

FCC Test Report

Product Name	Access Point/Sensor
Model No	O-90, O-90-E
FCC ID.	PPQ-O90

Applicant	Lite-On Technology Corp.
Address	Bldg. C, 90, Chien 1 Road, Chung Ho, New Taipei City 23585, Taiwan, R.O.C

Date of Receipt	Feb. 25, 2015
Issue Date	May 21, 2015
Report No.	1520469R-RFUSP01V00
Report Version	V1.0



The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration report of the equipment and evaluated measurement uncertainty herein.

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Test Report

Issue Date: May 21, 2015

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Product Name	Access Point/Sensor
Applicant	Lite-On Technology Corp.
Address	Bldg. C, 90, Chien 1 Road, Chung Ho, New Taipei City 23585, Taiwan, R.O.C
Manufacturer	Lite-On Network Communication (Dongguan) Limited
Model No.	O-90, O-90-E
FCC ID.	PPQ-O90
EUT Rated Voltage	Power By PoE (DC 48V)
EUT Test Voltage	Power By PoE (DC 48V)
Trade Name	LITE-ON
Applicable Standard	FCC CFR Title 47 Part 15 Subpart C: 2014 ANSI C63.10: 2009, KDB 558074 D01 DTS Meas Guidance v03r02
Test Result	Complied

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1. GENERAL INFORMATION

1.1. EUT Description

Product Name	Access Point/Sensor
Trade Name	LITE-ON
Model No.	O-90, O-90-E
FCC ID.	PPQ-O90
Frequency Range	2412-2462MHz for 802.11b/g/n-20BW, 2422-2452MHz for 802.11n-40BW
Number of Channels	802.11b/g/n-20MHz: 11, n-40MHz: 7
Data Speed	802.11b: 1-11Mbps, 802.11g: 6-54Mbps, 802.11n: up to 450Mbps
Type of Modulation	802.11b:DSSS (DBPSK, DQPSK, CCK) 802.11g/n:OFDM (BPSK, QPSK, 16QAM, 64QAM)
Antenna Type	Internal / External: Dipole Antenna
Antenna Gain	Refer to the table "Antenna List"
Channel Control	Auto

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain	Note
1	Lite-On	301000070567 301000070667 301000070767	Dipole	7.9dBi for 2.4GHz	Internal Antenna
2	Walsin	RFDPA252025AMLB801	Dipole	5.01dBi for 2.4GHz	External Antenna

Note: The antenna of EUT is conform to FCC 15.203.

802.11b/g/n-20MHz Center Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 01:	2412 MHz	Channel 02:	2417 MHz	Channel 03:	2422 MHz	Channel 04:	2427 MHz
Channel 05:	2432 MHz	Channel 06:	2437 MHz	Channel 07:	2442 MHz	Channel 08:	2447 MHz
Channel 09:	2452 MHz	Channel 10:	2457 MHz	Channel 11:	2462 MHz		

802.11n-40MHz Center Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 03:	2422 MHz	Channel 04:	2427 MHz	Channel 05:	2432 MHz	Channel 06:	2437 MHz
Channel 07:	2442 MHz	Channel 08:	2447 MHz	Channel 09:	2452 MHz		

Note:

1. The EUT is a Access Point/Sensor with a built-in 802.11a/b/g/n/ac WLAN transceiver, this report for 802.11b/g/n transceiver.
2. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
3. At result of pretests, module supports dual-channel transmission, only the worst case is shown in the report. (802.11b/g/n is chain A+ chain B+ chain C)
4. Lowest and highest data rates are tested in each mode. Only worst case is shown in the report. (802.11b is 1Mbps 、802.11g is 6Mbps 、802.11n(20M-BW) is 21.7Mbps and 、802.11n(40M-BW) is 45Mbps)
5. These tests are conducted on a sample for the purpose of demonstrating compliance of 802.11b/g/n transmitter with Part 15 Subpart C Paragraph 15.247 of spread spectrum devices.
6. At result of pretests, module supports dual-channel transmission, only the worst case is shown in the report. (802.11b is chain A+B+C 、802.11g is chain A+B+C 、802.11a is chain A+B+C)
7. The radiation measurements are performed in X, Y, Z axis positioning. Only the worst case is shown in the report.

Test Mode:	Mode 1: Transmit (802.11b 1Mbps)
	Mode 2: Transmit (802.11g 6Mbps)
	Mode 3: Transmit (802.11n 21.7Mbps 20M-BW)
	Mode 4: Transmit (802.11n 45Mbps 40M-BW)

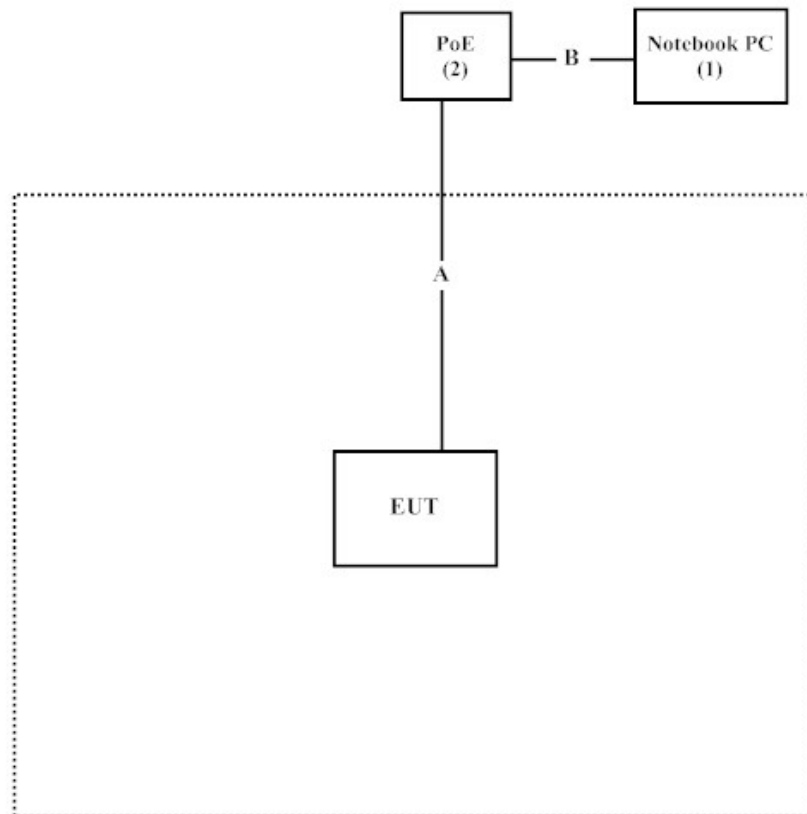
1.3. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product	Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook PC	DELL	PPT	N/A
2	PoE	Linksys	LGS108P	N/A

Signal Cable Type	Signal cable Description
A	LAN Cable
B	LAN Cable

1.4. Configuration of Tested System



1.5. EUT Exercise Software

1. Setup the EUT as shown in Section 1.4
2. Execute software “ART2-GUI (v2.3)” on the EUT.
3. Configure the test mode, the test channel, and the data rate.
4. Press “OK” to start the continuous Transmit.
5. Verify that the EUT works properly.

1.6. Test Facility

Ambient conditions in the laboratory:

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	20-35
Humidity (%RH)	25-75	50-65
Barometric pressure (mbar)	860-1060	950-1000

The related certificate for our laboratories about the test site and management system can be downloaded from Quietek Corporation's Web Site: <http://www.quietek.com/chinese/about/certificates.aspx?bval=5>

The address and introduction of Quietek Corporation's laboratories can be founded in our Web site: <http://www.quietek.com/>

Site Description: File on
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FCC Accreditation Number: TW1014

2. Conducted Emission

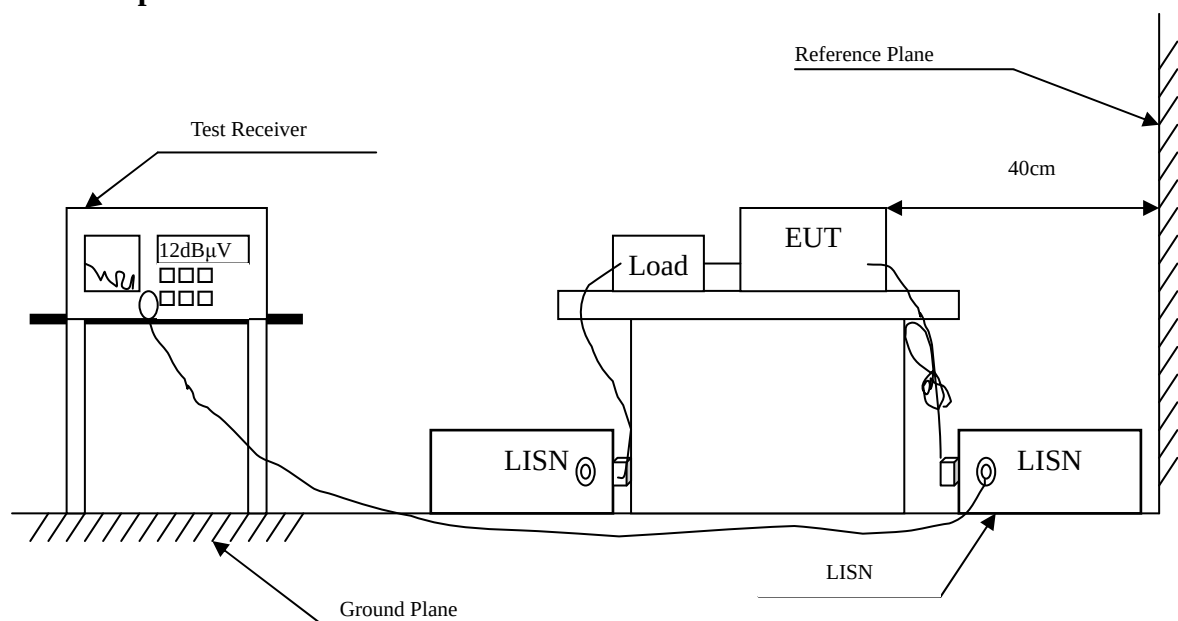
2.1. Test Equipment

	Equipment	Manufacturer	Model No. / Serial No.	Last Cal.	Remark
X	Test Receiver	R & S	ESCS 30 / 825442/018	Sep., 2014	
X	Artificial Mains Network	R & S	ENV4200 / 848411/10	Feb., 2015	Peripherals
X	LISN	R & S	ESH3-Z5 / 825562/002	Feb., 2015	EUT
	DC LISN	Schwarzbeck	8226 / 176	Mar., 2015	EUT
X	Pulse Limiter	R & S	ESH3-Z2 / 357.8810.52	Feb., 2015	
	No.1 Shielded Room				

Note:

1. All equipments are calibrated every one year.
2. The test instruments marked by "X" are used to measure the final test results.

2.2. Test Setup



2.3. Limits

FCC Part 15 Subpart C Paragraph 15.207 (dBμV) Limit		
Frequency MHz	Limits	
	QP	AVG
0.15 - 0.50	66-56	56-46
0.50-5.0	56	46
5.0 - 30	60	50

2.4. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2009 on conducted measurement.

Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

2.5. Uncertainty

± 2.26 dB

2.6. Test Result of Conducted Emission

Owing to the EUT does not sell Adapter, this test item is not performed.

3. Peak Power Output

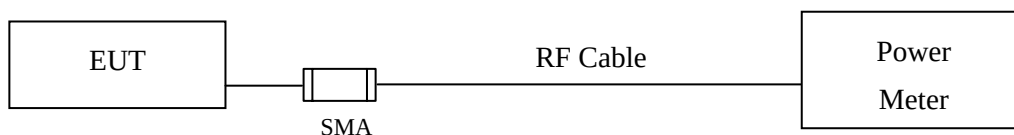
3.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Power Meter	Anritsu	ML2495A/6K00003357	May, 2015
X	Power Sensor	Anritsu	MA2411B/0738448	Jun., 2014

Note:

1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with “X” are used to measure the final test results.

3.2. Test Setup



3.3. Limits

The maximum peak power shall be less 1 Watt.

3.4. Test Procedure

The EUT was tested according to DTS test procedure of KDB 558074 for compliance to FCC 47CFR 15.247 requirements. The maximum peak conducted output power using KDB 558074 D01 DTS Meas Guidance v03r02 section 9.1.2 PKPM1 Peak power meter method.

3.5. Uncertainty

± 1.27 dB

3.6. Test Result of Peak Power Output

Product : Access Point/Sensor
Test Item : Peak Power Output Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (External Antenna)

Chain A

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)				Power Value
		1	2	5.5	11	
		Measurement Level (dBm)				
01	2412	15.61	--	--	--	16.5
06	2437	22.93	22.84	22.78	22.58	24
11	2462	16.94	--	--	--	17.5

Note: Peak Power Output Value =Reading value on power meter + cable loss

Chain B

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)				Power Value
		1	2	5.5	11	
		Measurement Level (dBm)				
01	2412	15.85	--	--	--	16.5
06	2437	23.31	23.24	23.17	23.05	24
11	2462	16.41	--	--	--	17.5

Note: Peak Power Output Value =Reading value on power meter + cable loss

Chain C

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)				Power Value
		1	2	5.5	11	
		Measurement Level (dBm)				
01	2412	16.93	--	--	--	16.5
06	2437	23.65	23.51	23.35	23.23	24
11	2462	17.52	--	--	--	17.5

Note: Peak Power Output Value =Reading value on power meter + cable loss

CHAIN A+B+C

Channel	Frequency (MHz)	Data Rate (Mbps)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain A+B+C Power (dBm)	Limit (dBm)	Result
01	2412	1	15.61	15.85	16.93	20.94	<30dBm	Pass
06	2437	1	22.93	23.31	23.65	28.08	<30dBm	Pass
11	2462	1	16.94	16.41	17.52	21.75	<30dBm	Pass

Note: Peak Power Output Value (dBm) = 10*LOG (Chain A (mW)+Chain B (mW)+Chain C (mW))

Product : Access Point/Sensor
Test Item : Peak Power Output Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (External Antenna)

Chain A

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Power Value
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
01	2412	13.57	--	--	--	--	--	--	--	14.5
06	2437	21.55	21.48	21.41	21.34	21.27	21.24	21.13	21.02	22.5
11	2462	12.85	--	--	--	--	--	--	--	13

Note: Peak Power Output Value =Reading value on power meter + cable loss

Chain B

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Power Value
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
01	2412	13.94	--	--	--	--	--	--	--	14.5
06	2437	22.13	22.05	21.97	21.89	21.84	21.73	21.61	21.57	22.5
11	2462	12.33	--	--	--	--	--	--	--	13

Note: Peak Power Output Value =Reading value on power meter + cable loss

Chain C

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Power Value
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
01	2412	14.53	--	--	--	--	--	--	--	14.5
06	2437	22.31	22.24	22.17	22.12	22.03	21.96	21.85	21.82	22.5
11	2462	13.13	--	--	--	--	--	--	--	13

Note: Peak Power Output Value =Reading value on power meter + cable loss

CHAIN A+B+C

Channel	Frequency (MHz)	Data Rate (Mbps)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain A+B+C Power (dBm)	Limit (dBm)	Result
01	2412	6	13.57	13.94	14.53	18.80	<30dBm	Pass
06	2437	6	21.55	22.13	22.31	26.78	<30dBm	Pass
11	2462	6	12.85	12.33	13.13	17.55	<30dBm	Pass

Note: Peak Power Output Value (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW)+Chain C (mW))

Product : Access Point/Sensor
Test Item : Peak Power Output Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n 21.7Mbps 20M-BW) (External Antenna)

Chain A

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Power Value
		21.7	43.3	65	86.7	130.7	173.3	195	216.7	
		Measurement Level (dBm)								
01	2412	13.07	--	--	--	--	--	--	--	14
06	2437	21.92	21.87	21.82	21.74	21.72	21.67	21.62	21.52	23
11	2462	11.25	--	--	--	--	--	--	--	11.5

Note: Peak Power Output Value =Reading value on power meter + cable loss

Chain B

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Power Value
		21.7	43.3	65	86.7	130.7	173.3	195	216.7	
		Measurement Level (dBm)								
01	2412	13.51	--	--	--	--	--	--	--	14
06	2437	22.49	22.41	22.33	22.25	22.18	22.09	22.01	21.86	23
11	2462	10.92	--	--	--	--	--	--	--	11.5

Note: Peak Power Output Value =Reading value on power meter + cable loss

Chain C

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Power Value
		21.7	43.3	65	86.7	130.7	173.3	195	216.7	
		Measurement Level (dBm)								
01	2412	14.12	--	--	--	--	--	--	--	14
06	2437	22.67	22.54	22.41	22.28	22.15	22.02	21.92	21.83	23
11	2462	12.16	--	--	--	--	--	--	--	11.5

Note: Peak Power Output Value =Reading value on power meter + cable loss

CHAIN A+B+C

Channel	Frequency (MHz)	Data Rate (Mbps)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain A+B+C Power (dBm)	Limit (dBm)	Result
01	2412	21.7	13.07	13.51	14.12	18.36	<30dBm	Pass
06	2437	21.7	21.92	22.49	22.67	27.14	<30dBm	Pass
11	2462	21.7	11.25	10.92	12.16	16.25	<30dBm	Pass

Note: Peak Power Output Value (dBm) = 10*LOG (Chain A (mW)+Chain B (mW)+Chain C (mW))

Product : Access Point/Sensor
Test Item : Peak Power Output Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n 45Mbps 40M-BW) (External Antenna)

Chain A

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Power Value
		45	90	135	180	270	360	405	450	
		Measurement Level (dBm)								
03	2422	8.69	--	--	--	--	--	--	--	9.5
06	2437	15.51	15.42	15.33	15.24	15.16	15.06	14.97	14.86	16.5
09	2452	9.21	--	--	--	--	--	--	--	10

Note: Peak Power Output Value =Reading value on power meter + cable loss

Chain B

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Power Value
		45	90	135	180	270	360	405	450	
		Measurement Level (dBm)								
03	2422	8.81	--	--	--	--	--	--	--	9.5
06	2437	15.98	15.84	15.7	15.56	15.42	15.32	15.14	15.05	16.5
09	2452	9.12	--	--	--	--	--	--	--	10

Note: Peak Power Output Value =Reading value on power meter + cable loss

Chain C

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Power Value
		45	90	135	180	270	360	405	450	
		Measurement Level (dBm)								
03	2422	9.58	--	--	--	--	--	--	--	9.5
06	2437	16.3	16.22	16.14	16.06	15.95	15.9	15.82	15.66	16.5
09	2452	9.79	--	--	--	--	--	--	--	10

Note: Peak Power Output Value =Reading value on power meter + cable loss

CHAIN A+B+C

Channel	Frequency (MHz)	Data Rate (Mbps)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain A+B+C Power (dBm)	Limit (dBm)	Result
03	2422	45	8.69	8.81	9.58	13.82	<30dBm	Pass
06	2437	45	15.51	15.98	16.30	20.71	<30dBm	Pass
09	2452	45	9.21	9.12	9.79	14.15	<30dBm	Pass

Note: Peak Power Output Value (dBm) = 10*LOG (Chain A (mW)+Chain B (mW)+Chain C (mW))

Product : Access Point/Sensor
Test Item : Peak Power Output Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (Internal Antenna)

Chain A

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)				Power Value
		1	2	5.5	11	
		Measurement Level (dBm)				
01	2412	18.88	--	--	--	20
06	2437	22.82	22.74	22.66	22.51	24
11	2462	18.02	--	--	--	19

Note: Peak Power Output Value =Reading value on power meter + cable loss

Chain B

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)				Power Value
		1	2	5.5	11	
		Measurement Level (dBm)				
01	2412	19.12	--	--	--	20
06	2437	23.27	23.18	23.09	22.94	24
11	2462	18.62	--	--	--	19

Note: Peak Power Output Value =Reading value on power meter + cable loss

Chain C

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)				Power Value
		1	2	5.5	11	
		Measurement Level (dBm)				
01	2412	19.2	--	--	--	20
06	2437	23.22	23.11	23.03	22.89	24
11	2462	18.21	--	--	--	19

Note: Peak Power Output Value =Reading value on power meter + cable loss

CHAIN A+B+C

Channel	Frequency (MHz)	Data Rate (Mbps)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain A+B+C Power (dBm)	Limit (dBm)	Result
01	2412	1	18.88	19.12	19.20	23.84	<28.1dBm	Pass
06	2437	1	22.82	23.27	23.22	27.88	<28.1dBm	Pass
11	2462	1	18.02	18.62	18.21	23.06	<28.1dBm	Pass

Note: Peak Power Output Value (dBm) = 10*LOG (Chain A (mW)+Chain B (mW)+Chain C (mW))

Product : Access Point/Sensor
Test Item : Peak Power Output Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (Internal Antenna)

Chain A

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Power Value
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
01	2412	14.29	--	--	--	--	--	--	--	15
06	2437	22.83	22.72	22.61	22.53	22.39	22.28	22.17	22.04	24
11	2462	12.99	--	--	--	--	--	--	--	14

Note: Peak Power Output Value =Reading value on power meter + cable loss

Chain B

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Power Value
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
01	2412	14.57	--	--	--	--	--	--	--	15
06	2437	23.01	22.88	22.75	22.62	22.49	22.36	22.23	22.16	24
11	2462	13.71	--	--	--	--	--	--	--	14

Note: Peak Power Output Value =Reading value on power meter + cable loss

Chain C

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Power Value
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
01	2412	14.81	--	--	--	--	--	--	--	15
06	2437	23.23	23.12	23.01	22.92	22.79	22.68	22.57	22.42	24
11	2462	13.69	--	--	--	--	--	--	--	14

Note: Peak Power Output Value =Reading value on power meter + cable loss

CHAIN A+B+C

Channel	Frequency (MHz)	Data Rate (Mbps)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain A+B+C Power (dBm)	Limit (dBm)	Result
01	2412	6	14.29	14.57	14.81	19.33	<28.1dBm	Pass
06	2437	6	22.83	23.01	23.23	27.80	<28.1dBm	Pass
11	2462	6	12.99	13.71	13.69	18.25	<28.1dBm	Pass

Note: Peak Power Output Value (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW)+Chain C (mW))

Product : Access Point/Sensor
Test Item : Peak Power Output Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n 21.7Mbps 20M-BW) (Internal Antenna)

Chain A

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Power Value
		21.7	43.3	65	86.7	130.7	173.3	195	216.7	
		Measurement Level (dBm)								
01	2412	13.52	--	--	--	--	--	--	--	14.5
06	2437	21.45	21.31	21.17	21.08	20.89	20.75	20.66	20.47	22.5
11	2462	12.37	--	--	--	--	--	--	--	13.5

Note: Peak Power Output Value =Reading value on power meter + cable loss

Chain B

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Power Value
		21.7	43.3	65	86.7	130.7	173.3	195	216.7	
		Measurement Level (dBm)								
01	2412	13.91	--	--	--	--	--	--	--	14.5
06	2437	21.49	21.34	21.19	21.08	20.89	20.74	20.52	20.44	22.5
11	2462	13.24	--	--	--	--	--	--	--	13.5

Note: Peak Power Output Value =Reading value on power meter + cable loss

Chain C

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Power Value
		21.7	43.3	65	86.7	130.7	173.3	195	216.7	
		Measurement Level (dBm)								
01	2412	14.11	--	--	--	--	--	--	--	14.5
06	2437	21.59	21.46	21.33	21.26	21.07	20.94	20.81	20.68	22.5
11	2462	13.29	--	--	--	--	--	--	--	13.5

Note: Peak Power Output Value =Reading value on power meter + cable loss

CHAIN A+B+C

Channel	Frequency (MHz)	Data Rate (Mbps)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain A+B+C Power (dBm)	Limit (dBm)	Result
01	2412	21.7	13.52	13.91	14.11	18.62	<28.1dBm	Pass
06	2437	21.7	21.45	21.49	21.59	26.28	<28.1dBm	Pass
11	2462	21.7	12.37	13.24	13.29	17.76	<28.1dBm	Pass

Note: Peak Power Output Value (dBm) = 10*LOG (Chain A (mW)+Chain B (mW)+Chain C (mW))

Product : Access Point/Sensor
Test Item : Peak Power Output Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n 45Mbps 40M-BW) (Internal Antenna)

Chain A

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Power Value
		45	90	135	180	270	360	405	450	
		Measurement Level (dBm)								
03	2422	9.94	--	--	--	--	--	--	--	11
06	2437	16.25	16.12	15.99	15.86	15.73	15.66	15.47	15.34	17.5
09	2452	11.13	--	--	--	--	--	--	--	12

Note: Peak Power Output Value =Reading value on power meter + cable loss

Chain B

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Power Value
		45	90	135	180	270	360	405	450	
		Measurement Level (dBm)								
03	2422	10.33	--	--	--	--	--	--	--	11
06	2437	16.71	16.58	16.45	16.32	16.17	16.06	15.93	15.83	17.5
09	2452	11.15	--	--	--	--	--	--	--	12

Note: Peak Power Output Value =Reading value on power meter + cable loss

Chain C

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Power Value
		45	90	135	180	270	360	405	450	
		Measurement Level (dBm)								
03	2422	10.53	--	--	--	--	--	--	--	11
06	2437	16.86	16.72	16.58	16.44	16.35	16.16	16.02	15.88	17.5
09	2452	11.25	--	--	--	--	--	--	--	12

Note: Peak Power Output Value =Reading value on power meter + cable loss

CHAIN A+B+C

Channel	Frequency (MHz)	Data Rate (Mbps)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain A+B+C Power (dBm)	Limit (dBm)	Result
03	2422	45	9.94	10.33	10.53	15.04	<28.1dBm	Pass
06	2437	45	16.25	16.71	16.86	21.39	<28.1dBm	Pass
09	2452	45	11.13	11.15	11.25	15.95	<28.1dBm	Pass

Note: Peak Power Output Value (dBm) = 10*LOG (Chain A (mW)+Chain B (mW)+Chain C (mW))

4. Radiated Emission

4.1. Test Equipment

The following test equipment are used during the radiated emission test:

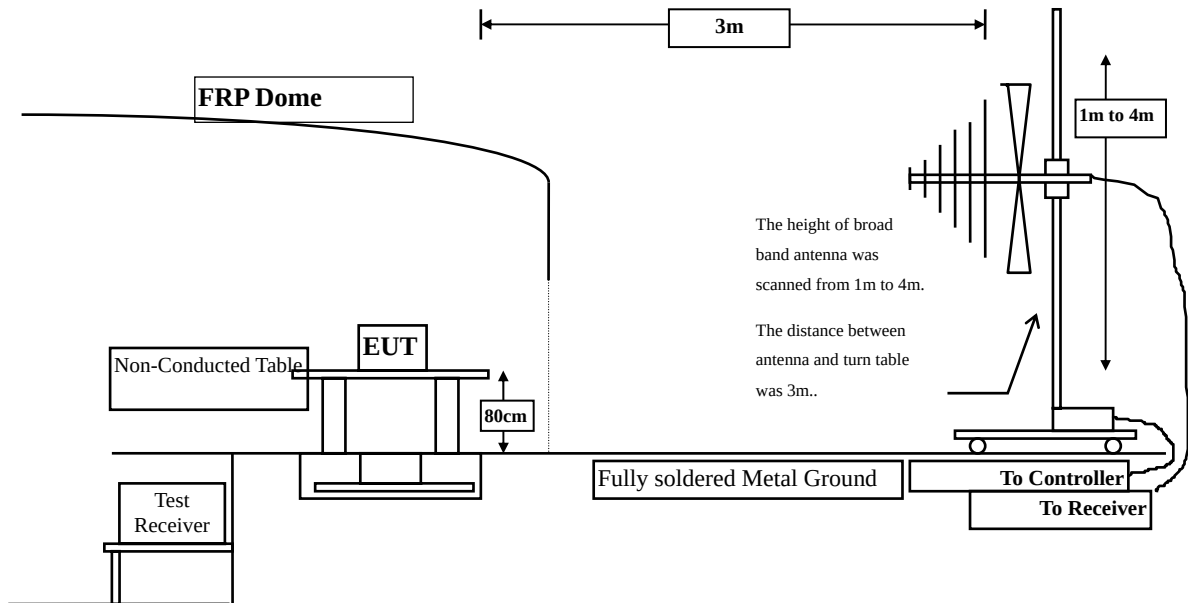
Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
☒ Site # 3	X	Loop Antenna	Teseq	HLA6121 / 37133	Sep., 2014
	X	Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2014
	X	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2014
	X	Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2014
	X	Pre-Amplifier	Agilent	8447D/2944A09549	Sep., 2014
	X	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2015
	X	Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2014
	X	Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2015
	X	Controller	QuieTek	QTK-CONTROLLER/ CTRL3	N/A
	X	Coaxial Switch	Anritsu	MP59B/6200265729	N/A

Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
☒ CB # 8	X	Spectrum Analyzer	R&S	FSP40/ 100339	Oct, 2014
	X	Horn Antenna	ETS-Lindgren	3117/ 35205	Mar, 2015
	X	Horn Antenna	Schwarzbeck	BBHA9170/209	Jan, 2015
	X	Horn Antenna	TRC	AH-0801/95051	Aug, 2014
	X	Pre-Amplifier	EMCI	EMC012630SE/980210	Jan, 2015
	X	Pre-Amplifier	MITEQ	JS41-001040000-58-5P/153945	Jul, 2014
	X	Pre-Amplifier	NARDA	DBL-1840N506/013	Jul, 2014

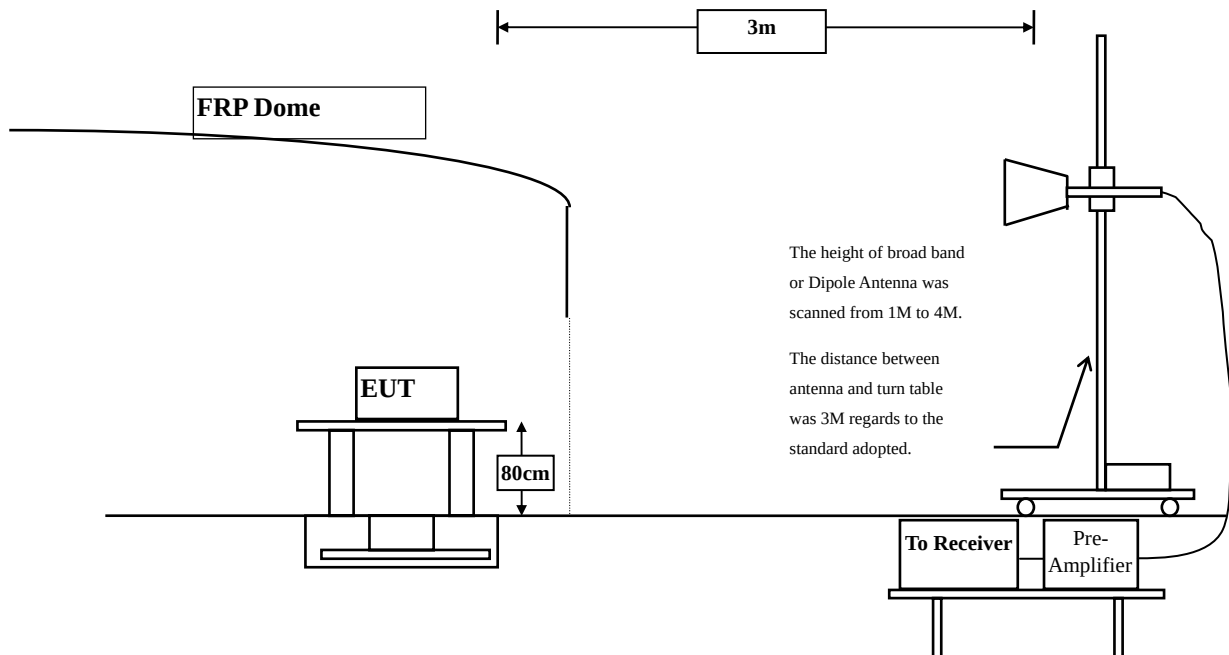
- Note:
1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
 2. The test instruments marked with "X" are used to measure the final test results.

4.2. Test Setup

Radiated Emission Below 1GHz



Radiated Emission Above 1GHz



4.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209(a) Limits		
Frequency MHz	Field strength (microvolts/meter)	Measurement distance (meter)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Remarks: E field strength (dBμV/m) = 20 log E field strength (uV/m)

4.4. Test Procedure

The EUT was setup according to ANSI C63.10: 2009 and tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The EUT is placed on a turn table which is 0.8 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned between 1 meter and 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10: 2009 on radiated measurement.

The resolution bandwidth below 30MHz setting on the field strength meter is 9kHz and 30MHz~1GHz is 120kHz and above 1GHz is 1MHz.

Radiated emission measurements below 30MHz are made using Loop Antenna and 30MHz~1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

The measurement is divided into the Preliminary Measurement and the Final Measurement.

The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB bandwidth of the antenna.

The worst radiated emission is measured in the Open Area Test Site on the Final Measurement.

The frequency range from 9kHz to 10th harmonics is checked.

4.5. Uncertainty

± 3.9 dB above 1GHz

± 3.8 dB below 1GHz

4.6. Test Result of Radiated Emission

Product : Access Point/Sensor
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz) (External Antenna)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level	dB	dB μ V/m
	dB	dB μ V	dB μ V/m		

Horizontal

Peak Detector:

4824.000	3.261	38.930	42.191	-31.809	74.000
7236.000	10.650	36.590	47.240	-26.760	74.000
9648.000	13.337	37.780	51.116	-22.884	74.000

Average Detector:

--

Vertical

Peak Detector:

4824.000	6.421	38.550	44.971	-29.029	74.000
7236.000	11.495	36.510	48.005	-25.995	74.000
9648.000	13.807	37.130	50.936	-23.064	74.000

Average Detector:

--

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Access Point/Sensor
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2437 MHz) (External Antenna)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dB μ V	dB μ V/m	dB	dB μ V/m
Horizontal					
Peak Detector:					
4874.000	3.038	45.170	48.207	-25.793	74.000
7311.000	11.795	41.250	53.044	-20.956	74.000
9748.000	12.635	37.270	49.905	-24.095	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4874.000	5.812	44.150	49.961	-24.039	74.000
7311.000	12.630	39.470	52.099	-21.901	74.000
9748.000	13.126	36.910	50.036	-23.964	74.000
Average Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Access Point/Sensor
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462 MHz) (External Antenna)

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector:					
4924.000	2.858	40.530	43.387	-30.613	74.000
7386.000	12.127	35.190	47.318	-26.682	74.000
9848.000	12.852	36.730	49.583	-24.417	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4924.000	5.521	39.250	44.770	-29.230	74.000
7386.000	13.254	35.630	48.884	-25.116	74.000
9848.000	13.367	36.960	50.327	-23.673	74.000
Average Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Access Point/Sensor
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz) (External Antenna)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dB μ V	dB μ V/m	dB	dB μ V/m

Horizontal

Peak Detector:

4824.000	3.261	38.440	41.701	-32.299	74.000
7236.000	10.650	35.580	46.230	-27.770	74.000
9648.000	13.337	37.300	50.636	-23.364	74.000

Average Detector:

--

Vertical

Peak Detector:

4824.000	6.421	38.720	45.141	-28.859	74.000
7236.000	11.495	36.950	48.445	-25.555	74.000
9648.000	13.807	37.130	50.936	-23.064	74.000

Average Detector:

--

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Access Point/Sensor
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437 MHz) (External Antenna)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dB μ V	dB μ V/m	dB	dB μ V/m

Horizontal

Peak Detector:

4874.000	3.038	41.250	44.287	-29.713	74.000
7311.000	11.795	36.060	47.854	-26.146	74.000
9748.000	12.635	37.190	49.825	-24.175	74.000

Average Detector:

--

Peak Detector:

4874.000	5.812	38.360	44.171	-29.829	74.000
7311.000	12.630	37.060	49.689	-24.311	74.000
9748.000	13.126	37.190	50.316	-23.684	74.000

Average Detector:

--

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Access Point/Sensor
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462 MHz) (External Antenna)

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector:					
4924.000	2.858	40.800	43.657	-30.343	74.000
7386.000	12.127	35.670	47.798	-26.202	74.000
9848.000	12.852	36.440	49.293	-24.707	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4924.000	5.521	38.880	44.400	-29.600	74.000
7386.000	13.254	36.340	49.594	-24.406	74.000
9848.000	13.367	36.950	50.317	-23.683	74.000
Average Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Access Point/Sensor
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n 21.7Mbps 20M-BW)(2412MHz) (External Antenna)

Frequency MHz	Correct Factor dB	Reading Level dB μ V	Measurement Level dB μ V/m	Margin dB	Limit dB μ V/m
Horizontal					
Peak Detector:					
4824.000	3.261	38.870	42.131	-31.869	74.000
7236.000	10.650	36.960	47.610	-26.390	74.000
9648.000	13.337	37.520	50.856	-23.144	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4824.000	6.421	39.130	45.551	-28.449	74.000
7236.000	11.495	36.400	47.895	-26.105	74.000
9648.000	13.807	37.090	50.896	-23.104	74.000
Average Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Access Point/Sensor
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n 21.7Mbps 20M-BW) (2437 MHz) (External Antenna)

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector:					
4874.000	3.038	38.870	41.907	-32.093	74.000
7311.000	11.795	35.300	47.094	-26.906	74.000
9748.000	12.635	36.450	49.085	-24.915	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4874.000	5.812	38.390	44.201	-29.799	74.000
7311.000	12.630	35.980	48.609	-25.391	74.000
9748.000	13.126	36.390	49.516	-24.484	74.000
Average Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Access Point/Sensor
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n 21.7Mbps 20M-BW) (2462 MHz) (External Antenna)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dB μ V	dB μ V/m	dB	dB μ V/m

Horizontal

Peak Detector:

4924.000	2.858	38.640	41.497	-32.503	74.000
7386.000	12.127	35.240	47.368	-26.632	74.000
9848.000	12.852	36.200	49.053	-24.947	74.000

Average Detector:

--

Vertical

Peak Detector:

4924.000	5.521	37.120	42.640	-31.360	74.000
7386.000	13.254	35.260	48.514	-25.486	74.000
9848.000	13.367	37.500	50.867	-23.133	74.000

Average Detector:

--

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Access Point/Sensor
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n 45Mbps 40M-BW)(2422MHz) (External Antenna)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dB μ V	dB μ V/m	dB	dB μ V/m

Horizontal

Peak Detector:

4844.000	3.171	37.320	40.491	-33.509	74.000
7266.000	11.162	35.660	46.822	-27.178	74.000
9688.000	12.964	36.780	49.745	-24.255	74.000

Average Detector:

--

Vertical

Peak Detector:

4844.000	6.178	37.960	44.138	-29.862	74.000
7266.000	11.982	37.450	49.432	-24.568	74.000
9688.000	13.507	36.520	50.028	-23.972	74.000

Average Detector:

--

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Access Point/Sensor
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n 45Mbps 40M-BW) (2437 MHz) (External Antenna)

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector:					
4874.000	3.038	36.690	39.727	-34.273	74.000
7311.000	11.795	35.660	47.454	-26.546	74.000
9748.000	12.635	37.630	50.265	-23.735	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4874.000	5.812	38.966	44.777	-29.223	74.000
7311.000	12.630	35.060	47.689	-26.311	74.000
9748.000	13.126	36.630	49.756	-24.244	74.000
Average Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Access Point/Sensor
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n 45Mbps 40M-BW) (2452 MHz) (External Antenna)

Frequency MHz	Correct Factor dB	Reading Level dB μ V	Measurement Level dB μ V/m	Margin dB	Limit dB μ V/m
Horizontal					
Peak Detector:					
4904.000	2.914	38.130	41.045	-32.955	74.000
7356.000	11.995	35.920	47.914	-26.086	74.000
9808.000	12.475	36.880	49.355	-24.645	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4904.000	5.530	38.480	44.011	-29.989	74.000
7356.000	13.005	36.140	49.144	-24.856	74.000
9808.000	12.901	37.110	50.011	-23.989	74.000
Average Detector:					
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Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Access Point/Sensor
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps)(2437 MHz) (External Antenna)

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
99.840	-7.471	42.103	34.632	-8.868	43.500
239.520	-6.851	39.164	32.314	-13.686	46.000
315.180	-4.186	38.172	33.986	-12.014	46.000
499.480	0.048	40.180	40.228	-5.772	46.000
600.360	3.977	33.970	37.947	-8.053	46.000
751.680	3.660	28.658	32.318	-13.682	46.000
Vertical					
109.540	-0.418	39.957	39.539	-3.961	43.500
204.600	-7.666	47.584	39.917	-3.583	43.500
499.480	-0.852	37.793	36.941	-9.059	46.000
695.420	1.878	25.374	27.252	-18.748	46.000
804.060	3.587	24.938	28.525	-17.475	46.000
963.140	7.604	24.124	31.728	-22.272	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : Access Point/Sensor
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps)(2437 MHz) (External Antenna)

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
99.840	-7.471	42.491	35.020	-8.480	43.500
317.120	-4.245	37.538	33.293	-12.707	46.000
499.480	0.048	40.067	40.115	-5.885	46.000
600.360	3.977	33.396	37.373	-8.627	46.000
749.740	3.320	27.197	30.517	-15.483	46.000
901.060	5.591	24.728	30.319	-15.681	46.000
Vertical					
95.960	-2.790	41.210	38.420	-5.080	43.500
204.600	-7.666	44.734	37.067	-6.433	43.500
260.860	-7.462	42.684	35.222	-10.778	46.000
499.480	-0.852	37.575	36.723	-9.277	46.000
693.480	2.168	26.718	28.886	-17.114	46.000
901.060	3.331	26.701	30.032	-15.968	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : Access Point/Sensor
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n 21.7Mbps 20M-BW)(2437 MHz) (External Antenna)

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
99.840	-7.471	40.523	33.052	-10.448	43.500
255.040	-5.098	38.193	33.095	-12.905	46.000
499.480	0.048	40.450	40.498	-5.502	46.000
600.360	3.977	33.809	37.786	-8.214	46.000
749.740	3.320	27.599	30.919	-15.081	46.000
930.160	7.187	23.793	30.980	-15.020	46.000
Vertical					
204.600	-7.666	45.097	37.430	-6.070	43.500
260.860	-7.462	43.289	35.827	-10.173	46.000
499.480	-0.852	35.975	35.123	-10.877	46.000
625.580	-2.600	30.323	27.723	-18.277	46.000
749.740	2.510	26.312	28.822	-17.178	46.000
967.020	8.071	23.181	31.252	-22.748	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : Access Point/Sensor
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n 45Mbps 40M-BW)(2437 MHz) (External Antenna)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dB μ V	dB μ V/m	dB	dB μ V/m
Horizontal					
92.080	-8.819	41.789	32.970	-10.530	43.500
317.120	-4.245	35.009	30.764	-15.236	46.000
499.480	0.048	40.602	40.650	-5.350	46.000
600.360	3.977	34.102	38.079	-7.921	46.000
749.740	3.320	27.808	31.128	-14.872	46.000
965.080	6.852	24.156	31.008	-22.992	54.000
Vertical					
101.780	-0.021	38.168	38.146	-5.354	43.500
229.820	-8.512	41.053	32.541	-13.459	46.000
499.480	-0.852	36.369	35.517	-10.483	46.000
625.580	-2.600	31.098	28.498	-17.502	46.000
901.060	3.331	26.513	29.844	-16.156	46.000
968.960	8.191	23.706	31.897	-22.103	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : Access Point/Sensor
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz) (Internal Antenna)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dB μ V	dB μ V/m	dB	dB μ V/m

Horizontal

Peak Detector:

