

FCC RF Test Report

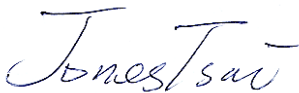
APPLICANT : Ubiquiti Networks, Inc.
EQUIPMENT : Access Point
BRAND NAME : UBIQUITI
MODEL NAME : PBE-2AC-400
FCC ID : SWX-PBE2AC
STANDARD : FCC Part 15 Subpart C §15.247
CLASSIFICATION : (DTS) Digital Transmission System

The product was received on Aug. 10, 2015 and testing was completed on Jan. 25, 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.

SPORTON INTERNATIONAL INC.

TEL : 886-3-327-3456

FAX : 886-3-328-4978

FCC ID : SWX-PBE2AC

Page Number : 1 of 66

Report Issued Date : Jan. 29, 2016

Report Version : Rev. 01

Report Template No.: BU5-FR15CWLAC MA Version 1.2



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 Pre-Scanned RF Power	9
2.3 Test Mode	10
2.4 Connection Diagram of Test System	11
2.5 Support Unit used in test configuration and system	12
2.6 EUT Operation Test Setup	12
2.7 Measurement Results Explanation Example	12
3 TEST RESULT	13
3.1 6dB and 99% Bandwidth Measurement	13
3.2 Peak Output Power Measurement	15
3.3 Power Spectral Density Measurement	16
3.4 Conducted Band Edges and Spurious Emission Measurement	19
3.5 Radiated Band Edges and Spurious Emission Measurement	56
3.6 AC Conducted Emission Measurement	60
3.7 Antenna Requirements	64
4 LIST OF MEASURING EQUIPMENT	65
5 UNCERTAINTY OF EVALUATION	66
APPENDIX A. CONDUCTED TEST RESULTS	
APPENDIX B. RADIATED SPURIOUS EMISSION	
APPENDIX C. RADIATED SPURIOUS EMISSION PLOTS	
APPENDIX D. SETUP PHOTOGRAPHS	



REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR581007	Rev. 01	Initial issue of report	Jan. 29, 2016

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	15.247(a)(2)	6dB Bandwidth	$\geq 0.5\text{MHz}$	Pass	-
3.1	-	99% Bandwidth	-	Pass	-
3.2	15.247(b)	Power Output Measurement	$\leq 30\text{dBm}$	Pass	-
3.3	15.247(e)	Power Spectral Density	$\leq 8\text{dBm}/3\text{kHz}$	Pass	-
3.4	15.247(d)	Conducted Band Edges	$\leq 20\text{dBc}$	Pass	-
		Conducted Spurious Emission		Pass	-
3.5	15.247(d)	Radiated Band Edges and Radiated Spurious Emission	15.209(a) & 15.247(d)	Pass	Under limit 0.13 dB at 2389.650 MHz
3.6	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 25.30 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	Access Point
Brand Name	UBIQUITI
Model Name	PBE-2AC-400
FCC ID	SWX-PBE2AC
Sample 1	EUT with Antenna 1 (Dish Antenna)
Sample 2	EUT with Antenna 2 (ISO Antenna)
EUT supports Radios application	WLAN 11ac VHT20 (10MHz) WLAN 11ac VHT20 WLAN 11ac VHT40
EUT Stage	Production Unit

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

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification									
Tx/Rx Channel Frequency Range		2412 MHz ~ 2462 MHz							
Maximum Output Power to antenna		<PTP> 802.11ac VHT20 (10MHz): 24.10 dBm (0.2570 W) 802.11ac VHT20: 25.83 dBm (0.3828 W) 802.11ac VHT40: 14.09 dBm (0.0256 W) <PTMP> 802.11ac VHT20 (10MHz): 17.62 dBm (0.0578 W) 802.11ac VHT20: 17.69 dBm (0.0587 W) 802.11ac VHT40: 14.09 dBm (0.0256 W)							
99% Occupied Bandwidth		<PTP> 802.11ac VHT20 (10MHz): 10.30MHz 802.11ac VHT20: 18.65MHz 802.11ac VHT40: 37.20MHz <PTMP> 802.11ac VHT20 (10MHz): 10.33MHz 802.11ac VHT20: 18.65MHz 802.11ac VHT40: 37.20MHz							
Antenna Type		<Ant. Port 1> 802.11ac : Dish Antenna type with gain 18.00 dBi <Ant. Port 2> 802.11ac : Dish Antenna type with gain 18.00 dBi							
Type of Modulation		OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)							
Antenna Function for Transmitter		<table><tr><td></td><td>Ant. Port 1</td><td>Ant. Port 2</td></tr><tr><td>802.11ac MIMO</td><td>V</td><td>V</td></tr></table>			Ant. Port 1	Ant. Port 2	802.11ac MIMO	V	V
	Ant. Port 1	Ant. Port 2							
802.11ac MIMO	V	V							

1.5 Modification of EUT

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

1.6 Testing Location

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

Test Site	SPORTON INTERNATIONAL INC.		
Test Site Location	No. 52, Hwa Ya 1 st Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C. TEL: +886-3-327-3456 FAX: +886-3-328-4978		
Test Site No.	Sporton Site No.		
	TH05-HY	CO05-HY	03CH07-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 v03r03
- ♦ FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ♦ FCC KDB 644545 D03 Guidance for IEEE 802 11ac New Rules v01
- ♦ 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).

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

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

2.1 Carrier Frequency and Channel

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

2.2 Pre-Scanned RF Power

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

<PTP>

MIMO <Ant. Port 1+2>

2.4GHz 802.11ac VHT20 (10MHz) mode									
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8
Peak Power (dBm)	24.10	23.95	23.96	23.71	23.87	23.75	23.51	23.66	23.68

2.4GHz 802.11ac VHT20 mode									
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8
Peak Power (dBm)	25.83	25.75	24.89	24.92	25.13	25.60	25.70	25.43	25.40

2.4GHz 802.11ac VHT40 mode										
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
Peak Power (dBm)	14.09	13.66	13.51	13.42	13.51	13.42	13.42	12.59	12.71	12.98

<PTMP>

MIMO <Ant. Port 1+2>

2.4GHz 802.11ac VHT20 (10MHz) mode									
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8
Peak Power (dBm)	17.62	17.53	17.57	17.45	17.44	17.05	17.48	17.27	17.12

2.4GHz 802.11ac VHT20 mode									
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8
Peak Power (dBm)	17.69	17.58	16.99	17.12	17.00	17.39	17.45	17.44	17.45

2.4GHz 802.11ac VHT40 mode										
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
Peak Power (dBm)	14.09	13.66	13.51	13.42	13.51	13.42	13.42	12.59	12.71	12.98

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

2.3 Test Mode

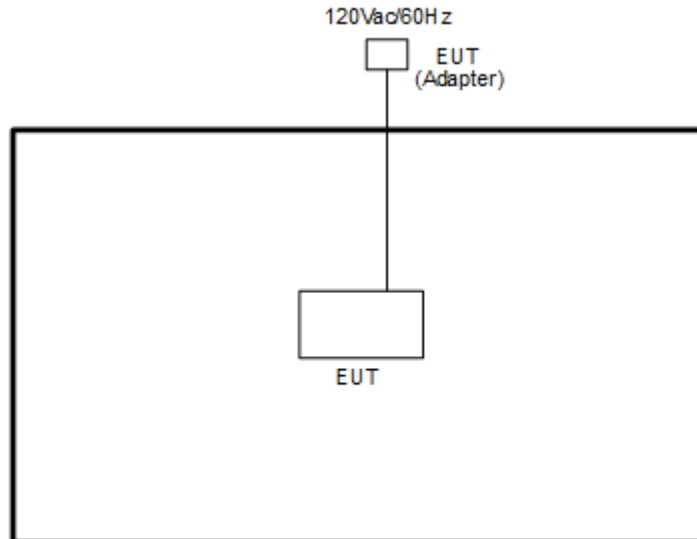
Final test mode of conducted test items and radiated spurious emissions are considering the modulation and worse data rates from the power table described in section 2.2.

Modulation	Data Rate
802.11ac VHT20 (10MHz)	MCS0
802.11ac VHT20	MCS0
802.11ac VHT40	MCS0

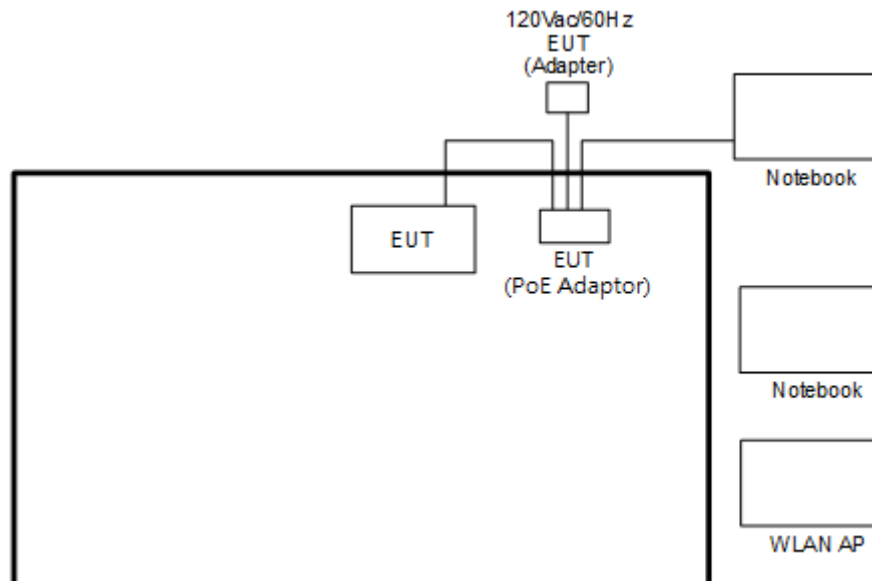
Test Cases	
AC Conducted Emission	Mode 1 : WLAN Idle + PoE + LAN Link for Sample 1

2.4 Connection Diagram of Test System

<WLAN Tx Mode>



<AC Conducted Emission Mode>



2.5 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	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
3.	WLAN AP	Ubiquiti	PBE-2AC-400	N/A	N/A	Unshielded, 0.5m

2.6 EUT Operation Test Setup

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

2.7 Measurement Results Explanation Example

For all conducted test items:

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

Example:

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

Offset = RF cable loss + attenuator factor.

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

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

= 4.2 + 10 = 14.2 (dB)

3 Test Result

3.1 6dB and 99% Bandwidth Measurement

3.1.1 Limit of 6dB and 99% Bandwidth

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

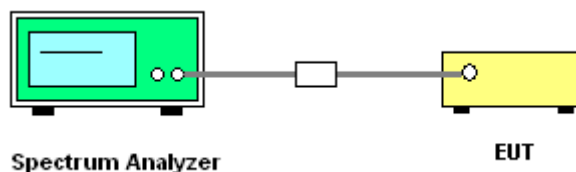
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 DTS D01 Meas. Guidance v03r03.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. Set the Video bandwidth (VBW) = 300 kHz. In order to make an accurate measurement. The 6 dB bandwidth must be greater than 500 kHz.
5. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) = 1MHz and set the Video bandwidth (VBW) = 3MHz.
6. Measure and record the results in the test report.

3.1.4 Test Setup

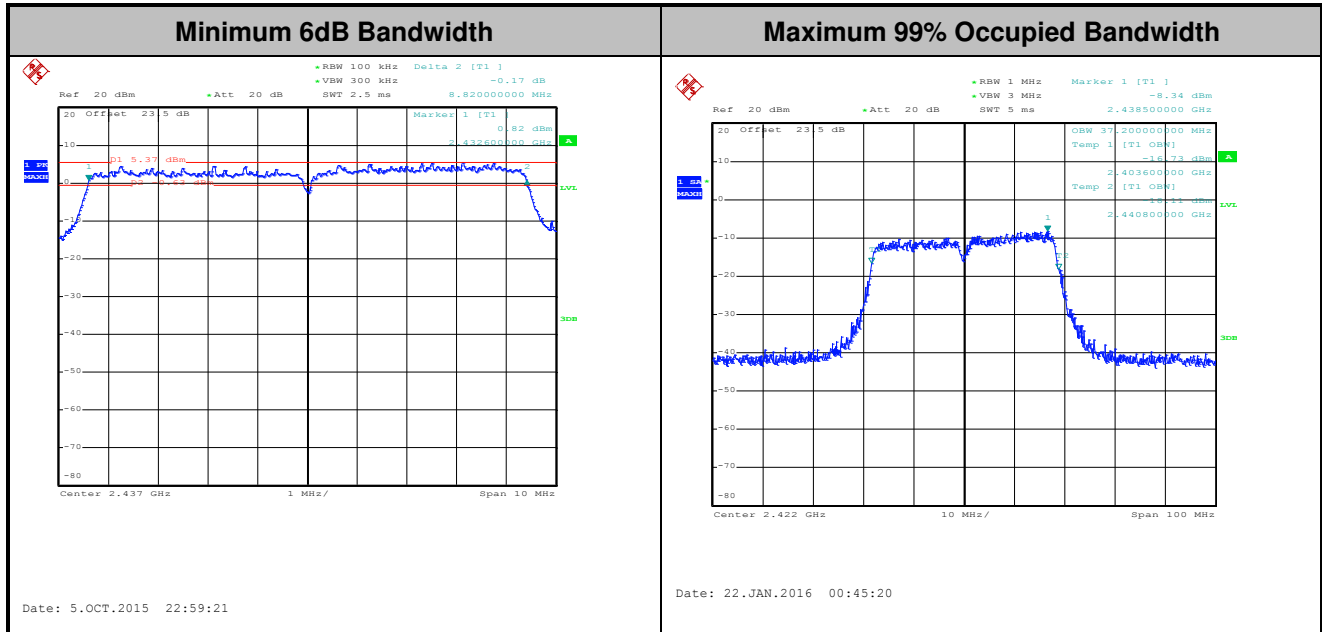




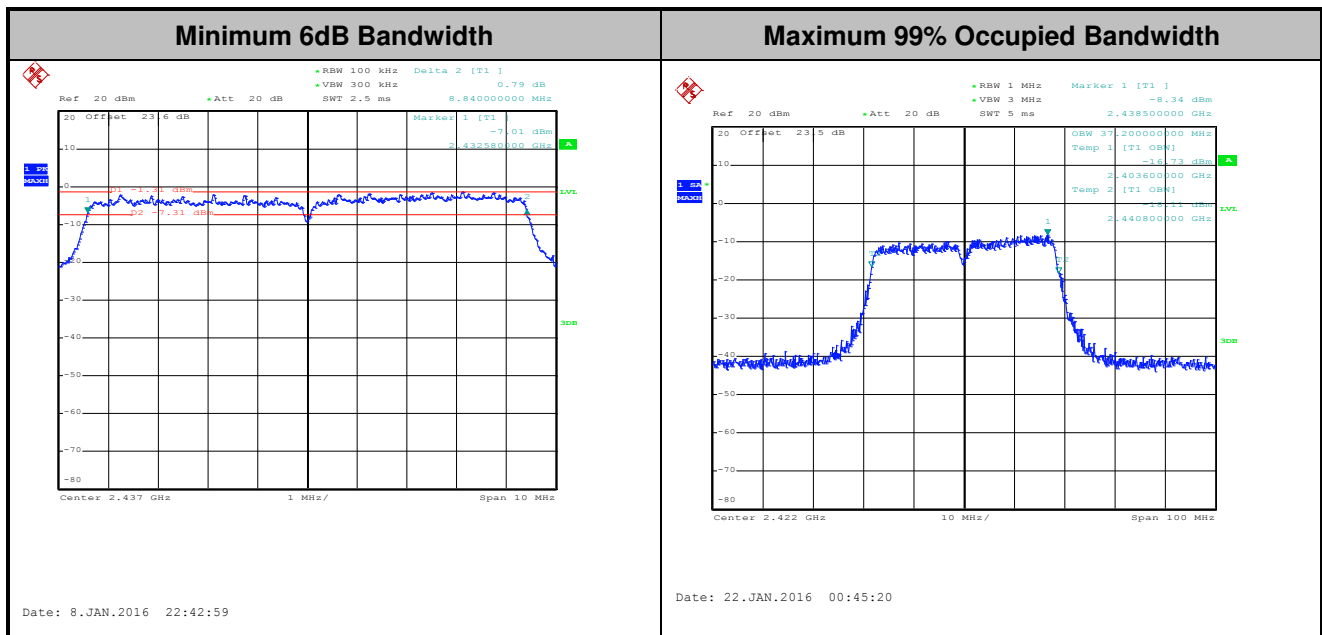
3.1.5 Test Result of 6dB and 99% Occupied Bandwidth

Please refer to Appendix A of this report.

<PTP>



<PTMP>



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 and of point-to-multi-point operation, the limit has to be reduced by 1dB for every 1dB that the directional gain of the antenna exceeds 6dBi.

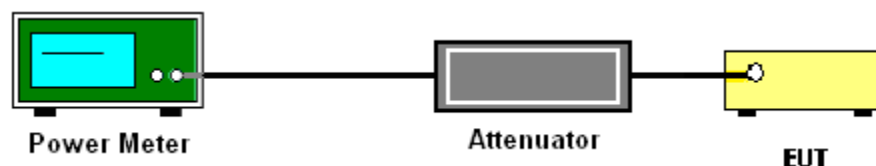
3.2.2 Measuring Instruments

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 v03r03 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 report.

3.2.6 Test Result of Average output Power (Reporting Only)

Please refer to Appendix A of this 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 v03r03
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 3 kHz. Video bandwidth VBW = 10 kHz In order to make an accurate measurement, set the span to 1.5 times DTS Channel Bandwidth. (6dB BW)
5. Detector = peak, Sweep time = auto couple, Trace mode = max hold, Allow trace to fully stabilize. Use the peak marker function to determine the maximum power level.
6. Measure and record the results in the test report.
7. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

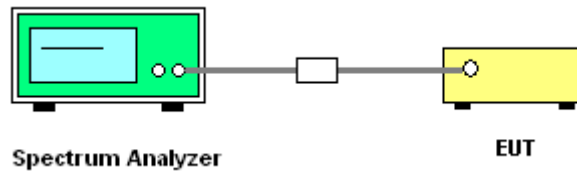
If measurements performed using method (2) plus $10 \log(N)$ exceeds the emission limit, the test should choose method (1) before declaring that the device fails the emission limit.

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

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

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

3.3.4 Test Setup

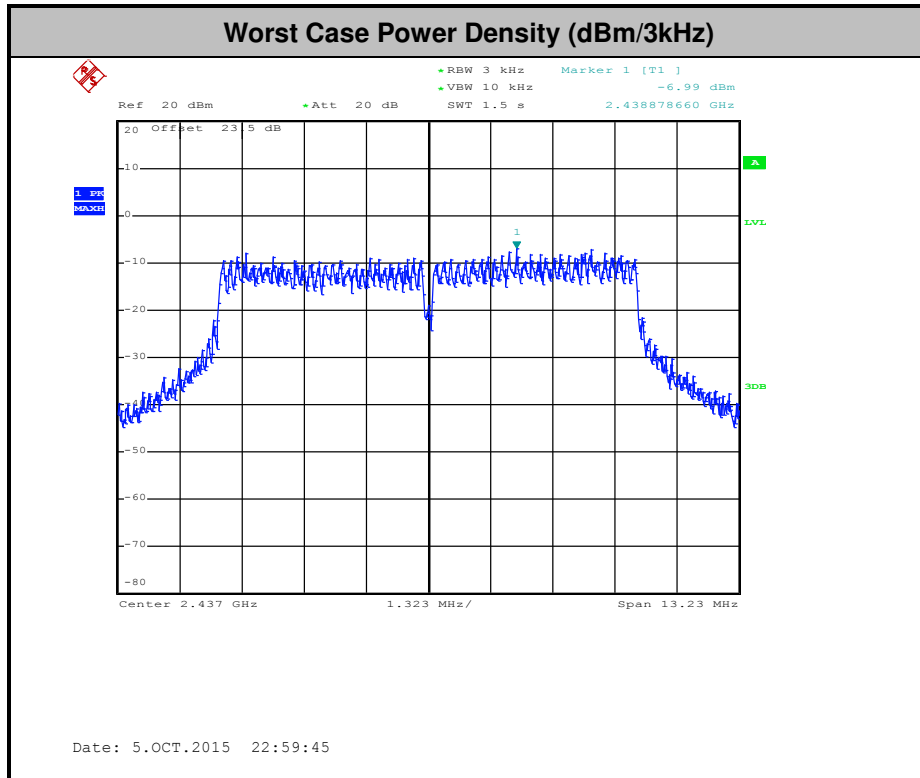


3.3.5 Test Result of Power Spectral Density

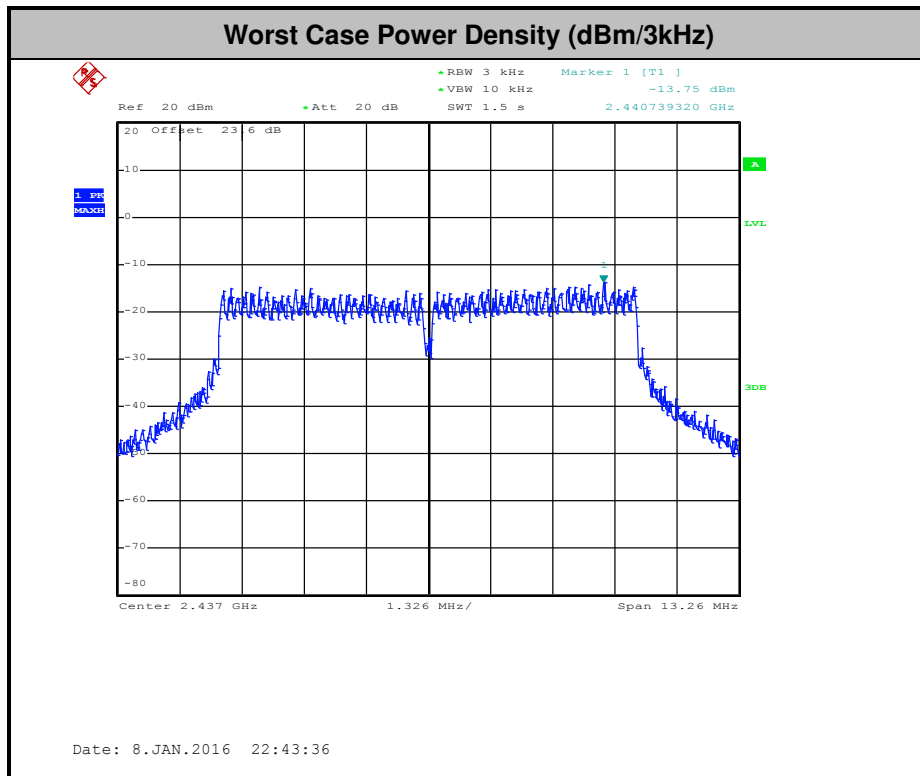
Please refer to Appendix A of this report.



<PTP>



<PTMP>



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).

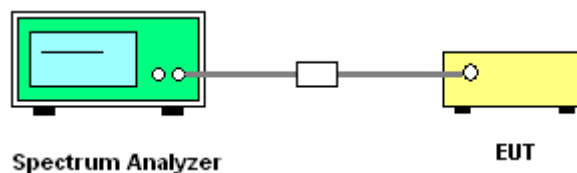
3.4.2 Measuring Instruments

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 v03r03.
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

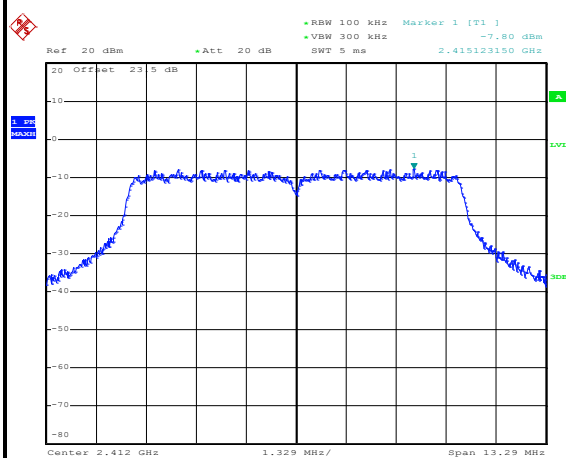
<PTP>

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

Number of TX :	2	Ant. :	1
Test Mode :	802.11ac VHT20 (10MHz)	Temperature :	23~24℃
Test Band :	2.4GHz Low	Relative Humidity :	52~53%
Test Channel :	01	Test Engineer :	Osolemio Chang

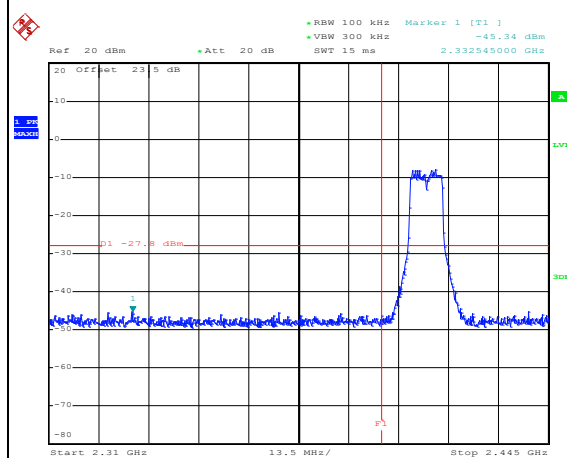
WLAN 802.11ac VHT20 (10MHz) Channel 01

100kHz PSD reference Level



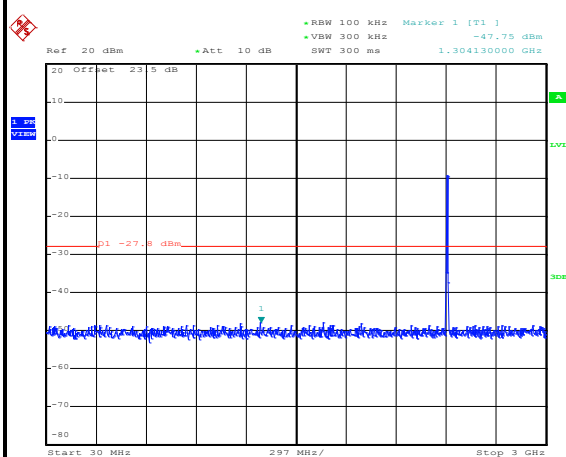
Date: 21.JAN.2016 23:50:18

Low Channel Plot



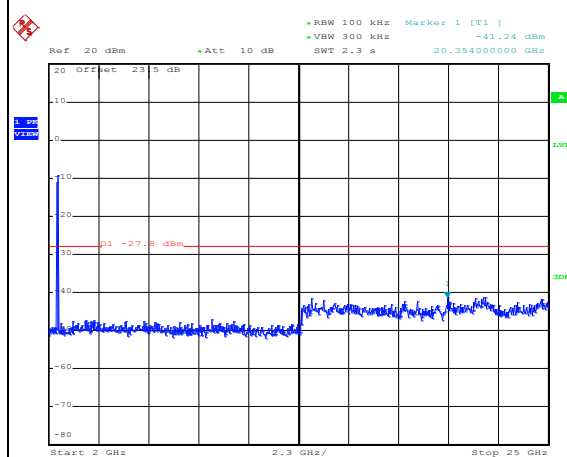
Date: 21.JAN.2016 23:50:59

Spurious Emission 30MHz~3GHz



Date: 21.JAN.2016 23:51:12

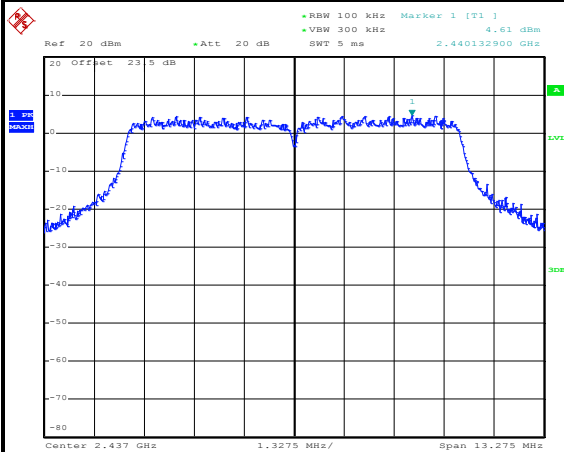
Spurious Emission 2GHz~25GHz



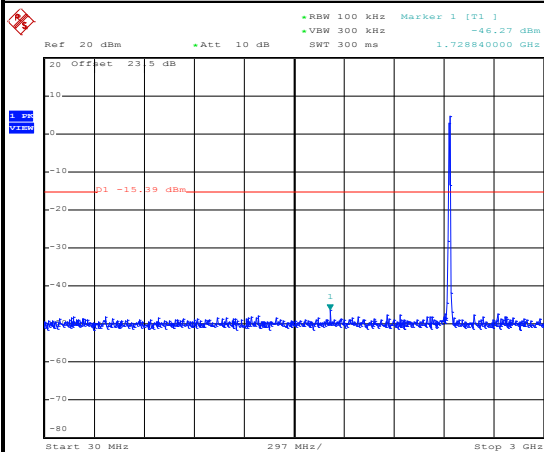
Date: 21.JAN.2016 23:51:20



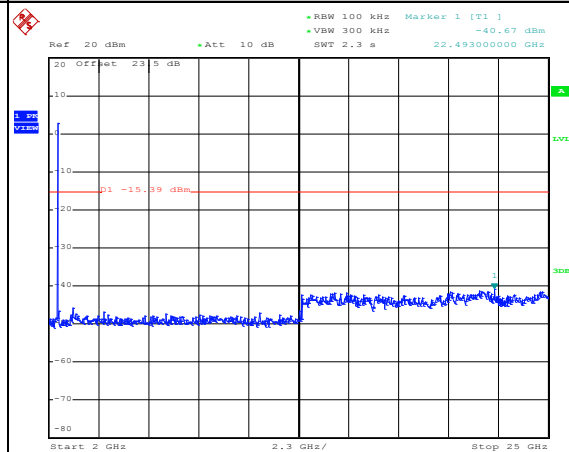
Number of TX :	2	Ant. :	1
Test Mode :	802.11ac VHT20 (10MHz)	Temperature :	23~24°C
Test Band :	2.4GHz Mid	Relative Humidity :	52~53%
Test Channel :	06	Test Engineer :	Osolemio Chang

WLAN 802.11ac VHT20 (10MHz) Channel 06**100kHz PSD reference Level**

Date: 5.OCT.2015 22:56:54

Spurious Emission 30MHz~3GHz

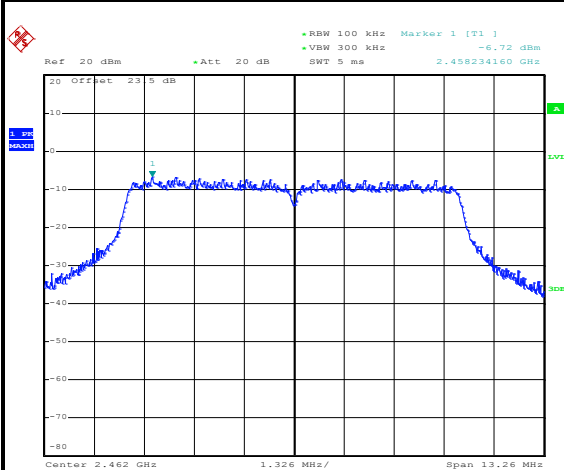
Date: 5.OCT.2015 22:57:19

Spurious Emission 2GHz~25GHz

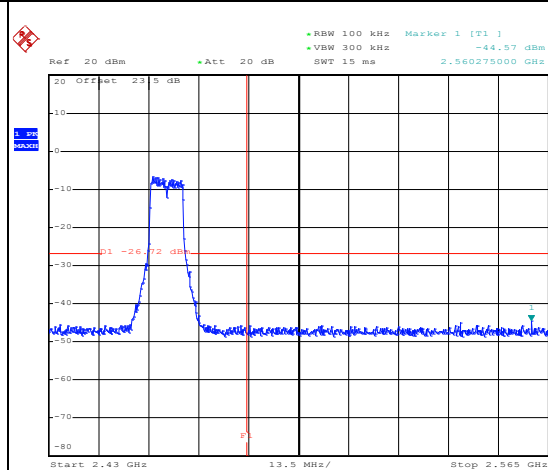
Date: 5.OCT.2015 22:57:37



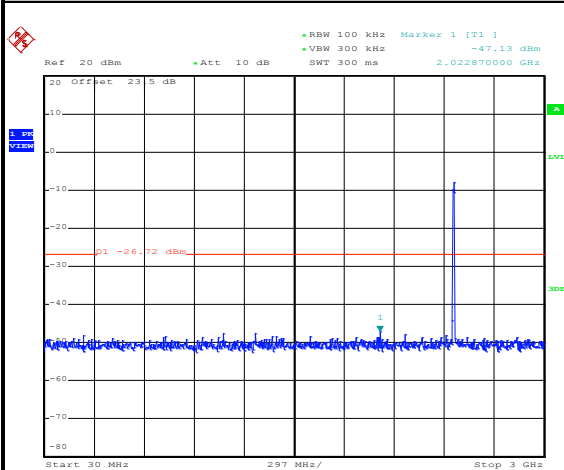
Number of TX :	2	Ant. :	1
Test Mode :	802.11ac VHT20 (10MHz)	Temperature :	23~24°C
Test Band :	2.4GHz High	Relative Humidity :	52~53%
Test Channel :	11	Test Engineer :	Osolemio Chang

