



FCC RF Test Report

APPLICANT : Acer Incorporated
EQUIPMENT : Smart HandHeld
BRAND NAME : Acer
MODEL NAME : S58, S58A
MARKETING NAME : Liquid Jade Primo, Liquid Jade 2
FCC ID : HLZEMS58
STANDARD : FCC Part 15 Subpart C §15.247
CLASSIFICATION : (DTS) Digital Transmission System

The product was received on Nov. 03, 2015 and testing was completed on Feb. 05, 2016. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

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

Reviewed by: Joseph Lin / Supervisor

Approved by: Jones Tsai / Manager



SPORTON INTERNATIONAL INC.

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



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR5N0311C	Rev. 01	Initial issue of report	Mar. 09, 2016

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 4.30 dB at 2484.200 MHz
3.6	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 9.70 dB at 0.182 MHz
3.7	15.203 & 15.247(b)	Antenna Requirement	N/A	Pass	-



1 General Description

1.1 Applicant

Acer Incorporated

8F., No. 88, Sec. 1, Xintai 5th Rd., Xizhi Dist., New Taipei City 22181, Taiwan (R.O.C)

1.2 Manufacturer

Shanghai Sunrise Simcom Limited

No. 888, Shengli Rd., Qingpu, Shanghai, P.R.China 201700

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Smart HandHeld
Brand Name	Acer
Model Name	S58, S58A
Marketing Name	Liquid Jade Primo, Liquid Jade 2
FCC ID	HLZEMS58
EUT supports Radios application	GSM/EGPRS/WCDMA/HSPA/LTE WLAN 11a/b/g/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80 Bluetooth v4.1 EDR/LE
EUT Stage	Identical Prototype

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

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification				
Tx/Rx Channel Frequency Range		2412 MHz ~ 2462 MHz		
Maximum (Peak) Output Power to antenna		<Ant. 1> 802.11b : 18.53 dBm (0.0713 W) 802.11g : 19.03 dBm (0.0800 W) <Ant. 2> 802.11b : 18.32 dBm (0.0679 W) 802.11g : 18.90 dBm (0.0776 W) SISO <Ant. 1> 802.11n HT20 : 17.89 dBm (0.0615 W) 802.11n HT40 : 18.51 dBm (0.0710 W) SISO <Ant. 2> 802.11n HT20 : 18.10 dBm (0.0646 W) 802.11n HT40 : 18.69 dBm (0.0740 W) MIMO <Ant. 1+2> 802.11n HT20 : 21.13 dBm (0.1297 W) 802.11n HT40 : 21.70 dBm (0.1479 W)		
99% Occupied Bandwidth		802.11b : 13.90MHz 802.11g : 17.25MHz 802.11n HT20 : 18.35MHz 802.11n HT40 : 36.70MHz		
Antenna Type		<Ant 1> : IFA Antenna type with gain 1.18 dBi <Ant 2> : IFA Antenna type with gain -0.50 dBi		
Type of Modulation		802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)		
Antenna Function for Transmitter				
		802.11 b/g	Ant. 1 V	Ant. 2 V
		802.11 n SISO	V	V
		802.11 n MIMO	V	V

1.5 Modification of EUT

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

1.6 Testing Location

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

Test Site	SPORTON INTERNATIONAL INC.	
Test Site Location	No. 52, Hwa Ya 1 st Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C. TEL: +886-3-327-3456 FAX: +886-3-328-4978	
Test Site No.	Sporton Site No.	
	TH05-HY	CO05-HY

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

Test Site	SPORTON INTERNATIONAL INC.	
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd Rd. Guishan Dist, Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855	
Test Site No.	Sporton Site No.	
	03CH11-HY	

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

1.7 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 v03r04
- ♦ FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ♦ ANSI C63.10-2013

Remark:

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

2 Test Configuration of Equipment Under Test

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

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

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

2.1 Carrier Frequency 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 Pre-Scanned RF Power

Preliminary tests were performed in different data rate and data rate associated with the highest power were chosen for full test shown in the following tables.

<Ant. 1>

802.11b				
Data Rate (MHz)	1M bps	2M bps	5.5M bps	11M bps
Peak Power (dBm)	18.53	18.43	18.36	18.52

802.11g								
Data Rate (MHz)	6M bps	9M bps	12M bps	18M bps	24M bps	36M bps	48M bps	54M bps
Peak Power (dBm)	19.03	19.01	18.79	19.02	18.99	18.52	18.28	18.56

<Ant. 2>

802.11b				
Data Rate (MHz)	1M bps	2M bps	5.5M bps	11M bps
Peak Power (dBm)	18.32	18.26	18.21	18.29

802.11g								
Data Rate (MHz)	6M bps	9M bps	12M bps	18M bps	24M bps	36M bps	48M bps	54M bps
Peak Power (dBm)	18.90	18.83	18.80	18.78	18.77	18.65	18.31	18.28

SISO <Ant. 1>

2.4GHz 802.11n HT20								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	17.89	17.78	17.68	17.62	17.61	17.57	17.55	17.12

2.4GHz 802.11n HT40								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	18.51	17.85	17.68	18.31	18.07	18.31	17.83	17.52



SISO <Ant. 2>

2.4GHz 802.11n HT20								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	18.10	18.08	18.09	18.01	18.01	18.06	17.55	17.50

2.4GHz 802.11n HT40								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	18.69	17.79	17.71	18.51	18.15	18.51	17.72	17.62

MIMO <Ant. 1+2>

2.4GHz 802.11n HT20								
Data Rate (MHz)	MCS8	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15
Peak Power (dBm)	21.13	20.91	21.12	19.99	20.21	20.18	20.21	20.21

2.4GHz 802.11n HT40								
Data Rate (MHz)	MCS8	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15
Peak Power (dBm)	21.70	21.31	21.31	20.28	19.68	19.18	20.05	20.09

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

2.3 Test Mode

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

Single Antenna

Modulation	Data Rate
802.11b	1 Mbps
802.11g	6 Mbps

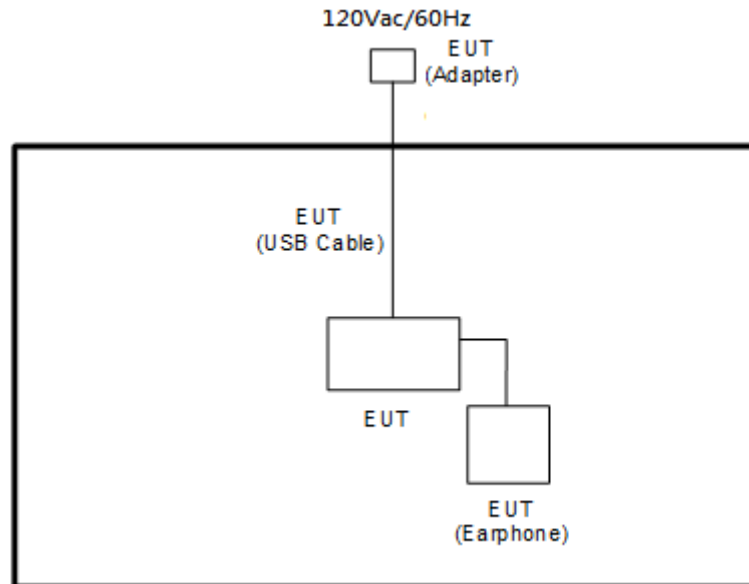
MIMO Antenna

Modulation	Data Rate
802.11n HT20	MCS8
802.11n HT40	MCS8

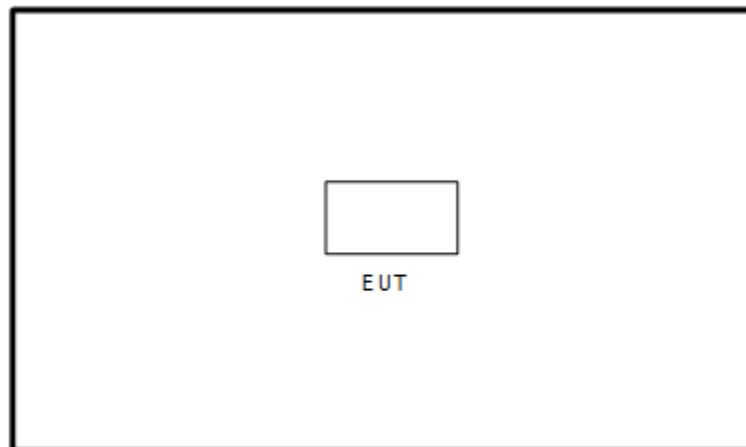
Test Cases	
AC Conducted Emission	Mode 1 : WCDMA Band V Idle + Bluetooth Link + WLAN Link + Earphone + GPS Rx + USB Cable (Data Link with Notebook) + SIM 1

2.4 Connection Diagram of Test System

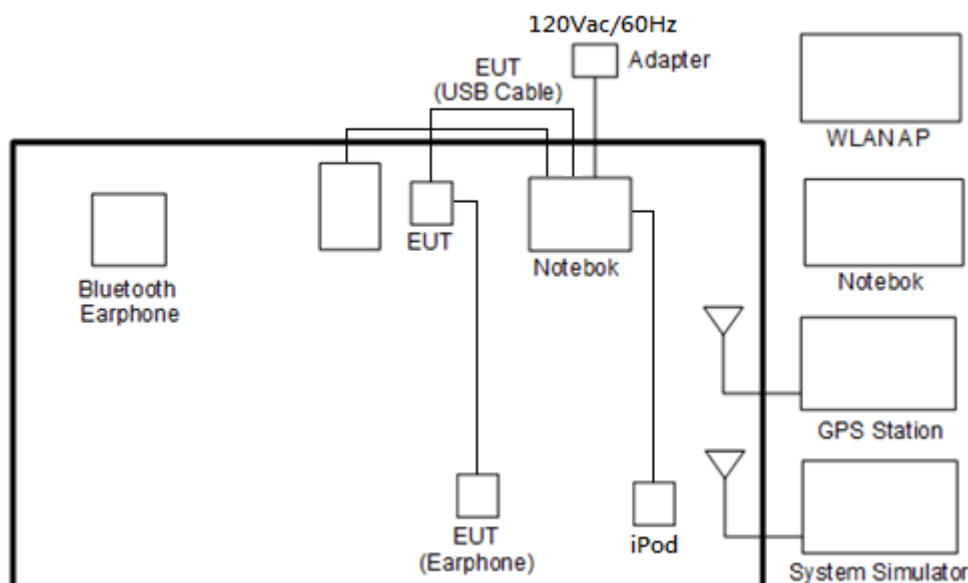
<WLAN Tx Mode for Antenna 1>



<WLAN Tx Mode for Antenna 2 and Antenna 1+2>



<AC Conducted Emission Mode>



2.5 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	GPS Station	Pendulum	GSG-54	N/A	N/A	Unshielded, 1.8 m
3.	Bluetooth Earphone	Sony Ericsson	MW600	PY7DDA-2029	N/A	N/A
4.	WLAN AP	D-Link	DIR-865L	KA2IR865LA1	N/A	Unshielded, 1.8 m
5.	iPod	Apple	A1285	FCC DoC	Shielded, 1.0 m	N/A
6.	Notebook	DELL	P20G	FCC DoC/ Contains FCC ID: QDS-BRCM1051	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
7.	Notebook	DELL	Latitude E6320	FCC DoC/ Contains FCC ID: QDS-BRCM1054	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
8.	SD Card	SanDisk	16G	FCC DoC	N/A	N/A

2.6 EUT Operation Test Setup

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



2.7 Measurement Results Explanation Example

For all conducted test items:

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

Example:

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

Offset = RF cable loss + attenuator factor.

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

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

3 Test Result

3.1 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.

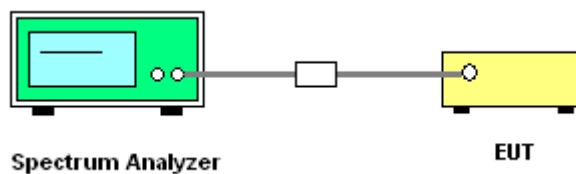
3.1.2 Measuring Instruments

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 v03r04.
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.

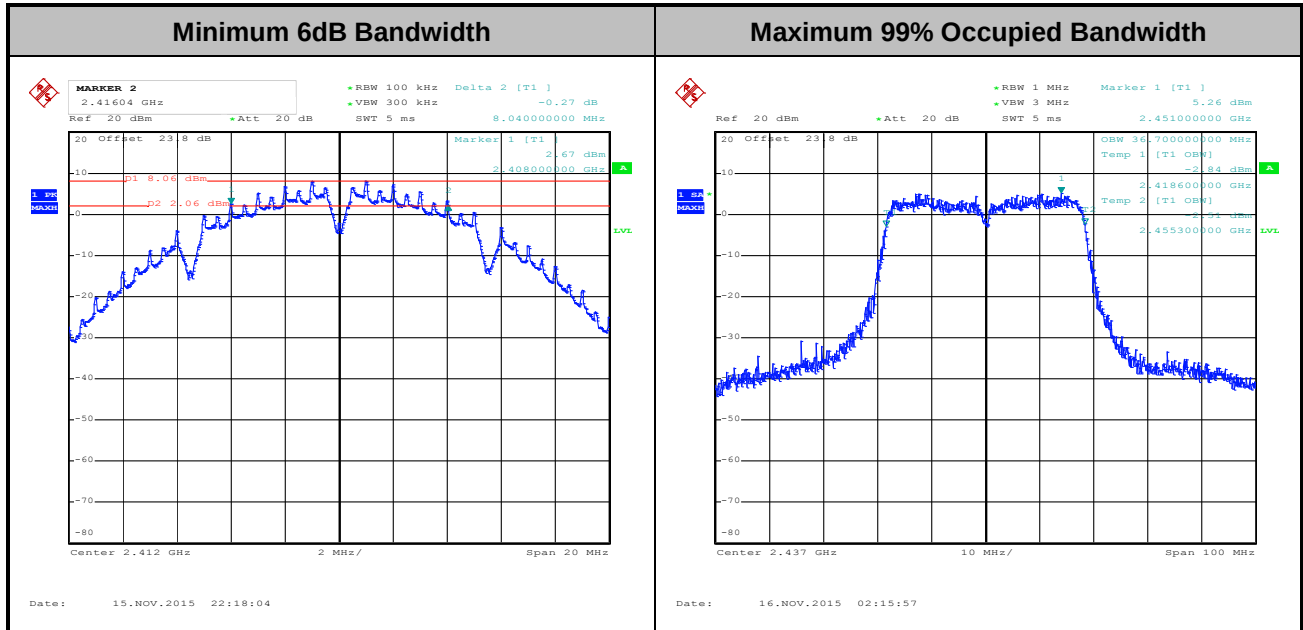
3.1.4 Test Setup





3.1.5 Test Result of 6dB and 99% Occupied Bandwidth

Please refer to Appendix A of this test report.



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

3.2 Peak Output Power Measurement

3.2.1 Limit of Peak Output Power

For systems using digital modulation in the 2400-2483.5MHz, the limit for peak output power is 30dBm. If transmitting antenna with directional gain greater than 6dBi is 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.

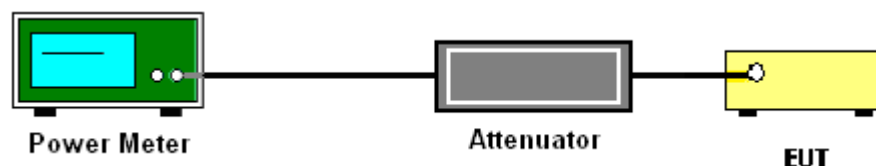
3.2.2 Measuring Instruments

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 v03r04 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.
5. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

3.2.4 Test Setup



3.2.5 Test Result of Peak Output Power

Please refer to Appendix A of this test report.

3.2.6 Test Result of Average output Power (Reporting Only)

Please refer to Appendix A of this test report.

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 v03r04.
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.
7. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

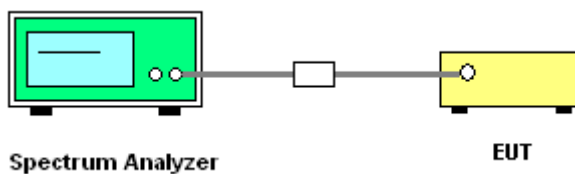
If measurements performed using method (2) plus 10 log (N) exceeds the emission limit, the test should choose method (1) before declaring that the device fails the emission limit.

Method (1): Measure and sum the spectra across the outputs.

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

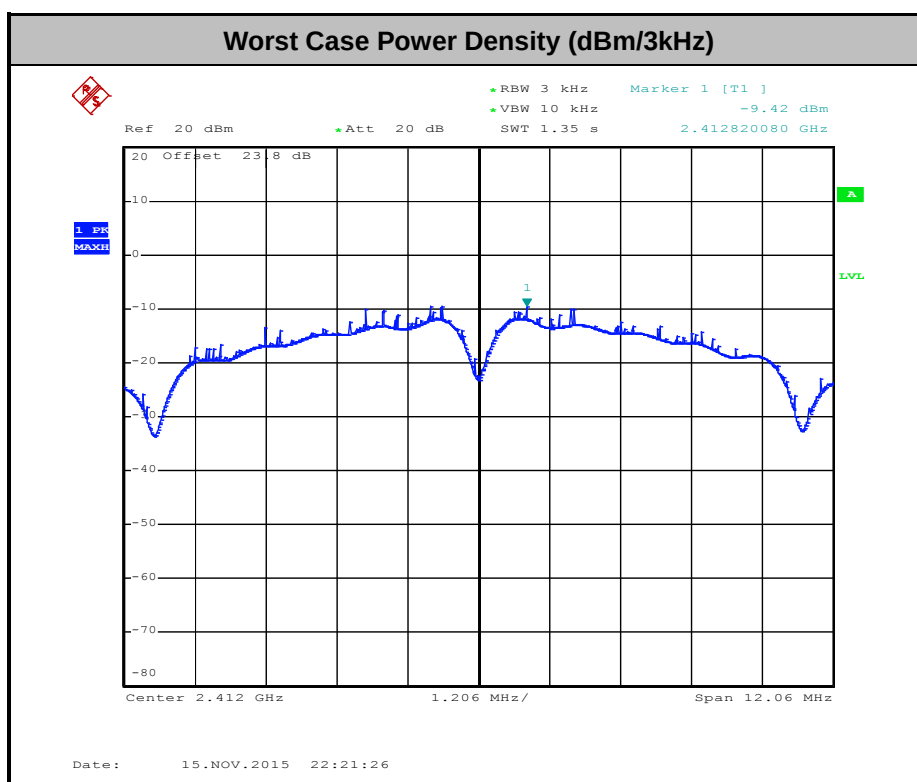
Method (2): Measure and add 10 log (N) dB, where N is the number of outputs. (N=2)

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A of this test report.



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 and radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

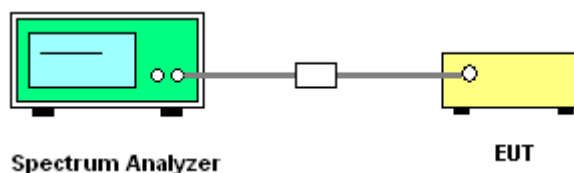
3.4.2 Measuring Instruments

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 v03r04.
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

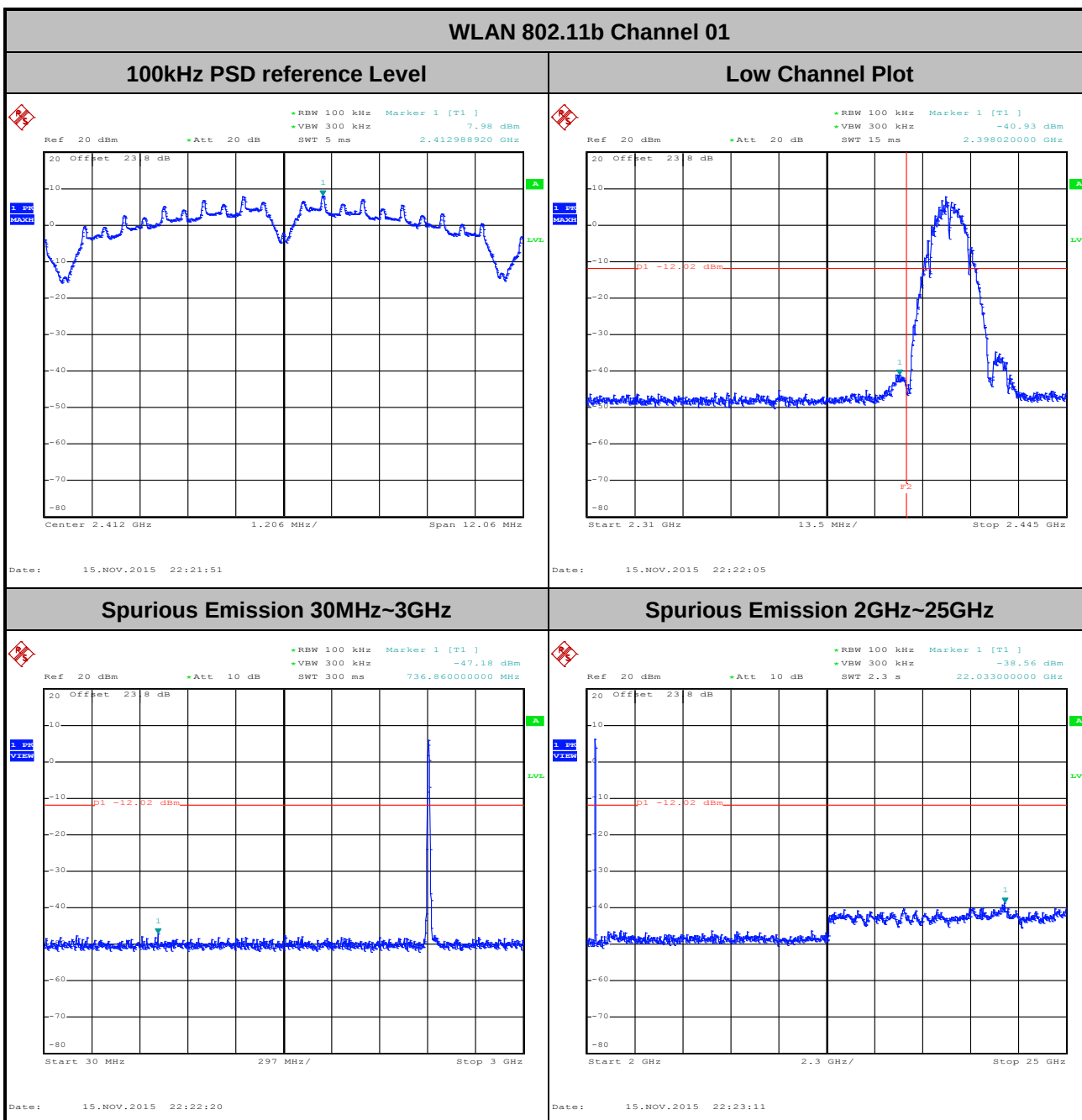




3.4.5 Test Result of Conducted Band Edges and Spurious Emission

Number of TX = 1, Ant. 1 (Measured)

Number of TX	1	Ant. :	1
Test Mode :	802.11b	Temperature :	21~25℃
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	01	Test Engineer :	AC Chang

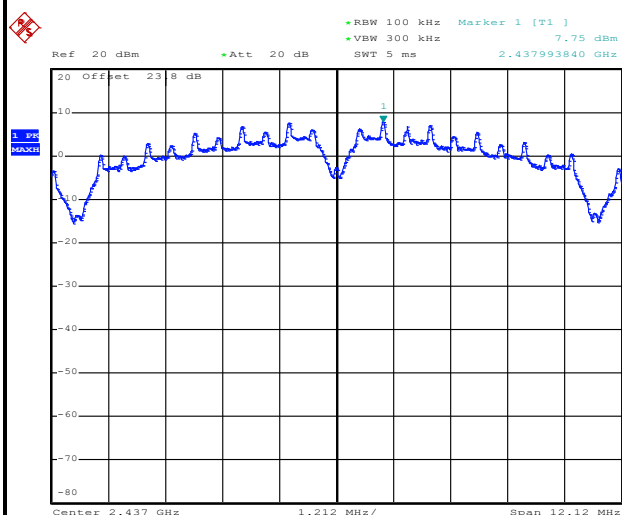




Number of TX :	1	Ant. :	1
Test Mode :	802.11b	Temperature :	21~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	AC Chang

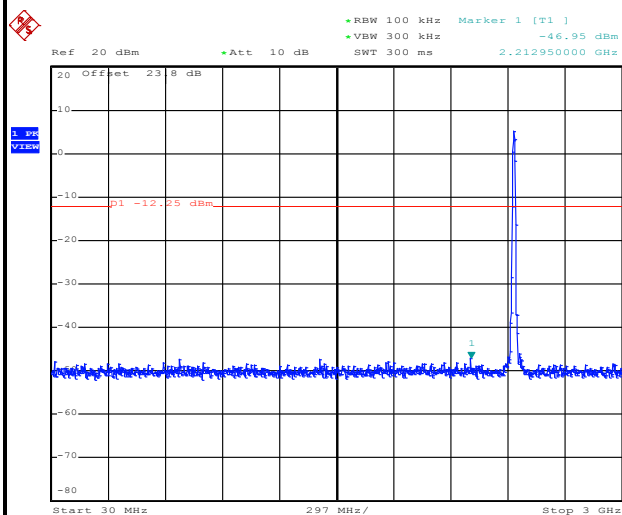
WLAN 802.11b Channel 06

100kHz PSD reference Level



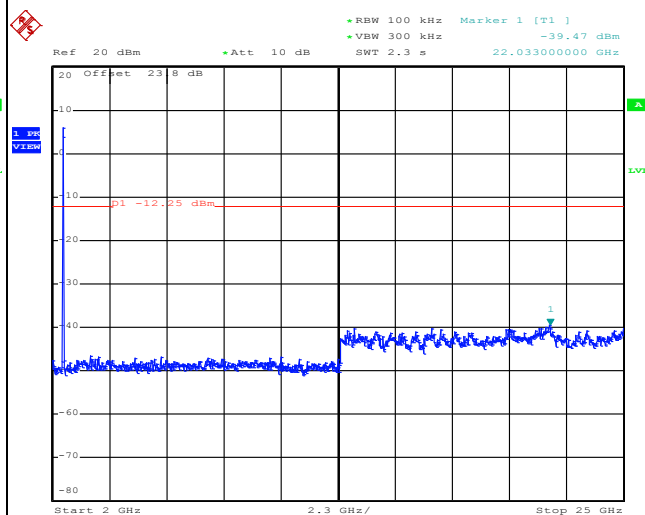
Date: 15.NOV.2015 22:26:27

Spurious Emission 30MHz~3GHz



Date: 15.NOV.2015 22:26:40

Spurious Emission 2GHz~25GHz



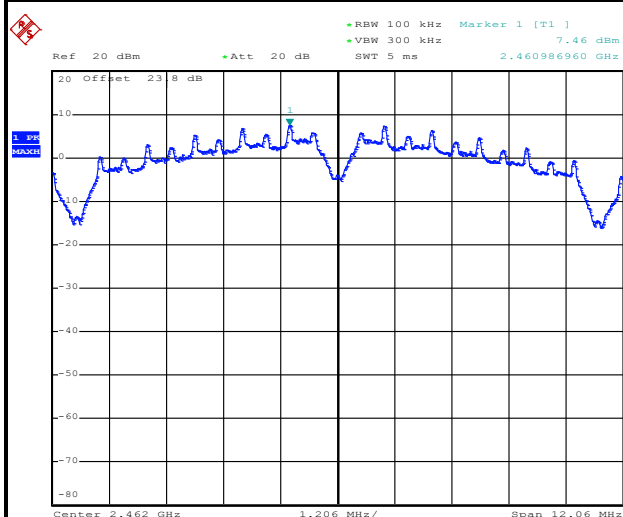
Date: 15.NOV.2015 22:27:15



Number of TX :	1	Ant. :	1
Test Mode :	802.11b	Temperature :	21~25°C
Test Band :	2.4GHz High	Relative Humidity :	51~54%
Test Channel :	11	Test Engineer :	AC Chang

