FCC RF Test Report

APPLICANT	:	Wonderosa L.L.C.
EQUIPMENT	:	Digital Media Receiver
MODEL NAME	:	MW46WB
FCC ID	:	2AETL-0725
STANDARD	:	FCC Part 15 Subpart E §15.407
CLASSIFICATION	:	(NII) Unlicensed National Information Infrastructure

The testing was completed on Jun. 21, 2016. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

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

Reviewed by: Joseph Lin / Supervisor

Approved by: Jones Tsai / Manager

Testing Laboratory 1190

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR572808-01D	Rev. 01	Initial issue of report	Jun. 08, 2016
FR572808-01D	Rev. 02	Update report of updating the plots and data of band edge and fundamental at appendix B and C	Jun. 22, 2016

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result
3.1	2.1049 15.403(i)	26dB & 99% Bandwidth	-	Pass
3.2	15.407(a)	Maximum Conducted Output Power	FCC ≤ 24 dBm (depend on band)	Pass
3.3	15.407(a)	Power Spectral Density	FCC ≤ 11 dBm (depend on band)	Pass
3.4	15.407(b)	Unwanted Emissions	≤ -17, -27 dBm (depend on band)&15.209(a)	Pass
3.5	15.207	AC Conducted Emission	15.207(a)	Pass
3.6	15.407(g)	Frequency Stability	Within Operation Band	Pass
3.7	15.407(c)	Automatically Discontinue Transmission	Discontinue Transmission	Pass
3.8	15.203 & 15.407(a)	Antenna Requirement	N/A	Pass

1 General Description

1.1 Applicant

Wonderosa L.L.C.
8115 Maple Lawn Blvd, Suite 200
Fulton, Maryland, 20759

1.2 Product Feature of Equipment Under Test

Product Feature	
Equipment	Digital Media Receiver
Model Name	MW46WB
FCC ID	2AETL-0725
EUT supports Radios application	WLAN 11b/g/n HT20 WLAN 11a/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80 Bluetooth v4.1 EDR/LE

1.3 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx/Rx Channel Frequency Range	5180 MHz ~ 5240 MHz
Maximum Output Power	**<5180 MHz ~ 5240 MHz>** **SISO <Ant. Port 1>** 802.11a : 19.53 dBm / 0.0897 W 802.11n HT20 : 19.71 dBm / 0.0935 W 802.11n HT40 : 19.37 dBm / 0.0865 W 802.11ac VHT20: 19.55 dBm / 0.0902 W 802.11ac VHT40: 19.25 dBm / 0.0841 W 802.11ac VHT80: 12.05 dBm / 0.0160 W **SISO <Ant. Port 2>** 802.11a : 19.54 dBm / 0.0899 W 802.11n HT20 : 19.62 dBm / 0.0916 W 802.11n HT40 : 19.51 dBm / 0.0893 W 802.11ac VHT20: 19.51 dBm / 0.0893 W 802.11ac VHT40: 19.50 dBm / 0.0891 W 802.11ac VHT80: 11.57 dBm / 0.0144 W **MIMO <Ant. Port 1 + 2>** 802.11a : 20.50 dBm / 0.1122 W 802.11n HT20 : 20.94 dBm / 0.1242 W 802.11n HT40 : 20.60 dBm / 0.1148 W 802.11ac VHT20: 20.91 dBm / 0.1233 W 802.11ac VHT40: 20.58 dBm / 0.1143 W 802.11ac VHT80: 12.52 dBm / 0.0179 W
99% Occupied Bandwidth	802.11a : 18.40 MHz 802.11n HT20 : 19.10 MHz 802.11n HT40 : 36.90 MHz 802.11ac VHT20 : 19.25 MHz 802.11ac VHT40 : 36.80 MHz 802.11ac VHT80 : 75.96 MHz
Type of Modulation	802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)
Antenna Type	Ant. 1 : Fixed Internal Antenna Ant. 2 : Fixed Internal Antenna
Antenna Gain	Ant. 1 : 4.76 dBi Ant. 2 : 5.38 dBi
Antenna Function Description	

	Chain Port 1	Chain Port 2
802.11 a/n/ac SISO	V	V
802.11 a/n/ac MIMO	V	V

1.4 Modification of EUT

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

1.5 Testing Location

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code : 1190) and the FCC designation No. TW1022 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC Test.

Test Site	SPORTON INTERNATIONAL INC.		
Test Site Location	No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C. TEL: +886-3-327-3456 FAX: +886-3-328-4978		
Test Site No.	**Sporton Site No.**		
	TH02-HY	CO05-HY	03CH07-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.	**Sporton Site No.**
	03CH11-HY

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

1.6 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 v01r02
- FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- FCC KDB 644545 D03 Guidance for IEEE 802 11ac New Rules v01
- ANSI C63.10-2013

Remark: All test items were verified and recorded according to the standards and without any deviation during the test.

2 Test Configuration of Equipment Under Test

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: conducted emission (150 kHz to 30 MHz) and radiated emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

The final configuration from all the combinations and the worst-case data rates were investigated by measuring the maximum power across all the data rates and modulation modes under section 2.2.

Based on the worst configuration found above, the RF power setting is set individually to meet FCC compliance limit for the final conducted and radiated tests shown in section 2.3.

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		

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 Pre-Scanned RF Power

Preliminary tests were performed in different data rate and data rate associated with the highest power were chosen for full test in the following tables. Final Output Power equals to Measured Output Power adds the duty factor.

SISO <Ant. Port 1>

5GHz 802.11a mode								
Data Rate (MHz)	**6M bps**	**9M bps**	**12M bps**	**18M bps**	**24M bps**	**36M bps**	**48M bps**	**54M bps**
Average Power (dBm)	19.53	19.52	19.52	19.42	19.51	19.44	19.52	19.52

5GHz 802.11n HT20 mode								
Data Rate (MHz)	**MCS0**	**MCS1**	**MCS2**	**MCS3**	**MCS4**	**MCS5**	**MCS6**	**MCS7**
Average Power (dBm)	19.71	19.56	19.47	19.64	19.63	19.65	19.63	19.68

5GHz 802.11n HT40 mode								
Data Rate (MHz)	**MCS0**	**MCS1**	**MCS2**	**MCS3**	**MCS4**	**MCS5**	**MCS6**	**MCS7**
Average Power (dBm)	19.37	19.24	19.18	19.25	19.27	19.35	19.32	19.30

5GHz 802.11ac VHT20 mode									
Data Rate (MHz)	**MCS 0**	**MCS 1**	**MCS 2**	**MCS 3**	**MCS 4**	**MCS 5**	**MCS 6**	**MCS 7**	**MCS 8**
Average Power (dBm)	19.55	19.48	19.47	19.50	19.53	19.49	19.51	19.53	19.54

5GHz 802.11ac VHT40 mode										
Data Rate (MHz)	**MCS 0**	**MCS 1**	**MCS 2**	**MCS 3**	**MCS 4**	**MCS 5**	**MCS 6**	**MCS 7**	**MCS 8**	**MCS 9**
Average Power (dBm)	19.25	19.18	19.17	19.16	19.24	19.21	19.22	19.23	19.20	19.24

5GHz 802.11ac VHT80 mode										
Data Rate (MHz)	**MCS 0**	**MCS 1**	**MCS 2**	**MCS 3**	**MCS 4**	**MCS 5**	**MCS 6**	**MCS 7**	**MCS 8**	**MCS 9**
Average Power (dBm)	12.05	11.95	12.03	11.89	11.96	12.03	11.97	12.00	11.96	11.99

SISO <Ant. Port 2>

5GHz 802.11a mode								
Data Rate (MHz)	6M bps	9M bps	12M bps	18M bps	24M bps	36M bps	48M bps	54M bps
Average Power (dBm)	19.54	19.32	19.47	19.51	19.49	19.48	19.52	19.45

5GHz 802.11n HT20 mode								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Average Power (dBm)	19.62	19.30	19.54	19.59	19.54	19.50	19.60	19.54

5GHz 802.11n HT40 mode								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Average Power (dBm)	19.51	19.23	19.20	19.22	19.24	19.20	19.34	19.27

5GHz 802.11ac VHT20 mode									
Data Rate (MHz)	MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8
Average Power (dBm)	19.51	19.32	19.36	19.49	19.45	19.42	19.47	19.44	19.35

5GHz 802.11ac VHT40 mode										
Data Rate (MHz)	MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9
Average Power (dBm)	19.50	19.20	19.30	19.30	19.30	19.27	19.35	19.34	19.32	19.20

5GHz 802.11ac VHT80 mode										
Data Rate (MHz)	MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9
Average Power (dBm)	11.57	11.41	11.34	11.34	11.34	11.45	11.31	11.40	11.47	11.37

MIMO <Ant. 1+2>

5GHz 802.11a mode								
Data Rate (MHz)	**6M bps**	**9M bps**	**12M bps**	**18M bps**	**24M bps**	**36M bps**	**48M bps**	**54M bps**
Average Power (dBm)	20.50	20.49	20.49	20.36	20.40	20.44	20.49	20.44

5GHz 802.11n HT20 mode								
Data Rate (MHz)	**MCS 0**	**MCS 1**	**MCS 2**	**MCS 3**	**MCS 4**	**MCS 5**	**MCS 6**	**MCS 7**
Average Power (dBm)	20.94	20.81	20.83	20.90	20.84	20.90	20.86	20.91

5GHz 802.11n HT40 mode								
Data Rate (MHz)	**MCS 0**	**MCS 1**	**MCS 2**	**MCS 3**	**MCS 4**	**MCS 5**	**MCS 6**	**MCS 7**
Average Power (dBm)	20.60	20.48	20.45	20.55	20.57	20.53	20.51	20.57

5GHz 802.11ac VHT20 mode									
Data Rate (MHz)	**MCS 0**	**MCS 1**	**MCS 2**	**MCS 3**	**MCS 4**	**MCS 5**	**MCS 6**	**MCS 7**	**MCS 8**
Average Power (dBm)	20.91	20.77	20.77	20.88	20.90	20.90	20.90	20.90	20.90

5GHz 802.11ac VHT40 mode										
Data Rate (MHz)	**MCS 0**	**MCS 1**	**MCS 2**	**MCS 3**	**MCS 4**	**MCS 5**	**MCS 6**	**MCS 7**	**MCS 8**	**MCS 9**
Average Power (dBm)	20.58	20.49	20.38	20.48	20.53	20.54	20.57	20.47	20.53	20.51

5GHz 802.11ac VHT80 mode										
Data Rate (MHz)	**MCS 0**	**MCS 1**	**MCS 2**	**MCS 3**	**MCS 4**	**MCS 5**	**MCS 6**	**MCS 7**	**MCS 8**	**MCS 9**
Average Power (dBm)	12.52	12.17	12.26	12.50	12.50	12.50	12.50	12.49	12.48	12.48

Note: MIMO Ant. 1+2 is a calculated result from sum of the power MIMO Ant. 1 and MIMO Ant. 2.

2.3 Test Mode

Final test mode of conducted test items and radiated spurious emissions are considering the modulation and worse data rates from the power table described in section 2.2.

Single 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 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

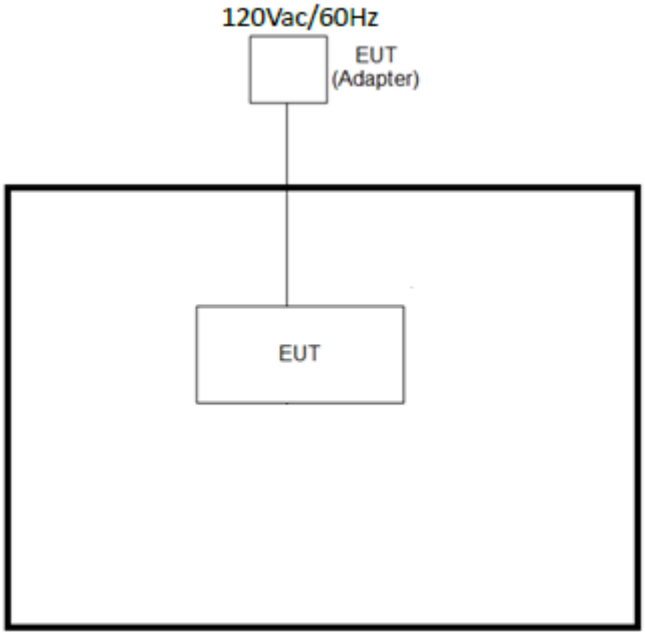
Test Cases	
AC Conducted Emission	Mode 1 : Bluetooth Link + WLAN (5GHz) Link + MPEG4 + Adapter

Ch. #		Band I：5150-5250 MHz	Band I：5150-5250 MHz	Band I：5150-5250 MHz
		802.11a	802.11n HT20	802.11n HT40
L	Low	36	36	38
M	Middle	44	44	-
H	High	48	48	46

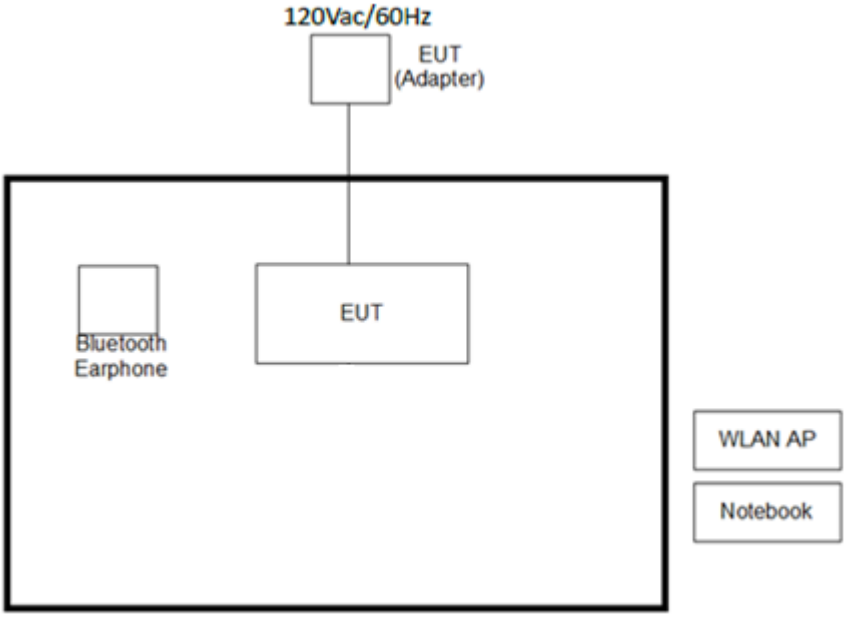
Ch. #		Band I：5150-5250 MHz	Band I：5150-5250 MHz	Band I：5150-5250 MHz
		802.11ac VHT20	802.11ac VHT40	802.11ac VHT80
L	Low	38	38	-
M	Middle	-	-	42
H	High	46	46	-

2.4 Connection Diagram of Test System

<WLAN Tx Mode>



<AC Conducted Emission Mode>



2.5 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m
2.	Notebook	DELL	Latitude E6320	FCC DoC/ Contains FCC ID: QDS-BRCM1054	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
3.	Bluetooth Earphone	Sony Ericsson	MW600	PY7DDA-2029	N/A	N/A

2.6 EUT Operation Test Setup

For WLAN function, programmed RF utility, “Command” installed in the notebook make the EUT provide functions like channel selection and power level for continuous transmitting and receiving signals.

2.7 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.

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).

= 4.2 + 10 = 14.2 (dB)

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.

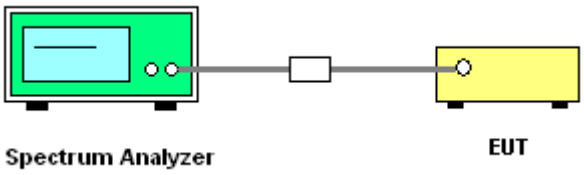
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r02. 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 1MHz and set the Video bandwidth (VBW) ≥ 3 * RBW.
8. Measure and record the results in the test report.

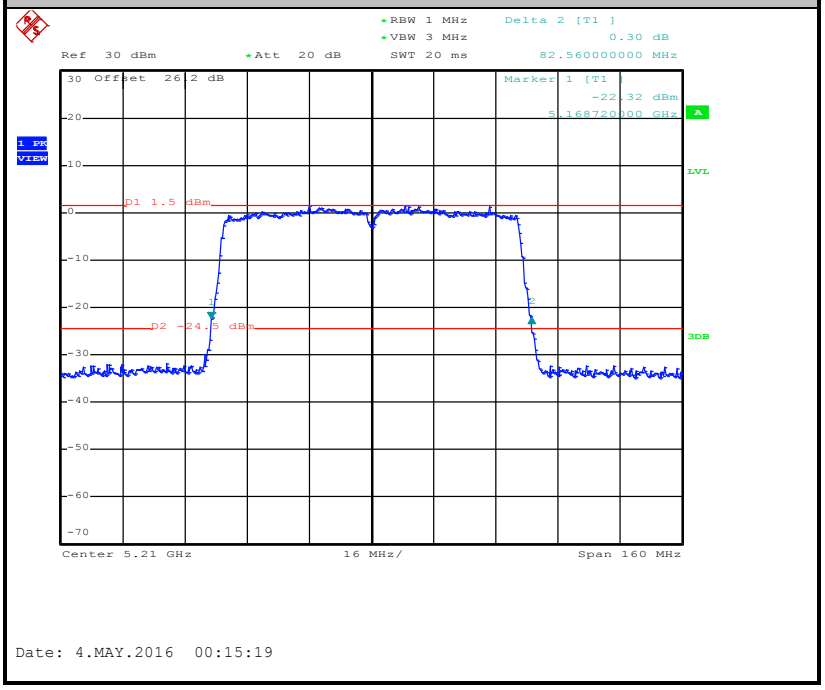
3.1.4 Test Setup



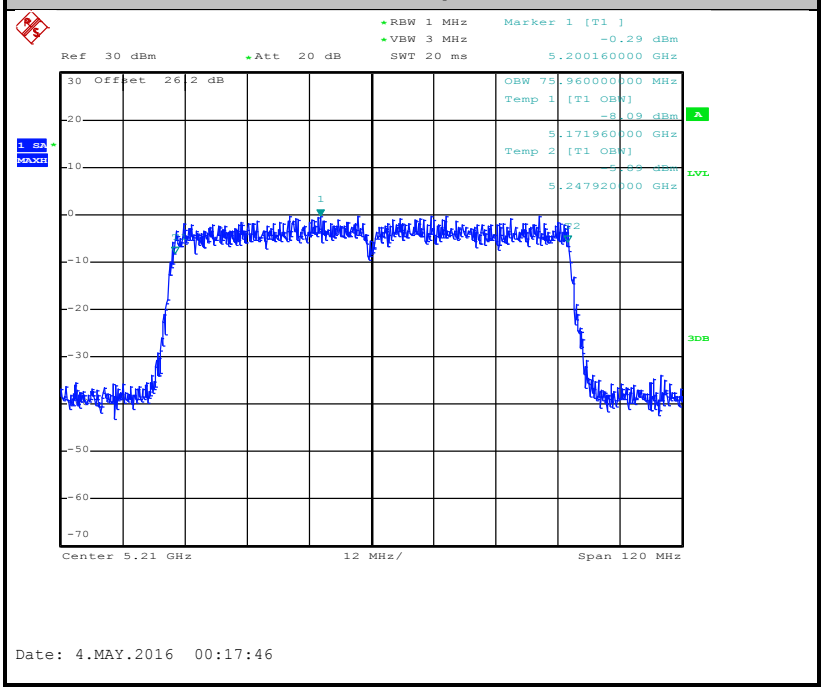
3.1.5 Test Result of 26dB & 99% Occupied Bandwidth

Please refer to Appendix A.

