

FCC RF Test Report

APPLICANT : Ubiquiti Networks, Inc.
EQUIPMENT : NanoBeam AC
BRAND NAME : UBIQUITI
MODEL NAME : NBE-5AC-Gen2
FCC ID : SWX-NBE5ACG2W
STANDARD : FCC Part 15 Subpart C §15.247
CLASSIFICATION : (DTS) Digital Transmission System

The product was received on May 30, 2017 and testing was completed on Aug. 14, 2017. 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



SPORTON INTERNATIONAL INC.

No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C.



TABLE OF CONTENTS

REVISION HISTORY.....	3
SUMMARY OF TEST RESULT	4
1 GENERAL DESCRIPTION	5
1.1 Applicant.....	5
1.2 Manufacturer.....	5
1.3 Product Feature of Equipment Under Test.....	5
1.4 Modification of EUT	5
1.5 Testing Location	6
1.6 Applicable Standards.....	7
2 TEST CONFIGURATION OF EQUIPMENT UNDER TEST	8
2.1 Carrier Frequency and Channel	8
2.2 Test Mode.....	9
2.3 Connection Diagram of Test System.....	10
2.4 Support Unit used in test configuration and system	11
2.5 EUT Operation Test Setup	11
2.6 Measurement Results Explanation Example.....	11
3 TEST RESULT	12
3.1 6dB and 99% Bandwidth Measurement	12
3.2 Output Power Measurement.....	14
3.3 Power Spectral Density Measurement	15
3.4 Conducted Band Edges and Spurious Emission Measurement	17
3.5 Radiated Band Edges and Spurious Emission Measurement	30
3.6 AC Conducted Emission Measurement.....	34
3.7 Antenna Requirements.....	36
4 LIST OF MEASURING EQUIPMENT	37
5 UNCERTAINTY OF EVALUATION	38
APPENDIX A. CONDUCTED TEST RESULTS	
APPENDIX B. AC CONDUCTED EMISSION TEST RESULT	
APPENDIX C. RADIATED SPURIOUS EMISSION	
APPENDIX D. RADIATED SPURIOUS EMISSION PLOTS	
APPENDIX E. DUTY CYCLE PLOTS	
APPENDIX F. SETUP PHOTOGRAPHS	



REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR561115-03A	Rev. 01	Initial issue of report	Sep. 01, 2017

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	15.247(a)(2)	6dB Bandwidth	$\geq 0.5\text{MHz}$	Pass	-
3.1	-	99% Bandwidth	-	Pass	-
3.2	15.247(b)	Power Output Measurement	$\leq 30\text{dBm}$	Pass	-
3.3	15.247(e)	Power Spectral Density	$\leq 8\text{dBm}/3\text{kHz}$	Pass	-
3.4	15.247(d)	Conducted Band Edges	$\leq 20\text{dBc}$	Pass	-
		Conducted Spurious Emission		Pass	-
3.5	15.247(d)	Radiated Band Edges and Radiated Spurious Emission	15.209(a) & 15.247(d)	Pass	Under limit 0.76 dB at 4824.000 MHz
3.6	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 10.00 dB at 0.158 MHz
3.7	15.203 & 15.247(b)	Antenna Requirement	N/A	Pass	-



1 General Description

1.1 Applicant

Ubiquiti Networks, Inc.

685 Third Avenue, 27th Floor New York, New York 10017 USA

1.2 Manufacturer

Ubiquiti Networks, Inc.

685 Third Avenue, 27th Floor New York, New York 10017 USA

1.3 Product Feature of Equipment Under Test

Wi-Fi 2.4GHz 802.11b/g/n, Wi-Fi 5GHz 802.11a/n/ac

Product Specification subjective to this standard	
Antenna Type	WLAN: Internal Antenna

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. TW0007 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC Test.

Test Site	SPORTON INTERNATIONAL INC.	
Test Site Location	No. 52, 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.	
	03CH13-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 C §15.247
- ♦ FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v04
- ♦ ANSI C63.10-2013

Remark:

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

2 Test Configuration of Equipment Under Test

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

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
2400-2483.5 MHz	1	2412	7	2442
	2	2417	8	2447
	3	2422	9	2452
	4	2427	10	2457
	5	2432	11	2462
	6	2437	-	-



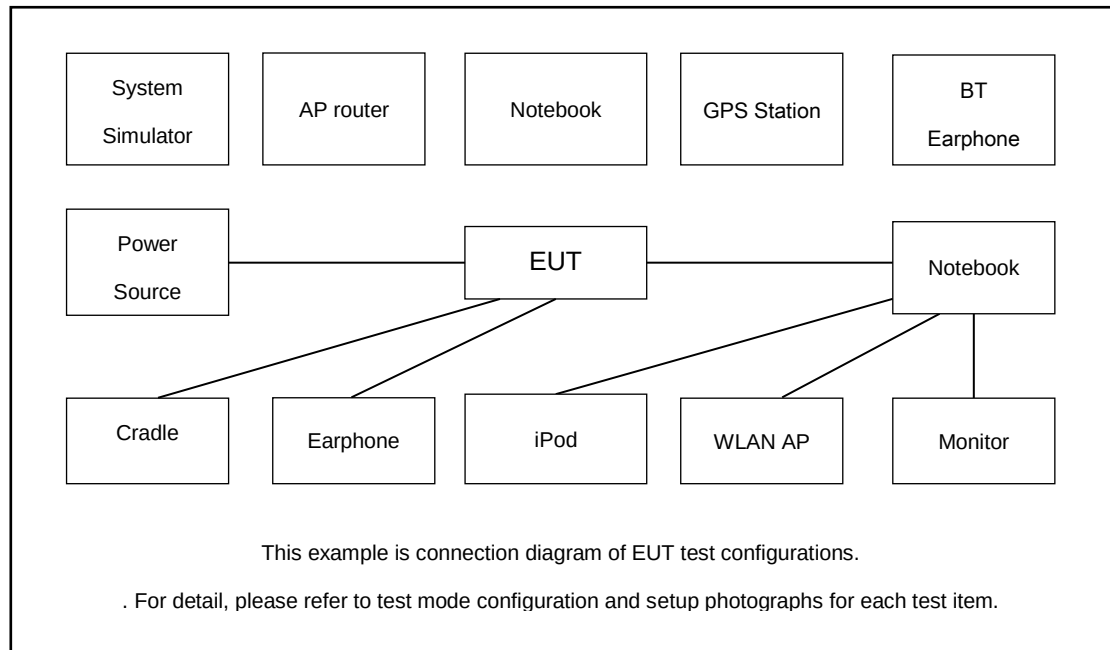
2.2 Test Mode

Final test mode of conducted test items and radiated spurious emissions are considering the modulation and worse data rates as below table.

Modulation	Data Rate
802.11b	1 Mbps
802.11g	6 Mbps
802.11n HT20	MCS0
802.11n HT40	MCS0

Test Cases	
AC Conducted Emission	Mode 1 : WLAN (2.4GHz) Link + WLAN (5GHz) Idle + LAN Link + PoE 1

2.3 Connection Diagram of Test System





2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	NOTE BOOK	DELL	E3340	FCC DoC	AC I/P: Unshielded, 1.2 m DC O/P:Shielded, 1.8 m	
2.	NOTE BOOK	DELL	Latitude E6320	FCC DoC	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m	
3.	Smart Phone	Apple	iPhone 6 Plus	FCC DoC	N/A	

2.5 EUT Operation Test Setup

The RF test items, programmed RF utility, “telnet 192.168.1.2 2390” installed in the notebook make the EUT provide functions like channel selection and power level for continuous transmitting and receiving signals.

2.6 Measurement Results Explanation Example

For all conducted test items:

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

Example :

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

Offset = RF cable loss + attenuator factor.

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

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

3 Test Result

3.1 6dB and 99% Bandwidth Measurement

3.1.1 Limit of 6dB and 99% Bandwidth

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

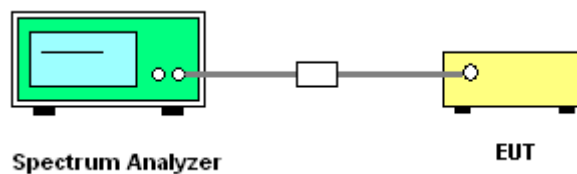
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 DTS D01 Meas. Guidance v04.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. Set the Video bandwidth (VBW) = 300 kHz. In order to make an accurate measurement. The 6 dB bandwidth must be greater than 500 kHz.
5. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) = 1MHz and set the Video bandwidth (VBW) = 3MHz.
6. Measure and record the results in the test report.

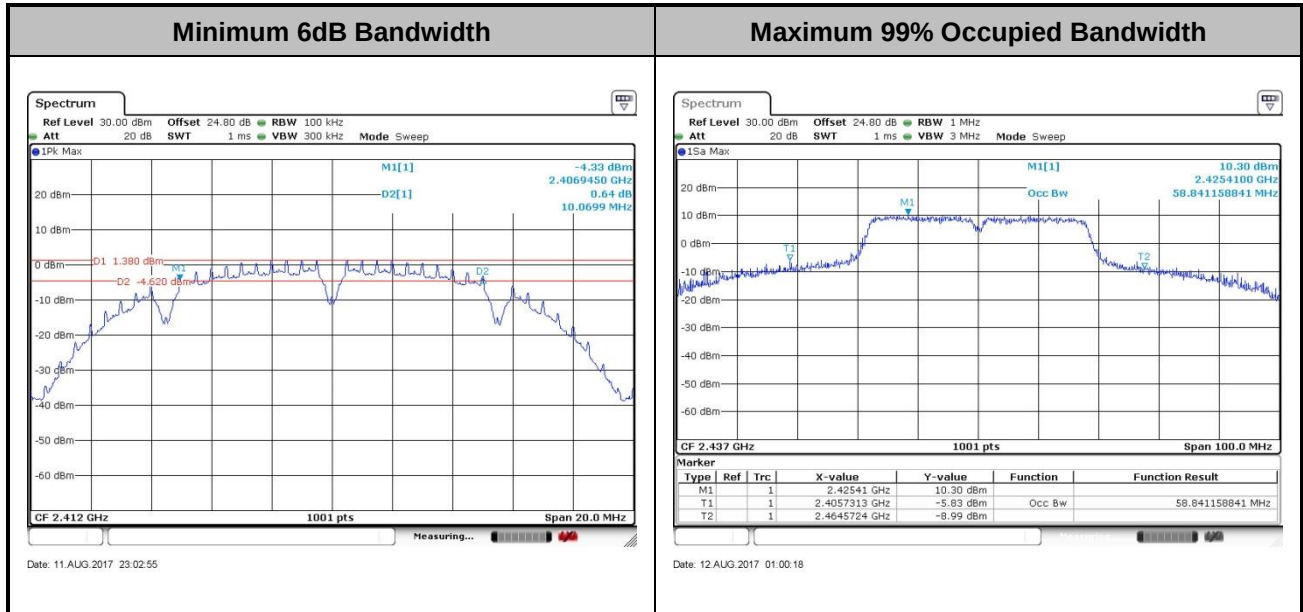
3.1.4 Test Setup





3.1.5 Test Result of 6dB and 99% Occupied Bandwidth

Please refer to Appendix A.



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

3.2 Output Power Measurement

3.2.1 Limit of Output Power

For systems using digital modulation in the 2400-2483.5MHz, the limit for peak output power is 30dBm. If transmitting antenna of directional gain greater than 6dBi are used the peak output power from the intentional radiator shall be reduced below the above stated value by the amount in dB that the directional gain of the antenna exceeds 6 dBi. In case of point-to-point operation, the limit has to be reduced by 1dB for every 3dB that the directional gain of the antenna exceeds 6dBi.

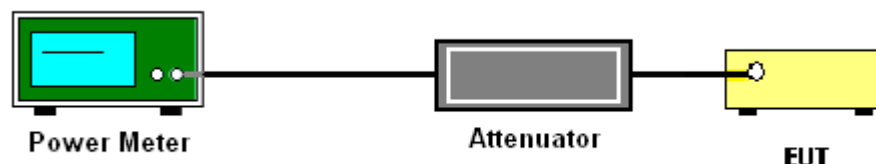
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

1. The testing follows the Measurement Procedure of FCC KDB No. 558074 DTS D01 Meas. Guidance v04 section 9.1.2 PKPM1 Peak power meter method.
2. The RF output of EUT was connected to the power meter by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Measure the conducted output power and record the results in the test report.

3.2.4 Test Setup



3.2.5 Test Result of Peak Output Power

Please refer to Appendix A.

3.2.6 Test Result of Average output Power (Reporting Only)

Please refer to Appendix A.

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

The peak power spectral density shall not be greater than 8dBm in any 3kHz band at any time interval of continuous transmission.

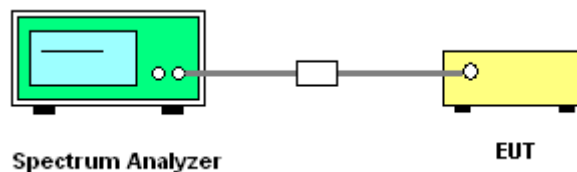
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

1. The testing follows Measurement Procedure 10.2 Method PKPSD of FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v04
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 3 kHz. Video bandwidth VBW = 10 kHz In order to make an accurate measurement, set the span to 1.5 times DTS Channel Bandwidth. (6dB BW)
5. Detector = peak, Sweep time = auto couple, Trace mode = max hold, Allow trace to fully stabilize. Use the peak marker function to determine the maximum power level.
6. Measure and record the results in the test report.

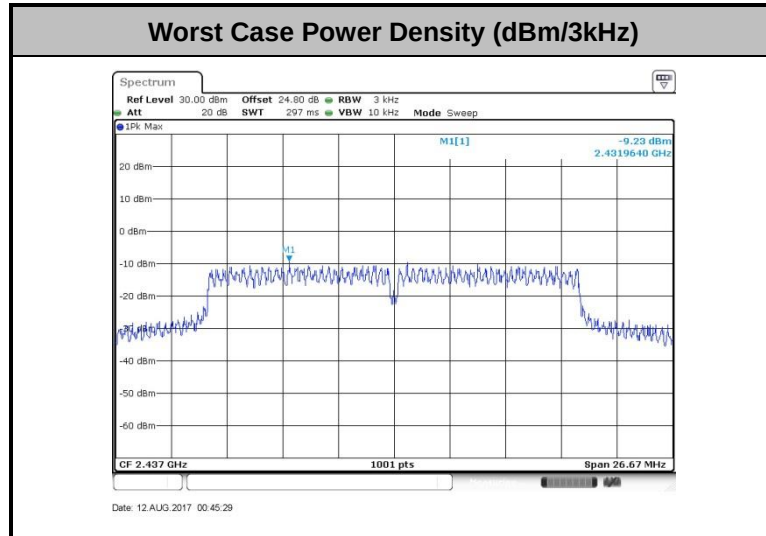
3.3.4 Test Setup





3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.



3.4 Conducted Band Edges and Spurious Emission Measurement

3.4.1 Limit of Conducted Band Edges and Spurious Emission Measurement

In any 100 kHz bandwidth outside of the authorized frequency band, the emissions which fall in the non-restricted bands shall be attenuated at least 20 dB / 30dB relative to the maximum PSD level in 100 kHz by RF conducted measurement.

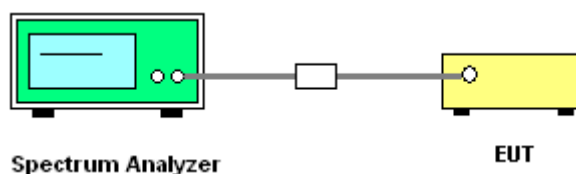
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v04.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Set RBW = 100 kHz, VBW=300 kHz, Peak Detector. Unwanted Emissions measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when maximum peak conducted output power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB per 15.247(d).
5. Measure and record the results in the test report.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

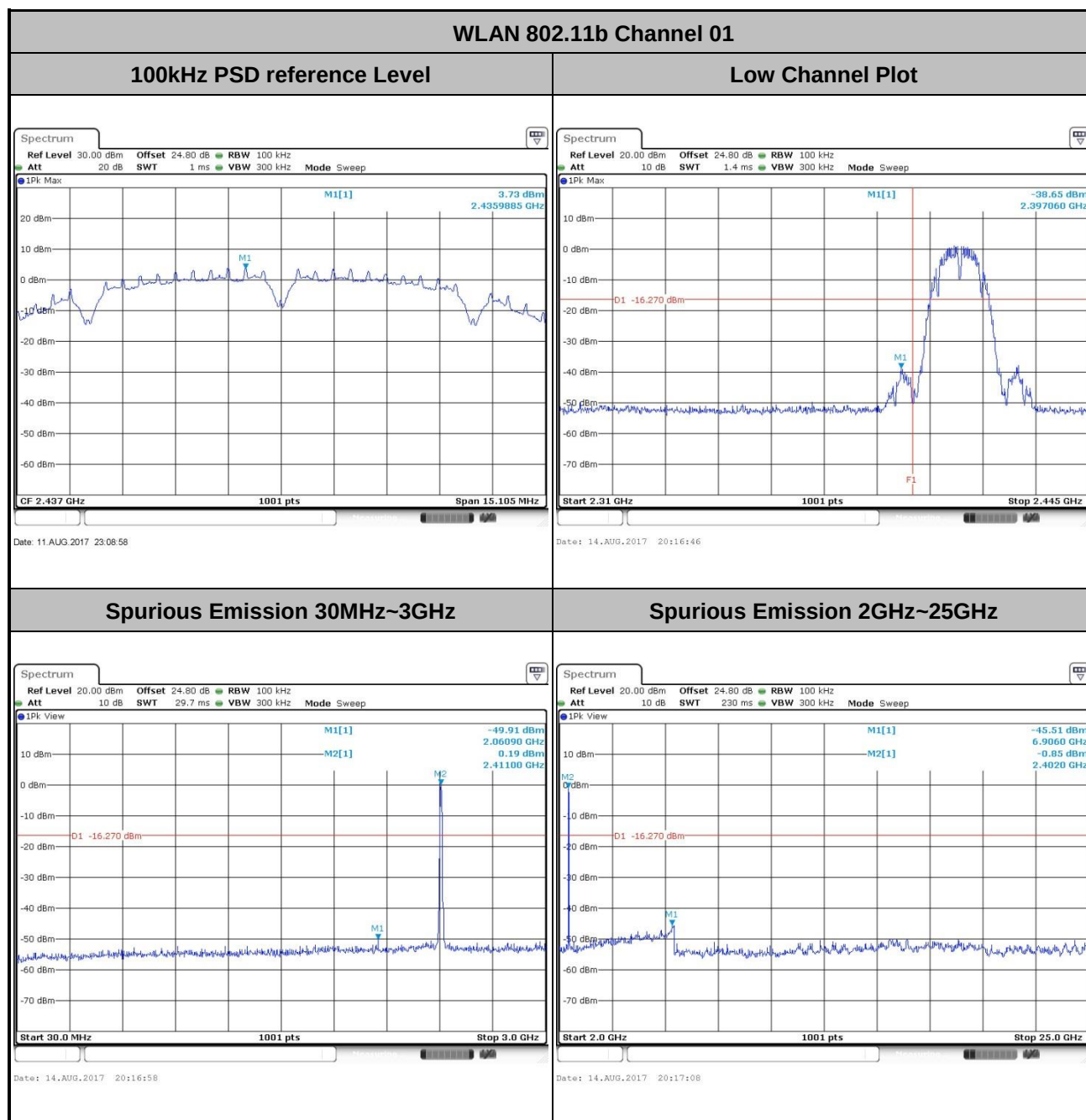
3.4.4 Test Setup





3.4.5 Test Result of Conducted Band Edges and Spurious Emission

Test Mode :	802.11b	Temperature :	21~25°C
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	01	Test Engineer :	Derek Hsu

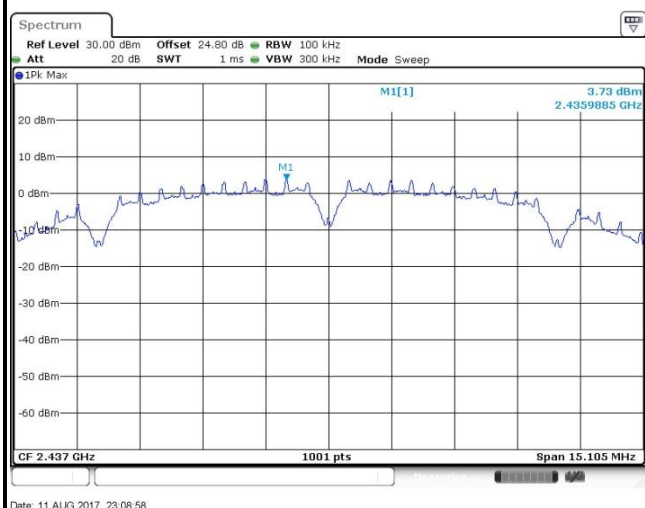




Test Mode :	802.11b	Temperature :	21~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	Derek Hsu

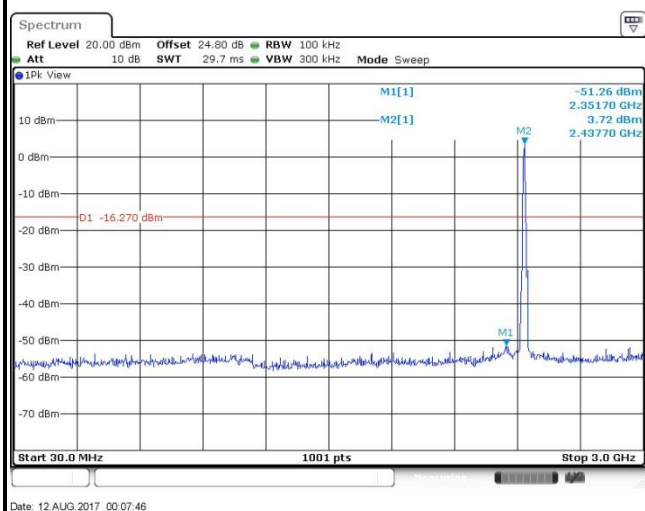
WLAN 802.11b Channel 06

100kHz PSD reference Level

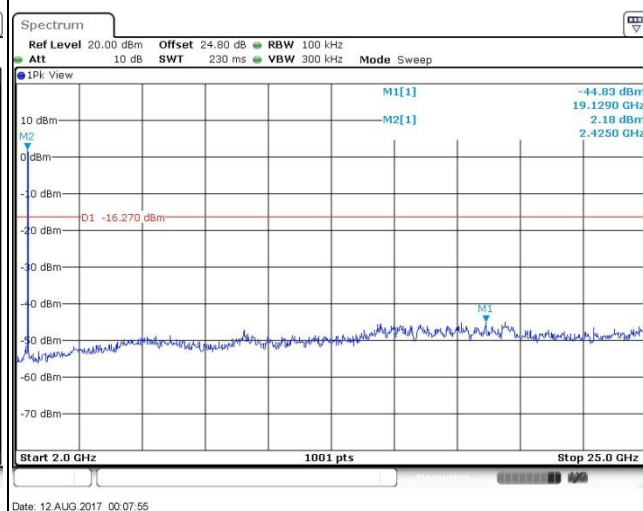


Mid Channel Plot

Spurious Emission 30MHz~3GHz

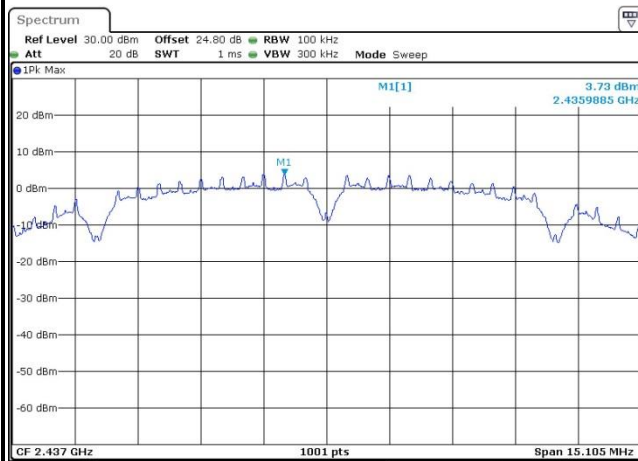


Spurious Emission 2GHz~25GHz

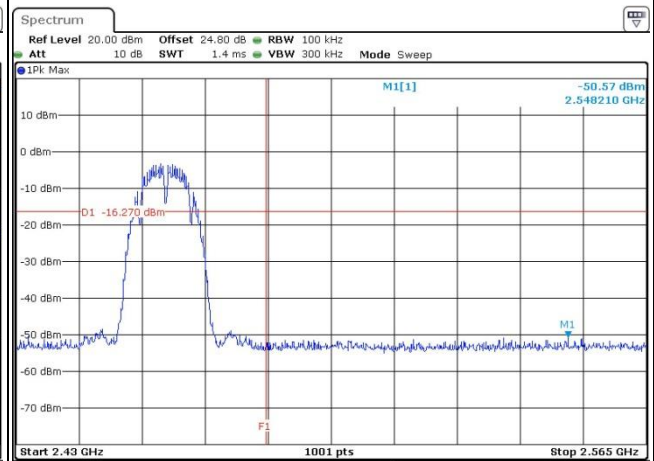




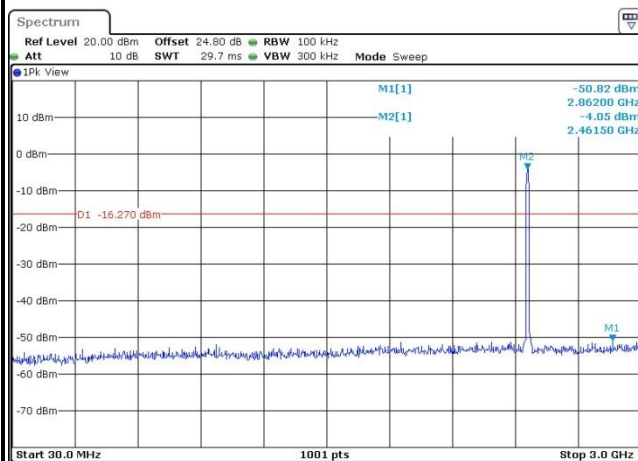
Test Mode :	802.11b	Temperature :	21~25°C
Test Band :	2.4GHz High	Relative Humidity :	51~54%
Test Channel :	11	Test Engineer :	Derek Hsu

