FCC RF Test Report

APPLICANT	**:**	**Altocumulous LLC**
EQUIPMENT	**:**	**Digital Media Receiver**
MODEL NAME	**:**	**RS03QR**
FCC ID	**:**	**2AHSE-2045**
STANDARD	**:**	**FCC Part 15 Subpart C §15.247**
CLASSIFICATION	**:**	**(DTS) Digital Transmission System**

The testing was completed on Jun. 29, 2016. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

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

Reviewed by: Joseph Lin / Supervisor

Approved by: Jones Tsai / Manager

Testing Laboratory 1190

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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APPENDIX A. CONDUCTED TEST RESULTS

APPENDIX B. RADIATED SPURIOUS EMISSION

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR631725-01C	Rev. 01	Initial issue of report	Jul. 01, 2016
FR631725-01C	Rev. 02	Update report of revising AC Conducted Emission test data and RSE test data	Jul. 19, 2016

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result
3.1	15.247(a)(2)	6dB Bandwidth	≥ 0.5MHz	Pass
3.1	-	99% Bandwidth	-	Pass
3.2	15.247(b)	Power Output Measurement	≤ 30dBm	Pass
3.3	15.247(e)	Power Spectral Density	≤ 8dBm/3kHz	Pass
3.4	15.247(d)	Conducted Band Edges	≤ 20dBc	Pass
		Conducted Spurious Emission		Pass
3.5	15.247(d)	Radiated Band Edges and Radiated Spurious Emission	15.209(a) & 15.247(d)	Pass
3.6	15.207	AC Conducted Emission	15.207(a)	Pass
3.7	15.203 & 15.247(b)	Antenna Requirement	N/A	Pass

1 General Description

1.1 Applicant

Altocumulous LLC

300 E. Business Way, Suite 200, Summit Woods Corporate Center Cincinnati, Ohio 45241

1.2 Product Feature of Equipment Under Test

Product Feature	
Equipment	Digital Media Receiver
Model Name	RS03QR
FCC ID	2AHSE-2045
EUT supports Radios application	WLAN 11b/g/n HT20 WLAN 11a/n HT20/HT40 Bluetooth v4.1 EDR/LE

1.3 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 : 22.92 dBm (0.1959 W) 802.11g : 25.56 dBm (0.3597 W) 802.11n HT20 : 25.51 dBm (0.3556 W) **<Ant. 2>** 802.11b : 24.01 dBm (0.2518 W) 802.11g : 25.24 dBm (0.3342 W) 802.11n HT20 : 25.26 dBm (0.3357 W)
99% Occupied Bandwidth	802.11b : 14.55MHz 802.11g : 18.60MHz 802.11n HT20 : 19.00MHz
Antenna Type	**<Ant. 1> :** Fixed Internal type with gain 1.47 dBi **<Ant. 2> :** Fixed Internal type with gain 2.36 dBi
Type of Modulation	802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)
Antenna Function for Transmitter	<table><tr><td></td><td>Ant. 1</td><td>Ant. 2</td></tr><tr><td>802.11 b/g/n</td><td>V</td><td>V</td></tr></table>

1.4 Modification of EUT

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

1.5 Testing Location

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

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

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

Test Site	SPORTON INTERNATIONAL INC.
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd Rd. Guishan Dist, Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	**Sporton Site No.**
	03CH13-HY

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

1.6 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15 Subpart C §15.247
- FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r05
- FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ANSI C63.10-2013

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

2 Test Configuration of Equipment Under Test

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conducted emission (150 kHz to 30 MHz) and radiated emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

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

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

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
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)	22.92	22.64	22.57	20.69

802.11g								
Data Rate (MHz)	6M bps	9M bps	12M bps	18M bps	24M bps	36M bps	48M bps	54M bps
Peak Power (dBm)	25.56	25.36	25.27	25.23	25.34	25.23	25.30	25.31

2.4GHz 802.11n HT20								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	25.51	25.32	25.24	25.25	25.17	25.37	25.46	25.26

<Ant. 2>

802.11b				
Data Rate (MHz)	1M bps	2M bps	5.5M bps	11M bps
Peak Power (dBm)	24.01	23.92	23.86	23.79

802.11g								
Data Rate (MHz)	6M bps	9M bps	12M bps	18M bps	24M bps	36M bps	48M bps	54M bps
Peak Power (dBm)	25.24	25.16	25.00	24.82	25.07	25.09	25.12	24.93

2.4GHz 802.11n HT20								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	25.26	25.02	24.95	25.02	25.06	25.07	24.90	24.98

2.3 Test Mode

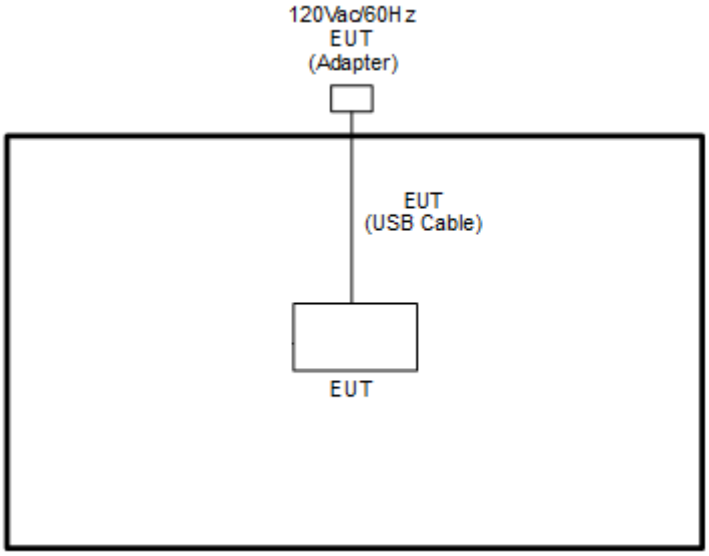
Final test mode of conducted test items and radiated spurious emissions are considering the modulation and worse data rates from the power table described in section 2.2.

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

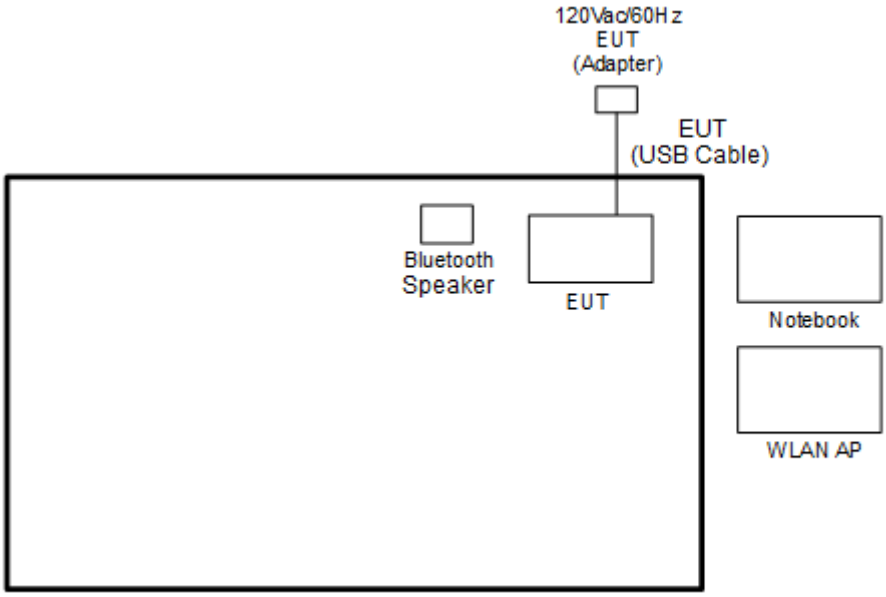
Test Cases	
AC Conducted Emission	Mode 1 :WLAN (2.4GHz) Link + Bluetooth Link + MP3 + USB Cable (Charging from Adapter)

2.4 Connection Diagram of Test System

<WLAN Tx Mode>



<AC Conducted Emission Mode>



2.5 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Bluetooth Speaker	JAWBONE	JAMBOX	V3J-JBE	N/A	N/A
2.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m
3.	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

2.6 EUT Operation Test Setup

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

2.7 Measurement Results Explanation Example

For all conducted test items:

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

Example:

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

Offset = RF cable loss + attenuator factor.

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

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

= 4.2 + 10 = 14.2 (dB)

3 Test Result

3.1 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.

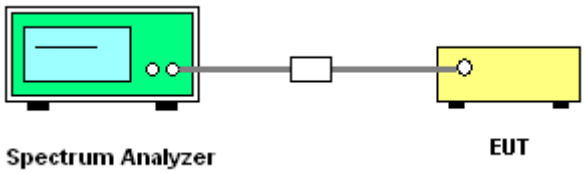
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

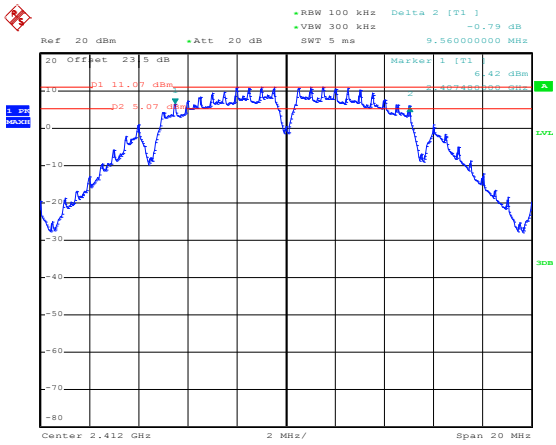
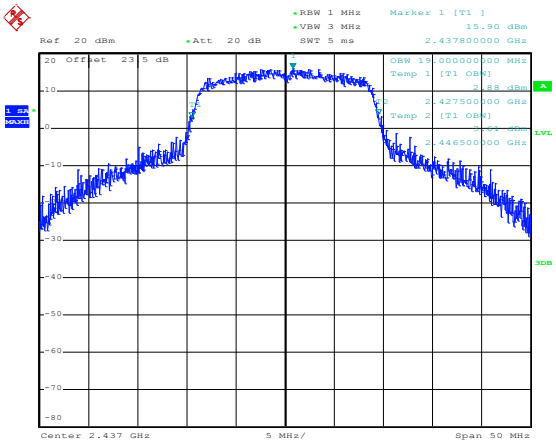
1. The testing follows FCC KDB Publication No. 558074 DTS D01 Meas. Guidance v03r05.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit 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.

Minimum 6dB Bandwidth	Maximum 99% Occupied Bandwidth
	
Date: 22.JUN.2016 23:59:44	Date: 18.JUN.2016 20:32:57

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.

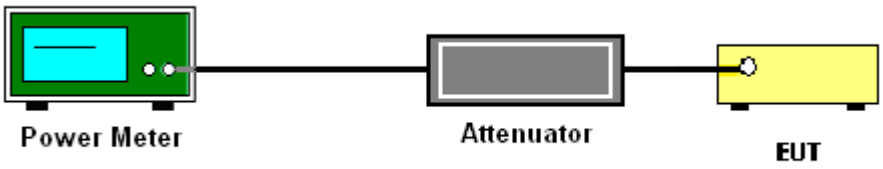
3.2.2 Measuring Instruments

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 v03r05 section 9.1.2 PKPM1 Peak power meter method.
2. The RF output of EUT was connected to the power meter by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Measure the conducted output power and record the results in the test report.

3.2.4 Test Setup



3.2.5 Test Result of Peak Output Power

Please refer to Appendix A of this test report.

3.2.6 Test Result of Average output Power (Reporting Only)

Please refer to Appendix A

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

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

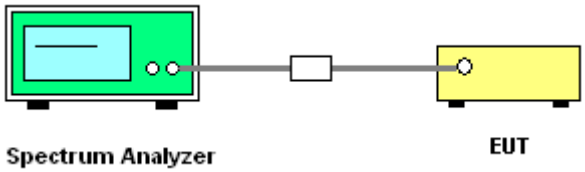
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

1. The testing follows Measurement Procedure 10.2 Method PKPSD of FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r05.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 3 kHz. Video bandwidth VBW = 10 kHz In order to make an accurate measurement, set the span to 1.5 times DTS Channel Bandwidth. (6dB BW)
5. Detector = peak, Sweep time = auto couple, Trace mode = max hold, Allow trace to fully stabilize. Use the peak marker function to determine the maximum power level.
6. Measure and record the results in the test report.

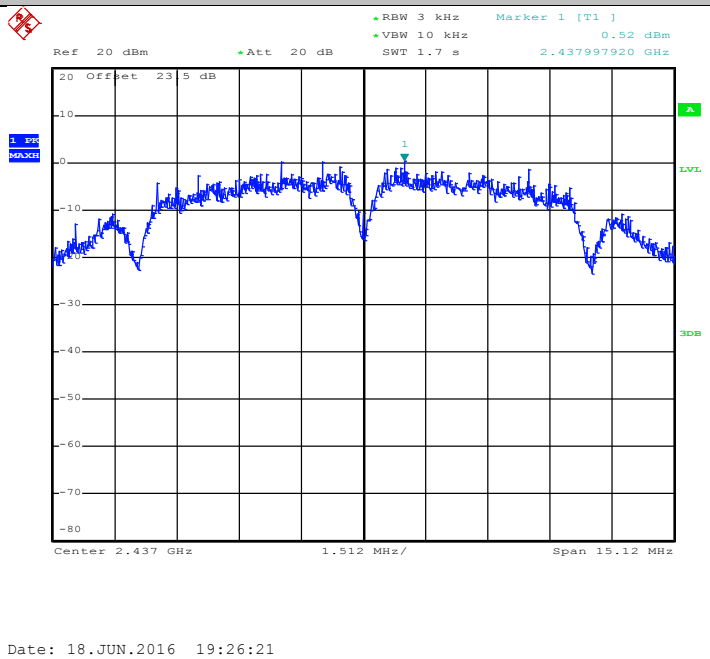
3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

Worst Case Power Density (dBm/3kHz)



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).

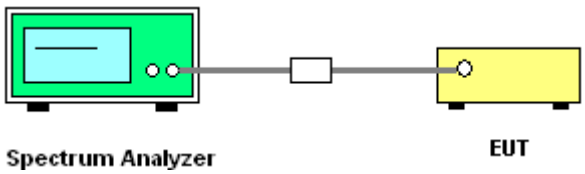
3.4.2 Measuring Instruments

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 v03r05.
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



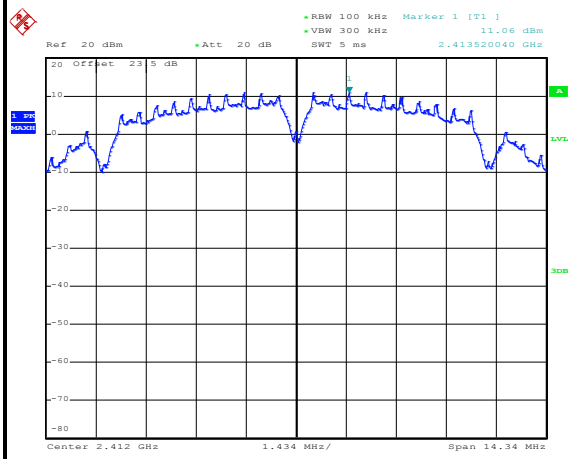
3.4.5 Test Result of Conducted Band Edges and Spurious Emission

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

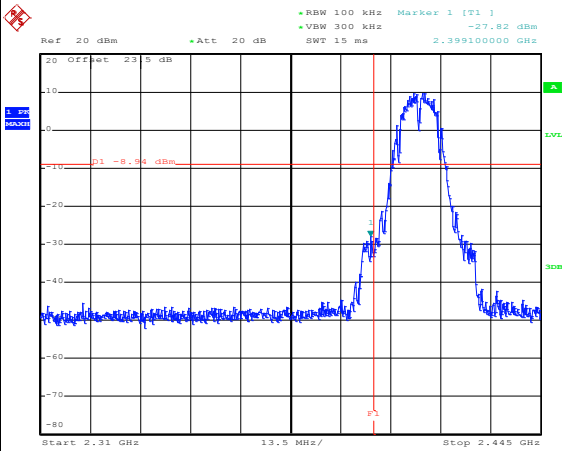
Number of TX	1	**Ant. :**	1
Test Mode :	802.11b	**Temperature :**	21~25℃
Test Band :	2.4GHz Low	**Relative Humidity :**	51~54%
Test Channel :	01	**Test Engineer :**	Osolemio Chang

WLAN 802.11b Channel 01

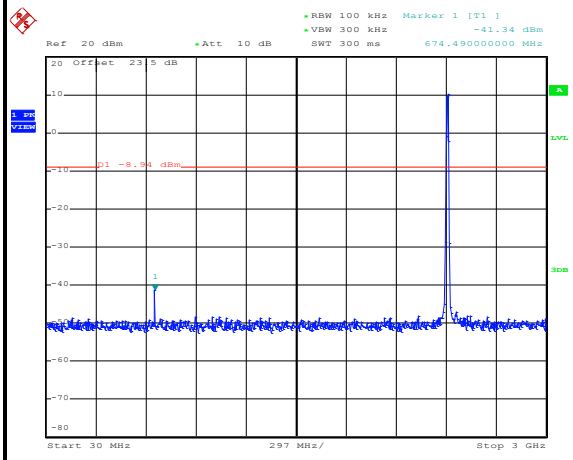
100kHz PSD reference Level



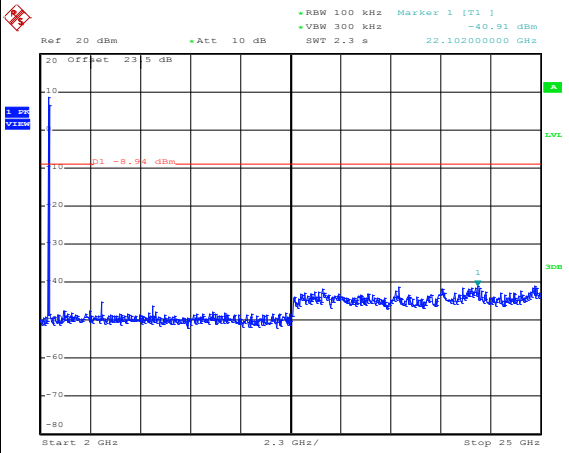
Low Channel Plot



Spurious Emission 30MHz~3GHz



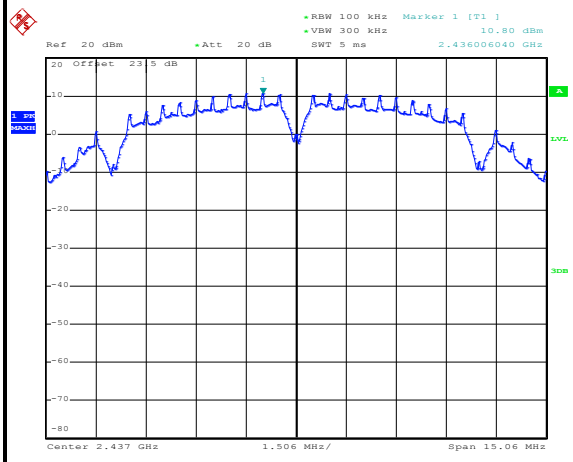
Spurious Emission 2GHz~25GHz



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

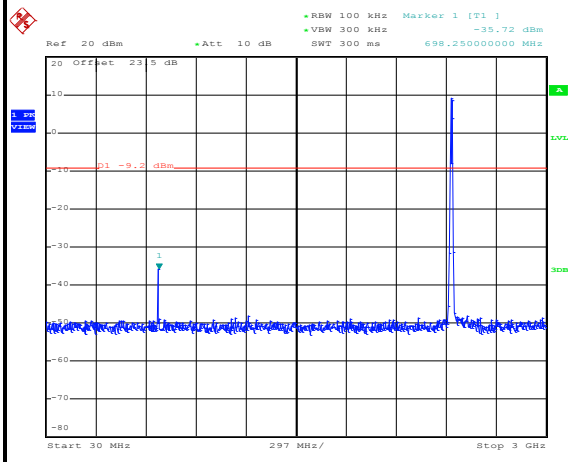
WLAN 802.11b Channel 06

100kHz PSD reference Level



Date: 18.JUN.2016 19:09:50

Spurious Emission 30MHz~3GHz



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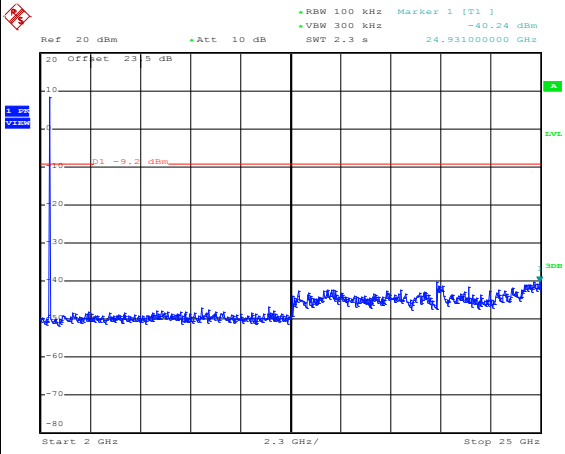
Spurious Emission 2GHz~25GHz

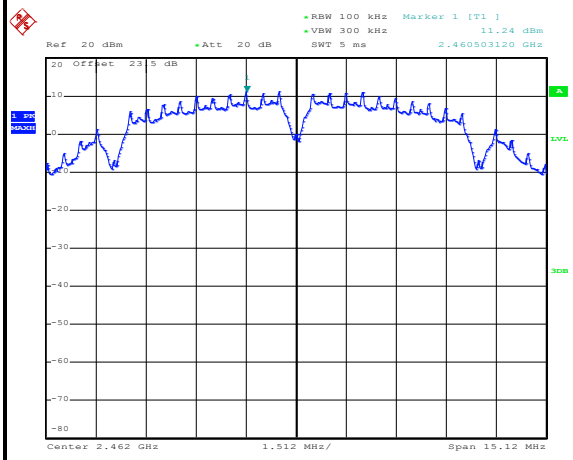


Date: 18.JUN.2016 19:10:14

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

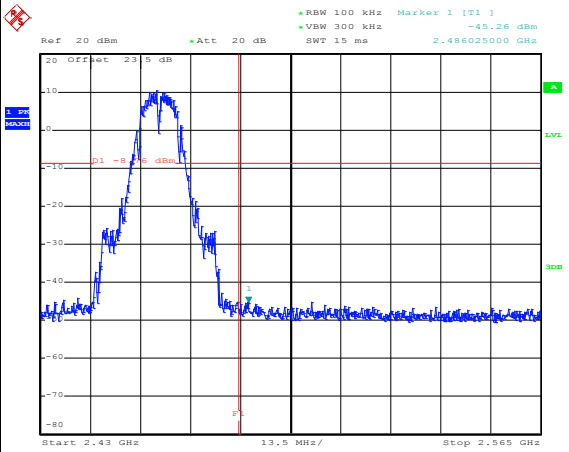
WLAN 802.11b Channel 11

100kHz PSD reference Level



Date: 18.JUN.2016 19:14:07

High Channel Plot



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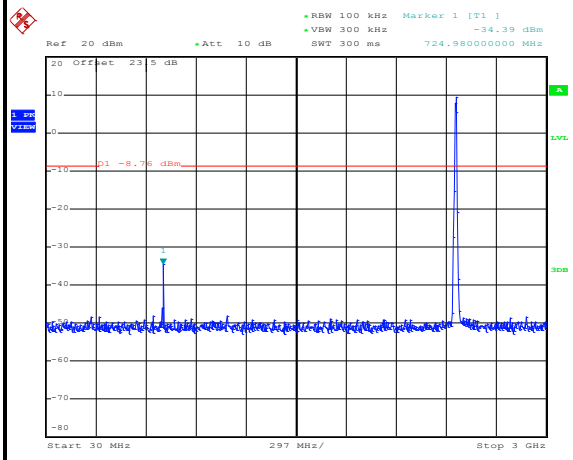
Spurious Emission 30MHz~3GHz



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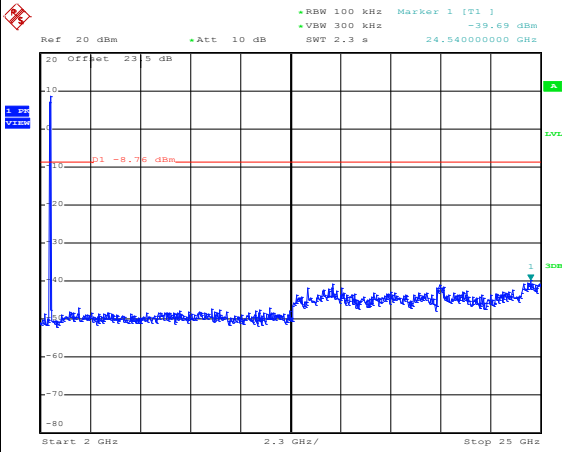
Spurious Emission 2GHz~25GHz