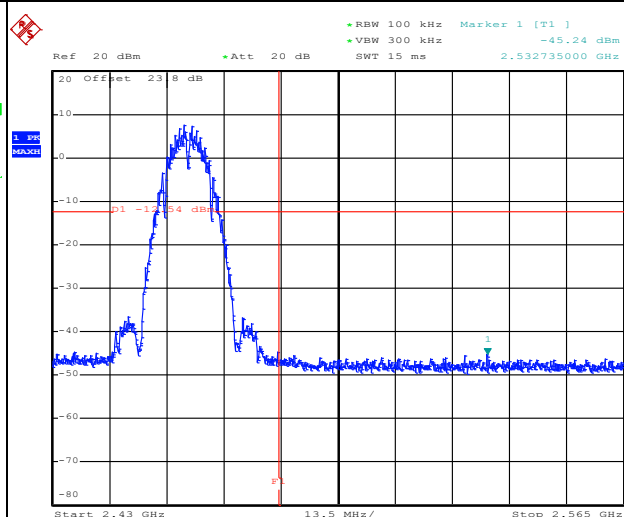
WLAN 802.11b Channel 11

100kHz PSD reference Level



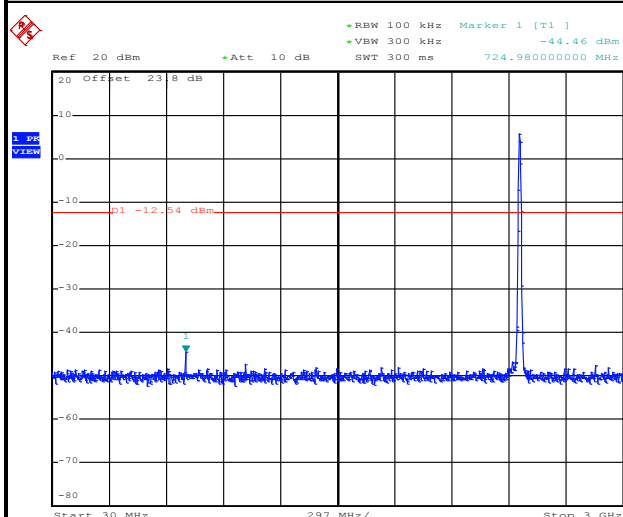
Date: 15.NOV.2015 22:34:44

High Channel Plot



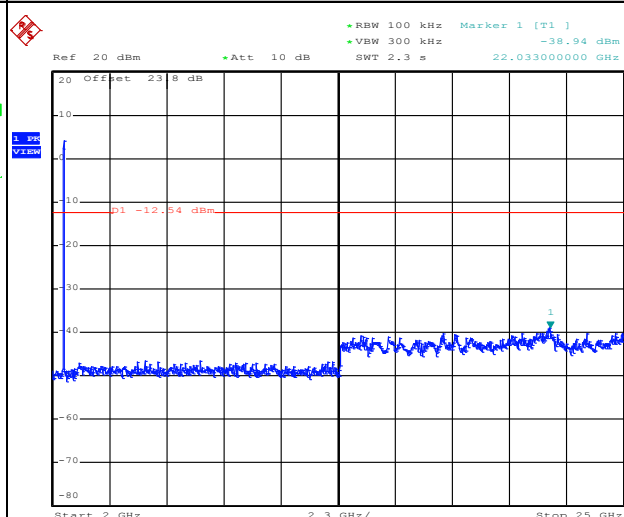
Date: 15.NOV.2015 22:35:01

Spurious Emission 30MHz~3GHz



Date: 15.NOV.2015 22:35:17

Spurious Emission 2GHz~25GHz



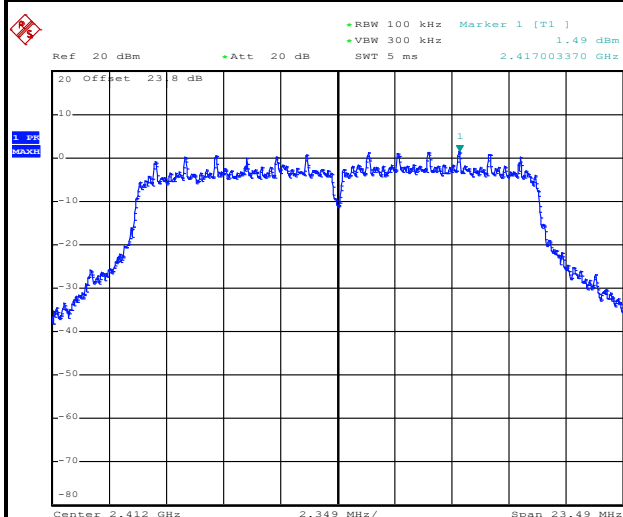
Date: 15.NOV.2015 22:35:51



Number of TX :	1	Ant. :	1
Test Mode :	802.11g	Temperature :	21~25°C
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	01	Test Engineer :	AC Chang

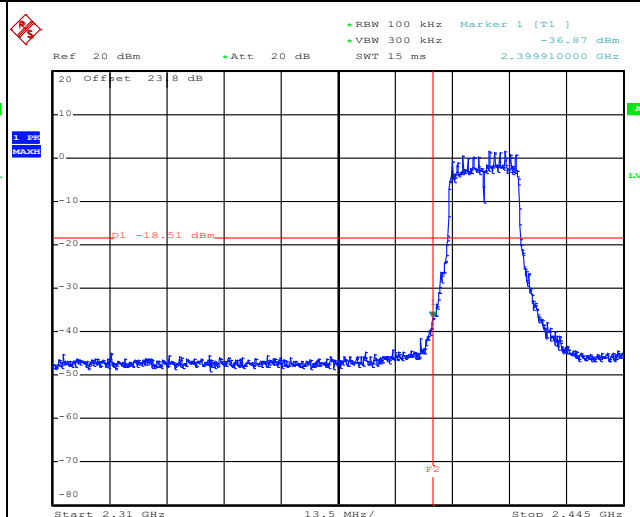
WLAN 802.11g Channel 01

100kHz PSD reference Level



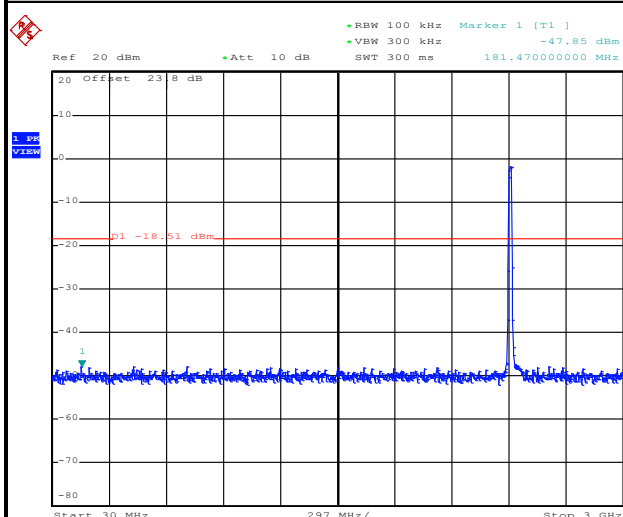
Date: 15.NOV.2015 22:39:58

Low Channel Plot



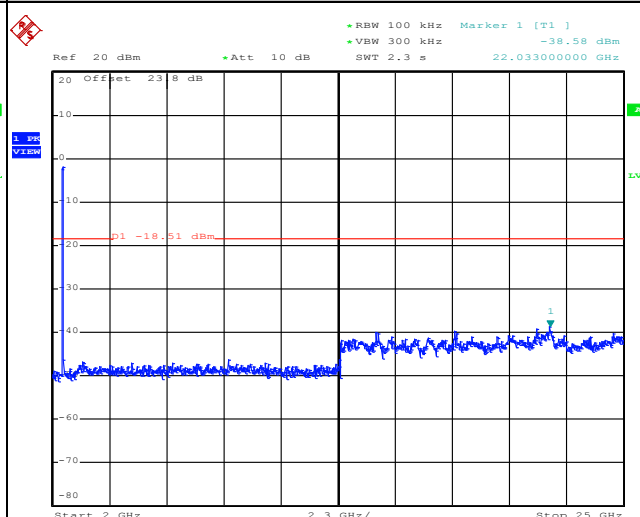
Date: 15.NOV.2015 22:40:35

Spurious Emission 30MHz~3GHz



Date: 15.NOV.2015 22:40:48

Spurious Emission 2GHz~25GHz



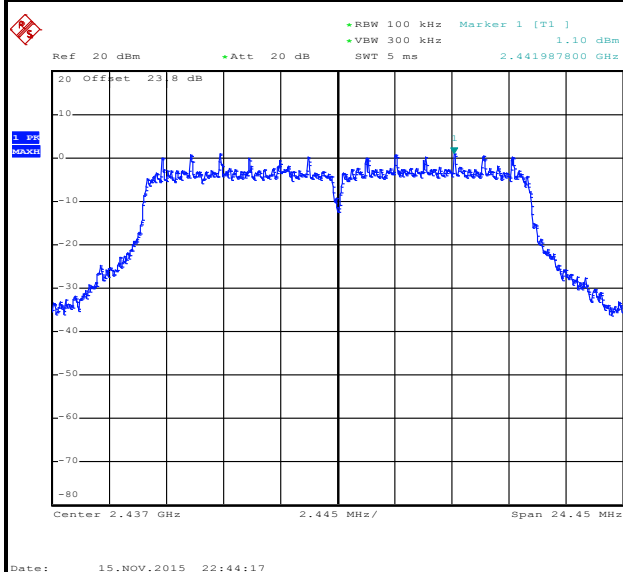
Date: 15.NOV.2015 22:41:21



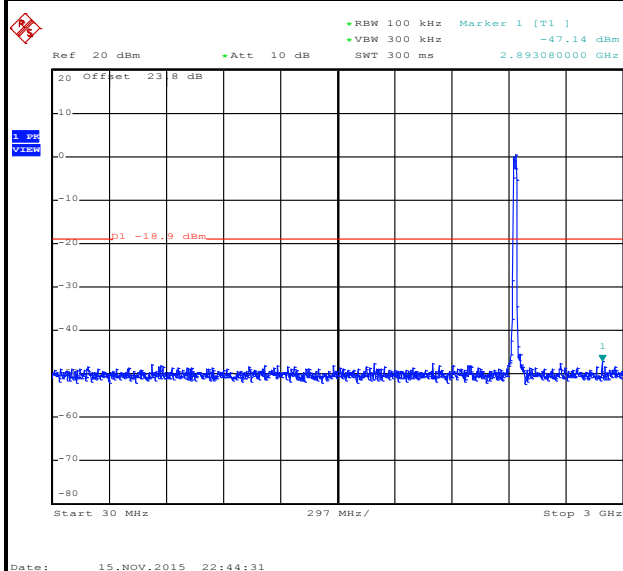
Number of TX :	1	Ant. :	1
Test Mode :	802.11g	Temperature :	21~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	AC Chang

WLAN 802.11g Channel 06

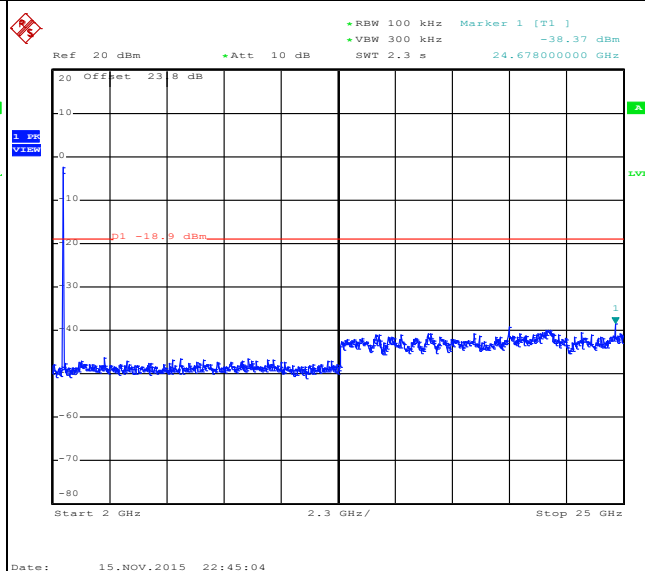
100kHz PSD reference Level



Spurious Emission 30MHz~3GHz



Spurious Emission 2GHz~25GHz

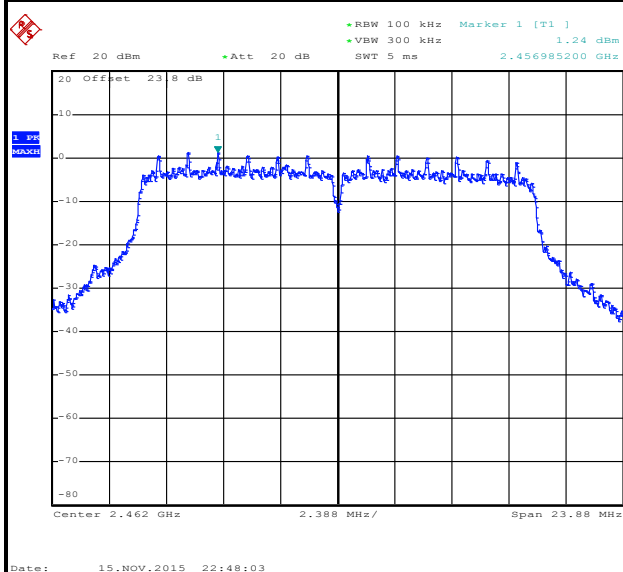




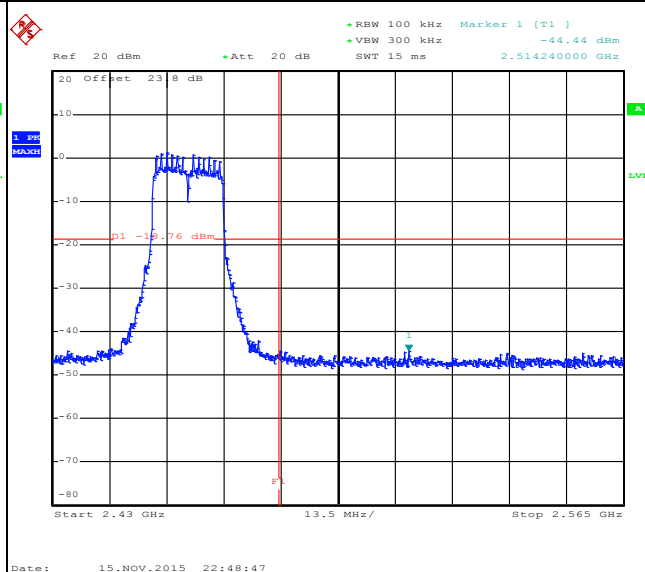
Number of TX :	1	Ant. :	1
Test Mode :	802.11g	Temperature :	21~25°C
Test Band :	2.4GHz High	Relative Humidity :	51~54%
Test Channel :	11	Test Engineer :	AC Chang

WLAN 802.11g Channel 11

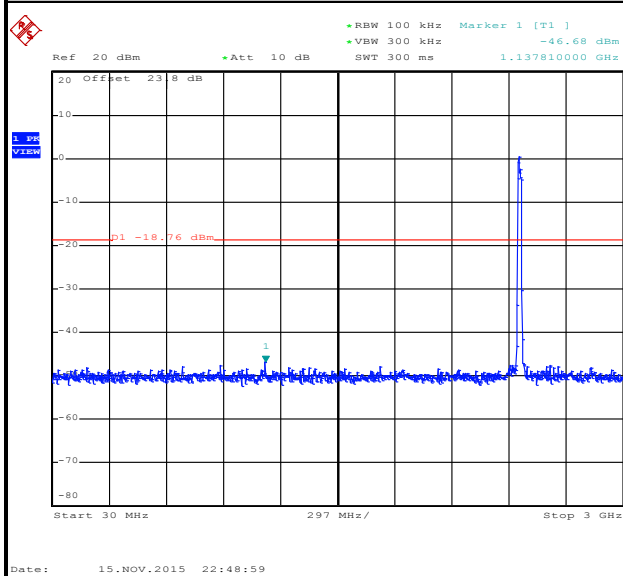
100kHz PSD reference Level



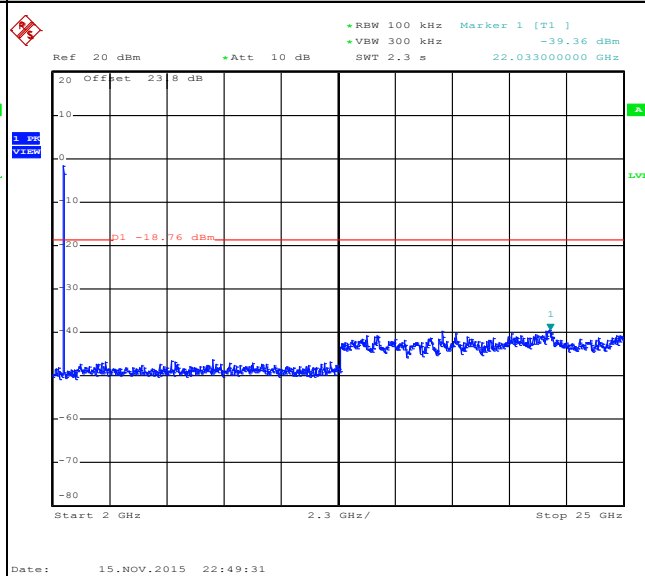
High Channel Plot



Spurious Emission 30MHz~3GHz



Spurious Emission 2GHz~25GHz



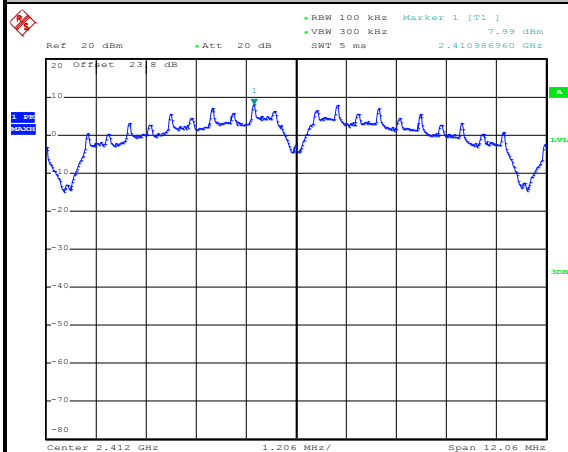


Number of TX = 1, Ant. 2 (Measured)

Number of TX :	1	Ant. :	2
Test Mode :	802.11b	Temperature :	21~25°C
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	01	Test Engineer :	AC Chang

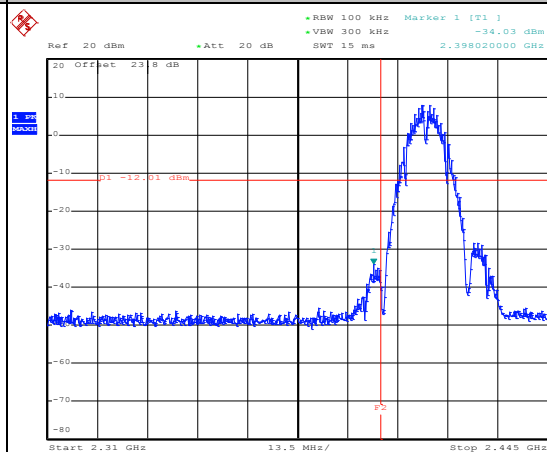
WLAN 802.11b Channel 01

100kHz PSD reference Level



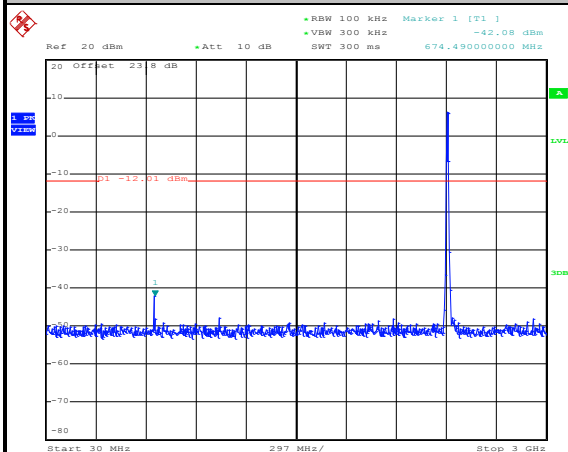
Date: 23.NOV.2015 09:10:12

Low Channel Plot



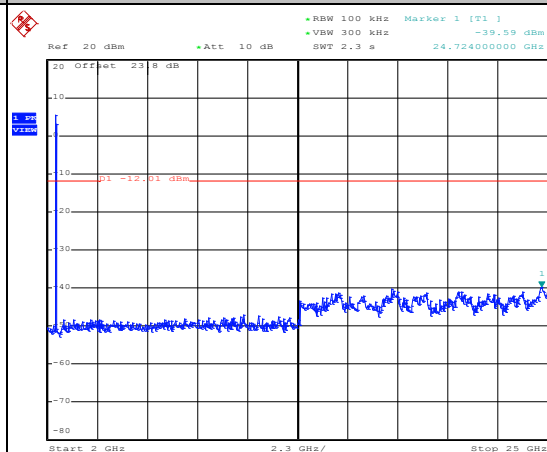
Date: 23.NOV.2015 09:10:26

Spurious Emission 30MHz~3GHz



Date: 23.NOV.2015 09:10:37

Spurious Emission 2GHz~25GHz



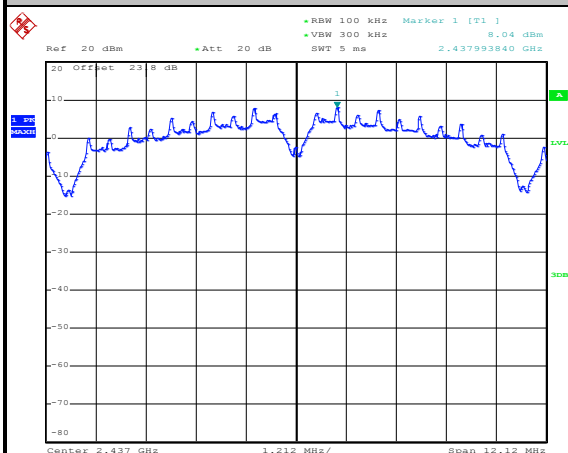
Date: 23.NOV.2015 09:10:45



Number of TX :	1	Ant. :	2
Test Mode :	802.11b	Temperature :	21~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	AC Chang

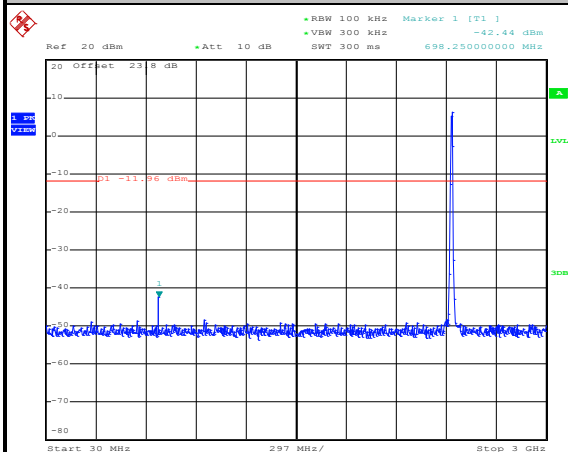
WLAN 802.11b Channel 06

100kHz PSD reference Level



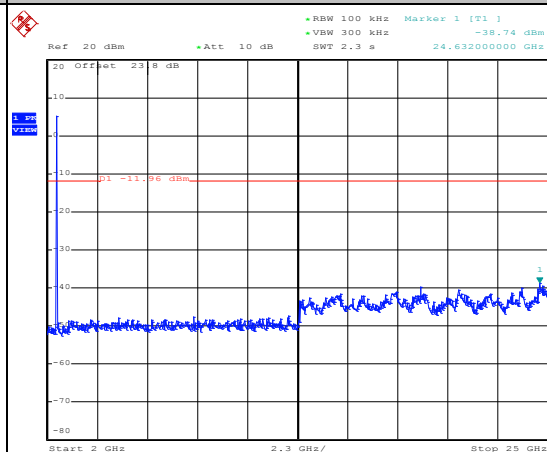
Date: 23.NOV.2015 09:13:07

Spurious Emission 30MHz~3GHz



Date: 23.NOV.2015 09:13:19

Spurious Emission 2GHz~25GHz



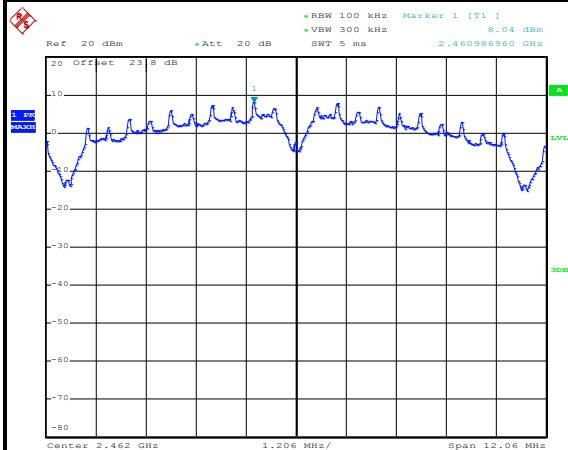
Date: 23.NOV.2015 09:13:28



Number of TX :	1	Ant. :	2
Test Mode :	802.11b	Temperature :	21~25°C
Test Band :	2.4GHz High	Relative Humidity :	51~54%
Test Channel :	11	Test Engineer :	AC Chang

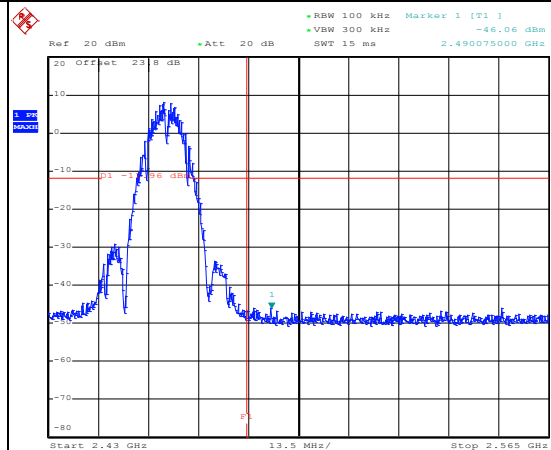
WLAN 802.11b Channel 11

100kHz PSD reference Level



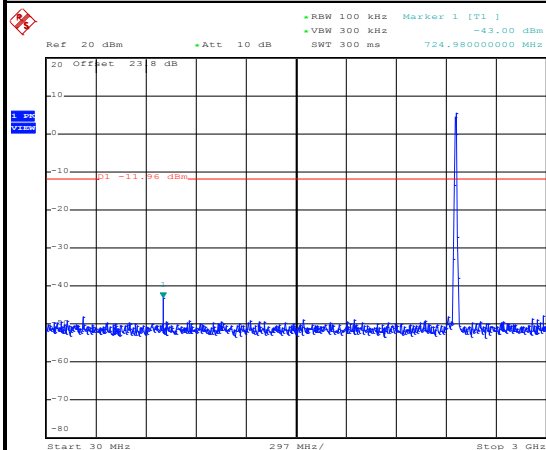
Date: 23.NOV.2015 09:15:47

High Channel Plot



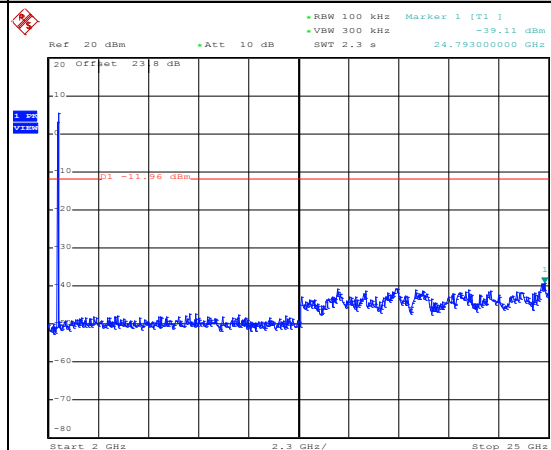
Date: 23.NOV.2015 09:16:02

Spurious Emission 30MHz~3GHz



Date: 23.NOV.2015 09:16:14

Spurious Emission 2GHz~25GHz



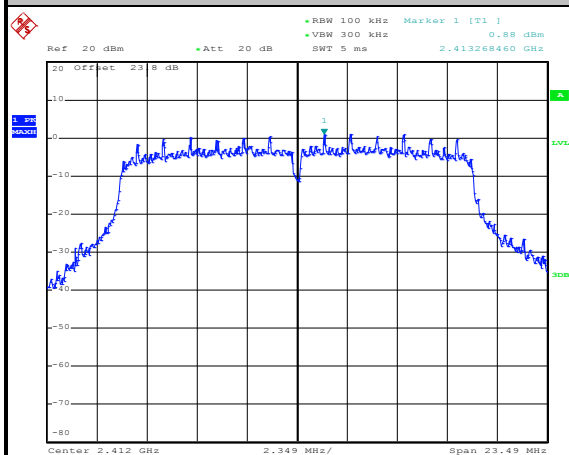
Date: 23.NOV.2015 09:16:23



Number of TX :	1	Ant. :	2
Test Mode :	802.11g	Temperature :	21~25°C
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	01	Test Engineer :	AC Chang