WLAN 802.11b Channel 11**100kHz PSD reference Level**

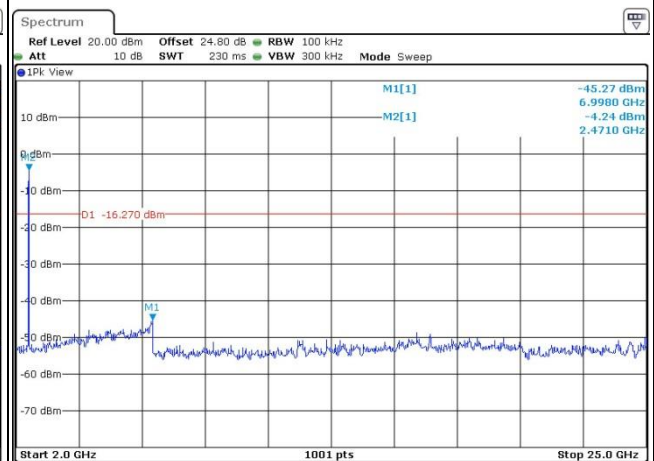
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High Channel Plot

Date: 14.AUG.2017 20:17:46

Spurious Emission 30MHz~3GHz

Date: 14.AUG.2017 20:17:57

Spurious Emission 2GHz~25GHz

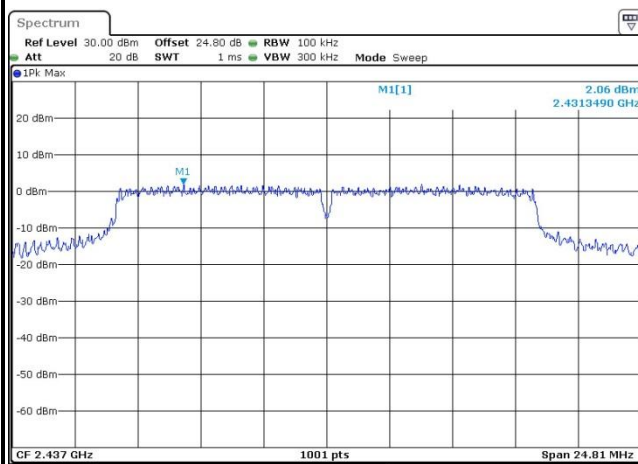
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Test Mode :	802.11g	Temperature :	21~25°C
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	01	Test Engineer :	Derek Hsu

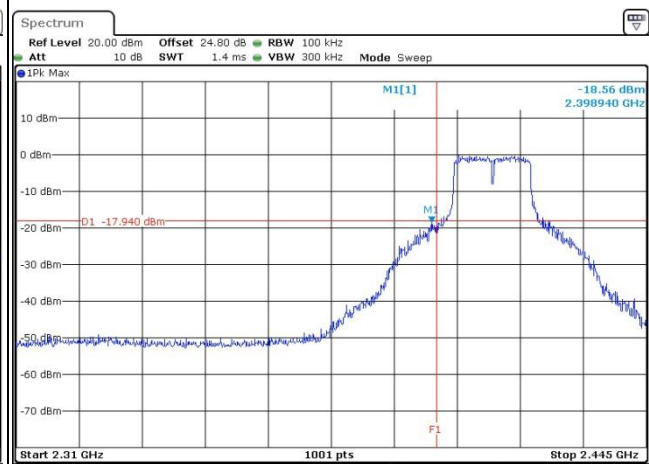
WLAN 802.11g Channel 01

100kHz PSD reference Level



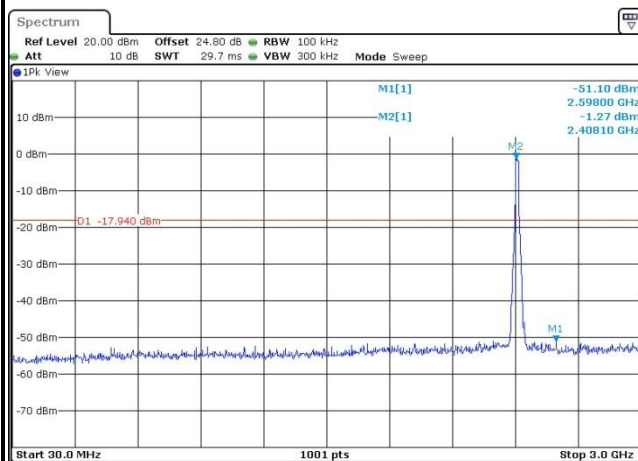
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Low Channel Plot



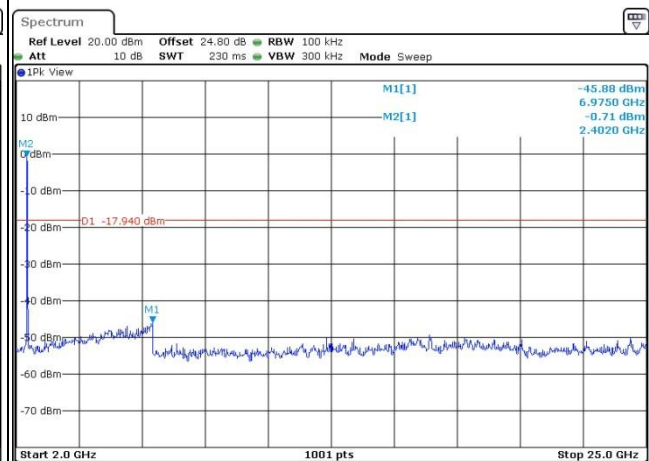
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Spurious Emission 30MHz~3GHz



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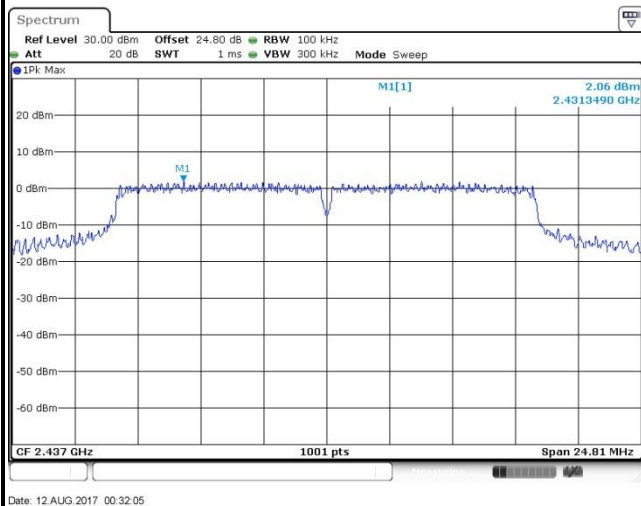
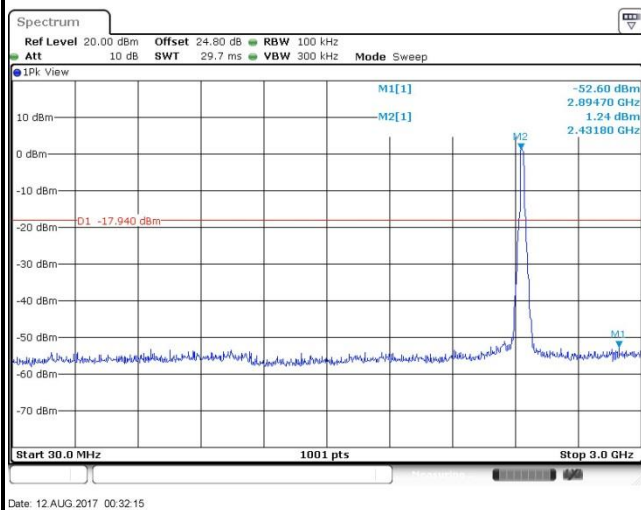
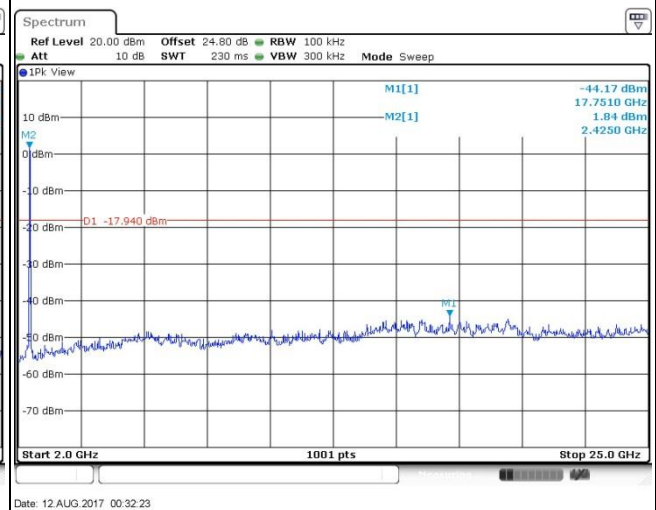
Spurious Emission 2GHz~25GHz



Date: 14.AUG.2017 19:06:45



Test Mode :	802.11g	Temperature :	21~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	Derek Hsu

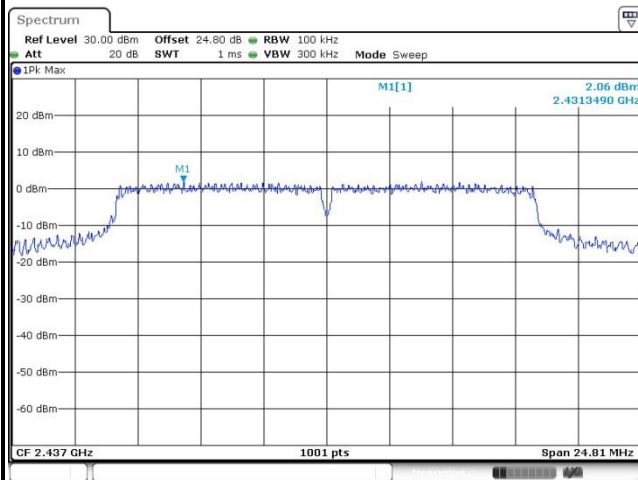
WLAN 802.11g Channel 06**100kHz PSD reference Level****Mid Channel Plot****Spurious Emission 30MHz~3GHz****Spurious Emission 2GHz~25GHz**



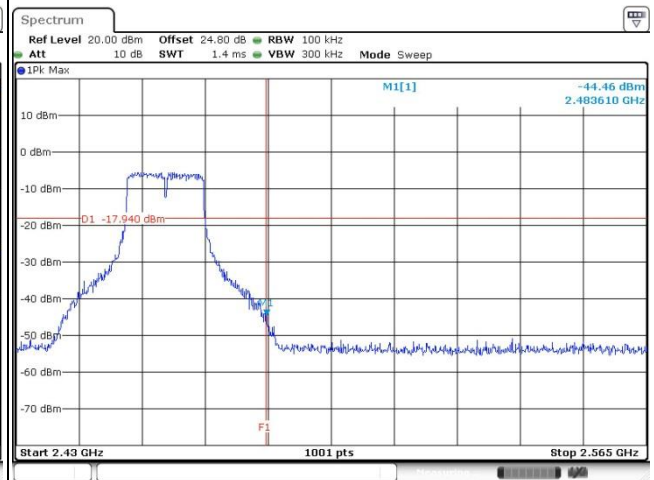
Test Mode :	802.11g	Temperature :	21~25°C
Test Band :	2.4GHz High	Relative Humidity :	51~54%
Test Channel :	11	Test Engineer :	Derek Hsu

WLAN 802.11g Channel 11

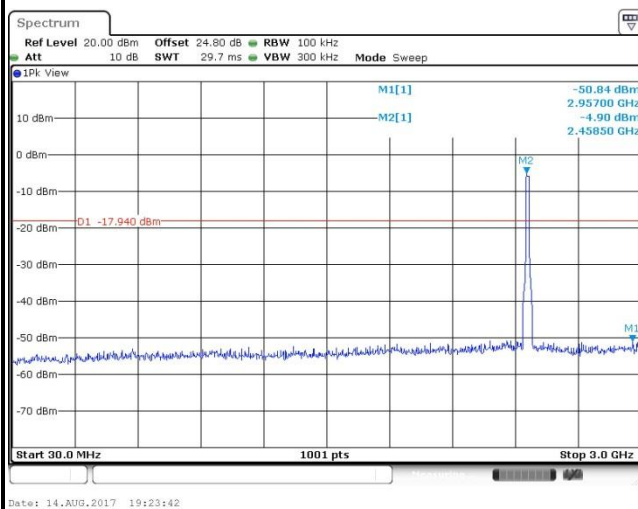
100kHz PSD reference Level



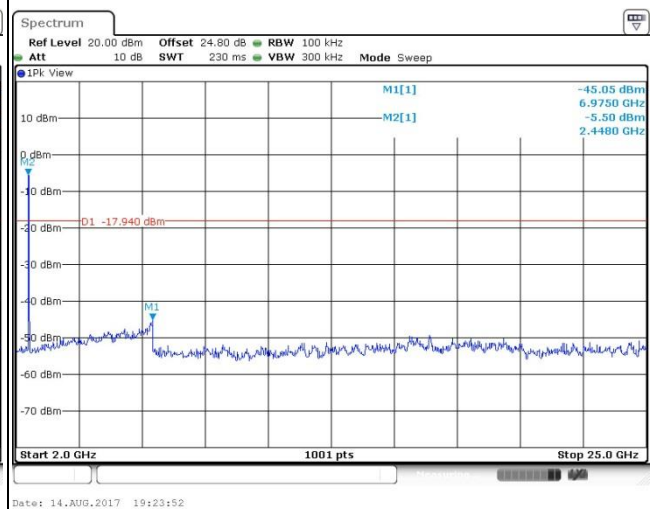
High Channel Plot



Spurious Emission 30MHz~3GHz



Spurious Emission 2GHz~25GHz

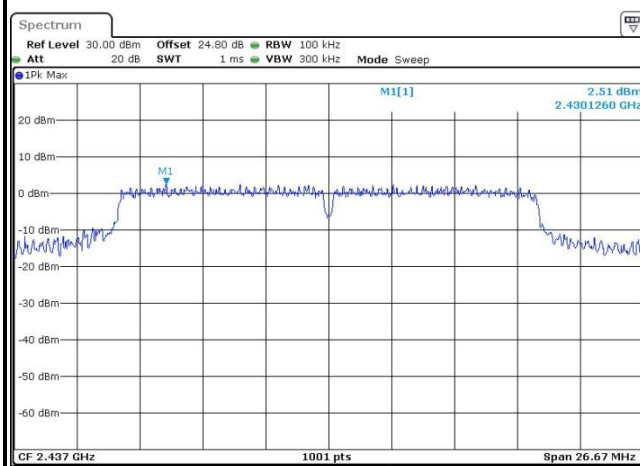




Test Mode :	802.11n HT20	Temperature :	21~25°C
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	01	Test Engineer :	Derek Hsu

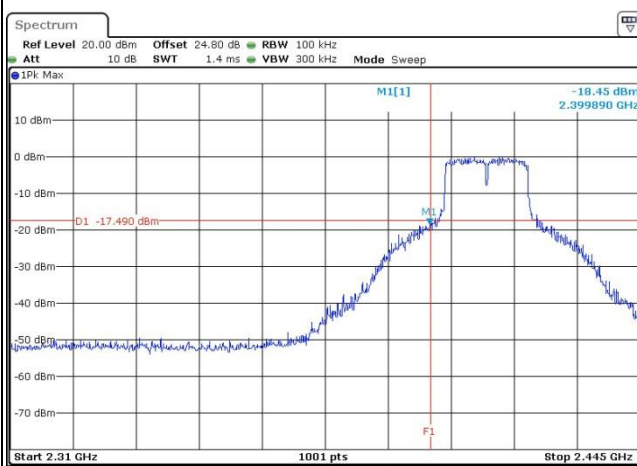
WLAN 802.11n HT20 Channel 01

100kHz PSD reference Level



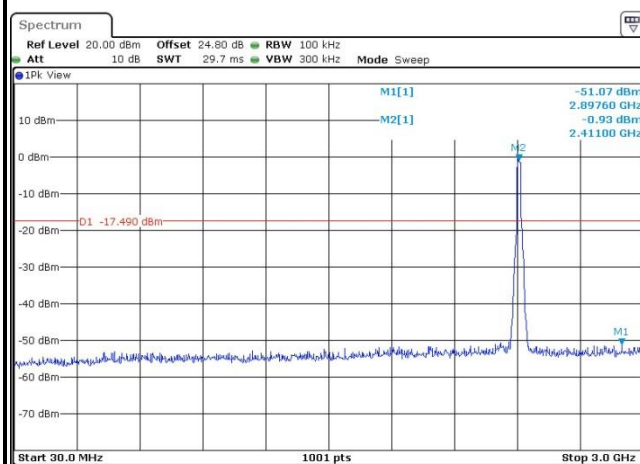
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Low Channel Plot



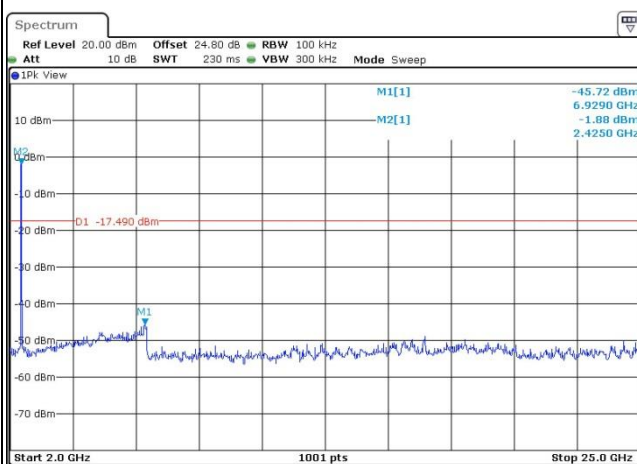
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Spurious Emission 30MHz~3GHz



Date: 14.AUG.2017 19:29:04

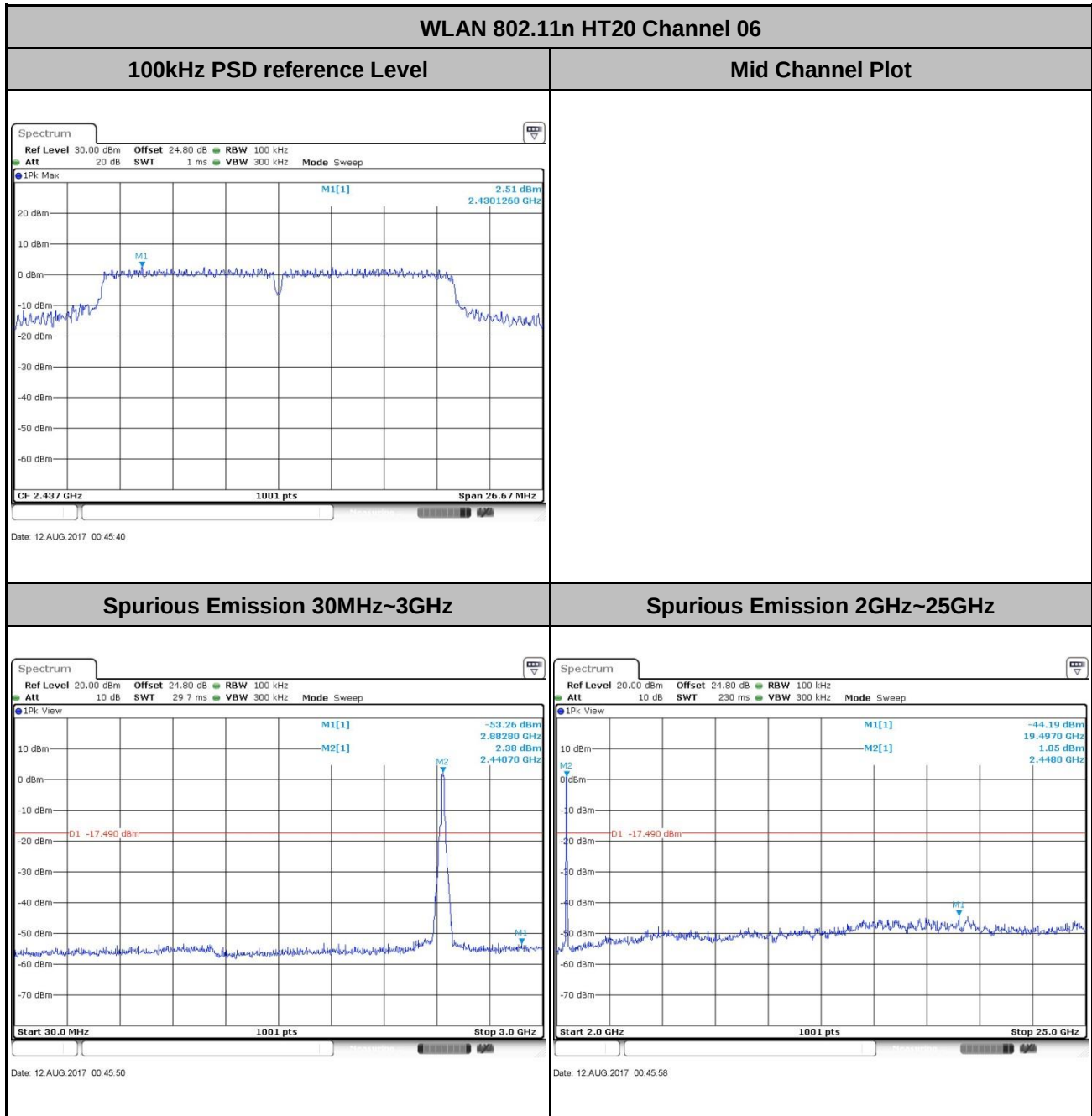
Spurious Emission 2GHz~25GHz



Date: 14.AUG.2017 19:29:14



Test Mode :	802.11n HT20	Temperature :	21~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	Derek Hsu