Maximum 26dB Bandwidth



Maximum 99% Occupied Bandwidth



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 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.

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

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

3.2.3 Test Procedures

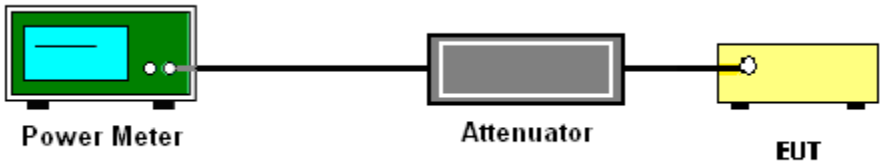
The testing follows Method PM of FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r02.

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

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

3.2.4 Test Setup

For normal channel:



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 mobile and portable client devices in the 5.15–5.25 GHz band, the maximum power spectral density shall not exceed 11dBm in any 1 megahertz band.

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

3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r02.
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).

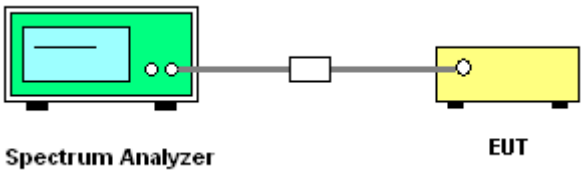
1. The testing follows Method SA-2 of FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r02.
   - Measure the duty cycle.
   - Set span to encompass the entire emission bandwidth (EBW) of the signal.
   - Set RBW = 1 MHz.
   - Set VBW ≥ 3 MHz.
   - Number of points in sweep ≥ 2 Span / RBW.
   - 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.

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

   Method (1): 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.

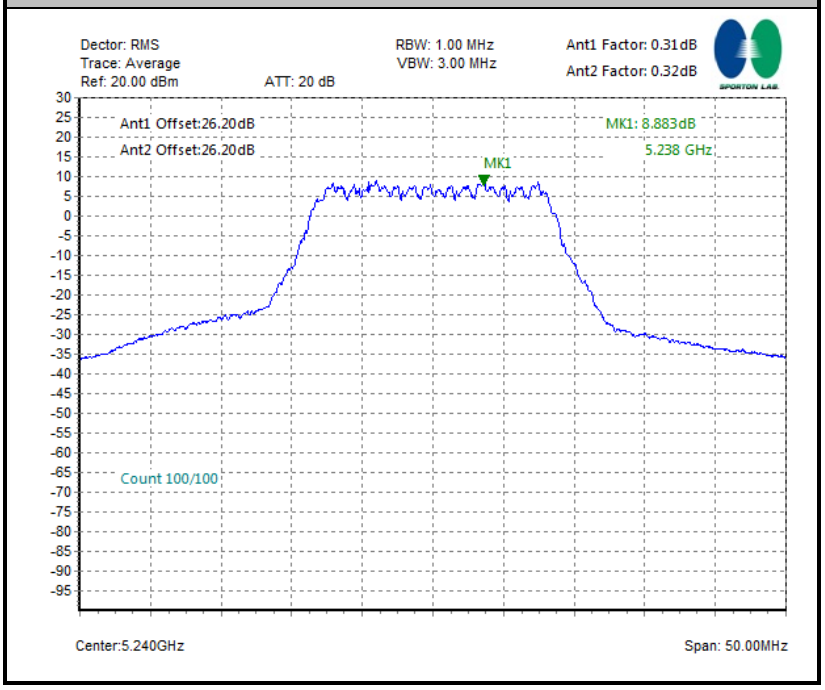
3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

Worst Case Power Density (dBm/MHz)



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

3.4 Unwanted Emissions Measurement

This section as specified in FCC Part 15.407(b) is to measure unwanted emissions through radiated measurement for band edge spurious emissions and out of band emissions measurement. The unwanted emissions shall comply with 15.407(b)(1) to (6), and restricted bands per FCC Part15.205.

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.

(2) Unwanted spurious emissions fallen in restricted bands per FCC Part15.205 shall comply with the general field strength limits set forth in § 15.209 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.

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

EIRP (dBm)	Field Strength at 3m (dBμV/m)
-17	78.3
- 27	68.3

(3) KDB789033 D02 v01r02 G)2)c) As specified in 15.407(b), emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit of -27 dBm/MHz (or -17 dBm/MHz as specified in 15.407(b)(4)). However, an out-of-band emission that complies with both the average and peak limits of 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz peak emission limit.

3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r02. 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 ≥ 3 MHz
   - Detector = Peak
   - Sweep time = auto
   - Trace mode = max hold

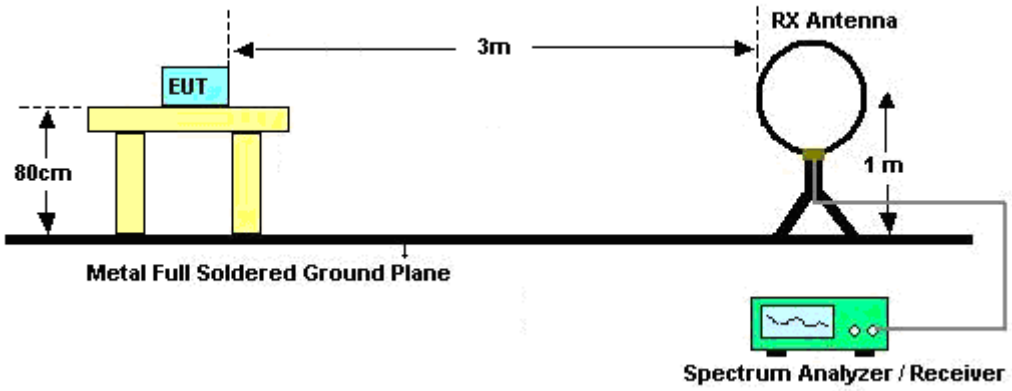
   (3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz

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

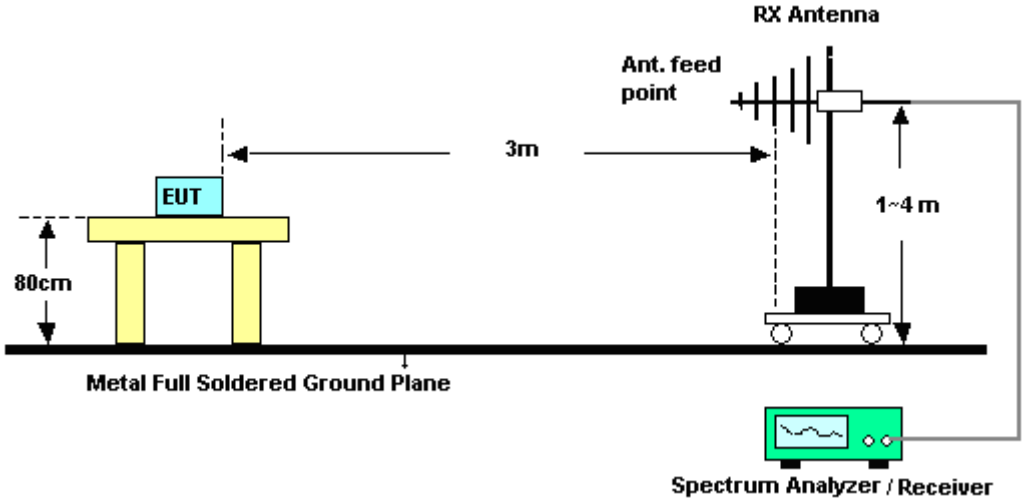
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

3.4.4 Test Setup

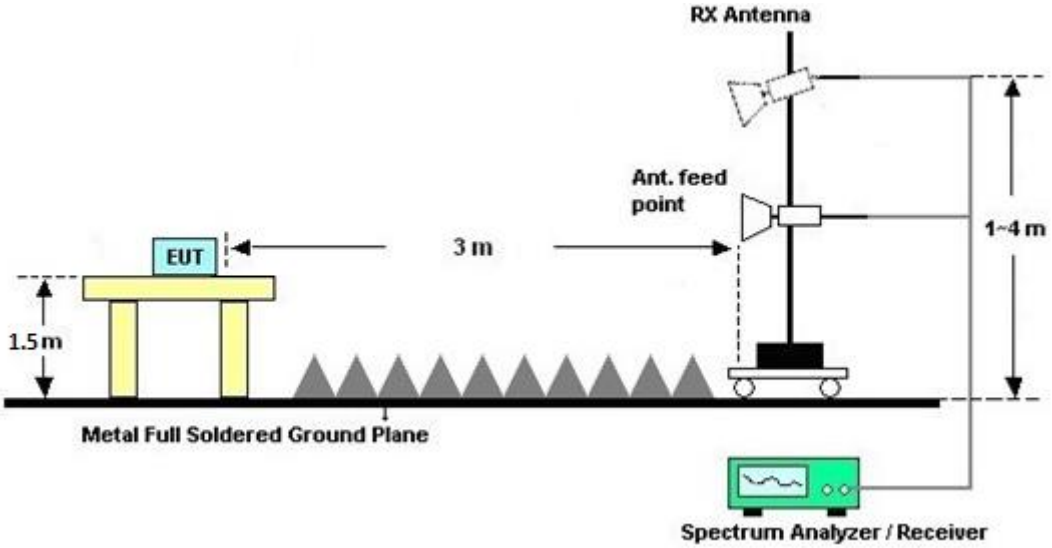
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



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

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.

3.4.6 Test Result of Radiated Band Edges

Please refer to Appendix B and Appendix C.

3.4.7 Duty Cycle

Please refer to Appendix D.

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

Please refer to Appendix B and Appendix C.

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 (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

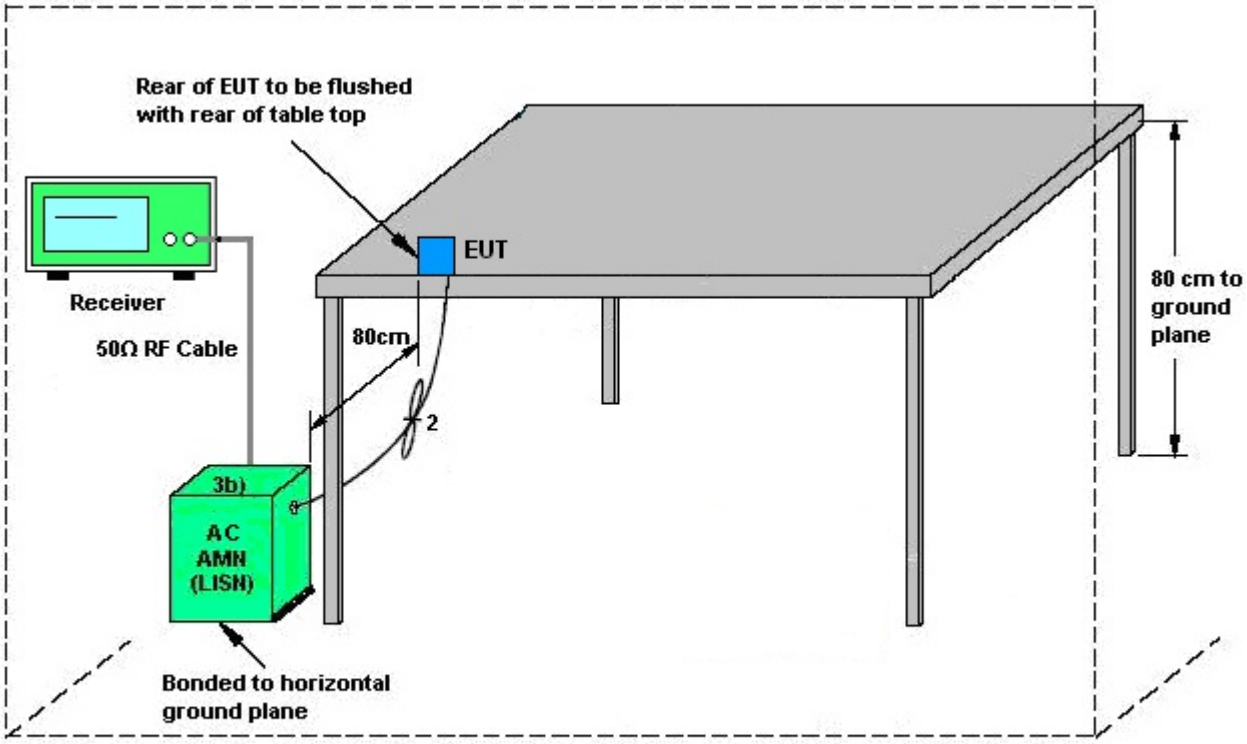
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

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

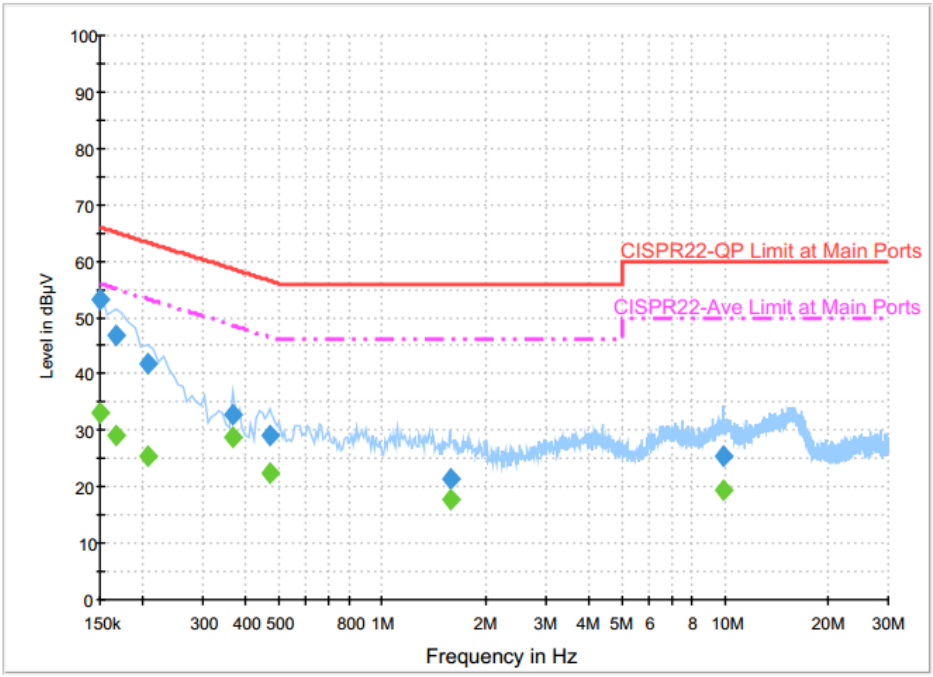
3.5.4 Test Setup



AMN = Artificial mains network (LISN)
AE = Associated equipment
EUT = Equipment under test
ISN = Impedance stabilization network

3.5.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1	**Temperature :**	21~22℃
Test Engineer :	Derreck Chen	**Relative Humidity :**	51~52%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line
Function Type :	Bluetooth Link + WLAN (5GHz) Link + MPEG4 + Adapter		