WLAN 802.11ac VHT20 (10MHz) Channel 11**100kHz PSD reference Level**

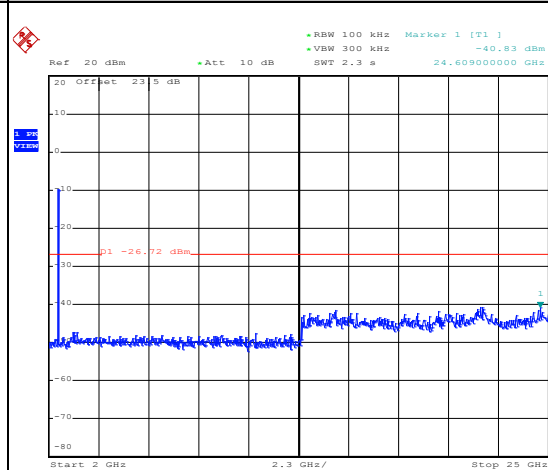
Date: 21.JAN.2016 23:54:29

High Channel Plot

Date: 21.JAN.2016 23:55:36

Spurious Emission 30MHz~3GHz

Date: 21.JAN.2016 23:57:03

Spurious Emission 2GHz~25GHz

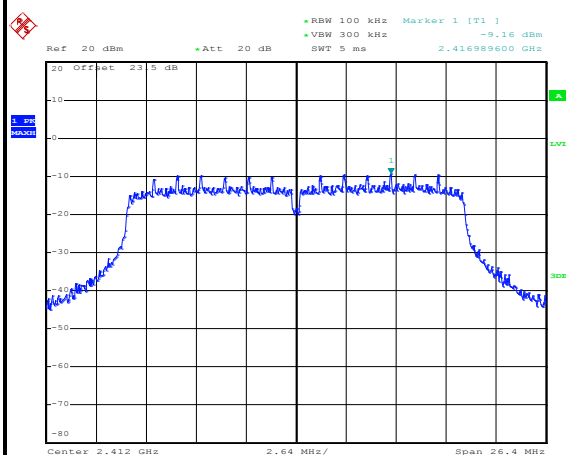
Date: 21.JAN.2016 23:57:12



Number of TX :	2	Ant. :	1
Test Mode :	802.11ac VHT20	Temperature :	23~24°C
Test Band :	2.4GHz Low	Relative Humidity :	52~53%
Test Channel :	01	Test Engineer :	Osolemio Chang

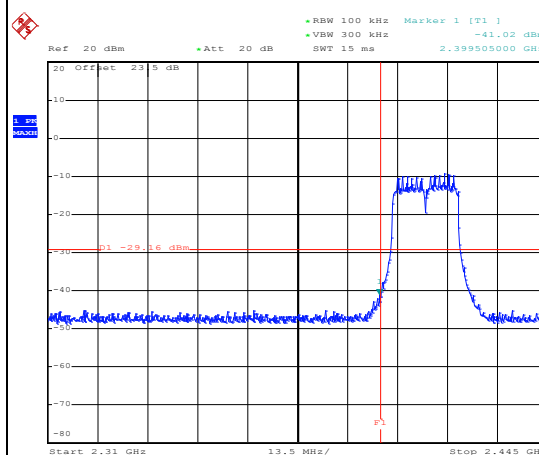
WLAN 802.11ac VHT20 Channel 01

100kHz PSD reference Level



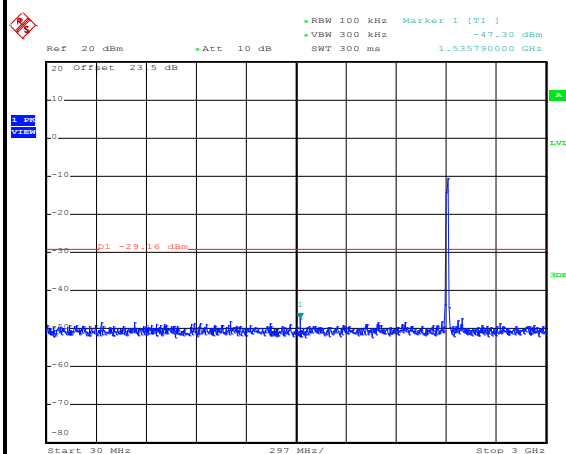
Date: 22.JAN.2016 00:11:21

Low Channel Plot



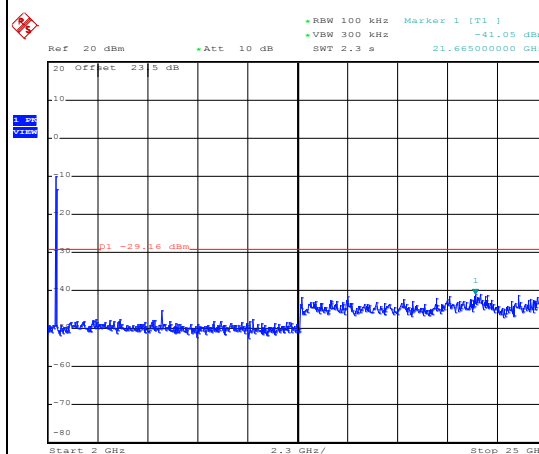
Date: 22.JAN.2016 00:13:32

Spurious Emission 30MHz~3GHz



Date: 22.JAN.2016 00:15:56

Spurious Emission 2GHz~25GHz



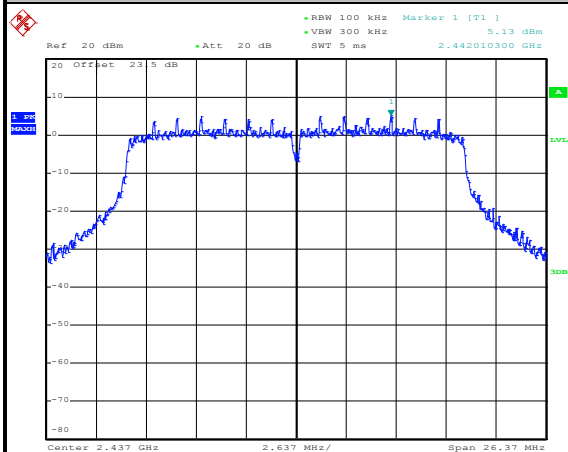
Date: 22.JAN.2016 00:16:05



Number of TX :	2	Ant. :	1
Test Mode :	802.11ac VHT20	Temperature :	23~24°C
Test Band :	2.4GHz Mid	Relative Humidity :	52~53%
Test Channel :	06	Test Engineer :	Osolemio Chang

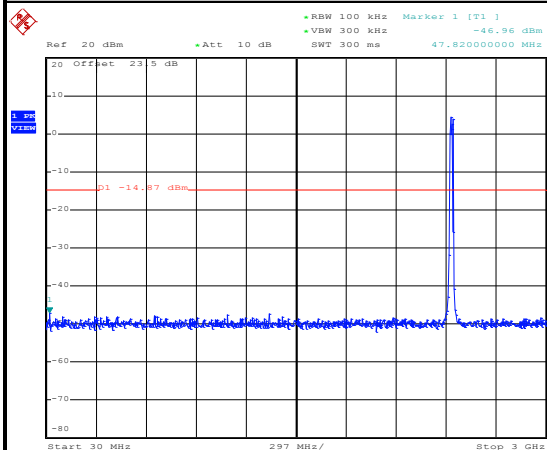
WLAN 802.11ac VHT20 Channel 06

100kHz PSD reference Level



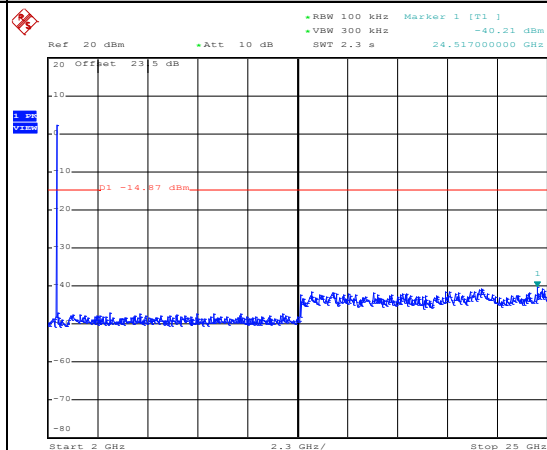
Date: 5.OCT.2015 23:27:30

Spurious Emission 30MHz~3GHz



Date: 5.OCT.2015 23:28:55

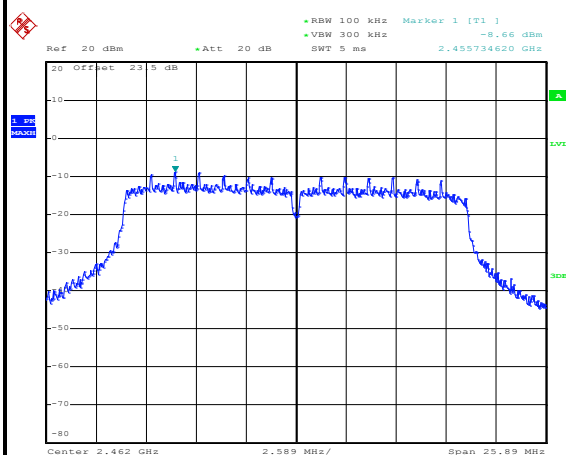
Spurious Emission 2GHz~25GHz



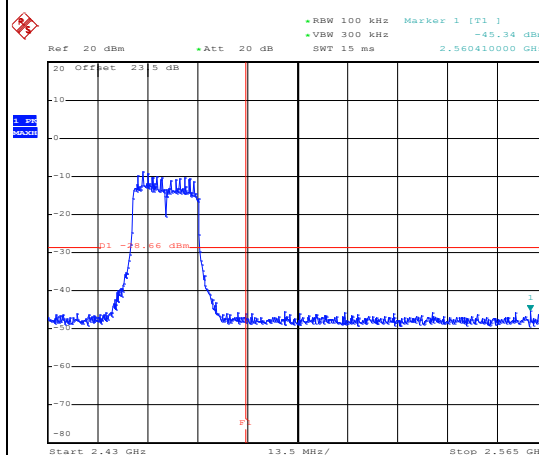
Date: 5.OCT.2015 23:29:12



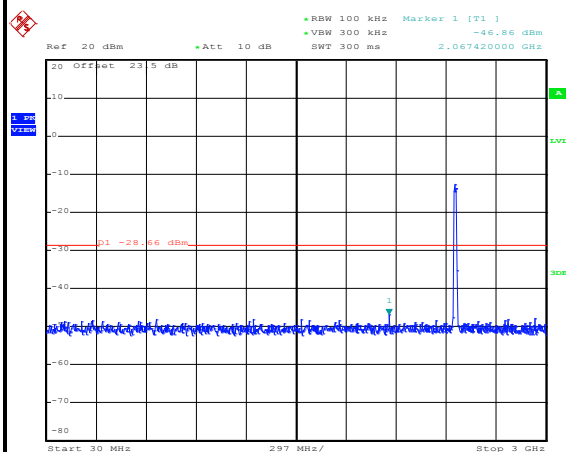
Number of TX :	2	Ant. :	1
Test Mode :	802.11ac VHT20	Temperature :	23~24°C
Test Band :	2.4GHz High	Relative Humidity :	52~53%
Test Channel :	11	Test Engineer :	Osolemio Chang

WLAN 802.11ac VHT20 Channel 11**100kHz PSD reference Level**

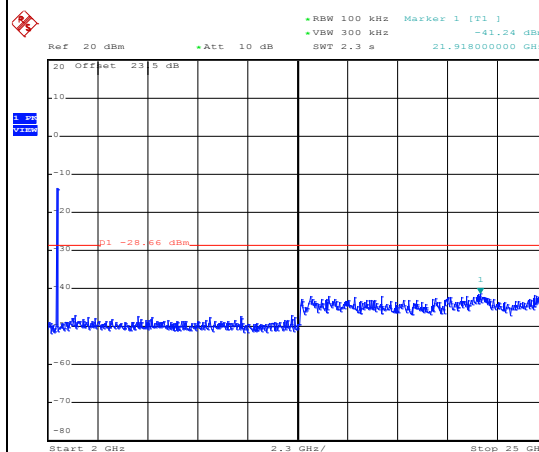
Date: 22.JAN.2016 00:24:41

High Channel Plot

Date: 22.JAN.2016 00:25:24

Spurious Emission 30MHz~3GHz

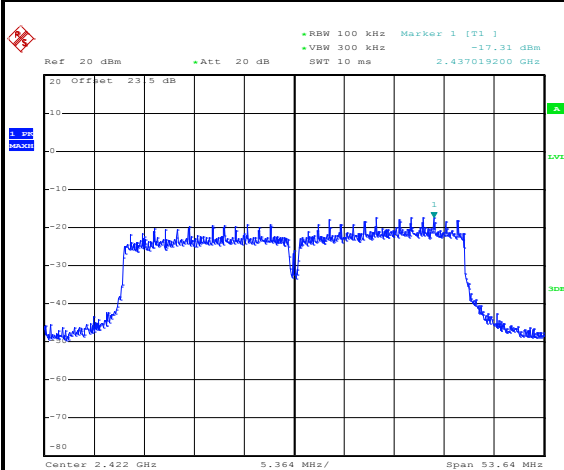
Date: 22.JAN.2016 00:26:01

Spurious Emission 2GHz~25GHz

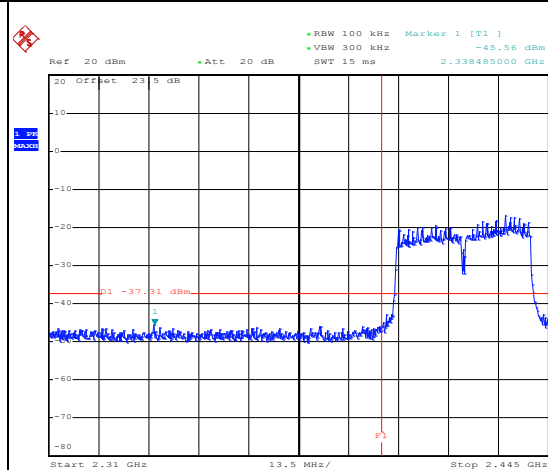
Date: 22.JAN.2016 00:26:10



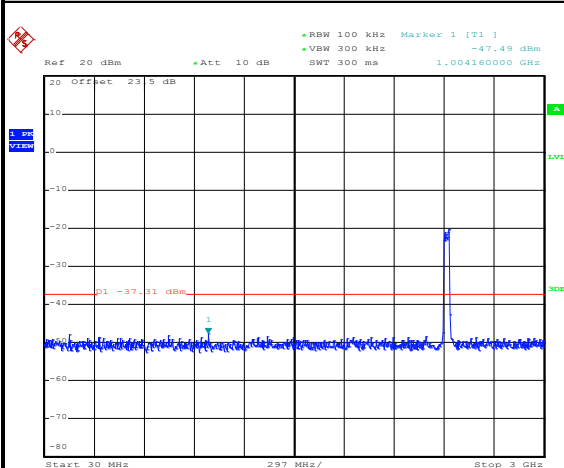
Number of TX :	2	Ant. :	1
Test Mode :	802.11ac VHT40	Temperature :	23~24°C
Test Band :	2.4GHz Low	Relative Humidity :	52~53%
Test Channel :	03	Test Engineer :	Osolemio Chang

WLAN 802.11ac VHT40 Channel 03**100kHz PSD reference Level**

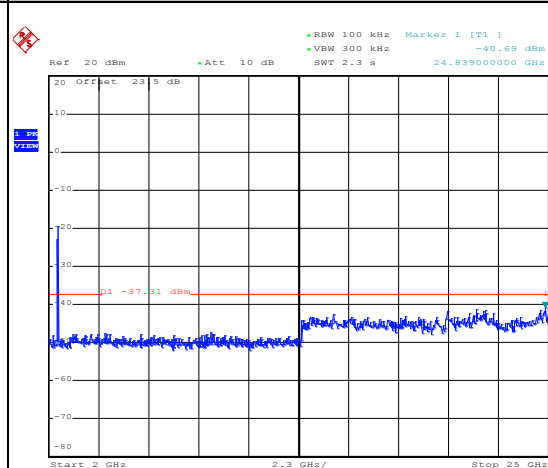
Date: 25.JAN.2016 18:12:09

Low Channel Plot

Date: 25.JAN.2016 18:12:27

Spurious Emission 30MHz~3GHz

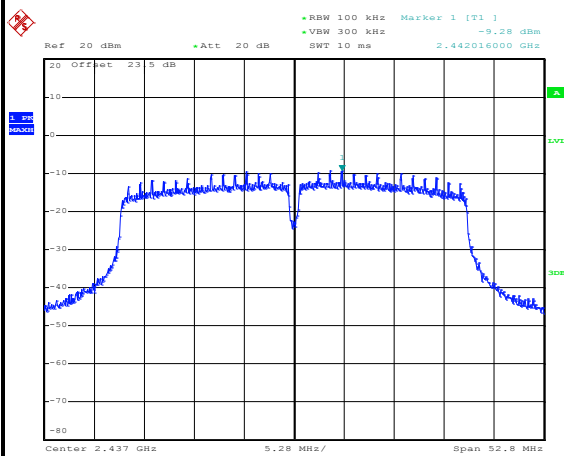
Date: 25.JAN.2016 18:13:19

Spurious Emission 2GHz~25GHz

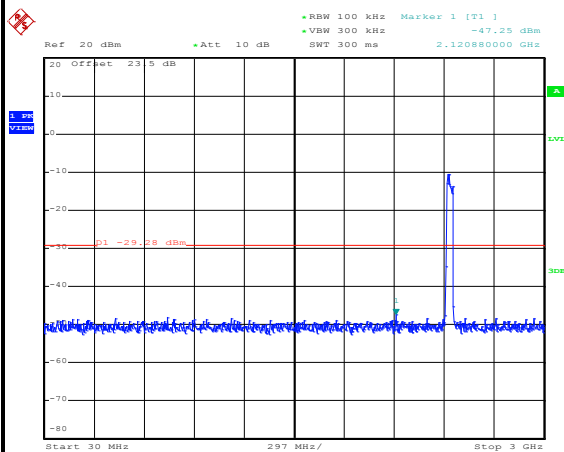
Date: 25.JAN.2016 18:13:28



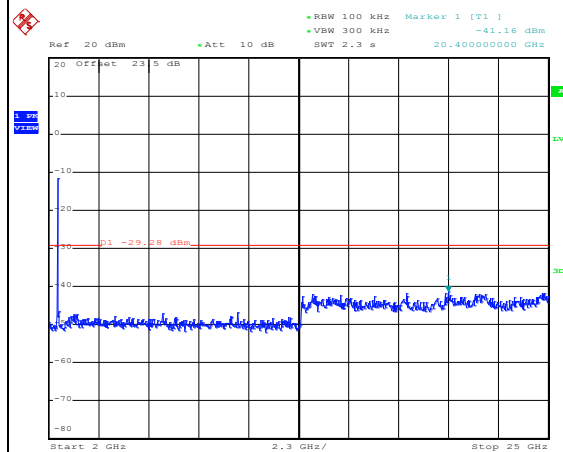
Number of TX :	2	Ant. :	1
Test Mode :	802.11ac VHT40	Temperature :	23~24°C
Test Band :	2.4GHz Mid	Relative Humidity :	52~53%
Test Channel :	06	Test Engineer :	Osolemio Chang

WLAN 802.11ac VHT40 Channel 06**100kHz PSD reference Level**

Date: 22.JAN.2016 00:49:03

Spurious Emission 30MHz~3GHz

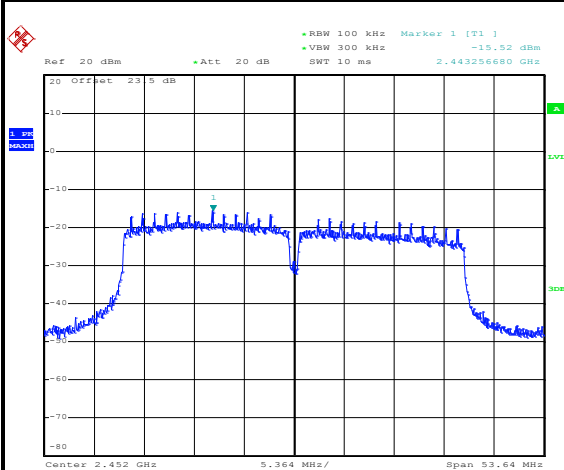
Date: 22.JAN.2016 00:49:26

Spurious Emission 2GHz~25GHz

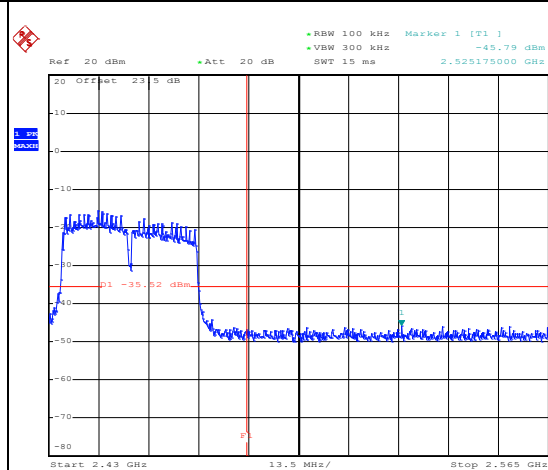
Date: 22.JAN.2016 00:49:35



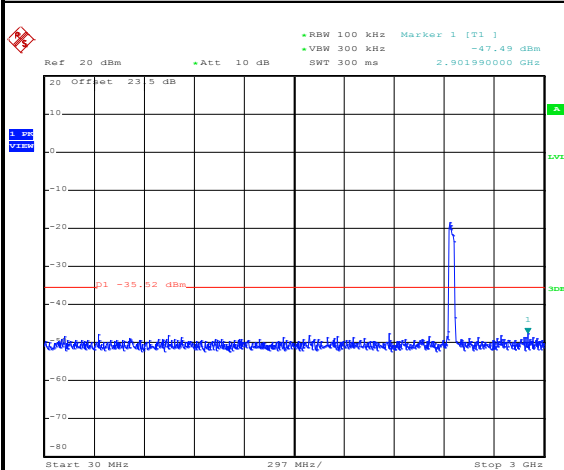
Number of TX :	2	Ant. :	1
Test Mode :	802.11ac VHT40	Temperature :	23~24°C
Test Band :	2.4GHz High	Relative Humidity :	52~53%
Test Channel :	09	Test Engineer :	Osolemio Chang

WLAN 802.11ac VHT40 Channel 09**100kHz PSD reference Level**

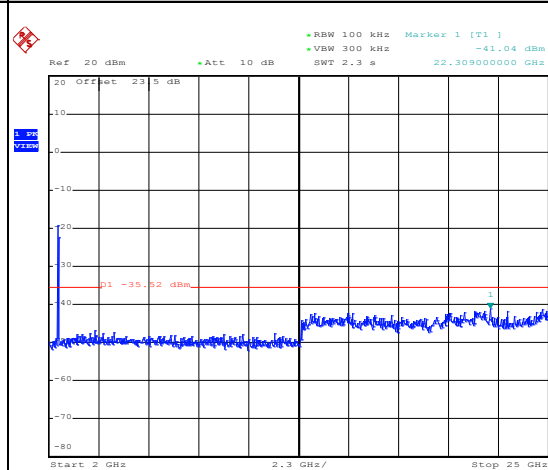
Date: 22.JAN.2016 00:58:57

High Channel Plot

Date: 22.JAN.2016 00:59:16

Spurious Emission 30MHz~3GHz

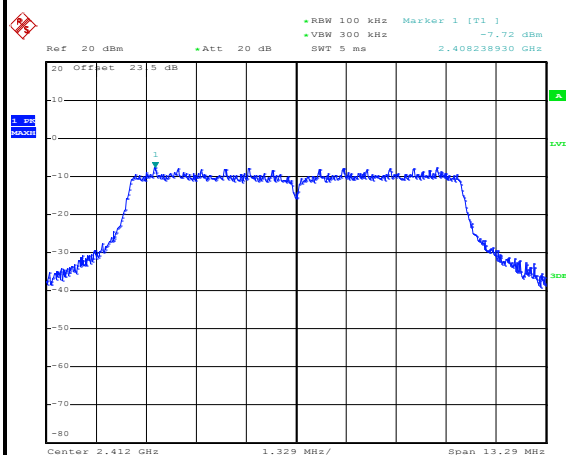
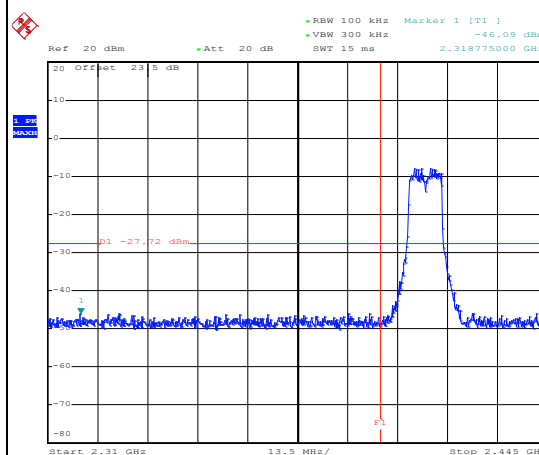
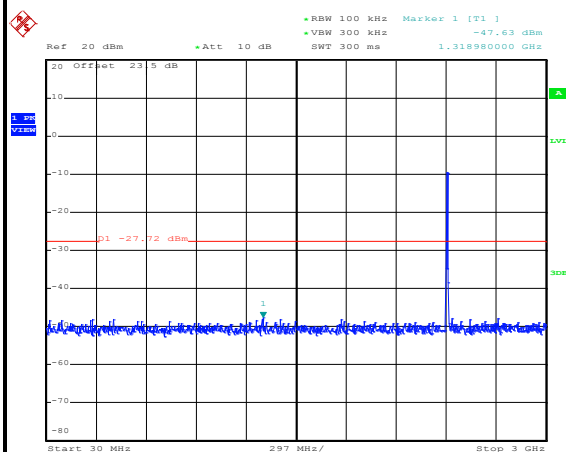
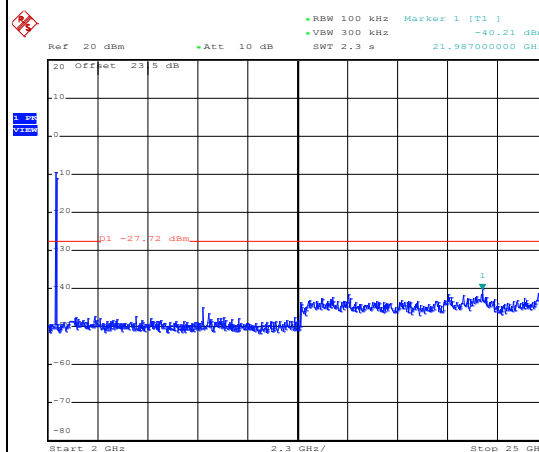
Date: 22.JAN.2016 01:00:13

Spurious Emission 2GHz~25GHz

Date: 22.JAN.2016 01:00:21

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

Number of TX :	2	Ant. :	2
Test Mode :	802.11ac VHT20 (10MHz)	Temperature :	23~24°C
Test Band :	2.4GHz Low	Relative Humidity :	52~53%
Test Channel :	01	Test Engineer :	Osolemio Chang

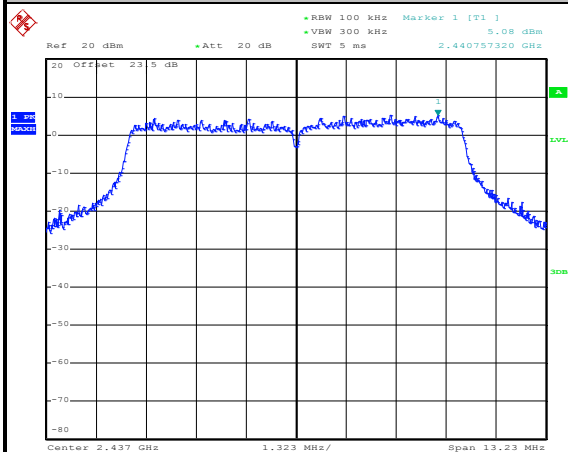
WLAN 802.11ac VHT20 (10MHz) Channel 01**100kHz PSD reference Level****Low Channel Plot****Spurious Emission 30MHz~3GHz****Spurious Emission 2GHz~25GHz**



Number of TX :	2	Ant. :	2
Test Mode :	802.11ac VHT20 (10MHz)	Temperature :	23~24°C
Test Band :	2.4GHz Mid	Relative Humidity :	52~53%
Test Channel :	06	Test Engineer :	Osolemio Chang

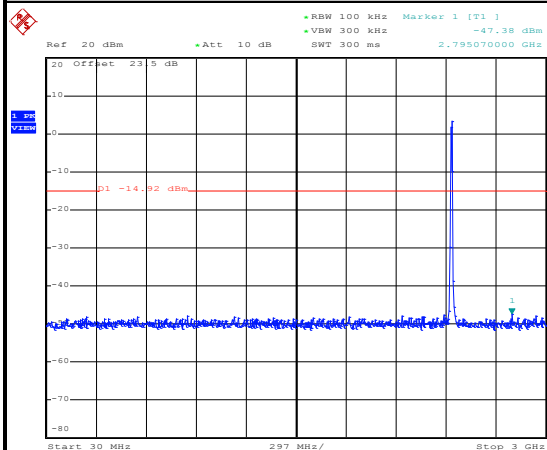
WLAN 802.11ac VHT20 (10MHz) Channel 06

100kHz PSD reference Level



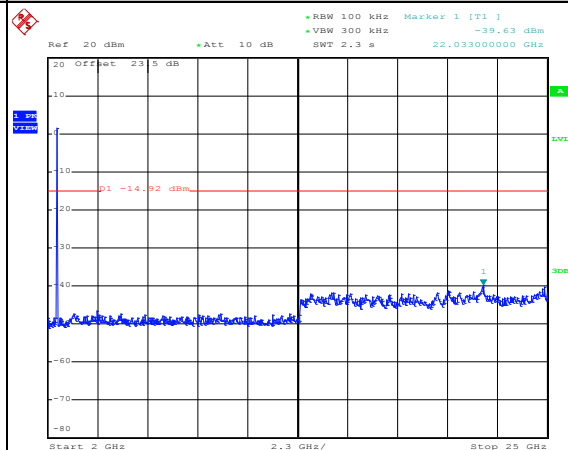
Date: 5.OCT.2015 23:00:11

Spurious Emission 30MHz~3GHz



Date: 5.OCT.2015 23:00:43

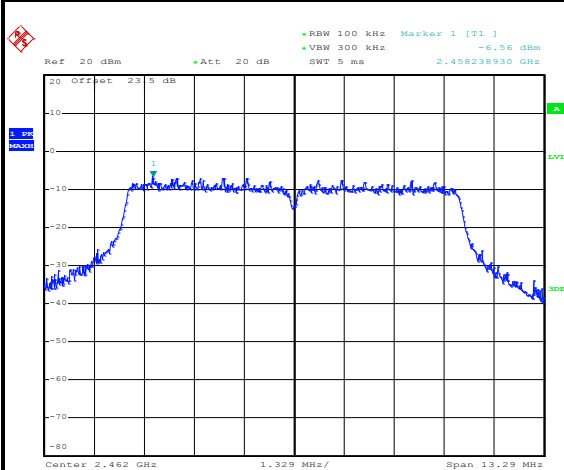
Spurious Emission 2GHz~25GHz



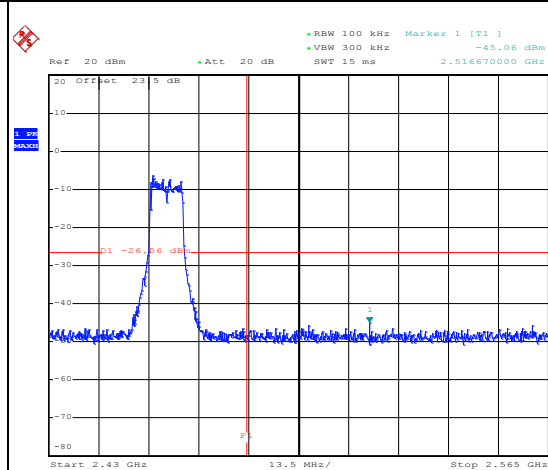
Date: 5.OCT.2015 23:01:00



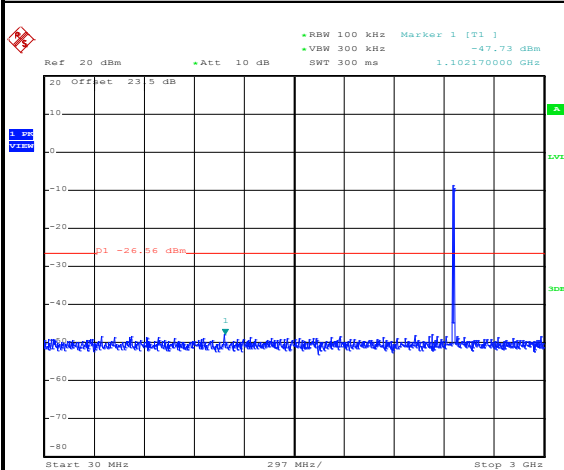
Number of TX :	2	Ant. :	2
Test Mode :	802.11ac VHT20 (10MHz)	Temperature :	23~24°C
Test Band :	2.4GHz High	Relative Humidity :	52~53%
Test Channel :	11	Test Engineer :	Osolemio Chang

