



FCC RF Test Report

APPLICANT : Polebridge Port Hole Limited Liability Company
EQUIPMENT : Tablet
MODEL NAME : PR53DC
FCC ID : 2AETH-1210
STANDARD : FCC Part 15 Subpart E §15.407
CLASSIFICATION : (NII) Unlicensed National Information Infrastructure

The testing was completed on Apr. 12, 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



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FCC ID : 2AETH-1210

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR5D3034-01D	Rev. 01	Initial issue of report	Apr. 26, 2016



SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	2.1049 15.403(i)	26dB & 99% Bandwidth	-	Pass	-
3.2	15.407(a)	Maximum Conducted Output Power	≤ 24 dBm (depend on band)	Pass	-
3.3	15.407(a)	Power Spectral Density	≤ 11 dBm (depend on band)	Pass	-
3.4	15.407(b)	Unwanted Emissions	$\leq -17, -27$ dBm (depend on band) & 15.209(a)	Pass	Under limit 1.17 dB at 5150.000 MHz
3.5	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 16.90 dB at 2.694 MHz
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

Polebridge Port Hole Limited Liability Company

Three Sugar Creek Center, Suite 100

Sugar Land, Texas, 77478

1.2 Product Feature of Equipment Under Test

Product Feature	
Equipment	Tablet
Model Name	PR53DC
FCC ID	2AETH-1210
EUT supports Radios application	WLAN 11b/g/n HT20 WLAN 11a/n HT20/HT40 Bluetooth v4.1 EDR/LE

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

1.3 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx/Rx Frequency Range	5180 MHz ~ 5240 MHz
Maximum Output Power to Antenna	802.11a : 13.56 dBm / 0.0227 W 802.11n HT20 : 13.39 dBm / 0.0218 W 802.11n HT40 : 13.55 dBm / 0.0227 W
99% Occupied Bandwidth	802.11a : 17.40 MHz 802.11n HT20 : 18.35 MHz 802.11n HT40 : 36.60 MHz
Antenna Type	Fixed Internal Antenna with gain 1.60 dBi
Type of Modulation	OFDM (BPSK / QPSK / 16QAM / 64QAM)

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 1 st 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

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.	
	03CH12-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
- ♦ ANSI C63.10-2013

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.



2 Test Configuration of Equipment Under Test

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). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Z plane) were recorded in this report.

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 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

Note: The above Frequency and Channel in boldface were 802.11n HT40.

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.

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)	13.56	12.91	13.07	12.96	12.85	12.89	12.94	13.01

5GHz 802.11n HT20 mode								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Average Power (dBm)	13.39	13.01	13.03	13.00	13.01	13.07	12.92	12.90

5GHz 802.11n HT40 mode								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Average Power (dBm)	13.55	13.41	13.12	13.00	13.03	13.08	13.13	13.08

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.

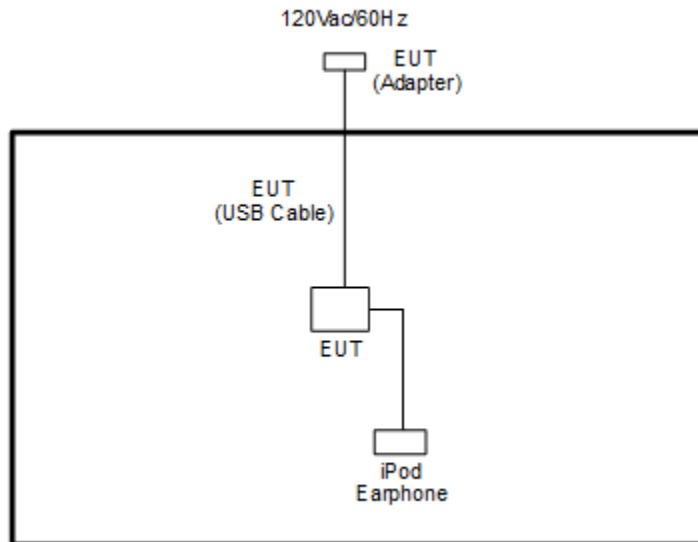
Modulation	Data Rate
802.11a	6 Mbps
802.11n HT20	MCS0
802.11n HT40	MCS0

AC Conducted Emission	Mode 1 : WLAN (5GHz) Link + Bluetooth Link + USB Cable (Charging from Adapter) + Camrea (Rear) + Earphone
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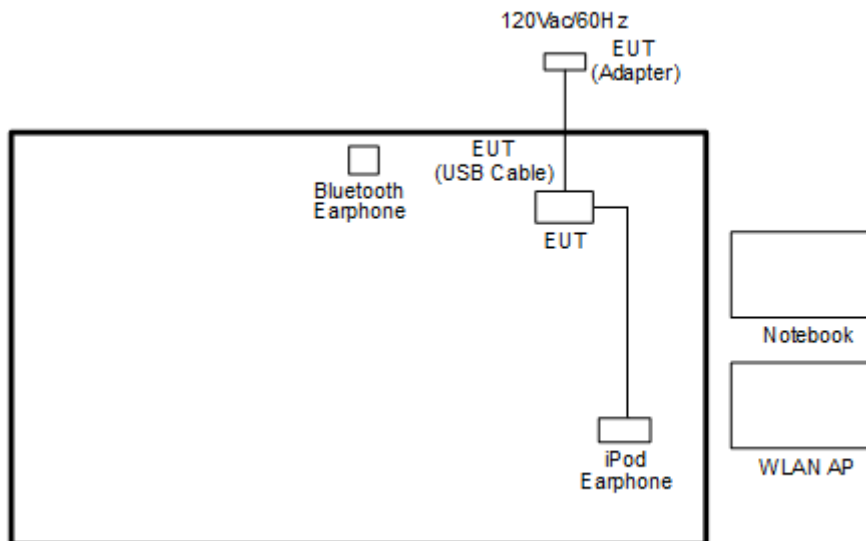
Ch. #		Band I : 5150-5250 MHz	Band I : 5150-5250 MHz	Band I : 5150-5250 MHz
		802.11a	802.11n HT20	802.11n HT40
L	Low	36	36	38
M	Middle	44	44	-
H	High	48	48	46

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
4.	iPod Earphone	Apple	N/A	Verification	Unshielded, 1.0 m	N/A
5.	Micro SD Card	SanDisk	MicroSD HC	FCC DoC	N/A	N/A

2.6 EUT Operation Test Setup

For WLAN function, programmed RF utility, “ADB” 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.

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

3 Test Result

3.1 26dB & 99% Occupied Bandwidth Measurement

3.1.1 Description of 26dB & 99% Occupied Bandwidth

This section is for reporting purpose only.

There is no restriction limits for bandwidth.

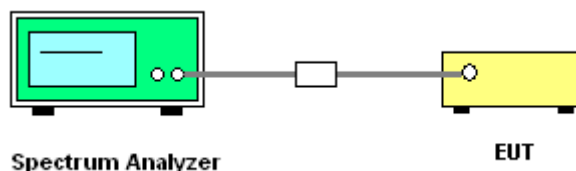
3.1.2 Measuring Instruments

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) $\geq 3 * \text{RBW}$.
8. Measure and record the results in the test report.

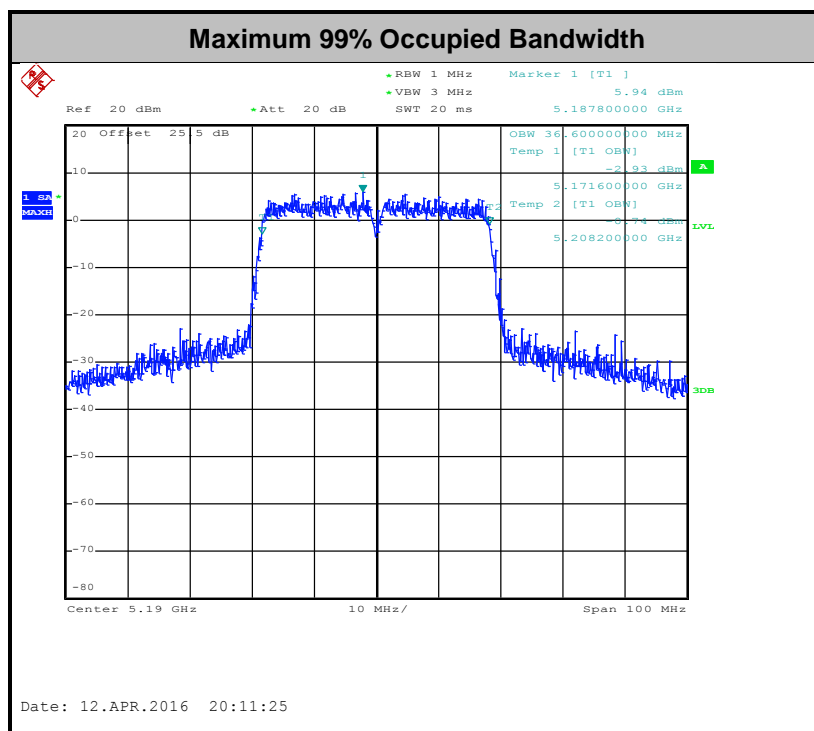
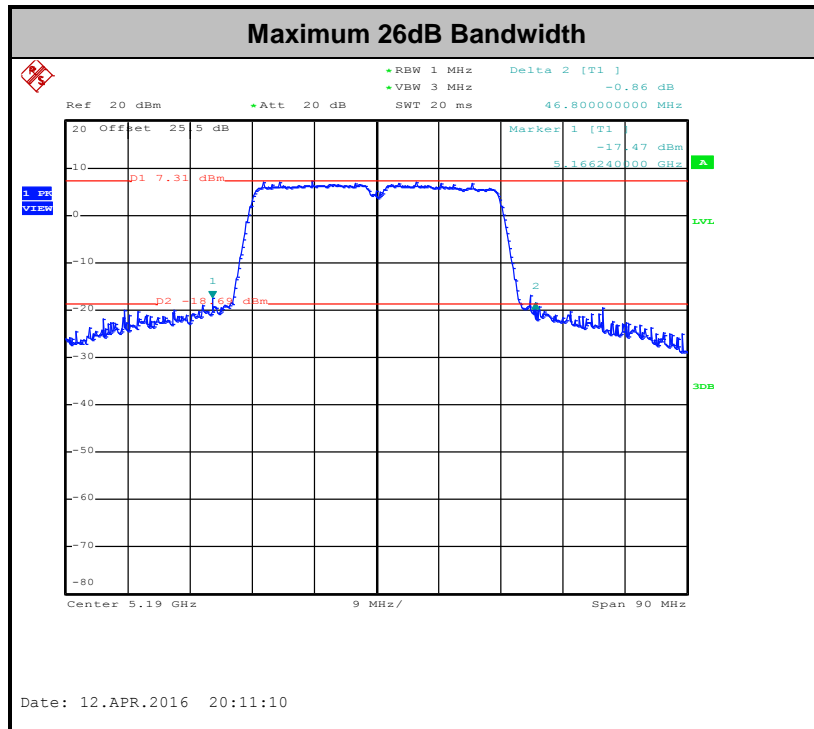
3.1.4 Test Setup





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

Please refer to Appendix A.



3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

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.

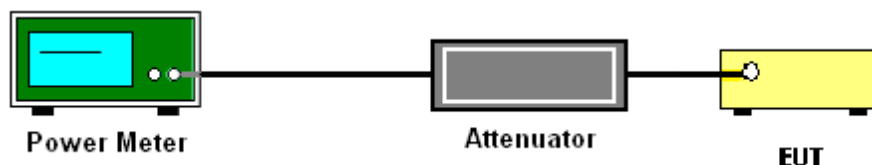
3.2.3 Test Procedures

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



3.2.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

For 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

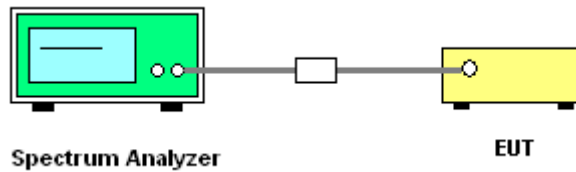
The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r02.
Section F) Maximum power spectral density.