4824.000	6.246	40.830	47.076	-26.924	74.000
7236.000	10.074	37.430	47.504	-26.496	74.000
9648.000	12.738	36.340	49.078	-24.922	74.000

Average Detector:

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Vertical

Peak Detector:

4824.000	6.246	39.830	46.076	-27.924	74.000
7236.000	10.074	36.850	46.924	-27.076	74.000
9648.000	12.738	36.710	49.448	-24.552	74.000

Average Detector:

--

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Access Point/Sensor
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2437 MHz) (Internal Antenna)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dB μ V	dB μ V/m	dB	dB μ V/m
Horizontal					
Peak Detector:					
4874.000	6.290	48.200	54.490	-19.510	74.000
7311.000	10.128	39.500	49.628	-24.372	74.000
9748.000	12.853	40.030	52.883	-21.117	74.000
Average Detector:					
4874.000	6.290	45.600	51.890	-2.110	54.000
Vertical					
Peak Detector:					
4874.000	6.290	47.360	53.650	-20.350	74.000
7311.000	10.128	38.400	48.528	-25.472	74.000
9748.000	12.853	36.290	49.143	-24.857	74.000
Average Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Access Point/Sensor
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462 MHz) (Internal Antenna)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBμV	dBμV/m	dB	dBμV/m

Horizontal

Peak Detector:

4924.000	6.245	39.140	45.385	-28.615	74.000
7386.000	10.167	37.650	47.817	-26.183	74.000
9848.000	13.232	35.220	48.452	-25.548	74.000

Average Detector:

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Vertical

Peak Detector:

4924.000	6.245	38.680	44.925	-29.075	74.000
7386.000	10.167	37.690	47.857	-26.143	74.000
9848.000	13.232	35.320	48.552	-25.448	74.000

Average Detector:

--

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Access Point/Sensor
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz) (Internal Antenna)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dB μ V	dB μ V/m	dB	dB μ V/m

Horizontal

Peak Detector:

4824.000	6.246	39.440	45.686	-28.314	74.000
7236.000	10.074	37.130	47.204	-26.796	74.000
9648.000	12.738	35.910	48.648	-25.352	74.000

Average Detector:

--

Vertical

Peak Detector:

4824.000	6.246	38.570	44.816	-29.184	74.000
7236.000	10.074	36.740	46.814	-27.186	74.000
9648.000	12.738	36.130	48.868	-25.132	74.000

Average Detector:

--

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Access Point/Sensor
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437 MHz) (Internal Antenna)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBμV	dBμV/m	dB	dBμV/m

Horizontal

Peak Detector:

4874.000	6.290	39.420	45.710	-28.290	74.000
7311.000	10.128	36.340	46.468	-27.532	74.000
9748.000	12.853	36.420	49.273	-24.727	74.000

Average Detector:

--

Peak Detector:

4874.000	6.290	40.700	46.990	-27.010	74.000
7311.000	10.128	36.680	46.808	-27.192	74.000
9748.000	12.853	36.180	49.033	-24.967	74.000

Average Detector:

--

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Access Point/Sensor
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462 MHz) (Internal Antenna)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBμV	dBμV/m	dB	dBμV/m

Horizontal

Peak Detector:

4924.000	6.245	39.120	45.365	-28.635	74.000
7386.000	10.167	36.900	47.067	-26.933	74.000
9848.000	13.232	34.950	48.182	-25.818	74.000

Average Detector:

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Vertical

Peak Detector:

4924.000	6.245	38.710	44.955	-29.045	74.000
7386.000	10.167	37.200	47.367	-26.633	74.000
9848.000	13.232	35.470	48.702	-25.298	74.000

Average Detector:

--

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Access Point/Sensor
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n 21.7Mbps 20M-BW)(2412MHz) (Internal Antenna)

Frequency MHz	Correct Factor dB	Reading Level dB μ V	Measurement Level dB μ V/m	Margin dB	Limit dB μ V/m
Horizontal					
Peak Detector:					
4824.000	6.246	38.740	44.986	-29.014	74.000
7236.000	10.074	37.080	47.154	-26.846	74.000
9648.000	12.738	36.990	49.728	-24.272	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4824.000	6.246	39.090	45.336	-28.664	74.000
7236.000	10.074	37.060	47.134	-26.866	74.000
9648.000	12.738	35.960	48.698	-25.302	74.000
Average Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Access Point/Sensor
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n 21.7Mbps 20M-BW) (2437 MHz) (Internal Antenna)

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector:					
4874.000	6.290	40.050	46.340	-27.660	74.000
7311.000	10.128	36.570	46.698	-27.302	74.000
9748.000	12.853	37.050	49.903	-24.097	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4874.000	6.290	38.270	44.560	-29.440	74.000
7311.000	10.128	36.630	46.758	-27.242	74.000
9748.000	12.853	36.640	49.493	-24.507	74.000
Average Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Access Point/Sensor
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n 21.7Mbps 20M-BW) (2462 MHz) (Internal Antenna)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level	dB	dBμV/m
	dB	dBμV	dBμV/m		

Horizontal

Peak Detector:

4924.000	6.245	38.930	45.175	-28.825	74.000
7386.000	10.167	36.970	47.137	-26.863	74.000
9848.000	13.232	34.920	48.152	-25.848	74.000

Average Detector:

--

Vertical

Peak Detector:

4924.000	6.245	38.410	44.655	-29.345	74.000
7386.000	10.167	36.260	46.427	-27.573	74.000
9848.000	13.232	36.300	49.532	-24.468	74.000

Average Detector:

--

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Access Point/Sensor
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n 45Mbps 40M-BW)(2422MHz) (Internal Antenna)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dB μ V	dB μ V/m	dB	dB μ V/m

Horizontal

Peak Detector:

4844.000	6.453	37.910	44.363	-29.637	74.000
7266.000	10.090	36.650	46.740	-27.260	74.000
9688.000	12.985	36.060	49.045	-24.955	74.000

Average Detector:

--

Vertical

Peak Detector:

4844.000	6.453	38.180	44.633	-29.367	74.000
7266.000	10.090	36.150	46.240	-27.760	74.000
9688.000	12.985	36.050	49.035	-24.965	74.000

Average Detector:

--

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Access Point/Sensor
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n 45Mbps 40M-BW) (2437 MHz) (Internal Antenna)

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector:					
4874.000	6.290	39.260	45.550	-28.450	74.000
7311.000	10.128	36.570	46.698	-27.302	74.000
9748.000	12.853	36.300	49.153	-24.847	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4874.000	6.290	38.270	44.560	-29.440	74.000
7311.000	10.128	36.680	46.808	-27.192	74.000
9748.000	12.853	36.320	49.173	-24.827	74.000
Average Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Access Point/Sensor
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n 45Mbps 40M-BW) (2452 MHz) (Internal Antenna)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dB μ V	dB μ V/m	dB	dB μ V/m

Horizontal

Peak Detector:

4904.000	6.193	38.390	44.583	-29.417	74.000
7356.000	10.371	36.390	46.761	-27.239	74.000
9808.000	13.071	35.660	48.731	-25.269	74.000

Average Detector:

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Vertical

Peak Detector:

4904.000	6.193	38.390	44.583	-29.417	74.000
7356.000	10.371	36.130	46.501	-27.499	74.000
9808.000	13.071	36.320	49.391	-24.609	74.000

Average Detector:

--

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Access Point/Sensor
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps)(2437 MHz) (Internal Antenna)

Frequency MHz	Correct Factor dB	Reading Level dB μ V	Measurement Level dB μ V/m	Margin dB	Limit dB μ V/m
Horizontal					
99.840	-7.471	44.474	37.003	-6.497	43.500
249.220	-6.014	36.854	30.840	-15.160	46.000
499.480	0.048	38.310	38.358	-7.642	46.000
625.580	1.770	35.651	37.421	-8.579	46.000
749.740	3.320	29.166	32.486	-13.514	46.000
875.840	5.271	33.992	39.263	-6.737	46.000
Vertical					
101.780	-0.021	42.077	42.055	-1.445	43.500
249.220	-7.634	33.955	26.321	-19.679	46.000
499.480	-0.852	38.919	38.067	-7.933	46.000
749.740	2.510	29.690	32.200	-13.800	46.000
875.840	1.621	30.700	32.321	-13.679	46.000
963.140	7.604	23.688	31.292	-22.708	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : Access Point/Sensor
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps)(2437 MHz) (Internal Antenna)

Frequency MHz	Correct Factor dB	Reading Level dB μ V	Measurement Level dB μ V/m	Margin dB	Limit dB μ V/m
Horizontal					
97.900	-7.650	44.367	36.716	-6.784	43.500
249.220	-6.014	37.291	31.277	-14.723	46.000
499.480	0.048	38.013	38.061	-7.939	46.000
625.580	1.770	36.292	38.062	-7.938	46.000
749.740	3.320	29.103	32.423	-13.577	46.000
875.840	5.271	33.289	38.560	-7.440	46.000
Vertical					
111.480	-0.954	39.556	38.602	-4.898	43.500
249.220	-7.634	33.632	25.998	-20.002	46.000
499.480	-0.852	37.729	36.877	-9.123	46.000
749.740	2.510	29.902	32.412	-13.588	46.000
875.840	1.621	29.831	31.452	-14.548	46.000
968.960	8.191	22.754	30.945	-23.055	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : Access Point/Sensor
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n 21.7Mbps 20M-BW)(2437 MHz) (Internal Antenna)

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
94.020	-8.189	43.341	35.151	-8.349	43.500
249.220	-6.014	36.585	30.571	-15.429	46.000
499.480	0.048	39.968	40.016	-5.984	46.000
625.580	1.770	36.274	38.044	-7.956	46.000
749.740	3.320	28.632	31.952	-14.048	46.000
875.840	5.271	34.452	39.723	-6.277	46.000
Vertical					
99.840	-0.021	41.953	41.932	-1.568	43.500
249.220	-7.634	33.463	25.829	-20.171	46.000
499.480	-0.852	38.210	37.358	-8.642	46.000
749.740	2.510	28.433	30.943	-15.057	46.000
875.840	1.621	30.446	32.067	-13.933	46.000
967.020	8.071	22.617	30.688	-23.312	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : Access Point/Sensor
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n 45Mbps 40M-BW)(2437 MHz) (Internal Antenna)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
97.900	-7.650	44.356	36.705	-6.795	43.500
249.220	-6.014	37.526	31.512	-14.488	46.000
499.480	0.048	37.600	37.648	-8.352	46.000
625.580	1.770	36.633	38.403	-7.597	46.000
749.740	3.320	29.034	32.354	-13.646	46.000
875.840	5.271	34.305	39.576	-6.424	46.000
Vertical					
99.840	-7.471	45.056	37.585	-5.915	43.500
249.220	-6.014	34.249	28.235	-17.765	46.000
499.480	0.048	38.581	38.629	-7.371	46.000
600.360	3.977	29.683	33.660	-12.340	46.000
749.740	3.320	28.202	31.522	-14.478	46.000
875.840	5.271	30.733	36.004	-9.996	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

5. RF antenna conducted test

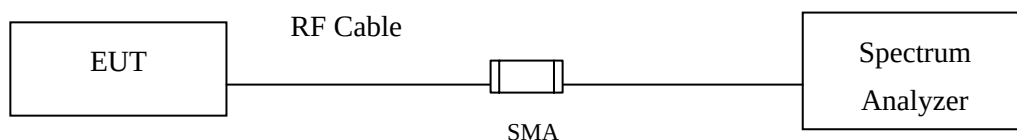
5.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun., 2014
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun., 2014
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2015

- Note:
1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
 2. The test instruments marked with “X” are used to measure the final test results.

5.2. Test Setup

RF antenna Conducted Measurement:



5.3. Limits

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, 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) (see Section 15.205(c)).

5.4. Test Procedure

The EUT was tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.

Set RBW = 100 kHz, Set VBW > RBW, scan up through 10th harmonic.

5.5. Uncertainty

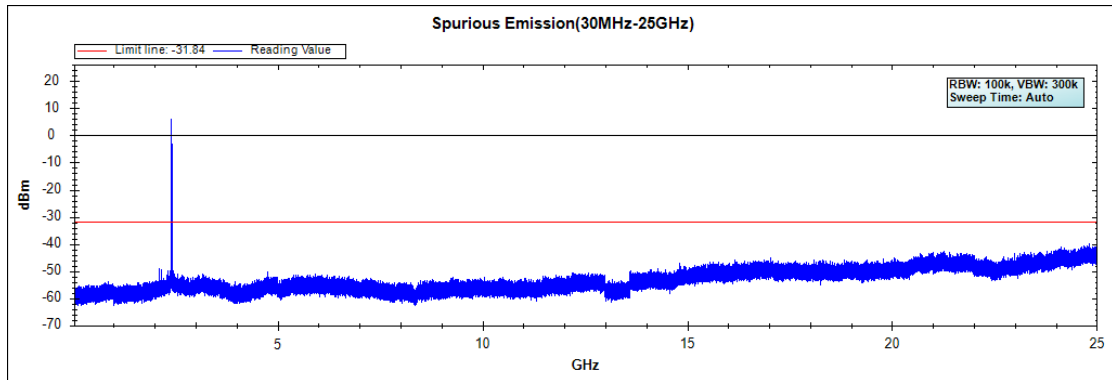
The measurement uncertainty

Conducted is defined as $\pm 1.27\text{dB}$

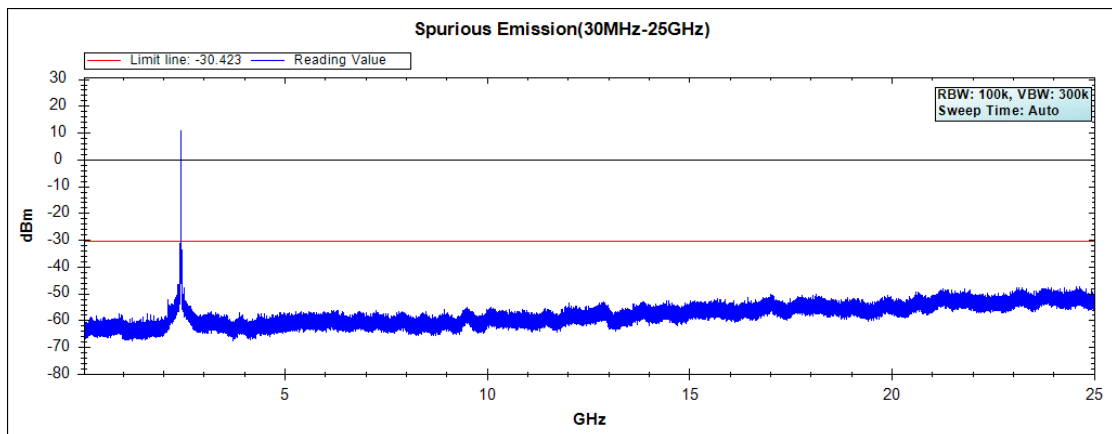
5.6. Test Result of RF antenna conducted test

Product : Access Point/Sensor
Test Item : RF antenna conducted test
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (External Antenna)

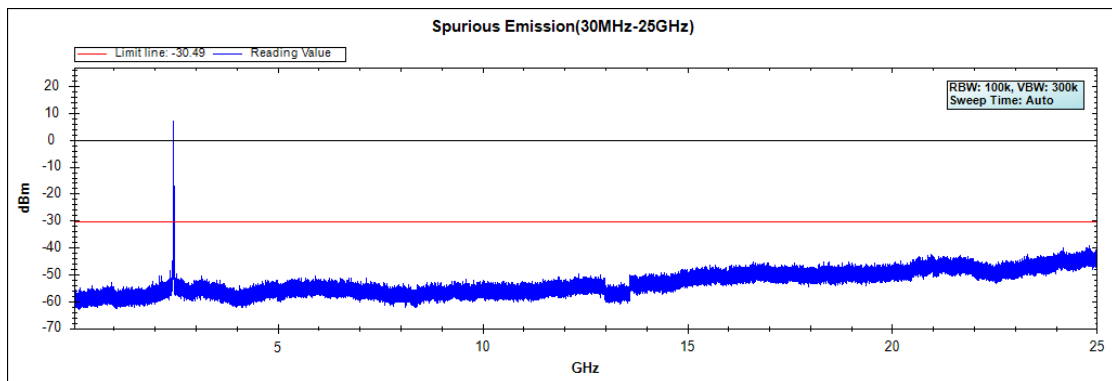
Channel 01 (2412MHz) (Chain A)



Channel 06 (2437MHz) (Chain A)

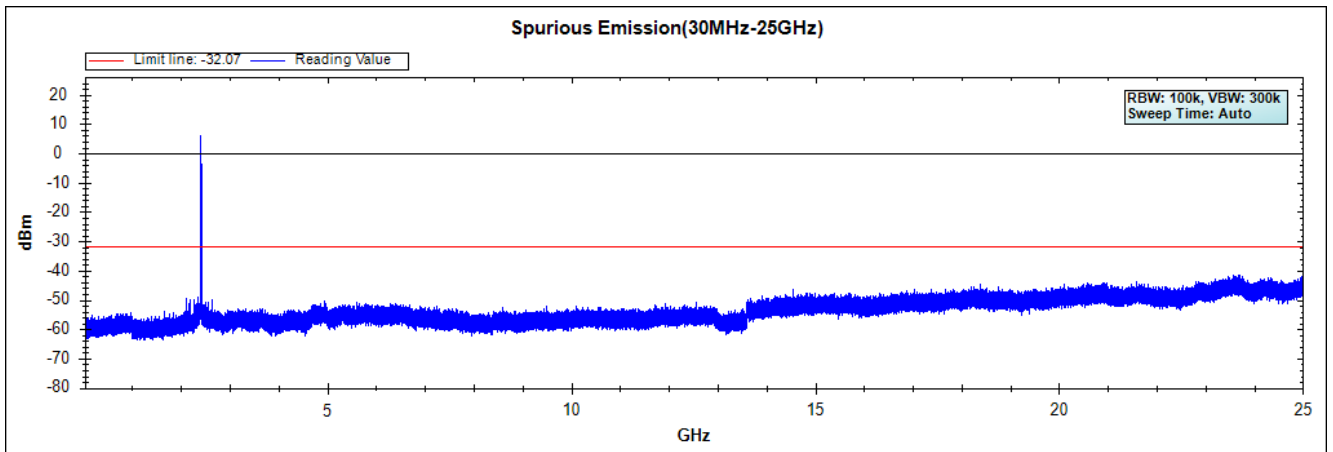


Channel 11 (2462MHz) (Chain A)

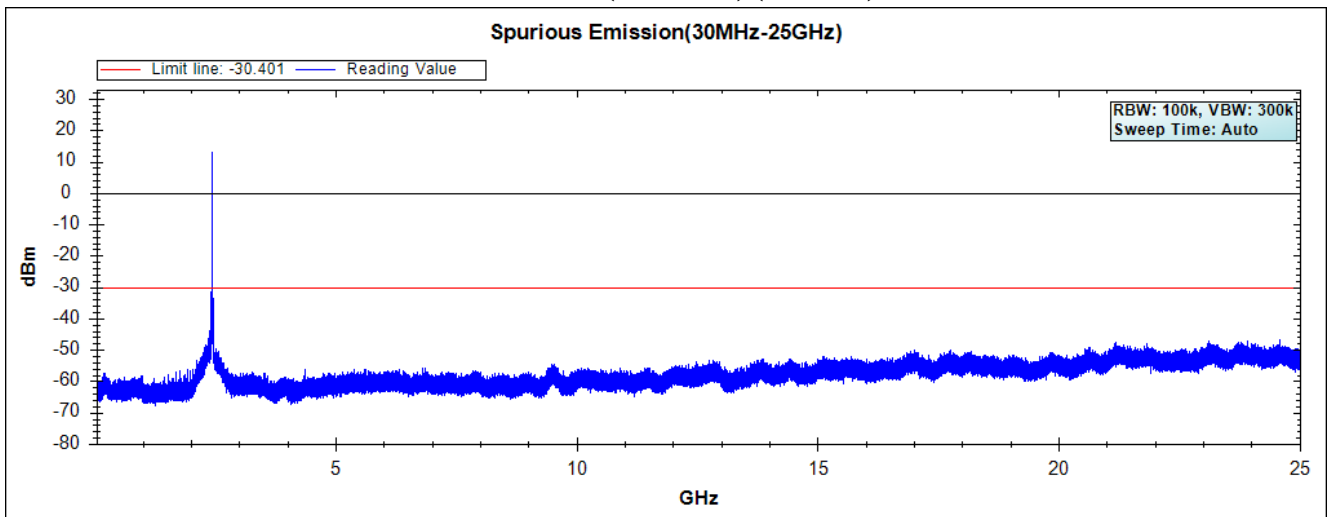


Note: The above test pattern is synthesized by multiple of the frequency range.

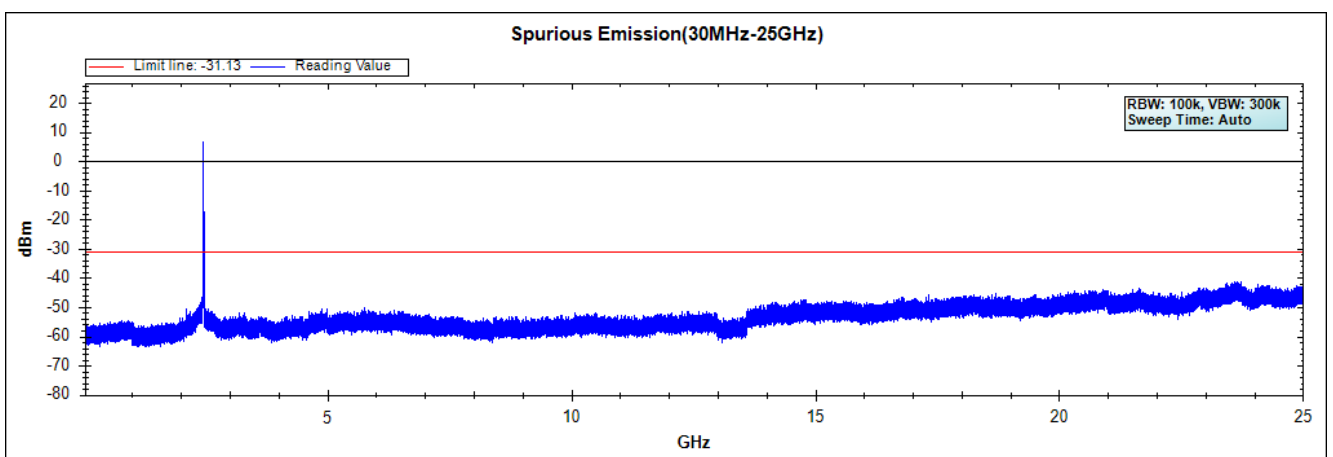
Channel 01 (2412MHz) (Chain B)



Channel 06 (2437MHz) (Chain B)

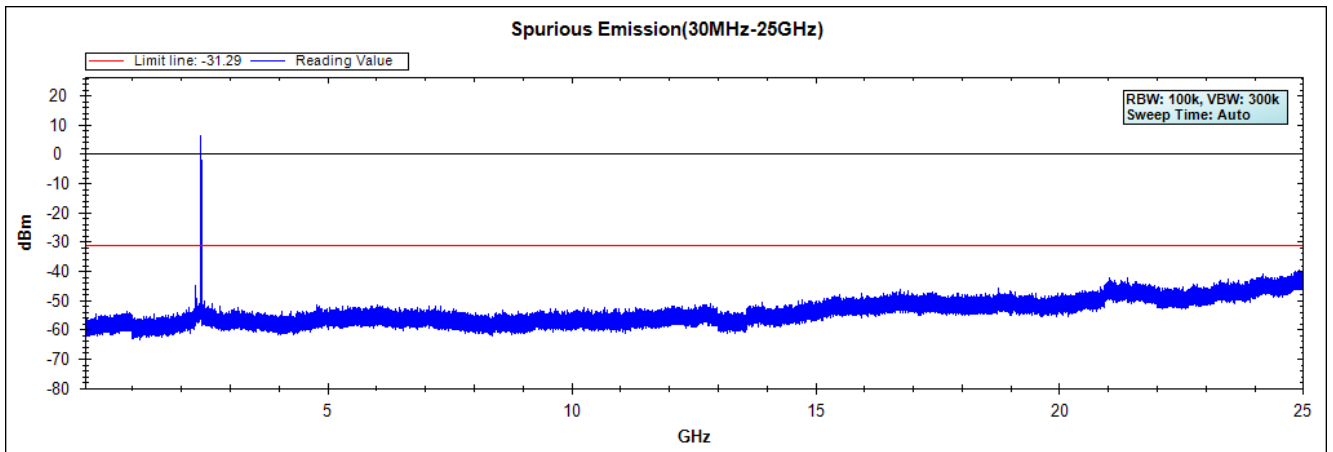


Channel 11 (2462MHz) (Chain B)

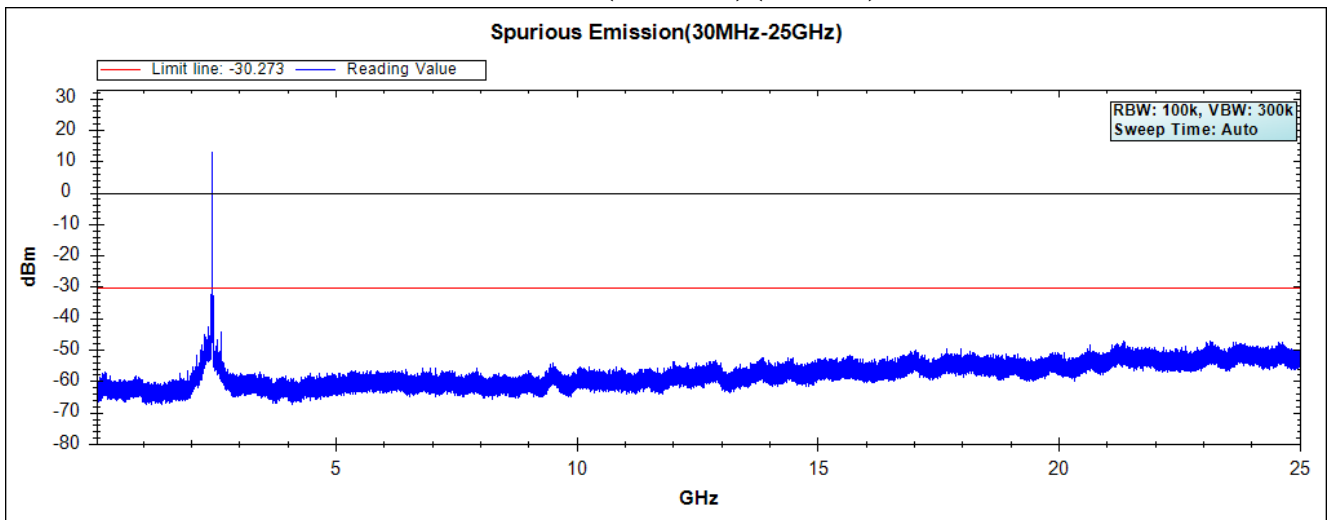


Note: The above test pattern is synthesized by multiple of the frequency range.

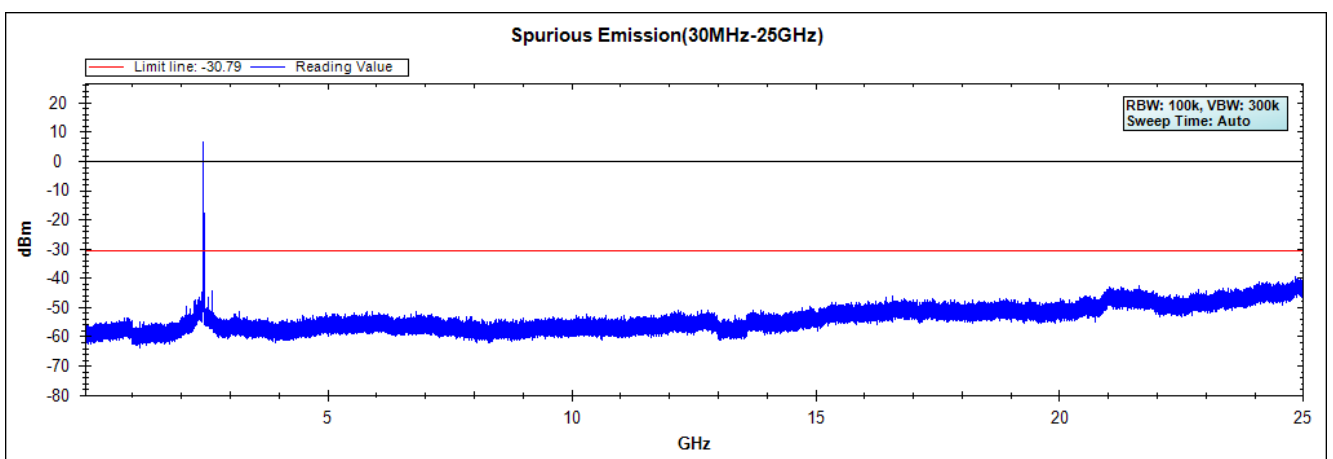
Channel 01 (2412MHz) (Chain C)



Channel 06 (2437MHz) (Chain C)



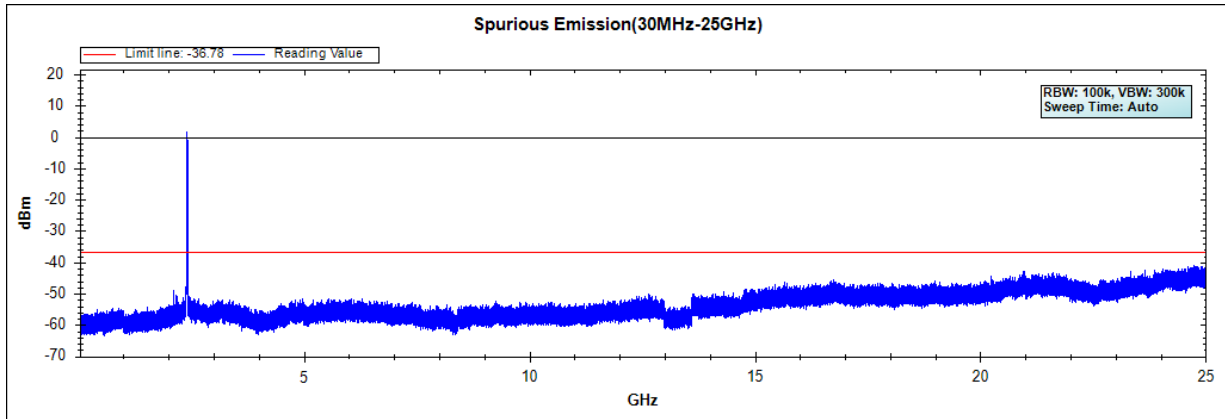
Channel 11 (2462MHz) (Chain C)



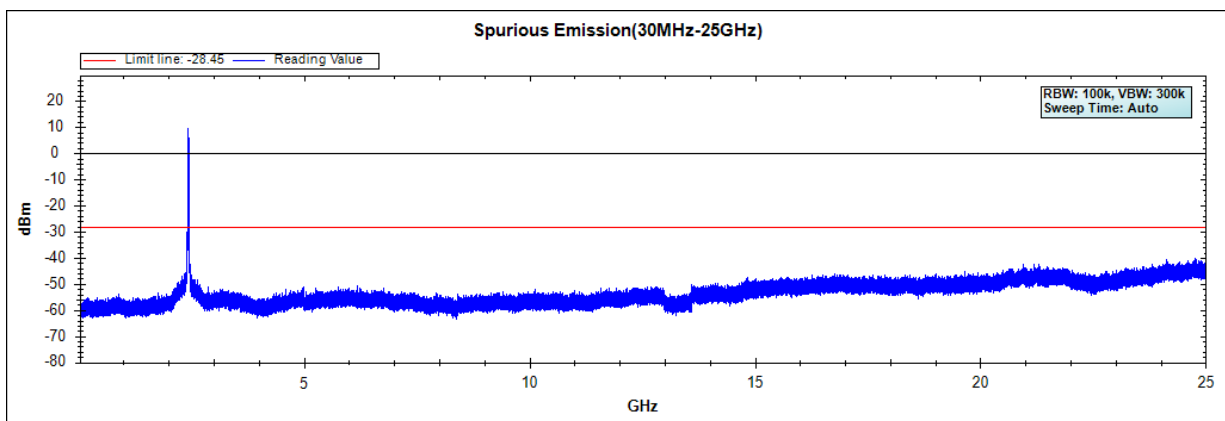
Note: The above test pattern is synthesized by multiple of the frequency range.

Product : Access Point/Sensor
Test Item : RF Antenna Conducted Spurious
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (External Antenna)

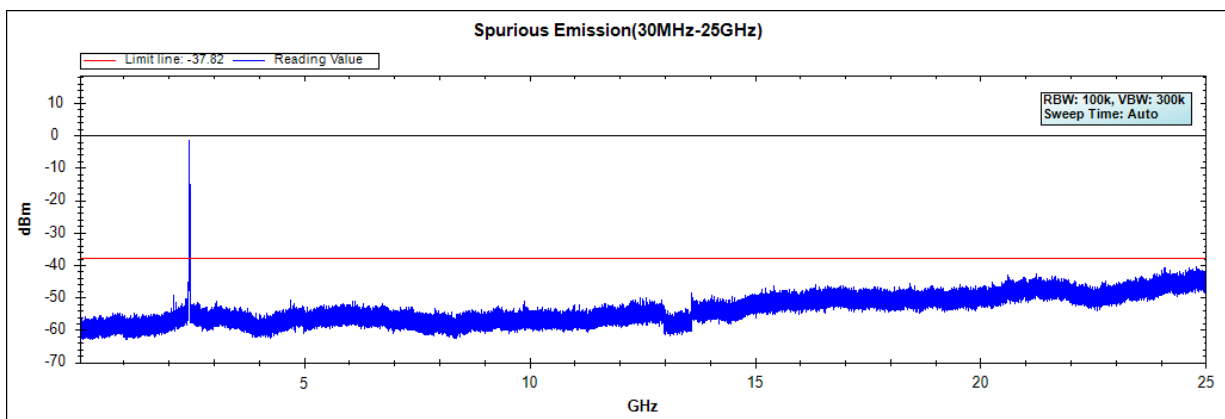
Channel 01 (2412MHz) (Chain A)



Channel 06 (2437MHz)

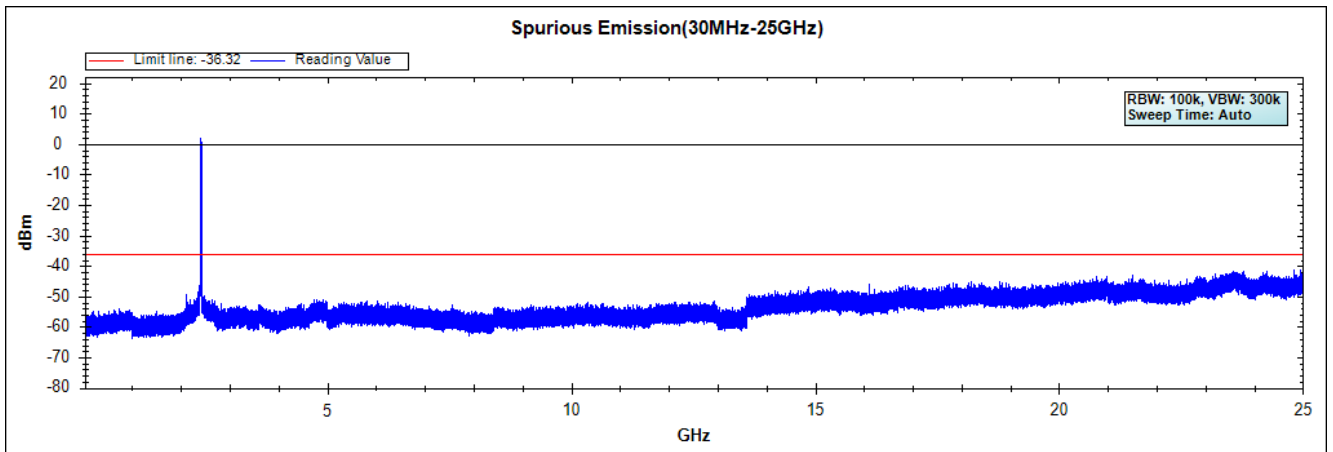


Channel 11 (2462MHz)

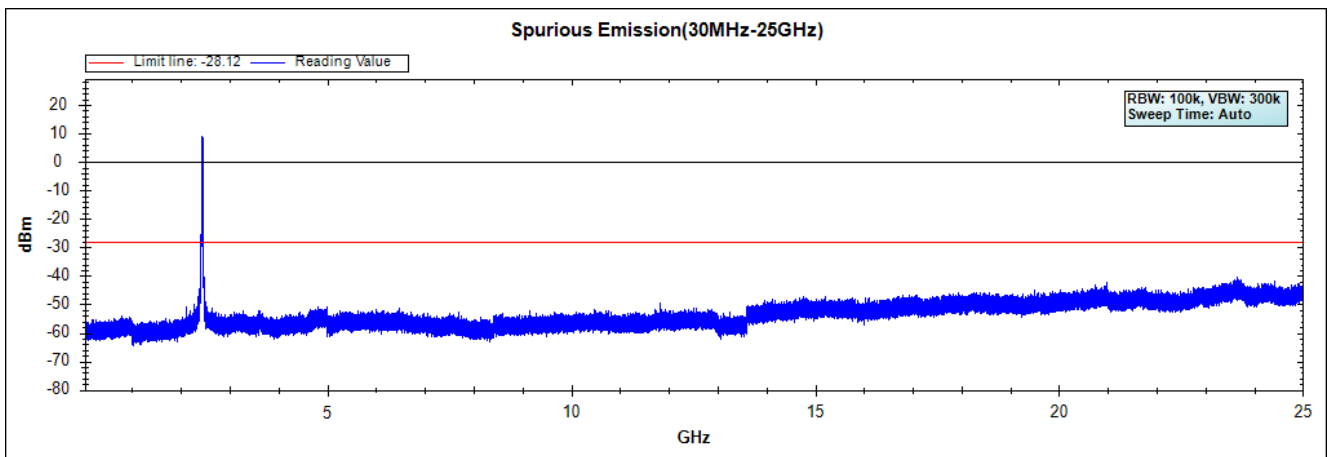


Note: The above test pattern is synthesized by multiple of the frequency range.

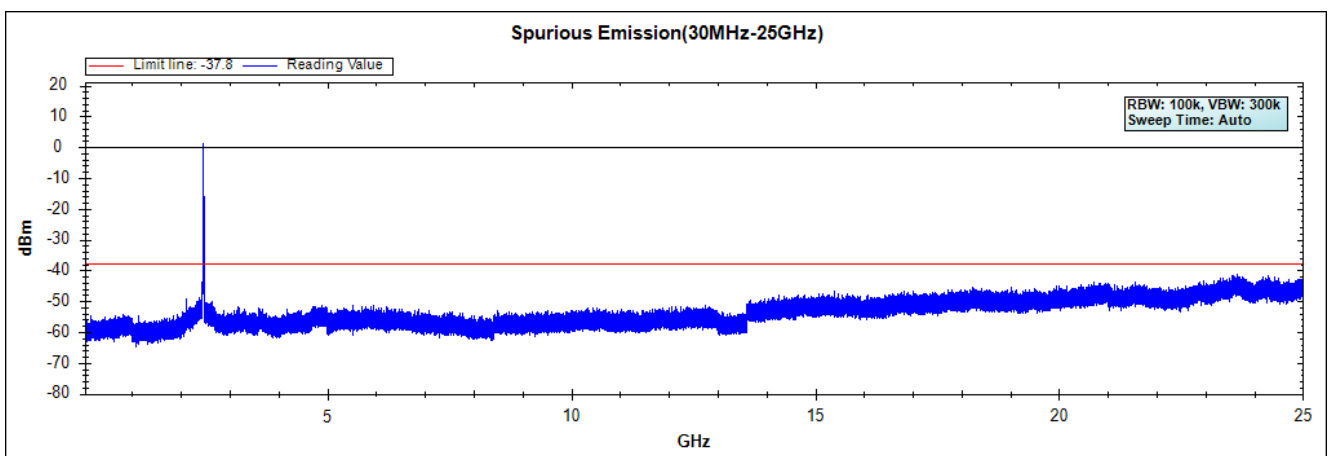
Channel 01 (2412MHz) (Chain B)



Channel 06 (2437MHz) (Chain B)

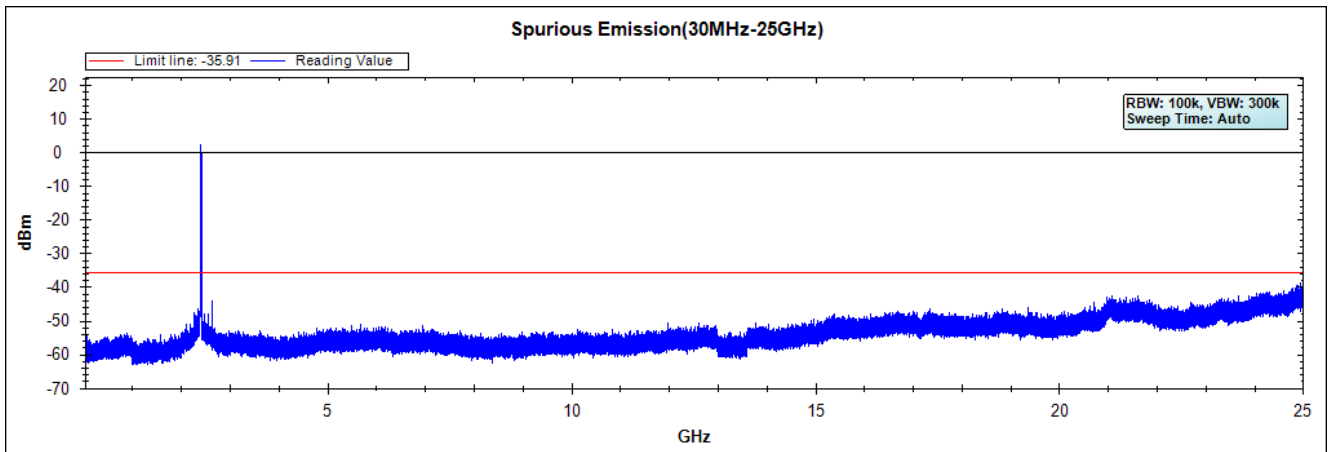


Channel 11 (2462MHz) (Chain B)

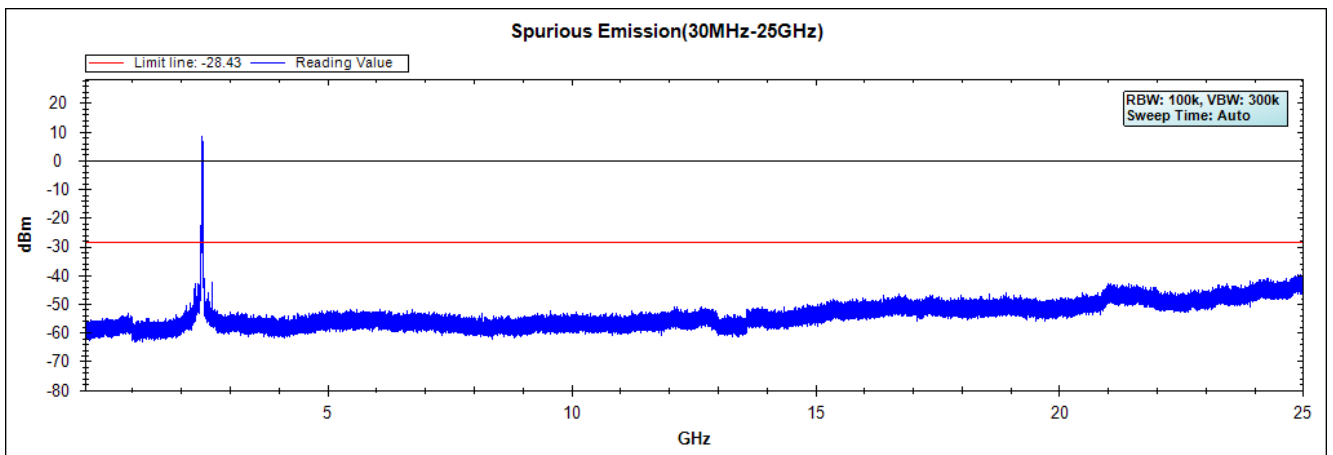


Note: The above test pattern is synthesized by multiple of the frequency range.