WLAN 802.11ac VHT20 (10MHz) Channel 11**100kHz PSD reference Level**

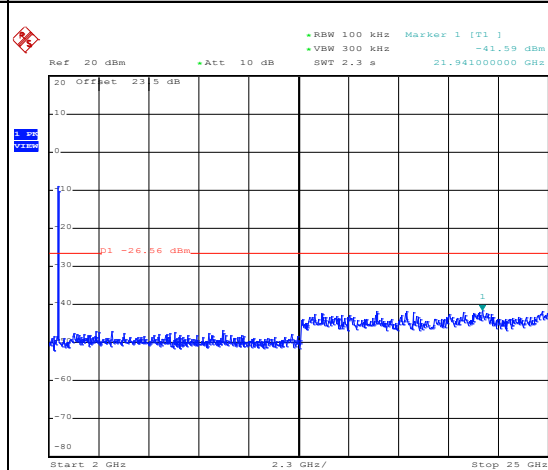
Date: 22.JAN.2016 00:01:48

High Channel Plot

Date: 22.JAN.2016 00:02:01

Spurious Emission 30MHz~3GHz

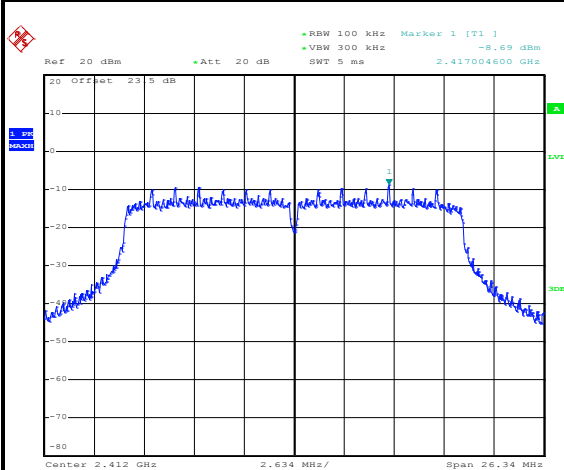
Date: 22.JAN.2016 00:02:14

Spurious Emission 2GHz~25GHz

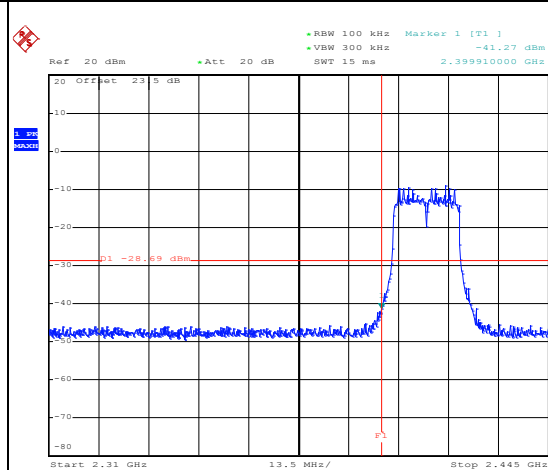
Date: 22.JAN.2016 00:02:23



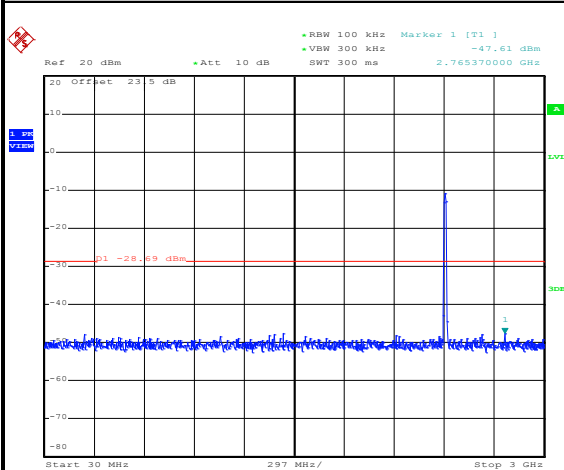
Number of TX :	2	Ant. :	2
Test Mode :	802.11ac VHT20	Temperature :	23~24°C
Test Band :	2.4GHz Low	Relative Humidity :	52~53%
Test Channel :	01	Test Engineer :	Osolemio Chang

WLAN 802.11ac VHT20 Channel 01**100kHz PSD reference Level**

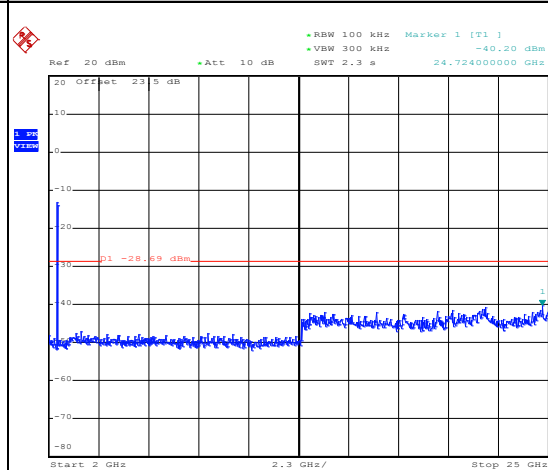
Date: 22.JAN.2016 00:19:05

Low Channel Plot

Date: 22.JAN.2016 00:20:16

Spurious Emission 30MHz~3GHz

Date: 22.JAN.2016 00:20:38

Spurious Emission 2GHz~25GHz

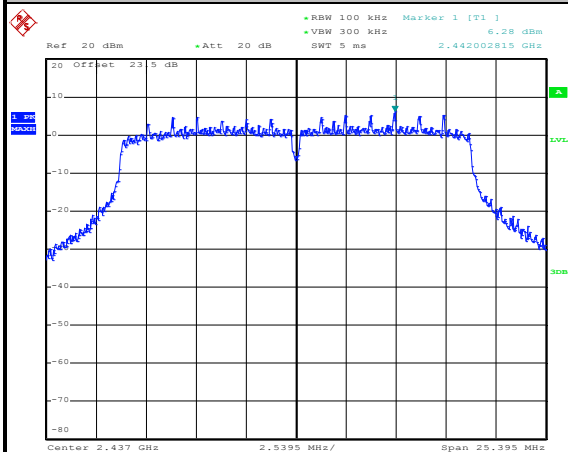
Date: 22.JAN.2016 00:20:47



Number of TX :	2	Ant. :	2
Test Mode :	802.11ac VHT20	Temperature :	23~24°C
Test Band :	2.4GHz Mid	Relative Humidity :	52~53%
Test Channel :	06	Test Engineer :	Osolemio Chang

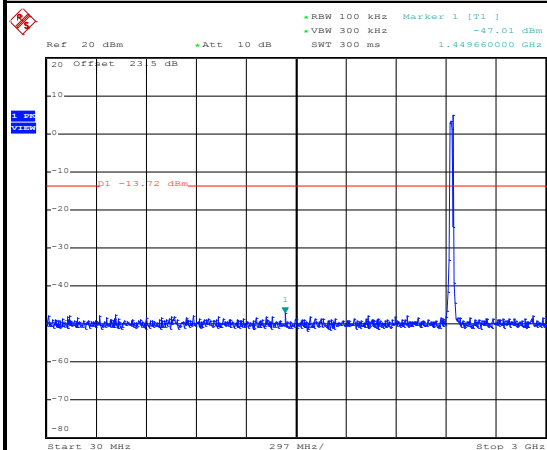
WLAN 802.11ac VHT20 Channel 06

100kHz PSD reference Level



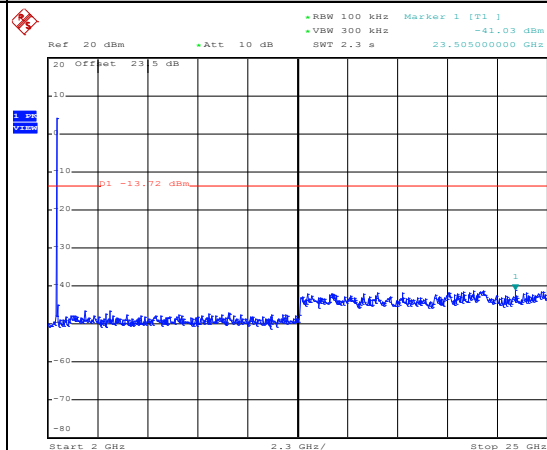
Date: 5.OCT.2015 23:33:27

Spurious Emission 30MHz~3GHz



Date: 5.OCT.2015 23:34:14

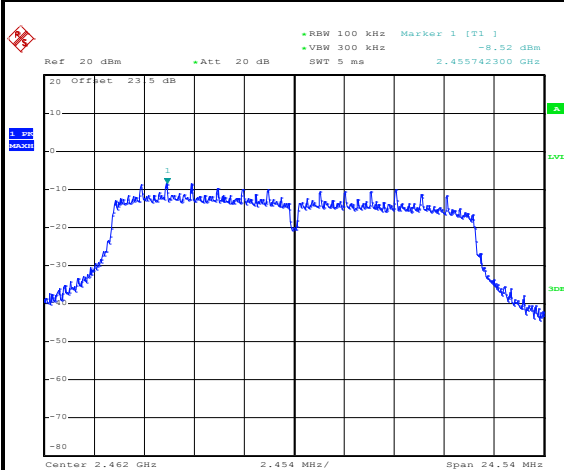
Spurious Emission 2GHz~25GHz



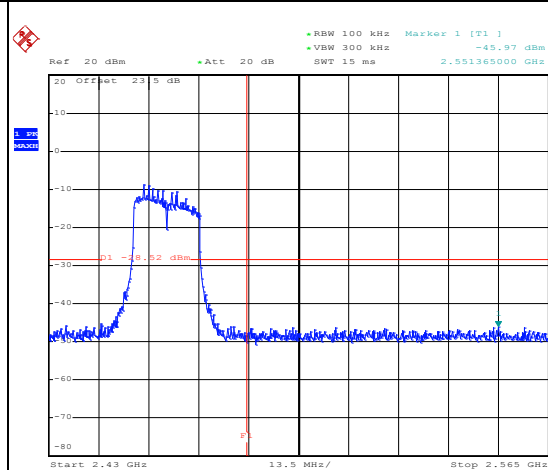
Date: 5.OCT.2015 23:34:31



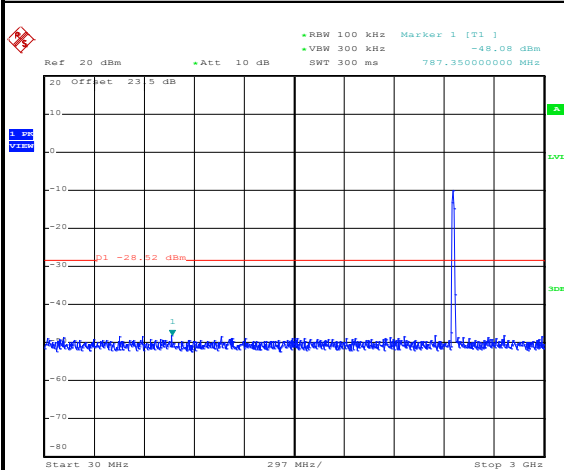
Number of TX :	2	Ant. :	2
Test Mode :	802.11ac VHT20	Temperature :	23~24°C
Test Band :	2.4GHz High	Relative Humidity :	52~53%
Test Channel :	11	Test Engineer :	Osolemio Chang

WLAN 802.11ac VHT20 Channel 11**100kHz PSD reference Level**

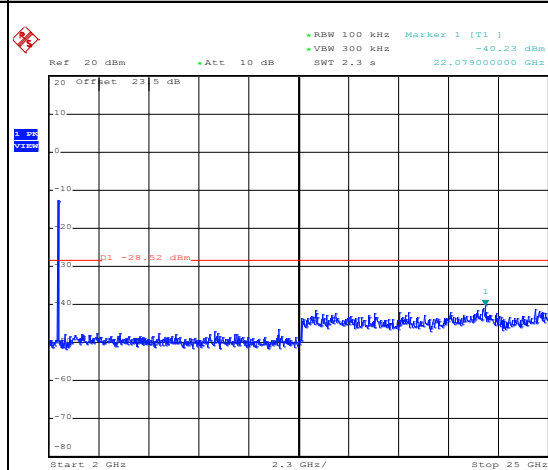
Date: 22.JAN.2016 00:29:49

High Channel Plot

Date: 22.JAN.2016 00:30:51

Spurious Emission 30MHz~3GHz

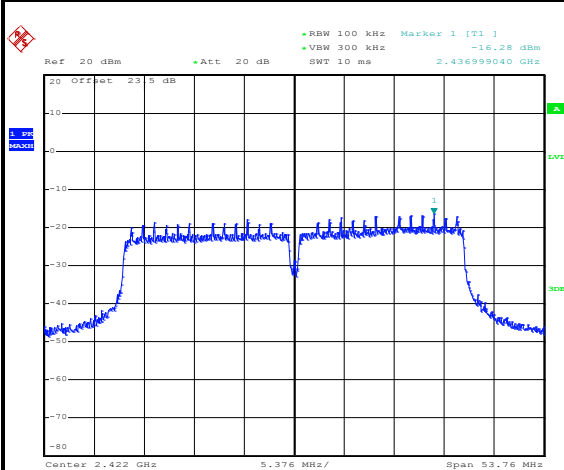
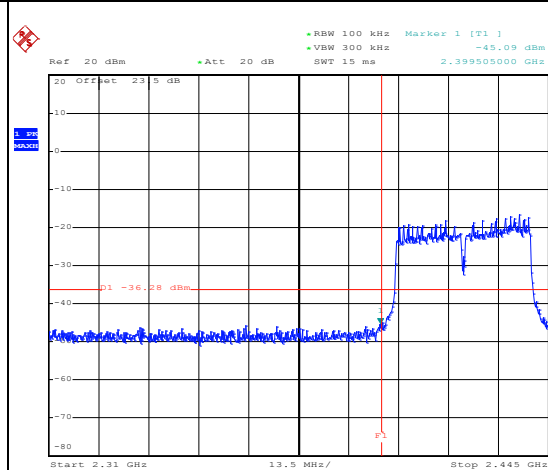
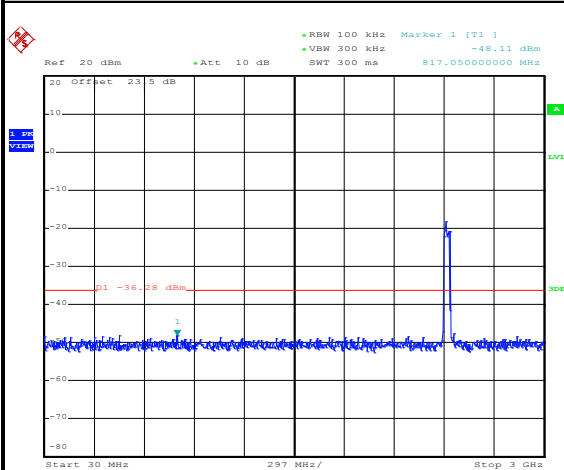
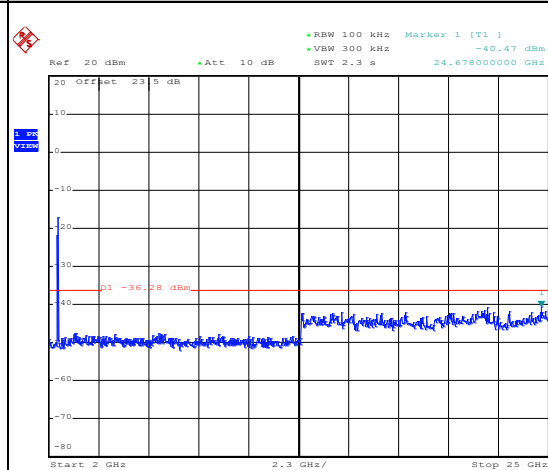
Date: 22.JAN.2016 00:31:13

Spurious Emission 2GHz~25GHz

Date: 22.JAN.2016 00:31:21



Number of TX :	2	Ant. :	2
Test Mode :	802.11ac VHT40	Temperature :	23~24°C
Test Band :	2.4GHz Low	Relative Humidity :	52~53%
Test Channel :	03	Test Engineer :	Osolemio Chang

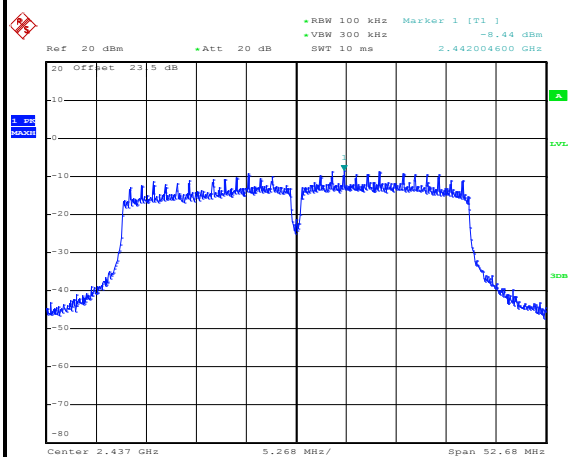
WLAN 802.11ac VHT40 Channel 03**100kHz PSD reference Level****Low Channel Plot****Spurious Emission 30MHz~3GHz****Spurious Emission 2GHz~25GHz**



Number of TX :	2	Ant. :	2
Test Mode :	802.11ac VHT40	Temperature :	23~24°C
Test Band :	2.4GHz Mid	Relative Humidity :	52~53%
Test Channel :	06	Test Engineer :	Osolemio Chang

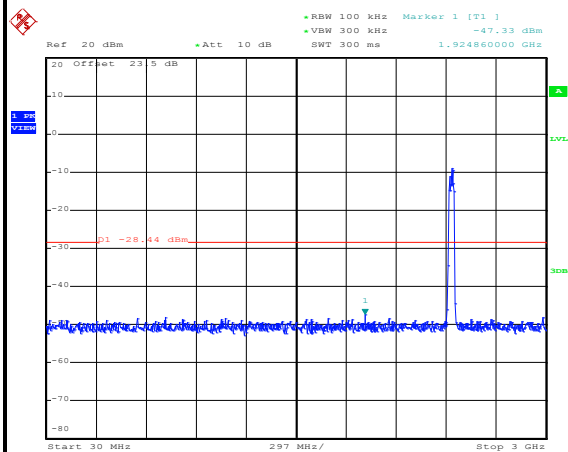
WLAN 802.11ac VHT40 Channel 06

100kHz PSD reference Level



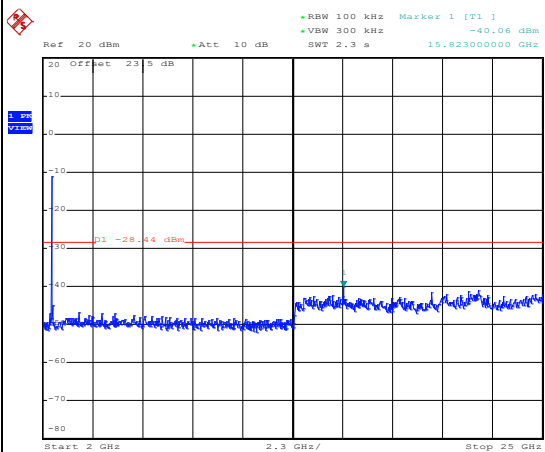
Date: 22.JAN.2016 00:53:05

Spurious Emission 30MHz~3GHz



Date: 22.JAN.2016 00:53:45

Spurious Emission 2GHz~25GHz



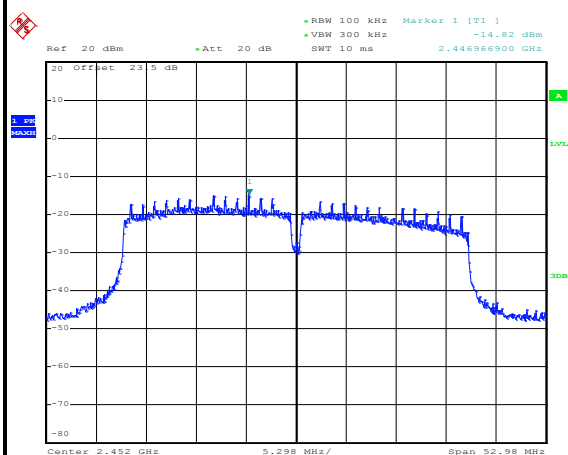
Date: 22.JAN.2016 00:53:54



Number of TX :	2	Ant. :	2
Test Mode :	802.11ac VHT40	Temperature :	23~24°C
Test Band :	2.4GHz High	Relative Humidity :	52~53%
Test Channel :	09	Test Engineer :	Osolemio Chang

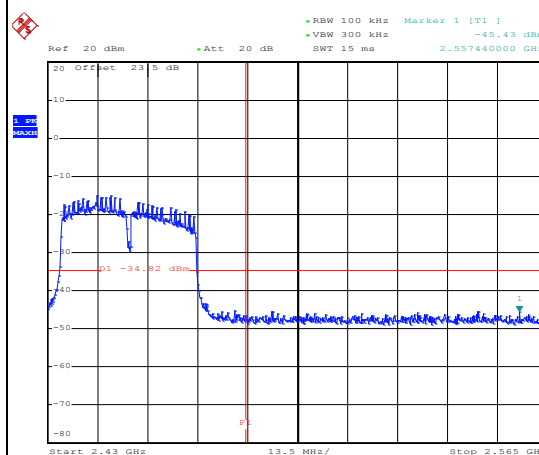
WLAN 802.11ac VHT40 Channel 09

100kHz PSD reference Level



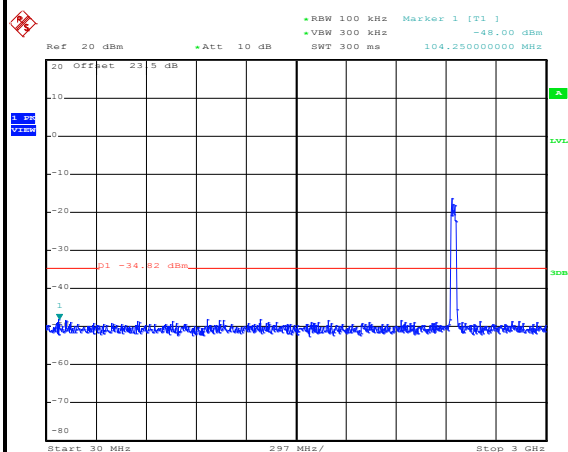
Date: 22.JAN.2016 01:03:52

High Channel Plot



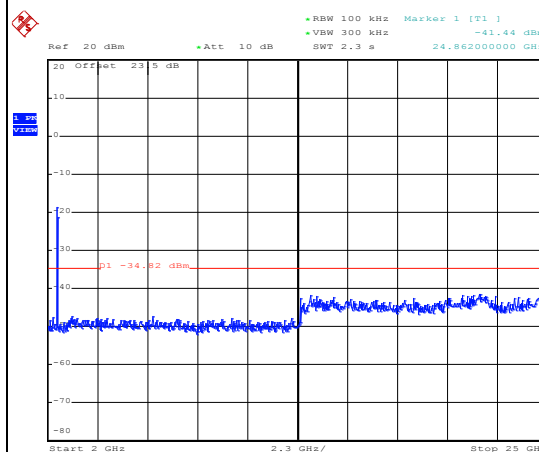
Date: 22.JAN.2016 01:04:37

Spurious Emission 30MHz~3GHz



Date: 22.JAN.2016 01:07:08

Spurious Emission 2GHz~25GHz



Date: 22.JAN.2016 01:07:16



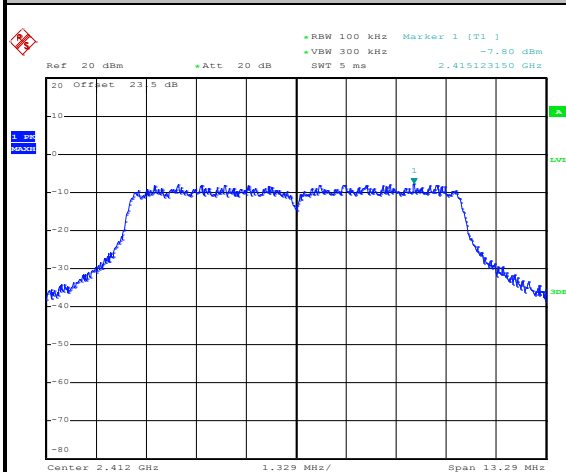
<PTMP>

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

Number of TX :	2	Ant. :	1
Test Mode :	802.11ac VHT20 (10MHz)	Temperature :	23~24°C
Test Band :	2.4GHz Low	Relative Humidity :	52~53%
Test Channel :	01	Test Engineer :	Osolemio Chang

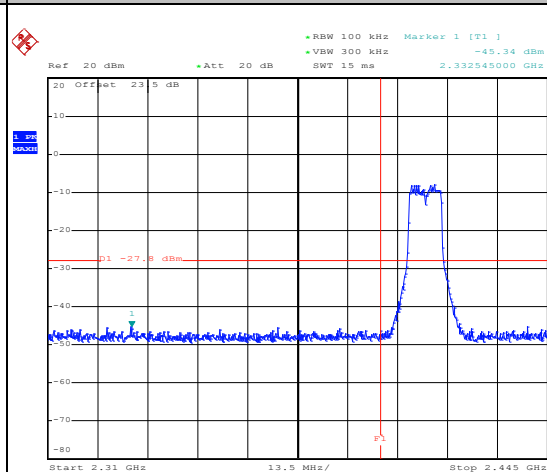
WLAN 802.11ac VHT20 (10MHz) Channel 01

100kHz PSD reference Level



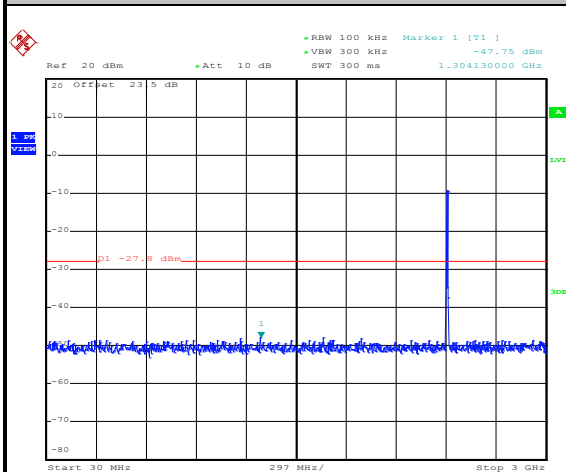
Date: 21.JAN.2016 23:50:18

Low Channel Plot



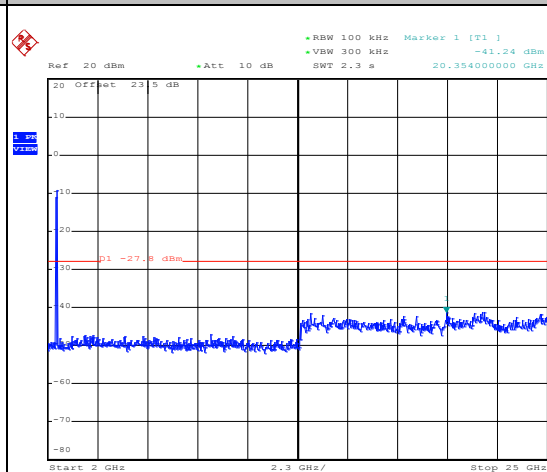
Date: 21.JAN.2016 23:50:59

Spurious Emission 30MHz~3GHz



Date: 21.JAN.2016 23:51:12

Spurious Emission 2GHz~25GHz



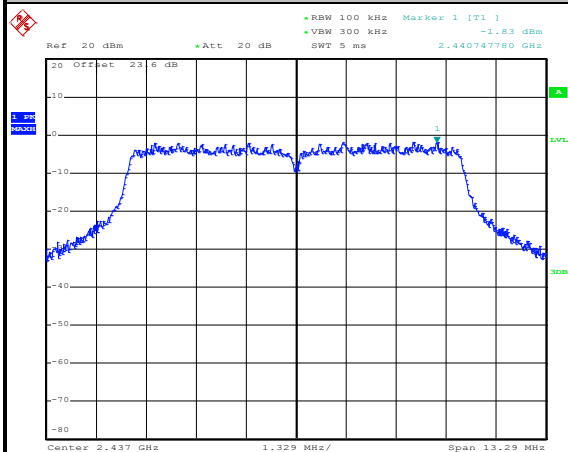
Date: 21.JAN.2016 23:51:20



Number of TX :	2	Ant. :	1
Test Mode :	802.11ac VHT20 (10MHz)	Temperature :	23~24°C
Test Band :	2.4GHz Mid	Relative Humidity :	52~53%
Test Channel :	06	Test Engineer :	Osolemio Chang

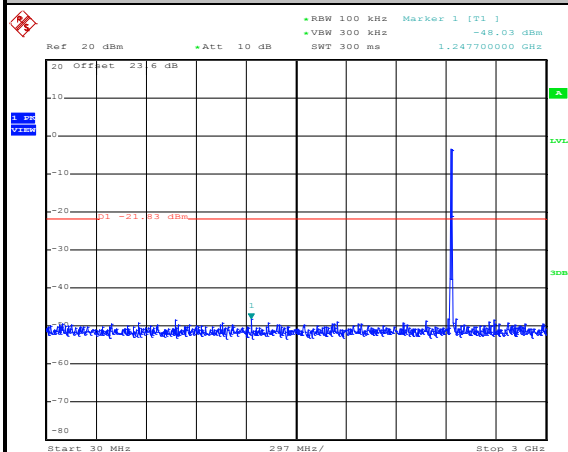
WLAN 802.11ac VHT20 (10MHz) Channel 06

100kHz PSD reference Level



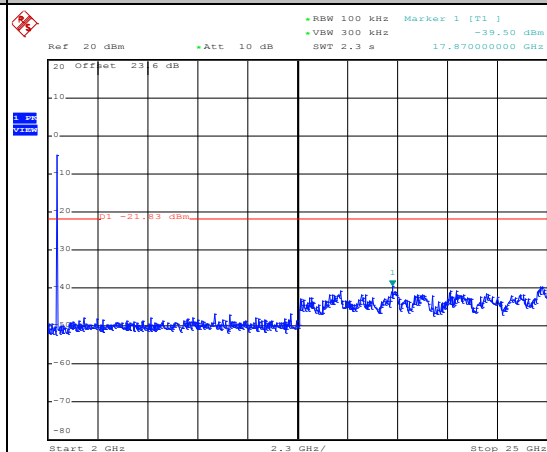
Date: 8.JAN.2016 22:39:18

Spurious Emission 30MHz~3GHz



Date: 8.JAN.2016 22:40:53

Spurious Emission 2GHz~25GHz



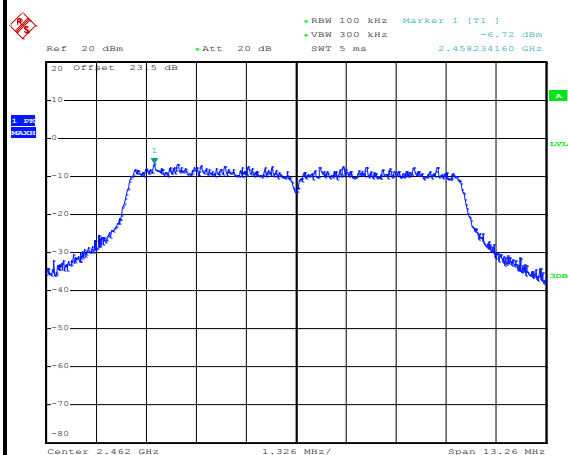
Date: 8.JAN.2016 22:41:03



Number of TX :	2	Ant. :	1
Test Mode :	802.11ac VHT20 (10MHz)	Temperature :	23~24°C
Test Band :	2.4GHz High	Relative Humidity :	52~53%
Test Channel :	11	Test Engineer :	Osolemio Chang

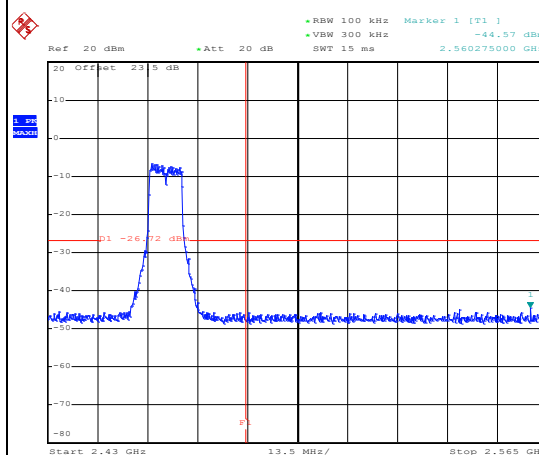
WLAN 802.11ac VHT20 (10MHz) Channel 11

100kHz PSD reference Level



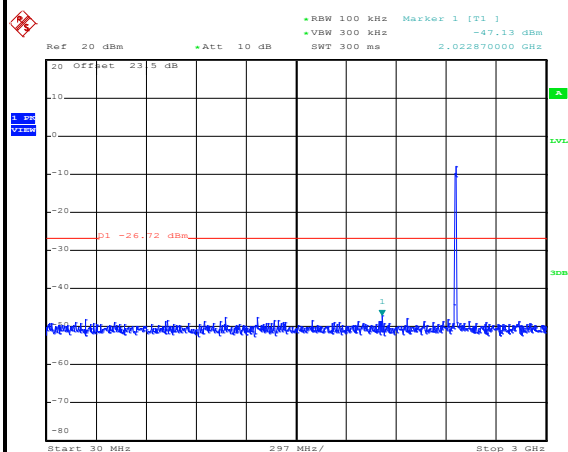
Date: 21.JAN.2016 23:54:29

High Channel Plot



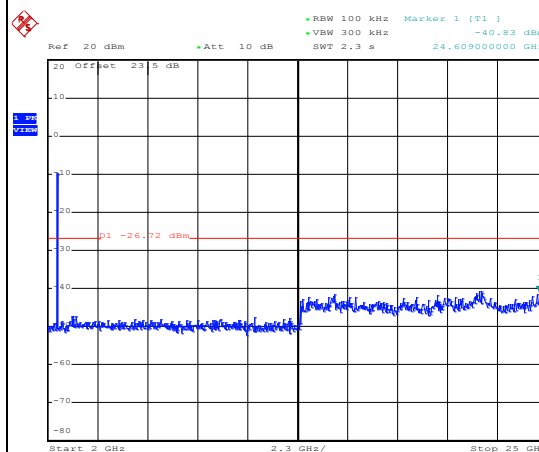
Date: 21.JAN.2016 23:55:36

Spurious Emission 30MHz~3GHz



Date: 21.JAN.2016 23:57:03

Spurious Emission 2GHz~25GHz



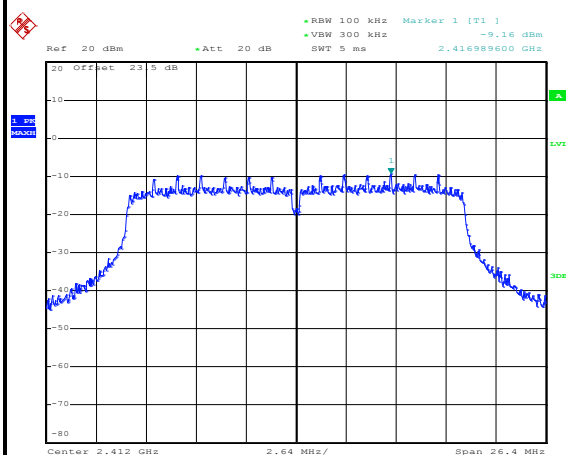
Date: 21.JAN.2016 23:57:12



Number of TX :	2	Ant. :	1
Test Mode :	802.11ac VHT20	Temperature :	23~24°C
Test Band :	2.4GHz Low	Relative Humidity :	52~53%
Test Channel :	01	Test Engineer :	Osolemio Chang