Method SA-2

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

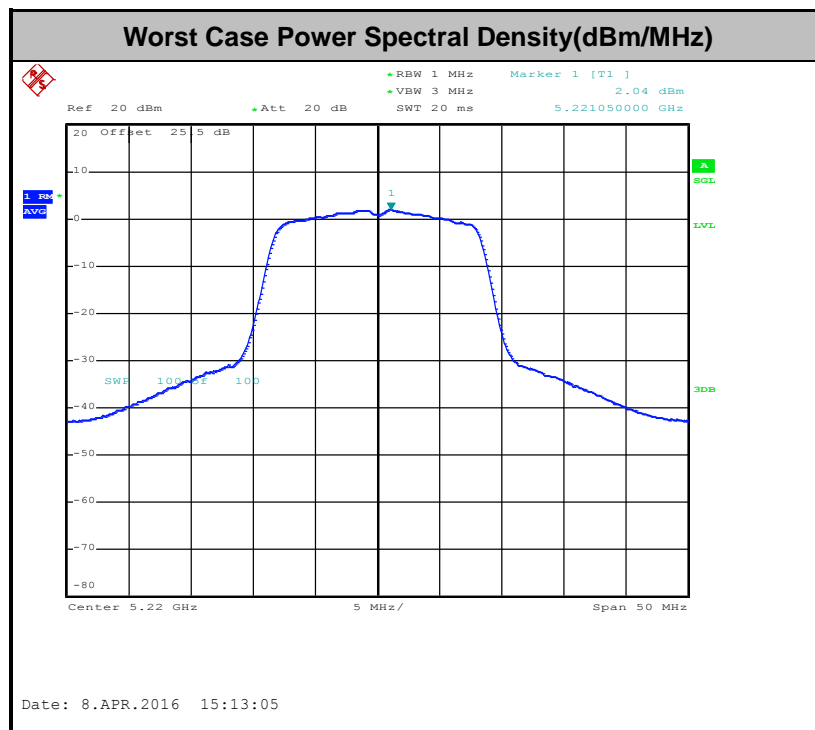
1. The testing follows Method SA-2 of FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r02.
 - Measure the duty cycle.
 - Set span to encompass the entire emission bandwidth (EBW) of the signal.
 - Set RBW = 1 MHz.
 - Set VBW \geq 3 MHz.
 - Number of points in sweep \geq 2 Span / RBW.
 - Sweep time = auto.
 - Detector = RMS
 - Trace average at least 100 traces in power averaging mode.
 - Add $10 \log(1/x)$, where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times. For example, add $10 \log(1/0.25) = 6$ dB if the duty cycle is 25 percent.
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.

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.



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

3.4 Unwanted Radiated Emission 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.

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

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

- (3) KDB789033 D01 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 \geq 3 MHz
- Detector = Peak
- Sweep time = auto
- Trace mode = max hold

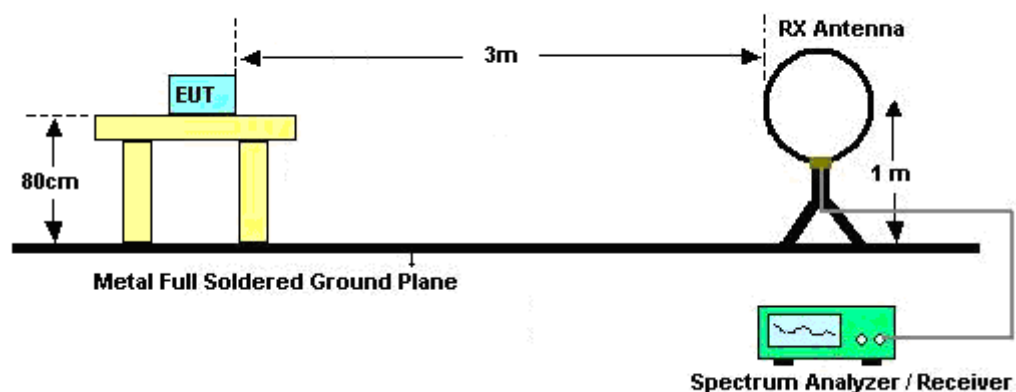
(3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz

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

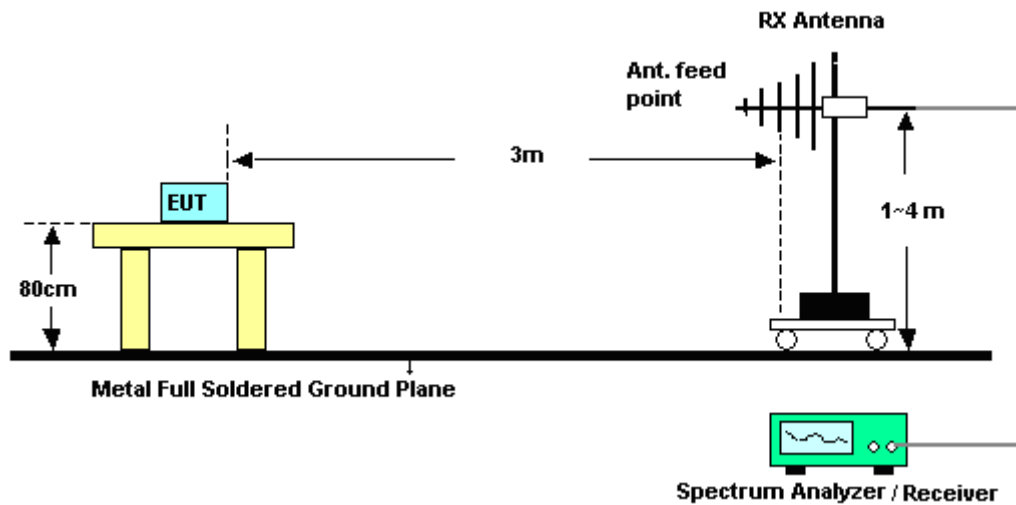
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband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

3.4.4 Test Setup

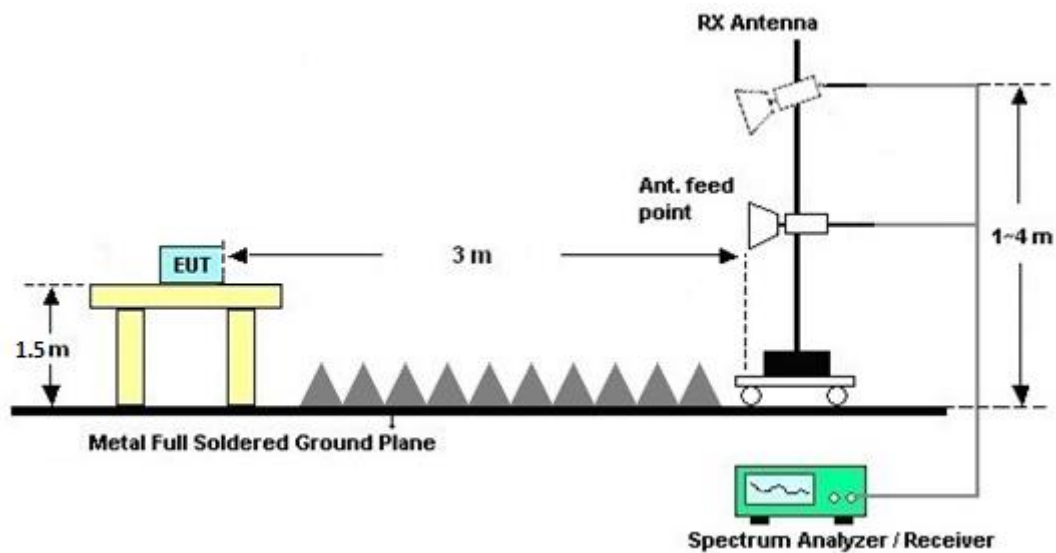
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz





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

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line 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 (dB μ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

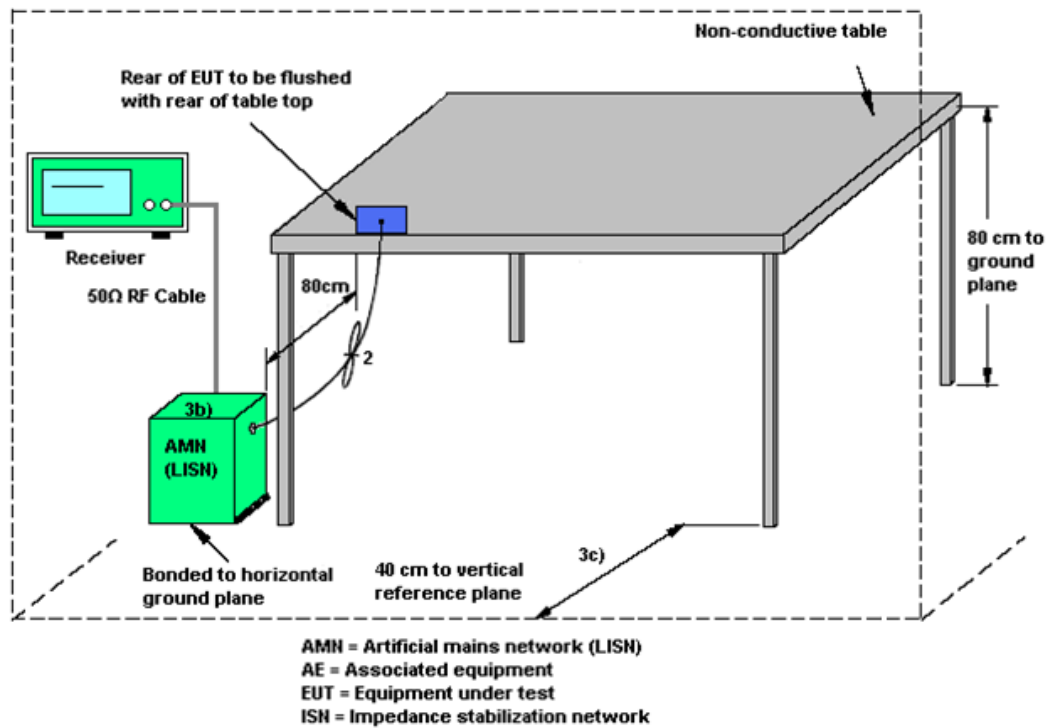
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

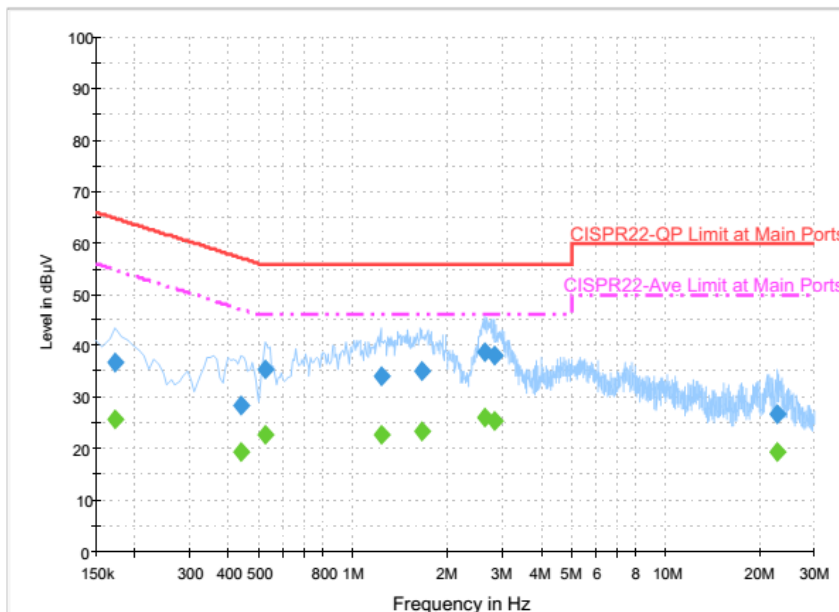
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.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

3.5.4 Test Setup



3.5.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1	Temperature :	23~24°C
Test Engineer :	Derreck Chen	Relative Humidity :	50~52%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	WLAN (5GHz) Link + Bluetooth Link + USB Cable (Charging from Adapter) + Camrea (Rear) + Earphone		



Final Result : QuasiPeak

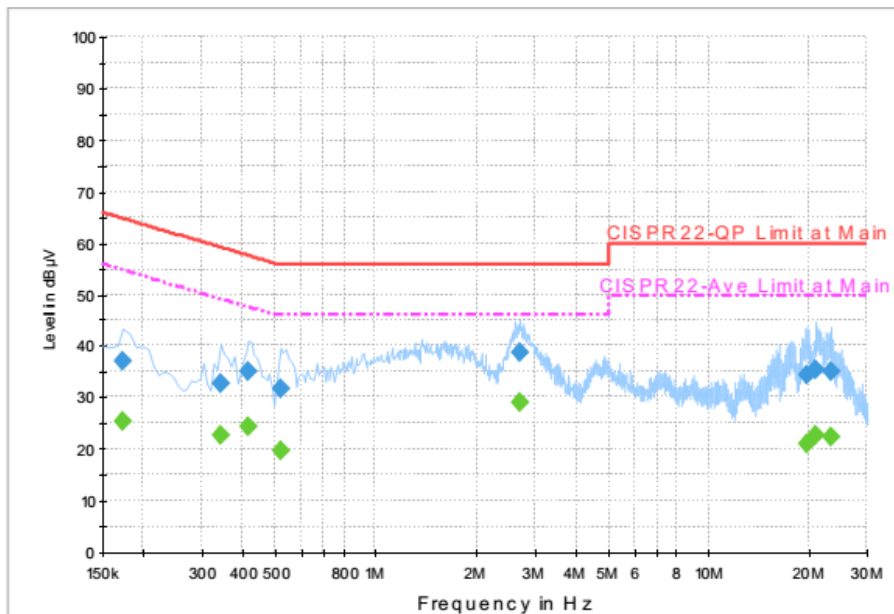
Frequency (MHz)	QuasiPeak (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.174000	36.9	Off	L1	19.6	27.9	64.8
0.438000	28.3	Off	L1	19.6	28.8	57.1
0.526000	35.3	Off	L1	19.6	20.7	56.0
1.230000	34.0	Off	L1	19.6	22.0	56.0
1.662000	35.0	Off	L1	19.6	21.0	56.0
2.646000	38.9	Off	L1	19.6	17.1	56.0
2.838000	38.2	Off	L1	19.6	17.8	56.0
22.942000	26.6	Off	L1	19.9	33.4	60.0