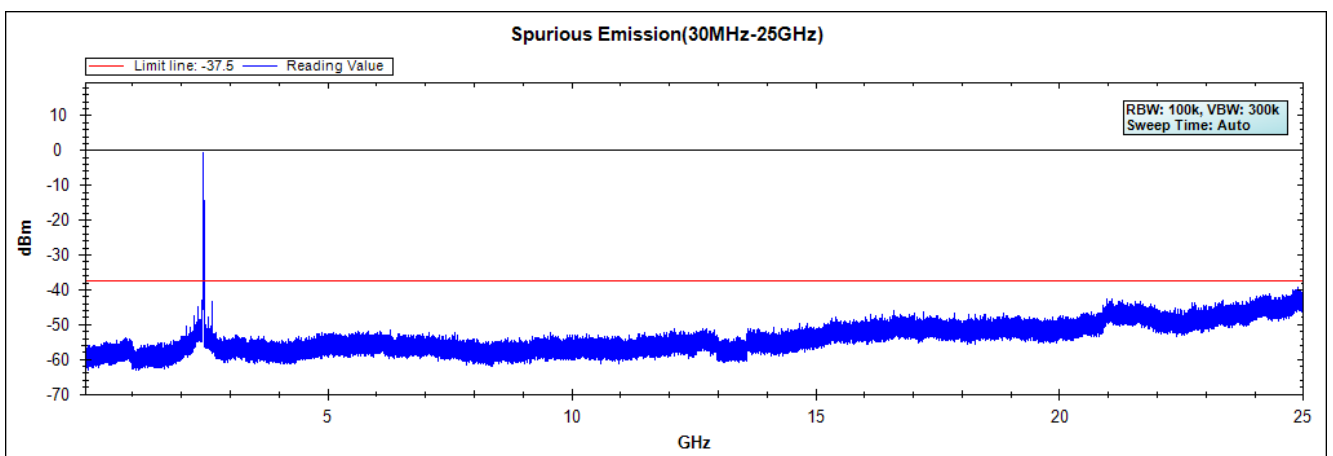
Channel 01 (2412MHz) (Chain C)



Channel 06 (2437MHz) (Chain C)



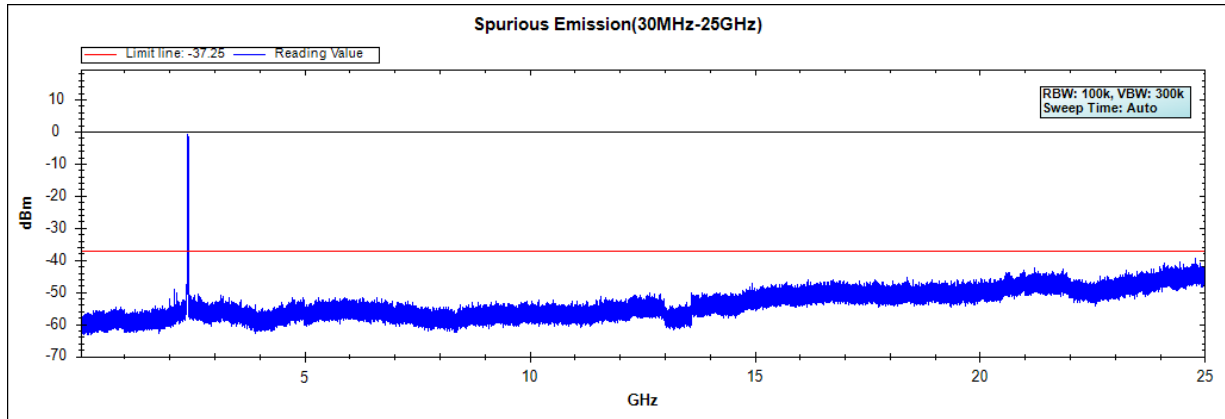
Channel 11 (2462MHz) (Chain C)



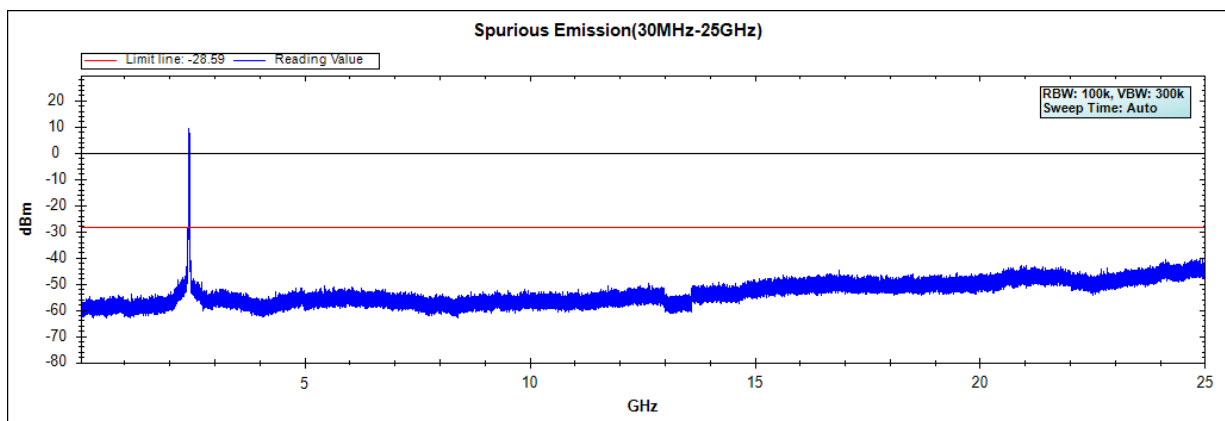
Note: The above test pattern is synthesized by multiple of the frequency range.

Product : Access Point/Sensor
Test Item : RF Antenna Conducted Spurious
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n 21.7Mbps 20M-BW) (External Antenna)

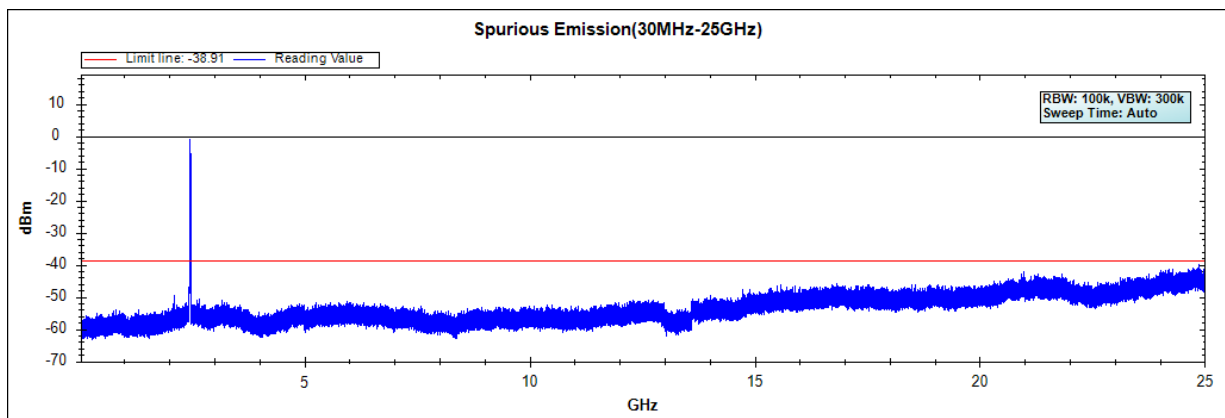
Channel 01 (2412MHz) (Chain A)



Channel 06 (2437MHz) (Chain A)

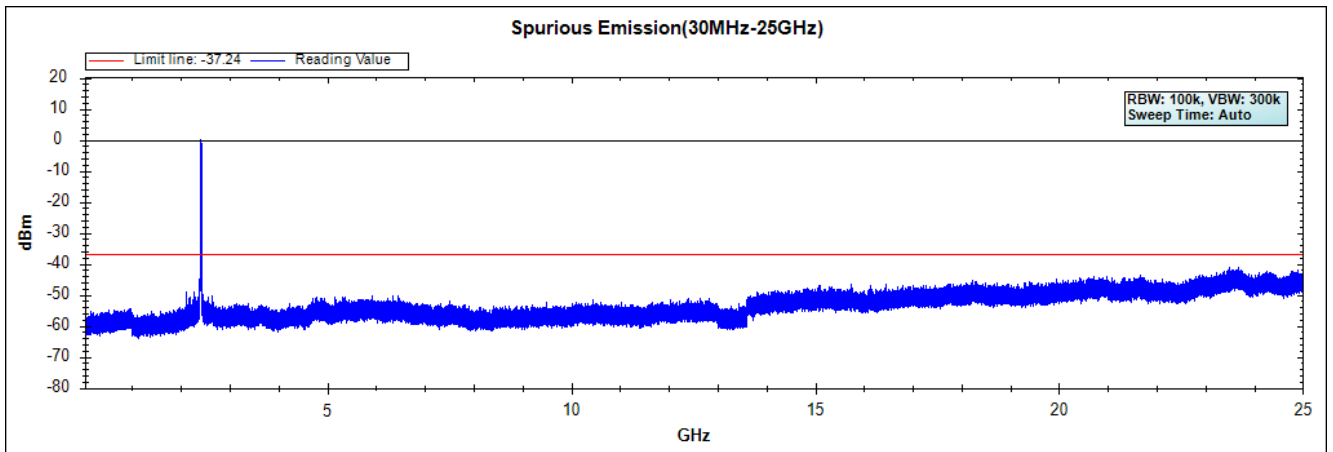


Channel 11 (2462MHz) (Chain A)

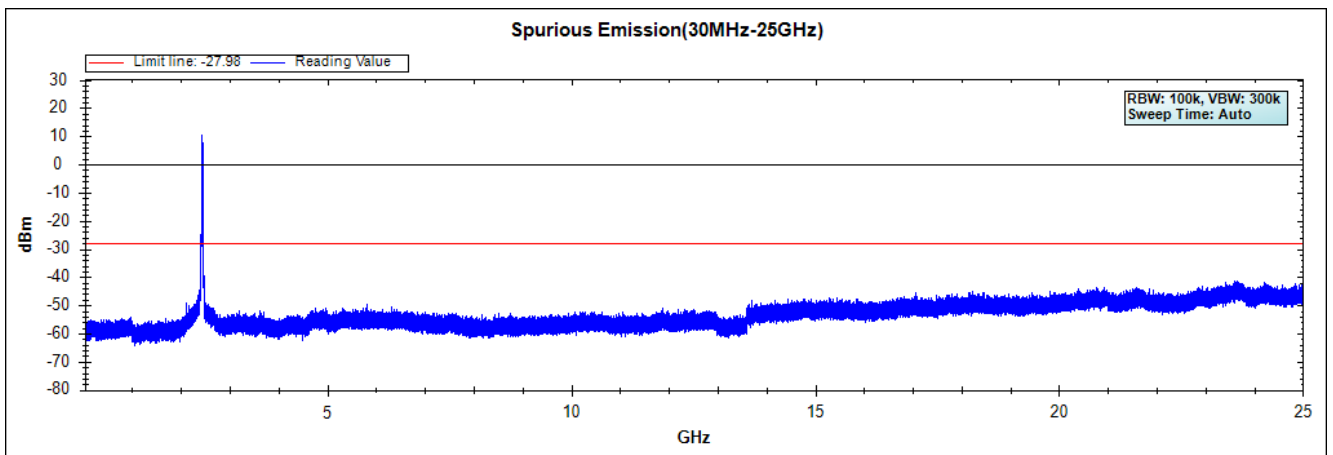


Note: The above test pattern is synthesized by multiple of the frequency range.

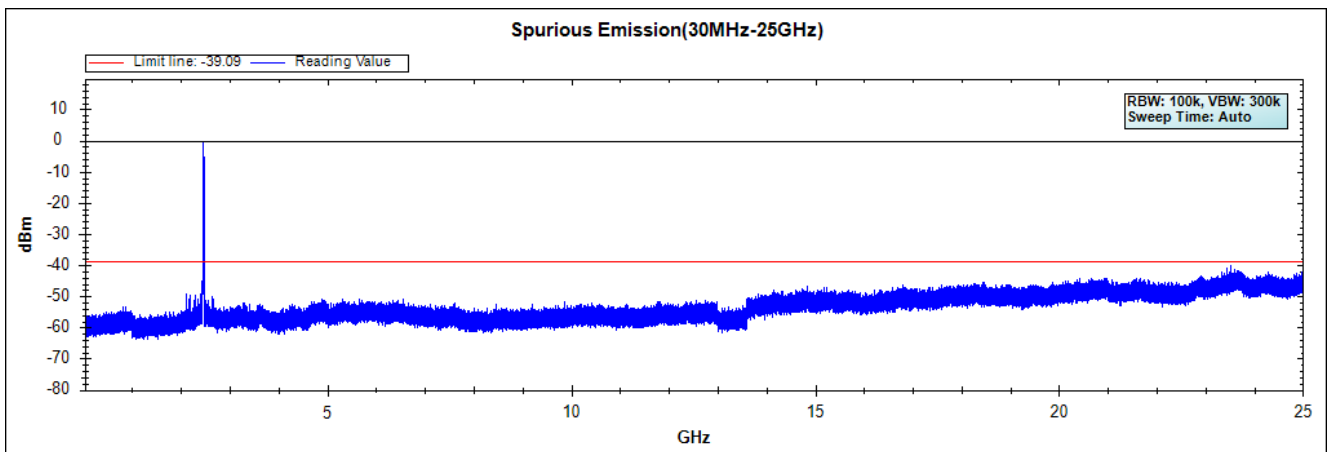
Channel 01 (2412MHz) (Chain B)



Channel 06 (2437MHz) (Chain B)

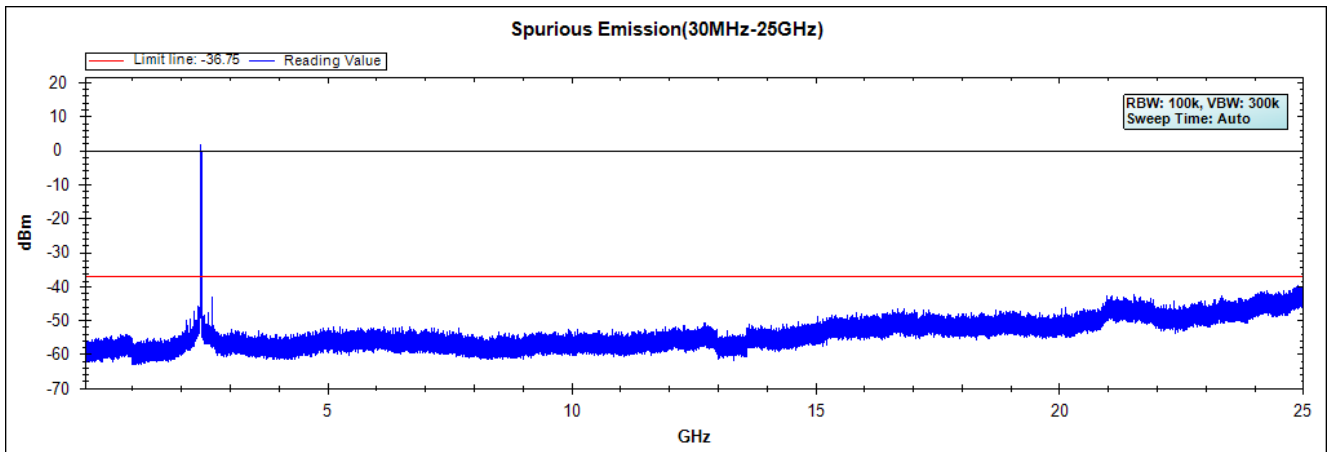


Channel 11 (2462MHz) (Chain B)

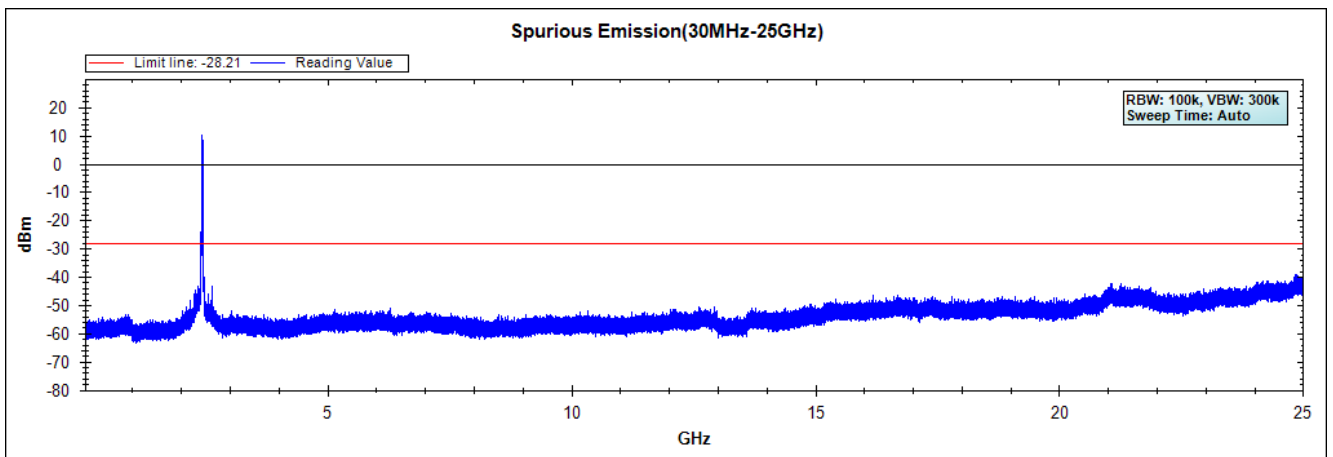


Note: The above test pattern is synthesized by multiple of the frequency range.

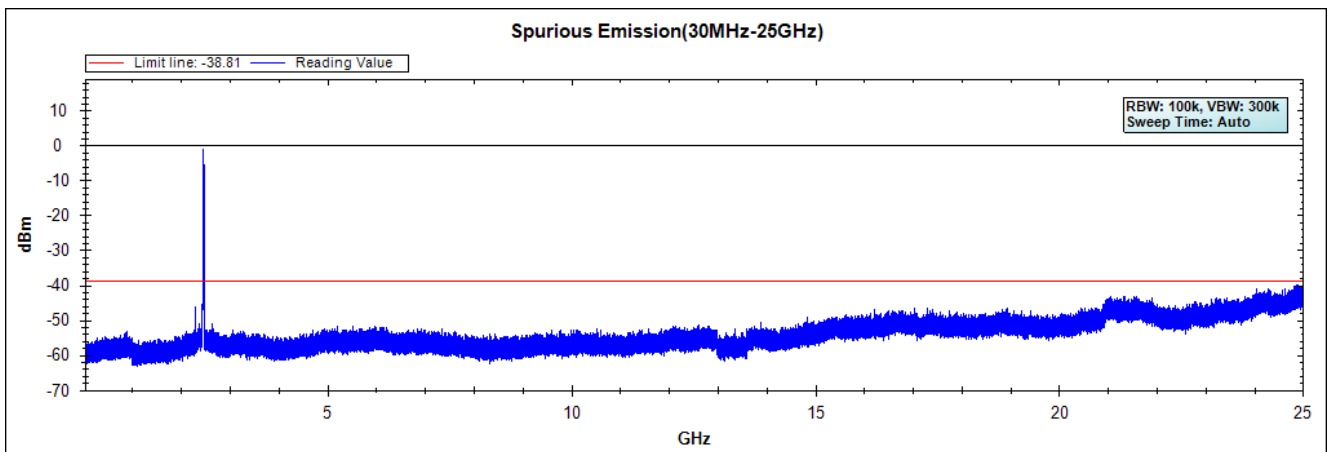
Channel 01 (2412MHz) (Chain C)



Channel 06 (2437MHz) (Chain C)



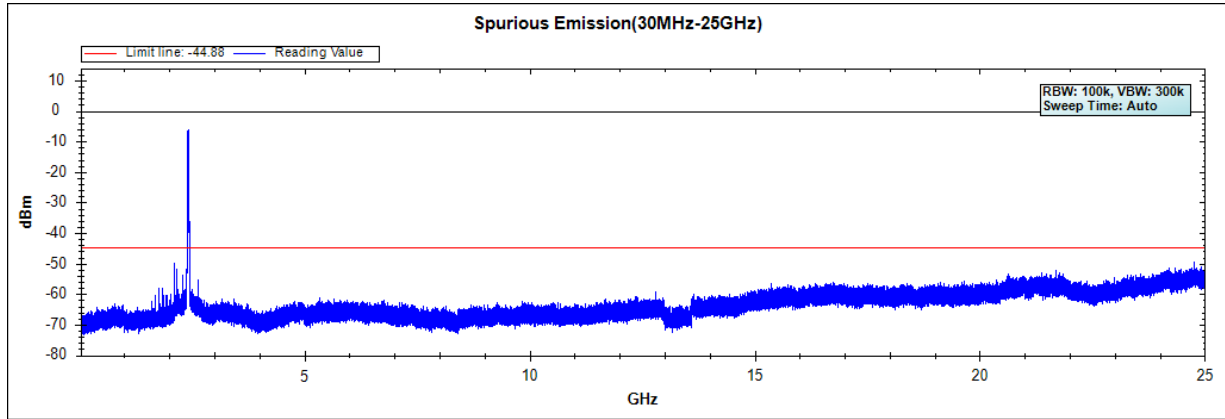
Channel 11 (2462MHz) (Chain C)



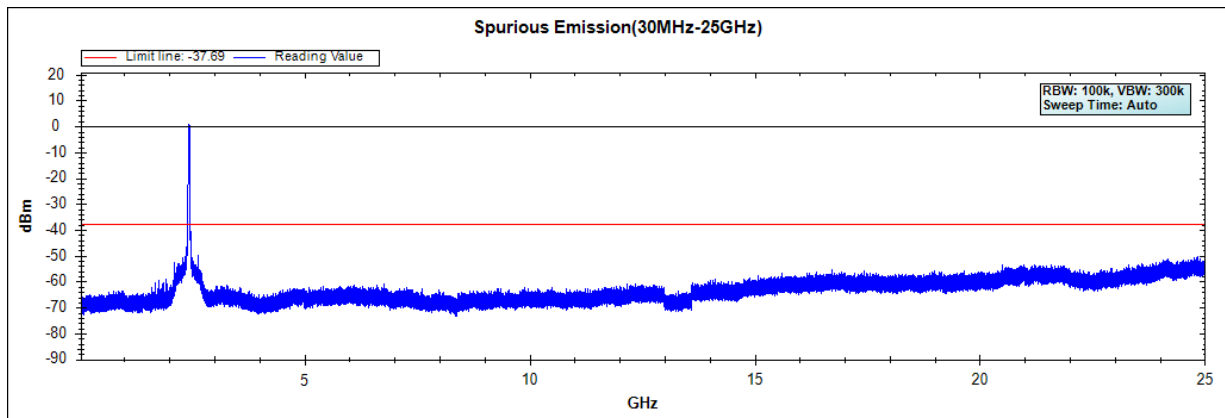
Note: The above test pattern is synthesized by multiple of the frequency range.

Product : Access Point/Sensor
Test Item : RF Antenna Conducted Spurious
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n 45Mbps 40M-BW) (External Antenna)

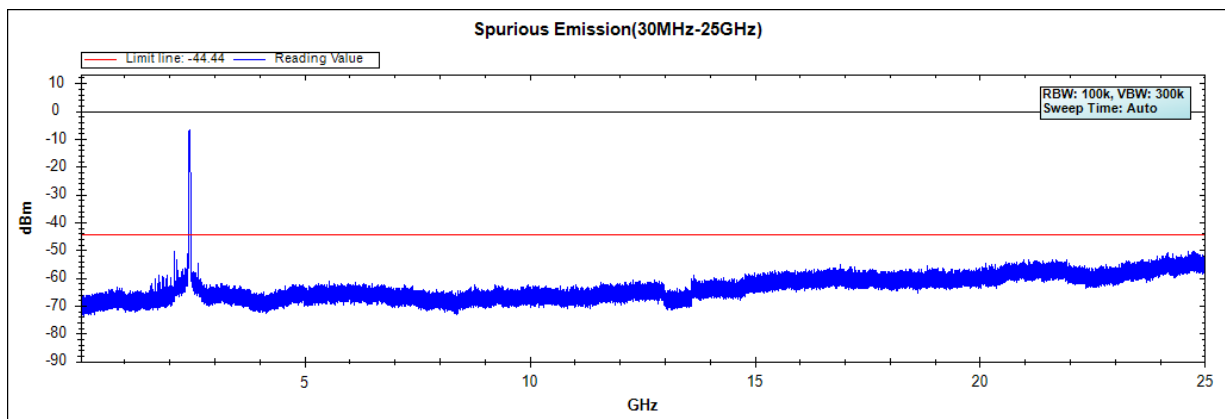
Channel 01 (2422MHz) (Chain A)



Channel 04 (2437MHz) (Chain A)

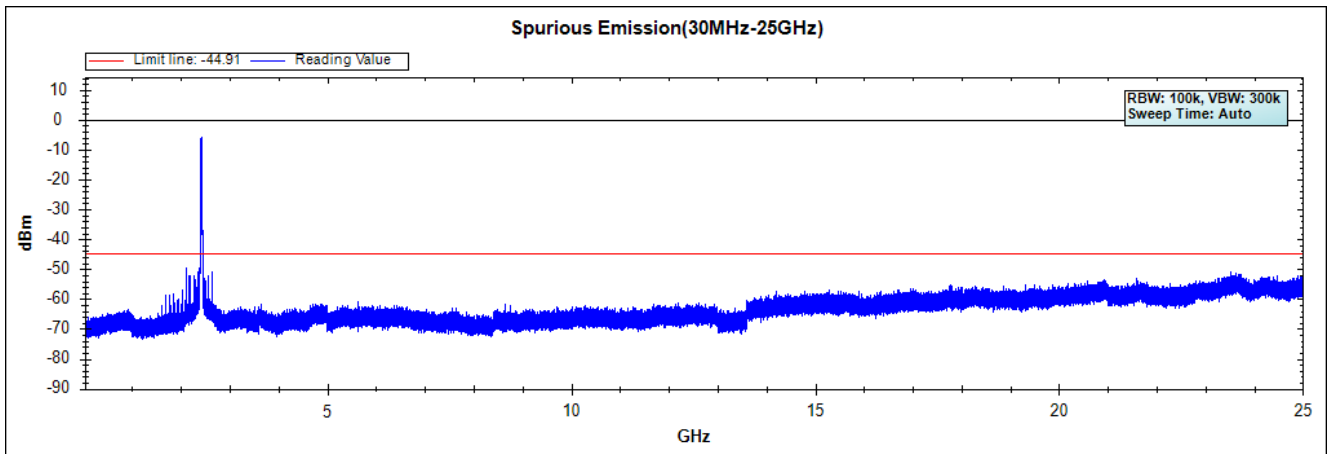


Channel 07 (2452MHz) (Chain A)

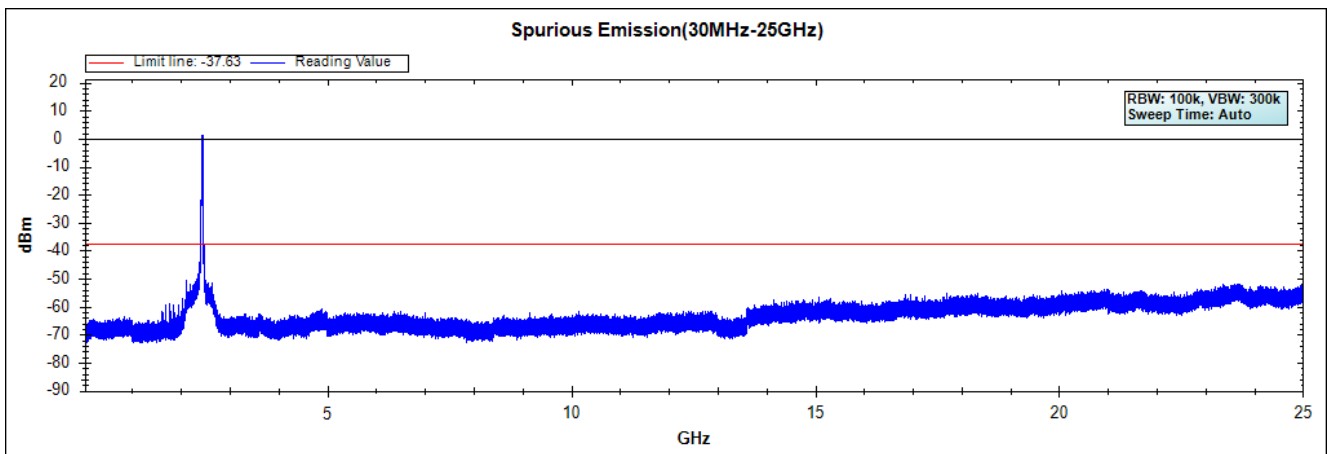


Note: The above test pattern is synthesized by multiple of the frequency range.

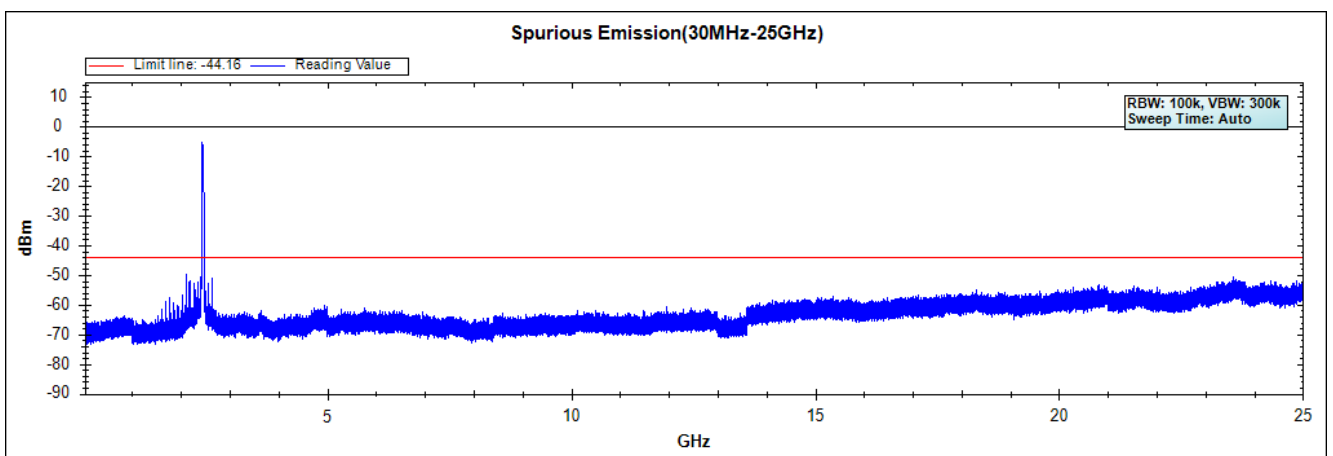
Channel 01 (2422MHz) (Chain B)



Channel 04 (2437MHz) (Chain B)

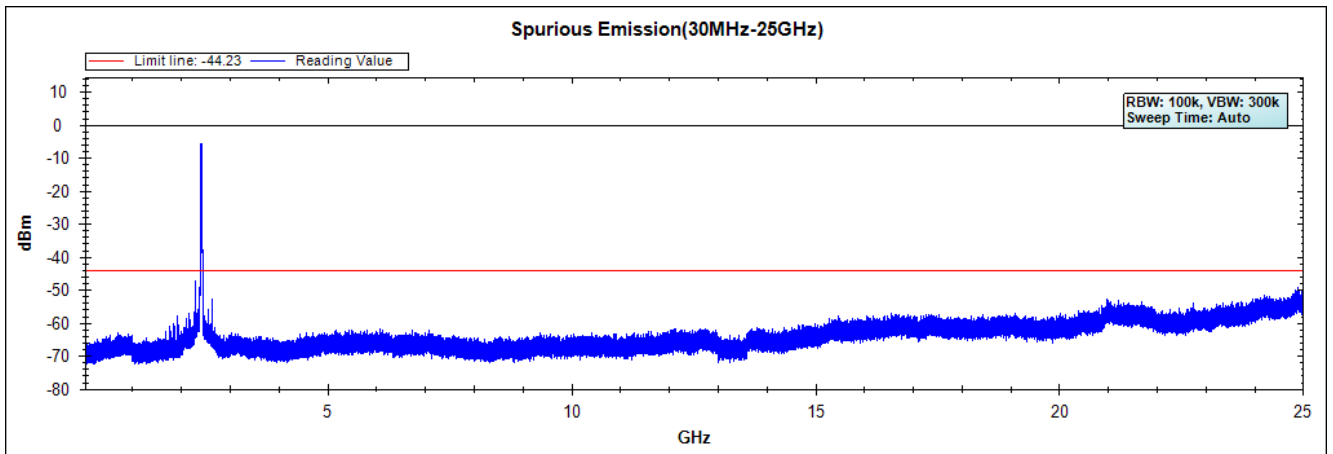


Channel 07 (2452MHz) (Chain B)

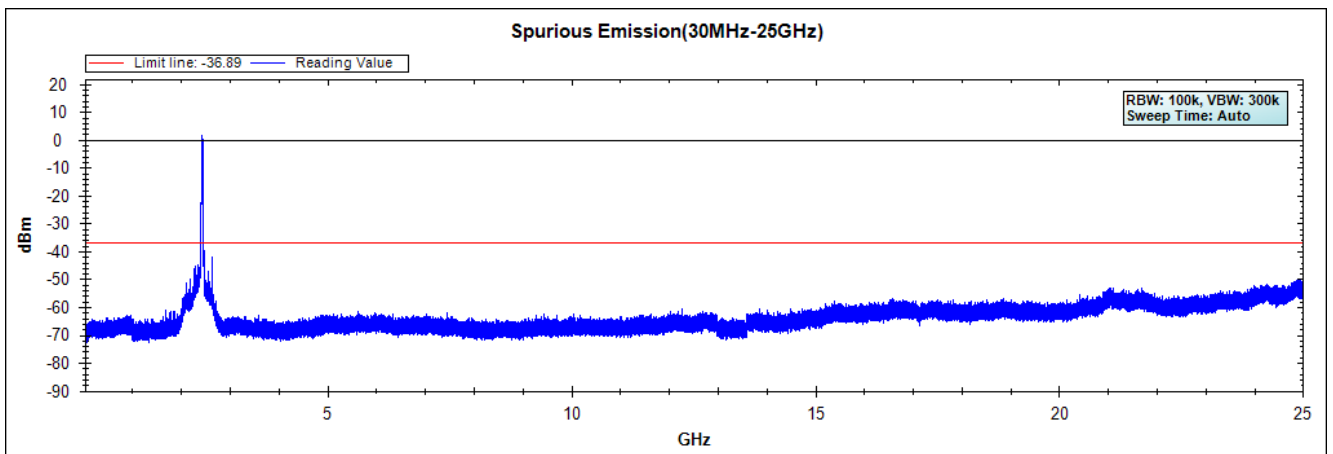


Note: The above test pattern is synthesized by multiple of the frequency range.

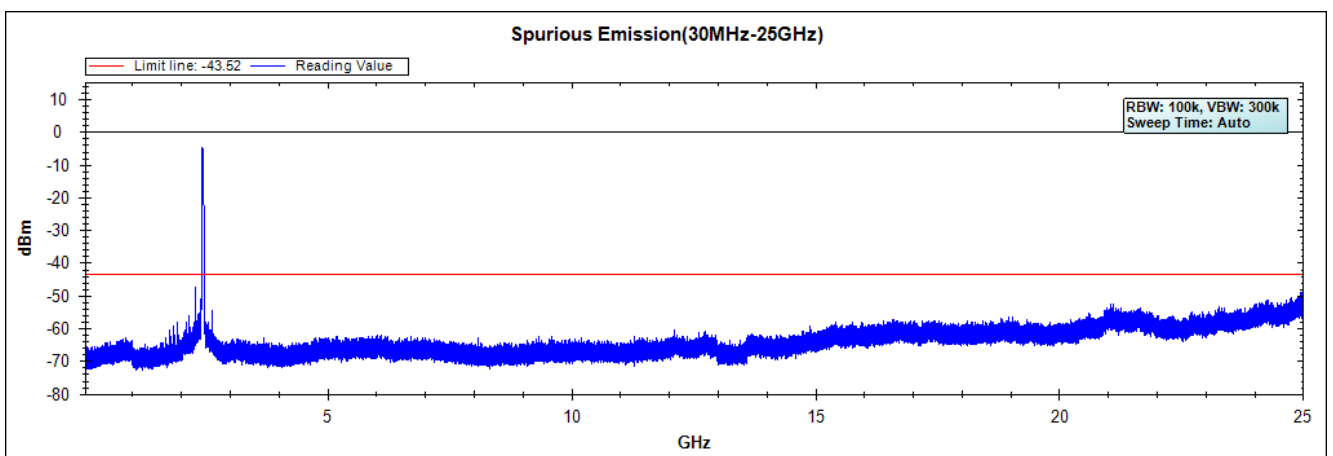
Channel 01 (2422MHz) (Chain C)



Channel 04 (2437MHz) (Chain C)



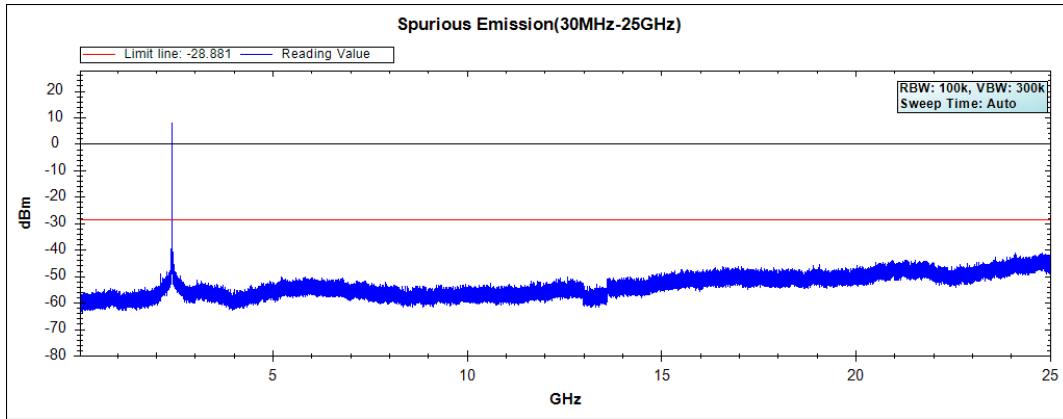
Channel 07 (2452MHz) (Chain C)



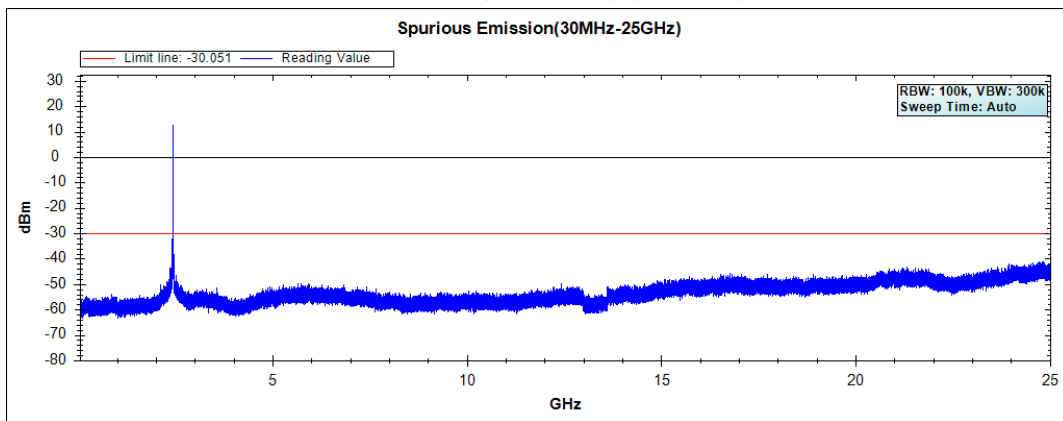
Note: The above test pattern is synthesized by multiple of the frequency range.