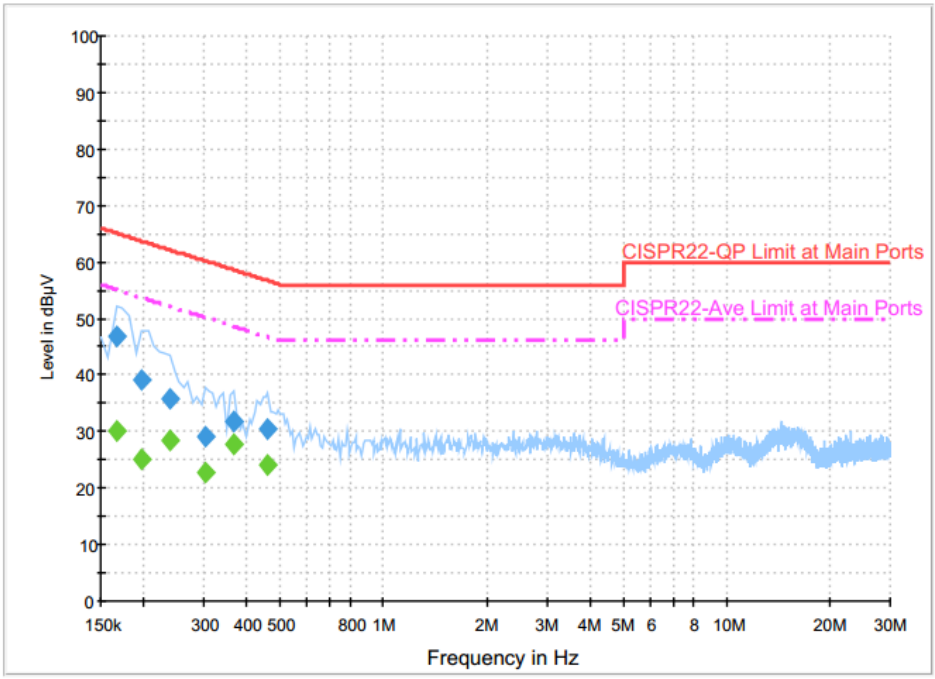
Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	53.2	Off	L1	19.6	12.8	66.0
0.166000	46.7	Off	L1	19.6	18.5	65.2
0.206000	41.8	Off	L1	19.6	21.6	63.4
0.366000	32.7	Off	L1	19.6	25.9	58.6
0.470000	29.0	Off	L1	19.6	27.5	56.5
1.582000	21.3	Off	L1	19.6	34.7	56.0
9.894000	25.3	Off	L1	19.7	34.7	60.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	33.1	Off	L1	19.6	22.9	56.0
0.166000	29.2	Off	L1	19.6	26.0	55.2
0.206000	25.4	Off	L1	19.6	28.0	53.4
0.366000	28.6	Off	L1	19.6	20.0	48.6
0.470000	22.4	Off	L1	19.6	24.1	46.5
1.582000	17.6	Off	L1	19.6	28.4	46.0
9.894000	19.4	Off	L1	19.7	30.6	50.0

Test Mode :	Mode 1	**Temperature :**	21~22℃
Test Engineer :	Derreck Chen	**Relative Humidity :**	51~52%
Test Voltage :	120Vac / 60Hz	**Phase :**	Neutral
Function Type :	Bluetooth Link + WLAN (5GHz) Link + MPEG4 + Adapter		



Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.166000	46.9	Off	N	19.6	18.3	65.2
0.198000	39.3	Off	N	19.6	24.4	63.7
0.238000	35.9	Off	N	19.6	26.3	62.2
0.302000	29.2	Off	N	19.6	31.0	60.2
0.366000	31.8	Off	N	19.6	26.8	58.6
0.462000	30.4	Off	N	19.6	26.3	56.7

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.166000	30.2	Off	N	19.6	25.0	55.2
0.198000	25.1	Off	N	19.6	28.6	53.7
0.238000	28.5	Off	N	19.6	23.7	52.2
0.302000	22.9	Off	N	19.6	27.3	50.2
0.366000	27.9	Off	N	19.6	20.7	48.6
0.462000	24.2	Off	N	19.6	22.5	46.7

3.6 Frequency Stability Measurement

3.6.1 Limit of Frequency Stability

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

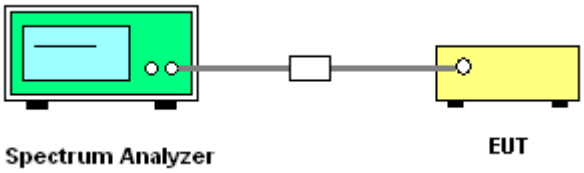
3.6.2 Measuring Instruments

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

3.6.3 Test Procedures

1. To ensure emission at the band edge is maintained within the authorized band, those values shall be measured by radiation emissions at upper and lower frequency points, and finally compensated by frequency deviation as procedures below.
2. The EUT was operated at the maximum output power, and connected to the spectrum analyzer, which is set to maximum hold function and peak detector. The peak value of the power envelope was measured and noted. The upper and lower frequency points were respectively measured relatively 10dB lower than the measured peak value.
3. The frequency deviation was calculated by adding the upper frequency point and the lower frequency point divided by two. Those detailed values of frequency deviation are provided in table below.

3.6.4 Test Setup



3.6.5 Test Result of Frequency Stability

Please refer to Appendix A.

The frequency band 5180-5240MHz which was verified by testing against other standard is less than 20 ppm which is sufficient to maintain the signal within the 5150-5250MHz band.

3.7 Automatically Discontinue Transmission

3.7.1 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.

3.7.2 Measuring Instruments

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

3.7.3 Test Result of Automatically Discontinue Transmission

EUT is verified this characteristic during the function check of normal sample associated with an access point:

A. Information start: make EUT supply information to the access point.

B. Information stop: stop supplying information to the access point.

While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving.

C. Information start: make EUT supply information to the access point again.

The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or 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.

5180MHz

Note: The control / signalling information during the period B is precluded.

3.8 Antenna Requirements

3.8.1 Standard Applicable

According to FCC 47 CFR Section 15.407(a)(1)(2) ,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.

3.8.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.8.3 Antenna Gain

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For CDD transmissions, directional gain is calculated as

Directional gain = G_{ANT} + Array Gain, where Array Gain is as follows.

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

Array Gain = 10 log(N_{ANT}/N_{SS}=1) dB.

For power measurements on IEEE 802.11 devices,

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

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

The EUT supports CDD mode.

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.

	Ant 1 (dBi)	Ant 2 (dBi)	DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
Band I	4.76	5.38	5.38	8.09	0.00	2.09

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	1036004	300MHz~40GHz	Jul. 29, 2015	Apr. 14, 2016 ~ Jun. 07, 2016	Jul. 28, 2016	Conducted (TH02-HY)
Power Sensor	Anritsu	MA2411B	1027253	300MHz~40GHz	Jul. 29, 2015	Apr. 14, 2016 ~ Jun. 07, 2016	Jul. 28, 2016	Conducted (TH02-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100055	9kHz~40GHz	Jun. 18, 2015	Apr. 14, 2016 ~ Jun. 07, 2016	Jun. 17, 2016	Conducted (TH02-HY)
Bilog Antenna	TESEQ	CBL 6111D	35419	30MHz to 1GHz	Jan. 13, 2016	Apr. 21, 2016 ~ Jun. 21, 2016	Jan. 12, 2017	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	00075962	1GHz ~ 18GHz	Aug. 21, 2015	Apr. 21, 2016 ~ Jun. 21, 2016	Aug. 20, 2016	Radiation (03CH07-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	Sep. 02, 2015	Apr. 21, 2016 ~ Jun. 21, 2016	Sep. 01, 2016	Radiation (03CH07-HY)
Preamplifier	MITEQ	AMF-7D-00101800-30-10P	1590075	1GHz ~ 18GHz	Apr. 15, 2016	Apr. 21, 2016 ~ Jun. 21, 2016	Apr. 14, 2017	Radiation (03CH07-HY)
Preamplifier	COM-POWER	PA-103A	161241	10MHz-1000MHz	Mar. 18, 2016	Apr. 21, 2016 ~ Jun. 21, 2016	Mar. 18, 2017	Radiation (03CH07-HY)
Preamplifier	Agilent	8449B	3008A02362	1GHz~ 26.5GHz	Oct. 19, 2015	Apr. 21, 2016 ~ Jun. 21, 2016	Oct. 18, 2016	Radiation (03CH07-HY)
Spectrum Analyzer	Agilent	N9010A	MY53470118	10Hz~44GHz	Feb. 27, 2016	Apr. 21, 2016 ~ Jun. 21, 2016	Feb. 26, 2017	Radiation (03CH07-HY)
Controller	ChainTek	Chaintek 3000	N/A	Control Turn table	N/A	Apr. 21, 2016 ~ Jun. 21, 2016	N/A	Radiation (03CH07-HY)
Controller	Max-Full	MF7802	MF780208368	Control Ant Mast	N/A	Apr. 21, 2016 ~ Jun. 21, 2016	N/A	Radiation (03CH07-HY)
Antenna Mast	Max-Full	MFA520BS	N/A	1m~4m	N/A	Apr. 21, 2016 ~ Jun. 21, 2016	N/A	Radiation (03CH07-HY)
Turn Table	ChainTek	Chaintek 3000	N/A	0~360 degree	N/A	Apr. 21, 2016 ~ Jun. 21, 2016	N/A	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	18GHz- 40GHz	Oct. 12, 2015	Apr. 21, 2016 ~ Jun. 21, 2016	Oct. 11, 2016	Radiation (03CH07-HY)
Preamplifier	MITEQ	JS44-18004000-33-8P	1840917	18GHz ~ 40GHz	Jun. 02, 2015	Apr. 20, 2016~ May 06, 2016	Jun. 01, 2016	Radiation (03CH07-HY)
Preamplifier	MITEQ	JS44-18004000-33-8P	1840917	18GHz ~ 40GHz	Jun. 14, 2016	Jun. 21, 2016	Jun. 13, 2017	Radiation (03CH07-HY)
EMI Test Receiver	Agilent Technologies	N9038A(MXE)	MY53290045	20MHz~8.4GHz	Feb. 01, 2016	Apr. 21, 2016 ~ Jun. 21, 2016	Jan. 31, 2017	Radiation (03CH07-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Apr. 25, 2016	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESCI 7	100724	9kHz~7GHz	Aug. 26, 2015	Apr. 25, 2016	Aug. 25, 2016	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Dec. 02, 2015	Apr. 25, 2016	Dec. 01, 2016	Conduction (CO05-HY)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	Sep. 02, 2015	Jun. 01, 2016 ~ Jun. 21, 2016	Sep. 01, 2016	Radiation (03CH11-HY)
Amplifier	SONOMA	310N	187312	9kHz~1GHz	Nov. 20, 2015	Jun. 01, 2016 ~ Jun. 21, 2016	Nov. 19, 2016	Radiation (03CH11-HY)
Bilog Antenna	TESEQ	CBL 6111D	35414	30MHz~1GHz	Nov. 17, 2015	Jun. 01, 2016 ~ Jun. 21, 2016	Nov. 16, 2016	Radiation (03CH11-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1326	1GHz ~ 18GHz	Oct. 08, 2015	Jun. 01, 2016 ~ Jun. 21, 2016	Oct. 07, 2016	Radiation (03CH11-HY)
Preamplifier	Keysight	83017A	MY53270080	1GHz~26.5GHz	Nov. 19, 2015	Jun. 01, 2016 ~ Jun. 21, 2016	Nov. 18, 2016	Radiation (03CH11-HY)
Preamplifier	MITEQ	AMF-7D-0010 1800-30-10P	1902247	1GHz~18GHz	Jul. 01, 2015	Jun. 01, 2016 ~ Jun. 21, 2016	Jun. 30, 2016	Radiation (03CH11-HY)
Spectrum Analyzer	Keysight	N9010A	MY54200486	10Hz ~ 44GHZ	Sep. 24, 2015	Jun. 01, 2016 ~ Jun. 21, 2016	Sep. 23, 2016	Radiation (03CH11-HY)
Controller	EMEC	EM 1000	N/A	Control Turn table & Ant Mast	N/A	Jun. 01, 2016 ~ Jun. 21, 2016	N/A	Radiation (03CH11-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1~4m	N/A	Jun. 01, 2016 ~ Jun. 21, 2016	N/A	Radiation (03CH11-HY)
Turn Table	EMEC	TT 2000	N/A	0~360 Degree	N/A	Jun. 01, 2016 ~ Jun. 21, 2016	N/A	Radiation (03CH11-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170584	18GHz- 40GHz	Nov. 02, 2015	Jun. 01, 2016 ~ Jun. 21, 2016	Nov. 01, 2016	Radiation (03CH11-HY)
Preamplifier	MITEQ	TTA0204	1872107	2GHz~40GHz	Feb. 15, 2016	Jun. 01, 2016 ~ Jun. 21, 2016	Feb. 14, 2017	Radiation (03CH11-HY)

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.26

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz) for 03CH07-HY

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.60

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz) for 03CH11-HY

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.90

Appendix A. Conducted Test Results

Report Number : FR572808-01D

Test Engineer:	Derek Hsu	Temperature:	21~25	°C
Test Date:	2016/4/14~2016/06/07	Relative Humidity:	51~54	%

TEST RESULTS DATA
26dB and 99% OBW

Band I														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)		26 dB Bandwidth (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)			Note
					Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	1	36	5180	18.25	18.35	23.49	27.30	-		22.61	22.64		
11a	6Mbps	1	44	5220	18.20	18.20	23.76	26.94	-		22.60	22.60		
11a	6Mbps	1	48	5240	18.20	18.40	23.76	23.76	-		22.60	22.65		
HT20	MCS0	1	36	5180	18.90	18.95	23.34	28.26	-		22.76	22.78		
HT20	MCS0	1	44	5220	18.95	18.85	23.64	23.46	-		22.78	22.75		
HT20	MCS0	1	48	5240	18.85	19.10	23.39	23.64	-		22.75	22.81		
HT40	MCS0	1	38	5190	36.70	36.70	41.31	41.31	-		23.01	23.01		
HT40	MCS0	1	46	5230	36.80	36.90	57.24	75.84	-		23.01	23.01		
VHT20	MCS0	1	36	5180	19.05	18.80	23.40	29.46	-		22.80	22.74		
VHT20	MCS0	1	44	5220	19.00	18.90	23.46	23.46	-		22.79	22.76		
VHT20	MCS0	1	48	5240	19.05	19.25	23.51	26.40	-		22.80	22.84		
VHT40	MCS0	1	38	5190	36.60	36.70	41.28	41.16	-		23.01	23.01		
VHT40	MCS0	1	46	5230	36.80	36.80	56.04	61.80	-		23.01	23.01		
VHT80	MCS0	1	42	5210	75.96	75.84	82.32	82.56	-		23.01	23.01		
11a	6Mbps	2	36	5180	18.20	18.00	23.15	23.10	-		22.55			
11a	6Mbps	2	44	5220	17.85	17.75	23.30	23.00	-		22.49			
11a	6Mbps	2	48	5240	18.10	17.80	23.20	22.75	-		22.50			
HT20	MCS0	2	36	5180	18.90	18.75	23.50	23.05	-		22.73			
HT20	MCS0	2	44	5220	18.90	18.60	23.60	23.10	-		22.70			
HT20	MCS0	2	48	5240	18.95	18.90	23.50	22.95	-		22.76			
HT40	MCS0	2	38	5190	36.60	36.80	41.55	40.95	-		23.01			
HT40	MCS0	2	46	5230	36.70	36.80	41.43	41.52	-		23.01			
VHT20	MCS0	2	36	5180	18.95	18.80	23.50	23.30	-		22.74			
VHT20	MCS0	2	44	5220	18.90	18.65	23.80	23.05	-		22.71			
VHT20	MCS0	2	48	5240	18.90	18.95	23.45	23.20	-		22.76			
VHT40	MCS0	2	38	5190	36.50	36.80	41.64	41.28	-		23.01			
VHT40	MCS0	2	46	5230	36.70	36.70	41.64	41.37	-		23.01			
VHT80	MCS0	2	42	5210	75.84	75.96	82.56	82.08	-		23.01			

TEST RESULTS DATA
Average Power Table

FCC Band I															
Mod.	Data Rate	NTX	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	0.29	0.29	17.20	16.86		24.00	24.00	4.76	5.38		Pass
11a	6Mbps	1	44	5220	0.29	0.29	19.53	19.54		24.00	24.00	4.76	5.38		Pass
11a	6Mbps	1	48	5240	0.29	0.29	19.51	19.51		24.00	24.00	4.76	5.38		Pass
HT20	MCS0	1	36	5180	0.31	0.34	17.22	17.17		24.00	24.00	4.76	5.38		Pass
HT20	MCS0	1	44	5220	0.31	0.34	19.71	19.62		24.00	24.00	4.76	5.38		Pass
HT20	MCS0	1	48	5240	0.31	0.34	19.69	19.55		24.00	24.00	4.76	5.38		Pass
HT40	MCS0	1	38	5190	0.67	0.67	12.11	12.55		24.00	24.00	4.76	5.38		Pass
HT40	MCS0	1	46	5230	0.67	0.67	19.37	19.51		24.00	24.00	4.76	5.38		Pass
VHT20	MCS0	1	36	5180	0.31	0.34	17.16	17.13		24.00	24.00	4.76	5.38		Pass
VHT20	MCS0	1	44	5220	0.31	0.34	19.55	19.51		24.00	24.00	4.76	5.38		Pass
VHT20	MCS0	1	48	5240	0.31	0.34	19.51	19.50		24.00	24.00	4.76	5.38		Pass
VHT40	MCS0	1	38	5190	0.60	0.66	12.02	12.47		24.00	24.00	4.76	5.38		Pass
VHT40	MCS0	1	46	5230	0.60	0.66	19.25	19.50		24.00	24.00	4.76	5.38		Pass
VHT80	MCS0	1	42	5210	1.14	1.14	12.05	11.57		24.00	24.00	4.76	5.38		Pass
11a	6Mbps	2	36	5180	0.31	0.32	16.36	15.80	19.10	24.00		5.38			Pass
11a	6Mbps	2	44	5220	0.31	0.32	17.65	17.33	20.50	24.00		5.38			Pass
11a	6Mbps	2	48	5240	0.31	0.32	17.55	17.03	20.31	24.00		5.38			Pass
HT20	MCS0	2	36	5180	0.34	0.31	16.19	15.79	19.01	24.00		5.38			Pass
HT20	MCS0	2	44	5220	0.34	0.31	18.22	17.62	20.94	24.00		5.38			Pass
HT20	MCS0	2	48	5240	0.34	0.31	17.64	17.32	20.50	24.00		5.38			Pass
HT40	MCS0	2	38	5190	0.60	0.60	10.01	9.70	12.87	24.00		5.38			Pass
HT40	MCS0	2	46	5230	0.60	0.60	17.72	17.44	20.60	24.00		5.38			Pass
VHT20	MCS0	2	36	5180	0.34	0.34	16.14	15.80	18.98	24.00		5.38			Pass
VHT20	MCS0	2	44	5220	0.34	0.34	18.14	17.65	20.91	24.00		5.38			Pass
VHT20	MCS0	2	48	5240	0.34	0.34	17.75	17.17	20.48	24.00		5.38			Pass
VHT40	MCS0	2	38	5190	0.60	0.67	9.73	9.62	12.69	24.00		5.38			Pass
VHT40	MCS0	2	46	5230	0.60	0.67	17.62	17.52	20.58	24.00		5.38			Pass
VHT80	MCS0	2	42	5210	1.20	1.14	9.84	9.16	12.52	24.00		5.38			Pass