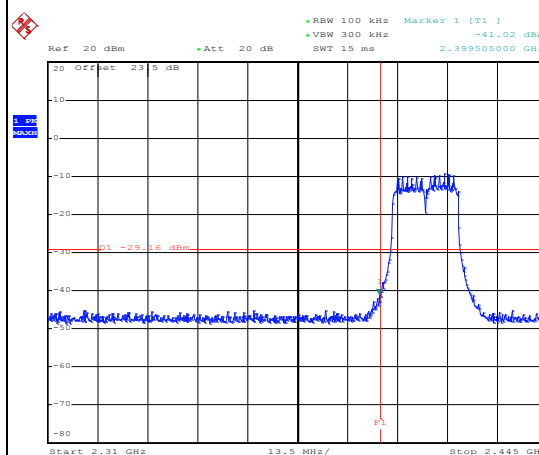
WLAN 802.11ac VHT20 Channel 01

100kHz PSD reference Level



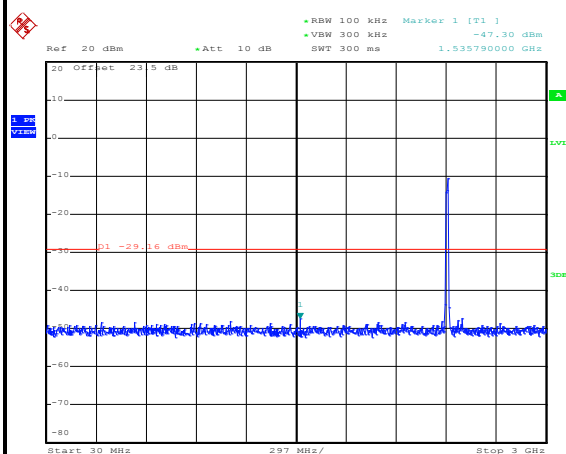
Date: 22.JAN.2016 00:11:21

Low Channel Plot



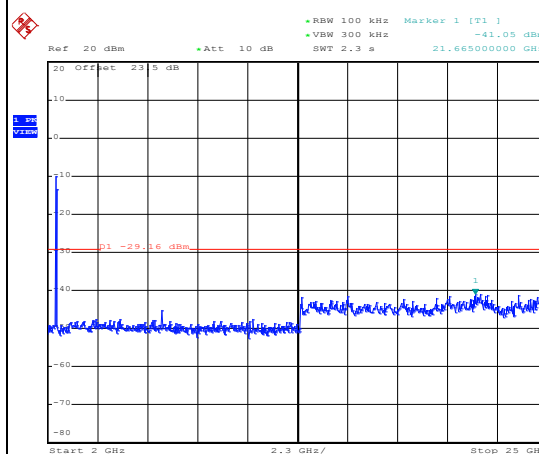
Date: 22.JAN.2016 00:13:32

Spurious Emission 30MHz~3GHz



Date: 22.JAN.2016 00:15:56

Spurious Emission 2GHz~25GHz



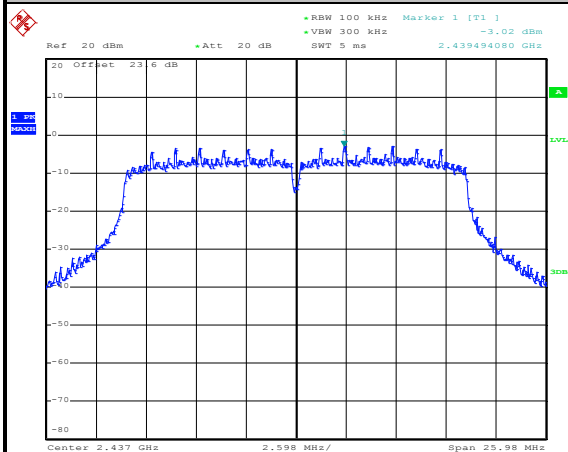
Date: 22.JAN.2016 00:16:05



Number of TX :	2	Ant. :	1
Test Mode :	802.11ac VHT20	Temperature :	23~24°C
Test Band :	2.4GHz Mid	Relative Humidity :	52~53%
Test Channel :	06	Test Engineer :	Osolemio Chang

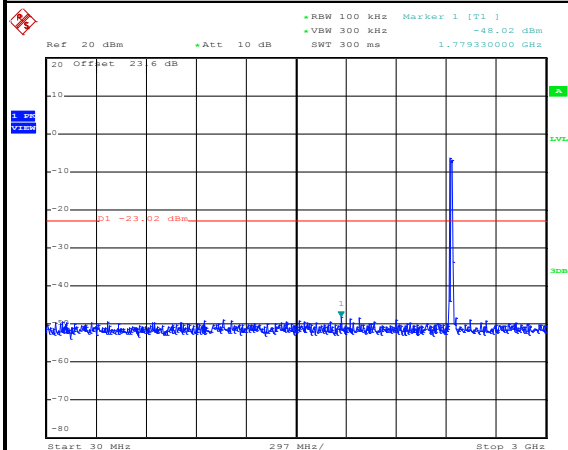
WLAN 802.11ac VHT20 Channel 06

100kHz PSD reference Level



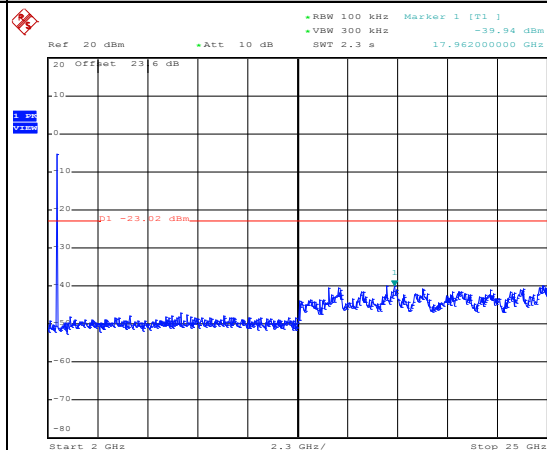
Date: 8.JAN.2016 23:03:09

Spurious Emission 30MHz~3GHz



Date: 8.JAN.2016 23:05:48

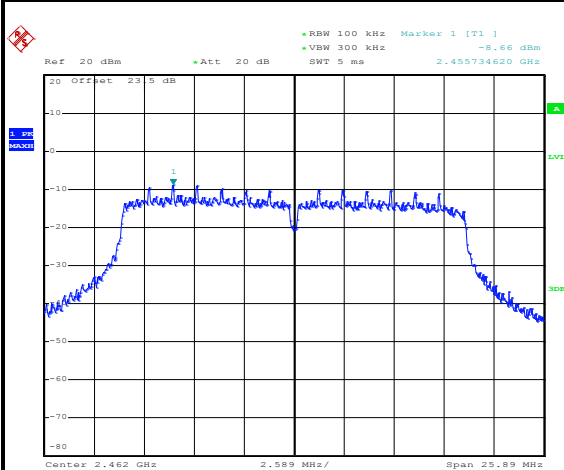
Spurious Emission 2GHz~25GHz



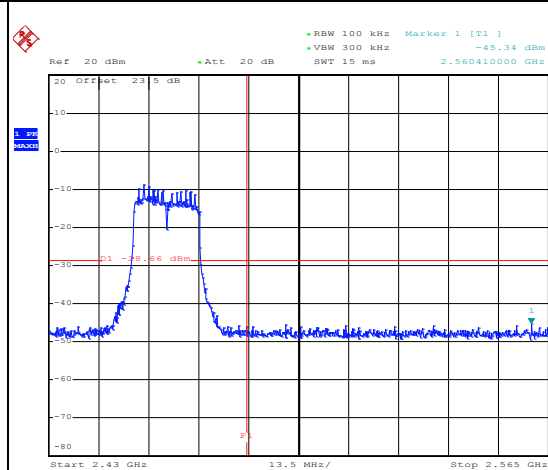
Date: 8.JAN.2016 23:05:57



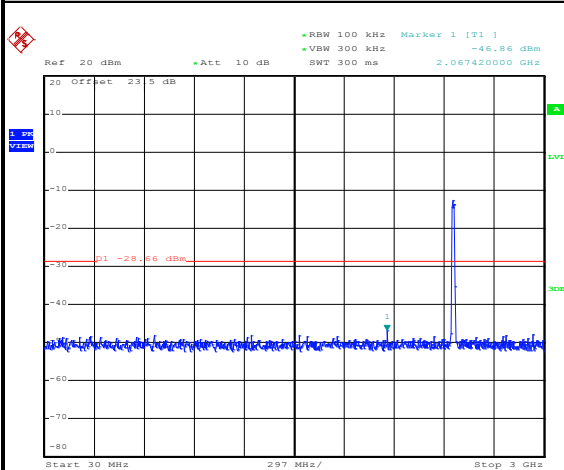
Number of TX :	2	Ant. :	1
Test Mode :	802.11ac VHT20	Temperature :	23~24°C
Test Band :	2.4GHz High	Relative Humidity :	52~53%
Test Channel :	11	Test Engineer :	Osolemio Chang

WLAN 802.11ac VHT20 Channel 11**100kHz PSD reference Level**

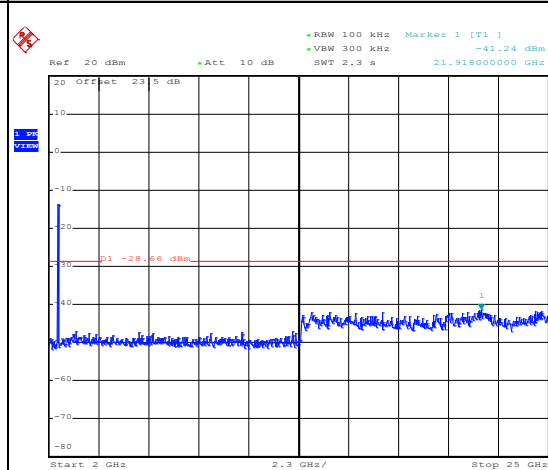
Date: 22.JAN.2016 00:24:41

High Channel Plot

Date: 22.JAN.2016 00:25:24

Spurious Emission 30MHz~3GHz

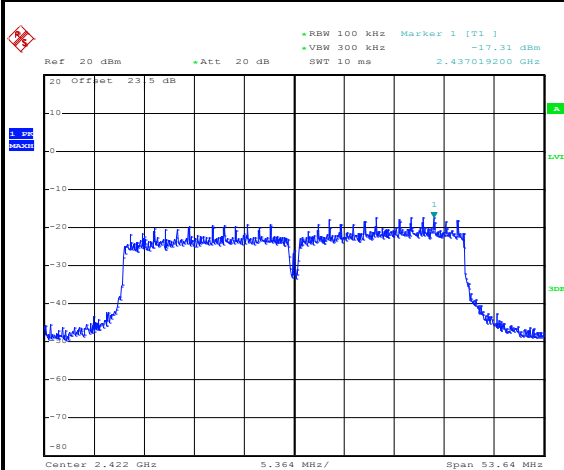
Date: 22.JAN.2016 00:26:01

Spurious Emission 2GHz~25GHz

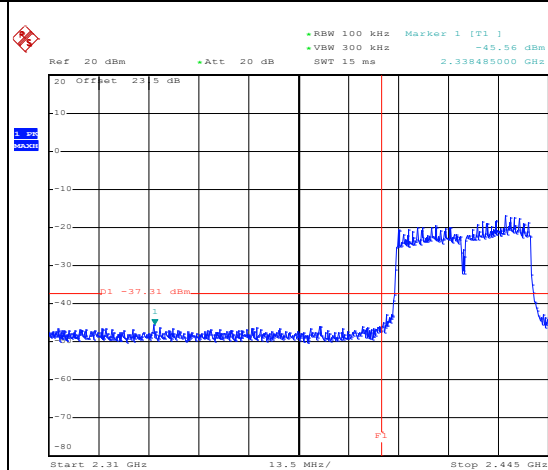
Date: 22.JAN.2016 00:26:10



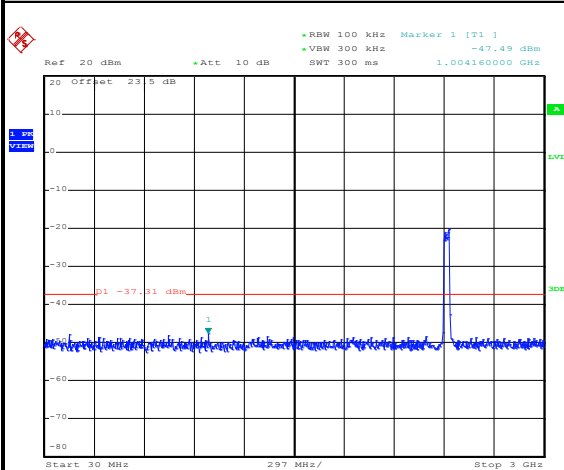
Number of TX :	2	Ant. :	1
Test Mode :	802.11ac VHT40	Temperature :	23~24°C
Test Band :	2.4GHz Low	Relative Humidity :	52~53%
Test Channel :	03	Test Engineer :	Osolemio Chang

WLAN 802.11ac VHT40 Channel 03**100kHz PSD reference Level**

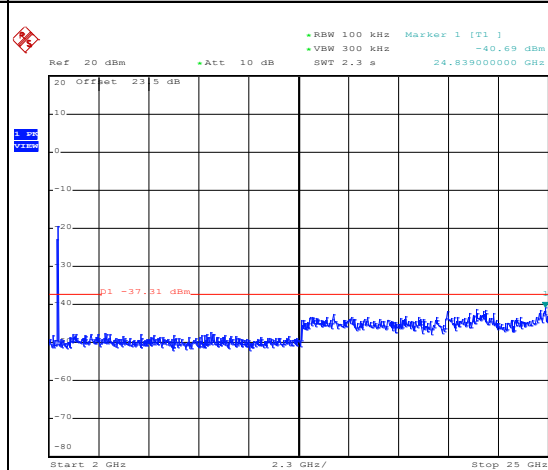
Date: 25.JAN.2016 18:12:09

Low Channel Plot

Date: 25.JAN.2016 18:12:27

Spurious Emission 30MHz~3GHz

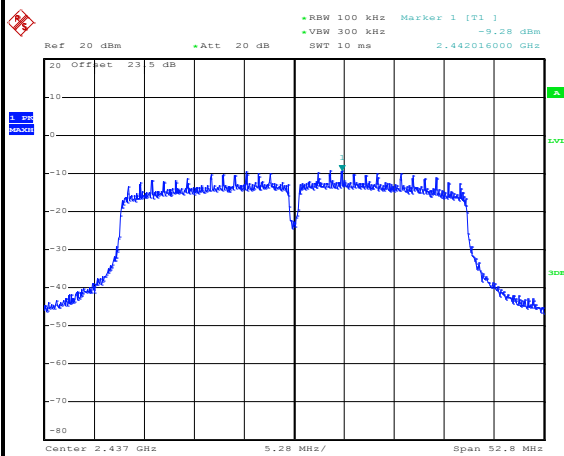
Date: 25.JAN.2016 18:13:19

Spurious Emission 2GHz~25GHz

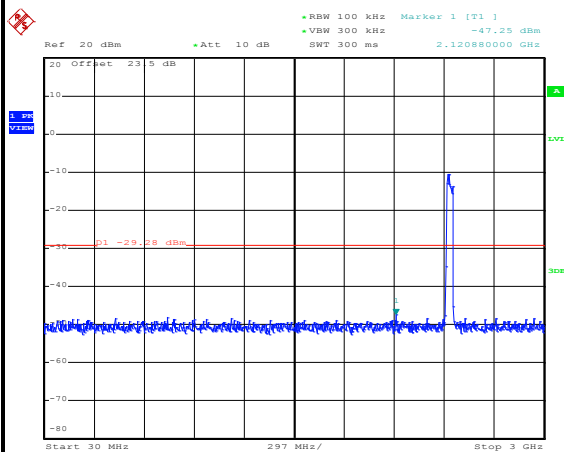
Date: 25.JAN.2016 18:13:28



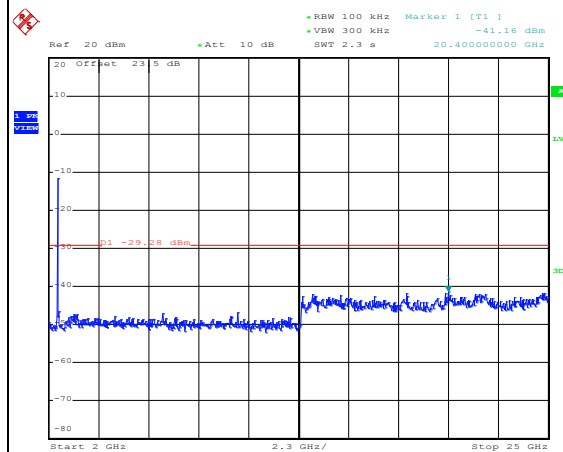
Number of TX :	2	Ant. :	1
Test Mode :	802.11ac VHT40	Temperature :	23~24°C
Test Band :	2.4GHz Mid	Relative Humidity :	52~53%
Test Channel :	06	Test Engineer :	Osolemio Chang

WLAN 802.11ac VHT40 Channel 06**100kHz PSD reference Level**

Date: 22.JAN.2016 00:49:03

Spurious Emission 30MHz~3GHz

Date: 22.JAN.2016 00:49:26

Spurious Emission 2GHz~25GHz

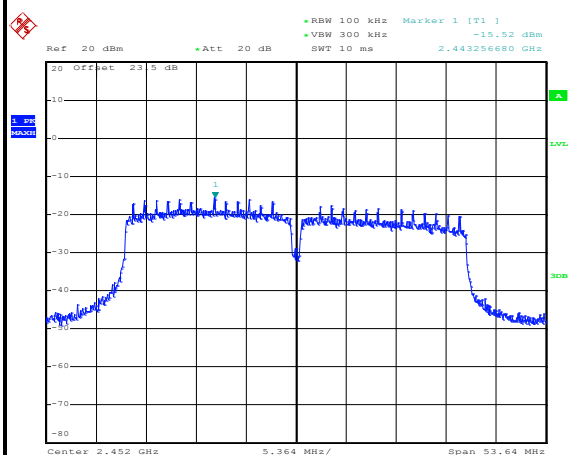
Date: 22.JAN.2016 00:49:35



Number of TX :	2	Ant. :	1
Test Mode :	802.11ac VHT40	Temperature :	23~24°C
Test Band :	2.4GHz High	Relative Humidity :	52~53%
Test Channel :	09	Test Engineer :	Osolemio Chang

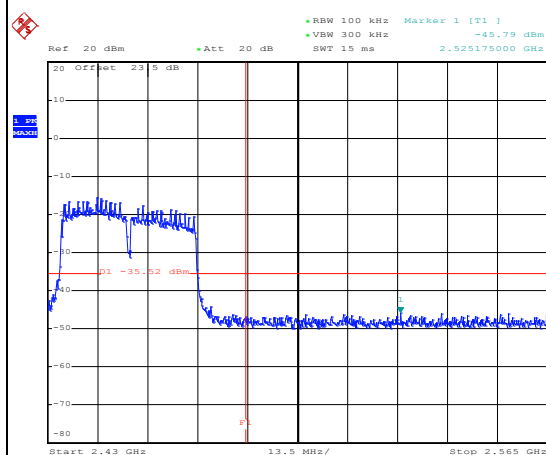
WLAN 802.11ac VHT40 Channel 09

100kHz PSD reference Level



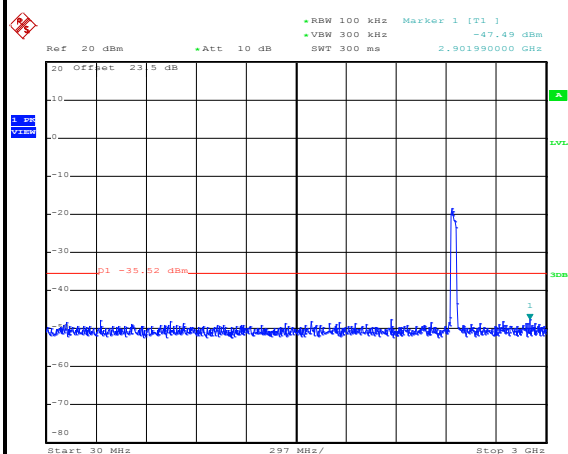
Date: 22.JAN.2016 00:58:57

High Channel Plot



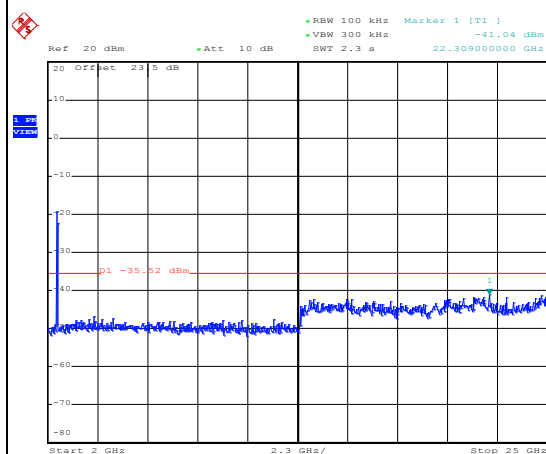
Date: 22.JAN.2016 00:59:16

Spurious Emission 30MHz~3GHz



Date: 22.JAN.2016 01:00:13

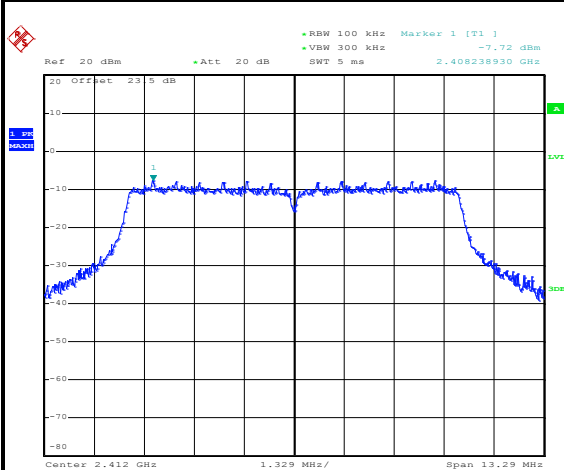
Spurious Emission 2GHz~25GHz



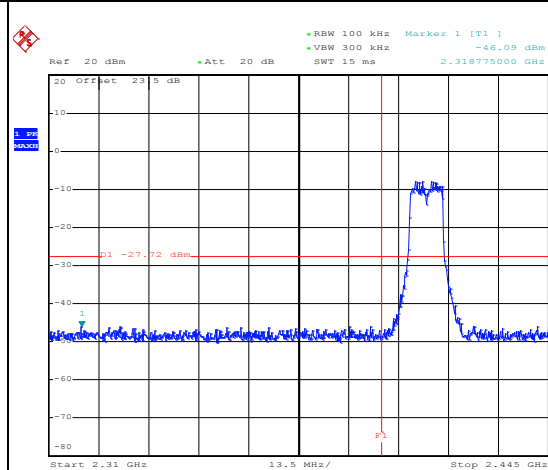
Date: 22.JAN.2016 01:00:21

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

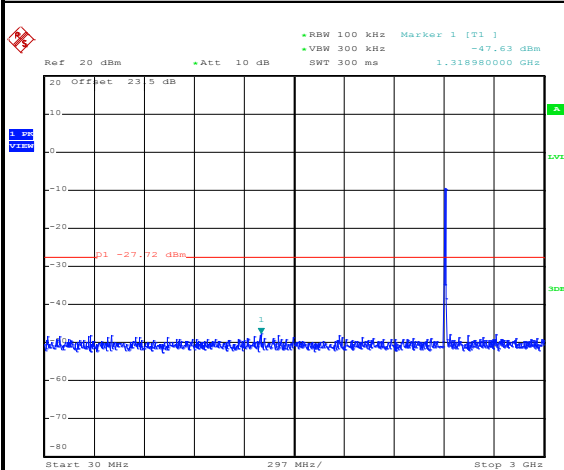
Number of TX :	2	Ant. :	2
Test Mode :	802.11ac VHT20 (10MHz)	Temperature :	23~24°C
Test Band :	2.4GHz Low	Relative Humidity :	52~53%
Test Channel :	01	Test Engineer :	Osolemio Chang

WLAN 802.11ac VHT20 (10MHz) Channel 01**100kHz PSD reference Level**

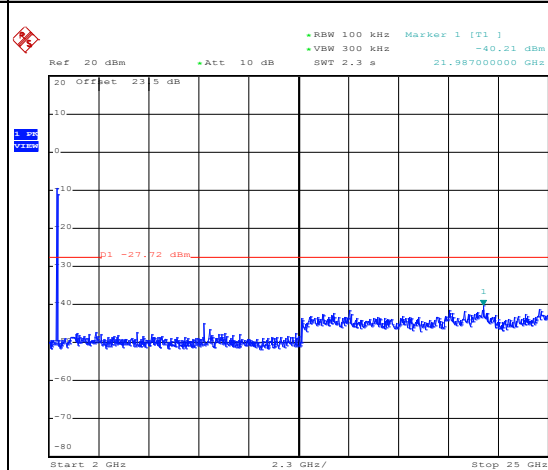
Date: 22.JAN.2016 00:05:12

Low Channel Plot

Date: 22.JAN.2016 00:05:32

Spurious Emission 30MHz~3GHz

Date: 22.JAN.2016 00:05:45

Spurious Emission 2GHz~25GHz

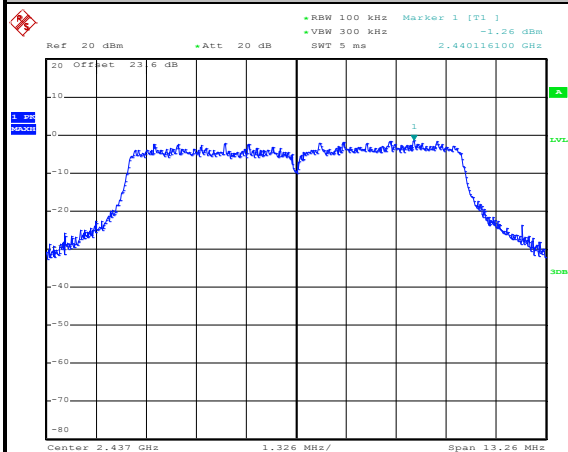
Date: 22.JAN.2016 00:05:53



Number of TX :	2	Ant. :	2
Test Mode :	802.11ac VHT20 (10MHz)	Temperature :	23~24°C
Test Band :	2.4GHz Mid	Relative Humidity :	52~53%
Test Channel :	06	Test Engineer :	Osolemio Chang

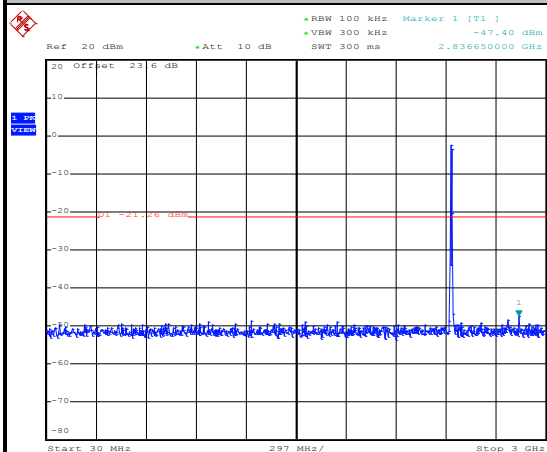
WLAN 802.11ac VHT20 (10MHz) Channel 06

100kHz PSD reference Level



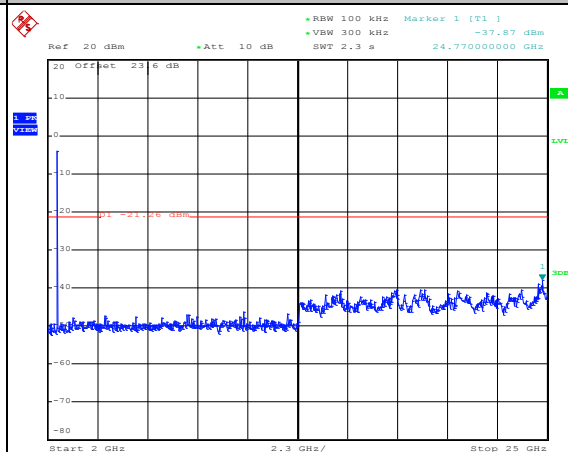
Date: 8.JAN.2016 22:44:06

Spurious Emission 30MHz~3GHz



Date: 8.JAN.2016 22:46:06

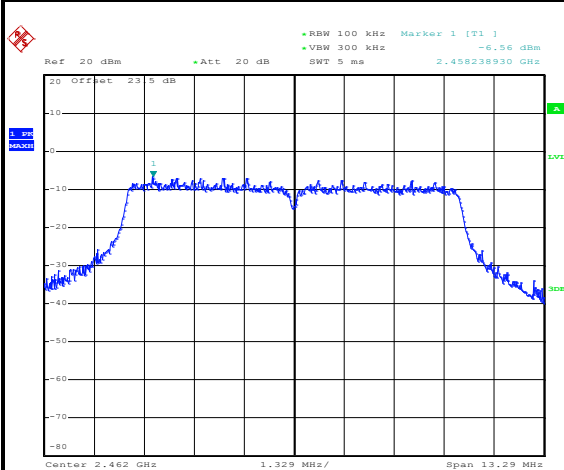
Spurious Emission 2GHz~25GHz



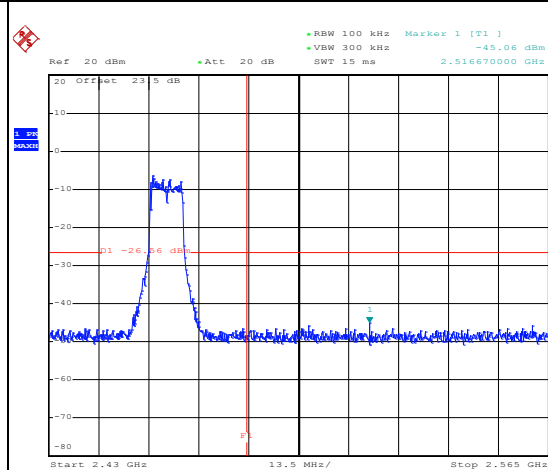
Date: 8.JAN.2016 22:46:15



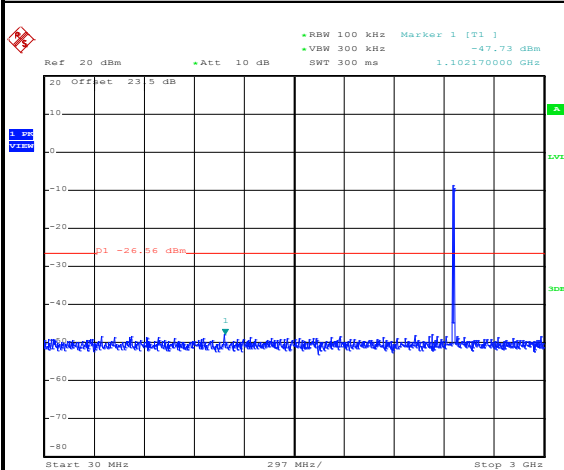
Number of TX :	2	Ant. :	2
Test Mode :	802.11ac VHT20 (10MHz)	Temperature :	23~24°C
Test Band :	2.4GHz High	Relative Humidity :	52~53%
Test Channel :	11	Test Engineer :	Osolemio Chang

WLAN 802.11ac VHT20 (10MHz) Channel 11**100kHz PSD reference Level**

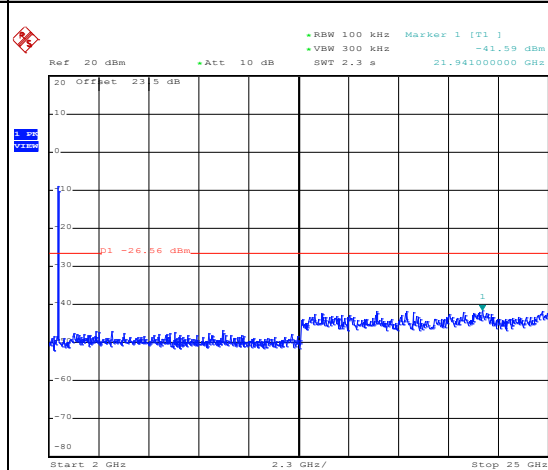
Date: 22.JAN.2016 00:01:48

High Channel Plot

Date: 22.JAN.2016 00:02:01

Spurious Emission 30MHz~3GHz

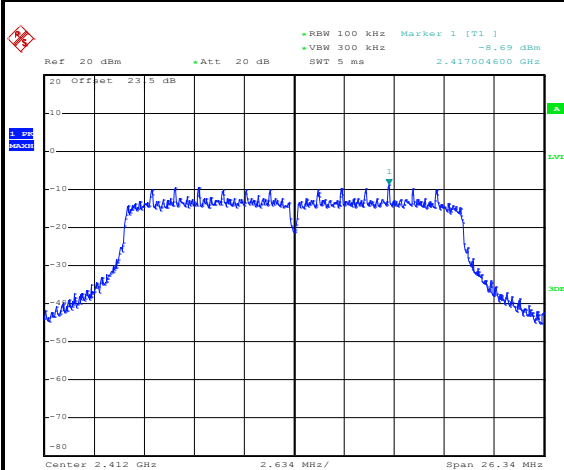
Date: 22.JAN.2016 00:02:14

Spurious Emission 2GHz~25GHz

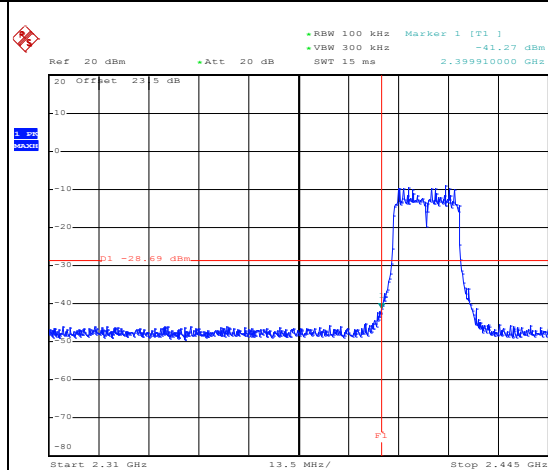
Date: 22.JAN.2016 00:02:23



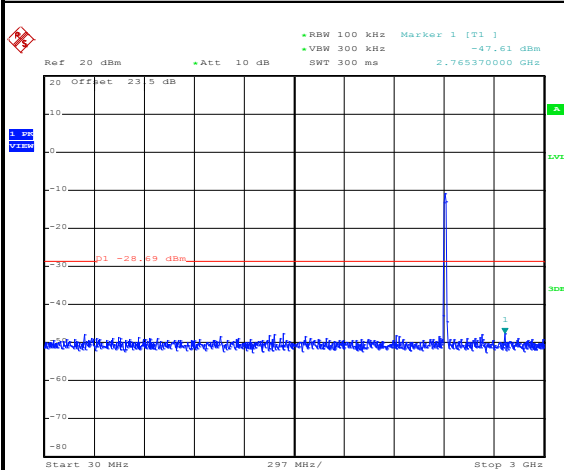
Number of TX :	2	Ant. :	2
Test Mode :	802.11ac VHT20	Temperature :	23~24°C
Test Band :	2.4GHz Low	Relative Humidity :	52~53%
Test Channel :	01	Test Engineer :	Osolemio Chang