Product : Access Point/Sensor
Test Item : RF antenna conducted test
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (Internal Antenna)

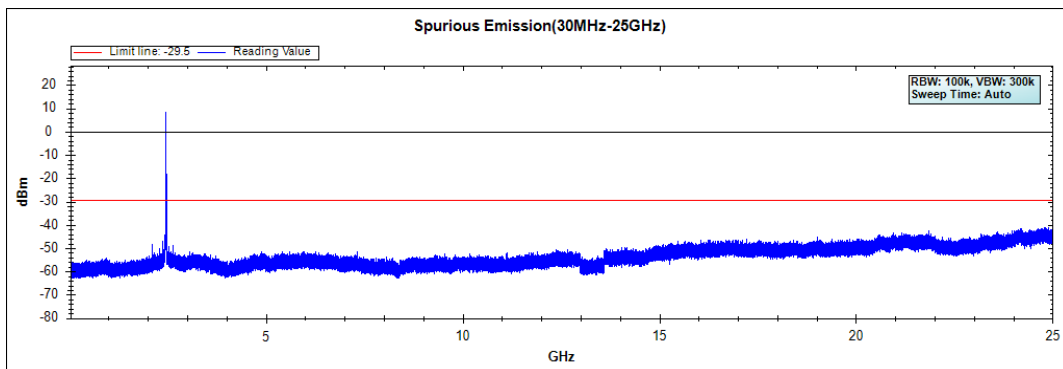
Channel 01 (2412MHz) (Chain A)



Channel 06 (2437MHz) (Chain A)

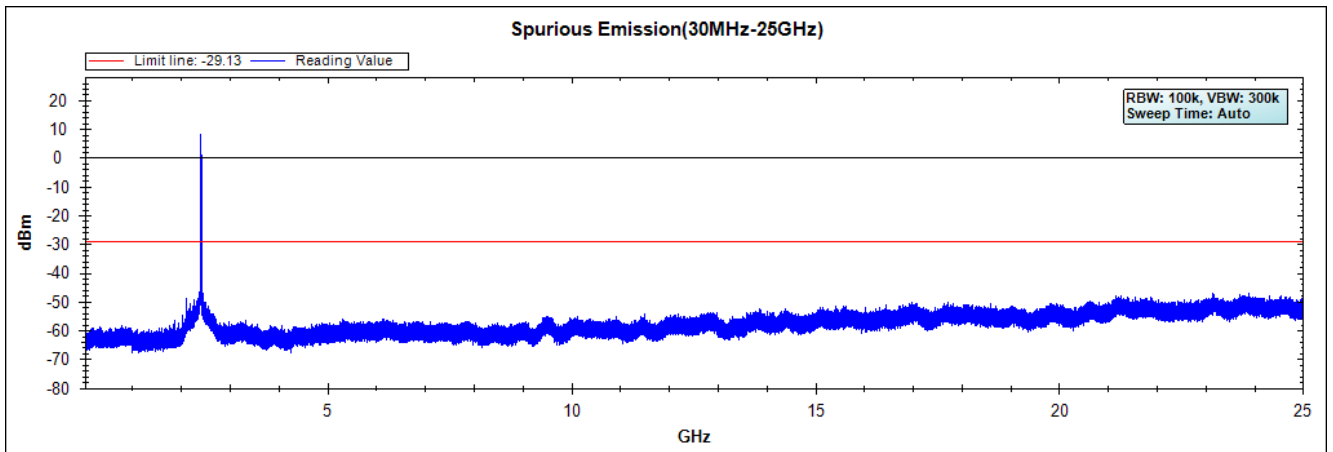


Channel 11 (2462MHz) (Chain A)

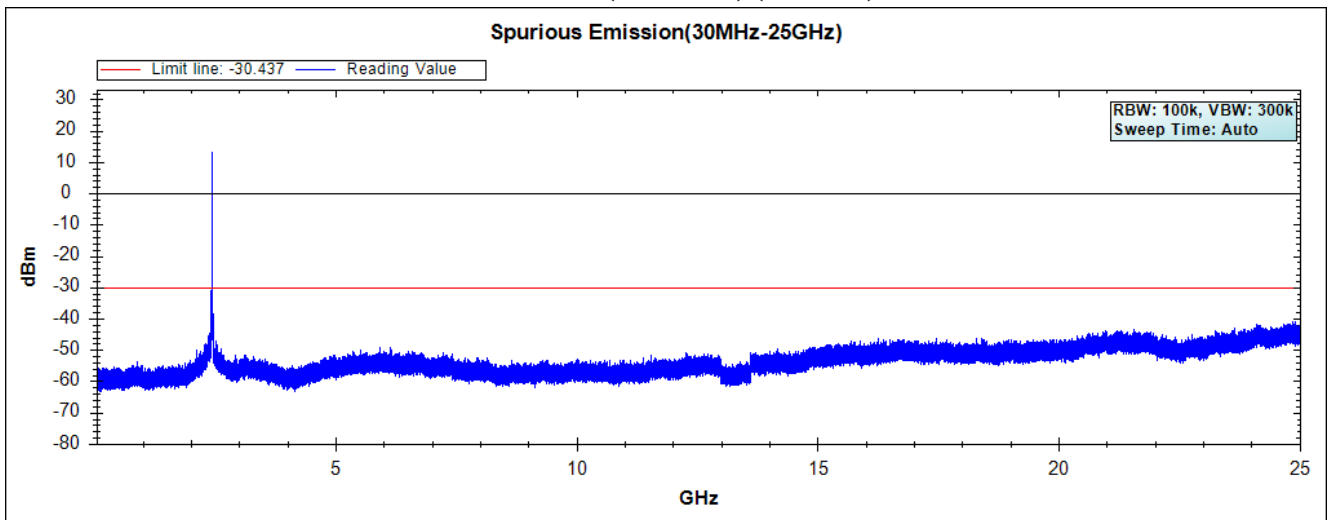


Note: The above test pattern is synthesized by multiple of the frequency range.

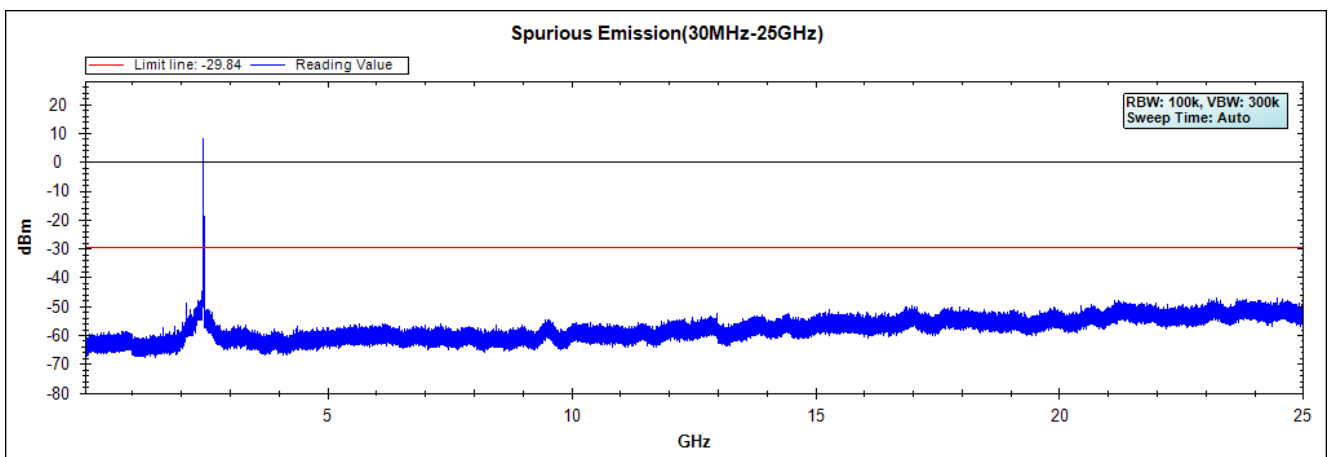
Channel 01 (2412MHz) (Chain B)



Channel 06 (2437MHz) (Chain B)

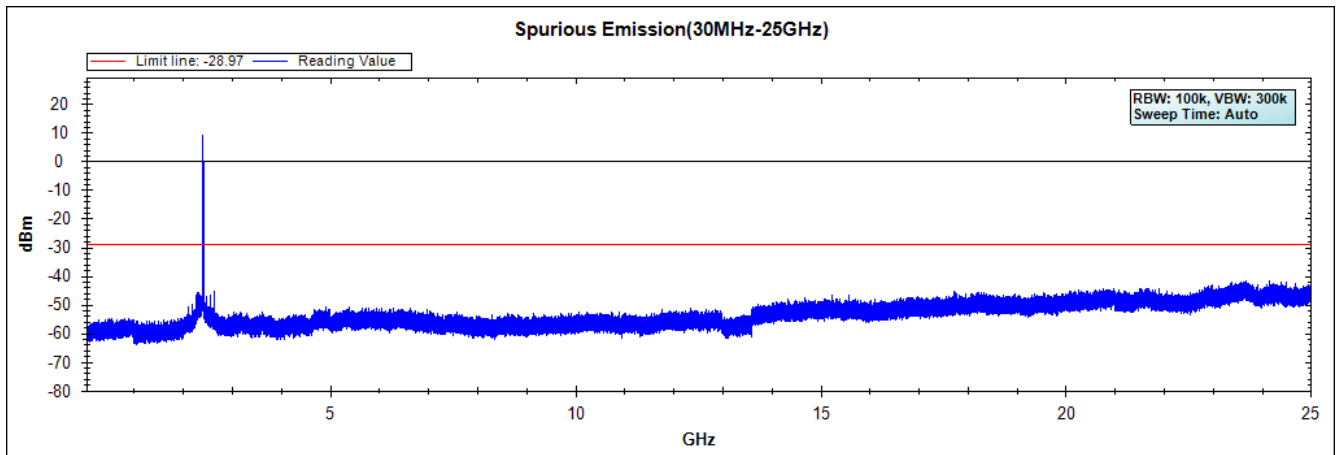


Channel 11 (2462MHz) (Chain B)

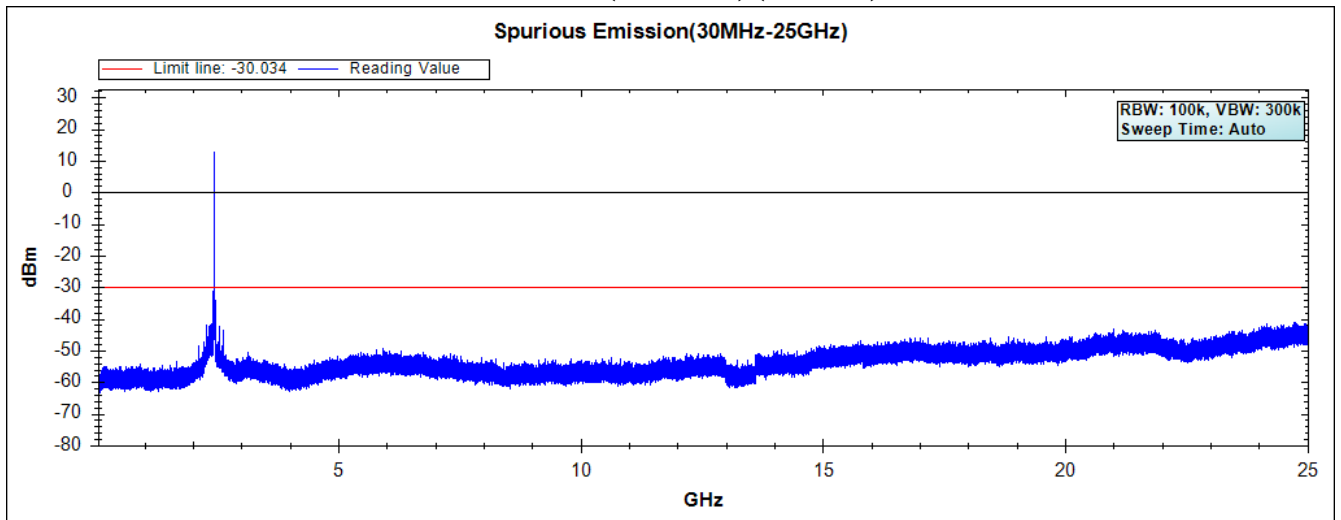


Note: The above test pattern is synthesized by multiple of the frequency range.

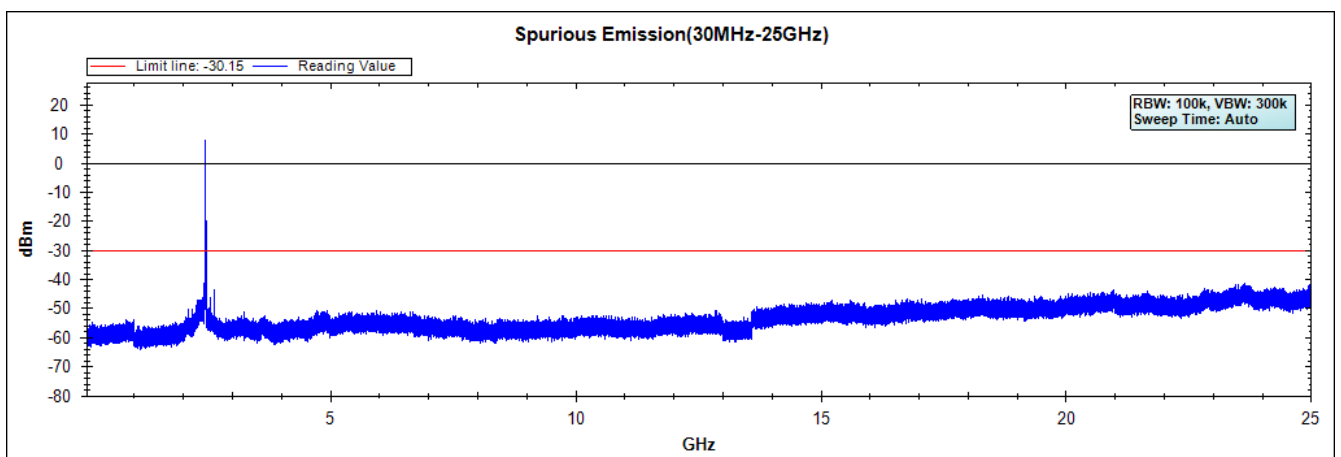
Channel 01 (2412MHz) (Chain C)



Channel 06 (2437MHz) (Chain C)



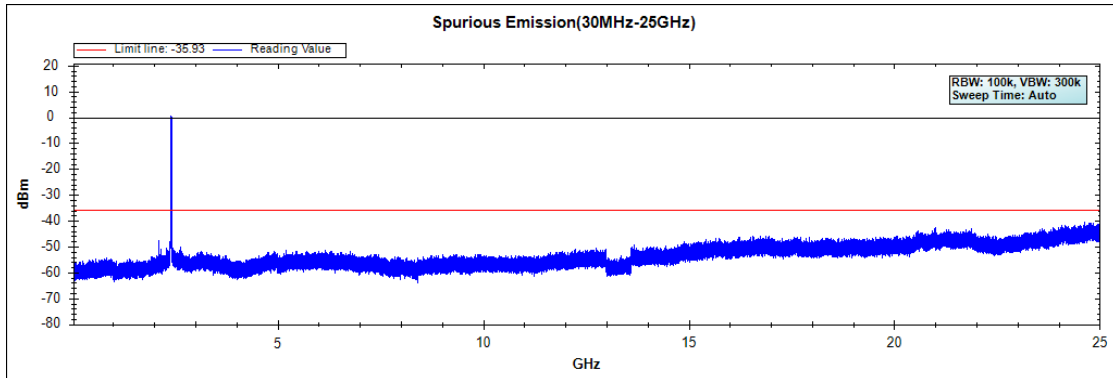
Channel 11 (2462MHz) (Chain C)



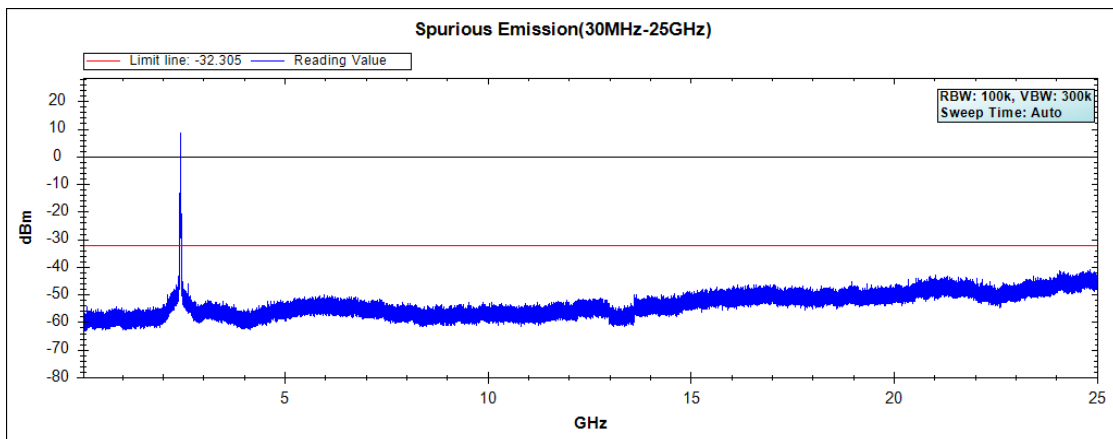
Note: The above test pattern is synthesized by multiple of the frequency range.

Product : Access Point/Sensor
Test Item : RF Antenna Conducted Spurious
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (Internal Antenna)

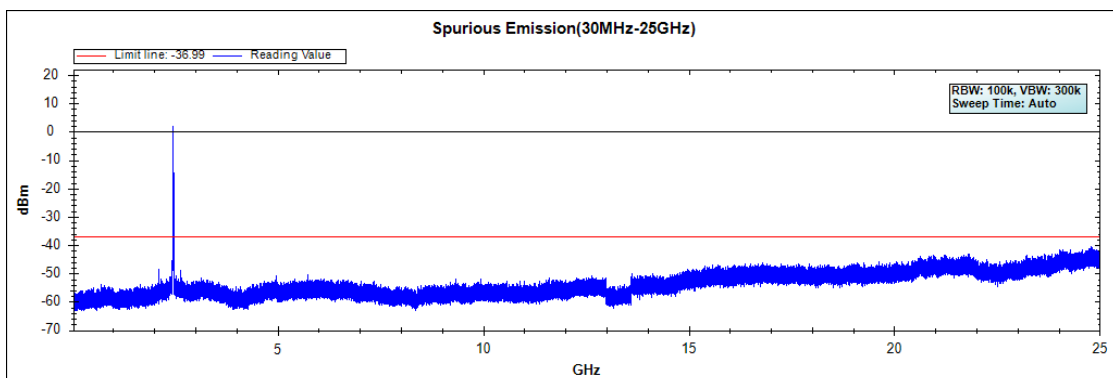
Channel 01 (2412MHz) (Chain A)



Channel 06 (2437MHz)

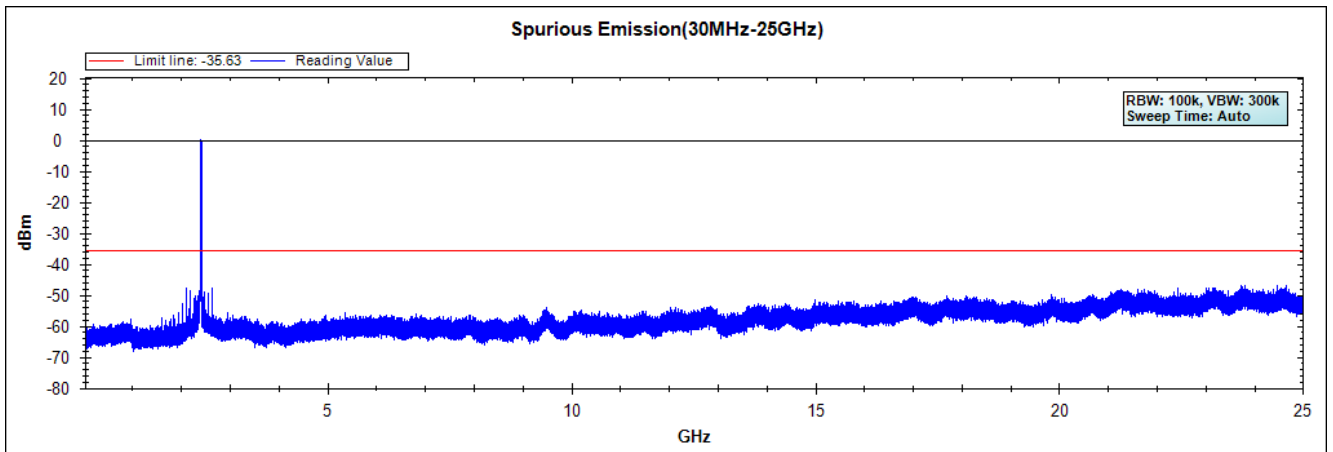


Channel 11 (2462MHz)

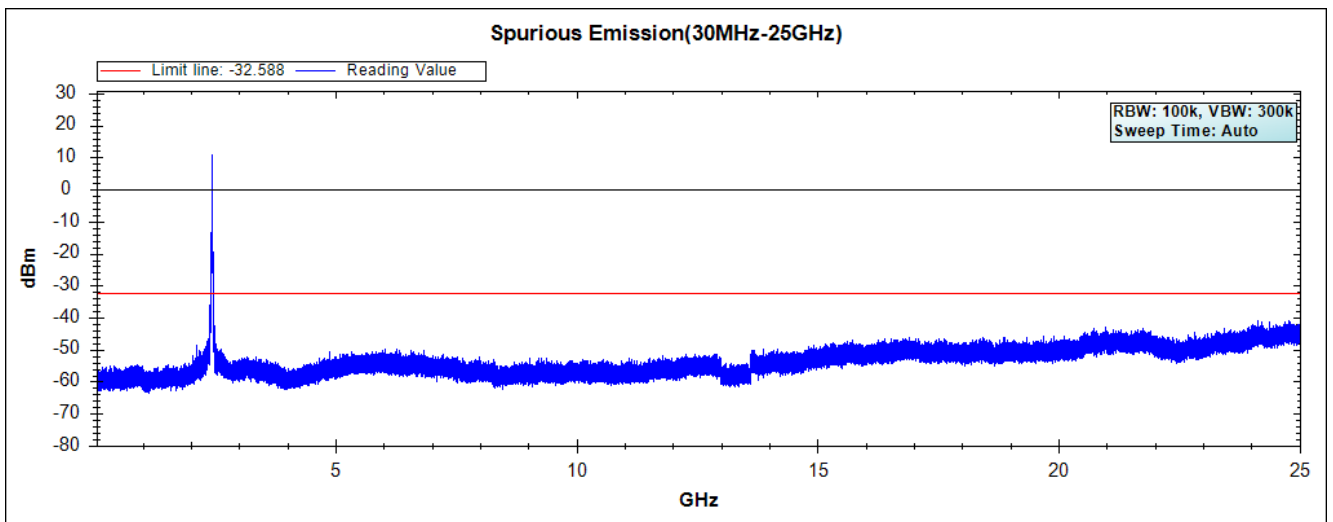


Note: The above test pattern is synthesized by multiple of the frequency range.

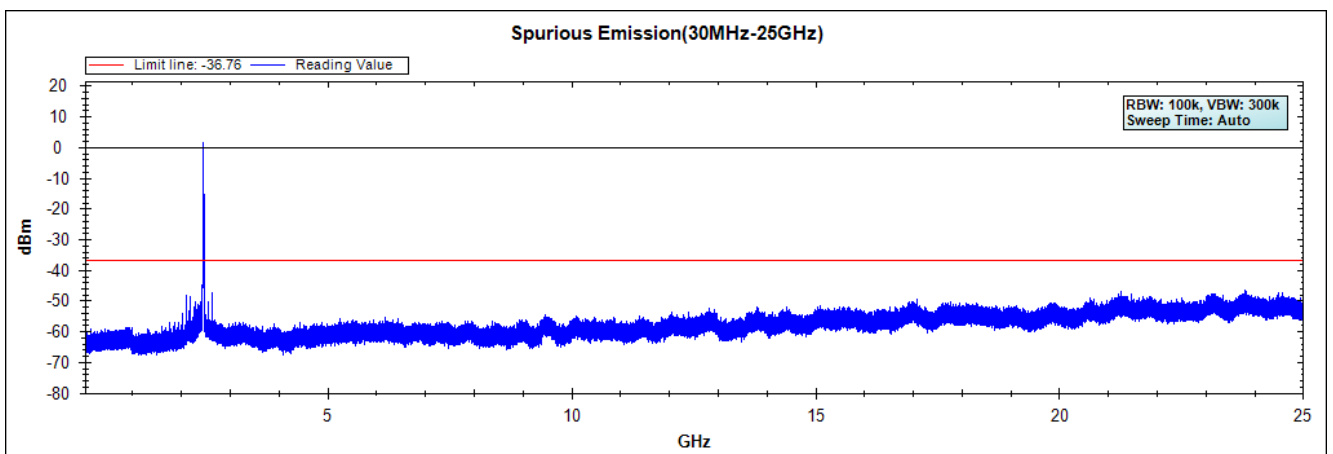
Channel 01 (2412MHz) (Chain B)



Channel 06 (2437MHz) (Chain B)

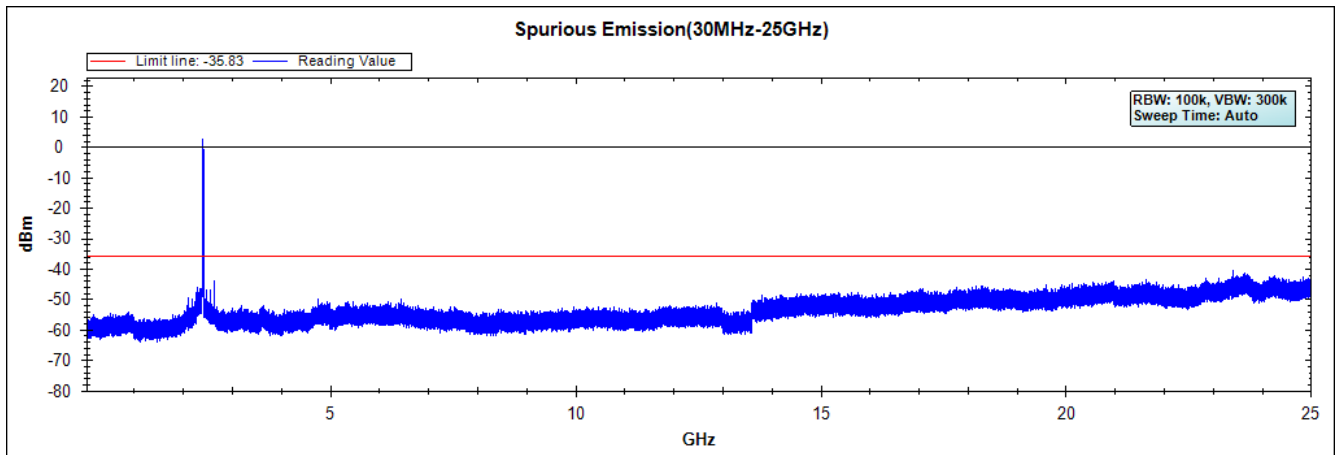


Channel 11 (2462MHz) (Chain B)

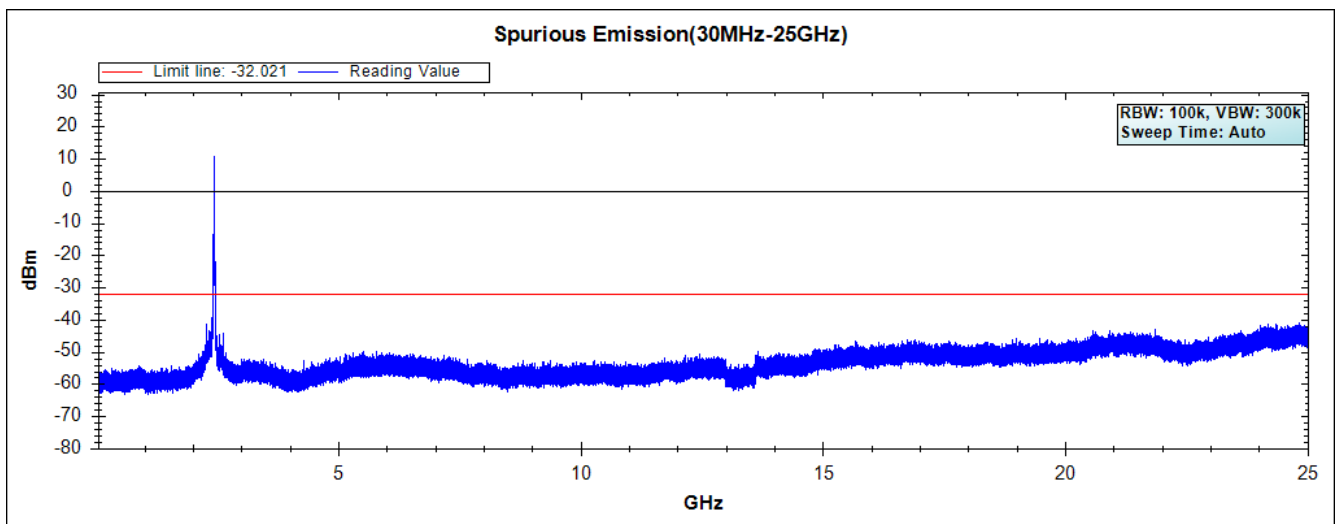


Note: The above test pattern is synthesized by multiple of the frequency range.

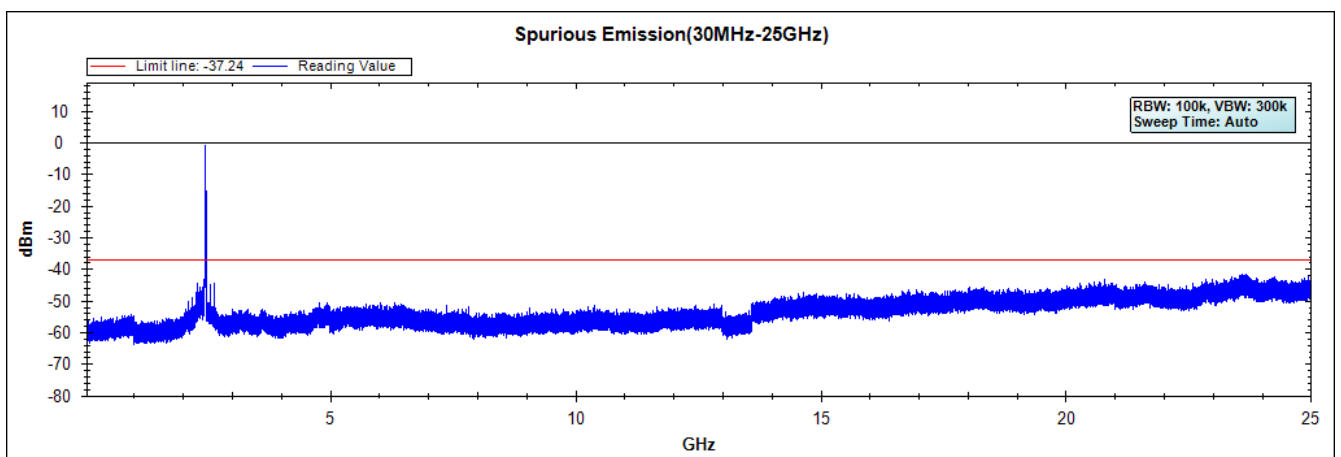
Channel 01 (2412MHz) (Chain C)



Channel 06 (2437MHz) (Chain C)



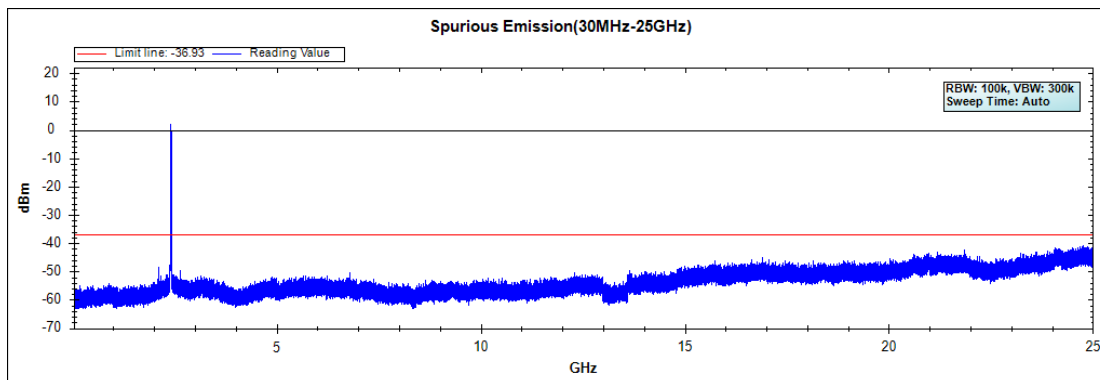
Channel 11 (2462MHz) (Chain C)



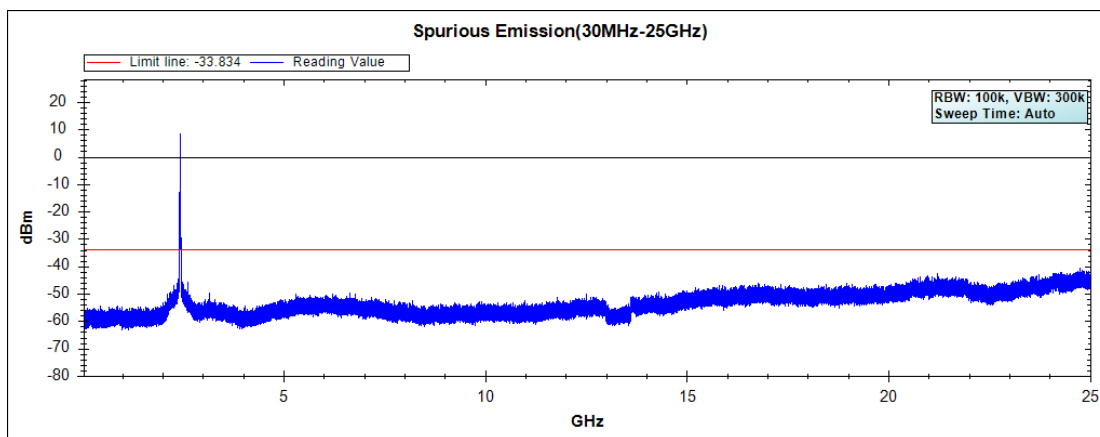
Note: The above test pattern is synthesized by multiple of the frequency range.

Product : Access Point/Sensor
Test Item : RF Antenna Conducted Spurious
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n 21.7Mbps 20M-BW) (Internal Antenna)

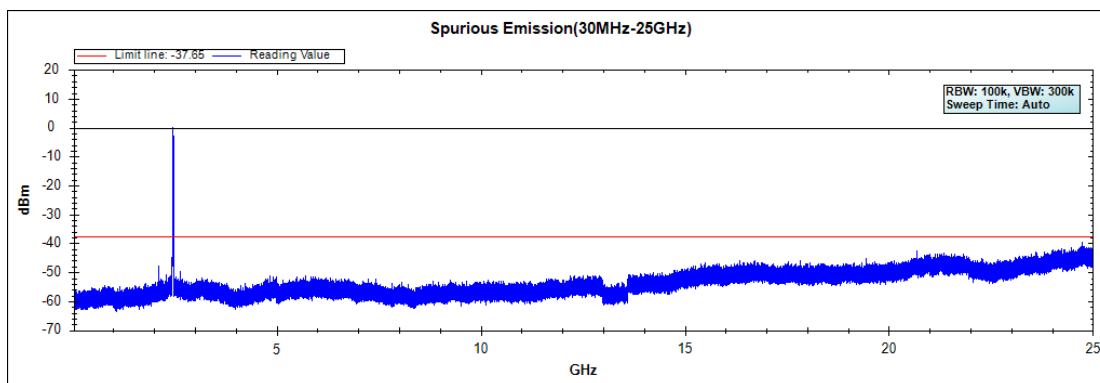
Channel 01 (2412MHz) (Chain A)



Channel 06 (2437MHz) (Chain A)

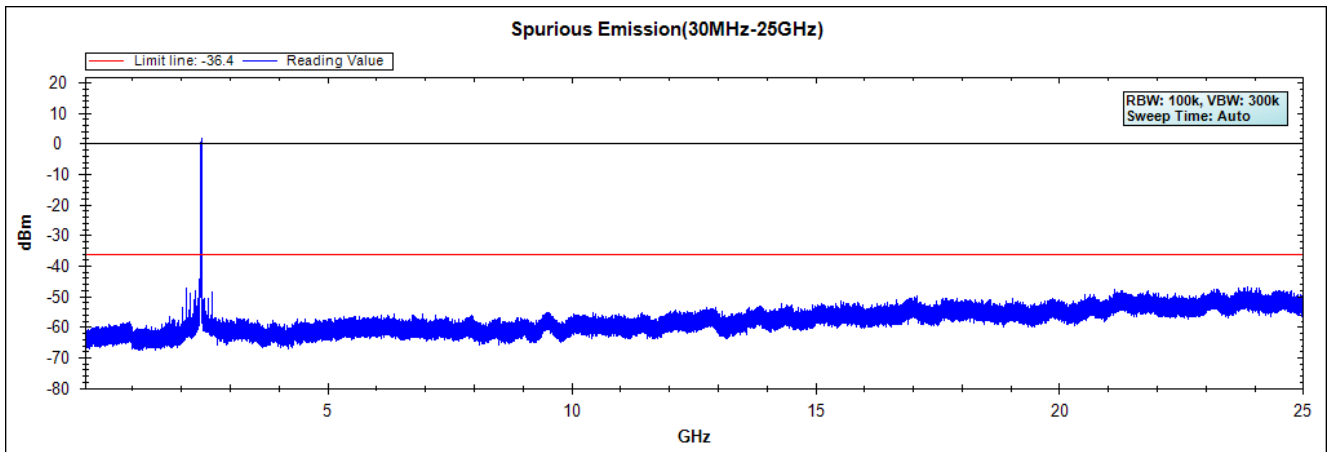


Channel 11 (2462MHz) (Chain A)

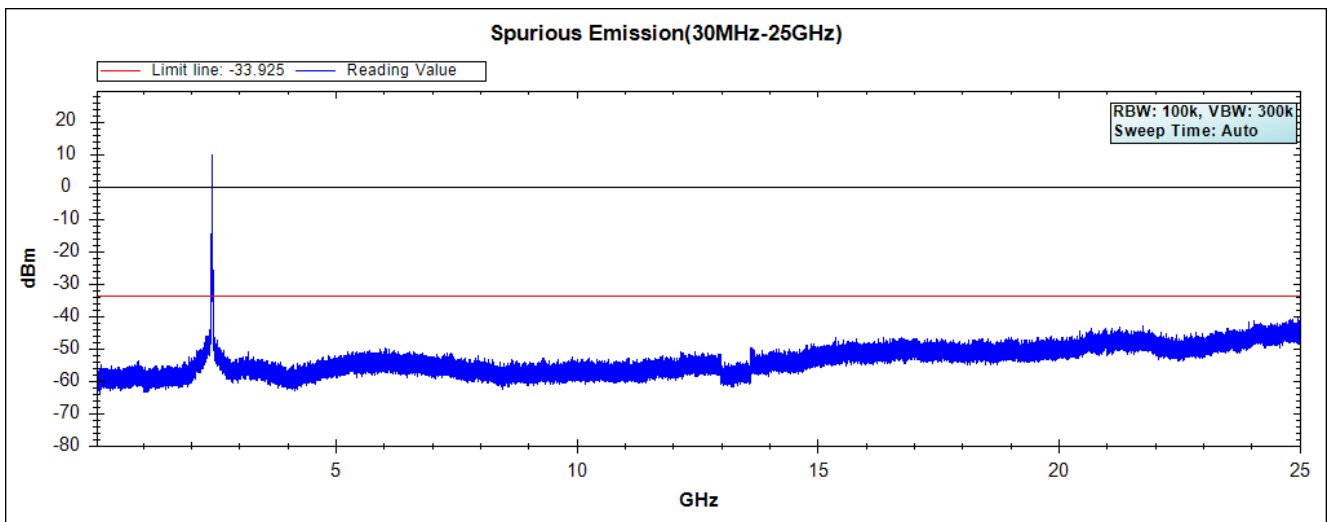


Note: The above test pattern is synthesized by multiple of the frequency range.

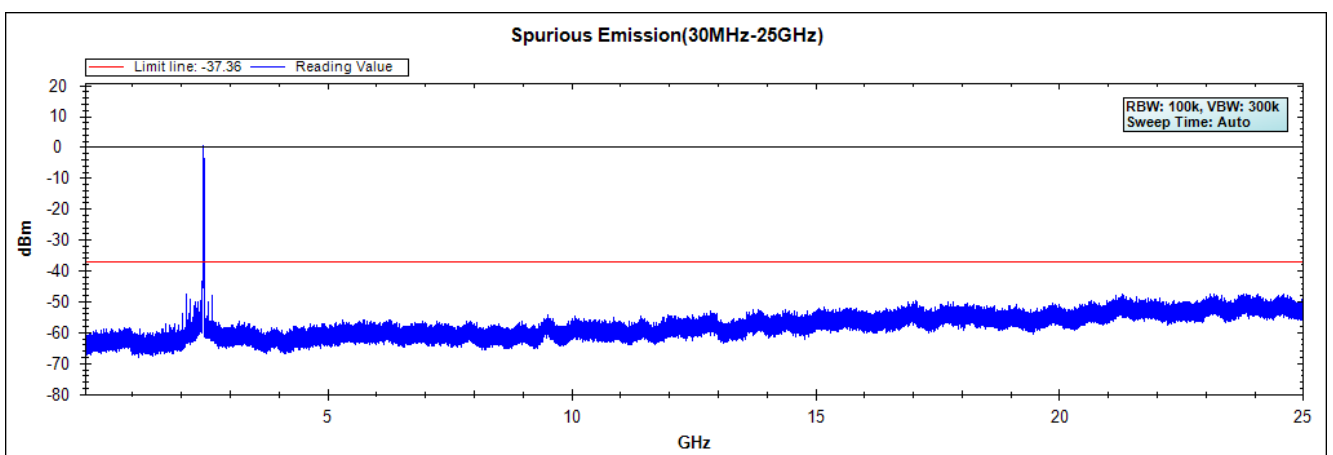
Channel 01 (2412MHz) (Chain B)



Channel 06 (2437MHz) (Chain B)

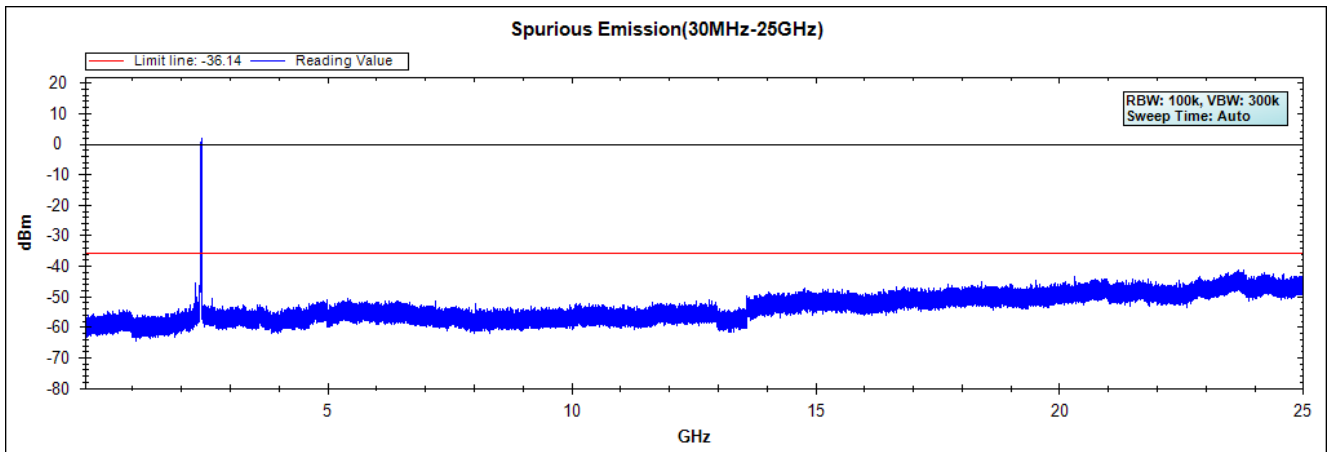


Channel 11 (2462MHz) (Chain B)

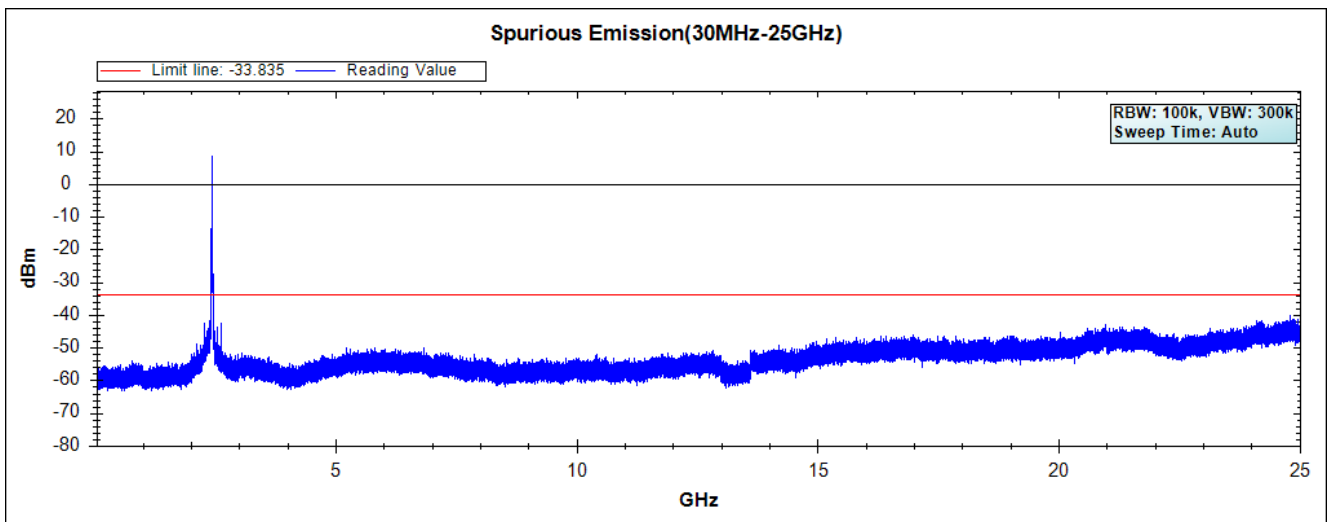


Note: The above test pattern is synthesized by multiple of the frequency range.

