FCC RF Test Report

APPLICANT	:	Ubiquiti Networks, Inc.
EQUIPMENT	:	UniFi® AC Access Point
BRAND NAME	:	UBIQUITI
MODEL NAME	:	UAP-AC-M
FCC ID	:	SWX-UAPACM
STANDARD	:	FCC Part 15 Subpart C §15.247
CLASSIFICATION	:	(DTS) Digital Transmission System

The product was received on Jun. 16, 2016 and testing was completed on Jul. 24, 2016. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

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

Reviewed by: Joseph Lin / Supervisor

Approved by: Jones Tsai / Manager

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

TABLE OF CONTENTS

REVISION HISTORY **3**

SUMMARY OF TEST RESULT **4**

1 GENERAL DESCRIPTION **5**

1.1 Applicant 5
1.2 Manufacturer 5
1.3 Product Feature of Equipment Under Test 5
1.4 Product Specification of Equipment Under Test 6
1.5 Modification of EUT 6
1.6 Testing Location 7
1.7 Applicable Standards 7

2 TEST CONFIGURATION OF EQUIPMENT UNDER TEST **8**

2.1 Carrier Frequency and Channel 8
2.2 Test Mode 8
2.3 Connection Diagram of Test System 9
2.4 Support Unit used in test configuration and system 10
2.5 EUT Operation Test Setup 10
2.6 Measurement Results Explanation Example 10

3 TEST RESULT **11**

3.1 6dB and 99% Bandwidth Measurement 11
3.2 Peak Output Power Measurement 13
3.3 Power Spectral Density Measurement 14
3.4 Conducted Band Edges and Spurious Emission Measurement 17
3.5 Radiated Band Edges and Spurious Emission Measurement 42
3.6 AC Conducted Emission Measurement 46
3.7 Antenna Requirements 50

4 LIST OF MEASURING EQUIPMENT **52**

5 UNCERTAINTY OF EVALUATION **53**

APPENDIX A. CONDUCTED TEST RESULTS

APPENDIX B. RADIATED SPURIOUS EMISSION

APPENDIX C. RADIATED SPURIOUS EMISSION PLOTS

APPENDIX D. DUTY CYCLE PLOTS

APPENDIX E. SETUP PHOTOGRAPHS

REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR661624A	Rev. 01	Initial issue of report	Aug. 03, 2016

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
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	Under limit 0.14 dB at 2389.940 MHz
3.6	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 14.20 dB at 0.150 MHz
3.7	15.203 & 15.247(b)	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

Ubiquiti Networks, Inc.
12F, No.105, Song Ren Rd.,SinYi District, Taipei 110,Taiwan

1.2 Manufacturer

Ubiquiti Networks, Inc.
12F, No.105, Song Ren Rd.,SinYi District, Taipei 110,Taiwan

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	UniFi® AC Access Point
Brand Name	UBIQUITI
Model Name	UAP-AC-M
FCC ID	SWX-UAPACM
EUT supports Radios application	WLAN 11a/b/g/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80
EUT Stage	Identical Prototype

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

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx/Rx Channel Frequency Range	802.11b/g/n : 2412 MHz ~ 2462 MHz
Maximum (Peak) Output Power to antenna	**<PTP & PTMP >** 802.11b : 24.50 dBm (0.2818 W) 802.11g : 27.25 dBm (0.5309 W) 802.11n HT20 : 27.28 dBm (0.5346 W) 802.11n HT40 : 27.21 dBm (0.5260 W)
99% Occupied Bandwidth	**<PTP & PTMP >** 802.11b : 11.95MHz 802.11g : 16.80MHz 802.11n HT20 : 17.95MHz 802.11n HT40 : 36.30MHz
Antenna Type	Ant. 1 : Dipole Antenna Ant. 2 : Dipole Antenna
Antenna Gain	Ant. 1 : 3.00 dBi Ant. 2 : 3.00 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>Chain Port 1</td><td>Chain Port 2</td></tr><tr><td>802.11 b/g/n MIMO</td><td>V</td><td>V</td></tr></table>

1.5 Modification of EUT

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

1.6 Testing Location

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

Test Site	SPORTON INTERNATIONAL INC.	
Test Site Location	No. 52, Hwa Ya 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.**	
	TH05-HY	CO05-HY

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

Test Site	SPORTON INTERNATIONAL INC.
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd Rd. Guishan Dist, Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	**Sporton Site No. :**
	03CH12-HY

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

1.7 Applicable Standards

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

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

Remark:

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

2 Test Configuration of Equipment Under Test

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

2.1 Carrier Frequency and Channel

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

2.2 Test Mode

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

MIMO Antenna

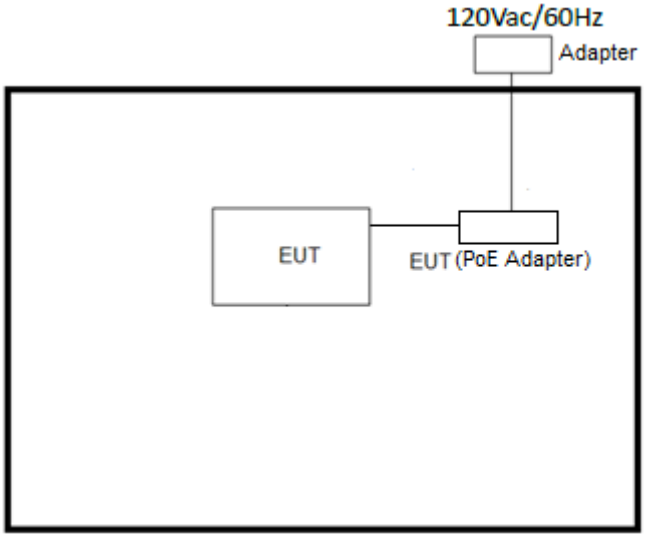
<2.4GHz>

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

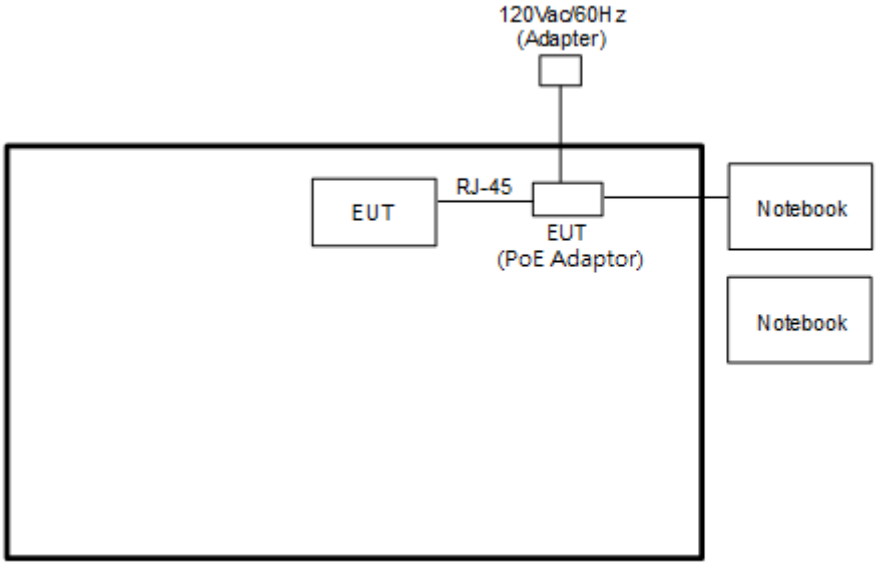
Test Cases	
AC Conducted Emission	Mode 1 :WLAN (2.4GHz) Link + PoE Adapter + LAN Link

2.3 Connection Diagram of Test System

<WLAN Tx Mode>



<AC Conducted Emission Mode>



2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Notebook	DELL	P20G	FCC DoC/ Contains FCC ID: QDS-BRCM1051	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
2.	Notebook	DELL	Latitude E6320	FCC DoC/ Contains FCC ID: QDS-BRCM1054	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m

2.5 EUT Operation Test Setup

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

2.6 Measurement Results Explanation Example

For all conducted test items:

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

Example:

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

Offset = RF cable loss + attenuator factor.

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

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.

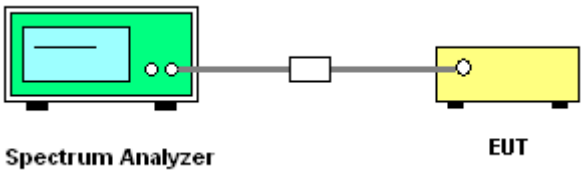
3.1.2 Measuring Instruments

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.

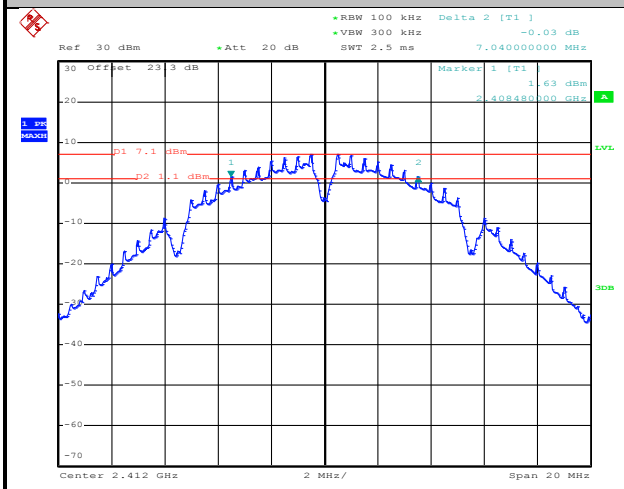
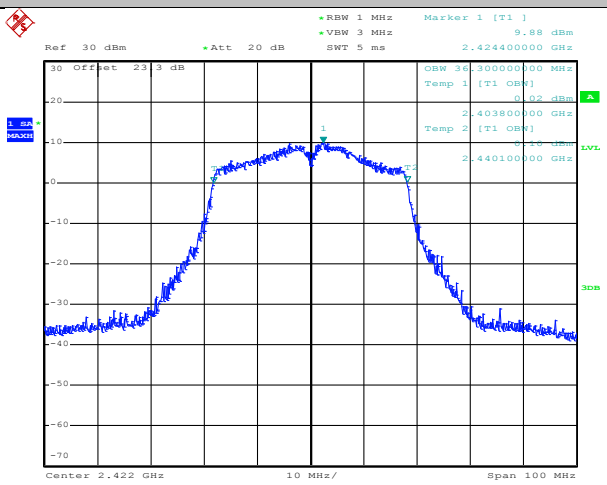
3.1.4 Test Setup



3.1.5 Test Result of 6dB and 99% Occupied Bandwidth

Please refer to Appendix A.

<PTP & PTMP>

Minimum 6dB Bandwidth	Maximum 99% Occupied Bandwidth
	
Date: 23.JUL.2016 15:14:08	Date: 24.JUL.2016 06:40:32

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.

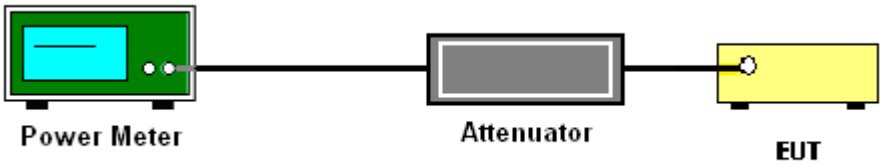
3.2.2 Measuring Instruments

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

3.2.4 Test Setup



3.2.5 Test Result of Peak Output Power

Please refer to Appendix A of this test report.

3.2.6 Test Result of Average output Power (Reporting Only)

Please refer to Appendix A of this test report.

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

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

3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

1. The testing follows Measurement Procedure 10.2 Method PKPSD of FCC KDB Publication No. 558074 D01 DTS Meas. Guidance 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.
7. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

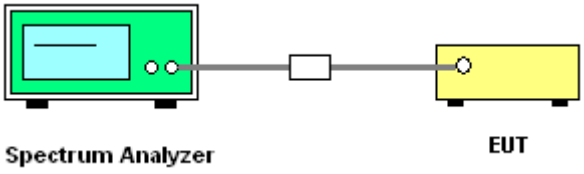
   If measurements performed using method (2) plus 10 log (N) exceeds the emission limit, the test should choose method (1) before declaring that the device fails the emission limit.

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

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

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

3.3.4 Test Setup

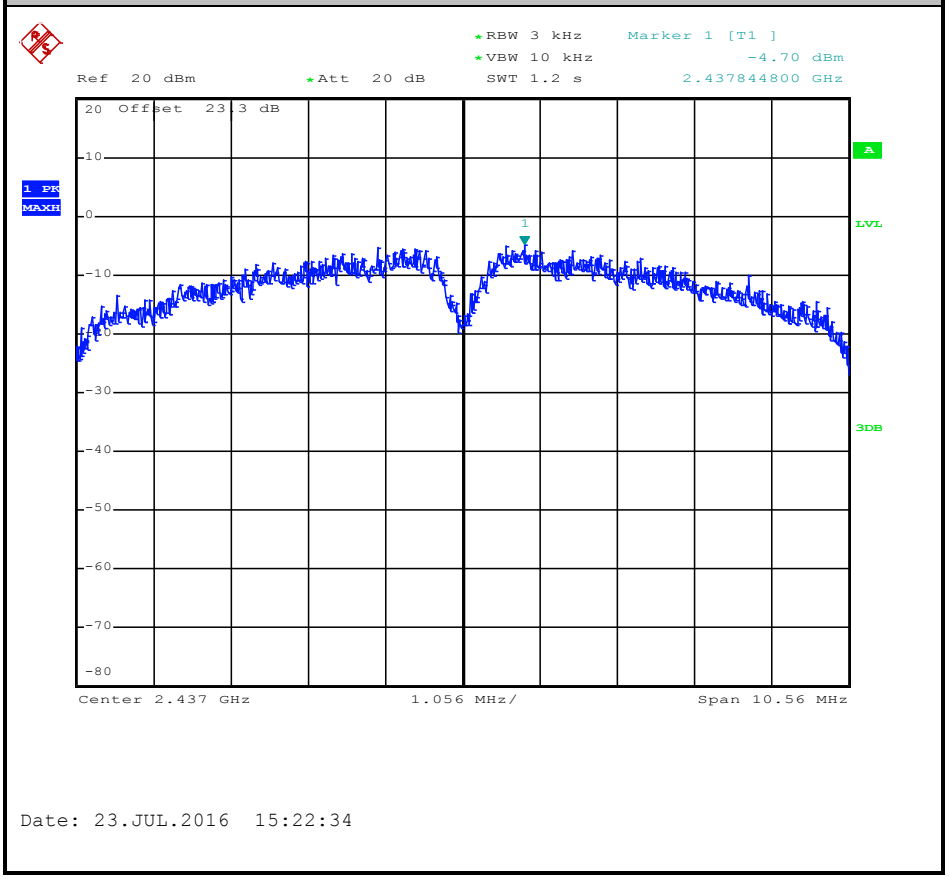


3.3.5 Test Result of Power Spectral Density

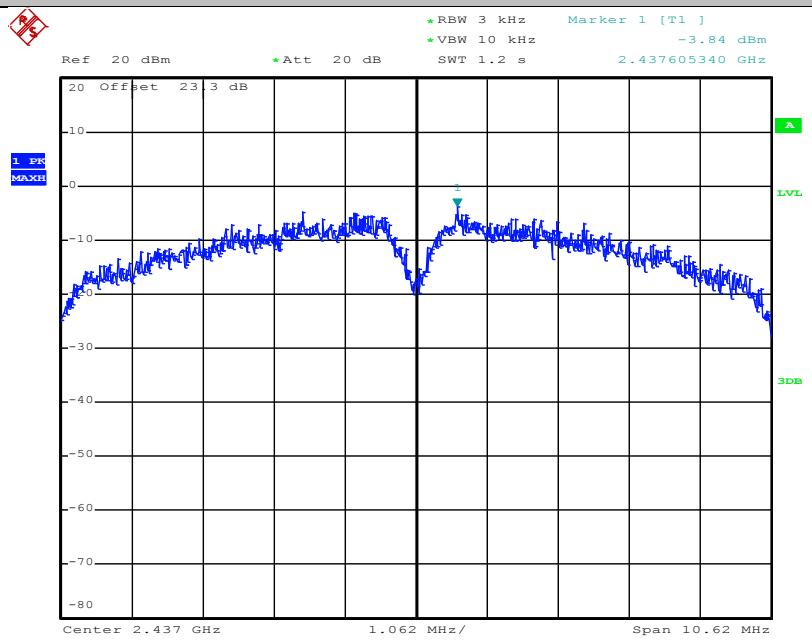
Please refer to Appendix A.

<PTP & PTMP>

Worst Case Power Density (dBm/3kHz) for Antenna 1



Worst Case Power Density (dBm/3kHz) for Antenna 2



Date: 23.JUL.2016 15:26:40

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).

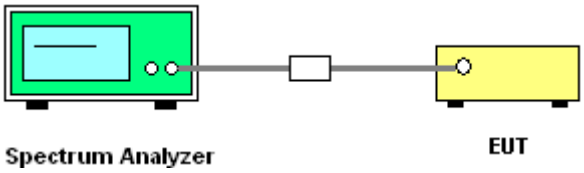
3.4.2 Measuring Instruments

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

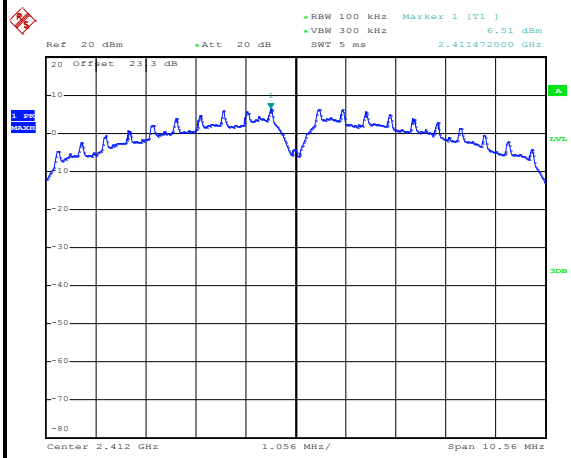
<PTP & PTMP>

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

Number of TX :	2	**Ant. :**	1
Test Mode :	802.11b	**Temperature :**	21.5~24.7℃
Test Band :	2.4GHz Low	**Relative Humidity :**	51.2~53.8%
Test Channel :	01	**Test Engineer :**	Osolemio Chang

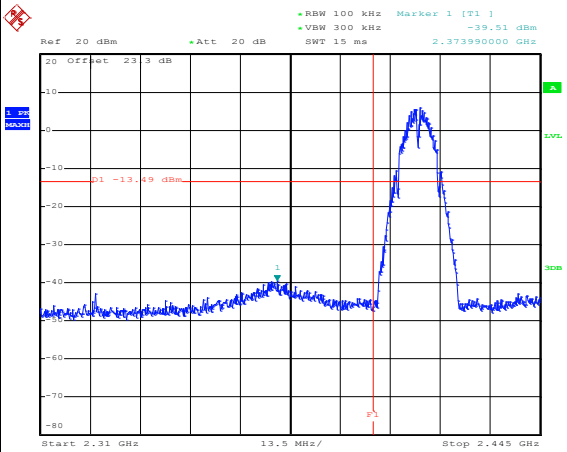
WLAN 802.11b Channel 01

100kHz PSD reference Level



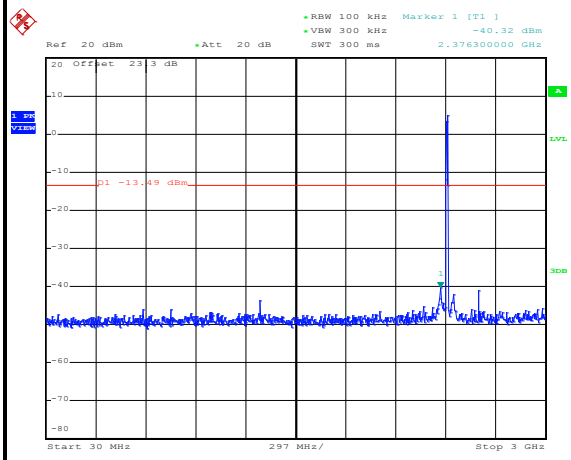
Date: 23.JUL.2016 15:14:45

Low Channel Plot



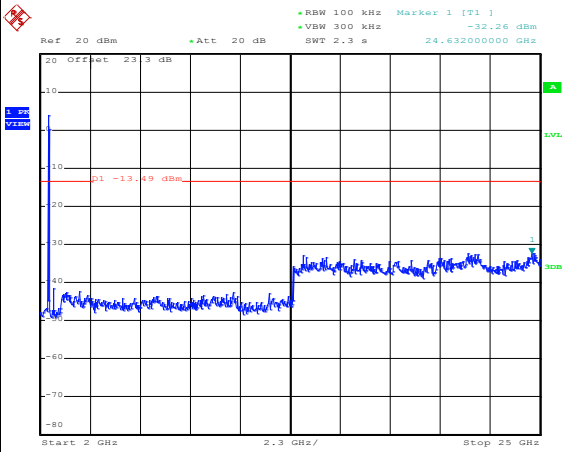
Date: 23.JUL.2016 15:14:59

Spurious Emission 30MHz~3GHz



Date: 23.JUL.2016 15:16:05

Spurious Emission 2GHz~25GHz

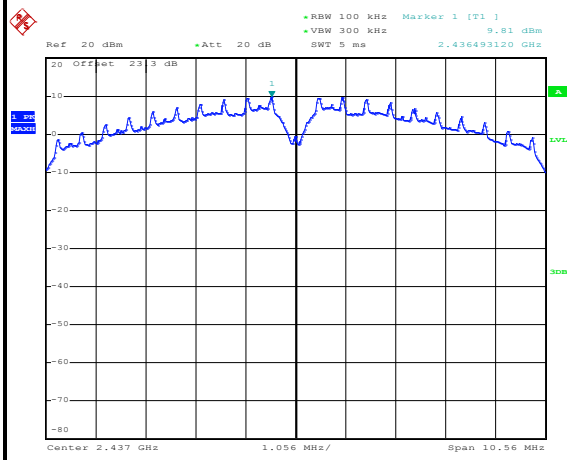


Date: 23.JUL.2016 15:16:14

Number of TX :	2	**Ant. :**	1
Test Mode :	802.11b	**Temperature :**	21.5~24.7℃
Test Band :	2.4GHz Mid	**Relative Humidity :**	51.2~53.8%
Test Channel :	06	**Test Engineer :**	Osolemio Chang

WLAN 802.11b Channel 06

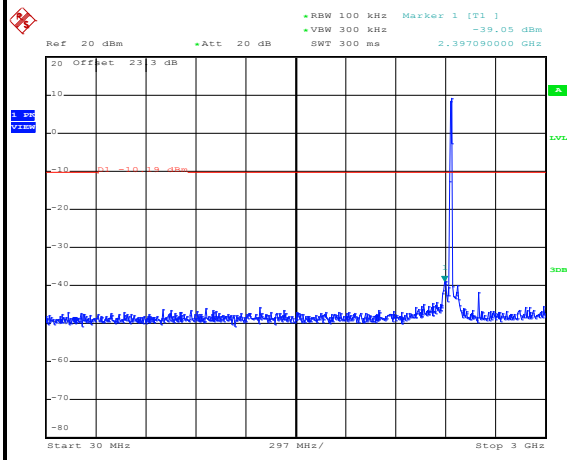
100kHz PSD reference Level



Date: 23.JUL.2016 15:22:49

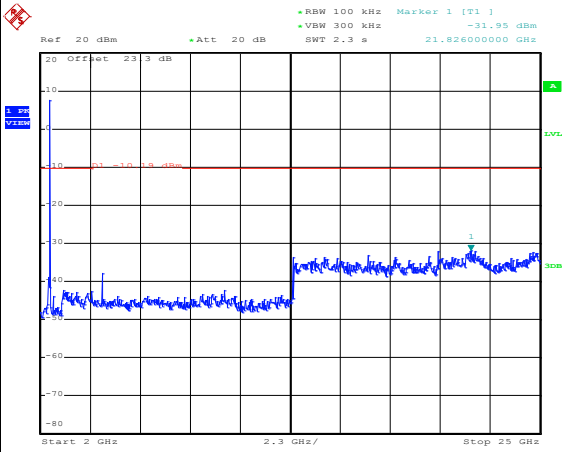
Mid Channel Plot

Spurious Emission 30MHz~3GHz



Date: 23.JUL.2016 15:24:19

Spurious Emission 2GHz~25GHz

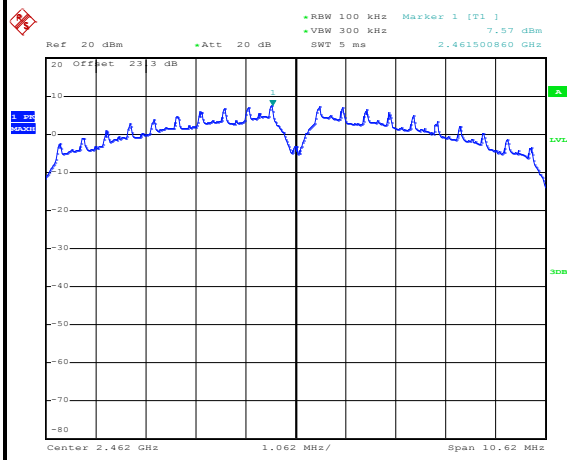


Date: 23.JUL.2016 15:23:48

Number of TX :	2	**Ant. :**	1
Test Mode :	802.11b	**Temperature :**	21.5~24.7℃
Test Band :	2.4GHz High	**Relative Humidity :**	51.2~53.8%
Test Channel :	11	**Test Engineer :**	Osolemio Chang

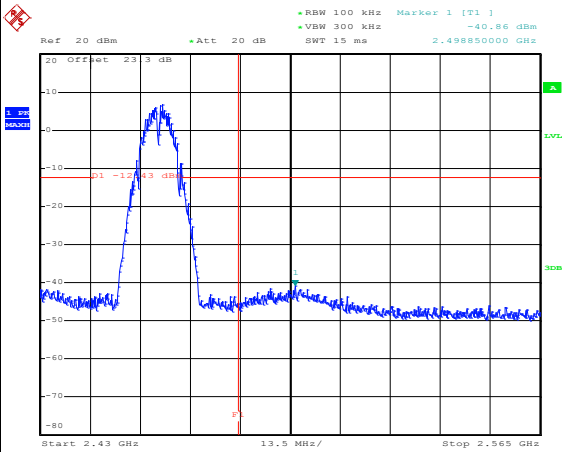
WLAN 802.11b Channel 11

100kHz PSD reference Level



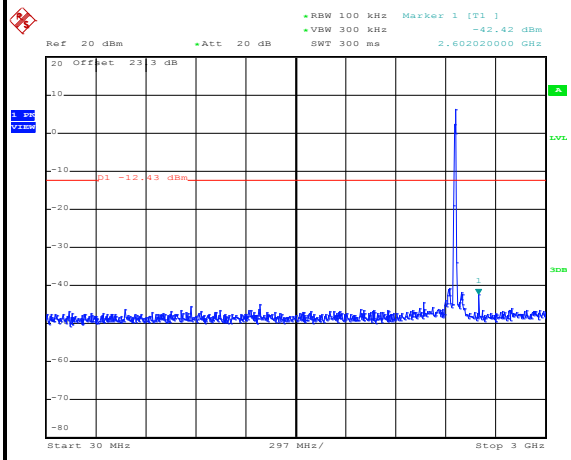
Date: 23.JUL.2016 15:29:44

High Channel Plot



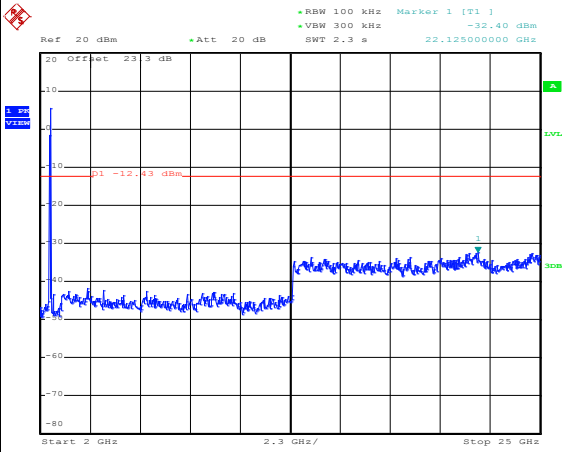
Date: 23.JUL.2016 15:29:58

Spurious Emission 30MHz~3GHz



Date: 23.JUL.2016 15:30:59

Spurious Emission 2GHz~25GHz

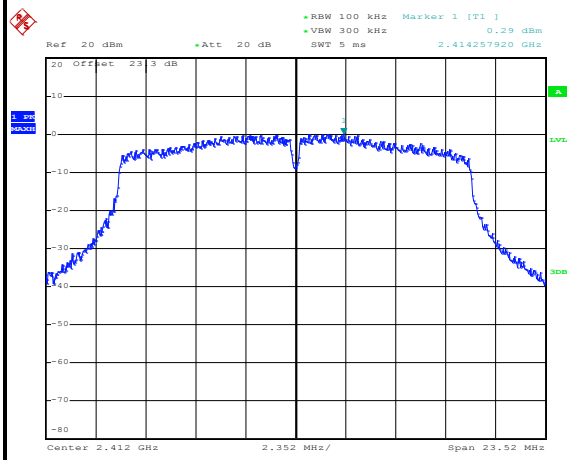


Date: 23.JUL.2016 15:30:19

Number of TX :	2	**Ant. :**	1
Test Mode :	802.11g	**Temperature :**	21.5~24.7℃
Test Band :	2.4GHz Low	**Relative Humidity :**	51.2~53.8%
Test Channel :	01	**Test Engineer :**	Osolemio Chang