Final Result : Average

Frequency (MHz)	Average (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.174000	25.6	Off	L1	19.6	29.2	54.8
0.438000	19.4	Off	L1	19.6	27.7	47.1
0.526000	22.9	Off	L1	19.6	23.1	46.0
1.230000	22.8	Off	L1	19.6	23.2	46.0
1.662000	23.3	Off	L1	19.6	22.7	46.0
2.646000	26.0	Off	L1	19.6	20.0	46.0
2.838000	25.3	Off	L1	19.6	20.7	46.0
22.942000	19.3	Off	L1	19.9	30.7	50.0



Test Mode :	Mode 1	Temperature :	23~24℃
Test Engineer :	Derreck Chen	Relative Humidity :	50~52%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	WLAN (5GHz) Link + Bluetooth Link + USB Cable (Charging from Adapter) + Camrea (Rear) + Earphone		

**Final Result : QuasiPeak**

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.174000	37.0	Off	N	19.6	27.8	64.8
0.342000	32.6	Off	N	19.6	26.6	59.2
0.414000	35.3	Off	N	19.6	22.3	57.6
0.518000	31.7	Off	N	19.6	24.3	56.0
2.694000	38.9	Off	N	19.6	17.1	56.0
19.742000	34.6	Off	N	19.9	25.4	60.0
21.110000	35.6	Off	N	20.0	24.4	60.0
23.238000	35.0	Off	N	20.0	25.0	60.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.174000	25.5	Off	N	19.6	29.3	54.8
0.342000	22.6	Off	N	19.6	26.6	49.2
0.414000	24.3	Off	N	19.6	23.3	47.6
0.518000	19.9	Off	N	19.6	26.1	46.0
2.694000	29.1	Off	N	19.6	16.9	46.0
19.742000	21.1	Off	N	19.9	28.9	50.0
21.110000	22.7	Off	N	20.0	27.3	50.0
23.238000	22.4	Off	N	20.0	27.6	50.0

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.

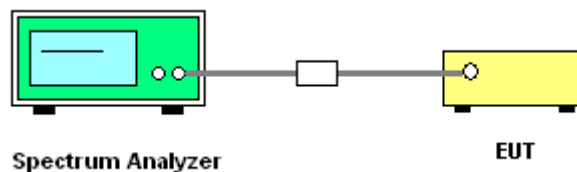
3.6.2 Measuring Instruments

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.

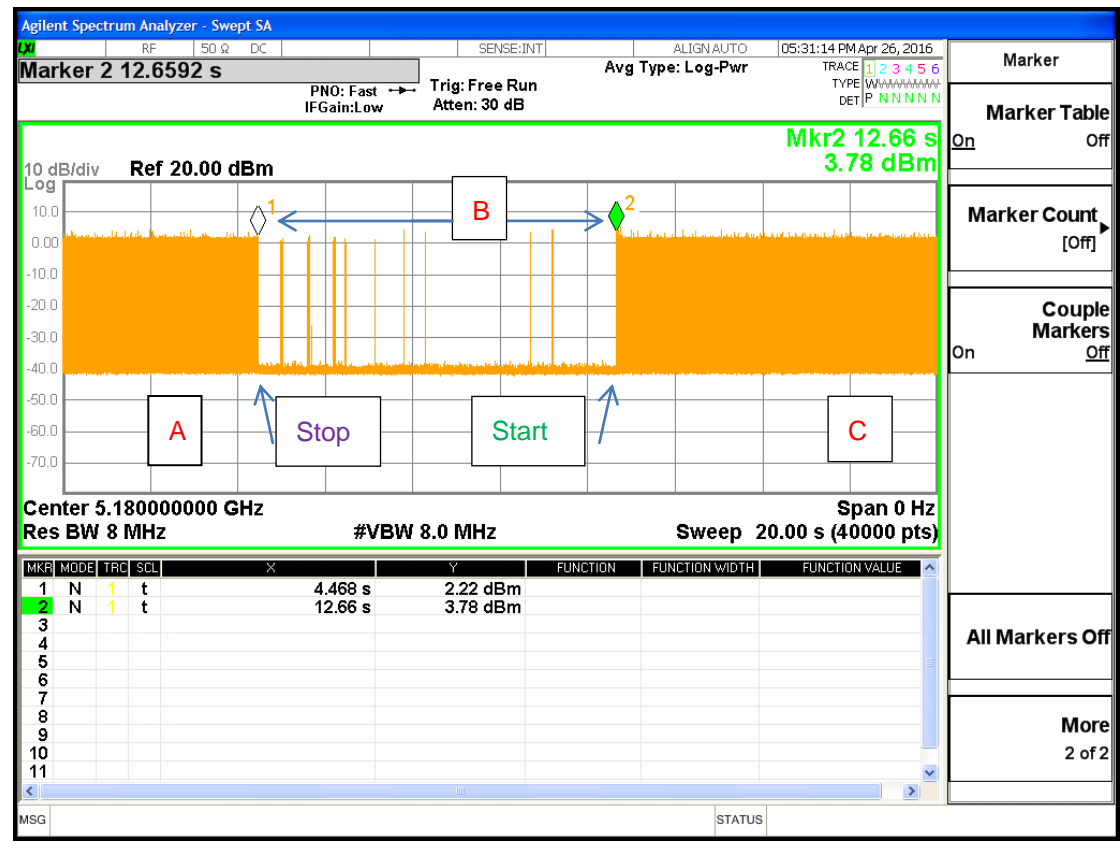
While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving.

- 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

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



4 List of Measuring Equipments

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
DC Power Supply	TOPWARD	3303D	740889	N/A	May 27, 2015	Mar. 28, 2016~ Apr. 12, 2016	May 26, 2016	Conducted (TH02-HY)
Power Meter	Anritsu	ML2495A	1036004	300MHz~40GHz	Jul. 29, 2015	Mar. 28, 2016~ Apr. 12, 2016	Jul. 28, 2016	Conducted (TH02-HY)
Power Sensor	Anritsu	MA2411B	1027253	300MHz~40GHz	Jul. 29, 2015	Mar. 28, 2016~ Apr. 12, 2016	Jul. 28, 2016	Conducted (TH02-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100055	9kHz~40GHz	Jun. 18, 2015	Mar. 28, 2016~ Apr. 12, 2016	Jun. 17, 2016	Conducted (TH02-HY)
Temperature Chamber	ESPEC	SU-241	92003713	-30℃ ~95℃	Jun. 15, 2015	Mar. 28, 2016~ Apr. 12, 2016	Jun. 14, 2016	Conducted (TH02-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Mar. 21, 2016	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESCI 7	100724	9kHz~7GHz	Aug. 26, 2015	Mar. 21, 2016	Aug. 25, 2016	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Dec. 02, 2015	Mar. 21, 2016	Dec. 01, 2016	Conduction (CO05-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	Sep. 02, 2015	Mar. 31, 2016~ Apr. 01, 2016	Sep. 01, 2016	Radiation (03CH12-HY)
Spectrum Analyzer	Keysight	N9010A	MY54200486	10Hz ~ 44GHZ	Sep. 24, 2015	Mar. 31, 2016~ Apr. 01, 2016	Sep. 23, 2016	Radiation (03CH12-HY)
Bilog Antenna	TESEQ	CBL 6111D	37059	30MHz~1GHz	Dec. 29, 2015	Mar. 31, 2016~ Apr. 01, 2016	Dec. 28, 2016	Radiation (03CH12-HY)
EMI Test Receiver	Rohde & Schwarz	ESU26	100390	20Hz~26.5GHz	Dec. 21, 2015	Mar. 31, 2016~ Apr. 01, 2016	Dec. 20, 2016	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1328	1GHz ~ 18GHz	Nov. 02, 2015	Mar. 31, 2016~ Apr. 01, 2016	Nov. 01, 2016	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170584	18GHz- 40GHz	Nov. 02, 2015	Mar. 31, 2016~ Apr. 01, 2016	Nov. 01, 2016	Radiation (03CH12-HY)
Amplifier	SONOMA	310N	187312	9kHz~1GHz	Nov. 20, 2015	Mar. 31, 2016~ Apr. 01, 2016	Nov. 19, 2016	Radiation (03CH12-HY)
Preamplifier	MITEQ	AMF-7D-0010 1800-30-10P	1815698	1GHz~18GHz	Dec. 14, 2015	Mar. 31, 2016~ Apr. 01, 2016	Dec. 13, 2016	Radiation (03CH12-HY)
Preamplifier	Agilent	8449B	3008A02375	1GHz~26.5GHz	Jan. 05, 2016	Mar. 31, 2016~ Apr. 01, 2016	Jan. 04, 2017	Radiation (03CH12-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1m~4m	N/A	Mar. 31, 2016~ Apr. 01, 2016	N/A	Radiation (03CH12-HY)
Turn Table	EMEC	TT2000	N/A	0-360 degree	N/A	Mar. 31, 2016~ Apr. 01, 2016	N/A	Radiation (03CH12-HY)
Preamplifier	MITEQ	JS44-1800400 0-33-8P	1840917	18GHz ~ 40GHz	Jun. 02, 2015	Mar. 31, 2016~ Apr. 01, 2016	Jun. 01, 2016	Radiation (03CH12-HY)



5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.26
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.40
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Appendix A. Conducted Test Results

Test Engineer:	Anan Wu and Derek Hsu	Temperature:	21~25	°C
Test Date:	2016/03/28~2016/04/12	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)		
11a	6Mbps	1	36	5180	17.35	22.40	-	22.39		
11a	6Mbps	1	44	5220	17.40	23.60	-	22.41		
11a	6Mbps	1	48	5240	17.35	24.30	-	22.39		
HT20	MCS0	1	36	5180	18.30	24.30	-	22.62		
HT20	MCS0	1	44	5220	18.25	26.00	-	22.61		
HT20	MCS0	1	48	5240	18.35	27.00	-	22.64		
HT40	MCS0	1	38	5190	36.60	46.80	-	23.01		
HT40	MCS0	1	46	5230	36.20	41.22	-	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
11a	6Mbps	1	36	5180	0.21	13.56	24.00	1.60		Pass
11a	6Mbps	1	44	5220	0.21	13.31	24.00	1.60		Pass
11a	6Mbps	1	48	5240	0.21	13.33	24.00	1.60		Pass
HT20	MCS0	1	36	5180	0.22	13.39	24.00	1.60		Pass
HT20	MCS0	1	44	5220	0.22	13.38	24.00	1.60		Pass
HT20	MCS0	1	48	5240	0.22	13.34	24.00	1.60		Pass
HT40	MCS0	1	38	5190	0.40	11.49	24.00	1.60		Pass
HT40	MCS0	1	46	5230	0.40	13.55	24.00	1.60		Pass

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
11a	6Mbps	1	36	5180	0.21	2.07	11.00	1.60		Pass
11a	6Mbps	1	44	5220	0.21	2.25	11.00	1.60		Pass
11a	6Mbps	1	48	5240	0.21	2.23	11.00	1.60		Pass
HT20	MCS0	1	36	5180	0.22	1.90	11.00	1.60		Pass
HT20	MCS0	1	44	5220	0.22	1.98	11.00	1.60		Pass
HT20	MCS0	1	48	5240	0.22	2.17	11.00	1.60		Pass
HT40	MCS0	1	38	5190	0.40	-2.04	11.00	1.60		Pass
HT40	MCS0	1	46	5230	0.40	-1.35	11.00	1.60		Pass

TEST RESULTS DATA
Frequency Stability

Band I										
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	Center Frequency (MHz)	Frequency Deviation (MHz)	Frequency Stability (ppm)	Temperature (°C)	Voltage (V)	Note
11a	6Mbps	1	36	5180	5180.050	0.050	9.65	25	3.4	
11a	6Mbps	1	36	5180	5180.000	0.000	0.00	25	4.2	
11a	6Mbps	1	36	5180	5180.000	0.000	0.00	25	3.8	
11a	6Mbps	1	36	5180	5180.000	0.000	0.00	0	3.8	
11a	6Mbps	1	36	5180	5180.000	0.000	0.00	35	3.8	



Appendix B. Radiated Spurious Emission

Test Engineer :	Ricky Su, Nick Yu, and Citta Ke	Temperature :	21~23°C
		Relative Humidity :	51~53%