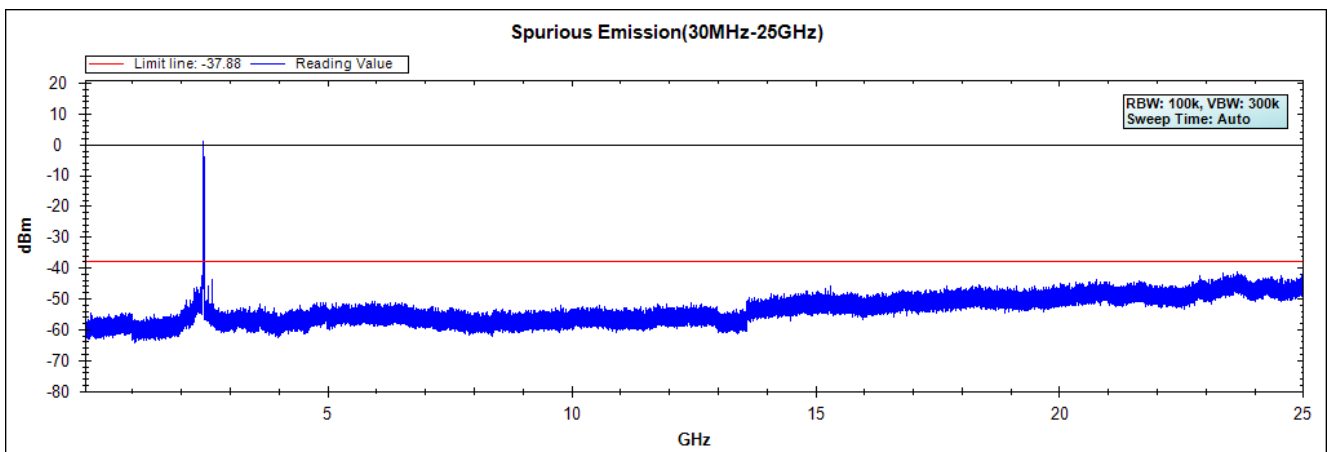
Channel 01 (2412MHz) (Chain C)



Channel 06 (2437MHz) (Chain C)



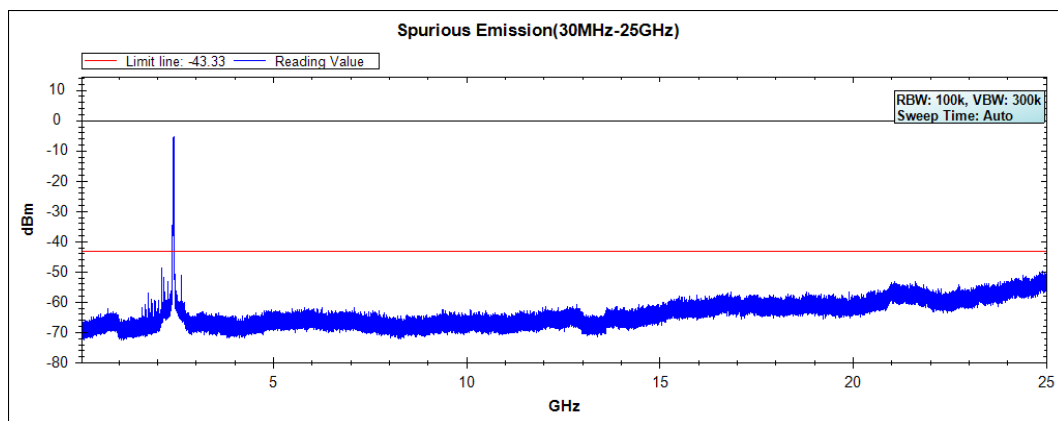
Channel 11 (2462MHz) (Chain C)



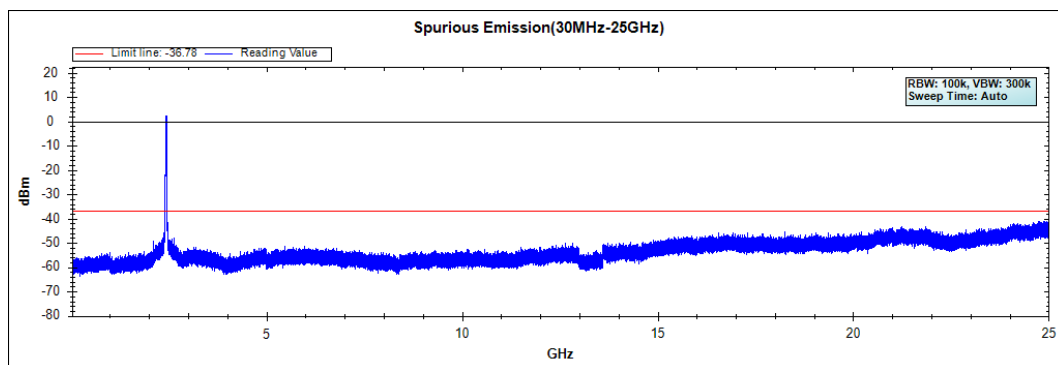
Note: The above test pattern is synthesized by multiple of the frequency range.

Product : Access Point/Sensor
Test Item : RF Antenna Conducted Spurious
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n 45Mbps 40M-BW) (Internal Antenna)

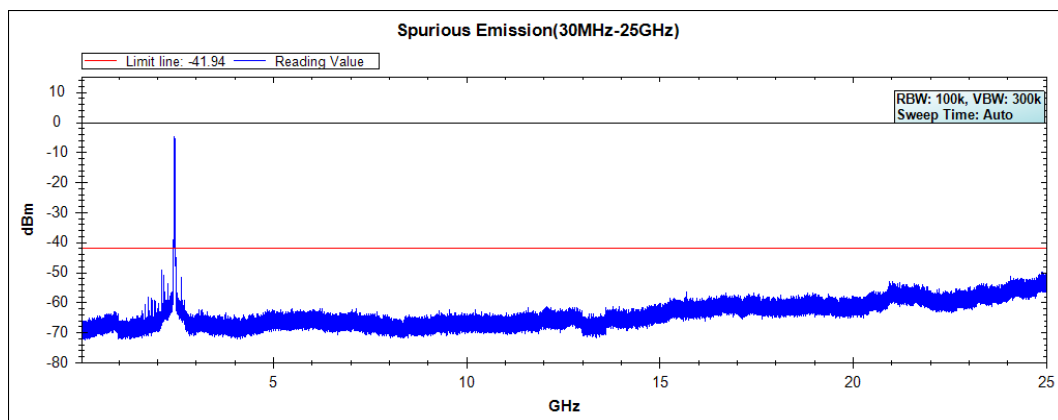
Channel 01 (2422MHz) (Chain A)



Channel 04 (2437MHz) (Chain A)

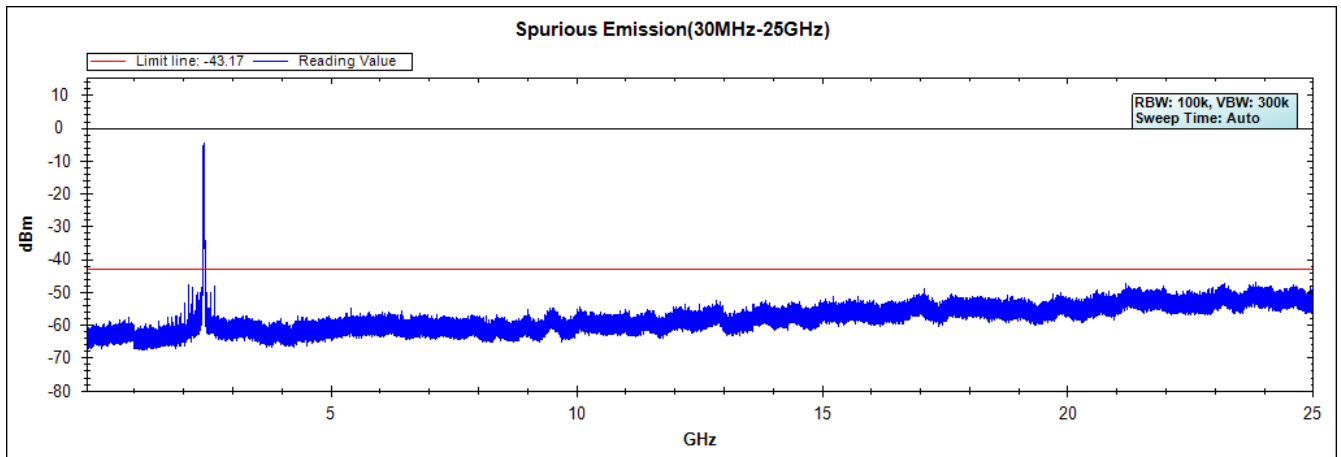


Channel 07 (2452MHz) (Chain A)

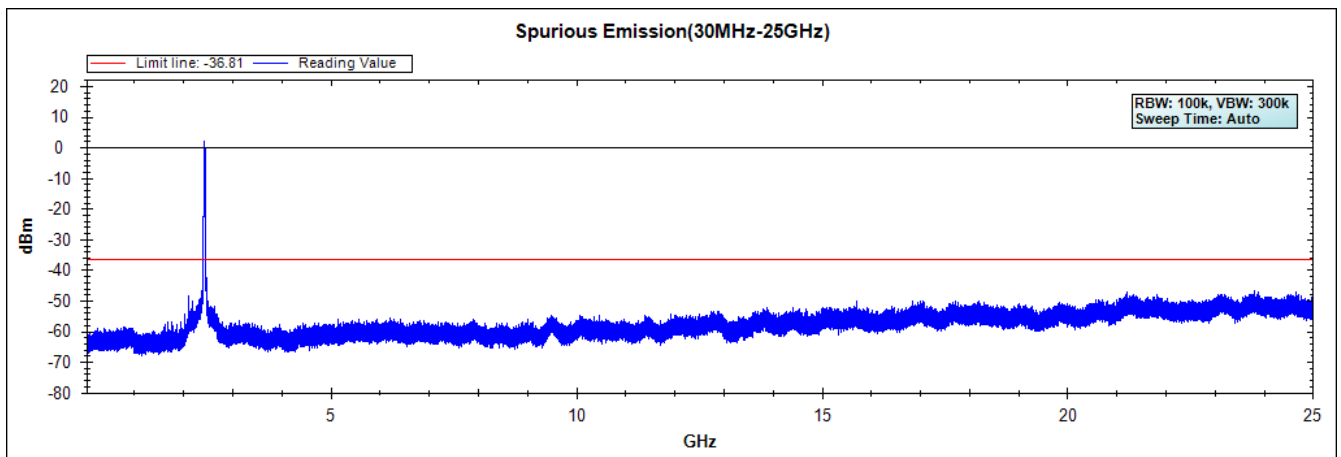


Note: The above test pattern is synthesized by multiple of the frequency range.

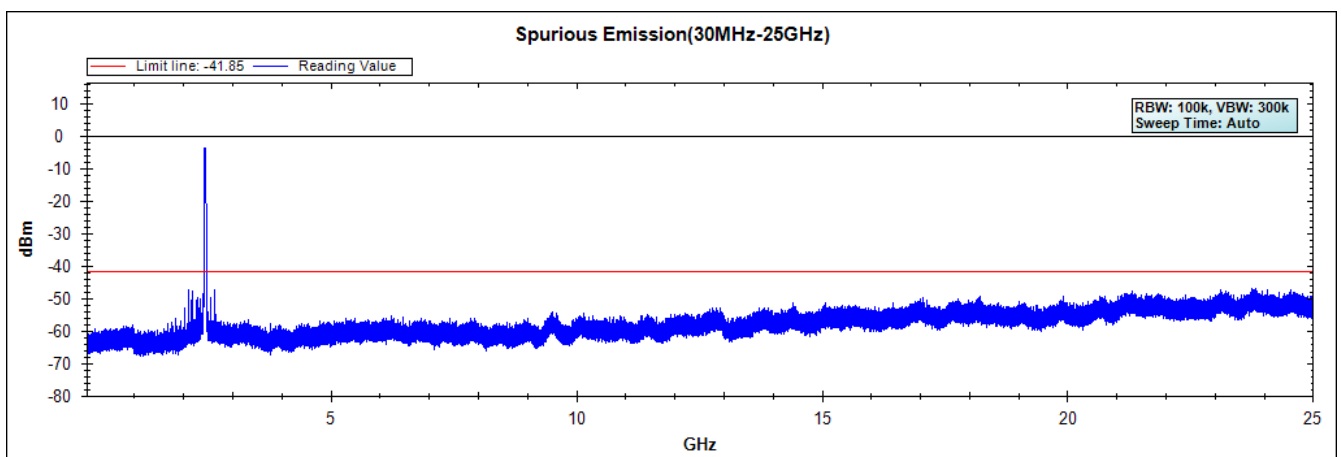
Channel 01 (2422MHz) (Chain B)



Channel 04 (2437MHz) (Chain B)

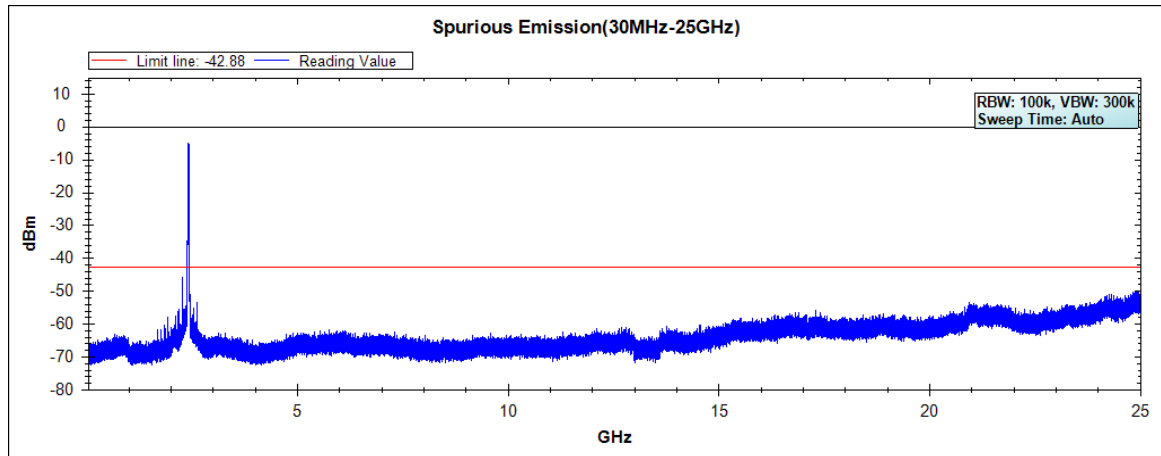


Channel 07 (2452MHz) (Chain B)

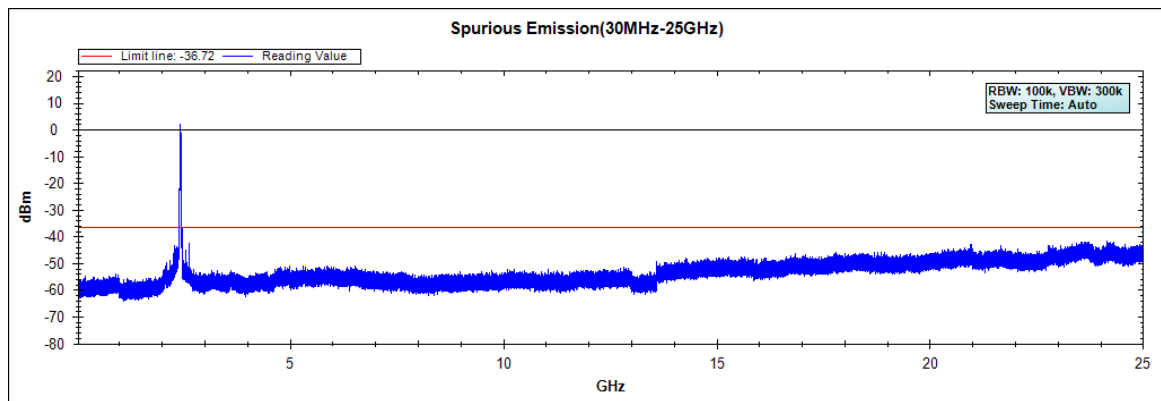


Note: The above test pattern is synthesized by multiple of the frequency range.

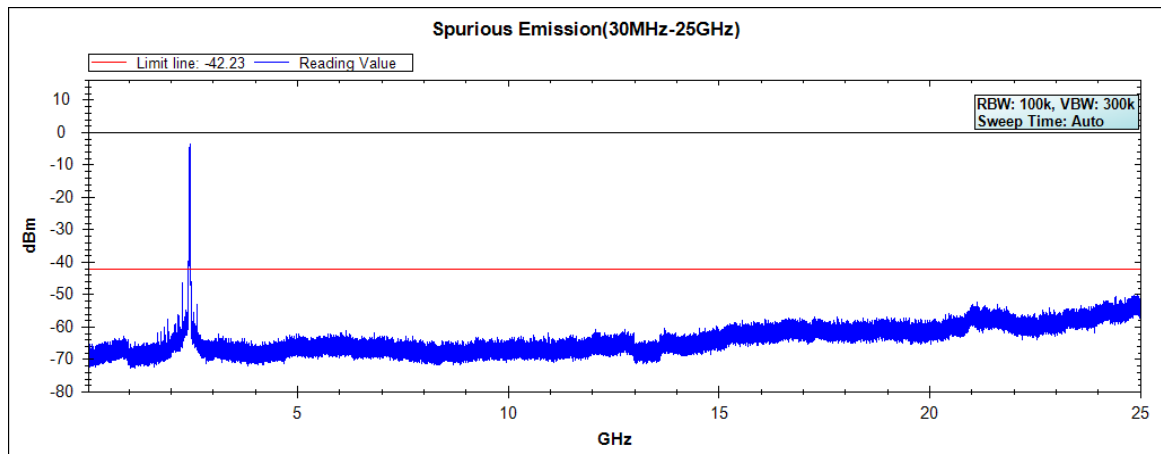
Channel 01 (2422MHz) (Chain C)



Channel 04 (2437MHz) (Chain C)



Channel 07 (2452MHz) (Chain C)



Note: The above test pattern is synthesized by multiple of the frequency range.

6. Band Edge

6.1. Test Equipment

RF Radiated Measurement:

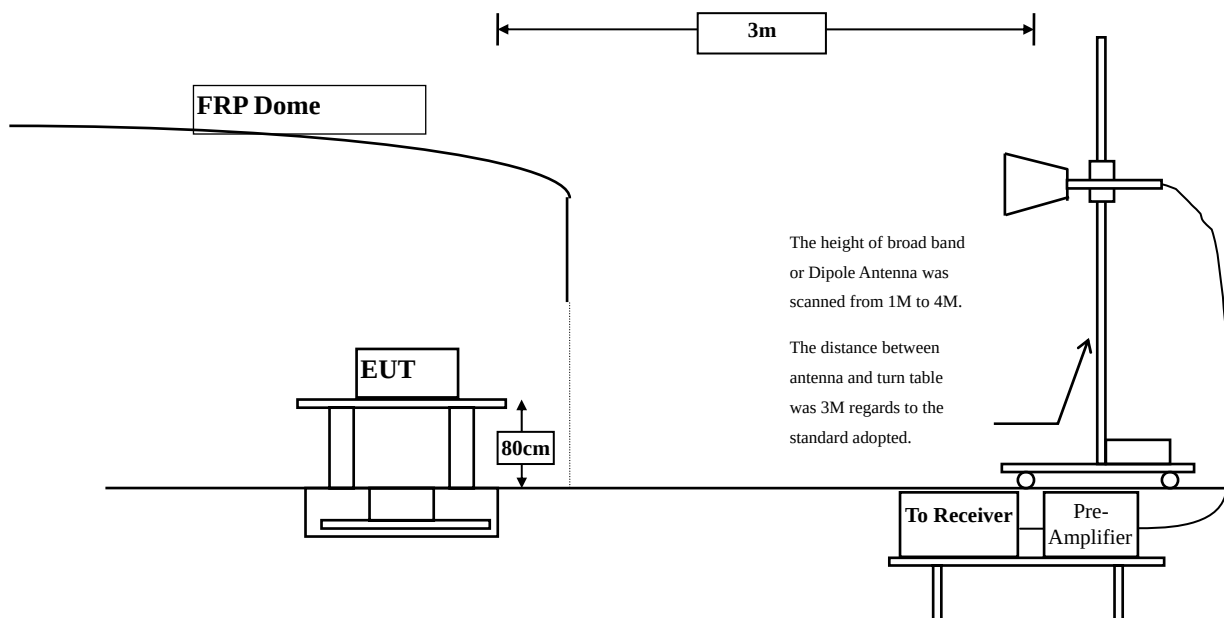
The following test equipments are used during the band edge tests:

Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
☒ CB # 8	X	Spectrum Analyzer	R&S	FSP40/ 100339	Oct, 2014
	X	Horn Antenna	ETS-Lindgren	3117/ 35205	Mar, 2015
	X	Horn Antenna	Schwarzbeck	BBHA9170/209	Jan, 2015
	X	Horn Antenna	TRC	AH-0801/95051	Aug, 2014
	X	Pre-Amplifier	EMCI	EMC012630SE/980210	Jan, 2015
	X	Pre-Amplifier	MITEQ	JS41-001040000-58-5P/153945	Jul, 2014
	X	Pre-Amplifier	NARDA	DBL-1840N506/013	Jul, 2014

- Note:
1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
 2. The test instruments marked with “X” are used to measure the final test results.

6.2. Test Setup

RF Radiated Measurement:



6.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

6.4. Test Procedure

The EUT was setup according to ANSI C63.10: 2009 and tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The EUT is placed on a turn table which is 0.8 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10: 2009 on radiated measurement.

6.5. Uncertainty

± 3.9 dB above 1GHz

± 3.8 dB below 1GHz

6.6. Test Result of Band Edge

Product : Access Point/Sensor
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz) (External Antenna)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
01 (Peak)	2390.000	31.509	23.663	55.172	74.00	54.00	Pass
01 (Peak)	2413.400	31.649	65.117	96.766	--	--	Pass
01 (Average)	2390.000	31.509	13.805	45.314	74.00	54.00	Pass
01 (Average)	2414.600	31.659	61.231	92.889	--	--	Pass

Figure Channel 01: Horizontal (Peak)

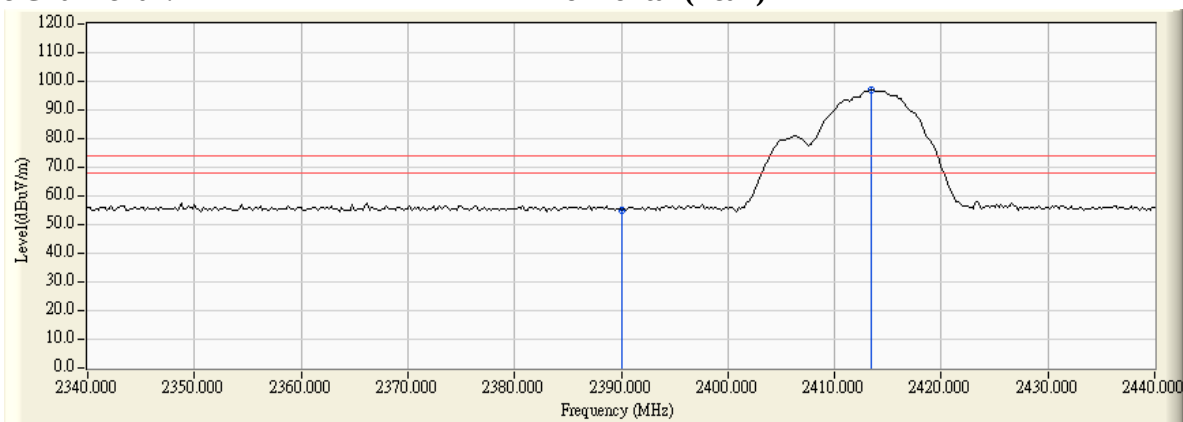
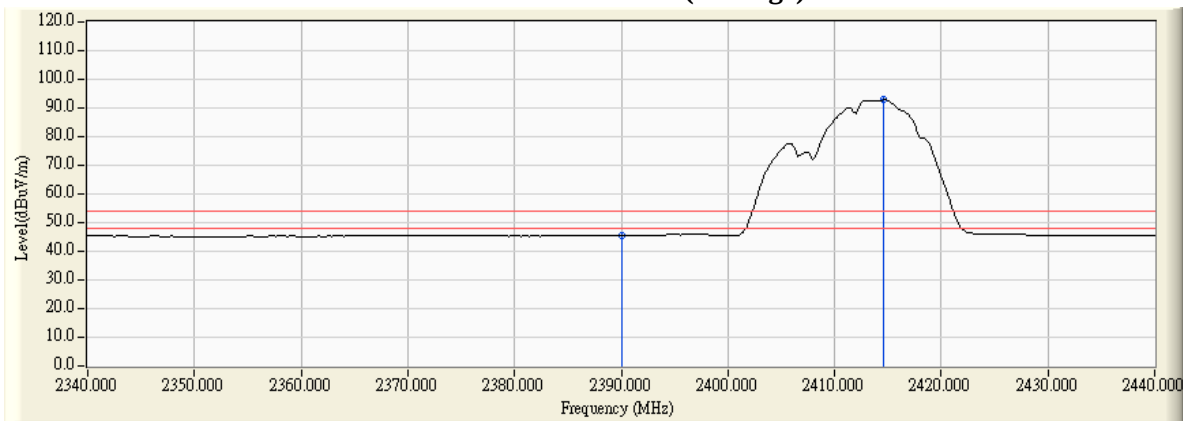


Figure Channel 01: Horizontal (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Access Point/Sensor
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz) (External Antenna)

RF Radiated Measurement (VERTICAL):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
01 (Peak)	2388.000	30.925	32.388	63.313	74.00	54.00	Pass
01 (Peak)	2390.000	30.915	31.824	62.739	74.00	54.00	Pass
01 (Peak)	2410.600	30.941	86.471	117.412	--	--	Pass
01 (Average)	2370.000	31.008	22.008	53.016	74.00	54.00	Pass
01 (Average)	2390.000	30.915	20.350	51.265	74.00	54.00	Pass
01 (Average)	2409.400	30.939	82.382	113.320	--	--	Pass

Figure Channel 01: VERTICAL (Peak)

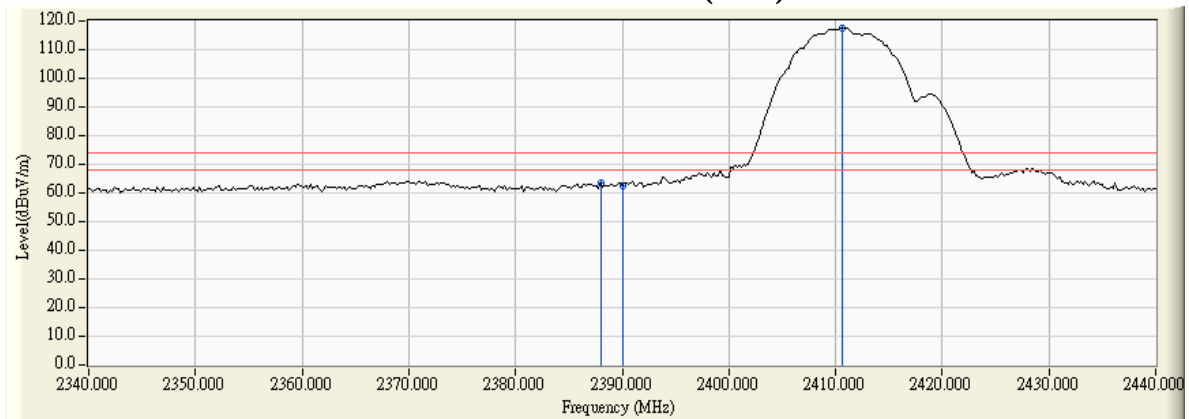
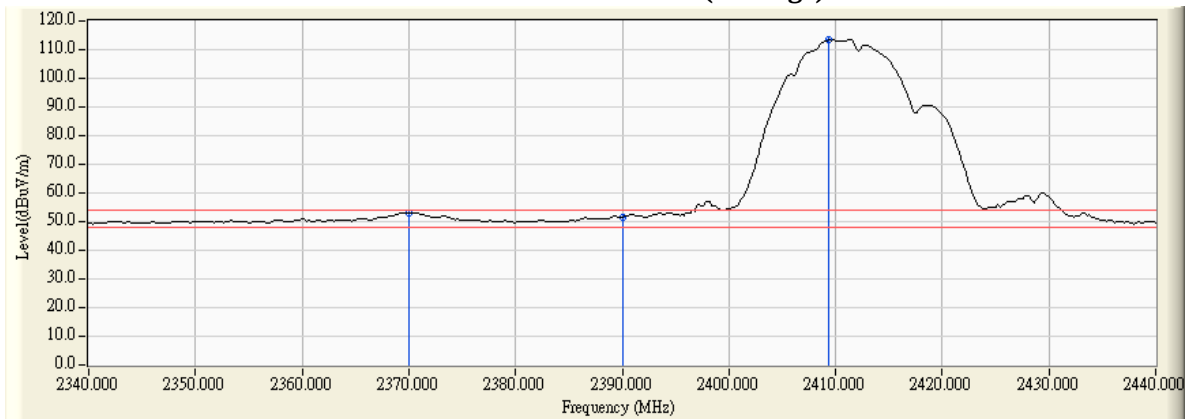


Figure Channel 01: VERTICAL (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Access Point/Sensor
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462MHz) (External Antenna)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB μ V)	Emission Level (dB μ V/m)	Peak Limit (dB μ V/m)	Average Limit (dB μ V/m)	Result
11 (Peak)	2464.100	32.036	62.862	94.897	--	--	Pass
11 (Peak)	2483.500	32.182	24.380	56.562	74.00	54.00	Pass
11 (Peak)	2487.500	32.212	25.423	57.635	74.00	54.00	Pass
11 (Average)	2459.300	31.999	59.608	91.607	--	--	Pass
11 (Average)	2483.500	32.182	13.842	46.024	74.00	54.00	Pass

Figure Channel 11: Horizontal (Peak)

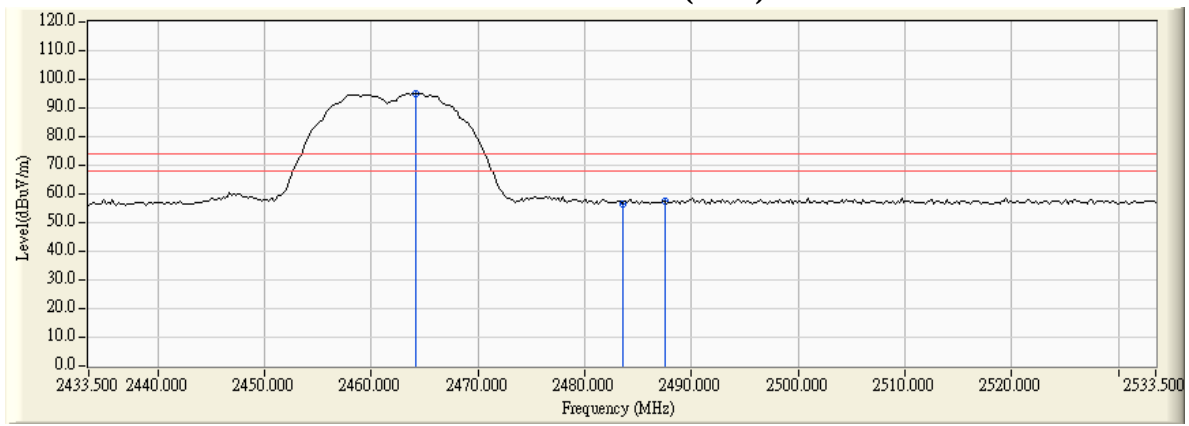
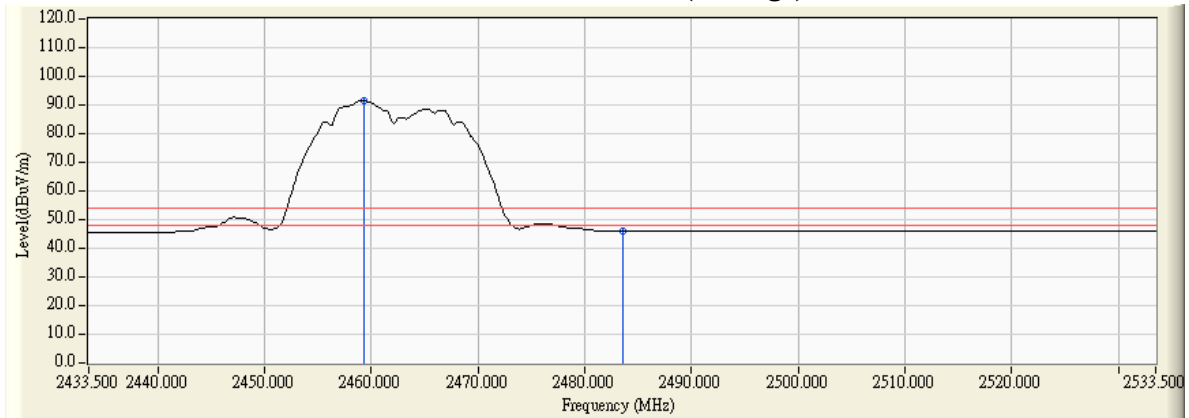


Figure Channel 11: Horizontal (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Access Point/Sensor
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462MHz) (External Antenna)

RF Radiated Measurement (VERTICAL):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB μ V)	Emission Level (dB μ V/m)	Peak Limit (dB μ V/m)	Average Limit (dB μ V/m)	Result
11 (Peak)	2464.500	31.307	84.496	115.803	--	--	Pass
11 (Peak)	2483.500	31.435	31.538	62.973	74.00	54.00	Pass
11 (Peak)	2486.100	31.452	31.803	63.256	74.00	54.00	Pass
11 (Average)	2464.700	31.308	81.137	112.446	--	--	Pass
11 (Average)	2483.500	31.435	21.394	52.829	74.00	54.00	Pass

Figure Channel 11: VERTICAL (Peak)

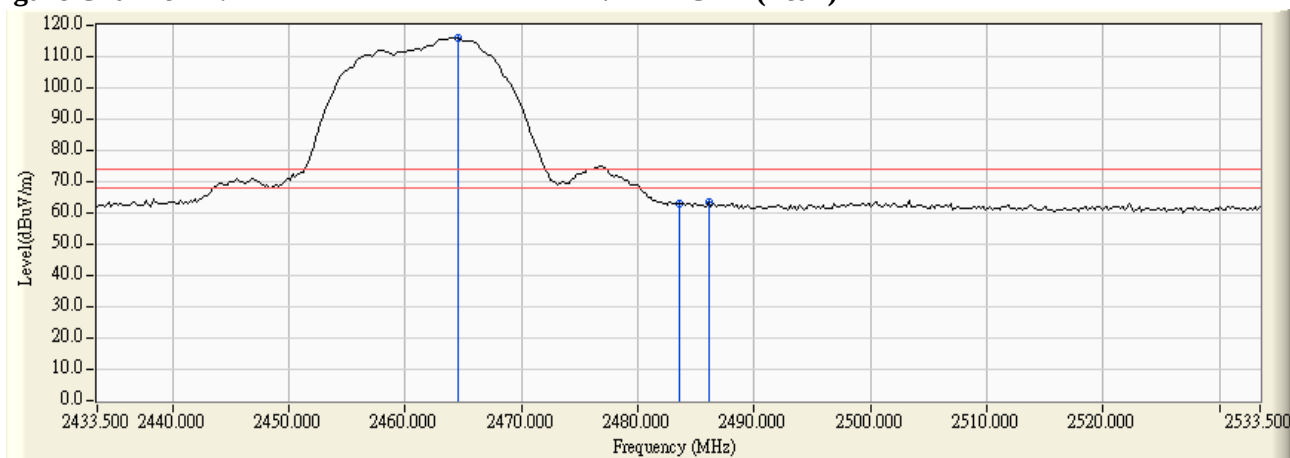


Figure Channel 11: VERTICAL (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Access Point/Sensor
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz) (External Antenna)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
01 (Peak)	2389.200	31.506	25.025	56.531	74.00	54.00	Pass
01 (Peak)	2390.000	31.509	23.738	55.247	74.00	54.00	Pass
01 (Peak)	2414.000	31.654	65.196	96.849	--	--	Pass
01 (Average)	2390.000	31.509	13.861	45.370	74.00	54.00	Pass
01 (Average)	2413.800	31.651	54.173	85.825	--	--	Pass

Figure Channel 01: Horizontal (Peak)

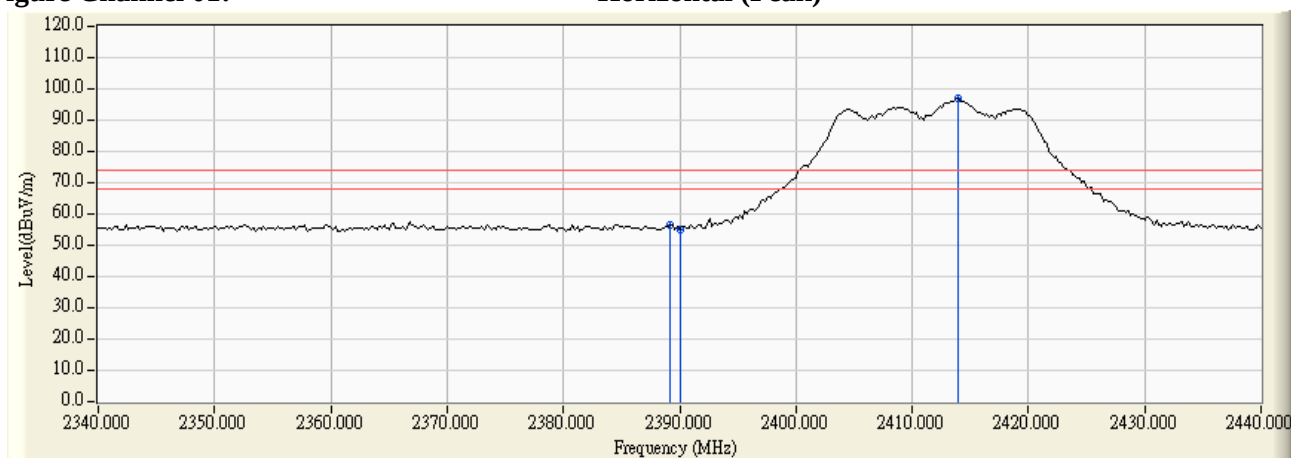
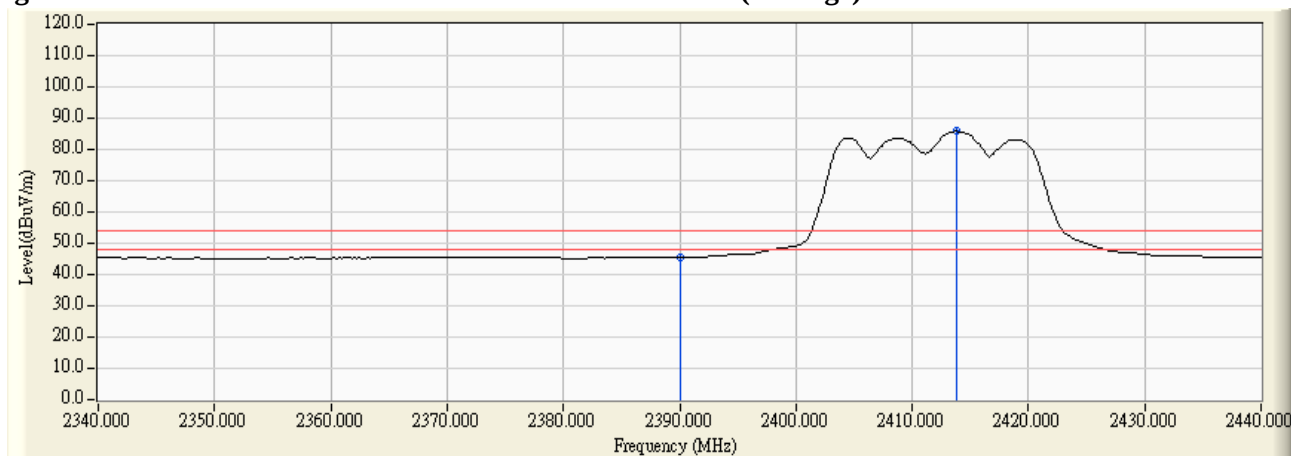


Figure Channel 01: Horizontal (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Access Point/Sensor
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz) (External Antenna)

RF Radiated Measurement (VERTICAL):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
01 (Peak)	2390.000	30.915	38.674	69.589	74.00	54.00	Pass
01 (Peak)	2415.200	30.971	86.000	116.971	--	--	Pass
01 (Average)	2390.000	30.915	22.222	53.137	74.00	54.00	Pass
01 (Average)	2415.400	30.972	73.978	104.950	--	--	Pass

Figure Channel 01: VERTICAL (Peak)