Report Number : FR572808-01D

TEST RESULTS DATA
Power Spectral Density

FCC Band I															
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Average Power Density (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)			Pass /Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	1	36	5180	0.29	0.29	6.58	6.84		11.00	11.00	4.76	5.38		Pass
11a	6Mbps	1	44	5220	0.29	0.29	6.97	6.85		11.00	11.00	4.76	5.38		Pass
11a	6Mbps	1	48	5240	0.29	0.29	7.01	6.91		11.00	11.00	4.76	5.38		Pass
HT20	MCS0	1	36	5180	0.31	0.34	6.29	6.51		11.00	11.00	4.76	5.38		Pass
HT20	MCS0	1	44	5220	0.31	0.34	6.65	6.44		11.00	11.00	4.76	5.38		Pass
HT20	MCS0	1	48	5240	0.31	0.34	6.69	6.60		11.00	11.00	4.76	5.38		Pass
HT40	MCS0	1	38	5190	0.67	0.67	-2.60	-2.30		11.00	11.00	4.76	5.38		Pass
HT40	MCS0	1	46	5230	0.67	0.67	4.16	4.40		11.00	11.00	4.76	5.38		Pass
VHT20	MCS0	1	36	5180	0.31	0.34	6.47	6.34		11.00	11.00	4.76	5.38		Pass
VHT20	MCS0	1	44	5220	0.31	0.34	6.63	6.49		11.00	11.00	4.76	5.38		Pass
VHT20	MCS0	1	48	5240	0.31	0.34	6.76	6.63		11.00	11.00	4.76	5.38		Pass
VHT40	MCS0	1	38	5190	0.60	0.66	-2.84	-2.27		11.00	11.00	4.76	5.38		Pass
VHT40	MCS0	1	46	5230	0.60	0.66	4.14	3.67		11.00	11.00	4.76	5.38		Pass
VHT80	MCS0	1	42	5210	1.14	1.14	-5.84	-6.29		11.00	11.00	4.76	5.38		Pass
11a	6Mbps	2	36	5180	0.31	0.32			7.14	8.91		8.09			Pass
11a	6Mbps	2	44	5220	0.31	0.32			8.65	8.91		8.09			Pass
11a	6Mbps	2	48	5240	0.31	0.32			8.88	8.91		8.09			Pass
HT20	MCS0	2	36	5180	0.34	0.31			6.76	8.91		8.09			Pass
HT20	MCS0	2	44	5220	0.34	0.31			8.47	8.91		8.09			Pass
HT20	MCS0	2	48	5240	0.34	0.31			8.55	8.91		8.09			Pass
HT40	MCS0	2	38	5190	0.60	0.60			-3.23	8.91		8.09			Pass
HT40	MCS0	2	46	5230	0.60	0.60			5.77	8.91		8.09			Pass
VHT20	MCS0	2	36	5180	0.34	0.34			6.83	8.91		8.09			Pass
VHT20	MCS0	2	44	5220	0.34	0.34			8.56	8.91		8.09			Pass
VHT20	MCS0	2	48	5240	0.34	0.34			8.83	8.91		8.09			Pass
VHT40	MCS0	2	38	5190	0.60	0.67			-3.05	8.91		8.09			Pass
VHT40	MCS0	2	46	5230	0.60	0.67			6.05	8.91		8.09			Pass
VHT80	MCS0	2	42	5210	1.20	1.14			-6.40	8.91		8.09			Pass

Report Number : FR572808-01D

TEST RESULTS DATA
Frequency Stability

Band I										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Center Frequency (MHz)	Frequency Deviation (MHz)	Frequency Stablility (ppm)	Temperature (˚C)	Voltage (V)	Note
11a	6Mbps	1	36	5180	5180.000	0.000	0.00	20	102	
11a	6Mbps	1	36	5180	5180.000	0.000	0.00	20	138	
11a	6Mbps	1	36	5180	5180.000	0.000	0.00	20	120	
11a	6Mbps	1	36	5180	5180.050	0.050	9.65	0	120	
11a	6Mbps	1	36	5180	5180.000	0.000	0.00	35	120	

Appendix B. Radiated Spurious Emission

Test Engineer :	Luke Chang, Jesse Wang, and James Chiu	Temperature :	21~24°C
		Relative Humidity :	50~54%

Band 1 - 5150~5250MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 36 5180MHz		5149	55.31	-18.69	74	46.97	31.58	10.23	33.47	198	66	P	H
		5146.75	45.8	-8.2	54	37.46	31.58	10.23	33.47	198	66	A	H
	*	5180	106.08	-	-	97.7	31.62	10.23	33.47	198	66	P	H
	*	5180	96	-	-	87.62	31.62	10.23	33.47	198	66	A	H
													H
													H
		5142.48	60.5	-13.5	74	52.16	31.58	10.23	33.47	200	85	P	V
		5150	50.99	-3.01	54	42.65	31.58	10.23	33.47	200	85	P	V
	*	5180	111.5	-	-	103.12	31.62	10.23	33.47	200	85	P	V
	*	5180	101.45	-	-	93.07	31.62	10.23	33.47	200	85	A	V
													V
													V
802.11a CH 44 5220MHz		5143.26	50.12	-23.88	74	41.78	31.58	10.23	33.47	206	63	P	H
		5145.34	42.01	-11.99	54	33.67	31.58	10.23	33.47	206	63	A	H
	*	5220	109.3	-	-	100.87	31.66	10.24	33.47	206	63	P	H
	*	5220	99.43	-	-	91	31.66	10.24	33.47	206	63	A	H
		5432.16	50.96	-23.04	74	41.68	31.92	10.84	33.48	206	63	P	H
		5443.68	43.97	-10.03	54	34.69	31.92	10.84	33.48	206	63	P	H
		5130.26	54.9	-19.1	74	46.59	31.56	10.22	33.47	196	84	P	V
		5146.9	45.32	-8.68	54	36.98	31.58	10.23	33.47	196	84	P	V
	*	5220	112.4	-	-	103.97	31.66	10.24	33.47	196	84	P	V
	*	5220	103.44	-	-	95.01	31.66	10.24	33.47	196	84	A	V
		5444.88	52.62	-21.38	74	43.34	31.92	10.84	33.48	196	84	P	V
		5430.72	45.88	-8.12	54	36.6	31.92	10.84	33.48	196	84	P	V

802.11a CH 48 5240MHz		5075.66	49.89	-24.11	74	41.65	31.5	10.21	33.47	202	64	P	H
		5149.5	40.5	-13.5	54	32.16	31.58	10.23	33.47	202	64	A	H
	*	5240	108.13	-	-	99.55	31.68	10.37	33.47	202	64	P	H
	*	5240	98.77	-	-	90.19	31.68	10.37	33.47	202	64	A	H
		5454.72	48.92	-25.08	74	39.62	31.94	10.84	33.48	202	64	P	H
		5453.52	43.57	-10.43	54	34.27	31.94	10.84	33.48	202	64	P	H
		5069.16	51.98	-22.02	74	43.76	31.48	10.21	33.47	206	84	P	V
		5133.64	42.74	-11.26	54	34.43	31.56	10.22	33.47	206	84	P	V
	*	5240	112.1	-	-	103.52	31.68	10.37	33.47	206	84	P	V
	*	5240	103.68	-	-	95.1	31.68	10.37	33.47	206	84	A	V
		5454	51.33	-22.67	74	42.03	31.94	10.84	33.48	206	84	P	V
		5451.6	45.43	-8.57	54	36.13	31.94	10.84	33.48	206	84	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 36 5180MHz		10360	47.28	-26.72	74	60.13	39.79	14.86	67.5	100	0	P	H
		15540	44.54	-29.46	74	53.44	38.6	17.89	65.39	100	0	P	H
													H
													H
		10360	47.77	-26.23	74	60.62	39.79	14.86	67.5	100	0	P	V
		15540	45.26	-28.74	74	54.16	38.6	17.89	65.39	100	0	P	V
													V
													V
802.11a CH 44 5220MHz		10440	46.62	-27.38	74	59.32	39.89	14.91	67.5	100	0	P	H
		15660	44.13	-29.87	74	53.33	38.23	17.94	65.37	100	0	P	H
													H
													H
		10440	45.96	-28.04	74	58.66	39.89	14.91	67.5	100	0	P	V
		15660	45.29	-28.71	74	54.49	38.23	17.94	65.37	100	0	P	V
													V
													V
802.11a CH 48 5240MHz		10480	45.87	-28.13	74	58.46	39.97	14.94	67.5	100	0	P	H
		15720	45.86	-28.14	74	55.22	38.03	17.97	65.36	100	0	P	H
													H
													H
		10480	46.62	-27.38	74	59.21	39.97	14.94	67.5	100	0	P	V
		15720	46.13	-27.87	74	55.49	38.03	17.97	65.36	100	0	P	V
													V
													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 HT20 (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT20 CH 36 5180MHz		5145.25	53.59	-20.41	74	45.25	31.58	10.23	33.47	204	60	P	H
		5150	44.21	-9.79	54	35.87	31.58	10.23	33.47	204	60	P	H
	*	5180	103.46	-	-	95.08	31.62	10.23	33.47	204	60	P	H
	*	5180	96.5	-	-	88.12	31.62	10.23	33.47	204	60	A	H
													H
													H
		5147.75	58.24	-15.76	74	49.9	31.58	10.23	33.47	215	67	P	V
		5149.5	51.72	-2.28	54	43.38	31.58	10.23	33.47	215	67	P	V
	*	5180	111.7	-	-	103.32	31.62	10.23	33.47	215	67	P	V
	*	5180	103.9	-	-	95.52	31.62	10.23	33.47	215	67	A	V
													V
													V
802.11n HT20 CH 44 5220MHz		5132.6	50.68	-23.32	74	42.37	31.56	10.22	33.47	208	60	P	H
		5147.42	41.36	-12.64	54	33.02	31.58	10.23	33.47	208	60	A	H
	*	5220	105.96	-	-	97.53	31.66	10.24	33.47	208	60	P	H
	*	5220	98.33	-	-	89.9	31.66	10.24	33.47	208	60	A	H
		5429.52	52.24	-21.76	74	42.96	31.92	10.84	33.48	208	60	P	H
		5443.68	43.06	-10.94	54	33.78	31.92	10.84	33.48	208	60	A	H
		5148.98	54.42	-19.58	74	46.08	31.58	10.23	33.47	211	66	P	V
		5149.24	45.33	-8.67	54	36.99	31.58	10.23	33.47	211	66	P	V
	*	5220	111.81	-	-	103.38	31.66	10.24	33.47	211	66	P	V
	*	5220	104.53	-	-	96.1	31.66	10.24	33.47	211	66	A	V
		5445.6	52.36	-21.64	74	43.06	31.94	10.84	33.48	211	66	P	V
		5441.28	46.61	-7.39	54	37.33	31.92	10.84	33.48	211	66	P	V

802.11n HT20 CH 48 5240MHz		5082.16	49.61	-24.39	74	41.37	31.5	10.21	33.47	203	59	P	H
		5123.76	40.26	-13.74	54	31.95	31.56	10.22	33.47	203	59	A	H
	*	5240	105.9	-	-	97.32	31.68	10.37	33.47	203	59	P	H
	*	5240	98.08	-	-	89.5	31.68	10.37	33.47	203	59	A	H
		5450.88	51.18	-22.82	74	41.88	31.94	10.84	33.48	203	59	P	H
		5450.4	42.27	-11.73	54	32.97	31.94	10.84	33.48	203	59	A	H
		5078.26	51.02	-22.98	74	42.78	31.5	10.21	33.47	203	74	P	V
		5135.98	43.46	-10.54	54	35.15	31.56	10.22	33.47	203	74	P	V
	*	5240	111.05	-	-	102.47	31.68	10.37	33.47	203	74	P	V
	*	5240	103.8	-	-	95.22	31.68	10.37	33.47	203	74	A	V
		5452.08	51.25	-22.75	74	41.95	31.94	10.84	33.48	203	74	P	V
		5451.6	44.97	-9.03	54	35.67	31.94	10.84	33.48	203	74	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 HT20 (Harmonic @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT20 CH 36 5180MHz		10360	44.62	-29.38	74	57.47	39.79	14.86	67.5	100	0	P	H
		15540	42.76	-31.24	74	51.66	38.6	17.89	65.39	100	0	P	H
													H
													H
		10360	45.03	-28.97	74	57.88	39.79	14.86	67.5	100	0	P	V
		15540	39.39	-34.61	74	48.29	38.6	17.89	65.39	100	0	P	V
													V
													V
802.11n HT20 CH 44 5220MHz		10440	47.98	-26.02	74	60.68	39.89	14.91	67.5	100	0	P	H
		15660	43.02	-30.98	74	52.22	38.23	17.94	65.37	100	0	P	H
													H
													H
		10440	46.38	-27.62	74	59.08	39.89	14.91	67.5	100	0	P	V
		15660	43.15	-30.85	74	52.35	38.23	17.94	65.37	100	0	P	V
													V
													V
802.11n HT20 CH 48 5240MHz		10480	47.38	-26.62	74	59.97	39.97	14.94	67.5	100	0	P	H
		15720	43.78	-30.22	74	53.14	38.03	17.97	65.36	100	0	P	H
													H
													H
		10480	46.45	-27.55	74	59.04	39.97	14.94	67.5	100	0	P	V
		15720	43.33	-30.67	74	52.69	38.03	17.97	65.36	100	0	P	V
													V
													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.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT40 CH 38 5190MHz		5149.24	53.41	-20.59	74	45.07	31.58	10.23	33.47	185	16	P	H
		5148.98	46.15	-7.85	54	37.81	31.58	10.23	33.47	185	16	P	H
	*	5190	95.7	-	-	87.31	31.62	10.24	33.47	185	16	P	H
	*	5190	88.3	-	-	79.91	31.62	10.24	33.47	185	16	A	H
		5398.32	48.87	-25.13	74	39.6	31.88	10.87	33.48	185	16	P	H
		5430	40.39	-13.61	54	31.11	31.92	10.84	33.48	185	16	A	H
		5147.16	60.72	-13.28	74	52.38	31.58	10.23	33.47	211	68	P	V
		5149.24	51.99	-2.01	54	43.65	31.58	10.23	33.47	211	68	P	V
	*	5190	101.91	-	-	93.52	31.62	10.24	33.47	211	68	P	V
	*	5190	95.1	-	-	86.71	31.62	10.24	33.47	211	68	A	V
		5370.48	48.66	-25.34	74	39.55	31.84	10.75	33.48	211	68	P	V
		5452.32	40.55	-13.45	54	31.25	31.94	10.84	33.48	211	68	A	V
802.11n HT40 CH 46 5230MHz		5145.6	52.18	-21.82	74	43.84	31.58	10.23	33.47	218	8	P	H
		5148.98	45.15	-8.85	54	36.81	31.58	10.23	33.47	218	8	A	H
	*	5230	101.96	-	-	93.38	31.68	10.37	33.47	218	8	P	H
	*	5230	95.38	-	-	86.8	31.68	10.37	33.47	218	8	A	H
		5350.08	49.85	-24.15	74	40.76	31.82	10.75	33.48	218	8	P	H
		5355.12	40.82	-13.18	54	31.73	31.82	10.75	33.48	218	8	A	H
		5140.66	59.15	-14.85	74	50.81	31.58	10.23	33.47	210	67	P	V
		5149.5	52.81	-1.19	54	44.47	31.58	10.23	33.47	210	67	P	V
	*	5230	109.71	-	-	101.13	31.68	10.37	33.47	210	67	P	V
	*	5230	101.96	-	-	93.38	31.68	10.37	33.47	210	67	A	V
		5449.2	51.68	-22.32	74	42.38	31.94	10.84	33.48	210	67	P	V
		5350.08	44.26	-9.74	54	35.17	31.82	10.75	33.48	210	67	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 (Harmonic @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT40 CH 38 5190MHz		10380	41.65	-32.35	74	54.48	39.81	14.86	67.5	100	0	P	H
		15570	39.53	-34.47	74	48.53	38.49	17.9	65.39	100	0	P	H
													H
													H
		10380	41.78	-32.22	74	54.61	39.81	14.86	67.5	100	0	P	V
		15570	38.63	-35.37	74	47.63	38.49	17.9	65.39	100	0	P	V
													V
													V
802.11n HT40 CH 46 5230MHz		10460	45.67	-28.33	74	58.34	39.92	14.91	67.5	100	0	P	H
		15690	41.62	-32.38	74	50.89	38.13	17.96	65.36	100	0	P	H
													H
													H
		10460	44.83	-29.17	74	57.5	39.92	14.91	67.5	100	0	P	V
		15690	41.37	-32.63	74	50.64	38.13	17.96	65.36	100	0	P	V
													V
													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.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ac VHT80 CH 42 5210MHz		5138.06	51.84	-22.16	74	43.53	31.56	10.22	33.47	197	14	P	H
		5144.04	46.53	-7.47	54	38.19	31.58	10.23	33.47	197	14	A	H
	*	5210	91.92	-	-	83.49	31.66	10.24	33.47	197	14	P	H
	*	5210	85.33	-	-	76.9	31.66	10.24	33.47	197	14	A	H
		5410.32	49.33	-24.67	74	40.06	31.88	10.87	33.48	197	14	P	H
		5433.12	41.63	-12.37	54	32.35	31.92	10.84	33.48	197	14	A	H
		5142.74	58.19	-15.81	74	49.85	31.58	10.23	33.47	211	68	P	V
		5142.48	52.76	-1.24	54	44.42	31.58	10.23	33.47	211	68	P	V
	*	5210	99.01	-	-	90.58	31.66	10.24	33.47	211	68	P	V
	*	5210	91.23	-	-	82.8	31.66	10.24	33.47	211	68	A	V
		5456.64	48.02	-25.98	74	38.72	31.94	10.84	33.48	211	68	P	V
		5451.12	41.69	-12.31	54	32.39	31.94	10.84	33.48	211	68	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 Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ac VHT80 CH 42 5210MHz		10420	41.91	-32.09	74	54.65	39.87	14.89	67.5	100	0	P	H
		15630	38.52	-35.48	74	47.66	38.29	17.94	65.37	100	0	P	H
													H
													H
		10420	43.5	-30.5	74	56.24	39.87	14.89	67.5	100	0	P	V
		15630	37.93	-36.07	74	47.07	38.29	17.94	65.37	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Emission below 1GHz