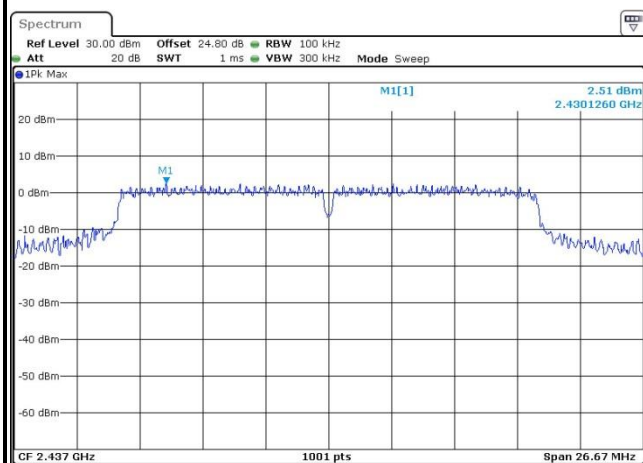




Test Mode :	802.11n HT20	Temperature :	21~25°C
Test Band :	2.4GHz High	Relative Humidity :	51~54%
Test Channel :	11	Test Engineer :	Derek Hsu

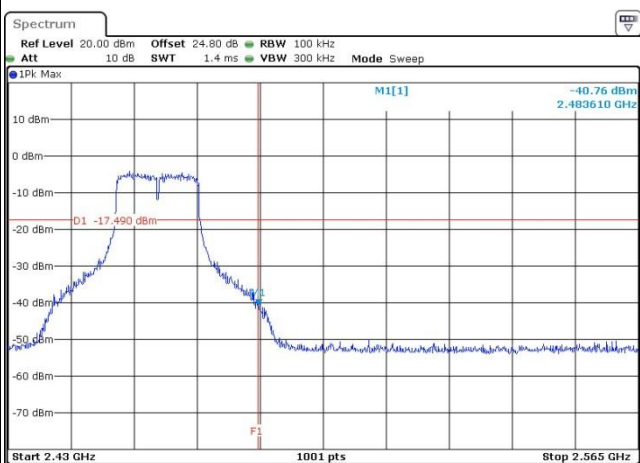
WLAN 802.11n HT20 Channel 11

100kHz PSD reference Level



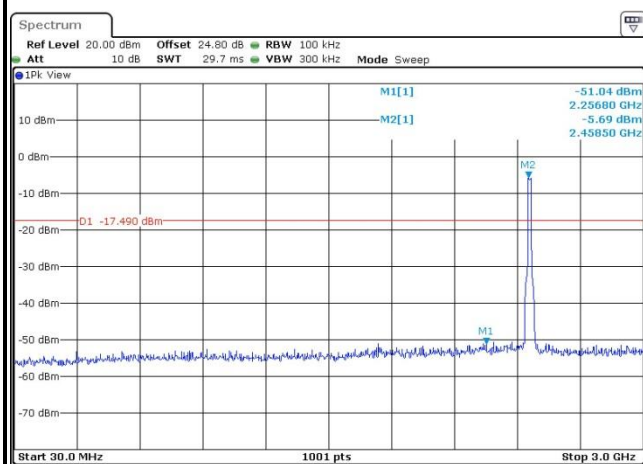
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High Channel Plot



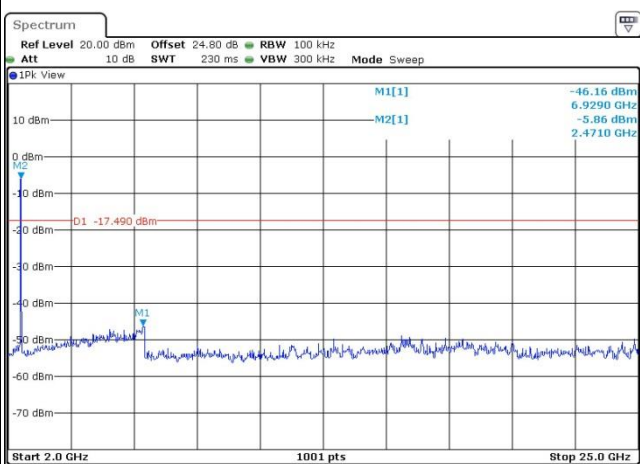
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Spurious Emission 30MHz~3GHz



Date: 14.AUG.2017 19:32:44

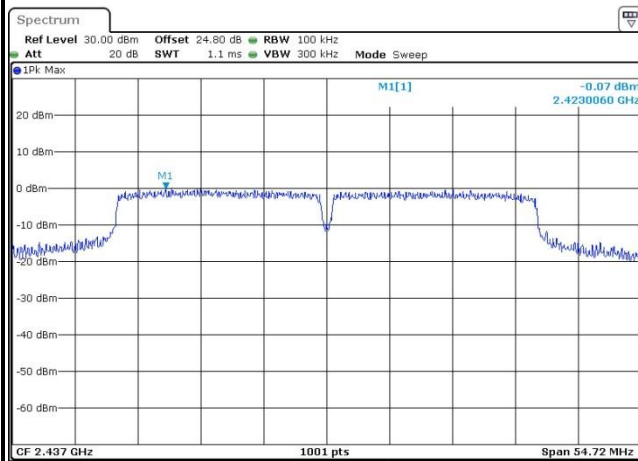
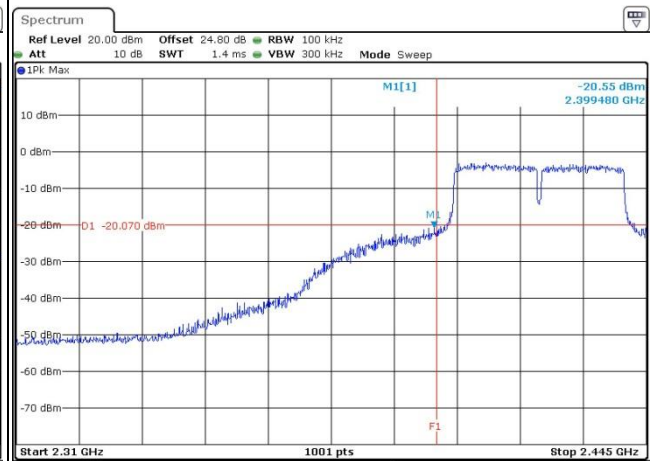
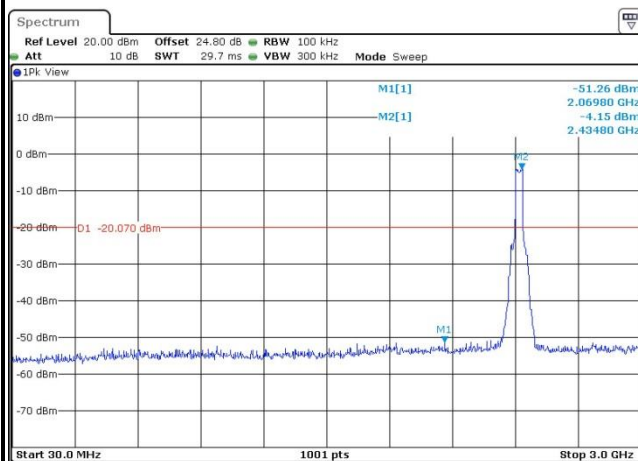
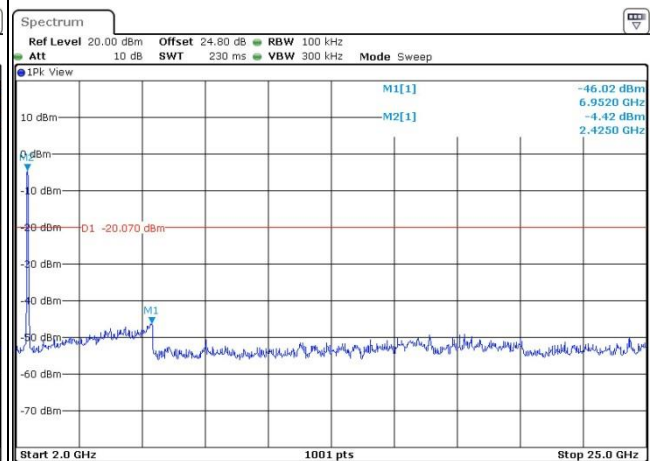
Spurious Emission 2GHz~25GHz



Date: 14.AUG.2017 19:32:53

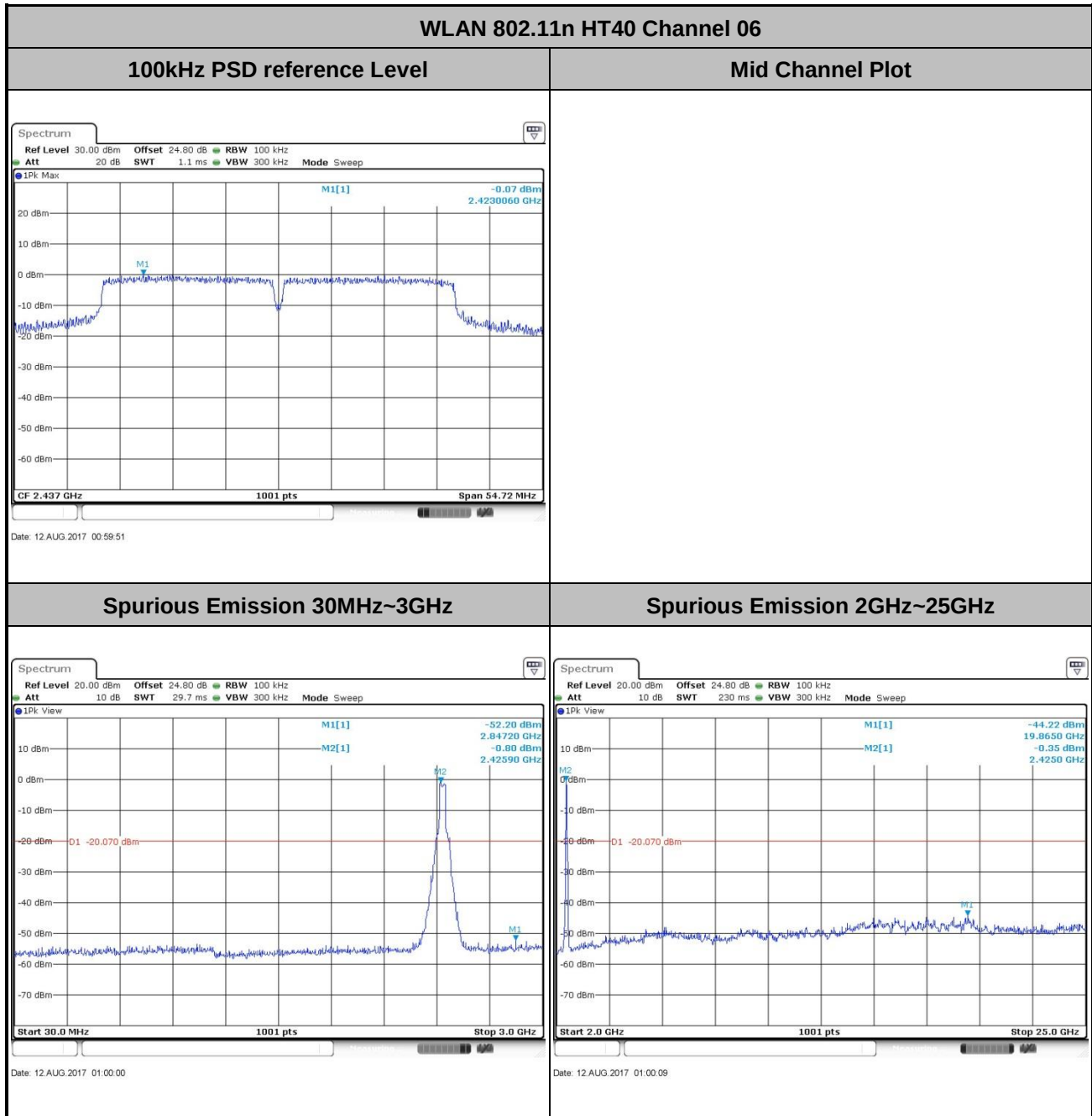


Test Mode :	802.11n HT40	Temperature :	21~25°C
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	03	Test Engineer :	Derek Hsu

WLAN 802.11n HT40 Channel 03**100kHz PSD reference Level****Low Channel Plot****Spurious Emission 30MHz~3GHz****Spurious Emission 2GHz~25GHz**



Test Mode :	802.11n HT40	Temperature :	21~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	Derek Hsu

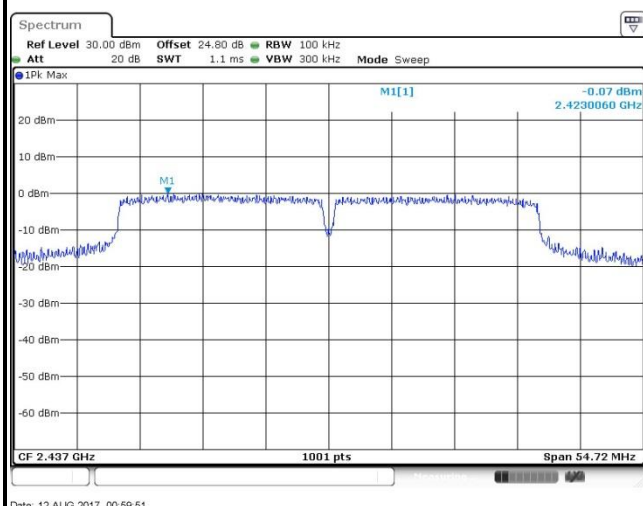




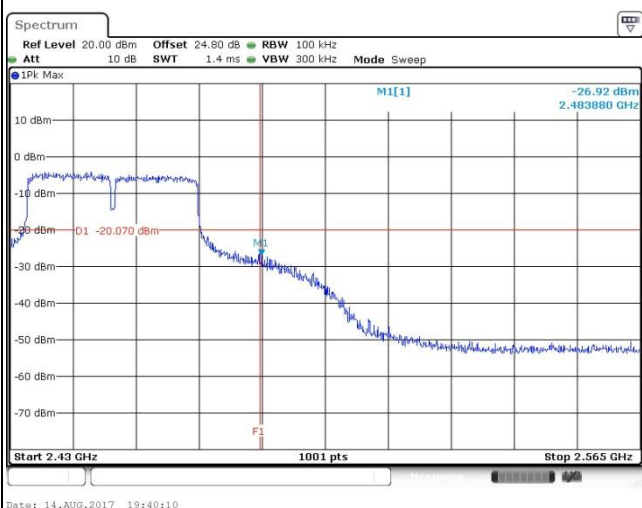
Test Mode :	802.11n HT40	Temperature :	21~25°C
Test Band :	2.4GHz High	Relative Humidity :	51~54%
Test Channel :	09	Test Engineer :	Derek Hsu

WLAN 802.11n HT40 Channel 09

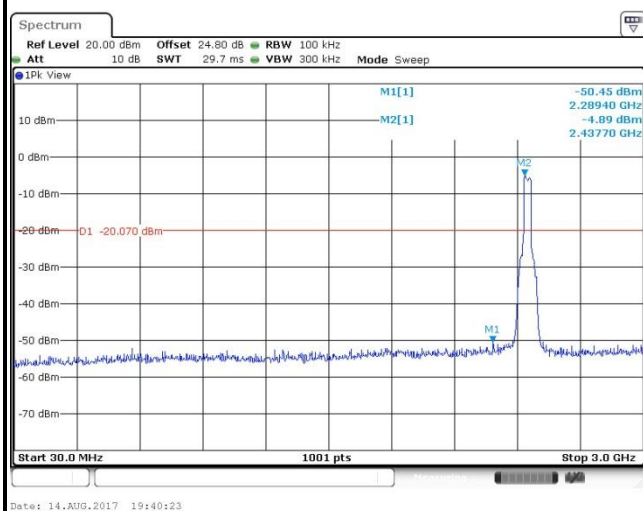
100kHz PSD reference Level



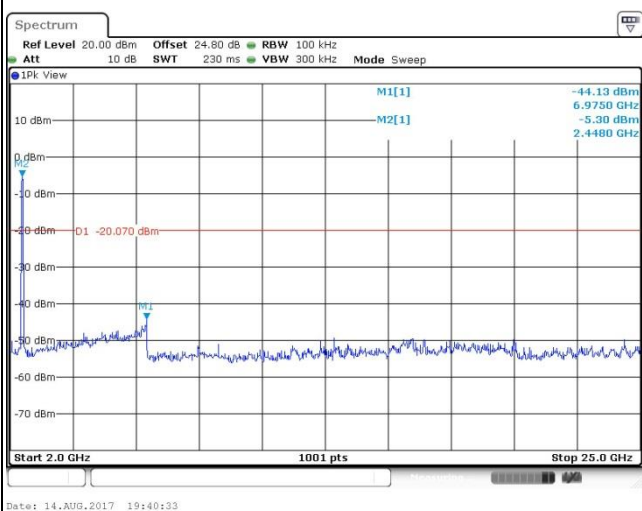
High Channel Plot



Spurious Emission 30MHz~3GHz



Spurious Emission 2GHz~25GHz



3.5 Radiated Band Edges and Spurious Emission Measurement

3.5.1 Limit of Radiated band edge and Spurious Emission Measurement

In any 100 kHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands must also comply with the limits as below.

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

3.5.2 Measuring Instruments

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



3.5.3 Test Procedures

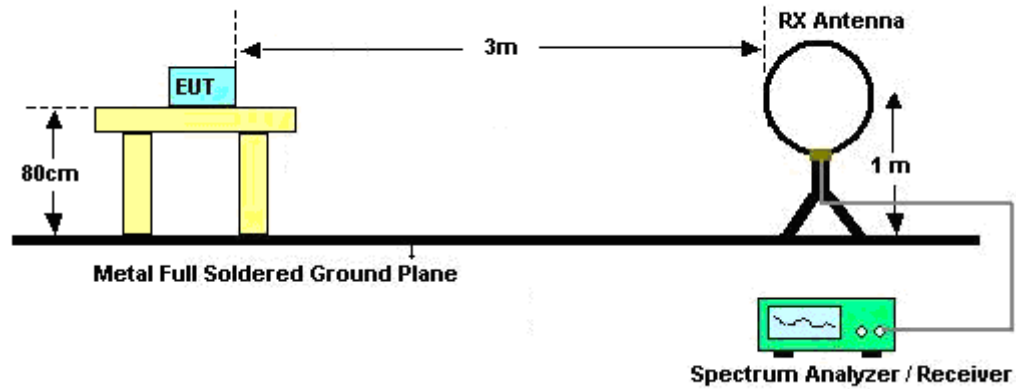
1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v04.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. 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.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
7. Use the following spectrum analyzer settings:
 - (1) Span shall wide enough to fully capture the emission being measured;
 - (2) Set RBW=100 kHz for $f < 1$ GHz; VBW $\geq$ RBW; Sweep = auto; Detector function = peak; Trace = max hold;
 - (3) Set RBW = 1 MHz, VBW= 3MHz for $f \geq 1$ GHz for peak measurement.

For average measurement:

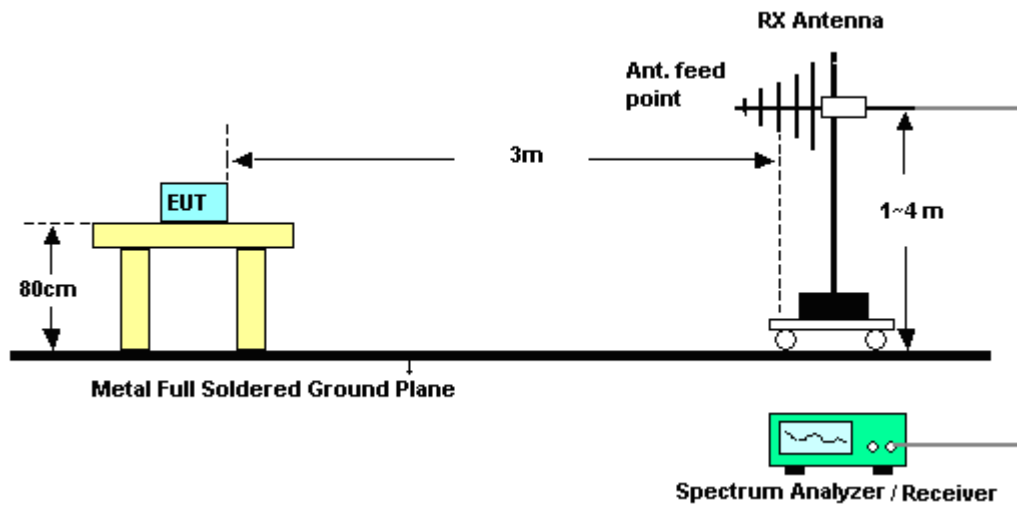
 - VBW = 10 Hz, when duty cycle is no less than 98 percent.
 - VBW $\geq 1/T$, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

3.5.4 Test Setup

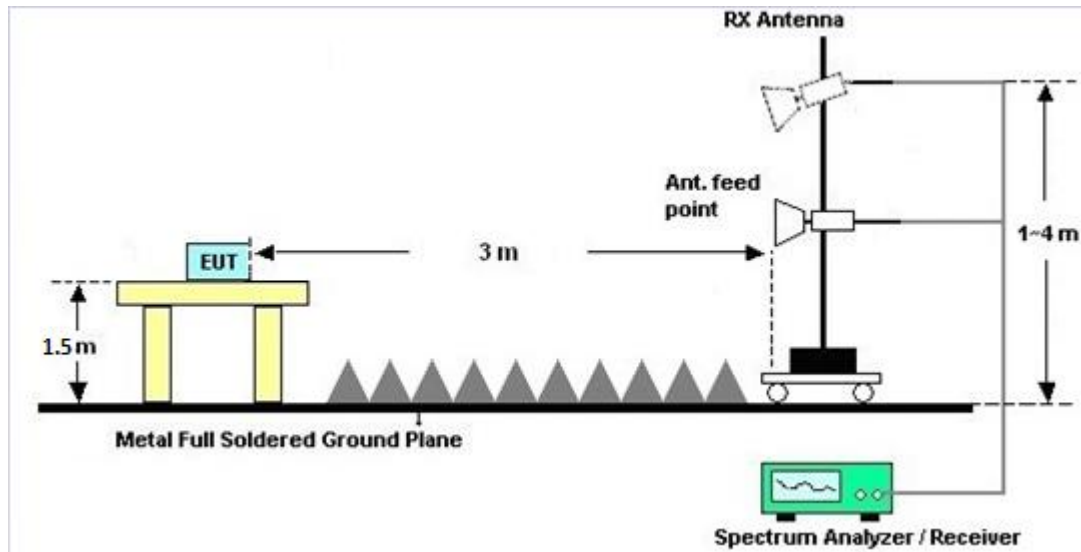
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



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

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

3.5.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C and D.

3.5.7 Duty Cycle

Please refer to Appendix E.

3.5.8 Test Result of Radiated Spurious Emission (30MHz ~ 10th Harmonic)

Please refer to Appendix C and D.

3.6 AC Conducted Emission Measurement

3.6.1 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.