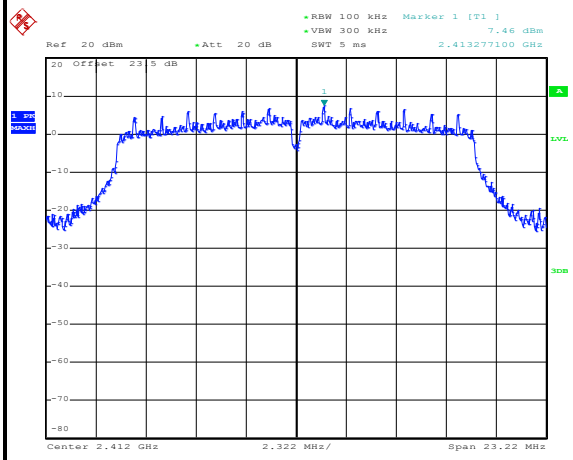


Date: 18.JUN.2016 19:14:57

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

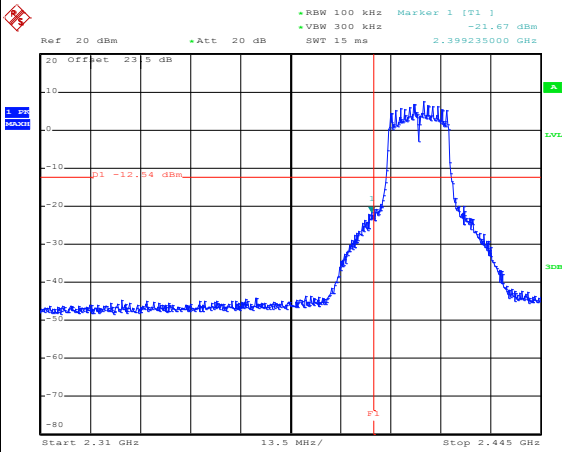
WLAN 802.11g Channel 01

100kHz PSD reference Level



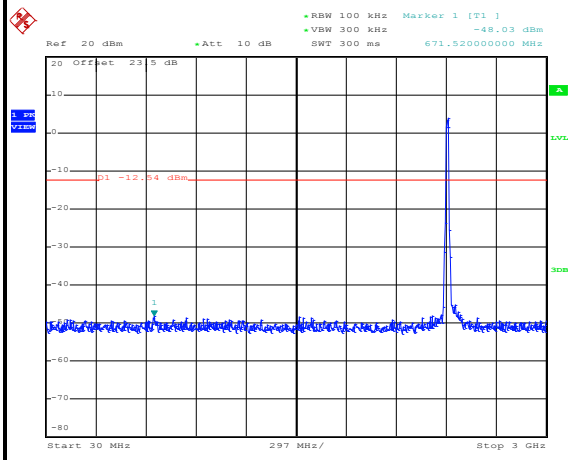
Date: 18.JUN.2016 19:37:20

Low Channel Plot



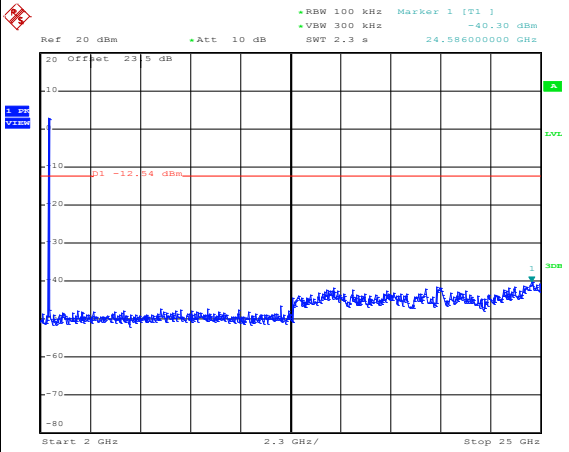
Date: 18.JUN.2016 19:38:14

Spurious Emission 30MHz~3GHz



Date: 18.JUN.2016 19:38:25

Spurious Emission 2GHz~25GHz

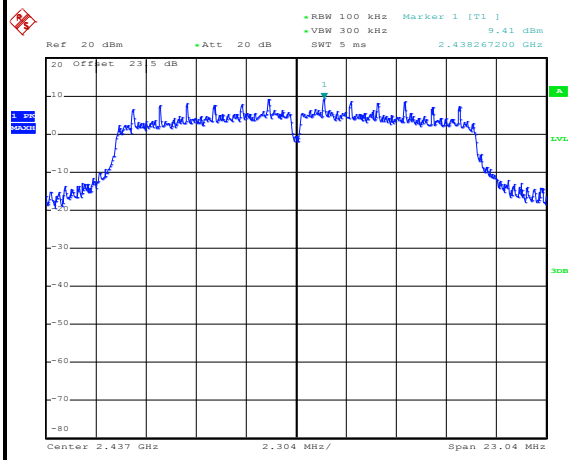


Date: 18.JUN.2016 19:38:33

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

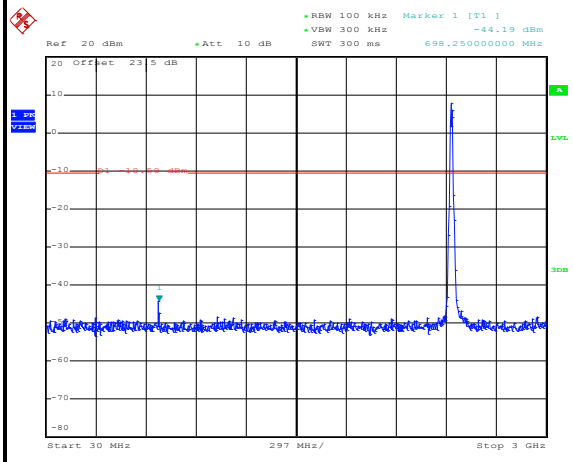
WLAN 802.11g Channel 06

100kHz PSD reference Level



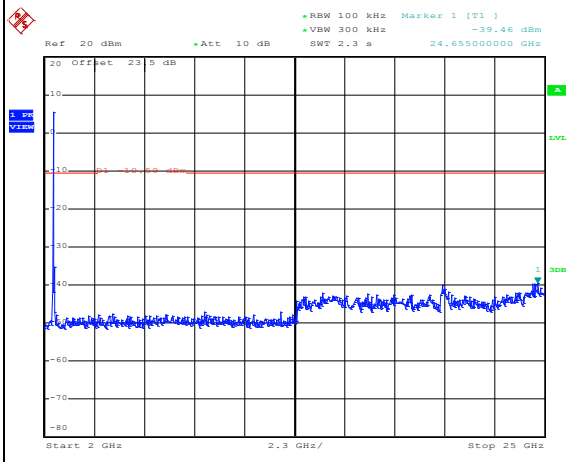
Date: 18.JUN.2016 19:43:39

Spurious Emission 30MHz~3GHz



Date: 18.JUN.2016 19:43:53

Spurious Emission 2GHz~25GHz

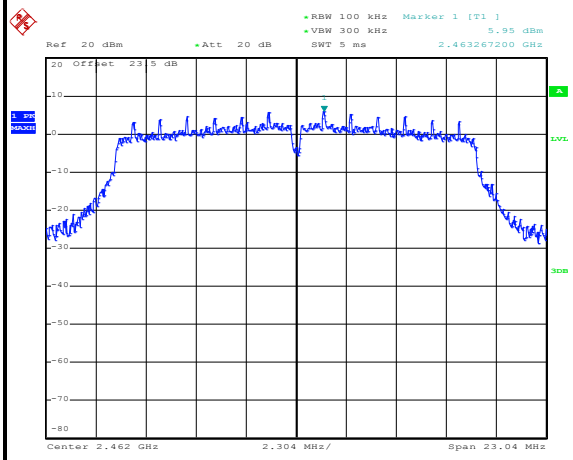


Date: 18.JUN.2016 19:44:01

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

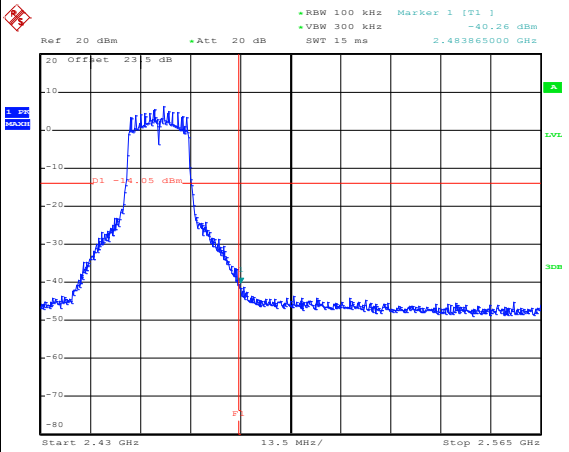
WLAN 802.11g Channel 11

100kHz PSD reference Level



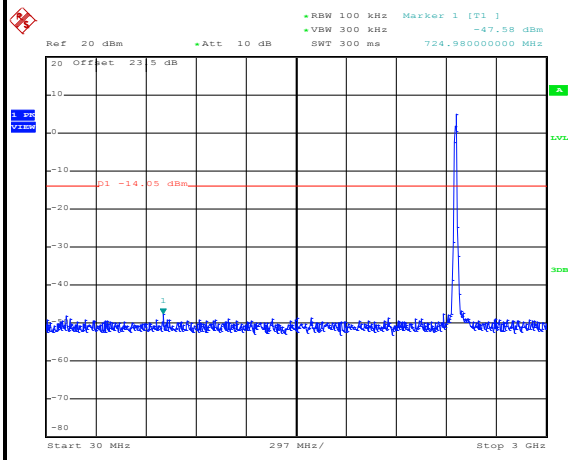
Date: 18.JUN.2016 19:47:50

High Channel Plot



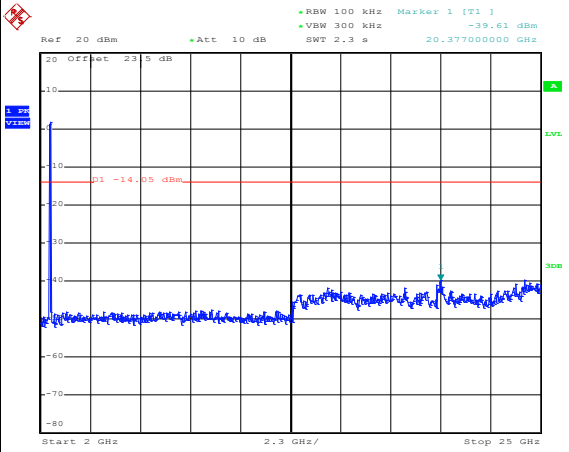
Date: 18.JUN.2016 19:48:50

Spurious Emission 30MHz~3GHz



Date: 18.JUN.2016 19:49:05

Spurious Emission 2GHz~25GHz

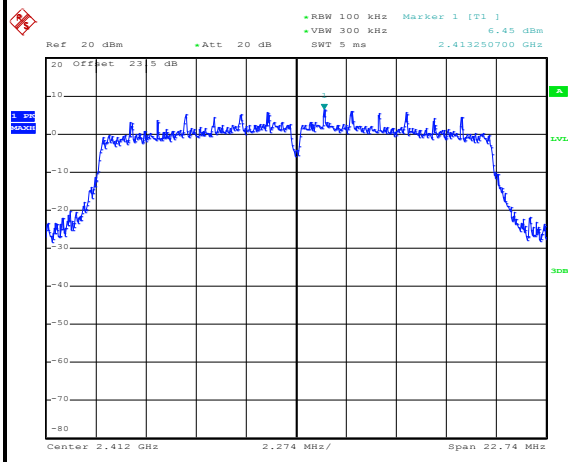


Date: 18.JUN.2016 19:49:14

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

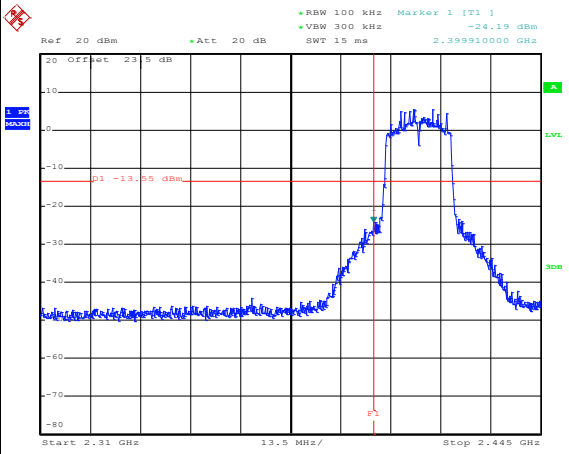
WLAN 802.11n HT20 Channel 01

100kHz PSD reference Level



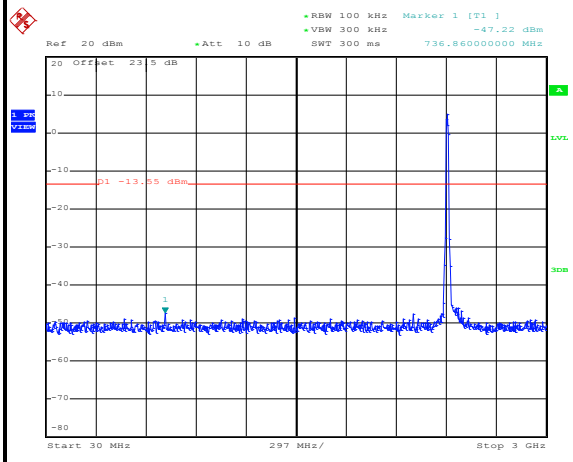
Date: 18.JUN.2016 20:12:38

Low Channel Plot



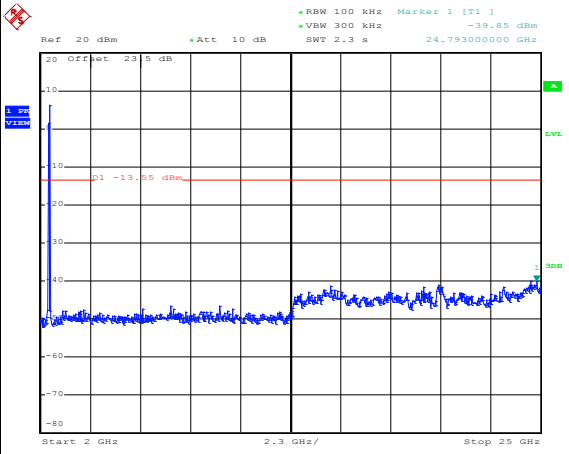
Date: 18.JUN.2016 20:12:54

Spurious Emission 30MHz~3GHz



Date: 18.JUN.2016 20:13:05

Spurious Emission 2GHz~25GHz

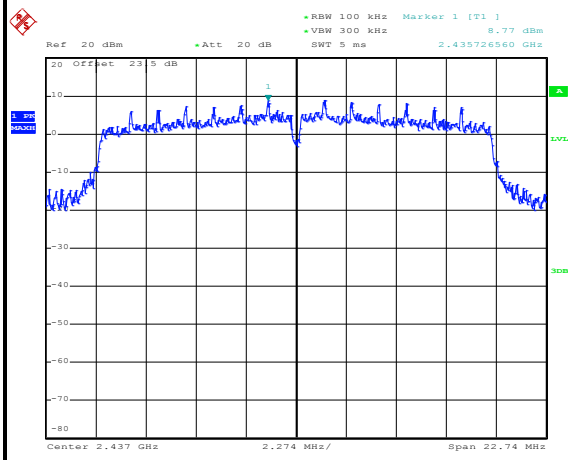


Date: 18.JUN.2016 20:13:14

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

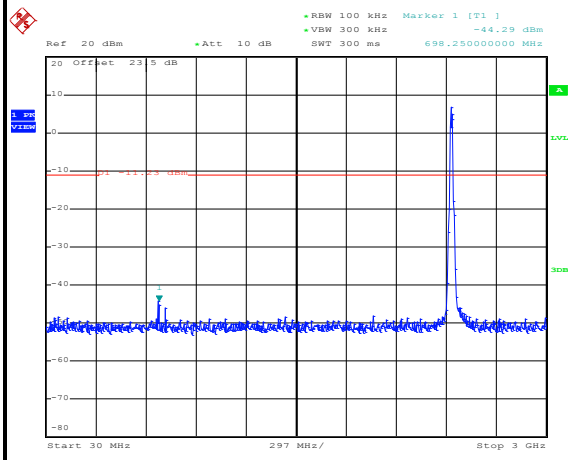
WLAN 802.11n HT20 Channel 06

100kHz PSD reference Level



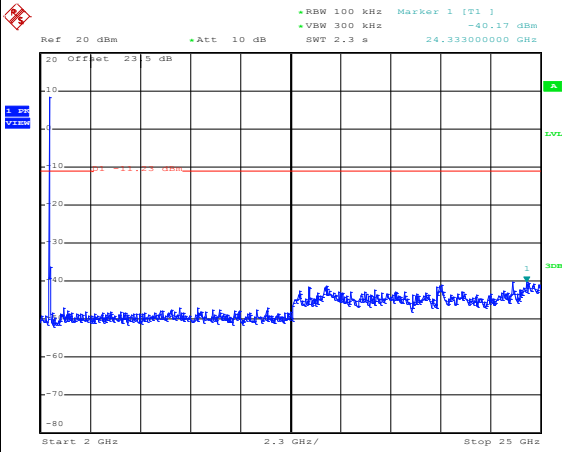
Date: 18.JUN.2016 20:16:38

Spurious Emission 30MHz~3GHz



Date: 18.JUN.2016 20:17:04

Spurious Emission 2GHz~25GHz

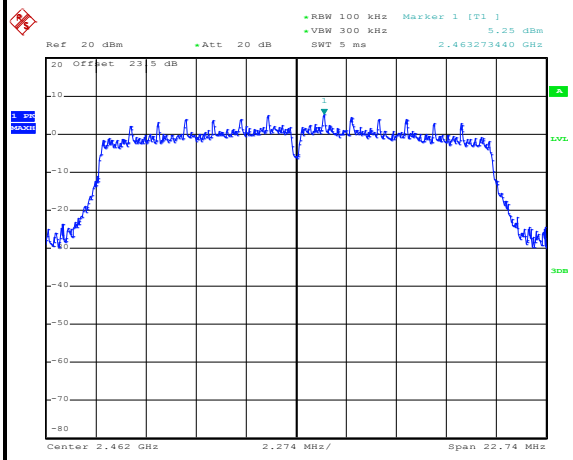


Date: 18.JUN.2016 20:17:12

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

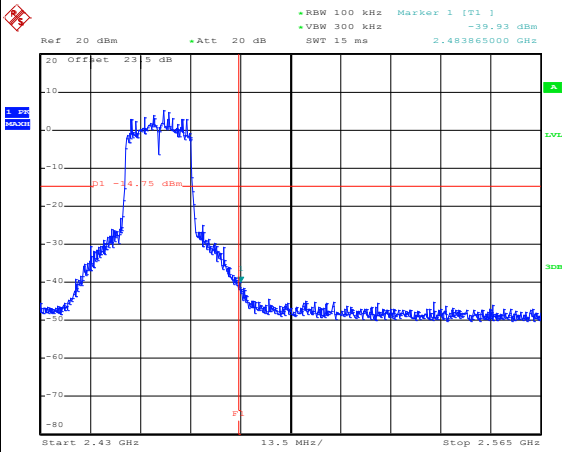
WLAN 802.11n HT20 Channel 11

100kHz PSD reference Level



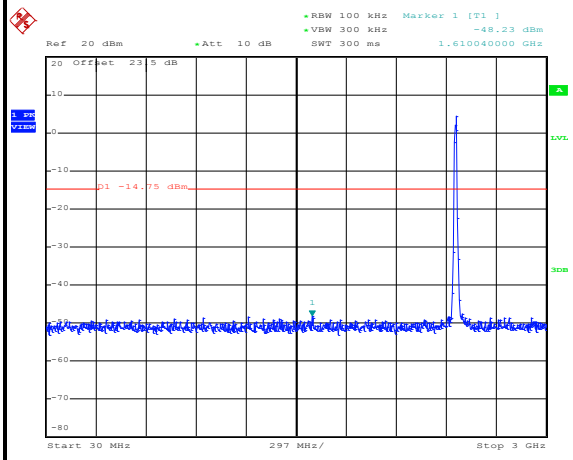
Date: 18.JUN.2016 20:20:30

High Channel Plot



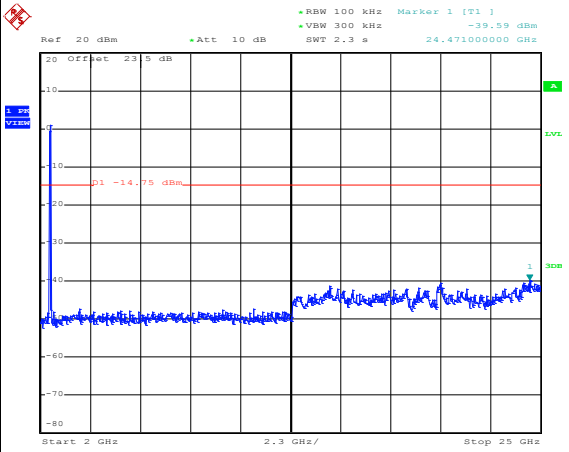
Date: 18.JUN.2016 20:20:45

Spurious Emission 30MHz~3GHz



Date: 18.JUN.2016 20:21:18

Spurious Emission 2GHz~25GHz



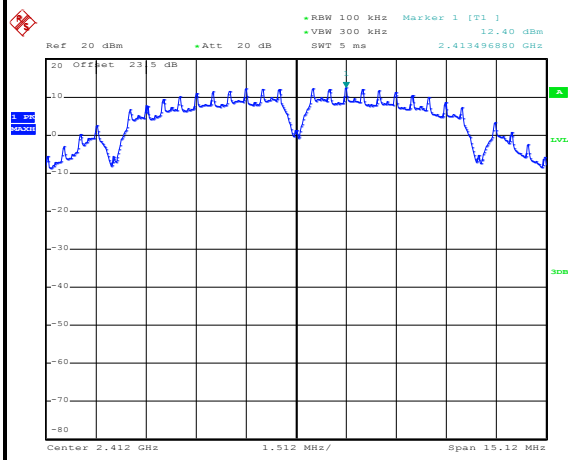
Date: 18.JUN.2016 20:21:26

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

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

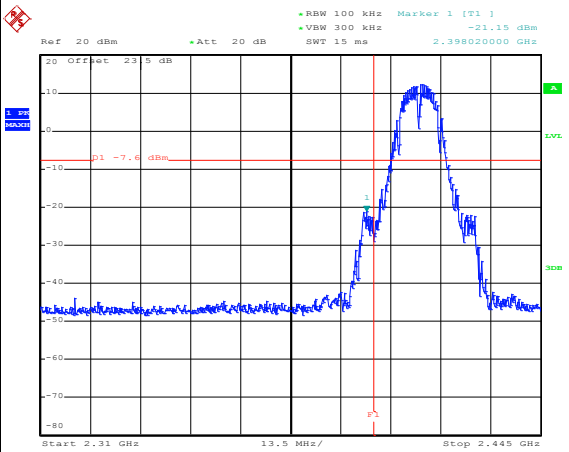
WLAN 802.11b Channel 01

100kHz PSD reference Level



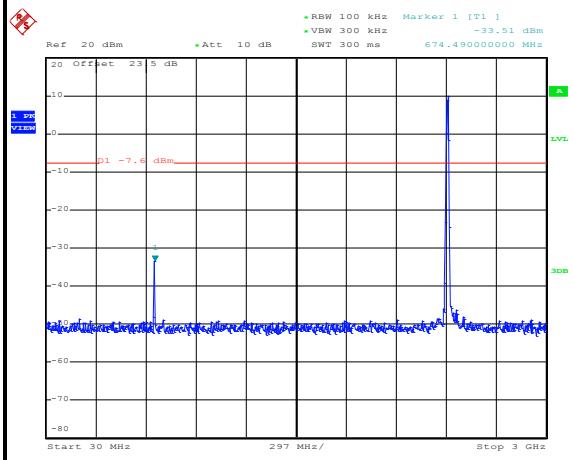
Date: 18.JUN.2016 19:21:50

Low Channel Plot



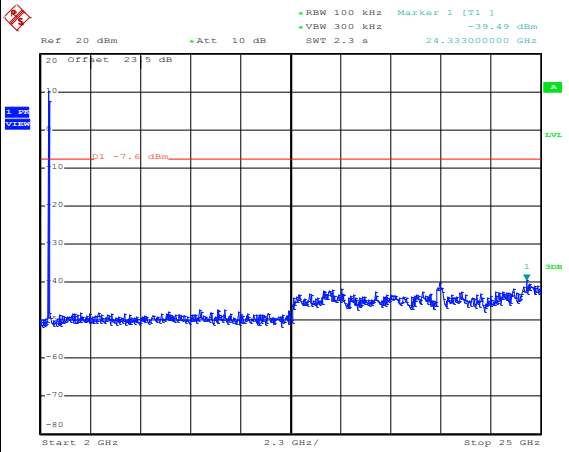
Date: 18.JUN.2016 19:22:52

Spurious Emission 30MHz~3GHz



Date: 18.JUN.2016 19:23:30

Spurious Emission 2GHz~25GHz

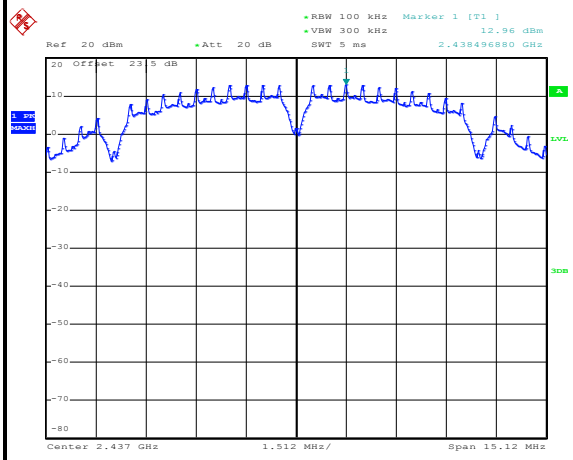


Date: 18.JUN.2016 19:23:38

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

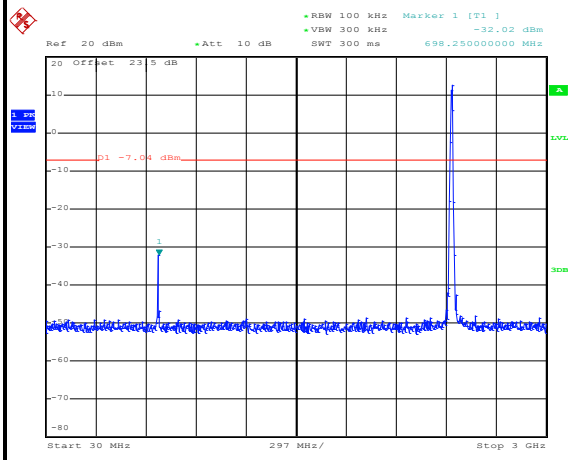
WLAN 802.11b Channel 06

100kHz PSD reference Level



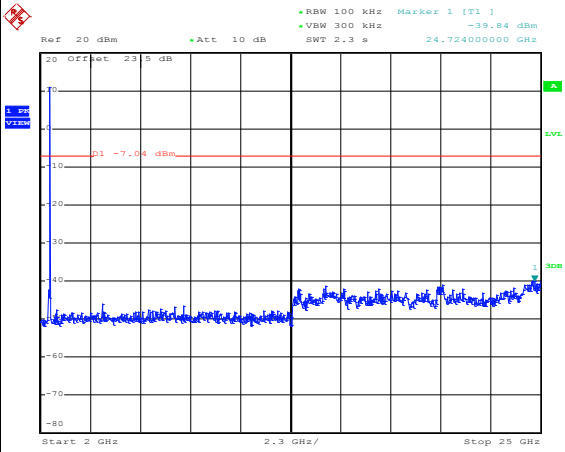
Date: 18.JUN.2016 19:27:18

Spurious Emission 30MHz~3GHz



Date: 18.JUN.2016 19:27:35

Spurious Emission 2GHz~25GHz

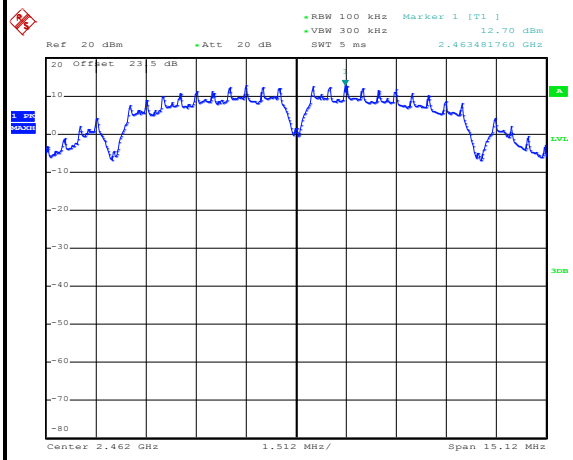


Date: 18.JUN.2016 19:27:43

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

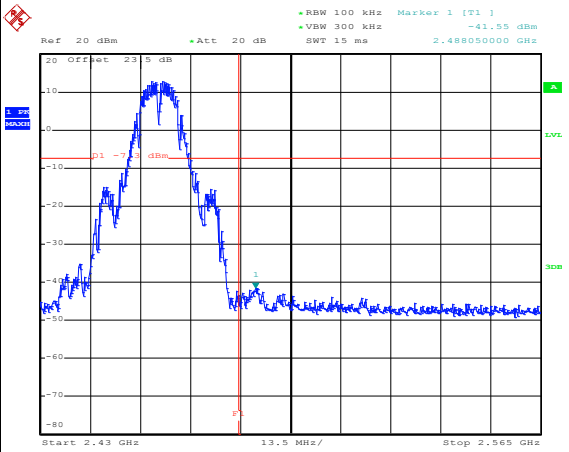
WLAN 802.11b Channel 11

100kHz PSD reference Level



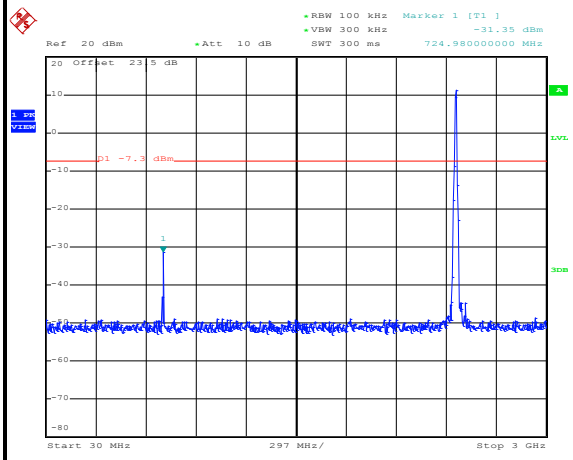
Date: 18.JUN.2016 19:31:20

High Channel Plot



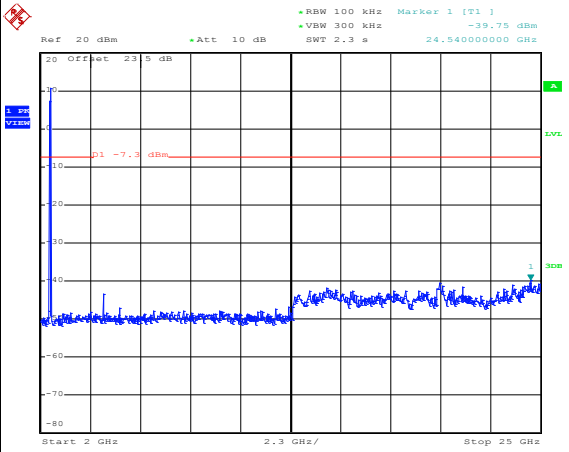
Date: 18.JUN.2016 19:32:11