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		5145.95	61.14	-12.86	74	52.55	31.65	11.21	34.27	217	65	P	H
		5150	47.9	-6.1	54	39.31	31.65	11.21	34.27	217	65	A	H
	*	5180	108.85	-	-	100.22	31.68	11.21	34.26	217	65	P	H
	*	5180	99.01	-	-	90.38	31.68	11.21	34.26	217	65	A	H
													H
													H
		5150	58.28	-15.72	74	49.69	31.65	11.21	34.27	275	153	P	V
		5150	46.59	-7.41	54	38	31.65	11.21	34.27	275	153	A	V
	*	5180	106.05	-	-	97.42	31.68	11.21	34.26	275	153	P	V
	*	5180	95.64	-	-	87.01	31.68	11.21	34.26	275	153	A	V
													V
													V
802.11a CH 44 5220MHz		5144.75	57.87	-16.13	74	49.28	31.65	11.21	34.27	216	70	P	H
		5139.95	46.44	-7.56	54	37.82	31.65	11.24	34.27	216	70	A	H
	*	5220	109.56	-	-	100.91	31.72	11.18	34.25	216	70	P	H
	*	5220	98.99	-	-	90.34	31.72	11.18	34.25	216	70	A	H
		5406.54	57.48	-16.52	74	48.16	31.9	11.6	34.18	216	70	P	H
		5373.1	45.55	-8.45	54	36.35	31.87	11.52	34.19	216	70	A	H
		5116.55	56.48	-17.52	74	47.91	31.62	11.24	34.29	207	175	P	V
		5139.95	45.43	-8.57	54	36.81	31.65	11.24	34.27	207	175	A	V
	*	5220	106.16	-	-	97.51	31.72	11.18	34.25	207	175	P	V
	*	5220	95.67	-	-	87.02	31.72	11.18	34.25	207	175	A	V
		5405.11	57.01	-16.99	74	47.69	31.9	11.6	34.18	207	175	P	V
		5415.89	44.97	-9.03	54	35.62	31.92	11.6	34.17	207	175	A	V



802.11a CH 48 5240MHz		5129.75	57.05	-16.95	74	48.46	31.63	11.24	34.28	220	72	P	H
		5149.85	45.35	-8.65	54	36.76	31.65	11.21	34.27	220	72	A	H
	*	5240	109.1	-	-	100.35	31.73	11.26	34.24	220	72	P	H
	*	5240	98.76	-	-	90.01	31.73	11.26	34.24	220	72	A	H
		5451.09	58.45	-15.55	74	49.02	31.95	11.64	34.16	220	72	P	H
		5392.9	45.29	-8.71	54	35.99	31.88	11.6	34.18	220	72	A	H
		5102.45	56.4	-17.6	74	47.85	31.6	11.24	34.29	213	191	P	V
		5149.1	44.85	-9.15	54	36.26	31.65	11.21	34.27	213	191	A	V
	*	5240	105.77	-	-	97.02	31.73	11.26	34.24	213	191	P	V
	*	5240	95.65	-	-	86.9	31.73	11.26	34.24	213	191	A	V
		5448.67	57.01	-16.99	74	47.58	31.95	11.64	34.16	213	191	P	V
		5445.81	45.02	-8.98	54	35.59	31.95	11.64	34.16	213	191	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 1 5150~5250MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1	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		10360	55.74	-18.26	74	56.49	39.59	17.13	57.47	326	117	P	H
		10360	45.58	-8.42	54	46.33	39.59	17.13	57.47	326	117	A	H
		15540	54.7	-19.3	74	53.36	38.26	21.61	58.53	100	23	P	H
		15540	44.43	-9.57	54	43.09	38.26	21.61	58.53	100	23	A	H
		11360	50.53	-23.47	74	49.66	40.19	18.27	57.59	300	101	P	V
		11360	40.26	-13.74	54	39.39	40.19	18.27	57.59	300	101	A	V
		15540	54.45	-19.55	74	53.11	38.26	21.61	58.53	100	227	P	V
		15540	44.34	-9.66	54	43	38.26	21.61	58.53	100	227	A	V
802.11a CH 44 5220MHz		10440	57.09	-16.91	74	57.51	39.69	17.22	57.33	300	265	P	H
		10440	47.24	-6.76	54	47.66	39.69	17.22	57.33	300	265	A	H
		15660	55.59	-18.41	74	54.07	38.11	21.7	58.29	300	331	P	H
		15660	45.66	-8.34	54	44.14	38.11	21.7	58.29	300	331	A	H
		10440	53.65	-20.35	74	54.07	39.69	17.22	57.33	100	56	P	V
		10440	43.7	-10.3	54	44.12	39.69	17.22	57.33	100	56	A	V
		15660	57.19	-16.81	74	55.67	38.11	21.7	58.29	100	98	P	V
		15660	47.29	-6.71	54	45.77	38.11	21.7	58.29	100	98	A	V
802.11a CH 48 5240MHz		10480	55.3	-18.7	74	55.49	39.77	17.27	57.23	267	331	P	H
		10480	45.32	-8.68	54	45.51	39.77	17.27	57.23	267	331	A	H
		15720	55.46	-18.54	74	53.82	38.03	21.76	58.15	289	310	P	H
		15720	45.56	-8.44	54	43.92	38.03	21.76	58.15	289	310	A	H
		10480	51.82	-22.18	74	52.01	39.77	17.27	57.23	100	62	P	V
		10480	41.92	-12.08	54	42.11	39.77	17.27	57.23	100	62	A	V
		15720	57.25	-16.75	74	55.61	38.03	21.76	58.15	100	163	P	V
		15720	47.34	-6.66	54	45.7	38.03	21.76	58.15	100	163	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 1 5150~5250MHz

WIFI 802.11n HT20 (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)
802.11n HT20 CH 36 5180MHz		5148.95	61.87	-12.13	74	53.28	31.65	11.21	34.27	217	71	P	H
		5149.25	48.11	-5.89	54	39.52	31.65	11.21	34.27	217	71	A	H
	*	5180	108.2	-	-	99.57	31.68	11.21	34.26	217	71	P	H
	*	5180	98.26	-	-	89.63	31.68	11.21	34.26	217	71	A	H
													H
													H
		5150	58.1	-15.9	74	49.51	31.65	11.21	34.27	205	173	P	V
		5150	46.73	-7.27	54	38.14	31.65	11.21	34.27	205	173	A	V
	*	5180	105.7	-	-	97.07	31.68	11.21	34.26	205	173	P	V
	*	5180	95.5	-	-	86.87	31.68	11.21	34.26	205	173	A	V
													V
													V
802.11n HT20 CH 44 5220MHz		5137.7	58.29	-15.71	74	49.7	31.63	11.24	34.28	101	293	P	H
		5140.1	46.56	-7.44	54	37.97	31.65	11.21	34.27	101	293	A	H
	*	5220	109.45	-	-	100.8	31.72	11.18	34.25	101	293	P	H
	*	5220	99.52	-	-	90.87	31.72	11.18	34.25	101	293	A	H
		5443.39	57.02	-16.98	74	47.62	31.93	11.64	34.17	101	293	P	H
		5371.89	45.27	-8.73	54	36.07	31.87	11.52	34.19	101	293	A	H
		5002.25	56.4	-17.6	74	47.89	31.5	11.34	34.33	257	208	P	V
		5139.95	45.37	-8.63	54	36.75	31.65	11.24	34.27	257	208	A	V
	*	5220	106.1	-	-	97.45	31.72	11.18	34.25	257	208	P	V
	*	5220	96	-	-	87.35	31.72	11.18	34.25	257	208	A	V
		5405.66	56.96	-17.04	74	47.64	31.9	11.6	34.18	257	208	P	V
		5409.62	45.02	-8.98	54	35.7	31.9	11.6	34.18	257	208	A	V



802.11n HT20 CH 48 5240MHz		5036.45	56.55	-17.45	74	48.03	31.53	11.31	34.32	100	294	P	H
		5148.35	45.1	-8.9	54	36.51	31.65	11.21	34.27	100	294	A	H
	*	5240	107.55	-	-	98.8	31.73	11.26	34.24	100	294	P	H
	*	5240	97.06	-	-	88.31	31.73	11.26	34.24	100	294	A	H
		5364.63	57.32	-16.68	74	48.12	31.87	11.52	34.19	100	294	P	H
		5392.02	45.18	-8.82	54	35.88	31.88	11.6	34.18	100	294	A	H
		5089.1	56.82	-17.18	74	48.24	31.6	11.27	34.29	136	148	P	V
		5146.1	44.61	-9.39	54	36.02	31.65	11.21	34.27	136	148	A	V
	*	5240	104.66	-	-	95.91	31.73	11.26	34.24	136	148	P	V
	*	5240	94.4	-	-	85.65	31.73	11.26	34.24	136	148	A	V
		5385.2	56.86	-17.14	74	47.56	31.88	11.6	34.18	136	148	P	V
		5416.88	45	-9	54	35.65	31.92	11.6	34.17	136	148	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 1 5150~5250MHz

WIFI 802.11n HT20 (Harmonic @ 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 HT20 CH 36 5180MHz		10360	55.47	-18.53	74	56.22	39.59	17.13	57.47	300	320	P	H
		10360	45.58	-8.42	54	46.33	39.59	17.13	57.47	300	320	A	H
		15540	52.9	-21.1	74	51.56	38.26	21.61	58.53	331	298	P	H
		15540	43.09	-10.91	54	41.75	38.26	21.61	58.53	331	298	A	H
		10360	50.96	-23.04	74	51.71	39.59	17.13	57.47	100	98	P	V
		10360	40.91	-13.09	54	41.66	39.59	17.13	57.47	100	98	A	V
		15540	53.19	-20.81	74	51.85	38.26	21.61	58.53	100	133	P	V
		15540	43.32	-10.68	54	41.98	38.26	21.61	58.53	100	133	A	V
802.11n HT20 CH 44 5220MHz		10440	56.08	-17.92	74	56.5	39.69	17.22	57.33	302	162	P	H
		10440	46.35	-7.65	54	46.77	39.69	17.22	57.33	302	162	A	H
		15660	55.16	-18.84	74	53.64	38.11	21.7	58.29	286	43	P	H
		15660	45.4	-8.6	54	43.88	38.11	21.7	58.29	286	43	A	H
		10440	51.5	-22.5	74	51.92	39.69	17.22	57.33	100	233	P	V
		10440	41.57	-12.43	54	41.99	39.69	17.22	57.33	100	233	A	V
		15660	57.29	-16.71	74	55.77	38.11	21.7	58.29	100	200	P	V
		15660	47.41	-6.59	54	45.89	38.11	21.7	58.29	100	200	A	V
802.11n HT20 CH 48 5240MHz		10480	56.58	-17.42	74	56.77	39.77	17.27	57.23	250	78	P	H
		10480	46.7	-7.3	54	46.89	39.77	17.27	57.23	250	78	A	H
		15720	56.04	-17.96	74	54.4	38.03	21.76	58.15	300	203	P	H
		15720	46.2	-7.8	54	44.56	38.03	21.76	58.15	300	203	A	H
		10480	52.97	-21.03	74	53.16	39.77	17.27	57.23	100	78	P	V
		10480	43.03	-10.97	54	43.22	39.77	17.27	57.23	100	78	A	V
		15720	56.37	-17.63	74	54.73	38.03	21.76	58.15	100	88	P	V
		15720	46.56	-7.44	54	44.92	38.03	21.76	58.15	100	88	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 1 5150~5250MHz

WIFI 802.11n HT40 (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)
802.11n HT40 CH 38 5190MHz		5148.65	66.7	-7.3	74	58.11	31.65	11.21	34.27	226	69	P	H
		5150	52.83	-1.17	54	44.24	31.65	11.21	34.27	226	69	A	H
	*	5190	101.11	-	-	92.51	31.68	11.18	34.26	226	69	P	H
	*	5190	90.64	-	-	82.04	31.68	11.18	34.26	226	69	A	H
		5417.1	56.48	-17.52	74	47.13	31.92	11.6	34.17	226	69	P	H
		5430.63	45.53	-8.47	54	36.13	31.93	11.64	34.17	226	69	A	H
		5149.25	61.32	-12.68	74	52.73	31.65	11.21	34.27	206	234	P	V
		5149.4	49.26	-4.74	54	40.67	31.65	11.21	34.27	206	234	A	V
	*	5190	97.65	-	-	89.05	31.68	11.18	34.26	206	234	P	V
	*	5190	87.32	-	-	78.72	31.68	11.18	34.26	206	234	A	V
		5357.15	57.23	-16.77	74	48.06	31.85	11.52	34.2	206	234	P	V
		5440.75	45.25	-8.75	54	35.85	31.93	11.64	34.17	206	234	A	V
802.11n HT40 CH 46 5230MHz		5142.2	57.14	-16.86	74	48.55	31.65	11.21	34.27	218	68	P	H
		5139.2	46.16	-7.84	54	37.57	31.63	11.24	34.28	218	68	A	H
	*	5230	106.67	-	-	97.92	31.73	11.26	34.24	218	68	P	H
	*	5230	95.86	-	-	87.11	31.73	11.26	34.24	218	68	A	H
		5393.45	57.56	-16.44	74	48.26	31.88	11.6	34.18	218	68	P	H
		5378.16	45.73	-8.27	54	36.51	31.88	11.52	34.18	218	68	A	H
		5147.45	56.31	-17.69	74	47.72	31.65	11.21	34.27	222	228	P	V
		5147.75	45.35	-8.65	54	36.76	31.65	11.21	34.27	222	228	A	V
	*	5230	102.04	-	-	93.29	31.73	11.26	34.24	222	228	P	V
	*	5230	91.83	-	-	83.08	31.73	11.26	34.24	222	228	A	V
		5423.59	57.15	-16.85	74	47.76	31.92	11.64	34.17	222	228	P	V
		5380.91	45.47	-8.53	54	36.17	31.88	11.6	34.18	222	228	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 1 5150~5250MHz