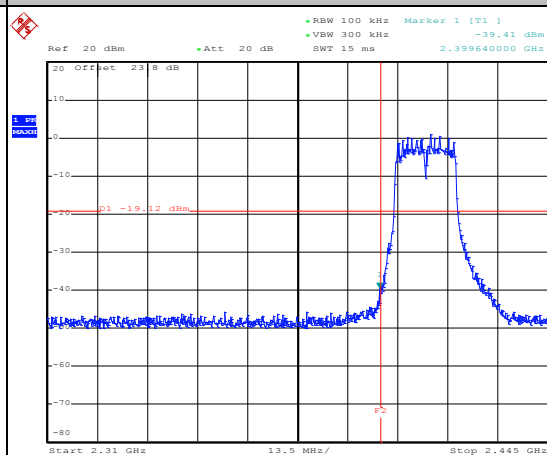
WLAN 802.11g Channel 01

100kHz PSD reference Level



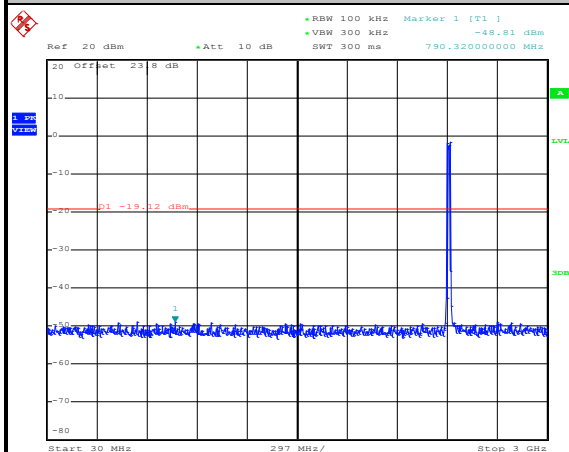
Date: 23.NOV.2015 09:19:37

Low Channel Plot



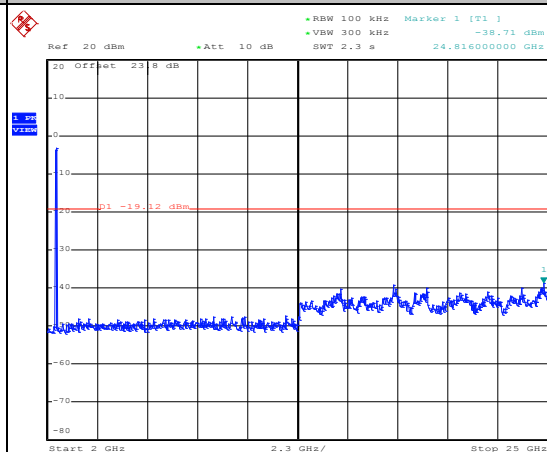
Date: 23.NOV.2015 09:19:57

Spurious Emission 30MHz~3GHz



Date: 23.NOV.2015 09:20:09

Spurious Emission 2GHz~25GHz



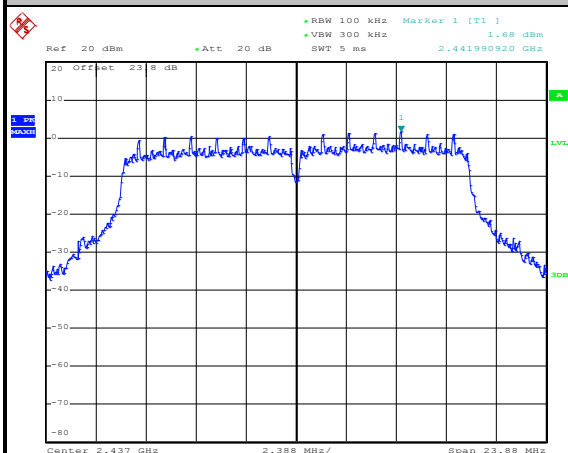
Date: 23.NOV.2015 09:20:17



Number of TX :	1	Ant. :	2
Test Mode :	802.11g	Temperature :	21~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	AC Chang

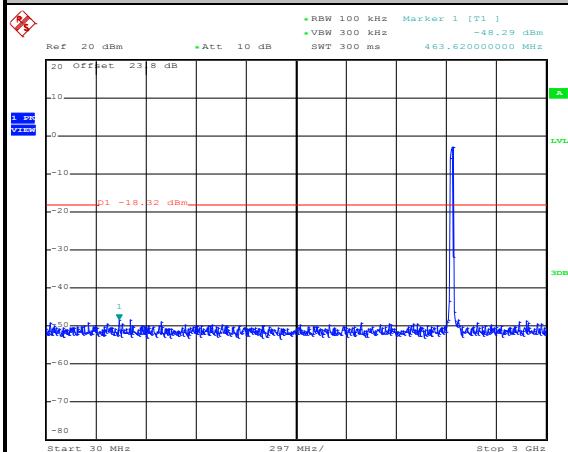
WLAN 802.11g Channel 06

100kHz PSD reference Level



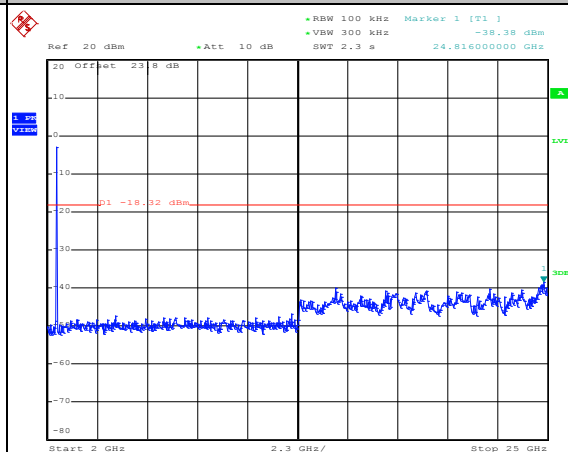
Date: 23.NOV.2015 09:23:49

Spurious Emission 30MHz~3GHz



Date: 23.NOV.2015 09:24:02

Spurious Emission 2GHz~25GHz



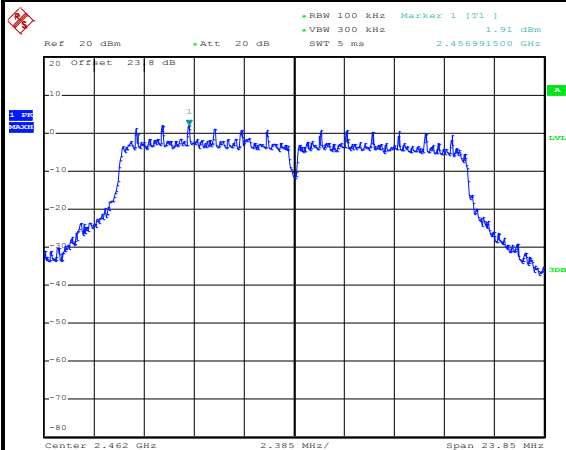
Date: 23.NOV.2015 09:24:10



Number of TX :	1	Ant. :	2
Test Mode :	802.11g	Temperature :	21~25°C
Test Band :	2.4GHz High	Relative Humidity :	51~54%
Test Channel :	11	Test Engineer :	AC Chang

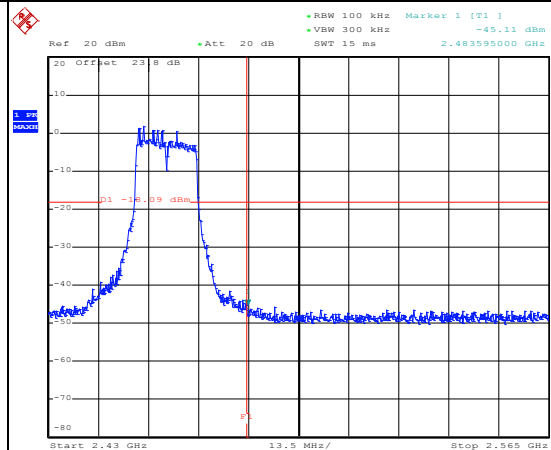
WLAN 802.11g Channel 11

100kHz PSD reference Level



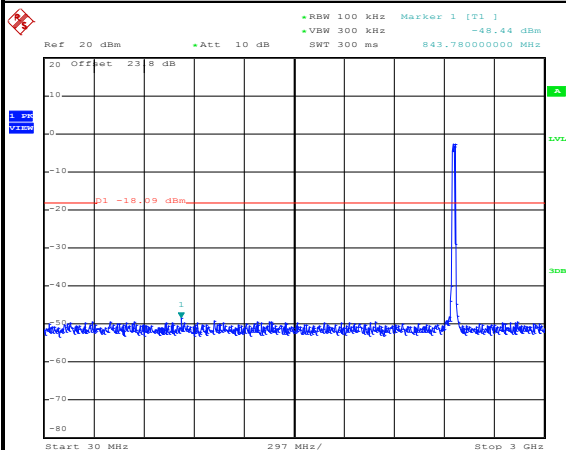
Date: 23.NOV.2015 09:26:39

High Channel Plot



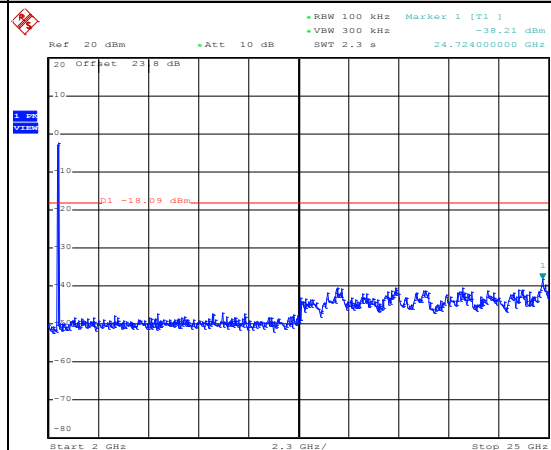
Date: 23.NOV.2015 09:27:02

Spurious Emission 30MHz~3GHz



Date: 23.NOV.2015 09:27:18

Spurious Emission 2GHz~25GHz



Date: 23.NOV.2015 09:27:26

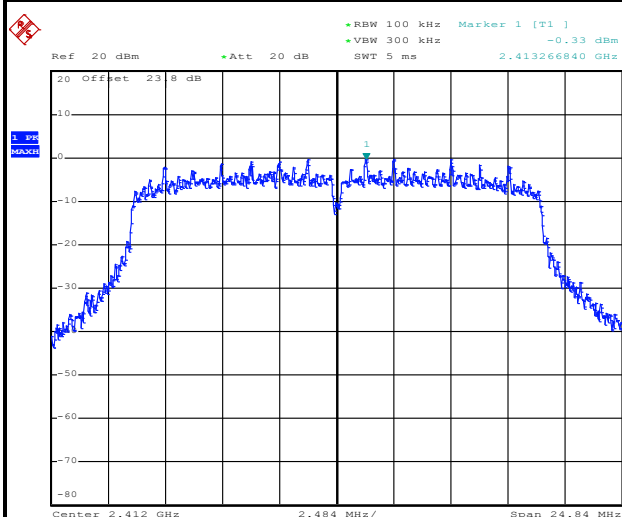


Number of TX = 2, Ant. 1 (Measured)

Number of TX :	2	Ant. :	1
Test Mode :	802.11n HT20	Temperature :	21~25°C
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	01	Test Engineer :	AC Chang

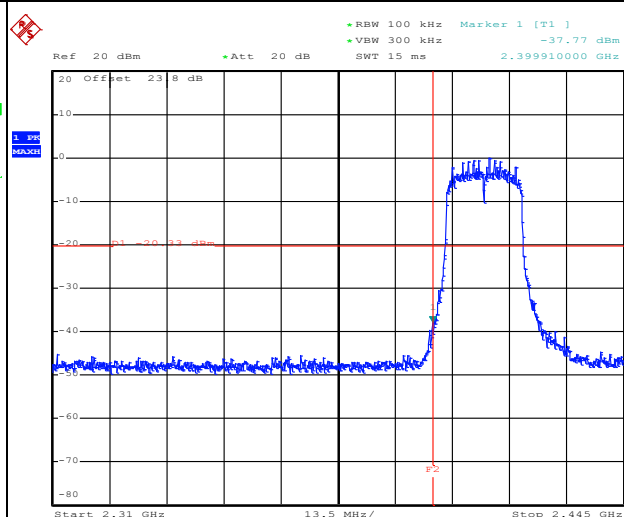
WLAN 802.11n HT20 Channel 01

100kHz PSD reference Level



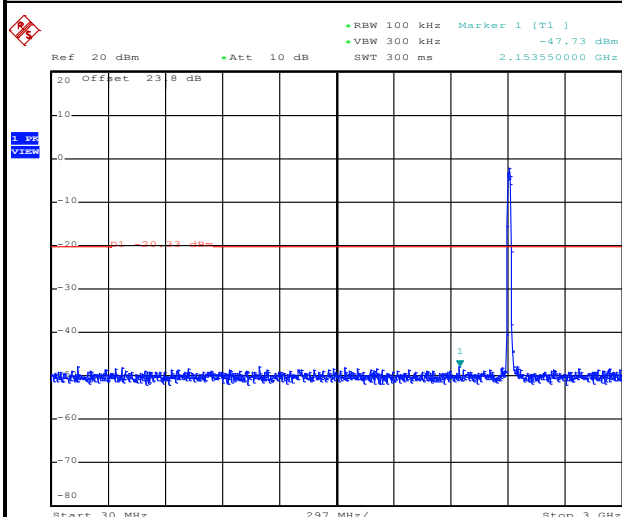
Date: 15.NOV.2015 23:55:44

Low Channel Plot



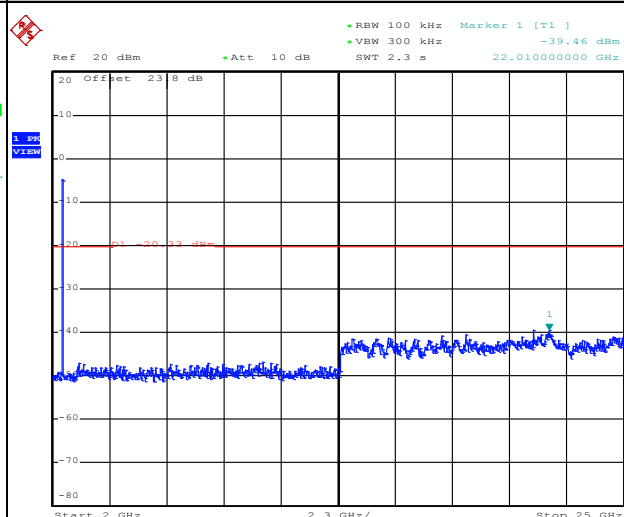
Date: 15.NOV.2015 23:56:17

Spurious Emission 30MHz~3GHz



Date: 16.NOV.2015 00:04:48

Spurious Emission 2GHz~25GHz



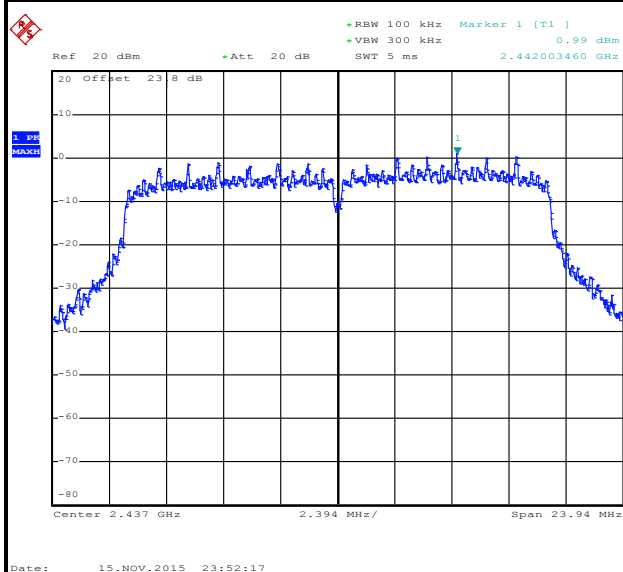
Date: 16.NOV.2015 00:05:12



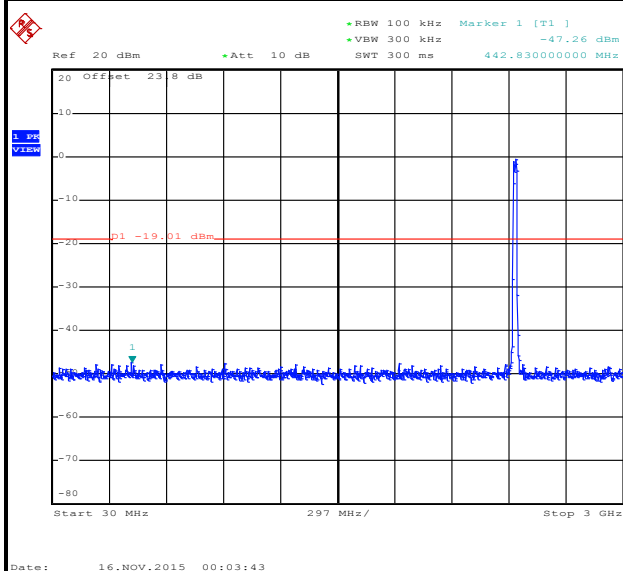
Number of TX :	2	Ant. :	1
Test Mode :	802.11n HT20	Temperature :	21~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	AC Chang

WLAN 802.11n HT20 Channel 06

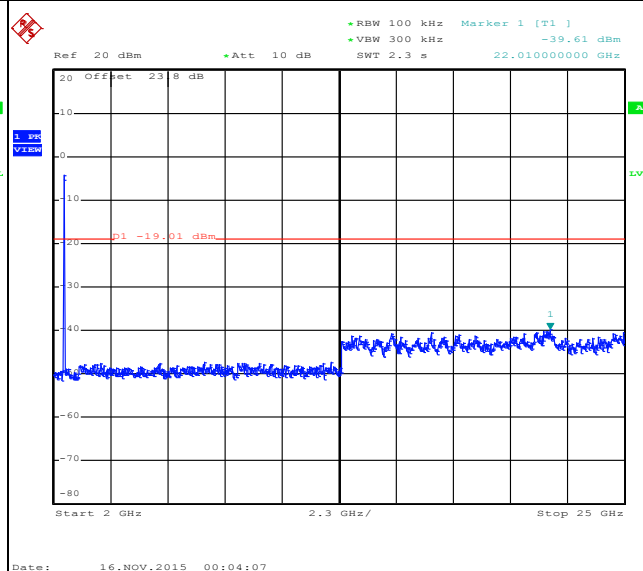
100kHz PSD reference Level



Spurious Emission 30MHz~3GHz



Spurious Emission 2GHz~25GHz

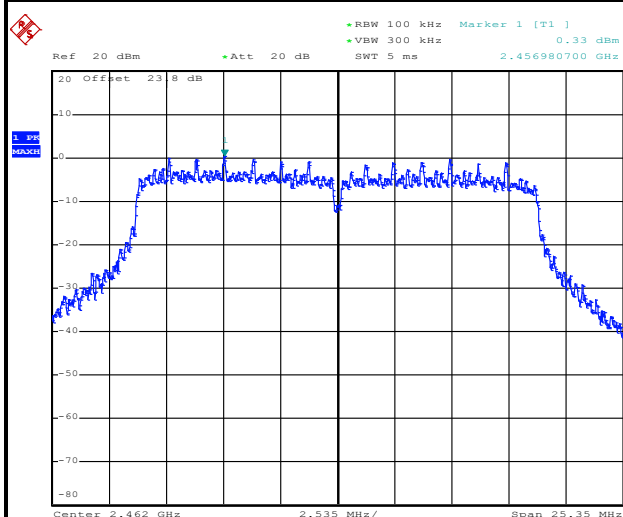




Number of TX :	2	Ant. :	1
Test Mode :	802.11n HT20	Temperature :	21~25°C
Test Band :	2.4GHz High	Relative Humidity :	51~54%
Test Channel :	11	Test Engineer :	AC Chang

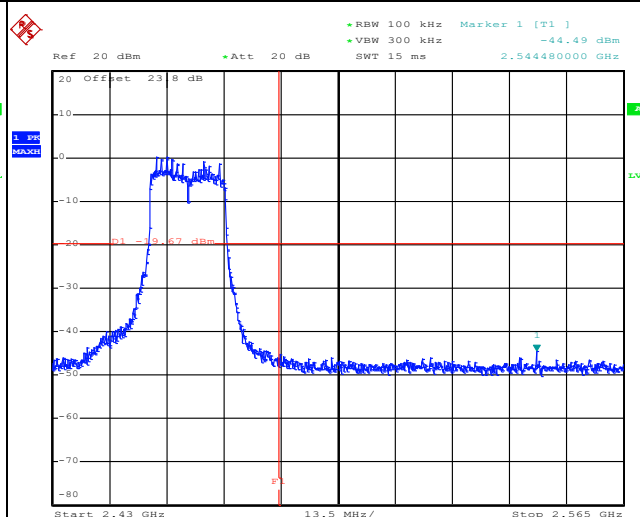
WLAN 802.11n HT20 Channel 11

100kHz PSD reference Level



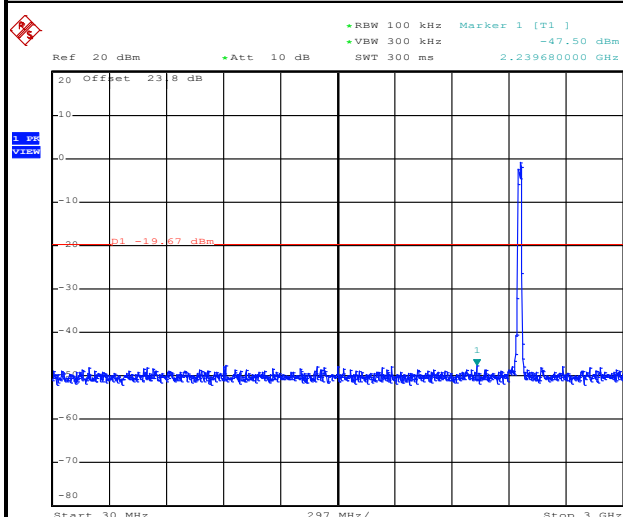
Date: 15.NOV.2015 23:48:34

High Channel Plot



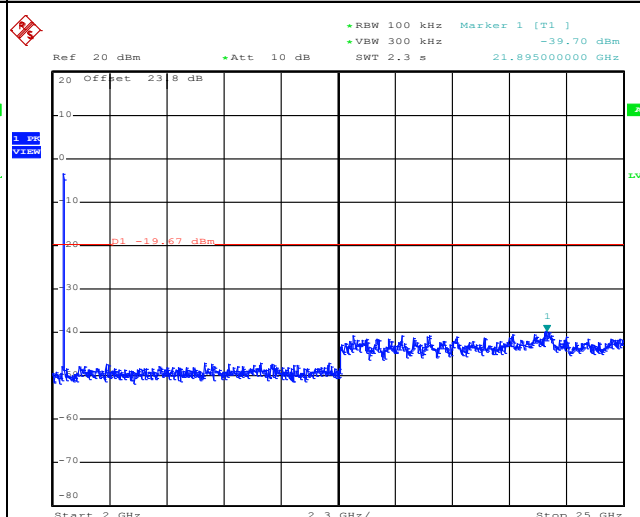
Date: 15.NOV.2015 23:48:49

Spurious Emission 30MHz~3GHz



Date: 16.NOV.2015 00:02:26

Spurious Emission 2GHz~25GHz



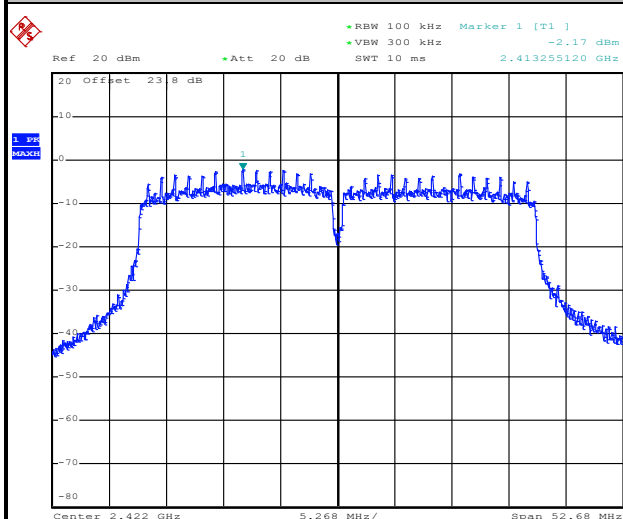
Date: 16.NOV.2015 00:02:52



Number of TX :	2	Ant. :	1
Test Mode :	802.11n HT40	Temperature :	21~25°C
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	03	Test Engineer :	AC Chang

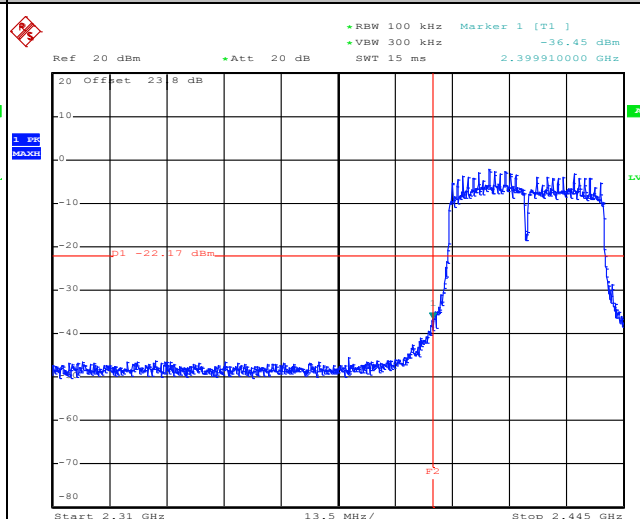
WLAN 802.11n HT40 Channel 03

100kHz PSD reference Level



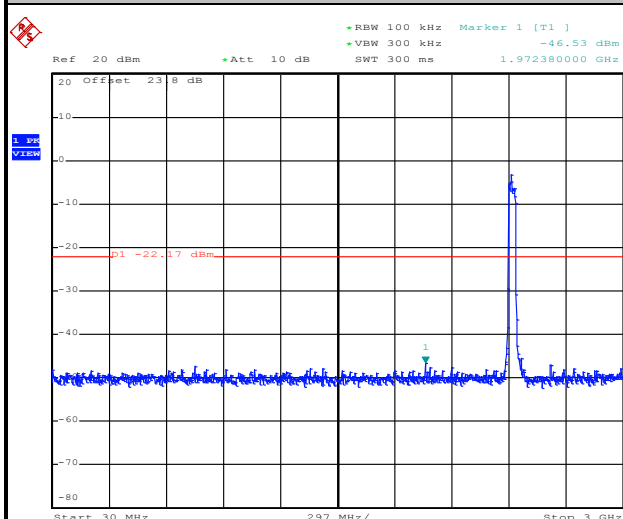
Date: 16.NOV.2015 02:12:05

Low Channel Plot



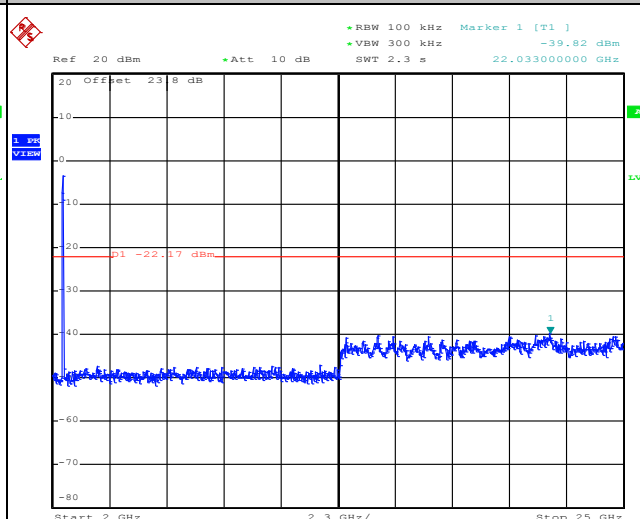
Date: 16.NOV.2015 02:12:37

Spurious Emission 30MHz~3GHz



Date: 16.NOV.2015 02:12:50

Spurious Emission 2GHz~25GHz



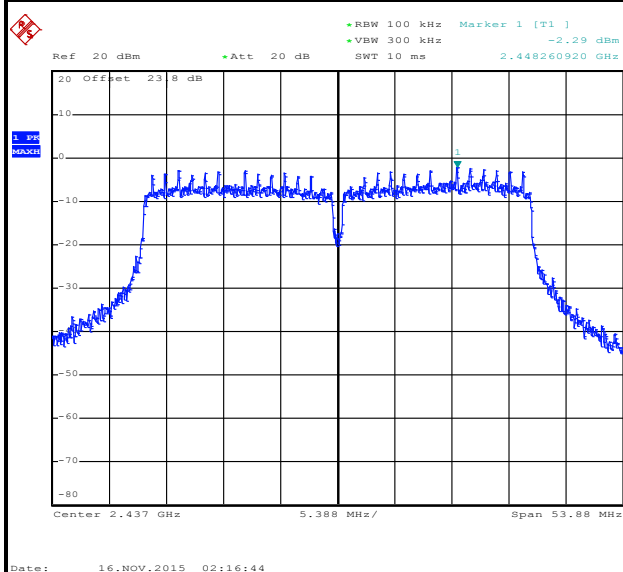
Date: 16.NOV.2015 02:13:16



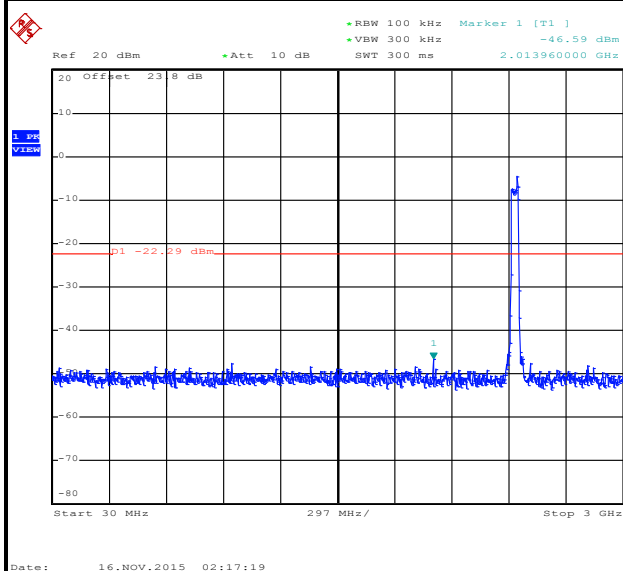
Number of TX :	2	Ant. :	1
Test Mode :	802.11n HT40	Temperature :	21~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	AC Chang