Spurious Emission 30MHz~3GHz



Date: 18.JUN.2016 19:32:23

Spurious Emission 2GHz~25GHz

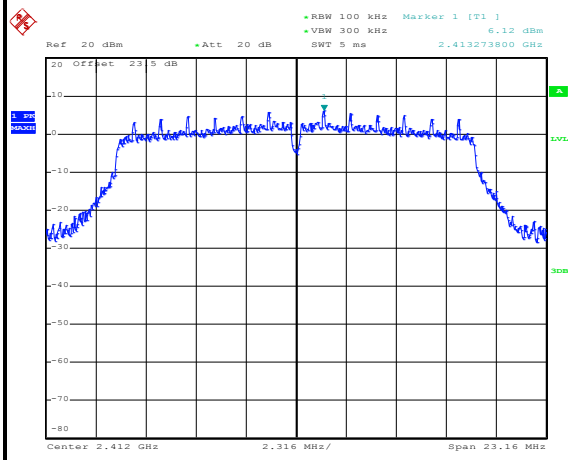


Date: 18.JUN.2016 19:32:31

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

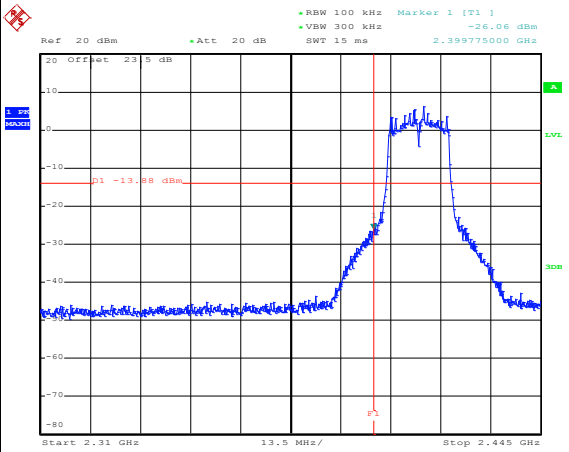
WLAN 802.11g Channel 01

100kHz PSD reference Level



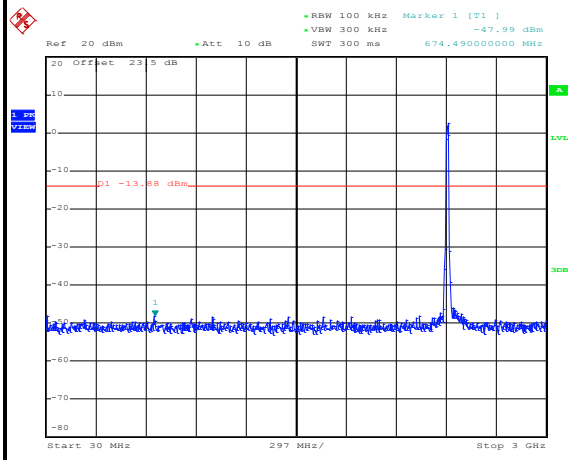
Date: 18.JUN.2016 19:55:34

Low Channel Plot



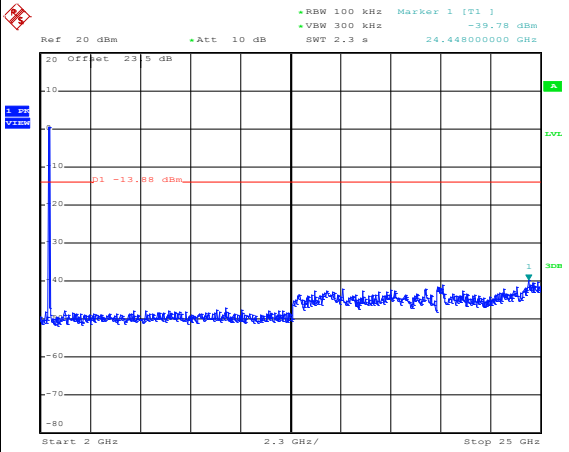
Date: 18.JUN.2016 19:55:55

Spurious Emission 30MHz~3GHz



Date: 18.JUN.2016 20:47:12

Spurious Emission 2GHz~25GHz

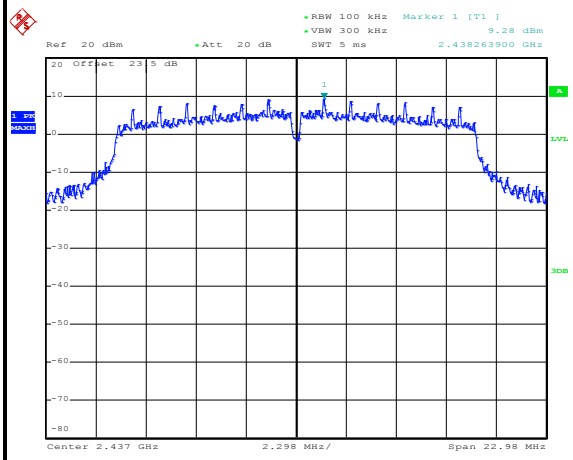


Date: 18.JUN.2016 20:47:21

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

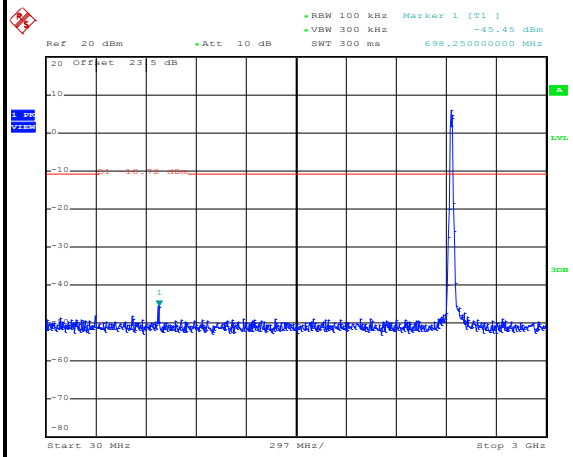
WLAN 802.11g Channel 06

100kHz PSD reference Level



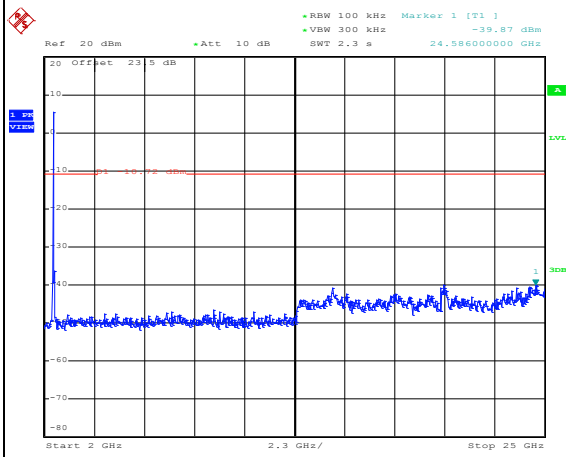
Date: 18.JUN.2016 20:00:22

Spurious Emission 30MHz~3GHz



Date: 18.JUN.2016 20:00:38

Spurious Emission 2GHz~25GHz

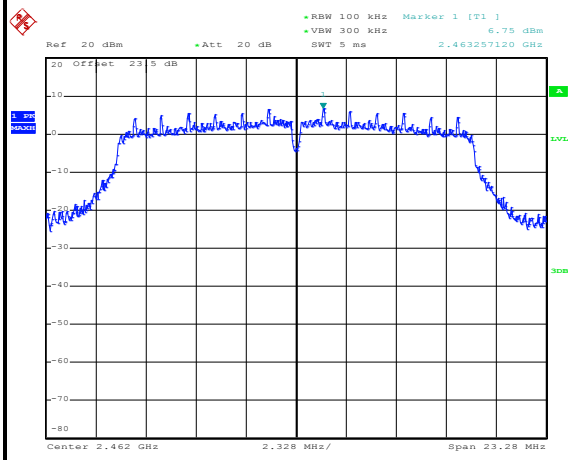


Date: 18.JUN.2016 20:00:47

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

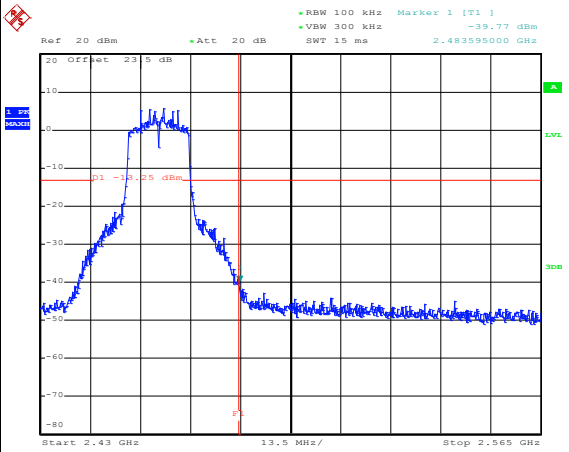
WLAN 802.11g Channel 11

100kHz PSD reference Level



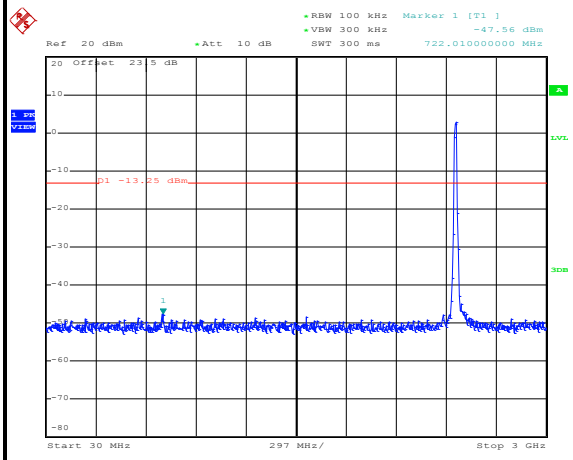
Date: 18.JUN.2016 20:06:46

High Channel Plot



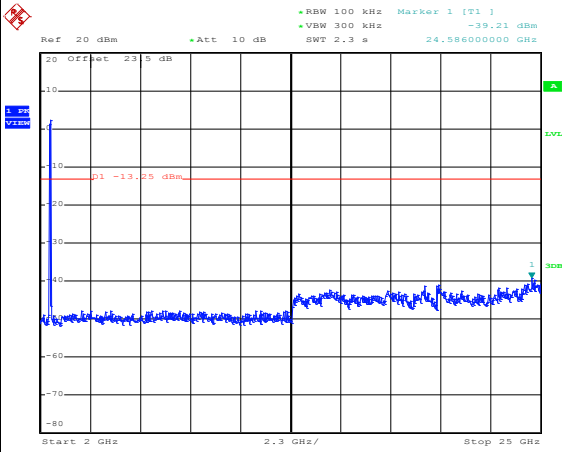
Date: 18.JUN.2016 20:07:31

Spurious Emission 30MHz~3GHz



Date: 18.JUN.2016 20:07:44

Spurious Emission 2GHz~25GHz

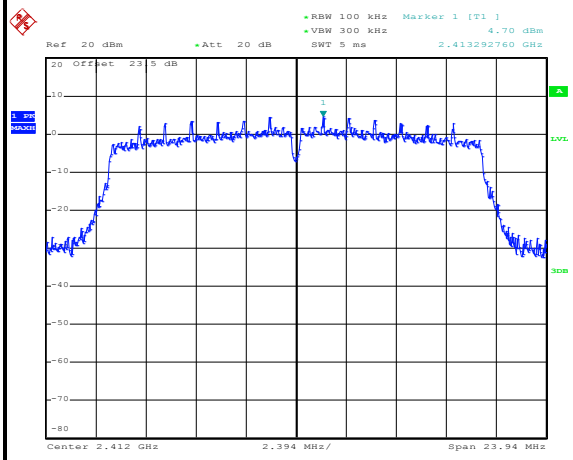


Date: 18.JUN.2016 20:07:53

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

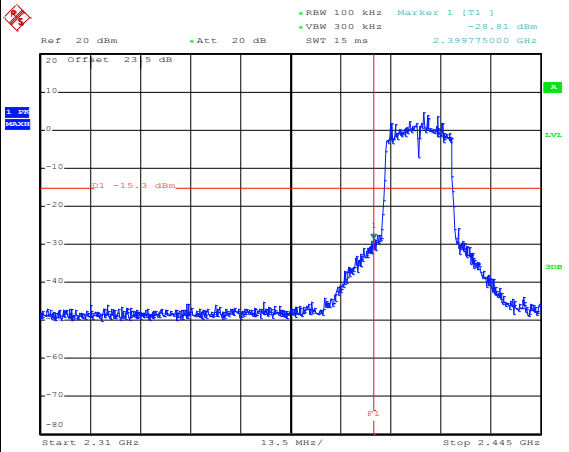
WLAN 802.11n HT20 Channel 01

100kHz PSD reference Level



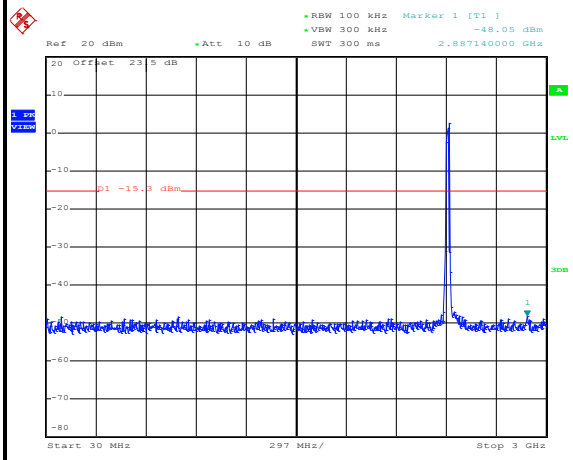
Date: 18.JUN.2016 20:26:53

Low Channel Plot



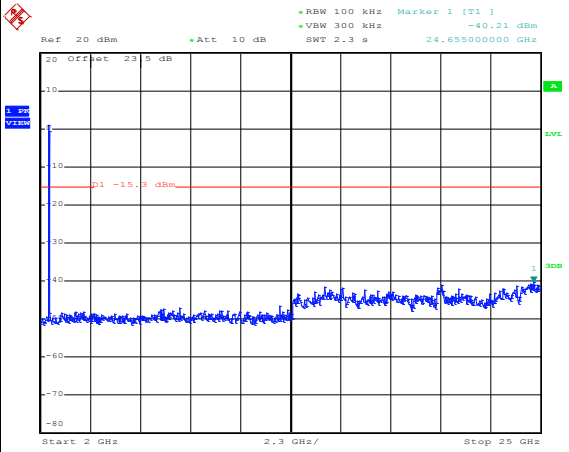
Date: 18.JUN.2016 20:27:20

Spurious Emission 30MHz~3GHz



Date: 18.JUN.2016 20:53:52

Spurious Emission 2GHz~25GHz

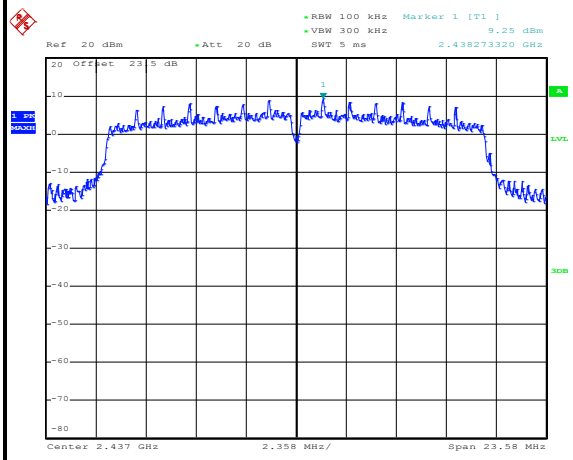


Date: 18.JUN.2016 20:54:00

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

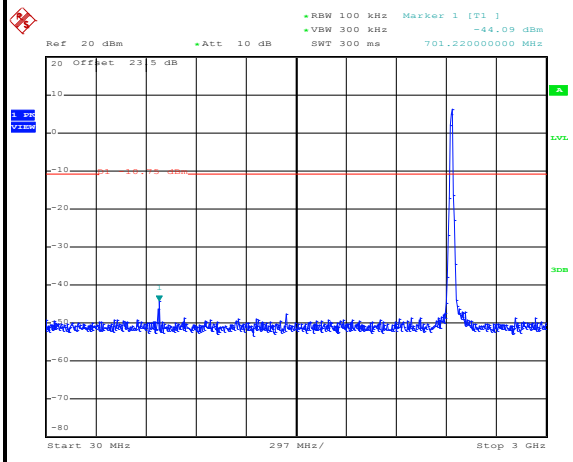
WLAN 802.11n HT20 Channel 06

100kHz PSD reference Level



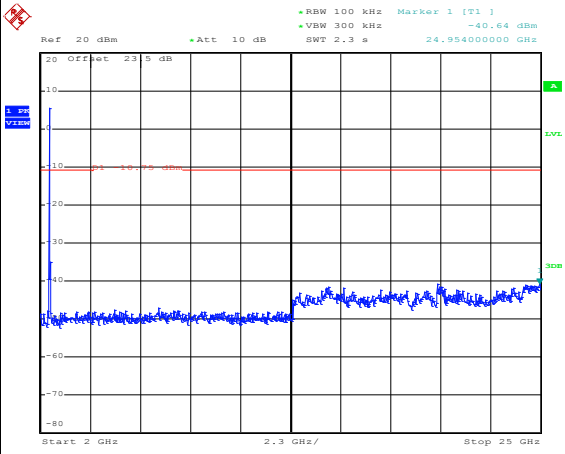
Date: 18.JUN.2016 20:31:55

Spurious Emission 30MHz~3GHz



Date: 18.JUN.2016 20:32:07

Spurious Emission 2GHz~25GHz

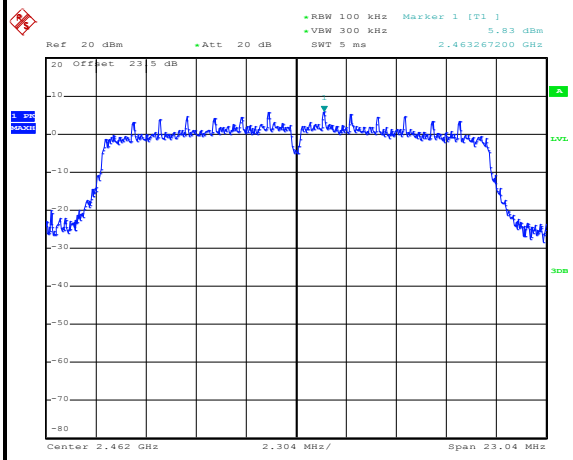


Date: 18.JUN.2016 20:32:16

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

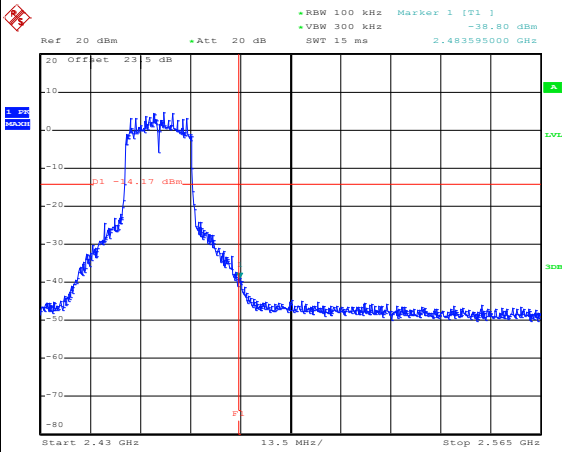
WLAN 802.11n HT20 Channel 11

100kHz PSD reference Level



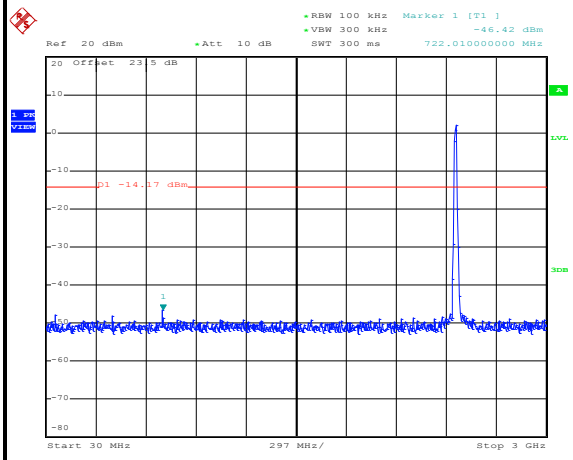
Date: 18.JUN.2016 20:36:42

High Channel Plot



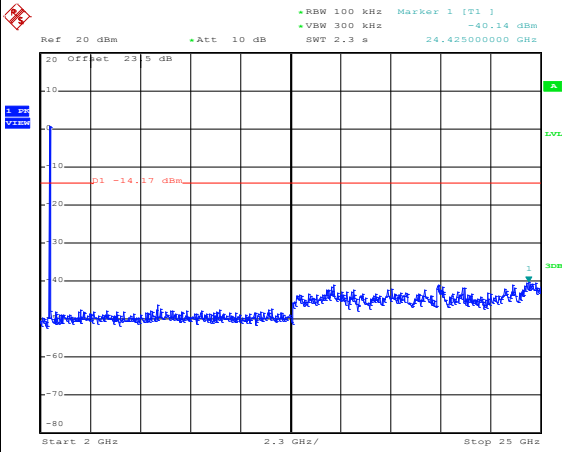
Date: 18.JUN.2016 20:36:58

Spurious Emission 30MHz~3GHz



Date: 18.JUN.2016 20:37:12

Spurious Emission 2GHz~25GHz



Date: 18.JUN.2016 20:37:20

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

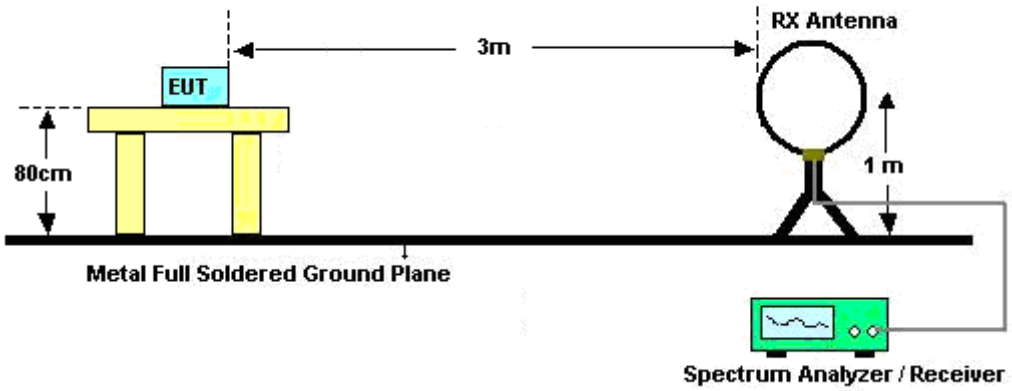
The measuring equipment is listed in the section 4 of this test report.

3.5.3 Test Procedure

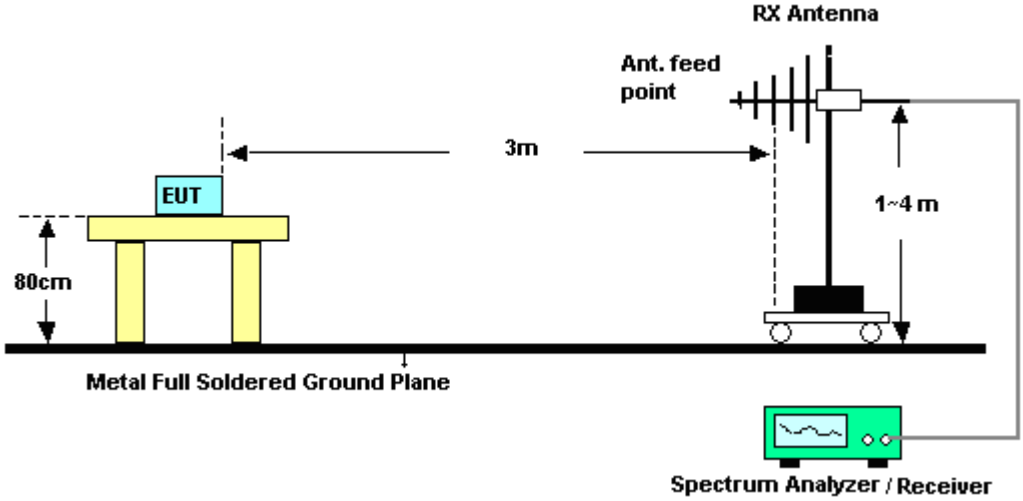
1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r05.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the 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 ≥ RBW; Sweep = auto; Detector function = peak; Trace = max hold;
   (3) Set RBW = 1 MHz, VBW= 3MHz for f ≥ 1 GHz for peak measurement.
   For average measurement:
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

3.5.4 Test Setup

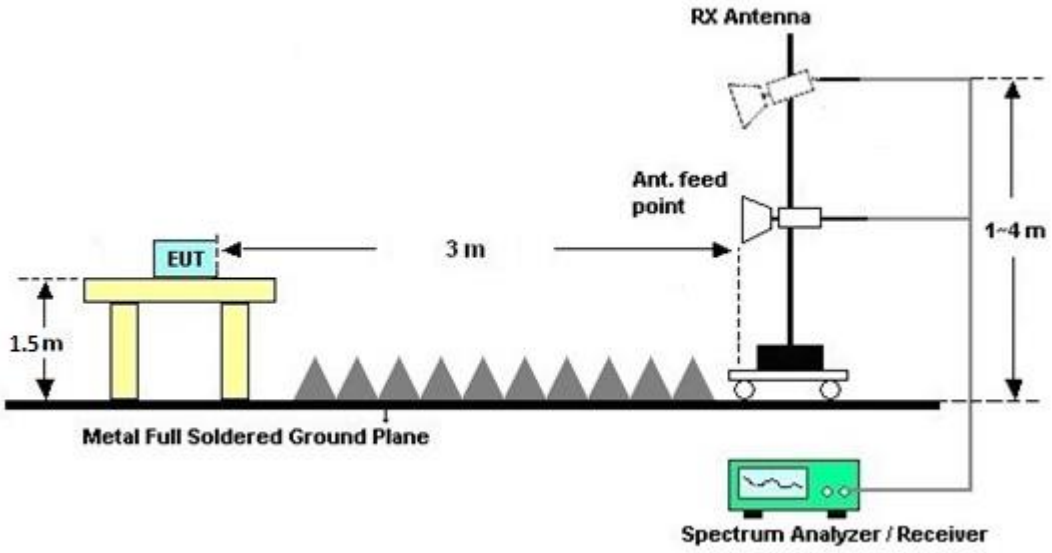
For radiated emissions below 30MHz



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 C.

3.5.7 Duty Cycle

Please refer to Appendix D.

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

Please refer to Appendix B and C.

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

*Decreases with the logarithm of the frequency.

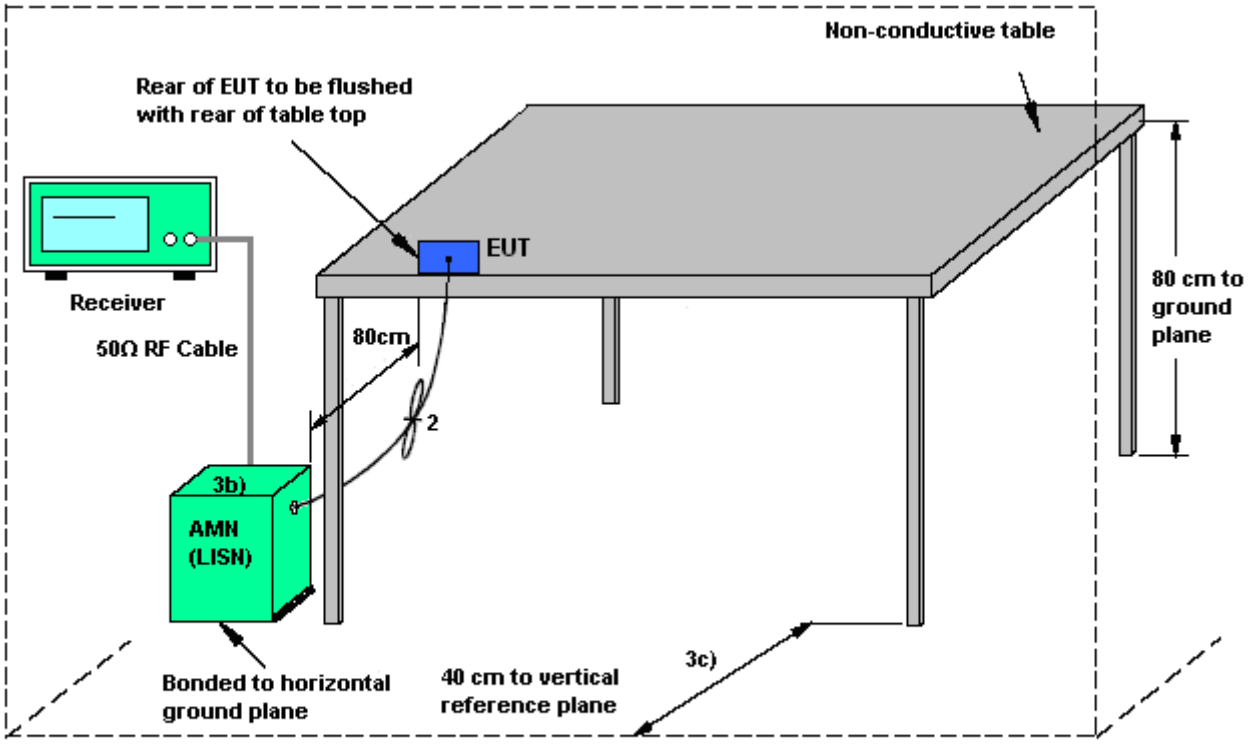
3.6.2 Measuring Instruments

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.