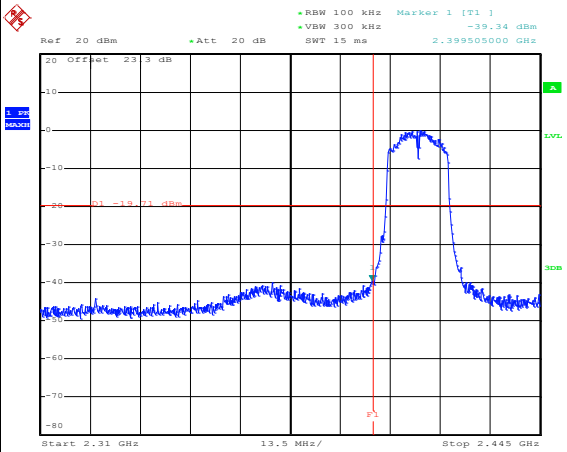
WLAN 802.11g Channel 01

100kHz PSD reference Level



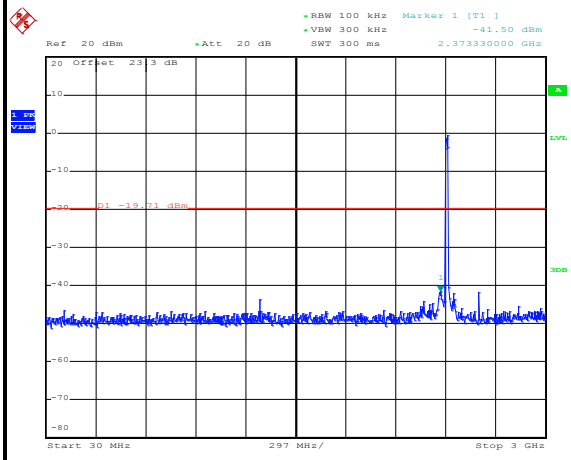
Date: 23.JUL.2016 15:39:03

Low Channel Plot



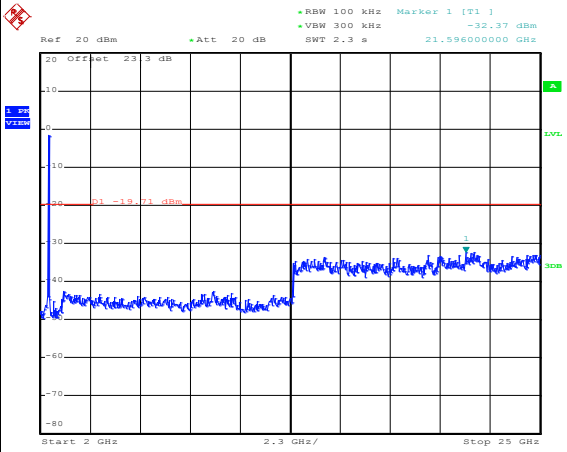
Date: 23.JUL.2016 15:39:16

Spurious Emission 30MHz~3GHz



Date: 23.JUL.2016 15:39:31

Spurious Emission 2GHz~25GHz

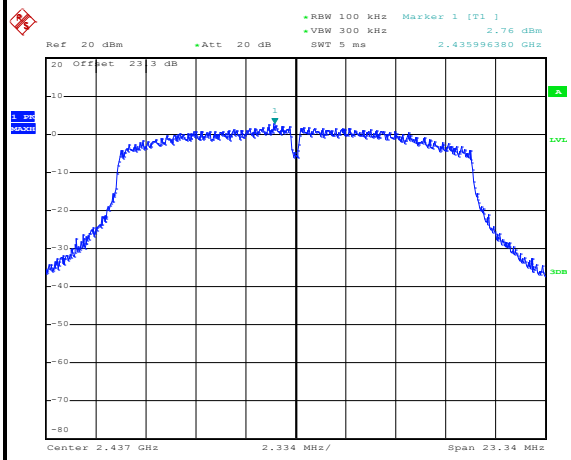


Date: 23.JUL.2016 15:39:39

Number of TX :	2	**Ant. :**	1
Test Mode :	802.11g	**Temperature :**	21.5~24.7℃
Test Band :	2.4GHz Mid	**Relative Humidity :**	51.2~53.8%
Test Channel :	06	**Test Engineer :**	Osolemio Chang

WLAN 802.11g Channel 06

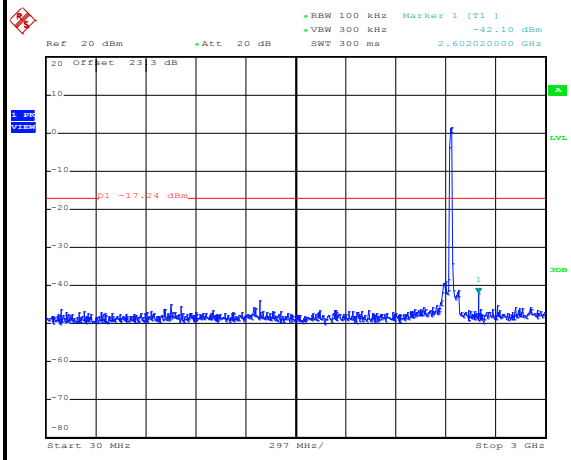
100kHz PSD reference Level



Date: 23.JUL.2016 15:51:43

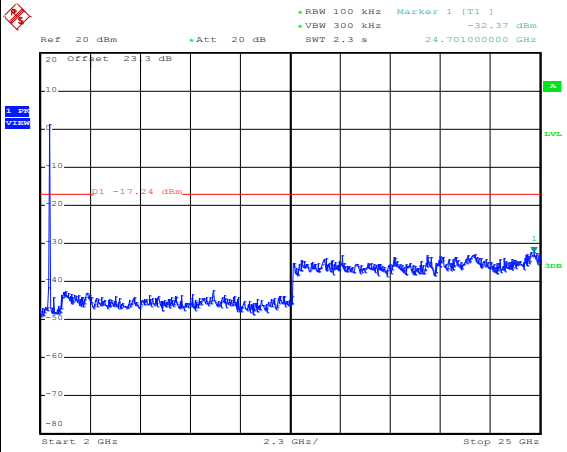
Mid Channel Plot

Spurious Emission 30MHz~3GHz



Date: 23.JUL.2016 15:53:25

Spurious Emission 2GHz~25GHz

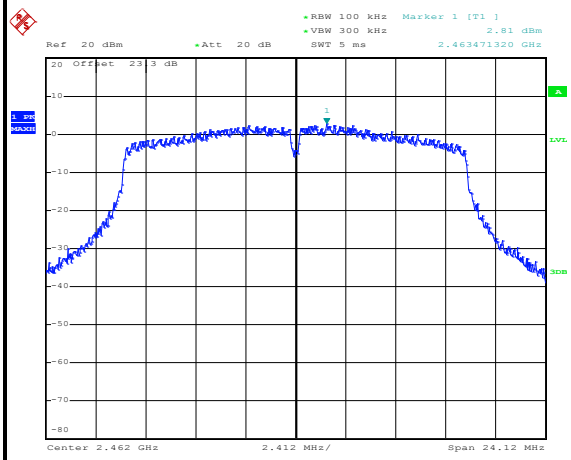


Date: 23.JUL.2016 15:52:47

Number of TX :	2	**Ant. :**	1
Test Mode :	802.11g	**Temperature :**	21.5~24.7℃
Test Band :	2.4GHz High	**Relative Humidity :**	51.2~53.8%
Test Channel :	11	**Test Engineer :**	Osolemio Chang

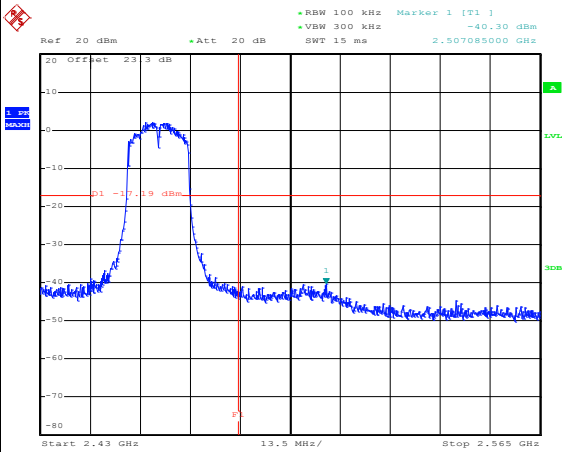
WLAN 802.11g Channel 11

100kHz PSD reference Level



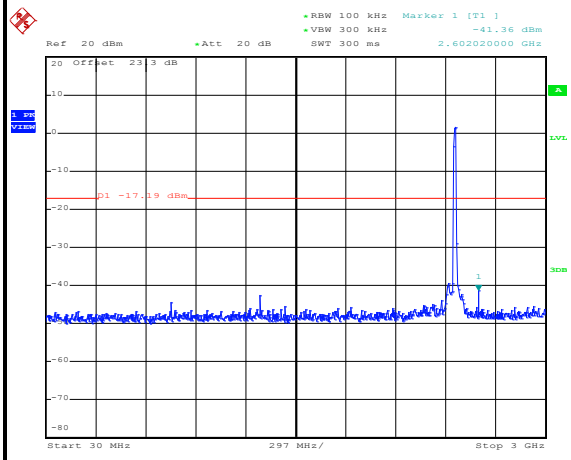
Date: 23.JUL.2016 16:02:05

High Channel Plot



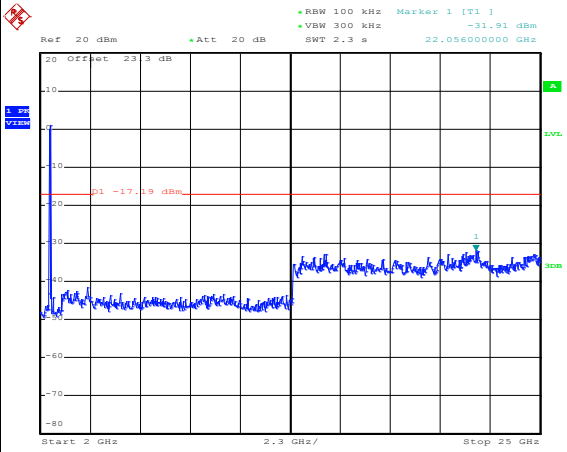
Date: 23.JUL.2016 16:02:20

Spurious Emission 30MHz~3GHz



Date: 23.JUL.2016 16:03:26

Spurious Emission 2GHz~25GHz

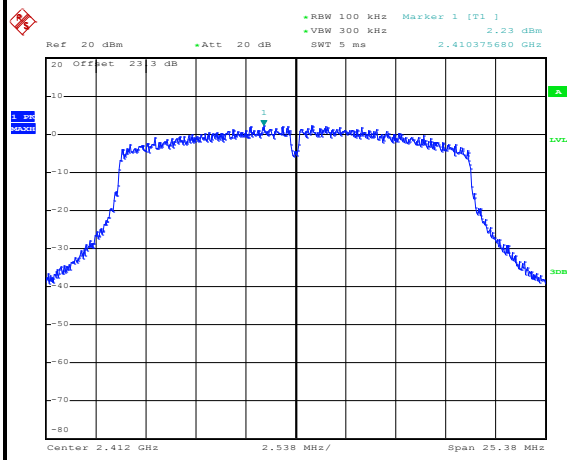


Date: 23.JUL.2016 16:02:41

Number of TX :	2	**Ant. :**	1
Test Mode :	802.11n HT20	**Temperature :**	21.5~24.7℃
Test Band :	2.4GHz Low	**Relative Humidity :**	51.2~53.8%
Test Channel :	01	**Test Engineer :**	Osolemio Chang

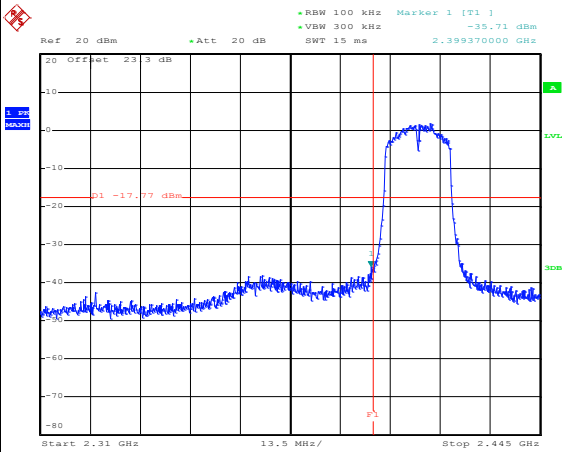
WLAN 802.11n HT20 Channel 01

100kHz PSD reference Level



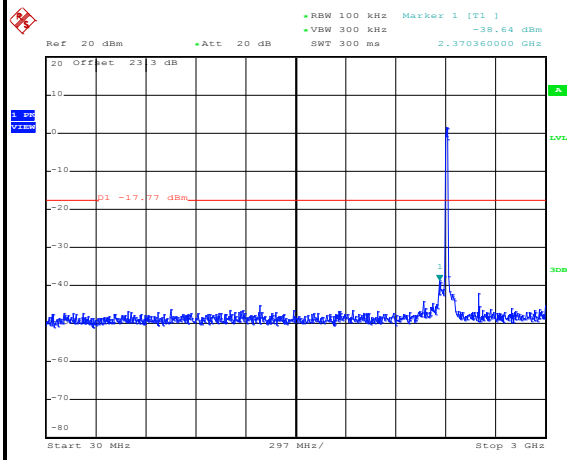
Date: 24.JUL.2016 05:38:17

Low Channel Plot



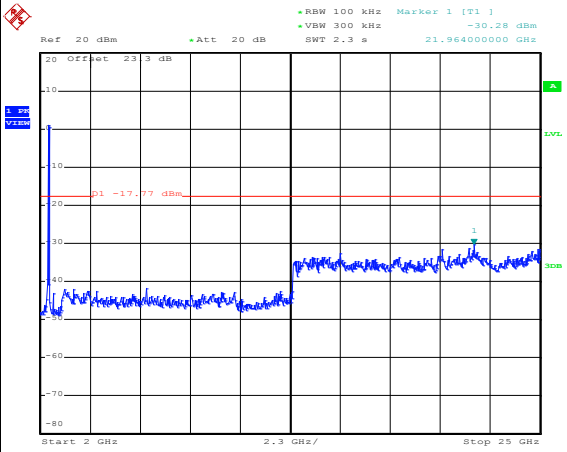
Date: 24.JUL.2016 05:38:30

Spurious Emission 30MHz~3GHz



Date: 24.JUL.2016 05:38:44

Spurious Emission 2GHz~25GHz

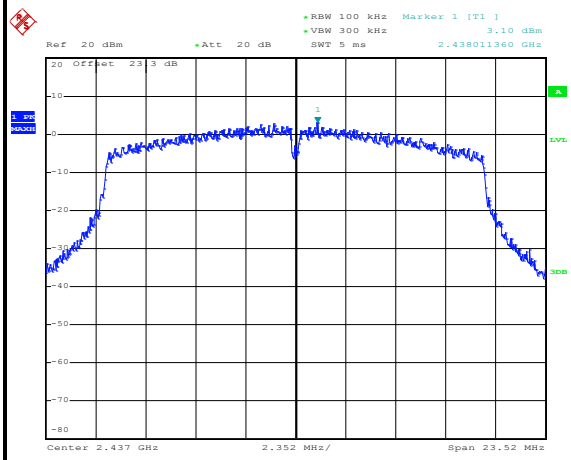


Date: 24.JUL.2016 05:38:52

Number of TX :	2	**Ant. :**	1
Test Mode :	802.11n HT20	**Temperature :**	21.5~24.7℃
Test Band :	2.4GHz Mid	**Relative Humidity :**	51.2~53.8%
Test Channel :	06	**Test Engineer :**	Osolemio Chang

WLAN 802.11n HT20 Channel 06

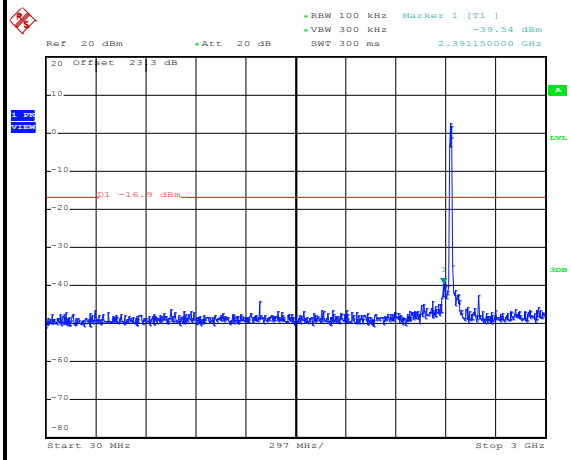
100kHz PSD reference Level



Date: 24.JUL.2016 06:02:11

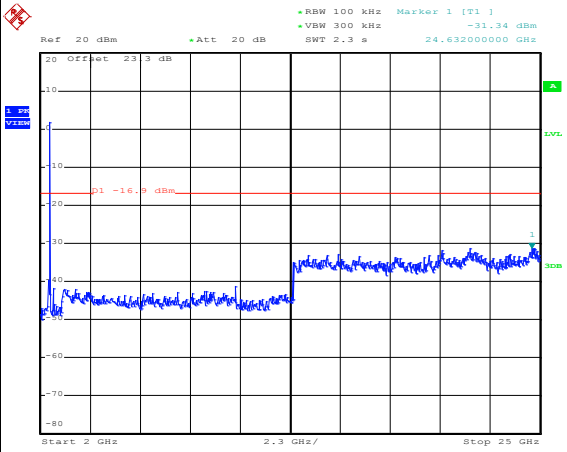
Mid Channel Plot

Spurious Emission 30MHz~3GHz



Date: 24.JUL.2016 06:02:25

Spurious Emission 2GHz~25GHz

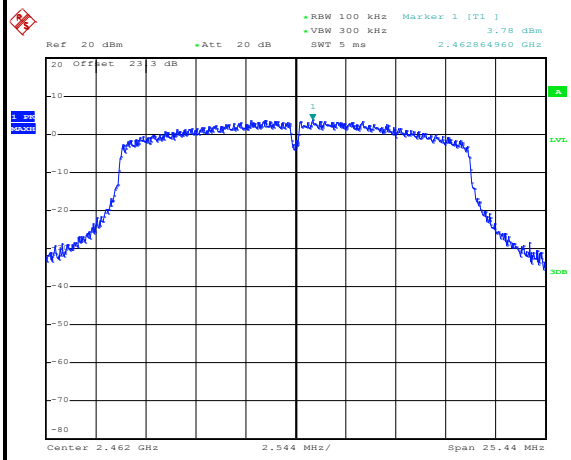


Date: 24.JUL.2016 06:02:33

Number of TX :	2	**Ant. :**	1
Test Mode :	802.11n HT20	**Temperature :**	21.5~24.7℃
Test Band :	2.4GHz High	**Relative Humidity :**	51.2~53.8%
Test Channel :	11	**Test Engineer :**	Osolemio Chang

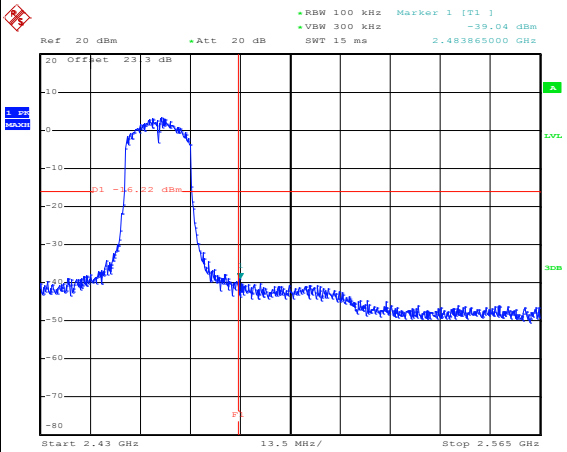
WLAN 802.11n HT20 Channel 11

100kHz PSD reference Level



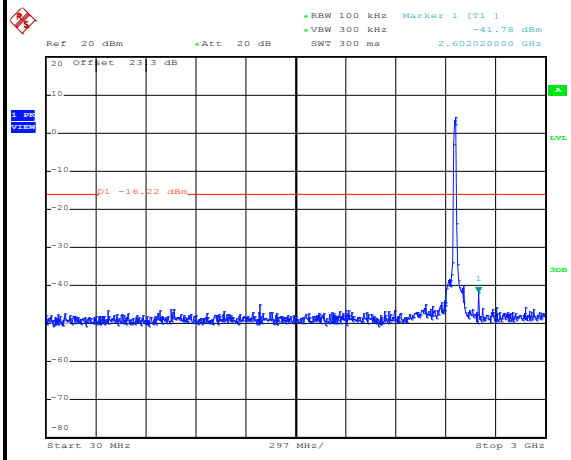
Date: 24.JUL.2016 06:15:01

High Channel Plot



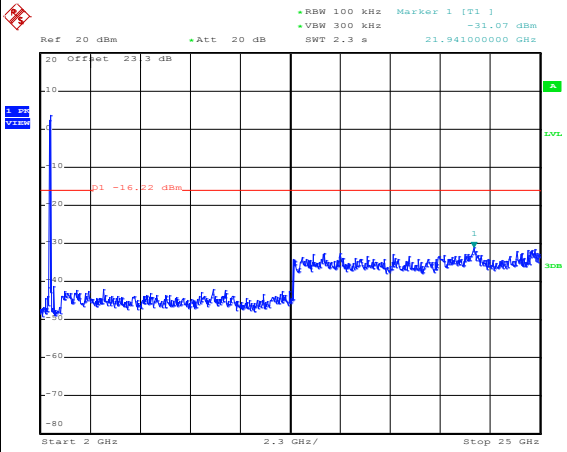
Date: 24.JUL.2016 06:15:15

Spurious Emission 30MHz~3GHz



Date: 24.JUL.2016 07:28:06

Spurious Emission 2GHz~25GHz

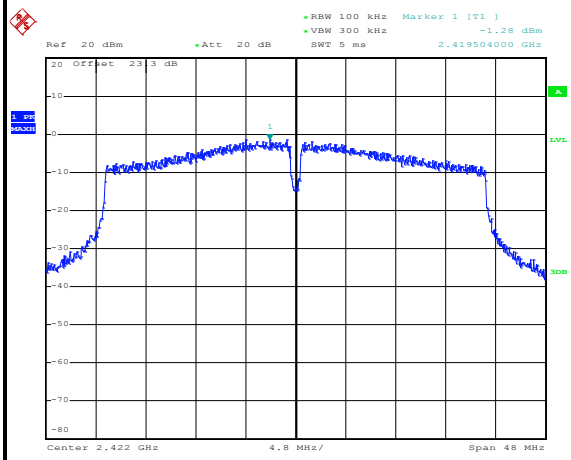


Date: 24.JUL.2016 07:28:14

Number of TX :	2	**Ant. :**	1
Test Mode :	802.11n HT40	**Temperature :**	21.5~24.7℃
Test Band :	2.4GHz Low	**Relative Humidity :**	51.2~53.8%
Test Channel :	03	**Test Engineer :**	Osolemio Chang

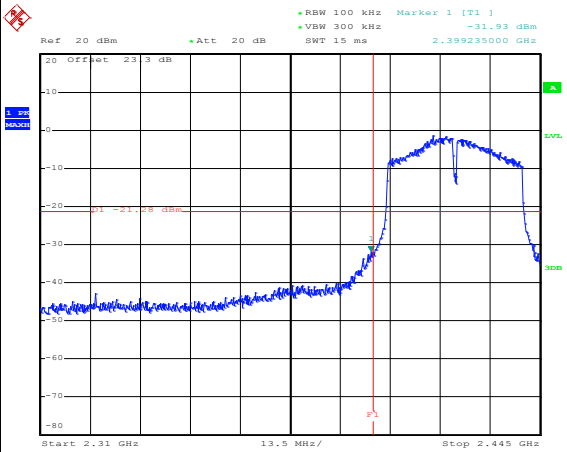
WLAN 802.11n HT40 Channel 03

100kHz PSD reference Level



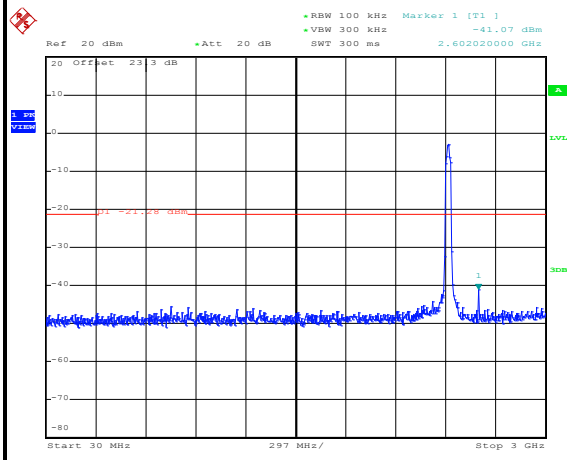
Date: 24.JUL.2016 06:34:23

Low Channel Plot



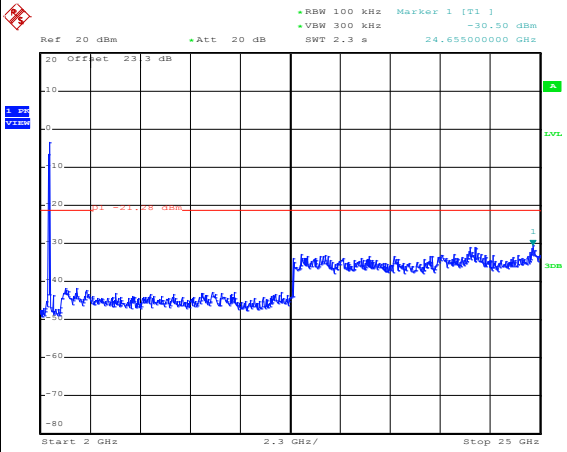
Date: 24.JUL.2016 06:34:45

Spurious Emission 30MHz~3GHz



Date: 24.JUL.2016 06:34:58

Spurious Emission 2GHz~25GHz

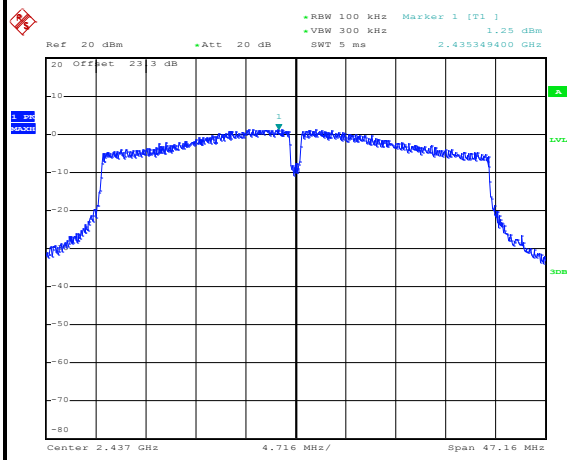


Date: 24.JUL.2016 06:35:07

Number of TX :	2	**Ant. :**	1
Test Mode :	802.11n HT40	**Temperature :**	21.5~24.7℃
Test Band :	2.4GHz Mid	**Relative Humidity :**	51.2~53.8%
Test Channel :	06	**Test Engineer :**	Osolemio Chang

WLAN 802.11n HT40 Channel 06

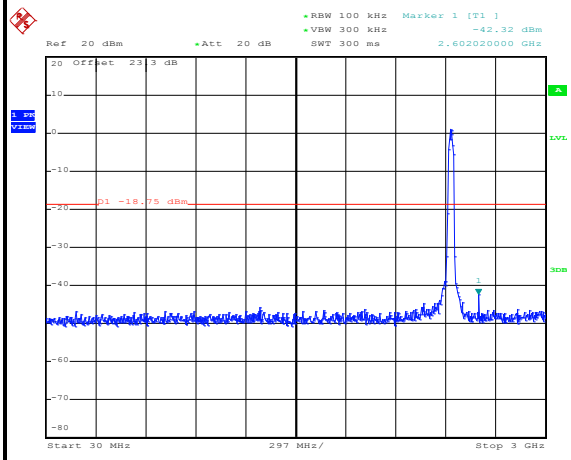
100kHz PSD reference Level



Date: 24.JUL.2016 06:44:18

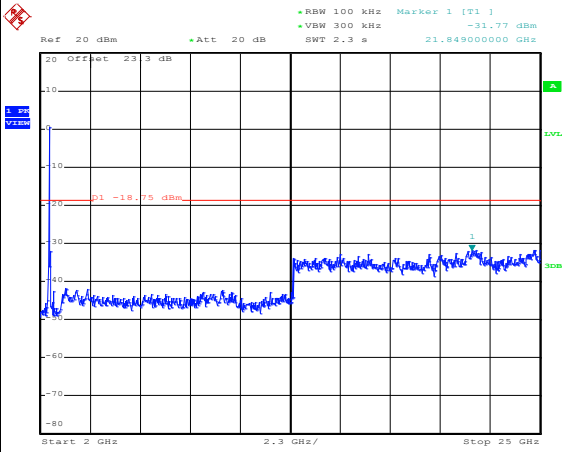
Mid Channel Plot

Spurious Emission 30MHz~3GHz



Date: 24.JUL.2016 06:44:32

Spurious Emission 2GHz~25GHz

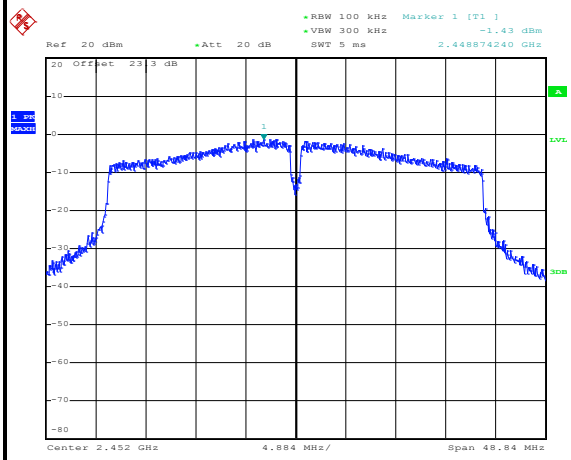


Date: 24.JUL.2016 06:44:40

Number of TX :	2	**Ant. :**	1
Test Mode :	802.11n HT40	**Temperature :**	21.5~24.7℃
Test Band :	2.4GHz High	**Relative Humidity :**	51.2~53.8%
Test Channel :	09	**Test Engineer :**	Osolemio Chang