WIFI 802.11n HT40 (LF @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 LF		31.08	25.26	-14.74	40	30.98	25.18	0.93	31.83			P	H
		148.8	23.93	-19.57	43.5	36.54	17.49	1.68	31.78			P	H
		255.72	22.3	-23.7	46	32.79	19.3	1.98	31.77			P	H
		434.4	25.93	-20.07	46	31.06	23.02	3.68	31.83			P	H
		748	31.51	-14.49	46	32.21	27.66	3.62	31.98	100	0	P	H
		977.6	34.51	-19.49	54	30.89	30.54	3.89	30.81			P	H
													H
													H
													H
													H
													H
													H
		30.54	31.79	-8.21	40	37.51	25.18	0.93	31.83	100	95	P	V
		116.67	25.02	-18.48	43.5	37.8	17.52	1.48	31.78			P	V
		255.72	23.75	-22.25	46	34.24	19.3	1.98	31.77			P	V
		422.5	26.27	-19.73	46	31.59	22.82	3.68	31.82			P	V
		734.7	31.58	-14.42	46	32.65	27.39	3.54	32			P	V
		990.9	35.42	-18.58	54	31.69	30.52	3.92	30.71			P	V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

Band 1 - 5150~5250MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 36 5180MHz		5145	51.78	-22.22	74	43.44	31.58	10.23	33.47	194	121	P	H
		5148.5	44.44	-9.56	54	36.1	31.58	10.23	33.47	194	121	P	H
	*	5180	103.34	-	-	94.96	31.62	10.23	33.47	194	121	P	H
	*	5180	96.74	-	-	88.36	31.62	10.23	33.47	194	121	A	H
													H
													H
		5149	57.73	-16.27	74	49.39	31.58	10.23	33.47	240	111	P	V
		5146.75	52.19	-1.81	54	43.85	31.58	10.23	33.47	240	111	P	V
	*	5180	111.53	-	-	103.15	31.62	10.23	33.47	240	111	P	V
	*	5180	104.28	-	-	95.9	31.62	10.23	33.47	240	111	A	V
													V
													V
802.11a CH 44 5220MHz		5053.04	48.85	-25.15	74	40.66	31.46	10.2	33.47	245	71	P	H
		5144.82	40.14	-13.86	54	31.8	31.58	10.23	33.47	245	71	A	H
	*	5220	107.7	-	-	99.27	31.66	10.24	33.47	245	71	P	H
	*	5220	99.83	-	-	91.4	31.66	10.24	33.47	245	71	A	H
		5441.28	52.42	-21.58	74	43.14	31.92	10.84	33.48	245	71	P	H
		5430.96	44.95	-9.05	54	35.67	31.92	10.84	33.48	245	71	P	H
		5143.26	52.86	-21.14	74	44.52	31.58	10.23	33.47	237	111	P	V
		5147.42	45.12	-8.88	54	36.78	31.58	10.23	33.47	237	111	P	V
	*	5220	113.56	-	-	105.13	31.66	10.24	33.47	237	111	P	V
	*	5220	105.14	-	-	96.71	31.66	10.24	33.47	237	111	A	V
		5434.8	51.8	-22.2	74	42.52	31.92	10.84	33.48	237	111	P	V
		5430.48	45.44	-8.56	54	36.16	31.92	10.84	33.48	237	111	A	V

802.11a CH 48 5240MHz		5005.46	49.36	-24.64	74	41.22	31.42	10.19	33.47	245	72	P	H
		5133.12	39.91	-14.09	54	31.6	31.56	10.22	33.47	245	72	A	H
	*	5240	108.95	-	-	100.37	31.68	10.37	33.47	245	72	P	H
	*	5240	100.73	-	-	92.15	31.68	10.37	33.47	245	72	A	H
		5451.84	50.35	-23.65	74	41.05	31.94	10.84	33.48	245	72	P	H
		5450.88	43.5	-10.5	54	34.2	31.94	10.84	33.48	245	72	P	H
		5013.26	50.47	-23.53	74	42.33	31.42	10.19	33.47	247	111	P	V
		5087.1	43.95	-10.05	54	35.71	31.5	10.21	33.47	247	111	P	V
	*	5240	111.43	-	-	102.85	31.68	10.37	33.47	247	111	P	V
	*	5240	104.27	-	-	95.69	31.68	10.37	33.47	247	111	A	V
		5458.56	52.49	-21.51	74	43.19	31.94	10.84	33.48	247	111	P	V
		5451.36	45.41	-8.59	54	36.11	31.94	10.84	33.48	247	111	A	V
Remark	3. No other spurious found. 4. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 36 5180MHz		10360	50.8	-23.2	74	63.65	39.79	14.86	67.5	400	0	P	H
		15540	39.59	-34.41	74	48.49	38.6	17.89	65.39	100	0	P	H
													H
													H
		10360	49.51	-24.49	74	62.36	39.79	14.86	67.5	400	0	P	V
		15540	39.4	-34.6	74	48.3	38.6	17.89	65.39	100	0	P	V
													V
													V
802.11a CH 44 5220MHz		10440	54.17	-14.13	68.3	66.87	39.89	14.91	67.5			P	H
		15660	41.04	-32.96	74	50.24	38.23	17.94	65.37			P	H
													H
													H
		10440	52.98	-15.32	68.3	65.68	39.89	14.91	67.5			P	V
		15660	40.39	-33.61	74	49.59	38.23	17.94	65.37			P	V
													V
													V
802.11a CH 48 5240MHz		10480	54.49	-13.81	68.3	67.08	39.97	14.94	67.5	100	0	P	H
		15720	40.21	-33.79	74	49.57	38.03	17.97	65.36	100	0	P	H
													H
													H
		10480	51.59	-16.71	68.3	64.18	39.97	14.94	67.5	100	0	P	V
		15720	42.16	-31.84	74	51.52	38.03	17.97	65.36	100	0	P	V
													V
													V
Remark	3. No other spurious found. 4. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT20 CH 36 5180MHz		5149.75	53.85	-20.15	74	45.51	31.58	10.23	33.47	245	79	P	H
		5149	43.97	-10.03	54	35.63	31.58	10.23	33.47	245	79	A	H
	*	5180	104.39	-	-	96.01	31.62	10.23	33.47	245	79	P	H
	*	5180	97.18	-	-	88.8	31.62	10.23	33.47	245	79	A	H
													H
													H
		5146.75	61.18	-12.82	74	52.84	31.58	10.23	33.47	242	111	P	V
		5149.5	52.84	-1.16	54	44.5	31.58	10.23	33.47	242	111	P	V
	*	5180	111.49	-	-	103.11	31.62	10.23	33.47	242	111	P	V
	*	5180	94.38	-	-	86	31.62	10.23	33.47	242	111	A	V
													V
													V
802.11n HT20 CH 44 5220MHz		5146.64	48.19	-25.81	74	39.85	31.58	10.23	33.47	242	71	P	H
		5149.76	40.23	-13.77	54	31.89	31.58	10.23	33.47	242	71	A	H
	*	5220	107.57	-	-	99.14	31.66	10.24	33.47	242	71	P	H
	*	5220	99.99	-	-	91.56	31.66	10.24	33.47	242	71	A	H
		5376	51.35	-22.65	74	42.24	31.84	10.75	33.48	242	71	P	H
		5430.96	44.34	-9.66	54	35.06	31.92	10.84	33.48	242	71	P	H
		5148.98	51.61	-22.39	74	43.27	31.58	10.23	33.47	237	111	P	V
		5150	45.53	-8.47	54	37.19	31.58	10.23	33.47	237	111	P	V
	*	5220	113.15	-	-	104.72	31.66	10.24	33.47	237	111	P	V
	*	5220	104.63	-	-	96.2	31.66	10.24	33.47	237	111	A	V
		5430	52.49	-21.51	74	43.21	31.92	10.84	33.48	237	111	P	V
		5429.28	45.48	-8.52	54	36.2	31.92	10.84	33.48	237	111	A	V

802.11n HT20 CH 48 5240MHz		5089.85	49.1	-24.9	74	40.84	31.52	10.21	33.47	246	71	P	H
		5029.9	39.81	-14.19	54	31.64	31.44	10.2	33.47	246	71	A	H
	*	5240	108.93	-	-	100.35	31.68	10.37	33.47	246	71	P	H
	*	5240	100.5	-	-	91.92	31.68	10.37	33.47	246	71	A	H
		5451.12	50.67	-23.33	74	41.37	31.94	10.84	33.48	246	71	P	H
		5449.92	43.63	-10.37	54	34.33	31.94	10.84	33.48	246	71	P	H
		5083.2	50.91	-23.09	74	42.67	31.5	10.21	33.47	239	110	P	V
		5085.28	43.28	-10.72	54	35.04	31.5	10.21	33.47	239	110	P	V
	*	5240	111.65	-	-	103.07	31.68	10.37	33.47	239	110	P	V
	*	5240	103.89	-	-	95.31	31.68	10.37	33.47	239	110	A	V
		5454.24	53.08	-20.92	74	43.78	31.94	10.84	33.48	239	111	P	V
		5458.08	45.29	-8.71	54	35.99	31.94	10.84	33.48	239	111	A	V
Remark	3. No other spurious found. 4. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT20 CH 36 5180MHz		10360	50.27	-23.73	74	63.12	39.79	14.86	67.5	100	0	P	H
		15540	41.04	-32.96	74	49.94	38.6	17.89	65.39	100	0	P	H
													H
													H
		10360	50.04	-23.96	74	62.89	39.79	14.86	67.5	100	0	P	V
		15540	39.46	-34.54	74	48.36	38.6	17.89	65.39	100	0	P	V
													V
													V
802.11n HT20 CH 44 5220MHz		10440	53.08	-15.22	68.3	65.78	39.89	14.91	67.5	100	0	P	H
		15660	41.17	-32.83	74	50.37	38.23	17.94	65.37	100	0	P	H
													H
													H
		10440	51.66	-16.64	68.3	64.36	39.89	14.91	67.5	100	0	P	V
		15660	41.32	-32.68	74	50.52	38.23	17.94	65.37	100	0	P	V
													V
													V
802.11n HT20 CH 48 5240MHz		10480	53.35	-14.95	68.3	65.94	39.97	14.94	67.5	100	0	P	H
		15720	40.13	-33.87	74	49.49	38.03	17.97	65.36	100	0	P	H
													H
													H
		10480	52.46	-15.84	68.3	65.05	39.97	14.94	67.5	100	0	P	V
		15720	44.07	-29.93	74	53.43	38.03	17.97	65.36	100	0	P	V
													V
													V
Remark	3. No other spurious found. 4. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT40 CH 38 5190MHz		5146.12	53.86	-20.14	74	45.52	31.58	10.23	33.47	242	72	P	H
		5149.76	44.94	-9.06	54	36.6	31.58	10.23	33.47	242	72	P	H
	*	5190	96.35	-	-	87.96	31.62	10.24	33.47	242	72	P	H
	*	5190	89.36	-	-	80.97	31.62	10.24	33.47	242	72	A	H
		5394.72	48.72	-25.28	74	39.45	31.88	10.87	33.48	242	72	P	H
		5361.36	40.7	-13.3	54	31.59	31.84	10.75	33.48	242	72	A	H
		5147.16	60.28	-13.72	74	51.94	31.58	10.23	33.47	240	111	P	V
		5150	52.87	-1.13	54	44.53	31.58	10.23	33.47	240	111	P	V
	*	5190	104.18	-	-	95.79	31.62	10.24	33.47	240	111	P	V
	*	5190	95.53	-	-	87.14	31.62	10.24	33.47	240	111	A	V
		5356.8	48.45	-25.55	74	39.36	31.82	10.75	33.48	240	111	P	V
		5362.08	40.55	-13.45	54	31.44	31.84	10.75	33.48	240	111	P	V
802.11n HT40 CH 46 5230MHz		5106.6	53.07	-20.93	74	44.78	31.54	10.22	33.47	245	72	P	H
		5148.72	45.1	-8.9	54	36.76	31.58	10.23	33.47	245	72	P	H
	*	5230	106.22	-	-	97.64	31.68	10.37	33.47	245	72	P	H
	*	5230	98.08	-	-	89.5	31.68	10.37	33.47	245	72	A	H
		5360.16	51.16	-22.84	74	42.07	31.82	10.75	33.48	245	72	P	H
		5350.8	43.73	-10.27	54	34.64	31.82	10.75	33.48	245	72	P	H
		5138.32	58.23	-15.77	74	49.92	31.56	10.22	33.47	238	111	P	V
		5150.02	51.07	-2.93	54	42.73	31.58	10.23	33.47	238	111	P	V
	*	5230	108.41	-	-	99.83	31.68	10.37	33.47	238	111	P	V
	*	5230	100.31	-	-	91.73	31.68	10.37	33.47	238	111	A	V
		5368.08	51.42	-22.58	74	42.31	31.84	10.75	33.48	238	111	P	V
		5350.56	43.62	-10.38	54	34.53	31.82	10.75	33.48	238	111	P	V
Remark	3. No other spurious found. 4. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT40 CH 38 5190MHz		10380	42.8	-31.2	74	55.63	39.81	14.86	67.5	100	0	P	H
		15570	39.44	-34.56	74	48.44	38.49	17.9	65.39	100	0	P	H
													H
													H
		10380	42.43	-31.57	74	55.26	39.81	14.86	67.5	100	0	P	V
		15570	38.74	-35.26	74	47.74	38.49	17.9	65.39	100	0	P	V
													V
													V
802.11n HT40 CH 46 5230MHz		10460	49.77	-24.23	74	62.44	39.92	14.91	67.5	100	0	P	H
		15690	38.44	-35.56	74	47.71	38.13	17.96	65.36	100	0	P	H
													H
													H
		10460	48.98	-25.02	74	61.65	39.92	14.91	67.5	100	0	P	V
		15690	39.05	-34.95	74	48.32	38.13	17.96	65.36	100	0	P	V
													V
													V

Remark

3. No other spurious found.
4. All results are PASS against Peak and Average limit line.

Band 1 5150~5250MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ac VHT80 CH 42 5210MHz		5145.34	50.84	-23.16	74	42.5	31.58	10.23	33.47	104	161	P	H
		5148.2	45.96	-8.04	54	37.62	31.58	10.23	33.47	104	161	P	H
	*	5210	91.41	-	-	82.98	31.66	10.24	33.47	104	161	P	H
	*	5210	85.25	-	-	76.82	31.66	10.24	33.47	104	161	A	H
		5390.16	48.53	-25.47	74	39.28	31.86	10.87	33.48	104	161	P	H
		5421.36	41.57	-12.43	54	32.31	31.9	10.84	33.48	104	161	A	H
		5122.46	57.23	-16.77	74	48.94	31.54	10.22	33.47	255	87	P	V
		5148.98	52.42	-1.58	54	44.08	31.58	10.23	33.47	255	87	P	V
	*	5210	100.73	-	-	92.3	31.66	10.24	33.47	255	87	P	V
	*	5210	94.15	-	-	85.72	31.66	10.24	33.47	255	87	A	V
		5408.16	49.27	-24.73	74	40	31.88	10.87	33.48	255	87	P	V
		5351.04	42.03	-11.97	54	32.94	31.82	10.75	33.48	255	87	A	V
Remark	3. No other spurious found. 4. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ac VHT80 CH 42 5210MHz		10420	41.83	-32.17	74	54.57	39.87	14.89	67.5	100	0	P	H
		15630	37.32	-36.68	74	46.46	38.29	17.94	65.37	100	0	P	H
													H
													H
		10420	41.31	-32.69	74	54.05	39.87	14.89	67.5	100	0	P	V
		15630	37.36	-36.64	74	46.5	38.29	17.94	65.37	100	0	P	V
													V
													V
Remark	3. No other spurious found. 4. All results are PASS against Peak and Average limit line.												

Emission below 1GHz

WIFI 802.11n HT40 (LF @ 3m)

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 LF		30.27	24.83	-15.17	40	30.03	25.7	0.93	31.83			P	H
		149.07	24.03	-19.47	43.5	36.68	17.45	1.68	31.78			P	H
		260.85	22.31	-23.69	46	32.29	19.66	2.13	31.77			P	H
		482.7	27.02	-18.98	46	32.21	23.82	2.86	31.87			P	H
		774.6	31.6	-14.4	46	31.93	28	3.62	31.95	100	0	P	H
		988.8	34.74	-19.26	54	31.03	30.52	3.92	30.73			P	H
													H
													H
													H
													H
													H
													H
		30.54	30.94	-9.06	40	36.66	25.18	0.93	31.83	100	100	P	V
		116.13	25.17	-18.33	43.5	37.95	17.52	1.48	31.78			P	V
		259.77	24.58	-21.42	46	34.67	19.7	1.98	31.77			P	V
		422.5	26.43	-19.57	46	31.75	22.82	3.68	31.82			P	V
		739.6	30.21	-15.79	46	31.16	27.5	3.54	31.99			P	V
		976.9	34.87	-19.13	54	31.25	30.55	3.89	30.82			P	V
													V
													V
													V
													V
													V
													V
Remark	3. No other spurious found. 4. All results are PASS against limit line.												