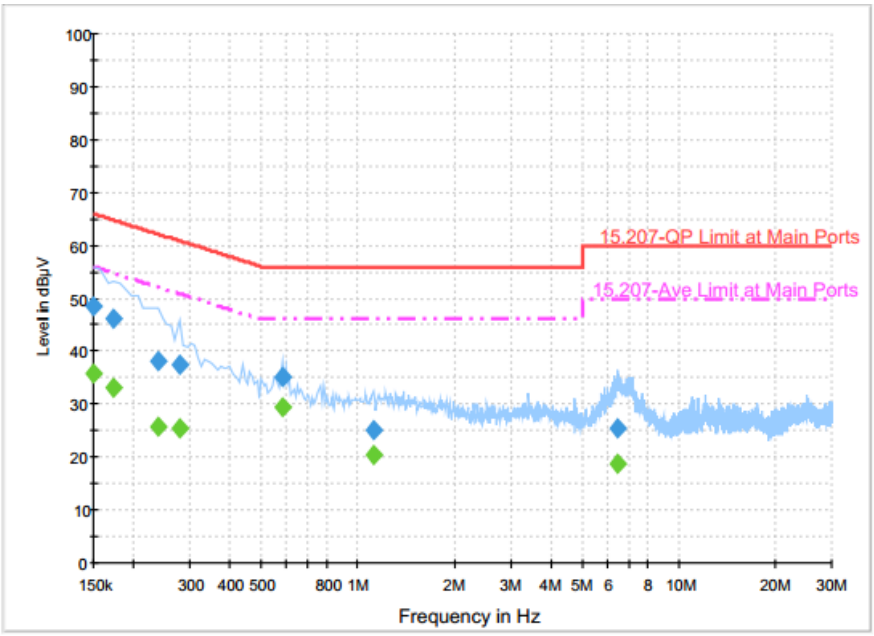
3.6.4 Test Setup



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

3.6.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1	Temperature :	24~25℃
Test Engineer :	Kai-Chun Chu	Relative Humidity :	49~50%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	WLAN (2.4GHz) Link + Bluetooth Link + MP3 + USB Cable (Charging from Adapter)		



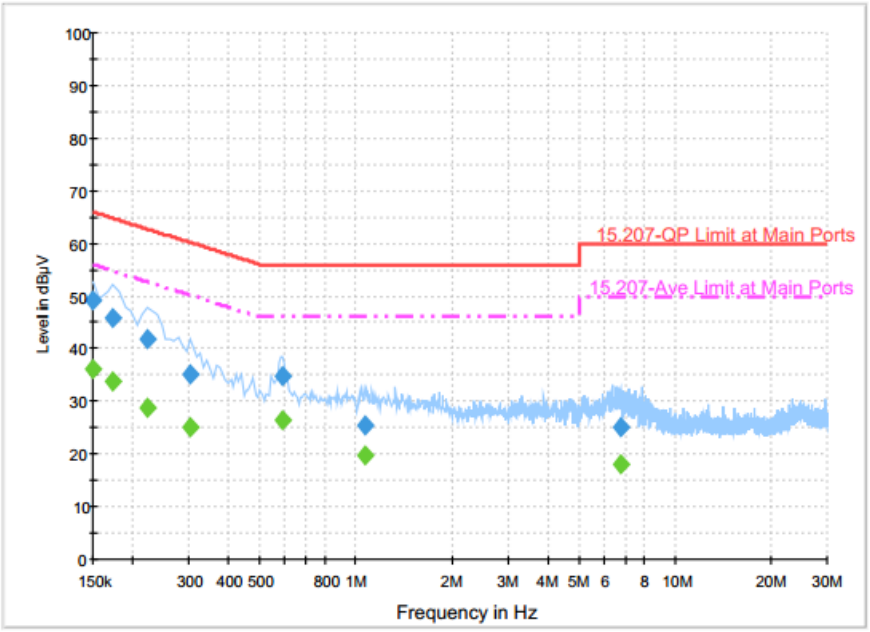
Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	48.6	Off	L1	19.6	17.4	66.0
0.174000	46.0	Off	L1	19.6	18.8	64.8
0.238000	38.3	Off	L1	19.6	23.9	62.2
0.278000	37.6	Off	L1	19.6	23.3	60.9
0.582000	35.0	Off	L1	19.6	21.0	56.0
1.126000	25.0	Off	L1	19.7	31.0	56.0
6.478000	25.3	Off	L1	19.9	34.7	60.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	35.7	Off	L1	19.6	20.3	56.0
0.174000	33.0	Off	L1	19.6	21.8	54.8
0.238000	25.8	Off	L1	19.6	26.4	52.2
0.278000	25.4	Off	L1	19.6	25.5	50.9
0.582000	29.3	Off	L1	19.6	16.7	46.0
1.126000	20.4	Off	L1	19.7	25.6	46.0
6.478000	18.7	Off	L1	19.9	31.3	50.0

Test Mode :	Mode 1	Temperature :	24~25℃
Test Engineer :	Kai-Chun Chu	Relative Humidity :	49~50%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	WLAN (2.4GHz) Link + Bluetooth Link + MP3 + USB Cable (Charging from Adapter)		



Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	49.2	Off	N	19.6	16.8	66.0
0.174000	46.0	Off	N	19.6	18.8	64.8
0.222000	41.7	Off	N	19.6	21.0	62.7
0.302000	35.1	Off	N	19.6	25.1	60.2
0.590000	34.9	Off	N	19.6	21.1	56.0
1.070000	25.3	Off	N	19.6	30.7	56.0
6.734000	25.0	Off	N	19.9	35.0	60.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	36.2	Off	N	19.6	19.8	56.0
0.174000	33.8	Off	N	19.6	21.0	54.8
0.222000	28.8	Off	N	19.6	23.9	52.7
0.302000	25.2	Off	N	19.6	25.0	50.2
0.590000	26.6	Off	N	19.6	19.4	46.0
1.070000	19.8	Off	N	19.6	26.2	46.0
6.734000	18.1	Off	N	19.9	31.9	50.0

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

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

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Power Meter	Anritsu	ML2495A	1132003	300MHz~40GHz	Aug. 12, 2015	Jun. 13, 2016 ~ Jun. 23, 2016	Aug. 11, 2016	Conducted (TH02-HY)
Power Sensor	Anritsu	MA2411B	1126017	300MHz~40GHz	Aug. 12, 2015	Jun. 13, 2016 ~ Jun. 23, 2016	Aug. 11, 2016	Conducted (TH02-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100057	9kHz-40GHz	Nov. 23, 2015	Jun. 13, 2016 ~ Jun. 23, 2016	Nov. 22, 2016	Conducted (TH02-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Jun. 29, 2016	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESCI 7	100724	9kHz~7GHz	Aug. 26, 2015	Jun. 29, 2016	Aug. 25, 2016	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Dec. 02, 2015	Jun. 29, 2016	Dec. 01, 2016	Conduction (CO05-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	Sep. 02, 2015	Jun. 15, 2016 ~ Jun. 21, 2016	Sep. 01, 2016	Radiation (03CH13-HY)
Preamplifier	MITEQ	TTA0204	1872107	2GHz~40GHz	Feb. 15, 2016	Jun. 15, 2016 ~ Jun. 21, 2016	Feb. 14, 2017	Radiation (03CH13-HY)
Amplifier	Sonoma-Instrument	310 N	187282	10MHz~1GHz	Dec. 31, 2015	Jun. 15, 2016 ~ Jun. 21, 2016	Dec. 30, 2016	Radiation (03CH13-HY)
Bilog Antenna	TESEQ	CBL 6111D	40103	30MHz to 1GHz	Jan. 13, 2016	Jun. 15, 2016 ~ Jun. 21, 2016	Jan. 12, 2017	Radiation (03CH13-HY)
EMI Test Receiver	Keysight	N9038A(MXE)	MY55420170	N/A	Mar. 10, 2016	Jun. 15, 2016 ~ Jun. 21, 2016	Mar. 09, 2017	Radiation (03CH13-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1241	1GHz ~ 18GHz	Apr. 25, 2016	Jun. 15, 2016 ~ Jun. 21, 2016	Apr. 24, 2017	Radiation (03CH13-HY)
Preamplifier	Keysight	83017A	MY53270147	1GHz~26.5GHz	Jan. 30, 2016	Jun. 15, 2016 ~ Jun. 21, 2016	Jan. 29, 2017	Radiation (03CH13-HY)
Spectrum Analyzer	Keysight	N9010A	MY55370526	N/A	Mar. 14, 2016	Jun. 15, 2016 ~ Jun. 21, 2016	Mar. 13, 2017	Radiation (03CH13-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1m~4m	N/A	Jun. 15, 2016 ~ Jun. 21, 2016	N/A	Radiation (03CH13-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Jun. 15, 2016 ~ Jun. 21, 2016	N/A	Radiation (03CH13-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170584	18GHz- 40GHz	Nov. 02, 2015	Jun. 15, 2016 ~ Jun. 21, 2016	Nov. 01, 2016	Radiation (03CH13-HY)

5 Uncertainty of Evaluation

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

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

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.70**

Appendix A. Conducted Test Results

Report Number : FR631725-01C

Test Engineer:	Osolemio Chang	Temperature:	21~25	°C
Test Date:	2016/6/13 ~ 2016/6/23	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	13.05	13.65	9.56	10.08	0.50	Pass
11b	1Mbps	1	6	2437	12.90	14.35	10.04	10.08	0.50	Pass
11b	1Mbps	1	11	2462	13.30	14.55	10.08	10.08	0.50	Pass
11g	6Mbps	1	1	2412	17.85	17.50	15.48	15.44	0.50	Pass
11g	6Mbps	1	6	2437	18.60	18.60	15.36	15.32	0.50	Pass
11g	6Mbps	1	11	2462	17.50	17.65	15.36	15.52	0.50	Pass
HT20	MCS0	1	1	2412	18.25	18.20	15.16	15.96	0.50	Pass
HT20	MCS0	1	6	2437	18.70	19.00	15.16	15.72	0.50	Pass
HT20	MCS0	1	11	2462	18.35	18.60	15.16	15.36	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	22.91	23.85		30.00	30.00	1.47	2.36	24.38	26.21	36.00	36.00	Pass
11b	1Mbps	1	6	2437	22.92	24.01		30.00	30.00	1.47	2.36	24.39	26.37	36.00	36.00	Pass
11b	1Mbps	1	11	2462	22.66	23.84		30.00	30.00	1.47	2.36	24.13	26.20	36.00	36.00	Pass
11g	6Mbps	1	1	2412	24.65	23.88		30.00	30.00	1.47	2.36	26.12	26.24	36.00	36.00	Pass
11g	6Mbps	1	6	2437	25.56	25.24		30.00	30.00	1.47	2.36	27.03	27.60	36.00	36.00	Pass
11g	6Mbps	1	11	2462	23.90	24.17		30.00	30.00	1.47	2.36	25.37	26.53	36.00	36.00	Pass
HT20	MCS0	1	1	2412	24.49	23.81		30.00	30.00	1.47	2.36	25.96	26.17	36.00	36.00	Pass
HT20	MCS0	1	6	2437	25.51	25.26		30.00	30.00	1.47	2.36	26.98	27.62	36.00	36.00	Pass
HT20	MCS0	1	11	2462	23.62	23.94		30.00	30.00	1.47	2.36	25.09	26.30	36.00	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	0.10	0.10	20.26	21.56	
11b	1Mbps	1	6	2437	0.10	0.10	20.27	21.65	
11b	1Mbps	1	11	2462	0.10	0.10	20.18	21.55	
11g	6Mbps	1	1	2412	0.53	0.53	17.64	16.42	
11g	6Mbps	1	6	2437	0.53	0.53	19.81	19.65	
11g	6Mbps	1	11	2462	0.53	0.53	16.24	16.91	
HT20	MCS0	1	1	2412	0.63	0.56	16.85	15.51	
HT20	MCS0	1	6	2437	0.63	0.56	19.98	19.57	
HT20	MCS0	1	11	2462	0.63	0.56	15.53	16.03	

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	-2.25	-1.65		1.47	2.36	8.00	8.00	Pass
11b	1Mbps	1	6	2437	-1.14	0.52		1.47	2.36	8.00	8.00	Pass
11b	1Mbps	1	11	2462	-3.19	-0.78		1.47	2.36	8.00	8.00	Pass
11g	6Mbps	1	1	2412	-7.41	-7.97		1.47	2.36	8.00	8.00	Pass
11g	6Mbps	1	6	2437	-4.06	-5.32	-	1.47	2.36	8.00	8.00	Pass
11g	6Mbps	1	11	2462	-7.69	-7.69		1.47	2.36	8.00	8.00	Pass
HT20	MCS0	1	1	2412	-6.62	-9.09		1.47	2.36	8.00	8.00	Pass
HT20	MCS0	1	6	2437	-5.90	-4.23		1.47	2.36	8.00	8.00	Pass
HT20	MCS0	1	11	2462	-10.38	-8.61		1.47	2.36	8.00	8.00	Pass

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

Appendix B. Radiated Spurious Emission

Test Engineer :	Bill Chang and Elvis Chen and Alex Jeng	Temperature :	20~24°C
		Relative Humidity :	45~50%

2.4GHz 2400~2483.5MHz

WIFI 802.11b (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)
802.11b CH 01 2412MHz		2388.855	54.2	-19.8	74	51.02	27.15	7.31	31.28	371	80	P	H
		2389.065	44.45	-9.55	54	41.27	27.15	7.31	31.28	371	80	A	H
	*	2412	110.12	-	-	106.89	27.19	7.31	31.27	371	80	P	H
	*	2412	107.12	-	-	103.89	27.19	7.31	31.27	371	80	A	H
													H
													H
		2355.78	53.28	-20.72	74	50.26	27.07	7.24	31.29	105	18	P	V
		2389.065	43.49	-10.51	54	40.31	27.15	7.31	31.28	105	18	A	V
	*	2412	105	-	-	101.77	27.19	7.31	31.27	105	18	P	V
	*	2412	101.98	-	-	98.75	27.19	7.31	31.27	105	18	A	V
													V
													V
802.11b CH 06 2437MHz		2355.24	53.28	-20.72	74	50.26	27.07	7.24	31.29	363	80	P	H
		2385.92	42.55	-11.45	54	39.37	27.15	7.31	31.28	363	80	A	H
	*	2437	110.34	-	-	106.96	27.28	7.36	31.26	363	80	P	H
	*	2437	107.26	-	-	103.88	27.28	7.36	31.26	363	80	A	H
		2490.34	53.54	-20.46	74	49.99	27.4	7.4	31.25	363	80	P	H
		2487.96	43.4	-10.6	54	39.85	27.4	7.4	31.25	363	80	A	H
		2389.43	52.47	-21.53	74	49.29	27.15	7.31	31.28	103	8	P	V
		2385.92	42.29	-11.71	54	39.11	27.15	7.31	31.28	103	8	A	V
	*	2437	107	-	-	103.62	27.28	7.36	31.26	103	8	P	V
	*	2437	104	-	-	100.62	27.28	7.36	31.26	103	8	A	V
		2488.52	54.15	-19.85	74	50.6	27.4	7.4	31.25	103	8	P	V
		2488.03	44.41	-9.59	54	40.86	27.4	7.4	31.25	103	8	A	V

802.11b CH 11 2462MHz	*	2462	111.48	-	-	108.02	27.32	7.4	31.26	400	74	P	H
	*	2462	108.38	-	-	104.92	27.32	7.4	31.26	400	74	A	H
		2483.6	56.02	-17.98	74	52.51	27.36	7.4	31.25	400	74	P	H
		2483.52	46.95	-7.05	54	43.44	27.36	7.4	31.25	400	74	A	H
													H
													H
	*	2462	108.29	-	-	104.83	27.32	7.4	31.26	100	6	P	V
	*	2462	105.16	-	-	101.7	27.32	7.4	31.26	100	6	A	V
		2483.8	55.66	-18.34	74	52.15	27.36	7.4	31.25	100	6	P	V
		2483.52	46.09	-7.91	54	42.58	27.36	7.4	31.25	100	6	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	45.34	-28.66	74	53.62	31.22	11.68	51.18	100	0	P	H
													H
													H
													H
		4824	46.39	-27.61	74	54.67	31.22	11.68	51.18	100	0	P	V
													V
													V
													V
802.11b CH 06 2437MHz		4874	43.64	-30.36	74	51.95	31.31	11.53	51.15	100	0	P	H
		7311	45.71	-28.29	74	46.43	36.27	13.81	50.8	100	0	P	H
													H
													H
		4874	42.65	-31.35	74	50.96	31.31	11.53	51.15	100	0	P	V
		7311	45.73	-28.27	74	46.45	36.27	13.81	50.8	100	0	P	V
													V
													V
802.11b CH 11 2462MHz		4924	40.76	-33.24	74	49.13	31.39	11.37	51.13	100	0	P	H
		7386	45.14	-28.86	74	45.48	36.51	13.95	50.8	100	0	P	H
													H
													H
		4924	41.22	-32.78	74	49.59	31.39	11.37	51.13	100	0	P	V
		7386	46.5	-27.5	74	46.84	36.51	13.95	50.8	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		2389.38	62.93	-11.07	74	59.75	27.15	7.31	31.28	368	82	P	H
		2390	50.09	-3.91	54	46.9	27.15	7.31	31.27	368	82	A	H
	*	2412	110.68	-	-	107.45	27.19	7.31	31.27	368	82	P	H
	*	2412	102.98	-	-	99.75	27.19	7.31	31.27	368	82	A	H
													H
													H
		2389.905	64.23	-9.77	74	61.04	27.15	7.31	31.27	107	17	P	V
		2390	48.26	-5.74	54	45.07	27.15	7.31	31.27	107	17	A	V
	*	2412	105.46	-	-	102.23	27.19	7.31	31.27	107	17	P	V
	*	2412	97.83	-	-	94.6	27.19	7.31	31.27	107	17	A	V
													V
													V
802.11g CH 06 2437MHz		2384.88	54.5	-19.5	74	51.36	27.11	7.31	31.28	364	80	P	H
		2389.04	43.51	-10.49	54	40.33	27.15	7.31	31.28	364	80	A	H
	*	2437	112.51	-	-	109.13	27.28	7.36	31.26	364	80	P	H
	*	2437	104.86	-	-	101.48	27.28	7.36	31.26	364	80	A	H
		2484.6	54.26	-19.74	74	50.75	27.36	7.4	31.25	364	80	P	H
		2484.11	44.51	-9.49	54	41	27.36	7.4	31.25	364	80	A	H
		2387.09	52.95	-21.05	74	49.77	27.15	7.31	31.28	104	8	P	V
		2386.83	43.06	-10.94	54	39.88	27.15	7.31	31.28	104	8	A	V
	*	2437	108.98	-	-	105.6	27.28	7.36	31.26	104	8	P	V
	*	2437	101.36	-	-	97.98	27.28	7.36	31.26	104	8	A	V
		2488.1	55.8	-18.2	74	52.25	27.4	7.4	31.25	104	8	P	V
		2484.74	45.43	-8.57	54	41.92	27.36	7.4	31.25	104	8	A	V

802.11g CH 11 2462MHz	*	2462	110.77	-	-	107.31	27.32	7.4	31.26	400	74	P	H
	*	2462	102.54	-	-	99.08	27.32	7.4	31.26	400	74	A	H
		2483.56	67.11	-6.89	74	63.6	27.36	7.4	31.25	400	74	P	H
		2483.52	51.19	-2.81	54	47.68	27.36	7.4	31.25	400	74	A	H
													H
													H
	*	2462	107.1	-	-	103.64	27.32	7.4	31.26	100	8	P	V
	*	2462	99.38	-	-	95.92	27.32	7.4	31.26	100	8	A	V
		2483.92	65.84	-8.16	74	62.33	27.36	7.4	31.25	100	8	P	V
		2483.52	50.12	-3.88	54	46.61	27.36	7.4	31.25	100	8	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	42.3	-31.7	74	50.58	31.22	11.68	51.18	100	0	P	H
													H
													H
													H
		4824	41.09	-32.91	74	49.37	31.22	11.68	51.18	100	0	P	V
													V
													V
													V
802.11g CH 06 2437MHz		4874	40.55	-33.45	74	48.86	31.31	11.53	51.15	100	0	P	H
		7311	45.56	-28.44	74	46.28	36.27	13.81	50.8	100	0	P	H
													H
													H
		4874	40.03	-33.97	74	48.34	31.31	11.53	51.15	100	0	P	V
		7311	45.64	-28.36	74	46.36	36.27	13.81	50.8	100	0	P	V
													V
													V
802.11g CH 11 2462MHz		4926	38.57	-35.43	74	46.94	31.39	11.37	51.13			P	H
		7386	45.75	-28.25	74	46.09	36.51	13.95	50.8			P	H
													H
													H
		4926	38.27	-35.73	74	46.64	31.39	11.37	51.13			P	V
		7386	45.79	-28.21	74	46.13	36.51	13.95	50.8			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 HT20 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		2389.485	66.48	-7.52	74	63.3	27.15	7.31	31.28	371	82	P	H
		2389.905	53.23	-0.77	54	50.04	27.15	7.31	31.27	371	82	A	H
	*	2412	109.57	-	-	106.34	27.19	7.31	31.27	371	82	P	H
	*	2412	102.21	-	-	98.98	27.19	7.31	31.27	371	82	A	H
802.11n													H
HT20													H
CH 01		2390	62.38	-11.62	74	59.19	27.15	7.31	31.27	107	16	P	V
2412MHz		2389.905	49.69	-4.31	54	46.5	27.15	7.31	31.27	107	16	A	V
	*	2412	104.19	-	-	100.96	27.19	7.31	31.27	107	16	P	V
	*	2412	96.86	-	-	93.63	27.19	7.31	31.27	107	16	A	V
													V
													V
		2388.78	53.07	-20.93	74	49.89	27.15	7.31	31.28	363	78	P	H
		2388.78	44.01	-9.99	54	40.83	27.15	7.31	31.28	363	78	A	H
	*	2437	112.1	-	-	108.72	27.28	7.36	31.26	363	78	P	H
	*	2437	104.28	-	-	100.9	27.28	7.36	31.26	363	78	A	H
802.11n		2491.32	55.82	-18.18	74	52.27	27.4	7.4	31.25	363	78	P	H
HT20		2483.55	44.96	-9.04	54	41.45	27.36	7.4	31.25	363	78	A	H
CH 06		2351.99	53.1	-20.9	74	50.08	27.07	7.24	31.29	102	10	P	V
2437MHz		2389.43	43.47	-10.53	54	40.29	27.15	7.31	31.28	102	10	A	V
	*	2437	108.56	-	-	105.18	27.28	7.36	31.26	102	10	P	V
	*	2437	101.12	-	-	97.74	27.28	7.36	31.26	102	10	A	V
		2492.37	56.06	-17.94	74	52.5	27.4	7.4	31.24	102	10	P	V
		2487.19	46.07	-7.93	54	42.56	27.36	7.4	31.25	102	10	A	V

	*	2462	109.38	-	-	105.92	27.32	7.4	31.26	400	73	P	H
	*	2462	101.44	-	-	97.98	27.32	7.4	31.26	400	73	A	H
		2483.52	63.92	-10.08	74	60.41	27.36	7.4	31.25	400	73	P	H
		2483.68	51.2	-2.8	54	47.69	27.36	7.4	31.25	400	73	A	H
802.11n													H
HT20													H
CH 11	*	2462	105.92	-	-	102.46	27.32	7.4	31.26	100	8	P	V
2462MHz	*	2462	98.31	-	-	94.85	27.32	7.4	31.26	100	8	A	V
		2483.8	64.48	-9.52	74	60.97	27.36	7.4	31.25	100	8	P	V
		2483.52	49.62	-4.38	54	46.11	27.36	7.4	31.25	100	8	A	V
													V
													V

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

2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		4824	40.44	-33.56	74	48.72	31.22	11.68	51.18	100	0	P	H
													H
802.11n													H
HT20													H
CH 01		4824	39.66	-34.34	74	47.94	31.22	11.68	51.18	100	0	P	V
2412MHz													V
													V
													V
		4874	39.98	-34.02	74	48.29	31.31	11.53	51.15	100	0	P	H
		7311	45.46	-28.54	74	46.18	36.27	13.81	50.8	100	0	P	H
802.11n													H
HT20													H
CH 06		4874	40.1	-33.9	74	48.41	31.31	11.53	51.15	100	0	P	V
2437MHz		7311	45.51	-28.49	74	46.23	36.27	13.81	50.8	100	0	P	V
													V
													V
		4924	38.18	-35.82	74	46.55	31.39	11.37	51.13	100	0	P	H
		7386	46.24	-27.76	74	46.58	36.51	13.95	50.8	100	0	P	H
802.11n													H
HT20													H
CH 11		4924	39.39	-34.61	74	47.76	31.39	11.37	51.13	100	0	P	V
2462MHz		7386	45.49	-28.51	74	45.83	36.51	13.95	50.8	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

Emission below 1GHz

2.4GHz WIFI 802.11n HT20 (LF)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz 802.11n HT20 LF		87.24	29.16	-10.84	40	45.59	14.47	1	31.9	-	-	P	H
		127.47	29.95	-13.55	43.5	42.99	17.64	1.19	31.87	-	-	P	H
		257.61	36.93	-9.07	46	47.4	19.58	1.73	31.78	100	70	P	H
		300.7	30.88	-15.12	46	41.28	19.53	1.82	31.75	-	-	P	H
		591.9	29.45	-16.55	46	33.5	25.13	2.76	31.94	-	-	P	H
		942.6	31.74	-14.26	46	29.54	29.94	3.44	31.18	-	-	P	H
													H
													H
													H
													H
													H
													H
		42.15	35.22	-4.78	40	47.98	18.52	0.65	31.93	-	-	P	V
		87.51	36.26	-3.74	40	52.69	14.47	1	31.9	125	80	P	V
		158.52	35.81	-7.69	43.5	49.39	16.94	1.32	31.84	-	-	P	V
		330.8	36.83	-9.17	46	46.23	20.42	1.93	31.75	-	-	P	V
		499.5	36.71	-9.29	46	42.1	23.98	2.49	31.86	-	-	P	V
		736.8	37.87	-8.13	46	39.7	27.07	3.09	31.99	-	-	P	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	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2390	59.54	-14.46	74	56.35	27.15	7.31	31.27	100	252	P	H
		2389.17	53.08	-0.92	54	49.9	27.15	7.31	31.28	100	252	A	H
	*	2412	109.63	-	-	106.4	27.19	7.31	31.27	100	252	P	H
	*	2412	106.53	-	-	103.3	27.19	7.31	31.27	100	252	A	H
													H
													H
		2390	58.61	-15.39	74	55.42	27.15	7.31	31.27	104	25	P	V
		2389.275	52.76	-1.24	54	49.58	27.15	7.31	31.28	104	25	A	V
	*	2412	109.05	-	-	105.82	27.19	7.31	31.27	104	25	P	V
	*	2412	105.9	-	-	102.67	27.19	7.31	31.27	104	25	A	V
													V
													V
802.11b CH 06 2437MHz		2381.89	54.66	-19.34	74	51.52	27.11	7.31	31.28	118	270	P	H
		2389.04	45.8	-8.2	54	42.62	27.15	7.31	31.28	118	270	A	H
	*	2437	110.54	-	-	107.16	27.28	7.36	31.26	118	270	P	H
	*	2437	107.36	-	-	103.98	27.28	7.36	31.26	118	270	A	H
		2491.88	54.71	-19.29	74	51.15	27.4	7.4	31.24	118	270	P	H
		2487.89	45.27	-8.73	54	41.72	27.4	7.4	31.25	118	270	A	H
		2387.74	54.04	-19.96	74	50.86	27.15	7.31	31.28	101	24	P	V
		2389.04	44.47	-9.53	54	41.29	27.15	7.31	31.28	101	24	A	V
	*	2437	108.23	-	-	104.85	27.28	7.36	31.26	101	24	P	V
	*	2437	105.16	-	-	101.78	27.28	7.36	31.26	101	24	A	V
		2499.72	54.39	-19.61	74	50.83	27.4	7.4	31.24	101	24	P	V
		2492.3	44.83	-9.17	54	41.27	27.4	7.4	31.24	101	24	A	V