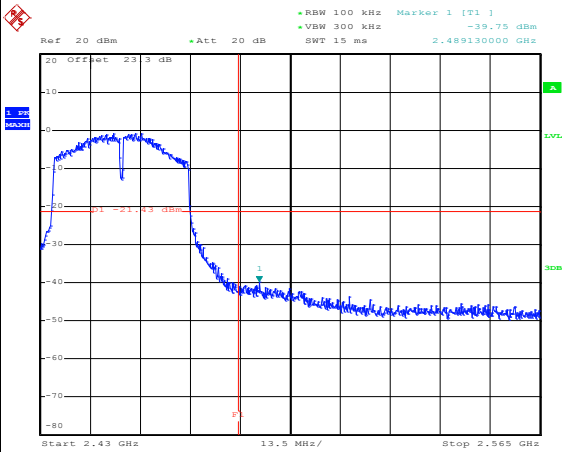
WLAN 802.11n HT40 Channel 09

100kHz PSD reference Level



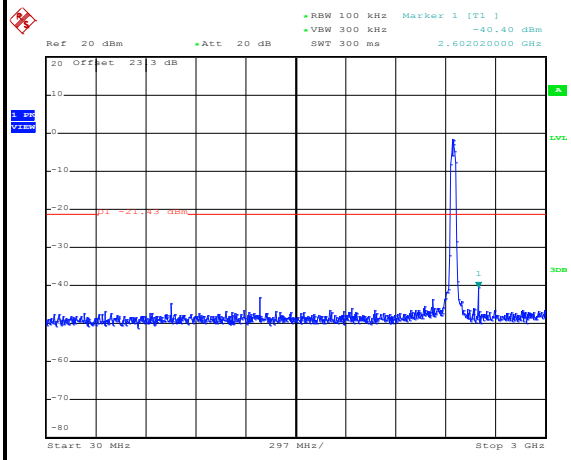
Date: 24.JUL.2016 06:58:21

High Channel Plot



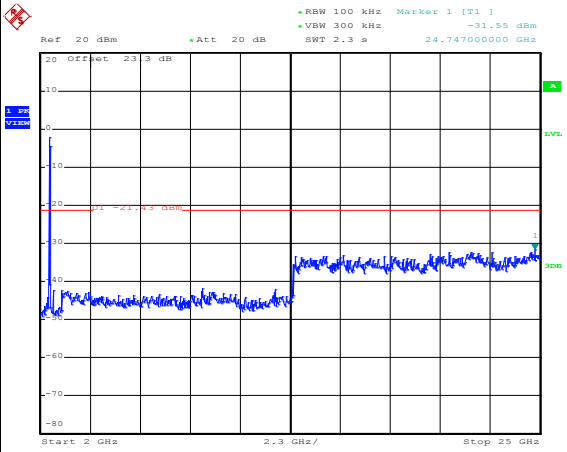
Date: 24.JUL.2016 07:35:14

Spurious Emission 30MHz~3GHz



Date: 24.JUL.2016 06:58:37

Spurious Emission 2GHz~25GHz



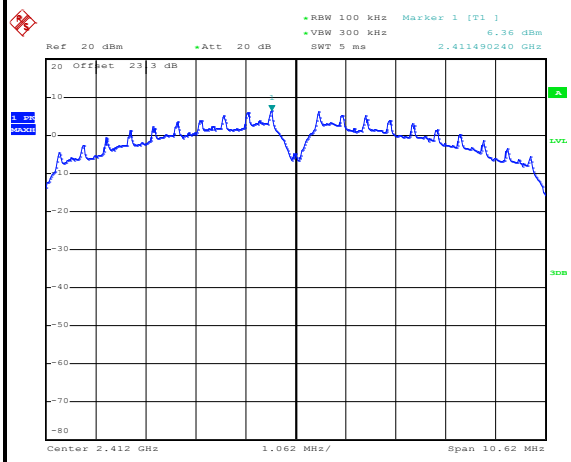
Date: 24.JUL.2016 06:58:45

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

Number of TX :	2	**Ant. :**	2
Test Mode :	802.11b	**Temperature :**	21.5~24.7℃
Test Band :	2.4GHz Low	**Relative Humidity :**	51.2~53.8%
Test Channel :	01	**Test Engineer :**	Osolemio Chang

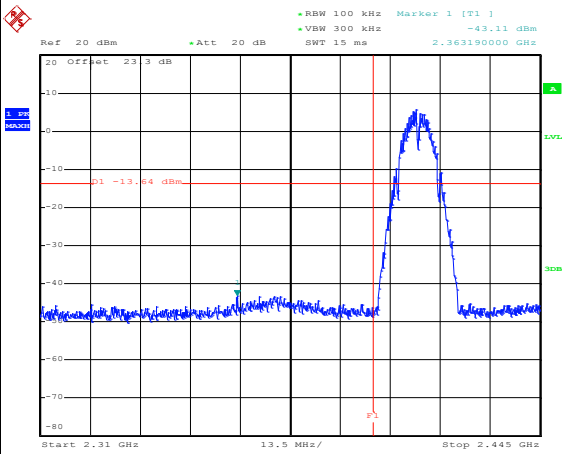
WLAN 802.11b Channel 01

100kHz PSD reference Level



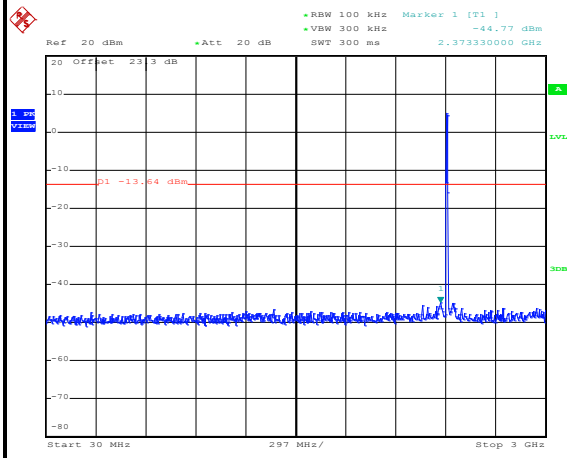
Date: 23.JUL.2016 15:18:47

Low Channel Plot



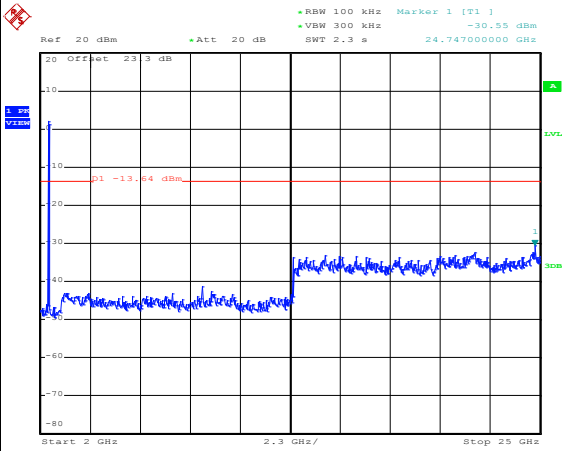
Date: 23.JUL.2016 15:19:03

Spurious Emission 30MHz~3GHz



Date: 23.JUL.2016 15:19:21

Spurious Emission 2GHz~25GHz

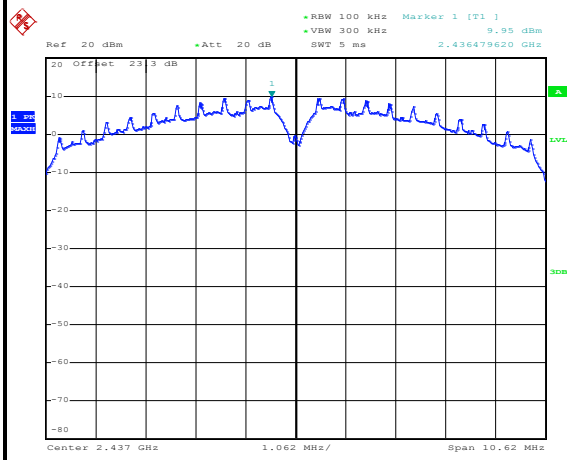


Date: 23.JUL.2016 15:19:30

Number of TX :	2	**Ant. :**	2
Test Mode :	802.11b	**Temperature :**	21.5~24.7℃
Test Band :	2.4GHz Mid	**Relative Humidity :**	51.2~53.8%
Test Channel :	06	**Test Engineer :**	Osolemio Chang

WLAN 802.11b Channel 06

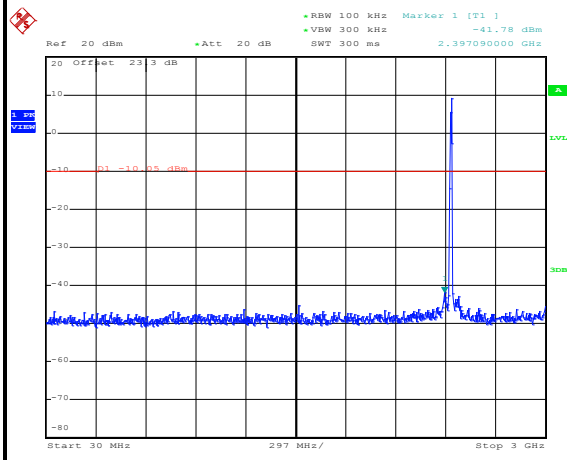
100kHz PSD reference Level



Date: 23.JUL.2016 15:26:52

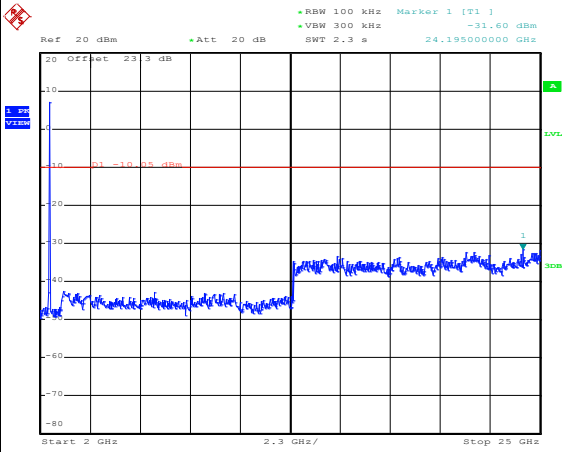
Mid Channel Plot

Spurious Emission 30MHz~3GHz



Date: 23.JUL.2016 15:27:04

Spurious Emission 2GHz~25GHz

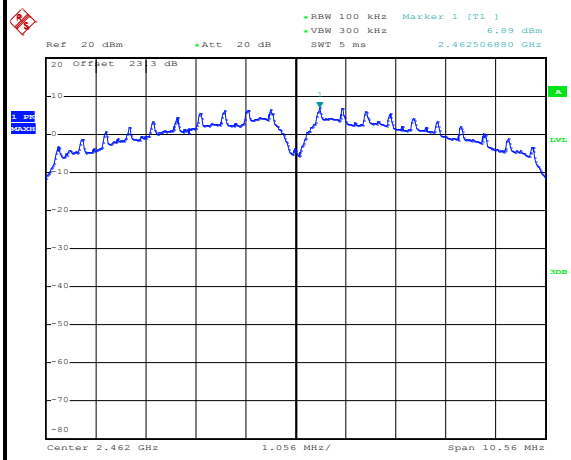


Date: 23.JUL.2016 15:27:13

Number of TX :	2	**Ant. :**	2
Test Mode :	802.11b	**Temperature :**	21.5~24.7℃
Test Band :	2.4GHz High	**Relative Humidity :**	51.2~53.8%
Test Channel :	11	**Test Engineer :**	Osolemio Chang

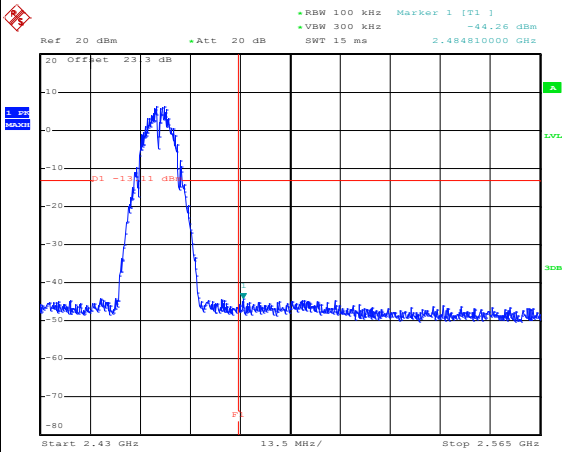
WLAN 802.11b Channel 11

100kHz PSD reference Level



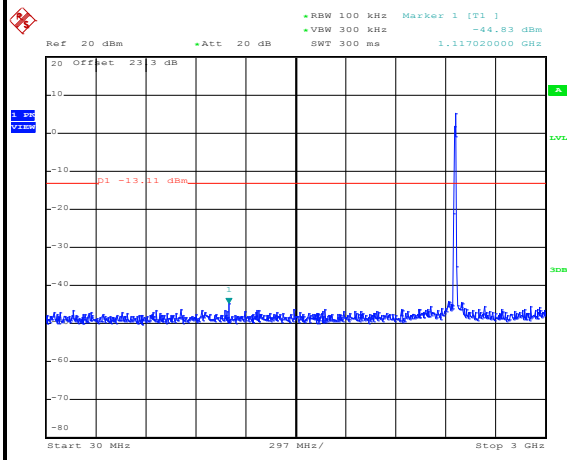
Date: 23.JUL.2016 15:33:26

High Channel Plot



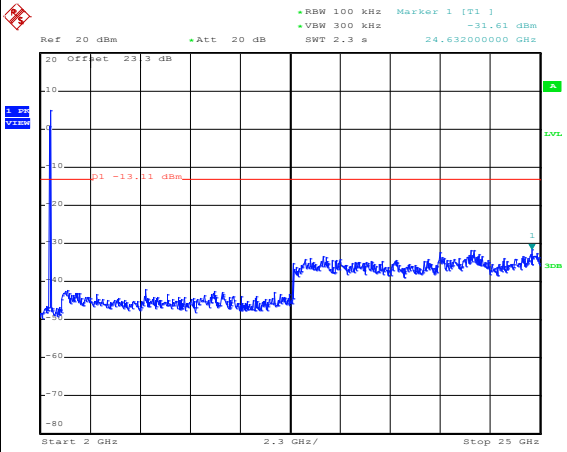
Date: 23.JUL.2016 15:33:38

Spurious Emission 30MHz~3GHz



Date: 23.JUL.2016 15:34:32

Spurious Emission 2GHz~25GHz

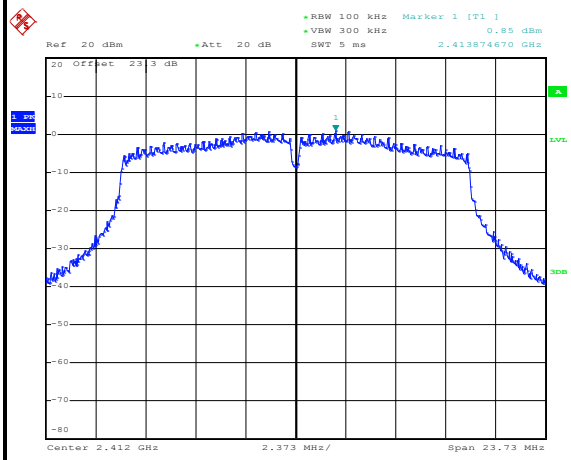


Date: 23.JUL.2016 15:34:00

Number of TX :	2	**Ant. :**	2
Test Mode :	802.11g	**Temperature :**	21.5~24.7℃
Test Band :	2.4GHz Low	**Relative Humidity :**	51.2~53.8%
Test Channel :	01	**Test Engineer :**	Osolemio Chang

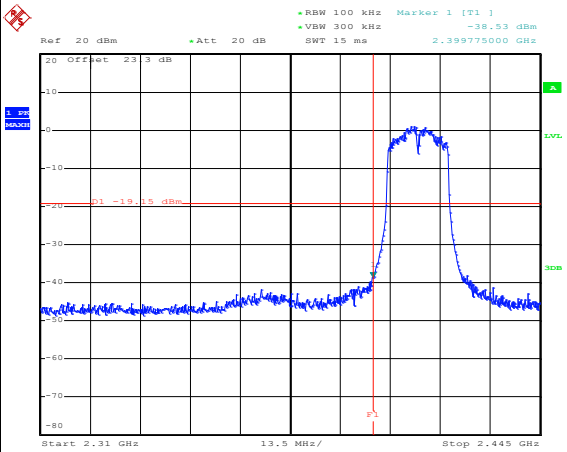
WLAN 802.11g Channel 01

100kHz PSD reference Level



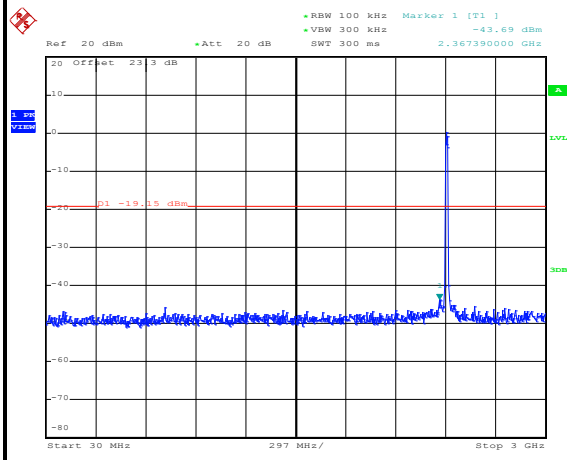
Date: 23.JUL.2016 15:46:15

Low Channel Plot



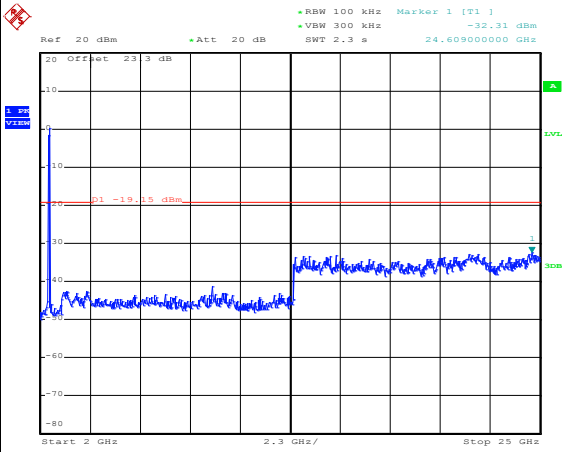
Date: 23.JUL.2016 15:46:57

Spurious Emission 30MHz~3GHz



Date: 23.JUL.2016 15:47:11

Spurious Emission 2GHz~25GHz

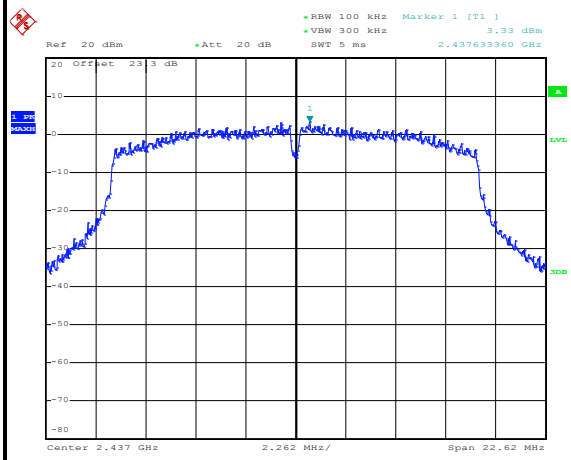


Date: 23.JUL.2016 15:47:20

Number of TX :	2	**Ant. :**	2
Test Mode :	802.11g	**Temperature :**	21.5~24.7℃
Test Band :	2.4GHz Mid	**Relative Humidity :**	51.2~53.8%
Test Channel :	06	**Test Engineer :**	Osolemio Chang

WLAN 802.11g Channel 06

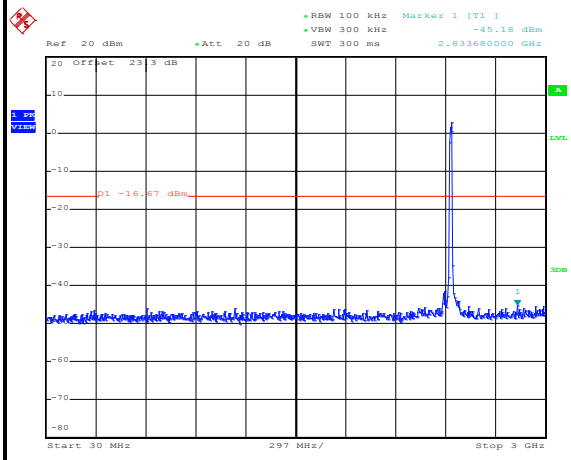
100kHz PSD reference Level



Date: 23.JUL.2016 15:57:09

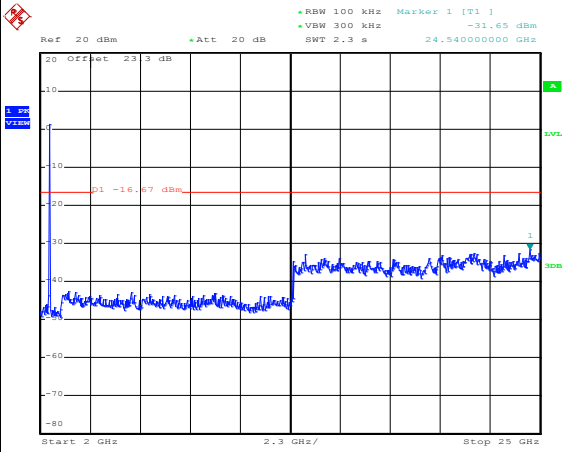
Mid Channel Plot

Spurious Emission 30MHz~3GHz



Date: 23.JUL.2016 15:58:25

Spurious Emission 2GHz~25GHz

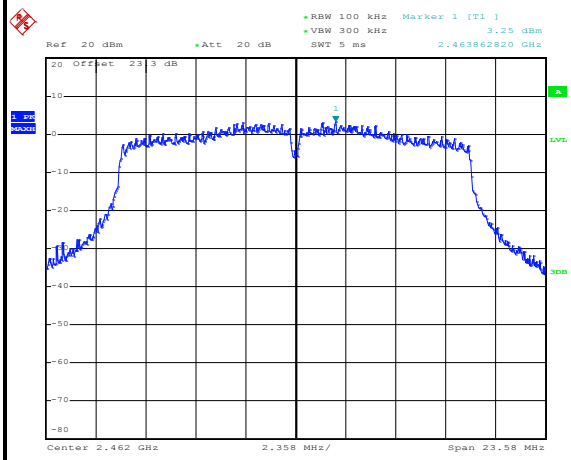


Date: 23.JUL.2016 15:57:39

Number of TX :	2	**Ant. :**	2
Test Mode :	802.11g	**Temperature :**	21.5~24.7℃
Test Band :	2.4GHz High	**Relative Humidity :**	51.2~53.8%
Test Channel :	11	**Test Engineer :**	Osolemio Chang

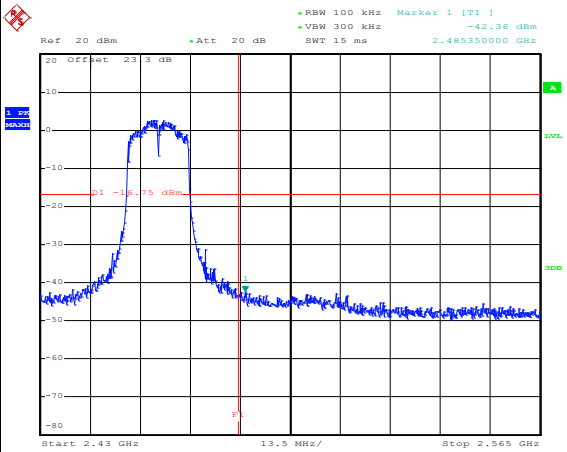
WLAN 802.11g Channel 11

100kHz PSD reference Level



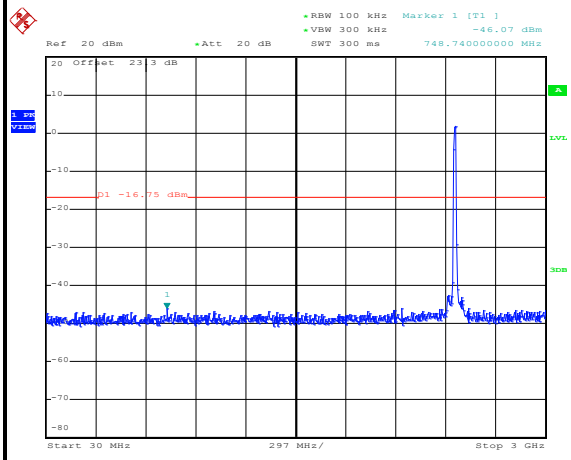
Date: 23.JUL.2016 16:06:12

High Channel Plot



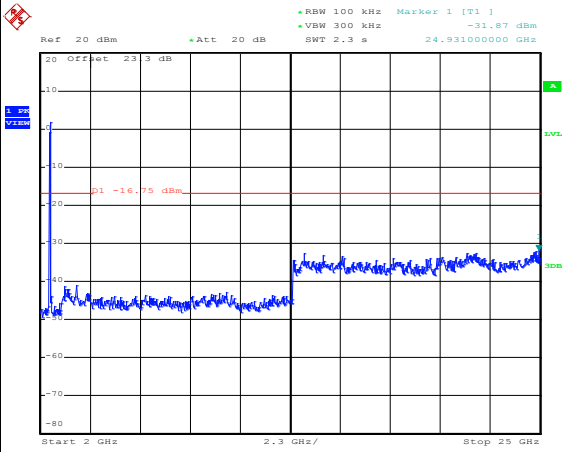
Date: 23.JUL.2016 16:06:30

Spurious Emission 30MHz~3GHz



Date: 23.JUL.2016 16:06:46

Spurious Emission 2GHz~25GHz

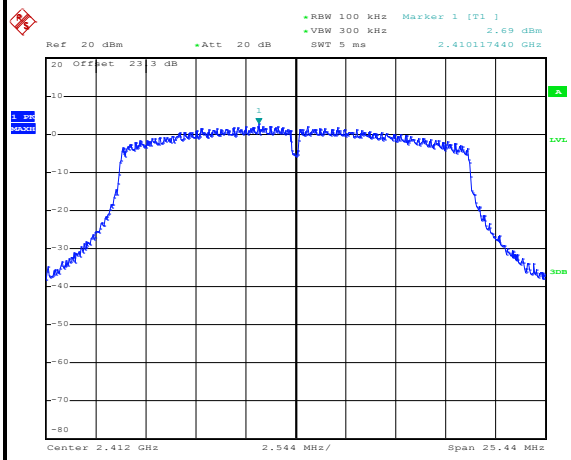


Date: 23.JUL.2016 16:06:54

Number of TX :	2	**Ant. :**	2
Test Mode :	802.11n HT20	**Temperature :**	21.5~24.7℃
Test Band :	2.4GHz Low	**Relative Humidity :**	51.2~53.8%
Test Channel :	01	**Test Engineer :**	Osolemio Chang

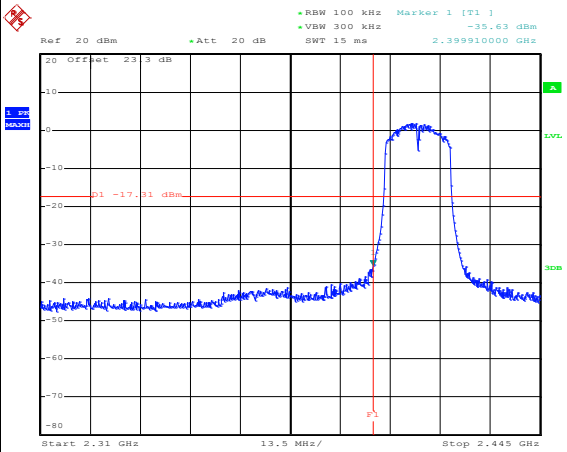
WLAN 802.11n HT20 Channel 01

100kHz PSD reference Level



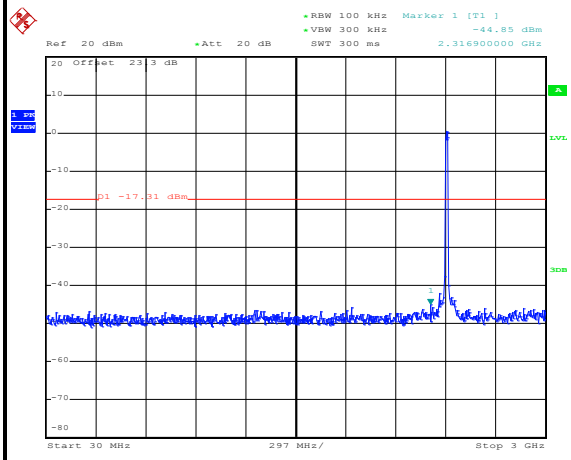
Date: 24.JUL.2016 05:49:21

Low Channel Plot



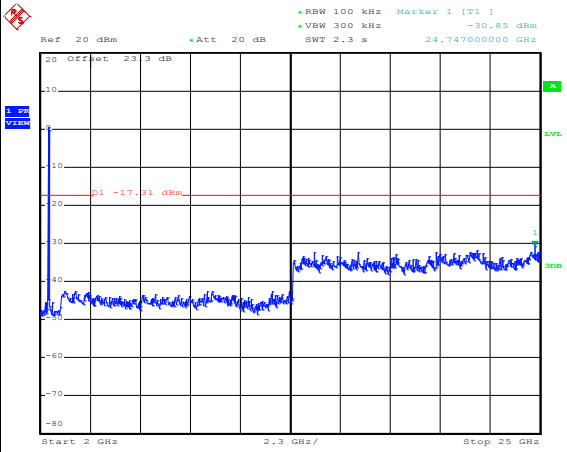
Date: 24.JUL.2016 05:50:29

Spurious Emission 30MHz~3GHz



Date: 24.JUL.2016 05:50:42

Spurious Emission 2GHz~25GHz

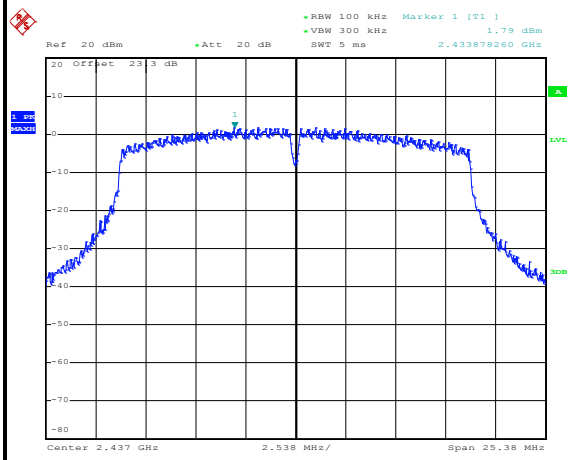


Date: 24.JUL.2016 05:50:51

Number of TX :	2	**Ant. :**	2
Test Mode :	802.11n HT20	**Temperature :**	21.5~24.7℃
Test Band :	2.4GHz Mid	**Relative Humidity :**	51.2~53.8%
Test Channel :	06	**Test Engineer :**	Osolemio Chang