WLAN 802.11ac VHT20 Channel 01**100kHz PSD reference Level**

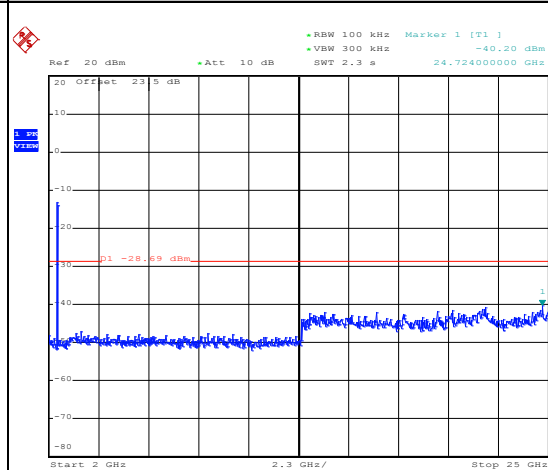
Date: 22.JAN.2016 00:19:05

Low Channel Plot

Date: 22.JAN.2016 00:20:16

Spurious Emission 30MHz~3GHz

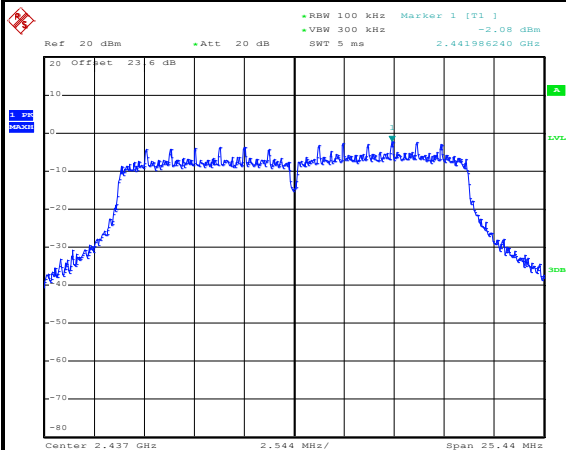
Date: 22.JAN.2016 00:20:38

Spurious Emission 2GHz~25GHz

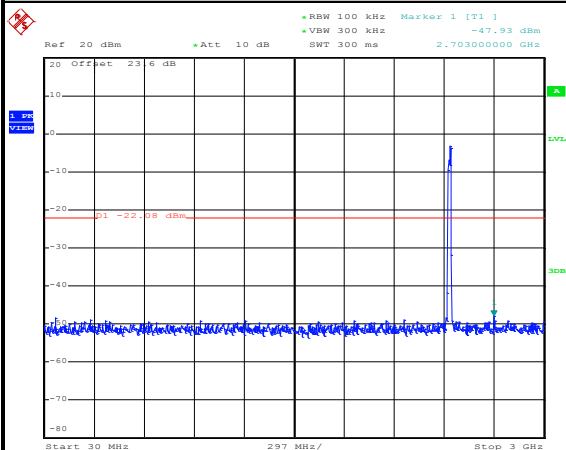
Date: 22.JAN.2016 00:20:47



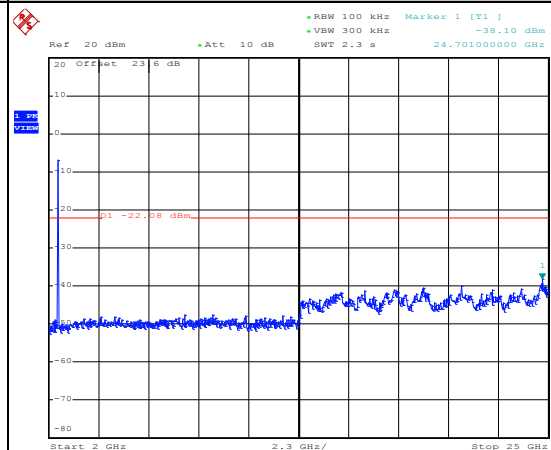
Number of TX :	2	Ant. :	2
Test Mode :	802.11ac VHT20	Temperature :	23~24°C
Test Band :	2.4GHz Mid	Relative Humidity :	52~53%
Test Channel :	06	Test Engineer :	Osolemio Chang

WLAN 802.11ac VHT20 Channel 06**100kHz PSD reference Level**

Date: 8.JAN.2016 23:28:26

Spurious Emission 30MHz~3GHz

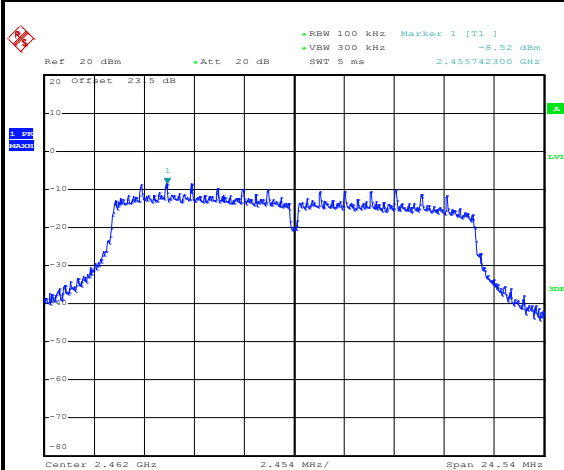
Date: 8.JAN.2016 23:28:44

Spurious Emission 2GHz~25GHz

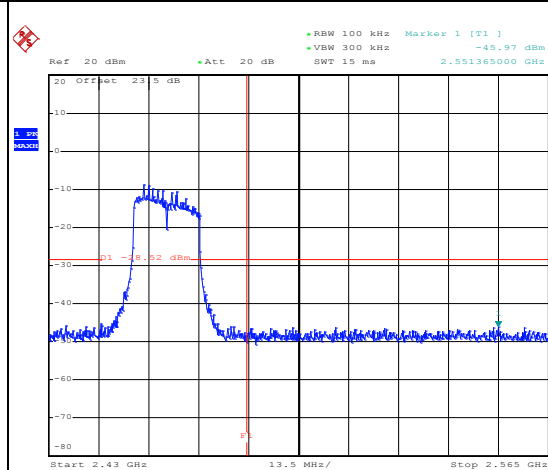
Date: 8.JAN.2016 23:28:52



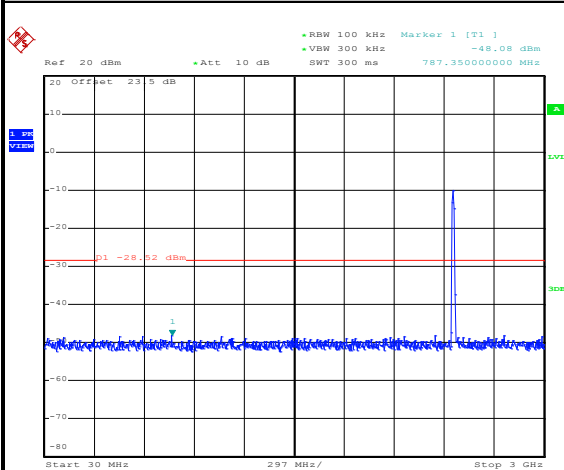
Number of TX :	2	Ant. :	2
Test Mode :	802.11ac VHT20	Temperature :	23~24°C
Test Band :	2.4GHz High	Relative Humidity :	52~53%
Test Channel :	11	Test Engineer :	Osolemio Chang

WLAN 802.11ac VHT20 Channel 11**100kHz PSD reference Level**

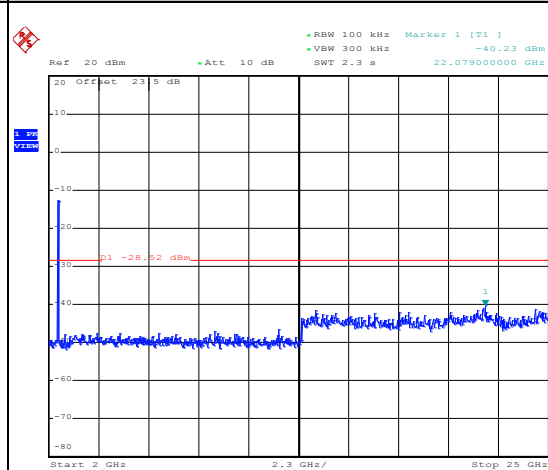
Date: 22.JAN.2016 00:29:49

High Channel Plot

Date: 22.JAN.2016 00:30:51

Spurious Emission 30MHz~3GHz

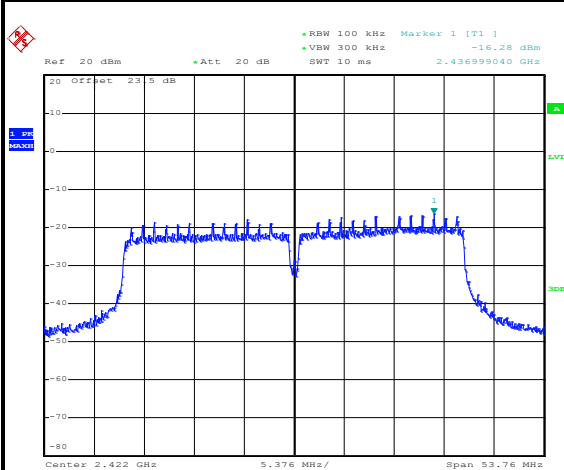
Date: 22.JAN.2016 00:31:13

Spurious Emission 2GHz~25GHz

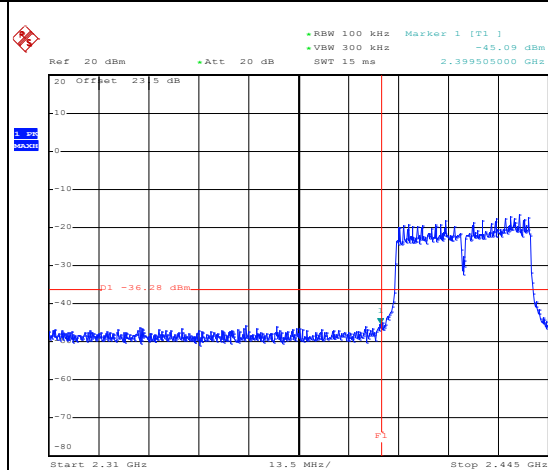
Date: 22.JAN.2016 00:31:21



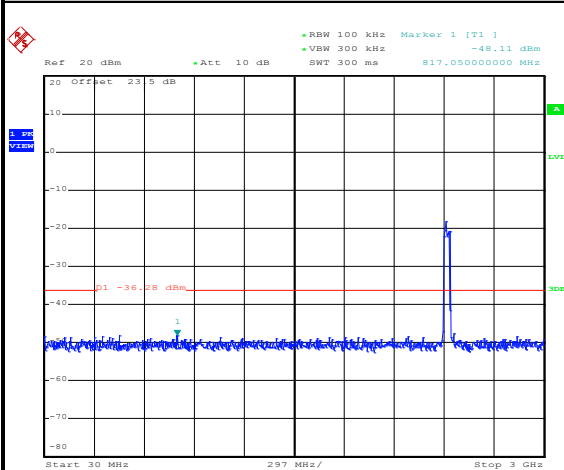
Number of TX :	2	Ant. :	2
Test Mode :	802.11ac VHT40	Temperature :	23~24°C
Test Band :	2.4GHz Low	Relative Humidity :	52~53%
Test Channel :	03	Test Engineer :	Osolemio Chang

WLAN 802.11ac VHT40 Channel 03**100kHz PSD reference Level**

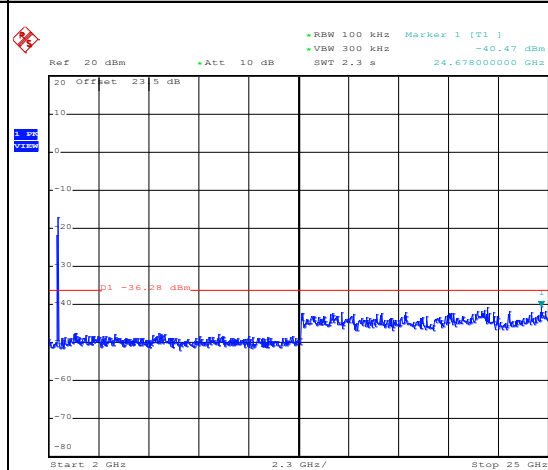
Date: 22.JAN.2016 00:43:25

Low Channel Plot

Date: 22.JAN.2016 00:44:25

Spurious Emission 30MHz~3GHz

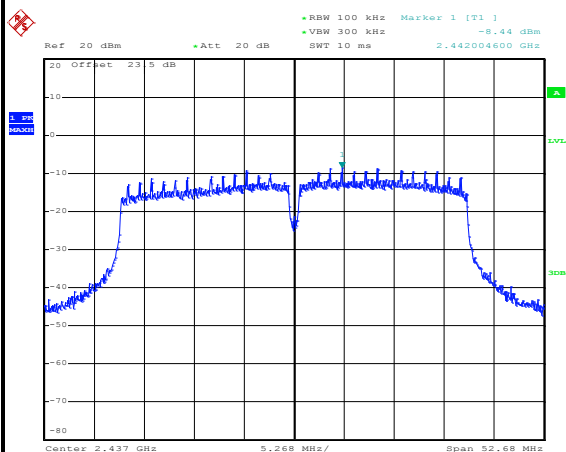
Date: 22.JAN.2016 00:44:39

Spurious Emission 2GHz~25GHz

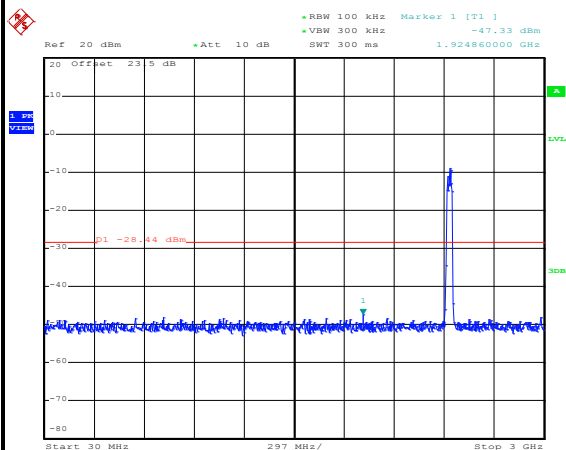
Date: 22.JAN.2016 00:44:47



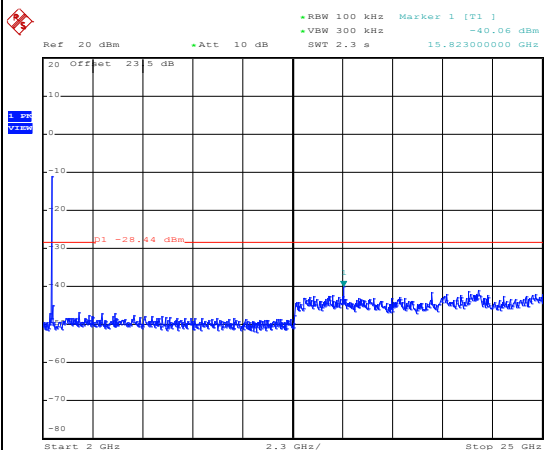
Number of TX :	2	Ant. :	2
Test Mode :	802.11ac VHT40	Temperature :	23~24°C
Test Band :	2.4GHz Mid	Relative Humidity :	52~53%
Test Channel :	06	Test Engineer :	Osolemio Chang

WLAN 802.11ac VHT40 Channel 06**100kHz PSD reference Level**

Date: 22.JAN.2016 00:53:05

Spurious Emission 30MHz~3GHz

Date: 22.JAN.2016 00:53:45

Spurious Emission 2GHz~25GHz

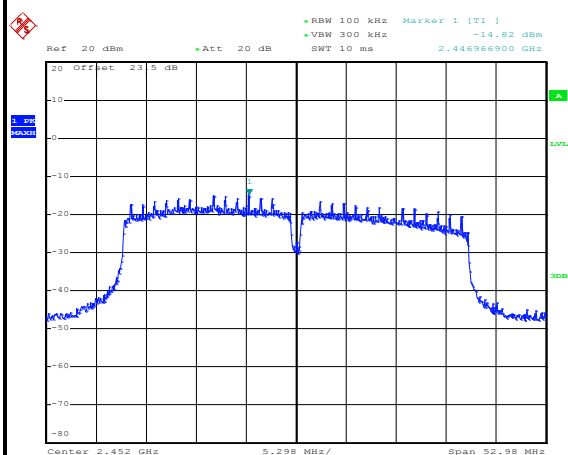
Date: 22.JAN.2016 00:53:54



Number of TX :	2	Ant. :	2
Test Mode :	802.11ac VHT40	Temperature :	23~24°C
Test Band :	2.4GHz High	Relative Humidity :	52~53%
Test Channel :	09	Test Engineer :	Osolemio Chang

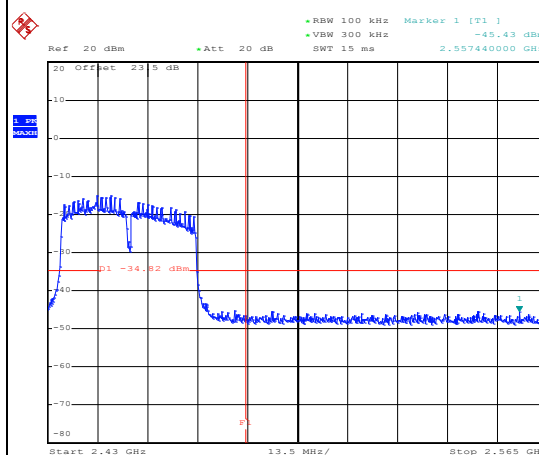
WLAN 802.11ac VHT40 Channel 09

100kHz PSD reference Level



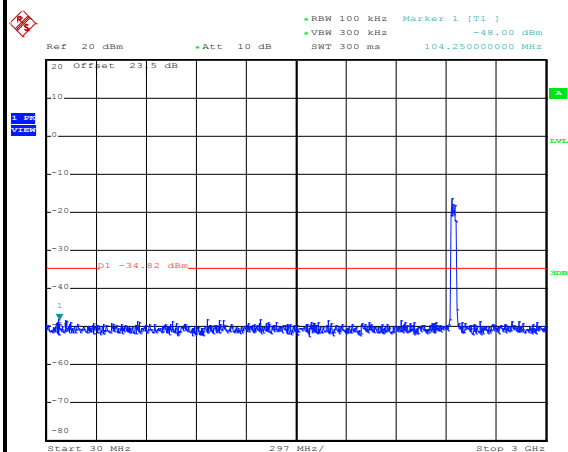
Date: 22.JAN.2016 01:03:52

High Channel Plot



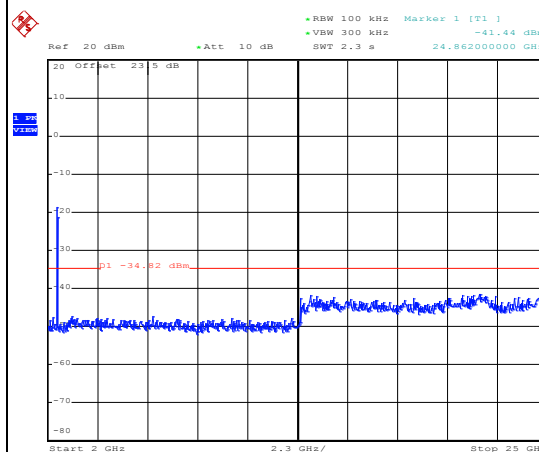
Date: 22.JAN.2016 01:04:37

Spurious Emission 30MHz~3GHz



Date: 22.JAN.2016 01:07:08

Spurious Emission 2GHz~25GHz



Date: 22.JAN.2016 01:07:16

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.

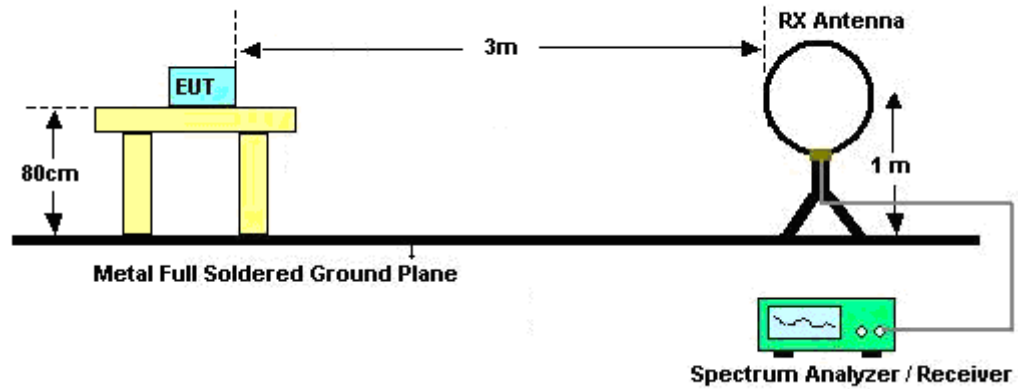
3.5.3 Test Procedure

1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r03.
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 $f < 1 \text{ GHz}$; $\text{VBW} \geq \text{RBW}$; Sweep = auto; Detector function = peak; Trace = max hold;
 - (3) Set RBW = 1 MHz, VBW= 3MHz for $f \geq 1 \text{ GHz}$ for peak measurement.
For average measurement:
 - $\text{VBW} = 10 \text{ Hz}$, when duty cycle is no less than 98 percent.
 - $\text{VBW} \geq 1/T$, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

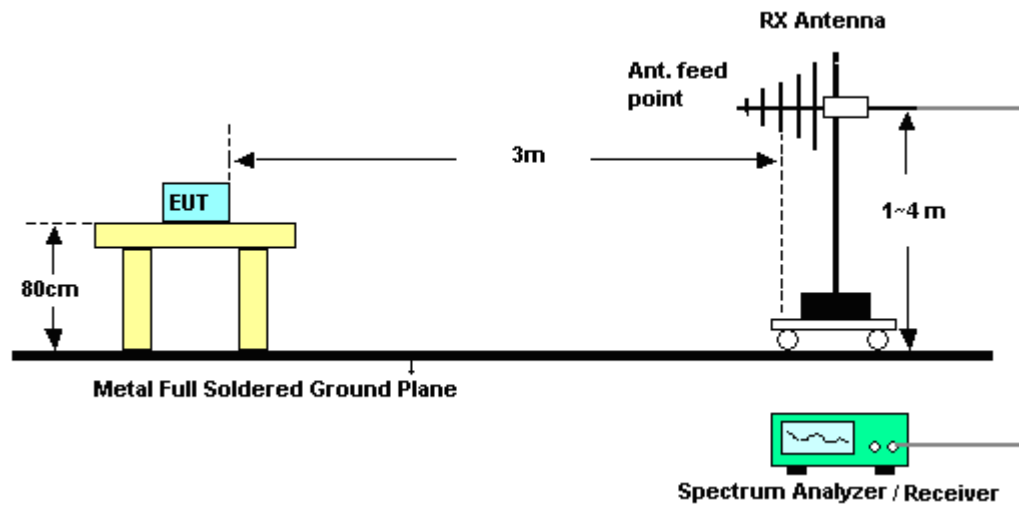
Antenna	Band	Duty Cycle (%)	T(us)	1/T(kHz)	VBW Setting
1+2	2.4GHz 802.11ac20 (10MHz) for Ant 1	96.51	2546.4	0.39	1kHz
1+2	2.4GHz 802.11ac20 (10MHz) for Ant 2	95.49	2540.0	0.39	
1+2	2.4GHz 802.11ac20 for Ant 1	94.03	1260.0	0.79	
1+2	2.4GHz 802.11ac20 for Ant 2	94.03	1260.0	0.79	
1+2	2.4GHz 802.11ac40 for Ant 1	90.00	630.0	1.59	3kHz
1+2	2.4GHz 802.11ac40 for Ant 2	90.14	640.0	1.56	

3.5.4 Test Setup

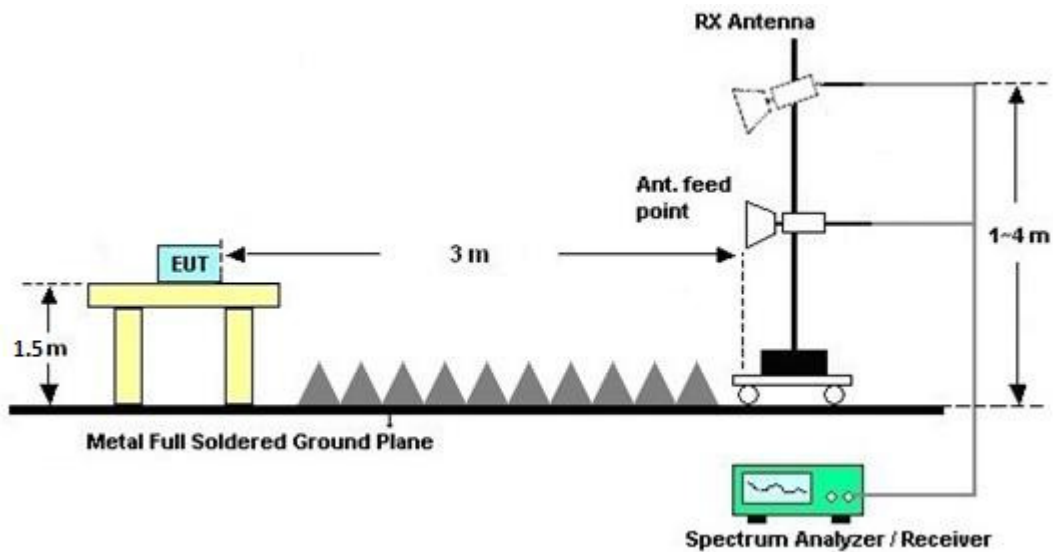
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



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

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.

3.5.6 Test Result of Radiated Spurious at Band Edges

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

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

Please refer to Appendix B and Appendix C of this 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 (dBuV)	
	Quasi-peak	Average
0.15-0.5	79	66
0.5-30	73	60

*Decreases with the logarithm of the frequency.

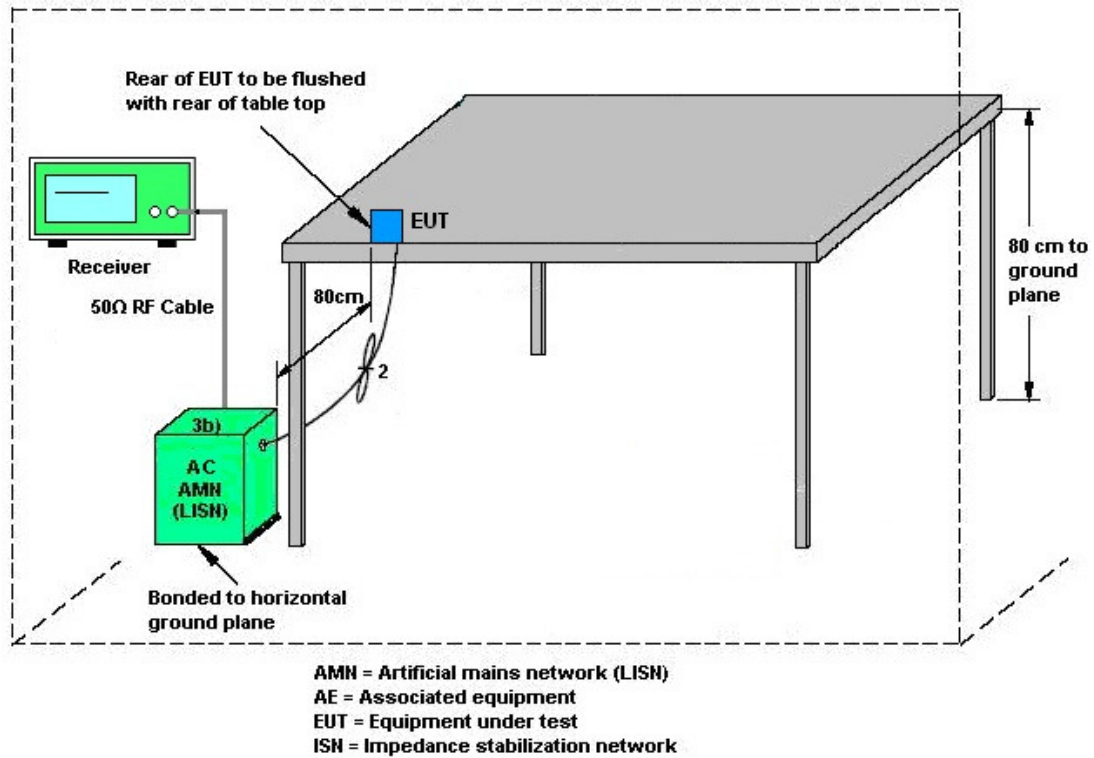
3.6.2 Measuring Instruments

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

3.6.3 Test Procedures

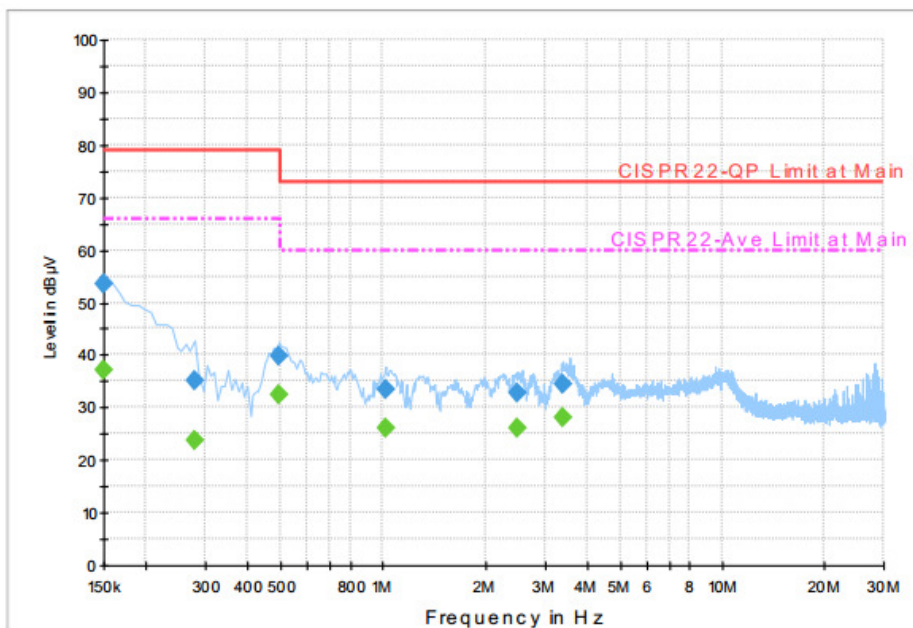
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF bandwidth = 9kHz) with Maximum Hold Mode.

3.6.4 Test Setup



3.6.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1	Temperature :	24~25°C
Test Engineer :	Kai-Chun Chu	Relative Humidity :	58~59%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	WLAN Idle + PoE + LAN Link for Sample 1		



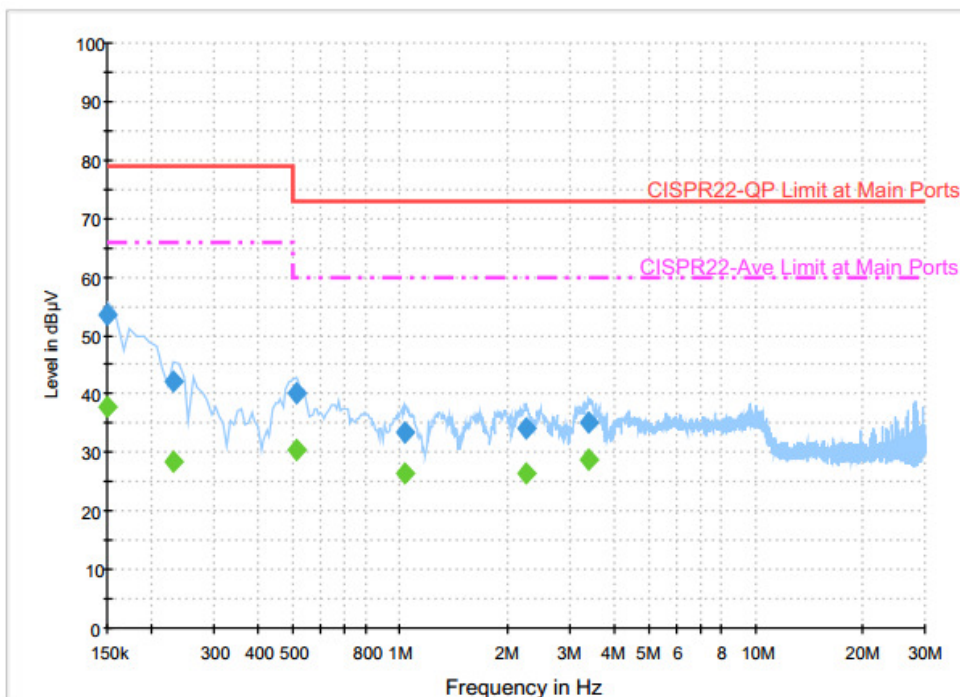
Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	53.4	Off	L1	19.7	25.6	79.0
0.278000	35.3	Off	L1	19.7	43.7	79.0
0.494000	39.7	Off	L1	19.6	39.3	79.0
1.014000	33.5	Off	L1	19.7	39.5	73.0
2.478000	32.9	Off	L1	19.6	40.1	73.0
3.414000	34.6	Off	L1	19.7	38.4	73.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	37.2	Off	L1	19.7	28.8	66.0
0.278000	23.8	Off	L1	19.7	42.2	66.0
0.494000	32.6	Off	L1	19.6	33.4	66.0
1.014000	26.0	Off	L1	19.7	34.0	60.0
2.478000	26.2	Off	L1	19.6	33.8	60.0
3.414000	28.1	Off	L1	19.7	31.9	60.0

Test Mode :	Mode 1	Temperature :	24~25°C
Test Engineer :	Kai-Chun Chu	Relative Humidity :	58~59%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	WLAN Idle + PoE + LAN Link for Sample 1		


Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.150000	53.7	Off	N	19.7	25.3	79.0
0.230000	42.0	Off	N	19.7	37.0	79.0
0.510000	40.0	Off	N	19.7	33.0	73.0
1.038000	33.5	Off	N	19.7	39.5	73.0
2.270000	34.0	Off	N	19.7	39.0	73.0
3.390000	35.2	Off	N	19.7	37.8	73.0

Final Result : Average

Frequency (MHz)	Average (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.150000	37.9	Off	N	19.7	28.1	66.0
0.230000	28.5	Off	N	19.7	37.5	66.0
0.510000	30.5	Off	N	19.7	29.5	60.0
1.038000	26.5	Off	N	19.7	33.5	60.0
2.270000	26.6	Off	N	19.7	33.4	60.0
3.390000	28.6	Off	N	19.7	31.4	60.0

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 = $G_{ANT} + \text{Array Gain}$, 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 $N_{ANT} \leq 4$.