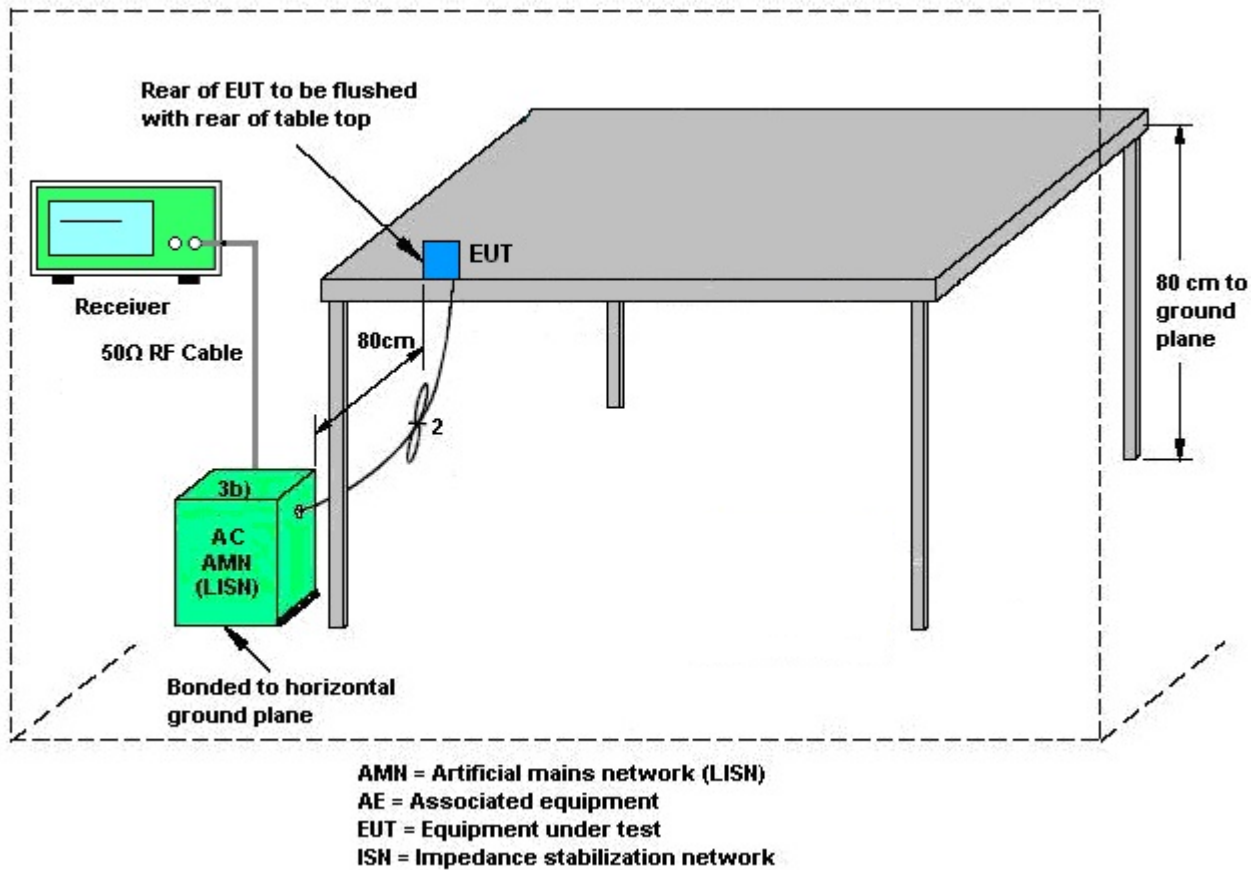
3.6.2 Measuring Instruments

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

3.6.3 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it 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 (IF bandwidth = 9kHz) with Maximum Hold Mode.

3.6.4 Test Setup



3.6.5 Test Result of AC Conducted Emission

Please refer to Appendix B.



3.7 Antenna Requirements

3.7.1 Standard Applicable

If directional gain of transmitting antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the rule.

3.7.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.7.3 Antenna Gain

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



4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Power Meter	Anritsu	ML2495A	0932001	N/A	Sep. 29, 2016	Aug 11 2017~ Aug 14 2017	Sep. 28, 2017	Conducted (TH05-HY)
Power Sensor	Anritsu	MA2411B	0846202	300MHz~40GHz	Sep. 29, 2016	Aug 11 2017~ Aug 14 2017	Sep. 28, 2017	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100057	9kHz-40GHz	Nov. 25, 2016	Aug 11 2017~ Aug 14 2017	Nov. 24, 2017	Conducted (TH05-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Aug. 11, 2017	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESCI 7	100724	9kHz~7GHz	Aug. 30, 2016	Aug. 11, 2017	Aug. 29, 2017	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Nov. 29, 2016	Aug. 11, 2017	Nov. 28, 2017	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Dec. 06, 2016	Aug. 11, 2017	Dec. 05, 2017	Conduction (CO05-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	May 15, 2017	Aug. 03, 2017~ Aug. 09, 2017	May 14, 2019	Radiation (03CH13-HY)
Amplifier	Sonoma-Instrument	310 N	187282	9KHz~1GHz	Dec. 21, 2016	Aug. 03, 2017~ Aug. 09, 2017	Dec. 20, 2017	Radiation (03CH13-HY)
Bilog Antenna	TESEQ	CBL 6111D&00800 N1D01N-06	40103&04	30MHz to 1GHz	Jan. 07, 2017	Aug. 03, 2017~ Aug. 09, 2017	Jan. 06, 2018	Radiation (03CH13-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-124 1	1GHz ~ 18GHz	May 02, 2017	Aug. 03, 2017~ Aug. 09, 2017	May 01, 2018	Radiation (03CH13-HY)
Preamplifier	MITEQ	AMF-7D-0010 1800-30-10P	1590074	1GHz~18GHz	May 22, 2017	Aug. 03, 2017~ Aug. 09, 2017	May 21, 2018	Radiation (03CH13-HY)
Preamplifier	Keysight	83017A	MY532701 47	1GHz~26.5GHz	Jan. 09, 2017	Aug. 03, 2017~ Aug. 09, 2017	Jan. 08, 2018	Radiation (03CH13-HY)
Spectrum Analyzer	Keysight	N9010A	MY553705 26	N/A	Mar. 15, 2017	Aug. 03, 2017~ Aug. 09, 2017	Mar. 14, 2018	Radiation (03CH13-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1m~4m	N/A	Aug. 03, 2017~ Aug. 09, 2017	N/A	Radiation (03CH13-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Aug. 03, 2017~ Aug. 09, 2017	N/A	Radiation (03CH13-HY)
EMI Test Receiver	Agilent	N9038A(MXE)	MY532900 53	20Hz to 26.5GHz	Jan. 12, 2017	Aug. 03, 2017~ Aug. 09, 2017	Jan. 11, 2018	Radiation (03CH13-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170 584	18GHz- 40GHz	Nov. 08, 2016	Aug. 03, 2017~ Aug.09, 2017	Nov. 07, 2017	Radiation (03CH13-HY)
Preamplifier	MITEQ	TTA 1840-35-HG	1887435	18GHz ~ 40GHz	Oct. 13, 2016	Aug. 03, 2017~ Aug. 09, 2017	Oct. 12, 2017	Radiation (03CH13-HY)



5 Uncertainty of Evaluation

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

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

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

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

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.40
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.30
--	------

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Derek Hsu	Temperature:	21~25	°C
Test Date:	2017/08/11~2017/08/14	Relative Humidity:	51~54	%

TEST RESULTS DATA
6dB and 99% Occupied Bandwidth

2.4GHz Band								
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	99% Occupied BW (MHz)	6dB BW (MHz)	6dB BW Limit (MHz)	Pass/Fail
11b	1Mbps	1	1	2412	14.34	10.07	0.50	Pass
11b	1Mbps	1	6	2437	14.59	10.07	0.50	Pass
11b	1Mbps	1	11	2462	14.39	10.07	0.50	Pass
11g	6Mbps	1	1	2412	20.93	16.54	0.50	Pass
11g	6Mbps	1	6	2437	27.27	16.54	0.50	Pass
11g	6Mbps	1	11	2462	18.83	16.50	0.50	Pass
HT20	MCS0	1	1	2412	22.98	17.78	0.50	Pass
HT20	MCS0	1	6	2437	30.67	17.78	0.50	Pass
HT20	MCS0	1	11	2462	19.78	17.80	0.50	Pass
HT40	MCS0	1	3	2422	42.06	36.52	0.50	Pass
HT40	MCS0	1	6	2437	58.84	36.48	0.50	Pass
HT40	MCS0	1	9	2452	40.26	36.48	0.50	Pass

TEST RESULTS DATA
Peak Power Table

2.4GHz Band										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Peak Conducted Power (dBm)	Conducted Power Limit (dBm)	DG (dBi)	EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
11b	1Mbps	1	1	2412	12.82	30.00	2.00	14.82	36.00	Pass
11b	1Mbps	1	6	2437	15.00	30.00	2.00	17.00	36.00	Pass
11b	1Mbps	1	11	2462	8.46	30.00	2.00	10.46	36.00	Pass
11g	6Mbps	1	1	2412	18.85	30.00	2.00	20.85	36.00	Pass
11g	6Mbps	1	6	2437	19.82	30.00	2.00	21.82	36.00	Pass
11g	6Mbps	1	11	2462	16.26	30.00	2.00	18.26	36.00	Pass
HT20	MCS0	1	1	2412	19.04	30.00	2.00	21.04	36.00	Pass
HT20	MCS0	1	6	2437	20.26	30.00	2.00	22.26	36.00	Pass
HT20	MCS0	1	11	2462	16.40	30.00	2.00	18.40	36.00	Pass
HT40	MCS0	1	3	2422	18.85	30.00	2.00	20.85	36.00	Pass
HT40	MCS0	1	6	2437	20.38	30.00	2.00	22.38	36.00	Pass
HT40	MCS0	1	9	2452	18.40	30.00	2.00	20.40	36.00	Pass

TEST RESULTS DATA
Average Power Table
(Reporting Only)

2.4GHz Band						
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)
11b	1Mbps	1	1	2412	0.00	10.33
11b	1Mbps	1	6	2437	0.00	13.00
11b	1Mbps	1	11	2462	0.00	5.35
11g	6Mbps	1	1	2412	0.00	13.04
11g	6Mbps	1	6	2437	0.00	15.15
11g	6Mbps	1	11	2462	0.00	8.84
HT20	MCS0	1	1	2412	0.00	13.65
HT20	MCS0	1	6	2437	0.00	15.86
HT20	MCS0	1	11	2462	0.00	9.31
HT40	MCS0	1	3	2422	0.00	13.75
HT40	MCS0	1	6	2437	0.00	15.90
HT40	MCS0	1	9	2452	0.00	12.40

TEST RESULTS DATA
Peak Power Density

2.4GHz Band								
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	Peak PSD (dBm /3kHz)	DG (dBi)	Peak PSD Limit (dBm /3kHz)	Pass/Fail
11b	1Mbps	1	1	2412	-12.53	2.00	8.00	Pass
11b	1Mbps	1	6	2437	-9.41	2.00	8.00	Pass
11b	1Mbps	1	11	2462	-17.43	2.00	8.00	Pass
11g	6Mbps	1	1	2412	-11.31	2.00	8.00	Pass
11g	6Mbps	1	6	2437	-9.25	2.00	8.00	Pass
11g	6Mbps	1	11	2462	-16.34	2.00	8.00	Pass
HT20	MCS0	1	1	2412	-12.06	2.00	8.00	Pass
HT20	MCS0	1	6	2437	-9.23	2.00	8.00	Pass
HT20	MCS0	1	11	2462	-15.42	2.00	8.00	Pass
HT40	MCS0	1	3	2422	-15.12	2.00	8.00	Pass
HT40	MCS0	1	6	2437	-12.00	2.00	8.00	Pass
HT40	MCS0	1	9	2452	-16.41	2.00	8.00	Pass



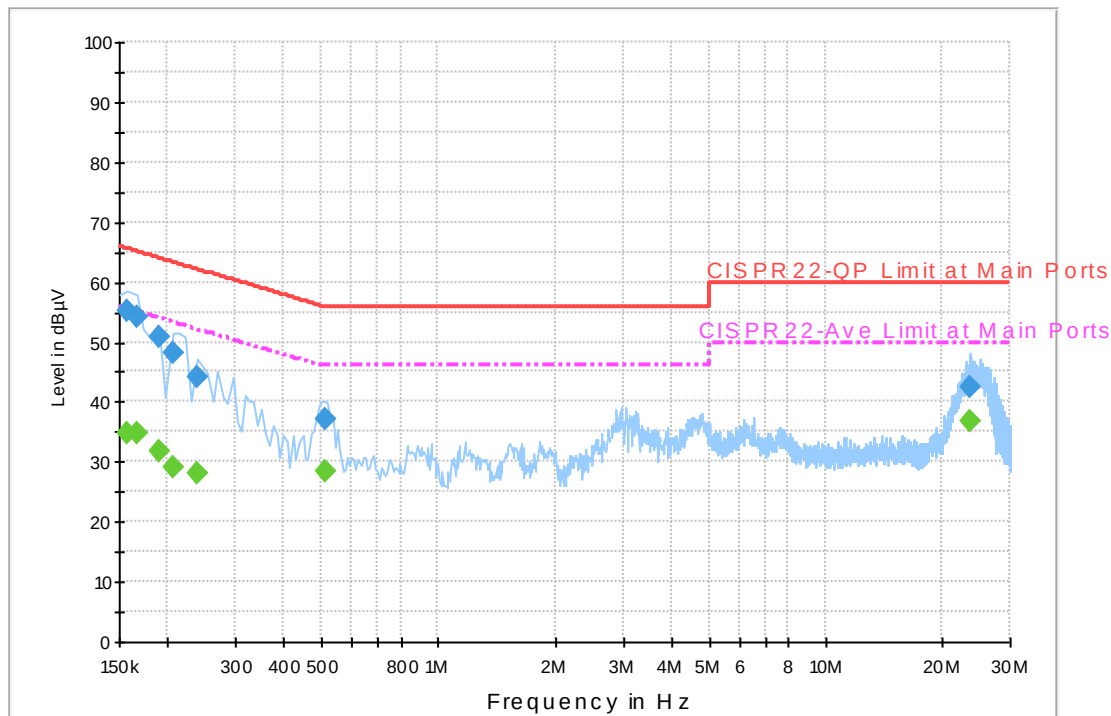
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Eric Jeng	Temperature :	26~28°C
		Relative Humidity :	52~55%

EUT Information

Report NO : 561115-03
Test Mode : Mode 1
Test Voltage : 120Vac/60Hz
Phase : Line

ENV216 Auto Test FCC Power Bar - L



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	55.3	Off	L1	19.6	10.3	65.6
0.166000	54.1	Off	L1	19.6	11.1	65.2
0.190000	50.7	Off	L1	19.6	13.3	64.0
0.206000	48.1	Off	L1	19.6	15.3	63.4
0.238000	44.0	Off	L1	19.6	18.2	62.2
0.510000	37.3	Off	L1	19.6	18.7	56.0
23.782000	42.4	Off	L1	20.8	17.6	60.0

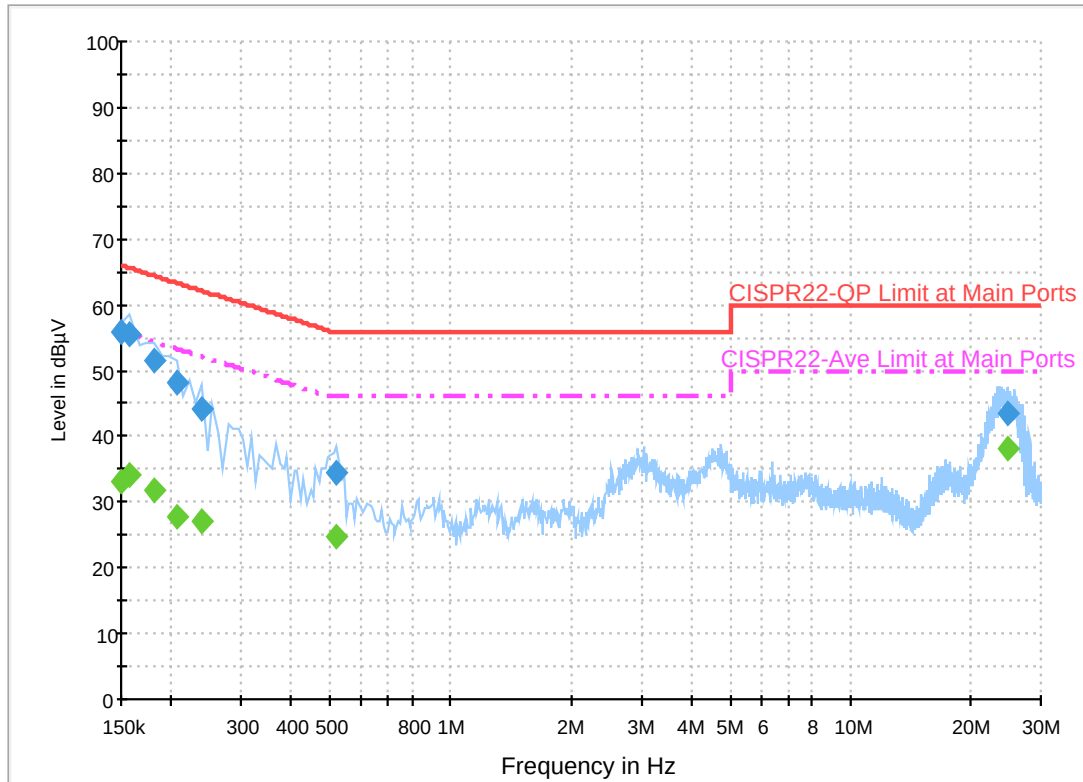
Final Result 2

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	34.8	Off	L1	19.6	20.8	55.6
0.166000	34.7	Off	L1	19.6	20.5	55.2
0.190000	31.7	Off	L1	19.6	22.3	54.0
0.206000	29.2	Off	L1	19.6	24.2	53.4
0.238000	28.1	Off	L1	19.6	24.1	52.2
0.510000	28.5	Off	L1	19.6	17.5	46.0
23.782000	36.8	Off	L1	20.8	13.2	50.0

EUT Information

Report NO : 561115-03
Test Mode : Mode 1
Test Voltage : 120Vac/60Hz
Phase : Neutral

ENV216 Auto Test FCC Power Bar - N



Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.150000	55.9	Off	N	19.5	10.1	66.0
0.158000	55.6	Off	N	19.5	10.0	65.6
0.182000	51.6	Off	N	19.5	12.8	64.4
0.206000	48.0	Off	N	19.5	15.4	63.4
0.238000	44.1	Off	N	19.5	18.1	62.2
0.518000	34.3	Off	N	19.5	21.7	56.0
24.934000	43.6	Off	N	21.0	16.4	60.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.150000	33.2	Off	N	19.5	22.8	56.0
0.158000	34.2	Off	N	19.5	21.4	55.6
0.182000	31.9	Off	N	19.5	22.5	54.4
0.206000	27.8	Off	N	19.5	25.6	53.4
0.238000	27.2	Off	N	19.5	25.0	52.2
0.518000	24.9	Off	N	19.5	21.1	46.0
24.934000	38.1	Off	N	21.0	11.9	50.0



Appendix C. Radiated Spurious Emission

Test Engineer :	Alex Jheng, Bill Chang and Wilson Wu	Temperature :	25.0~25.3°C
		Relative Humidity :	51~55%

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preampl 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)
802.11b CH 01 2412MHz		2358.825	52.01	-21.99	74	41.49	26.79	4.8	31	193	230	P	H
		2389.695	40.96	-13.04	54	30.3	26.89	4.83	30.99	193	230	A	H
	*	2412	90.22	-	-	79.47	26.94	4.87	30.99	193	230	P	H
	*	2412	87	-	-	76.25	26.94	4.87	30.99	193	230	A	H
													H
													H
		2367.225	51.61	-22.39	74	41.08	26.79	4.8	30.99	100	202	P	V
		2390	40.79	-13.21	54	30.13	26.89	4.83	30.99	100	202	A	V
	*	2412	83.16	-	-	72.41	26.94	4.87	30.99	100	202	P	V
	*	2412	79.91	-	-	69.16	26.94	4.87	30.99	100	202	A	V
													V
													V
802.11b CH 06 2437MHz		2317.84	51.92	-22.08	74	41.58	26.68	4.74	31.01	262	225	P	H
		2347.94	40.78	-13.22	54	30.34	26.73	4.78	31	262	225	A	H
	*	2437	95.03	-	-	84.16	27.04	4.88	30.98	262	225	P	H
	*	2437	92.01	-	-	81.14	27.04	4.88	30.98	262	225	A	H
		2490.83	51.44	-22.56	74	40.34	27.2	4.93	30.96	262	225	P	H
		2485.72	41.17	-12.83	54	30.13	27.15	4.93	30.97	262	225	A	H
		2362.22	52.21	-21.79	74	41.69	26.79	4.8	31	196	196	P	V
		2389.66	40.51	-13.49	54	29.85	26.89	4.83	30.99	196	196	A	V
	*	2437	90.94	-	-	80.07	27.04	4.88	30.98	196	196	P	V
	*	2437	87.9	-	-	77.03	27.04	4.88	30.98	196	196	A	V
		2493	51.8	-22.2	74	40.7	27.2	4.93	30.96	196	196	P	V
		2498.67	40.99	-13.01	54	29.89	27.2	4.93	30.96	196	196	A	V



802.11b CH 11 2462MHz	*	2462	88.7	-	-	77.74	27.1	4.9	30.97	252	223	P	H
	*	2462	85.45	-	-	74.49	27.1	4.9	30.97	252	223	A	H
		2497	51.67	-22.33	74	40.57	27.2	4.93	30.96	252	223	P	H
		2500	40.86	-13.14	54	29.76	27.2	4.93	30.96	252	223	A	H
													H
													H
	*	2462	82.15	-	-	71.19	27.1	4.9	30.97	365	186	P	V
	*	2462	78.87	-	-	67.91	27.1	4.9	30.97	365	186	A	V
		2486.04	51.42	-22.58	74	40.38	27.15	4.93	30.97	365	186	P	V
		2499.96	40.9	-13.1	54	29.8	27.2	4.93	30.96	365	186	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11b (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)
802.11b CH 01 2412MHz		4824	54.52	-19.48	74	72.36	31.56	7.33	57.24	153	139	P	H
		4824	53.24	-0.76	54	71.08	31.56	7.33	57.24	153	139	A	H
													H
													H
		4824	47.47	-26.53	74	65.31	31.56	7.33	57.24	100	0	P	V
													V
													V
													V
802.11b CH 06 2437MHz		4874	50.31	-23.69	74	67.91	31.63	7.44	57.17	173	145	P	H
		4874	48.64	-5.36	54	66.24	31.63	7.44	57.17	173	145	A	H
		7311	56.03	-17.97	74	67.55	36.16	9.13	57.27	118	122	P	H
		7311	53.23	-0.77	54	64.75	36.16	9.13	57.27	118	122	A	H
		12185	53.16	-20.84	74	59.4	38.59	11.5	56.7	146	198	P	H
		12185	48.43	-5.57	54	54.67	38.59	11.5	56.7	146	198	A	H
		4874	51.28	-22.72	74	68.88	31.63	7.44	57.17	196	172	P	V
		4874	50	-4	54	67.6	31.63	7.44	57.17	196	172	A	V
		7311	51.28	-22.72	74	62.8	36.16	9.13	57.27	100	188	P	V
		7311	45.97	-8.03	54	57.49	36.16	9.13	57.27	100	188	A	V
		12185	55.37	-18.63	74	61.61	38.59	11.5	56.7	271	207	P	V
		12185	51.27	-2.73	54	57.51	38.59	11.5	56.7	271	207	A	V
802.11b CH 11 2462MHz		4924	55.05	-18.95	74	72.43	31.7	7.52	57.1	100	144	P	H
		4924	53.12	-0.88	54	70.5	31.7	7.52	57.1	100	144	A	H
		7386	44.48	-29.52	74	55.93	36.31	9.18	57.38	100	0	P	H
													H
		4924	47.9	-26.1	74	65.28	31.7	7.52	57.1	100	0	P	V
		7386	44.16	-29.84	74	55.61	36.31	9.18	57.38	100	0	P	V
													V
													V



Remark

1. No other spurious found.
2. All results are PASS against Peak and Average limit line.



2.4GHz 2400~2483.5MHz
WIFI 802.11g (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)
802.11g CH 01 2412MHz		2389.905	63.27	-10.73	74	52.61	26.89	4.83	30.99	171	222	P	H
		2390	47.4	-6.6	54	36.74	26.89	4.83	30.99	171	222	A	H
	*	2412	97.8	-	-	87.05	26.94	4.87	30.99	171	222	P	H
	*	2412	90.18	-	-	79.43	26.94	4.87	30.99	171	222	A	H
													H
													H
		2389.8	56.98	-17.02	74	46.32	26.89	4.83	30.99	394	186	P	V
		2390	43.47	-10.53	54	32.81	26.89	4.83	30.99	394	186	A	V
	*	2412	94.5	-	-	83.75	26.94	4.87	30.99	394	186	P	V
	*	2412	86.28	-	-	75.53	26.94	4.87	30.99	394	186	A	V
													V
													V
802.11g CH 06 2437MHz		2381.96	51.52	-22.48	74	40.91	26.84	4.83	30.99	385	222	P	H
		2389.94	40.78	-13.22	54	30.12	26.89	4.83	30.99	385	222	A	H
	*	2437	97.51	-	-	86.64	27.04	4.88	30.98	385	222	P	H
	*	2437	89.86	-	-	78.99	27.04	4.88	30.98	385	222	A	H
		2486.28	52.25	-21.75	74	41.21	27.15	4.93	30.97	385	222	P	H
		2487.19	41.26	-12.74	54	30.22	27.15	4.93	30.97	385	222	A	H
		2380.7	52.99	-21.01	74	42.38	26.84	4.83	30.99	391	185	P	V
		2389.66	40.64	-13.36	54	29.98	26.89	4.83	30.99	391	185	A	V
	*	2437	94.5	-	-	83.63	27.04	4.88	30.98	391	185	P	V
	*	2437	86.55	-	-	75.68	27.04	4.88	30.98	391	185	A	V
		2491.88	52.18	-21.82	74	41.08	27.2	4.93	30.96	391	185	P	V
		2500	41.07	-12.93	54	29.97	27.2	4.93	30.96	391	185	A	V