WLAN 802.11n HT20 Channel 06

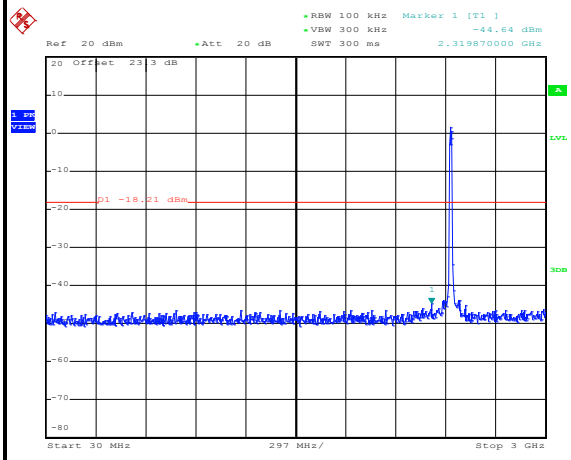
100kHz PSD reference Level



Date: 24.JUL.2016 06:07:19

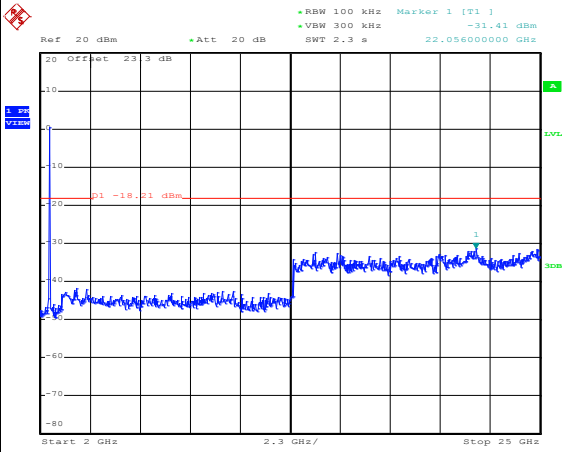
Mid Channel Plot

Spurious Emission 30MHz~3GHz



Date: 24.JUL.2016 06:07:38

Spurious Emission 2GHz~25GHz

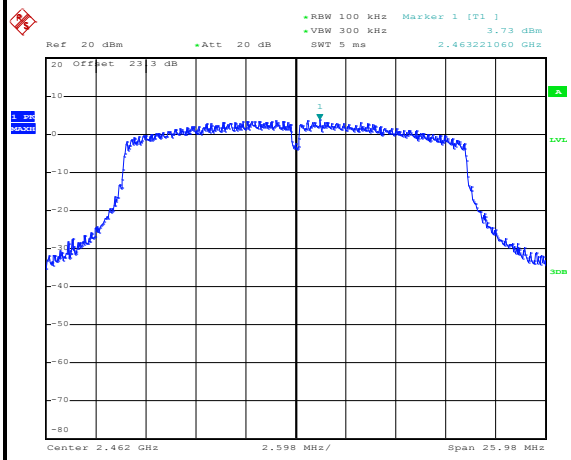


Date: 24.JUL.2016 06:07:46

Number of TX :	2	**Ant. :**	2
Test Mode :	802.11n HT20	**Temperature :**	21.5~24.7℃
Test Band :	2.4GHz High	**Relative Humidity :**	51.2~53.8%
Test Channel :	11	**Test Engineer :**	Osolemio Chang

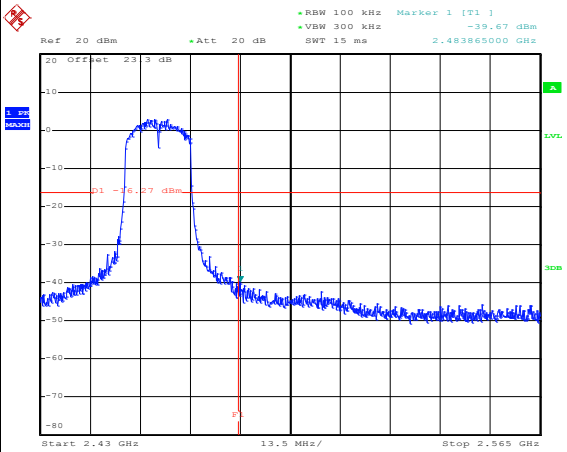
WLAN 802.11n HT20 Channel 11

100kHz PSD reference Level



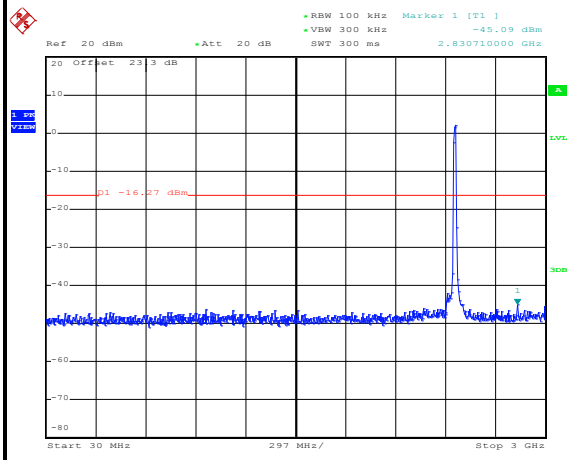
Date: 24.JUL.2016 06:27:48

High Channel Plot



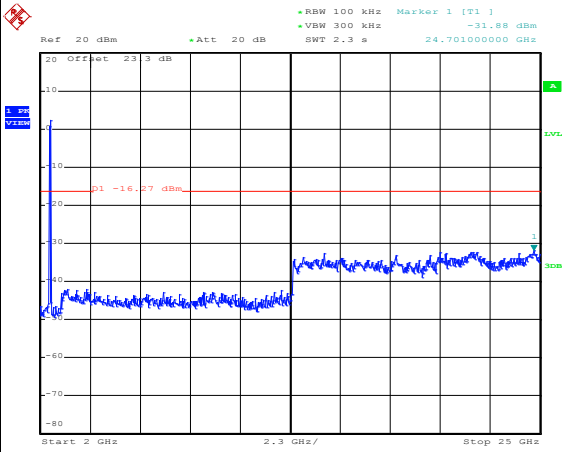
Date: 24.JUL.2016 06:28:12

Spurious Emission 30MHz~3GHz



Date: 24.JUL.2016 06:28:26

Spurious Emission 2GHz~25GHz

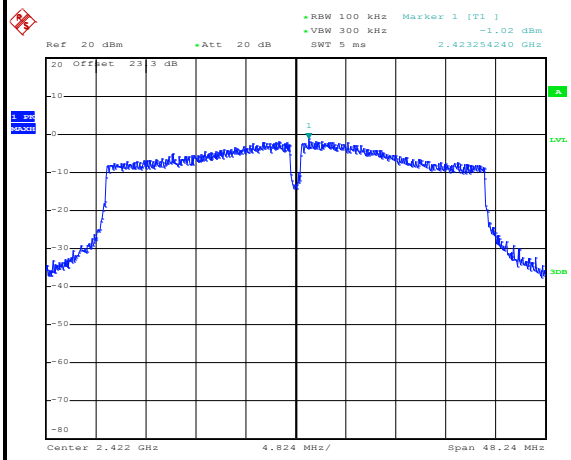


Date: 24.JUL.2016 06:28:35

Number of TX :	2	**Ant. :**	2
Test Mode :	802.11n HT40	**Temperature :**	21.5~24.7℃
Test Band :	2.4GHz Low	**Relative Humidity :**	51.2~53.8%
Test Channel :	03	**Test Engineer :**	Osolemio Chang

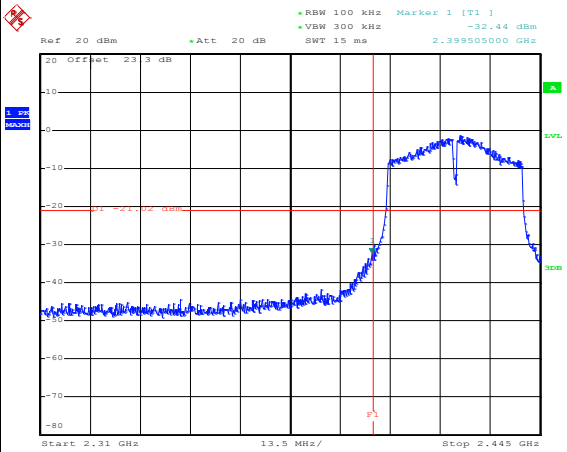
WLAN 802.11n HT40 Channel 03

100kHz PSD reference Level



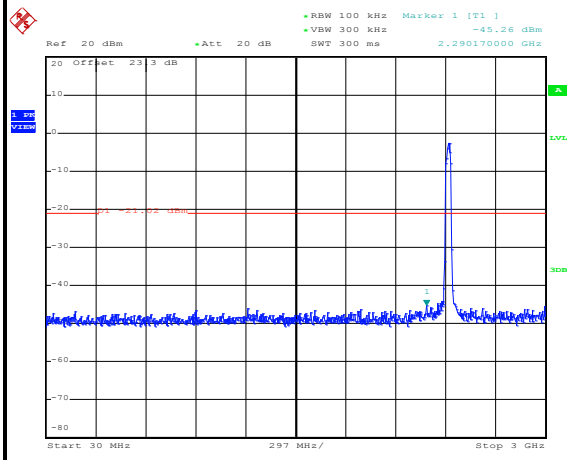
Date: 24.JUL.2016 06:38:19

Low Channel Plot



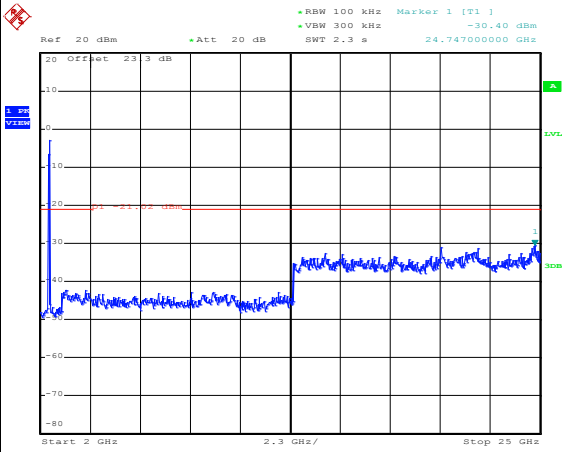
Date: 24.JUL.2016 06:38:45

Spurious Emission 30MHz~3GHz



Date: 24.JUL.2016 06:38:58

Spurious Emission 2GHz~25GHz

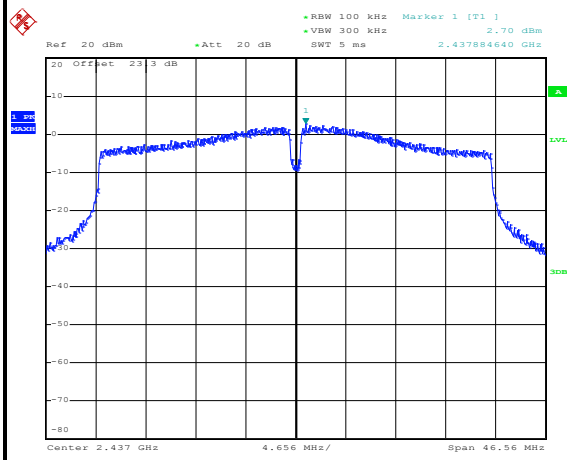


Date: 24.JUL.2016 06:39:07

Number of TX :	2	**Ant. :**	2
Test Mode :	802.11n HT40	**Temperature :**	21.5~24.7℃
Test Band :	2.4GHz Mid	**Relative Humidity :**	51.2~53.8%
Test Channel :	06	**Test Engineer :**	Osolemio Chang

WLAN 802.11n HT40 Channel 06

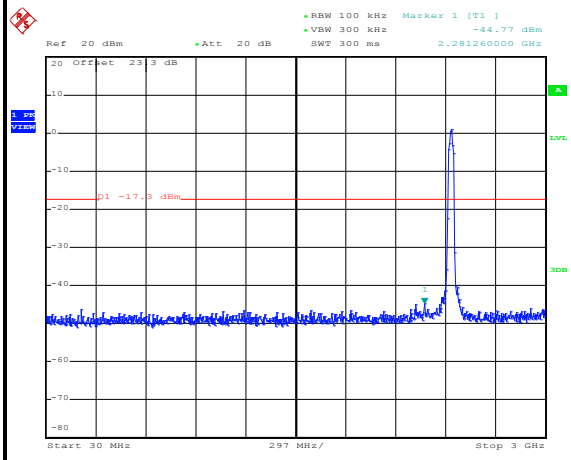
100kHz PSD reference Level



Date: 24.JUL.2016 06:50:58

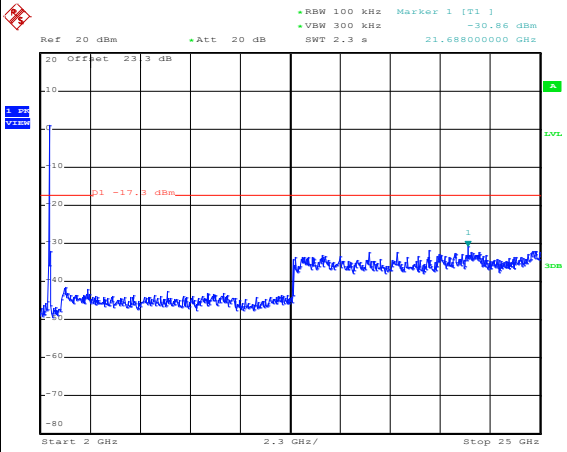
Mid Channel Plot

Spurious Emission 30MHz~3GHz



Date: 24.JUL.2016 06:51:10

Spurious Emission 2GHz~25GHz

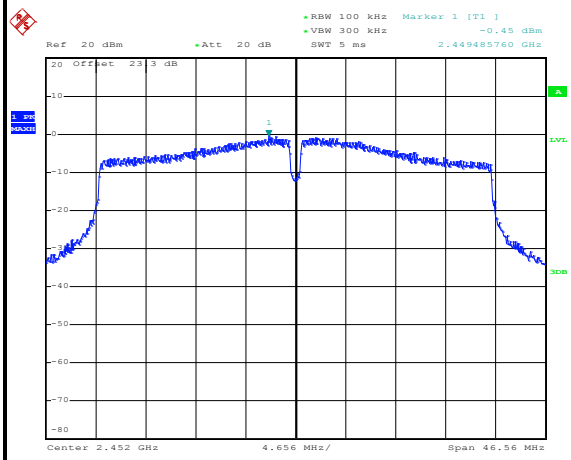


Date: 24.JUL.2016 06:51:18

Number of TX :	2	**Ant. :**	2
Test Mode :	802.11n HT40	**Temperature :**	21.5~24.7℃
Test Band :	2.4GHz High	**Relative Humidity :**	51.2~53.8%
Test Channel :	09	**Test Engineer :**	Osolemio Chang

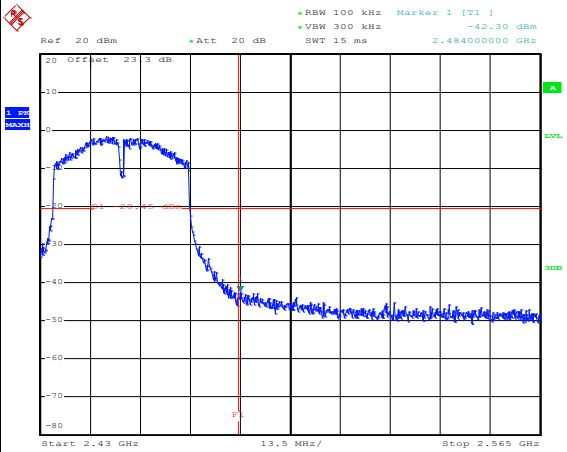
WLAN 802.11n HT40 Channel 09

100kHz PSD reference Level



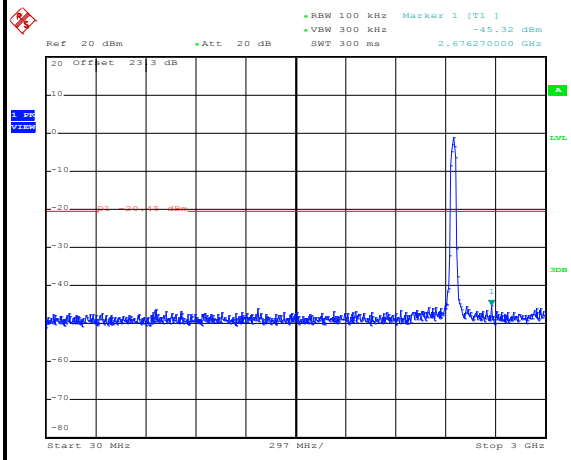
Date: 24.JUL.2016 07:06:27

High Channel Plot



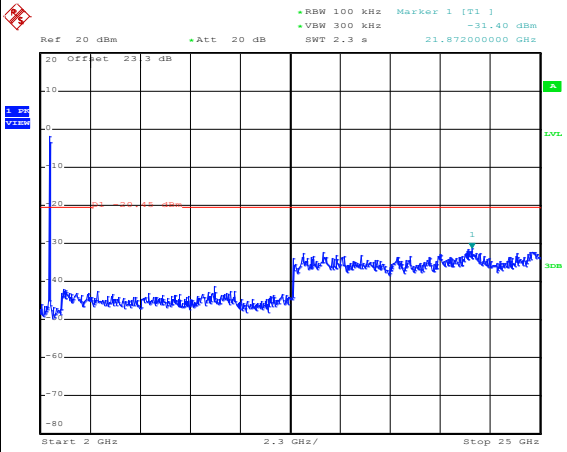
Date: 24.JUL.2016 07:06:49

Spurious Emission 30MHz~3GHz



Date: 24.JUL.2016 07:07:03

Spurious Emission 2GHz~25GHz



Date: 24.JUL.2016 07:07:11

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

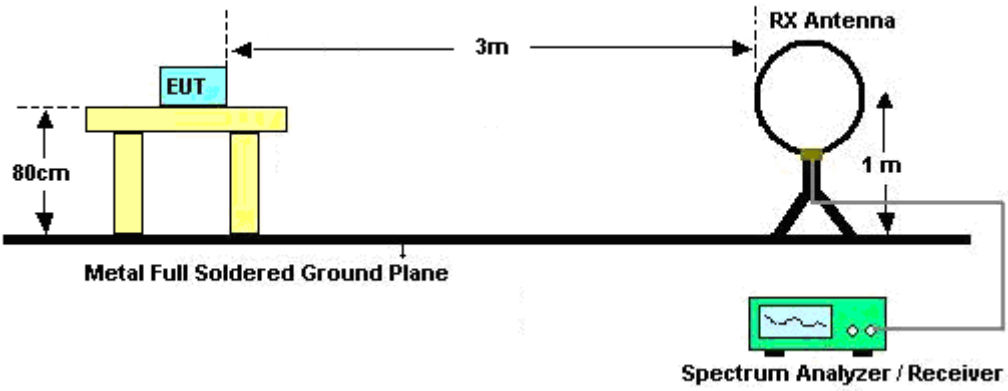
The measuring equipment is listed in the section 4 of this test report.

3.5.3 Test Procedure

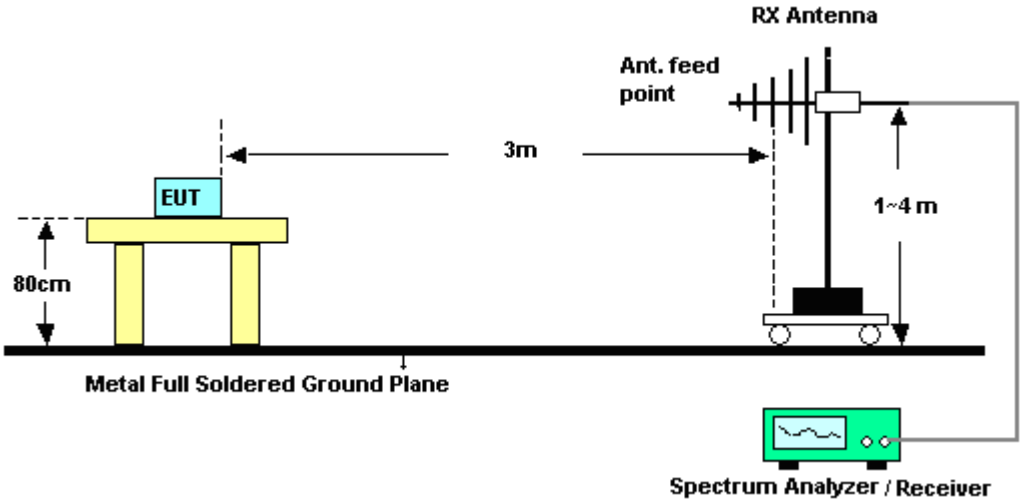
1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r05.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the 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

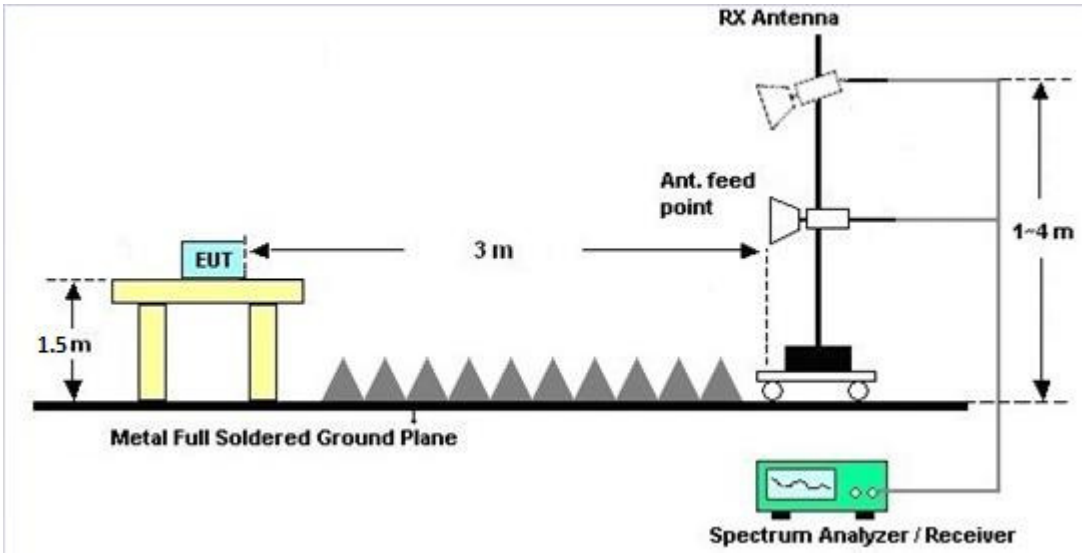
For radiated emissions below 30MHz



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 of this test report.

3.5.7 Duty Cycle

Please refer to Appendix D of this test report.

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

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

3.6 AC Conducted Emission Measurement

3.6.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of Emission (MHz)	Conducted Limit (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.

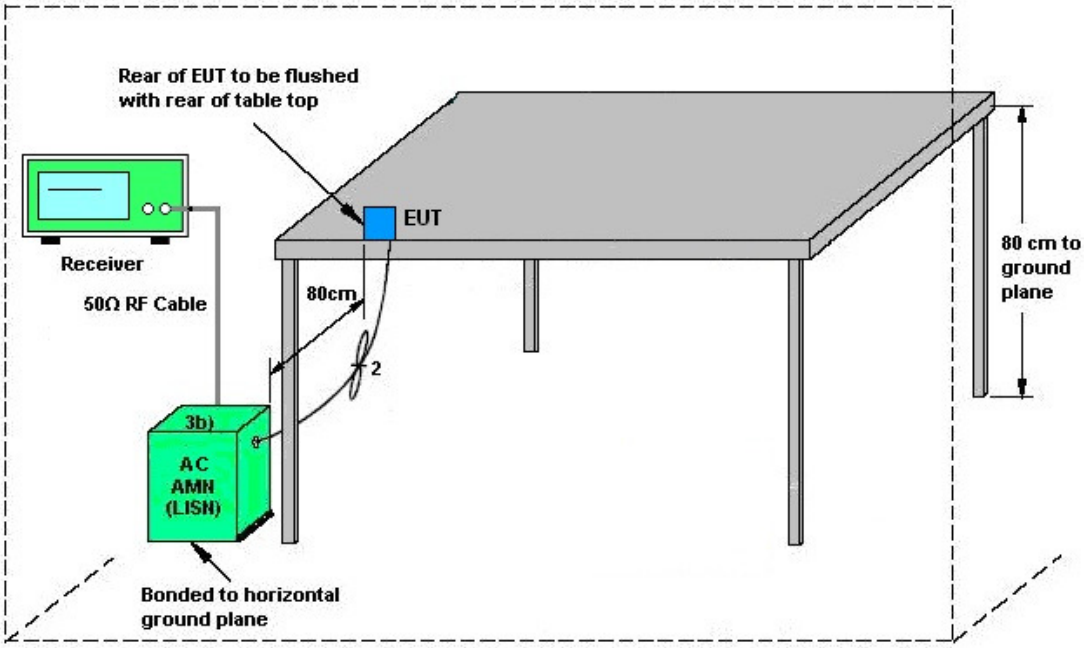
3.6.2 Measuring Instruments

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.

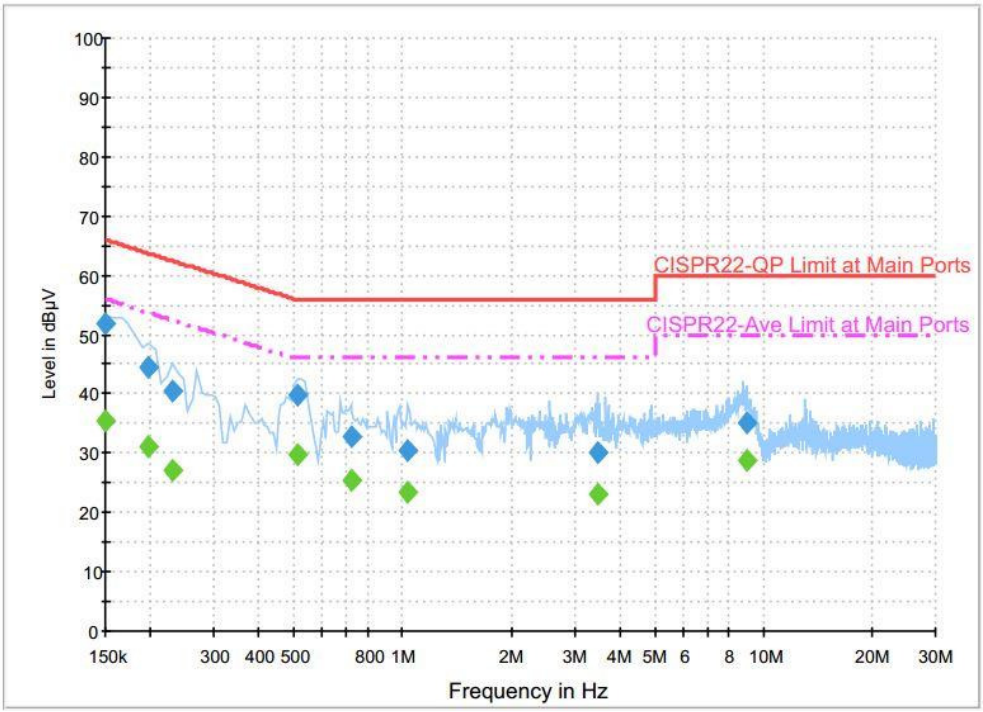
3.6.4 Test Setup



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 :**	23~24℃
Test Engineer :	Arthur Hsieh	**Relative Humidity :**	51~52%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line
Function Type :	WLAN (2.4GHz) Link + PoE Adapter + LAN Link		



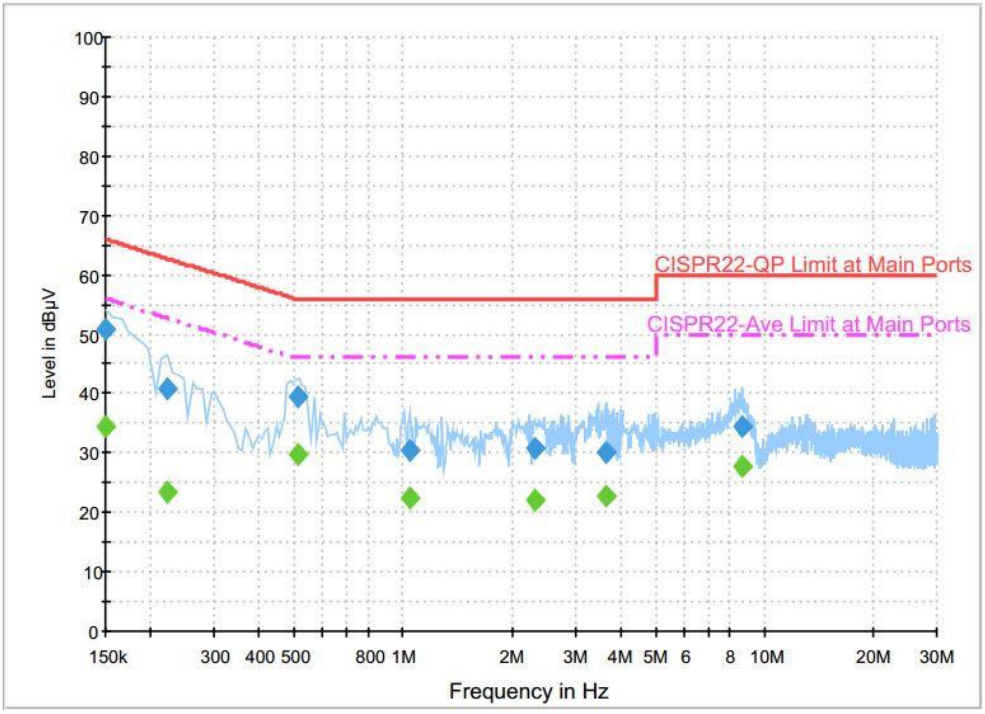
Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	51.8	Off	L1	19.6	14.2	66.0
0.198000	44.4	Off	L1	19.6	19.3	63.7
0.230000	40.5	Off	L1	19.6	21.9	62.4
0.510000	39.9	Off	L1	19.6	16.1	56.0
0.718000	32.8	Off	L1	19.6	23.2	56.0
1.038000	30.3	Off	L1	19.7	25.7	56.0
3.462000	30.3	Off	L1	19.8	25.7	56.0
8.990000	35.2	Off	L1	20.0	24.8	60.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	35.3	Off	L1	19.6	20.7	56.0
0.198000	31.1	Off	L1	19.6	22.6	53.7
0.230000	27.0	Off	L1	19.6	25.4	52.4
0.510000	29.8	Off	L1	19.6	16.2	46.0
0.718000	25.6	Off	L1	19.6	20.4	46.0
1.038000	23.4	Off	L1	19.7	22.6	46.0
3.462000	23.2	Off	L1	19.8	22.8	46.0
8.990000	28.8	Off	L1	20.0	21.2	50.0

Test Mode :	Mode 1	**Temperature :**	23~24℃
Test Engineer :	Arthur Hsieh	**Relative Humidity :**	51~52%
Test Voltage :	120Vac / 60Hz	**Phase :**	Neutral
Function Type :	WLAN (2.4GHz) Link + PoE Adapter + LAN Link		



Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	50.9	Off	N	19.6	15.1	66.0
0.222000	40.8	Off	N	19.6	21.9	62.7
0.510000	39.6	Off	N	19.6	16.4	56.0
1.046000	30.5	Off	N	19.6	25.5	56.0
2.310000	30.8	Off	N	19.6	25.2	56.0
3.654000	30.2	Off	N	19.7	25.8	56.0
8.734000	34.6	Off	N	20.0	25.4	60.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	34.5	Off	N	19.6	21.5	56.0
0.222000	23.3	Off	N	19.6	29.4	52.7
0.510000	29.7	Off	N	19.6	16.3	46.0
1.046000	22.5	Off	N	19.6	23.5	46.0
2.310000	22.2	Off	N	19.6	23.8	46.0
3.654000	22.7	Off	N	19.7	23.3	46.0
8.734000	27.8	Off	N	20.0	22.2	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

Non-standard antenna connector is used.