802.11b CH 11 2462MHz	*	2462	110.9	-	-	107.44	27.32	7.4	31.26	400	287	P	H
	*	2462	107.75	-	-	104.29	27.32	7.4	31.26	400	287	A	H
		2483.68	55.86	-18.14	74	52.35	27.36	7.4	31.25	400	287	P	H
		2483.52	47.15	-6.85	54	43.64	27.36	7.4	31.25	400	287	A	H
													H
													H
	*	2462	110.06	-	-	106.6	27.32	7.4	31.26	106	23	P	V
	*	2462	106.84	-	-	103.38	27.32	7.4	31.26	106	23	A	V
		2484.56	56.76	-17.24	74	53.25	27.36	7.4	31.25	106	23	P	V
		2483.56	47.36	-6.64	54	43.85	27.36	7.4	31.25	106	23	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. 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	44.41	-29.59	74	52.69	31.22	11.68	51.18	100	0	P	H
													H
													H
													H
		4824	44.55	-29.45	74	52.83	31.22	11.68	51.18	100	0	P	V
													V
													V
													V
802.11b CH 06 2437MHz		4874	39.53	-34.47	74	47.84	31.31	11.53	51.15	100	0	P	H
		7311	46.71	-27.29	74	47.43	36.27	13.81	50.8	100	0	P	H
													H
													H
		4874	42.01	-31.99	74	50.32	31.31	11.53	51.15	100	0	P	V
		7311	46.53	-27.47	74	47.25	36.27	13.81	50.8	100	0	P	V
													V
													V
802.11b CH 11 2462MHz		4924	41.3	-32.7	74	49.67	31.39	11.37	51.13	100	0	P	H
		7386	45.8	-28.2	74	46.14	36.51	13.95	50.8	100	0	P	H
													H
													H
		4924	42.7	-31.3	74	51.07	31.39	11.37	51.13	100	0	P	V
		7386	46.58	-27.42	74	46.92	36.51	13.95	50.8	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. 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		2389.59	65	-9	74	61.82	27.15	7.31	31.28	100	272	P	H
		2390	51.34	-2.66	54	48.15	27.15	7.31	31.27	100	272	A	H
	*	2412	106.68	-	-	103.45	27.19	7.31	31.27	100	272	P	H
	*	2410	99.1	-	-	95.87	27.19	7.31	31.27	100	272	A	H
													H
													H
		2390	63.14	-10.86	74	59.95	27.15	7.31	31.27	104	8	P	V
		2390	49.96	-4.04	54	46.77	27.15	7.31	31.27	104	8	A	V
	*	2410	106.4	-	-	103.17	27.19	7.31	31.27	104	8	P	V
	*	2410	98.62	-	-	95.39	27.19	7.31	31.27	104	8	A	V
													V
													V
802.11g CH 06 2437MHz		2383.58	54.95	-19.05	74	51.81	27.11	7.31	31.28	120	251	P	H
		2386.57	45.58	-8.42	54	42.4	27.15	7.31	31.28	120	251	A	H
	*	2437	110.06	-	-	106.68	27.28	7.36	31.26	120	251	P	H
	*	2437	102.74	-	-	99.36	27.28	7.36	31.26	120	251	A	H
		2486.56	55.72	-18.28	74	52.21	27.36	7.4	31.25	120	251	P	H
		2485.65	45.54	-8.46	54	42.03	27.36	7.4	31.25	120	251	A	H
		2382.67	53.69	-20.31	74	50.55	27.11	7.31	31.28	100	22	P	V
		2386.57	44.31	-9.69	54	41.13	27.15	7.31	31.28	100	22	A	V
	*	2437	107.68	-	-	104.3	27.28	7.36	31.26	100	22	P	V
	*	2437	100.27	-	-	96.89	27.28	7.36	31.26	100	22	A	V
		2486	54.5	-19.5	74	50.99	27.36	7.4	31.25	100	22	P	V
		2484.46	45.09	-8.91	54	41.58	27.36	7.4	31.25	100	22	A	V

802.11g CH 11 2462MHz	*	2464	109.34	-	-	105.88	27.32	7.4	31.26	400	288	P	H
	*	2460	101.89	-	-	98.47	27.32	7.36	31.26	400	288	A	H
		2484.44	65.31	-8.69	74	61.8	27.36	7.4	31.25	400	288	P	H
		2483.56	52.56	-1.44	54	49.05	27.36	7.4	31.25	400	288	A	H
													H
													H
	*	2460	107.48	-	-	104.06	27.32	7.36	31.26	108	24	P	V
	*	2460	100.01	-	-	96.59	27.32	7.36	31.26	108	24	A	V
		2483.6	68.34	-5.66	74	64.83	27.36	7.4	31.25	108	24	P	V
		2483.64	51.12	-2.88	54	47.61	27.36	7.4	31.25	108	24	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. 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	38.24	-35.76	74	46.52	31.22	11.68	51.18	100	0	P	H
													H
													H
													H
		4824	38.42	-35.58	74	46.7	31.22	11.68	51.18	100	0	P	V
													V
													V
													V
802.11g CH 06 2437MHz		4874	38.72	-35.28	74	47.03	31.31	11.53	51.15	100	0	P	H
		7311	46.27	-27.73	74	46.99	36.27	13.81	50.8	100	0	P	H
													H
													H
		4874	38.68	-35.32	74	46.99	31.31	11.53	51.15	100	0	P	V
		7311	45.49	-28.51	74	46.21	36.27	13.81	50.8	100	0	P	V
													V
													V
802.11g CH 11 2462MHz		4924	37.91	-36.09	74	46.28	31.39	11.37	51.13	100	0	P	H
		7386	45.44	-28.56	74	45.78	36.51	13.95	50.8	100	0	P	H
													H
													H
		4924	38.54	-35.46	74	46.91	31.39	11.37	51.13	100	0	P	V
		7386	45.71	-28.29	74	46.05	36.51	13.95	50.8	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 HT20 (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)
		2389.905	65.51	-8.49	74	62.32	27.15	7.31	31.27	100	252	P	H
		2390	50.09	-3.91	54	46.9	27.15	7.31	31.27	100	252	A	H
	*	2412	105.41	-	-	102.18	27.19	7.31	31.27	100	252	P	H
	*	2412	97.5	-	-	94.27	27.19	7.31	31.27	100	252	A	H
802.11n													H
HT20													H
CH 01		2390	63.21	-10.79	74	60.02	27.15	7.31	31.27	103	6	P	V
2412MHz		2389.905	49.9	-4.1	54	46.71	27.15	7.31	31.27	103	6	A	V
	*	2412	104.3	-	-	101.07	27.19	7.31	31.27	103	6	P	V
	*	2412	97.02	-	-	93.79	27.19	7.31	31.27	103	6	A	V
													V
													V
		2388.91	54.6	-19.4	74	51.42	27.15	7.31	31.28	115	251	P	H
		2389.3	45.41	-8.59	54	42.23	27.15	7.31	31.28	115	251	A	H
	*	2437	109.28	-	-	105.9	27.28	7.36	31.26	115	251	P	H
	*	2437	102.15	-	-	98.77	27.28	7.36	31.26	115	251	A	H
802.11n		2492.23	55.32	-18.68	74	51.76	27.4	7.4	31.24	115	251	P	H
HT20		2490.55	45.58	-8.42	54	42.03	27.4	7.4	31.25	115	251	A	H
CH 06		2384.88	54.41	-19.59	74	51.27	27.11	7.31	31.28	103	24	P	V
2437MHz		2388.65	44.8	-9.2	54	41.62	27.15	7.31	31.28	103	24	A	V
	*	2437	107.52	-	-	104.14	27.28	7.36	31.26	103	24	P	V
	*	2437	99.84	-	-	96.46	27.28	7.36	31.26	103	24	A	V
		2492.51	54.52	-19.48	74	50.96	27.4	7.4	31.24	103	24	P	V
		2489.71	45.21	-8.79	54	41.66	27.4	7.4	31.25	103	24	A	V

	*	2462	106.82	-	-	103.36	27.32	7.4	31.26	110	250	P	H
	*	2462	99.52	-	-	96.06	27.32	7.4	31.26	110	250	A	H
		2484.16	67.68	-6.32	74	64.17	27.36	7.4	31.25	110	250	P	H
		2483.56	53.13	-0.87	54	49.62	27.36	7.4	31.25	110	250	A	H
802.11n													H
HT20													H
CH 11	*	2462	106.55	-	-	103.09	27.32	7.4	31.26	108	24	P	V
2462MHz	*	2462	98.87	-	-	95.41	27.32	7.4	31.26	108	24	A	V
		2484.48	63.99	-10.01	74	60.48	27.36	7.4	31.25	108	24	P	V
		2483.52	51.53	-2.47	54	48.02	27.36	7.4	31.25	108	24	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. 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)
		4824	38.12	-35.88	74	46.4	31.22	11.68	51.18	100	0	P	H
													H
802.11n													H
HT20													H
CH 01		4824	37.82	-36.18	74	46.1	31.22	11.68	51.18	100	0	P	V
2412MHz													V
													V
													V
		4874	37.76	-36.24	74	46.07	31.31	11.53	51.15	100	0	P	H
		7311	45.23	-28.77	74	45.95	36.27	13.81	50.8	100	0	P	H
802.11n													H
HT20													H
CH 06		4874	37.92	-36.08	74	46.23	31.31	11.53	51.15	100	0	P	V
2437MHz		7311	45.24	-28.76	74	45.96	36.27	13.81	50.8	100	0	P	V
													V
													V
		4924	39.7	-34.3	74	48.07	31.39	11.37	51.13	100	0	P	H
		7386	45.62	-28.38	74	45.96	36.51	13.95	50.8	100	0	P	H
802.11n													H
HT20													H
CH 11		4924	39.19	-34.81	74	47.56	31.39	11.37	51.13	100	0	P	V
2462MHz		7386	45.18	-28.82	74	45.52	36.51	13.95	50.8	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

Emission below 1GHz

2.4GHz WIFI 802.11n HT20 (LF)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz 802.11n HT20 LF		89.13	33.36	-10.14	43.5	49.56	14.69	1.01	31.9	-	-	P	H
		127.2	31.07	-12.43	43.5	44.11	17.64	1.19	31.87	-	-	P	H
		166.08	31.81	-11.69	43.5	46.04	16.26	1.35	31.84	-	-	P	H
		317.5	38.97	-7.03	46	48.82	20.02	1.88	31.75	140	80	P	H
		371.4	30.75	-15.25	46	38.89	21.52	2.1	31.76	-	-	P	H
		911.1	31.94	-14.06	46	30.79	29.16	3.44	31.45	-	-	P	H
													H
													H
													H
													H
													H
													H
		41.88	35.58	-4.42	40	47.79	19.08	0.64	31.93	137	60	P	V
		86.16	32.69	-7.31	40	49.24	14.36	0.99	31.9	-	-	P	V
		213.6	31.37	-12.13	43.5	45.54	16.07	1.56	31.8	-	-	P	V
		516.3	24.76	-21.24	46	29.99	24.09	2.55	31.87	-	-	P	V
		746.6	32.36	-13.64	46	33.91	27.32	3.11	31.98	-	-	P	V
		949.6	31.42	-14.58	46	29	30.1	3.44	31.12	-	-	P	V
													V
													V
													V
													V
													V
													V

Remark

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

Note symbol

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

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

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

1. Level(dBμV/m) =

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

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

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 43.54 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

= -10.46(dB)

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

Appendix C. Radiated Spurious Emission Plots

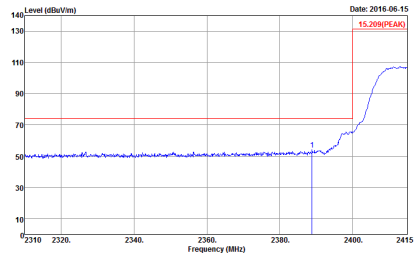
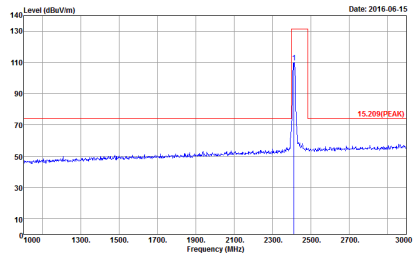
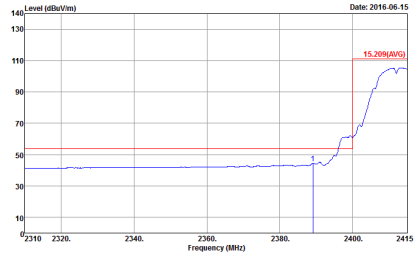
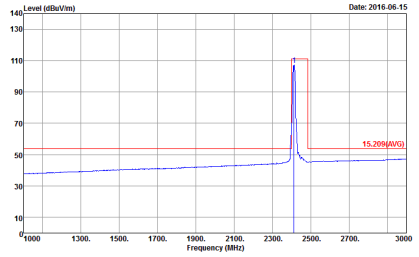
Test Engineer :	Bill Chang and Elvis Chen and Alex Jeng	**Temperature :**	20~24°C
		Relative Humidity :	45~50%

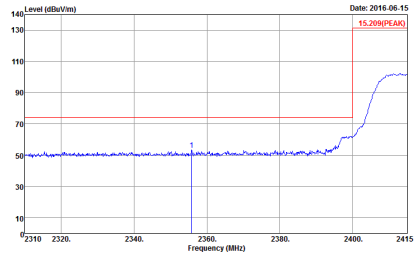
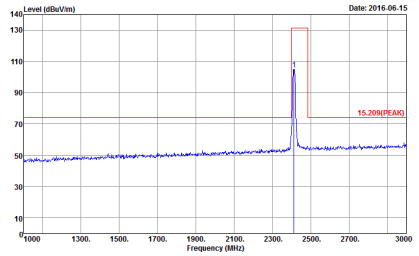
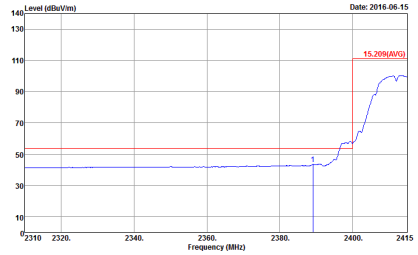
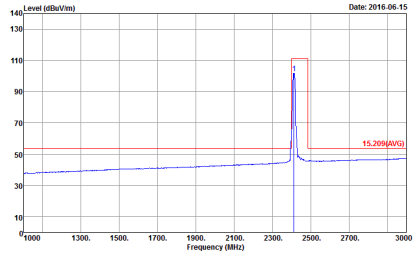
Note symbol

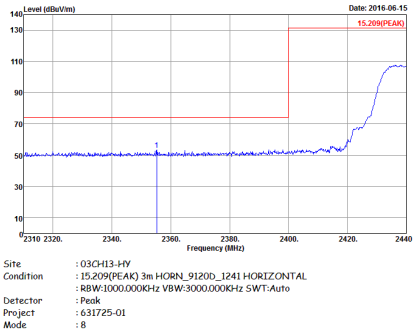
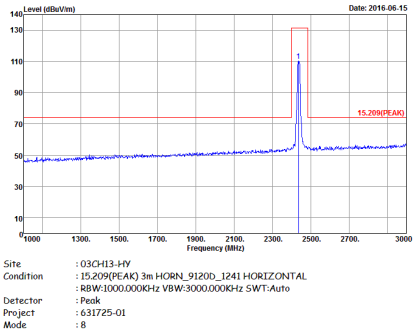
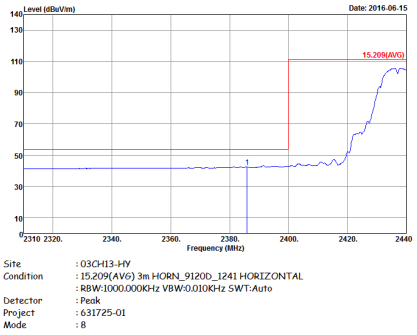
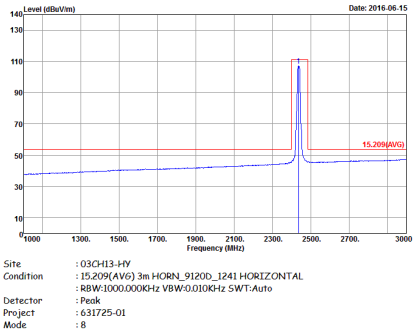
-L	**Low channel location**
-R	**High channel location**

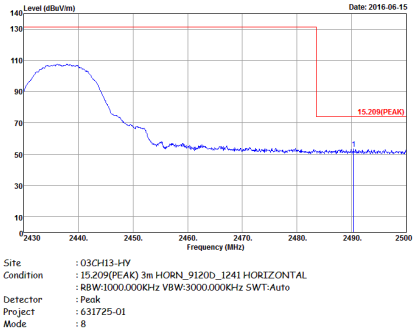
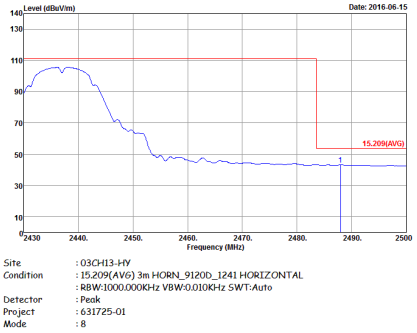
2.4GHz 2400~2483.5MHz

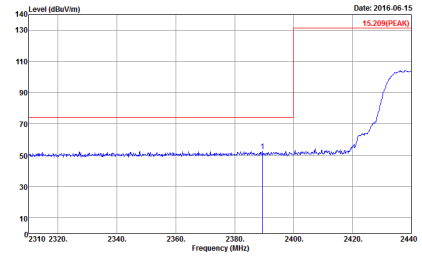
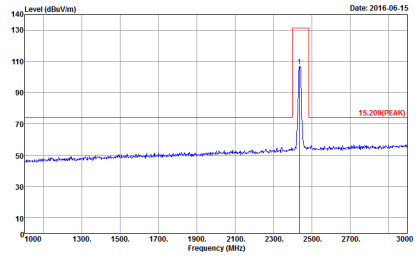
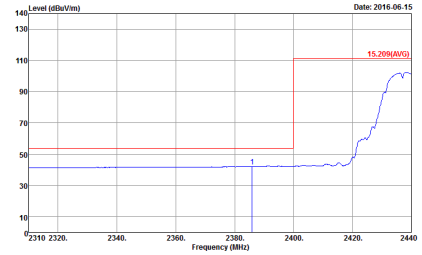
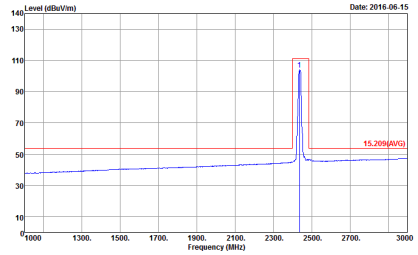
WIFI 802.11b (Band Edge @ 3m)

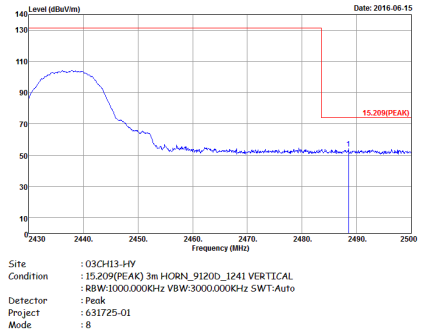
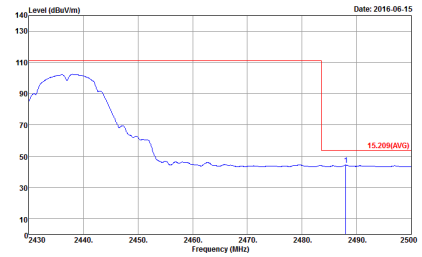
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 7	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 7
Avg.	 Site : 03CH13-HY Condition : 15.209(AV6) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 7	 Site : 03CH13-HY Condition : 15.209(AV6) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 7

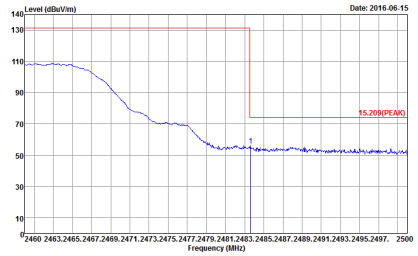
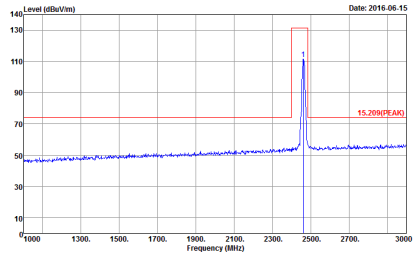
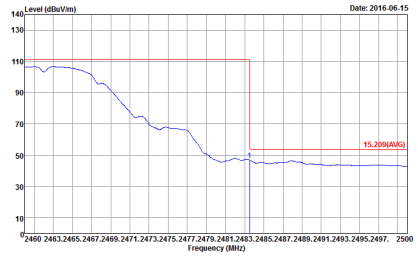
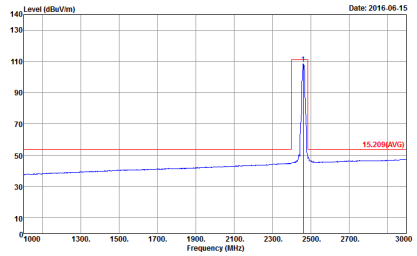
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 7	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 7
Avg.	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 7	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 7

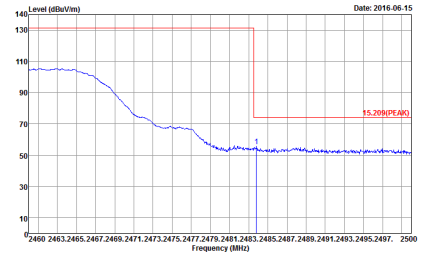
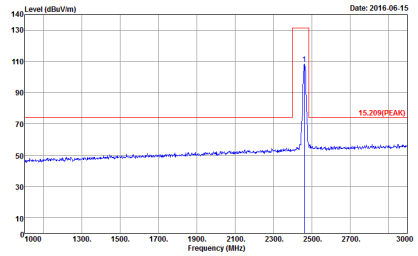
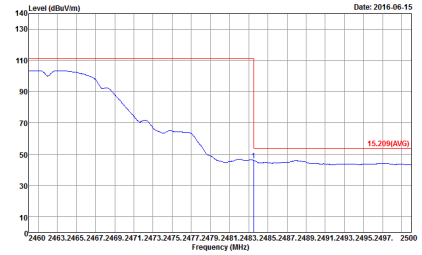
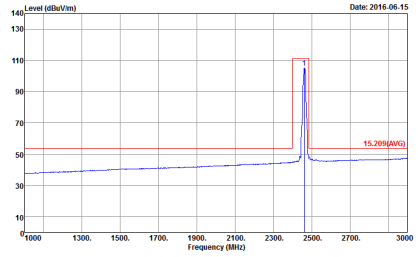
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 8	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 8
Avg.	 Site : 03CH13-HY Condition : 15.209(AV6) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 8	 Site : 03CH13-HY Condition : 15.209(AV6) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 8

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 8	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 8
Avg.	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 8	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 8

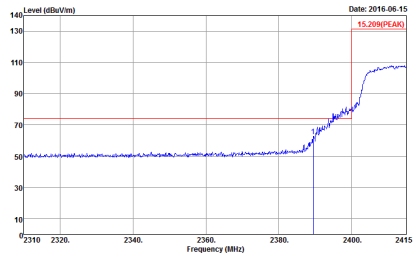
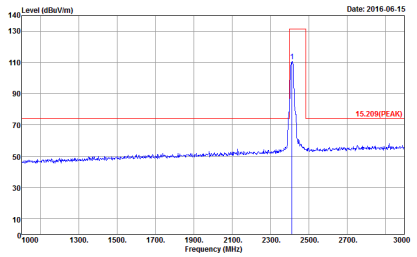
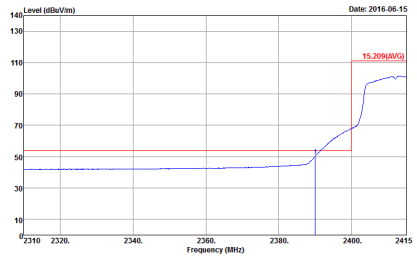
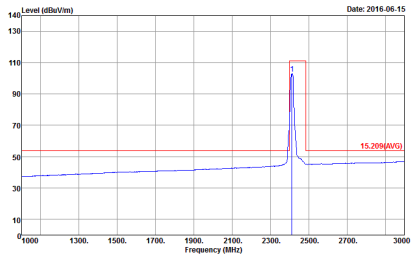
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
1	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 8	Left blank
Avg.	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 8	Left blank

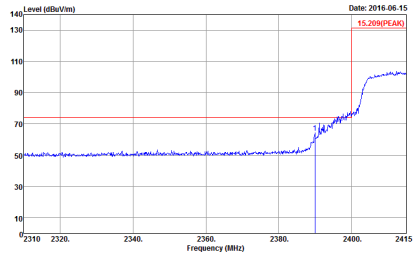
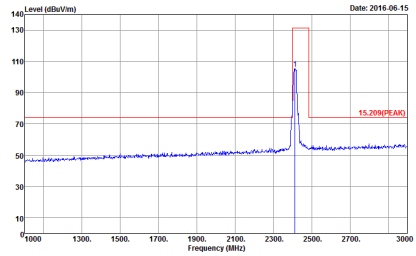
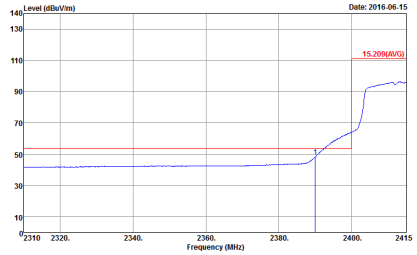
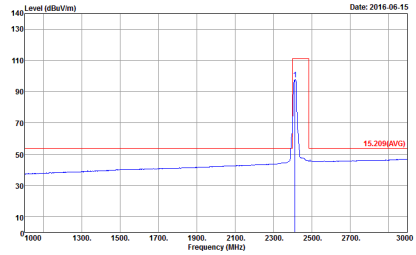
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 9	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 9
Avg.	 Site : 03CH13-HY Condition : 15.209(AV6) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 9	 Site : 03CH13-HY Condition : 15.209(AV6) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 9