WIFI 802.11n HT40 (Harmonic @ 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 CH 38 5190MHz		10380	48.31	-25.69	74	49	39.61	17.13	57.43	100	0	P	H
		15570	46.89	-27.11	74	45.49	38.22	21.64	58.46	100	0	P	H
													H
													H
		10380	45.7	-28.3	74	46.39	39.61	17.13	57.43	100	0	P	V
		15570	45.58	-28.42	74	44.18	38.22	21.64	58.46	100	0	P	V
													V
													V
802.11n HT40 CH 46 5230MHz		10460	52.75	-21.25	74	53.11	39.72	17.22	57.3	300	328	P	H
		10460	42.93	-11.07	54	43.29	39.72	17.22	57.3	300	328	A	H
		15690	52.66	-21.34	74	51.08	38.07	21.73	58.22	288	123	P	H
		15690	42.76	-11.24	54	41.18	38.07	21.73	58.22	288	123	A	H
		10460	49.41	-24.59	74	49.77	39.72	17.22	57.3	100	89	P	V
		10460	38.56	-15.44	54	38.92	39.72	17.22	57.3	100	89	A	V
		15690	53.61	-20.39	74	52.03	38.07	21.73	58.22	100	85	P	V
		15690	43.69	-10.31	54	42.11	38.07	21.73	58.22	100	85	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Emission below 1GHz

WIFI 802.11n HT20 (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 HT20 LF		45.93	29.65	-10.35	40	44.26	17.07	0.78	32.46	100	23	P	H
		106.41	25.25	-18.25	43.5	39.48	16.77	1.43	32.43	-	-	P	H
		212.52	26.41	-17.09	43.5	41.02	16.08	1.7	32.39	-	-	P	H
		309.1	26.03	-19.97	46	36.14	19.79	2.34	32.24	-	-	P	H
		496	31.38	-14.62	46	36.79	23.91	3.08	32.4	-	-	P	H
		549.9	30.84	-15.16	46	35.44	24.5	3.3	32.4	-	-	P	H
													H
													H
													H
													H
													H
													H
		80.76	36.79	-3.21	40	54.47	13.7	1.06	32.44	150	33	P	V
		199.56	40.28	-3.22	43.5	55.19	15.8	1.7	32.41	-	-	P	V
		208.74	39.94	-3.56	43.5	54.58	16.05	1.7	32.39	-	-	P	V
		304.9	32.9	-13.1	46	43.16	19.64	2.34	32.24	-	-	P	V
		438.6	30.73	-15.27	46	37.33	22.89	2.89	32.38	-	-	P	V
		866.3	32.31	-13.69	46	30.94	28.7	4.45	31.78	-	-	P	V
													V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. 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	Peak or Average
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		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
2412MHz		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

1. Level(dBμV/m) =

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

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

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 43.54 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

= -10.46(dB)

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



Appendix C. Radiated Spurious Emission Plots

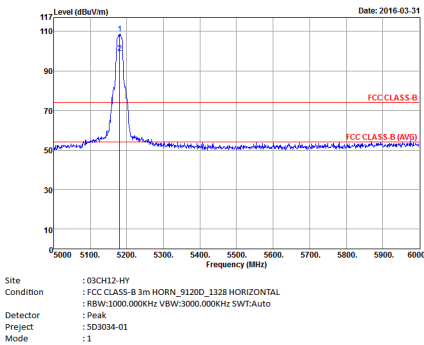
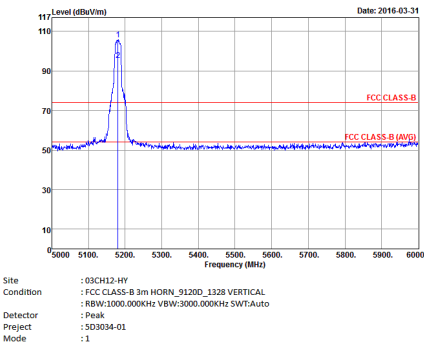
Test Engineer :	Ricky Su, Nick Yu, and Citta Ke	Temperature :	21~23°C
		Relative Humidity :	51~53%

Note symbol

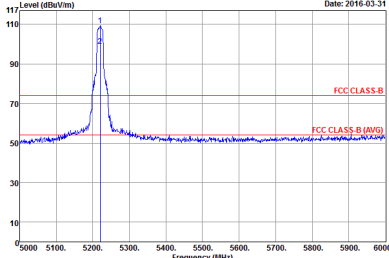
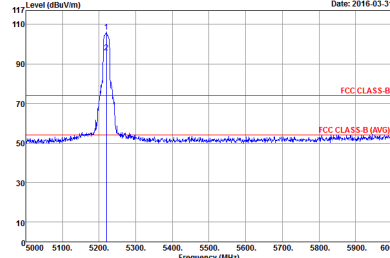
-L	Low channel location
-R	High channel location

Band 1 - 5150~5250MHz

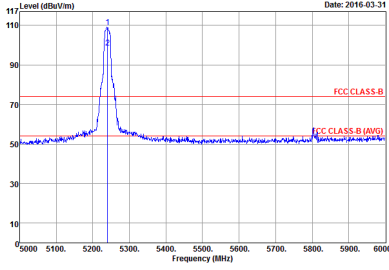
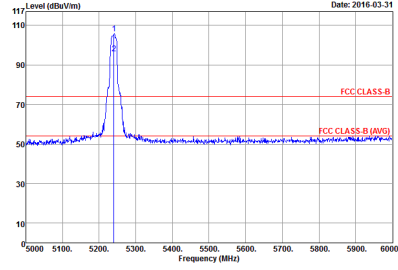
WIFI 802.11a (Fundamental @ 3m)

WIFI	Band 1 5150~5250MHz Fundamental @ 3m	
ANT	802.11a CH36 5180MHz	
1	Horizontal	Vertical
Peak/ Avg.		



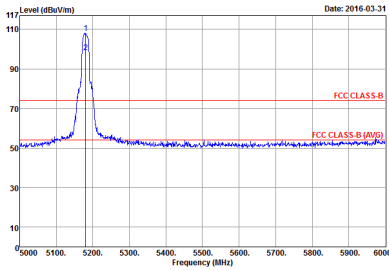
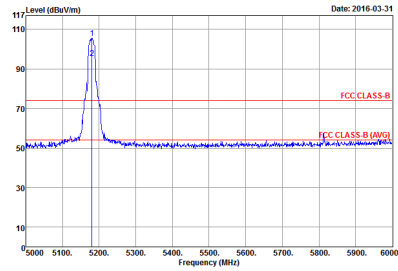
WIFI	Band 1 5150~5250MHz Fundamental @ 3m	
ANT	802.11a CH44 5220MHz	
1	Horizontal	Vertical
Peak/ Avg.	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 HORIZONTAL Detector : Peak Project : SD3034-01 Mode : 2</p></div>	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 VERTICAL Detector : Peak Project : SD3034-01 Mode : 2</p></div>



WIFI	Band 1 5150~5250MHz Fundamental @ 3m	
ANT	802.11a CH48 5240MHz	
1	Horizontal	Vertical
Peak/ Avg.	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 HORIZONTAL Detector : Peak Project : SD3034-01 Mode : 3</p></div>	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 VERTICAL Detector : Peak Project : SD3034-01 Mode : 3</p></div>



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

WIFI	Band 1 5150~5250MHz Fundamental @ 3m	
ANT	802.11n HT20 CH36 5180MHz	
1	Horizontal	Vertical
Peak/ Avg.	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_9120D_1328 HORIZONTAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : SD3034-01 Mode : 4</p></div>	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_9120D_1328 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : SD3034-01 Mode : 4</p></div>



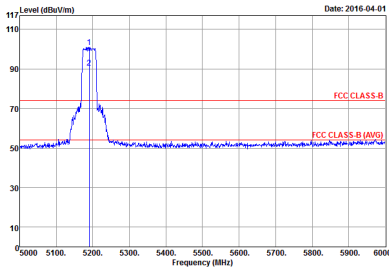
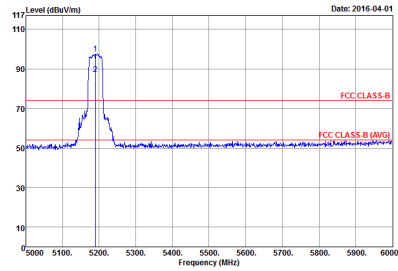
WIFI	Band 1 5150~5250MHz Fundamental @ 3m	
ANT	802.11n HT20 CH44 5220MHz	
1	Horizontal	Vertical
Peak/ Avg.	<div><p>Level (dBuV/m)</p><p>Date: 2016-04-01</p><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 HORIZONTAL Detector : Peak Project : SD3034-01 Mode : S</p></div>	<div><p>Level (dBuV/m)</p><p>Date: 2016-04-01</p><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 VERTICAL Detector : Peak Project : SD3034-01 Mode : S</p></div>



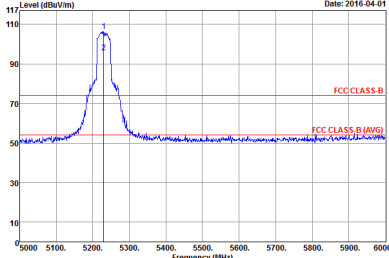
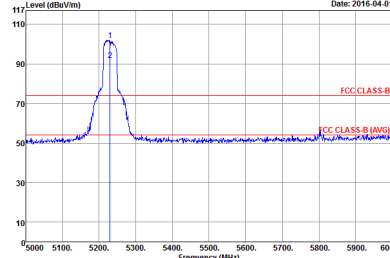
WIFI	Band 1 5150~5250MHz Fundamental @ 3m	
ANT	802.11n HT20 CH48 5240MHz	
1	Horizontal	Vertical
Peak/ Avg.	<div><p>Level (dBuV/m)</p><p>Date: 2016-04-01</p><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 HORIZONTAL Detector : Peak Project : SD3034-01 Mode : 6</p></div>	<div><p>Level (dBuV/m)</p><p>Date: 2016-04-01</p><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 VERTICAL Detector : Peak Project : SD3034-01 Mode : 6</p></div>



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

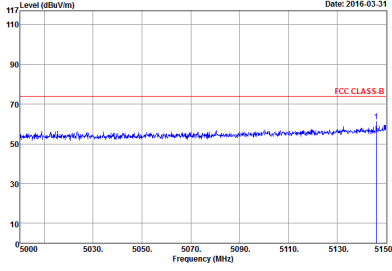
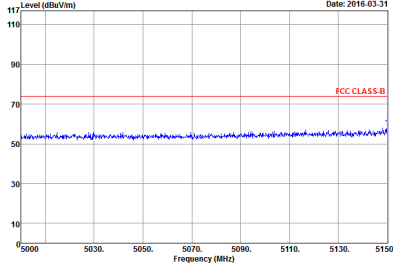
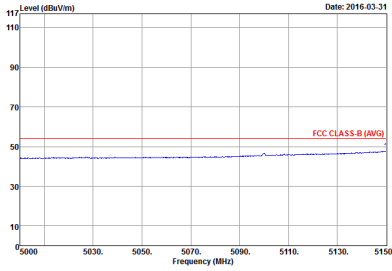
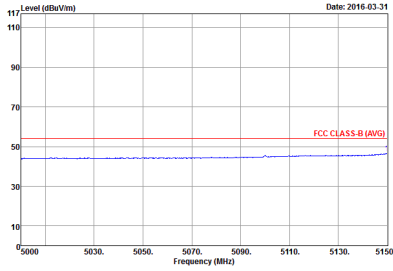
WIFI	Band 1 5150~5250MHz Fundamental @ 3m	
ANT	802.11n HT40 CH38 5190MHz	
1	Horizontal	Vertical
Peak/ Avg.	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_9120D_1328 HORIZONTAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : SD3034-01 Mode : 7 Power : 13</p></div>	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_9120D_1328 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : SD3034-01 Mode : 7 Power : 13</p></div>