3.7.3 Antenna Gain

FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

For CDD transmissions, directional gain is calculated as

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

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

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

For power measurements on IEEE 802.11 devices,

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

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

The EUT supports CDD mode.

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

The directional gain “DG” is calculated as following table.

<PTMP>

	Ant. 1 (dBi)	Ant. 2 (dBi)	DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
2.4 GHz	3.00	3.00	3.00	6.01	0.00	0.01

Power Limit Reduction = DG(Power) – 6dBi, (min = 0)

PSD Limit Reduction = DG(PSD) – 6dBi, (min = 0)

<PTP>

	Ant. 1 (dBi)	Ant. 2 (dBi)	DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
2.4 GHz	3.00	3.00	3.00	6.01	0.00	0.00

Remark: 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.

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. 25, 2016 ~ Jul. 24, 2016	Aug. 11, 2016	Conducted (TH05-HY)
Power Sensor	Anritsu	MA2411B	1126017	300MHz~40GHz	Aug. 12, 2015	Jun. 25, 2016 ~ Jul. 24, 2016	Aug. 11, 2016	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100057	9kHz-40GHz	Nov. 23, 2015	Jun. 25, 2016 ~ Jul. 24, 2016	Nov. 22, 2016	Conducted (TH05-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Jun. 30, 2016	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESCI 7	100724	9kHz~7GHz	Aug. 26, 2015	Jun. 30, 2016	Aug. 25, 2016	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Dec. 02, 2015	Jun. 30, 2016	Dec. 01, 2016	Conduction (CO05-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	Sep. 02, 2015	Jul. 22, 2016 ~ Jul. 23, 2016	Sep. 01, 2016	Radiation (03CH12-HY)
Amplifier	SONOMA	310N	187312	9kHz~1GHz	Nov. 20, 2015	Jul. 22, 2016 ~ Jul. 23, 2016	Nov. 19, 2016	Radiation (03CH12-HY)
Bilog Antenna	TESEQ	CBL 6111D	37059	30MHz~1GHz	Dec. 29, 2015	Jul. 22, 2016 ~ Jul. 23, 2016	Dec. 28, 2016	Radiation (03CH12-HY)
EMI Test Receiver	Rohde & Schwarz	ESU26	100390	20Hz~26.5GHz	Dec. 21, 2015	Jul. 22, 2016 ~ Jul. 23, 2016	Dec. 20, 2016	Radiation (03CH12-HY)
Preamplifier	MITEQ	TTA0204	1872107	2GHz~40GHz	Feb. 15, 2016	Jul. 22, 2016 ~ Jul. 23, 2016	Feb. 14, 2017	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1328	1GHz ~ 18GHz	Nov. 02, 2015	Jul. 22, 2016 ~ Jul. 23, 2016	Nov. 01, 2016	Radiation (03CH12-HY)
Preamplifier	MITEQ	AMF-7D-00101800-30-10P	1815698	1GHz~18GHz	Dec. 14, 2015	Jul. 22, 2016 ~ Jul. 23, 2016	Dec. 13, 2016	Radiation (03CH12-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1m~4m	N/A	Jul. 22, 2016 ~ Jul. 23, 2016	N/A	Radiation (03CH12-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Jul. 22, 2016 ~ Jul. 23, 2016	N/A	Radiation (03CH12-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170584	18GHz- 40GHz	Nov. 02, 2015	Jul. 22, 2016 ~ Jul. 23, 2016	Nov. 01, 2016	Radiation (03CH12-HY)

5 Uncertainty of Evaluation

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

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

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.40

Appendix A. Conducted Test Results

<PTP>

Report Number : FR661624A

Test Engineer:	Osolemio Chang	Temperature:	21.5~24.7	°C
Test Date:	2016/6/25 ~ 2016/7/24	Relative Humidity:	51.2~53.8	%

Report Number : FR661624A

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	2	1	2412	11.75	11.65	7.04	7.08	0.50	Pass
11b	1Mbps	2	6	2437	11.65	11.50	7.04	7.08	0.50	Pass
11b	1Mbps	2	11	2462	11.90	11.95	7.08	7.04	0.50	Pass
11g	6Mbps	2	1	2412	16.70	16.80	15.68	15.82	0.50	Pass
11g	6Mbps	2	6	2437	16.60	16.55	15.56	15.08	0.50	Pass
11g	6Mbps	2	11	2462	16.75	16.70	16.08	15.72	0.50	Pass
HT20	MCS0	2	1	2412	17.85	17.95	16.92	16.96	0.50	Pass
HT20	MCS0	2	6	2437	17.70	17.95	15.68	16.92	0.50	Pass
HT20	MCS0	2	11	2462	17.85	17.95	16.96	17.32	0.50	Pass
HT40	MCS0	2	3	2422	36.20	36.30	32.00	32.16	0.50	Pass
HT40	MCS0	2	6	2437	36.20	36.30	31.44	31.04	0.50	Pass
HT40	MCS0	2	9	2452	36.20	36.00	32.56	31.04	0.50	Pass

Report Number : FR661624A

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	2	1	2412	17.61	17.26	20.45	30.00		3.00		23.45		36.00		Pass
11b	1Mbps	2	6	2437	21.34	21.64	24.50	30.00		3.00		27.50		36.00		Pass
11b	1Mbps	2	11	2462	18.70	18.34	21.53	30.00		3.00		24.53		36.00		Pass
11g	6Mbps	2	1	2412	23.19	23.04	26.13	30.00		3.00		29.13		36.00		Pass
11g	6Mbps	2	6	2437	24.22	24.15	27.20	30.00		3.00		30.20		36.00		Pass
11g	6Mbps	2	11	2462	24.30	24.17	27.25	30.00		3.00		30.25		36.00		Pass
HT20	MCS0	2	1	2412	24.12	24.00	27.07	30.00		3.00		30.07		36.00		Pass
HT20	MCS0	2	6	2437	24.17	24.25	27.22	30.00		3.00		30.22		36.00		Pass
HT20	MCS0	2	11	2462	24.22	24.32	27.28	30.00		3.00		30.28		36.00		Pass
HT40	MCS0	2	3	2422	22.33	22.52	25.44	30.00		3.00		28.44		36.00		Pass
HT40	MCS0	2	6	2437	24.10	24.29	27.21	30.00		3.00		30.21		36.00		Pass
HT40	MCS0	2	9	2452	22.27	22.92	25.62	30.00		3.00		28.62		36.00		Pass

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

Report Number : FR661624A

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	2	1	2412	0.00	0.00	14.42	14.10	17.27
11b	1Mbps	2	6	2437	0.00	0.00	18.01	18.38	21.21
11b	1Mbps	2	11	2462	0.00	0.00	15.59	15.44	18.53
11g	6Mbps	2	1	2412	0.00	0.00	13.59	13.61	16.61
11g	6Mbps	2	6	2437	0.00	0.00	15.49	15.69	18.60
11g	6Mbps	2	11	2462	0.00	0.00	16.03	16.06	19.06
HT20	MCS0	2	1	2412	0.00	0.00	15.42	15.28	18.36
HT20	MCS0	2	6	2437	0.00	0.00	15.53	15.89	18.72
HT20	MCS0	2	11	2462	0.00	0.00	16.48	16.51	19.51
HT40	MCS0	2	3	2422	0.00	0.00	14.00	14.27	17.15
HT40	MCS0	2	6	2437	0.00	0.00	17.11	17.16	20.15
HT40	MCS0	2	9	2452	0.00	0.00	14.35	14.73	17.55

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

Report Number : FR661624A

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	2	1	2412	-6.17	-8.39	-3.16	6.01		8.00		Pass
11b	1Mbps	2	6	2437	-4.70	-3.84	-0.83	6.01		8.00		Pass
11b	1Mbps	2	11	2462	-5.97	-7.12	-2.96	6.01		8.00		Pass
11g	6Mbps	2	1	2412	-12.54	-10.84	-7.83	6.01		8.00		Pass
11g	6Mbps	2	6	2437	-9.67	-8.81	-5.80	6.01		8.00		Pass
11g	6Mbps	2	11	2462	-7.95	-8.41	-4.94	6.01		8.00		Pass
HT20	MCS0	2	1	2412	-8.87	-8.72	-5.71	6.01		8.00		Pass
HT20	MCS0	2	6	2437	-7.71	-8.70	-4.70	6.01		8.00		Pass
HT20	MCS0	2	11	2462	-7.75	-7.08	-4.07	6.01		8.00		Pass
HT40	MCS0	2	3	2422	-12.94	-13.26	-9.93	6.01		8.00		Pass
HT40	MCS0	2	6	2437	-10.38	-9.21	-6.20	6.01		8.00		Pass
HT40	MCS0	2	9	2452	-13.44	-12.13	-9.12	6.01		8.00		Pass

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

<PTMP>

Report Number : FR661624A

Test Engineer:	Osolemio Chang	Temperature:	21.5~24.7	°C
Test Date:	2016/6/25 ~ 2016/7/24	Relative Humidity:	51.2~53.8	%

Report Number : FR661624A

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	2	1	2412	11.75	11.65	7.04	7.08	0.50	Pass
11b	1Mbps	2	6	2437	11.65	11.50	7.04	7.08	0.50	Pass
11b	1Mbps	2	11	2462	11.90	11.95	7.08	7.04	0.50	Pass
11g	6Mbps	2	1	2412	16.70	16.80	15.68	15.82	0.50	Pass
11g	6Mbps	2	6	2437	16.60	16.55	15.56	15.08	0.50	Pass
11g	6Mbps	2	11	2462	16.75	16.70	16.08	15.72	0.50	Pass
HT20	MCS0	2	1	2412	17.85	17.95	16.92	16.96	0.50	Pass
HT20	MCS0	2	6	2437	17.70	17.95	15.68	16.92	0.50	Pass
HT20	MCS0	2	11	2462	17.85	17.95	16.96	17.32	0.50	Pass
HT40	MCS0	2	3	2422	36.20	36.30	32.00	32.16	0.50	Pass
HT40	MCS0	2	6	2437	36.20	36.30	31.44	31.04	0.50	Pass
HT40	MCS0	2	9	2452	36.20	36.00	32.56	31.04	0.50	Pass

Report Number : FR661624A

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	2	1	2412	17.61	17.26	20.45	30.00		3.00		23.45		36.00		Pass
11b	1Mbps	2	6	2437	21.34	21.64	24.50	30.00		3.00		27.50		36.00		Pass
11b	1Mbps	2	11	2462	18.70	18.34	21.53	30.00		3.00		24.53		36.00		Pass
11g	6Mbps	2	1	2412	23.19	23.04	26.13	30.00		3.00		29.13		36.00		Pass
11g	6Mbps	2	6	2437	24.22	24.15	27.20	30.00		3.00		30.20		36.00		Pass
11g	6Mbps	2	11	2462	24.30	24.17	27.25	30.00		3.00		30.25		36.00		Pass
HT20	MCS0	2	1	2412	24.12	24.00	27.07	30.00		3.00		30.07		36.00		Pass
HT20	MCS0	2	6	2437	24.17	24.25	27.22	30.00		3.00		30.22		36.00		Pass
HT20	MCS0	2	11	2462	24.22	24.32	27.28	30.00		3.00		30.28		36.00		Pass
HT40	MCS0	2	3	2422	22.33	22.52	25.44	30.00		3.00		28.44		36.00		Pass
HT40	MCS0	2	6	2437	24.10	24.29	27.21	30.00		3.00		30.21		36.00		Pass
HT40	MCS0	2	9	2452	22.27	22.92	25.62	30.00		3.00		28.62		36.00		Pass

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

Report Number : FR661624A

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	2	1	2412	0.00	0.00	14.42	14.10	17.27
11b	1Mbps	2	6	2437	0.00	0.00	18.01	18.38	21.21
11b	1Mbps	2	11	2462	0.00	0.00	15.59	15.44	18.53
11g	6Mbps	2	1	2412	0.00	0.00	13.59	13.61	16.61
11g	6Mbps	2	6	2437	0.00	0.00	15.49	15.69	18.60
11g	6Mbps	2	11	2462	0.00	0.00	16.03	16.06	19.06
HT20	MCS0	2	1	2412	0.00	0.00	15.42	15.28	18.36
HT20	MCS0	2	6	2437	0.00	0.00	15.53	15.89	18.72
HT20	MCS0	2	11	2462	0.00	0.00	16.48	16.51	19.51
HT40	MCS0	2	3	2422	0.00	0.00	14.00	14.27	17.15
HT40	MCS0	2	6	2437	0.00	0.00	17.11	17.16	20.15
HT40	MCS0	2	9	2452	0.00	0.00	14.35	14.73	17.55

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

Report Number : FR661624A

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	2	1	2412	-6.17	-8.39	-3.16	6.01		7.99		Pass
11b	1Mbps	2	6	2437	-4.70	-3.84	-0.83	6.01		7.99		Pass
11b	1Mbps	2	11	2462	-5.97	-7.12	-2.96	6.01		7.99		Pass
11g	6Mbps	2	1	2412	-12.54	-10.84	-7.83	6.01		7.99		Pass
11g	6Mbps	2	6	2437	-9.67	-8.81	-5.80	6.01		7.99		Pass
11g	6Mbps	2	11	2462	-7.95	-8.41	-4.94	6.01		7.99		Pass
HT20	MCS0	2	1	2412	-8.87	-8.72	-5.71	6.01		7.99		Pass
HT20	MCS0	2	6	2437	-7.71	-8.70	-4.70	6.01		7.99		Pass
HT20	MCS0	2	11	2462	-7.75	-7.08	-4.07	6.01		7.99		Pass
HT40	MCS0	2	3	2422	-12.94	-13.26	-9.93	6.01		7.99		Pass
HT40	MCS0	2	6	2437	-10.38	-9.21	-6.20	6.01		7.99		Pass
HT40	MCS0	2	9	2452	-13.44	-12.13	-9.12	6.01		7.99		Pass

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

Appendix B. Radiated Spurious Emission

Test Engineer :	Peter Chiu, Nick Yu, Karl Hou and Ricky Su	Temperature :	21~22°C
		Relative Humidity :	49~52%

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b CH 01 2412MHz		2372.79	64.82	-9.18	74	61.93	27.01	7.37	31.49	234	248	P	H
		2372.475	53.54	-0.46	54	50.65	27.01	7.37	31.49	234	248	A	H
		2412	109.33	-21.97	131.3	106.28	27.09	7.45	31.49	234	248	P	H
		2412	105.16	-26.14	131.3	102.11	27.09	7.45	31.49	234	248	A	H
													H
													H
		2349.27	55.81	-18.19	74	53.01	26.93	7.37	31.5	400	229	P	V
		2381.82	44.29	-9.71	54	41.32	27.01	7.45	31.49	400	229	A	V
		2412	93.99	-37.31	131.3	90.94	27.09	7.45	31.49	400	229	P	V
		2412	89.37	-41.93	131.3	86.32	27.09	7.45	31.49	400	229	A	V
													V
													V
802.11b CH 06 2437MHz		2387.7	59.85	-14.15	74	56.84	27.05	7.45	31.49	321	111	P	H
		2389.38	48.35	-5.65	54	45.34	27.05	7.45	31.49	321	111	A	H
		2437	113.11	-18.19	131.3	109.92	27.18	7.49	31.48	321	111	P	H
		2437	108.47	-22.83	131.3	105.28	27.18	7.49	31.48	321	111	A	H
		2485.02	62.85	-11.15	74	59.53	27.26	7.53	31.47	321	111	P	H
		2484.81	51.61	-2.39	54	48.29	27.26	7.53	31.47	321	111	A	H
		2384.06	56.38	-17.62	74	53.41	27.01	7.45	31.49	114	222	P	V
		2389.38	44.88	-9.12	54	41.87	27.05	7.45	31.49	114	222	A	V
		2437	98.93	-32.37	131.3	95.74	27.18	7.49	31.48	114	222	P	V
		2437	94.34	-36.96	131.3	91.15	27.18	7.49	31.48	114	222	A	V
		2484.67	57.51	-16.49	74	54.19	27.26	7.53	31.47	114	222	P	V
		2484.74	44.75	-9.25	54	41.43	27.26	7.53	31.47	114	222	A	V

802.11b CH 11 2462MHz		2464	111.35	-19.95	131.3	108.07	27.22	7.53	31.47	200	106	P	H
		2464	106.68	-24.62	131.3	103.4	27.22	7.53	31.47	200	106	A	H
		2499.48	62.61	-11.39	74	59.24	27.3	7.53	31.46	200	106	P	H
		2500	52.24	-1.76	54	48.87	27.3	7.53	31.46	200	106	A	H
													H
													H
		2462	100.79	-30.51	131.3	97.51	27.22	7.53	31.47	100	200	P	V
		2462	96.84	-34.46	131.3	93.56	27.22	7.53	31.47	100	200	A	V
		2495.28	57.76	-16.24	74	54.39	27.3	7.53	31.46	100	200	P	V
		2498.76	45.95	-8.05	54	42.58	27.3	7.53	31.46	100	200	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 802.11b (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b CH 01 2412MHz		4824	49.78	-24.22	74	65.92	31.26	10.74	58.14	100	0	P	H
													H
													H
													H
		4824	46.06	-27.94	74	62.2	31.26	10.74	58.14	100	0	P	V
													V
													V
													V
802.11b CH 06 2437MHz		4874	66.44	-7.56	74	82.32	31.33	10.89	58.1	400	289	P	H
		4874	49.88	-4.12	54	65.76	31.33	10.89	58.1	400	289	A	H
		7311	63.76	-10.24	74	72.6	36.07	14.18	59.09	100	21	P	H
		7311	44.43	-9.57	54	53.27	36.07	14.18	59.09	100	21	A	H
		4874	61.84	-12.16	74	77.72	31.33	10.89	58.1	400	346	P	V
		4874	45.01	-8.99	54	60.89	31.33	10.89	58.1	400	346	A	V
		7311	52.7	-21.3	74	61.54	36.07	14.18	59.09	100	0	P	V
													V
802.11b CH 11 2462MHz		4924	67.18	-6.82	74	82.8	31.4	11.04	58.06	374	289	P	H
		4924	49.51	-4.49	54	65.13	31.4	11.04	58.06	374	289	A	H
		7386	61.11	-12.89	74	69.67	36.31	14.27	59.14	100	23	P	H
		7386	36.47	-17.53	54	45.03	36.31	14.27	59.14	100	23	A	H
		4924	63.09	-10.91	74	78.71	31.4	11.04	58.06	393	337	P	V
		4924	45.78	-8.22	54	61.4	31.4	11.04	58.06	393	337	A	V
		7386	48.42	-25.58	74	56.98	36.31	14.27	59.14	100	0	P	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+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		2370.69	66.81	-7.19	74	63.92	27.01	7.37	31.49	235	100	P	H
		2370.69	53.79	-0.21	54	50.9	27.01	7.37	31.49	235	100	A	H
		2412	111.79	-19.51	131.3	108.74	27.09	7.45	31.49	235	100	P	H
		2412	102.89	-28.41	131.3	99.84	27.09	7.45	31.49	235	100	A	H
													H
													H
		2376.99	56.12	-17.88	74	53.23	27.01	7.37	31.49	121	203	P	V
		2368.905	44.99	-9.01	54	42.1	27.01	7.37	31.49	121	203	A	V
		2412	98.52	-32.78	131.3	95.47	27.09	7.45	31.49	121	203	P	V
		2412	89.44	-41.86	131.3	86.39	27.09	7.45	31.49	121	203	A	V
													V
													V
802.11g CH 06 2437MHz		2386.3	65.56	-8.44	74	62.55	27.05	7.45	31.49	206	99	P	H
		2389.94	53.67	-0.33	54	50.66	27.05	7.45	31.49	206	99	A	H
		2437	113.92	-17.38	131.3	110.73	27.18	7.49	31.48	206	99	P	H
		2437	104.72	-26.58	131.3	101.53	27.18	7.49	31.48	206	99	A	H
		2483.83	65.54	-8.46	74	62.22	27.26	7.53	31.47	206	99	P	H
		2484.11	53.55	-0.45	54	50.23	27.26	7.53	31.47	206	99	A	H
		2366.42	56.68	-17.32	74	53.83	26.97	7.37	31.49	253	340	P	V
		2389.24	45.06	-8.94	54	42.05	27.05	7.45	31.49	253	340	A	V
		2437	100.66	-30.64	131.3	97.47	27.18	7.49	31.48	253	340	P	V
		2437	92.08	-39.22	131.3	88.89	27.18	7.49	31.48	253	340	A	V
		2494.12	56.65	-17.35	74	53.28	27.3	7.53	31.46	253	340	P	V
		2485.93	44.86	-9.14	54	41.54	27.26	7.53	31.47	253	340	A	V

802.11g CH 11 2462MHz		2462	114.7	-16.6	131.3	111.42	27.22	7.53	31.47	228	98	P	H
		2462	105.02	-26.28	131.3	101.74	27.22	7.53	31.47	228	98	A	H
		2483.6	68.14	-5.86	74	64.82	27.26	7.53	31.47	228	98	P	H
		2500	52.45	-1.55	54	49.08	27.3	7.53	31.46	228	98	P	H
													H
													H
		2462	101.61	-29.69	131.3	98.33	27.22	7.53	31.47	100	200	P	V
		2462	92.22	-39.08	131.3	88.94	27.22	7.53	31.47	100	200	A	V
		2484.8	57.46	-16.54	74	54.14	27.26	7.53	31.47	100	200	P	V
		2498.56	45.58	-8.42	54	42.21	27.3	7.53	31.46	100	200	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+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	48.91	-25.09	74	65.05	31.26	10.74	58.14	100	0	P	H
													H
													H
													H
		4824	44.46	-29.54	74	60.6	31.26	10.74	58.14	100	0	P	V
													V
													V
													V
802.11g CH 06 2437MHz		4874	64.83	-9.17	74	80.71	31.33	10.89	58.1	400	289	P	H
		4874	46.19	-7.81	54	62.07	31.33	10.89	58.1	400	289	A	H
		7311	49.35	-24.65	74	58.19	36.07	14.18	59.09	100	0	P	H
													H
		4874	51.47	-22.53	74	67.35	31.33	10.89	58.1	100	0	P	V
		7311	43.17	-30.83	74	52.01	36.07	14.18	59.09	100	0	P	V
													V
													V
802.11g CH 11 2462MHz		4924	67.51	-6.49	74	83.13	31.4	11.04	58.06	391	292	P	H
		4924	50.18	-3.82	54	65.8	31.4	11.04	58.06	391	292	A	H
		7386	54.37	-19.63	74	62.93	36.31	14.27	59.14	100	0	P	H
													H
		4924	64.67	-9.33	74	80.29	31.4	11.04	58.06	234	0	P	V
		4924	46.41	-7.59	54	62.03	31.4	11.04	58.06	234	0	A	V
		7386	44.29	-29.71	74	52.85	36.31	14.27	59.14	100	0	P	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+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 01 2412MHz		2367.435	65.07	-8.93	74	62.22	26.97	7.37	31.49	182	92	P	H
		2363.445	53.22	-0.78	54	50.38	26.97	7.37	31.5	182	92	A	H
		2412	112.33	-18.97	131.3	109.28	27.09	7.45	31.49	182	92	P	H
		2412	102.39	-28.91	131.3	99.34	27.09	7.45	31.49	182	92	A	H
													H
													H
		2371.53	56.73	-17.27	74	53.84	27.01	7.37	31.49	100	149	P	V
		2375.835	44.41	-9.59	54	41.52	27.01	7.37	31.49	100	149	A	V
		2412	98.03	-33.27	131.3	94.98	27.09	7.45	31.49	100	149	P	V
		2412	88.09	-43.21	131.3	85.04	27.09	7.45	31.49	100	149	A	V
													V
													V
802.11n HT20 CH 06 2437MHz		2389.38	63.84	-10.16	74	60.83	27.05	7.45	31.49	207	92	P	H
		2389.94	53.1	-0.9	54	50.09	27.05	7.45	31.49	207	92	A	H
		2437	113.79	-17.51	131.3	110.6	27.18	7.49	31.48	207	92	P	H
		2437	104.62	-26.68	131.3	101.43	27.18	7.49	31.48	207	92	A	H
		2483.55	65.93	-8.07	74	62.61	27.26	7.53	31.47	207	92	P	H
		2483.5	53.37	-0.63	54	50.05	27.26	7.53	31.47	207	92	A	H
		2366.42	55.88	-18.12	74	53.03	26.97	7.37	31.49	393	126	P	V
		2389.94	44.1	-9.9	54	41.09	27.05	7.45	31.49	393	126	A	V
		2437	101.24	-30.06	131.3	98.05	27.18	7.49	31.48	393	126	P	V
		2437	91.45	-39.85	131.3	88.26	27.18	7.49	31.48	393	126	A	V
		2486.35	56.35	-17.65	74	53.03	27.26	7.53	31.47	393	126	P	V
		2483.55	44.86	-9.14	54	41.54	27.26	7.53	31.47	393	126	A	V

802.11n HT20 CH 11 2462MHz		2462	114.39	-16.91	131.3	111.11	27.22	7.53	31.47	178	99	P	H
		2462	104.77	-26.53	131.3	101.49	27.22	7.53	31.47	178	99	A	H
		2484.2	70.21	-3.79	74	66.89	27.26	7.53	31.47	178	99	P	H
		2483.52	53.48	-0.52	54	50.16	27.26	7.53	31.47	178	99	A	H
													H
													H
		2462	102.48	-28.82	131.3	99.2	27.22	7.53	31.47	378	360	P	V
		2462	93.79	-37.51	131.3	90.51	27.22	7.53	31.47	378	360	A	V
		2484.84	57.96	-16.04	74	54.64	27.26	7.53	31.47	378	360	P	V
		2499.96	45.73	-8.27	54	42.36	27.3	7.53	31.46	378	360	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 01 2412MHz		4824	59.98	-14.02	74	76.12	31.26	10.74	58.14	388	290	P	H
		4824	42.16	-11.84	54	58.3	31.26	10.74	58.14	388	290	A	H
													H
													H
		4824	47.24	-26.76	74	63.38	31.26	10.74	58.14	100	0	P	V
													V
													V
													V
802.11n HT20 CH 06 2437MHz		4874	63.65	-10.35	74	79.53	31.33	10.89	58.1	387	289	P	H
		4874	46.45	-7.55	54	62.33	31.33	10.89	58.1	387	289	A	H
		7311	49.67	-24.33	74	58.51	36.07	14.18	59.09	100	0	P	H
													H
		4874	55.35	-18.65	74	71.23	31.33	10.89	58.1	143	0	P	V
		4874	41.01	-12.99	54	56.89	31.33	10.89	58.1	143	0	A	V
		7311	42.2	-31.8	74	51.04	36.07	14.18	59.09	100	0	P	V
													V
802.11n HT20 CH 11 2462MHz		4926	64.79	-9.21	74	80.41	31.4	11.04	58.06	374	291	P	H
		4926	49.52	-4.48	54	65.14	31.4	11.04	58.06	374	291	A	H
		7386	60.83	-13.17	74	69.39	36.31	14.27	59.14	100	21	P	H
		7386	36.52	-17.48	54	45.08	36.31	14.27	59.14	100	21	A	H
		4926	59.76	-14.24	74	75.38	31.4	11.04	58.06	394	336	P	V
		4926	45.18	-8.82	54	60.8	31.4	11.04	58.06	394	336	A	V
		7386	44.49	-29.51	74	53.05	36.31	14.27	59.14	100	0	P	V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 03 2422MHz		2378.18	64.31	-9.69	74	61.42	27.01	7.37	31.49	181	91	P	H
		2389.94	53.22	-0.78	54	50.21	27.05	7.45	31.49	181	91	A	H
		2422	109.17	-22.13	131.3	106.03	27.13	7.49	31.48	181	91	P	H
		2422	99.54	-31.76	131.3	96.4	27.13	7.49	31.48	181	91	A	H
		2483.83	58.71	-15.29	74	55.39	27.26	7.53	31.47	181	91	P	H
		2483.9	47.18	-6.82	54	43.86	27.26	7.53	31.47	181	91	A	H
		2389.24	57	-17	74	53.99	27.05	7.45	31.49	400	181	P	V
		2389.94	45.18	-8.82	54	42.17	27.05	7.45	31.49	400	181	A	V
		2422	98.48	-32.82	131.3	95.34	27.13	7.49	31.48	400	181	P	V
		2422	88.78	-42.52	131.3	85.64	27.13	7.49	31.48	400	181	A	V
		2488.87	56.21	-17.79	74	52.85	27.3	7.53	31.47	400	181	P	V
		2499.93	44.35	-9.65	54	40.98	27.3	7.53	31.46	400	181	A	V
802.11n HT40 CH 06 2437MHz		2388.68	65.71	-8.29	74	62.7	27.05	7.45	31.49	203	96	P	H
		2389.94	53.86	-0.14	54	50.85	27.05	7.45	31.49	203	96	A	H
		2437	111.45	-19.85	131.3	108.26	27.18	7.49	31.48	203	96	P	H
		2437	102.99	-28.31	131.3	99.8	27.18	7.49	31.48	203	96	A	H
		2486.91	64.13	-9.87	74	60.81	27.26	7.53	31.47	203	96	P	H
		2486.14	52.16	-1.84	54	48.84	27.26	7.53	31.47	203	96	A	H
		2375.24	55.93	-18.07	74	53.04	27.01	7.37	31.49	394	181	P	V
		2389.94	44.58	-9.42	54	41.57	27.05	7.45	31.49	394	181	A	V
		2437	101.82	-29.48	131.3	98.63	27.18	7.49	31.48	394	181	P	V
		2437	92.08	-39.22	131.3	88.89	27.18	7.49	31.48	394	181	A	V
		2488.31	55.81	-18.19	74	52.45	27.3	7.53	31.47	394	181	P	V
		2499.86	44.07	-9.93	54	40.7	27.3	7.53	31.46	394	181	A	V