WLAN 802.11n HT40 Channel 06

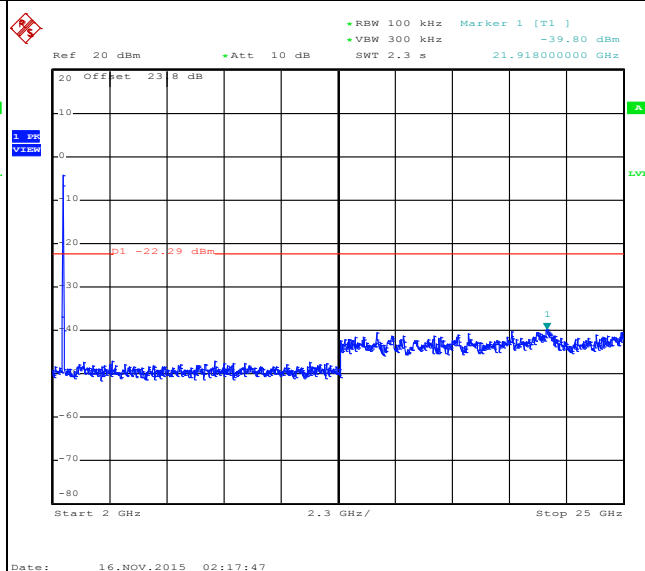
100kHz PSD reference Level



Spurious Emission 30MHz~3GHz



Spurious Emission 2GHz~25GHz

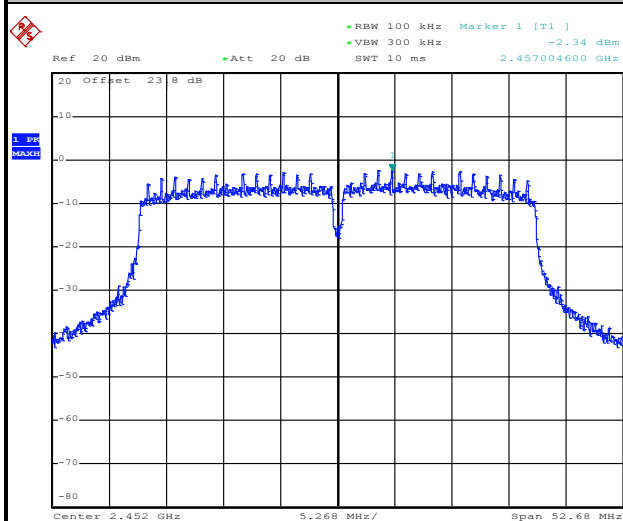




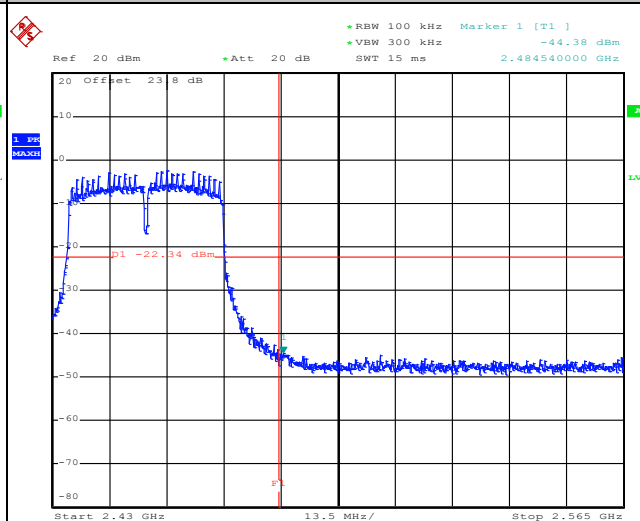
Number of TX :	2	Ant. :	1
Test Mode :	802.11n HT40	Temperature :	21~25°C
Test Band :	2.4GHz High	Relative Humidity :	51~54%
Test Channel :	09	Test Engineer :	AC Chang

WLAN 802.11n HT40 Channel 09

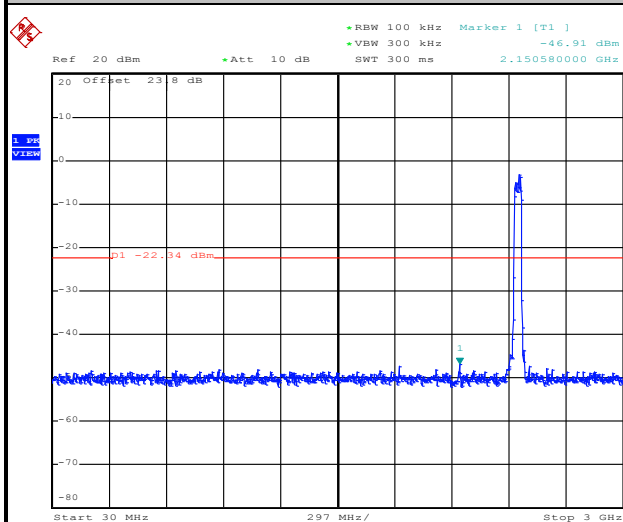
100kHz PSD reference Level



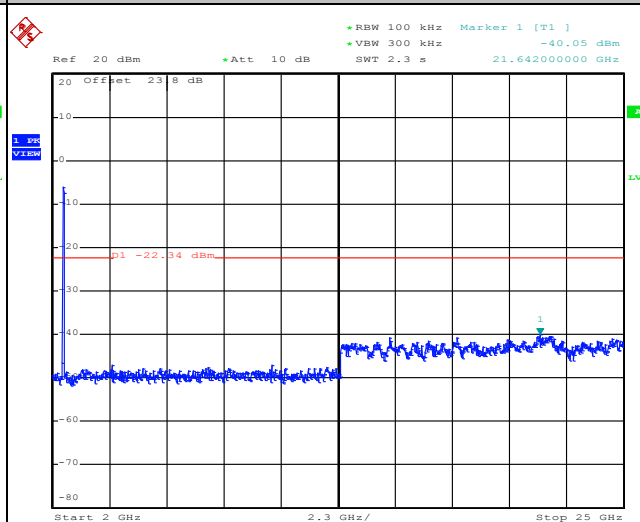
High Channel Plot



Spurious Emission 30MHz~3GHz



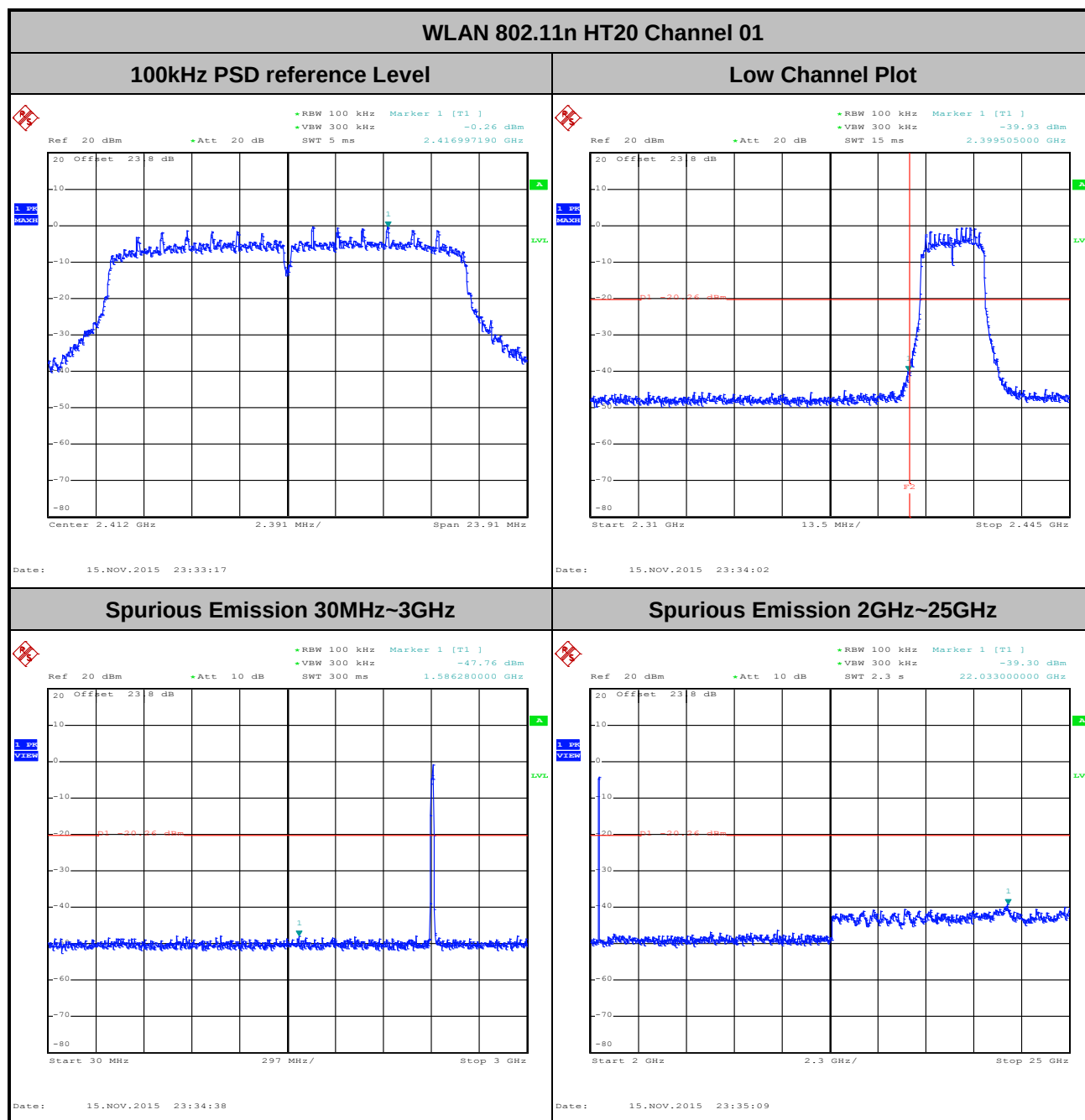
Spurious Emission 2GHz~25GHz





Number of TX = 2, Ant. 2 (Measured)

Number of TX :	2	Ant. :	2
Test Mode :	802.11n HT20	Temperature :	21~25°C
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	01	Test Engineer :	AC Chang

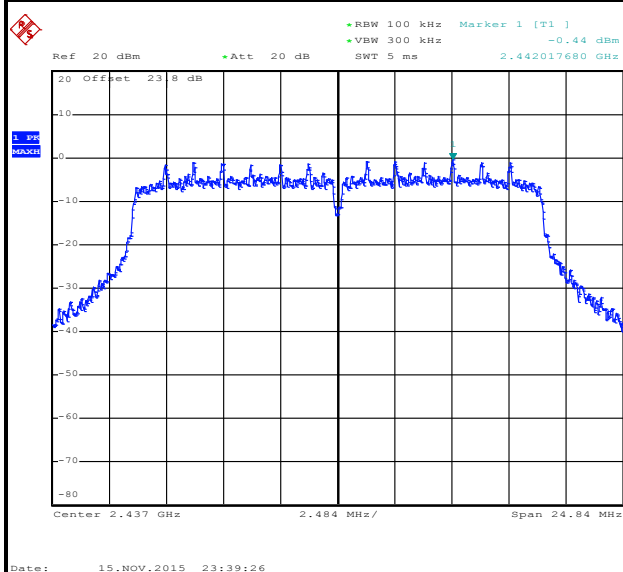




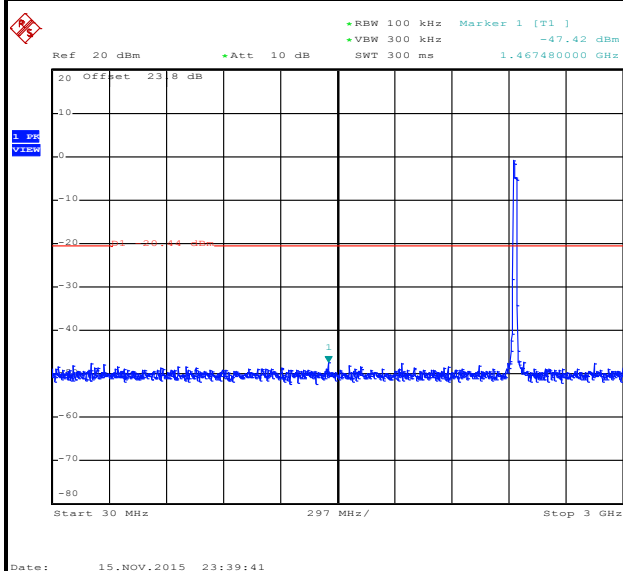
Number of TX :	2	Ant. :	2
Test Mode :	802.11n HT20	Temperature :	21~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	AC Chang

WLAN 802.11n HT20 Channel 06

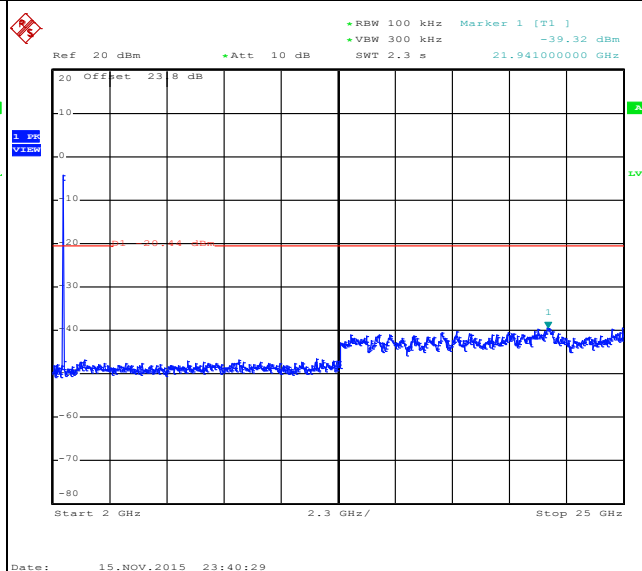
100kHz PSD reference Level



Spurious Emission 30MHz~3GHz



Spurious Emission 2GHz~25GHz

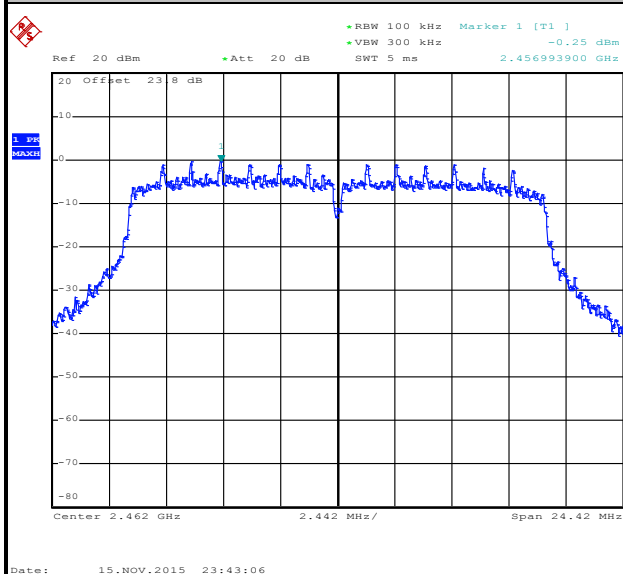




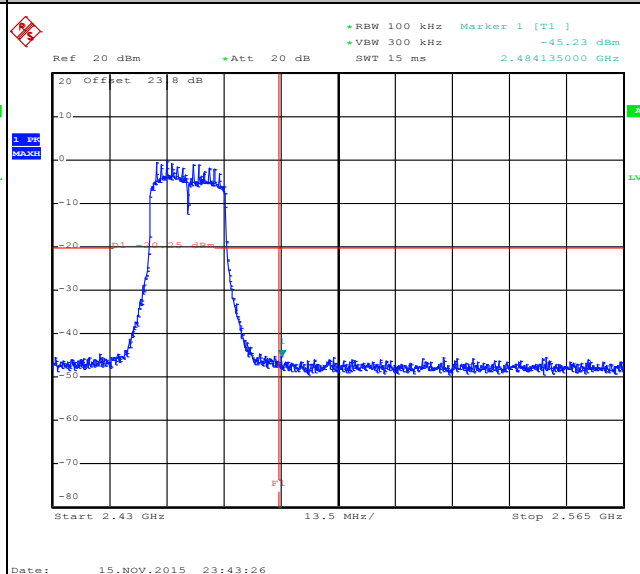
Number of TX :	2	Ant. :	2
Test Mode :	802.11n HT20	Temperature :	21~25°C
Test Band :	2.4GHz High	Relative Humidity :	51~54%
Test Channel :	11	Test Engineer :	AC Chang

WLAN 802.11n HT20 Channel 11

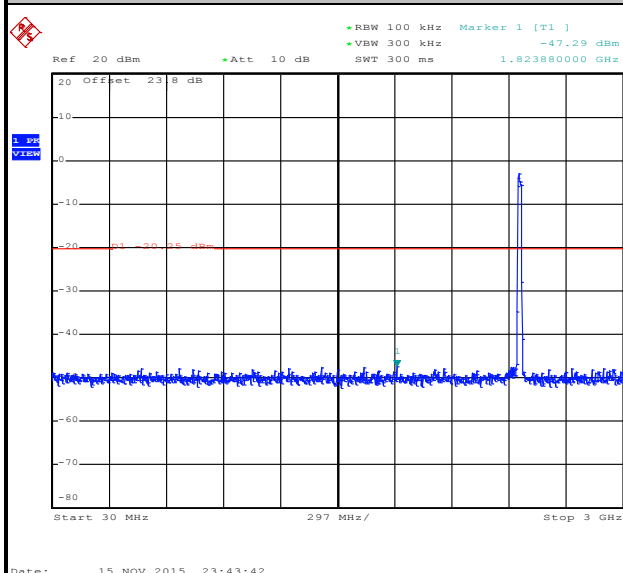
100kHz PSD reference Level



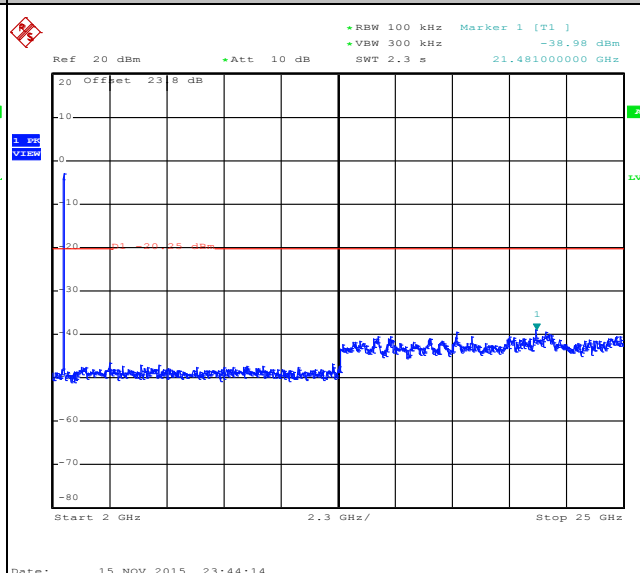
High Channel Plot



Spurious Emission 30MHz~3GHz



Spurious Emission 2GHz~25GHz

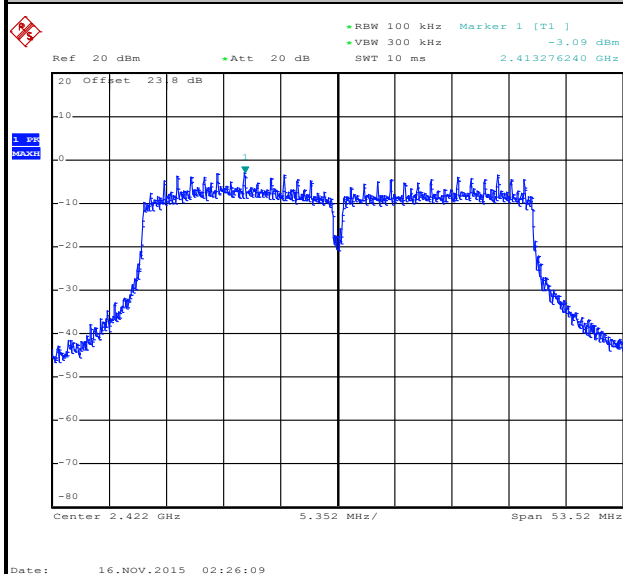




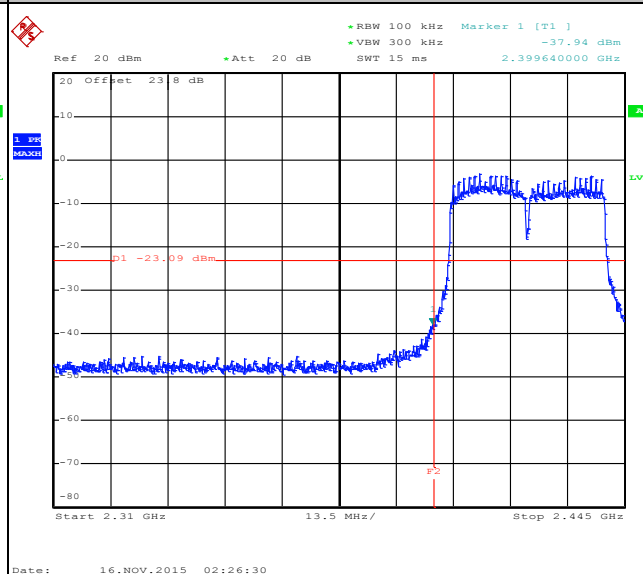
Number of TX :	2	Ant. :	2
Test Mode :	802.11n HT40	Temperature :	21~25°C
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	03	Test Engineer :	AC Chang

WLAN 802.11n HT40 Channel 03

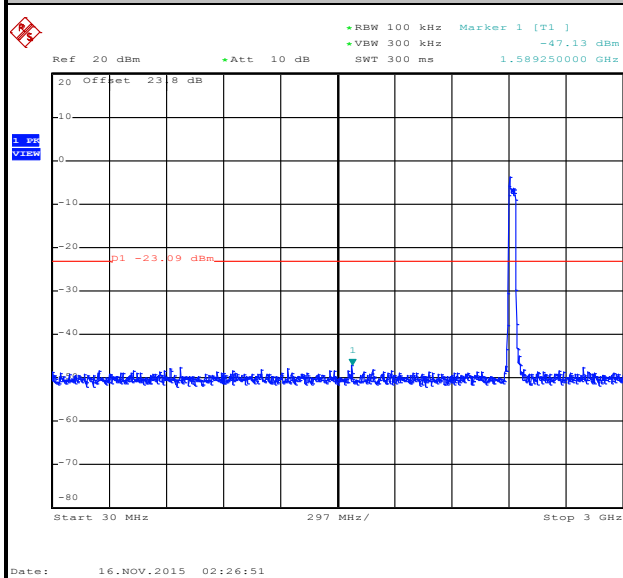
100kHz PSD reference Level



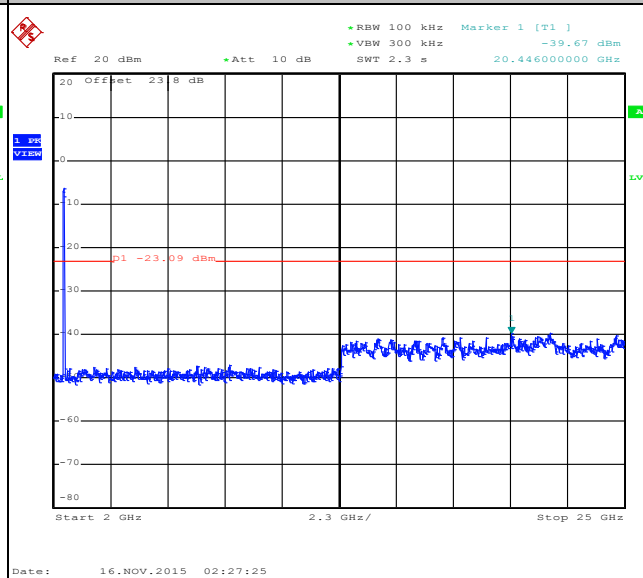
Low Channel Plot



Spurious Emission 30MHz~3GHz



Spurious Emission 2GHz~25GHz

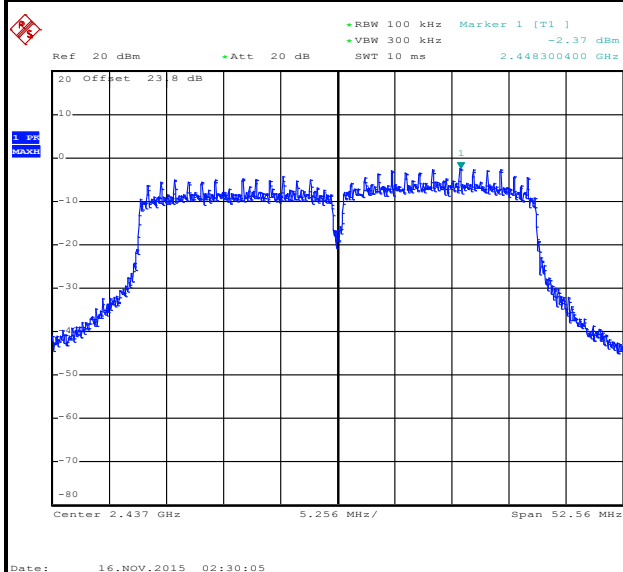




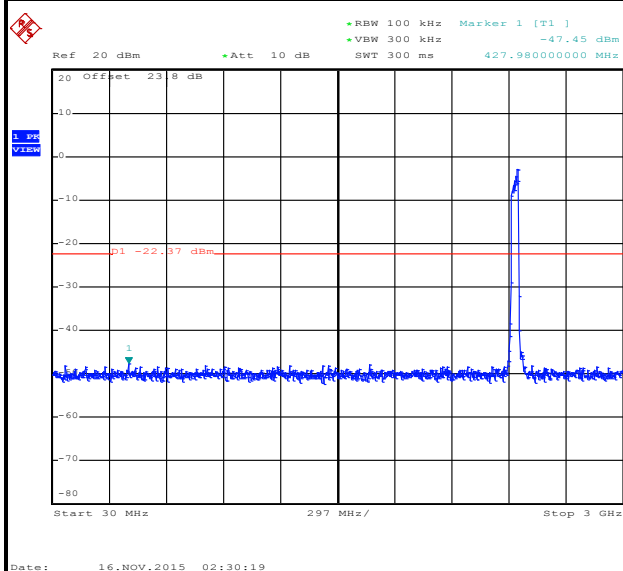
Number of TX :	2	Ant. :	2
Test Mode :	802.11n HT40	Temperature :	21~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	AC Chang

WLAN 802.11n HT40 Channel 06

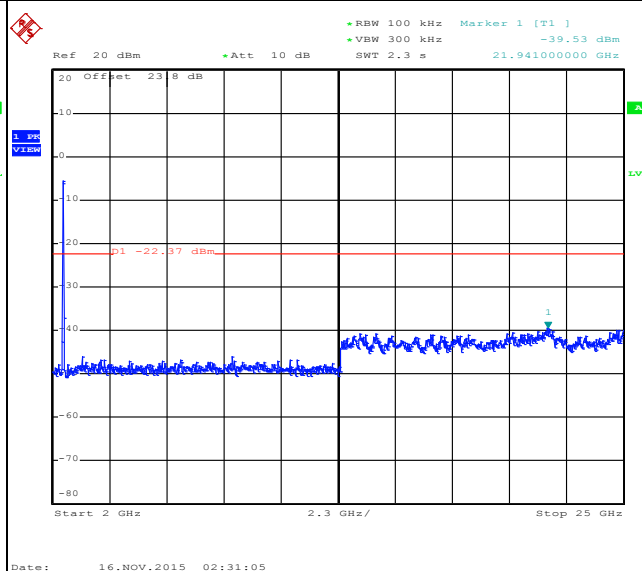
100kHz PSD reference Level



Spurious Emission 30MHz~3GHz



Spurious Emission 2GHz~25GHz

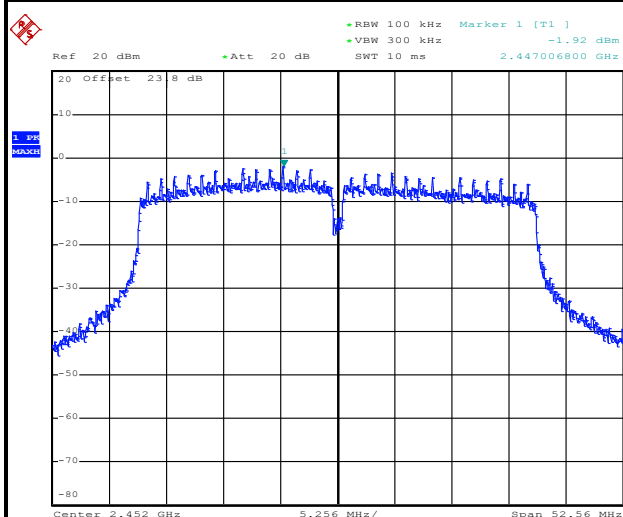




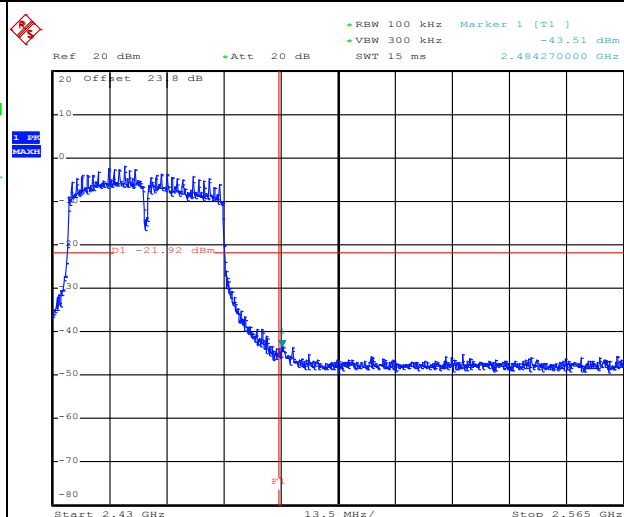
Number of TX :	2	Ant. :	2
Test Mode :	802.11n HT40	Temperature :	21~25°C
Test Band :	2.4GHz High	Relative Humidity :	51~54%
Test Channel :	09	Test Engineer :	AC Chang

WLAN 802.11n HT40 Channel 09

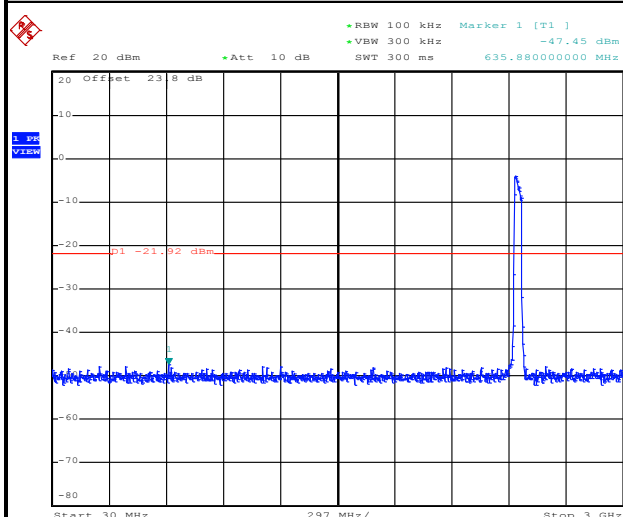
100kHz PSD reference Level



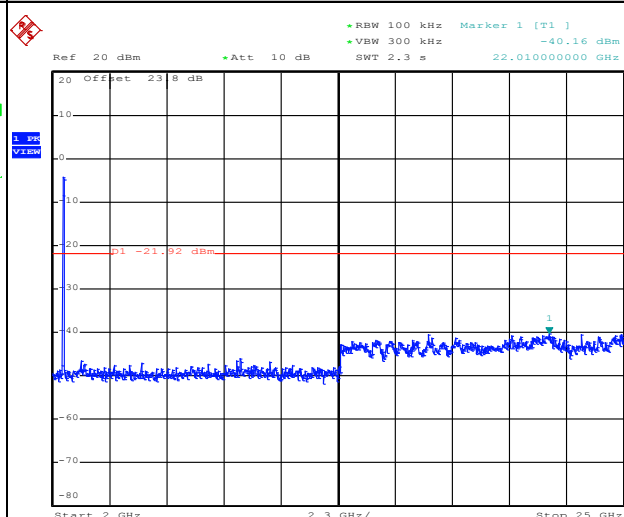
High Channel Plot



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 FCC section 15.209 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 Procedure

1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r04.
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.