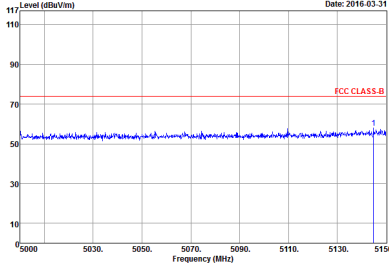
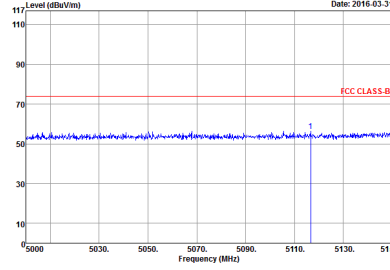
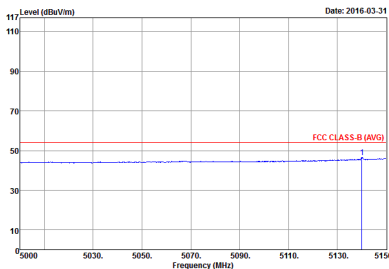
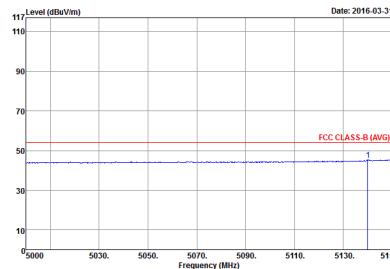
WIFI	Band 1 5150~5250MHz Fundamental @ 3m	
ANT	802.11n HT40 CH46 5230MHz	
1	Horizontal	Vertical
Peak/ Avg.	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 HORIZONTAL Detector : Peak Project : SD3034-01 Mode : 8</p></div>	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 VERTICAL Detector : Peak Project : SD3034-01 Mode : 8</p></div>



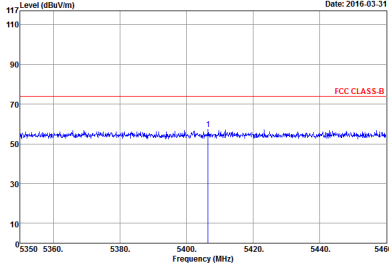
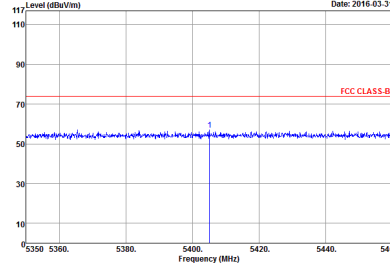
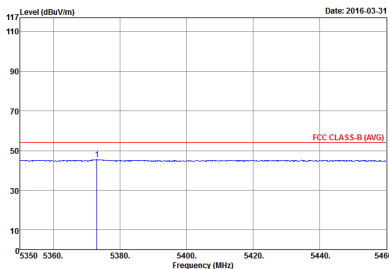
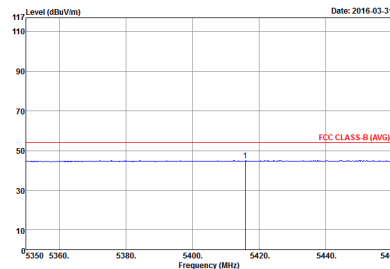
Band 1 - 5150~5250MHz
WIFI 802.11a (Band Edge @ 3m)

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH36 5180MHz	
1	Horizontal	Vertical
Peak	<p>The plot shows the peak level in dBuV/m versus frequency in MHz for the horizontal polarization. The y-axis ranges from 0 to 117 dBuV/m, and the x-axis ranges from 5000 to 5150 MHz. A red line indicates the FCC CLASS-B limit at approximately 70 dBuV/m. The measured signal is shown as a blue line, which remains below the limit.</p> <p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 HORIZONTAL Detector : Peak Project : S03034-01 Mode : 1</p>	<p>The plot shows the peak level in dBuV/m versus frequency in MHz for the vertical polarization. The y-axis ranges from 0 to 117 dBuV/m, and the x-axis ranges from 5000 to 5150 MHz. A red line indicates the FCC CLASS-B limit at approximately 70 dBuV/m. The measured signal is shown as a blue line, which remains below the limit.</p> <p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 VERTICAL Detector : Peak Project : S03034-01 Mode : 1</p>
Avg.	<p>The plot shows the average level in dBuV/m versus frequency in MHz for the horizontal polarization. The y-axis ranges from 0 to 117 dBuV/m, and the x-axis ranges from 5000 to 5150 MHz. A red line indicates the FCC CLASS-B (AVG) limit at approximately 50 dBuV/m. The measured signal is shown as a blue line, which remains below the limit.</p> <p>Site : 03CH12-HY Condition : FCC CLASS-B (AVG) 3m HORN_91200_1328 HORIZONTAL Detector : Peak Project : S03034-01 Mode : 1</p>	<p>The plot shows the average level in dBuV/m versus frequency in MHz for the vertical polarization. The y-axis ranges from 0 to 117 dBuV/m, and the x-axis ranges from 5000 to 5150 MHz. A red line indicates the FCC CLASS-B (AVG) limit at approximately 50 dBuV/m. The measured signal is shown as a blue line, which remains below the limit.</p> <p>Site : 03CH12-HY Condition : FCC CLASS-B (AVG) 3m HORN_91200_1328 VERTICAL Detector : Peak Project : S03034-01 Mode : 1</p>

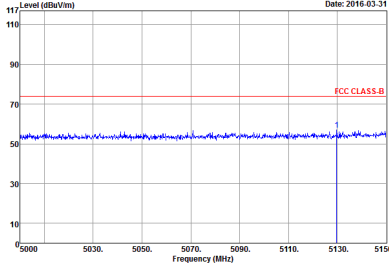
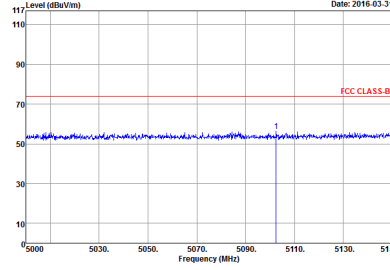
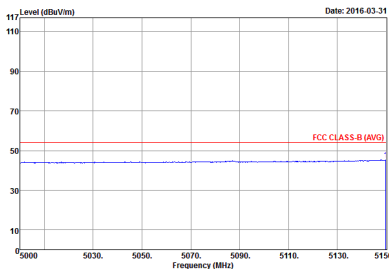
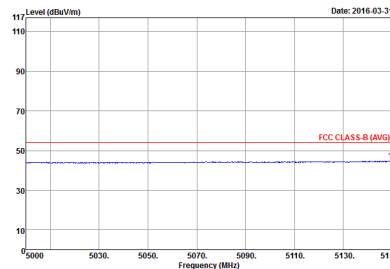


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH44 5220MHz - L	
1	Horizontal	Vertical
Peak	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 HORIZONTAL Detector : Peak Project : 5D3034-01 Mode : 2</p></div>	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 VERTICAL Detector : Peak Project : 5D3034-01 Mode : 2</p></div>
Avg.	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B (AVG) 3m HORN_91200_1328 HORIZONTAL Detector : Peak Project : 5D3034-01 Mode : 2</p></div>	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B (AVG) 3m HORN_91200_1328 VERTICAL Detector : Peak Project : 5D3034-01 Mode : 2</p></div>

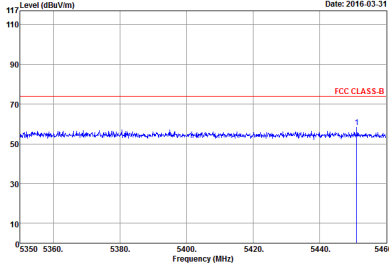
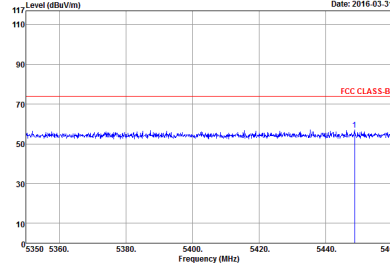
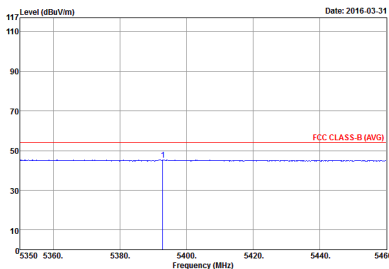
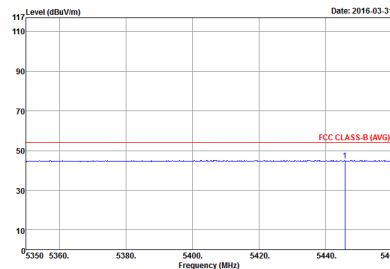


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH44 5220MHz - R	
1	Horizontal	Vertical
Peak	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 HORIZONTAL Detector : Peak Project : S03034-01 Mode : 2</p></div>	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 VERTICAL Detector : Peak Project : S03034-01 Mode : 2</p></div>
Avg.	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B (AVG) 3m HORN_91200_1328 HORIZONTAL Detector : Peak Project : S03034-01 Mode : 2</p></div>	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B (AVG) 3m HORN_91200_1328 VERTICAL Detector : Peak Project : S03034-01 Mode : 2</p></div>



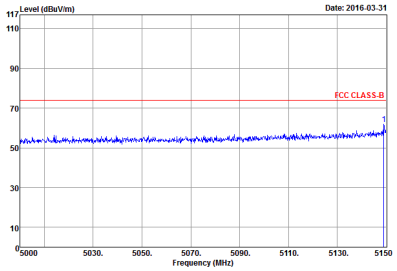
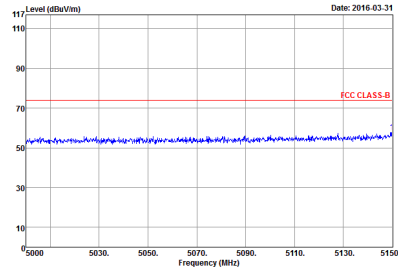
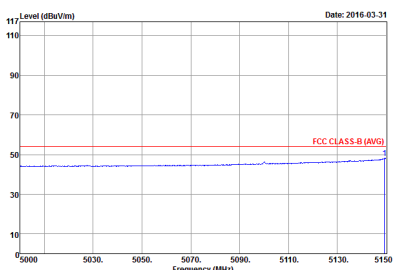
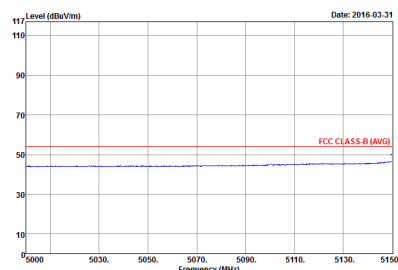
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH48 5240MHz - L	
1	Horizontal	Vertical
Peak	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 HORIZONTAL Detector : Peak Project : 5D3034-01 Mode : 3</p></div>	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 VERTICAL Detector : Peak Project : 5D3034-01 Mode : 3</p></div>
Avg.	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B (AVG) 3m HORN_91200_1328 HORIZONTAL Detector : Peak Project : 5D3034-01 Mode : 3</p></div>	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B (AVG) 3m HORN_91200_1328 VERTICAL Detector : Peak Project : 5D3034-01 Mode : 3</p></div>



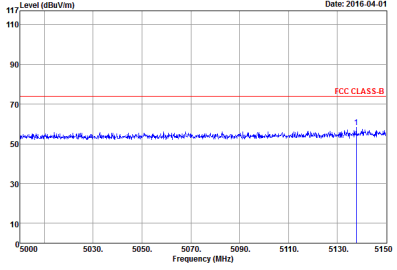
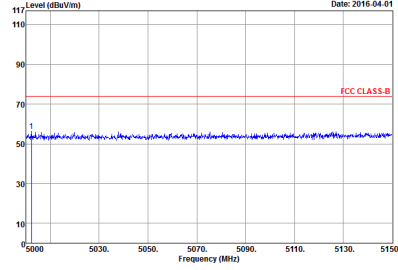
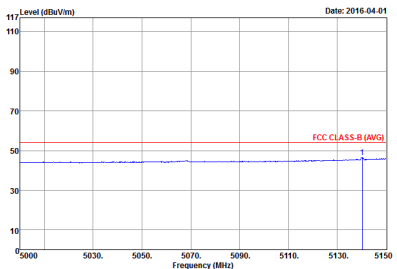
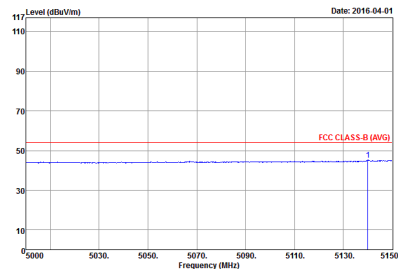
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH48 5240MHz - R	
1	Horizontal	Vertical
Peak	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 HORIZONTAL Detector : Peak Project : 5D3034-01 Mode : 3</p></div>	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 VERTICAL Detector : Peak Project : 5D3034-01 Mode : 3</p></div>
Avg.	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B (AVG) 3m HORN_91200_1328 HORIZONTAL Detector : Peak Project : 5D3034-01 Mode : 3</p></div>	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B (AVG) 3m HORN_91200_1328 VERTICAL Detector : Peak Project : 5D3034-01 Mode : 3</p></div>