Band 1 - 5150~5250MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 36 5180MHz		5144	59.96	-14.04	74	49.31	34.66	11.21	35.22	200	359	P	H
		5149.1	48.91	-5.09	54	38.26	34.66	11.21	35.22	200	359	A	H
	*	5180	108.71	-	-	97.98	34.74	11.21	35.22	200	359	P	H
	*	5180	101.84	-	-	91.11	34.74	11.21	35.22	200	359	A	H
													H
													H
		5149.7	62.15	-11.85	74	51.5	34.66	11.21	35.22	191	61	P	V
		5148.95	53.19	-0.81	54	42.54	34.66	11.21	35.22	191	61	A	V
	*	5180	113.33	-	-	102.6	34.74	11.21	35.22	191	61	P	V
	*	5180	107.16	-	-	96.43	34.74	11.21	35.22	191	61	A	V
													V
													V
802.11a CH 44 5220MHz		5120.12	50.13	-23.87	74	39.59	34.58	11.18	35.22	192	351	P	H
		5149.5	43.05	-10.95	54	32.4	34.66	11.21	35.22	192	351	A	H
	*	5218	110.07	-	-	99.22	34.82	11.25	35.22	192	351	P	H
	*	5218	105.01	-	-	94.16	34.82	11.25	35.22	192	351	A	H
		5441.76	50.41	-23.59	74	38.42	35.34	11.89	35.24	192	351	P	H
		5442	44.91	-9.09	54	32.92	35.34	11.89	35.24	192	351	A	H
		5147.42	53.58	-20.42	74	42.93	34.66	11.21	35.22	190	67	P	V
		5149.5	47.94	-6.06	54	37.29	34.66	11.21	35.22	190	67	A	V
	*	5218	116.2	-	-	105.35	34.82	11.25	35.22	190	67	P	V
	*	5218	109.53	-	-	98.68	34.82	11.25	35.22	190	67	A	V
		5431.2	54.93	-19.07	74	42.94	35.34	11.89	35.24	190	67	P	V
		5440.8	49.9	-4.1	54	37.91	35.34	11.89	35.24	190	67	A	V

802.11a CH 48 5240MHz		5034.06	50.43	-23.57	74	40.15	34.38	11.11	35.21	196	349	P	H
		5125.84	42.07	-11.93	54	31.49	34.62	11.18	35.22	196	349	A	H
	*	5242	111.28	-	-	100.22	34.9	11.38	35.22	196	349	P	H
	*	5242	103.76	-	-	92.7	34.9	11.38	35.22	196	349	A	H
		5454.24	51.21	-22.79	74	39.18	35.38	11.89	35.24	196	349	P	H
		5457.36	45.25	-8.75	54	33.22	35.38	11.89	35.24	196	349	A	H
		5128.18	52.58	-21.42	74	42	34.62	11.18	35.22	198	66	P	V
		5024.96	44.78	-9.22	54	34.5	34.38	11.11	35.21	198	66	A	V
	*	5242	116.83	-	-	105.77	34.9	11.38	35.22	198	66	P	V
	*	5242	109.28	-	-	98.22	34.9	11.38	35.22	198	66	A	V
		5451.84	54.41	-19.59	74	42.38	35.38	11.89	35.24	198	66	P	V
		5456.4	49.55	-4.45	54	37.52	35.38	11.89	35.24	198	66	A	V
Remark	5. No other spurious found. 6. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 36 5180MHz		10365	55.66	-12.64	68.3	60.33	37.37	17.17	59.21	200	6	P	H
		15534	46.88	-27.12	74	44.09	40.36	19.61	57.18	100	0	P	H
													H
													H
		10360	53.18	-15.12	68.3	57.85	37.37	17.17	59.21	200	94	P	V
		15546	48.58	-25.42	74	45.73	40.39	19.63	57.17	100	0	P	V
													V
													V
802.11a CH 44 5220MHz		10444	59.23	-9.07	68.3	63.75	37.45	17.17	59.14	100	0	P	H
		15660	49.89	-24.11	74	46.74	40.58	19.68	57.11	100	0	P	H
													H
													H
		10444	58.28	-10.02	68.3	62.8	37.45	17.17	59.14	100	0	P	V
		15660	50.58	-23.42	74	47.43	40.58	19.68	57.11	100	89	P	V
		15660	41.21	-12.79	54	38.06	40.58	19.68	57.11	100	89	A	V
													V
802.11a CH 48 5240MHz		10482	58.93	-9.37	68.3	63.39	37.48	17.17	59.11	100	0	P	H
		15720	51.72	-22.28	74	48.36	40.7	19.73	57.07	198	8	P	H
		15720	42.62	-11.38	54	39.26	40.7	19.73	57.07	198	8	A	H
													H
		10480	56.79	-11.51	68.3	61.25	37.48	17.17	59.11	100	0	P	V
		15720	52.74	-21.26	74	49.38	40.7	19.73	57.07	100	136	P	V
		15720	43.48	-10.52	54	40.12	40.7	19.73	57.07	100	136	A	V
													V
Remark	5. No other spurious found. 6. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT20 CH 36 5180MHz		5147	57.02	-16.98	74	46.37	34.66	11.21	35.22	200	359	P	H
		5149.85	48.7	-5.3	54	38.05	34.66	11.21	35.22	200	359	A	H
	*	5182	107.38	-	-	96.61	34.74	11.25	35.22	200	359	P	H
	*	5182	99.92	-	-	89.15	34.74	11.25	35.22	200	359	A	H
													H
													H
		5149.85	61.84	-12.16	74	51.19	34.66	11.21	35.22	197	60	P	V
		5149.55	53.19	-0.81	54	42.54	34.66	11.21	35.22	197	60	P	V
	*	5182	112.18	-	-	101.41	34.74	11.25	35.22	197	60	P	V
	*	5182	105.89	-	-	95.12	34.74	11.25	35.22	197	60	A	V
													V
													V
802.11n HT20 CH 44 5220MHz		5103.74	51.01	-22.99	74	40.51	34.54	11.18	35.22	197	357	P	H
		5149.76	44.98	-9.02	54	34.33	34.66	11.21	35.22	197	357	A	H
	*	5212	103.28	-	-	92.43	34.82	11.25	35.22	197	357	A	H
	*	5220	110.42	-	-	99.57	34.82	11.25	35.22	197	357	P	H
		5440.56	50.97	-23.03	74	38.98	35.34	11.89	35.24	197	357	P	H
		5431.92	43.77	-10.23	54	31.78	35.34	11.89	35.24	197	357	A	H
		5147.68	55.63	-18.37	74	44.98	34.66	11.21	35.22	179	63	P	V
		5150	49.17	-4.83	54	38.52	34.66	11.21	35.22	179	63	A	V
	*	5224	115.56	-	-	104.58	34.82	11.38	35.22	179	63	P	V
	*	5224	109.27	-	-	98.29	34.82	11.38	35.22	179	63	A	V
		5429.64	56.01	-17.99	74	44.02	35.34	11.89	35.24	179	63	P	V
		5430.08	50.31	-3.69	54	38.32	35.34	11.89	35.24	179	63	A	V

802.11n HT20 CH 48 5240MHz		5139.88	50.65	-23.35	74	40.03	34.66	11.18	35.22	197	351	P	H
		5130	42.03	-11.97	54	31.45	34.62	11.18	35.22	197	351	A	H
	*	5242	109.15	-	-	98.09	34.9	11.38	35.22	197	351	P	H
	*	5242	104.3	-	-	93.24	34.9	11.38	35.22	197	351	A	H
		5457.6	50.51	-23.49	74	38.48	35.38	11.89	35.24	197	351	P	H
		5457.84	43.99	-10.01	54	31.96	35.38	11.89	35.24	197	351	A	H
		5084.5	52.53	-21.47	74	42.11	34.5	11.14	35.22	198	61	P	V
		5016.12	45.08	-8.92	54	34.88	34.34	11.07	35.21	198	61	A	V
	*	5236	115.34	-	-	104.32	34.86	11.38	35.22	198	61	P	V
	*	5236	108.62	-	-	97.6	34.86	11.38	35.22	198	61	A	V
		5459.52	56.55	-17.45	74	44.52	35.38	11.89	35.24	198	61	P	V
		5449.92	49.71	-4.29	54	37.68	35.38	11.89	35.24	198	61	A	V
Remark	5. No other spurious found. 6. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT20 CH 36 5180MHz		10360	52.84	-15.46	68.3	57.51	37.37	17.17	59.21	100	0	P	H
		15540	44.62	-29.38	74	41.83	40.36	19.61	57.18	100	0	P	H
													H
													H
		10360	51.34	-16.96	68.3	56.01	37.37	17.17	59.21	100	0	P	V
		15540	44.6	-29.4	74	41.81	40.36	19.61	57.18	100	0	P	V
													V
													V
802.11n HT20 CH 44 5220MHz		10440	57.79	-10.51	68.3	62.34	37.43	17.17	59.15	100	0	P	H
		15660	47.75	-26.25	74	44.6	40.58	19.68	57.11	100	0	P	H
													H
													H
		10440	55.39	-12.91	68.3	59.94	37.43	17.17	59.15	100	0	P	V
		15660	48.9	-25.1	74	45.75	40.58	19.68	57.11	100	0	P	V
													V
													V
802.11n HT20 CH 48 5240MHz		10480	57.6	-10.7	68.3	62.06	37.48	17.17	59.11	100	0	P	H
		15720	49.34	-24.66	74	45.98	40.7	19.73	57.07	100	0	P	H
													H
													H
		10480	55.66	-12.64	68.3	60.12	37.48	17.17	59.11	100	0	P	V
		15720	50.99	-23.01	74	47.63	40.7	19.73	57.07	100	112	P	V
		15720	41.94	-12.06	54	38.58	40.7	19.73	57.07	100	112	A	V
													V
Remark	5. No other spurious found. 6. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT40 CH 38 5190MHz		5059.02	51.04	-22.96	74	40.68	34.46	11.11	35.21	182	353	P	H
		5149.5	46.99	-7.01	54	36.34	34.66	11.21	35.22	182	353	A	H
	*	5188	98.02	-	-	87.25	34.74	11.25	35.22	182	353	P	H
	*	5188	92.18	-	-	81.41	34.74	11.25	35.22	182	353	A	H
		5445.84	48.49	-25.51	74	36.46	35.38	11.89	35.24	182	353	P	H
		5455.68	41.79	-12.21	54	29.76	35.38	11.89	35.24	182	353	A	H
		5149.5	58.39	-15.61	74	47.74	34.66	11.21	35.22	190	61	P	V
		5149.5	52.39	-1.61	54	41.74	34.66	11.21	35.22	190	61	A	V
	*	5200	104.1	-	-	93.29	34.78	11.25	35.22	190	61	P	V
	*	5200	97.38	-	-	86.57	34.78	11.25	35.22	190	61	A	V
		5408.16	50.39	-23.61	74	38.47	35.26	11.89	35.23	190	61	P	V
		5353.44	42.04	-11.96	54	30.37	35.14	11.76	35.23	190	61	A	V
802.11n HT40 CH 46 5230MHz		5147.42	54.29	-19.71	74	43.64	34.66	11.21	35.22	190	355	P	H
		5149.5	49.89	-4.11	54	39.24	34.66	11.21	35.22	190	355	P	H
	*	5230	107.89	-	-	96.87	34.86	11.38	35.22	190	355	P	H
	*	5230	100.23	-	-	89.21	34.86	11.38	35.22	190	355	A	H
		5426.16	49.93	-24.07	74	37.98	35.3	11.89	35.24	190	355	P	H
		5457.36	42.14	-11.86	54	30.11	35.38	11.89	35.24	190	355	A	H
		5148.46	62.05	-11.95	74	51.4	34.66	11.21	35.22	188	60	P	V
		5146.38	53.25	-0.75	54	42.6	34.66	11.21	35.22	188	60	A	V
	*	5230	111.54	-	-	100.52	34.86	11.38	35.22	188	60	P	V
	*	5230	105.27	-	-	94.25	34.86	11.38	35.22	188	60	A	V
		5358.96	51.8	-22.2	74	40.13	35.14	11.76	35.23	188	60	P	V
		5351.04	45.55	-8.45	54	33.88	35.14	11.76	35.23	188	60	A	V
Remark	5. No other spurious found. 6. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT40 CH 38 5190MHz		10380	43.83	-24.47	68.3	48.47	37.38	17.17	59.19	100	0	P	H
		15570	44.63	-29.37	74	41.74	40.42	19.63	57.16	100	0	P	H
													H
													H
		10380	43.32	-24.98	68.3	47.96	37.38	17.17	59.19	100	0	P	V
		15570	44.55	-29.45	74	41.66	40.42	19.63	57.16	100	0	P	V
													V
													V
802.11n HT40 CH 46 5230MHz		10460	54.53	-13.77	68.3	59.05	37.45	17.17	59.14	100	0	P	H
		15690	44.93	-29.07	74	41.68	40.64	19.7	57.09	100	0	P	H
													H
													H
		10460	51.93	-16.37	68.3	56.45	37.45	17.17	59.14	100	0	P	V
		15690	46.63	-27.37	74	43.38	40.64	19.7	57.09	100	0	P	V
													V
													V

Remark

5. No other spurious found.
6. All results are PASS against Peak and Average limit line.

Band 1 5150~5250MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ac VHT80 CH 42 5210MHz		5145.08	53.44	-20.56	74	42.79	34.66	11.21	35.22	180	355	P	H
		5149.76	48.57	-5.43	54	37.92	34.66	11.21	35.22	180	355	A	H
	*	5210	95.97	-	-	85.12	34.82	11.25	35.22	180	355	P	H
	*	5210	89.52	-	-	78.67	34.82	11.25	35.22	180	355	A	H
		5458.08	48.68	-25.32	74	36.65	35.38	11.89	35.24	180	355	P	H
		5457.84	42.95	-11.05	54	30.92	35.38	11.89	35.24	180	355	A	H
		5148.98	56.92	-17.08	74	46.27	34.66	11.21	35.22	200	33	P	V
		5142.22	52.11	-1.89	54	41.46	34.66	11.21	35.22	200	33	A	V
	*	5210	100.9	-	-	90.05	34.82	11.25	35.22	200	33	P	V
	*	5210	94.69	-	-	83.84	34.82	11.25	35.22	200	33	A	V
		5432.88	49.57	-24.43	74	37.58	35.34	11.89	35.24	200	33	P	V
		5406.96	43.55	-10.45	54	31.63	35.26	11.89	35.23	200	33	A	V
Remark	5. No other spurious found. 6. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ac VHT80 CH 42 5210MHz		10420	43.1	-25.2	68.3	47.68	37.42	17.17	59.17	100	0	P	H
		15630	44.06	-29.94	74	40.95	40.55	19.68	57.12	100	0	P	H
													H
													H
		10420	43.69	-24.61	68.3	48.27	37.42	17.17	59.17	100	0	P	V
		15630	44.81	-29.19	74	41.7	40.55	19.68	57.12	100	0	P	V
													V
													V
Remark	5. No other spurious found. 6. All results are PASS against Peak and Average limit line.												

Emission below 1GHz

WIFI 802.11n VHT80 (LF @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n VHT80 LF		30.27	28.09	-11.91	40	32.37	26	1.07	31.35			P	H
		229.8	36.72	-9.28	46	48.87	17.2	2.07	31.42			P	H
		240.33	41.2	-4.8	46	52.43	18.09	2.07	31.39	100	0	P	H
		390.3	37.47	-8.53	46	43.82	22.16	2.67	31.18			P	H
		427.4	37.87	-8.13	46	43.32	22.79	2.89	31.13			P	H
		979.7	33.95	-20.05	54	30.14	30.26	4.07	30.52			P	H
													H
													H
													H
													H
													H
													H
		30.54	28.14	-11.86	40	32.97	25.46	1.07	31.36			P	V
		236.28	36	-10	46	47.57	17.76	2.07	31.4			P	V
		248.43	39.14	-6.86	46	49.63	18.82	2.07	31.38			P	V
		325.2	29.43	-16.57	46	37.77	20.5	2.41	31.25			P	V
		430.9	42.18	-3.82	46	47.58	22.83	2.89	31.12	100	0	P	V
		986	34.03	-19.97	54	30.3	30.27	3.98	30.52			P	V
													V
													V
													V
													V
													V
													V
Remark	5. No other spurious found. 6. All results are PASS against limit line.												

Note symbol

*	**Fundamental Frequency** which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
!	Test result is **over limit** line.
P/A	**P**eak or **A**verage
H/V	**H**orizontal or **V**ertical

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

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (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. Level(dBμV/m) =

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

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

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

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

= 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

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

= 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)

= 43.54 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

= -10.46(dB)

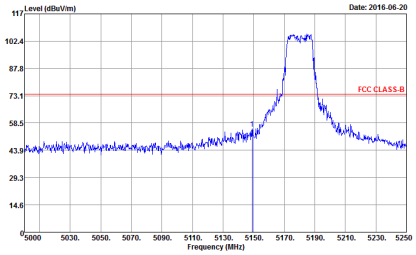
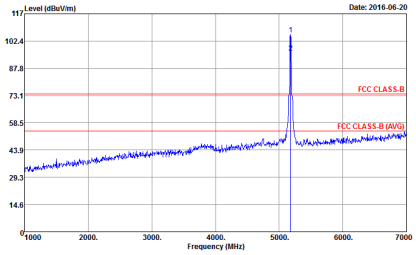
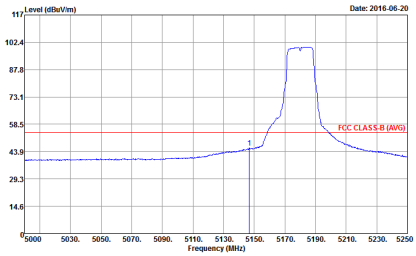
Both peak and average measured complies with the limit line, so test result is “PASS”.