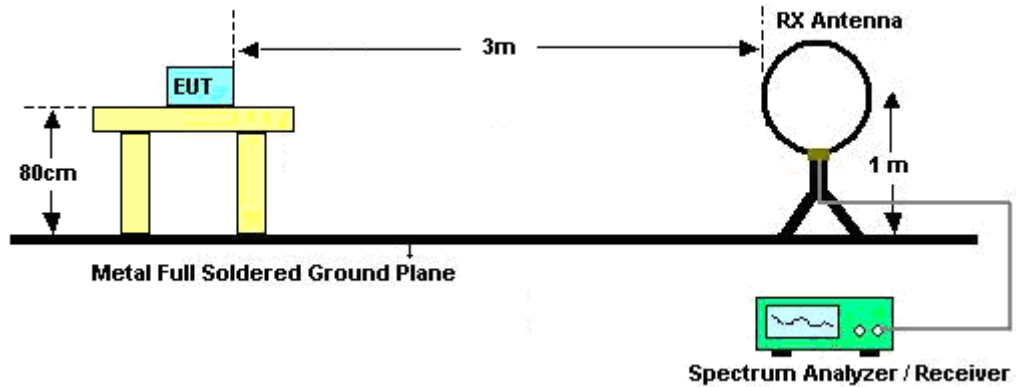
For average measurement:

 - 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.

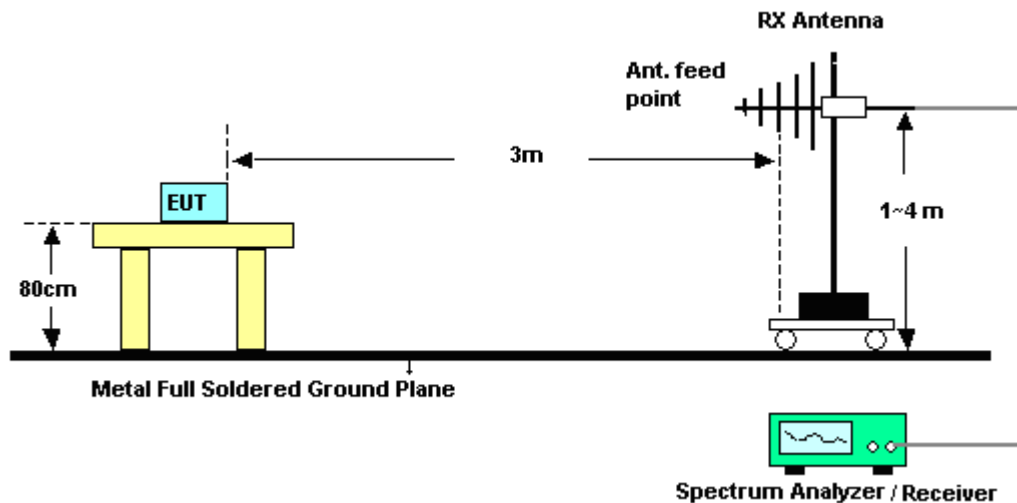
Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
1	802.11b	98.57	-	-	10Hz
2	802.11b	98.565	-	-	10Hz
1	802.11g	94.50	2060.00	0.49	1kHz
2	802.11g	94.50	2060.00	0.49	1kHz
1+2	2.4GHz 802.11n HT20 for Ant. 1	89.91	980.00	1.02	3kHz
1+2	2.4GHz 802.11n HT20 for Ant. 2	90.00	990.00	1.01	3kHz
1+2	2.4GHz 802.11n HT40 for Ant. 1	83.84	498.00	2.01	3kHz
1+2	2.4GHz 802.11n HT40 for Ant. 2	83.84	498.00	2.01	3kHz

3.5.4 Test Setup

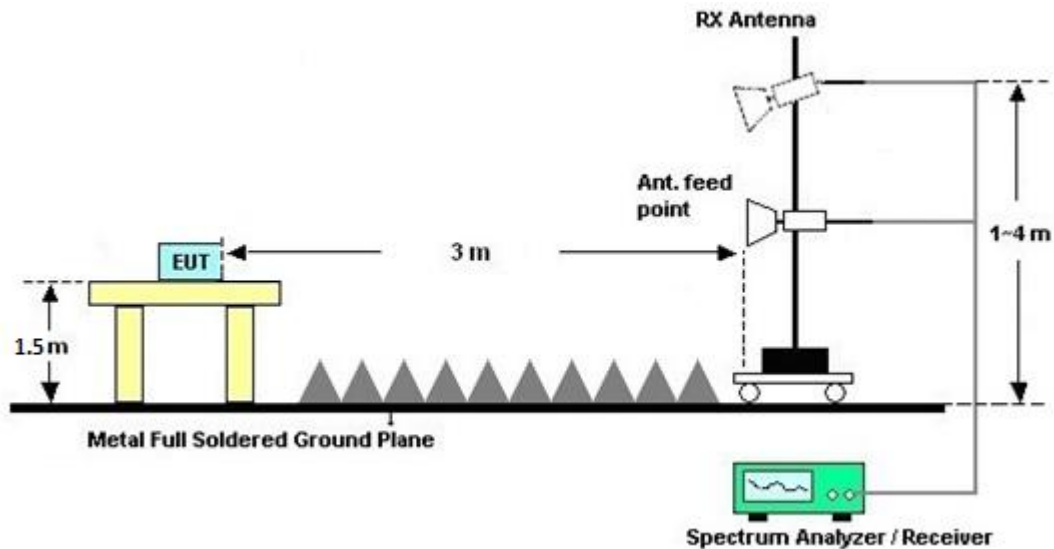
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.5.5 Test Results of Radiated 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 per 15.31(o) was not reported.

3.5.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix B and Appendix C of this test report.

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

Please refer to Appendix B and Appendix C of this test report.

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.

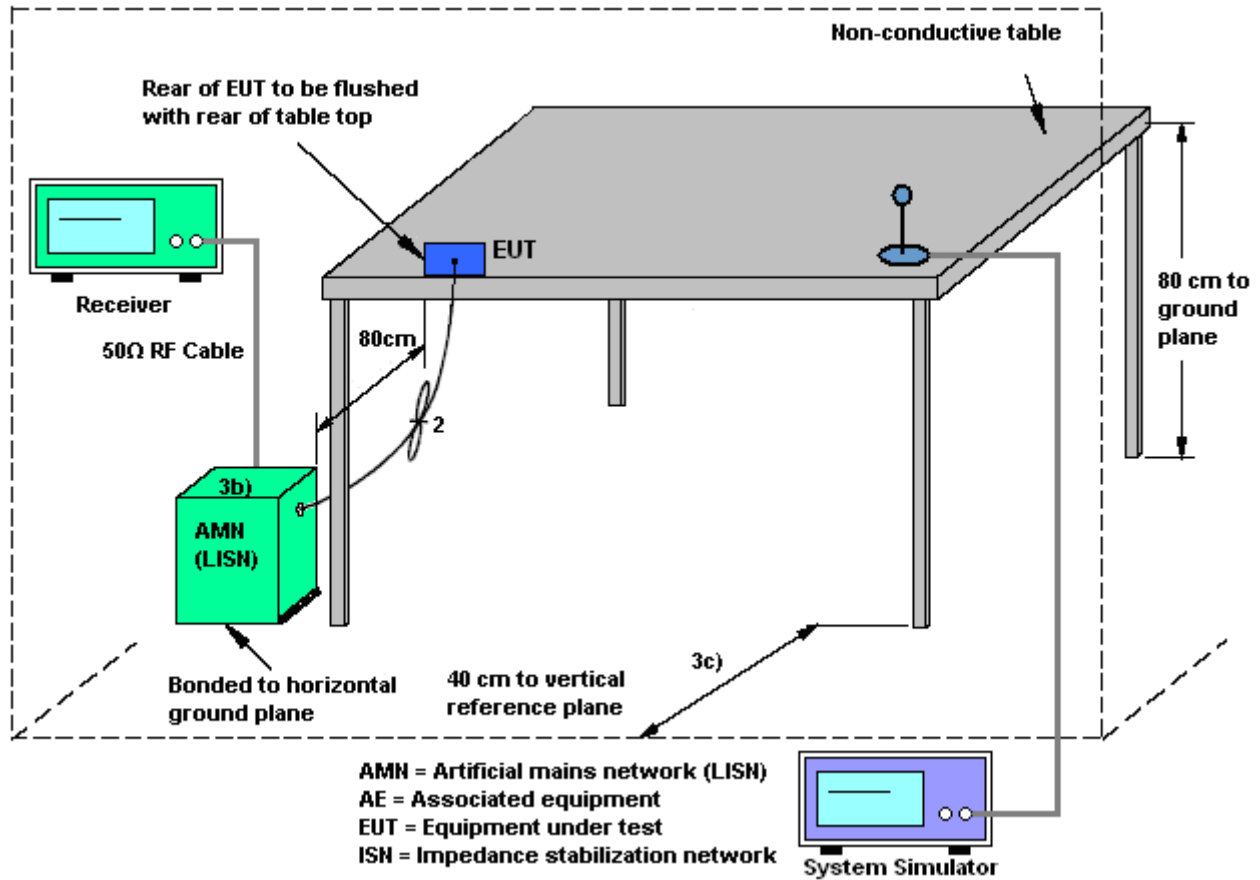
3.6.2 Measuring Instruments

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

3.6.3 Test Procedures

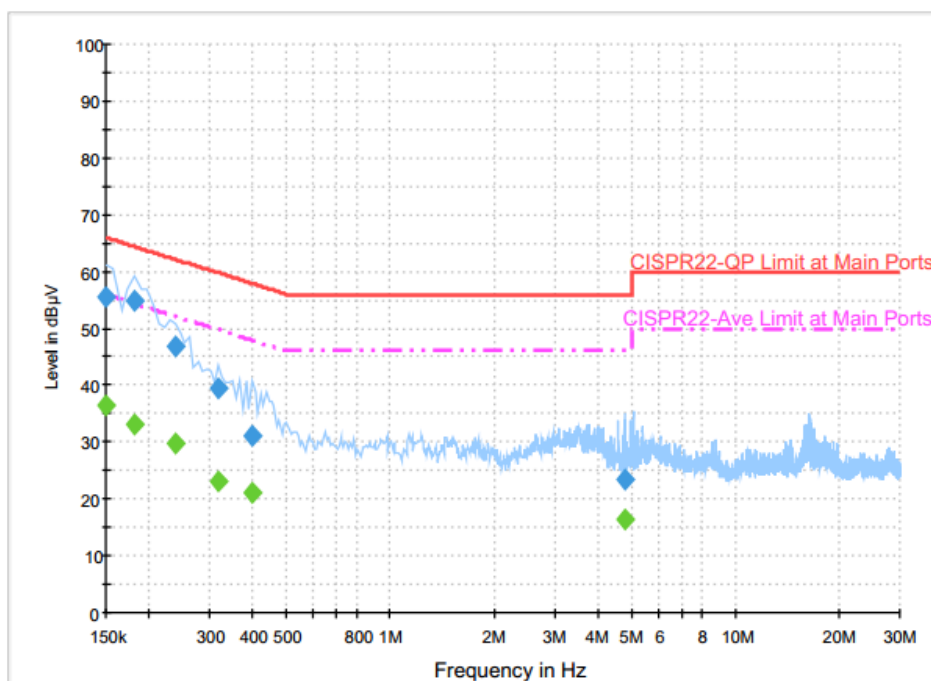
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other 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

Test Mode :	Mode 1	Temperature :	24~25°C
Test Engineer :	Kai-Chun Chu	Relative Humidity :	56~57%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	WCDMA Band V Idle + Bluetooth Link + WLAN Link + Earphone + GPS Rx + USB Cable (Data Link with Notebook) + SIM 1		



Final Result : Quasi-Peak

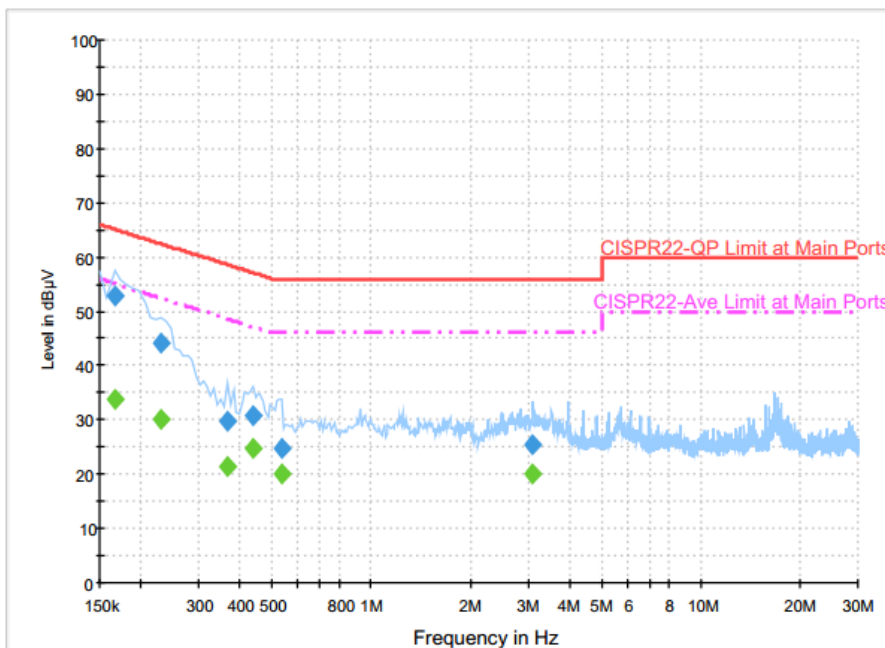
Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	55.6	Off	L1	19.6	10.4	66.0
0.182000	54.7	Off	L1	19.6	9.7	64.4
0.238000	46.9	Off	L1	19.6	15.3	62.2
0.318000	39.5	Off	L1	19.6	20.3	59.8
0.398000	31.2	Off	L1	19.6	26.7	57.9
4.774000	23.5	Off	L1	19.7	32.5	56.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	36.6	Off	L1	19.6	19.4	56.0
0.182000	33.0	Off	L1	19.6	21.4	54.4
0.238000	29.7	Off	L1	19.6	22.5	52.2
0.318000	23.2	Off	L1	19.6	26.6	49.8
0.398000	21.2	Off	L1	19.6	26.7	47.9
4.774000	16.3	Off	L1	19.7	29.7	46.0



Test Mode :	Mode 1	Temperature :	24~25°C
Test Engineer :	Kai-Chun Chu	Relative Humidity :	56~57%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	WCDMA Band V Idle + Bluetooth Link + WLAN Link + Earphone + GPS Rx + USB Cable (Data Link with Notebook) + SIM 1		



Final Result : Quasi-Peak

Frequency (MHz)	Quasi-Peak (dB μ V)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.166000	53.0	Off	N	19.6	12.2	65.2
0.230000	44.3	Off	N	19.6	18.1	62.4
0.366000	29.8	Off	N	19.6	28.8	58.6
0.438000	30.9	Off	N	19.6	26.2	57.1
0.534000	24.6	Off	N	19.6	31.4	56.0
3.102000	25.5	Off	N	19.6	30.5	56.0

Final Result : Average

Frequency (MHz)	Average (dB μ V)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.166000	33.7	Off	N	19.6	21.5	55.2
0.230000	30.2	Off	N	19.6	22.2	52.4
0.366000	21.4	Off	N	19.6	27.2	48.6
0.438000	24.9	Off	N	19.6	22.2	47.1
0.534000	20.1	Off	N	19.6	25.9	46.0
3.102000	20.0	Off	N	19.6	26.0	46.0

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. For the fixed point-to-point operation, the power shall be reduced by one dB for every 3 dB that the directional gain of the Antenna exceeds 6 dBi. 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 FCC rule.

3.7.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.7.3 Antenna Gain

FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

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

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

			DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
	Ant. 1 (dBi)	Ant. 2 (dBi)				
2.4 GHz	1.18	-0.50	1.18	3.39	0.00	0.00

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

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



4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Power Meter	Anritsu	ML2495A	1132003	300MHz~40GHz	Aug. 12, 2015	Nov. 15, 2015 ~ Feb. 01, 2016	Aug. 11, 2016	Conducted (TH05-HY)
Power Sensor	Anritsu	MA2411B	1126017	300MHz~40GHz	Aug. 12, 2015	Nov. 15, 2015 ~ Feb. 01, 2016	Aug. 11, 2016	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100055	9kHz-40GHz	Jun. 18, 2015	Nov. 15, 2015 ~ Feb. 01, 2016	Jun. 17, 2016	Conducted (TH05-HY)
Temperature Chamber	ESPEC	SH-641	92013720	-40℃ ~90℃	Sep. 08, 2015	Nov. 15, 2015 ~ Feb. 01, 2016	Sep. 07, 2016	Conducted (TH05-HY)
Programmable Power Supply	GW Instek	PSS-2005	GEO821763	N/A	Nov. 13, 2015	Nov. 15, 2015 ~ Feb. 01, 2016	Nov. 12, 2016	Conducted (TH05-HY)
AC Power Source	ChainTek	APC-1000 W	N/A	N/A	N/A	Feb. 05, 2016	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESCI 7	100724	9kHz~7GHz	Aug. 26, 2015	Feb. 05, 2016	Aug. 25, 2016	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Dec. 02, 2015	Feb. 05, 2016	Dec. 01, 2016	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Dec. 14, 2015	Feb. 05, 2016	Dec. 13, 2016	Conduction (CO05-HY)
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100851	N/A	Jan. 08, 2016	Feb. 05, 2016	Jan. 07, 2017	Conduction (CO05-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	Sep. 02, 2015	Nov. 17, 2015 ~ Nov. 18, 2015	Sep. 01, 2016	Radiation (03CH11-HY)
Bilog Antenna	TESEQ	CBL 6111D	35414	30MHz~1GHz	Oct. 31, 2015	Nov. 17, 2015 ~ Nov. 18, 2015	Oct. 30, 2016	Radiation (03CH11-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1326	1GHz ~ 18GHz	Oct. 08, 2015	Nov. 17, 2015 ~ Nov. 18, 2015	Oct. 07, 2016	Radiation (03CH11-HY)
Preamplifier	MITEQ	AMF-7D-00 101800-30-10P	1902247	1GHz~18GHz	Jul. 01, 2015	Nov. 17, 2015 ~ Nov. 18, 2015	Jun. 30, 2016	Radiation (03CH11-HY)
Spectrum Analyzer	Keysight	N9010A	MY54200486	10Hz ~ 44GHz	Sep. 24, 2015	Nov. 17, 2015 ~ Nov. 18, 2015	Sep. 23, 2016	Radiation (03CH11-HY)
Antenna Mast	EMEC	AM-BS-450 0-B	N/A	1~4m	N/A	Nov. 17, 2015 ~ Nov. 18, 2015	N/A	Radiation (03CH11-HY)
Turn Table	EMEC	TT 2000	N/A	0-360 degree	N/A	Nov. 17, 2015 ~ Nov. 18, 2015	N/A	Radiation (03CH11-HY)
Preamplifier	Agilent	8449B	3008A02375	1GHz~26.5GHz	Jan. 15, 2015	Nov. 17, 2015 ~ Nov. 18, 2015	Jan. 14, 2016	Radiation (03CH11-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170576	18GHz ~ 40GHz	Apr. 20, 2015	Nov. 17, 2015 ~ Nov. 18, 2015	Apr. 19, 2016	Radiation (03CH11-HY)
Preamplifier	MITEQ	JS44-18004 000-33-8P	1840917	18GHz ~ 40GHz	Jun. 02, 2015	Nov. 17, 2015 ~ Nov. 18, 2015	Jun. 01, 2016	Radiation (03CH11-HY)
Amplifier	SONOMA	310N	187231	9kHz~1GHz	Jan. 14, 2015	Nov. 17, 2015 ~ Nov. 18, 2015	Jan. 13, 2016	Radiation (03CH11-HY)



5 Uncertainty of Evaluation

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

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.9
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Appendix A. Conducted Test Results

Report Number : FR5N0311C

Test Engineer:	AC Chang	Temperature:	21~25	°C
Test Date:	104/11/15 ~ 105/02/01	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
					Ant 1	Ant 2	Ant 1	Ant 2		
11b	1Mbps	1	1	2412	13.40	13.85	8.04	8.04	0.50	Pass
11b	1Mbps	1	6	2437	13.75	13.70	8.08	8.08	0.50	Pass
11b	1Mbps	1	11	2462	13.55	13.90	8.04	8.04	0.50	Pass
11g	6Mbps	1	1	2412	17.05	16.95	15.66	15.66	0.50	Pass
11g	6Mbps	1	6	2437	17.25	17.20	16.30	15.92	0.50	Pass
11g	6Mbps	1	11	2462	17.15	17.25	15.92	15.90	0.50	Pass
HT20	MCS8	2	1	2412	18.05	18.10	16.56	15.94	0.50	Pass
HT20	MCS8	2	6	2437	18.20	18.25	15.96	16.56	0.50	Pass
HT20	MCS8	2	11	2462	18.35	18.15	16.90	16.28	0.50	Pass
HT40	MCS8	2	3	2422	36.30	36.50	35.12	35.68	0.50	Pass
HT40	MCS8	2	6	2437	36.70	36.30	35.92	35.04	0.50	Pass
HT40	MCS8	2	9	2452	36.30	36.30	35.12	35.04	0.50	Pass

TEST RESULTS DATA
Peak Output Power

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
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	
11b	1Mbps	1	1	2412	18.53	18.12		30.00	30.00	1.18	-0.50	19.71	17.62	36.00	36.00	Pass
11b	1Mbps	1	6	2437	18.36	18.23		30.00	30.00	1.18	-0.50	19.54	17.73	36.00	36.00	Pass
11b	1Mbps	1	11	2462	17.65	18.32		30.00	30.00	1.18	-0.50	18.83	17.82	36.00	36.00	Pass
11g	6Mbps	1	1	2412	19.03	18.43		30.00	30.00	1.18	-0.50	20.21	17.93	36.00	36.00	Pass
11g	6Mbps	1	6	2437	18.98	18.35		30.00	30.00	1.18	-0.50	20.16	17.85	36.00	36.00	Pass
11g	6Mbps	1	11	2462	18.79	18.90		30.00	30.00	1.18	-0.50	19.97	18.40	36.00	36.00	Pass
HT20	MCS0	1	1	2412	17.89	18.10		30.00	30.00	1.18	-0.50	19.07	17.60	36.00	36.00	Pass
HT20	MCS0	1	6	2437	17.83	17.82		30.00	30.00	1.18	-0.50	19.01	17.32	36.00	36.00	Pass
HT20	MCS0	1	11	2462	17.85	17.89		30.00	30.00	1.18	-0.50	19.03	17.39	36.00	36.00	Pass
HT40	MCS0	1	3	2422	18.51	18.32		30.00	30.00	1.18	-0.50	19.69	17.82	36.00	36.00	Pass
HT40	MCS0	1	6	2437	17.86	18.24		30.00	30.00	1.18	-0.50	19.04	17.74	36.00	36.00	Pass
HT40	MCS0	1	9	2452	17.81	18.69		30.00	30.00	1.18	-0.50	18.99	18.19	36.00	36.00	Pass
HT20	MCS8	2	1	2412	17.35	18.72	21.10	30.00		1.18		22.28		36.00		Pass
HT20	MCS8	2	6	2437	17.41	18.73	21.13	30.00		1.18		22.31		36.00		Pass
HT20	MCS8	2	11	2462	17.21	18.23	20.76	30.00		1.18		21.94		36.00		Pass
HT40	MCS8	2	3	2422	18.02	18.94	21.51	30.00		1.18		22.69		36.00		Pass
HT40	MCS8	2	6	2437	17.94	18.98	21.50	30.00		1.18		22.68		36.00		Pass
HT40	MCS8	2	9	2452	18.05	19.24	21.70	30.00		1.18		22.88		36.00		Pass

Note: Measured power (dBm) has offset with cable loss.

TEST RESULTS DATA
Average Output Power

2.4GHz Band									
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)		
					Ant 1	Ant 2	Ant 1	Ant 2	SUM
11b	1Mbps	1	1	2412	0.06	0.06	15.98	15.69	
11b	1Mbps	1	6	2437	0.06	0.06	15.96	15.82	
11b	1Mbps	1	11	2462	0.06	0.06	15.12	15.92	
11g	6Mbps	1	1	2412	0.25	0.25	12.84	12.40	
11g	6Mbps	1	6	2437	0.25	0.25	12.82	12.38	
11g	6Mbps	1	11	2462	0.25	0.25	12.57	12.90	
HT20	MCS0	1	1	2412	0.22	0.22	11.36	11.72	
HT20	MCS0	1	6	2437	0.22	0.22	11.28	11.49	
HT20	MCS0	1	11	2462	0.22	0.22	11.32	11.60	
HT40	MCS0	1	3	2422	0.48	0.48	11.46	11.50	
HT40	MCS0	1	6	2437	0.48	0.48	11.30	11.43	
HT40	MCS0	1	9	2452	0.48	0.48	11.21	11.71	
HT20	MCS8	2	1	2412	0.46	0.46	10.63	12.19	14.49
HT20	MCS8	2	6	2437	0.46	0.46	10.65	12.32	14.57
HT20	MCS8	2	11	2462	0.46	0.46	10.77	12.07	14.48
HT40	MCS8	2	3	2422	0.77	0.77	11.26	12.52	14.94
HT40	MCS8	2	6	2437	0.77	0.77	11.09	12.61	14.92
HT40	MCS8	2	9	2452	0.77	0.77	12.68	12.58	14.83

Note: Measured power (dBm) has offset with cable loss.

TEST RESULTS DATA
Peak Power Spectral Density

2.4GHz Band												
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	Peak PSD (dBm/3kHz)			DG (dBi)		Peak PSD Limit (dBm/3kHz)		Pass/Fail
					Ant 1	Ant 2	Worse + 3.01	Ant 1	Ant 2	Ant 1	Ant 2	
11b	1Mbps	1	1	2412	-9.42	-9.70	-	1.18	-0.50	8.00	8.00	Pass
11b	1Mbps	1	6	2437	-9.82	-9.66		1.18	-0.50	8.00	8.00	Pass
11b	1Mbps	1	11	2462	-10.32	-9.43		1.18	-0.50	8.00	8.00	Pass
11g	6Mbps	1	1	2412	-15.57	-16.47		1.18	-0.50	8.00	8.00	Pass
11g	6Mbps	1	6	2437	-16.39	-15.92		1.18	-0.50	8.00	8.00	Pass
11g	6Mbps	1	11	2462	-15.32	-14.20		1.18	-0.50	8.00	8.00	Pass
HT20	MCS8	2	1	2412	-16.48	-16.28	-13.27	3.39		8.00		Pass
HT20	MCS8	2	6	2437	-16.06	-16.85	-13.05	3.39		8.00		Pass
HT20	MCS8	2	11	2462	-16.09	-16.76	-13.08	3.39		8.00		Pass
HT40	MCS8	2	3	2422	-18.37	-18.79	-15.36	3.39		8.00		Pass
HT40	MCS8	2	6	2437	-17.74	-18.15	-14.73	3.39		8.00		Pass
HT40	MCS8	2	9	2452	-18.13	-17.09	-14.08	3.39		8.00		Pass

Measured power density (dBm) has offset with cable loss.