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.

			DG	DG	Power	PSD
			for	for	Limit	Limit
	Ant. 1	Ant. 2	Power	PSD	Reduction	Reduction
	(dBi)	(dBi)	(dBi)	(dBi)	(dB)	(dB)
2.4 GHz	18.00	18.00	18.00	21.01	12.00	15.01

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

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



4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Power Meter	Anritsu	ML2495A	1132003	300MHz~40GHz	Aug. 12, 2015	Oct. 05, 2015 ~ Jan. 25, 2016	Aug. 11, 2016	Conducted (TH05-HY)
Power Sensor	Anritsu	MA2411B	1126017	300MHz~40GHz	Aug. 12, 2015	Oct. 05, 2015 ~ Jan. 25, 2016	Aug. 11, 2016	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100055	9kHz~40GHz	Jun. 18, 2015	Oct. 05, 2015 ~ Jan. 25, 2016	Jun. 17, 2016	Conducted (TH05-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Dec. 31, 2015	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESCI 7	100724	9kHz~7GHz	Aug. 26, 2015	Dec. 31, 2015	Aug. 25, 2016	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Dec. 02, 2015	Dec. 31, 2015	Dec. 01, 2016	Conduction (CO05-HY)
Bilog Antenna	Schaffner	CBL6111C	2725	30MHz~1GHz	Nov. 17, 2015	Jan. 19, 2016 ~ Jan. 24, 2016	Nov. 16, 2016	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	00075962	1GHz ~ 18GHz	Aug. 21, 2015	Jan. 19, 2016 ~ Jan. 24, 2016	Aug. 20, 2016	Radiation (03CH07-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	Sep. 02, 2015	Jan. 19, 2016 ~ Jan. 24, 2016	Sep. 01, 2016	Radiation (03CH07-HY)
Preamplifier	MITEQ	AMF-7D-0010 1800-30-10P	1590075	1GHz ~ 18GHz	Apr. 20, 2015	Jan. 19, 2016 ~ Jan. 24, 2016	Apr. 19, 2016	Radiation (03CH07-HY)
Preamplifier	COM-POWER	PA-103A	161241	10MHz-1000MHz	Mar. 12, 2015	Jan. 19, 2016 ~ Jan. 24, 2016	Mar. 11, 2016	Radiation (03CH07-HY)
Preamplifier	Agilent	8449B	3008A023 62	1GHz~ 26.5GHz	Oct. 19, 2015	Jan. 19, 2016 ~ Jan. 24, 2016	Oct. 18, 2016	Radiation (03CH07-HY)
Spectrum Analyzer	Agilent	N9010A	MY534701 18	10Hz~44GHz	Mar. 03, 2015	Jan. 19, 2016 ~ Jan. 24, 2016	Mar. 02, 2016	Radiation (03CH07-HY)
Antenna Mast	Max-Full	MFA520BS	N/A	1m~4m	N/A	Jan. 19, 2016 ~ Jan. 24, 2016	N/A	Radiation (03CH07-HY)
Turn Table	ChainTek	Chaintek 3000	N/A	0~360 degree	N/A	Jan. 19, 2016 ~ Jan. 24, 2016	N/A	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170 576	18GHz ~ 40GHz	Apr. 20, 2015	Jan. 19, 2016 ~ Jan. 24, 2016	Apr. 19, 2016	Radiation (03CH07-HY)
Preamplifier	MITEQ	JS44-180040 00-33-8P	1840917	18GHz ~ 40GHz	Jun. 02, 2015	Jan. 19, 2016 ~ Jan. 24, 2016	Jun. 01, 2016	Radiation (03CH07-HY)



5 Uncertainty of Evaluation

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

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

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.8
---	-----



Appendix A. Conducted Test Results

<PTP>

Report Number : FR581007

Test Engineer:	Osolemio Chang	Temperature:	23~24	°C
Test Date:	2015/10/05/~2016/01/25	Relative Humidity:	52~53	%

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		
T20 (10)	MCS0	2	1	2412	10.28	10.23	8.86	8.86	0.50	Pass
T20 (10)	MCS0	2	6	2437	10.28	10.30	8.85	8.82	0.50	Pass
T20 (10)	MCS0	2	11	2462	10.28	10.28	8.84	8.86	0.50	Pass
VHT20	MCS0	2	1	2412	18.65	18.60	17.60	17.56	0.50	Pass
VHT20	MCS0	2	6	2437	18.40	18.60	17.58	16.93	0.50	Pass
VHT20	MCS0	2	11	2462	18.65	18.65	17.26	16.36	0.50	Pass
VHT40	MCS0	2	3	2422	37.10	37.20	35.76	35.84	0.50	Pass
VHT40	MCS0	2	6	2437	36.40	36.50	35.20	35.12	0.50	Pass
VHT40	MCS0	2	9	2452	36.80	36.40	35.76	35.32	0.50	Pass

TEST RESULTS DATA
Peak Output Power

2.4GHz Band																
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Peak Conducted Power (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)				Pass /Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2			
T20 (10)	MCS0	2	1	2412	8.53	8.81	11.68	26.00		18.00		29.68				Pass
T20 (10)	MCS0	2	6	2437	20.85	21.31	24.10	26.00		18.00		42.10				Pass
T20 (10)	MCS0	2	11	2462	9.47	9.35	12.42	26.00		18.00		30.42				Pass
VHT20	MCS0	2	1	2412	8.13	8.27	11.21	26.00		18.00		29.21				Pass
VHT20	MCS0	2	6	2437	22.86	22.78	25.83	26.00		18.00		43.83				Pass
VHT20	MCS0	2	11	2462	8.09	8.42	11.27	26.00		18.00		29.27				Pass
VHT40	MCS0	2	3	2422	4.00	3.89	6.96	26.00		18.00		24.96				Pass
VHT40	MCS0	2	6	2437	11.03	11.13	14.09	26.00		18.00		32.09				Pass
VHT40	MCS0	2	9	2452	11.03	4.93	7.81	26.00		18.00		25.81				Pass

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

TEST RESULTS DATA
Average Output Power

2.4GHz Band									
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)		
					Ant 1	Ant 2	Ant 1	Ant 2	SUM
T20 (10)	MCS0	2	1	2412	0.15	0.20	2.14	2.28	5.22
T20 (10)	MCS0	2	6	2437	0.15	0.20	14.79	2.28	18.08
T20 (10)	MCS0	2	11	2462	0.15	0.20	3.27	2.28	6.19
VHT20	MCS0	2	1	2412	0.27	0.27	1.62	1.79	4.71
VHT20	MCS0	2	6	2437	0.27	0.27	16.38	1.79	19.47
VHT20	MCS0	2	11	2462	0.27	0.27	1.52	1.79	4.64
VHT40	MCS0	2	3	2422	0.46	0.45	-3.88	-4.01	-0.94
VHT40	MCS0	2	6	2437	0.46	0.45	4.21	4.49	7.36
VHT40	MCS0	2	9	2452	0.46	0.45	-2.91	-2.69	0.21

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

TEST RESULTS DATA
Peak Power Spectral Density

2.4GHz Band												
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	Peak PSD (dBm/3kHz)			DG (dBi)		Peak PSD Limit (dBm/3kHz)		Pass/Fail
					Ant 1	Ant 2	Worse + 3.01	Ant 1	Ant 2	Ant 1	Ant 2	
T20 (10)	MCS0	2	1	2412	-19.89	-19.75	-16.74	21.01		3.00		Pass
T20 (10)	MCS0	2	6	2437	-7.76	-6.99	-3.98	21.01		3.00		Pass
T20 (10)	MCS0	2	11	2462	-19.57	-18.84	-15.83	21.01		3.00		Pass
VHT20	MCS0	2	1	2412	-23.44	-23.23	-20.22	21.01		3.00		Pass
VHT20	MCS0	2	6	2437	-9.38	-8.77	-5.76	21.01		3.00		Pass
VHT20	MCS0	2	11	2462	-22.91	-23.26	-19.90	21.01		3.00		Pass
VHT40	MCS0	2	3	2422	-31.02	-31.16	-28.01	21.01		3.00		Pass
VHT40	MCS0	2	6	2437	-23.98	-23.48	-20.47	21.01		3.00		Pass
VHT40	MCS0	2	9	2452	-28.70	-27.92	-24.91	21.01		3.00		Pass

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



<PTMP>

Report Number : FR581007

Test Engineer:	Osolemio Chang	Temperature:	23~24	°C
Test Date:	2015/10/05~2016/01/25	Relative Humidity:	52~53	%

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		
T20 (10)	MCS0	2	1	2412	10.28	10.23	8.86	8.86	0.50	Pass
T20 (10)	MCS0	2	6	2437	10.30	10.33	8.86	8.84	0.50	Pass
T20 (10)	MCS0	2	11	2462	10.28	10.28	8.84	8.86	0.50	Pass
VHT20	MCS0	2	1	2412	18.65	18.60	17.60	17.56	0.50	Pass
VHT20	MCS0	2	6	2437	18.65	18.55	17.32	16.96	0.50	Pass
VHT20	MCS0	2	11	2462	18.65	18.65	17.26	16.36	0.50	Pass
VHT40	MCS0	2	3	2422	37.10	37.20	35.76	35.84	0.50	Pass
VHT40	MCS0	2	6	2437	36.40	36.50	35.20	35.12	0.50	Pass
VHT40	MCS0	2	9	2452	36.80	36.40	35.76	35.32	0.50	Pass

TEST RESULTS DATA
Peak Output Power

2.4GHz Band																
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Peak Conducted Power (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	
T20 (10)	MCS0	2	1	2412	8.53	8.81	11.68	18.00		18.00		29.68		36.00		Pass
T20 (10)	MCS0	2	6	2437	14.62	14.59	17.62	18.00		18.00		35.62		36.00		Pass
T20 (10)	MCS0	2	11	2462	9.47	9.35	12.42	18.00		18.00		30.42		36.00		Pass
VHT20	MCS0	2	1	2412	8.13	8.27	11.21	18.00		18.00		29.21		36.00		Pass
VHT20	MCS0	2	6	2437	14.75	14.60	17.69	18.00		18.00		35.69		36.00		Pass
VHT20	MCS0	2	11	2462	8.09	8.42	11.27	18.00		18.00		29.27		36.00		Pass
VHT40	MCS0	2	3	2422	4.00	3.89	6.96	18.00		18.00		24.96		36.00		Pass
VHT40	MCS0	2	6	2437	11.03	11.13	14.09	18.00		18.00		32.09		36.00		Pass
VHT40	MCS0	2	9	2452	11.03	4.93	7.81	18.00		18.00		25.81		36.00		Pass

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

TEST RESULTS DATA
Average Output Power

2.4GHz Band									
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)		
					Ant 1	Ant 2	Ant 1	Ant 2	SUM
T20 (10)	MCS0	2	1	2412	0.15	0.20	2.14	2.28	5.22
T20 (10)	MCS0	2	6	2437	0.15	0.20	8.52	8.61	11.58
T20 (10)	MCS0	2	11	2462	0.15	0.20	3.27	3.08	6.19
VHT20	MCS0	2	1	2412	0.27	0.27	1.62	1.79	4.71
VHT20	MCS0	2	6	2437	0.27	0.27	8.47	1.79	11.46
VHT20	MCS0	2	11	2462	0.27	0.27	1.52	1.79	4.64
VHT40	MCS0	2	3	2422	0.46	0.45	-3.88	-4.01	-0.94
VHT40	MCS0	2	6	2437	0.46	0.45	4.21	4.49	7.36
VHT40	MCS0	2	9	2452	0.46	0.45	-2.91	-2.69	0.21

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

TEST RESULTS DATA
Peak Power Spectral Density

2.4GHz Band												
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	Peak PSD (dBm/3kHz)			DG (dBi)		Peak PSD Limit (dBm/3kHz)		Pass/Fail
					Ant 1	Ant 2	Worse + 3.01	Ant 1	Ant 2	Ant 1	Ant 2	
T20 (10)	MCS0	2	1	2412	-19.89	-19.75	-16.74	21.01		-7.01		Pass
T20 (10)	MCS0	2	6	2437	-15.87	-13.75	-10.74	21.01		-7.01		Pass
T20 (10)	MCS0	2	11	2462	-19.57	-18.84	-15.83	21.01		-7.01		Pass
VHT20	MCS0	2	1	2412	-23.44	-23.23	-20.22	21.01		-7.01		Pass
VHT20	MCS0	2	6	2437	-18.12	-16.59	-13.58	21.01		-7.01		Pass
VHT20	MCS0	2	11	2462	-22.91	-23.26	-19.90	21.01		-7.01		Pass
VHT40	MCS0	2	3	2422	-31.02	-31.16	-28.01	21.01		-7.01		Pass
VHT40	MCS0	2	6	2437	-23.98	-23.48	-20.47	21.01		-7.01		Pass
VHT40	MCS0	2	9	2452	-28.70	-27.92	-24.91	21.01		-7.01		Pass

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



Appendix B. Radiated Spurious Emission

Test Engineer :	James Chiu, Jesse Wang, and Nick Yu	Temperature :	21~23°C
		Relative Humidity :	51~58%

<Sample 1>

2.4GHz 2400~2483.5MHz

WIFI 802.11ac VHT20 (10MHz) (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)
802.11ac VHT20 (10MHz) CH 01 2412MHz		2387.58	64.18	-9.82	74	58.61	32.18	7.75	34.36	208	176	P	H
		2389.56	53.74	-0.26	54	48.17	32.18	7.75	34.36	208	176	A	H
	*	2412	119.14	-	-	113.51	32.2	7.75	34.32	208	176	P	H
	*	2412	110.1	-	-	104.47	32.2	7.75	34.32	208	176	A	H
													H
													H
		2389.2	69.28	-4.72	74	63.71	32.18	7.75	34.36	216	178	P	V
		2387.13	52.75	-1.25	54	47.18	32.18	7.75	34.36	216	178	A	V
	*	2412	117.87	-	-	112.24	32.2	7.75	34.32	216	178	P	V
	*	2412	109.03	-	-	103.4	32.2	7.75	34.32	216	178	A	V
													V
													V
802.11ac VHT20 (10MHz) CH 06 2437MHz		2385.51	62.27	-11.73	74	56.7	32.18	7.75	34.36	204	180	P	H
		2382.27	52.81	-1.19	54	47.26	32.16	7.75	34.36	204	180	A	H
	*	2437	120.08	-	-	114.28	32.24	7.83	34.27	204	180	P	H
	*	2437	110.98	-	-	105.18	32.24	7.83	34.27	204	180	A	H
		2486.56	63.61	-10.39	74	57.61	32.28	7.91	34.19	204	180	P	H
		2483.96	51.79	-2.21	54	45.79	32.28	7.91	34.19	204	180	A	H
		2389.74	62.61	-11.39	74	57.04	32.18	7.75	34.36	196	178	P	V
		2383.44	52.57	-1.43	54	47.02	32.16	7.75	34.36	196	178	A	V
	*	2437	119.16	-	-	113.36	32.24	7.83	34.27	196	178	P	V
	*	2437	110.04	-	-	104.24	32.24	7.83	34.27	196	178	A	V
		2488.52	62.21	-11.79	74	56.19	32.3	7.91	34.19	196	178	P	V
		2488.44	49.52	-4.48	54	43.5	32.3	7.91	34.19	196	178	A	V



802.11ac VHT20 (10MHz) CH 11 2462MHz	*	2462	118.86	-	-	112.92	32.26	7.91	34.23	203	177	P	H
	*	2462	110.33	-	-	104.39	32.26	7.91	34.23	203	177	A	H
		2483.84	70	-4	74	64	32.28	7.91	34.19	203	177	P	H
		2485.48	53.25	-0.75	54	47.25	32.28	7.91	34.19	203	177	A	H
													H
													H
	*	2462	117.07	-	-	111.13	32.26	7.91	34.23	200	178	P	V
	*	2462	108.11	-	-	102.17	32.26	7.91	34.23	200	178	A	V
		2483.84	68.47	-5.53	74	62.47	32.28	7.91	34.19	200	178	P	V
		2484.84	51.72	-2.28	54	45.72	32.28	7.91	34.19	200	178	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 802.11ac VHT20 (10MHz) (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)
802.11ac VHT20 (10MHz) CH 01 2412MHz		4824	40.23	-33.77	74	54.45	34.26	11.16	59.64	100	0	P	H
													H
													H
													H
		4824	40.52	-33.48	74	54.74	34.26	11.16	59.64	100	0	P	V
													V
													V
802.11ac VHT20 (10MHz) CH 06 2437MHz		4872	39.59	-34.41	74	53.65	34.3	11.21	59.57	100	0	P	H
		7308	42.05	-31.95	74	49.84	35.6	15.08	58.47	100	0	P	H
													H
													H
		4872	39.87	-34.13	74	53.93	34.3	11.21	59.57	100	0	P	V
		7308	42.32	-31.68	74	50.11	35.6	15.08	58.47	100	0	P	V
													V
802.11ac VHT20 (10MHz) CH 11 2462MHz		4926	40.32	-33.68	74	54.21	34.34	11.27	59.5	100	0	P	H
		7386	41.77	-32.23	74	49.61	35.6	15.14	58.58	100	0	P	H
													H
													H
		4926	40.61	-33.39	74	54.5	34.34	11.27	59.5	100	0	P	V
		7386	42.2	-31.8	74	50.04	35.6	15.14	58.58	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 802.11ac VHT20 (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)
802.11ac VHT20 CH 01 2412MHz		2387.94	66.14	-7.86	74	60.57	32.18	7.75	34.36	204	181	P	H
		2390	53.86	-0.14	54	48.25	32.18	7.75	34.32	204	181	A	H
	*	2412	114.25	-	-	108.62	32.2	7.75	34.32	204	181	P	H
	*	2412	106.64	-	-	101.01	32.2	7.75	34.32	204	181	A	H
													H
													H
		2384.34	63.47	-10.53	74	57.92	32.16	7.75	34.36	217	178	P	V
		2390	53.47	-0.53	54	47.86	32.18	7.75	34.32	217	178	A	V
	*	2412	114.29	-	-	108.66	32.2	7.75	34.32	217	178	P	V
	*	2412	105.99	-	-	100.36	32.2	7.75	34.32	217	178	A	V
													V
													V
802.11ac VHT20 CH 06 2437MHz		2386.86	62.2	-11.8	74	56.63	32.18	7.75	34.36	204	179	P	H
		2384.16	52.93	-1.07	54	47.38	32.16	7.75	34.36	204	179	A	H
	*	2437	116.98	-	-	111.18	32.24	7.83	34.27	204	179	P	H
	*	2437	108.67	-	-	102.87	32.24	7.83	34.27	204	179	A	H
		2485.16	60.84	-13.16	74	54.84	32.28	7.91	34.19	204	179	P	H
		2484.6	51.81	-2.19	54	45.81	32.28	7.91	34.19	204	179	A	H
		2383.98	62.62	-11.38	74	57.07	32.16	7.75	34.36	197	178	P	V
		2384.43	52.78	-1.22	54	47.23	32.16	7.75	34.36	197	178	A	V
	*	2437	116.02	-	-	110.22	32.24	7.83	34.27	197	178	P	V
	*	2437	106.91	-	-	101.11	32.24	7.83	34.27	197	178	A	V
		2486.64	61.25	-12.75	74	55.25	32.28	7.91	34.19	197	178	P	V
		2485	51.09	-2.91	54	45.09	32.28	7.91	34.19	197	178	A	V



802.11ac VHT20 CH 11 2462MHz	*	2462	114.24	-	-	108.3	32.26	7.91	34.23	201	177	P	H
	*	2462	105.71	-	-	99.77	32.26	7.91	34.23	201	177	A	H
		2488.64	65.52	-8.48	74	59.5	32.3	7.91	34.19	201	177	P	H
		2483.56	53.68	-0.32	54	47.68	32.28	7.91	34.19	201	177	A	H
													H
													H
	*	2462	111.77	-	-	105.83	32.26	7.91	34.23	213	178	P	V
	*	2462	104.04	-	-	98.1	32.26	7.91	34.23	213	178	A	V
		2485.68	61.32	-12.68	74	55.32	32.28	7.91	34.19	213	178	P	V
		2483.56	50.08	-3.92	54	44.08	32.28	7.91	34.19	213	178	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 802.11ac VHT20 (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)
802.11ac VHT20 CH 01 2412MHz		4824	40.92	-33.08	74	55.14	34.26	11.16	59.64	100	0	P	H
													H
													H
													H
		4824	40	-34	74	54.22	34.26	11.16	59.64	100	0	P	V
													V
													V
802.11ac VHT20 CH 06 2437MHz		4872	40.42	-33.58	74	54.48	34.3	11.21	59.57	100	0	P	H
		7308	41.9	-32.1	74	49.69	35.6	15.08	58.47	100	0	P	H
													H
													H
		4872	40.2	-33.8	74	54.26	34.3	11.21	59.57	100	0	P	V
		7308	42.99	-31.01	74	50.78	35.6	15.08	58.47	100	0	P	V
													V
802.11ac VHT20 CH 11 2462MHz		4926	41.13	-32.87	74	55.02	34.34	11.27	59.5	100	0	P	H
		7386	42.62	-31.38	74	50.46	35.6	15.14	58.58	100	0	P	H
													H
													H
		4926	41.48	-32.52	74	55.37	34.34	11.27	59.5	100	0	P	V
		7386	41.54	-32.46	74	49.38	35.6	15.14	58.58	100	0	P	V
													V
Remark	3.	No other spurious found.											
	4.	All results are PASS against Peak and Average limit line.											



2.4GHz 2400~2483.5MHz

WIFI 802.11ac VHT40 (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)
802.11ac VHT40 CH 03 2422MHz		2388.66	61.8	-12.2	74	56.23	32.18	7.75	34.36	186	177	P	H
		2390	52.55	-1.45	54	46.94	32.18	7.75	34.32	186	177	A	H
	*	2422	104.68	-	-	98.9	32.22	7.83	34.27	186	177	P	H
	*	2422	97.02	-	-	91.24	32.22	7.83	34.27	186	177	A	H
		2490.2	60.41	-13.59	74	54.39	32.3	7.91	34.19	186	177	P	H
		2487.52	50.53	-3.47	54	44.51	32.3	7.91	34.19	186	177	A	H
		2389.83	62.92	-11.08	74	57.31	32.18	7.75	34.32	195	177	P	V
		2389.65	53.87	-0.13	54	48.3	32.18	7.75	34.36	195	177	A	V
	*	2433.734	103.71	-	-	97.93	32.22	7.83	34.27	195	177	P	V
	*	2432.064	95.15	-	-	89.37	32.22	7.83	34.27	195	177	A	V
		2488.68	59.11	-14.89	74	53.09	32.3	7.91	34.19	195	177	P	V
		2486.4	49.93	-4.07	54	43.93	32.28	7.91	34.19	195	177	A	V
802.11ac VHT40 CH 06 2437MHz		2377.86	61.75	-12.25	74	56.27	32.16	7.68	34.36	186	179	P	H
		2377.59	52.48	-1.52	54	47	32.16	7.68	34.36	186	179	A	H
	*	2437	112.91	-	-	107.11	32.24	7.83	34.27	186	179	P	H
	*	2437	105.27	-	-	99.47	32.24	7.83	34.27	186	179	A	H
		2488.76	61.44	-12.56	74	55.42	32.3	7.91	34.19	186	179	P	H
		2484.32	52.78	-1.22	54	46.78	32.28	7.91	34.19	186	179	A	H
		2385.6	62.23	-11.77	74	56.66	32.18	7.75	34.36	196	179	P	V
		2388.3	53.59	-0.41	54	48.02	32.18	7.75	34.36	196	179	A	V
	*	2437	113.32	-	-	107.52	32.24	7.83	34.27	196	179	P	V
	*	2437	104.44	-	-	98.64	32.24	7.83	34.27	196	179	A	V
		2485.2	59.45	-14.55	74	53.45	32.28	7.91	34.19	196	179	P	V
		2485.4	50.33	-3.67	54	44.33	32.28	7.91	34.19	196	179	A	V



802.11ac VHT40 CH 09 2452MHz		2386.95	60.52	-13.48	74	54.95	32.18	7.75	34.36	205	179	P	H
		2383.26	51.81	-2.19	54	46.26	32.16	7.75	34.36	205	179	A	H
	*	2452	107.34	-	-	101.5	32.24	7.83	34.23	205	179	P	H
	*	2452	99.91	-	-	94.07	32.24	7.83	34.23	205	179	A	H
		2483.92	64.05	-9.95	74	58.05	32.28	7.91	34.19	205	179	P	H
		2483.52	53.53	-0.47	54	47.53	32.28	7.91	34.19	205	179	A	H
		2386.86	62.19	-11.81	74	56.62	32.18	7.75	34.36	206	176	P	V
		2382.54	53.16	-0.84	54	47.61	32.16	7.75	34.36	206	176	A	V
	*	2452	105.89	-	-	100.05	32.24	7.83	34.23	206	176	P	V
	*	2452	98.09	-	-	92.25	32.24	7.83	34.23	206	176	A	V
		2484.68	62.49	-11.51	74	56.49	32.28	7.91	34.19	206	176	P	V
		2483.6	52.17	-1.83	54	46.17	32.28	7.91	34.19	206	176	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 802.11ac VHT40 (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)
802.11ac VHT40 CH 03 2422MHz		4842	39.34	-34.66	74	53.52	34.28	11.16	59.62	100	0	P	H
		7266	42.14	-31.86	74	49.91	35.6	15.06	58.43	100	0	P	H
													H
													H
		4842	40.44	-33.56	74	54.62	34.28	11.16	59.62	100	0	P	V
		7266	41.73	-32.27	74	49.5	35.6	15.06	58.43	100	0	P	V
													V
													V
802.11ac VHT40 CH 06 2437MHz		4872	39.63	-34.37	74	53.69	34.3	11.21	59.57	100	0	P	H
		7308	41.63	-32.37	74	49.42	35.6	15.08	58.47	100	0	P	H
													H
													H
		4872	40.65	-33.35	74	54.71	34.3	11.21	59.57	100	0	P	V
		7308	41.55	-32.45	74	49.34	35.6	15.08	58.47	100	0	P	V
													V
													V
802.11ac VHT40 CH 09 2452MHz		4902	40.43	-33.57	74	54.35	34.33	11.27	59.52	100	0	P	H
		7536	41.32	-32.68	74	49.28	35.61	15.12	58.69	100	0	P	H
													H
													H
		4902	40.63	-33.37	74	54.55	34.33	11.27	59.52	100	0	P	V
		7536	41.51	-32.49	74	49.47	35.61	15.12	58.69	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Emission below 1GHz
2.4GHz WIFI 802.11ac VHT40 (LF)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
2.4GHz 802.11n VHT40 LF		98.58	39.76	-3.74	43.5	52.82	15.98	2.06	31.1	100	192	Q	H
		98.58	42.26	-1.24	43.5	55.32	15.98	2.06	31.1	100	192	P	H
		125.04	40.92	-2.58	43.5	51.79	17.85	2.38	31.1	100	187	Q	H
		125.04	42.92	-0.58	43.5	53.79	17.85	2.38	31.1	100	187	P	H
		180.39	38.62	-4.88	43.5	51.63	15.2	2.69	30.9	100	190	Q	H
		180.39	41.11	-2.39	43.5	54.12	15.2	2.69	30.9	100	190	P	H
		374.9	41.77	-4.23	46	47.64	21.76	3.39	31.02	-	-	P	H
		600.3	39.05	-6.95	46	39.87	25.7	4.08	30.6	-	-	P	H
		624.8	45.78	-0.22	46	46.16	25.95	4.22	30.55	100	188	Q	H
		624.8	48.88	2.88	46	49.26	25.95	4.22	30.55	100	188	P	H
													H
													H
		50.79	39.6	-0.4	40	54.13	14.9	1.77	31.2	121	0	Q	V
		50.79	42.81	2.81	40	57.34	14.9	1.77	31.2	121	0	P	V
		67.8	36.38	-3.62	40	53.28	12.3	2.06	31.26	122	2	Q	V
		67.8	38.97	-1.03	40	55.87	12.3	2.06	31.26	122	2	P	V
		97.77	39.7	-3.8	43.5	52.88	15.86	2.06	31.1	125	1	Q	V
		97.77	42.22	-1.28	43.5	55.4	15.86	2.06	31.1	125	1	P	V
		374.9	40.14	-5.86	46	46.01	21.76	3.39	31.02	-	-	P	V
		624.8	44.27	-1.73	46	44.65	25.95	4.22	30.55	119	0	Q	V
		624.8	46.75	0.75	46	47.13	25.95	4.22	30.55	119	0	P	V
		874.7	39.2	-6.8	46	35.84	29.05	4.66	30.35			P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



<Sample 2>

2.4GHz 2400~2483.5MHz

WIFI 802.11ac VHT20 (10MHz) (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)
802.11ac VHT20 (10MHz) CH 01 2412MHz		2387.13	67.24	-6.76	74	61.67	32.18	7.75	34.36	192	178	P	H
		2388.75	53.74	-0.26	54	48.17	32.18	7.75	34.36	192	178	A	H
	*	2412	120.01	-	-	114.38	32.2	7.75	34.32	192	178	P	H
	*	2412	110.6	-	-	104.97	32.2	7.75	34.32	192	178	A	H
													H
													H
		2388.03	65.81	-8.19	74	60.24	32.18	7.75	34.36	221	179	P	V
		2386.86	52.83	-1.17	54	47.26	32.18	7.75	34.36	221	179	A	V
	*	2412	117.24	-	-	111.61	32.2	7.75	34.32	221	179	P	V
	*	2412	108.44	-	-	102.81	32.2	7.75	34.32	221	179	A	V
													V
													V
802.11ac VHT20 (10MHz) CH 06 2437MHz		2384.7	62.45	-11.55	74	56.9	32.16	7.75	34.36	203	179	P	H
		2385.87	52.99	-1.01	54	47.42	32.18	7.75	34.36	203	179	A	H
	*	2437	123.48	-	-	117.68	32.24	7.83	34.27	203	179	P	H
	*	2437	114.42	-	-	108.62	32.24	7.83	34.27	203	179	A	H
		2483.68	63.93	-10.07	74	57.93	32.28	7.91	34.19	203	179	P	H
		2484.2	52.12	-1.88	54	46.12	32.28	7.91	34.19	203	179	A	H
		2387.4	63.64	-10.36	74	58.07	32.18	7.75	34.36	195	178	P	V
		2386.5	53.85	-0.15	54	48.28	32.18	7.75	34.36	195	178	A	V
	*	2437	122.57	-	-	116.77	32.24	7.83	34.27	195	178	P	V
	*	2437	113.19	-	-	107.39	32.24	7.83	34.27	195	178	A	V
		2484.88	64.63	-9.37	74	58.63	32.28	7.91	34.19	195	178	P	V
		2486	51.26	-2.74	54	45.26	32.28	7.91	34.19	195	178	A	V