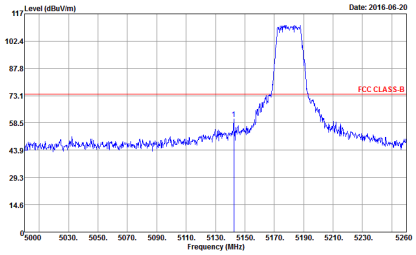
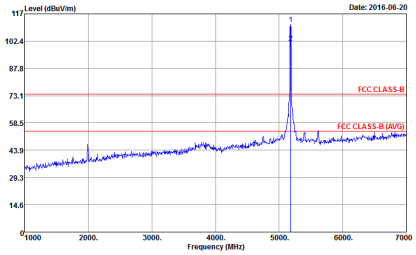
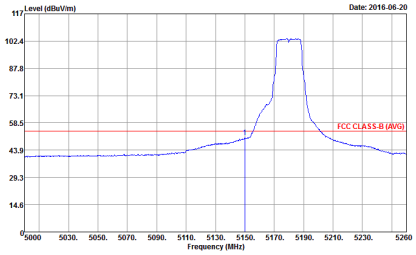
Appendix C. Radiated Spurious Emission

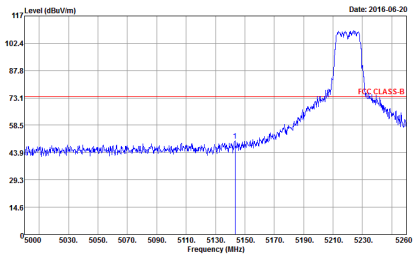
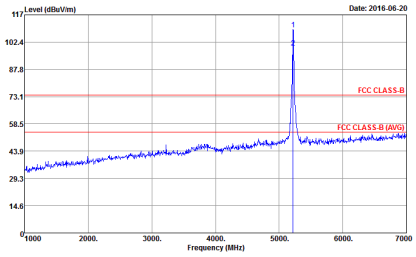
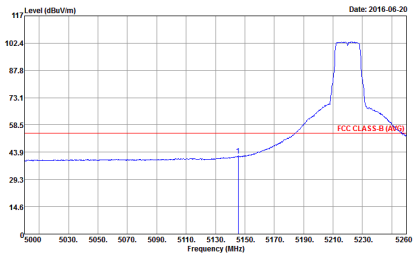
Test Engineer :	Luke Chang, Jesse Wang, and James Chiu	**Temperature :**	21~24°C
		Relative Humidity :	50~54%

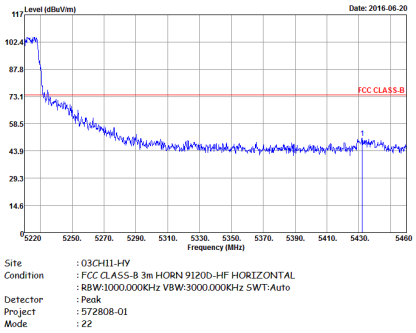
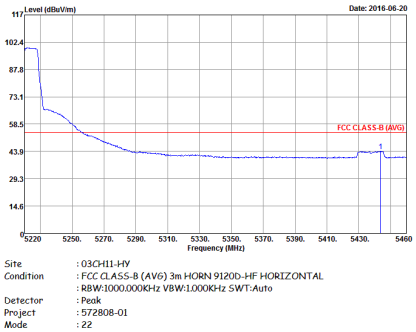
Band 1 - 5150~5250MHz

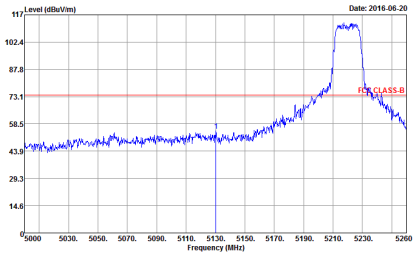
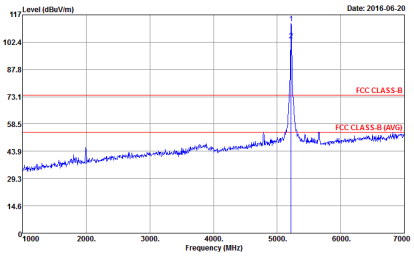
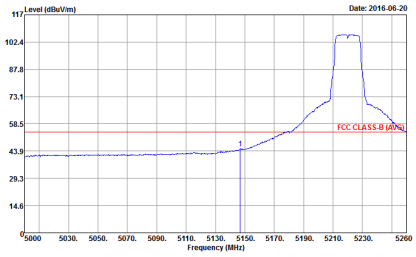
WIFI 802.11a (Band Edge and Fundamental @ 3m)

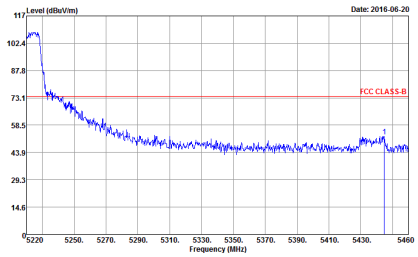
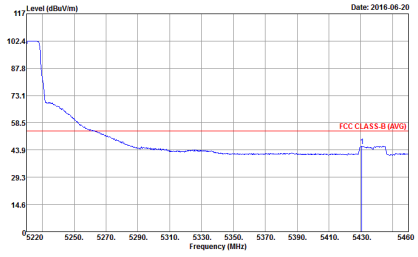
WIFI	Band 1 5150~5250MHz Band Edge and Fundamental @ 3m	
ANT	802.11a CH36 5180MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 21 Setting : 17	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 21 Setting : 17
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 21 Setting : 17	

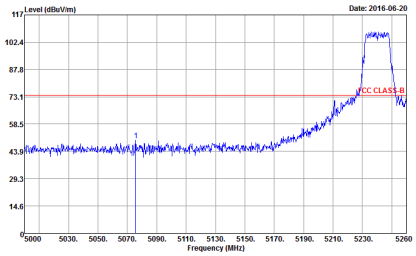
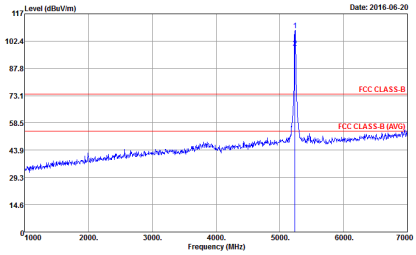
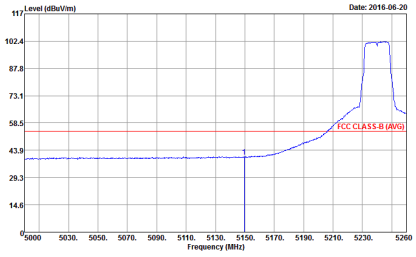
WIFI	Band 1 5150~5250MHz Band Edge and Fundamental @ 3m	
ANT	802.11a CH36 5180MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 21 Setting : 17	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 21 Setting : 17
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 21 Setting : 17	

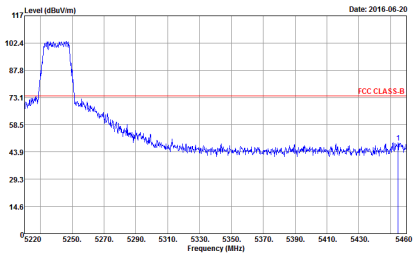
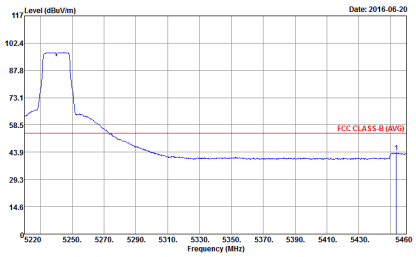
WIFI	Band 1 5150~5250MHz Band Edge and Fundamental @ 3m	
ANT	802.11a CH44 5220MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 22	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 22
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 22	

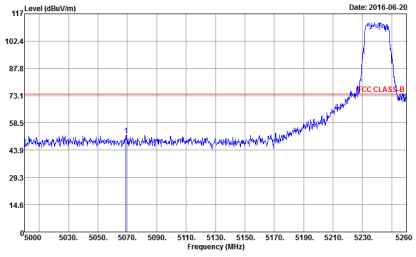
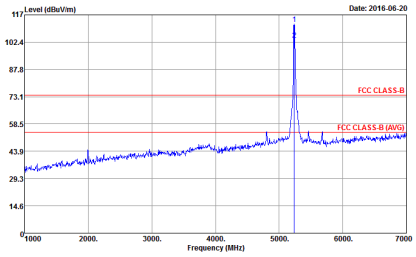
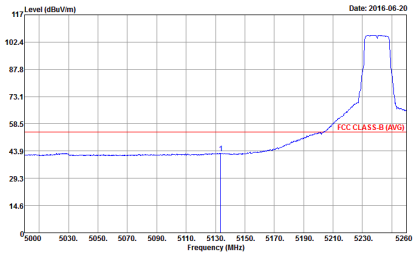
WIFI	Band 1 5150~5250MHz Band Edge and Fundamental @ 3m	
ANT	802.11a CH44 5220MHz - R	
1	Horizontal	
Peak		
Avg.		

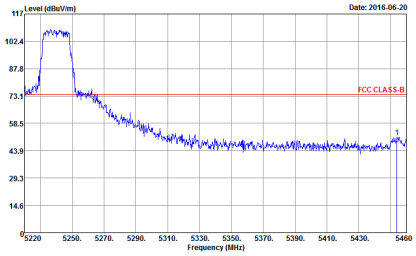
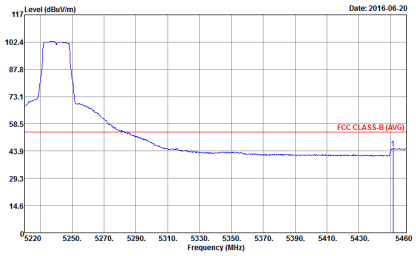
WIFI	Band 1 5150~5250MHz Band Edge and Fundamental @ 3m	
ANT	802.11a CH44 5220MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 22	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 22
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 22	

WIFI	Band 1 5150~5250MHz Band Edge and Fundamental @ 3m	
ANT	802.11a CH44 5220MHz - R	
1	Vertical	
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 22	
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 22	

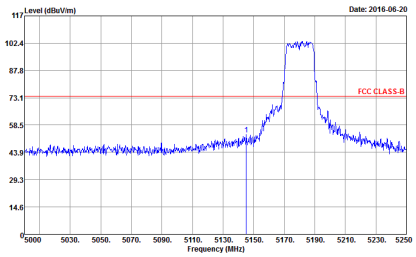
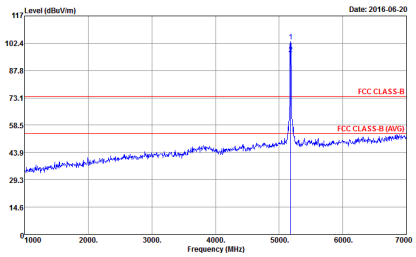
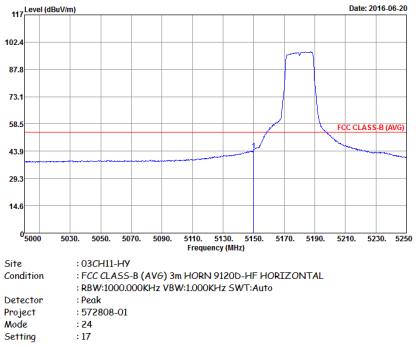
WIFI	Band 1 5150~5250MHz Band Edge and Fundamental @ 3m	
ANT	802.11a CH48 5240MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 23	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 23
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 23	

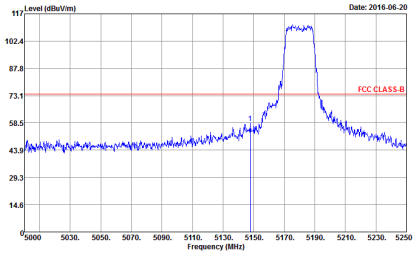
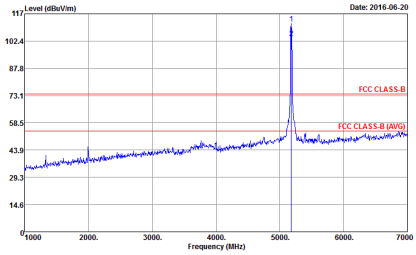
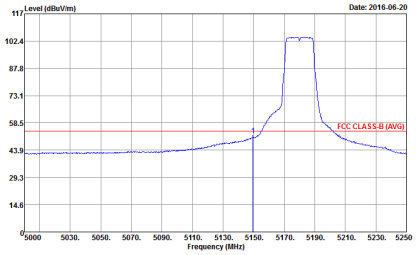
WIFI	Band 1 5150~5250MHz Band Edge and Fundamental @ 3m	
ANT	802.11a CH48 5240MHz - R	
1	Horizontal	
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 23	
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 23	

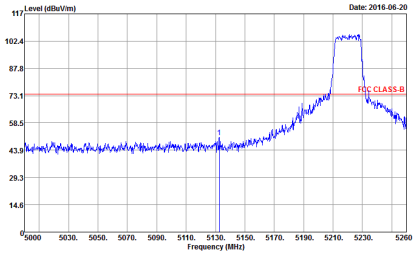
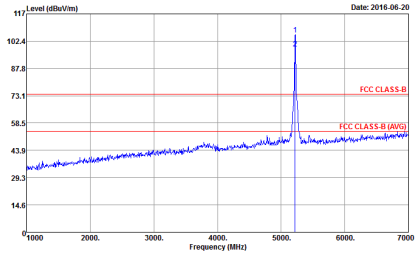
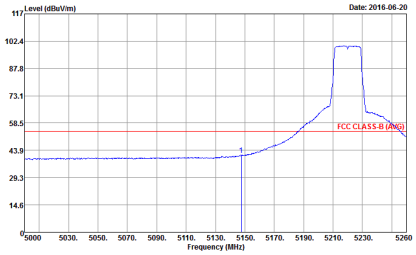
WIFI	Band 1 5150~5250MHz Band Edge and Fundamental @ 3m	
ANT	802.11a CH48 5240MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 23	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 23
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 23	

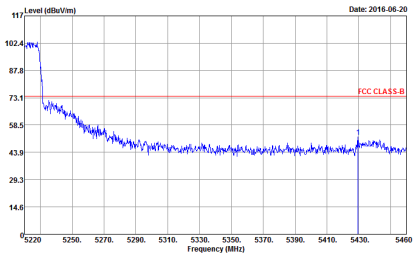
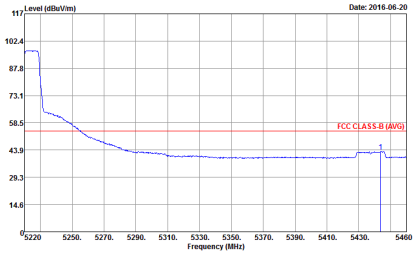
WIFI	Band 1 5150~5250MHz Band Edge and Fundamental @ 3m	
ANT	802.11a CH48 5240MHz - R	
1	Vertical	
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 23	
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 23	

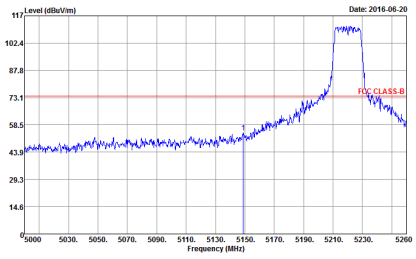
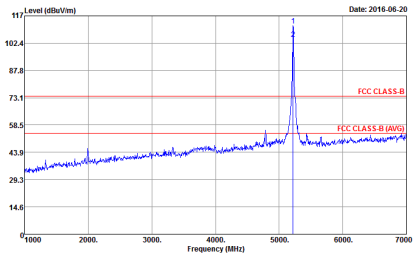
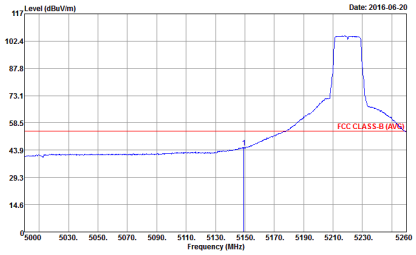
Band 1 5150~5250MHz
WIFI 802.11n HT20 (Band Edge and Fundamental @ 3m)

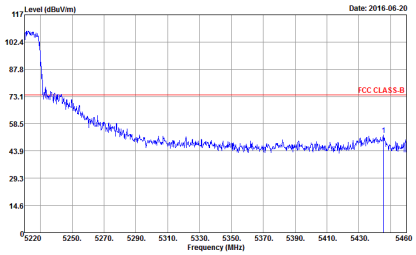
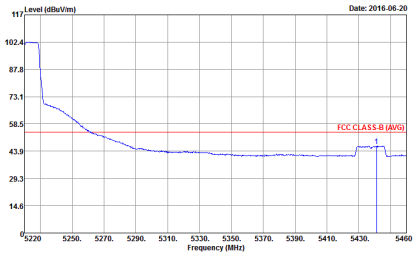
WIFI	Band 1 5150~5250MHz Band Edge and Fundamental @ 3m	
ANT	802.11n HT20 CH36 5180MHz	
1	Horizontal	Fundamental
Peak		
Avg.		