Appendix B. Radiated Spurious Emission

Test Engineer :	Bill Chang, Ken Wu, and J.C. Liang	Temperature :	21~23°C
		Humidity :	54~56%

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

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 CH 01 2412MHz		2390	55.46	-18.54	74	56.48	27.01	6.01	34.04	352	86	P	H
		2389.92	45.61	-8.39	54	46.63	27.01	6.01	34.04	352	86	A	H
	*	2410.938	110.56	-	-	111.5	27.06	6.04	34.04	352	86	P	H
	*	2410.855	108.08	-	-	109.02	27.06	6.04	34.04	352	86	A	H
													H
													H
		2387.49	53.17	-20.83	74	54.19	27.01	6.01	34.04	395	134	P	V
		2390	43.51	-10.49	54	44.53	27.01	6.01	34.04	395	134	A	V
	*	2412.024	107.36	-	-	108.3	27.06	6.04	34.04	395	134	P	V
	*	2410.938	104.96	-	-	105.9	27.06	6.04	34.04	395	134	A	V
													V
													V
802.11b CH 06 2437MHz		2388.57	54.38	-19.62	74	55.4	27.01	6.01	34.04	342	89	P	H
		2390	44.71	-9.29	54	45.73	27.01	6.01	34.04	342	89	A	H
	*	2438.076	112.2	-	-	113.03	27.16	6.04	34.03	342	89	P	H
	*	2438.159	109.64	-	-	110.47	27.16	6.04	34.03	342	89	A	H
		2484.64	55.8	-18.2	74	56.47	27.25	6.09	34.01	342	89	P	H
		2483.52	45.76	-8.24	54	46.43	27.25	6.09	34.01	342	89	A	H
		2385.96	52.82	-21.18	74	53.84	27.01	6.01	34.04	387	136	P	V
		2390	42.78	-11.22	54	43.8	27.01	6.01	34.04	387	136	A	V
	*	2436.99	108.19	-	-	109.02	27.16	6.04	34.03	387	136	P	V
	*	2435.989	105.76	-	-	106.64	27.11	6.04	34.03	387	136	A	V
		2483.72	54.1	-19.9	74	54.77	27.25	6.09	34.01	387	136	P	V
		2483.52	43.65	-10.35	54	44.32	27.25	6.09	34.01	387	136	A	V



802.11b CH 11 2462MHz	*	2460.872	111.6	-	-	112.35	27.2	6.07	34.02	373	90	P	H
	*	2460.872	109.12	-	-	109.87	27.2	6.07	34.02	373	90	A	H
		2484.32	58.65	-15.35	74	59.32	27.25	6.09	34.01	373	90	P	H
		2483.72	49.08	-4.92	54	49.75	27.25	6.09	34.01	373	90	A	H
													H
													H
	*	2460.955	108.58	-	-	109.33	27.2	6.07	34.02	378	135	P	V
	*	2460.872	106.19	-	-	106.94	27.2	6.07	34.02	378	135	A	V
		2483.6	56.24	-17.76	74	56.91	27.25	6.09	34.01	378	135	P	V
		2483.8	45.79	-8.21	54	46.46	27.25	6.09	34.01	378	135	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	37.08	-36.92	74	62.38	31.12	8.65	65.07	100	0	P	H
													H
													H
													H
		4824	36.42	-37.58	74	61.72	31.12	8.65	65.07	100	0	P	V
													V
													V
													V
802.11b CH 06 2437MHz		4874	36	-38	74	61.12	31.21	8.69	65.02	100	0	P	H
		7311	39.37	-34.63	74	57.96	36.08	10.39	65.06	100	0	P	H
													H
													H
		4874	35.75	-38.25	74	60.87	31.21	8.69	65.02	100	0	P	V
		7311	39.76	-34.24	74	58.35	36.08	10.39	65.06	100	0	P	V
													V
													V
802.11b CH 11 2462MHz		4924	39.79	-34.21	74	64.68	31.29	8.79	64.97	100	0	P	H
		7386	40.89	-33.11	74	59.22	36.27	10.48	65.08	100	0	P	H
													H
													H
		4924	37.36	-36.64	74	62.25	31.29	8.79	64.97	100	0	P	V
		7386	40.85	-33.15	74	59.18	36.27	10.48	65.08	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		2389.56	57.72	-16.28	74	58.74	27.01	6.01	34.04	350	89	P	H
		2390	48.7	-5.3	54	49.72	27.01	6.01	34.04	350	89	A	H
	*	2412	109.15	-	-	110.09	27.06	6.04	34.04	350	89	P	H
	*	2412	101.45	-	-	102.39	27.06	6.04	34.04	350	89	A	H
													H
													H
		2388.21	55.02	-18.98	74	56.04	27.01	6.01	34.04	351	136	P	V
		2389.92	46.12	-7.88	54	47.14	27.01	6.01	34.04	351	136	A	V
	*	2412	107.19	-	-	108.13	27.06	6.04	34.04	351	136	P	V
	*	2412	99.05	-	-	99.99	27.06	6.04	34.04	351	136	A	V
													V
													V
802.11g CH 06 2437MHz		2389.29	54.18	-19.82	74	55.2	27.01	6.01	34.04	341	86	P	H
		2390	45.18	-8.82	54	46.2	27.01	6.01	34.04	341	86	A	H
	*	2437	110.58	-	-	111.41	27.16	6.04	34.03	341	86	P	H
	*	2437	102.95	-	-	103.78	27.16	6.04	34.03	341	86	A	H
		2483.64	55	-19	74	55.67	27.25	6.09	34.01	341	86	P	H
		2484.04	46.11	-7.89	54	46.78	27.25	6.09	34.01	341	86	A	H
		2389.83	52.98	-21.02	74	54	27.01	6.01	34.04	340	135	P	V
		2390	43.2	-10.8	54	44.22	27.01	6.01	34.04	340	135	A	V
	*	2437	107.41	-	-	108.24	27.16	6.04	34.03	340	135	P	V
	*	2437	99.85	-	-	100.68	27.16	6.04	34.03	340	135	A	V
		2485	54.79	-19.21	74	55.46	27.25	6.09	34.01	340	135	P	V
		2484.04	44.76	-9.24	54	45.43	27.25	6.09	34.01	340	135	A	V



802.11g CH 11 2462MHz	*	2462	108.33	-	-	109.08	27.2	6.07	34.02	377	86	P	H
	*	2462	100.77	-	-	101.52	27.2	6.07	34.02	377	86	A	H
		2484.2	59.24	-14.76	74	59.91	27.25	6.09	34.01	377	86	P	H
		2483.52	48.68	-5.32	54	49.35	27.25	6.09	34.01	377	86	A	H
													H
													H
	*	2462	105.02	-	-	105.77	27.2	6.07	34.02	373	114	P	V
	*	2462	97.51	-	-	98.26	27.2	6.07	34.02	373	114	A	V
		2484.8	56.05	-17.95	74	56.72	27.25	6.09	34.01	373	114	P	V
		2483.72	46.78	-7.22	54	47.45	27.25	6.09	34.01	373	114	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	35.46	-38.54	74	60.76	31.12	8.65	65.07	100	0	P	H
													H
													H
													H
		4824	36.74	-37.26	74	62.04	31.12	8.65	65.07	100	0	P	V
													V
													V
													V
802.11g CH 06 2437MHz		4874	36.19	-37.81	74	61.31	31.21	8.69	65.02	100	0	P	H
		7311	40.57	-33.43	74	59.16	36.08	10.39	65.06	100	0	P	H
													H
													H
		4874	36.11	-37.89	74	61.23	31.21	8.69	65.02	100	0	P	V
		7311	38.78	-35.22	74	57.37	36.08	10.39	65.06	100	0	P	V
													V
													V
802.11g CH 11 2462MHz		4926	36.25	-37.75	74	61.14	31.29	8.79	64.97	100	0	P	H
		7386	40.33	-33.67	74	58.66	36.27	10.48	65.08	100	0	P	H
													H
													H
		4924	37.01	-36.99	74	61.9	31.29	8.79	64.97	100	0	P	V
		7386	40.09	-33.91	74	58.42	36.27	10.48	65.08	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



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

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)
2.4GHz 802.11b LF		41.34	28.08	-11.92	40	47.33	11.9	0.67	31.82	113	191	P	H
		63.21	24.18	-15.82	40	49.99	4.94	1.04	31.79	-	-	P	H
		166.62	26.63	-16.87	43.5	47.77	9	1.64	31.78	-	-	P	H
		425.3	19.3	-26.7	46	32.12	16.59	2.41	31.82	-	-	P	H
		699.7	20.61	-25.39	46	30.61	18.9	3.14	32.04	-	-	P	H
		985.3	23.87	-30.13	54	30.44	20.41	3.78	30.76	-	-	P	H
													H
													H
													H
													H
													H
													H
		41.88	36.37	-3.63	40	55.94	11.57	0.67	31.81	274	341	P	V
		73.74	31.17	-8.83	40	56.35	5.57	1.04	31.79	-	-	P	V
		101.01	23.91	-19.59	43.5	44.15	10.26	1.28	31.78	-	-	P	V
		381.2	17.55	-28.45	46	32.08	14.94	2.32	31.79	-	-	P	V
		750.8	21.59	-24.41	46	30.53	19.79	3.25	31.98	-	-	P	V
		867.7	23.16	-22.84	46	31.21	20.1	3.44	31.59	-	-	P	V
													V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b CH 01 2412MHz		2389.02	53.34	-20.66	74	54.36	27.01	6.01	34.04	183	315	P	H
		2388.12	43.74	-10.26	54	44.76	27.01	6.01	34.04	183	315	A	H
	*	2412	104.35	-	-	105.29	27.06	6.04	34.04	183	315	P	H
	*	2412	101.92	-	-	102.86	27.06	6.04	34.04	183	315	A	H
													H
													H
		2389.11	52.76	-21.24	74	53.78	27.01	6.01	34.04	400	295	P	V
		2387.94	42.18	-11.82	54	43.2	27.01	6.01	34.04	400	295	A	V
	*	2412	97.63	-	-	98.57	27.06	6.04	34.04	400	295	P	V
	*	2412	95.25	-	-	96.19	27.06	6.04	34.04	400	295	A	V
													V
													V
802.11b CH 06 2437MHz		2387.4	52.59	-21.41	74	53.61	27.01	6.01	34.04	162	71	P	H
		2389.02	42.3	-11.7	54	43.32	27.01	6.01	34.04	162	71	A	H
	*	2437	101.4	-	-	102.23	27.16	6.04	34.03	162	71	P	H
	*	2437	99.14	-	-	99.97	27.16	6.04	34.03	162	71	A	H
		2490.88	53.48	-20.52	74	54.1	27.3	6.09	34.01	162	71	P	H
		2484.96	43.26	-10.74	54	43.93	27.25	6.09	34.01	162	71	A	H
		2354.01	52.57	-21.43	74	53.76	26.91	5.95	34.05	355	304	P	V
		2389.11	41.76	-12.24	54	42.78	27.01	6.01	34.04	355	304	A	V
	*	2437	95.58	-	-	96.41	27.16	6.04	34.03	355	304	P	V
	*	2437	93.08	-	-	93.91	27.16	6.04	34.03	355	304	A	V
		2492.92	53.19	-20.81	74	53.8	27.3	6.09	34	355	304	P	V
		2485.04	42.19	-11.81	54	42.86	27.25	6.09	34.01	355	304	A	V



802.11b CH 11 2462MHz	*	2462	103.11	-	-	103.86	27.2	6.07	34.02	224	313	P	H
	*	2462	100.56	-	-	101.31	27.2	6.07	34.02	224	313	A	H
		2485.6	54.15	-19.85	74	54.82	27.25	6.09	34.01	224	313	P	H
		2483.52	43.9	-10.1	54	44.57	27.25	6.09	34.01	224	313	A	H
													H
													H
	*	2462	95.18	-	-	95.93	27.2	6.07	34.02	100	328	P	V
	*	2462	92.83	-	-	93.58	27.2	6.07	34.02	100	328	A	V
		2486.32	52.95	-21.05	74	53.62	27.25	6.09	34.01	100	328	P	V
		2483.52	42.58	-11.42	54	43.25	27.25	6.09	34.01	100	328	A	V
													V
													V
Remark	3. No other spurious found. 4. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11b (Harmonic @ 3m)

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b CH 01 2412MHz		4824	53.75	-20.25	74	79.05	31.12	8.65	65.07	100	282	P	H
		4824	50.93	-3.07	54	76.23	31.12	8.65	65.07	100	282	A	H
													H
													H
		4824	51.88	-22.12	74	77.18	31.12	8.65	65.07	100	194	P	V
		4824	44.41	-9.59	54	69.71	31.12	8.65	65.07	100	194	A	V
													V
													V
802.11b CH 06 2437MHz		4872	47.16	-26.84	74	72.28	31.21	8.69	65.02	100	0	P	H
		7311	48.46	-25.54	74	67.05	36.08	10.39	65.06	100	0	P	H
													H
													H
		4872	38.86	-35.14	74	63.98	31.21	8.69	65.02	100	0	P	V
		7311	51.85	-22.15	74	70.44	36.08	10.39	65.06	283	264	P	V
		7311	48.56	-5.44	54	67.15	36.08	10.39	65.06	283	264	A	V
													V
802.11b CH 11 2462MHz		4924	39.72	-34.28	74	64.61	31.29	8.79	64.97	100	0	P	H
		7386	46.62	-27.38	74	64.95	36.27	10.48	65.08	100	0	P	H
													H
													H
		4924	40.13	-33.87	74	65.02	31.29	8.79	64.97	100	0	P	V
		7386	48.45	-25.55	74	66.78	36.27	10.48	65.08	100	0	P	V
													V
													V
Remark	3. No other spurious found. 4. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11g (Band Edge @ 3m)

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g CH 01 2412MHz		2389.92	52.99	-21.01	74	54.01	27.01	6.01	34.04	300	134	P	H
		2390	44.33	-9.67	54	45.35	27.01	6.01	34.04	300	134	A	H
	*	2412	102.45	-	-	103.39	27.06	6.04	34.04	300	134	P	H
	*	2412	94.12	-	-	95.06	27.06	6.04	34.04	300	134	A	H
													H
													H
		2384.34	52.54	-21.46	74	53.61	26.96	6.01	34.04	400	122	P	V
		2390	42.65	-11.35	54	43.67	27.01	6.01	34.04	400	122	A	V
	*	2412	97.93	-	-	98.87	27.06	6.04	34.04	400	122	P	V
	*	2412	90.19	-	-	91.13	27.06	6.04	34.04	400	122	A	V
													V
													V
802.11g CH 06 2437MHz		2388.12	52.56	-21.44	74	53.58	27.01	6.01	34.04	332	132	P	H
		2389.2	43.11	-10.89	54	44.13	27.01	6.01	34.04	332	132	A	H
	*	2437	102.74	-	-	103.57	27.16	6.04	34.03	332	132	P	H
	*	2437	94.48	-	-	95.31	27.16	6.04	34.03	332	132	A	H
		2488.2	53.36	-20.64	74	53.98	27.3	6.09	34.01	332	132	P	H
		2484.88	44.6	-9.4	54	45.27	27.25	6.09	34.01	332	132	A	H
		2377.95	52.78	-21.22	74	53.85	26.96	6.01	34.04	385	121	P	V
		2389.02	42.19	-11.81	54	43.21	27.01	6.01	34.04	385	121	A	V
	*	2437	98.37	-	-	99.2	27.16	6.04	34.03	385	121	P	V
	*	2437	90.75	-	-	91.58	27.16	6.04	34.03	385	121	A	V
		2489.12	52.61	-21.39	74	53.23	27.3	6.09	34.01	385	121	P	V
		2485.08	43.62	-10.38	54	44.29	27.25	6.09	34.01	385	121	A	V



802.11g CH 11 2462MHz	*	2462	102.57	-	-	103.32	27.2	6.07	34.02	332	131	P	H
	*	2462	94.86	-	-	95.61	27.2	6.07	34.02	332	131	A	H
		2483.52	57.81	-16.19	74	58.48	27.25	6.09	34.01	332	131	P	H
		2483.52	47.55	-6.45	54	48.22	27.25	6.09	34.01	332	131	A	H
													H
													H
	*	2462	100.34	-	-	101.09	27.2	6.07	34.02	384	120	P	V
	*	2462	92.99	-	-	93.74	27.2	6.07	34.02	384	120	A	V
		2483.56	54.88	-19.12	74	55.55	27.25	6.09	34.01	384	120	P	V
		2483.52	45.45	-8.55	54	46.12	27.25	6.09	34.01	384	120	A	V
													V
													V
Remark	3. No other spurious found. 4. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11g (Harmonic @ 3m)

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g CH 01 2412MHz		4824	44.11	-29.89	74	69.41	31.12	8.65	65.07	100	0	P	H
													H
													H
													H
		4824	37.75	-36.25	74	63.05	31.12	8.65	65.07	100	0	P	V
													V
													V
													V
802.11g CH 06 2437MHz		4874	43.83	-30.17	74	68.95	31.21	8.69	65.02	100	0	P	H
		7311	40.41	-33.59	74	59	36.08	10.39	65.06	100	0	P	H
													H
													H
		4874	39.5	-34.5	74	64.62	31.21	8.69	65.02	100	0	P	V
		7311	41.54	-32.46	74	60.13	36.08	10.39	65.06	100	0	P	V
													V
													V
802.11g CH 11 2462MHz		4924	45.14	-28.86	74	70.03	31.29	8.79	64.97	100	0	P	H
		7386	39.12	-34.88	74	57.45	36.27	10.48	65.08	100	0	P	H
													H
													H
		4924	39.93	-34.07	74	64.82	31.29	8.79	64.97	100	0	P	V
		7386	39.25	-34.75	74	57.58	36.27	10.48	65.08	100	0	P	V
													V
													V
Remark	3. No other spurious found. 4. All results are PASS against Peak and Average limit line.												



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

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
2.4GHz 802.11g LF		30.27	16.21	-23.79	40	29.51	17.86	0.67	31.83	-	-	P	H
		125.31	11.49	-32.01	43.5	30.3	11.51	1.46	31.78	-	-	P	H
		271.65	13.2	-32.8	46	30.63	12.4	1.94	31.77	-	-	P	H
		646.5	20.48	-25.52	46	30.4	19.1	3.02	32.04	-	-	P	H
		841.1	22.53	-23.47	46	30.65	20.2	3.4	31.72	-	-	P	H
		899.2	23.22	-22.78	46	31	20.1	3.55	31.43	132	83	P	H
													H
													H
													H
													H
													H
													H
		30.81	16.17	-23.83	40	29.73	17.6	0.67	31.83	-	-	P	V
		142.32	16.13	-27.37	43.5	35.99	10.46	1.46	31.78	-	-	P	V
		162.03	15.24	-28.26	43.5	36.16	9.4	1.46	31.78	-	-	P	V
		562.5	19.66	-26.34	46	30.37	18.5	2.77	31.98	-	-	P	V
		810.3	21.98	-24.02	46	30.54	19.91	3.4	31.87	-	-	P	V
		941.2	23.34	-22.66	46	30.26	20.51	3.68	31.11	274	135	P	V
													V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 01 2412MHz		2390	53.68	-20.32	74	54.7	27.01	6.01	34.04	340	266	P	H
		2389.65	44.94	-9.06	54	45.96	27.01	6.01	34.04	340	266	A	H
	*	2412	107.38	-	-	108.32	27.06	6.04	34.04	340	266	P	H
	*	2412	99.21	-	-	100.15	27.06	6.04	34.04	340	266	A	H
													H
													H
		2389.47	53.09	-20.91	74	54.11	27.01	6.01	34.04	345	156	P	V
		2389.2	44.49	-9.51	54	45.51	27.01	6.01	34.04	345	156	A	V
	*	2412	103.84	-	-	104.78	27.06	6.04	34.04	345	156	P	V
	*	2412	96.15	-	-	97.09	27.06	6.04	34.04	345	156	A	V
													V
													V
802.11n HT20 CH 06 2437MHz		2389.38	52.82	-21.18	74	53.84	27.01	6.01	34.04	266	265	P	H
		2389.74	43.92	-10.08	54	44.94	27.01	6.01	34.04	266	265	A	H
	*	2437	106.92	-	-	107.75	27.16	6.04	34.03	266	265	P	H
	*	2437	99.4	-	-	100.23	27.16	6.04	34.03	266	265	A	H
		2483.84	55.78	-18.22	74	56.45	27.25	6.09	34.01	266	265	P	H
		2483.64	46.33	-7.67	54	47	27.25	6.09	34.01	266	265	A	H
		2368.05	52.7	-21.3	74	53.82	26.91	6.01	34.04	383	121	P	V
		2389.56	43.88	-10.12	54	44.9	27.01	6.01	34.04	383	121	A	V
	*	2437	105.45	-	-	106.28	27.16	6.04	34.03	383	121	P	V
	*	2437	97.32	-	-	98.15	27.16	6.04	34.03	383	121	A	V
		2485.12	54.65	-19.35	74	55.32	27.25	6.09	34.01	383	121	P	V
		2484.68	45.75	-8.25	54	46.42	27.25	6.09	34.01	383	121	A	V



802.11n HT20 CH 11 2462MHz	*	2462	105.03	-	-	105.78	27.2	6.07	34.02	330	90	P	H
	*	2462	97.79	-	-	98.54	27.2	6.07	34.02	330	90	A	H
		2483.92	57.31	-16.69	74	57.98	27.25	6.09	34.01	330	90	P	H
		2483.6	47.83	-6.17	54	48.5	27.25	6.09	34.01	330	90	A	H
													H
													H
	*	2462	104.33	-	-	105.08	27.2	6.07	34.02	378	128	P	V
	*	2462	96.1	-	-	96.85	27.2	6.07	34.02	378	128	A	V
		2484.36	55.73	-18.27	74	56.4	27.25	6.09	34.01	378	128	P	V
		2483.88	46.74	-7.26	54	47.41	27.25	6.09	34.01	378	128	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+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 01 2412MHz		4824	39.49	-34.51	74	64.79	31.12	8.65	65.07	100	0	P	H
													H
													H
													H
		4824	39.07	-34.93	74	64.37	31.12	8.65	65.07	100	0	P	V
													V
													V
													V
802.11n HT20 CH 06 2437MHz		4874	42.02	-31.98	74	67.14	31.21	8.69	65.02	100	0	P	H
		7311	42.59	-31.41	74	61.18	36.08	10.39	65.06	100	0	P	H
													H
													H
		4874	41.45	-32.55	74	66.57	31.21	8.69	65.02	100	0	P	V
		7311	42.64	-31.36	74	61.23	36.08	10.39	65.06	100	0	P	V
													V
													V
802.11n HT20 CH 11 2462MHz		4924	42.36	-31.64	74	67.25	31.29	8.79	64.97	100	0	P	H
		7386	41.62	-32.38	74	59.95	36.27	10.48	65.08	100	0	P	H
													H
													H
		4924	40.2	-33.8	74	65.09	31.29	8.79	64.97	100	0	P	V
		7386	43.48	-30.52	74	61.81	36.27	10.48	65.08	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 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 03 2422MHz		2388.3	63.39	-10.61	74	64.41	27.01	6.01	34.04	336	268	P	H
		2388.93	48.71	-5.29	54	49.73	27.01	6.01	34.04	336	268	A	H
	*	2422	104.95	-	-	105.83	27.11	6.04	34.03	336	268	P	H
	*	2422	96.45	-	-	97.33	27.11	6.04	34.03	336	268	A	H
		2483.88	57.84	-16.16	74	58.51	27.25	6.09	34.01	336	268	P	H
		2484.84	44.67	-9.33	54	45.34	27.25	6.09	34.01	336	268	A	H
		2389.47	60.5	-13.5	74	61.52	27.01	6.01	34.04	341	156	P	V
		2389.38	46.37	-7.63	54	47.39	27.01	6.01	34.04	341	156	A	V
	*	2422	101.24	-	-	102.12	27.11	6.04	34.03	341	156	P	V
	*	2422	93.47	-	-	94.35	27.11	6.04	34.03	341	156	A	V
		2484.28	55.69	-18.31	74	56.36	27.25	6.09	34.01	341	156	P	V
		2483.88	44.42	-9.58	54	45.09	27.25	6.09	34.01	341	156	A	V
802.11n HT40 CH 06 2437MHz		2388.57	59.92	-14.08	74	60.94	27.01	6.01	34.04	335	262	P	H
		2389.83	46.28	-7.72	54	47.3	27.01	6.01	34.04	335	262	A	H
	*	2437	104.93	-	-	105.76	27.16	6.04	34.03	335	262	P	H
	*	2437	97.45	-	-	98.28	27.16	6.04	34.03	335	262	A	H
		2483.92	60.53	-13.47	74	61.2	27.25	6.09	34.01	335	262	P	H
		2483.72	47.77	-6.23	54	48.44	27.25	6.09	34.01	335	262	A	H
		2389.56	60.86	-13.14	74	61.88	27.01	6.01	34.04	351	153	P	V
		2389.65	46.1	-7.9	54	47.12	27.01	6.01	34.04	351	153	A	V
	*	2437	101.61	-	-	102.44	27.16	6.04	34.03	351	153	P	V
	*	2437	94.07	-	-	94.9	27.16	6.04	34.03	351	153	A	V
		2483.64	59.78	-14.22	74	60.45	27.25	6.09	34.01	351	153	P	V
		2483.72	46.94	-7.06	54	47.61	27.25	6.09	34.01	351	153	A	V



802.11n HT40 CH 09 2452MHz		2389.56	57.99	-16.01	74	59.01	27.01	6.01	34.04	334	267	P	H
		2388.03	44.42	-9.58	54	45.44	27.01	6.01	34.04	334	267	A	H
	*	2452	105.64	-	-	106.43	27.16	6.07	34.02	334	267	P	H
	*	2452	97.75	-	-	98.54	27.16	6.07	34.02	334	267	A	H
		2484.68	63.88	-10.12	74	64.55	27.25	6.09	34.01	334	267	P	H
		2484.2	49.7	-4.3	54	50.37	27.25	6.09	34.01	334	267	A	H
		2389.92	55.77	-18.23	74	56.79	27.01	6.01	34.04	343	154	P	V
		2389.29	43.69	-10.31	54	44.71	27.01	6.01	34.04	343	154	A	V
	*	2452	101.25	-	-	102.04	27.16	6.07	34.02	343	154	P	V
	*	2452	93.49	-	-	94.28	27.16	6.07	34.02	343	154	A	V
		2486.28	62.43	-11.57	74	63.1	27.25	6.09	34.01	343	154	P	V
		2483.52	48.85	-5.15	54	49.52	27.25	6.09	34.01	343	154	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+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 03 2422MHz		4844	40.19	-33.81	74	65.41	31.15	8.69	65.06	100	0	P	H
		7266	45.13	-28.87	74	63.84	36.01	10.34	65.06	100	0	P	H
													H
													H
		4844	40.38	-33.62	74	65.6	31.15	8.69	65.06	100	0	P	V
		7266	42.95	-31.05	74	61.66	36.01	10.34	65.06	100	0	P	V
													V
													V
802.11n HT40 CH 06 2437MHz		4874	41.28	-32.72	74	66.4	31.21	8.69	65.02	100	0	P	H
		7311	44.29	-29.71	74	62.88	36.08	10.39	65.06	100	0	P	H
													H
													H
		4874	40.74	-33.26	74	65.86	31.21	8.69	65.02	100	0	P	V
		7311	42.53	-31.47	74	61.12	36.08	10.39	65.06	100	0	P	V
													V
													V
802.11n HT40 CH 09 2452MHz		4904	42.02	-31.98	74	67.01	31.26	8.74	64.99	100	0	P	H
		7356	43.73	-30.27	74	62.16	36.2	10.44	65.07	100	0	P	H
													H
													H
		4904	41.61	-32.39	74	66.6	31.26	8.74	64.99	100	0	P	V
		7356	44.03	-29.97	74	62.46	36.2	10.44	65.07	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Emission below 1GHz
2.4GHz WIFI 802.11n HT40 (LF)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
2.4GHz 802.11n HT40 LF		30.27	16.1	-23.9	40	29.4	17.86	0.67	31.83	-	-	P	H
		116.94	10.98	-32.52	43.5	30.14	11.34	1.28	31.78	-	-	P	H
		254.37	13.29	-32.71	46	30.68	12.44	1.94	31.77	-	-	P	H
		579.3	19.64	-26.36	46	30.26	18.5	2.89	32.01	-	-	P	H
		734.7	21.76	-24.24	46	30.71	19.8	3.25	32	-	-	P	H
		865.6	23.13	-22.87	46	31.19	20.1	3.44	31.6	247	214	P	H
													H
													H
													H
													H
													H
													H
		78.06	18.34	-21.66	40	42.78	6.31	1.04	31.79	174	48	P	V
		137.46	14.47	-29.03	43.5	33.89	10.9	1.46	31.78	-	-	P	V
		260.58	20.01	-25.99	46	36.86	12.98	1.94	31.77	-	-	P	V
		556.9	20.03	-25.97	46	30.68	18.56	2.77	31.98	-	-	P	V
		773.2	22.21	-23.79	46	31.11	19.7	3.35	31.95	-	-	P	V
		910.4	23.19	-22.81	46	30.89	20.1	3.55	31.35	-	-	P	V
													V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



Note symbol

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

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

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b CH 01		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
2412MHz		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

1. Level(dBμV/m) =

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

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

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 43.54 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