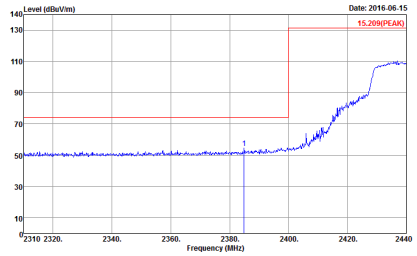
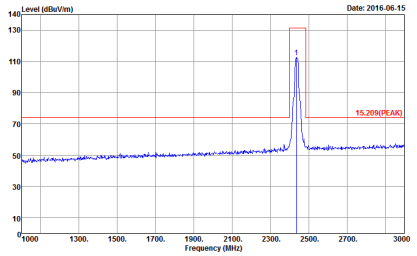
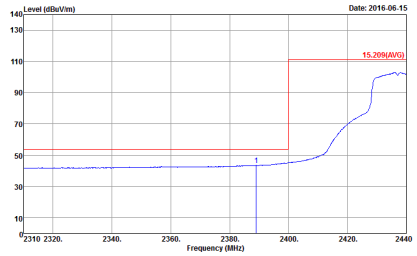
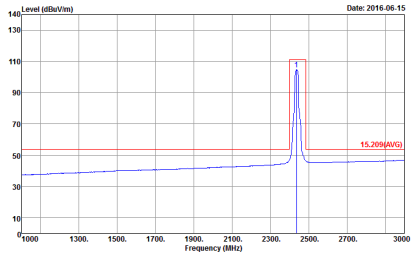
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 9	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 9
Avg.	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 9	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 9

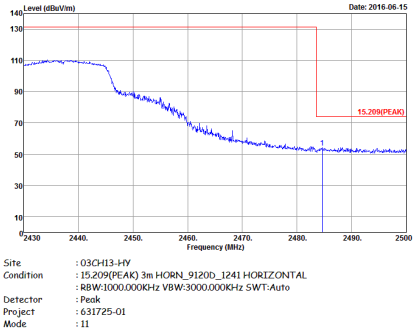
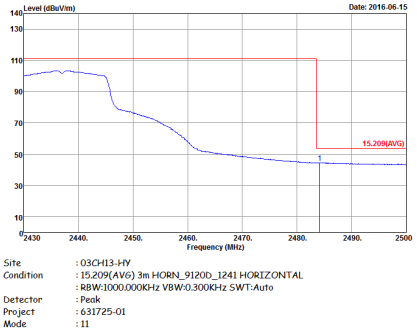
2.4GHz 2400~2483.5MHz

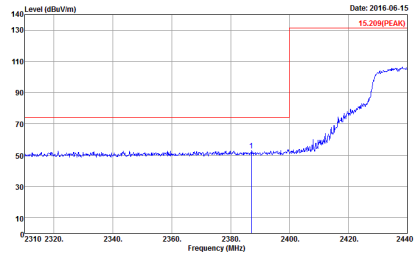
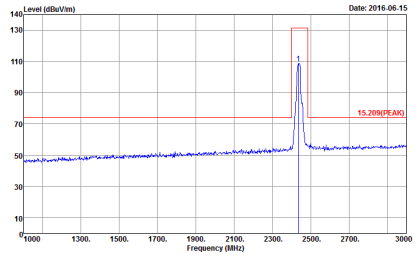
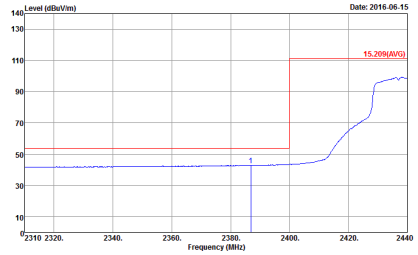
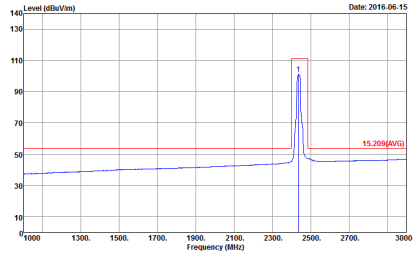
WIFI 802.11g (Band Edge @ 3m)

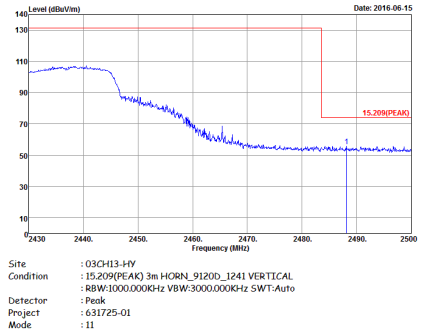
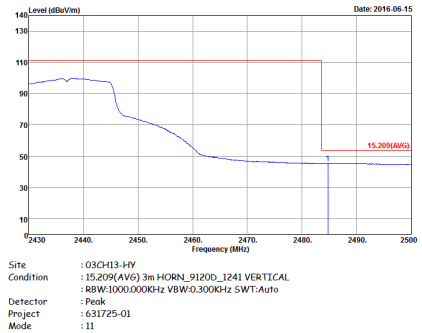
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 10 Power : 20	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 10 Power : 20
Avg.	 Site : 03CH13-HY Condition : 15.209(AV6) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 10 Power : 20	 Site : 03CH13-HY Condition : 15.209(AV6) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 10 Power : 20

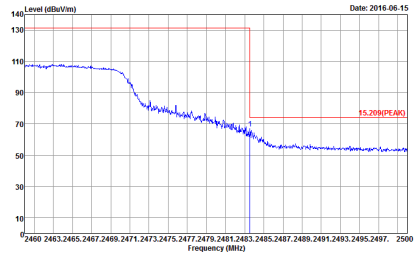
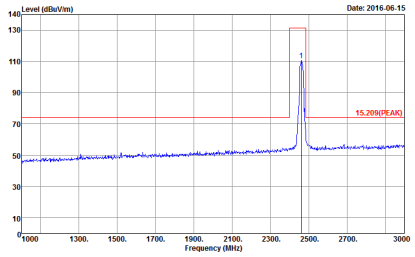
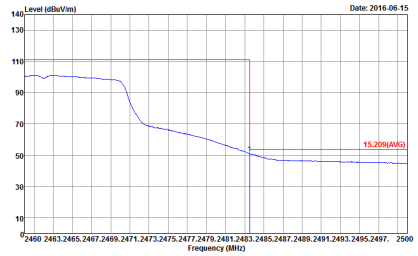
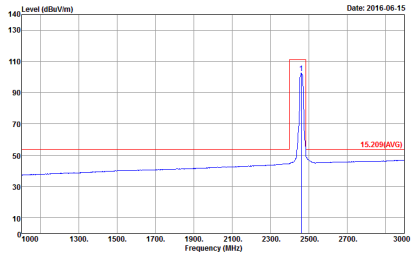
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 10 Power : 20	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 10 Power : 20
Avg.	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 10 Power : 20	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 10 Power : 20

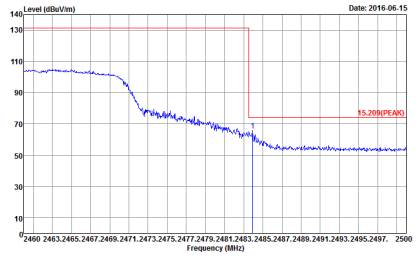
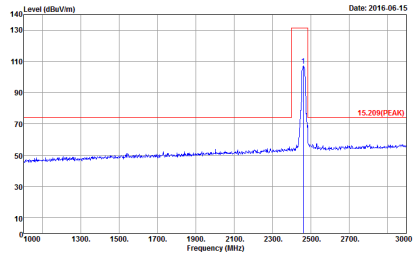
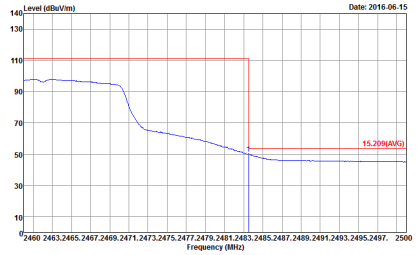
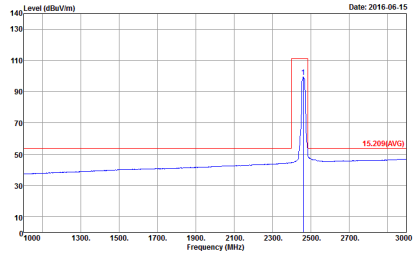
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 11	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 11
Avg.	 Site : 03CH13-HY Condition : 15.209(AV6) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 11	 Site : 03CH13-HY Condition : 15.209(AV6) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 11

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 11	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 11
Avg.	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 11	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 11

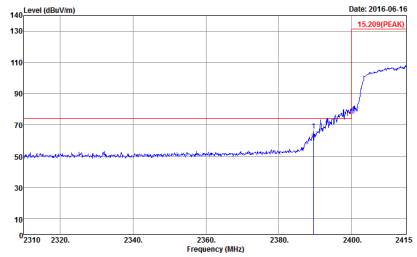
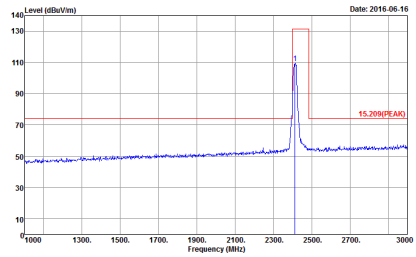
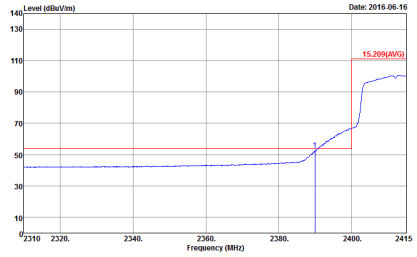
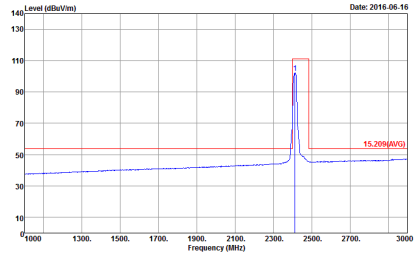
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
1	Vertical	Fundamental
Peak		Left Blank
Avg.		Left Blank

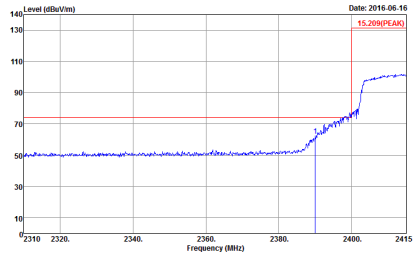
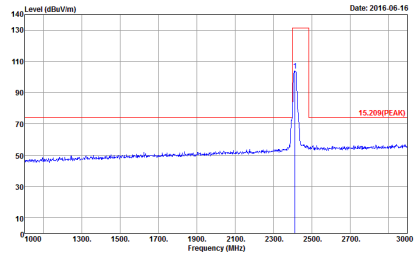
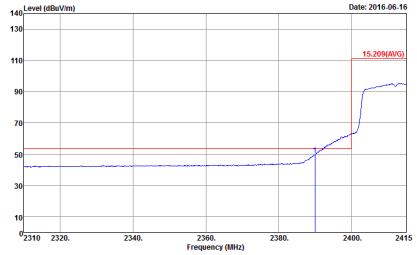
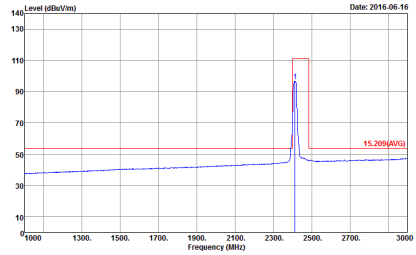
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 12 Power : 19	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 12 Power : 19
Avg.	 Site : 03CH13-HY Condition : 15.209(AV6) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 12 Power : 19	 Site : 03CH13-HY Condition : 15.209(AV6) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 12 Power : 19

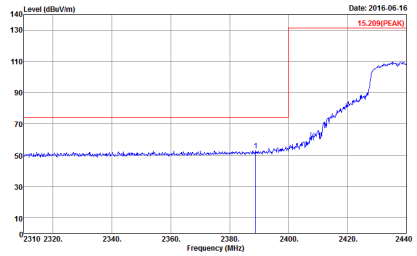
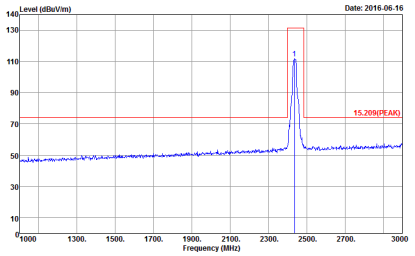
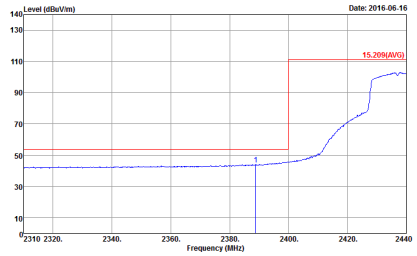
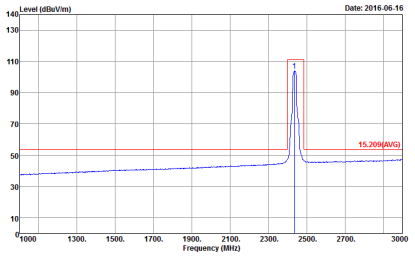
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 12 Power : 19	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 12 Power : 19
Avg.	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 12 Power : 19	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 12 Power : 19

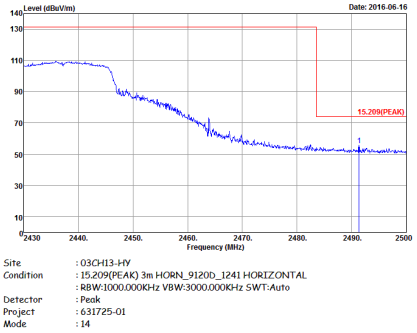
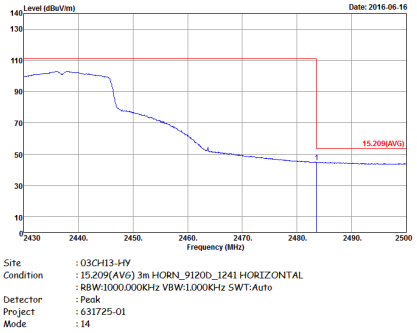
2.4GHz 2400~2483.5MHz

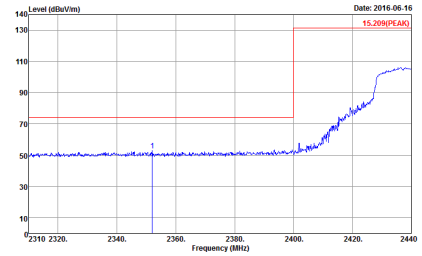
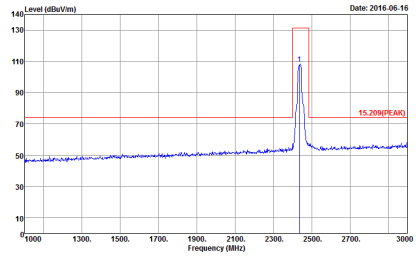
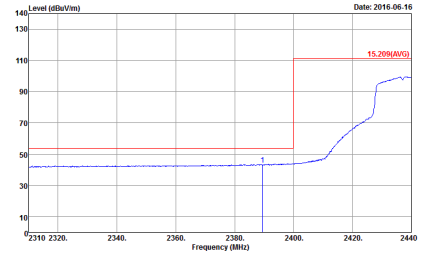
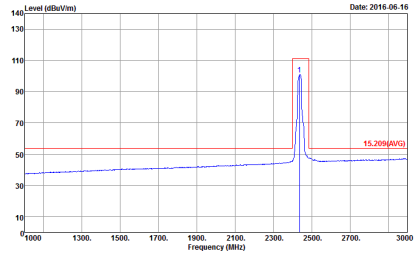
WIFI 802.11n HT20 (Band Edge @ 3m)

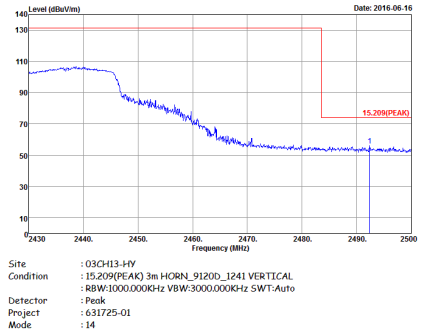
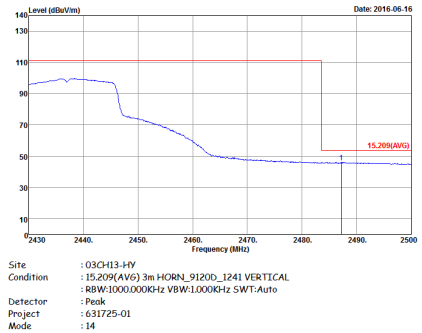
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 13 Power : 19	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 13 Power : 19
Avg.	 Site : 03CH13-HY Condition : 15.209(AV6) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 13 Power : 19	 Site : 03CH13-HY Condition : 15.209(AV6) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 13 Power : 19

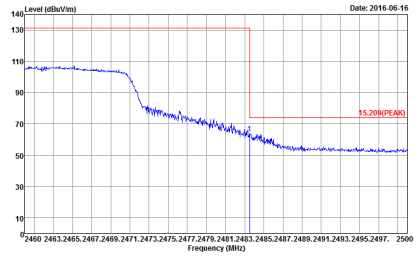
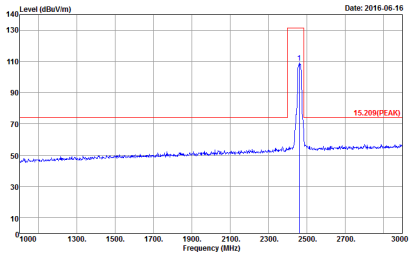
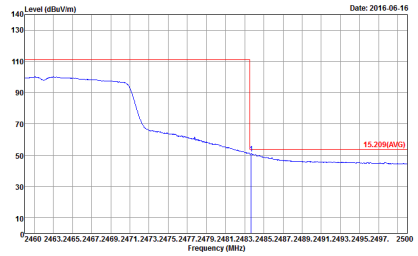
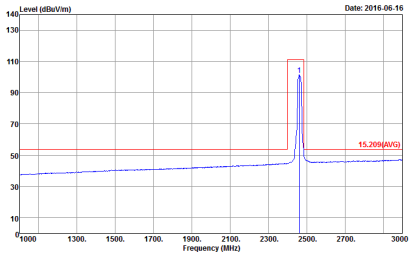
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 13 Power : 19	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 13 Power : 19
Avg.	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 13 Power : 19	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 13 Power : 19

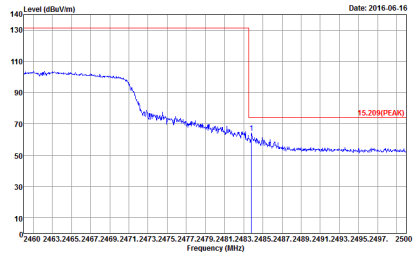
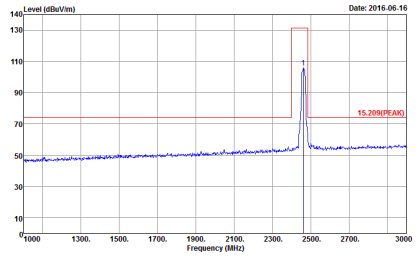
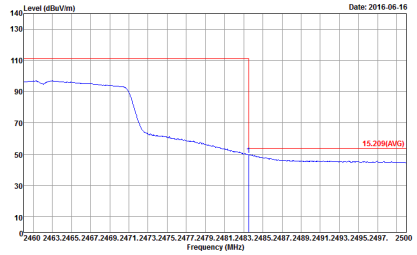
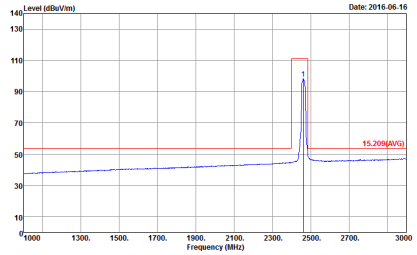
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 14	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 14
Avg.	 Site : 03CH13-HY Condition : 15.209(AV6) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 14	 Site : 03CH13-HY Condition : 15.209(AV6) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 14

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 14	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 14
Avg.	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 14	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 14

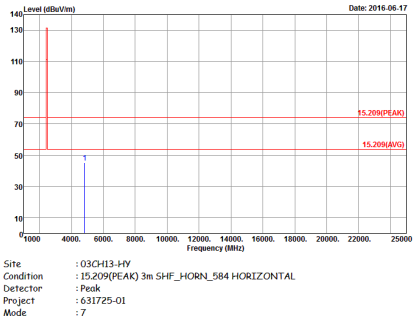
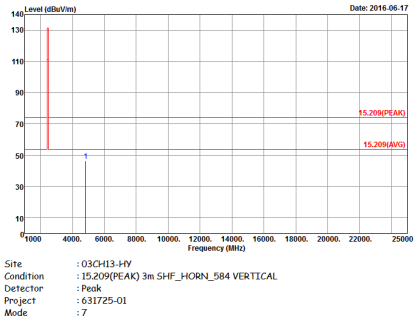
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
1	Vertical	Fundamental
Peak		Left Blank
Avg.		Left Blank

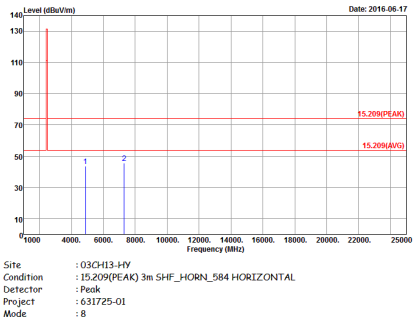
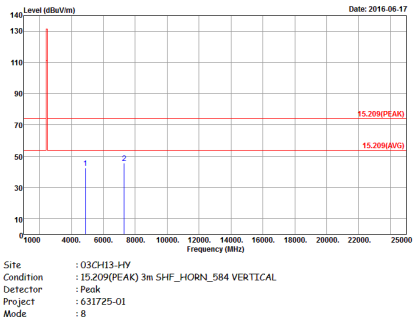
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 15 Power : 18	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 15 Power : 18
Avg.	 Site : 03CH13-HY Condition : 15.209(AV6) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 15 Power : 18	 Site : 03CH13-HY Condition : 15.209(AV6) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 15 Power : 18

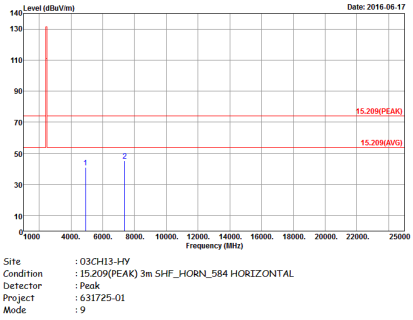
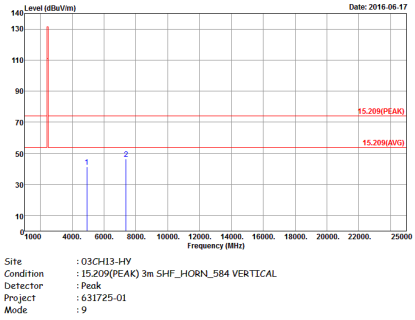
WIFI	2.4GHz 2400~2483.5MHz Fundamental @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 15 Power : 18	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 15 Power : 18
Avg.	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 15 Power : 18	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 15 Power : 18

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Harmonic @ 3m)

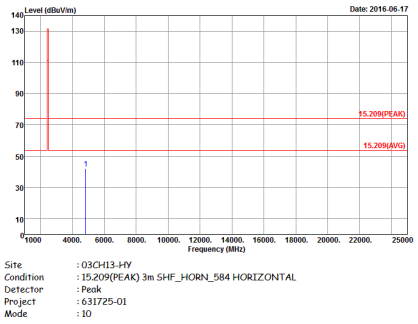
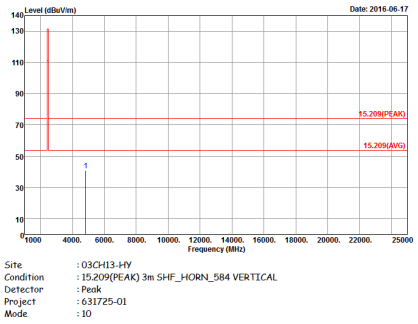
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.		

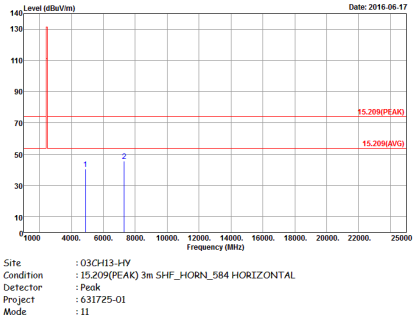
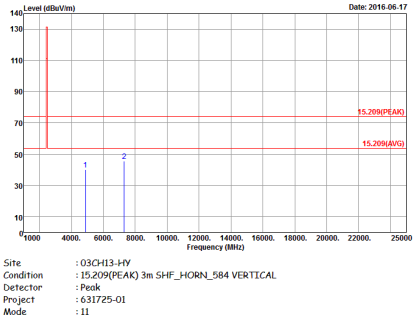
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH06 2437MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m SHF_HORN_584 HORIZONTAL Detector : Peak Project : 631725-01 Mode : 8	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m SHF_HORN_584 VERTICAL Detector : Peak Project : 631725-01 Mode : 8

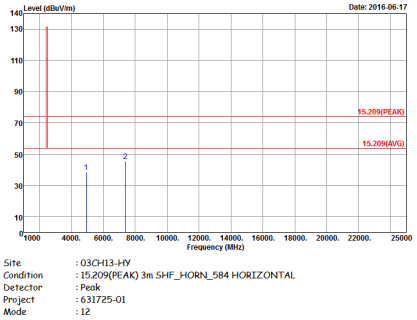
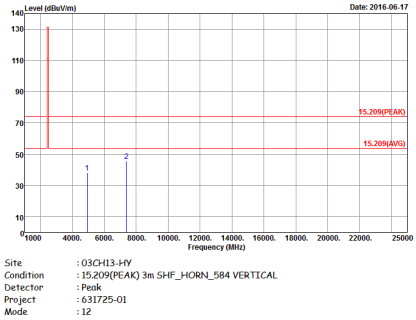
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH11 2462MHz	
1	Horizontal	Vertical
Peak Avg.		

2.4GHz 2400~2483.5MHz

WIFI 802.11g (Harmonic @ 3m)

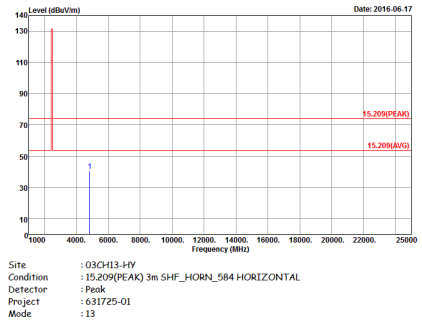
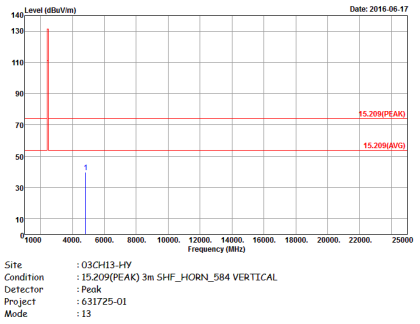
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.		

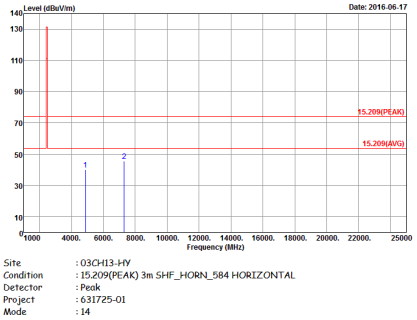
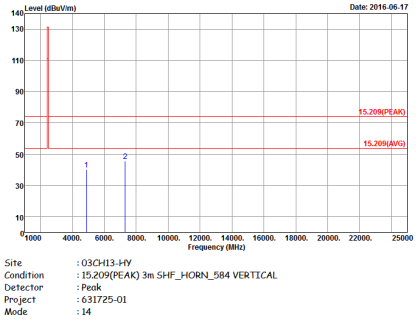
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH06 2437MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m SHF_HORN_584 HORIZONTAL Detector : Peak Project : 631725-01 Mode : 11	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m SHF_HORN_584 VERTICAL Detector : Peak Project : 631725-01 Mode : 11

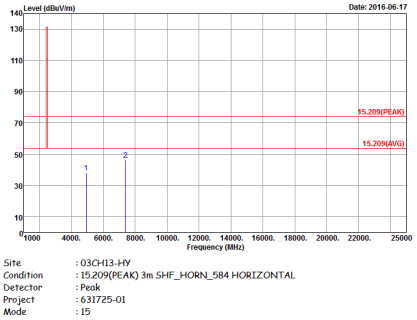
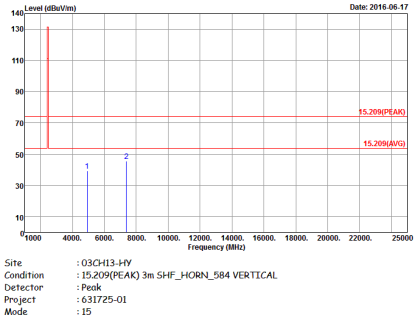
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH11 2462MHz	
1	Horizontal	Vertical
Peak Avg.		