802.11n HT40 CH 09 2452MHz		2388.68	58.76	-15.24	74	55.75	27.05	7.45	31.49	200	104	P	H
		2324.98	47.87	-6.13	54	45.19	26.89	7.3	31.51	200	104	A	H
		2452	109.19	-22.11	131.3	105.99	27.18	7.49	31.47	200	104	P	H
		2452	99.34	-31.96	131.3	96.14	27.18	7.49	31.47	200	104	A	H
		2485.58	65.83	-8.17	74	62.51	27.26	7.53	31.47	200	104	P	H
		2483.5	52.78	-1.22	54	49.46	27.26	7.53	31.47	200	104	A	H
		2382.8	55.92	-18.08	74	52.95	27.01	7.45	31.49	389	146	P	V
		2388.4	43.81	-10.19	54	40.8	27.05	7.45	31.49	389	146	A	V
		2452	98.52	-32.78	131.3	95.32	27.18	7.49	31.47	389	146	P	V
		2452	88.86	-42.44	131.3	85.66	27.18	7.49	31.47	389	146	A	V
		2488.31	56.49	-17.51	74	53.13	27.3	7.53	31.47	389	146	P	V
		2487.68	44.96	-9.04	54	41.6	27.3	7.53	31.47	389	146	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 03 2422MHz		4842	47.44	-26.56	74	63.54	31.28	10.74	58.12	100	0	P	H
		7266	44.11	-29.89	74	53.07	35.97	14.14	59.07	100	0	P	H
													H
													H
		4842	42.56	-31.44	74	58.66	31.28	10.74	58.12	100	0	P	V
		7266	42.58	-31.42	74	51.54	35.97	14.14	59.07	100	0	P	V
													V
													V
802.11n HT40 CH 06 2437MHz		4874	57.68	-16.32	74	73.56	31.33	10.89	58.1	400	0	P	H
		4874	40.95	-13.05	54	56.83	31.33	10.89	58.1	400	0	A	H
		7311	48.44	-25.56	74	57.28	36.07	14.18	59.09	100	0	P	H
													H
		4874	50.75	-23.25	74	66.63	31.33	10.89	58.1	100	0	P	V
		7311	42.8	-31.2	74	51.64	36.07	14.18	59.09	100	0	P	V
													V
													V
802.11n HT40 CH 09 2452MHz		4904	55.38	-18.62	74	71.03	31.38	11.04	58.07	397	282	P	H
		4904	40.89	-13.11	54	56.54	31.38	11.04	58.07	397	282	A	H
		7356	43.26	-30.74	74	51.95	36.21	14.22	59.12	100	0	P	H
													H
		4904	50.14	-23.86	74	65.79	31.38	11.04	58.07	100	0	P	V
		7356	42.5	-31.5	74	51.19	36.21	14.22	59.12	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 802.11g (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+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz 802.11g LF		108.84	22.6	-20.9	43.5	36.61	16.99	1.43	32.43	-	-	P	H
		186.87	22.68	-20.82	43.5	38.09	15.3	1.7	32.41	-	-	P	H
		263.01	21.66	-24.34	46	32.33	19.38	2.25	32.3	-	-	P	H
		463.1	25.07	-20.93	46	31.05	23.33	3.08	32.39	-	-	P	H
		761.3	29.89	-16.11	46	30.55	27.65	3.97	32.28	-	-	P	H
		936.3	33.47	-12.53	46	30.2	29.92	4.6	31.25	145	321	P	H
													H
													H
													H
													H
													H
													H
		47.28	27.32	-12.68	40	42.8	16.2	0.78	32.46	-	-	P	V
		119.1	23.03	-20.47	43.5	36.48	17.55	1.43	32.43	-	-	P	V
		223.59	19.86	-26.14	46	34.12	16.28	1.83	32.37	-	-	P	V
		462.4	24.93	-21.07	46	30.91	23.33	3.08	32.39	-	-	P	V
		752.2	29.96	-16.04	46	30.68	27.61	3.97	32.3	-	-	P	V
		938.4	33.62	-12.38	46	30.29	29.97	4.6	31.24	157	231	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.	
1+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

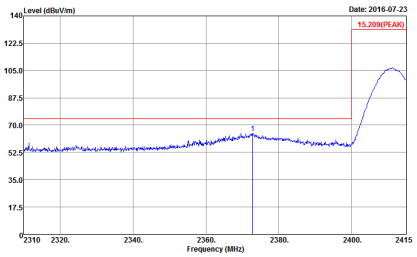
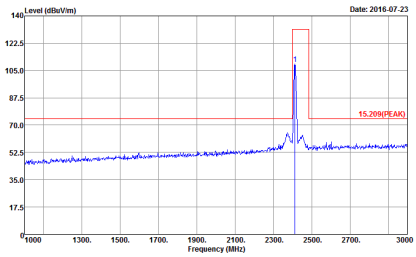
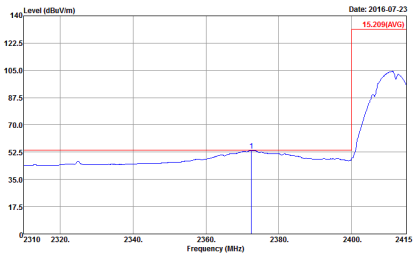
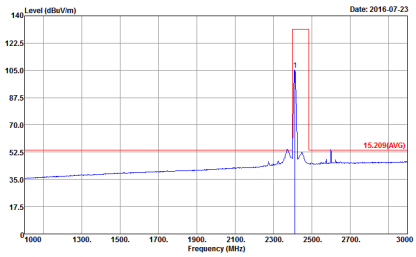
Test Engineer :	Peter Chiu, Nick Yu, Karl Hou and Ricky Su	**Temperature :**	21~22°C
		Relative Humidity :	49~52%

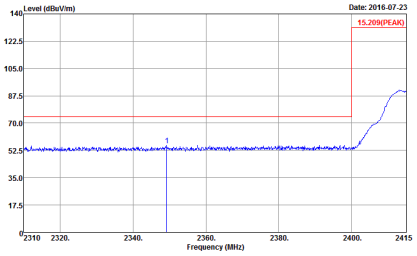
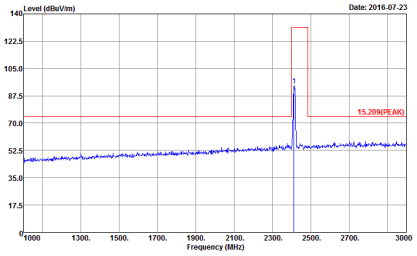
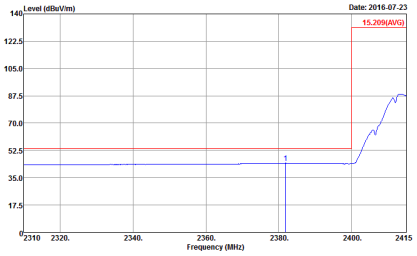
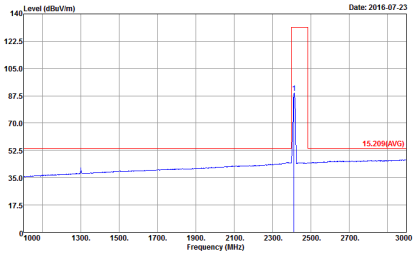
Note symbol

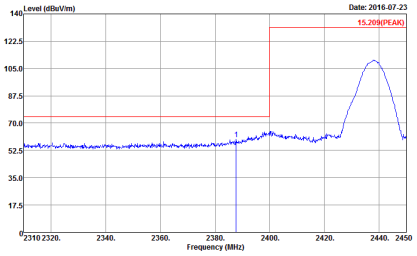
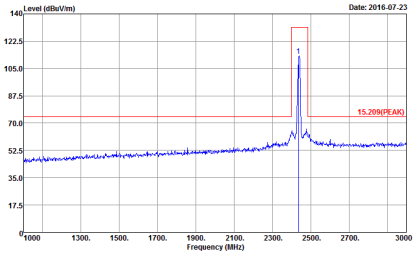
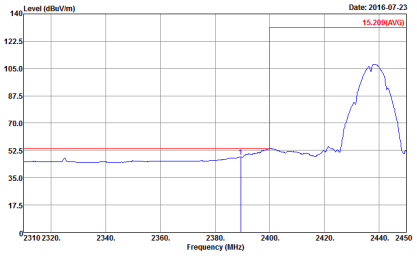
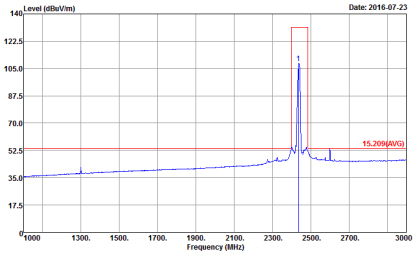
-L	**Low channel location**
-R	**High channel location**

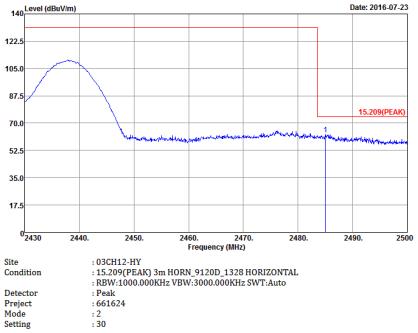
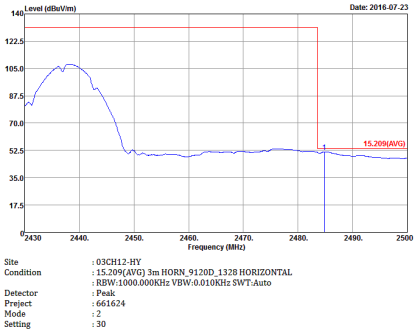
2.4GHz 2400~2483.5MHz

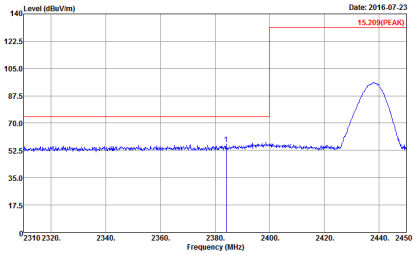
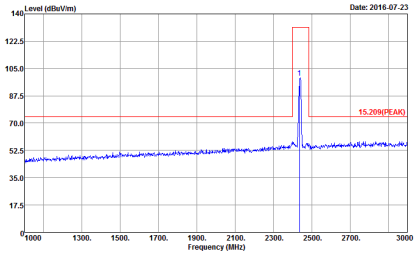
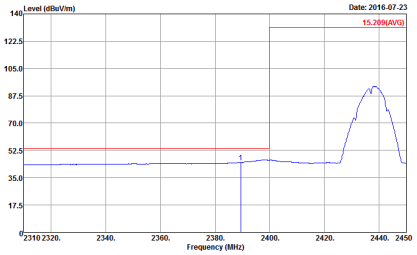
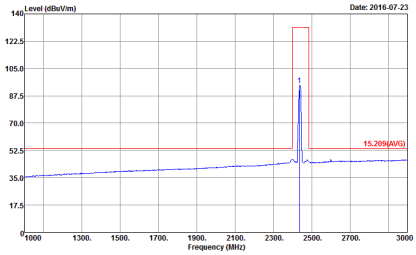
WIFI 802.11b (Band Edge @ 3m)

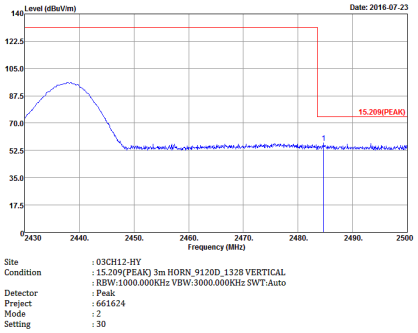
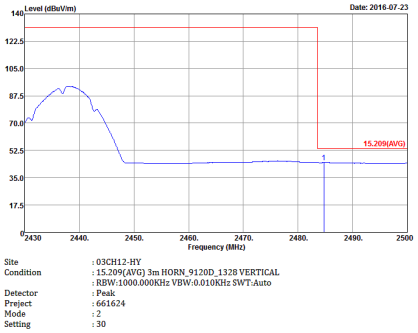
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 1 Setting : 26	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 1 Setting : 26
Avg.	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 1 Setting : 26	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 1 Setting : 26

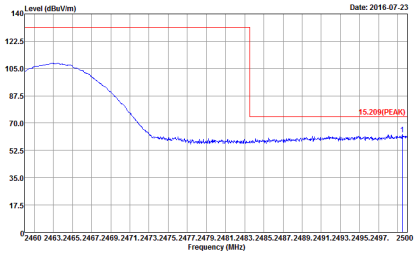
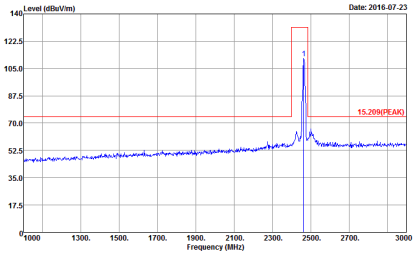
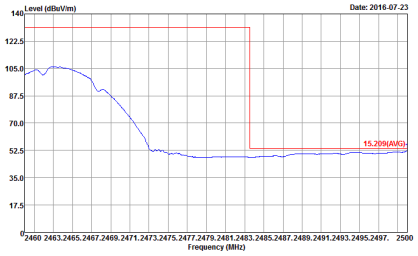
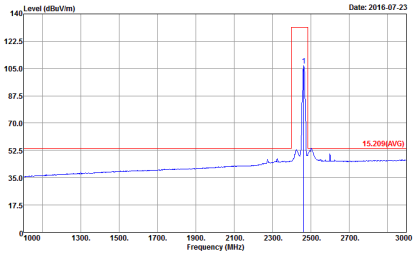
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 1 Setting : 26	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 1 Setting : 26
Avg.	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 1 Setting : 26	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 1 Setting : 26

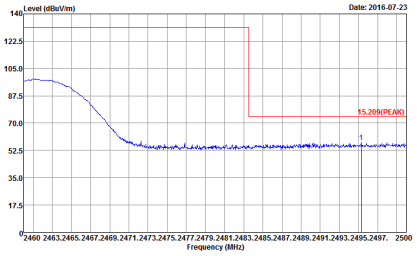
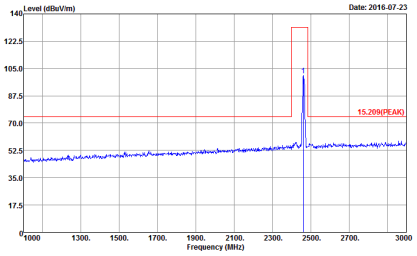
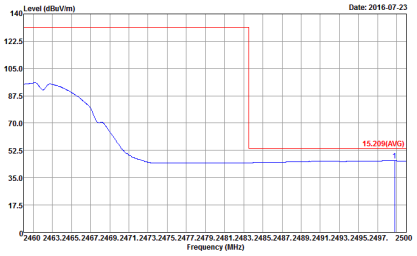
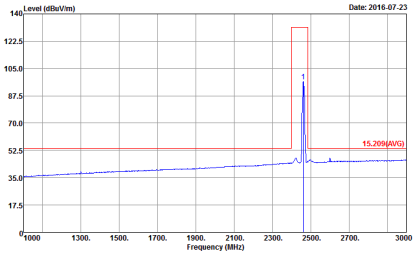
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 2 Setting : 30	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 2 Setting : 30
Avg.	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 2 Setting : 30	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 2 Setting : 30

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
1+2	Vertical	Fundamental
Peak	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 2 Setting : 30	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 2 Setting : 30
Avg.	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 2 Setting : 30	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 2 Setting : 30

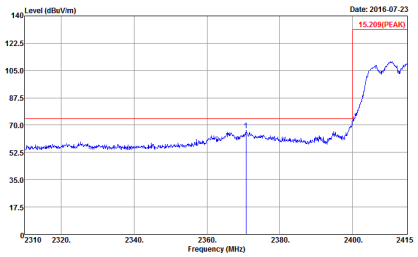
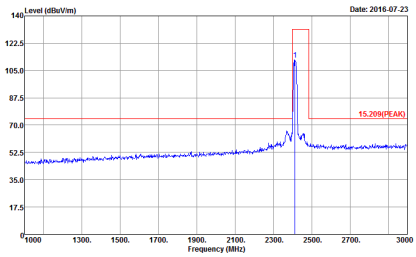
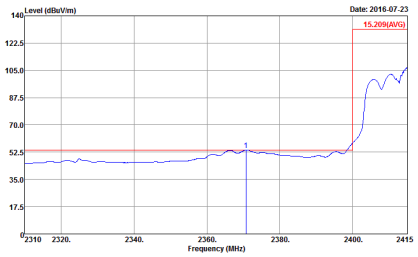
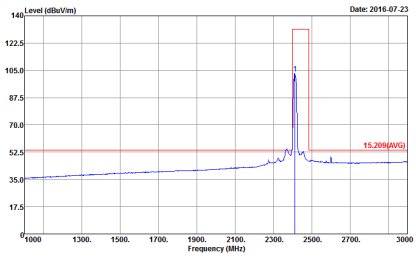
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

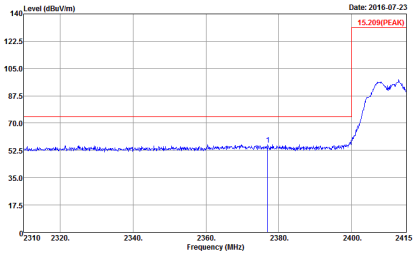
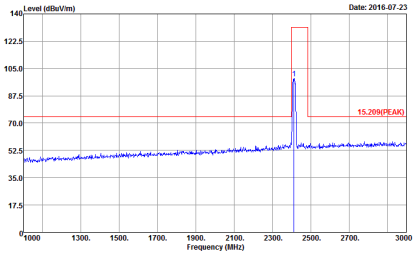
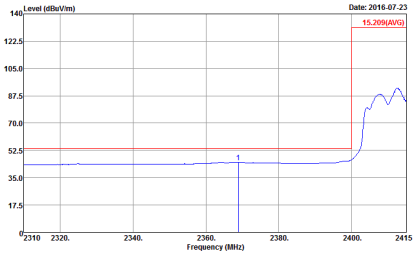
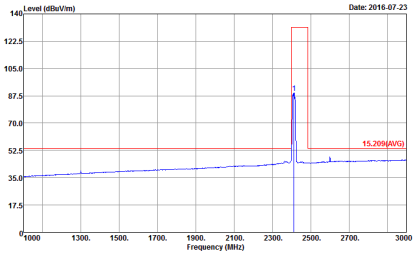
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 3 Setting : 28	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 3 Setting : 28
Avg.	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 3 Setting : 28	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 3 Setting : 28

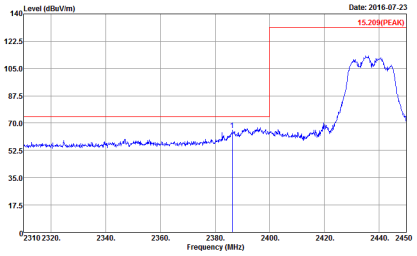
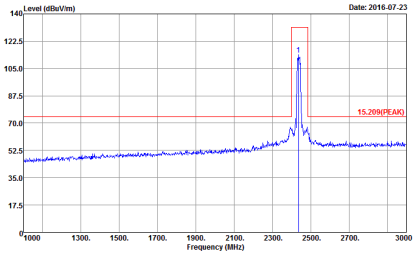
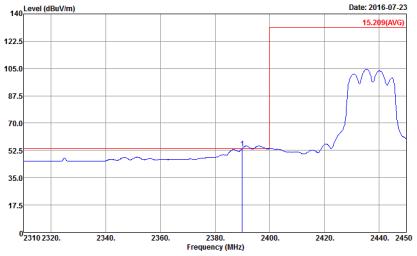
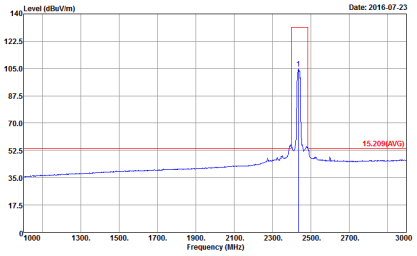
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 3 Setting : 2B	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 3 Setting : 2B
Avg.	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 3 Setting : 2B	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 3 Setting : 2B

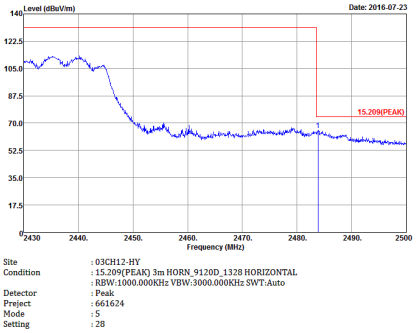
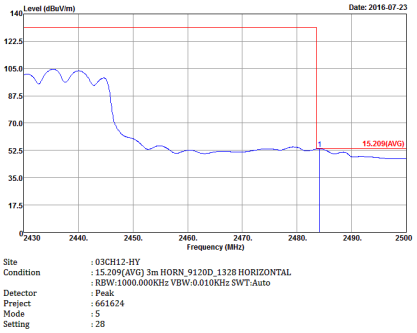
2.4GHz 2400~2483.5MHz

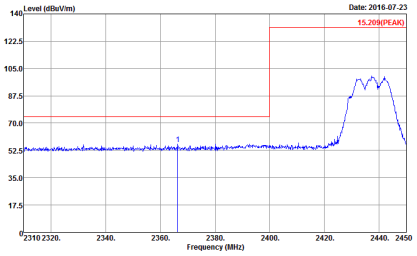
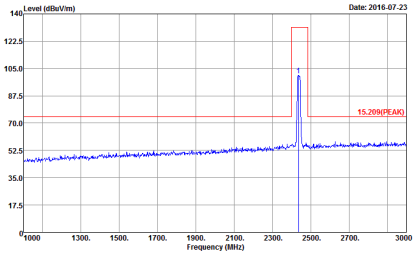
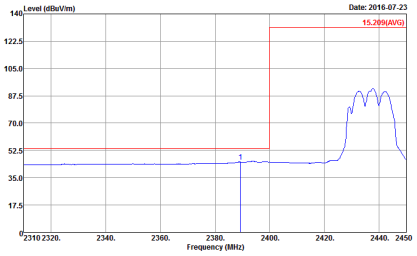
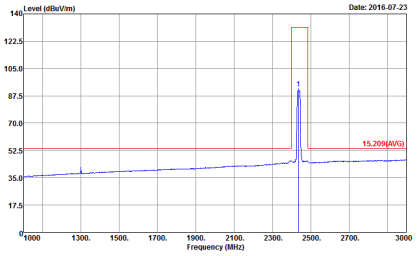
WIFI 802.11g (Band Edge @ 3m)

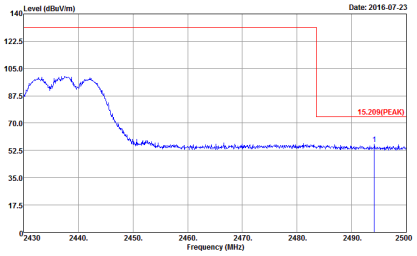
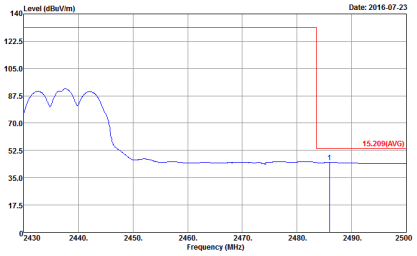
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 4 Setting : 26	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 4 Setting : 26
Avg.	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 4 Setting : 26	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 4 Setting : 26

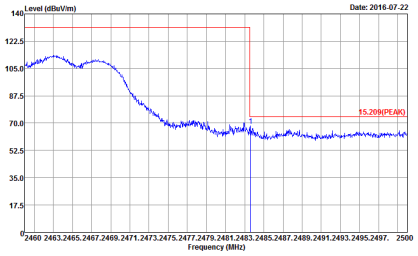
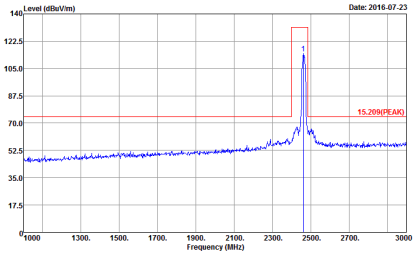
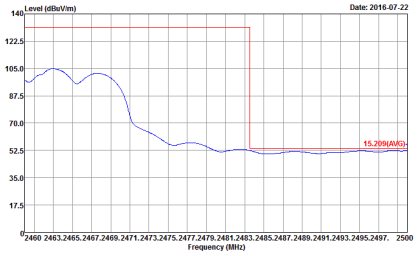
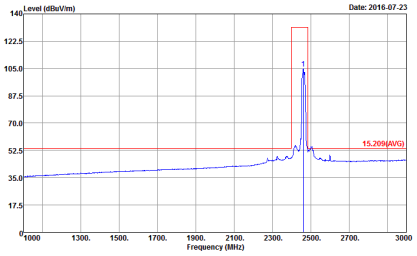
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 4 Setting : 26	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 4 Setting : 26
Avg.	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 4 Setting : 26	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 4 Setting : 26

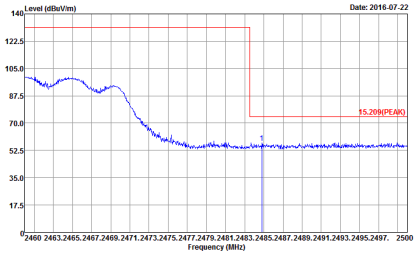
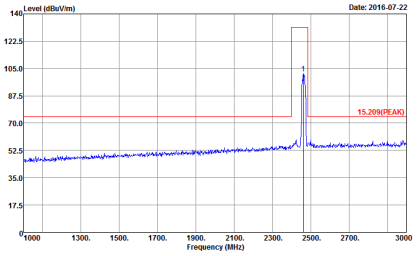
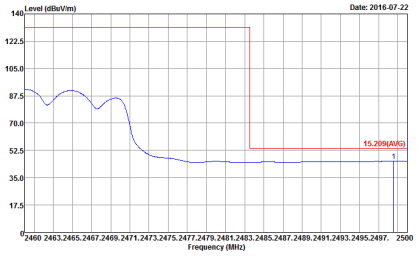
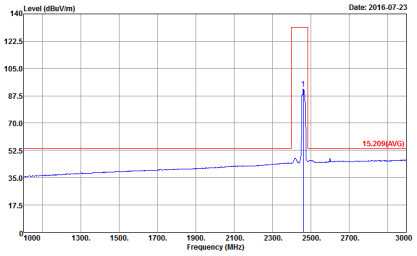
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 5 Setting : 28	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 5 Setting : 28
Avg.	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 5 Setting : 28	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 5 Setting : 28

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
1+2	Vertical	Fundamental
Peak	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 5 Setting : 28	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 5 Setting : 28
Avg.	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 5 Setting : 28	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 5 Setting : 28

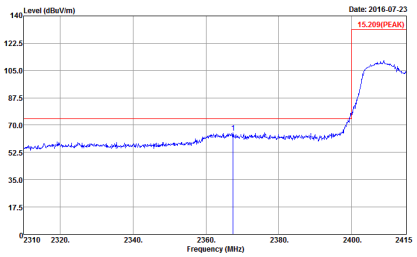
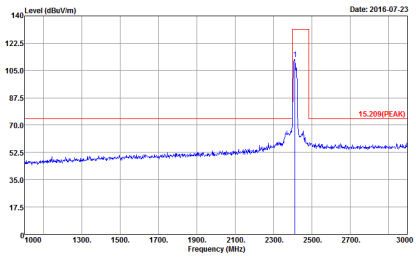
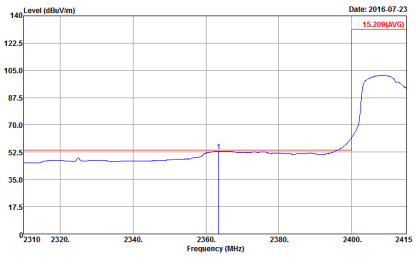
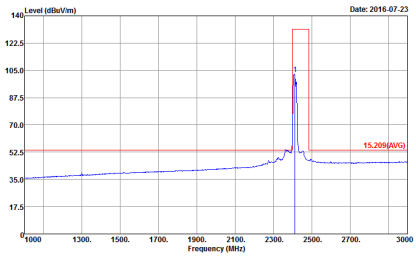
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
1+2	Vertical	Fundamental
Peak	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 5 Setting : 2B	Left Blank
Avg.	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 5 Setting : 2B	Left Blank