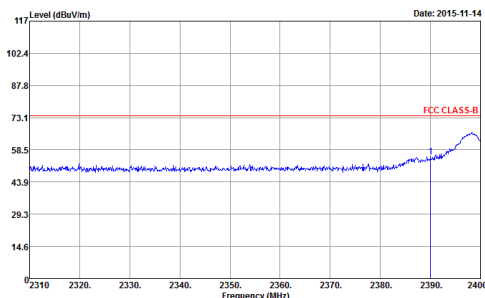
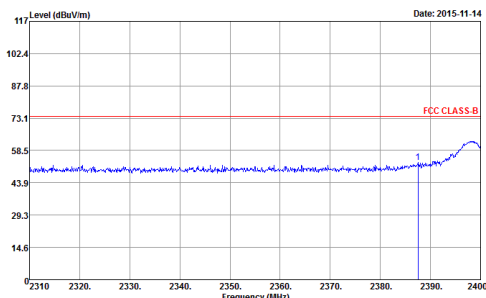
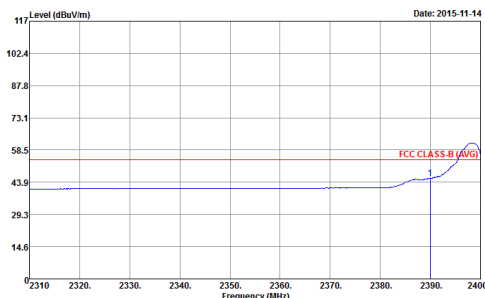
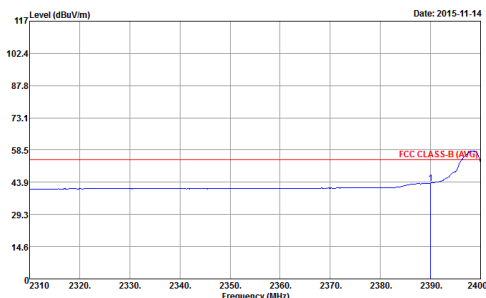
= -10.46(dB)

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

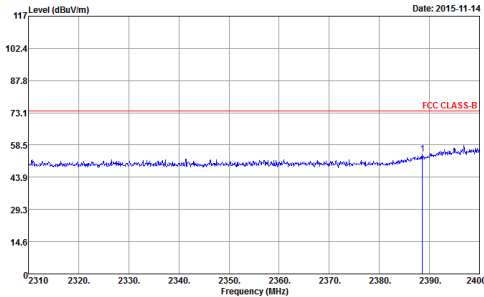
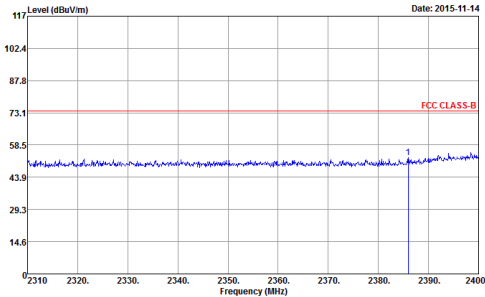
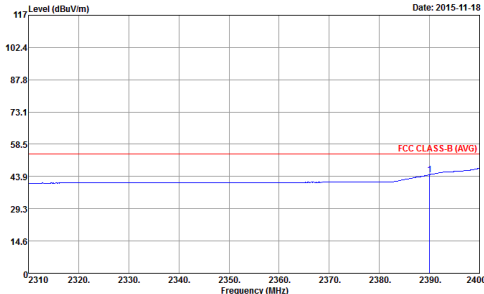
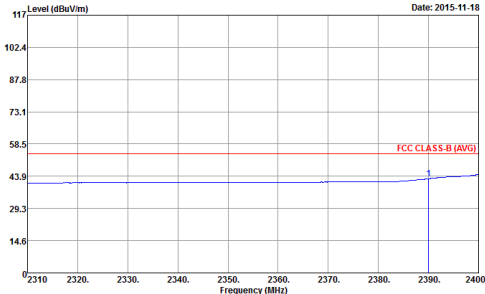
Appendix C. Radiated Spurious Emission Plots

2.4GHz 2400~2483.5MHz

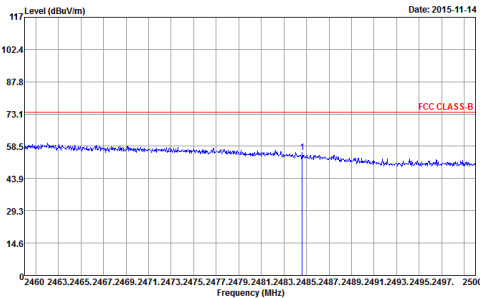
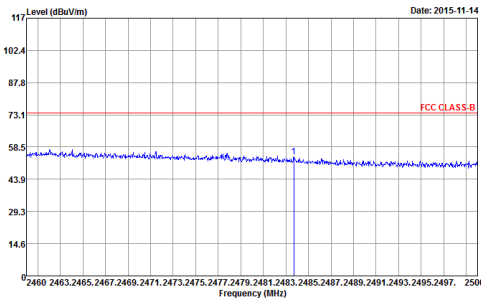
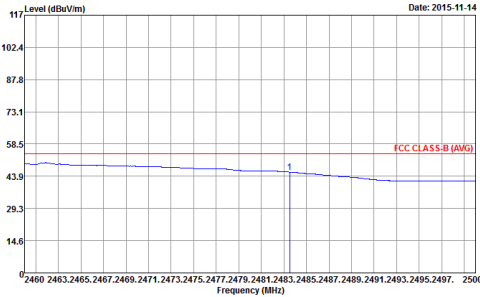
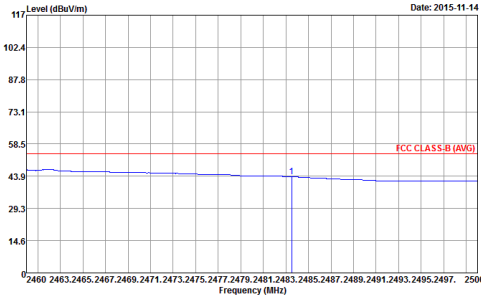
WIFI 802.11b (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
1	Horizontal	Vertical
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL Detector : Peak RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL Detector : Peak RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL Detector : Peak RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL Detector : Peak RBW:1000.000KHz VBW:0.010KHz SWT:Auto



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
1	Horizontal	Vertical
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL Detector : Peak
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL Detector : Peak



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
1	Horizontal	Vertical
Peak	 Level (dBuV/m) vs Frequency (MHz) plot for Horizontal polarization. The y-axis ranges from 0 to 117 dBuV/m, and the x-axis ranges from 2460 to 2500 MHz. A red line indicates the FCC CLASS-B limit at 73.1 dBuV/m. The blue trace shows the measured signal, which is below the limit. A peak is marked at 2437 MHz. Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak	 Level (dBuV/m) vs Frequency (MHz) plot for Vertical polarization. The y-axis ranges from 0 to 117 dBuV/m, and the x-axis ranges from 2460 to 2500 MHz. A red line indicates the FCC CLASS-B limit at 73.1 dBuV/m. The blue trace shows the measured signal, which is below the limit. A peak is marked at 2437 MHz. Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak
Avg.	 Level (dBuV/m) vs Frequency (MHz) plot for Horizontal polarization. The y-axis ranges from 0 to 117 dBuV/m, and the x-axis ranges from 2460 to 2500 MHz. A red line indicates the FCC CLASS-B (AVG) limit at 58.5 dBuV/m. The blue trace shows the measured signal, which is below the limit. A peak is marked at 2437 MHz. Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak	 Level (dBuV/m) vs Frequency (MHz) plot for Vertical polarization. The y-axis ranges from 0 to 117 dBuV/m, and the x-axis ranges from 2460 to 2500 MHz. A red line indicates the FCC CLASS-B (AVG) limit at 58.5 dBuV/m. The blue trace shows the measured signal, which is below the limit. A peak is marked at 2437 MHz. Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
1	Horizontal	Vertical
Peak	Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak	Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak
Avg.	Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak	Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak

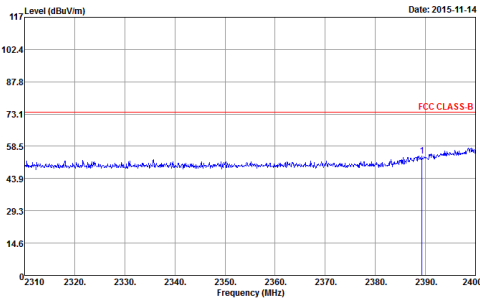
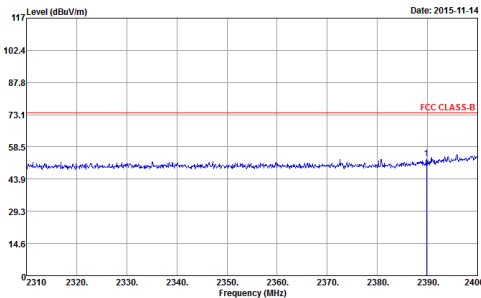
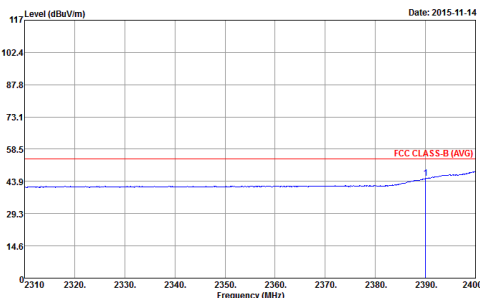
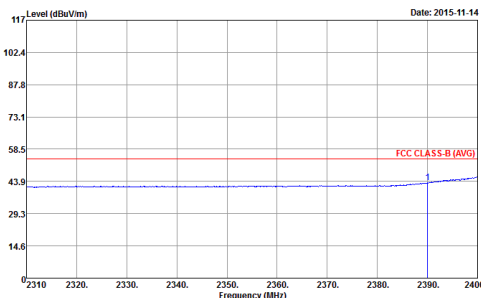


2.4GHz 2400~2483.5MHz

WIFI 802.11g (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
1	Horizontal	Vertical
Peak	Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak	Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak
Avg.	Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL Detector : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak	Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL Detector : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak

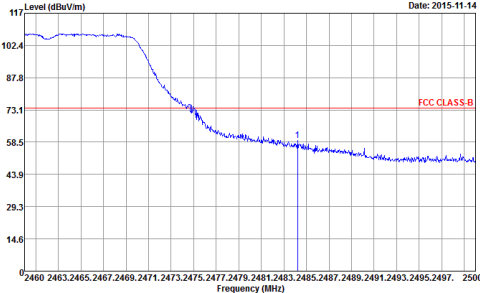
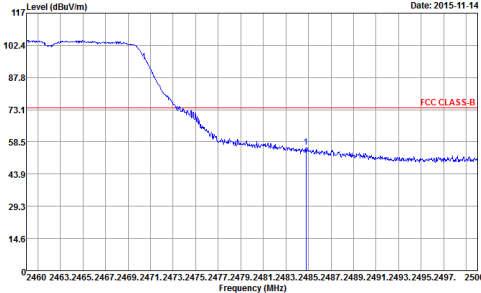
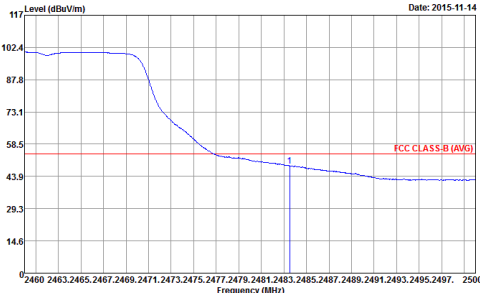
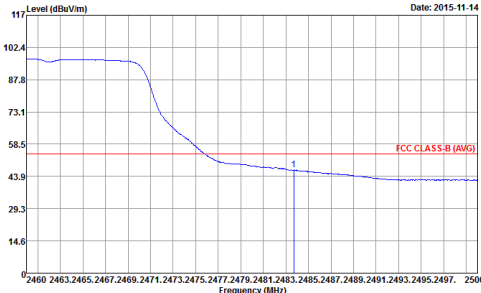


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
1	Horizontal	Vertical
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
1	Horizontal	Vertical
Peak	Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak	Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak
Avg.	Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak	Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak



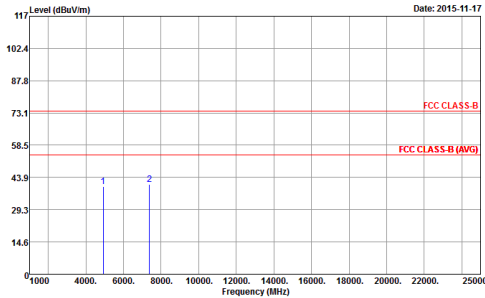
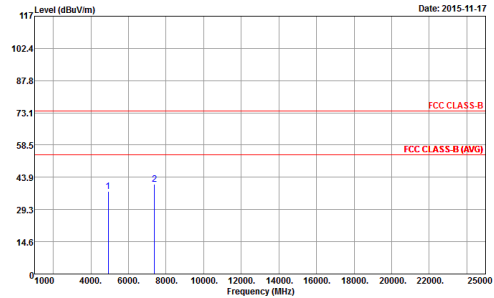
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
1	Horizontal	Vertical
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak

**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 : 03CH11-HY Condition : FCC CLASS-B 3m 9170 SHF HORM_I50809 HORIZONTAL Detector : Peak	Site : 03CH11-HY Condition : FCC CLASS-B 3m 9170 SHF HORM_I50809 VERTICAL Detector : Peak

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH06 2437MHz	
1	Horizontal	Vertical
Peak Avg.	Site : 03CH11-HY Condition : FCC CLASS-B 3m 9170 SHF HORM_I50809 HORIZONTAL Detector : Peak	Site : 03CH11-HY Condition : FCC CLASS-B 3m 9170 SHF HORM_I50809 VERTICAL Detector : Peak

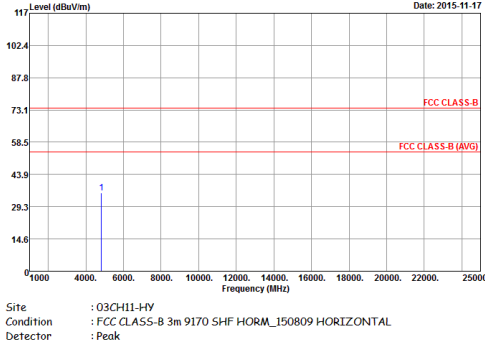
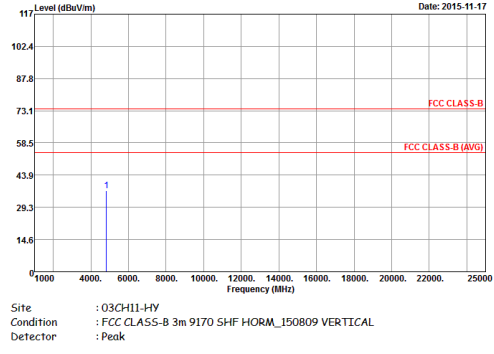


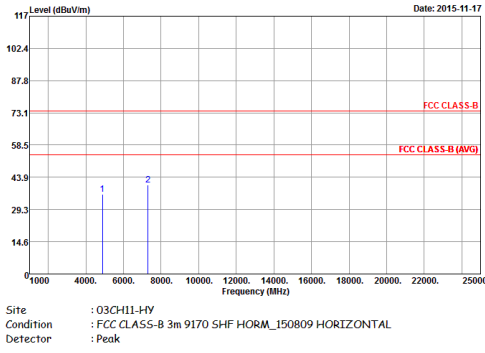
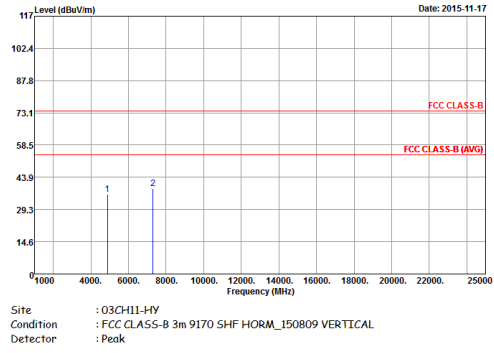
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH11 2462MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B 3m 9170 SHF HORM_150809 HORIZONTAL Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m 9170 SHF HORM_150809 VERTICAL Detector : Peak



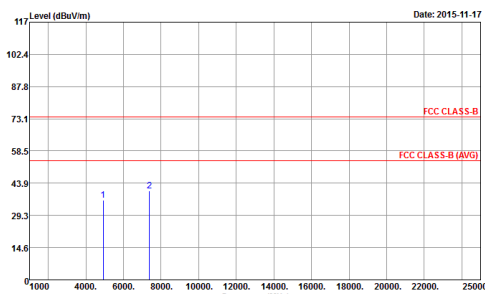
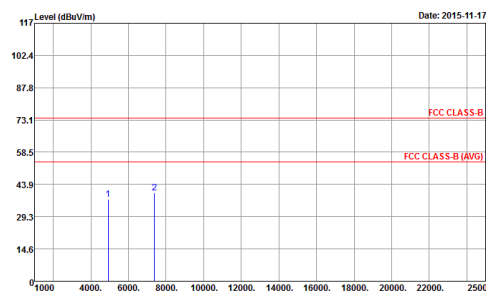
2.4GHz 2400~2483.5MHz

WIFI 802.11g (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B 3m 9170 SHF HORM_150809 HORIZONTAL Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m 9170 SHF HORM_150809 VERTICAL Detector : Peak

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH06 2437MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B 3m 9170 SHF HORM_150809 HORIZONTAL Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m 9170 SHF HORM_150809 VERTICAL Detector : Peak

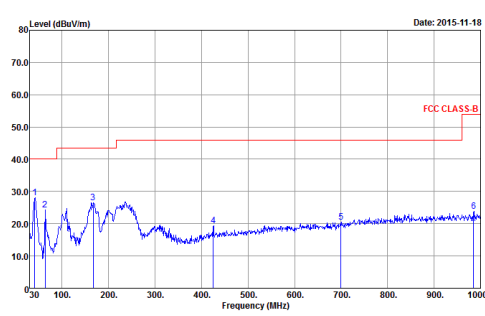
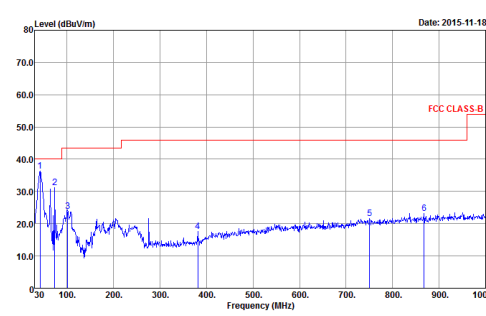


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH11 2462MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B 3m 9170 SHF HORM_150809 HORIZONTAL Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m 9170 SHF HORM_150809 VERTICAL Detector : Peak

2.4GHz 2400~2483.5MHz

Emission below 1GHz

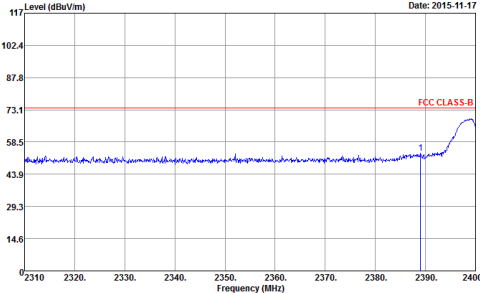
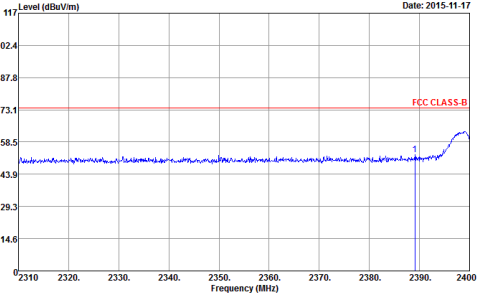
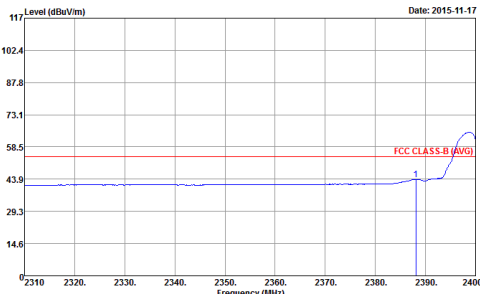
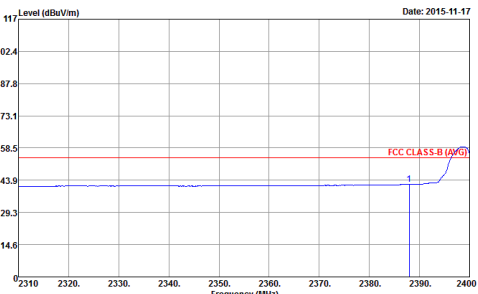
2.4GHz WIFI 802.11b (LF)

WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11b LF	
1	Horizontal	Vertical
QP / Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m CBL6112 HORIZONTAL Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m CBL6112 VERTICAL Detector : Peak



2.4GHz 2400~2483.5MHz

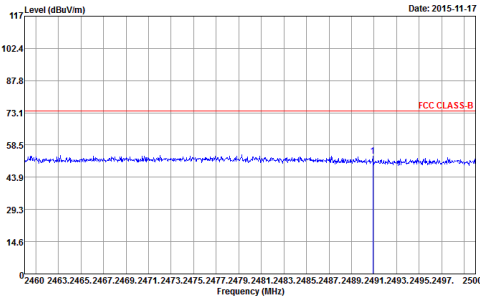
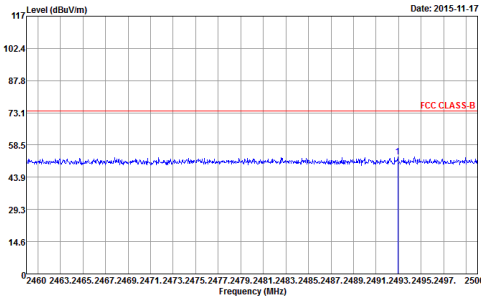
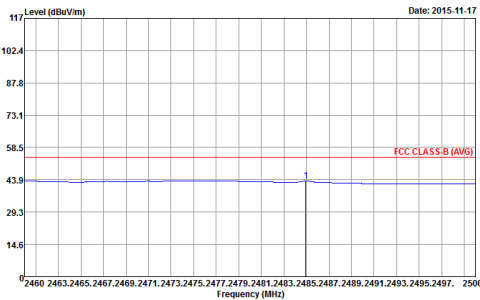
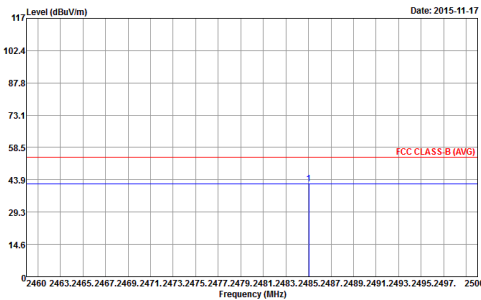
WIFI 802.11b (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
2	Horizontal	Vertical
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak

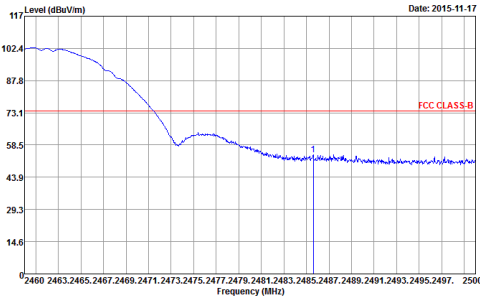
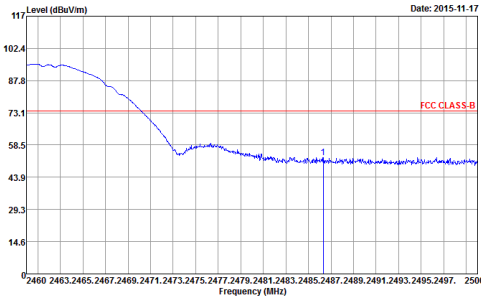
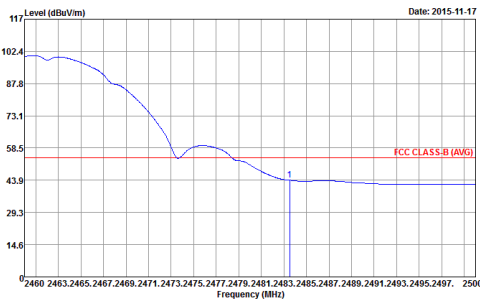
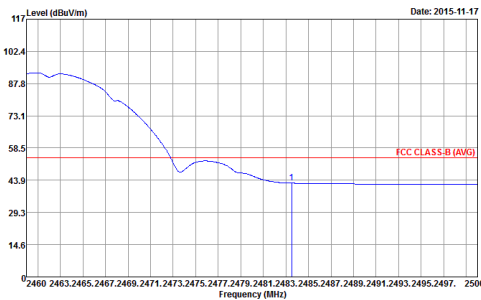


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
2	Horizontal	Vertical
Peak	Level (dBuV/m) vs Frequency (MHz) plot for Horizontal orientation. The y-axis ranges from 14.6 to 117 dBuV/m, and the x-axis ranges from 2310 to 2400 MHz. A red line indicates the FCC CLASS-B limit at 73.1 dBuV/m. The blue trace shows the measured signal, with a peak labeled '1' at approximately 2390 MHz. The date is 2015-11-17. Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak	Level (dBuV/m) vs Frequency (MHz) plot for Vertical orientation. The y-axis ranges from 14.6 to 117 dBuV/m, and the x-axis ranges from 2310 to 2400 MHz. A red line indicates the FCC CLASS-B limit at 73.1 dBuV/m. The blue trace shows the measured signal, with a peak labeled '1' at approximately 2390 MHz. The date is 2015-11-17. Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak
Avg.	Level (dBuV/m) vs Frequency (MHz) plot for Horizontal orientation. The y-axis ranges from 14.6 to 117 dBuV/m, and the x-axis ranges from 2310 to 2400 MHz. A red line indicates the FCC CLASS-B (AVG) limit at 58.5 dBuV/m. The blue trace shows the averaged signal, with a peak labeled '1' at approximately 2390 MHz. The date is 2015-11-17. Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL Detector : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak	Level (dBuV/m) vs Frequency (MHz) plot for Vertical orientation. The y-axis ranges from 14.6 to 117 dBuV/m, and the x-axis ranges from 2310 to 2400 MHz. A red line indicates the FCC CLASS-B (AVG) limit at 58.5 dBuV/m. The blue trace shows the averaged signal, with a peak labeled '1' at approximately 2390 MHz. The date is 2015-11-17. Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL Detector : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
2	Horizontal	Vertical
Peak	 Level (dBuV/m) vs Frequency (MHz) plot for Horizontal polarization. The y-axis ranges from 14.6 to 117 dBuV/m, and the x-axis ranges from 2460 to 2500 MHz. A red line indicates the FCC CLASS-B limit at 73.1 dBuV/m. The measured signal is a noisy blue line that remains below the limit. A vertical blue line marks the peak at 2437 MHz. Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL Detector : Peak	 Level (dBuV/m) vs Frequency (MHz) plot for Vertical polarization. The y-axis ranges from 14.6 to 117 dBuV/m, and the x-axis ranges from 2460 to 2500 MHz. A red line indicates the FCC CLASS-B limit at 73.1 dBuV/m. The measured signal is a noisy blue line that remains below the limit. A vertical blue line marks the peak at 2437 MHz. Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL Detector : Peak
Avg.	 Level (dBuV/m) vs Frequency (MHz) plot for Horizontal polarization (Average). The y-axis ranges from 14.6 to 117 dBuV/m, and the x-axis ranges from 2460 to 2500 MHz. A red line indicates the FCC CLASS-B (AVG) limit at 58.5 dBuV/m. The measured signal is a smooth blue line that remains below the limit. A vertical blue line marks the average at 2437 MHz. Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL Detector : Peak	 Level (dBuV/m) vs Frequency (MHz) plot for Vertical polarization (Average). The y-axis ranges from 14.6 to 117 dBuV/m, and the x-axis ranges from 2460 to 2500 MHz. A red line indicates the FCC CLASS-B (AVG) limit at 58.5 dBuV/m. The measured signal is a smooth blue line that remains below the limit. A vertical blue line marks the average at 2437 MHz. Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL Detector : Peak



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
2	Horizontal	Vertical
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL Detector : Peak
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL Detector : Peak

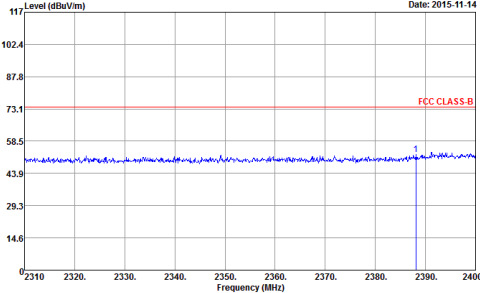
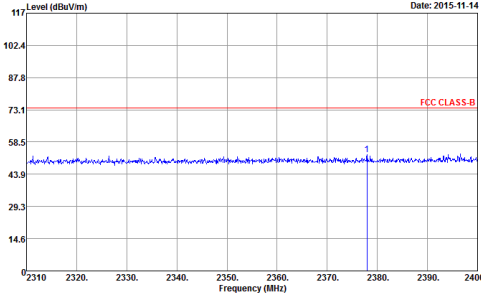
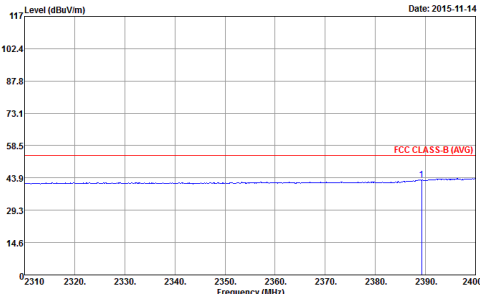
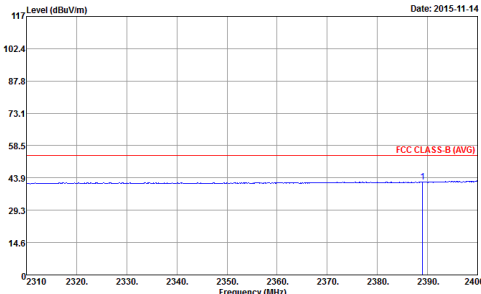