2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

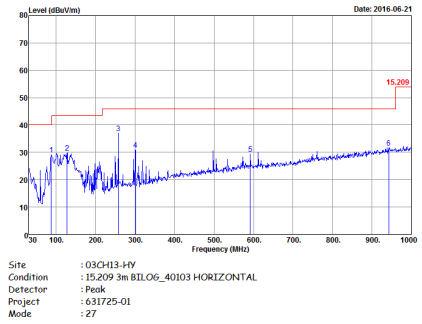
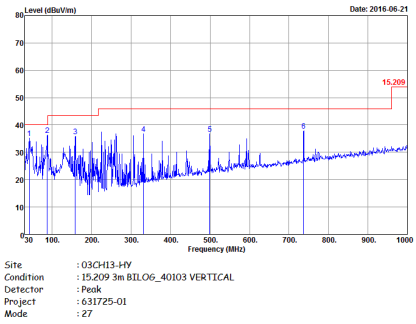
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.		

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH06 2437MHz	
1	Horizontal	Vertical
Peak Avg.		

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

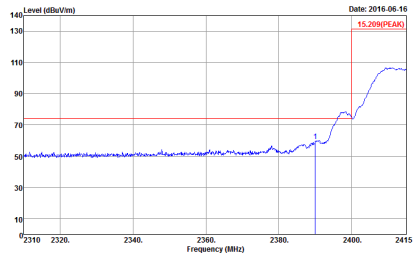
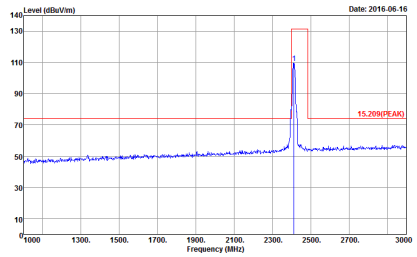
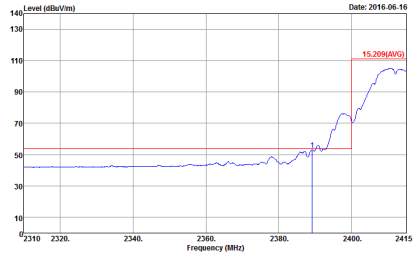
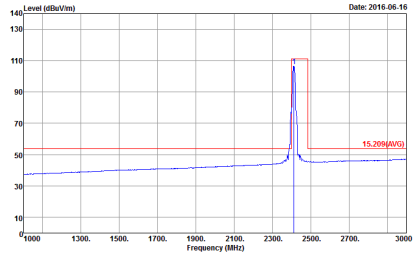
Emission below 1GHz

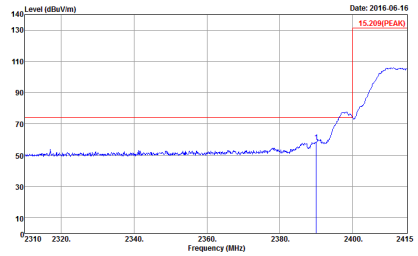
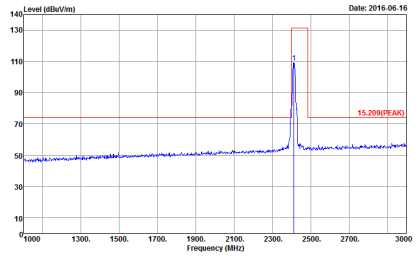
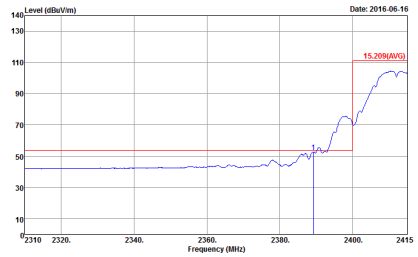
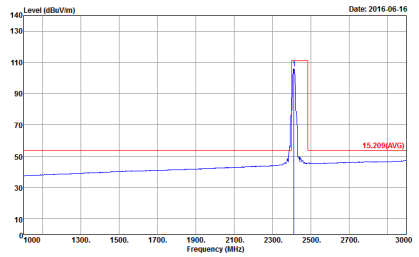
2.4GHz WIFI 802.11n HT20 (LF)

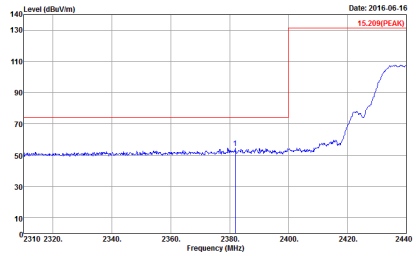
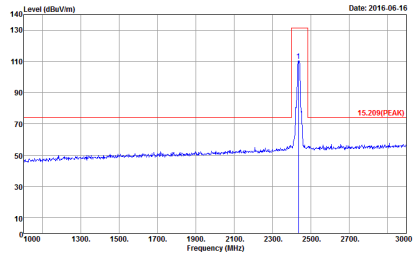
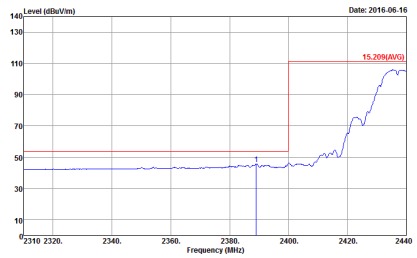
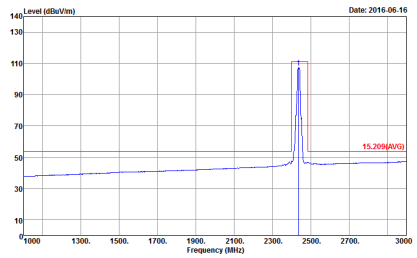
WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11n HT20 LF	
1	Horizontal	Vertical
QP / Peak		

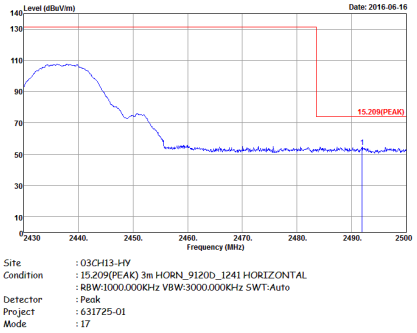
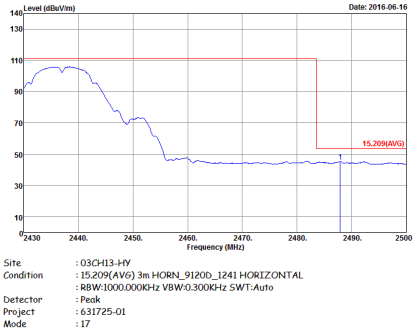
2.4GHz 2400~2483.5MHz

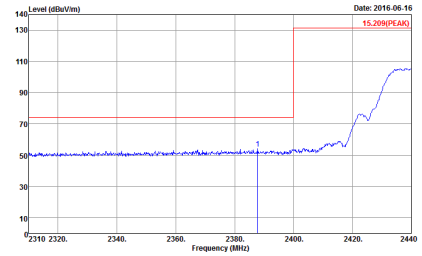
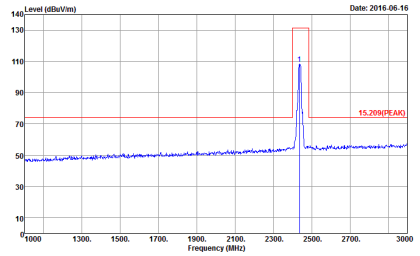
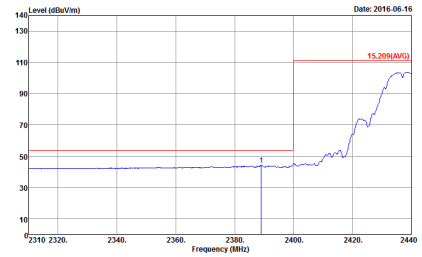
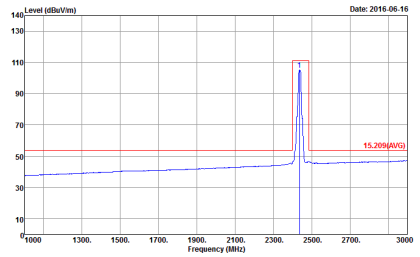
WIFI 802.11b (Band Edge @ 3m)

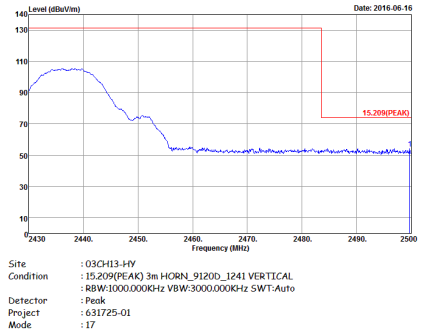
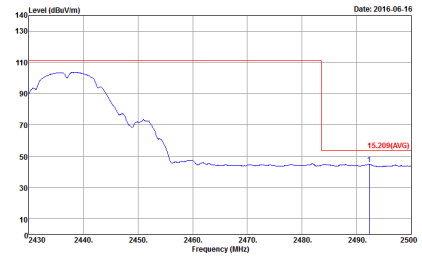
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
2	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 16	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 16
Avg.	 Site : 03CH13-HY Condition : 15.209(AV6) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 16	 Site : 03CH13-HY Condition : 15.209(AV6) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 16

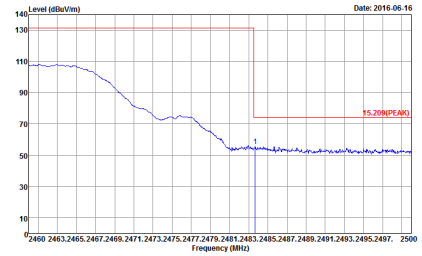
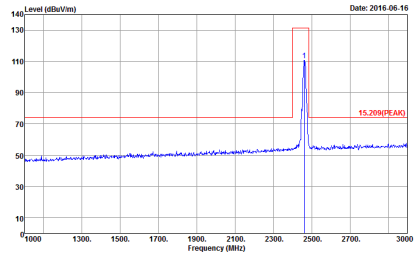
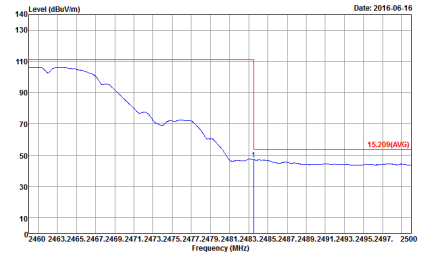
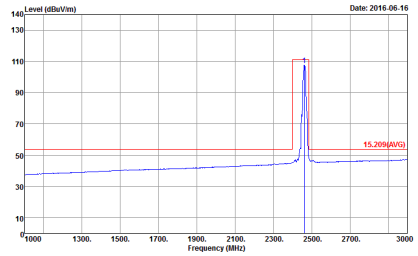
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
2	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 16	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 16
Avg.	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 16	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 16

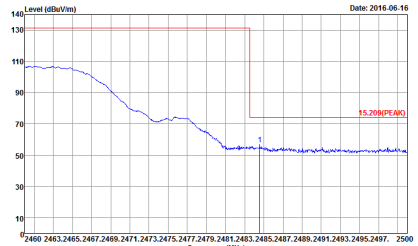
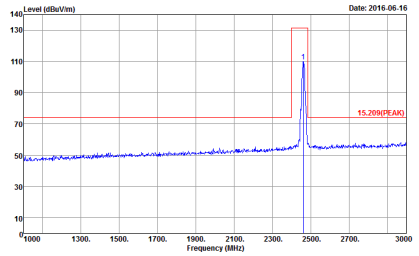
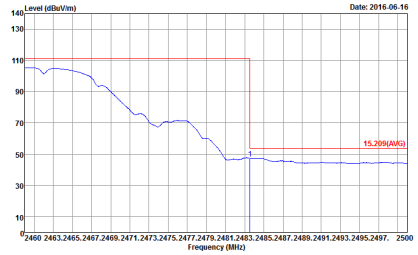
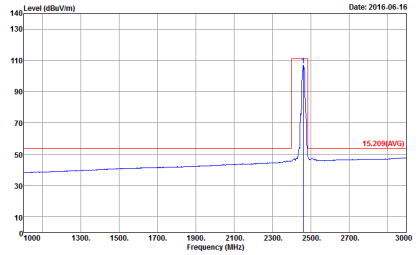
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
2	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 17	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 17
Avg.	 Site : 03CH13-HY Condition : 15.209(AV6) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 17	 Site : 03CH13-HY Condition : 15.209(AV6) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 17

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
2	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 17	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 17
Avg.	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 17	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 17

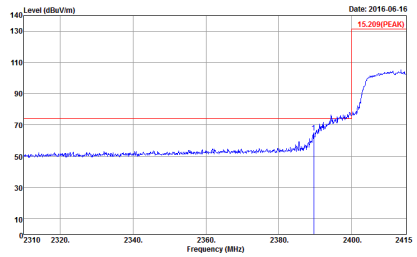
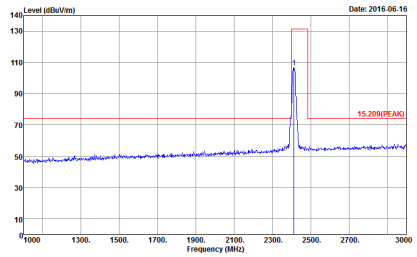
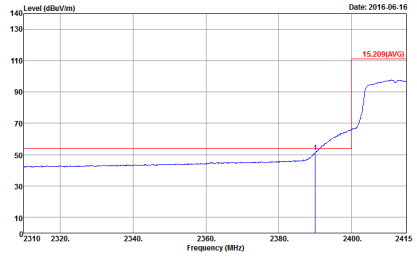
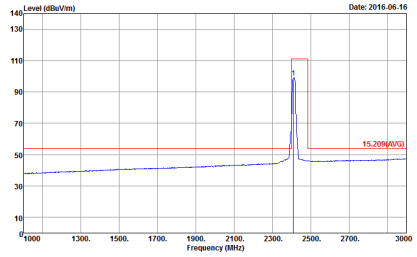
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
2	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 17	Left blank
Avg.	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 17	Left blank

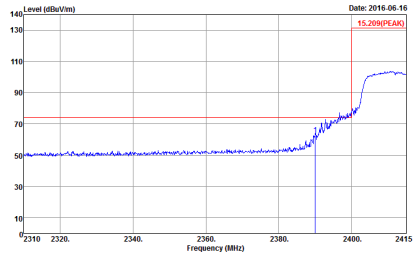
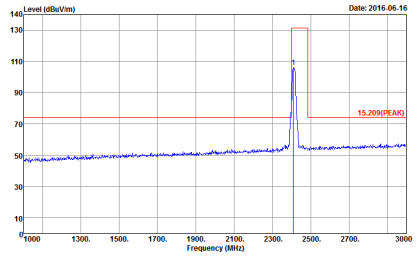
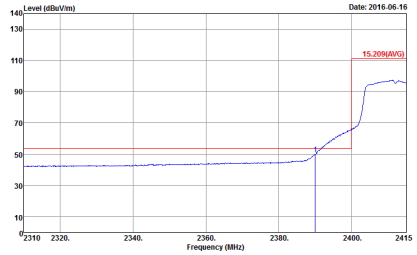
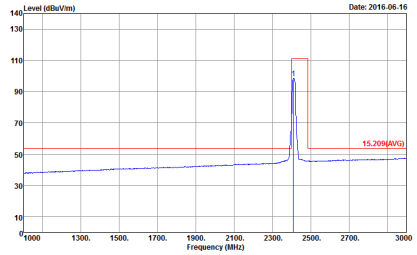
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
2	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 18	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 18
Avg.	 Site : 03CH13-HY Condition : 15.209(AV6) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 18	 Site : 03CH13-HY Condition : 15.209(AV6) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 18

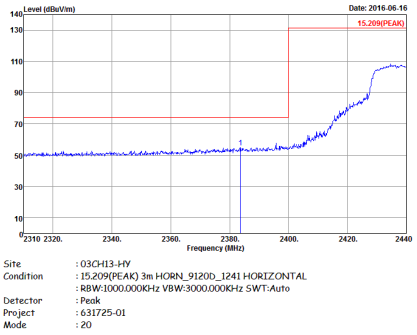
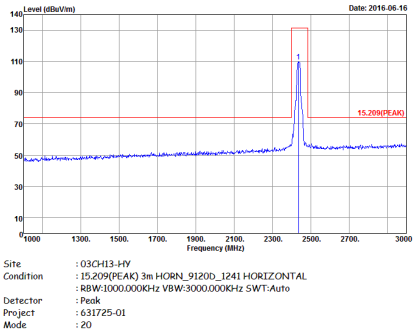
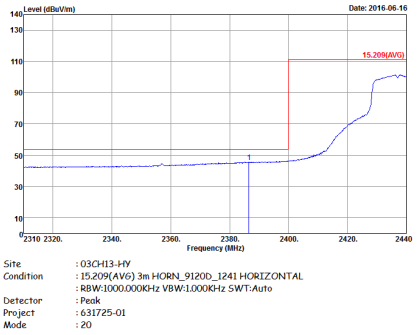
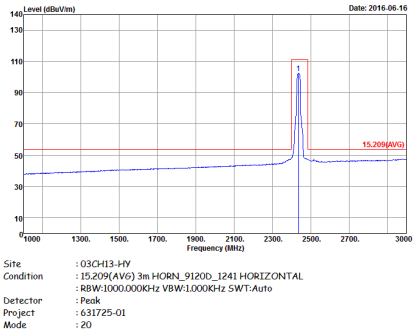
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
2	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 18	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 18
Avg.	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 18	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 18

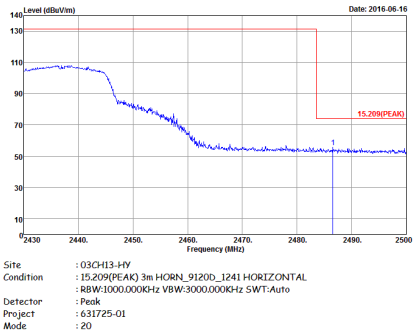
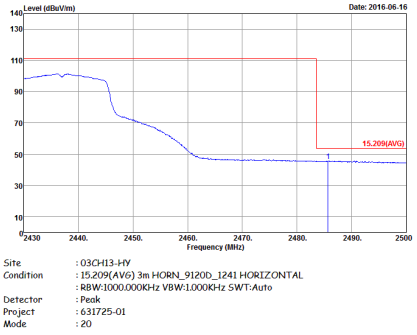
2.4GHz 2400~2483.5MHz

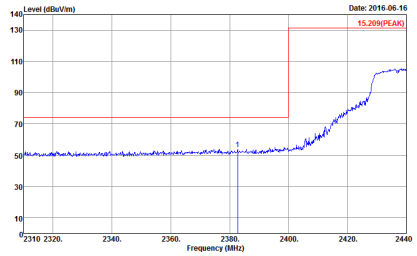
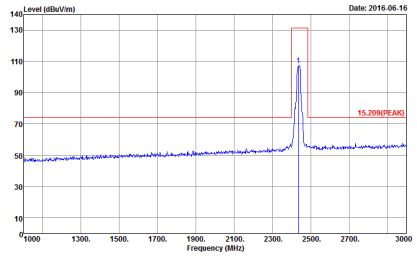
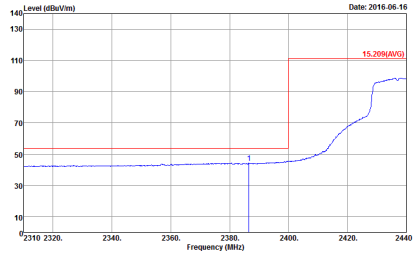
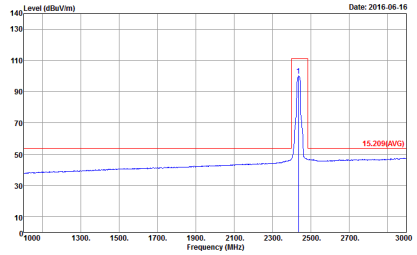
WIFI 802.11g (Band Edge @ 3m)

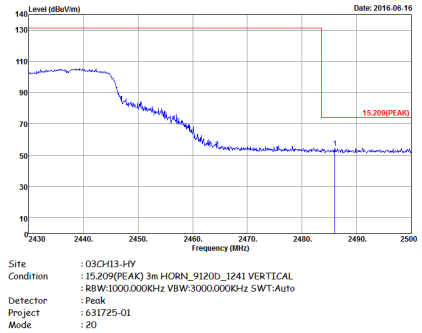
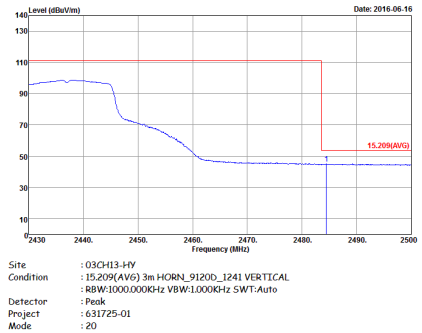
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
2	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 19 power setting : 19	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 19 power setting : 19
Avg.	 Site : 03CH13-HY Condition : 15.209(AV6) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 19 power setting : 19	 Site : 03CH13-HY Condition : 15.209(AV6) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 19 power setting : 19

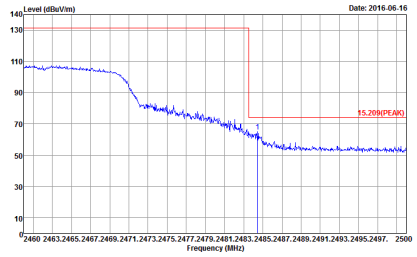
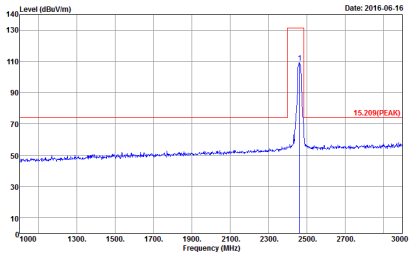
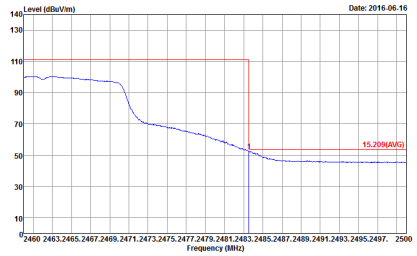
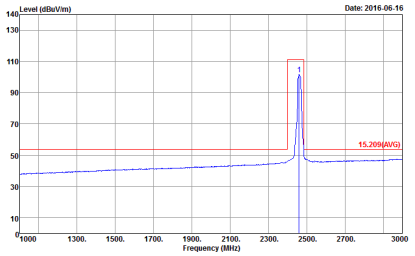
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
2	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 19 power setting : 19	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 19 power setting : 19
Avg.	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 19 power setting : 19	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 19 power setting : 19

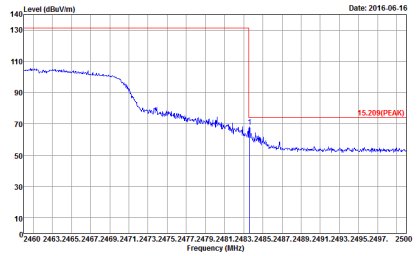
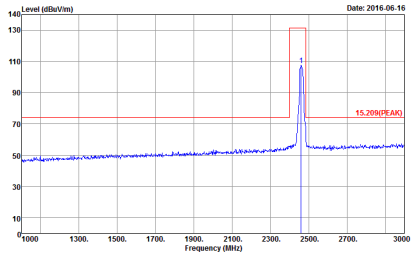
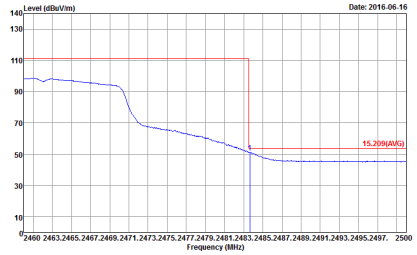
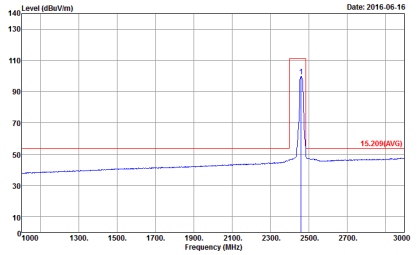
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
2	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 20	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 20
Avg.	 Site : 03CH13-HY Condition : 15.209(AV6) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 20	 Site : 03CH13-HY Condition : 15.209(AV6) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 20

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
2	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 20	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 20
Avg.	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 20	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 20

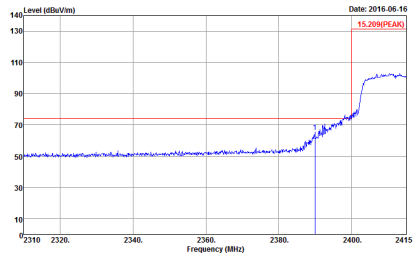
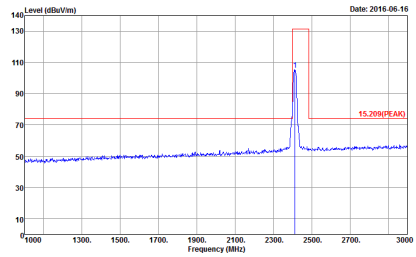
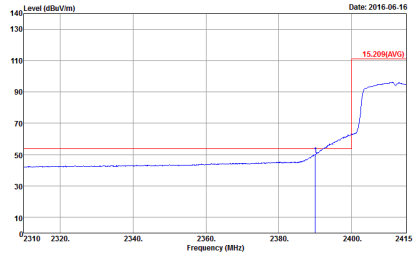
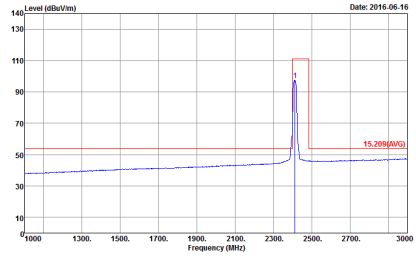
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
2	Vertical	Fundamental
Peak		Left Blank
Avg.		Left Blank

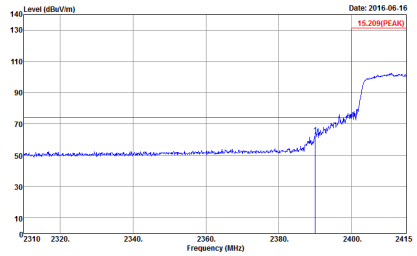
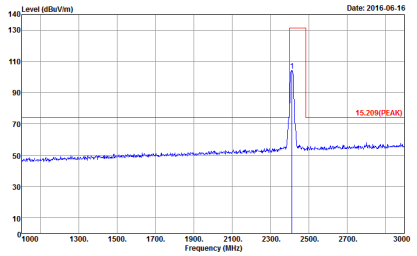
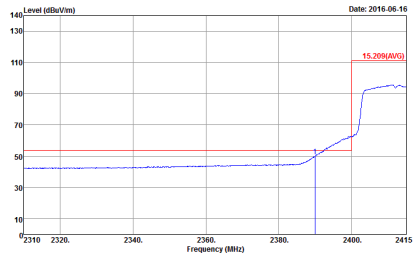
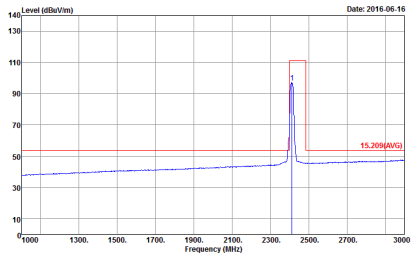
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
2	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 21 power setting : 20	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 21 power setting : 20
Avg.	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 21 power setting : 20	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 21 power setting : 20