802.11g CH 11 2462MHz	*	2462	91.86	-	-	80.9	27.1	4.9	30.97	387	227	P	H
	*	2462	83.85	-	-	72.89	27.1	4.9	30.97	387	227	A	H
		2483.88	56.67	-17.33	74	45.63	27.15	4.93	30.97	387	227	P	H
		2483.52	43.24	-10.76	54	32.2	27.15	4.93	30.97	387	227	A	H
													H
													H
	*	2462	88.73	-	-	77.77	27.1	4.9	30.97	384	190	P	V
	*	2462	80.99	-	-	70.03	27.1	4.9	30.97	384	190	A	V
		2483.56	57.69	-16.31	74	46.65	27.15	4.93	30.97	384	190	P	V
		2483.52	42.34	-11.66	54	31.3	27.15	4.93	30.97	384	190	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11g (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)
802.11g CH 01 2412MHz		4824	65.14	-8.86	74	82.98	31.56	7.33	57.24	100	137	P	H
		4824	52.63	-1.37	54	70.47	31.56	7.33	57.24	100	137	A	H
													H
													H
		4824	63.28	-10.72	74	81.12	31.56	7.33	57.24	372	228	P	V
		4824	50.18	-3.82	54	68.02	31.56	7.33	57.24	372	228	A	V
													V
													V
802.11g CH 06 2437MHz		4874	65.8	-8.2	74	83.4	31.63	7.44	57.17	173	149	P	H
		4874	52.11	-1.89	54	69.71	31.63	7.44	57.17	173	149	A	H
		7311	63.69	-10.31	74	75.21	36.16	9.13	57.27	100	250	P	H
		7311	50.3	-3.7	54	61.82	36.16	9.13	57.27	100	250	A	H
		12185	60.38	-13.62	74	66.62	38.59	11.5	56.7	135	199	P	H
		12185	48.41	-5.59	54	54.65	38.59	11.5	56.7	135	199	A	H
		4874	62.7	-11.3	74	80.3	31.63	7.44	57.17	365	228	P	V
		4874	48.16	-5.84	54	65.76	31.63	7.44	57.17	365	228	A	V
		7311	63.77	-10.23	74	75.29	36.16	9.13	57.27	166	155	P	V
		7311	51.73	-2.27	54	63.25	36.16	9.13	57.27	166	155	A	V
		12185	63.14	-10.86	74	69.38	38.59	11.5	56.7	259	208	P	V
		12185	51.15	-2.85	54	57.39	38.59	11.5	56.7	259	208	A	V
802.11g CH 11 2462MHz		4924	63.92	-10.08	74	81.3	31.7	7.52	57.1	170	148	P	H
		4924	52.32	-1.68	54	69.7	31.7	7.52	57.1	170	148	A	H
		7386	54	-20	74	65.45	36.31	9.18	57.38	100	252	P	H
		7386	41.02	-12.98	54	52.47	36.31	9.18	57.38	100	252	A	H
		4924	62.2	-11.8	74	79.58	31.7	7.52	57.1	374	233	P	V
		4924	47.47	-6.53	54	64.85	31.7	7.52	57.1	374	233	A	V
		7386	56.59	-17.41	74	68.04	36.31	9.18	57.38	174	141	P	V
		7386	43.15	-10.85	54	54.6	36.31	9.18	57.38	174	141	A	V
		12310	56.16	-17.84	74	62.41	38.51	11.55	56.7	265	207	P	V
		12310	43.15	-10.85	54	49.4	38.51	11.55	56.7	265	207	A	V



2.4GHz 2400~2483.5MHz

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 01 2412MHz		2389.38	62.09	-11.91	74	51.43	26.89	4.83	30.99	398	224	P	H
		2390	46.24	-7.76	54	35.58	26.89	4.83	30.99	398	224	A	H
	*	2412	92.66	-	-	81.91	26.94	4.87	30.99	398	224	P	H
	*	2412	84.57	-	-	73.82	26.94	4.87	30.99	398	224	A	H
													H
													H
		2389.59	55.6	-18.4	74	44.94	26.89	4.83	30.99	394	194	P	V
		2390	43.16	-10.84	54	32.5	26.89	4.83	30.99	394	194	A	V
	*	2412	89.16	-	-	78.41	26.94	4.87	30.99	394	194	P	V
	*	2412	81.22	-	-	70.47	26.94	4.87	30.99	394	194	A	V
													V
													V
802.11n HT20 CH 06 2437MHz		2387.98	52.55	-21.45	74	41.89	26.89	4.83	30.99	390	224	P	H
		2389.94	40.91	-13.09	54	30.25	26.89	4.83	30.99	390	224	A	H
	*	2437	96.79	-	-	85.92	27.04	4.88	30.98	390	224	P	H
	*	2437	88.97	-	-	78.1	27.04	4.88	30.98	390	224	A	H
		2497.9	52.19	-21.81	74	41.09	27.2	4.93	30.96	390	224	P	H
		2483.55	41.25	-12.75	54	30.21	27.15	4.93	30.97	390	224	A	H
		2354.24	51.76	-22.24	74	41.26	26.79	4.78	31	177	202	P	V
		2389.94	40.58	-13.42	54	29.92	26.89	4.83	30.99	177	202	A	V
	*	2437	94.22	-	-	83.35	27.04	4.88	30.98	177	202	P	V
	*	2437	85.53	-	-	74.66	27.04	4.88	30.98	177	202	A	V
		2485.93	52.91	-21.09	74	41.87	27.15	4.93	30.97	177	202	P	V
		2483.62	41.09	-12.91	54	30.05	27.15	4.93	30.97	177	202	A	V



802.11n HT20 CH 11 2462MHz	*	2462	91.48	-	-	80.52	27.1	4.9	30.97	389	227	P	H
	*	2462	82.97	-	-	72.01	27.1	4.9	30.97	389	227	A	H
		2483.84	59.35	-14.65	74	48.31	27.15	4.93	30.97	389	227	P	H
		2483.52	44.65	-9.35	54	33.61	27.15	4.93	30.97	389	227	A	H
													H
													H
	*	2462	88.37	-	-	77.41	27.1	4.9	30.97	384	189	P	V
	*	2462	80.02	-	-	69.06	27.1	4.9	30.97	384	189	A	V
		2485.2	57.1	-16.9	74	46.06	27.15	4.93	30.97	384	189	P	V
		2483.52	43.4	-10.6	54	32.36	27.15	4.93	30.97	384	189	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz
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 01 2412MHz		4824	65.09	-8.91	74	82.93	31.56	7.33	57.24	177	137	P	H
		4824	52.96	-1.04	54	70.8	31.56	7.33	57.24	177	137	A	H
													H
													H
		4824	60.89	-13.11	74	78.73	31.56	7.33	57.24	351	226	P	V
		4824	47.98	-6.02	54	65.82	31.56	7.33	57.24	351	226	A	V
													V
													V
802.11n HT20 CH 06 2437MHz		4874	64.72	-9.28	74	82.32	31.63	7.44	57.17	100	145	P	H
		4874	53.17	-0.83	54	70.77	31.63	7.44	57.17	100	145	A	H
		7311	63.45	-10.55	74	74.97	36.16	9.13	57.27	100	249	P	H
		7311	53.05	-0.95	54	64.57	36.16	9.13	57.27	100	249	A	H
		12185	58.93	-15.07	74	65.17	38.59	11.5	56.7	136	198	P	H
		12185	48.5	-5.5	54	54.74	38.59	11.5	56.7	136	198	A	H
		4874	61.87	-12.13	74	79.47	31.63	7.44	57.17	389	226	P	V
		4874	49.43	-4.57	54	67.03	31.63	7.44	57.17	389	226	A	V
		7311	64.18	-9.82	74	75.7	36.16	9.13	57.27	262	153	P	V
		7311	52.22	-1.78	54	63.74	36.16	9.13	57.27	262	153	A	V
		12185	61.33	-12.67	74	67.57	38.59	11.5	56.7	273	203	P	V
		12185	50.64	-3.36	54	56.88	38.59	11.5	56.7	273	203	A	V
802.11n HT20 CH 11 2462MHz		4924	63.31	-10.69	74	80.69	31.7	7.52	57.1	100	145	P	H
		4924	52.58	-1.42	54	69.96	31.7	7.52	57.1	100	145	A	H
		7386	56.97	-17.03	74	68.42	36.31	9.18	57.38	237	120	P	H
		7386	44.59	-9.41	54	56.04	36.31	9.18	57.38	237	120	A	H
		12310	56.63	-17.37	74	62.88	38.51	11.55	56.7	115	181	P	H
		12310	43.72	-10.28	54	49.97	38.51	11.55	56.7	115	181	A	H
		4924	59.46	-14.54	74	76.84	31.7	7.52	57.1	376	232	P	V
		4924	47.2	-6.8	54	64.58	31.7	7.52	57.1	376	232	A	V
		7386	57.57	-16.43	74	69.02	36.31	9.18	57.38	219	156	P	V
		7386	44.91	-9.09	54	56.36	36.31	9.18	57.38	219	156	A	V



		12310	56.61	-17.39	74	62.86	38.51	11.55	56.7	268	207	P	V
		12310	43.7	-10.3	54	49.95	38.51	11.55	56.7	268	207	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

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 03 2422MHz		2389.66	63.92	-10.08	74	53.26	26.89	4.83	30.99	259	222	P	H
		2389.94	52.89	-1.11	54	42.23	26.89	4.83	30.99	259	222	A	H
	*	2422	91	-	-	80.19	26.99	4.87	30.98	259	222	P	H
	*	2422	83.07	-	-	72.26	26.99	4.87	30.98	259	222	A	H
		2491.11	51.71	-22.29	74	40.61	27.2	4.93	30.96	259	222	P	H
		2483.55	41.31	-12.69	54	30.27	27.15	4.93	30.97	259	222	A	H
		2388.96	59.95	-14.05	74	49.29	26.89	4.83	30.99	153	195	P	V
		2389.94	48.49	-5.51	54	37.83	26.89	4.83	30.99	153	195	A	V
	*	2422	89.26	-	-	78.45	26.99	4.87	30.98	153	195	P	V
	*	2422	80.71	-	-	69.9	26.99	4.87	30.98	153	195	A	V
		2494.19	52.04	-21.96	74	40.94	27.2	4.93	30.96	153	195	P	V
		2483.76	41.14	-12.86	54	30.1	27.15	4.93	30.97	153	195	A	V
802.11n HT40 CH 06 2437MHz		2389.8	65.35	-8.65	74	54.69	26.89	4.83	30.99	232	221	P	H
		2389.94	53.03	-0.97	54	42.37	26.89	4.83	30.99	232	221	A	H
	*	2437	93.31	-	-	82.44	27.04	4.88	30.98	232	221	P	H
	*	2437	85.25	-	-	74.38	27.04	4.88	30.98	232	221	A	H
		2485.72	64.42	-9.58	74	53.38	27.15	4.93	30.97	232	221	P	H
		2483.5	51.8	-2.2	54	40.76	27.15	4.93	30.97	232	221	A	H
		2389.94	58.73	-15.27	74	48.07	26.89	4.83	30.99	111	187	P	V
		2389.94	46.95	-7.05	54	36.29	26.89	4.83	30.99	111	187	A	V
	*	2437	90.65	-	-	79.78	27.04	4.88	30.98	111	187	P	V
	*	2437	82.53	-	-	71.66	27.04	4.88	30.98	111	187	A	V
		2485.3	61.32	-12.68	74	50.28	27.15	4.93	30.97	111	187	P	V
		2483.5	49.42	-4.58	54	38.38	27.15	4.93	30.97	111	187	A	V



802.11n HT40 CH 09 2452MHz		2377.2	51.6	-22.4	74	40.99	26.84	4.83	30.99	253	226	P	H
		2389.94	41.19	-12.81	54	30.53	26.89	4.83	30.99	253	226	A	H
	*	2452	89.73	-	-	78.83	27.04	4.9	30.97	253	226	P	H
	*	2452	81.81	-	-	70.91	27.04	4.9	30.97	253	226	A	H
		2483.62	63.85	-10.15	74	52.81	27.15	4.93	30.97	253	226	P	H
		2483.5	52.81	-1.19	54	41.77	27.15	4.93	30.97	253	226	A	H
		2382.52	51.5	-22.5	74	40.89	26.84	4.83	30.99	194	197	P	V
		2389.66	40.51	-13.49	54	29.85	26.89	4.83	30.99	194	197	A	V
	*	2452	87.21	-	-	76.31	27.04	4.9	30.97	194	197	P	V
	*	2452	78.96	-	-	68.06	27.04	4.9	30.97	194	197	A	V
		2485.79	61.36	-12.64	74	50.32	27.15	4.93	30.97	194	197	P	V
		2483.5	50.44	-3.56	54	39.4	27.15	4.93	30.97	194	197	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz
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 03 2422MHz		4844	60.07	-13.93	74	77.83	31.58	7.37	57.22	164	138	P	H
		4844	47.11	-6.89	54	64.87	31.58	7.37	57.22	164	138	A	H
		7266	52.93	-21.07	74	64.48	36.1	9.11	57.23	100	251	P	H
		7266	40.97	-13.03	54	52.52	36.1	9.11	57.23	100	251	A	H
		4844	56.57	-17.43	74	74.33	31.58	7.37	57.22	350	224	P	V
		4844	43.59	-10.41	54	61.35	31.58	7.37	57.22	350	224	A	V
		7266	55.79	-18.21	74	67.34	36.1	9.11	57.23	175	133	P	V
		7266	43.11	-10.89	54	54.66	36.1	9.11	57.23	175	133	A	V
		12110	55.73	-18.27	74	61.98	38.63	11.47	56.7	266	207	P	V
		12110	42.85	-11.15	54	49.1	38.63	11.47	56.7	266	207	A	V
802.11n HT40 CH 06 2437MHz		4874	66.65	-7.35	74	84.25	31.63	7.44	57.17	109	146	P	H
		4874	53.08	-0.92	54	70.68	31.63	7.44	57.17	109	146	A	H
		7311	61.76	-12.24	74	73.28	36.16	9.13	57.27	163	256	P	H
		7311	50	-4	54	61.52	36.16	9.13	57.27	163	256	A	H
		12185	56.29	-17.71	74	62.53	38.59	11.5	56.7	136	198	P	H
		12185	46.17	-7.83	54	52.41	38.59	11.5	56.7	136	198	A	H
		4874	61.98	-12.02	74	79.58	31.63	7.44	57.17	383	228	P	V
		4874	49.54	-4.46	54	67.14	31.63	7.44	57.17	383	228	A	V
		7311	62.76	-11.24	74	74.28	36.16	9.13	57.27	151	138	P	V
		7311	51.22	-2.78	54	62.74	36.16	9.13	57.27	151	138	A	V
		12185	58.98	-15.02	74	65.22	38.59	11.5	56.7	250	205	P	V
		12185	47.53	-6.47	54	53.77	38.59	11.5	56.7	250	205	A	V
802.11n HT40 CH 09 2452MHz		4904	64.27	-9.73	74	81.73	31.68	7.48	57.12	100	142	P	H
		4904	51.95	-2.05	54	69.41	31.68	7.48	57.12	100	142	A	H
		7356	57.46	-16.54	74	68.92	36.25	9.17	57.33	100	249	P	H
		7356	46.54	-7.46	54	58	36.25	9.17	57.33	100	249	A	H
		12260	56.43	-17.57	74	62.67	38.54	11.54	56.7	141	199	P	H
		12260	45.49	-8.51	54	51.73	38.54	11.54	56.7	141	199	A	H
		4904	61.1	-12.9	74	78.56	31.68	7.48	57.12	356	227	P	V
		4904	48.46	-5.54	54	65.92	31.68	7.48	57.12	356	227	A	V



		7356	59.19	-14.81	74	70.65	36.25	9.17	57.33	166	138	P	V
		7356	47.28	-6.72	54	58.74	36.25	9.17	57.33	166	138	A	V
		12260	55.65	-18.35	74	61.89	38.54	11.54	56.7	182	204	P	V
		12260	45	-9	54	51.24	38.54	11.54	56.7	182	204	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

Emission below 1GHz

2.4GHz WIFI 802.11b (LF)

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)
2.4GHz 802.11b LF		30	26.8	-13.2	40	35.94	22.63	0.59	32.34	-	-	P	H
		184.98	29.05	-14.45	43.5	48.19	11.63	1.42	32.27	-	-	P	H
		250.05	34.91	-11.09	46	50.28	15.16	1.59	32.2	-	-	P	H
		400.1	32.55	-13.45	46	43.94	18.7	1.97	32.15	-	-	P	H
		624.8	35.82	-10.18	46	42.48	22.98	2.45	32.2	-	-	P	H
		874.7	40.05	-5.95	46	42.52	26.14	2.9	31.63	100	0	P	H
													H
													H
													H
													H
													H
													H
		30	35.83	-4.17	40	44.97	22.63	0.59	32.34	100	0	P	V
		133.41	34.76	-8.74	43.5	52.03	13.77	1.19	32.28	-	-	P	V
		250.05	29.63	-16.37	46	45	15.16	1.59	32.2	-	-	P	V
		400.1	31.45	-14.55	46	42.84	18.7	1.97	32.15	-	-	P	V
		624.8	35.61	-10.39	46	42.27	22.98	2.45	32.2	-	-	P	V
		874.7	40	-6	46	42.47	26.14	2.9	31.63	-	-	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	P eak or A verage
H/V	H orizontal or V ertical



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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
CH 01													
2412MHz		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

1. Level(dBμV/m) =

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

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

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 43.54 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

= -10.46(dB)

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



Appendix D. Radiated Spurious Emission Plots

Test Engineer :	Alex Jheng, Bill Chang and Wilson Wu	Temperature :	25.0~25.3°C
		Relative Humidity :	51~55%

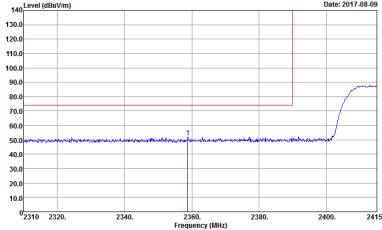
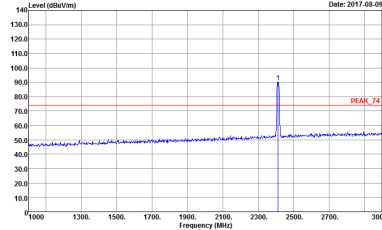
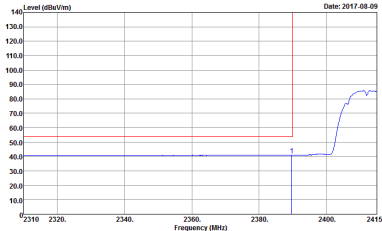
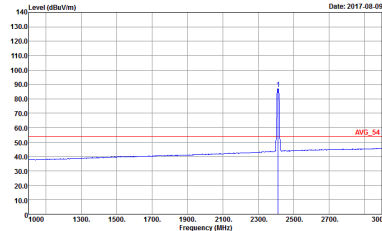
Note symbol

-L	Low channel location
-R	High channel location

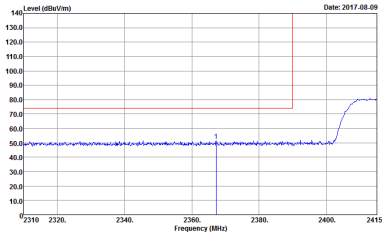
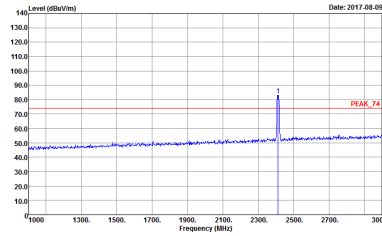
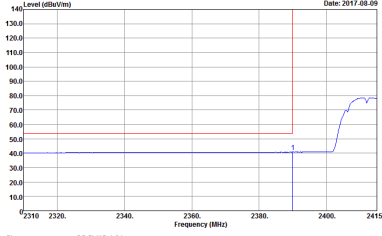
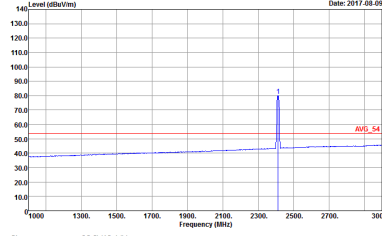


2.4GHz 2400~2483.5MHz

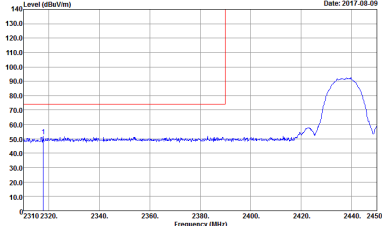
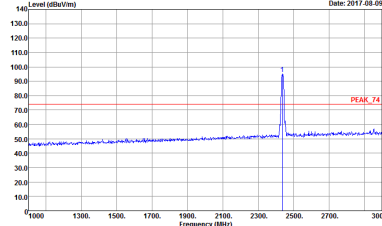
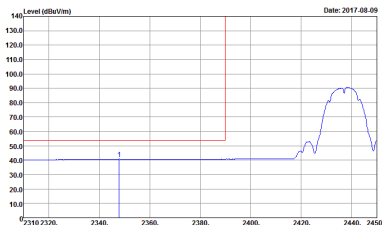
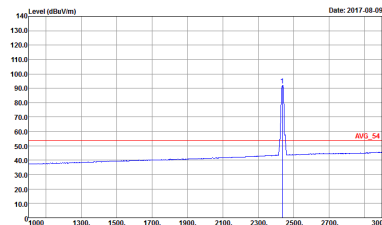
WIFI 802.11b (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 1 Power : 12 Sample : #6	 Site : 03CH13-HY Condition : PEAK_74 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 1 Power : 12 Sample : #6
Avg.	 Site : 03CH13-HY Condition : AVG_BE_54 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 1 Power : 12 Sample : #6	 Site : 03CH13-HY Condition : AVG_54 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 1 Power : 12 Sample : #6

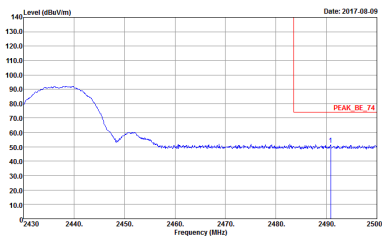
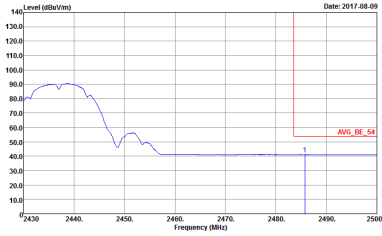


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
1	Vertical	Fundamental
Peak	 Level (dBuV/m) Frequency (MHz) Date: 2017-08-09 Site : 03CH13-I-VY Condition : PEAK_BE_74 3m HORN_91200_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 1 Power : 12 Sample : #6	 Level (dBuV/m) Frequency (MHz) Date: 2017-08-09 Site : 03CH13-I-VY Condition : PEAK_74 3m HORN_91200_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 1 Power : 12 Sample : #6
Avg.	 Level (dBuV/m) Frequency (MHz) Date: 2017-08-09 Site : 03CH13-I-VY Condition : AVG_BE_54 3m HORN_91200_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 1 Power : 12 Sample : #6	 Level (dBuV/m) Frequency (MHz) Date: 2017-08-09 Site : 03CH13-I-VY Condition : AVG_54 3m HORN_91200_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 1 Power : 12 Sample : #6