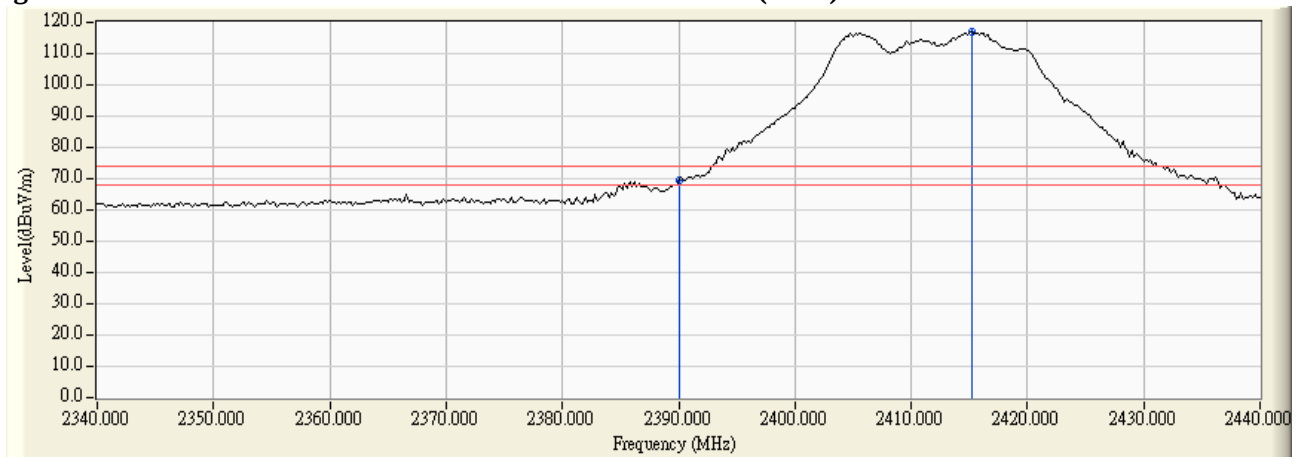
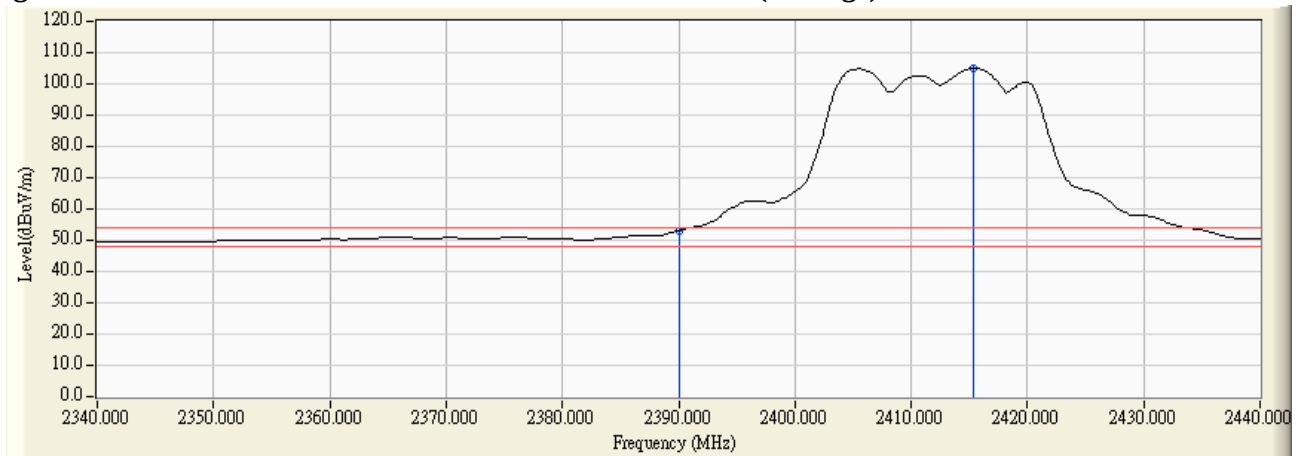


Figure Channel 01: VERTICAL (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Access Point/Sensor
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462MHz) (External Antenna)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
11 (Peak)	2455.700	31.972	65.560	97.532	--	--	Pass
11 (Peak)	2483.500	32.182	24.106	56.288	74.00	54.00	Pass
11 (Average)	2456.500	31.977	55.256	87.234	--	--	Pass
11 (Average)	2483.500	32.182	13.843	46.025	74.00	54.00	Pass

Figure Channel 11: Horizontal (Peak)

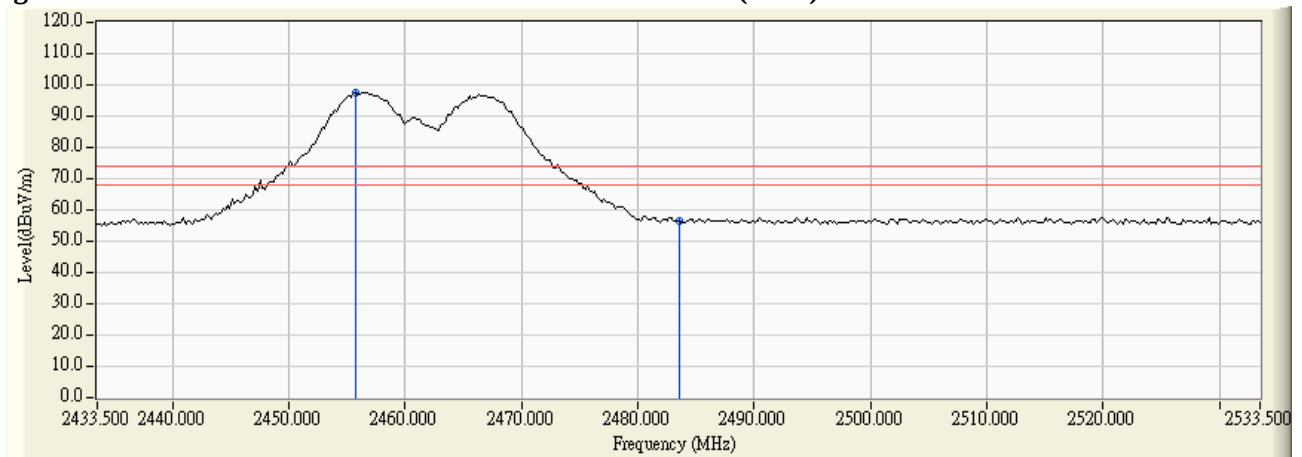
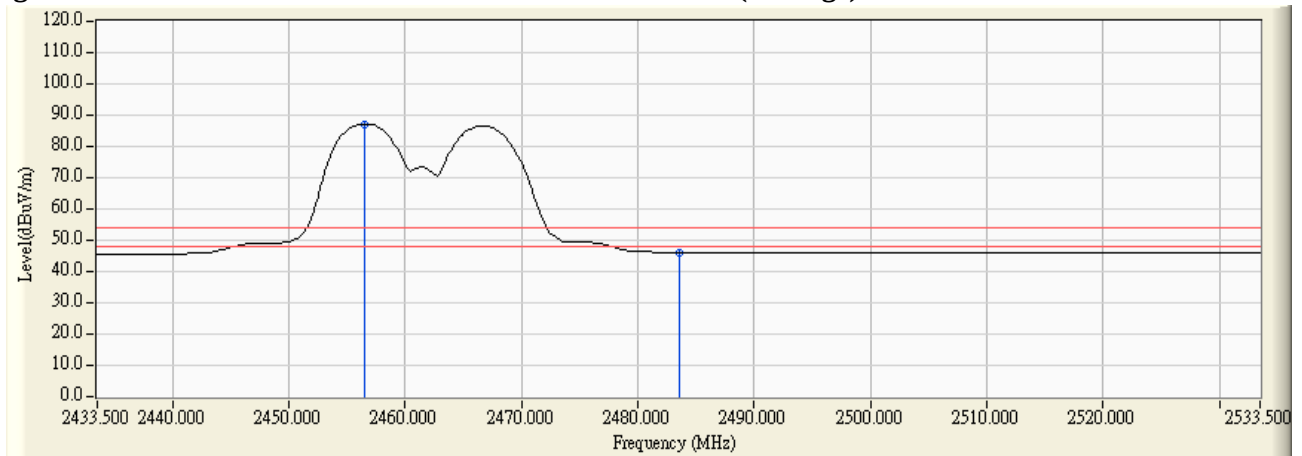


Figure Channel 11: Horizontal (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Access Point/Sensor
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462MHz) (External Antenna)

RF Radiated Measurement (VERTICAL):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
11 (Peak)	2467.900	31.330	86.366	117.696	--	--	Pass
11 (Peak)	2483.500	31.435	36.115	67.550	74.00	54.00	Pass
11 (Peak)	2487.100	31.460	37.363	68.823	74.00	54.00	Pass
11 (Average)	2458.100	31.263	74.804	106.068	--	--	Pass
11 (Average)	2483.500	31.435	21.596	53.031	74.00	54.00	Pass

Figure Channel 11: VERTICAL (Peak)

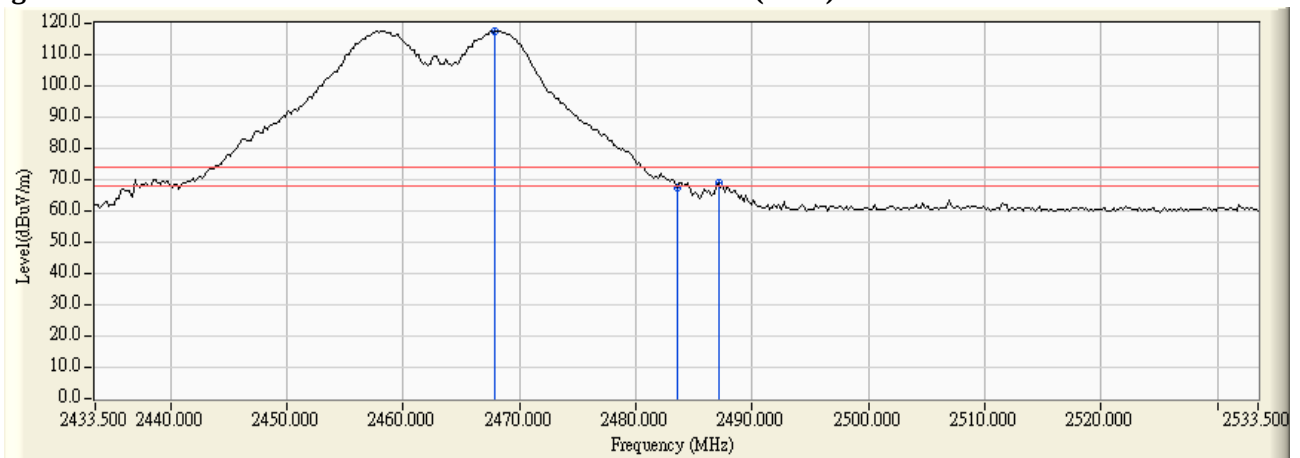
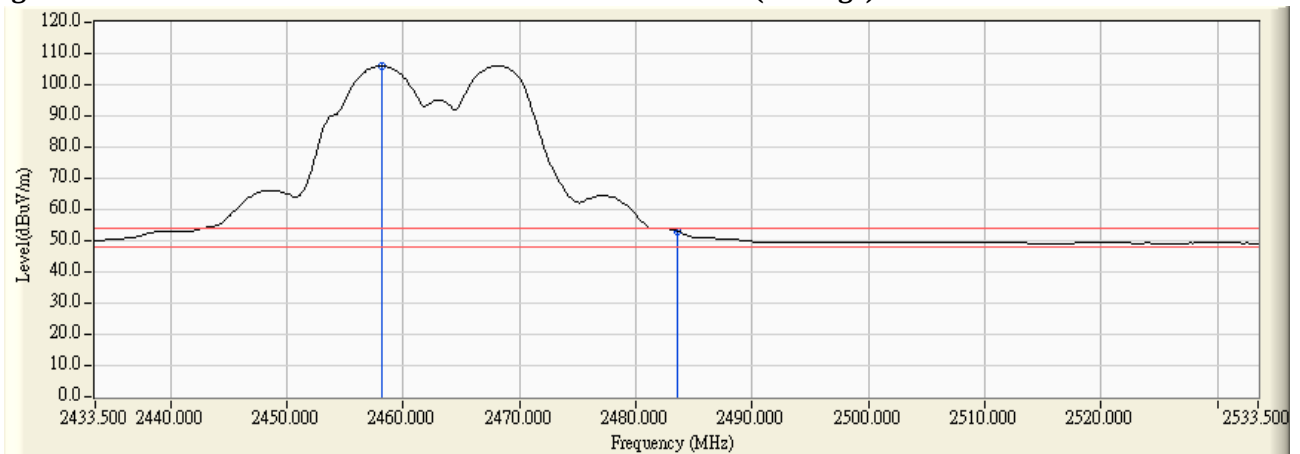


Figure Channel 11: VERTICAL (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Access Point/Sensor
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n 21.7Mbps 20M-BW) (2412MHz) (External Antenna)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
01 (Peak)	2390.000	31.509	24.346	55.855	74.00	54.00	Pass
01 (Peak)	2415.600	31.665	64.979	96.645	--	--	Pass
01 (Average)	2390.000	31.509	13.866	45.375	74.00	54.00	Pass
01 (Average)	2415.400	31.664	53.750	85.414	--	--	Pass

Figure Channel 01:

Horizontal (Peak)

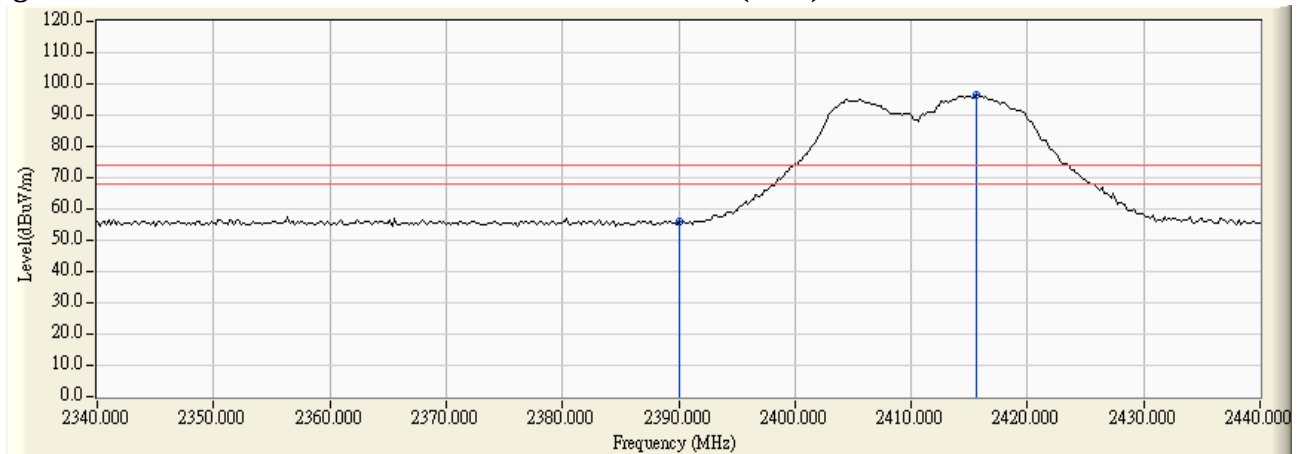
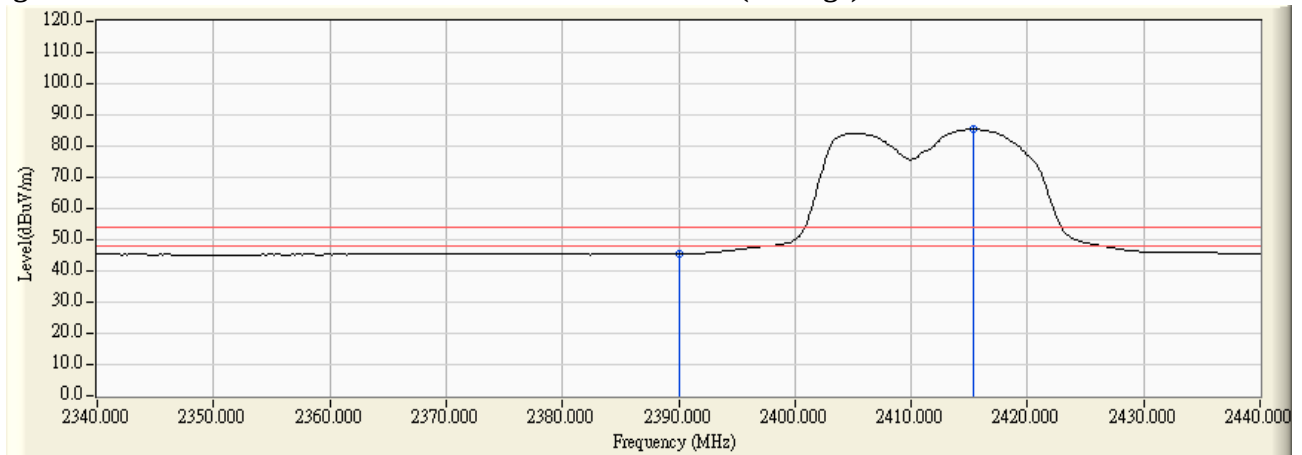


Figure Channel 01:

Horizontal (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Access Point/Sensor
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n 21.7Mbps 20M-BW) (2412MHz) (External Antenna)

RF Radiated Measurement (VERTICAL):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
01 (Peak)	2390.000	30.915	39.084	69.999	74.00	54.00	Pass
01 (Peak)	2418.000	30.991	85.121	116.111	--	--	Pass
01 (Average)	2390.000	30.915	22.775	53.690	74.00	54.00	Pass
01 (Average)	2417.400	30.985	73.518	104.504	--	--	Pass

Figure Channel 01: VERTICAL (Peak)

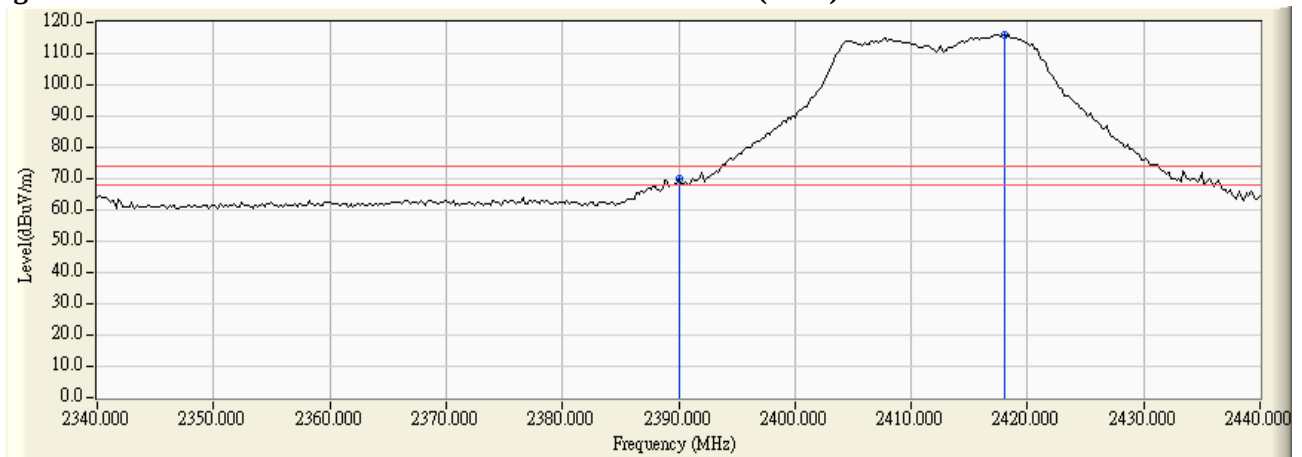
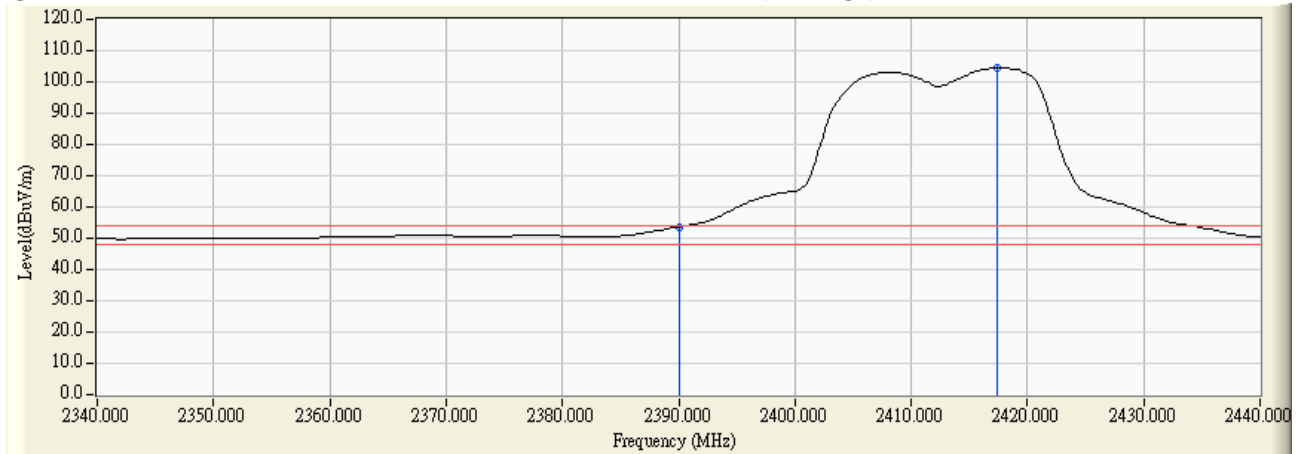


Figure Channel 01: VERTICAL (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Access Point/Sensor
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n 21.7Mbps 20M-BW) (2462MHz) (External Antenna)

RF Radiated Measurement (HORIZONTAL):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
11 (Peak)	2455.100	31.967	62.835	94.802	--	--	Pass
11 (Peak)	2483.500	32.182	25.622	57.804	74.00	54.00	Pass
11 (Average)	2455.900	31.973	51.310	83.283	--	--	Pass
11 (Average)	2483.500	32.182	13.813	45.995	74.00	54.00	Pass

Figure Channel 11: HORIZONTAL (Peak)

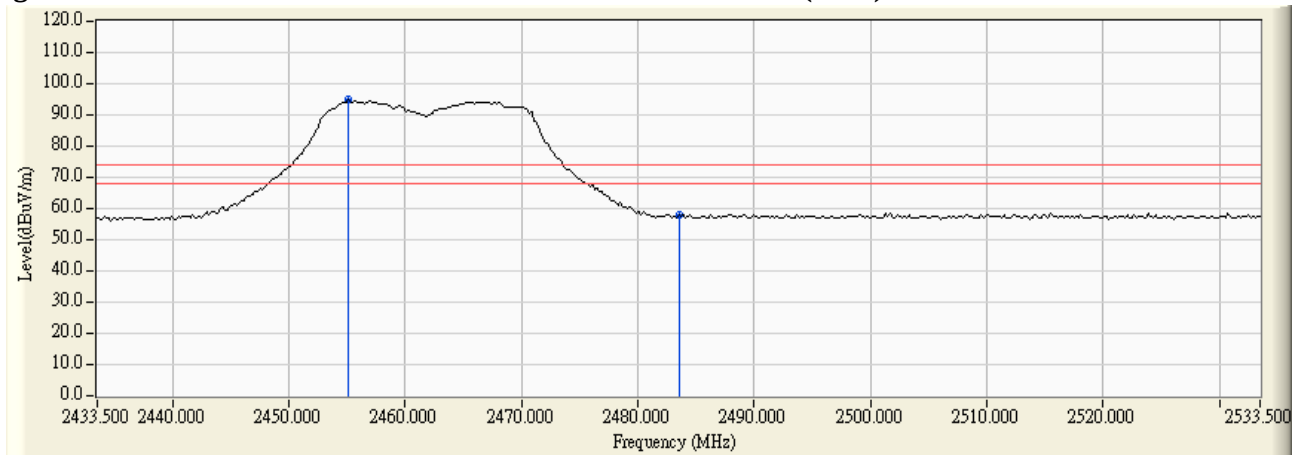
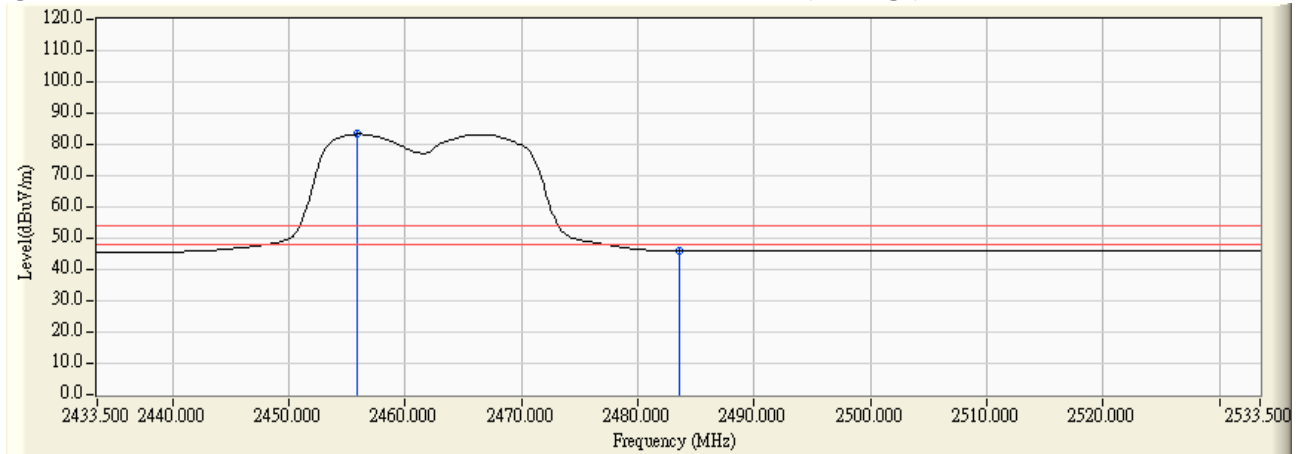


Figure Channel 11: HORIZONTAL (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Access Point/Sensor
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n 21.7Mbps 20M-BW) (2462MHz) (External Antenna)

RF Radiated Measurement (VERTICAL):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
11 (Peak)	2468.700	31.336	82.923	114.258	--	--	Pass
11 (Peak)	2483.500	31.435	37.440	68.875	74.00	54.00	Pass
11 (Average)	2468.700	31.336	71.183	102.518	--	--	Pass
11 (Average)	2483.500	31.435	20.817	52.252	74.00	54.00	Pass

Figure Channel 11:

VERTICAL (Peak)

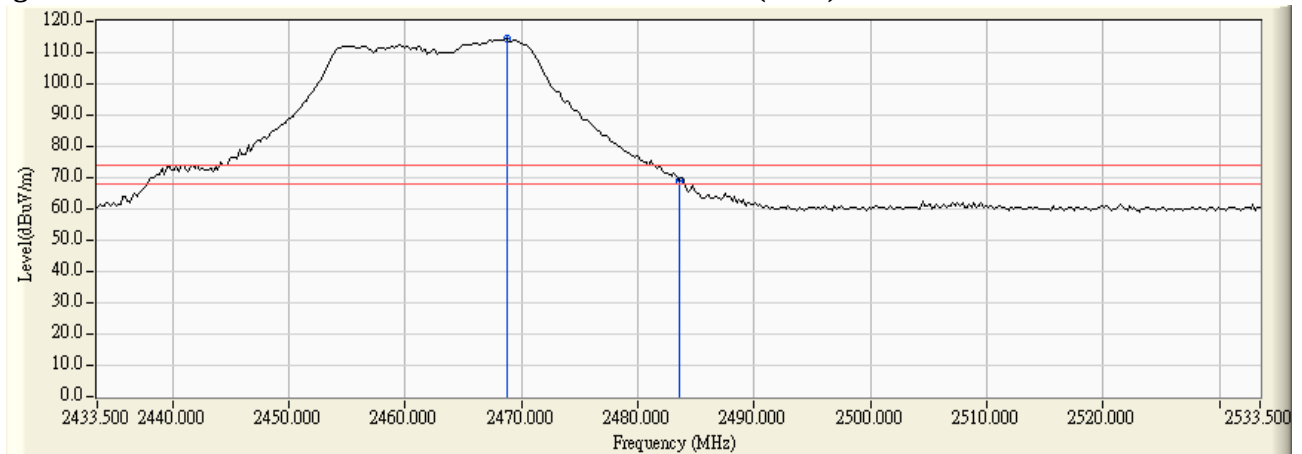
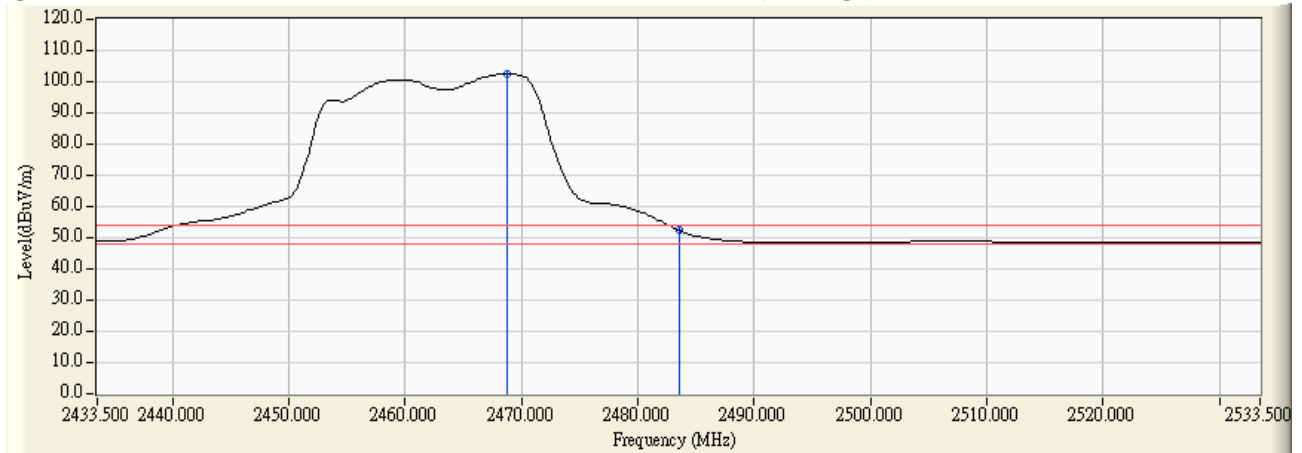


Figure Channel 11:

VERTICAL (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Access Point/Sensor
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n 45Mbps 40M-BW) (2422MHz) (External Antenna)

RF Radiated Measurement (HORIZONTAL):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
03 (Peak)	2390.000	31.509	25.199	56.708	74.00	54.00	Pass
03 (Peak)	2430.800	31.782	56.837	88.619	--	--	Pass
03 (Average)	2390.000	31.509	13.867	45.376	74.00	54.00	Pass
03 (Average)	2430.000	31.776	44.796	76.572	--	--	Pass

Figure Channel 03:

HORIZONTAL (Peak)

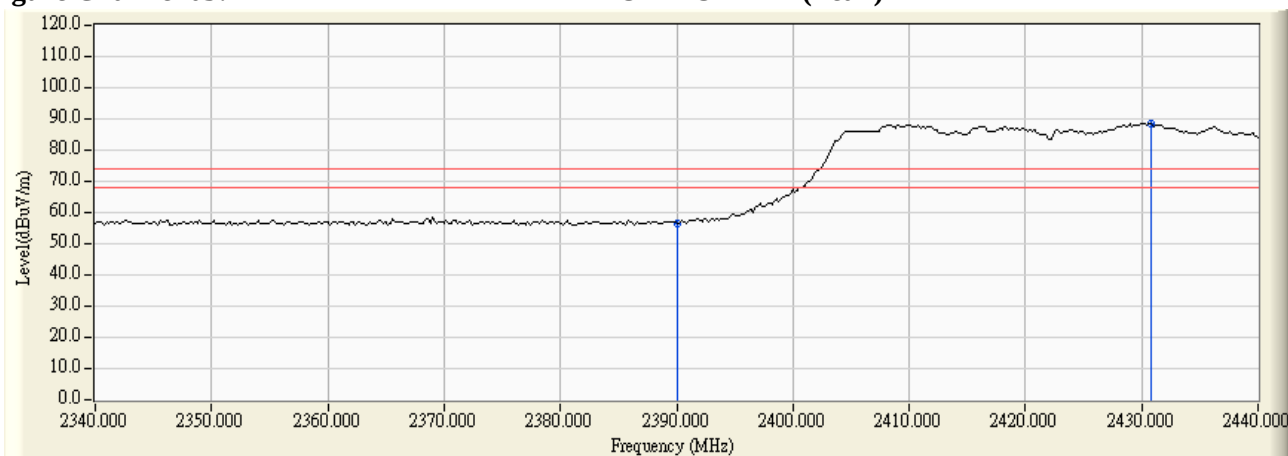
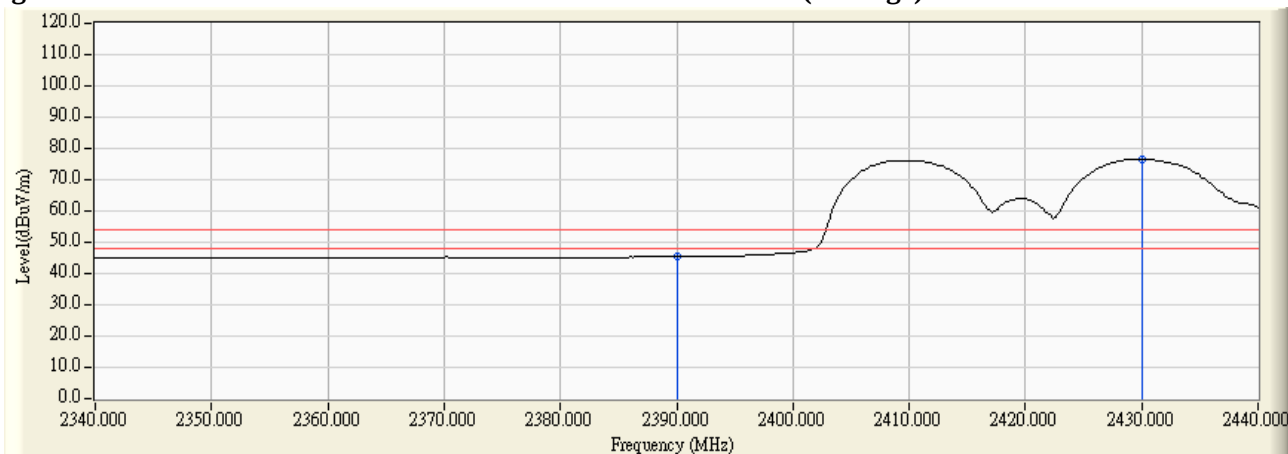


Figure Channel 03:

HORIZONTAL (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Access Point/Sensor
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n 45Mbps 40M-BW) (2422MHz) (External Antenna)

RF Radiated Measurement (VERTICAL):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
03 (Peak)	2389.800	30.916	40.111	71.027	74.00	54.00	Pass
03 (Peak)	2390.000	30.915	38.035	68.950	74.00	54.00	Pass
03 (Peak)	2418.000	30.991	80.977	111.967	--	--	Pass
03 (Average)	2390.000	30.915	18.549	49.464	74.00	54.00	Pass
03 (Average)	2419.600	31.002	67.317	98.318	--	--	Pass

Figure Channel 03:

VERTICAL (Peak)

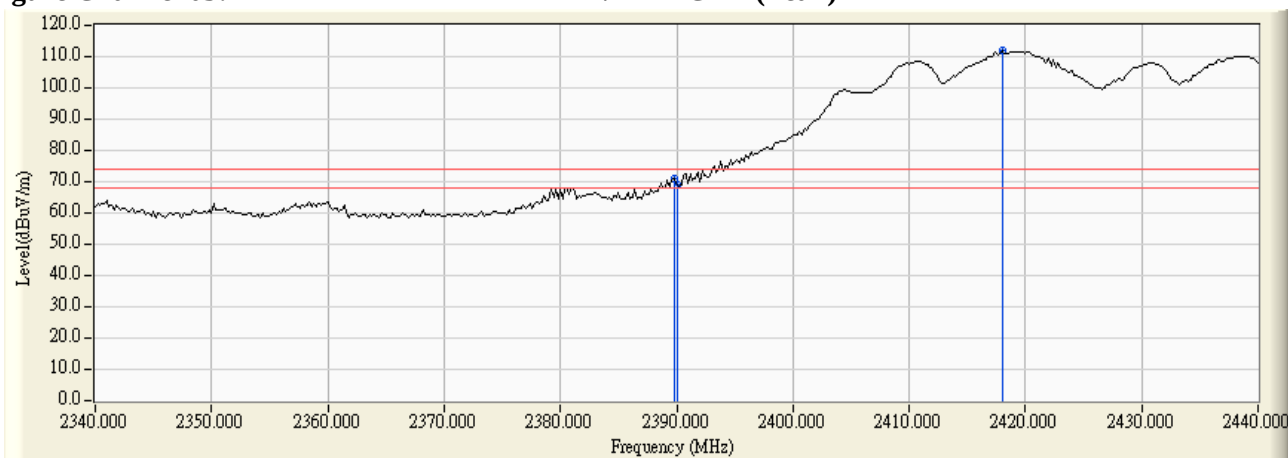
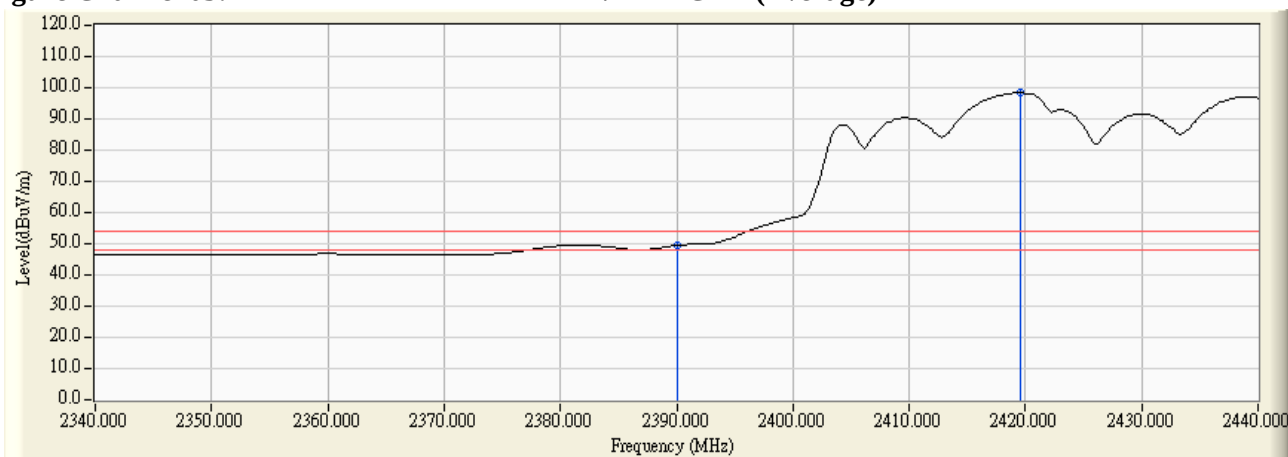


Figure Channel 03:

VERTICAL (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Access Point/Sensor
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n 45Mbps 40M-BW) (2452MHz) (External Antenna)

RF Radiated Measurement (HORIZONTAL):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB μ V)	Emission Level (dB μ V/m)	Peak Limit (dB μ V/m)	Average Limit (dB μ V/m)	Result
09 (Peak)	2449.500	31.924	56.692	88.617	--	--	Pass
09 (Peak)	2483.500	32.182	24.096	56.278	74.00	54.00	Pass
09 (Peak)	2484.100	32.186	26.074	58.261	74.00	54.00	Pass
09 (Average)	2449.500	31.924	45.349	77.274	--	--	Pass
09 (Average)	2483.500	32.182	13.755	45.937	74.00	54.00	Pass

Figure Channel 09: HORIZONTAL (Peak)

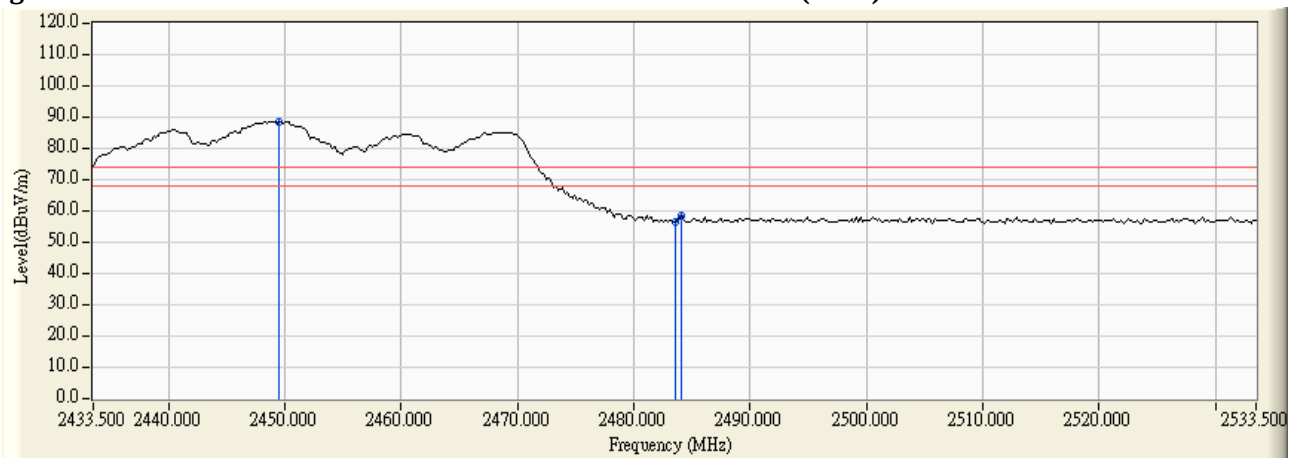
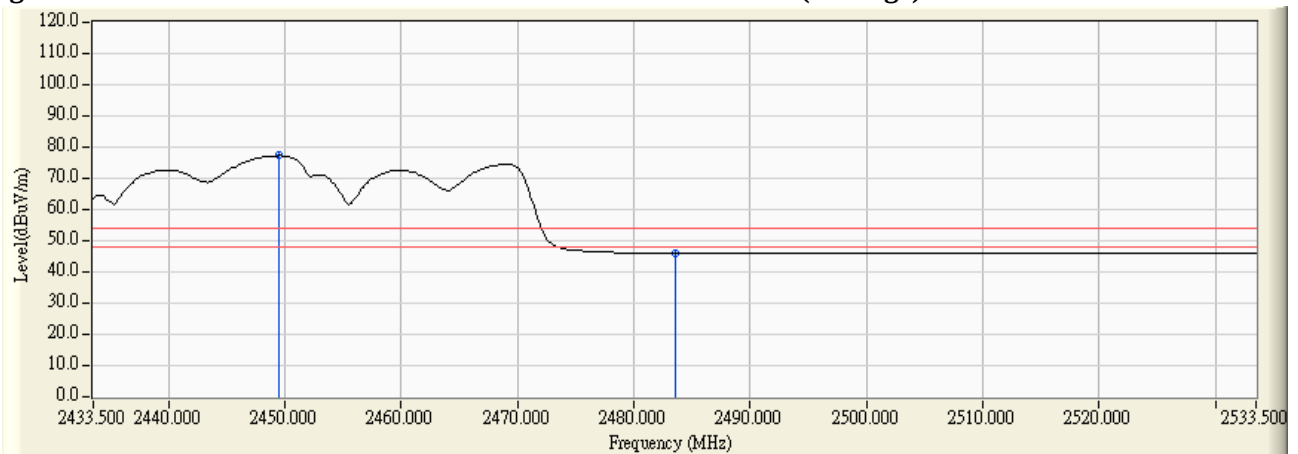


Figure Channel 09: HORIZONTAL (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Access Point/Sensor
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n 45Mbps 40M-BW) (2452MHz) (External Antenna)

RF Radiated Measurement (VERTICAL):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
09 (Peak)	2441.500	31.149	79.925	111.075	--	--	Pass
09 (Peak)	2483.500	31.435	39.018	70.453	74.00	54.00	Pass
09 (Average)	2440.500	31.144	67.673	98.816	--	--	Pass
09 (Average)	2483.500	31.435	21.937	53.372	74.00	54.00	Pass

Figure Channel 09:

VERTICAL (Peak)