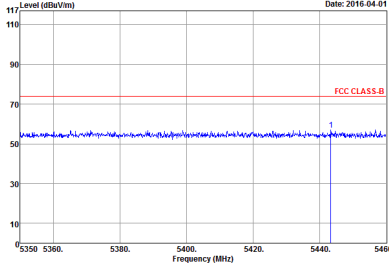
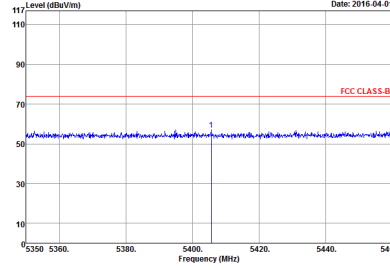
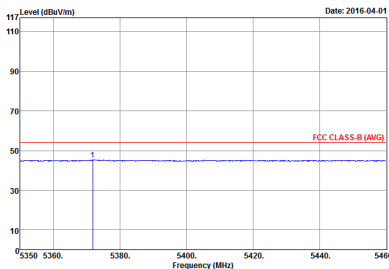
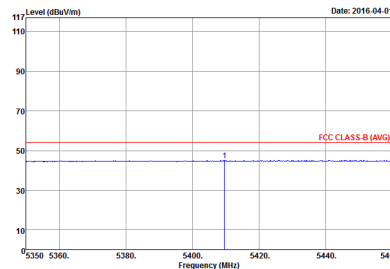
Band 1 5150~5250MHz
WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT20 CH36 5180MHz	
1	Horizontal	Vertical
Peak	 <p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 HORIZONTAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak Mode : 5D3034-01 Date: 2016-03-31</p>	 <p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak Mode : 5D3034-01 Date: 2016-03-31</p>
Avg.	 <p>Site : 03CH12-HY Condition : FCC CLASS-B (AVG) 3m HORN_91200_1328 HORIZONTAL Detector : RBW:1000.000KHz VBW:0.300KHz SWT:Auto Project : Peak Mode : 5D3034-01 Date: 2016-03-31</p>	 <p>Site : 03CH12-HY Condition : FCC CLASS-B (AVG) 3m HORN_91200_1328 VERTICAL Detector : RBW:1000.000KHz VBW:0.300KHz SWT:Auto Project : Peak Mode : 5D3034-01 Date: 2016-03-31</p>

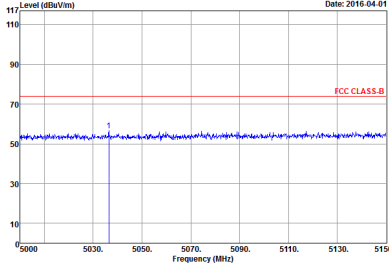
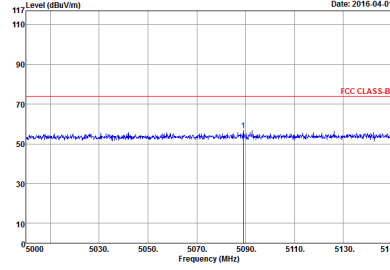
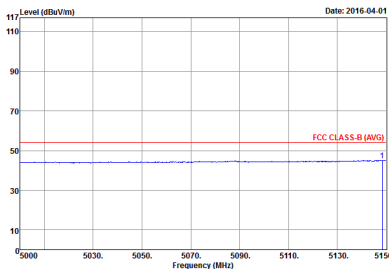
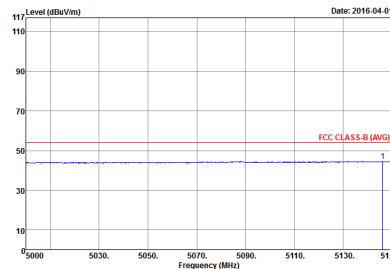


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT20 CH44 5220MHz - L	
1	Horizontal	Vertical
Peak	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 HORIZONTAL Detector : Peak Project : 5D3034-01 Mode : 5</p></div>	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 VERTICAL Detector : Peak Project : 5D3034-01 Mode : 5</p></div>
Avg.	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B (AVG) 3m HORN_91200_1328 HORIZONTAL Detector : Peak Project : 5D3034-01 Mode : 5</p></div>	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B (AVG) 3m HORN_91200_1328 VERTICAL Detector : Peak Project : 5D3034-01 Mode : 5</p></div>

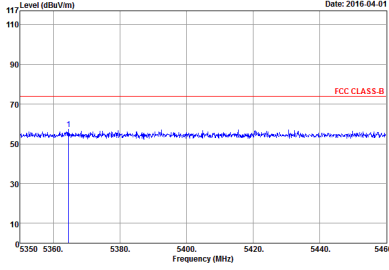
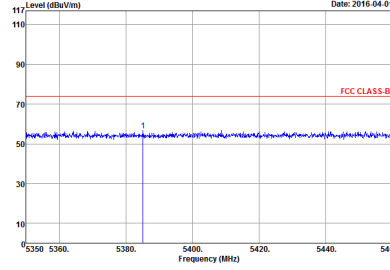
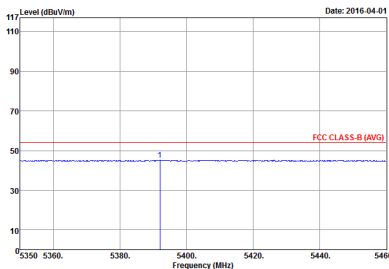
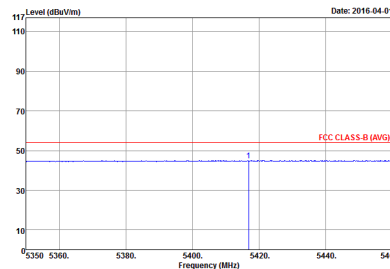


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT20 CH44 5220MHz - R	
1	Horizontal	Vertical
Peak	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 HORIZONTAL Detector : Peak Project : 5D3034-01 Mode : 5</p></div>	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 VERTICAL Detector : Peak Project : 5D3034-01 Mode : 5</p></div>
Avg.	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B (AVG) 3m HORN_91200_1328 HORIZONTAL Detector : Peak Project : 5D3034-01 Mode : 5</p></div>	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B (AVG) 3m HORN_91200_1328 VERTICAL Detector : Peak Project : 5D3034-01 Mode : 5</p></div>



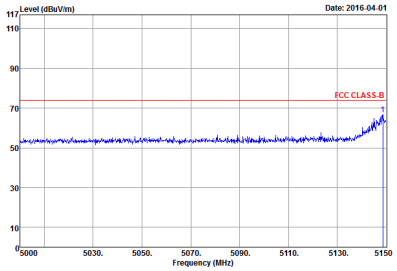
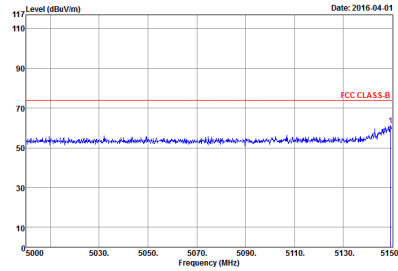
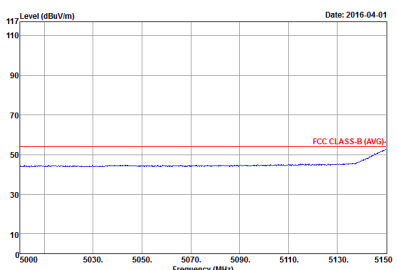
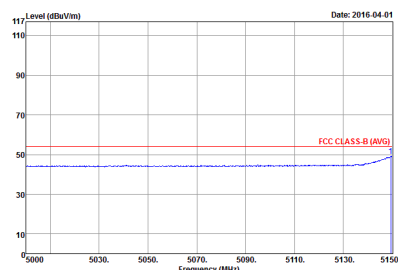
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT20 CH48 5240MHz - L	
1	Horizontal	Vertical
Peak	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 HORIZONTAL Detector : Peak Project : 5D3034-01 Mode : 6</p></div>	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 VERTICAL Detector : Peak Project : 5D3034-01 Mode : 6</p></div>
Avg.	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B (AVG) 3m HORN_91200_1328 HORIZONTAL Detector : Peak Project : 5D3034-01 Mode : 6</p></div>	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B (AVG) 3m HORN_91200_1328 VERTICAL Detector : Peak Project : 5D3034-01 Mode : 6</p></div>



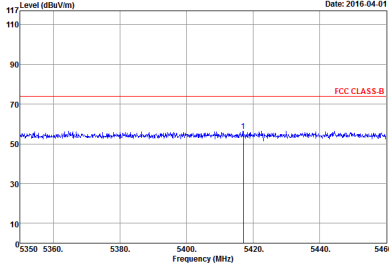
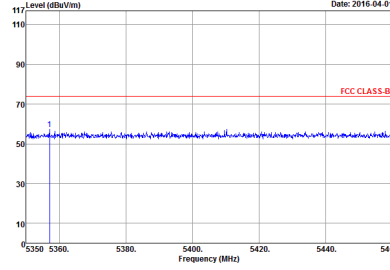
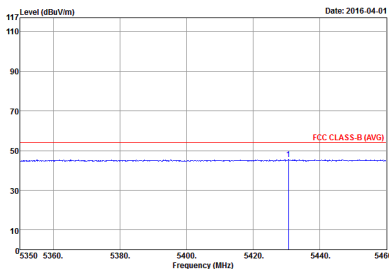
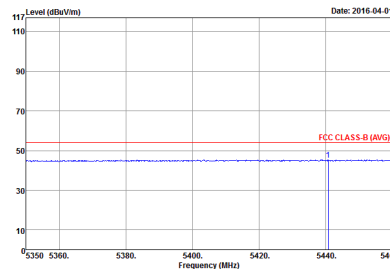
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT20 CH48 5240MHz - R	
1	Horizontal	Vertical
Peak	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 HORIZONTAL Detector : Peak Project : 5D3034-01 Mode : 6</p></div>	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 VERTICAL Detector : Peak Project : 5D3034-01 Mode : 6</p></div>
Avg.	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B (AVG) 3m HORN_91200_1328 HORIZONTAL Detector : Peak Project : 5D3034-01 Mode : 6</p></div>	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B (AVG) 3m HORN_91200_1328 VERTICAL Detector : Peak Project : 5D3034-01 Mode : 6</p></div>



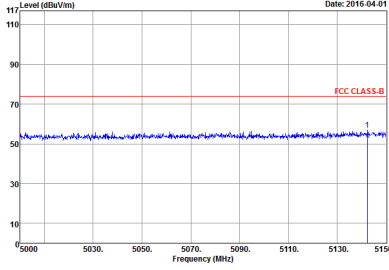
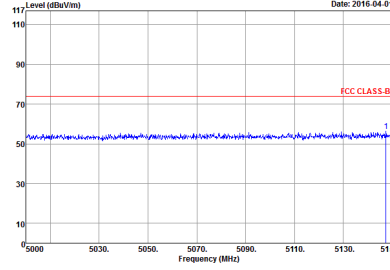
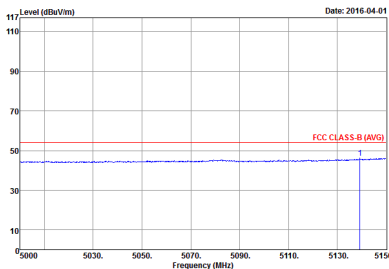
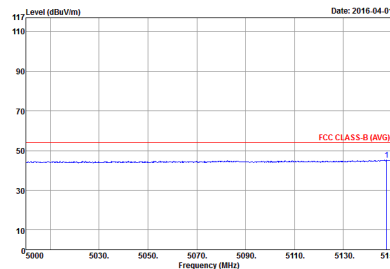
Band 1 5150~5250MHz
WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH38 5190MHz - L	
1	Horizontal	Vertical
Peak	 <p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 HORIZONTAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : S03034-01 Mode : Peak Power : 7</p>	 <p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 VERTICAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : S03034-01 Mode : Peak Power : 7</p>
Avg.	 <p>Site : 03CH12-HY Condition : FCC CLASS-B (AVG) 3m HORN_91200_1328 HORIZONTAL Detector : RBW:1000.000kHz VBW:1.000kHz SWT:Auto Project : S03034-01 Mode : Avg. Power : 13</p>	 <p>Site : 03CH12-HY Condition : FCC CLASS-B (AVG) 3m HORN_91200_1328 VERTICAL Detector : RBW:1000.000kHz VBW:1.000kHz SWT:Auto Project : S03034-01 Mode : Avg. Power : 13</p>

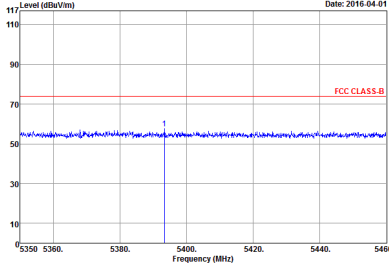
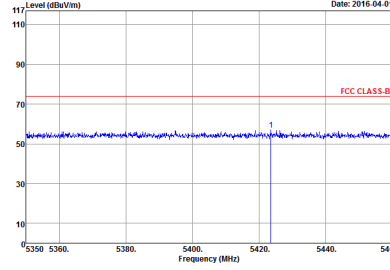
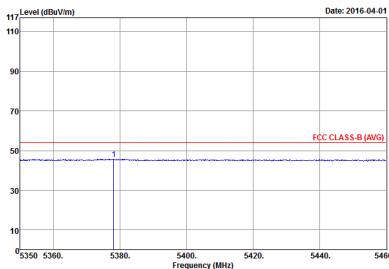
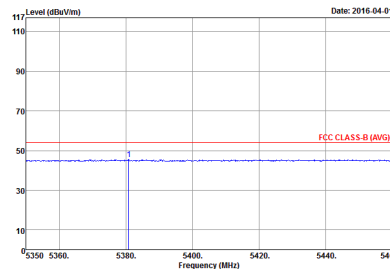