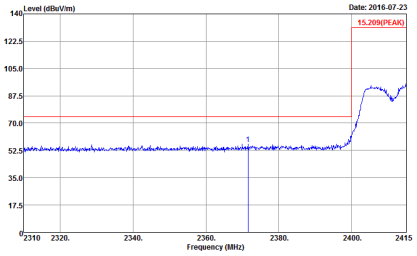
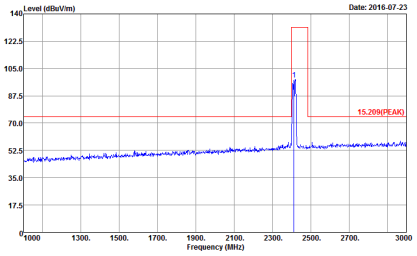
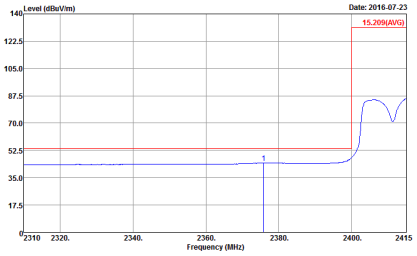
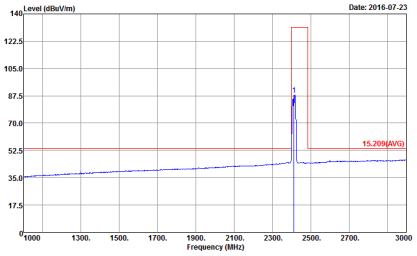
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 6 Setting : 2B	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 6 Setting : 2B
Avg.	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 6 Setting : 2B	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 6 Setting : 2B

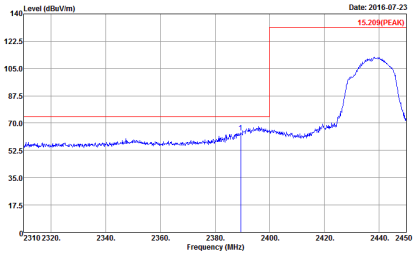
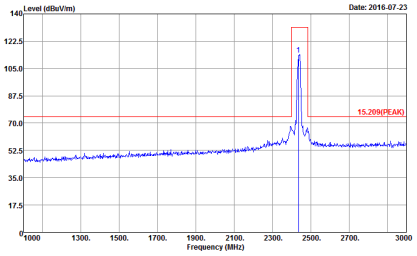
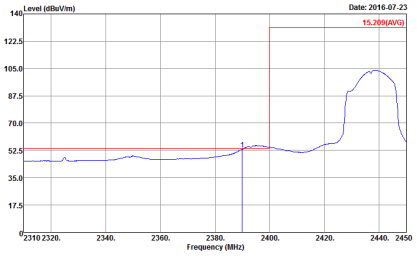
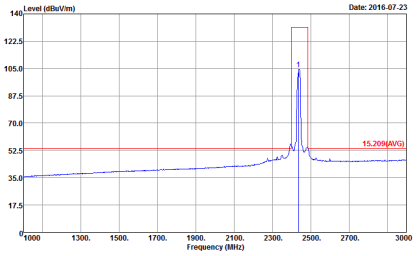
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 6 Setting : 2B	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 6 Setting : 2B
Avg.	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 6 Setting : 2B	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 6 Setting : 2B

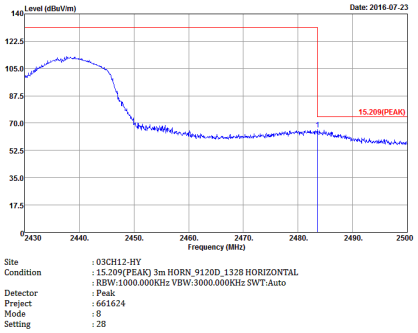
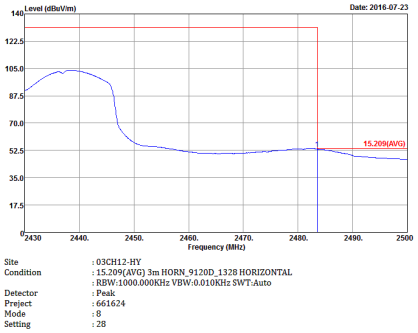
2.4GHz 2400~2483.5MHz

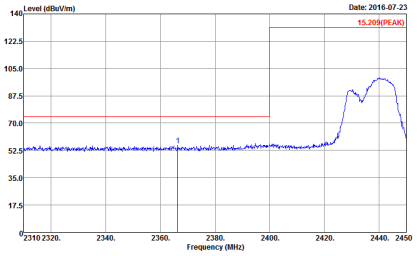
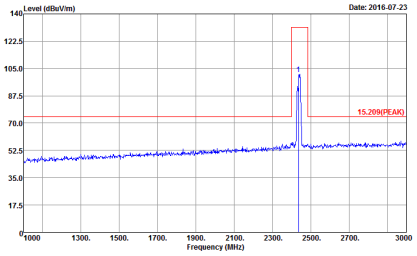
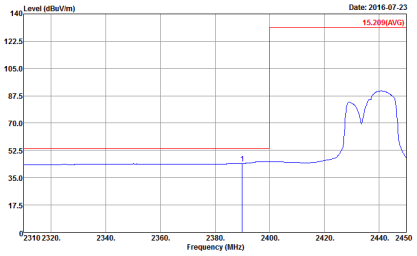
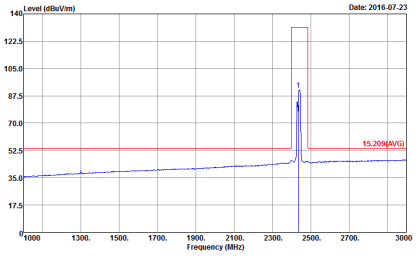
WIFI 802.11n HT20 (Band Edge @ 3m)

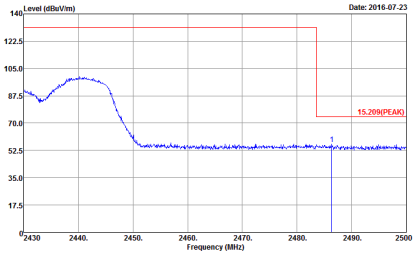
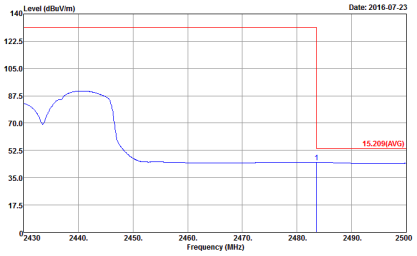
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 7 Setting : 28	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 7 Setting : 28
Avg.	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 7 Setting : 28	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 7 Setting : 28

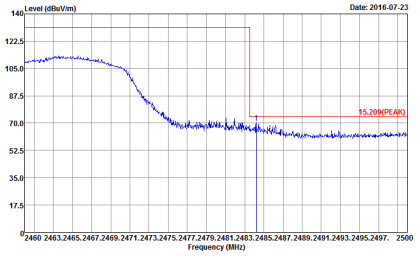
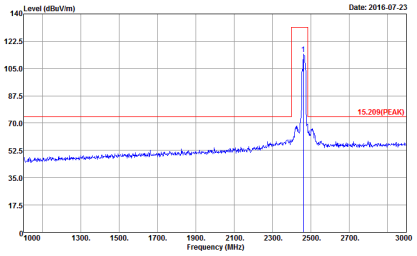
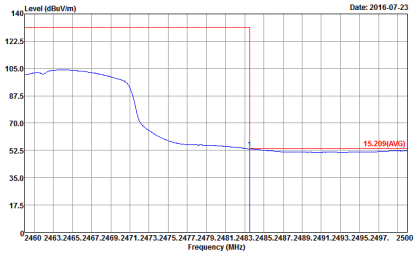
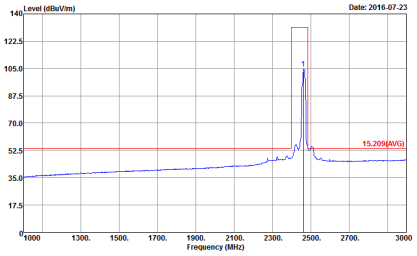
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 7 Setting : 28	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 7 Setting : 28
Avg.	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 7 Setting : 28	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 7 Setting : 28

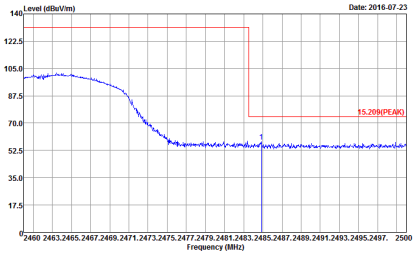
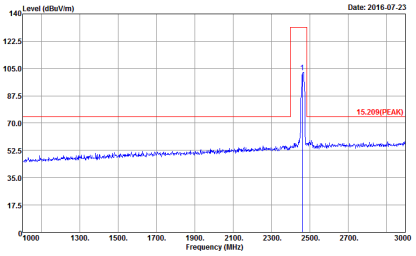
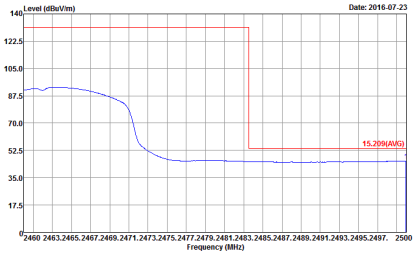
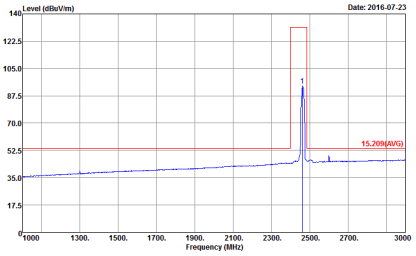
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - L	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 8 Setting : 28	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 8 Setting : 28
Avg.	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 8 Setting : 28	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 8 Setting : 28

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
1+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	
1+2	Vertical	Fundamental
Peak	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 8 Setting : 29	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 8 Setting : 29
Avg.	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 8 Setting : 29	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 8 Setting : 29

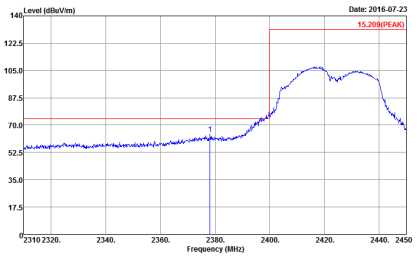
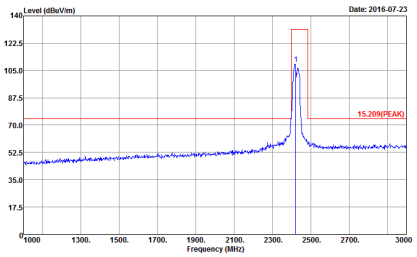
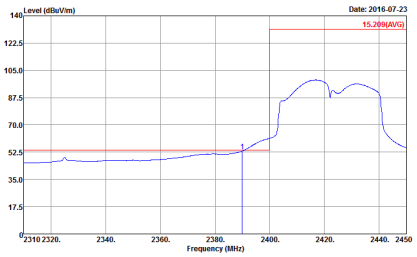
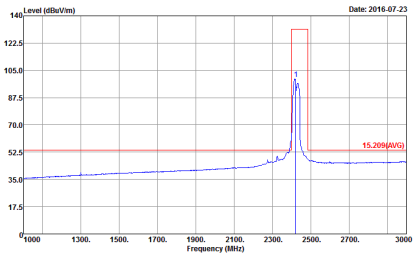
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
1+2	Vertical	Fundamental
Peak	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 8 Setting : 29	Left Blank
Avg.	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 8 Setting : 29	Left Blank

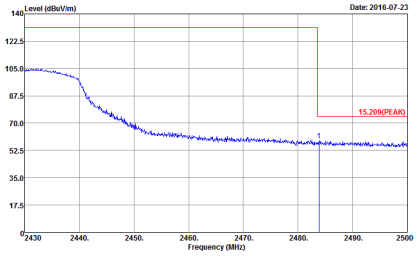
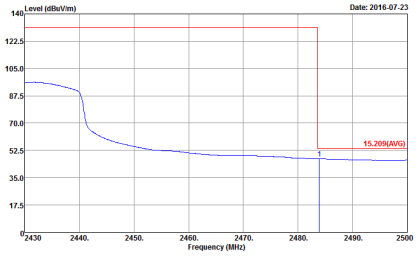
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 9 Setting : 29	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 9 Setting : 29
Avg.	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 9 Setting : 29	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 9 Setting : 29

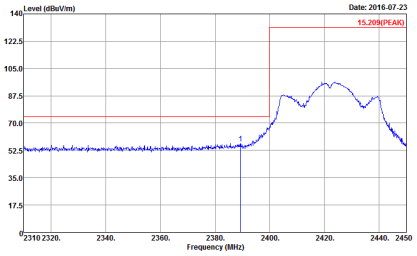
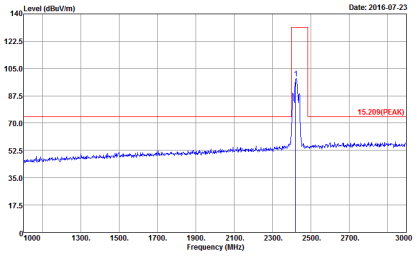
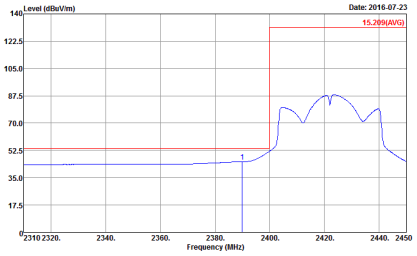
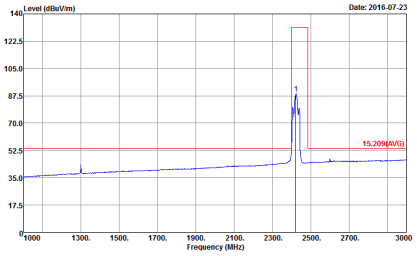
WIFI	2.4GHz 2400~2483.5MHz Fundamental @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 9 Setting : 29	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 9 Setting : 29
Avg.	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 9 Setting : 29	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 9 Setting : 29

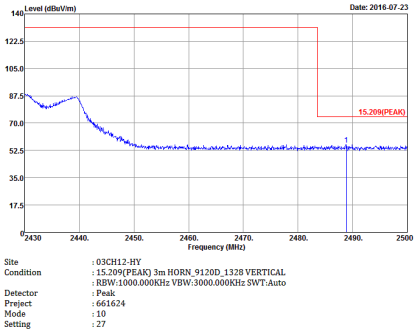
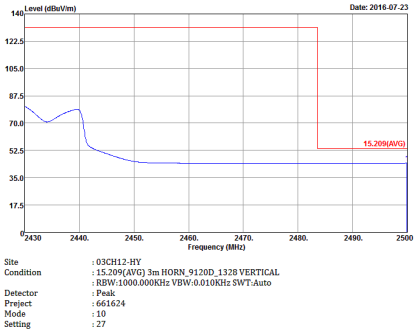
2.4GHz 2400~2483.5MHz

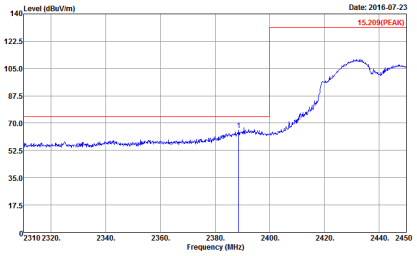
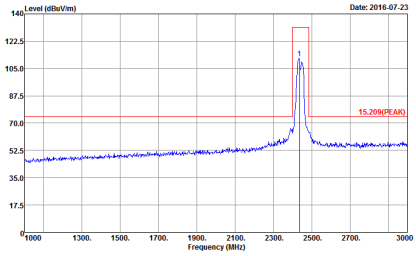
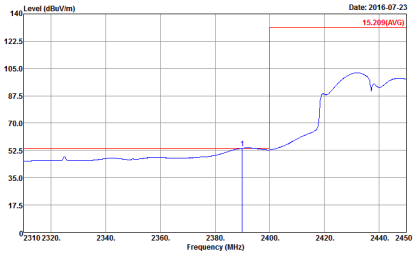
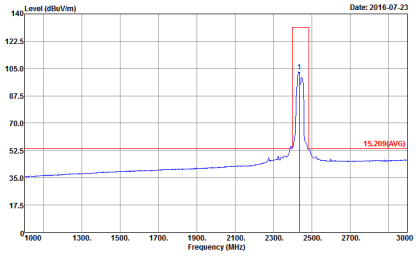
WIFI 802.11n HT40 (Band Edge @ 3m)

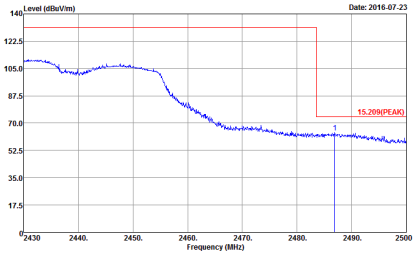
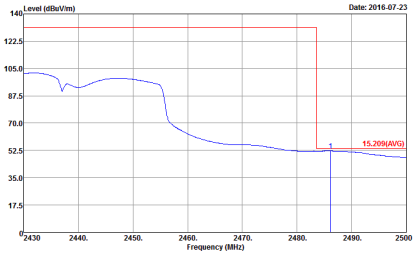
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - L	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 10 Setting : 27	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 10 Setting : 27
Avg.	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 10 Setting : 27	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 10 Setting : 27

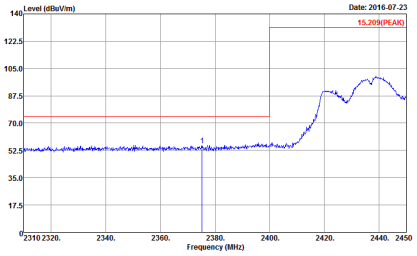
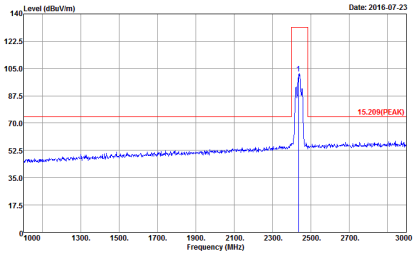
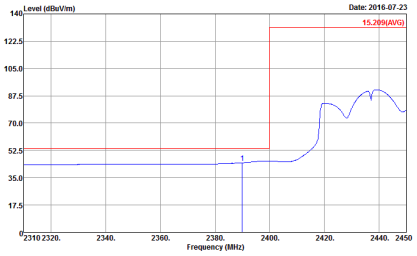
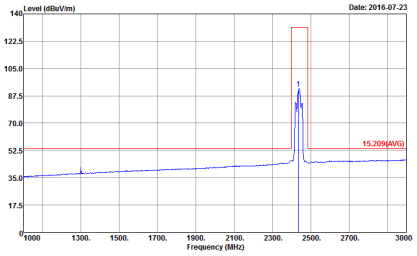
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - R	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 10 Setting : 27	Left Blank
Avg.	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 10 Setting : 27	Left Blank

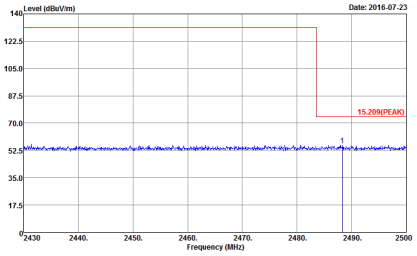
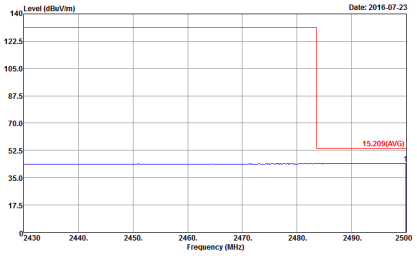
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - L	
1+2	Vertical	Fundamental
Peak	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 10 Setting : 27	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 10 Setting : 27
Avg.	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 10 Setting : 27	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 10 Setting : 27

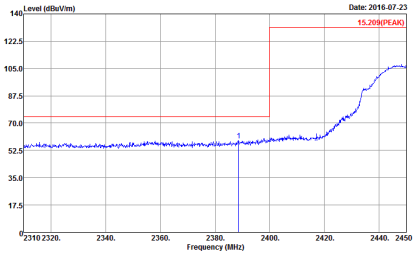
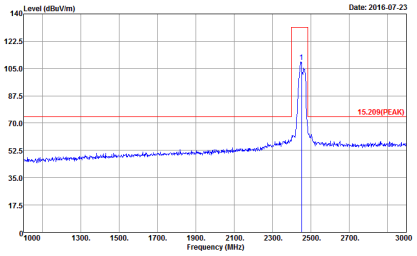
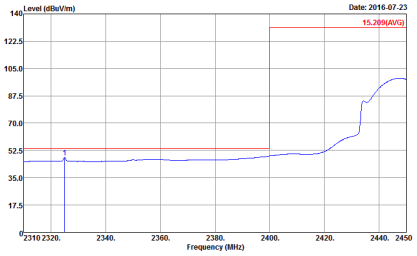
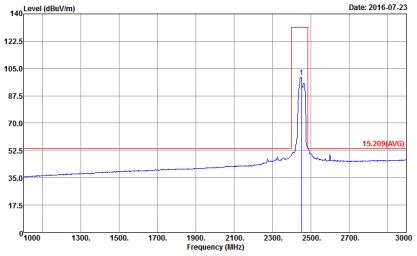
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

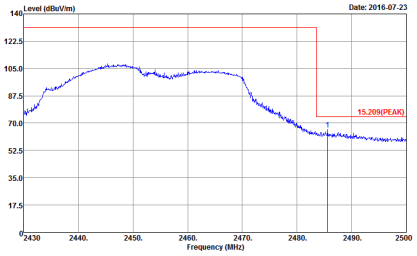
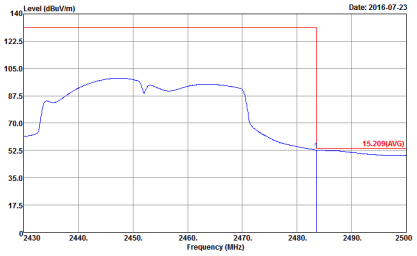
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH06 2437MHz - L	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 11 Setting : 30	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 11 Setting : 30
Avg.	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 11 Setting : 30	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 11 Setting : 30

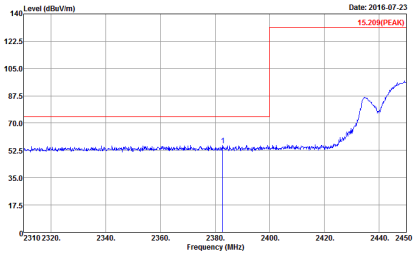
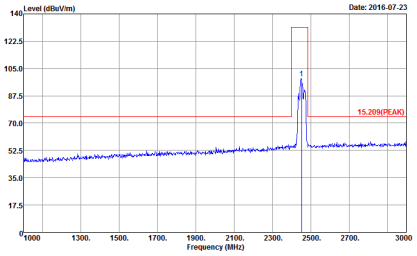
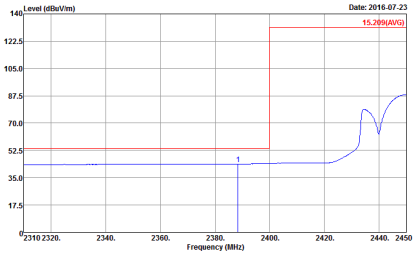
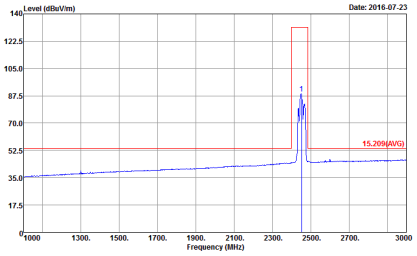
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH06 2437MHz - R	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 11 Setting : 30	Left blank
Avg.	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 11 Setting : 30	Left blank

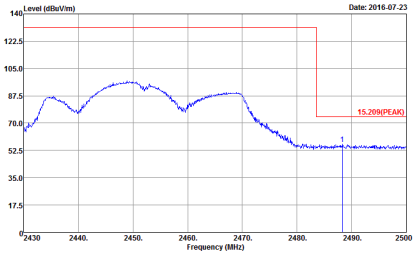
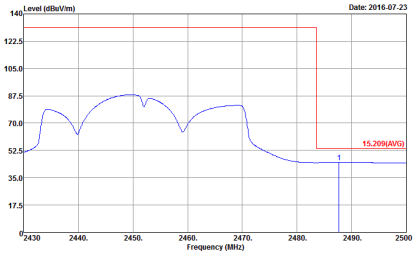
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH06 2437MHz - L	
1+2	Vertical	Fundamental
Peak	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 11 Setting : 30	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 11 Setting : 30
Avg.	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 11 Setting : 30	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 11 Setting : 30

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH06 2437MHz - R	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 11 Setting : 30	Left blank
Avg.	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 11 Setting : 30	Left blank

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - L	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 12 Setting : 27	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 12 Setting : 27
Avg.	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 12 Setting : 27	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 12 Setting : 27

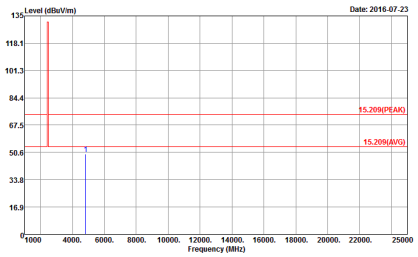
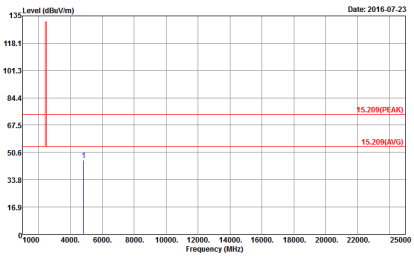
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - R	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 12 Setting : 27	Left blank
Avg.	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 12 Setting : 27	Left blank

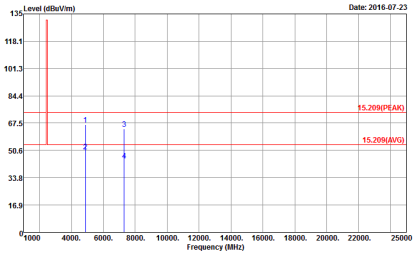
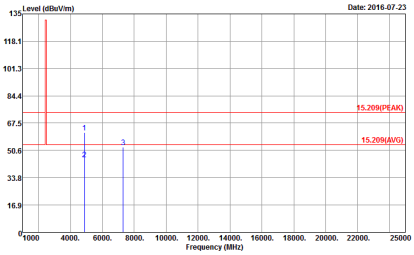
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - L	
1+2	Vertical	Fundamental
Peak	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 12 Setting : 27	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 12 Setting : 27
Avg.	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 12 Setting : 27	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 12 Setting : 27

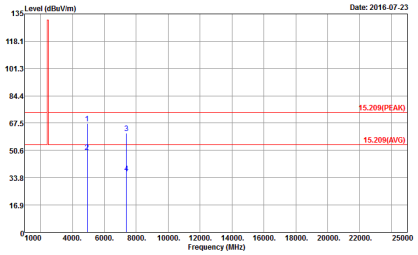
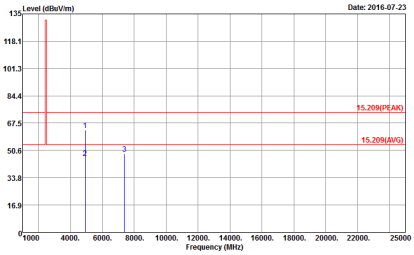
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - R	
1+2	Vertical	Fundamental
Peak	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 12 Setting : 27	Left blank
Avg.	 Site : 03CH12-HY Condition : 15.209(AVG) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Preject : 661624 Mode : 12 Setting : 27	Left blank

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Harmonic @ 3m)

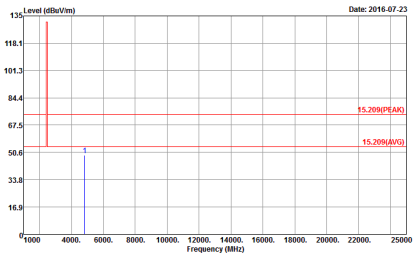
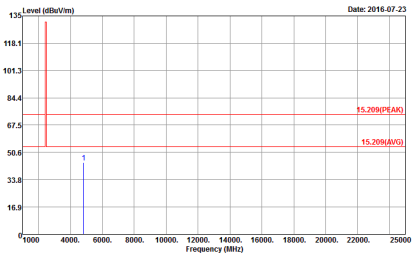
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH01 2412MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 HORIZONTAL Detector : Peak Preject : 661624 Mode : 1 Setting : 26	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 VERTICAL Detector : Peak Preject : 661624 Mode : 1 Setting : 26

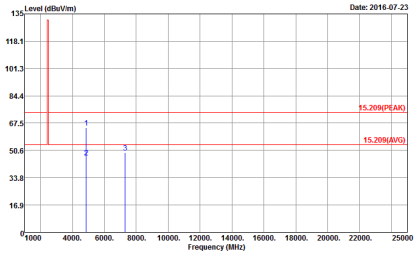
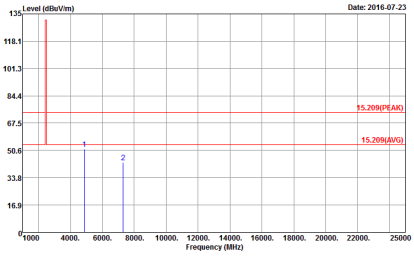
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH06 2437MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 HORIZONTAL Detector : Peak Preject : 661624 Mode : 2 Setting : 30	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 VERTICAL Detector : Peak Preject : 661624 Mode : 2 Setting : 30

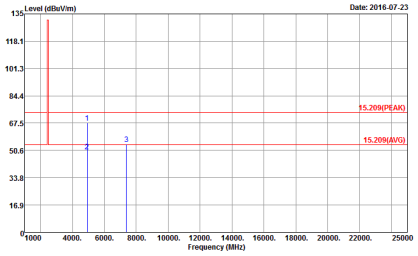
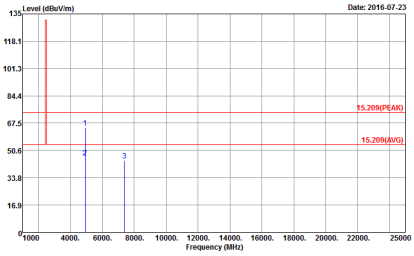
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH11 2462MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 HORIZONTAL Detector : Peak Preject : 661624 Mode : 3 Setting : 28	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 VERTICAL Detector : Peak Preject : 661624 Mode : 3 Setting : 28

2.4GHz 2400~2483.5MHz

WIFI 802.11g (Harmonic @ 3m)

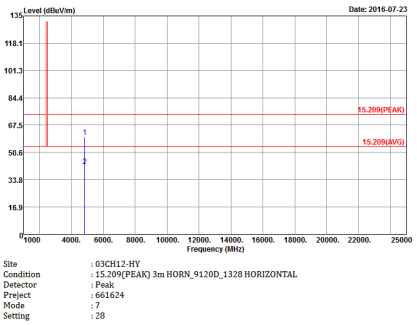
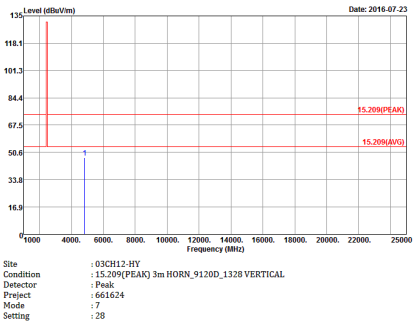
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH01 2412MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 HORIZONTAL Detector : Peak Preject : 661624 Mode : 4 Setting : 26	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 VERTICAL Detector : Peak Preject : 661624 Mode : 4 Setting : 26

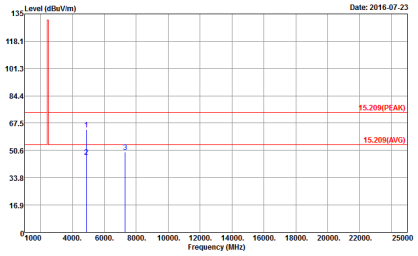
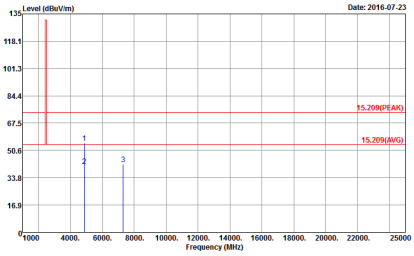
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH06 2437MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 HORIZONTAL Detector : Peak Preject : 661624 Mode : 5 Setting : 28	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 VERTICAL Detector : Peak Preject : 661624 Mode : 5 Setting : 28

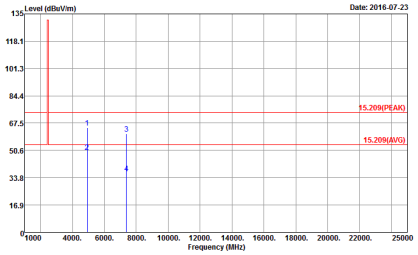
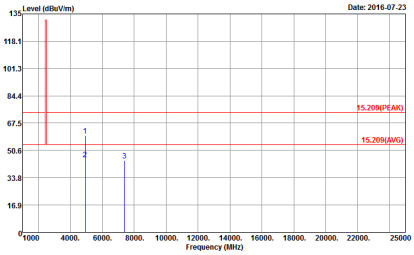
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH11 2462MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 HORIZONTAL Detector : Peak Preject : 661624 Mode : 6 Setting : 28	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 VERTICAL Detector : Peak Preject : 661624 Mode : 6 Setting : 28

2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

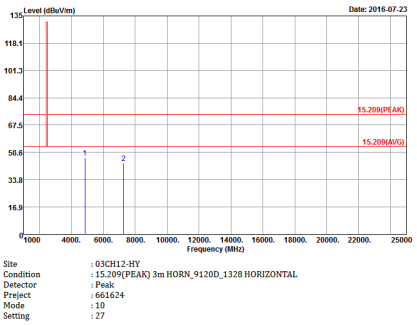
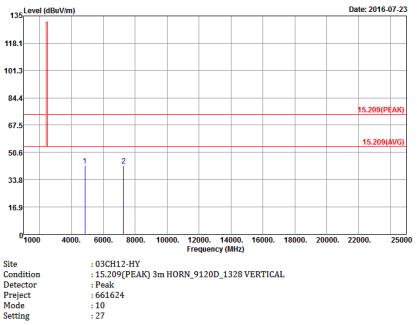
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1+2	Horizontal	Vertical
Peak Avg.		