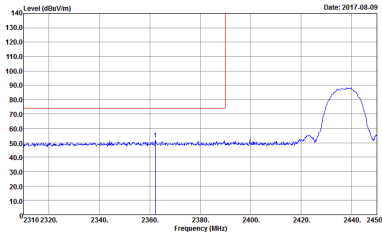
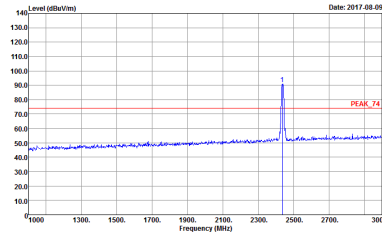
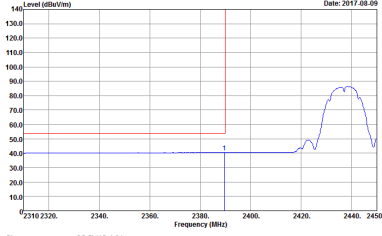
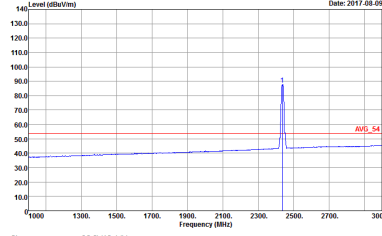


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak	 Level (dBuV/m) Frequency (MHz) Date: 2017.08.09 Site : 03CH13-14Y Condition : PEAK_BE_74 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 2 Power : 14.5 Sample : #6	 Level (dBuV/m) Frequency (MHz) Date: 2017.08.09 Site : 03CH13-14Y Condition : PEAK_74 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 2 Power : 14.5 Sample : #6
Avg.	 Level (dBuV/m) Frequency (MHz) Date: 2017.08.09 Site : 03CH13-14Y Condition : AVG_BE_54 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 2 Power : 14.5 Sample : #6	 Level (dBuV/m) Frequency (MHz) Date: 2017.08.09 Site : 03CH13-14Y Condition : AVG_54 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 2 Power : 14.5 Sample : #6

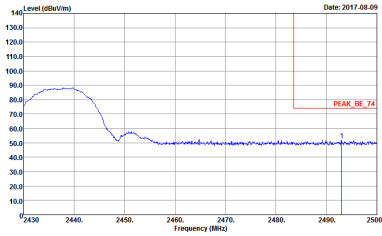
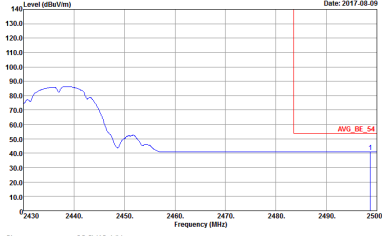


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
1	Horizontal	Fundamental
Peak	 Site : 03CH13-14Y Condition : PEAK_BE_74 3m HORN_9120D_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 2 Power : 14.5 Sample : #6	Left blank
Avg.	 Site : 03CH13-14Y Condition : AVG_BE_54 3m HORN_9120D_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 2 Power : 14.5 Sample : #6	Left blank

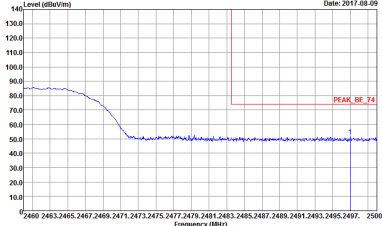
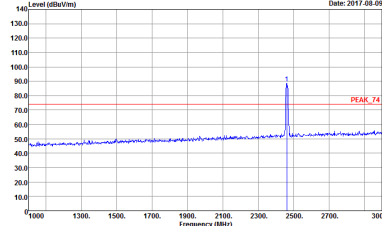
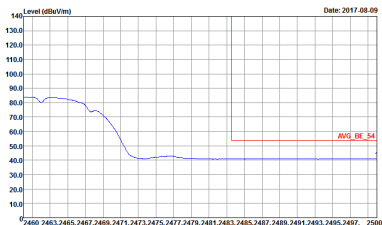
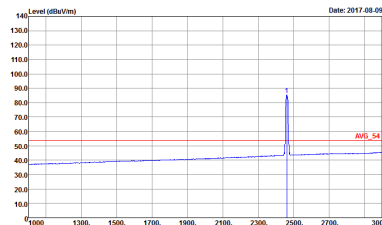


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
1	Vertical	Fundamental
Peak	 Level (dBuV/m) Frequency (MHz) Date: 2017-08-09 Site : 03CH13-I-FY Condition : PEAK_BE_74 3m HORN_91200_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 2 Power : 14.5 Sample : #6	 Level (dBuV/m) Frequency (MHz) Date: 2017-08-09 Site : 03CH13-I-FY Condition : PEAK_74 3m HORN_91200_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 2 Power : 14.5 Sample : #6
Avg.	 Level (dBuV/m) Frequency (MHz) Date: 2017-08-09 Site : 03CH13-I-FY Condition : AVG_BE_54 3m HORN_91200_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 2 Power : 14.5 Sample : #6	 Level (dBuV/m) Frequency (MHz) Date: 2017-08-09 Site : 03CH13-I-FY Condition : AVG_54 3m HORN_91200_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 2 Power : 14.5 Sample : #6

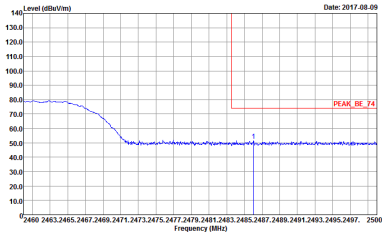
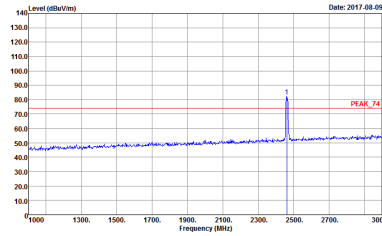
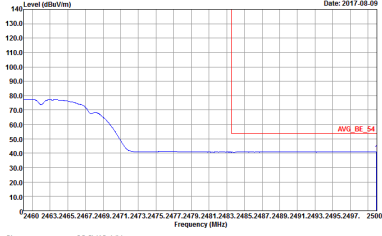
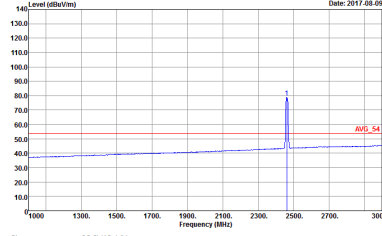


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
1	Vertical	Fundamental
Peak	 Site : 03CH13-14Y Condition : PEAK_BE_74 3m HORN_9120D_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 2 Power : 14.5 Sample : #6	Left blank
Avg.	 Site : 03CH13-14Y Condition : AVG_BE_54 3m HORN_9120D_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 2 Power : 14.5 Sample : #6	Left blank



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
1	Horizontal	Fundamental
Peak	 Level (dBuV/m) Frequency (MHz) Site : 03CH13-14Y Condition : PEAK_BE_74 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 3 Power : 7.5 Sample : #6	 Level (dBuV/m) Frequency (MHz) Site : 03CH13-14Y Condition : PEAK_74 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 3 Power : 7.5 Sample : #6
Avg.	 Level (dBuV/m) Frequency (MHz) Site : 03CH13-14Y Condition : AVG_BE_54 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 3 Power : 7.5 Sample : #6	 Level (dBuV/m) Frequency (MHz) Site : 03CH13-14Y Condition : AVG_54 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 3 Power : 7.5 Sample : #6

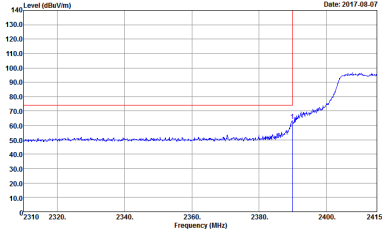
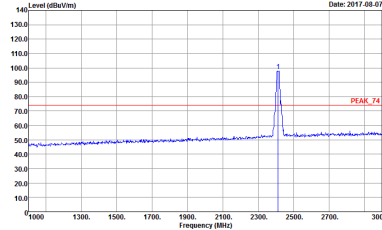
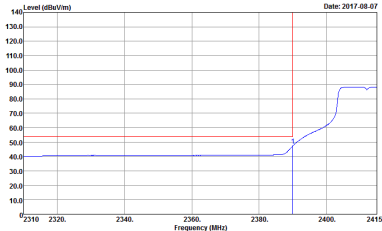
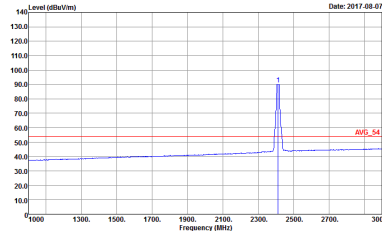


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
1	Vertical	Fundamental
Peak	 Level (dBuV/m) Frequency (MHz) Site : 03CH13-14Y Condition : PEAK_BE_74 3m HORN_9120D_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 3 Power : 7.5 Sample : #6	 Level (dBuV/m) Frequency (MHz) Site : 03CH13-14Y Condition : PEAK_74 3m HORN_9120D_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 3 Power : 7.5 Sample : #6
Avg.	 Level (dBuV/m) Frequency (MHz) Site : 03CH13-14Y Condition : AVG_BE_54 3m HORN_9120D_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 3 Power : 7.5 Sample : #6	 Level (dBuV/m) Frequency (MHz) Site : 03CH13-14Y Condition : AVG_54 3m HORN_9120D_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 3 Power : 7.5 Sample : #6

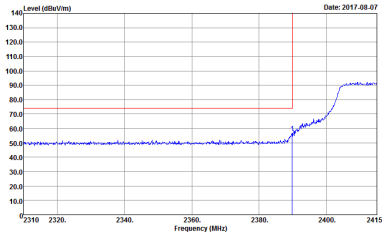
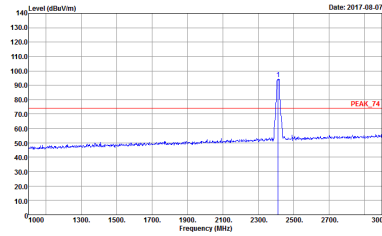
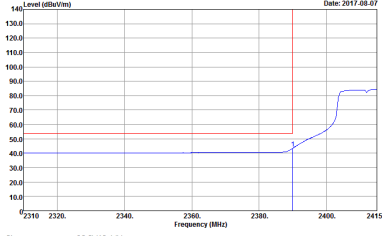
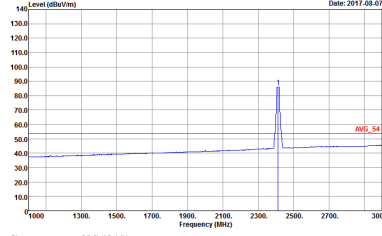


2.4GHz 2400~2483.5MHz

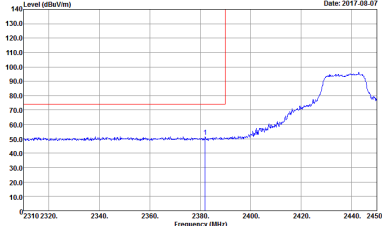
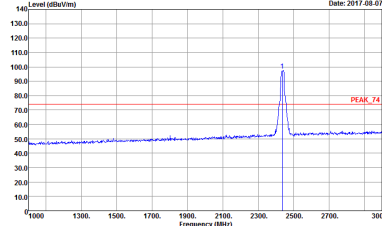
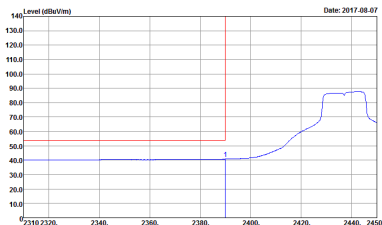
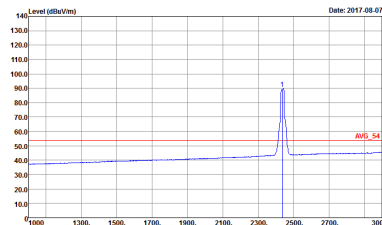
WIFI 802.11g (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
1	Horizontal	Fundamental
Peak	 Level (dBuV/m) Frequency (MHz) Date: 2017-08-07 Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 4 Power : 17 Sample : #6	 Level (dBuV/m) Frequency (MHz) Date: 2017-08-07 Site : 03CH13-HY Condition : PEAK_74 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 4 Power : 17 Sample : #6
Avg.	 Level (dBuV/m) Frequency (MHz) Date: 2017-08-07 Site : 03CH13-HY Condition : AVG_BE_54 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 4 Power : 17 Sample : #6	 Level (dBuV/m) Frequency (MHz) Date: 2017-08-07 Site : 03CH13-HY Condition : AVG_54 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 4 Power : 17 Sample : #6

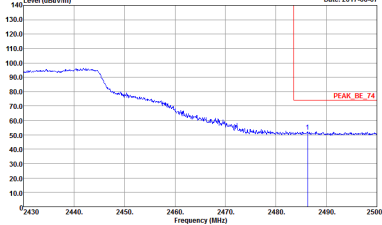
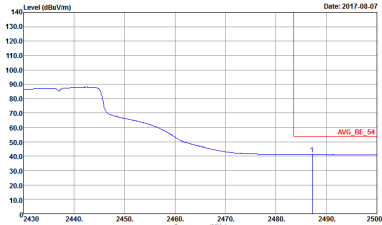


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH13-IY Condition : PEAK_BE_74 3m HORN_91200_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 4 Power : 17 Sample : #6	 Site : 03CH13-IY Condition : PEAK_74 3m HORN_91200_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 4 Power : 17 Sample : #6
Avg.	 Site : 03CH13-IY Condition : AVG_BE_54 3m HORN_91200_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 4 Power : 17 Sample : #6	 Site : 03CH13-IY Condition : AVG_54 3m HORN_91200_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 4 Power : 17 Sample : #6

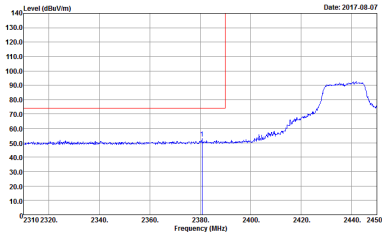
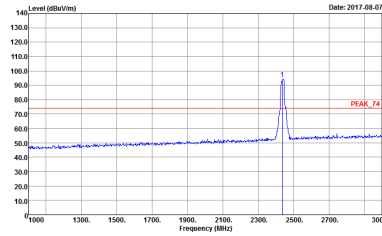
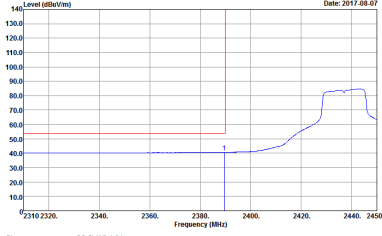
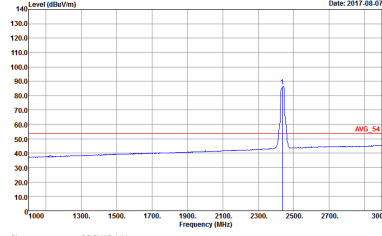


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak	 Level (dBuV/m) Frequency (MHz) Date: 2017-08-07 Site : 03CH13-14Y Condition : PEAK_BE_74 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 5 Power : 18 Sample : #6	 Level (dBuV/m) Frequency (MHz) Date: 2017-08-07 Site : 03CH13-14Y Condition : PEAK_74 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 5 Power : 18 Sample : #6
Avg.	 Level (dBuV/m) Frequency (MHz) Date: 2017-08-07 Site : 03CH13-14Y Condition : AVG_BE_54 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 5 Power : 18 Sample : #6	 Level (dBuV/m) Frequency (MHz) Date: 2017-08-07 Site : 03CH13-14Y Condition : AVG_54 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 5 Power : 18 Sample : #6

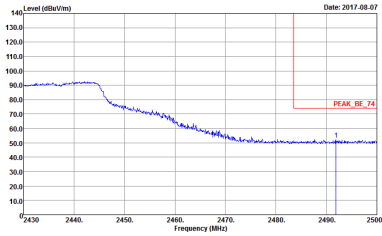
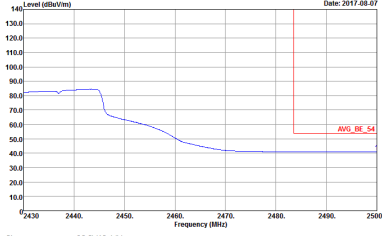


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
1	Horizontal	Fundamental
Peak	 Site : 03CH13-14Y Condition : PEAK_BE_74 3m HORN_9120D_1241 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 561115-03 Mode : 5 Power : 18 Sample : #6	Left blank
Avg.	 Site : 03CH13-14Y Condition : AVG_BE_54 3m HORN_9120D_1241 HORIZONTAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 561115-03 Mode : 5 Power : 18 Sample : #6	Left blank

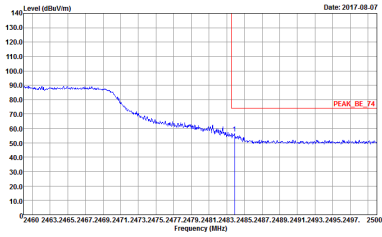
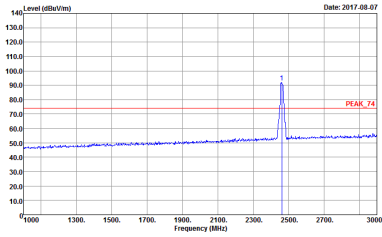
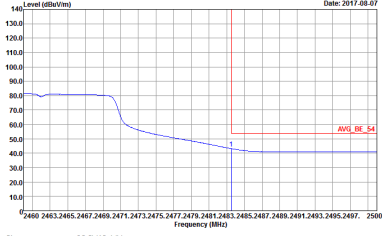
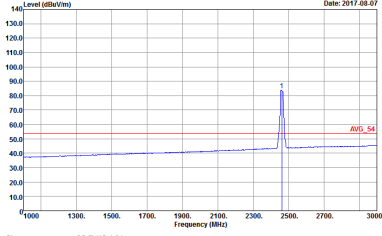


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH13-I-VY Condition : PEAK_BE_74 3m HORN_91200_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 5 Power : 18 Sample : #6	 Site : 03CH13-I-VY Condition : PEAK_74 3m HORN_91200_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 5 Power : 18 Sample : #6
Avg.	 Site : 03CH13-I-VY Condition : AVG_BE_54 3m HORN_91200_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 5 Power : 18 Sample : #6	 Site : 03CH13-I-VY Condition : AVG_54 3m HORN_91200_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 5 Power : 18 Sample : #6

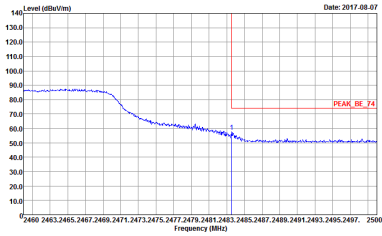
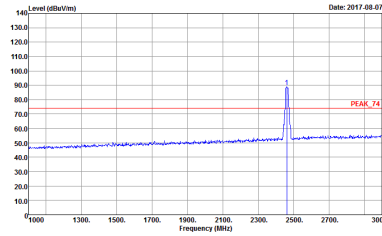
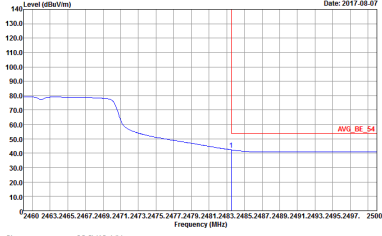
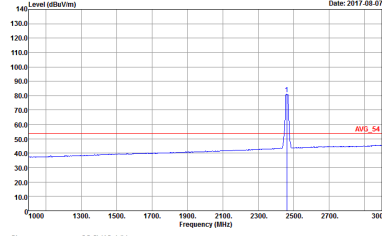


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
1	Vertical	Fundamental
Peak	 Site : 03CH13-14Y Condition : PEAK_BE_74 3m HORN_9120D_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 5 Power : 18 Sample : #6	Left Blank
Avg.	 Site : 03CH13-14Y Condition : AVG_BE_54 3m HORN_9120D_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 5 Power : 18 Sample : #6	Left Blank



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH13-14Y Condition : PEAK_BE_74 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 6 Power : 9.5 Sample : #6	 Site : 03CH13-14Y Condition : PEAK_74 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 6 Power : 9.5 Sample : #6
Avg.	 Site : 03CH13-14Y Condition : AVG_BE_54 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 6 Power : 9.5 Sample : #6	 Site : 03CH13-14Y Condition : AVG_54 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 6 Power : 9.5 Sample : #6

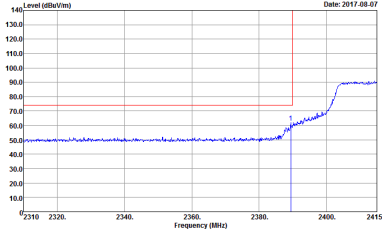
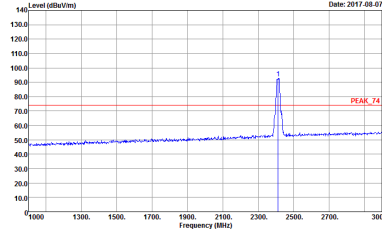
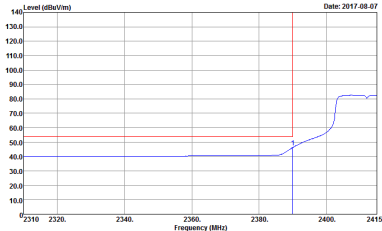
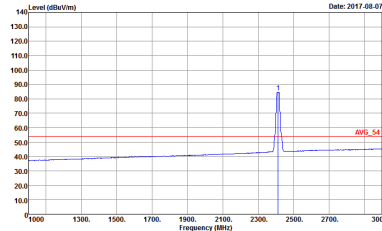


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
1	Vertical	Fundamental
Peak	 Level (dBuV/m) Frequency (MHz) Site : 03CH13-14Y Condition : PEAK_BE_74 3m HORN_9120D_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 6 Power : 9.5 Sample : #6	 Level (dBuV/m) Frequency (MHz) Site : 03CH13-14Y Condition : PEAK_74 3m HORN_9120D_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 6 Power : 9.5 Sample : #6
Avg.	 Level (dBuV/m) Frequency (MHz) Site : 03CH13-14Y Condition : AVG_BE_54 3m HORN_9120D_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 6 Power : 9.5 Sample : #6	 Level (dBuV/m) Frequency (MHz) Site : 03CH13-14Y Condition : AVG_54 3m HORN_9120D_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 6 Power : 9.5 Sample : #6

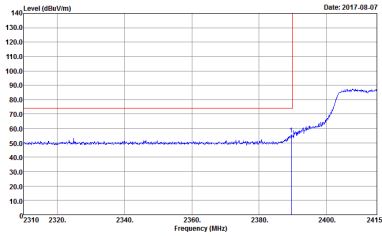
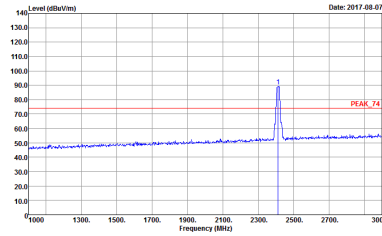
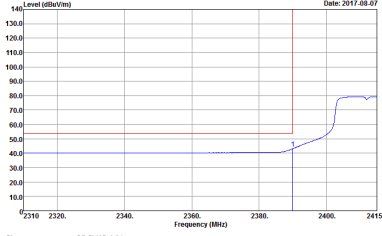
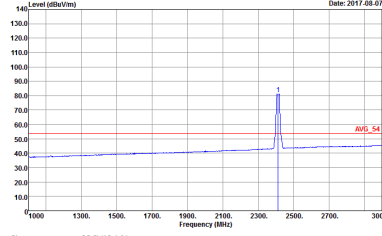