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH38 5190MHz - R	
1	Horizontal	Vertical
Peak	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 HORIZONTAL Detector : Peak Project : 503034-01 Mode : 7 Power : 13</p></div>	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 VERTICAL Detector : Peak Project : 503034-01 Mode : 7 Power : 13</p></div>
Avg.	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B (AVG) 3m HORN_91200_1328 HORIZONTAL Detector : Peak Project : 503034-01 Mode : 7 Power : 13</p></div>	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B (AVG) 3m HORN_91200_1328 VERTICAL Detector : Peak Project : 503034-01 Mode : 7 Power : 13</p></div>



WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH46 5230MHz - L	
1	Horizontal	Vertical
Peak	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 HORIZONTAL Detector : Peak Project : 5D3034-01 Mode : 8</p></div>	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 VERTICAL Detector : Peak Project : 5D3034-01 Mode : 8</p></div>
Avg.	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B (AVG) 3m HORN_91200_1328 HORIZONTAL Detector : Peak Project : 5D3034-01 Mode : 8</p></div>	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B (AVG) 3m HORN_91200_1328 VERTICAL Detector : Peak Project : 5D3034-01 Mode : 8</p></div>



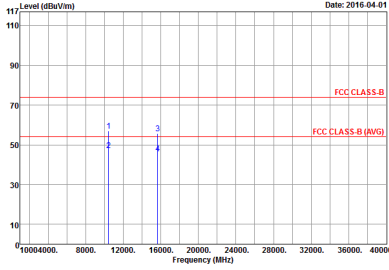
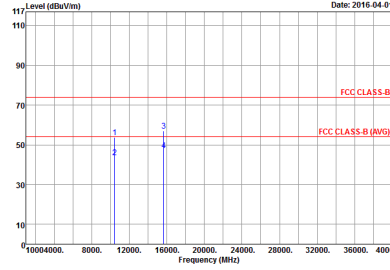
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH46 5230MHz - R	
1	Horizontal	Vertical
Peak	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 HORIZONTAL Detector : Peak Project : 5D3034-01 Mode : 8</p></div>	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 VERTICAL Detector : Peak Project : 5D3034-01 Mode : 8</p></div>
Avg.	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B (AVG) 3m HORN_91200_1328 HORIZONTAL Detector : Peak Project : 5D3034-01 Mode : 8</p></div>	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B (AVG) 3m HORN_91200_1328 VERTICAL Detector : Peak Project : 5D3034-01 Mode : 8</p></div>



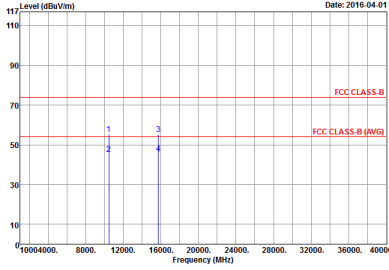
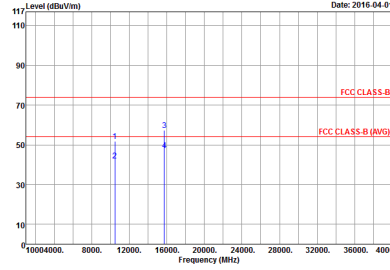
Band 1 - 5150~5250MHz
WIFI 802.11a (Harmonic @ 3m)

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11a CH36 5180MHz	
1	Horizontal	Vertical
Peak Avg.	<div><p>Level (dBuV/m)</p><p>Date: 2016-04-01</p><p>Frequency (MHz)</p><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 HORIZONTAL Detector : Peak Project : SD3034-01 Mode : 1</p></div>	<div><p>Level (dBuV/m)</p><p>Date: 2016-04-01</p><p>Frequency (MHz)</p><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 VERTICAL Detector : Peak Project : SD3034-01 Mode : 1</p></div>



WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11a CH44 5220MHz	
1	Horizontal	Vertical
Peak Avg.	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 HORIZONTAL Detector : Peak Project : 5D3034-01 Mode : 2</p></div>	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 VERTICAL Detector : Peak Project : 5D3034-01 Mode : 2</p></div>



WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11a CH48 5240MHz	
1	Horizontal	Vertical
Peak Avg.	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 HORIZONTAL Detector : Peak Project : 5D3034-01 Mode : 3</p></div>	<div><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 VERTICAL Detector : Peak Project : 5D3034-01 Mode : 3</p></div>



Band 1 5150~5250MHz
WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11n HT20 CH36 5180MHz	
1	Horizontal	Vertical
Peak Avg.	<div><p>Level (dBuV/m)</p><p>Date: 2016-04-01</p><p>Frequency (MHz)</p><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_51200_1328 HORIZONTAL Detector : Peak Project : SD3034-01 Mode : 4</p></div>	<div><p>Level (dBuV/m)</p><p>Date: 2016-04-01</p><p>Frequency (MHz)</p><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_51200_1328 VERTICAL Detector : Peak Project : SD3034-01 Mode : 4</p></div>



WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11n HT20 CH44 5220MHz	
1	Horizontal	Vertical
Peak Avg.	<div><p>Level (dBuV/m)</p><p>Date: 2016-04-01</p><p>Frequency (MHz)</p><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 HORIZONTAL Detector : Peak Project : 5D3034-01 Mode : 5</p></div>	<div><p>Level (dBuV/m)</p><p>Date: 2016-04-01</p><p>Frequency (MHz)</p><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 VERTICAL Detector : Peak Project : 5D3034-01 Mode : 5</p></div>



WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11n HT20 CH48 5240MHz	
1	Horizontal	Vertical
Peak Avg.	<div><p>Level (dBuV/m)</p><p>Date: 2016-04-01</p><p>Frequency (MHz)</p><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 HORIZONTAL Detector : Peak Project : 5D3034-01 Mode : 6</p></div>	<div><p>Level (dBuV/m)</p><p>Date: 2016-04-01</p><p>Frequency (MHz)</p><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 VERTICAL Detector : Peak Project : 5D3034-01 Mode : 6</p></div>



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

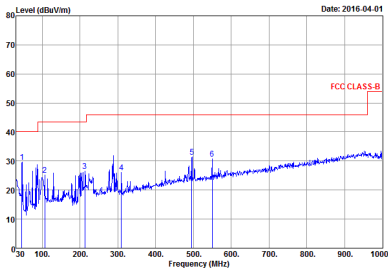
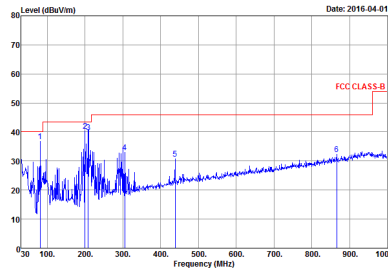
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11n HT40 CH38 5190MHz	
1	Horizontal	Vertical
Peak Avg.	<div><p>Level (dBuV/m)</p><p>Date: 2016-04-01</p><p>Frequency (MHz)</p><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_51200_1328 HORIZONTAL Detector : Peak Project : 5D3034-01 Mode : 7 Power : 13</p></div>	<div><p>Level (dBuV/m)</p><p>Date: 2016-04-01</p><p>Frequency (MHz)</p><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_51200_1328 VERTICAL Detector : Peak Project : 5D3034-01 Mode : 7 Power : 13</p></div>



WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11n HT40 CH46 5230MHz	
1	Horizontal	Vertical
Peak Avg.	<div><p>Level (dBuV/m)</p><p>Date: 2016-04-01</p><p>Frequency (MHz)</p><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 HORIZONTAL Detector : Peak Project : 5D3034-01 Mode : 8</p></div>	<div><p>Level (dBuV/m)</p><p>Date: 2016-04-01</p><p>Frequency (MHz)</p><p>Site : 03CH12-HY Condition : FCC CLASS-B 3m HORN_91200_1328 VERTICAL Detector : Peak Project : 5D3034-01 Mode : 8</p></div>



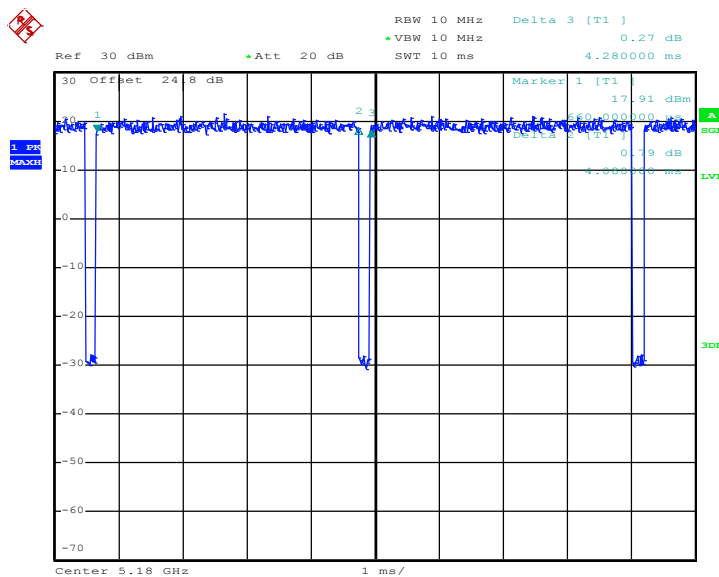
Emission below 1GHz
5GHz WIFI 802.11n HT20 (LF)

WIFI	5GHz WIFI	
ANT	802.11n HT20 LF	
1	Horizontal	Vertical
QP / Peak	 <p>Site : 03CH12-HY Condition : FCC CLASS-B 3m BILOG_6111D_37059 HORIZONTAL Detector : Peak Project : 5D3034-01 Mode : 17</p>	 <p>Site : 03CH12-HY Condition : FCC CLASS-B 3m BILOG_6111D_37059 VERTICAL Detector : Peak Project : 5D3034-01 Mode : 17</p>

Appendix D. Duty Cycle Plots

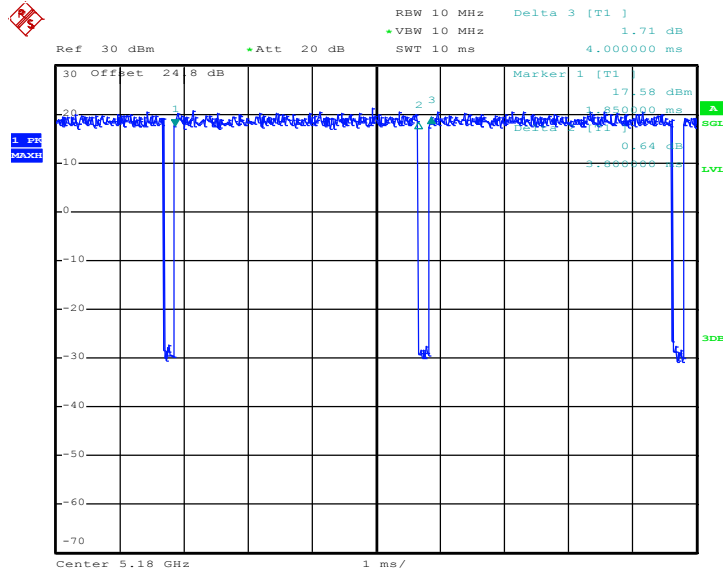
Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
802.11a	95.33	4080.00	0.25	300Hz
802.11n HT20	95.00	3800.00	0.26	300Hz
802.11n HT40	91.13	1850.00	0.54	1kHz

802.11a



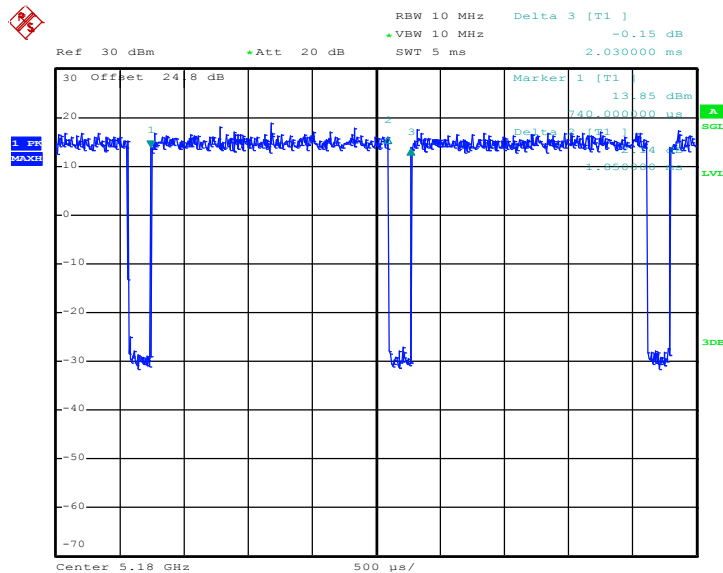
Date: 28.MAR.2016 14:50:45

802.11n HT20



Date: 28.MAR.2016 15:21:20

802.11n HT40



Date: 28.MAR.2016 15:25:44