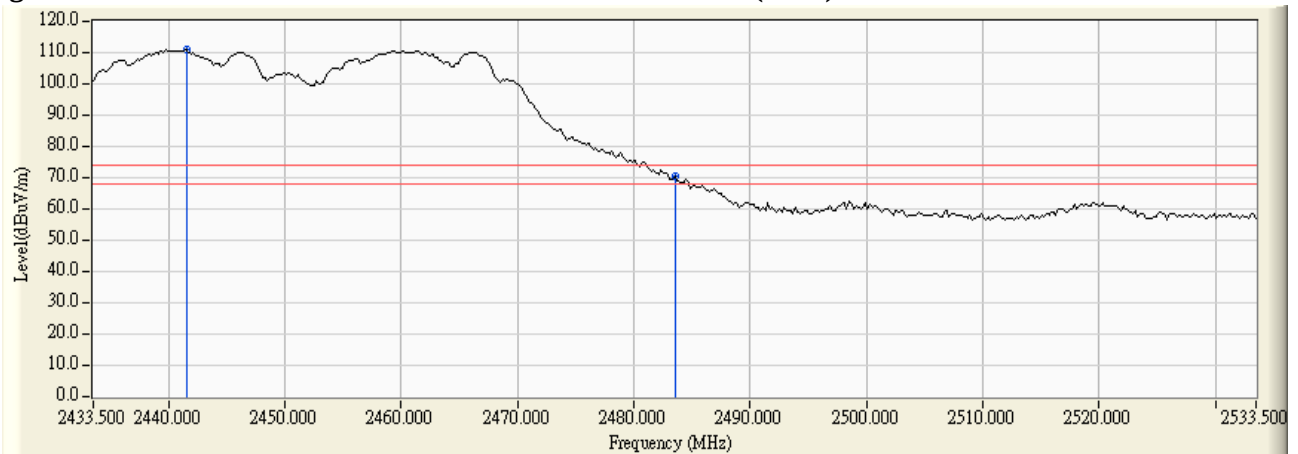
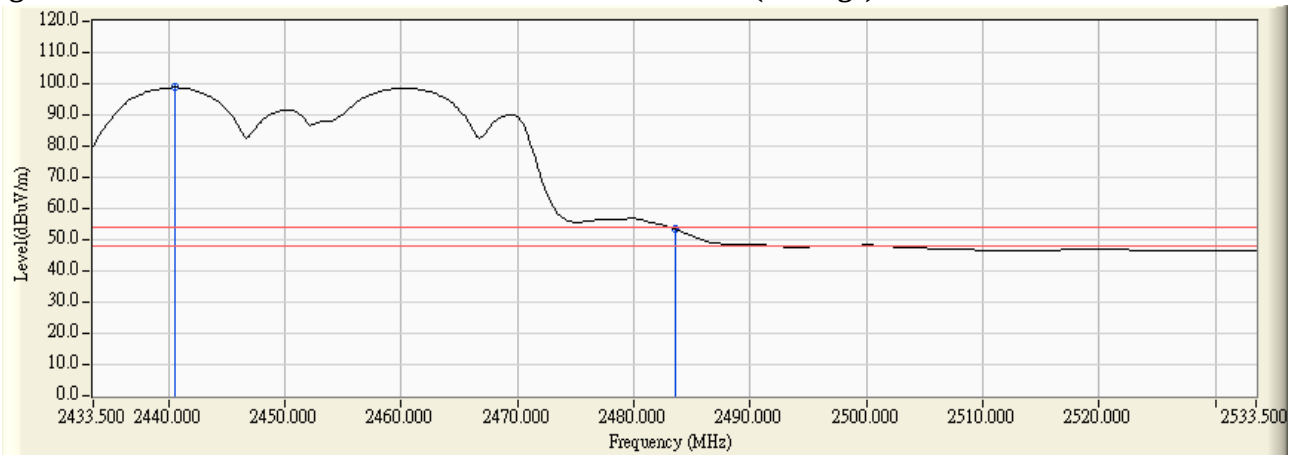


Figure Channel 09:

VERTICAL (Average)

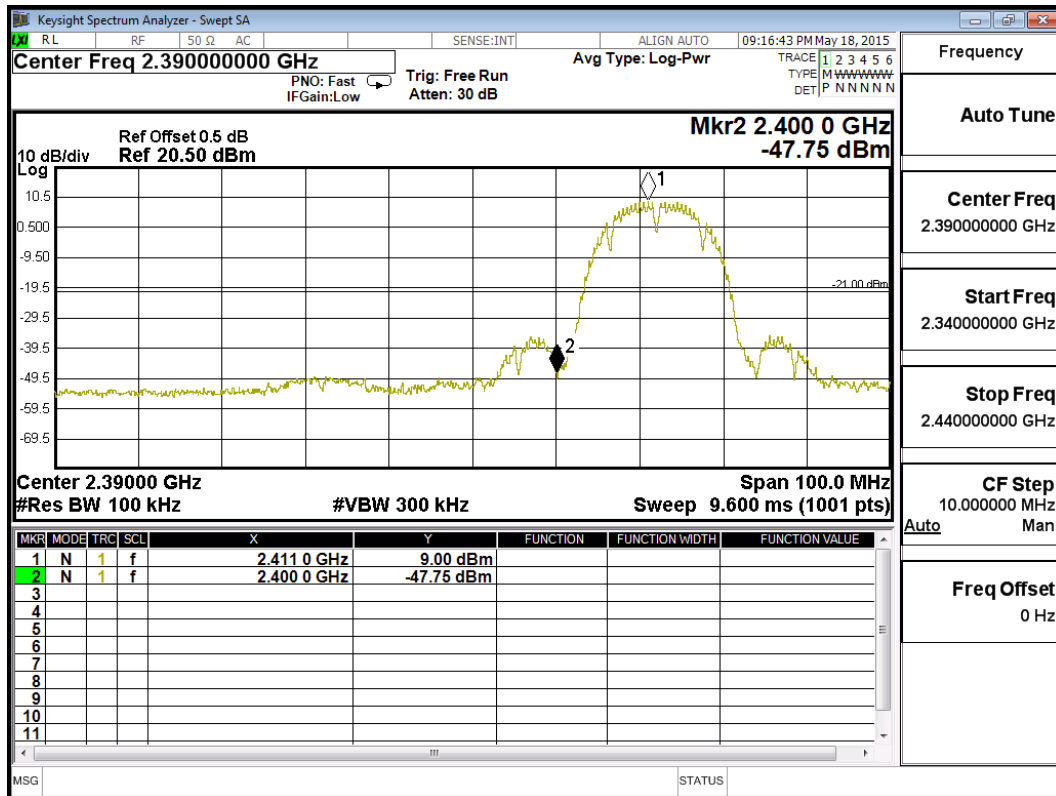


- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

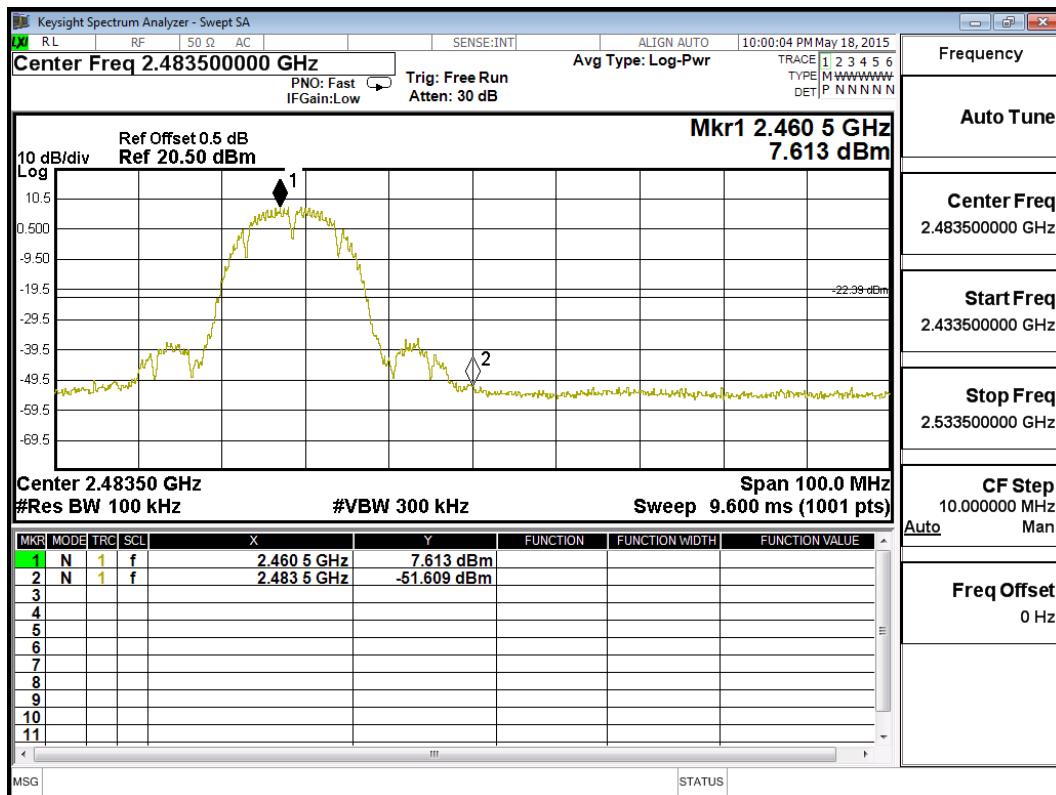
Product : Access Point/Sensor
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (External Antenna)

Test Frequency (MHz)	Chain	Measurement Level Δ (dB)	Limit Δ (dB)	Result
2412	A	56.75	>30	PASS
2462	A	59.22	>30	PASS

2412MHz



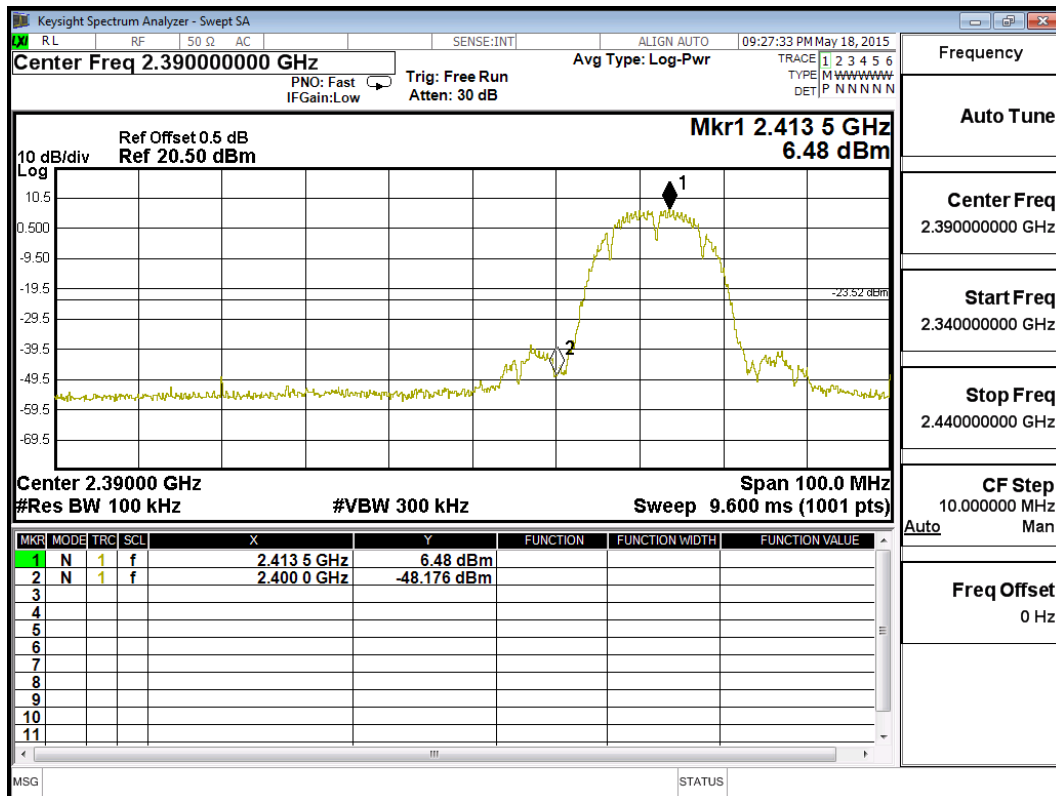
2462MHz



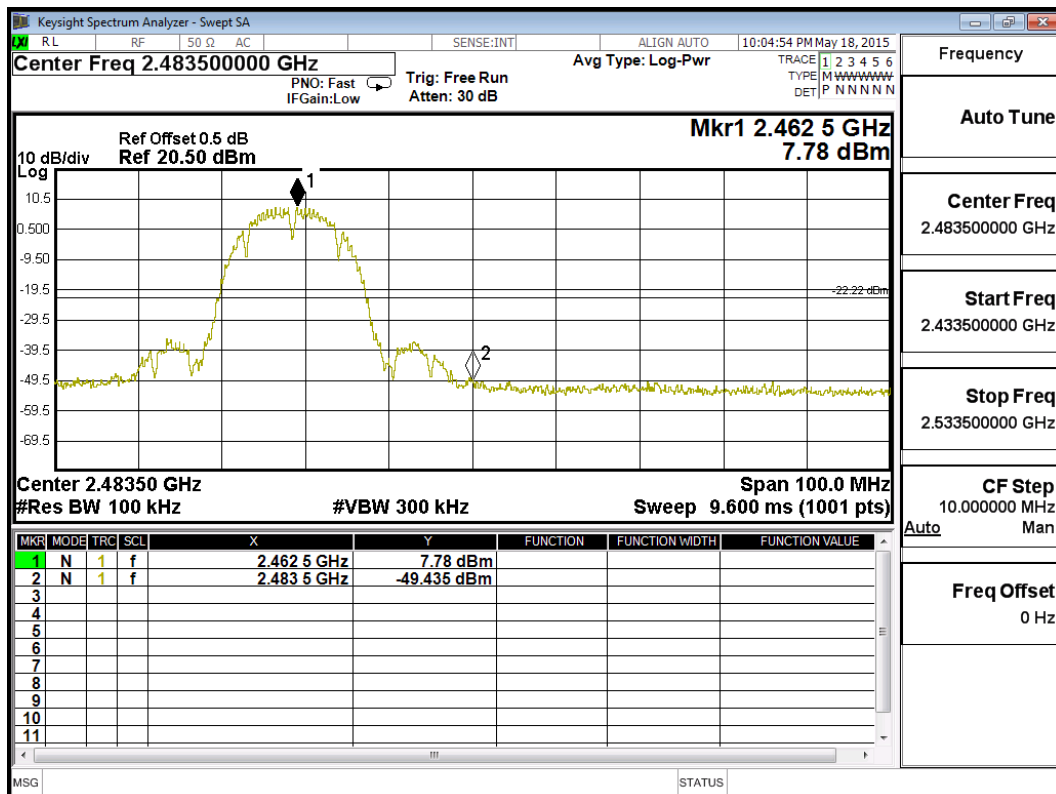
Product : Access Point/Sensor
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (External Antenna)

Test Frequency (MHz)	Chain	Measurement Level Δ (dB)	Limit Δ (dB)	Result
2412	B	54.66	>30	PASS
2462	B	57.22	>30	PASS

2412MHz



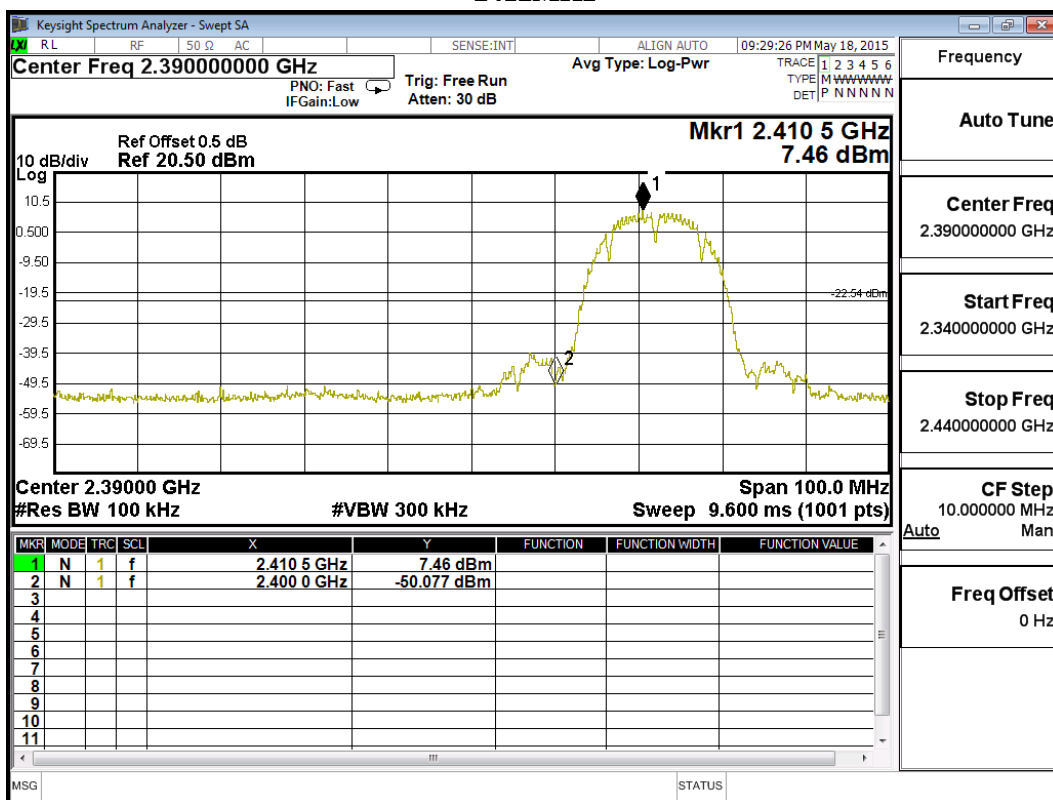
2462MHz



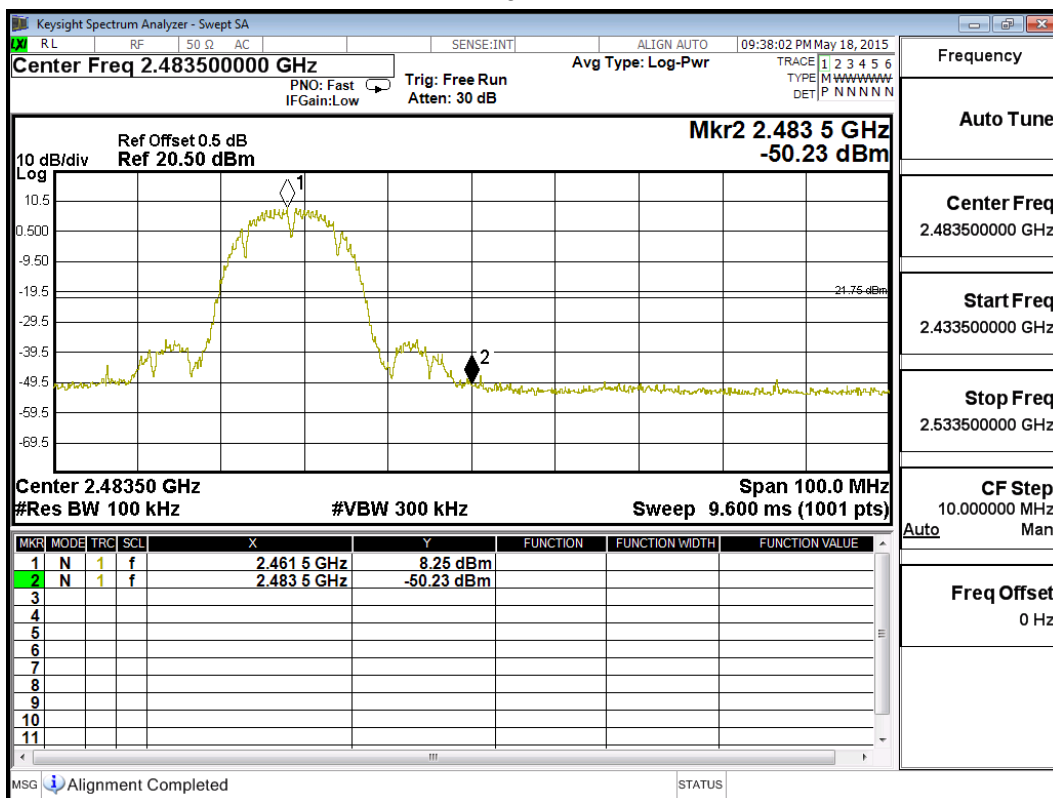
Product : Access Point/Sensor
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (External Antenna)

Test Frequency (MHz)	Chain	Measurement Level Δ (dB)	Limit Δ (dB)	Result
2412	C	57.54	>30	PASS
2462	C	58.48	>30	PASS

2412MHz



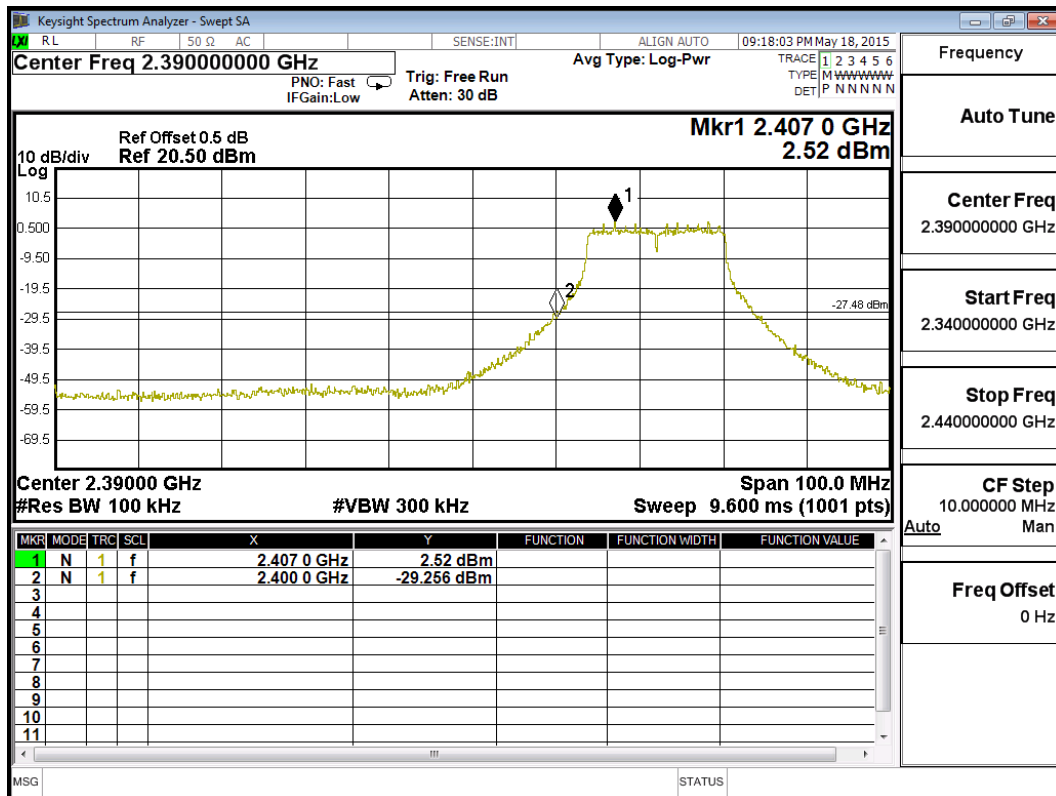
2462MHz



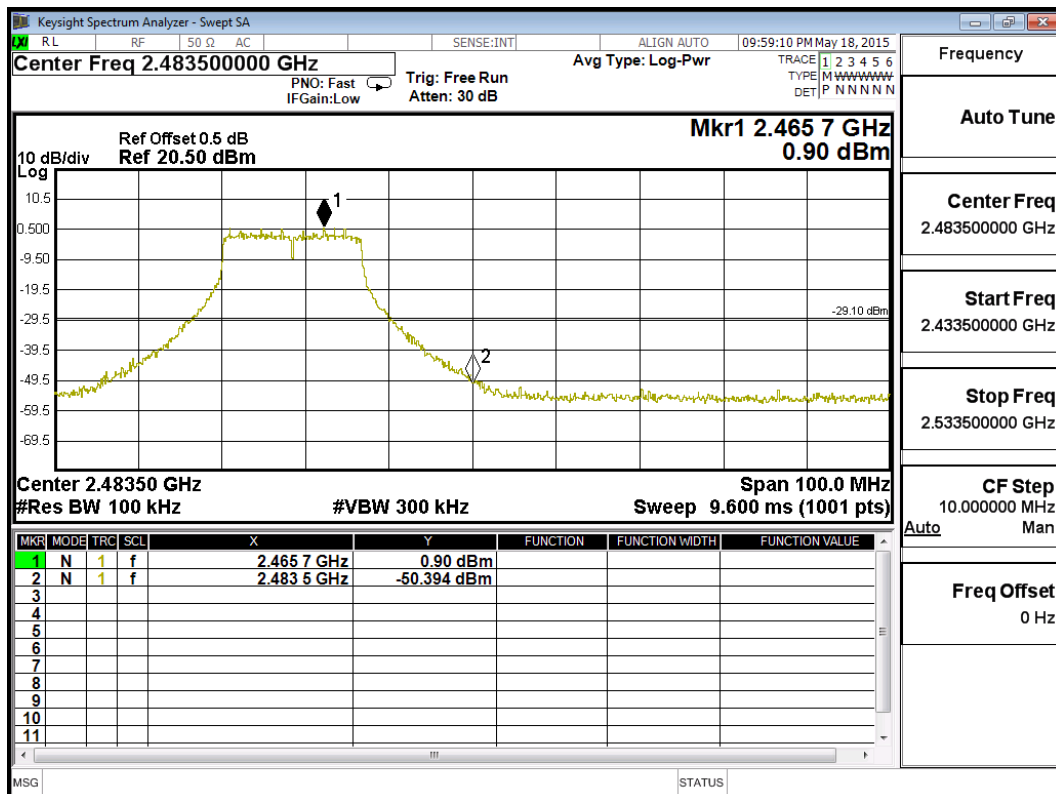
Product : Access Point/Sensor
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (External Antenna)

Test Frequency (MHz)	Chain	Measurement Level Δ (dB)	Limit Δ (dB)	Result
2412	A	31.78	>30	PASS
2462	A	51.29	>30	PASS

2412MHz



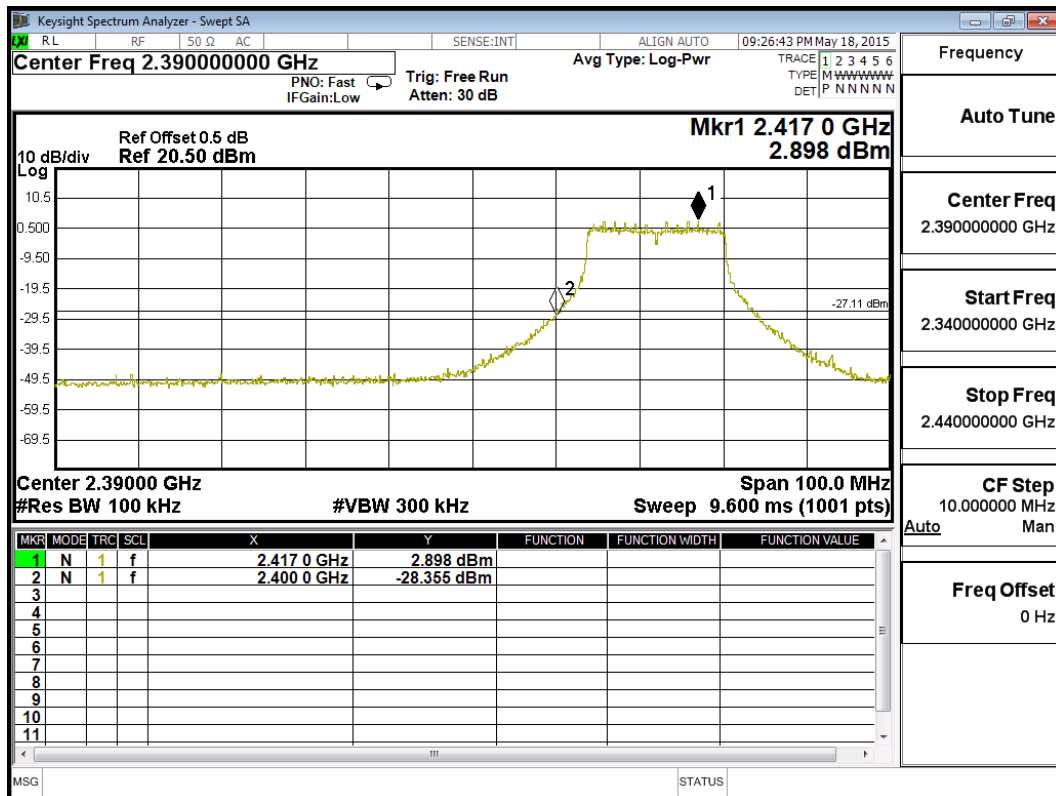
2462MHz



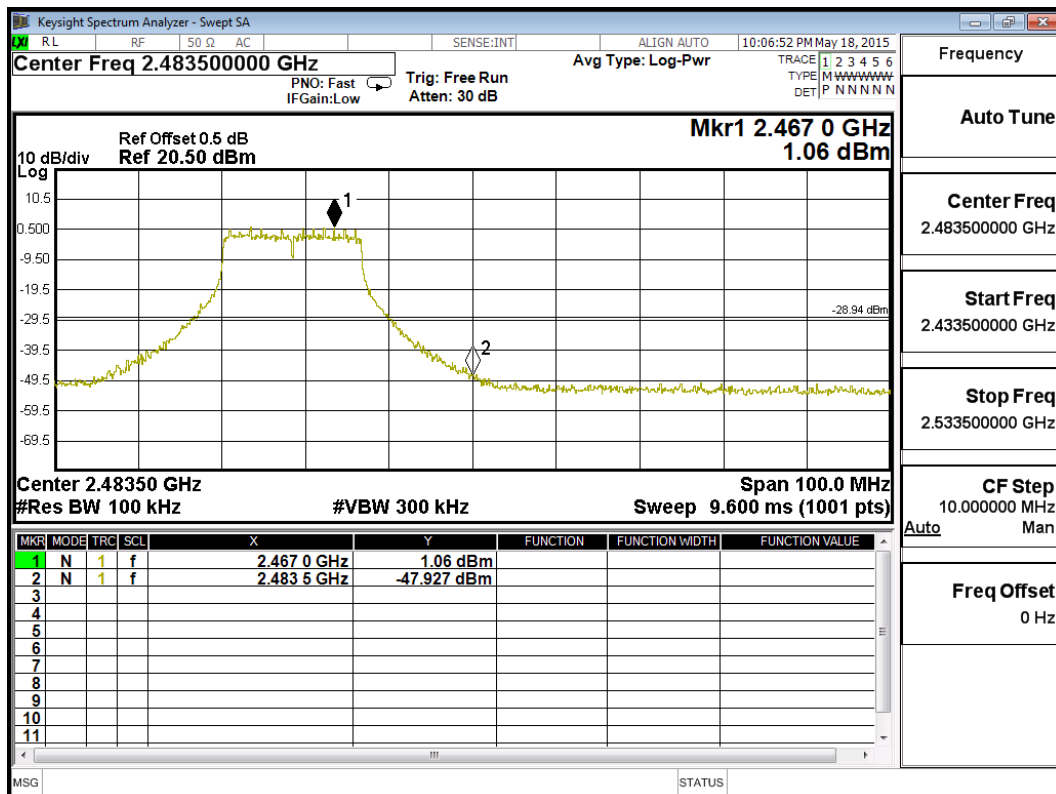
Product : Access Point/Sensor
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (External Antenna)

Test Frequency (MHz)	Chain	Measurement Level Δ (dB)	Limit Δ (dB)	Result
2412	B	31.25	>30	PASS
2462	B	48.99	>30	PASS

2412MHz



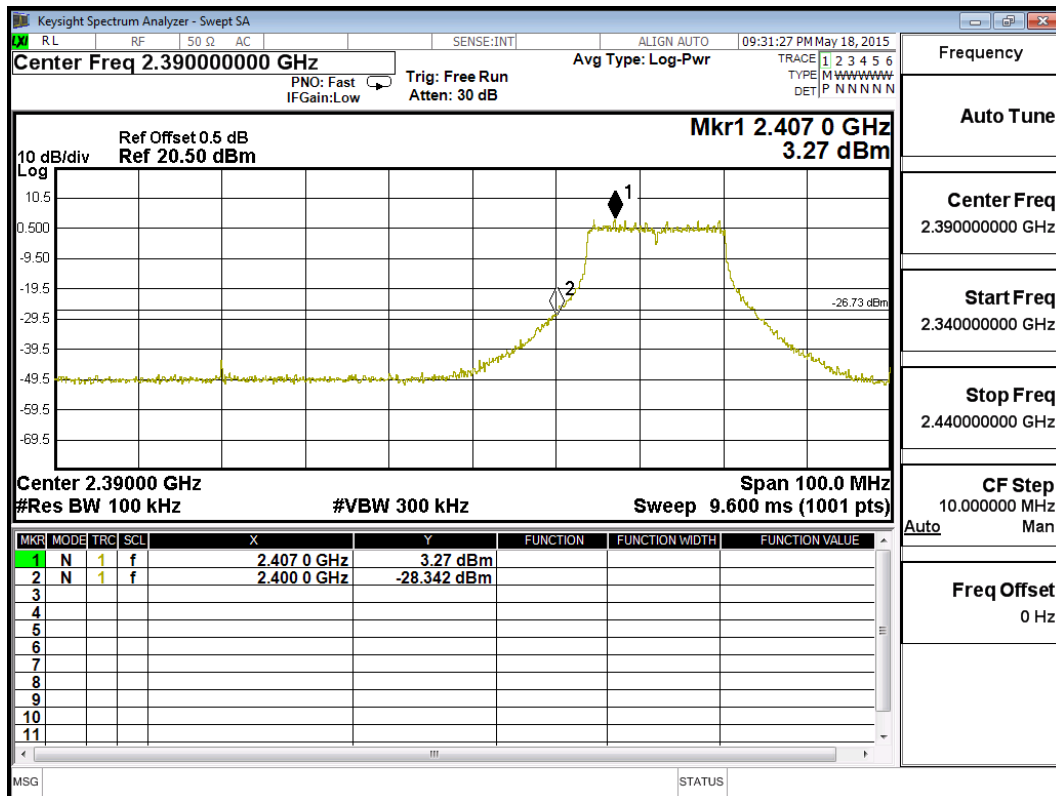
2462MHz



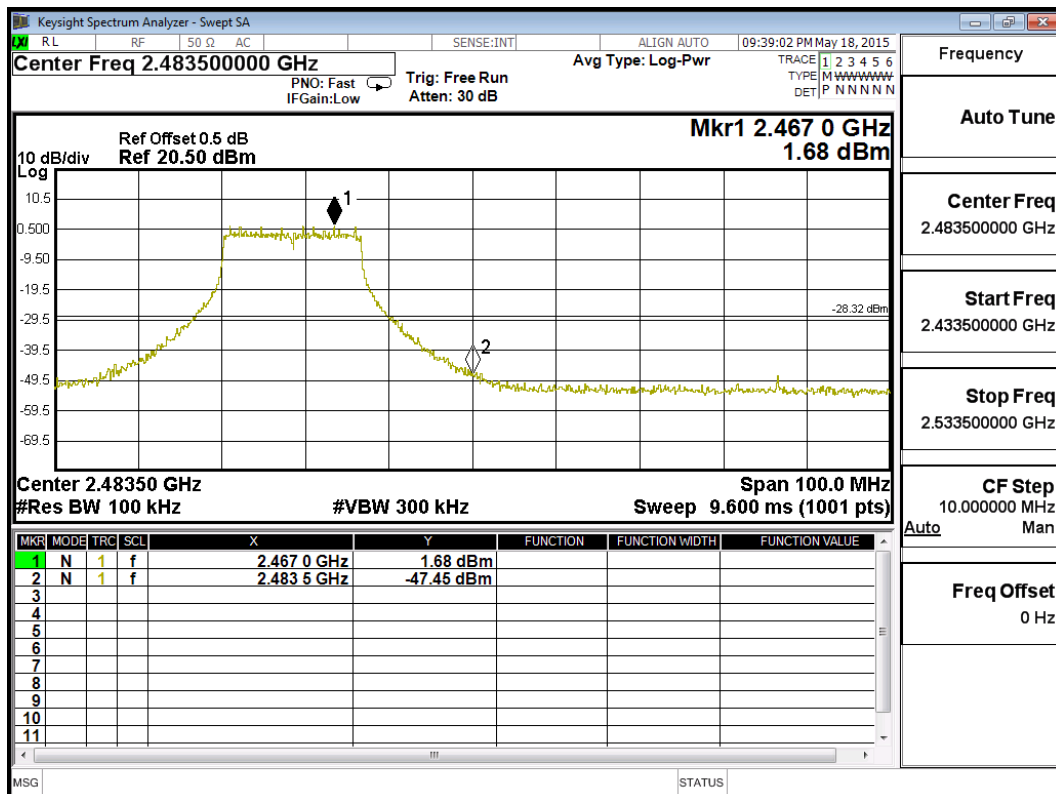
Product : Access Point/Sensor
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (External Antenna)

Test Frequency (MHz)	Chain	Measurement Level Δ (dB)	Limit Δ (dB)	Result
2412	C	31.61	>30	PASS
2462	C	49.13	>30	PASS

2412MHz



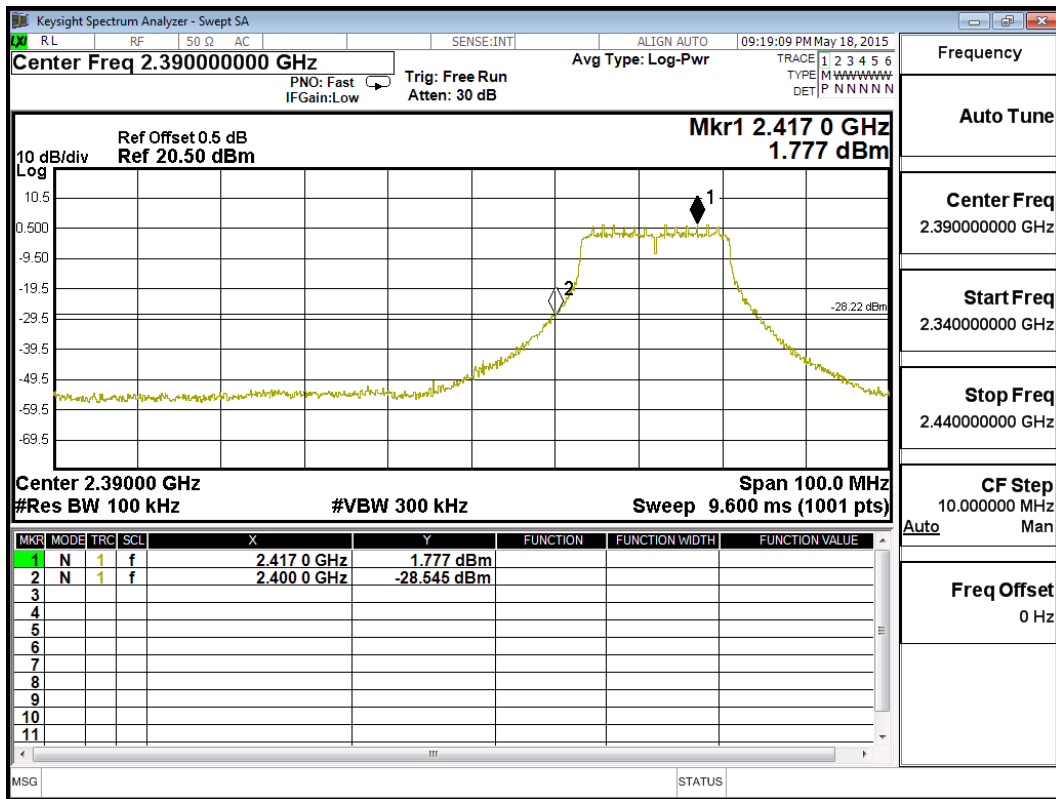
2462MHz



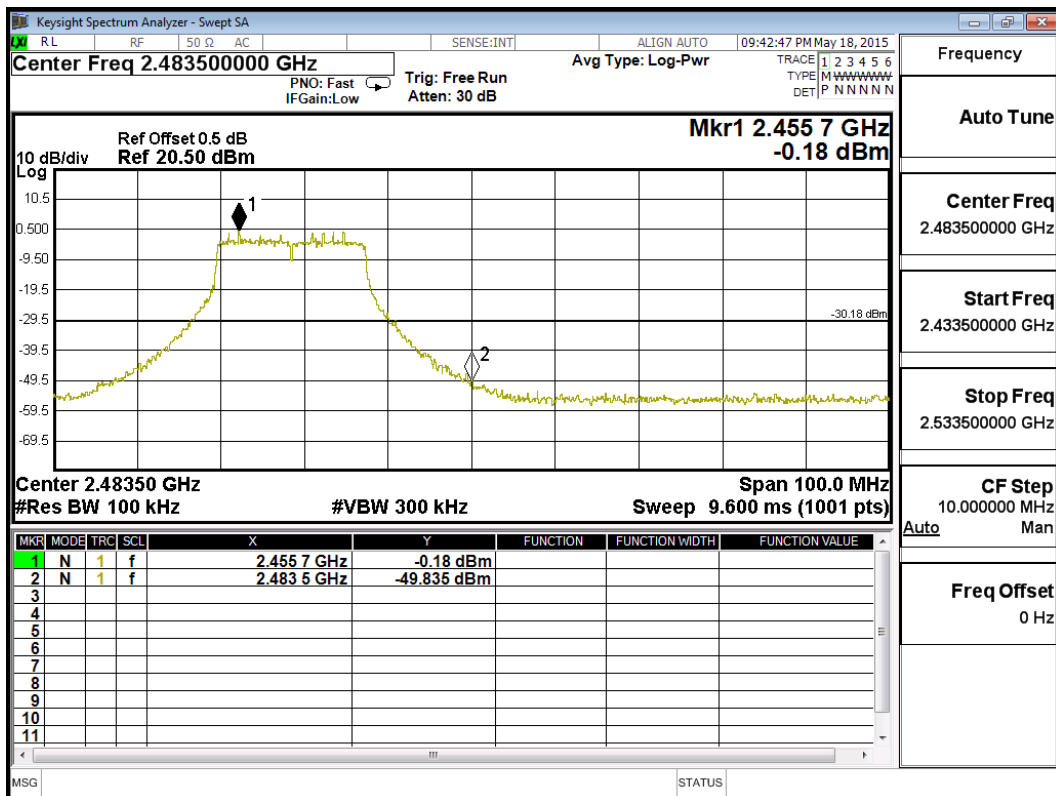
Product : Access Point/Sensor
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n 21.7Mbps 20M-BW) (External Antenna)

Test Frequency (MHz)	Chain	Measurement Level Δ (dB)	Limit Δ (dB)	Result
2412	A	30.32	>30	PASS
2462	A	49.66	>30	PASS