2.4GHz 2400~2483.5MHz

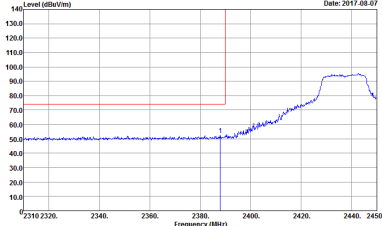
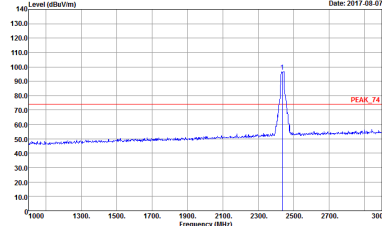
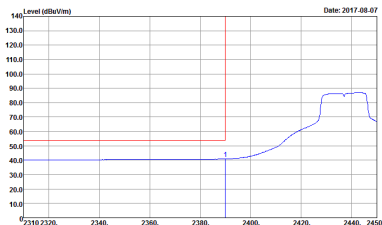
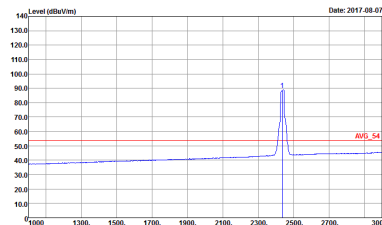
WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1	Horizontal	Fundamental
Peak	 Level (dBuV/m) Frequency (MHz) Date: 2017-08-07 Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 7 Power : 16.5 Sample : #6	 Level (dBuV/m) Frequency (MHz) Date: 2017-08-07 Site : 03CH13-HY Condition : PEAK_74 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 7 Power : 16.5 Sample : #6
Avg.	 Level (dBuV/m) Frequency (MHz) Date: 2017-08-07 Site : 03CH13-HY Condition : AVG_BE_54 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 7 Power : 16.5 Sample : #6	 Level (dBuV/m) Frequency (MHz) Date: 2017-08-07 Site : 03CH13-HY Condition : AVG_54 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 7 Power : 16.5 Sample : #6

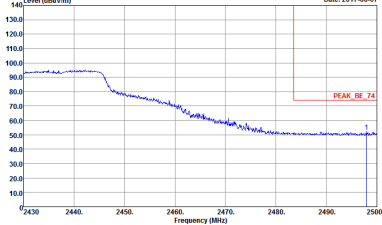
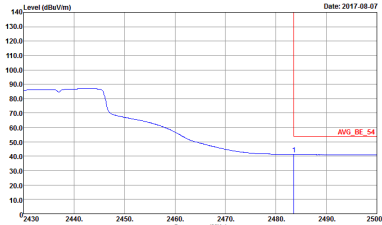


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1	Vertical	Fundamental
Peak	 Level (dBuV/m) Frequency (MHz) Date: 2017-08-07 Site : 03CH13-14Y Condition : PEAK_BE_74 3m HORN_91200_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 7 Power : 16.5 Sample : #6	 Level (dBuV/m) Frequency (MHz) Date: 2017-08-07 Site : 03CH13-14Y Condition : PEAK_74 3m HORN_91200_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 7 Power : 16.5 Sample : #6
Avg.	 Level (dBuV/m) Frequency (MHz) Date: 2017-08-07 Site : 03CH13-14Y Condition : AVG_BE_54 3m HORN_91200_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 7 Power : 16.5 Sample : #6	 Level (dBuV/m) Frequency (MHz) Date: 2017-08-07 Site : 03CH13-14Y Condition : AVG_54 3m HORN_91200_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 7 Power : 16.5 Sample : #6

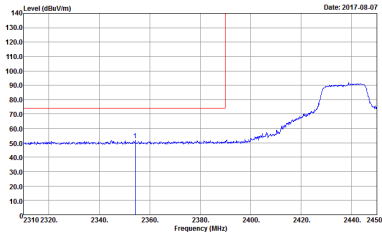
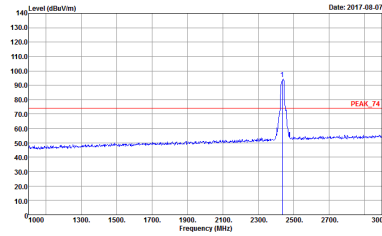
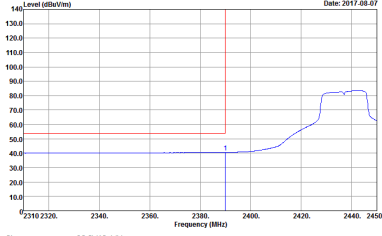
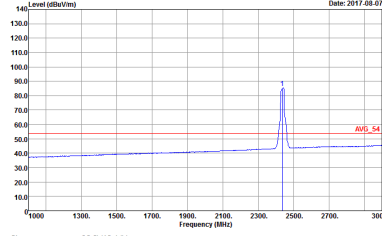


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH13-14Y Condition : PEAK_BE_74 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 8 Power : 19.5 Sample : #6	 Site : 03CH13-14Y Condition : PEAK_74 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 8 Power : 19.5 Sample : #6
Avg.	 Site : 03CH13-14Y Condition : AVG_BE_54 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 8 Power : 19.5 Sample : #6	 Site : 03CH13-14Y Condition : AVG_54 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 8 Power : 19.5 Sample : #6

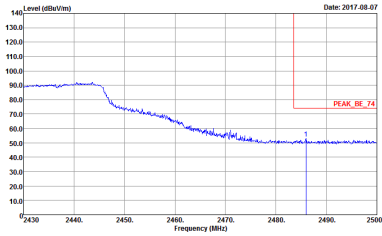
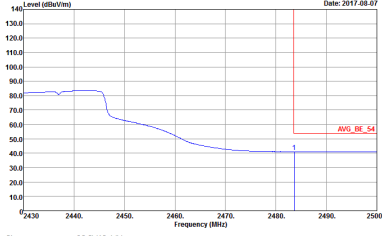


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
1	Horizontal	Fundamental
Peak	 Site : 03CH13-14Y Condition : PEAK_BE_74 3m HORN_9120D_1241 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 561115-03 Mode : 8 Power : 19.5 Sample : #6	Left blank
Avg.	 Site : 03CH13-14Y Condition : AVG_BE_54 3m HORN_9120D_1241 HORIZONTAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 561115-03 Mode : 8 Power : 19.5 Sample : #6	Left blank



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - L	
1	Vertical	Fundamental
Peak	 Level (dBuV/m) Frequency (MHz) Date: 2017-08-07 Site : 03CH13-14Y Condition : PEAK_BE_74 3m HORN_91200_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 8 Power : 19.5 Sample : #6	 Level (dBuV/m) Frequency (MHz) Date: 2017-08-07 Site : 03CH13-14Y Condition : PEAK_74 3m HORN_91200_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 8 Power : 19.5 Sample : #6
Avg.	 Level (dBuV/m) Frequency (MHz) Date: 2017-08-07 Site : 03CH13-14Y Condition : AVG_BE_54 3m HORN_91200_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 8 Power : 19.5 Sample : #6	 Level (dBuV/m) Frequency (MHz) Date: 2017-08-07 Site : 03CH13-14Y Condition : AVG_54 3m HORN_91200_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 8 Power : 19.5 Sample : #6

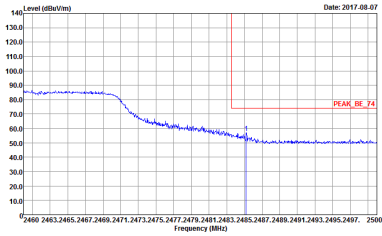
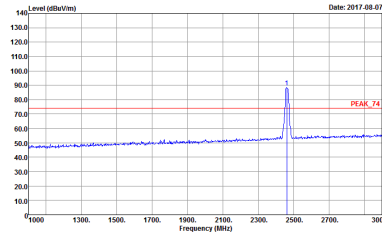
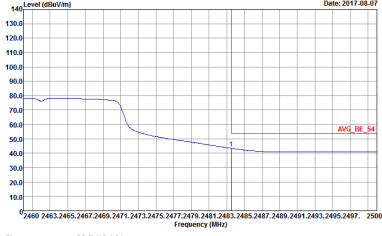
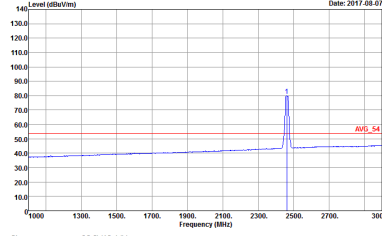


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
1	Vertical	Fundamental
Peak	 Site : 03CH13-14Y Condition : PEAK_BE_74 3m HORN_9120D_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 8 Power : 19.5 Sample : #6	Left Blank
Avg.	 Site : 03CH13-14Y Condition : AVG_BE_54 3m HORN_9120D_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 8 Power : 19.5 Sample : #6	Left Blank

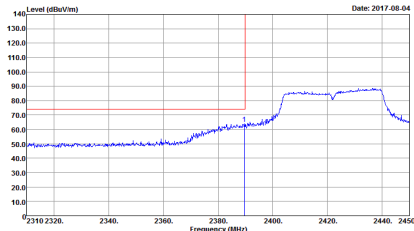
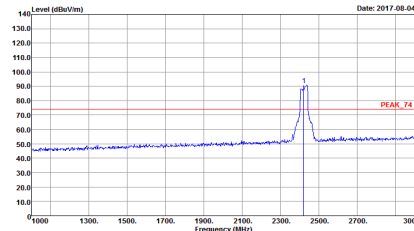
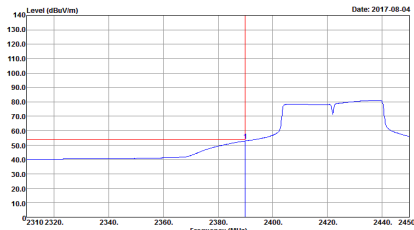
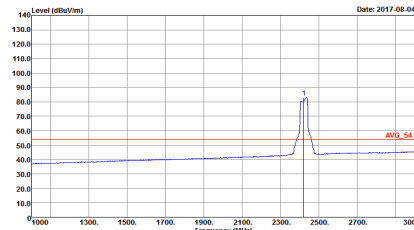


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1	Horizontal	Fundamental
Peak	Site : 03CH13-14Y Condition : PEAK_BE_74 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 9 Power : 10 Sample : #6	Site : 03CH13-14Y Condition : PEAK_74 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 9 Power : 10 Sample : #6
Avg.	Site : 03CH13-14Y Condition : AVG_BE_54 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 9 Power : 10 Sample : #6	Site : 03CH13-14Y Condition : AVG_54 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 9 Power : 10 Sample : #6

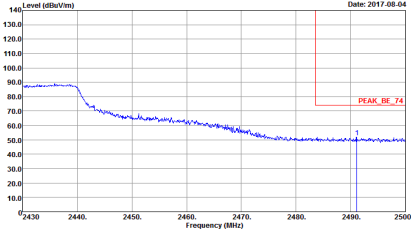
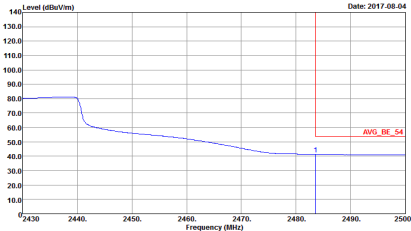


WIFI	2.4GHz 2400~2483.5MHz Fundamental @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1	Vertical	Fundamental
Peak	 Level (dBuV/m) Frequency (MHz) Site : 03CH13-14Y Condition : PEAK_BE_74 3m HORN_9120D_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 9 Power : 10 Sample : #6	 Level (dBuV/m) Frequency (MHz) Site : 03CH13-14Y Condition : PEAK_74 3m HORN_9120D_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 9 Power : 10 Sample : #6
Avg.	 Level (dBuV/m) Frequency (MHz) Site : 03CH13-14Y Condition : AVG_BE_54 3m HORN_9120D_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 9 Power : 10 Sample : #6	 Level (dBuV/m) Frequency (MHz) Site : 03CH13-14Y Condition : AVG_54 3m HORN_9120D_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 9 Power : 10 Sample : #6

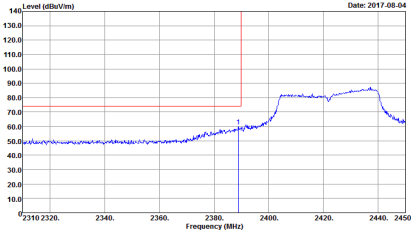
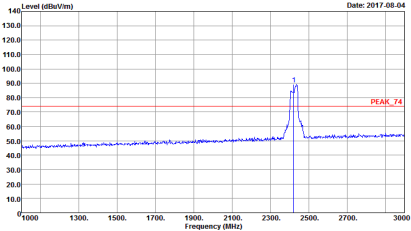
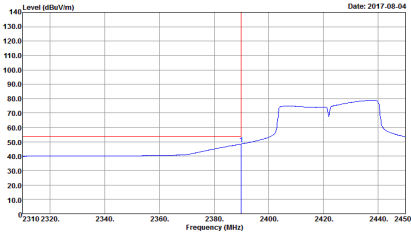
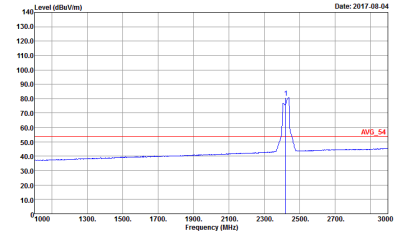
2.4GHz 2400~2483.5MHz
WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_91200_1241 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 561115-03 Mode : 10 Power : 17 Sample : #6	 Site : 03CH13-HY Condition : PEAK_74 3m HORN_91200_1241 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 561115-03 Mode : 10 Power : 17 Sample : #6
Avg.	 Site : 03CH13-HY Condition : AVG_BE_54 3m HORN_91200_1241 HORIZONTAL RBW:1000.000kHz VBW:0.010kHz SWT:Auto Detector : Peak Project : 561115-03 Mode : 10 Power : 17 Sample : #6	 Site : 03CH13-HY Condition : AVG_54 3m HORN_91200_1241 HORIZONTAL RBW:1000.000kHz VBW:0.010kHz SWT:Auto Detector : Peak Project : 561115-03 Mode : 10 Power : 17 Sample : #6

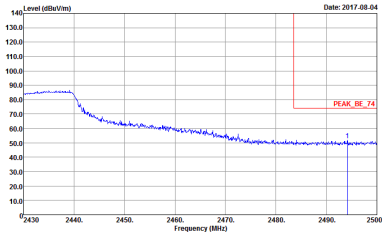
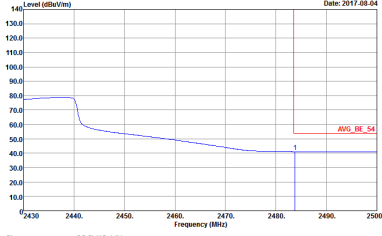


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - R	
1	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_91200_1241 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 561115-03 Mode : 10 Power : 17 Sample : #6	Left Blank
Avg.	 Site : 03CH13-HY Condition : AVG_BE_54 3m HORN_91200_1241 HORIZONTAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 561115-03 Mode : 10 Power : 17 Sample : #6	Left Blank

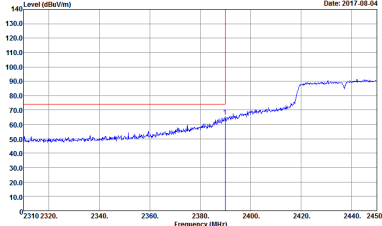
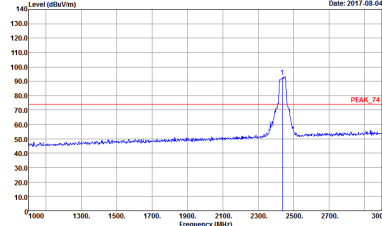
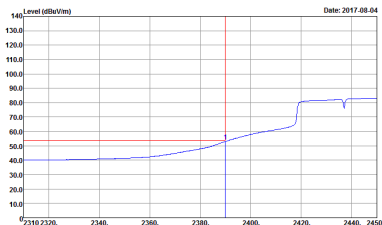
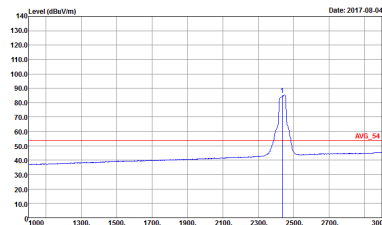


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_9120D_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 10 Power : 17 Sample : #6	 Site : 03CH13-HY Condition : PEAK_74 3m HORN_9120D_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 10 Power : 17 Sample : #6
Avg.	 Site : 03CH13-HY Condition : AVG_BE_54 3m HORN_9120D_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 10 Power : 17 Sample : #6	 Site : 03CH13-HY Condition : AVG_54 3m HORN_9120D_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 10 Power : 17 Sample : #6

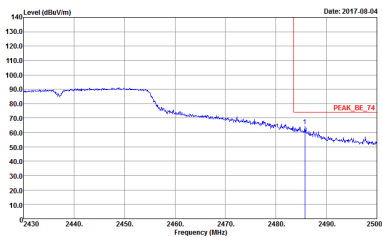
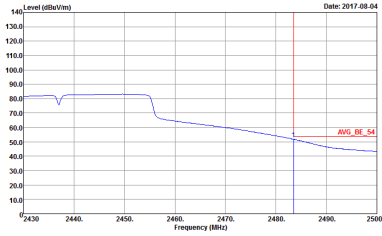


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - R	
1	Vertical	Fundamental
Peak	 Site : 03CH13-14V Condition : PEAK_BE_74 3m HORN_9120D_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 10 Power : 17 Sample : #6	Left blank
Avg.	 Site : 03CH13-14V Condition : AVG_BE_54 3m HORN_9120D_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 10 Power : 17 Sample : #6	Left blank

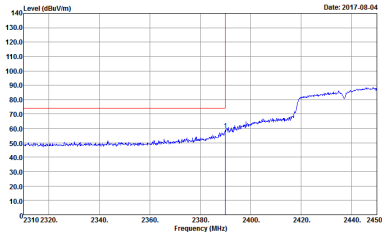
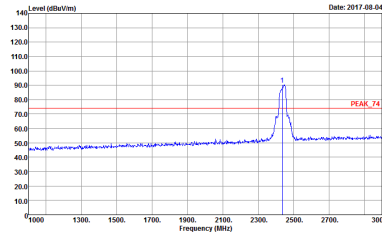
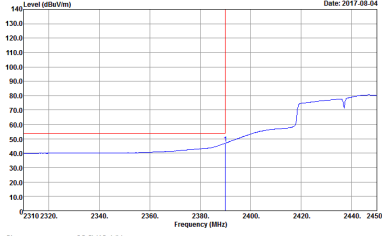
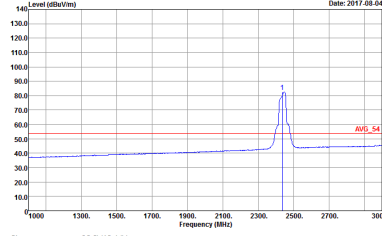


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak	 Level (dBuV/m) Frequency (MHz) Date: 2017.08.04 Site : 03CH13-14Y Condition : PEAK_BE_74 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 11 Power : 20 Sample : #6	 Level (dBuV/m) Frequency (MHz) Date: 2017.08.04 Site : 03CH13-14Y Condition : PEAK_74 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 11 Power : 20 Sample : #6
Avg.	 Level (dBuV/m) Frequency (MHz) Date: 2017.08.04 Site : 03CH13-14Y Condition : AVG_BE_54 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 11 Power : 20 Sample : #6	 Level (dBuV/m) Frequency (MHz) Date: 2017.08.04 Site : 03CH13-14Y Condition : AVG_54 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 11 Power : 20 Sample : #6

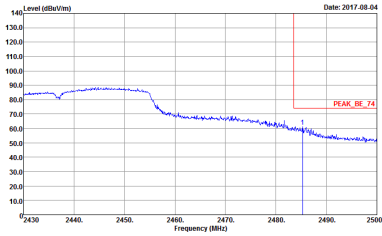
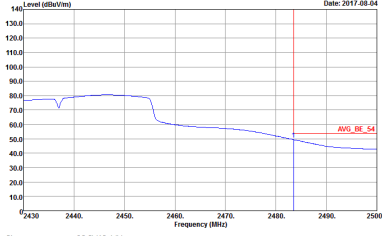


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH06 2437MHz - R	
1	Horizontal	Fundamental
Peak	 Site : 03CH13-14Y Condition : PEAK_BE_74 3m HORN_9120D_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 11 Power : 20 Sample : #6	Left blank
Avg.	 Site : 03CH13-14Y Condition : AVG_BE_54 3m HORN_9120D_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 11 Power : 20 Sample : #6	Left blank

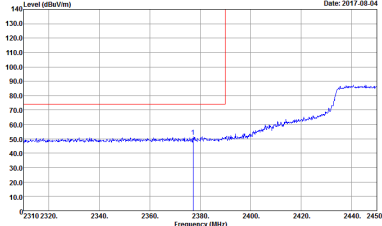
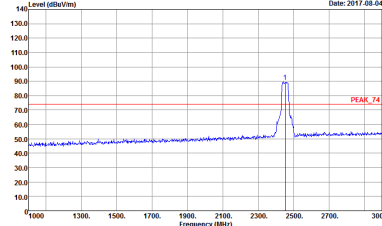
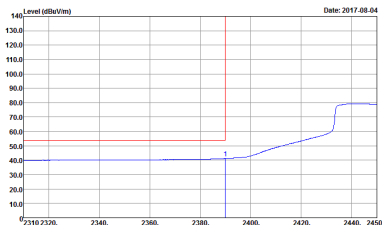
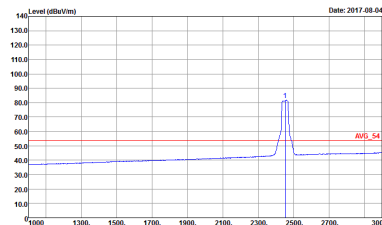


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH06 2437MHz - L	
1	Vertical	Fundamental
Peak	 Level (dBuV/m) Frequency (MHz) Date: 2017-08-04 Site : 03CH13-I-VY Condition : PEAK_BE_74 3m HORN_91200_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 11 Power : 20 Sample : #6	 Level (dBuV/m) Frequency (MHz) Date: 2017-08-04 Site : 03CH13-I-VY Condition : PEAK_74 3m HORN_91200_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 11 Power : 20 Sample : #6
Avg.	 Level (dBuV/m) Frequency (MHz) Date: 2017-08-04 Site : 03CH13-I-VY Condition : AVG_BE_54 3m HORN_91200_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 11 Power : 20 Sample : #6	 Level (dBuV/m) Frequency (MHz) Date: 2017-08-04 Site : 03CH13-I-VY Condition : AVG_54 3m HORN_91200_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 11 Power : 20 Sample : #6

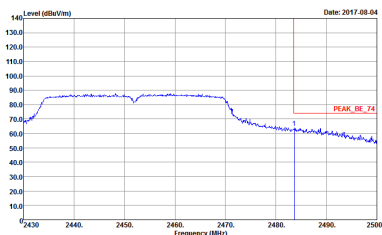
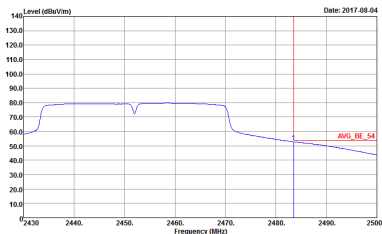


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH06 2437MHz - R	
1	Vertical	Fundamental
Peak	 Site : 03CH13-14V Condition : PEAK_BE_74 3m HORN_9120D_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 11 Power : 20 Sample : #6	Left blank
Avg.	 Site : 03CH13-14V Condition : AVG_BE_54 3m HORN_9120D_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 11 Power : 20 Sample : #6	Left blank

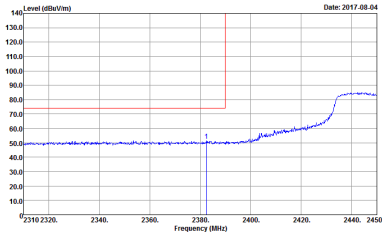
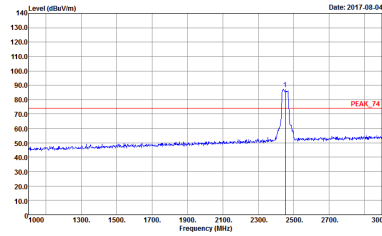
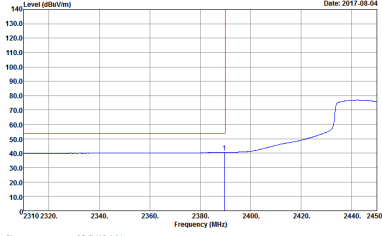
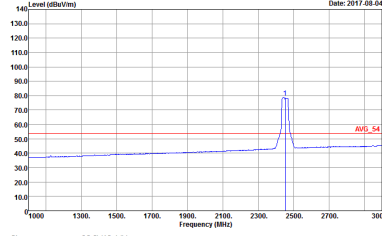