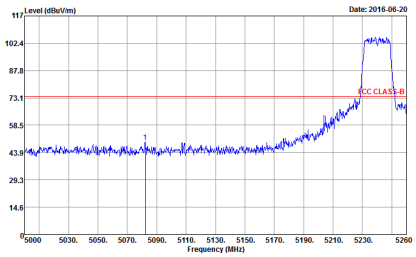
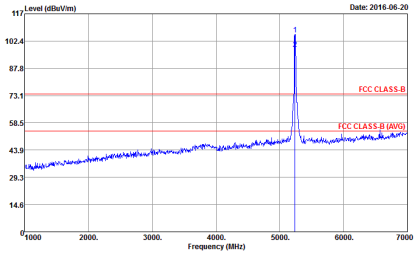
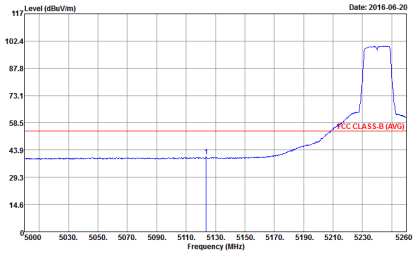
WIFI	Band 1 5150~5250MHz Band Edge and Fundamental @ 3m	
ANT	802.11n HT20 CH36 5180MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 24 Setting : 17	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 24 Setting : 17
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 24 Setting : 17	

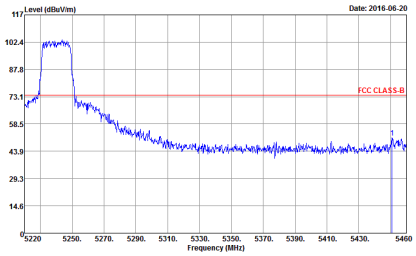
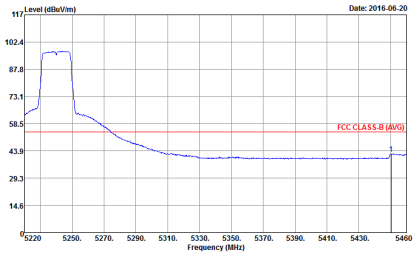
WIFI	Band 1 5150~5250MHz Band Edge and Fundamental @ 3m	
ANT	802.11n HT20 CH44 5220MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 25	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 25
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 25	

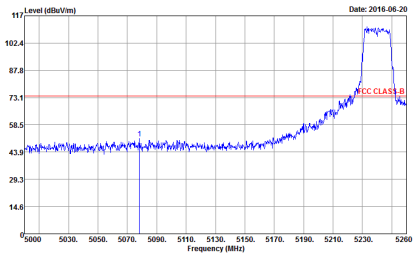
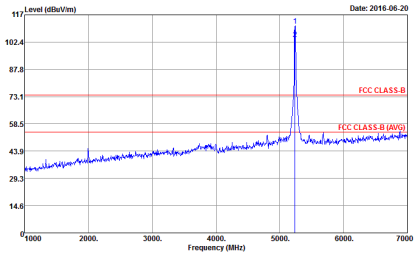
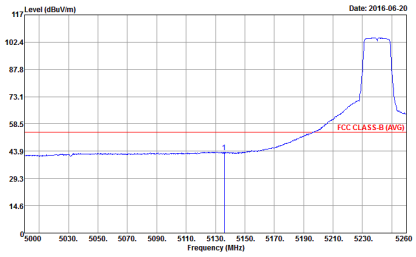
WIFI	Band 1 5150~5250MHz Band Edge and Fundamental @ 3m	
ANT	802.11n HT20 CH44 5220MHz - R	
1	Horizontal	
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 25	
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 25	

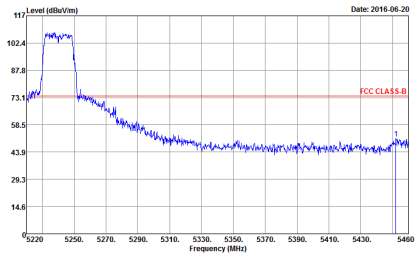
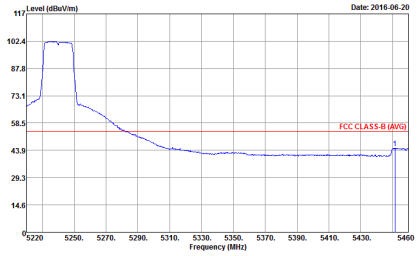
WIFI	Band 1 5150~5250MHz Band Edge and Fundamental @ 3m	
ANT	802.11n HT20 CH44 5220MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 25	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 25
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 25	

WIFI	Band 1 5150~5250MHz Band Edge and Fundamental @ 3m	
ANT	802.11n HT20 CH44 5220MHz - R	
1	Vertical	
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 25	
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 25	

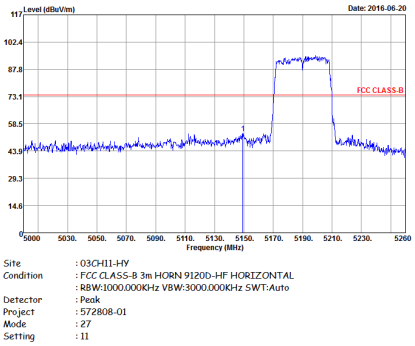
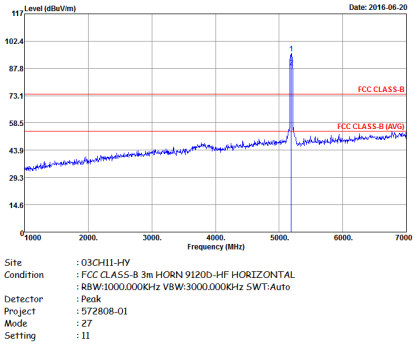
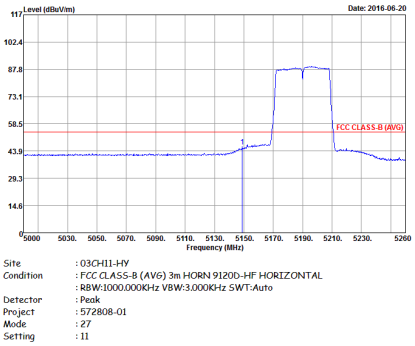
WIFI	Band 1 5150~5250MHz Band Edge and Fundamental @ 3m	
ANT	802.11n HT20 CH48 5240MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 26	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 26
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 26	

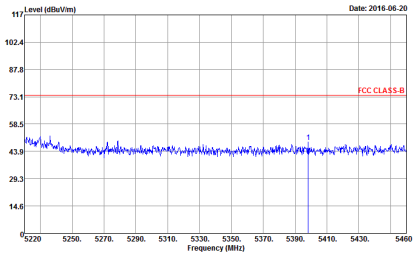
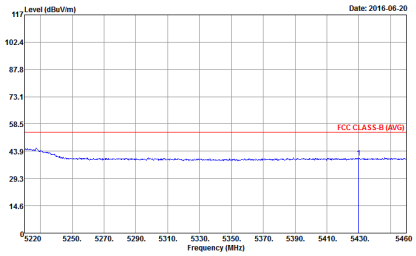
WIFI	Band 1 5150~5250MHz Band Edge and Fundamental @ 3m	
ANT	802.11n HT20 CH48 5240MHz - R	
1	Horizontal	
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 26	
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 26	

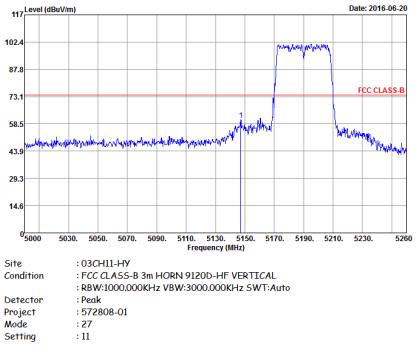
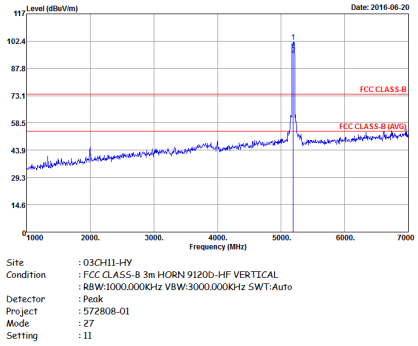
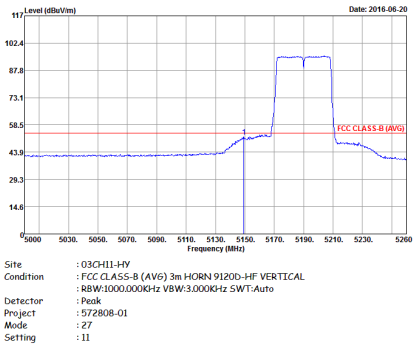
WIFI	Band 1 5150~5250MHz Band Edge and Fundamental @ 3m	
ANT	802.11n HT20 CH48 5240MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 26	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 26
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 26	

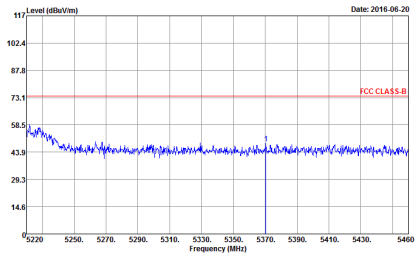
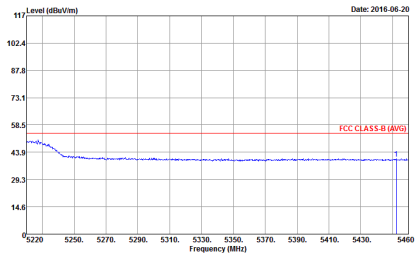
WIFI	Band 1 5150~5250MHz Band Edge and Fundamental @ 3m	
ANT	802.11n HT20 CH48 5240MHz - R	
1	Vertical	
Peak	 Site : 03CH11-HV Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 26	
Avg.	 Site : 03CH11-HV Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 26	

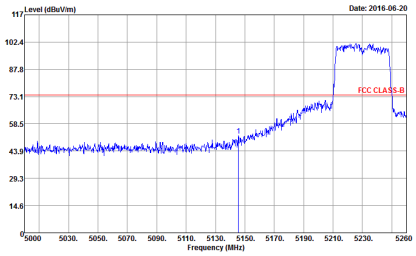
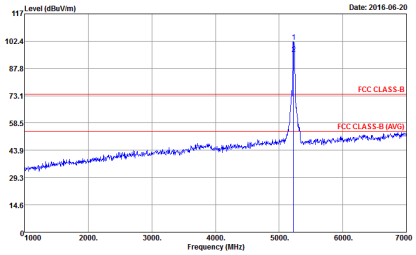
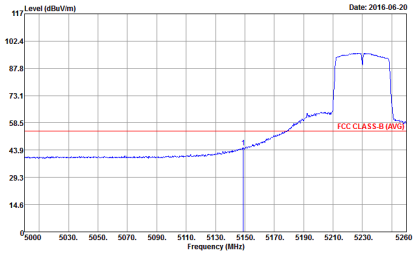
Band 1 5150~5250MHz
WIFI 802.11n HT40 (Band Edge and Fundamental @ 3m)

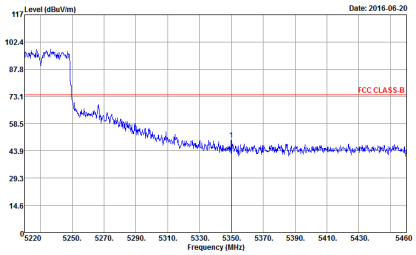
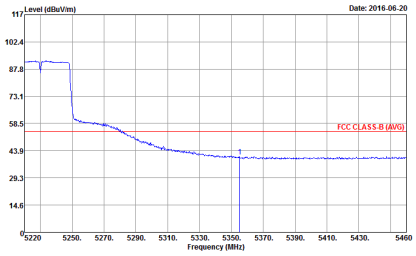
WIFI	Band 1 5150~5250MHz Band Edge and Fundamental @ 3m	
ANT	802.11n HT40 CH38 5190MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		

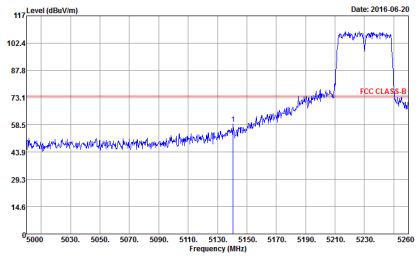
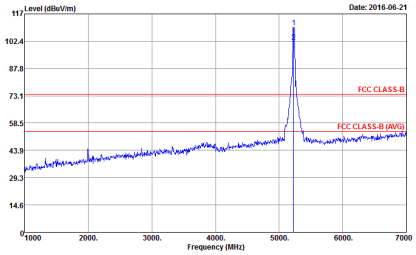
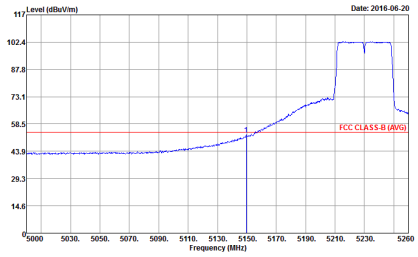
WIFI	Band 1 5150~5250MHz Band Edge and Fundamental @ 3m	
ANT	802.11n HT40 CH38 5190MHz - R	
1	Horizontal	
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 27 Setting : 11	
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AV6) 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 27 Setting : 11	

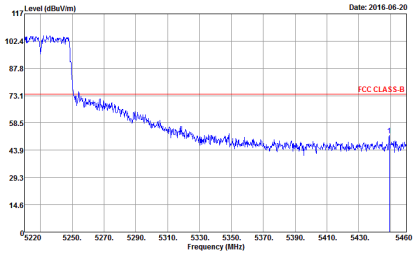
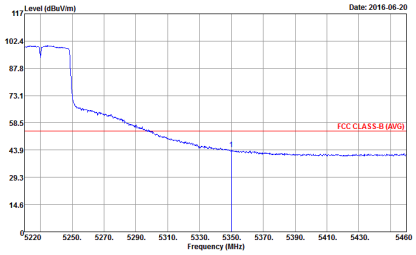
WIFI	Band 1 5150~5250MHz Band Edge and Fundamental @ 3m	
ANT	802.11n HT40 CH38 5190MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		

WIFI	Band 1 5150~5250MHz Band Edge and Fundamental @ 3m	
ANT	802.11n HT40 CH38 5190MHz - R	
1	Vertical	
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 27 Setting : 11	
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AV6) 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 27 Setting : 11	

WIFI	Band 1 5150~5250MHz Band Edge and Fundamental @ 3m	
ANT	802.11n HT40 CH46 5230MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 28 Setting : 18.5	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 28 Setting : 18.5
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 28 Setting : 18.5	

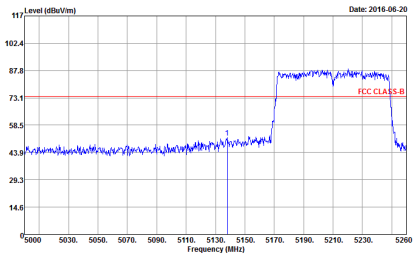
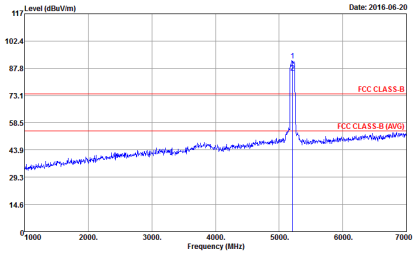
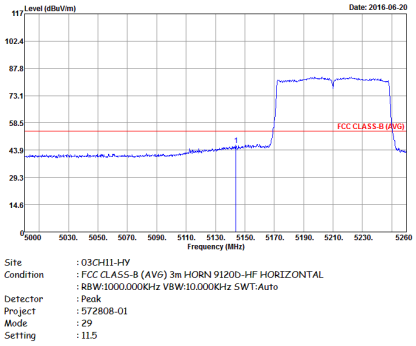
WIFI	Band 1 5150~5250MHz Band Edge and Fundamental @ 3m	
ANT	802.11n HT40 CH46 5230MHz - R	
1	Horizontal	
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 28 Setting : 18.5	
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AV6) 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 28 Setting : 18.5	

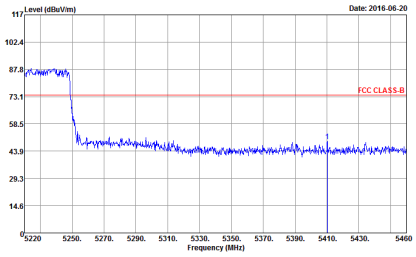
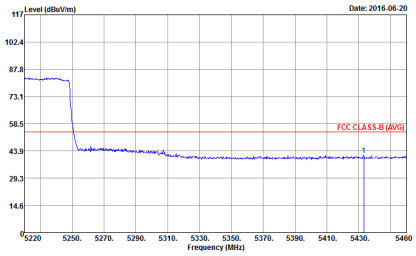
WIFI	Band 1 5150~5250MHz Band Edge and Fundamental @ 3m	
ANT	802.11n HT40 CH46 5230MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 28 Setting : 18.5	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 28 Setting : 18.5
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 28 Setting : 18.5	

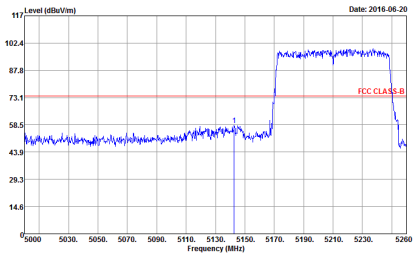
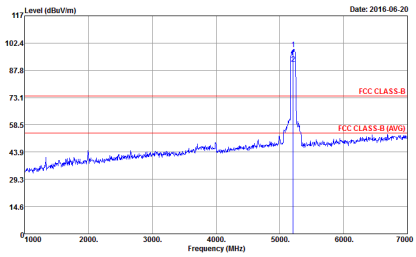
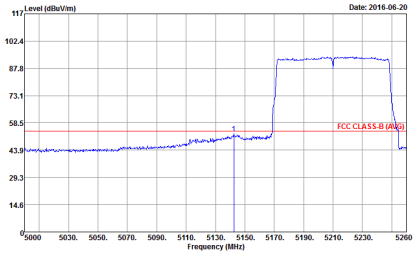
WIFI	Band 1 5150~5250MHz Band Edge and Fundamental @ 3m	
ANT	802.11n HT40 CH46 5230MHz - R	
1	Vertical	
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 28 Setting : 18.5	
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 28 Setting : 18.5	

Band 1 5150~5250MHz

WIFI 802.11ac VHT80 (Band Edge and Fundamental @ 3m)

WIFI	Band 1 5150~5250MHz Band Edge and Fundamental @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		

WIFI	Band 1 5150~5250MHz Band Edge and Fundamental @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - R	
1	Horizontal	
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 29 Setting : 11.5	
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:10.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 29 Setting : 11.5	

WIFI	Band 1 5150~5250MHz Band Edge and Fundamental @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 29 Setting : 11.5	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 29 Setting : 11.5
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:10.000KHz SWT:Auto Detector : Peak Project : 572808-01 Mode : 29 Setting : 11.5	