2.4GHz 2400~2483.5MHz

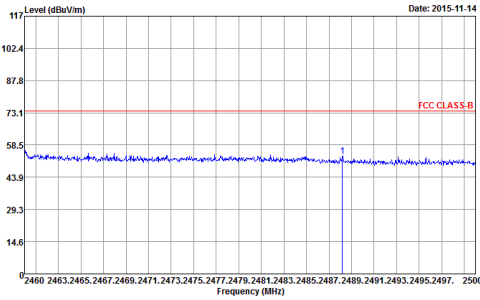
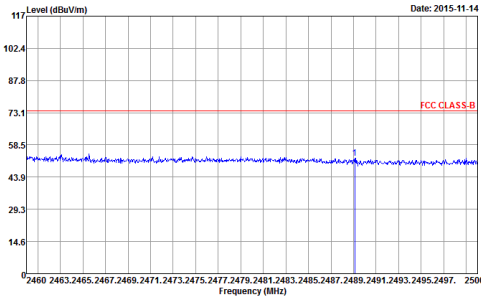
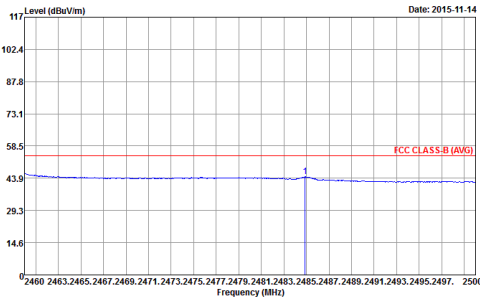
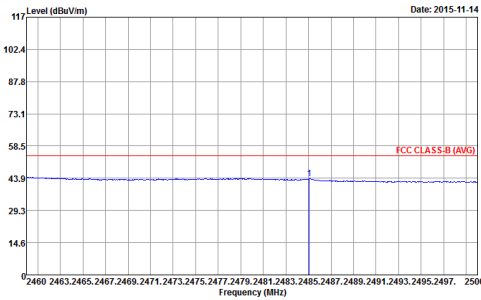
WIFI 802.11g (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
2	Horizontal	Vertical
Peak	Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak	Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak
Avg.	Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:1000KHz SWT:Auto Detector : Peak	Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:1000KHz SWT:Auto Detector : Peak

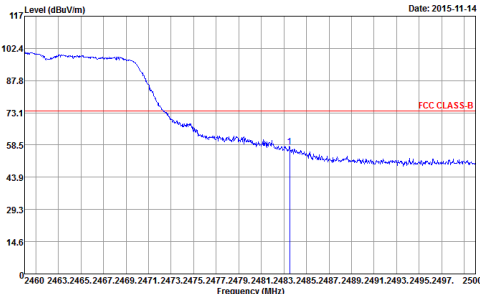
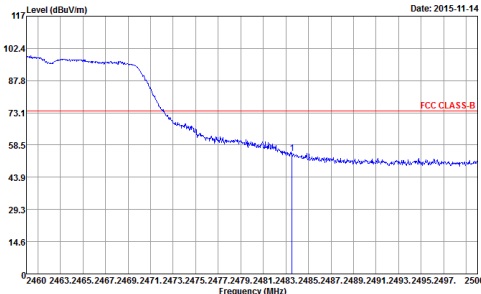
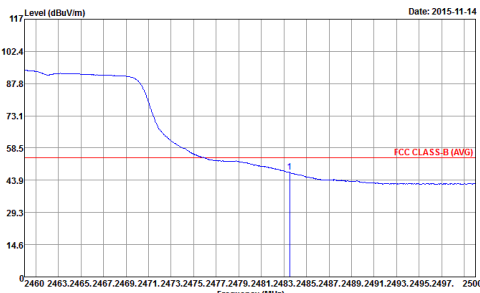
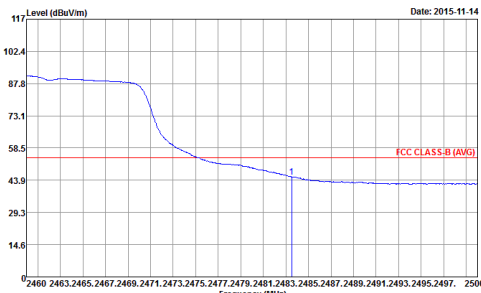


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
2	Horizontal	Vertical
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
2	Horizontal	Vertical
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL Detector : Peak
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL Detector : Peak



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
2	Horizontal	Vertical
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL Detector : Peak
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL Detector : Peak

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

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH01 2412MHz	
2	Horizontal	Vertical
Peak Avg.	Site : 03CH11-HY Condition : FCC CLASS-B 3m 9170 SHF HORM_150809 HORIZONTAL Detector : Peak	Site : 03CH11-HY Condition : FCC CLASS-B 3m 9170 SHF HORM_150809 VERTICAL Detector : Peak

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH06 2437MHz	
2	Horizontal	Vertical
Peak Avg.	Site : 03CH11-HY Condition : FCC CLASS-B 3m 9170 SHF HORM_150809 HORIZONTAL Detector : Peak	Site : 03CH11-HY Condition : FCC CLASS-B 3m 9170 SHF HORM_150809 VERTICAL Detector : Peak



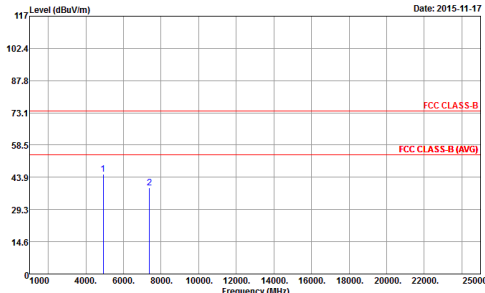
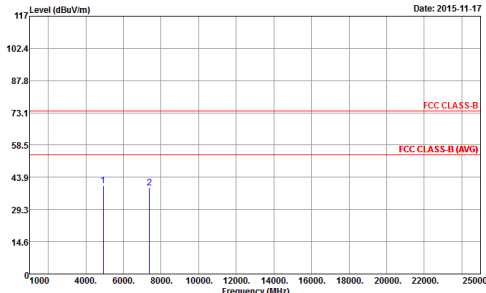
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH11 2462MHz	
2	Horizontal	Vertical
Peak Avg.	Level (dBuV/m) Date: 2015-11-17 Site : 03CH11-HY Condition : FCC CLASS-B 3m 9170 SHF HORM_150809 HORIZONTAL Detector : Peak	Level (dBuV/m) Date: 2015-11-17 Site : 03CH11-HY Condition : FCC CLASS-B 3m 9170 SHF HORM_150809 VERTICAL Detector : Peak

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

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH01 2412MHz	
2	Horizontal	Vertical
Peak Avg.	Site : 03CH11-HY Condition : FCC CLASS-B 3m 9170 SHF HORM_150809 HORIZONTAL Detector : Peak	Site : 03CH11-HY Condition : FCC CLASS-B 3m 9170 SHF HORM_150809 VERTICAL Detector : Peak

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH06 2437MHz	
2	Horizontal	Vertical
Peak Avg.	Site : 03CH11-HY Condition : FCC CLASS-B 3m 9170 SHF HORM_150809 HORIZONTAL Detector : Peak	Site : 03CH11-HY Condition : FCC CLASS-B 3m 9170 SHF HORM_150809 VERTICAL Detector : Peak

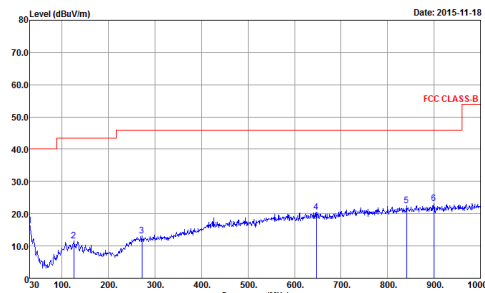
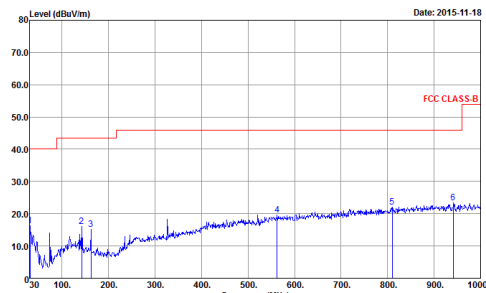


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH11 2462MHz	
2	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B 3m 9170 SHF HORM_150809 HORIZONTAL Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m 9170 SHF HORM_150809 VERTICAL Detector : Peak

2.4GHz 2400~2483.5MHz

Emission below 1GHz

2.4GHz WIFI 802.11g (LF)

WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11g LF	
2	Horizontal	Vertical
QP / Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m CBL6112 HORIZONTAL Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m CBL6112 VERTICAL Detector : Peak

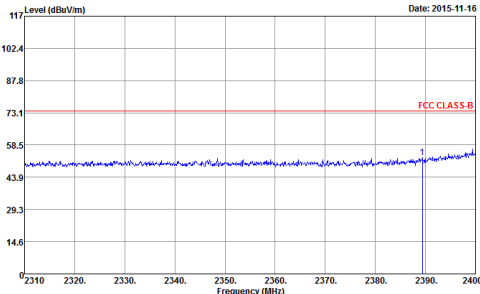
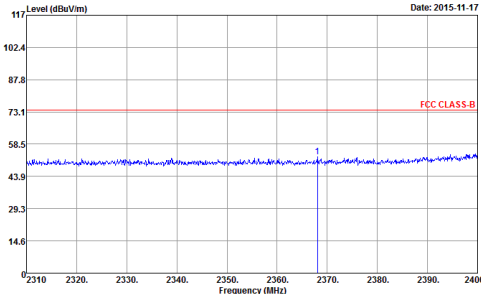
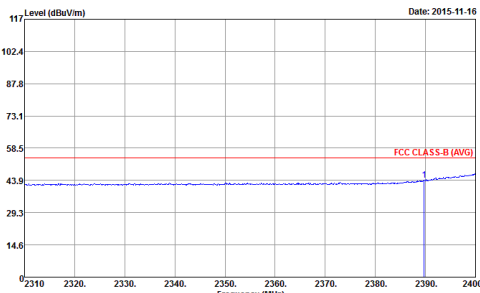
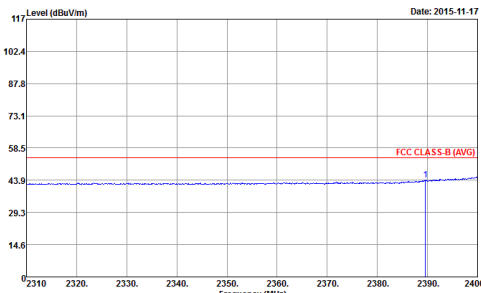


2.4GHz 2400~2483.5MHz

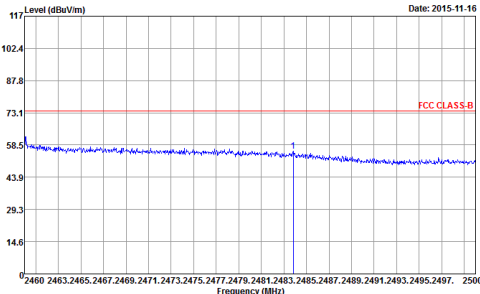
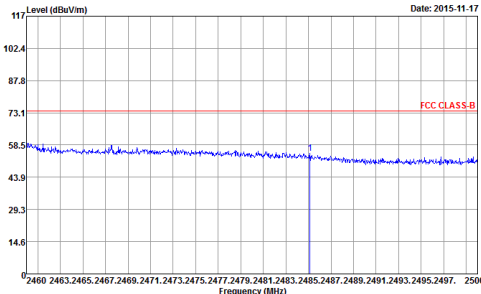
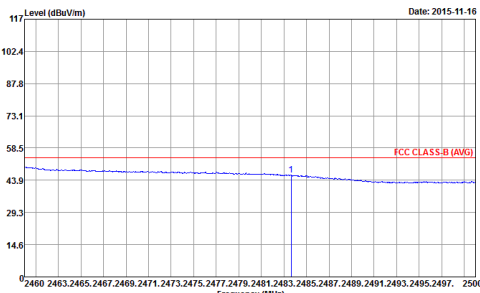
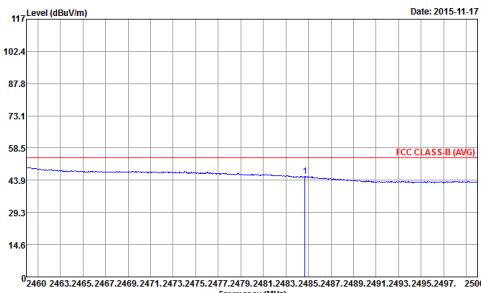
WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1+2	Horizontal	Vertical
Peak	Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak	Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak
Avg.	Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL Detector : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak	Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL Detector : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - L	
1+2	Horizontal	Vertical
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL Detector : Peak
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL Detector : Peak

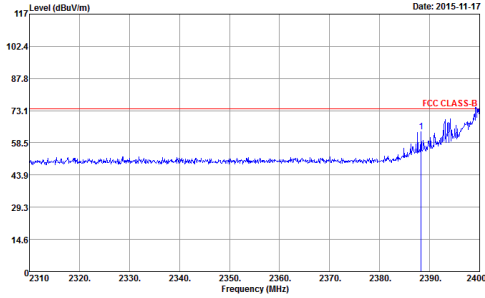
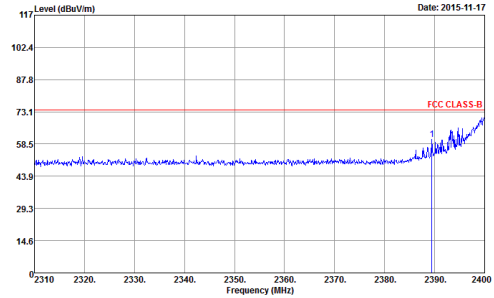
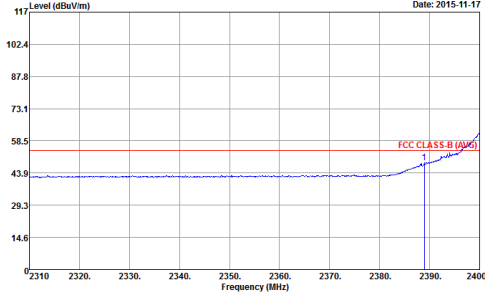
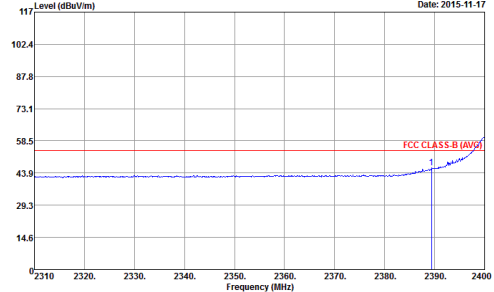


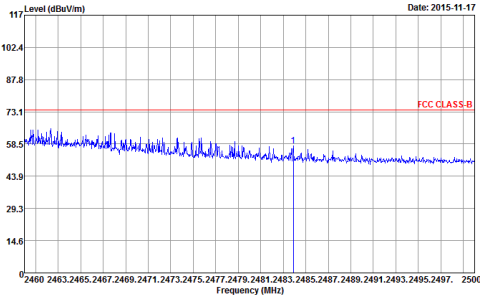
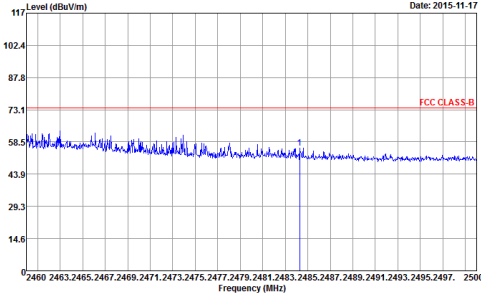
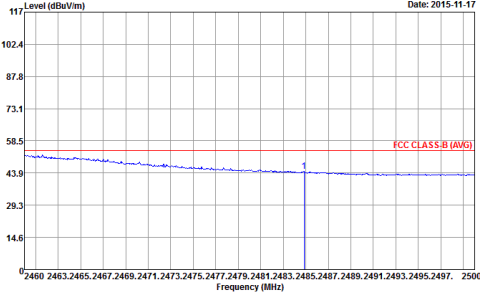
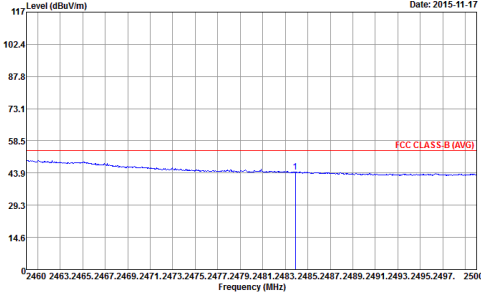
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
1+2	Horizontal	Vertical
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL Detector : Peak
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL Detector : Peak



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1+2	Horizontal	Vertical
Peak	Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL Detector : Peak	Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL Detector : Peak
Avg.	Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL Detector : Peak	Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL Detector : Peak

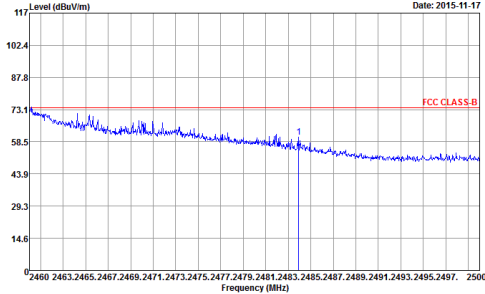
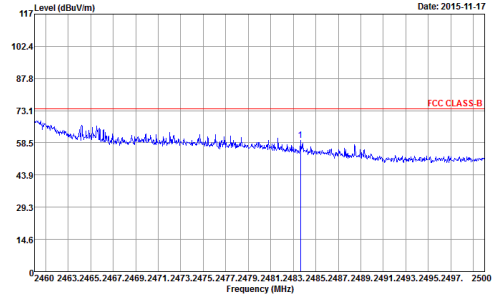
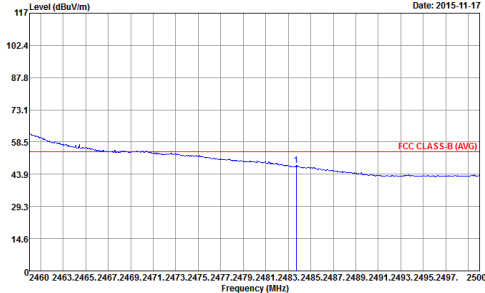
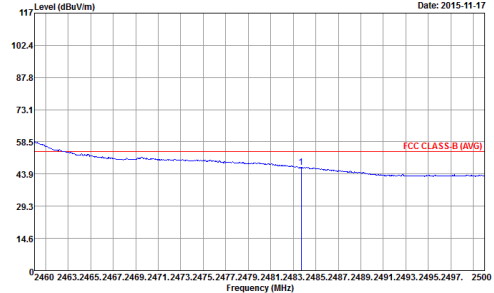
2.4GHz 2400~2483.5MHz
WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - L	
1	Horizontal	Vertical
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL Detector : Peak
	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL Detector : Peak

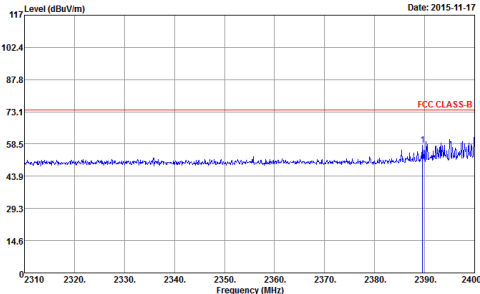
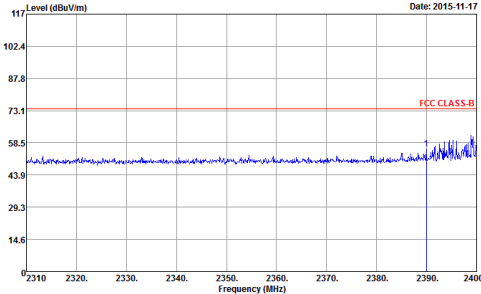
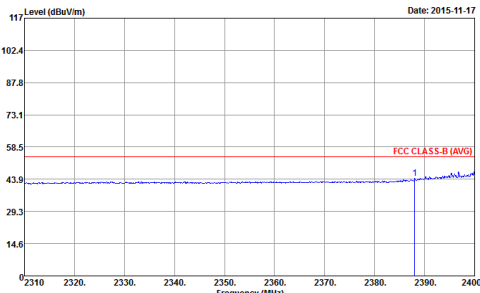
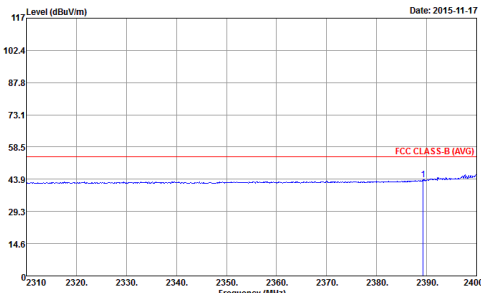
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - R	
1	Horizontal	Vertical
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL Detector : Peak
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL Detector : Peak



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH06 2437MHz - L	
1	Horizontal	Vertical
Peak	Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak	Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak
Avg.	Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak	Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH06 2437MHz - R	
1	Horizontal	Vertical
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL Detector : Peak
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL Detector : Peak

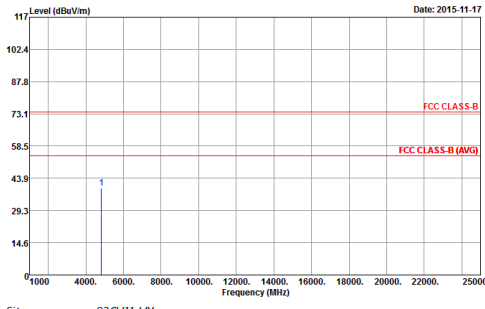
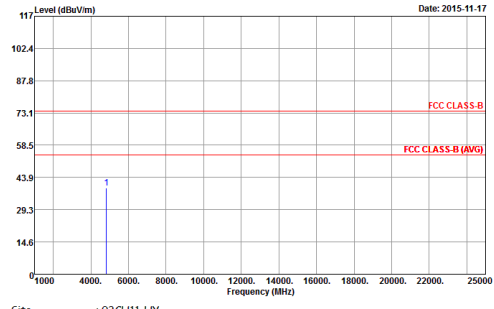


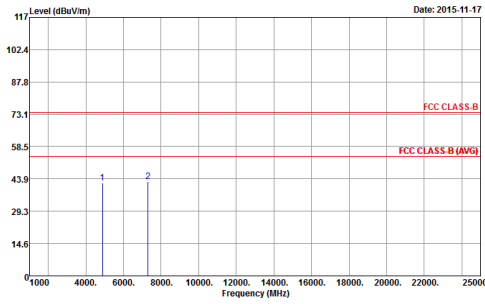
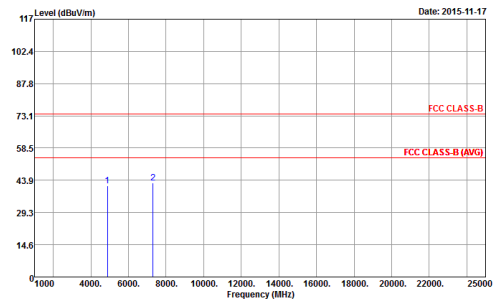
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - L	
1	Horizontal	Vertical
Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak
Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - R	
1	Horizontal	Vertical
Peak	Level (dBuV/m) vs Frequency (MHz) plot for Horizontal polarization. The y-axis ranges from 14.6 to 117 dBuV/m, and the x-axis ranges from 2460 to 2500 MHz. A red line indicates the FCC CLASS-B limit at 73.1 dBuV/m. The blue line shows the measured signal, which is below the limit. A vertical blue line marks the peak at 2452 MHz. Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL Detector : Peak	Level (dBuV/m) vs Frequency (MHz) plot for Vertical polarization. The y-axis ranges from 14.6 to 117 dBuV/m, and the x-axis ranges from 2460 to 2500 MHz. A red line indicates the FCC CLASS-B limit at 73.1 dBuV/m. The blue line shows the measured signal, which is below the limit. A vertical blue line marks the peak at 2452 MHz. Site : 03CH11-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL Detector : Peak
Avg.	Level (dBuV/m) vs Frequency (MHz) plot for Horizontal polarization. The y-axis ranges from 14.6 to 117 dBuV/m, and the x-axis ranges from 2460 to 2500 MHz. A red line indicates the FCC CLASS-B (AVG) limit at 58.5 dBuV/m. The blue line shows the measured signal, which is below the limit. A vertical blue line marks the peak at 2452 MHz. Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL Detector : Peak	Level (dBuV/m) vs Frequency (MHz) plot for Vertical polarization. The y-axis ranges from 14.6 to 117 dBuV/m, and the x-axis ranges from 2460 to 2500 MHz. A red line indicates the FCC CLASS-B (AVG) limit at 58.5 dBuV/m. The blue line shows the measured signal, which is below the limit. A vertical blue line marks the peak at 2452 MHz. Site : 03CH11-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL Detector : Peak

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+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B 3m 9170 SHF HORM_150809 HORIZONTAL Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m 9170 SHF HORM_150809 VERTICAL Detector : Peak

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH06 2437MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B 3m 9170 SHF HORM_150809 HORIZONTAL Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m 9170 SHF HORM_150809 VERTICAL Detector : Peak

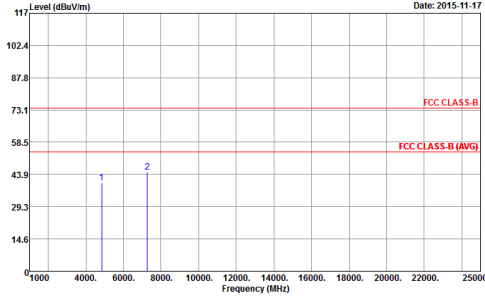
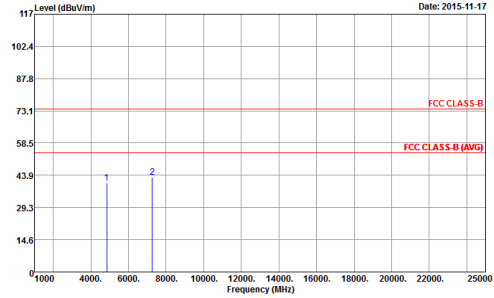


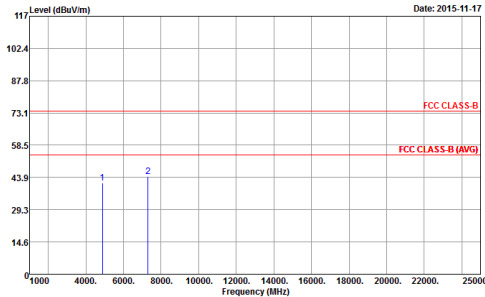
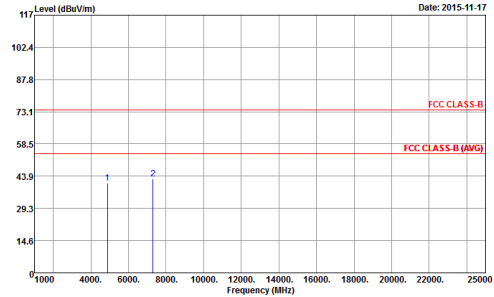
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1+2	Horizontal	Vertical
Peak Avg.	Level (dBuV/m) Date: 2015-11-17 Site : 03CH11-HY Condition : FCC CLASS-B 3m 9170 SHF HORM_150809 HORIZONTAL Detector : Peak	Level (dBuV/m) Date: 2015-11-17 Site : 03CH11-HY Condition : FCC CLASS-B 3m 9170 SHF HORM_150809 VERTICAL Detector : Peak



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+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B 3m 9170 SHF HORM_150809 HORIZONTAL Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m 9170 SHF HORM_150809 VERTICAL Detector : Peak

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT40 CH06 2437MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-HY Condition : FCC CLASS-B 3m 9170 SHF HORM_150809 HORIZONTAL Detector : Peak	 Site : 03CH11-HY Condition : FCC CLASS-B 3m 9170 SHF HORM_150809 VERTICAL Detector : Peak



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT40 CH09 2452MHz	
1+2	Horizontal	Vertical
Peak Avg.	Site : 03CH11-HY Condition : FCC CLASS-B 3m 9170 SHF HORM_150809 HORIZONTAL Detector : Peak	Site : 03CH11-HY Condition : FCC CLASS-B 3m 9170 SHF HORM_150809 VERTICAL Detector : Peak

2.4GHz 2400~2483.5MHz**Emission below 1GHz****2.4GHz WIFI 802.11n HT40 (LF)**

WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11n HT40 LF	
1+2	Horizontal	Vertical
QP / Peak	Site : 03CH11-HY Condition : FCC CLASS-B 3m CBL6112 HORIZONTAL Detector : Peak	Site : 03CH11-HY Condition : FCC CLASS-B 3m CBL6112 VERTICAL Detector : Peak