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH13-I-FY Condition : PEAK_BE_74 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 12 Power : 14 Sample : #6	 Site : 03CH13-I-FY Condition : PEAK_74 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 12 Power : 14 Sample : #6
Avg.	 Site : 03CH13-I-FY Condition : AVG_BE_54 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 12 Power : 14 Sample : #6	 Site : 03CH13-I-FY Condition : AVG_54 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 12 Power : 14 Sample : #6

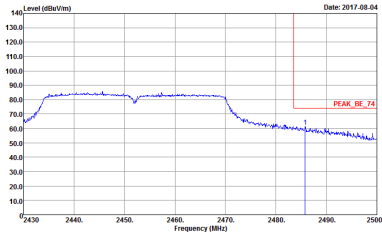
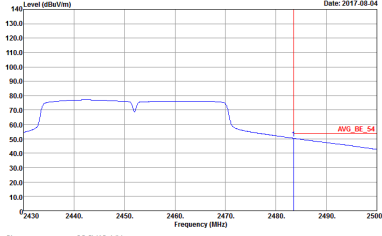


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - R	
1	Horizontal	Fundamental
Peak	 Site : 03CH13-14V Condition : PEAK_BE_74 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 12 Power : 14 Sample : #6	Left blank
Avg.	 Site : 03CH13-14V Condition : AVG_BE_54 3m HORN_91200_1241 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 12 Power : 14 Sample : #6	Left blank



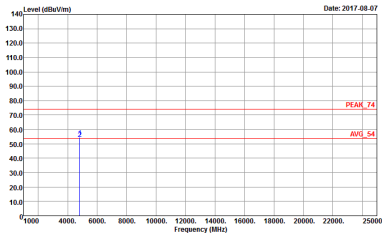
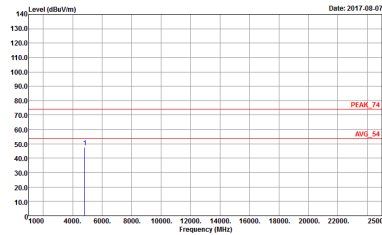
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH13-14Y Condition : PEAK_BE_74 3m HORN_91200_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 12 Power : 14 Sample : #6	 Site : 03CH13-14Y Condition : PEAK_74 3m HORN_91200_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 12 Power : 14 Sample : #6
Avg.	 Site : 03CH13-14Y Condition : AVG_BE_54 3m HORN_91200_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 12 Power : 14 Sample : #6	 Site : 03CH13-14Y Condition : AVG_54 3m HORN_91200_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 12 Power : 14 Sample : #6



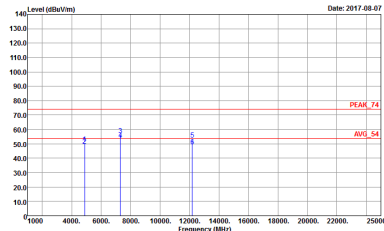
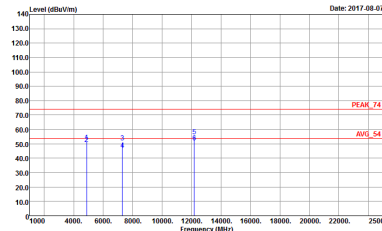
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - R	
1	Vertical	Fundamental
Peak	 Site : 03CH13-14V Condition : PEAK_BE_74 3m HORN_9120D_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 12 Power : 14 Sample : #6	Left blank
Avg.	 Site : 03CH13-14V Condition : AVG_BE_54 3m HORN_9120D_1241 VERTICAL Detector : Peak Project : 561115-03 Mode : 12 Power : 14 Sample : #6	Left blank



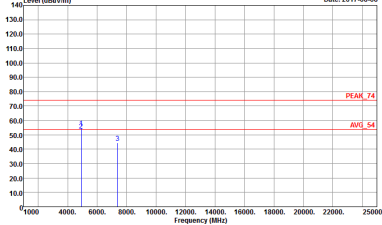
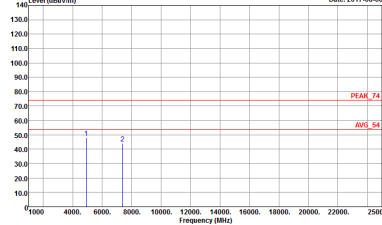
2.4GHz 2400~2483.5MHz
WIFI 802.11b (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH13-IHY Condition : PEAK_74 3m SHF_HORN_584 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 1 Power : 12 Sample : #6	 Site : 03CH13-IHY Condition : PEAK_74 3m SHF_HORN_584 VERTICAL Detector : Peak Project : 561115-03 Mode : 1 Power : 12 Sample : #6



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m																													
ANT	802.11b CH06 2437MHz																													
1	Horizontal	Vertical																												
Peak Avg.	<table><tr><td>Site</td><td>: 03CH13-14Y</td></tr><tr><td>Condition</td><td>: PEAK_74 3m SHF_HORN_584 HORIZONTAL</td></tr><tr><td>Detector</td><td>: Peak</td></tr><tr><td>Project</td><td>: 561115-03</td></tr><tr><td>Mode</td><td>: 2</td></tr><tr><td>Power</td><td>: 14.5</td></tr><tr><td>Sample</td><td>: #6</td></tr></table>	Site	: 03CH13-14Y	Condition	: PEAK_74 3m SHF_HORN_584 HORIZONTAL	Detector	: Peak	Project	: 561115-03	Mode	: 2	Power	: 14.5	Sample	: #6	<table><tr><td>Site</td><td>: 03CH13-14Y</td></tr><tr><td>Condition</td><td>: PEAK_74 3m SHF_HORN_584 VERTICAL</td></tr><tr><td>Detector</td><td>: Peak</td></tr><tr><td>Project</td><td>: 561115-03</td></tr><tr><td>Mode</td><td>: 2</td></tr><tr><td>Power</td><td>: 14.5</td></tr><tr><td>Sample</td><td>: #6</td></tr></table>	Site	: 03CH13-14Y	Condition	: PEAK_74 3m SHF_HORN_584 VERTICAL	Detector	: Peak	Project	: 561115-03	Mode	: 2	Power	: 14.5	Sample	: #6
Site	: 03CH13-14Y																													
Condition	: PEAK_74 3m SHF_HORN_584 HORIZONTAL																													
Detector	: Peak																													
Project	: 561115-03																													
Mode	: 2																													
Power	: 14.5																													
Sample	: #6																													
Site	: 03CH13-14Y																													
Condition	: PEAK_74 3m SHF_HORN_584 VERTICAL																													
Detector	: Peak																													
Project	: 561115-03																													
Mode	: 2																													
Power	: 14.5																													
Sample	: #6																													

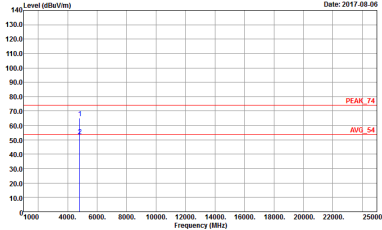
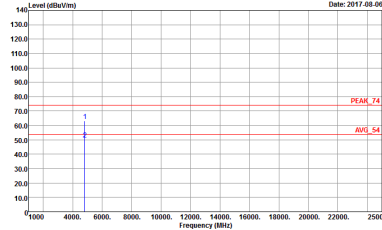


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH11 2462MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH13-14Y Condition : PEAK_74 3m SHF_HORN_584 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 3 Power : 7.5 Sample : #6	 Site : 03CH13-14Y Condition : PEAK_74 3m SHF_HORN_584 VERTICAL Detector : Peak Project : 561115-03 Mode : 3 Power : 7.5 Sample : #6

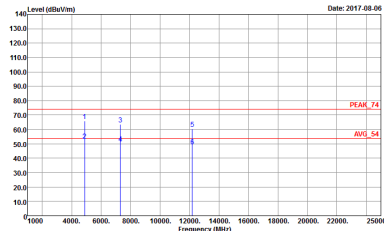
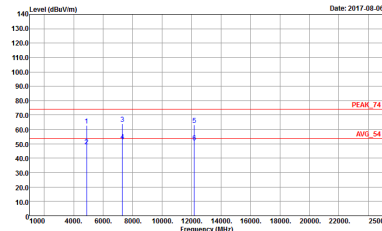


2.4GHz 2400~2483.5MHz

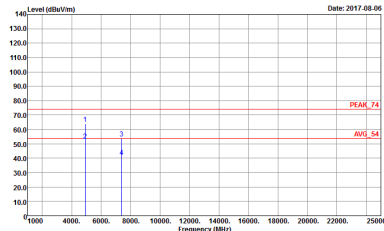
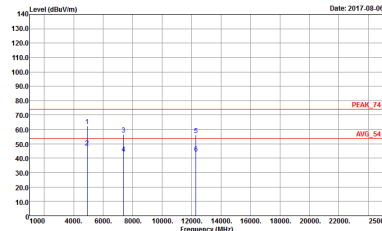
WIFI 802.11g (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH13-IHY Condition : PEAK_74 3m SHF_HORN_584 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 4 Power : 17 Sample : #6	 Site : 03CH13-IHY Condition : PEAK_74 3m SHF_HORN_584 VERTICAL Detector : Peak Project : 561115-03 Mode : 4 Power : 17 Sample : #6



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m																													
ANT	802.11g CH06 2437MHz																													
1	Horizontal	Vertical																												
Peak Avg.	<table><tr><td>Site</td><td>: 03CH13-14Y</td></tr><tr><td>Condition</td><td>: PEAK_74 3m SHF_HORN_584 HORIZONTAL</td></tr><tr><td>Detector</td><td>: Peak</td></tr><tr><td>Project</td><td>: 561115-03</td></tr><tr><td>Mode</td><td>: 5</td></tr><tr><td>Power</td><td>: 18</td></tr><tr><td>Sample</td><td>: #6</td></tr></table>	Site	: 03CH13-14Y	Condition	: PEAK_74 3m SHF_HORN_584 HORIZONTAL	Detector	: Peak	Project	: 561115-03	Mode	: 5	Power	: 18	Sample	: #6	<table><tr><td>Site</td><td>: 03CH13-14Y</td></tr><tr><td>Condition</td><td>: PEAK_74 3m SHF_HORN_584 VERTICAL</td></tr><tr><td>Detector</td><td>: Peak</td></tr><tr><td>Project</td><td>: 561115-03</td></tr><tr><td>Mode</td><td>: 5</td></tr><tr><td>Power</td><td>: 18</td></tr><tr><td>Sample</td><td>: #6</td></tr></table>	Site	: 03CH13-14Y	Condition	: PEAK_74 3m SHF_HORN_584 VERTICAL	Detector	: Peak	Project	: 561115-03	Mode	: 5	Power	: 18	Sample	: #6
	Site	: 03CH13-14Y																												
Condition	: PEAK_74 3m SHF_HORN_584 HORIZONTAL																													
Detector	: Peak																													
Project	: 561115-03																													
Mode	: 5																													
Power	: 18																													
Sample	: #6																													
Site	: 03CH13-14Y																													
Condition	: PEAK_74 3m SHF_HORN_584 VERTICAL																													
Detector	: Peak																													
Project	: 561115-03																													
Mode	: 5																													
Power	: 18																													
Sample	: #6																													

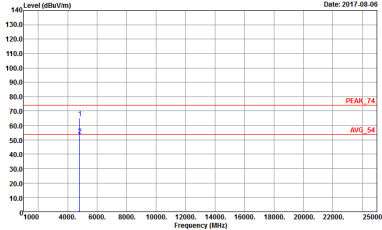
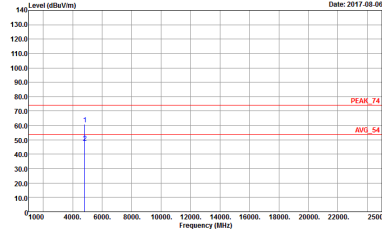


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m																													
ANT	802.11g CH11 2462MHz																													
1	Horizontal	Vertical																												
Peak Avg.	<table><tr><td>Site</td><td>: 03CH13-14Y</td></tr><tr><td>Condition</td><td>: PEAK_74 3m SHF_HORN_584 HORIZONTAL</td></tr><tr><td>Detector</td><td>: Peak</td></tr><tr><td>Project</td><td>: 561115-03</td></tr><tr><td>Mode</td><td>: 6</td></tr><tr><td>Power</td><td>: 9.5</td></tr><tr><td>Sample</td><td>: #6</td></tr></table>	Site	: 03CH13-14Y	Condition	: PEAK_74 3m SHF_HORN_584 HORIZONTAL	Detector	: Peak	Project	: 561115-03	Mode	: 6	Power	: 9.5	Sample	: #6	<table><tr><td>Site</td><td>: 03CH13-14Y</td></tr><tr><td>Condition</td><td>: PEAK_74 3m SHF_HORN_584 VERTICAL</td></tr><tr><td>Detector</td><td>: Peak</td></tr><tr><td>Project</td><td>: 561115-03</td></tr><tr><td>Mode</td><td>: 6</td></tr><tr><td>Power</td><td>: 9.5</td></tr><tr><td>Sample</td><td>: #6</td></tr></table>	Site	: 03CH13-14Y	Condition	: PEAK_74 3m SHF_HORN_584 VERTICAL	Detector	: Peak	Project	: 561115-03	Mode	: 6	Power	: 9.5	Sample	: #6
	Site	: 03CH13-14Y																												
Condition	: PEAK_74 3m SHF_HORN_584 HORIZONTAL																													
Detector	: Peak																													
Project	: 561115-03																													
Mode	: 6																													
Power	: 9.5																													
Sample	: #6																													
Site	: 03CH13-14Y																													
Condition	: PEAK_74 3m SHF_HORN_584 VERTICAL																													
Detector	: Peak																													
Project	: 561115-03																													
Mode	: 6																													
Power	: 9.5																													
Sample	: #6																													

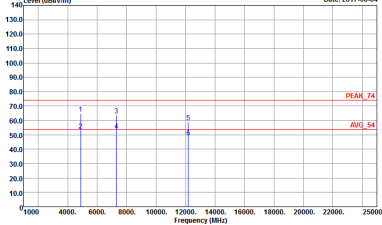
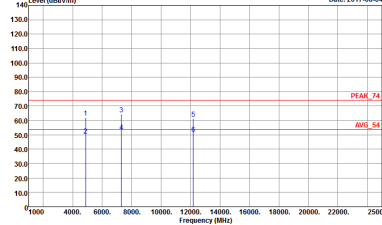


2.4GHz 2400~2483.5MHz

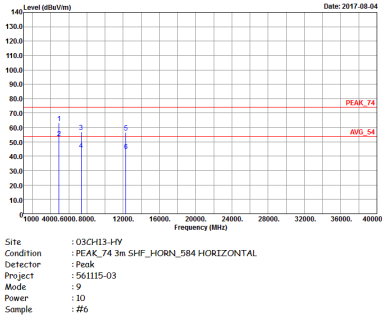
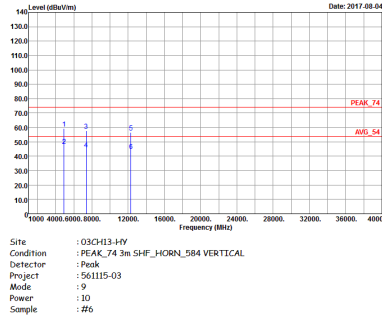
WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH13-IHY Condition : PEAK_74 3m SHF_HORN_584 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 7 Power : 16.5 Sample : #6	 Site : 03CH13-IHY Condition : PEAK_74 3m SHF_HORN_584 VERTICAL Detector : Peak Project : 561115-03 Mode : 7 Power : 16.5 Sample : #6



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH06 2437MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH13-14Y Condition : PEAK_74 3m SHF_HORN_584 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 8 Power : 19.5 Sample : #6	 Site : 03CH13-14Y Condition : PEAK_74 3m SHF_HORN_584 VERTICAL Detector : Peak Project : 561115-03 Mode : 8 Power : 19.5 Sample : #6

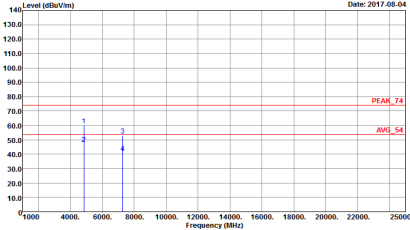
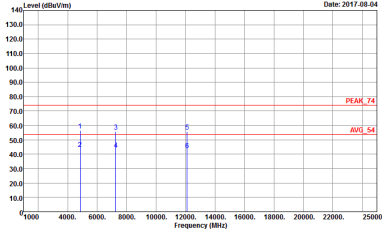


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1	Horizontal	Vertical
Peak Avg.		

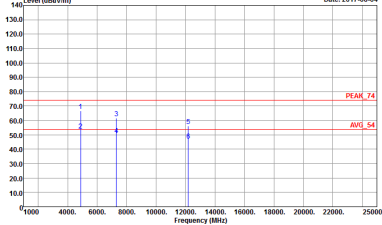
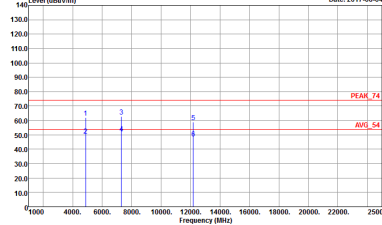


2.4GHz 2400~2483.5MHz

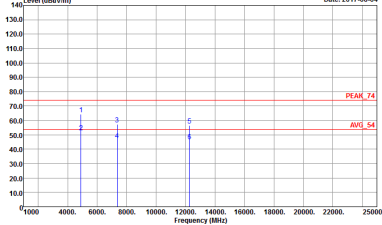
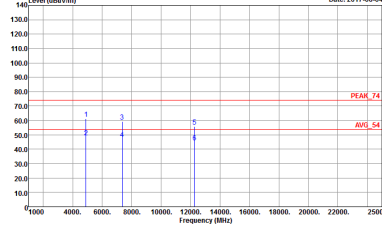
WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT40 CH03 2422MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH13-HY Condition : PEAK_74 3m SHF_HORN_584 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 10 Power : 17 Sample : #6	 Site : 03CH13-HY Condition : PEAK_74 3m SHF_HORN_584 VERTICAL Detector : Peak Project : 561115-03 Mode : 10 Power : 17 Sample : #6



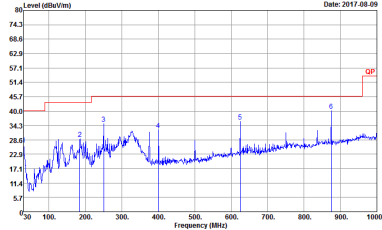
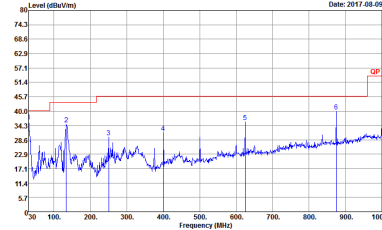
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT40 CH06 2437MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH13-14Y Condition : PEAK_74 3m SHF_HORN_584 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 11 Power : 20 Sample : #6	 Site : 03CH13-14Y Condition : PEAK_74 3m SHF_HORN_584 VERTICAL Detector : Peak Project : 561115-03 Mode : 11 Power : 20 Sample : #6



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT40 CH09 2452MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH13-14Y Condition : PEAK_74 3m SHF_HORN_584 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 12 Power : 14 Sample : #6	 Site : 03CH13-14Y Condition : PEAK_74 3m SHF_HORN_584 VERTICAL Detector : Peak Project : 561115-03 Mode : 12 Power : 14 Sample : #6



Emission below 1GHz
2.4GHz WIFI 802.11b (LF)

WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11b LF	
1	Horizontal	Vertical
QP / Peak	 Site : 03CH13-HY Condition : QP 3m B1LOG_40103 HORIZONTAL Detector : Peak Project : 561115-03 Mode : 13 Sample : #6	 Site : 03CH13-HY Condition : QP 3m B1LOG_40103 VERTICAL Detector : Peak Project : 561115-03 Mode : 13 Sample : #6

Appendix E. Duty Cycle Plots

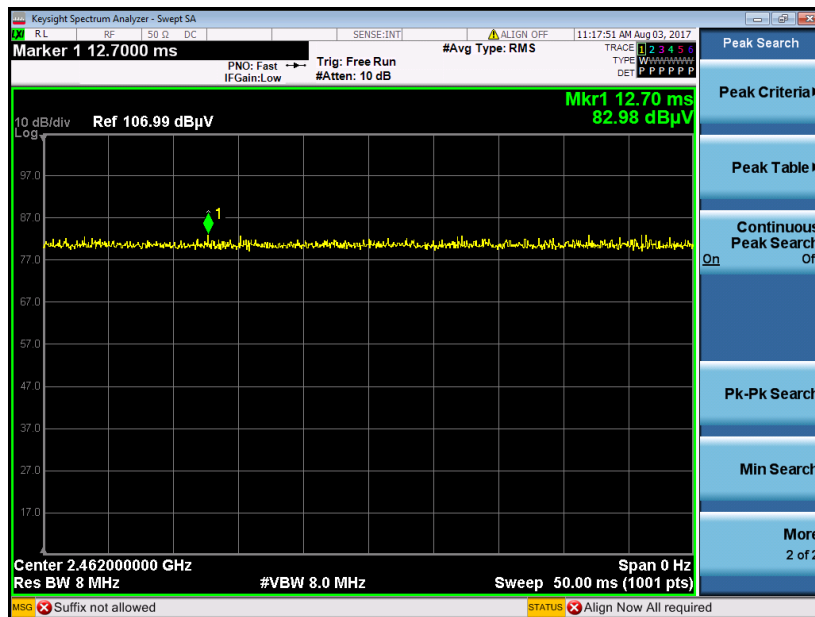
Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
802.11b	100	-	-	10Hz
802.11g	100	-	-	
2.4GHz 802.11n HT20	100	-	-	
2.4GHz 802.11n HT40	100	-	-	



802.11b

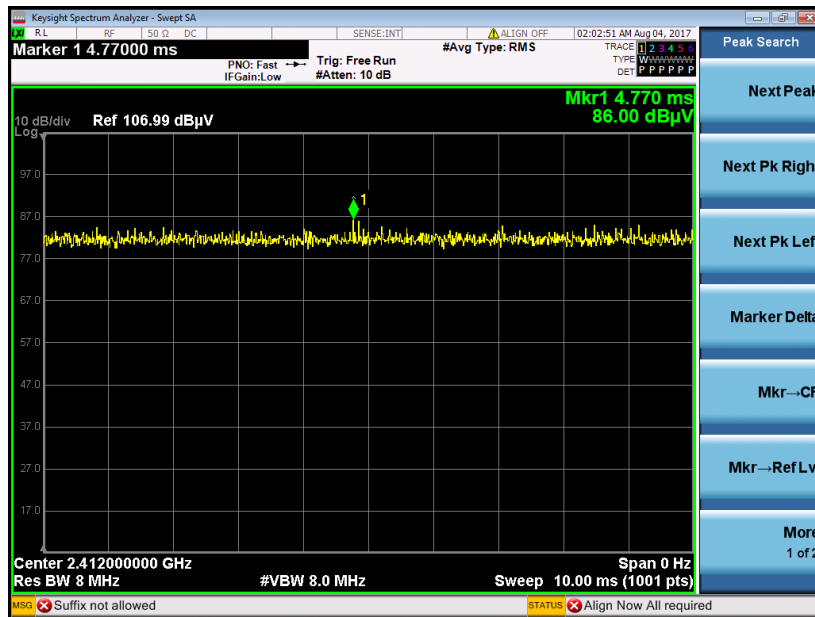


802.11g





802.11n HT20



802.11n HT40