802.11ac VHT20 (10MHz) CH 11 2462MHz	*	2462	119.67	-	-	113.73	32.26	7.91	34.23	198	178	P	H
	*	2462	110.27	-	-	104.33	32.26	7.91	34.23	198	178	A	H
		2483.52	71.57	-2.43	74	65.57	32.28	7.91	34.19	198	178	P	H
		2484.28	53.15	-0.85	54	47.15	32.28	7.91	34.19	198	178	A	H
													H
													H
	*	2462	117.22	-	-	111.28	32.26	7.91	34.23	204	178	P	V
	*	2462	108.08	-	-	102.14	32.26	7.91	34.23	204	178	A	V
		2484.64	68.38	-5.62	74	62.38	32.28	7.91	34.19	204	178	P	V
		2483.56	52.32	-1.68	54	46.32	32.28	7.91	34.19	204	178	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 802.11ac VHT20 (10MHz) (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)
802.11ac VHT20 (10MHz) CH 01 2412MHz		4824	40.13	-33.87	74	54.35	34.26	11.16	59.64	100	0	P	H
													H
													H
													H
		4824	40.34	-33.66	74	54.56	34.26	11.16	59.64	100	0	P	V
													V
													V
802.11ac VHT20 (10MHz) CH 06 2437MHz		4872	43.65	-30.35	74	57.71	34.3	11.21	59.57	100	0	P	H
		7308	44.4	-29.6	74	52.19	35.6	15.08	58.47	100	0	P	H
													H
													H
		4874	41.63	-32.37	74	55.69	34.3	11.21	59.57	100	0	P	V
		7308	44.71	-29.29	74	52.5	35.6	15.08	58.47	100	0	P	V
													V
802.11ac VHT20 (10MHz) CH 11 2462MHz		4926	40.56	-33.44	74	54.45	34.34	11.27	59.5	100	0	P	H
		7386	42.34	-31.66	74	50.18	35.6	15.14	58.58	100	0	P	H
													H
													H
		4926	41.2	-32.8	74	55.09	34.34	11.27	59.5	100	0	P	V
		7386	42.39	-31.61	74	50.23	35.6	15.14	58.58	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 802.11ac VHT20 (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)
802.11ac VHT20 CH 01 2412MHz		2388.57	62.7	-11.3	74	57.13	32.18	7.75	34.36	183	177	P	H
		2389.74	52.54	-1.46	54	46.97	32.18	7.75	34.36	183	177	A	H
	*	2412	114.1	-	-	108.47	32.2	7.75	34.32	183	177	P	H
	*	2412	106.29	-	-	100.66	32.2	7.75	34.32	183	177	A	H
													H
													H
		2387.22	65.34	-8.66	74	59.77	32.18	7.75	34.36	201	179	P	V
		2389.83	53.28	-0.72	54	47.67	32.18	7.75	34.32	201	179	A	V
	*	2412	114.4	-	-	108.77	32.2	7.75	34.32	201	179	P	V
	*	2412	105.51	-	-	99.88	32.2	7.75	34.32	201	179	A	V
													V
													V
802.11ac VHT20 CH 06 2437MHz		2385.69	62.3	-11.7	74	56.73	32.18	7.75	34.36	255	178	P	H
		2383.8	52.97	-1.03	54	47.42	32.16	7.75	34.36	255	178	A	H
	*	2437	118.65	-	-	112.85	32.24	7.83	34.27	255	178	P	H
	*	2437	110.86	-	-	105.06	32.24	7.83	34.27	255	178	A	H
		2490.32	62.59	-11.41	74	56.57	32.3	7.91	34.19	255	178	P	H
		2483.6	51.85	-2.15	54	45.85	32.28	7.91	34.19	255	178	A	H
		2383.98	62.27	-11.73	74	56.72	32.16	7.75	34.36	266	180	P	V
		2385.78	53.4	-0.6	54	47.83	32.18	7.75	34.36	266	180	A	V
	*	2437	118.07	-	-	112.27	32.24	7.83	34.27	266	180	P	V
	*	2437	109.69	-	-	103.89	32.24	7.83	34.27	266	180	A	V
		2491.4	61.93	-12.07	74	55.91	32.3	7.91	34.19	266	180	P	V
		2485.32	51.11	-2.89	54	45.11	32.28	7.91	34.19	266	180	A	V



802.11ac VHT20 CH 11 2462MHz	*	2462	114.14	-	-	108.2	32.26	7.91	34.23	198	180	P	H
	*	2462	106.06	-	-	100.12	32.26	7.91	34.23	198	180	A	H
		2486.8	66.03	-7.97	74	60.03	32.28	7.91	34.19	198	180	P	H
		2483.68	53.82	-0.18	54	47.82	32.28	7.91	34.19	198	180	A	H
													H
													H
	*	2462	111.52	-	-	105.58	32.26	7.91	34.23	193	180	P	V
	*	2462	103.65	-	-	97.71	32.26	7.91	34.23	193	180	A	V
		2489.52	61.57	-12.43	74	55.55	32.3	7.91	34.19	193	180	P	V
		2483.52	50.42	-3.58	54	44.42	32.28	7.91	34.19	193	180	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 802.11ac VHT20 (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)
802.11ac VHT20 CH 01 2412MHz		4824	41.13	-32.87	74	55.35	34.26	11.16	59.64	100	0	P	H
													H
													H
													H
		4824	40.52	-33.48	74	54.74	34.26	11.16	59.64	100	0	P	V
													V
													V
802.11ac VHT20 CH 06 2437MHz		4872	40.16	-33.84	74	54.22	34.3	11.21	59.57	100	0	P	H
		7308	42.51	-31.49	74	50.3	35.6	15.08	58.47	100	0	P	H
													H
													H
		4872	40.33	-33.67	74	54.39	34.3	11.21	59.57	100	0	P	V
		7308	42.09	-31.91	74	49.88	35.6	15.08	58.47	100	0	P	V
													V
802.11ac VHT20 CH 11 2462MHz		4926	41.71	-32.29	74	55.6	34.34	11.27	59.5	100	0	P	H
		7386	42.97	-31.03	74	50.81	35.6	15.14	58.58	100	0	P	H
													H
													H
		4926	40.77	-33.23	74	54.66	34.34	11.27	59.5	100	0	P	V
		7386	43.1	-30.9	74	50.94	35.6	15.14	58.58	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 802.11ac VHT40 (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)
802.11ac VHT40 CH 03 2422MHz		2389.29	62.01	-11.99	74	56.44	32.18	7.75	34.36	226	179	P	H
		2390	53.71	-0.29	54	48.1	32.18	7.75	34.32	226	179	A	H
	*	2422	106.83	-	-	101.05	32.22	7.83	34.27	226	179	P	H
	*	2422	98.95	-	-	93.17	32.22	7.83	34.27	226	179	A	H
		2485.12	59.4	-14.6	74	53.4	32.28	7.91	34.19	226	179	P	H
		2484.12	50.6	-3.4	54	44.6	32.28	7.91	34.19	226	179	A	H
		2387.85	62.87	-11.13	74	57.3	32.18	7.75	34.36	269	179	P	V
		2390	53.06	-0.94	54	47.45	32.18	7.75	34.32	269	179	A	V
	*	2422	104.9	-	-	99.12	32.22	7.83	34.27	269	179	P	V
	*	2422	96.48	-	-	90.7	32.22	7.83	34.27	269	179	A	V
		2485.72	58.5	-15.5	74	52.5	32.28	7.91	34.19	269	179	P	V
		2484.32	49.04	-4.96	54	43.04	32.28	7.91	34.19	269	179	A	V
802.11ac VHT40 CH 06 2437MHz		2389.47	60.77	-13.23	74	55.2	32.18	7.75	34.36	238	178	P	H
		2389.92	51.69	-2.31	54	46.08	32.18	7.75	34.32	238	178	A	H
	*	2437	114.15	-	-	108.35	32.24	7.83	34.27	238	178	P	H
	*	2437	105.98	-	-	100.18	32.24	7.83	34.27	238	178	A	H
		2484.32	60.51	-13.49	74	54.51	32.28	7.91	34.19	238	178	P	H
		2483.96	50.65	-3.35	54	44.65	32.28	7.91	34.19	238	178	A	H
		2386.23	61.41	-12.59	74	55.84	32.18	7.75	34.36	243	179	P	V
		2386.95	52.23	-1.77	54	46.66	32.18	7.75	34.36	243	179	A	V
	*	2437	112.01	-	-	106.21	32.24	7.83	34.27	243	179	P	V
	*	2437	103.3	-	-	97.5	32.24	7.83	34.27	243	179	A	V
		2485.64	59.24	-14.76	74	53.24	32.28	7.91	34.19	243	179	P	V
		2484	49.93	-4.07	54	43.93	32.28	7.91	34.19	243	179	A	V



802.11ac VHT40 CH 09 2452MHz		2383.17	60.73	-13.27	74	55.18	32.16	7.75	34.36	255	179	P	H
		2385.96	51.13	-2.87	54	45.56	32.18	7.75	34.36	255	179	A	H
	*	2452	107.7	-	-	101.86	32.24	7.83	34.23	255	179	P	H
	*	2452	99.59	-	-	93.75	32.24	7.83	34.23	255	179	A	H
		2485.56	63.69	-10.31	74	57.69	32.28	7.91	34.19	255	179	P	H
		2483.64	52.99	-1.01	54	46.99	32.28	7.91	34.19	255	179	A	H
		2380.56	61.55	-12.45	74	56	32.16	7.75	34.36	240	180	P	V
		2387.31	51.67	-2.33	54	46.1	32.18	7.75	34.36	240	180	A	V
	*	2452	104.86	-	-	99.02	32.24	7.83	34.23	240	180	P	V
	*	2452	96.74	-	-	90.9	32.24	7.83	34.23	240	180	A	V
		2483.68	61.55	-12.45	74	55.55	32.28	7.91	34.19	240	180	P	V
		2483.52	51.8	-2.2	54	45.8	32.28	7.91	34.19	240	180	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 802.11ac VHT40 (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)
802.11ac VHT40 CH 03 2422MHz		4842	40.87	-33.13	74	55.05	34.28	11.16	59.62	100	0	P	H
		7266	43.18	-30.82	74	50.95	35.6	15.06	58.43	100	0	P	H
													H
													H
		4842	40.26	-33.74	74	54.44	34.28	11.16	59.62	100	0	P	V
		7266	43.3	-30.7	74	51.07	35.6	15.06	58.43	100	0	P	V
													V
													V
802.11ac VHT40 CH 06 2437MHz		4872	40.56	-33.44	74	54.62	34.3	11.21	59.57	100	0	P	H
		7308	42.79	-31.21	74	50.58	35.6	15.08	58.47	100	0	P	H
													H
													H
		4872	40.7	-33.3	74	54.76	34.3	11.21	59.57	100	0	P	V
		7308	42.48	-31.52	74	50.27	35.6	15.08	58.47	100	0	P	V
													V
													V
802.11ac VHT40 CH 09 2452MHz		4902	40.06	-33.94	74	53.98	34.33	11.27	59.52	100	0	P	H
		7356	42.22	-31.78	74	50.04	35.6	15.11	58.53	100	0	P	H
													H
													H
		4902	40.15	-33.85	74	54.07	34.33	11.27	59.52	100	0	P	V
		7356	41.79	-32.21	74	49.61	35.6	15.11	58.53	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Emission below 1GHz
2.4GHz WIFI VHT20 (10MHz) (LF)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
2.4GHz 802.11ac LF		47.82	35.1	-4.9	40	48.78	16.2	1.77	31.65	-	-	P	H
		98.58	39.1	-4.4	43.5	52.67	15.98	2.06	31.61	100	0	P	H
		174.99	36.55	-6.95	43.5	49.91	15.58	2.61	31.55	-	-	P	H
		374.9	34.42	-11.58	46	40.49	21.76	3.39	31.22	-	-	P	H
		624.8	38.27	-7.73	46	38.98	25.95	4.22	30.88	-	-	P	H
		963.6	35.13	-18.87	54	30.25	30.57	4.94	30.63	-	-	P	H
													H
													H
													H
													H
													H
													H
		30.54	36.8	-3.2	40	41.26	25.18	1.77	31.41	105	256	QP	V
		30.54	39.27	-0.73	40	43.73	25.18	1.77	31.41	105	256	P	V
		47.82	36.51	-3.49	40	50.19	16.2	1.77	31.65	100	235	QP	V
		47.82	38.62	-1.38	40	52.3	16.2	1.77	31.65	100	235	P	V
		98.31	40.52	-2.98	43.5	54.21	15.86	2.06	31.61	102	216	QP	V
		98.31	42.52	-0.98	43.5	56.21	15.86	2.06	31.61	102	216	P	V
		374.9	34.2	-11.8	46	40.27	21.76	3.39	31.22	-	-	P	V
		475	30.59	-15.41	46	34.2	23.7	3.77	31.08	-	-	P	V
		624.8	37.84	-8.16	46	38.55	25.95	4.22	30.88	-	-	P	V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



Note symbol

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

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

WIFI	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		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
CH 01													
2412MHz		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

1. Level(dBμV/m) =

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

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

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 43.54 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

= -10.46(dB)

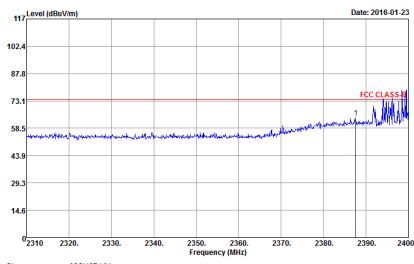
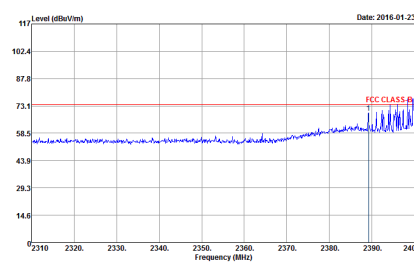
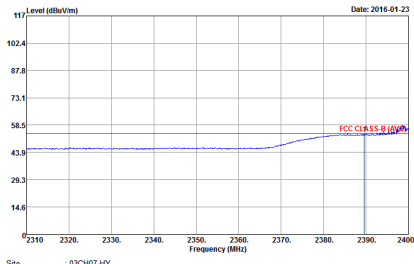
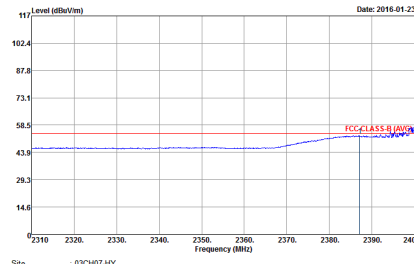
Both peak and average measured complies with the limit line, so test result is “PASS”.

Appendix C. Radiated Spurious Emission Plots

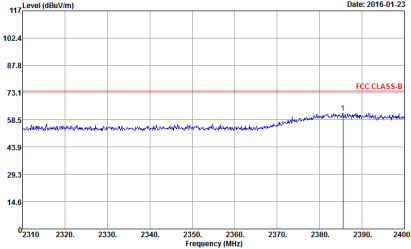
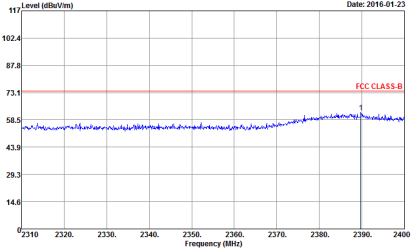
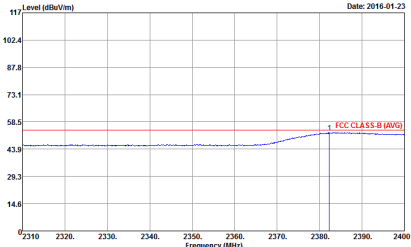
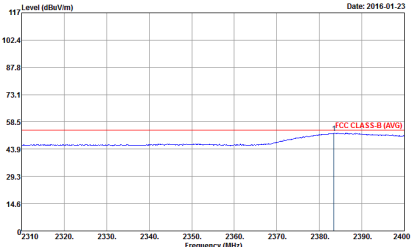
<Sample 1>

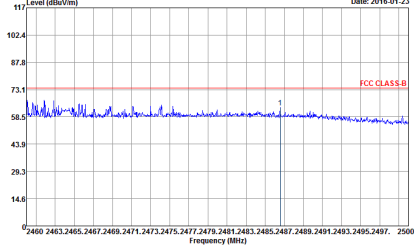
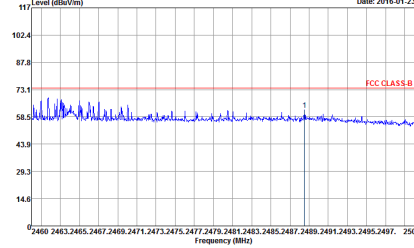
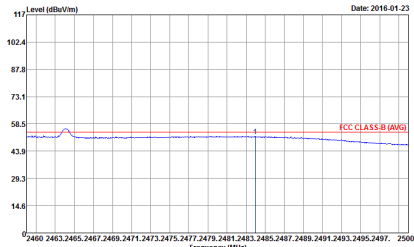
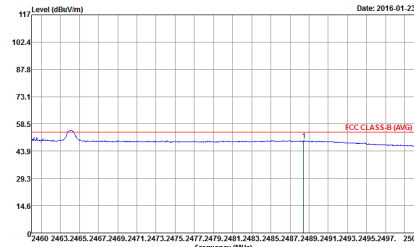
2.4GHz 2400~2483.5MHz

WIFI 802.11ac VHT20 (10MHz) (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VHT20 (10MHz) CH01 2412MHz	
1+2	Horizontal	Vertical
Peak	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL Detector : Peak Project : FR 581007 Mode : 2 Plane : Y Plane : 14.5	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 VERTICAL Detector : Peak Project : FR 581007 Mode : 2 Plane : Y Plane : 14.5
Avg.	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL Detector : Peak Project : FR 581007 Mode : 2 Plane : Y Plane : 14.5	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL Detector : Peak Project : FR 581007 Mode : 2 Plane : Y Plane : 14.5



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VHT20 (10MHz) CH06 2437MHz - L	
1+2	Horizontal	Vertical
Peak	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 2 Plane : Y Plane : 16.5	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 2 Plane : Y Plane : 16.5
Avg.	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL RBW:1000.000kHz VBW:1.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 2 Plane : Y Plane : 16.5	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL RBW:1000.000kHz VBW:1.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 2 Plane : Y Plane : 16.5

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VHT20 (10MHz) CH06 2437MHz - R	
1+2	Horizontal	Vertical
Peak	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL Detector : Peak Project : FR 581007 Mode : 2 Plane : Y Plane : 16.5	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 VERTICAL Detector : Peak Project : FR 581007 Mode : 2 Plane : Y Plane : 16.5
Avg.	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL Detector : Peak Project : FR 581007 Mode : 2 Plane : Y Plane : 16.5	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL Detector : Peak Project : FR 581007 Mode : 2 Plane : Y Plane : 16.5



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VHT20 (10MHz) CH11 2462MHz	
1+2	Horizontal	Vertical
Peak	Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL Detector : Peak Project : FR 581007 Mode : 3 Plane : Y Plane : 16	Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 VERTICAL Detector : Peak Project : FR 581007 Mode : 3 Plane : Y Plane : 16
Avg.	Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL Detector : Peak Project : FR 581007 Mode : 3 Plane : Y Plane : 16	Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL Detector : Peak Project : FR 581007 Mode : 3 Plane : Y Plane : 16

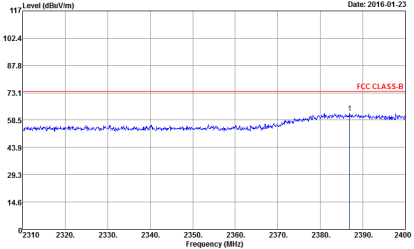
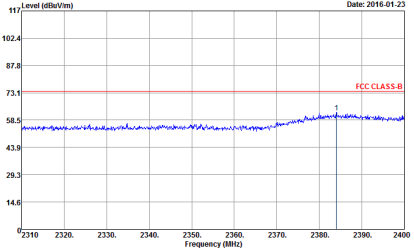
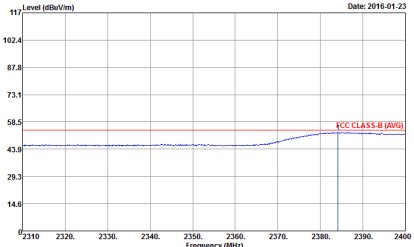
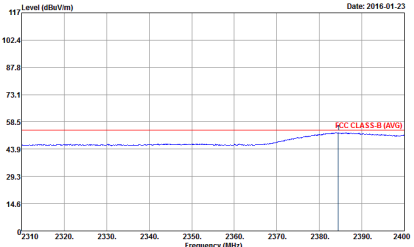


2.4GHz 2400~2483.5MHz

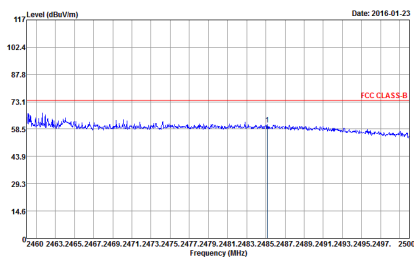
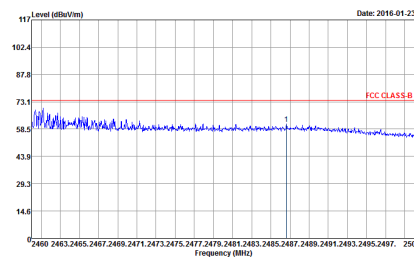
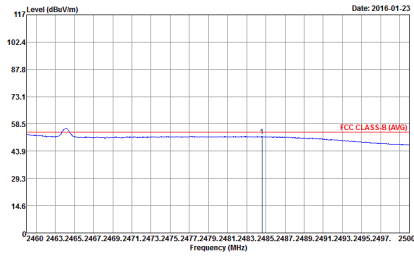
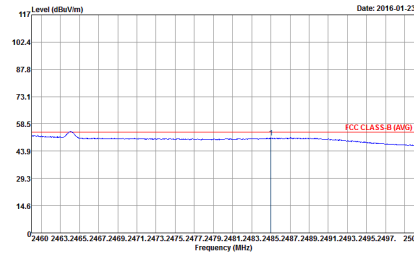
WIFI 802.11ac VHT20 (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH01 2412MHz	
1+2	Horizontal	Vertical
Peak	Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL Detector : Peak Project : FR 581007 Mode : 4 Plane : Y Plane : 14.5	Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 VERTICAL Detector : Peak Project : FR 581007 Mode : 4 Plane : Y Plane : 14.5
Avg.	Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL Detector : Peak Project : FR 581007 Mode : 4 Plane : Y Plane : 14.5	Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL Detector : Peak Project : FR 581007 Mode : 4 Plane : Y Plane : 14.5

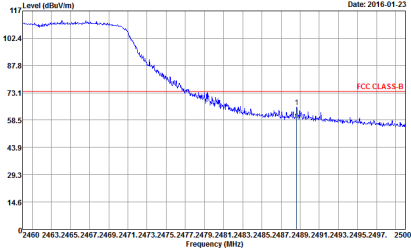
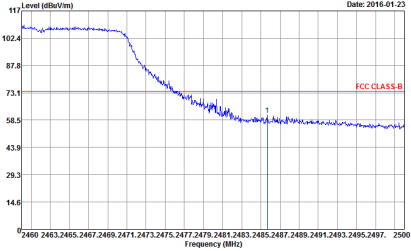
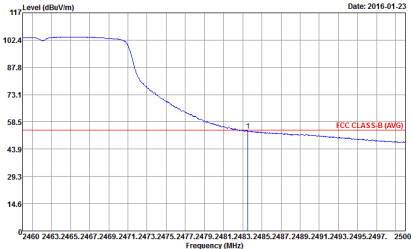
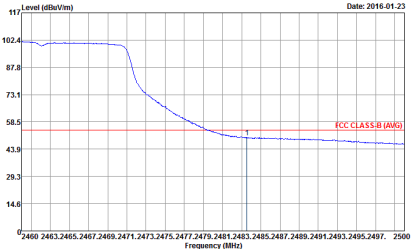


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH06 2437MHz - L	
1+2	Horizontal	Vertical
Peak	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 5 Plane : Y Plane : 16.5	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 5 Plane : Y Plane : 16.5
Avg.	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL RBW:1000.000kHz VBW:1.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 5 Plane : Y Plane : 16.5	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL RBW:1000.000kHz VBW:1.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 5 Plane : Y Plane : 16.5



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VH20 CH06 2437MHz - R	
1+2	Horizontal	Vertical
Peak	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 5 Plane : Y Plane : 16.5	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 5 Plane : Y Plane : 16.5
Avg.	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL RBW:1000.000kHz VBW:1.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 5 Plane : Y Plane : 16.5	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL RBW:1000.000kHz VBW:1.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 5 Plane : Y Plane : 16.5



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VH20 CH11 2462MHz	
1+2	Horizontal	Vertical
Peak	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 6 Plane : Y Plane : 14.5	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 6 Plane : Y Plane : 14.5
Avg.	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL RBW:1000.000kHz VBW:1.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 6 Plane : Y Plane : 14.5	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL RBW:1000.000kHz VBW:1.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 6 Plane : Y Plane : 14.5

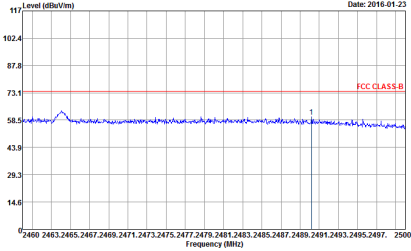
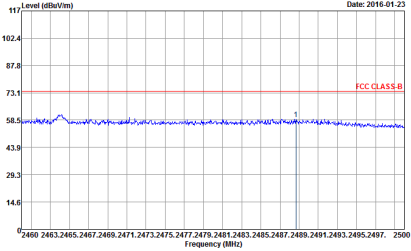
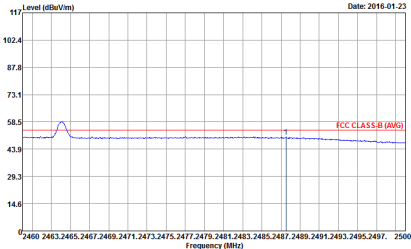
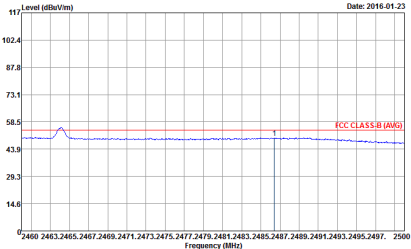


2.4GHz 2400~2483.5MHz

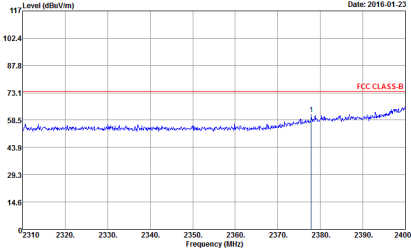
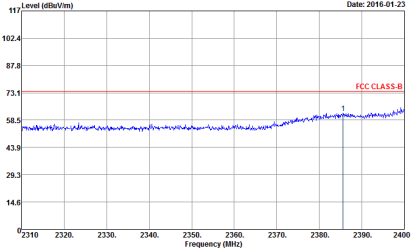
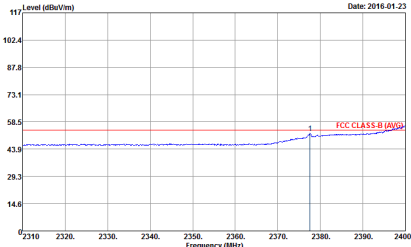
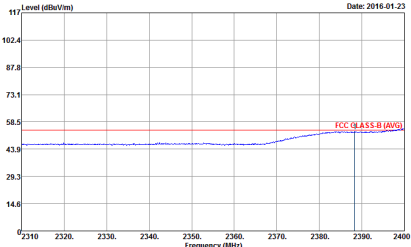
WIFI 802.11ac VHT40 (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VH40 CH03 2422MHz - L	
1+2	Horizontal	Vertical
Peak	Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL Detector : Peak Project : FR 581007 Mode : T Plane : Y Plane : 6.5	Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 VERTICAL Detector : Peak Project : FR 581007 Mode : T Plane : Y Plane : 6.5
Avg.	Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL Detector : Peak Project : FR 581007 Mode : T Plane : Y Plane : 6.5	Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL Detector : Peak Project : FR 581007 Mode : T Plane : Y Plane : 6.5

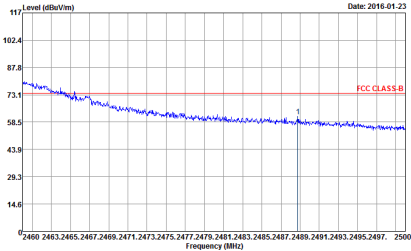
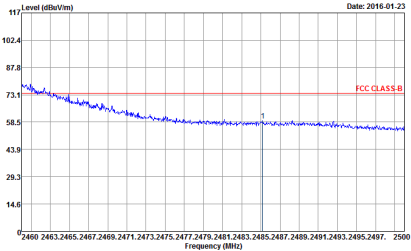
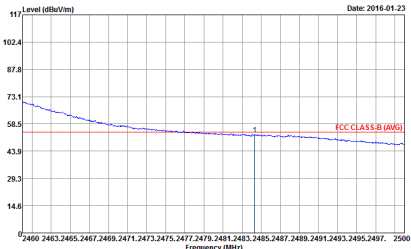
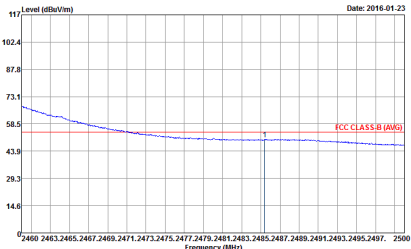


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VH40 CH03 2422MHz - R	
1+2	Horizontal	Vertical
Peak	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL Detector : Peak Project : FR 581007 Mode : 7 Plane : Y Plane : 6.5	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 VERTICAL Detector : Peak Project : FR 581007 Mode : 7 Plane : Y Plane : 6.5
Avg.	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL Detector : Peak Project : FR 581007 Mode : 7 Plane : Y Plane : 6.5	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL Detector : Peak Project : FR 581007 Mode : 7 Plane : Y Plane : 6.5

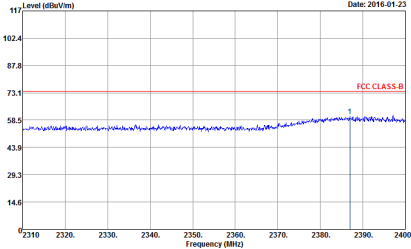
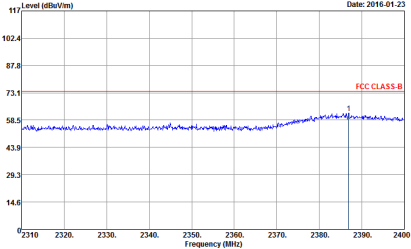
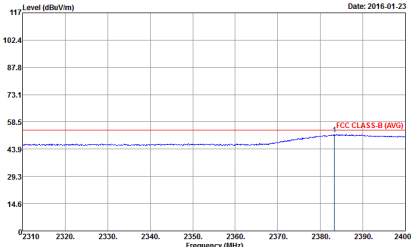
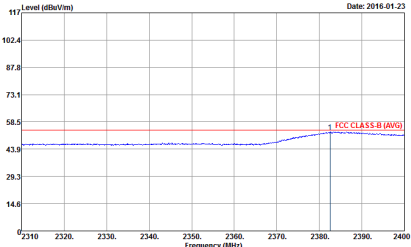


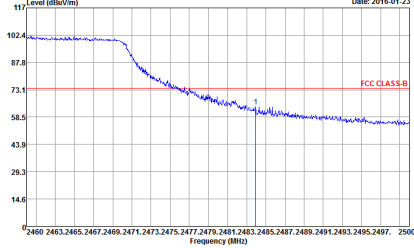
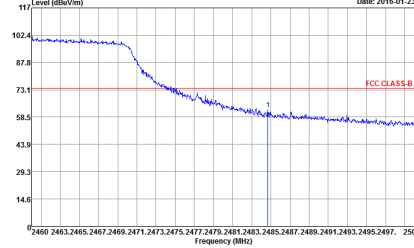
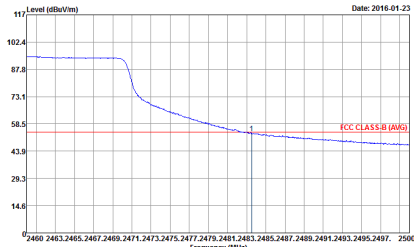
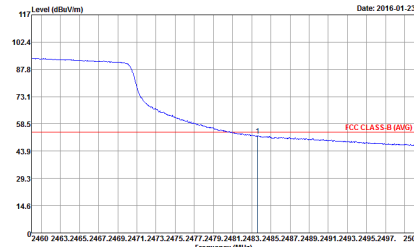
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VH40 CH06 2437MHz - L	
1+2	Horizontal	Vertical
Peak	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL Detector : Peak Project : FR 581007 Mode : 8 Plane : Y Plane : 17	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 VERTICAL Detector : Peak Project : FR 581007 Mode : 8 Plane : Y Plane : 17
Avg.	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL Detector : Peak Project : FR 581007 Mode : 8 Plane : Y Plane : 17	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL Detector : Peak Project : FR 581007 Mode : 8 Plane : Y Plane : 17



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VH40 CH06 2437MHz - R	
1+2	Horizontal	Vertical
Peak	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL Detector : Peak Project : FR 581007 Mode : 8 Plane : Y Plane : 17	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 VERTICAL Detector : Peak Project : FR 581007 Mode : 8 Plane : Y Plane : 17
Avg.	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL Detector : Peak Project : FR 581007 Mode : 8 Plane : Y Plane : 17	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL Detector : Peak Project : FR 581007 Mode : 8 Plane : Y Plane : 17



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VH40 CH09 2452MHz - L	
1+2	Horizontal	Vertical
Peak	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 9 Plane : Y Plane : 10	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 9 Plane : Y Plane : 10
Avg.	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL RBW:1000.000kHz VBW:2.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 9 Plane : Y Plane : 10	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL RBW:1000.000kHz VBW:2.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 9 Plane : Y Plane : 10

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VH40 CH09 2452MHz - R	
1+2	Horizontal	Vertical
Peak	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 9 Plane : Y Plane : 10	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 9 Plane : Y Plane : 10
Avg.	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL RBW:1000.000kHz VBW:2.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 9 Plane : Y Plane : 10	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL RBW:1000.000kHz VBW:2.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 9 Plane : Y Plane : 10

**2.4GHz 2400~2483.5MHz****WIFI 802.11ac VHT20 (10MHz) (Harmonic @ 3m)**

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11ac VHT20 (10MHz) CH01 2412MHz	
1+2	Horizontal	Vertical
Peak Avg.	Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : FR 581007 Mode : 2 Plane : Y Plane : 14.5	Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : FR 581007 Mode : 2 Plane : Y Plane : 14.5

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11ac VHT20 (10MHz) CH06 2437MHz	
1+2	Horizontal	Vertical
Peak Avg.	Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : FR 581007 Mode : 2 Plane : Y Plane : 16.5	Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : FR 581007 Mode : 2 Plane : Y Plane : 16.5