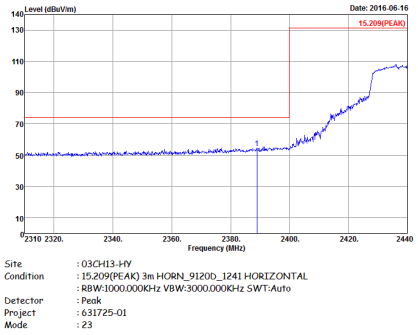
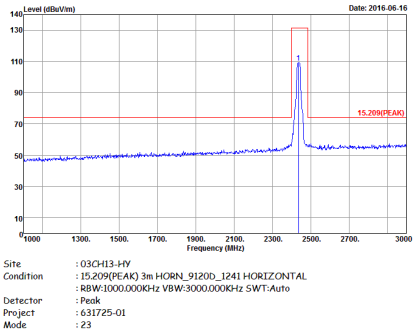
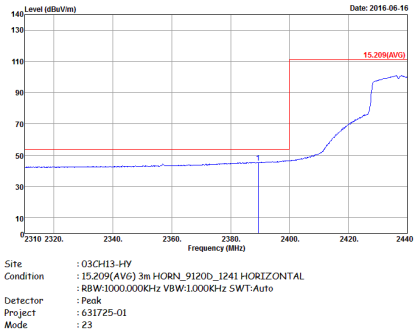
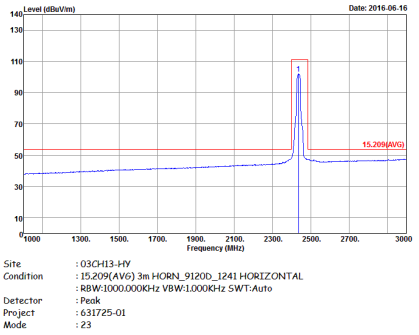
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
2	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 21 power setting : 20	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 21 power setting : 20
Avg.	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 21 power setting : 20	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 21 power setting : 20

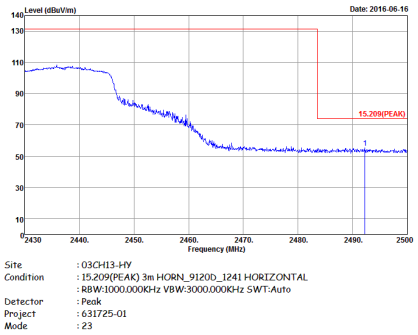
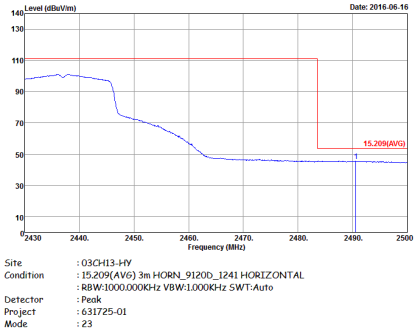
2.4GHz 2400~2483.5MHz

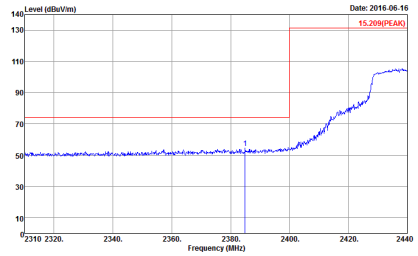
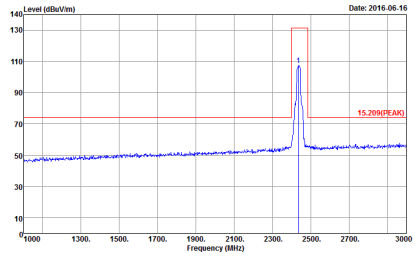
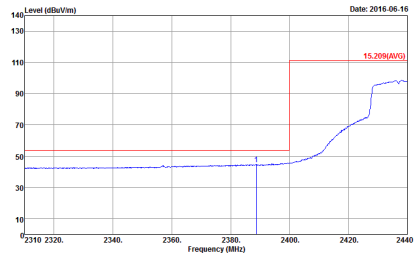
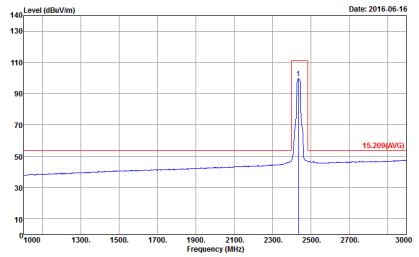
WIFI 802.11n HT20 (Band Edge @ 3m)

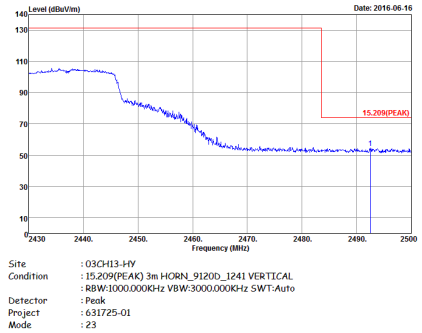
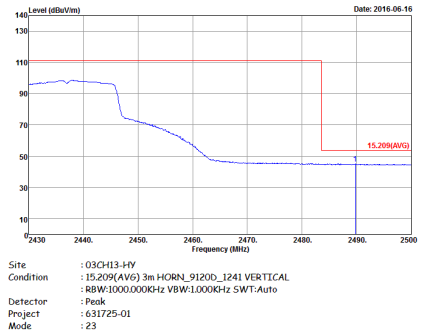
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
2	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 22 power setting : 18	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 22 power setting : 18
Avg.	 Site : 03CH13-HY Condition : 15.209(AV6) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 22 power setting : 18	 Site : 03CH13-HY Condition : 15.209(AV6) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 22 power setting : 18

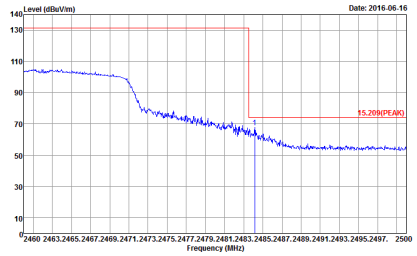
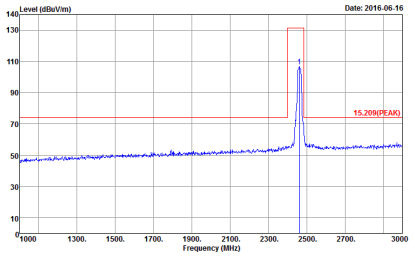
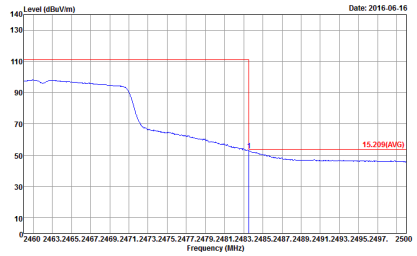
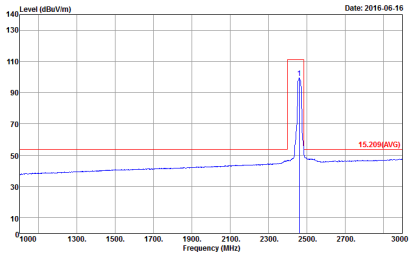
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
2	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 22 power setting : 18	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 22 power setting : 18
Avg.	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 22 power setting : 18	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 22 power setting : 18

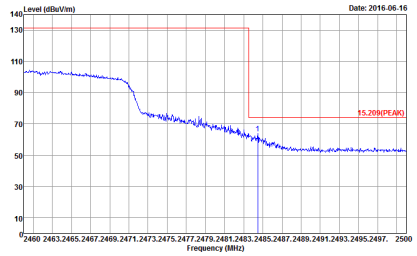
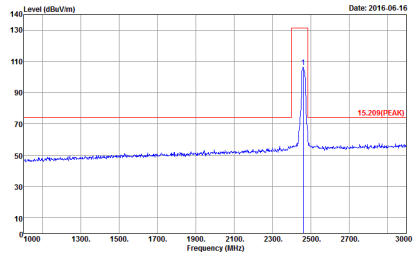
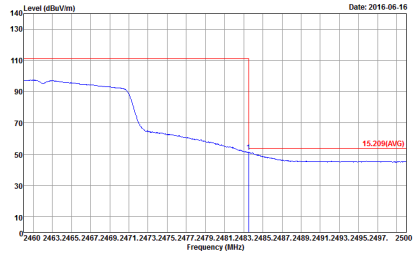
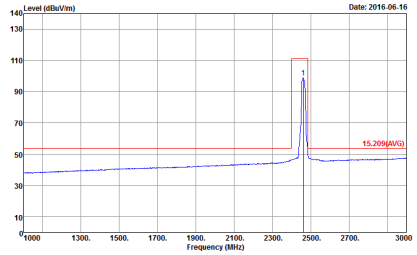
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - L	
2	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 23	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 23
Avg.	 Site : 03CH13-HY Condition : 15.209(AV6) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 23	 Site : 03CH13-HY Condition : 15.209(AV6) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 23

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - L	
2	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 23	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 23
Avg.	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 23	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 23

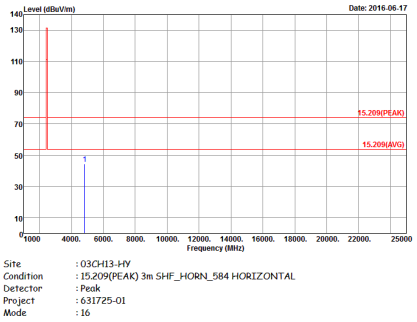
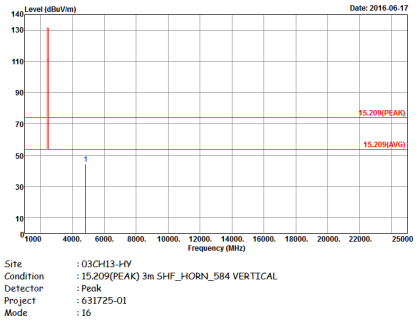
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
2	Vertical	Fundamental
Peak		Left Blank
Avg.		Left Blank

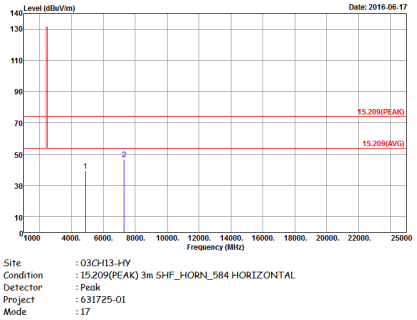
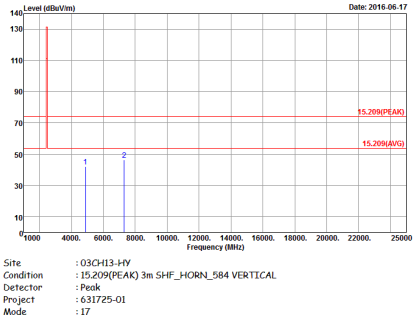
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
2	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 24 Power setting : 19	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 24 Power setting : 19
Avg.	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 24 Power setting : 19	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 24 Power setting : 19

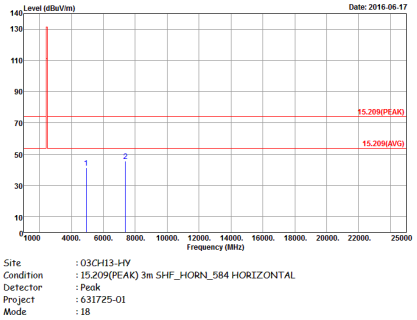
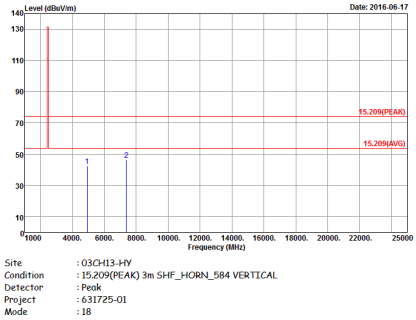
WIFI	2.4GHz 2400~2483.5MHz Fundamental @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
2	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 24 Power setting : 19	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 24 Power setting : 19
Avg.	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 24 Power setting : 19	 Site : 03CH13-HY Condition : 15.209(AVG) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 631725-01 Mode : 24 Power setting : 19

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Harmonic @ 3m)

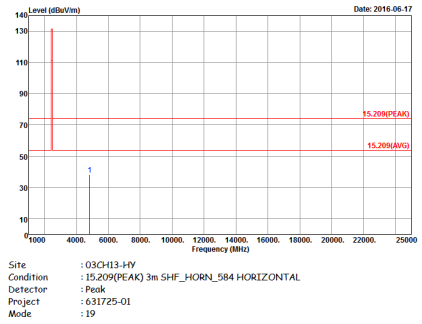
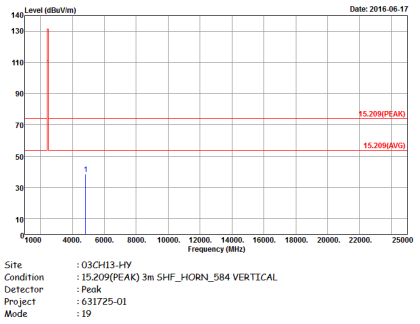
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH01 2412MHz	
2	Horizontal	Vertical
Peak Avg.		

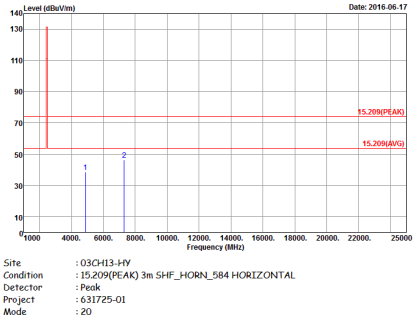
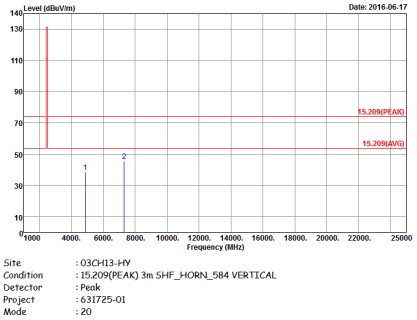
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH06 2437MHz	
2	Horizontal	Vertical
Peak Avg.	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m SHF_HORN_584 HORIZONTAL Detector : Peak Project : 631725-01 Mode : 17	 Site : 03CH13-HY Condition : 15.209(PEAK) 3m SHF_HORN_584 VERTICAL Detector : Peak Project : 631725-01 Mode : 17

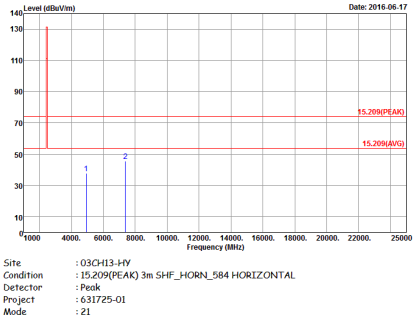
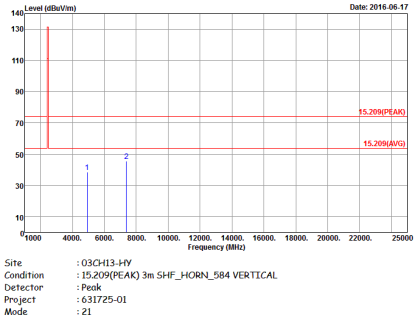
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH11 2462MHz	
2	Horizontal	Vertical
Peak Avg.		

2.4GHz 2400~2483.5MHz

WIFI 802.11g (Harmonic @ 3m)

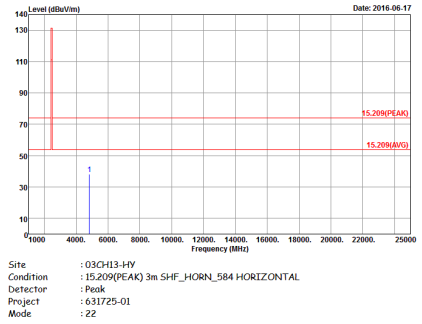
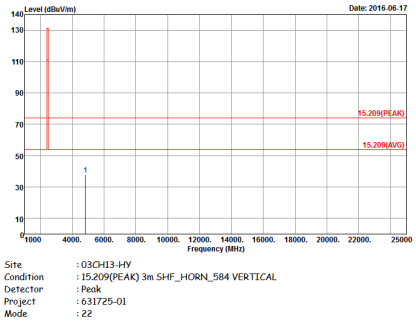
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH01 2412MHz	
2	Horizontal	Vertical
Peak Avg.		

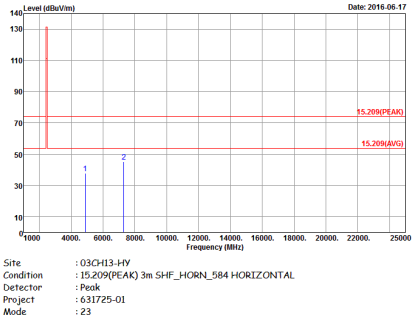
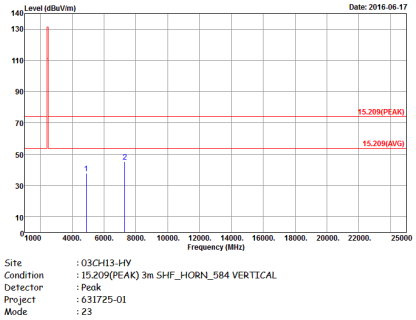
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH06 2437MHz	
2	Horizontal	Vertical
Peak Avg.		

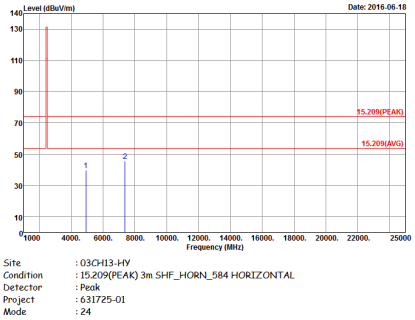
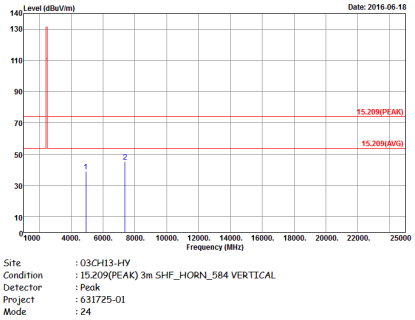
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH11 2462MHz	
2	Horizontal	Vertical
Peak Avg.		

2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

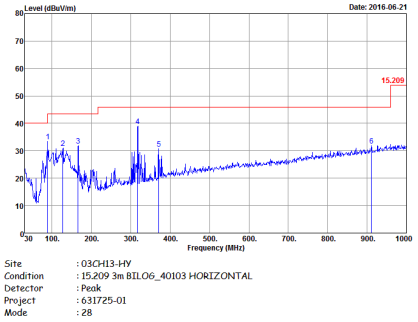
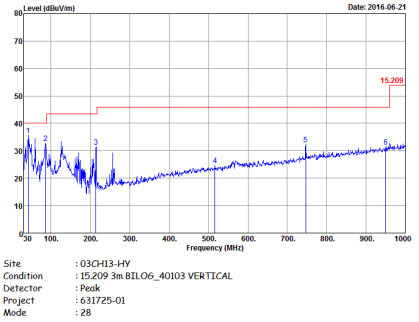
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
2	Horizontal	Vertical
Peak Avg.		

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH06 2437MHz	
2	Horizontal	Vertical
Peak Avg.		

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

Emission below 1GHz

2.4GHz WIFI 802.11n HT20 (LF)

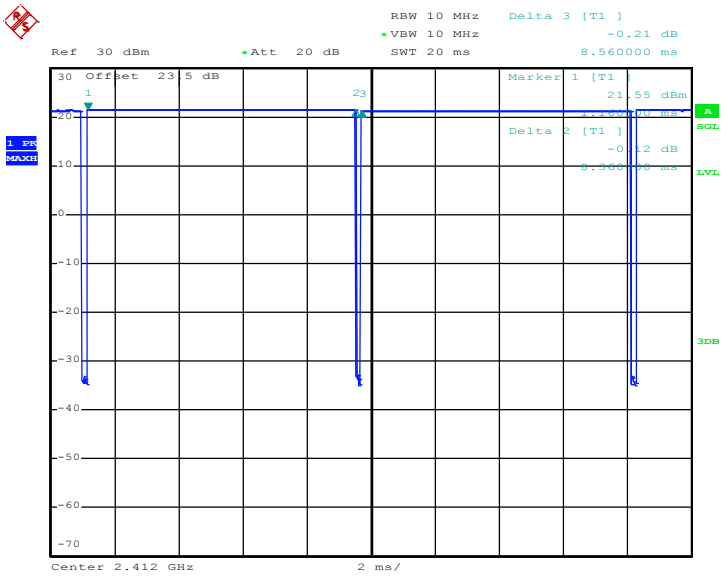
WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11n HT20 LF	
2	Horizontal	Vertical
QP / Peak		

Appendix D. Duty Cycle Plots

Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
1	802.11b	97.66	8360.00	0.12	300Hz
2	802.11b	97.66	8360.00	0.12	300Hz
1	802.11g	88.46	1380.00	0.72	1kHz
2	802.11g	88.61	1400.00	0.71	1kHz
1	2.4GHz 802.11n HT20	86.49	1280.00	0.78	1kHz
2	2.4GHz 802.11n HT20	87.84	1300.00	0.77	1kHz

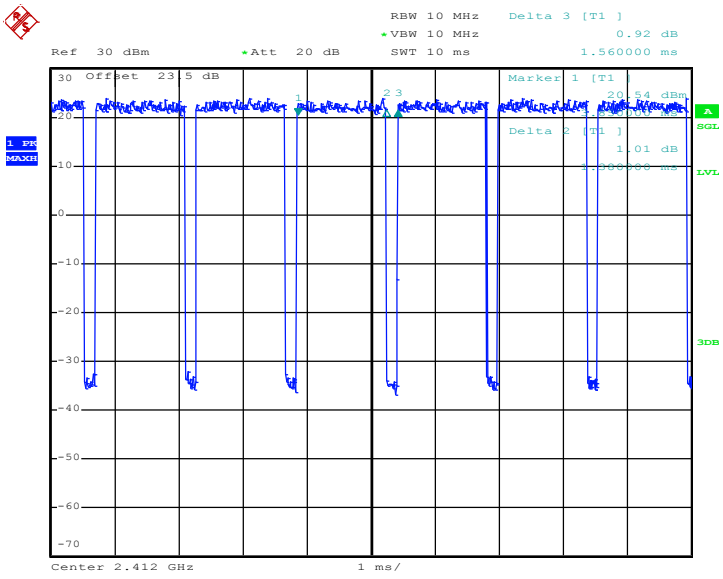
<Ant. 1>

802.11b



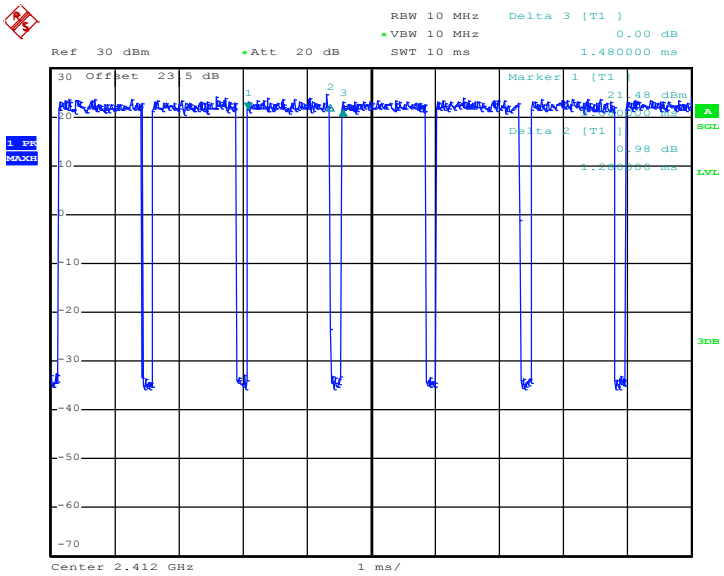
Date: 13.JUN.2016 23:19:03

802.11g



Date: 13.JUN.2016 23:42:46

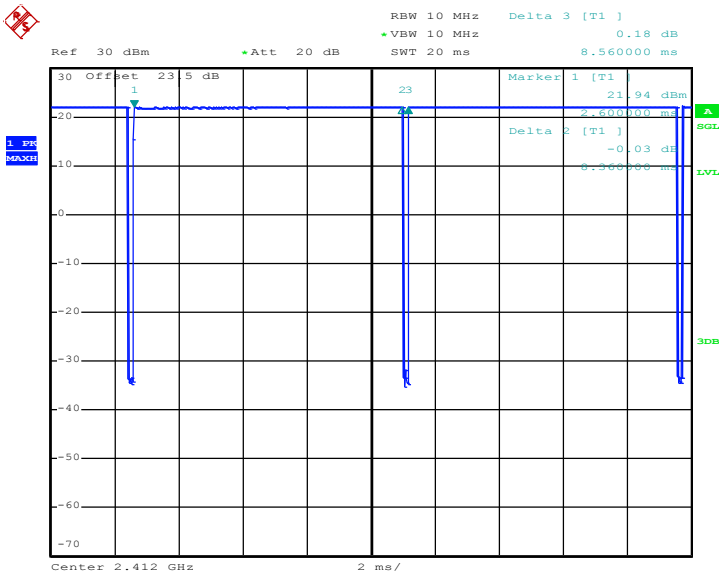
802.11n HT20



Date: 13.JUN.2016 23:55:49

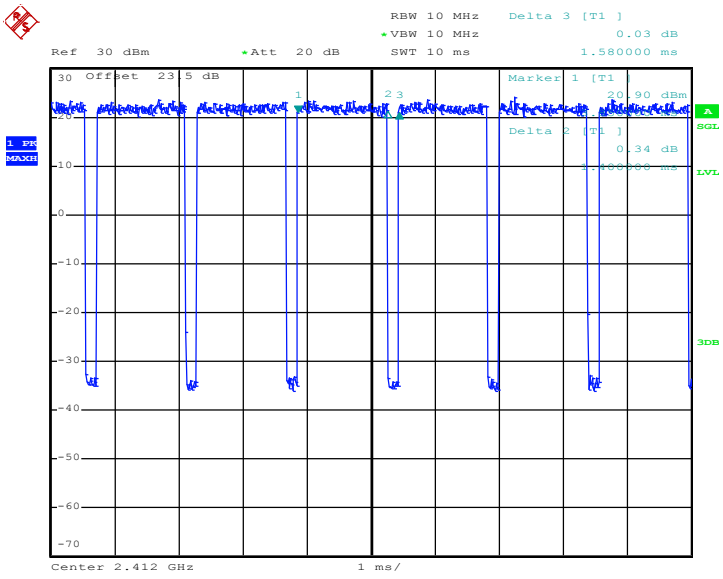
<Ant. 2>

802.11b



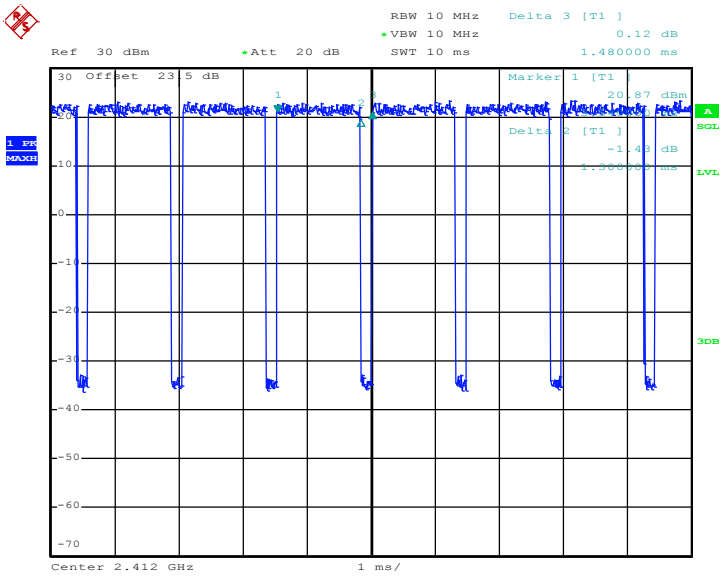
Date: 13.JUN.2016 23:24:47

802.11g



Date: 13.JUN.2016 23:47:43

802.11n HT20



Date: 13.JUN.2016 23:52:22