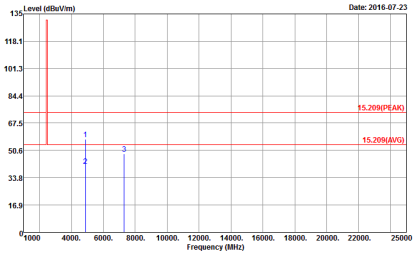
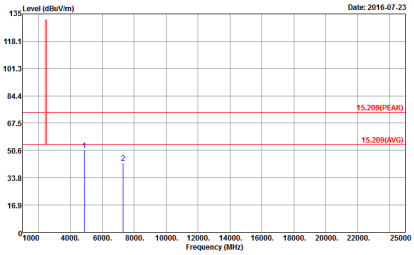
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH06 2437MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 HORIZONTAL Detector : Peak Preject : 661624 Mode : 8 Setting : 28	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 VERTICAL Detector : Peak Preject : 661624 Mode : 8 Setting : 28

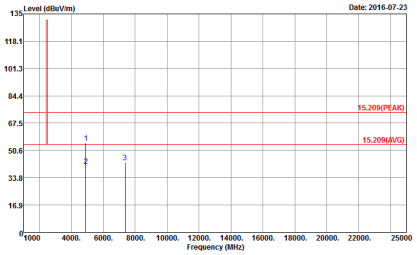
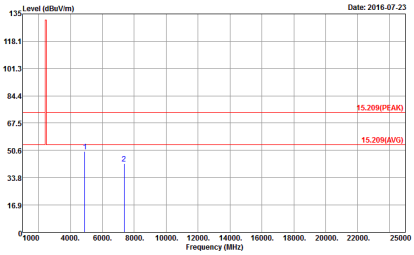
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 HORIZONTAL Detector : Peak Preject : 661624 Mode : 9 Setting : 29	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 VERTICAL Detector : Peak Preject : 661624 Mode : 9 Setting : 29

2.4GHz 2400~2483.5MHz

WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT40 CH03 2422MHz	
1+2	Horizontal	Vertical
Peak Avg.		

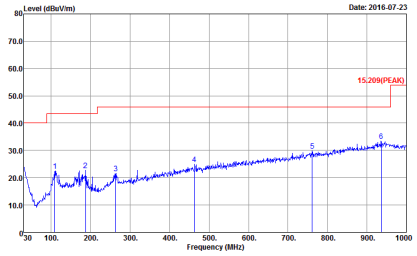
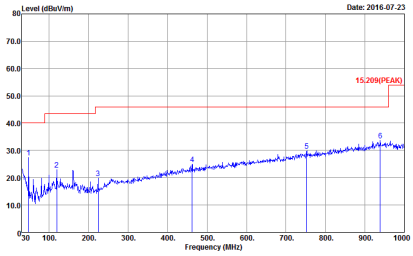
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT40 CH06 2437MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 HORIZONTAL Detector : Peak Preject : 661624 Mode : 11 Setting : 30	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 VERTICAL Detector : Peak Preject : 661624 Mode : 11 Setting : 30

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT40 CH09 2452MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 HORIZONTAL Detector : Peak Preject : 661624 Mode : 12 Setting : 27	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m HORN_9120D_1328 VERTICAL Detector : Peak Preject : 661624 Mode : 12 Setting : 27

2.4GHz 2400~2483.5MHz

Emission below 1GHz

2.4GHz WIFI 802.11g (LF)

WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11g LF	
1+2	Horizontal	Vertical
QP / Peak	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m BILOG_6111D_37059 HORIZONTAL Detector : Peak Preject : 661624 Mode : 6 Setting : 28	 Site : 03CH12-HY Condition : 15.209(PEAK) 3m BILOG_6111D_37059 VERTICAL Detector : Peak Preject : 661624 Mode : 6 Setting : 28

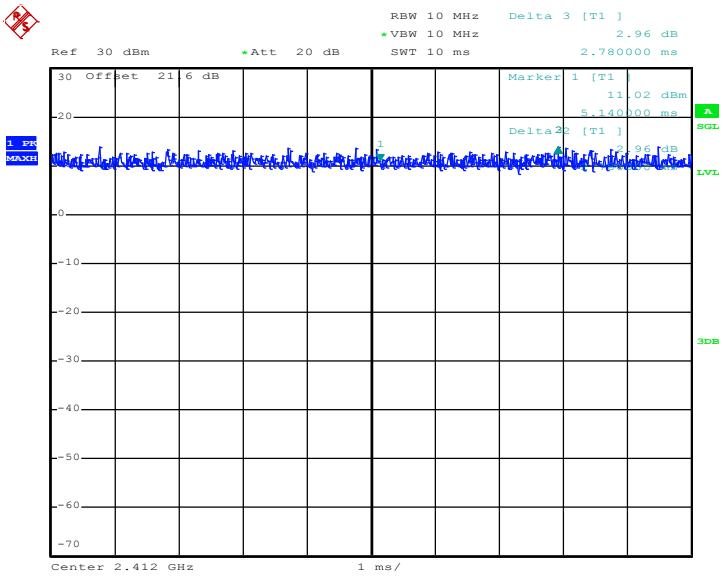
Appendix D. Duty Cycle Plots

Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
MIMO Ant. 1	802.11b	100.00	-	-	10Hz
MIMO Ant. 2	802.11b	100.00	-	-	10Hz
MIMO Ant. 1	802.11g	100.00	-	-	10Hz
MIMO Ant. 2	802.11g	100.00	-	-	10Hz
MIMO Ant. 1	2.4GHz 802.11n HT20	100.00	-	-	10Hz
MIMO Ant. 2	2.4GHz 802.11n HT20	100.00	-	-	10Hz
MIMO Ant. 1	2.4GHz 802.11n HT40	100.00	-	-	10Hz
MIMO Ant. 2	2.4GHz 802.11n HT40	100.00	-	-	10Hz

<PTP>

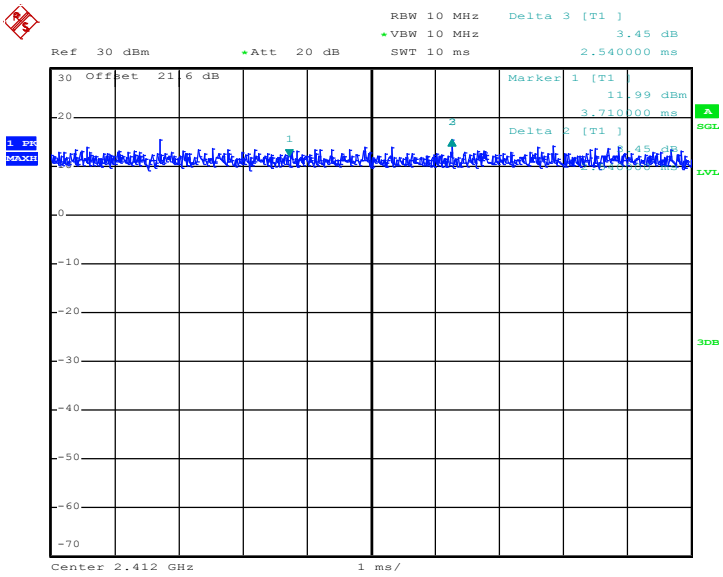
MIMO Ant. 1

802.11b



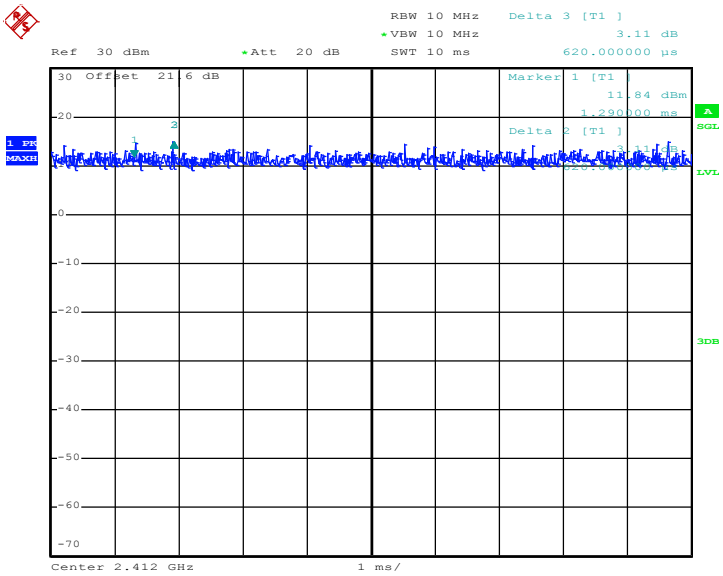
Date: 25.JUN.2016 15:57:20

802.11g



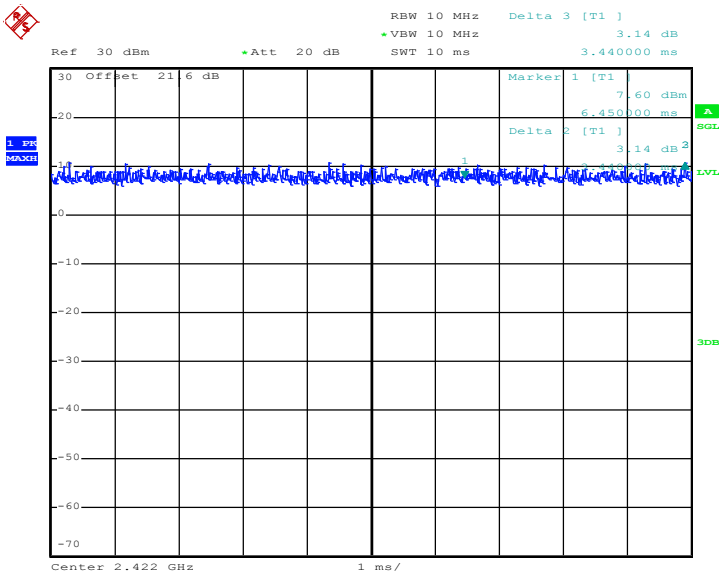
Date: 25.JUN.2016 16:08:17

802.11n HT20



Date: 25.JUN.2016 16:47:07

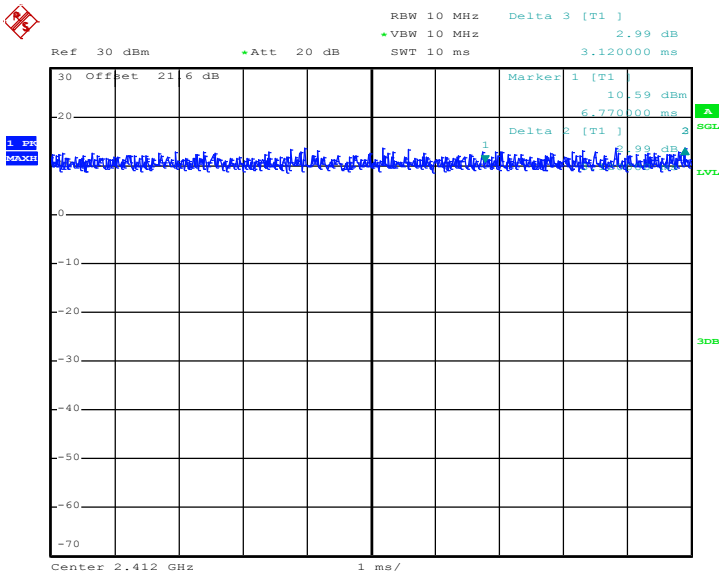
802.11n HT40



Date: 25.JUN.2016 16:57:35

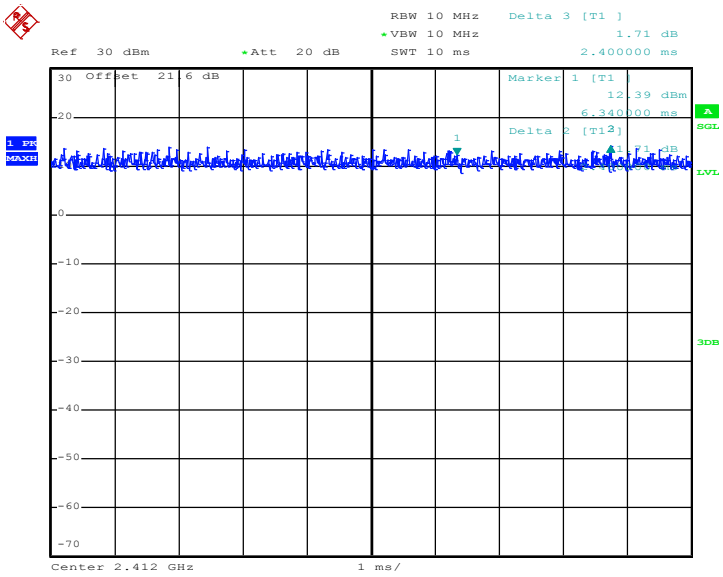
MIMO Ant. 2

802.11b



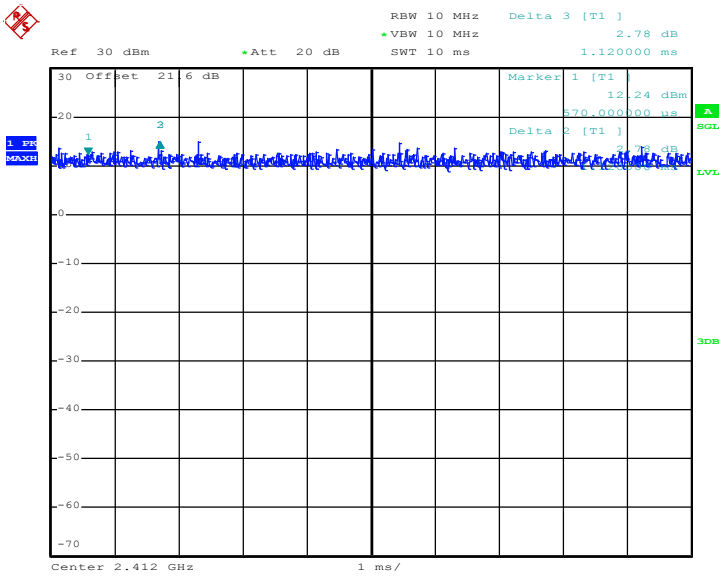
Date: 25.JUN.2016 15:58:08

802.11g



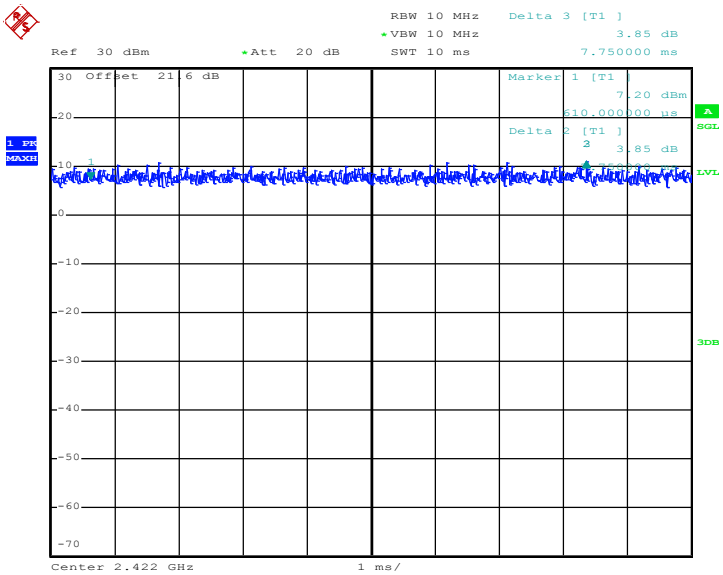
Date: 25.JUN.2016 16:13:17

802.11n HT20



Date: 25.JUN.2016 16:47:41

802.11n HT40

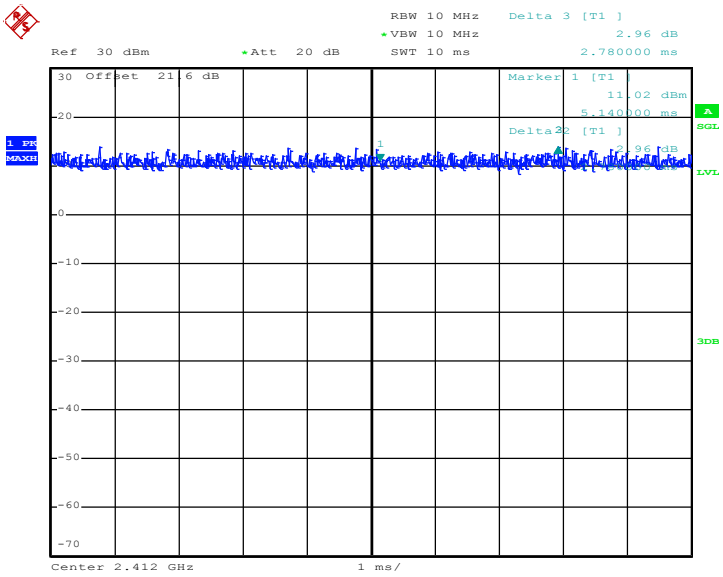


Date: 25.JUN.2016 16:58:13

<PTMP>

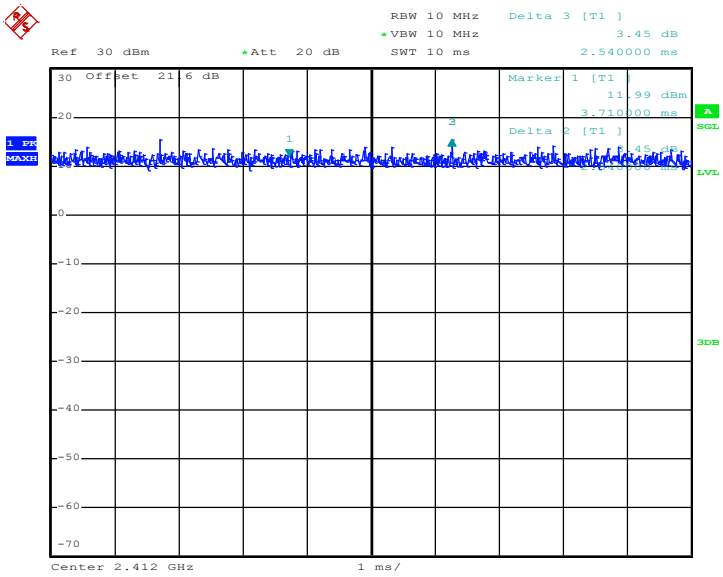
MIMO Ant. 1

802.11b



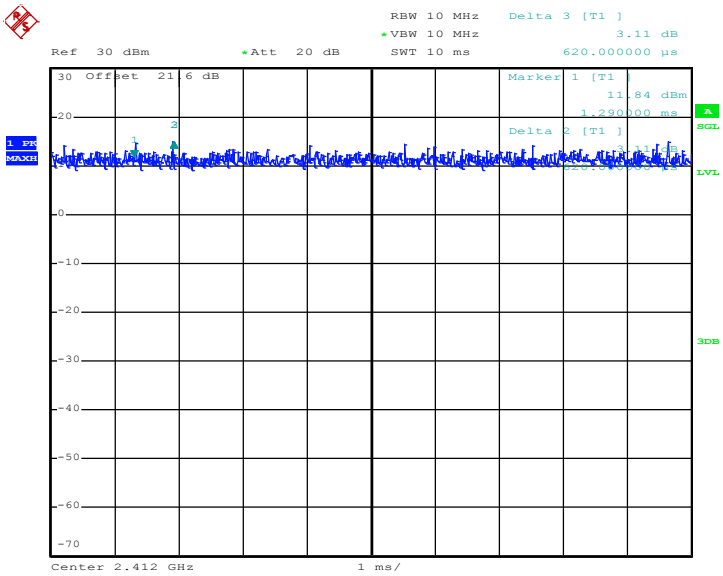
Date: 25.JUN.2016 15:57:20

802.11g



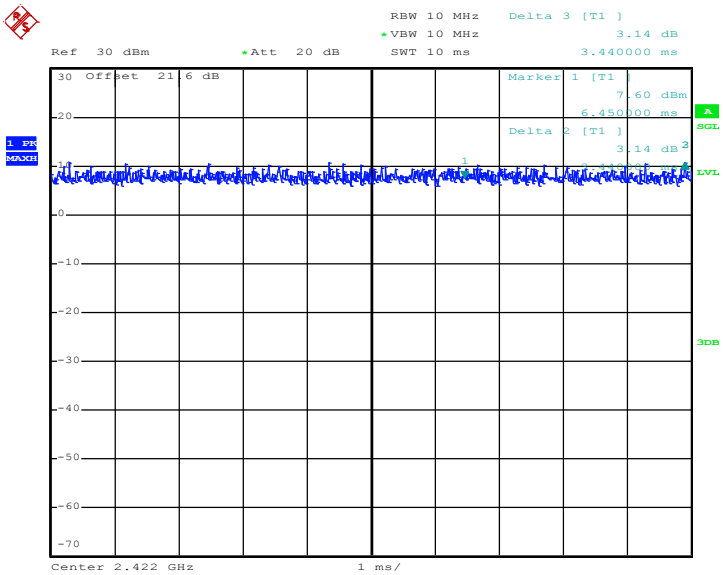
Date: 25.JUN.2016 16:08:17

802.11n HT20



Date: 25.JUN.2016 16:47:07

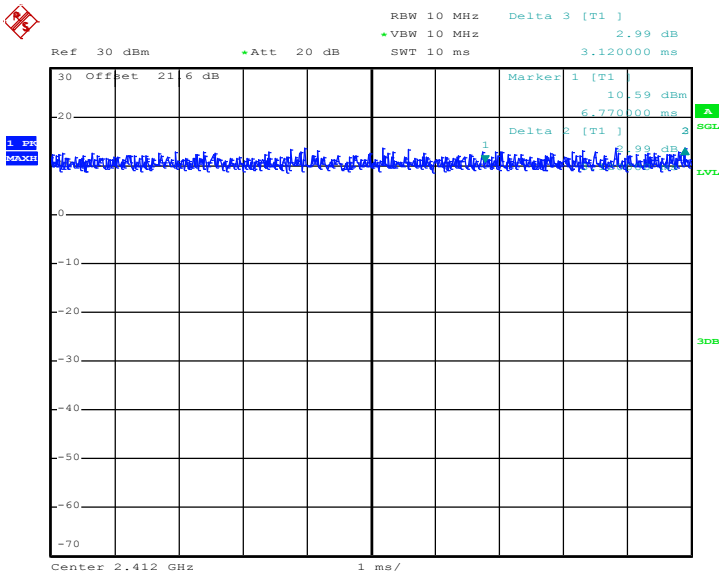
802.11n HT40



Date: 25.JUN.2016 16:57:35

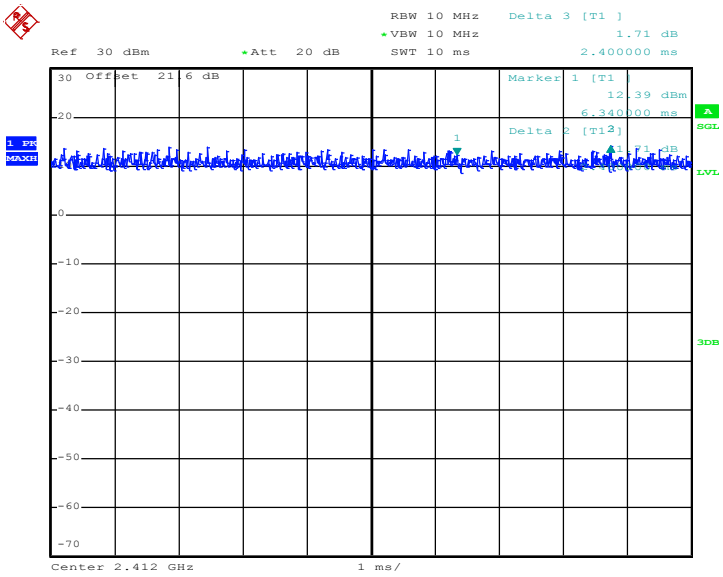
MIMO Ant. 2

802.11b



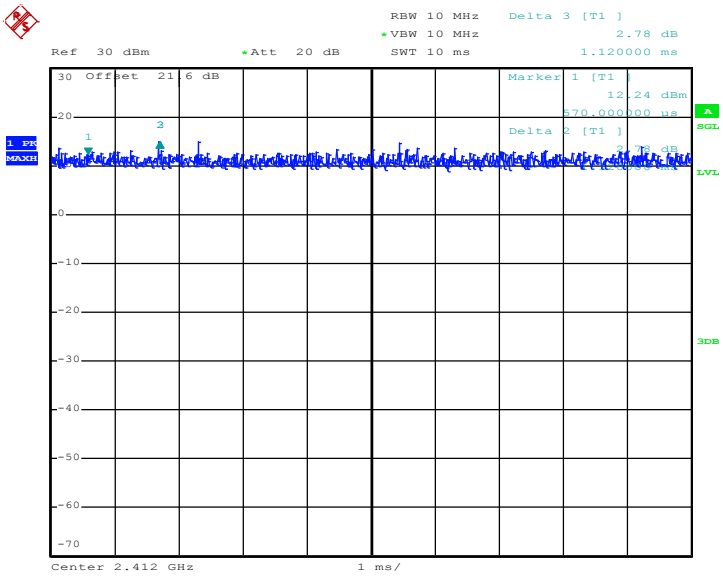
Date: 25.JUN.2016 15:58:08

802.11g



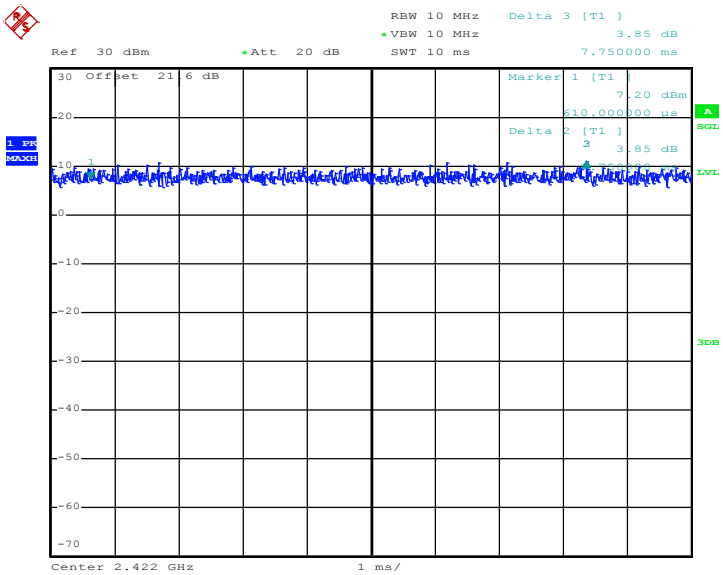
Date: 25.JUN.2016 16:13:17

802.11n HT20



Date: 25.JUN.2016 16:47:41

802.11n HT40



Date: 25.JUN.2016 16:58:13