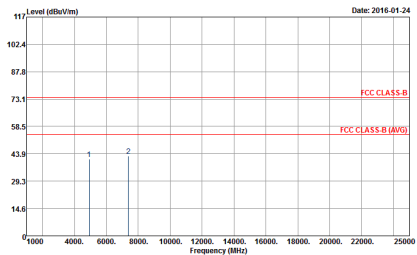
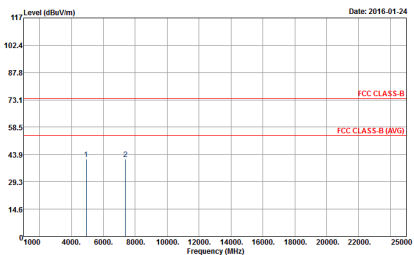
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11ac VHT20 (10MHz) CH11 2462MHz	
1+2	Horizontal	Vertical
Peak Avg.	Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : FR 581007 Mode : 3 Plane : Y Plane : 16	Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : FR 581007 Mode : 3 Plane : Y Plane : 16

**2.4GHz 2400~2483.5MHz****WIFI 802.11ac VHT20 (Harmonic @ 3m)**

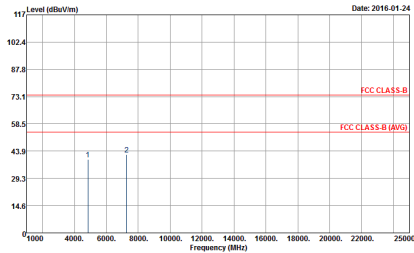
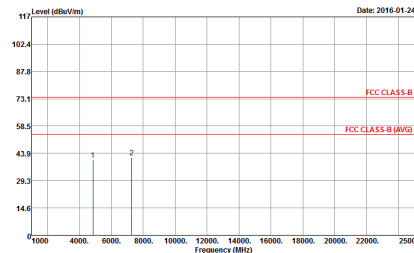
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11ac VHT20 CH01 2412MHz	
1+2	Horizontal	Vertical
Peak Avg.	Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : FR 581007 Mode : 4 Plane : Y Plane : 14.5	Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : FR 581007 Mode : 4 Plane : Y Plane : 14.5

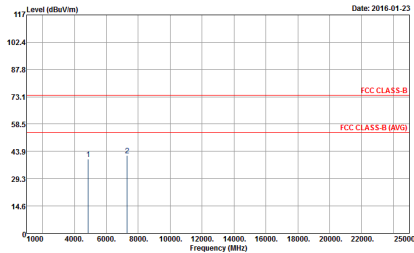
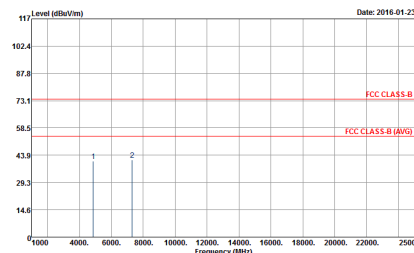
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11ac VHT20 CH06 2437MHz	
1+2	Horizontal	Vertical
Peak Avg.	Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : FR 581007 Mode : 6 Plane : Y Plane : 16.5	Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : FR 581007 Mode : 6 Plane : Y Plane : 16.5



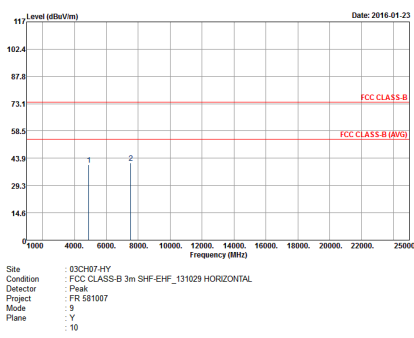
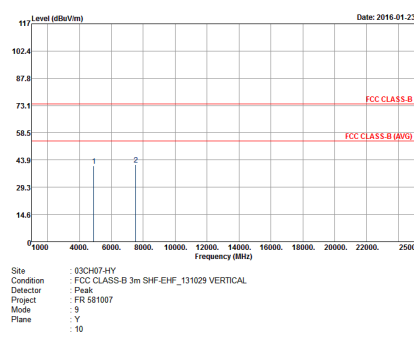
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11ac VHT20 CH11 2462MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : FR 581007 Mode : G Plane : Y Plane : 14.5	 Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : FR 581007 Mode : G Plane : Y Plane : 14.5

**2.4GHz 2400~2483.5MHz****WIFI 802.11ac VHT40 (Harmonic @ 3m)**

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11ac VHT40 CH03 2422MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : FR 581007 Mode : 7 Plane : Y Plane : 6.5	 Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : FR 581007 Mode : 7 Plane : Y Plane : 6.5

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11ac VHT40 CH06 2437MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : FR 581007 Mode : 8 Plane : Y Plane : 17	 Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : FR 581007 Mode : 8 Plane : Y Plane : 17

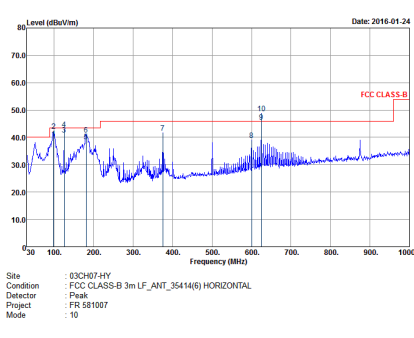
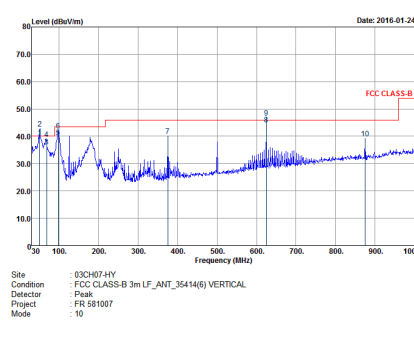


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11ac VHT40 CH09 2452MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : FR 581007 Mode : 9 Plane : Y Plane : 10	 Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : FR 581007 Mode : 9 Plane : Y Plane : 10

2.4GHz 2400~2483.5MHz

Emission below 1GHz

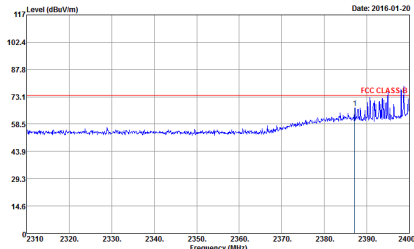
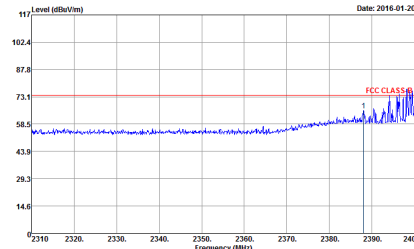
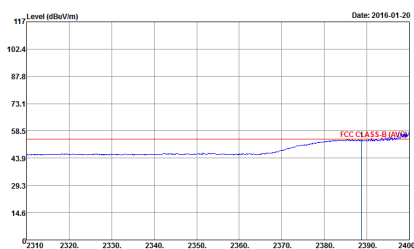
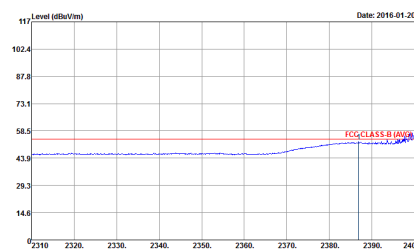
2.4GHz WIFI 802.11ac VHT40 (LF)

WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11ac VHT40 LF	
1+2	Horizontal	Vertical
QP / Peak	 Site : 03CH07-HY Condition : FCC CLASS-B 3m LF_ANT_35414(6) HORIZONTAL Detector : Peak Project : FR 581007 Mode : 10	 Site : 03CH07-HY Condition : FCC CLASS-B 3m LF_ANT_35414(6) VERTICAL Detector : Peak Project : FR 581007 Mode : 10

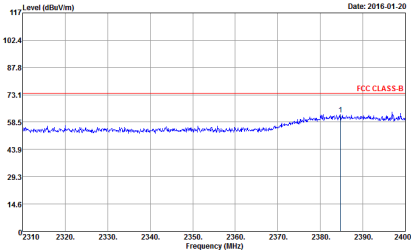
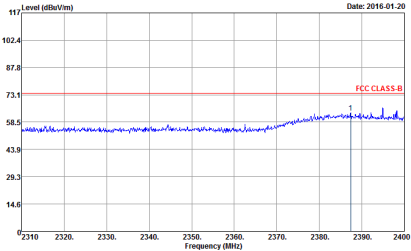
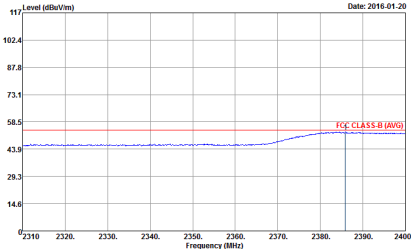
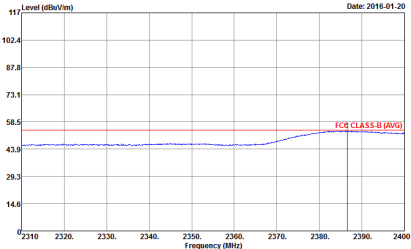
<Sample 2>

2.4GHz 2400~2483.5MHz

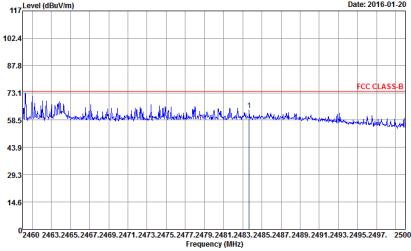
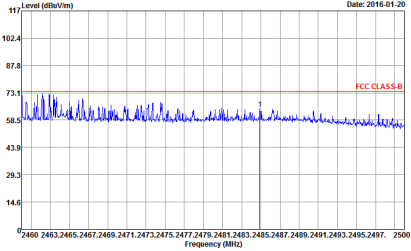
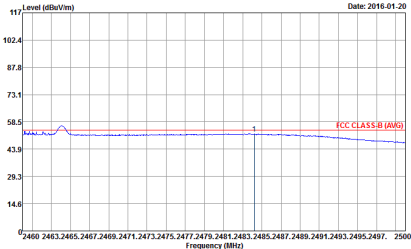
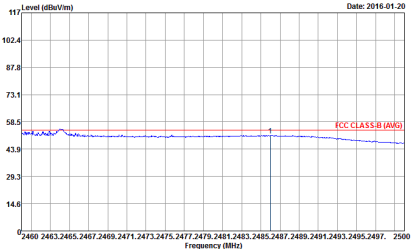
WIFI 802.11ac VHT20 (10MHz) (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VHT20 (10MHz) CH01 2412MHz	
1+2	Horizontal	Vertical
Peak	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL RBW: 1000.000kHz VBW: 3000.000kHz SWT: Auto Detector : Peak Project : FR 581007 Mode : 10 Plane : Y Plane : 14.5	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 VERTICAL RBW: 1000.000kHz VBW: 3000.000kHz SWT: Auto Detector : Peak Project : FR 581007 Mode : 10 Plane : Y Plane : 14.5
Avg.	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL RBW: 1000.000kHz VBW: 1.000kHz SWT: Auto Detector : Peak Project : FR 581007 Mode : 10 Plane : Y Plane : 14.5	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL RBW: 1000.000kHz VBW: 1.000kHz SWT: Auto Detector : Peak Project : FR 581007 Mode : 10 Plane : Y Plane : 14.5



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VHT20 (10MHz) CH06 2437MHz - L	
1+2	Horizontal	Vertical
Peak	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 11 Plane : Y Plane : 20	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 11 Plane : Y Plane : 20
Avg.	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL RBW:1000.000kHz VBW:1.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 11 Plane : Y Plane : 20	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL RBW:1000.000kHz VBW:1.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 11 Plane : Y Plane : 20



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VHT20 (10MHz) CH06 2437MHz - R	
1+2	Horizontal	Vertical
Peak	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 11 Plane : Y Plane : 20	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 11 Plane : Y Plane : 20
Avg.	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL RBW:1000.000kHz VBW:1.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 11 Plane : Y Plane : 20	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL RBW:1000.000kHz VBW:1.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 11 Plane : Y Plane : 20

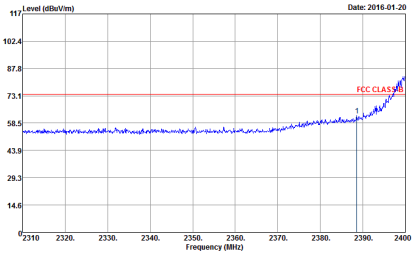
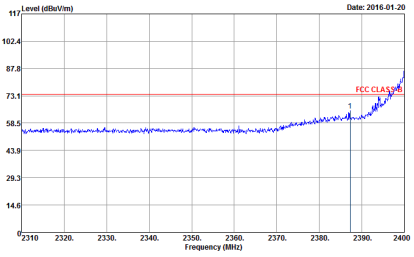
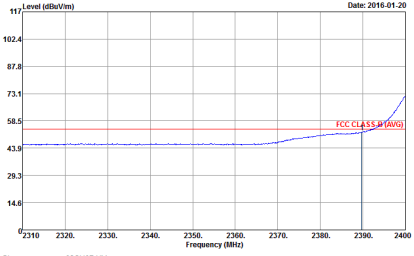
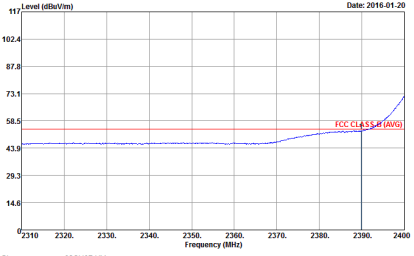


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VHT20 (10MHz) CH11 2462MHz	
1+2	Horizontal	Vertical
Peak	Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 12 Plane : Y Plane : 16	Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 12 Plane : Y Plane : 16
Avg.	Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL RBW:1000.000kHz VBW:1.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 12 Plane : Y Plane : 16	Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL RBW:1000.000kHz VBW:1.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 12 Plane : Y Plane : 16



2.4GHz 2400~2483.5MHz

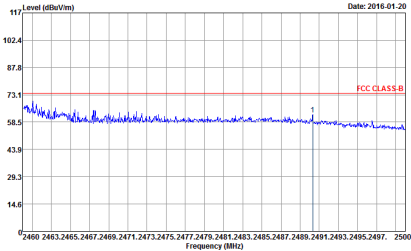
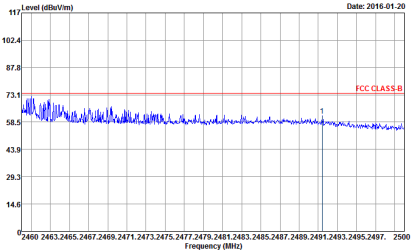
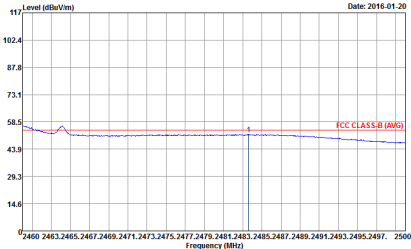
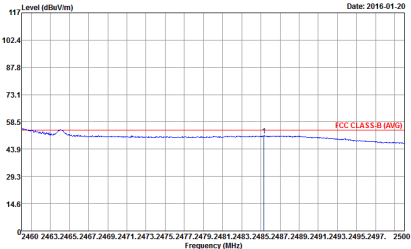
WIFI 802.11ac VHT20 (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH01 2412MHz	
1+2	Horizontal	Vertical
Peak	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL Detector : Peak Project : FR 581007 Mode : 13 Plane : Y Plane : 14	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 VERTICAL Detector : Peak Project : FR 581007 Mode : 13 Plane : Y Plane : 14
Avg.	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL Detector : Peak Project : FR 581007 Mode : 13 Plane : Y Plane : 14	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL Detector : Peak Project : FR 581007 Mode : 13 Plane : Y Plane : 14

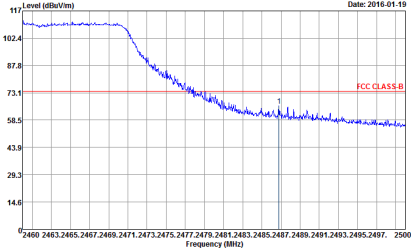
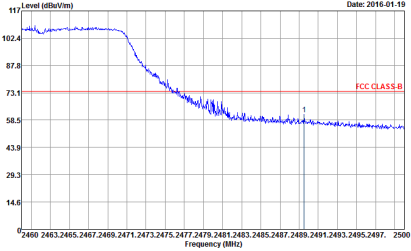
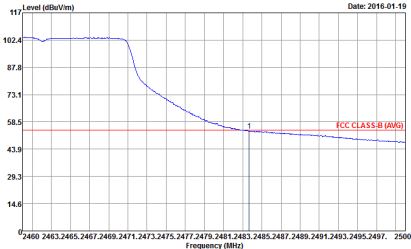
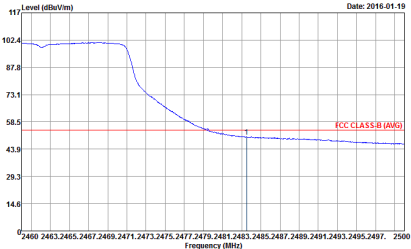


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH06 2437MHz - L	
1+2	Horizontal	Vertical
Peak	Level (dBuV/m) Date: 2016-01-20 Frequency (MHz) Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL RBW: 1000.000kHz VBW: 3000.000kHz SWT: Auto Detector : Peak Project : FR 581007 Mode : 14 Plane : Y Plane : 20	Level (dBuV/m) Date: 2016-01-20 Frequency (MHz) Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 VERTICAL RBW: 1000.000kHz VBW: 3000.000kHz SWT: Auto Detector : Peak Project : FR 581007 Mode : 14 Plane : Y Plane : 20
Avg.	Level (dBuV/m) Date: 2016-01-20 Frequency (MHz) Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL RBW: 1000.000kHz VBW: 1.000kHz SWT: Auto Detector : Peak Project : FR 581007 Mode : 14 Plane : Y Plane : 20	Level (dBuV/m) Date: 2016-01-20 Frequency (MHz) Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL RBW: 1000.000kHz VBW: 1.000kHz SWT: Auto Detector : Peak Project : FR 581007 Mode : 14 Plane : Y Plane : 20



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VH20 CH06 2437MHz - R	
1+2	Horizontal	Vertical
Peak	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 14 Plane : Y Plane : 20	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 14 Plane : Y Plane : 20
Avg.	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL RBW:1000.000kHz VBW:1.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 14 Plane : Y Plane : 20	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL RBW:1000.000kHz VBW:1.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 14 Plane : Y Plane : 20



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VH20 CH11 2462MHz	
1+2	Horizontal	Vertical
Peak	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 15 Plane : Y Plane : 14.5	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 15 Plane : Y Plane : 14.5
Avg.	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL RBW:1000.000kHz VBW:1.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 15 Plane : Y Plane : 14.5	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL RBW:1000.000kHz VBW:1.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 15 Plane : Y Plane : 14.5

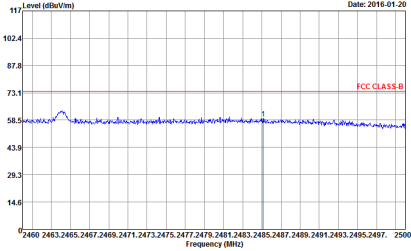
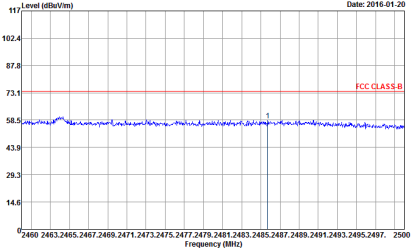
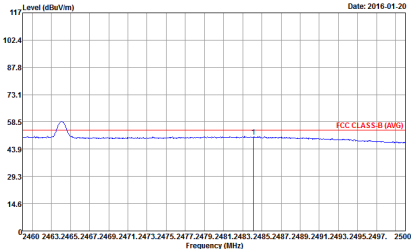
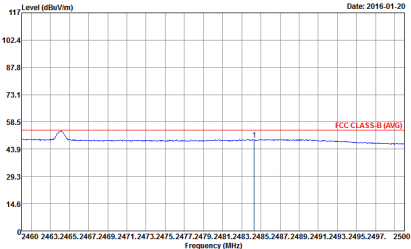


2.4GHz 2400~2483.5MHz

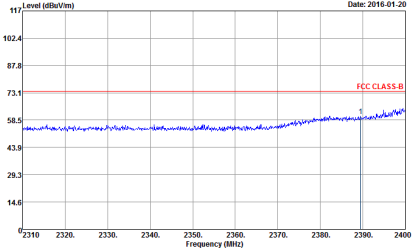
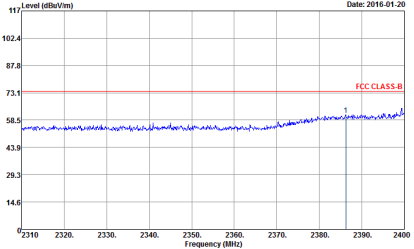
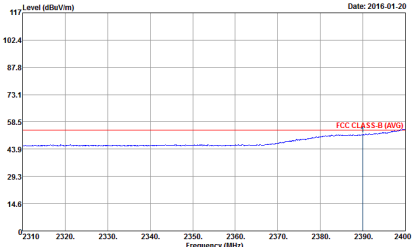
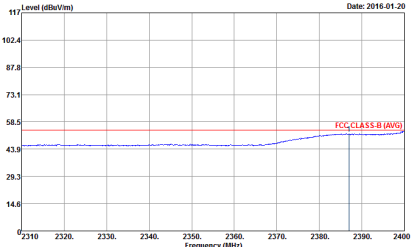
WIFI 802.11ac VHT40 (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VH40 CH03 2422MHz - L	
1+2	Horizontal	Vertical
Peak	Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL Detector : Peak Project : FR 581007 Mode : 16 Plane : Y Plane : 9	Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 VERTICAL Detector : Peak Project : FR 581007 Mode : 16 Plane : Y Plane : 9
Avg.	Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL Detector : Peak Project : FR 581007 Mode : 16 Plane : Y Plane : 9	Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL Detector : Peak Project : FR 581007 Mode : 16 Plane : Y Plane : 9

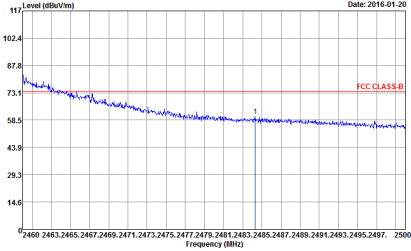
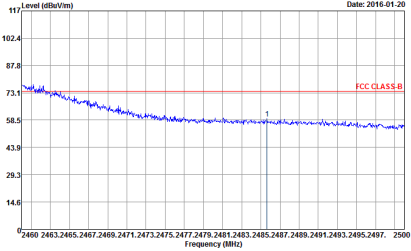
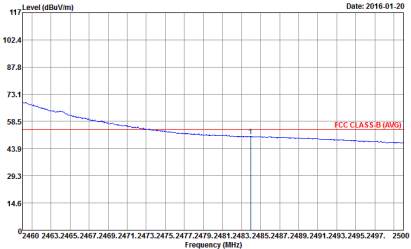
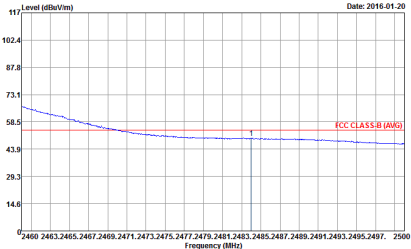


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VH40 CH03 2422MHz - R	
1+2	Horizontal	Vertical
Peak	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 16 Plane : Y Plane : 9	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 16 Plane : Y Plane : 9
Avg.	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL RBW:1000.000kHz VBW:2.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 16 Plane : Y Plane : 9	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL RBW:1000.000kHz VBW:1.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 16 Plane : Y Plane : 9

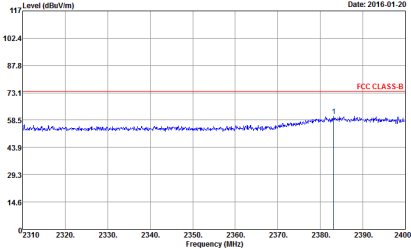
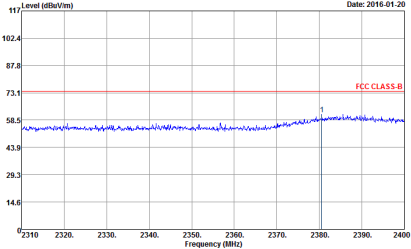
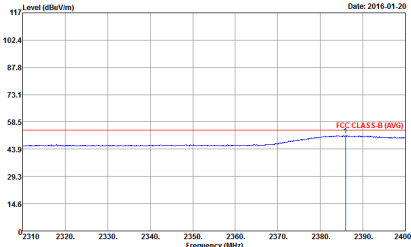
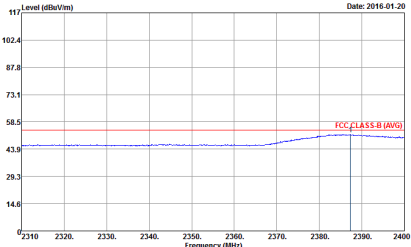


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VH40 CH06 2437MHz - L	
1+2	Horizontal	Vertical
Peak	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL Detector : Peak Project : FR 581007 Mode : 17 Plane : 17	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 VERTICAL Detector : Peak Project : FR 581007 Mode : 17 Plane : 17
Avg.	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL Detector : Peak Project : FR 581007 Mode : 17 Plane : 17	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL Detector : Peak Project : FR 581007 Mode : 17 Plane : 17

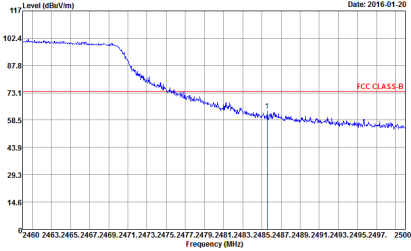
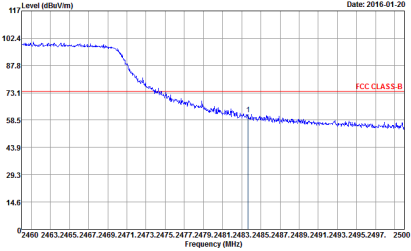
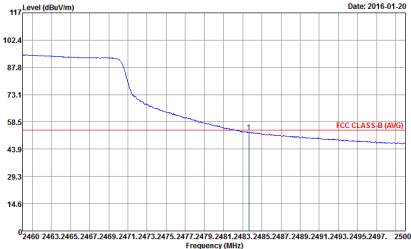
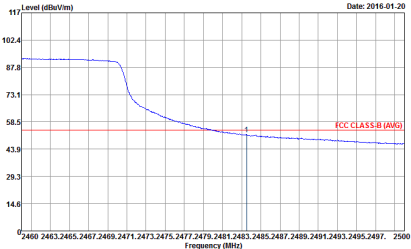


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VH40 CH06 2437MHz - R	
1+2	Horizontal	Vertical
Peak	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT, 130829 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 17 Plane : Y	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT, 130829 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 17 Plane : Y
Avg.	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT, 130829 HORIZONTAL RBW:1000.000kHz VBW:1.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 17 Plane : Y	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT, 130829 VERTICAL RBW:1000.000kHz VBW:1.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 17 Plane : Y



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VH40 CH09 2452MHz - L	
1+2	Horizontal	Vertical
Peak	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 18 Plane : Y Plane : 10	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 18 Plane : Y Plane : 10
Avg.	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL RBW:1000.000kHz VBW:1.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 18 Plane : Y Plane : 10	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL RBW:1000.000kHz VBW:1.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 18 Plane : Y Plane : 10



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VH40 CH09 2452MHz - R	
1+2	Horizontal	Vertical
Peak	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 18 Plane : Y Plane : 10	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 18 Plane : Y Plane : 10
Avg.	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL RBW:1000.000kHz VBW:1.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 18 Plane : Y Plane : 10	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL RBW:1000.000kHz VBW:1.000kHz SWT:Auto Detector : Peak Project : FR 581007 Mode : 18 Plane : Y Plane : 10

**2.4GHz 2400~2483.5MHz****WIFI 802.11ac VHT20 (10MHz) (Harmonic @ 3m)**

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11ac VHT20 (10MHz) CH01 2412MHz	
1+2	Horizontal	Vertical
Peak Avg.	Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : FR 581007 Mode : 10 Plane : Y Plane : 14.5	Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : FR 581007 Mode : 10 Plane : Y Plane : 14.5

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11ac VHT20 (10MHz) CH06 2437MHz	
1+2	Horizontal	Vertical
Peak Avg.	Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : FR 581007 Mode : 11 Plane : Y Plane : 20	Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : FR 581007 Mode : 11 Plane : Y Plane : 20



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11ac VHT20 (10MHz) CH11 2462MHz	
1+2	Horizontal	Vertical
Peak Avg.	117 102.4 87.8 73.1 58.5 43.9 29.3 14.6 0 Level (dBuV/m) Date: 2016-01-21 Frequency (MHz) Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : FR 581007 Mode : 12 Plane : Y Plane : 16	117 102.4 87.8 73.1 58.5 43.9 29.3 14.6 0 Level (dBuV/m) Date: 2016-01-21 Frequency (MHz) Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : FR 581007 Mode : 12 Plane : Y Plane : 16

**2.4GHz 2400~2483.5MHz****WIFI 802.11ac VHT20 (Harmonic @ 3m)**

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11ac VHT20 CH01 2412MHz	
1+2	Horizontal	Vertical
Peak Avg.	Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : FR 581007 Mode : 13 Plane : 14	Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : FR 581007 Mode : 13 Plane : 14

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11ac VHT20 CH06 2437MHz	
1+2	Horizontal	Vertical
Peak Avg.	Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : FR 581007 Mode : 14 Plane : 20	Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : FR 581007 Mode : 14 Plane : 20

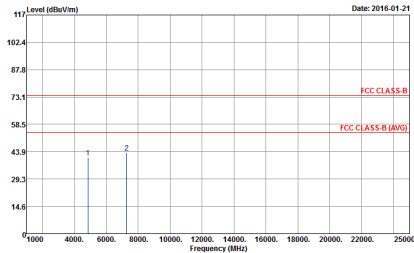
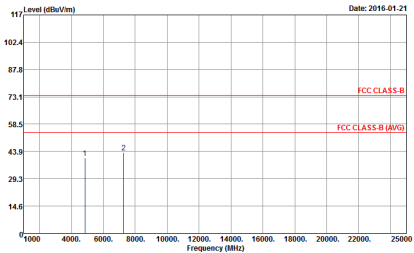


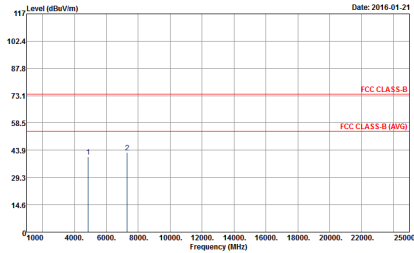
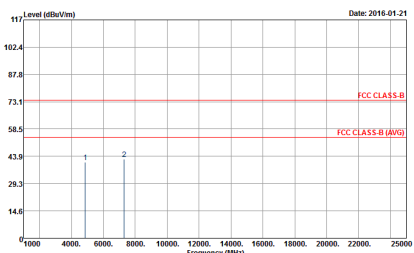
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11ac VHT20 CH11 2462MHz	
1+2	Horizontal	Vertical
Peak Avg.	Level (dBuV/m) Date: 2016-01-21 Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : FR 581007 Mode : 15 Plane : Y Plane : 14.5	Level (dBuV/m) Date: 2016-01-21 Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : FR 581007 Mode : 15 Plane : Y Plane : 14.5



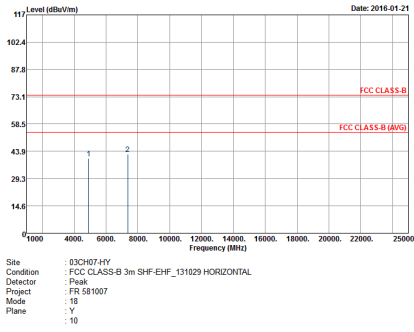
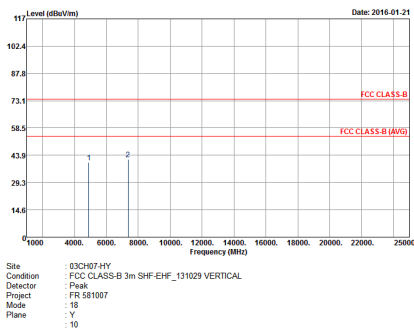
2.4GHz 2400~2483.5MHz

WIFI 802.11ac VHT40 (Harmonic @ 3m)

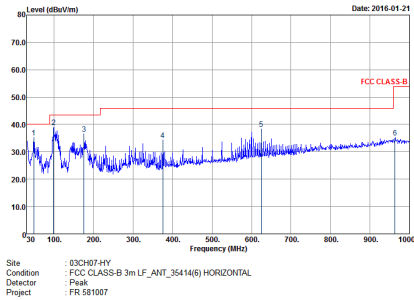
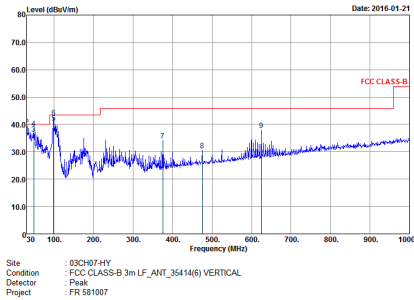
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11ac VHT40 CH03 2422MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : FR 581007 Mode : 16 Plane : Y Plane : 9	 Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : FR 581007 Mode : 16 Plane : Y Plane : 9

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11ac VHT40 CH06 2437MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : FR 581007 Mode : 17 Plane : Y Plane : 17	 Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : FR 581007 Mode : 17 Plane : Y Plane : 17



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11ac VHT40 CH09 2452MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : FR 581007 Mode : 18 Plane : Y Plane : 10	 Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : FR 581007 Mode : 18 Plane : Y Plane : 10

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

WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11ac LF	
1+2	Horizontal	Vertical
QP / Peak	 Site : 03CH07-HY Condition : FCC CLASS-B 3m LF_ANT_35414(S) HORIZONTAL Detector : Peak Project : FR 581007	 Site : 03CH07-HY Condition : FCC CLASS-B 3m LF_ANT_35414(S) VERTICAL Detector : Peak Project : FR 581007