2412MHz



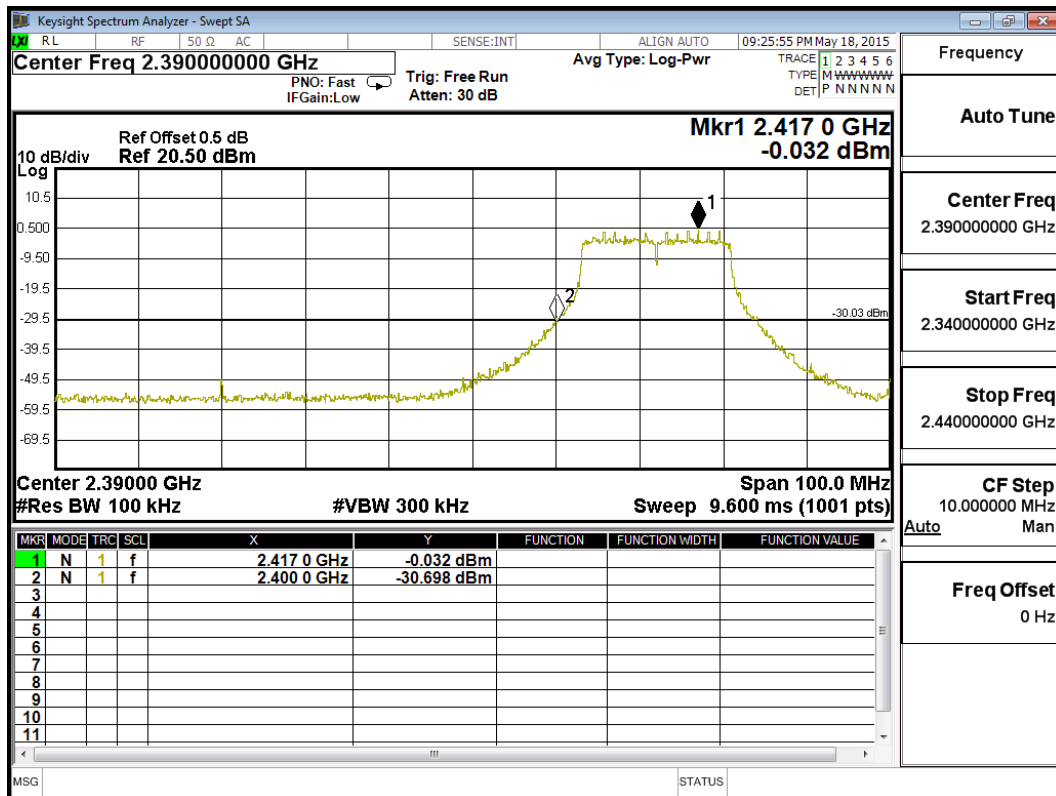
2462MHz



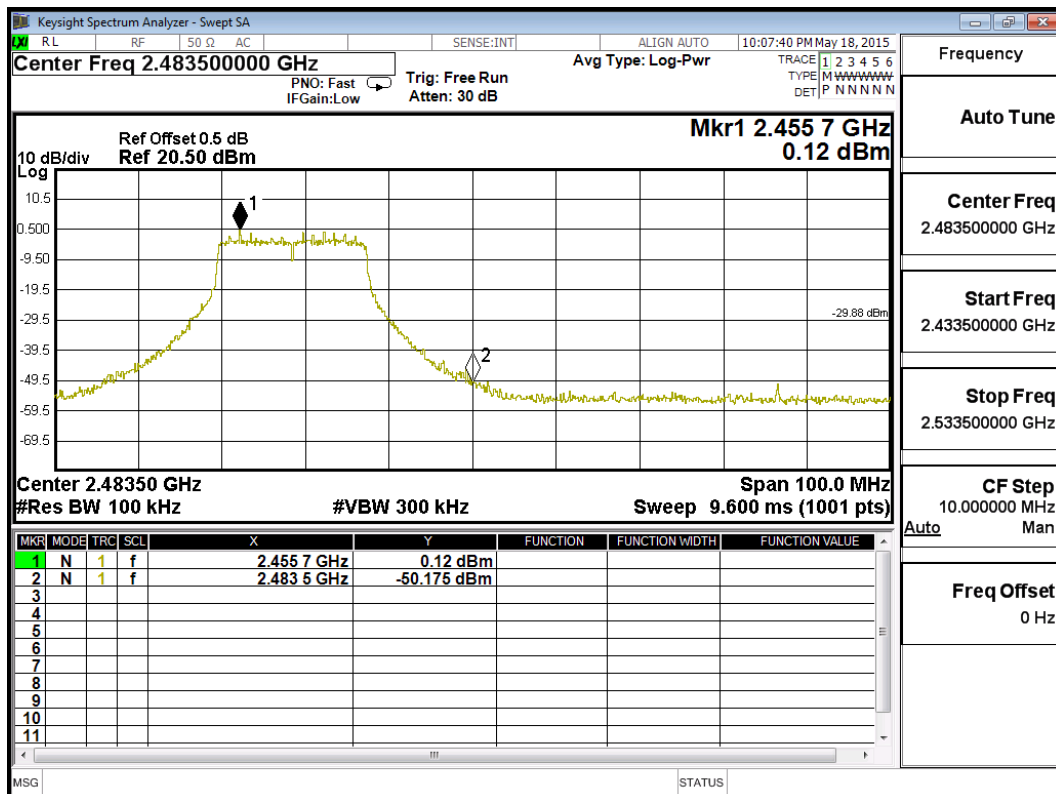
Product : Access Point/Sensor
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n 21.7Mbps 20M-BW) (External Antenna)

Test Frequency (MHz)	Chain	Measurement Level Δ (dB)	Limit Δ (dB)	Result
2412	B	30.66	>30	PASS
2462	B	50.30	>30	PASS

2412MHz



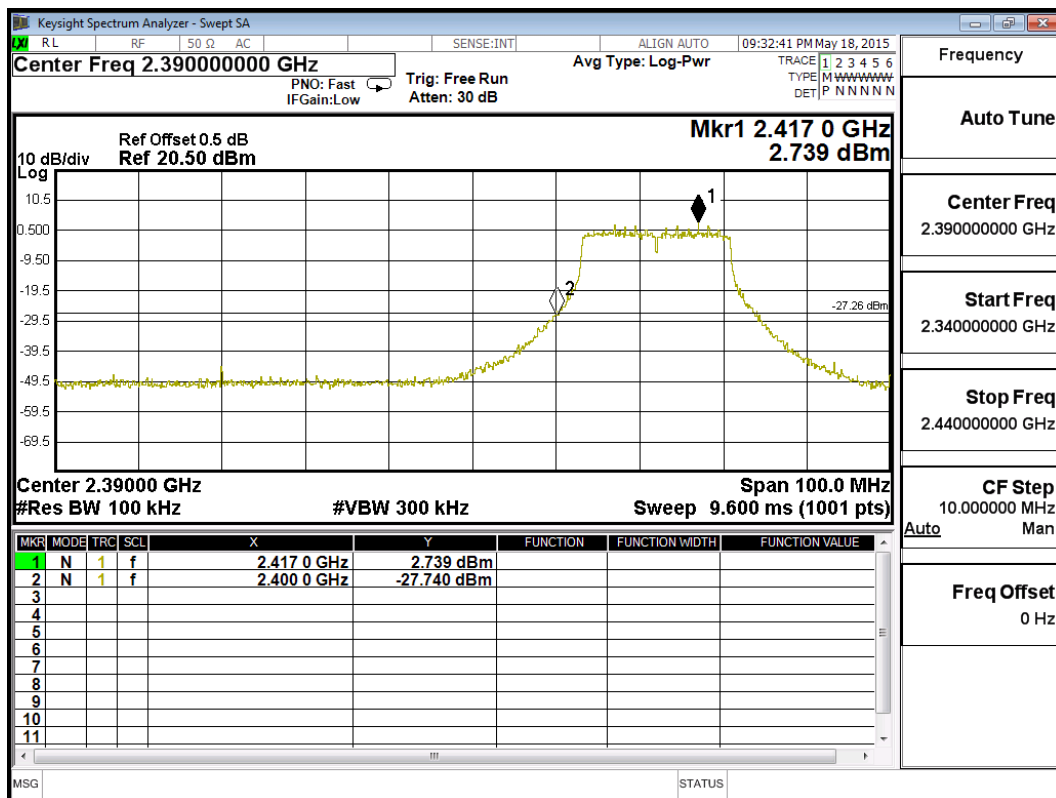
2462MHz



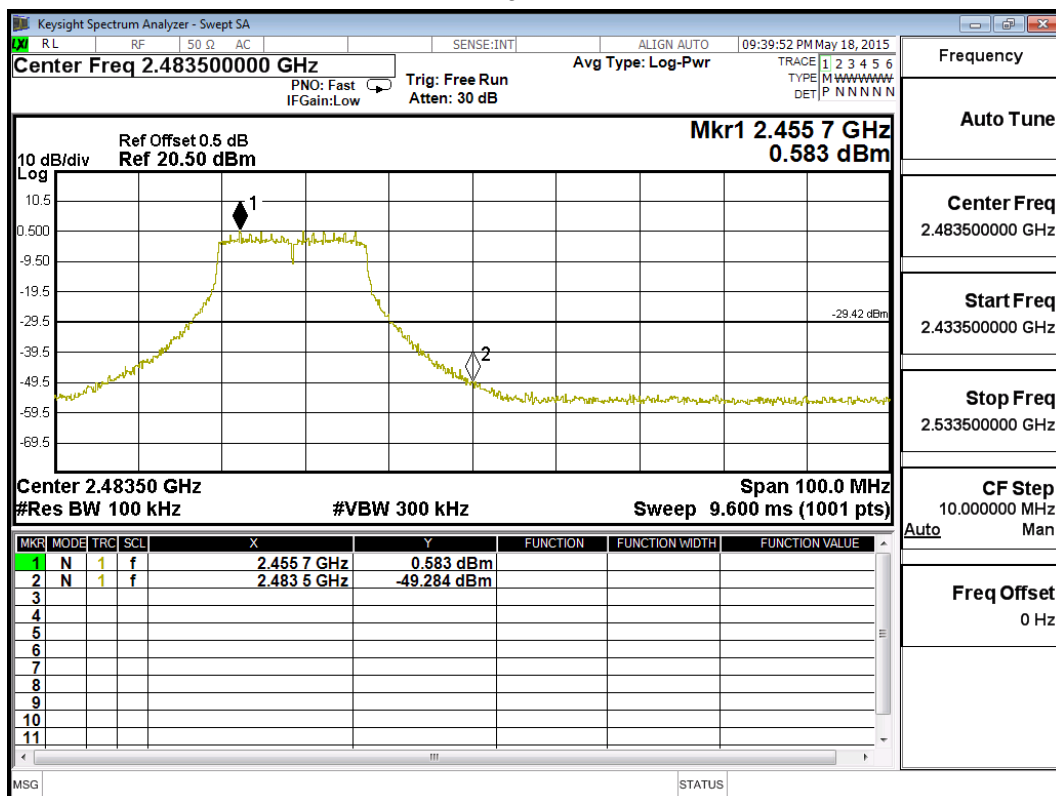
Product : Access Point/Sensor
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n 21.7Mbps 20M-BW) (External Antenna)

Test Frequency (MHz)	Chain	Measurement Level Δ (dB)	Limit Δ (dB)	Result
2412	C	30.48	>30	PASS
2462	C	49.87	>30	PASS

2412MHz



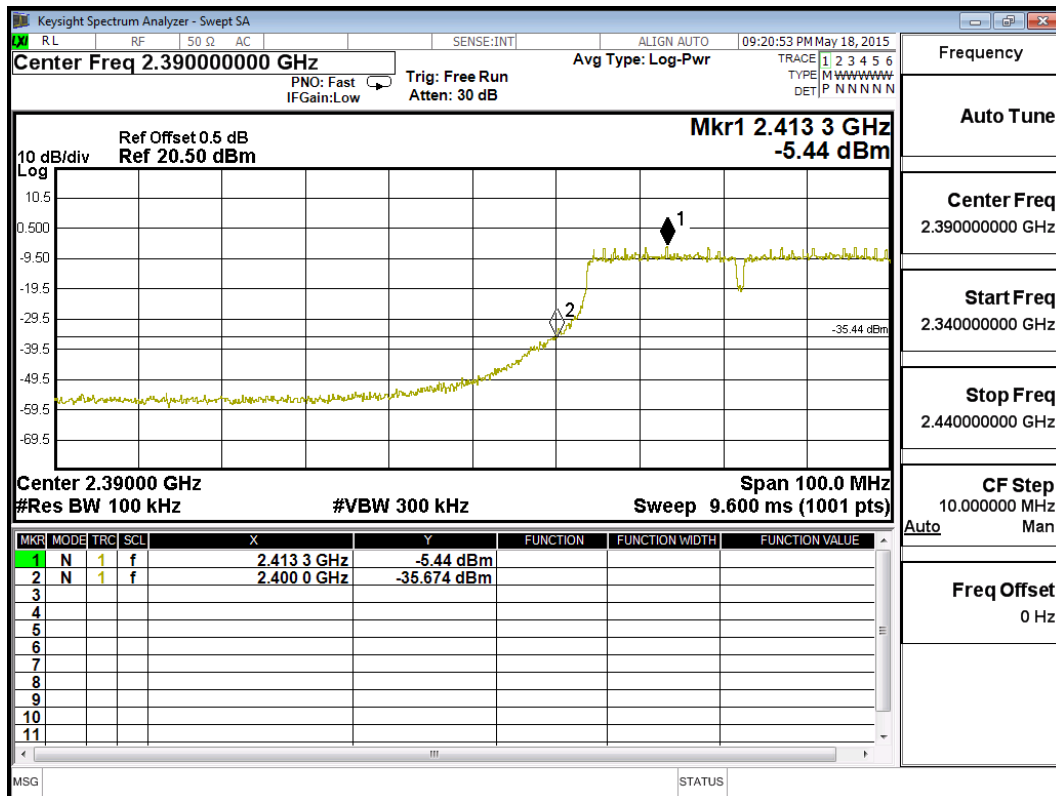
2462MHz



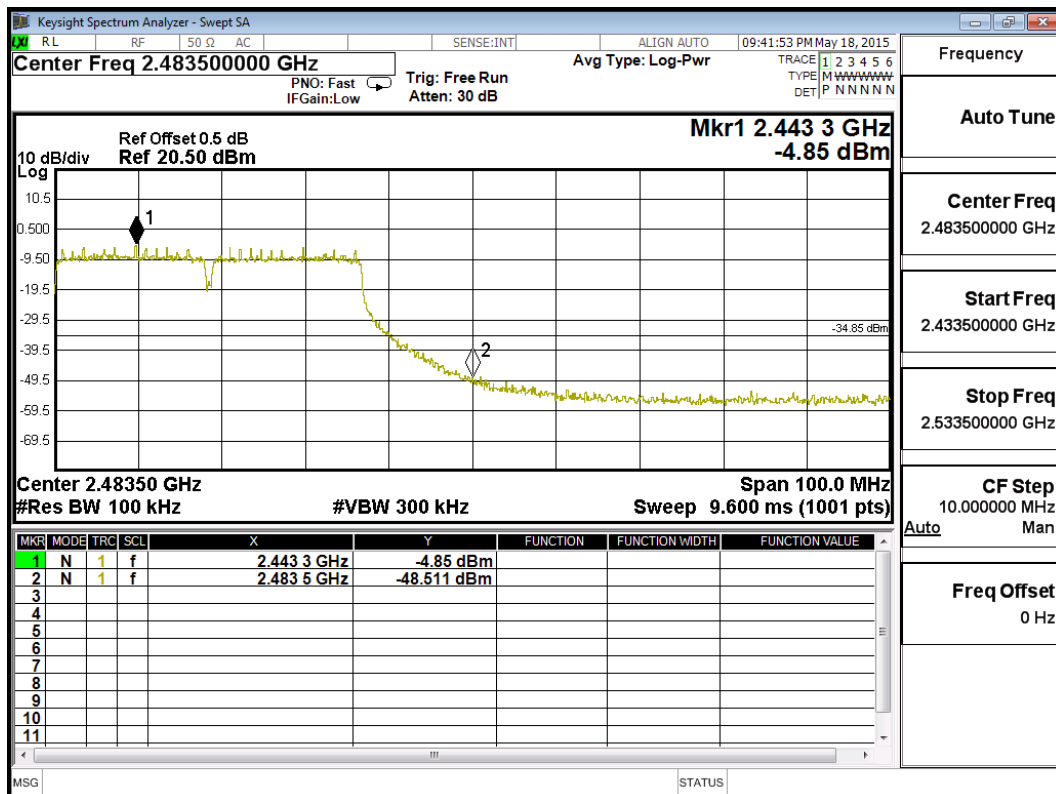
Product : Access Point/Sensor
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit (802.11n 45Mbps 40M-BW) (External Antenna)

Test Frequency (MHz)	Chain	Measurement Level Δ (dB)	Limit Δ (dB)	Result
2422	A	30.23	>30	PASS
2452	A	43.66	>30	PASS

2422MHz



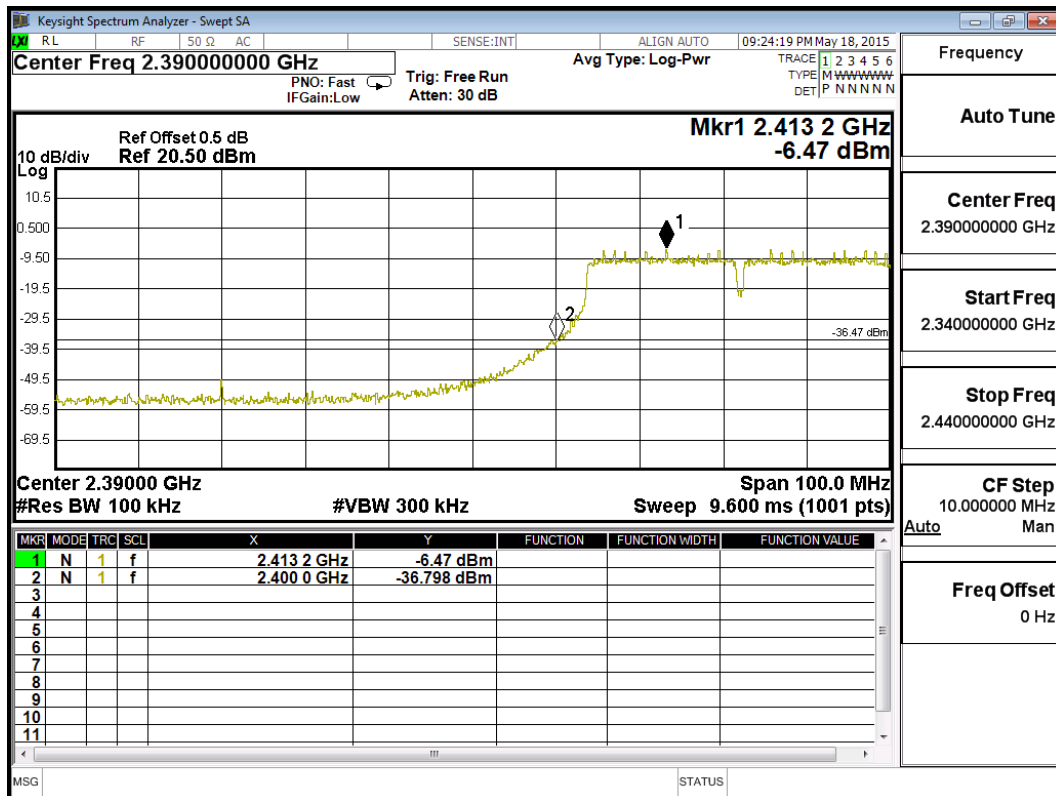
2452MHz



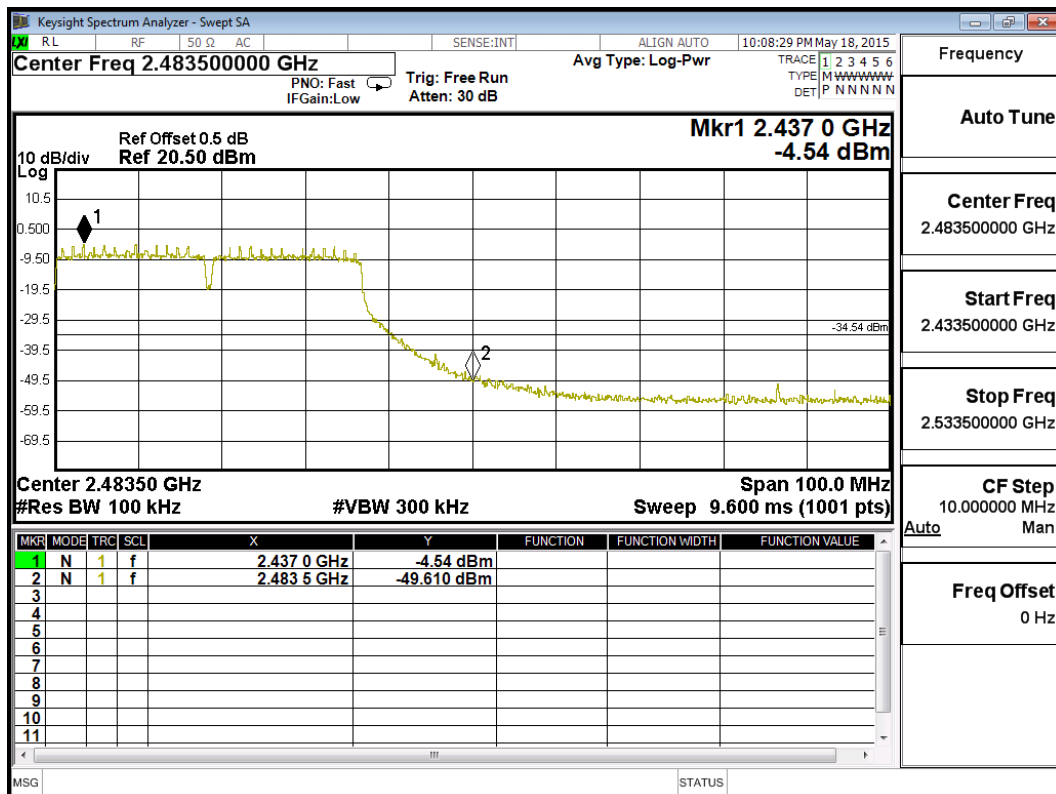
Product : Access Point/Sensor
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit (802.11n 45Mbps 40M-BW) (External Antenna)

Test Frequency (MHz)	Chain	Measurement Level Δ (dB)	Limit Δ (dB)	Result
2422	B	30.33	>30	PASS
2452	B	45.07	>30	PASS

2422MHz



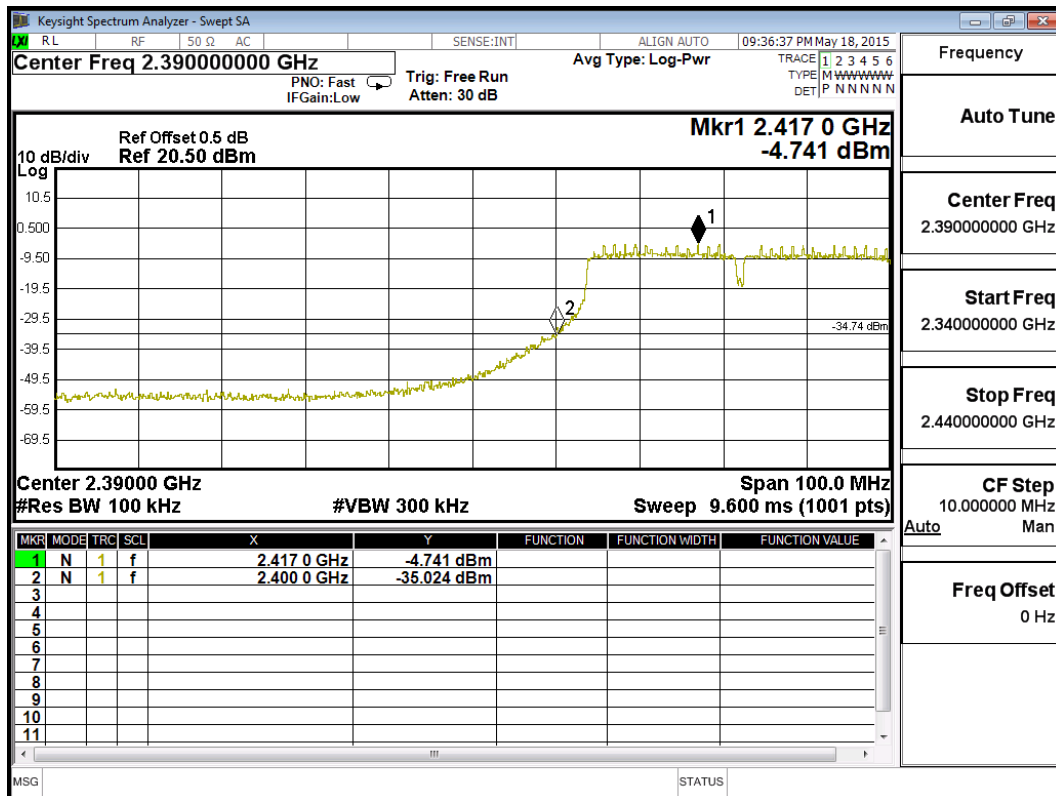
2452MHz



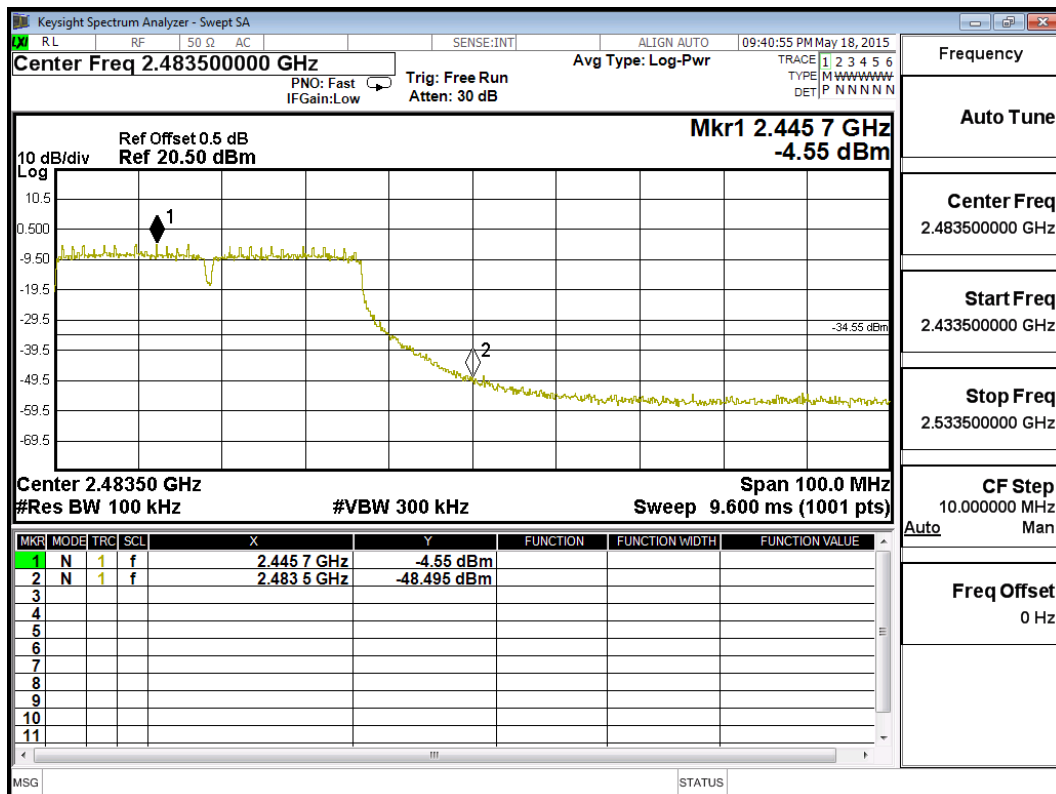
Product : Access Point/Sensor
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit (802.11n 45Mbps 40M-BW) (External Antenna)

Test Frequency (MHz)	Chain	Measurement Level Δ (dB)	Limit Δ (dB)	Result
2422	C	30.28	>30	PASS
2452	C	43.95	>30	PASS

2422MHz



2452MHz



Product : Access Point/Sensor
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz) (Internal Antenna)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
01 (Peak)	2386.000	31.493	33.074	64.568	74.00	54.00	Pass
01 (Peak)	2390.000	31.509	32.427	63.936	74.00	54.00	Pass
01 (Peak)	2409.400	31.621	84.610	116.230	--	--	Pass
01 (Average)	2386.400	31.495	21.705	53.200	74.00	54.00	Pass
01 (Average)	2390.000	31.509	20.213	51.722	74.00	54.00	Pass
01 (Average)	2409.800	31.623	80.720	112.343	--	--	Pass

Figure Channel 01: Horizontal (Peak)

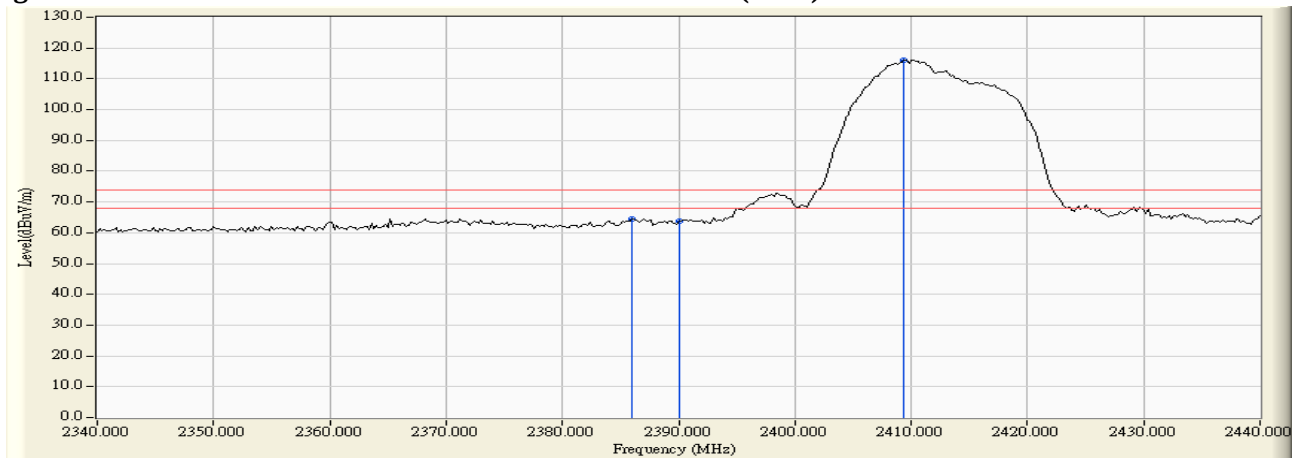
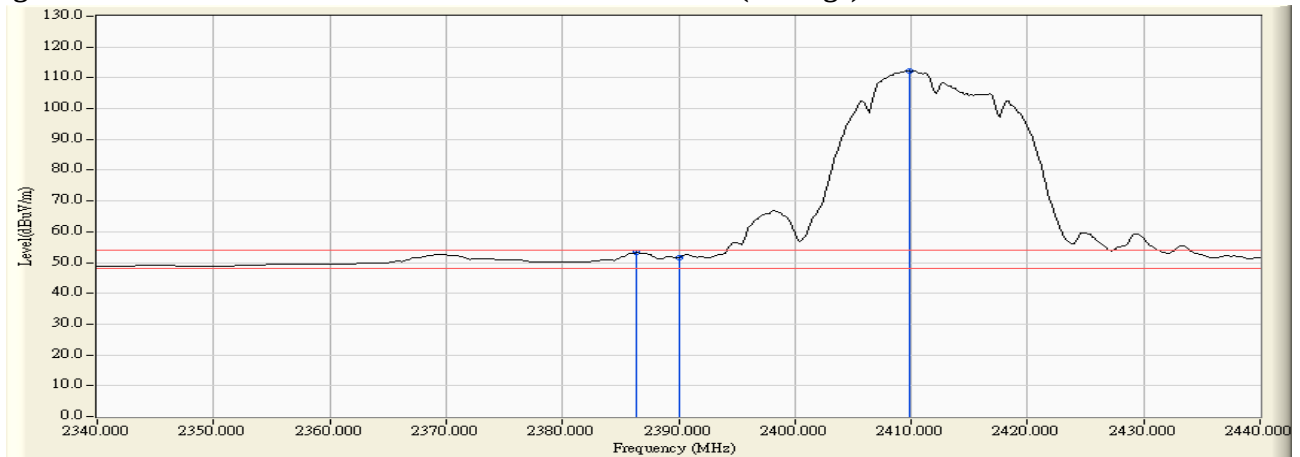


Figure Channel 01: Horizontal (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Access Point/Sensor
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz) (Internal Antenna)

RF Radiated Measurement (VERTICAL):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
01 (Peak)	2374.600	30.987	32.065	63.052	74.00	54.00	Pass
01 (Peak)	2390.000	30.915	31.477	62.392	74.00	54.00	Pass
01 (Peak)	2411.000	30.942	84.058	115.000	--	--	Pass
01 (Average)	2390.000	30.915	20.698	51.613	74.00	54.00	Pass
01 (Average)	2410.200	30.940	80.288	111.228	--	--	Pass

Figure Channel 01: VERTICAL (Peak)

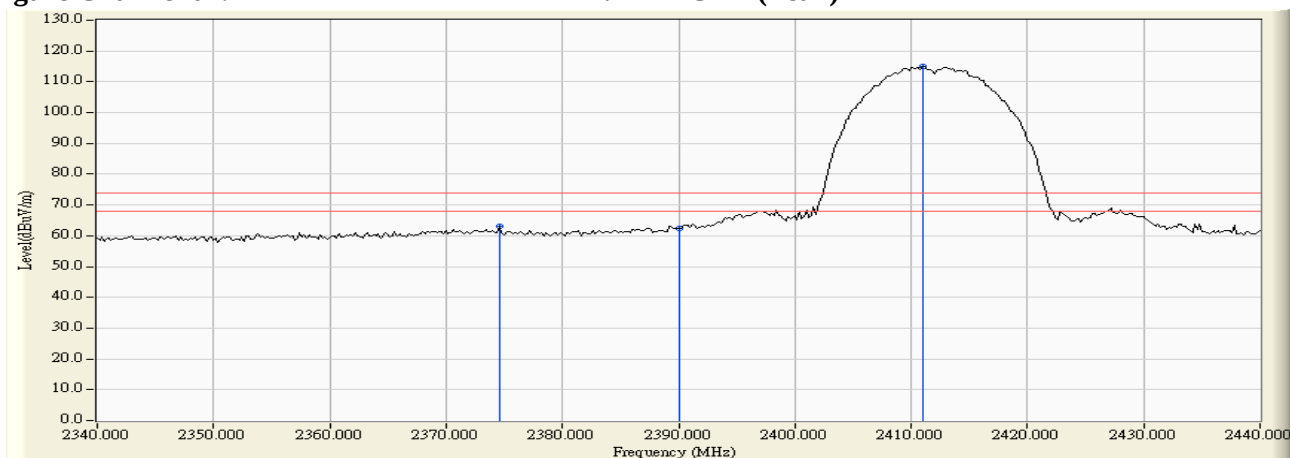
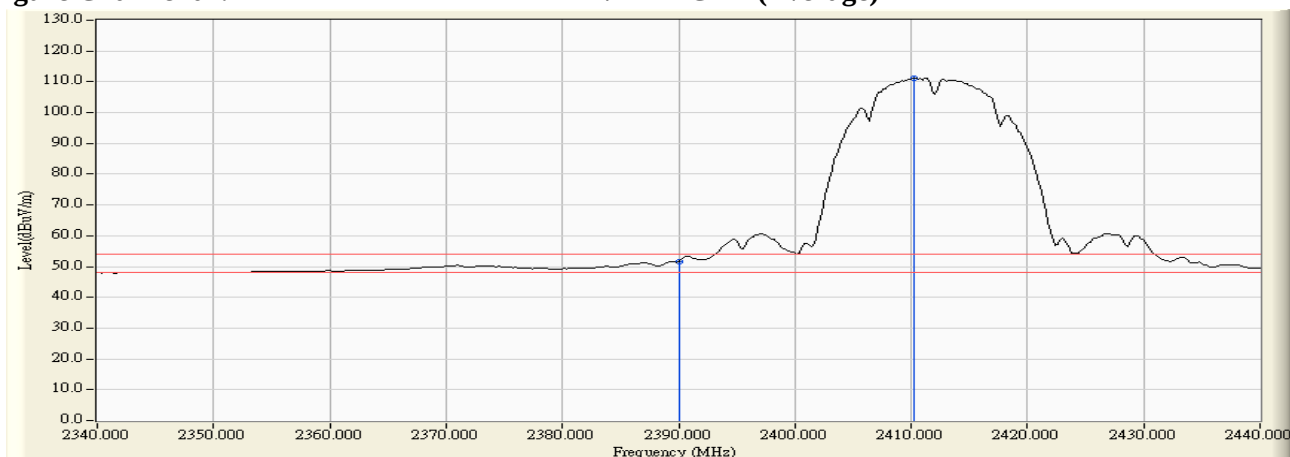


Figure Channel 01: VERTICAL (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Access Point/Sensor
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462MHz) (Internal Antenna)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
11 (Peak)	2460.500	32.008	84.998	117.006	--	--	Pass
11 (Peak)	2483.500	32.182	31.514	63.696	74.00	54.00	Pass
11 (Peak)	2485.100	32.194	31.647	63.841	74.00	54.00	Pass
11 (Average)	2461.100	32.013	81.221	113.234	--	--	Pass
11 (Average)	2483.500	32.182	21.729	53.911	74.00	54.00	Pass

Figure Channel 11: Horizontal (Peak)

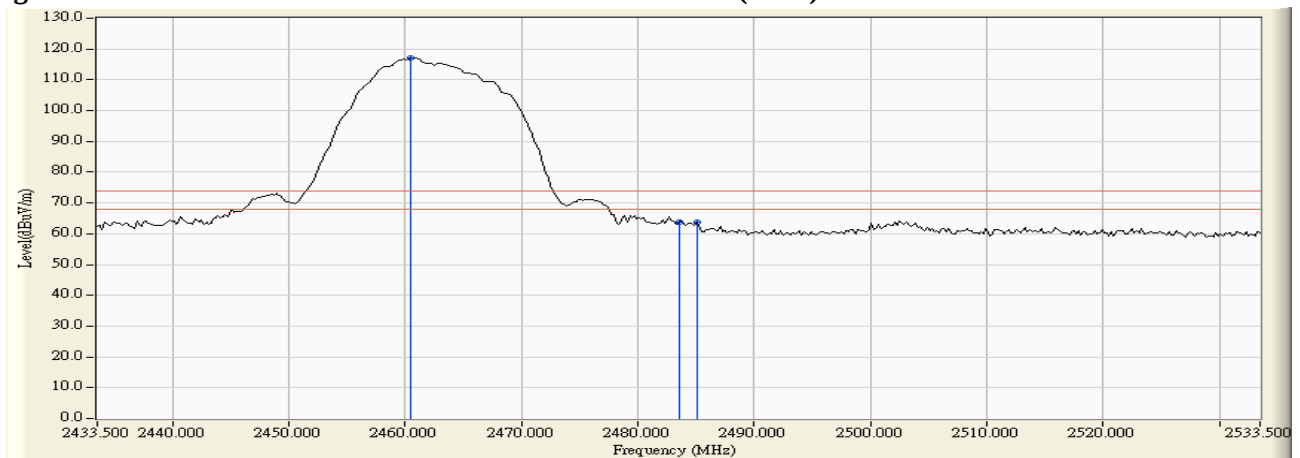
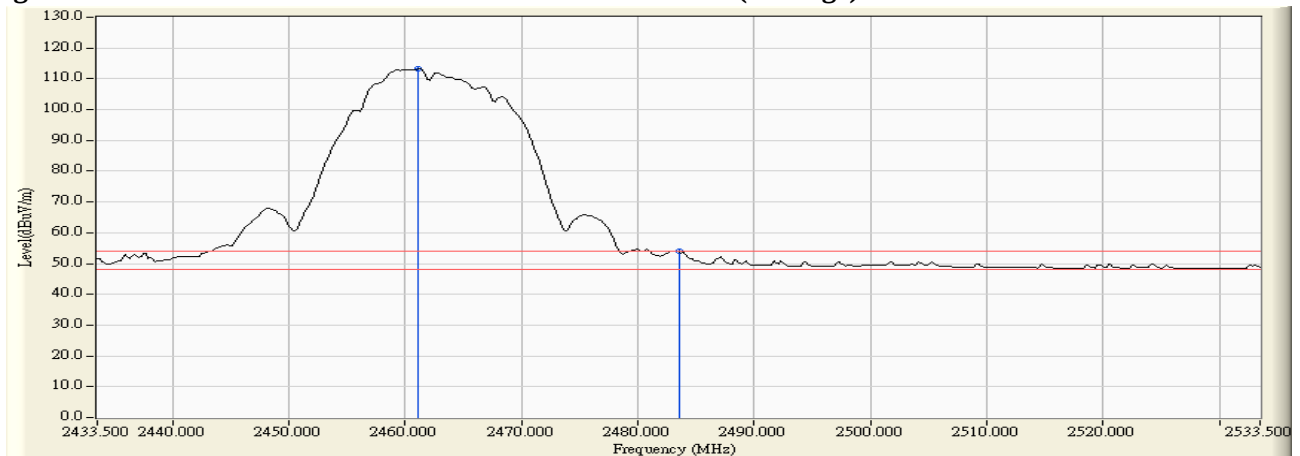


Figure Channel 11: Horizontal (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Access Point/Sensor
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462MHz) (Internal Antenna)

RF Radiated Measurement (VERTICAL):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
11 (Peak)	2463.500	31.300	82.725	114.025	--	--	Pass
11 (Peak)	2483.500	31.435	30.253	61.688	74.00	54.00	Pass
11 (Peak)	2484.300	31.440	31.166	62.607	74.00	54.00	Pass
11 (Average)	2464.700	31.308	79.084	110.393	--	--	Pass
11 (Average)	2483.500	31.435	19.628	51.063	74.00	54.00	Pass

Figure Channel 11: VERTICAL (Peak)

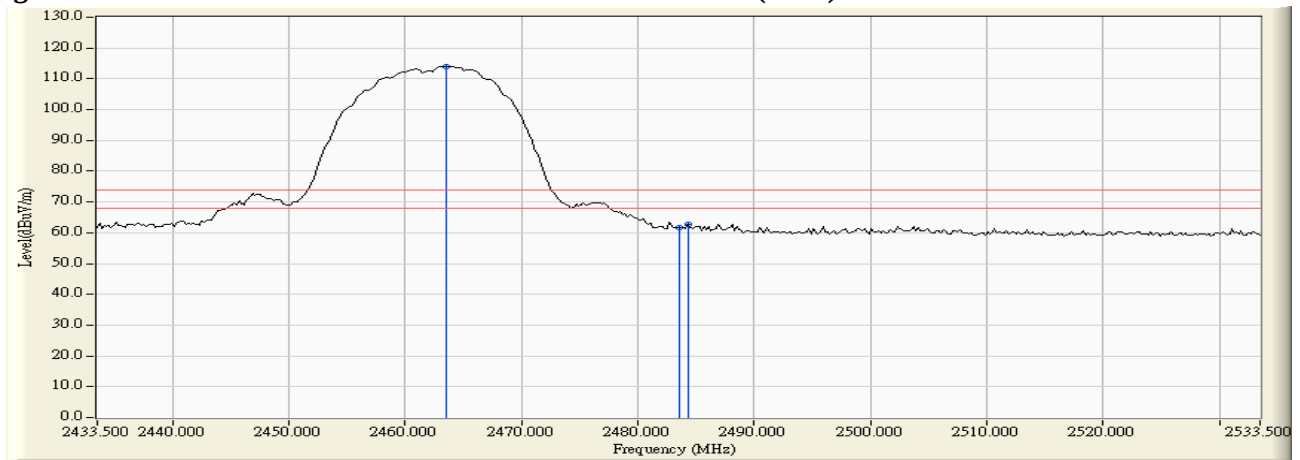
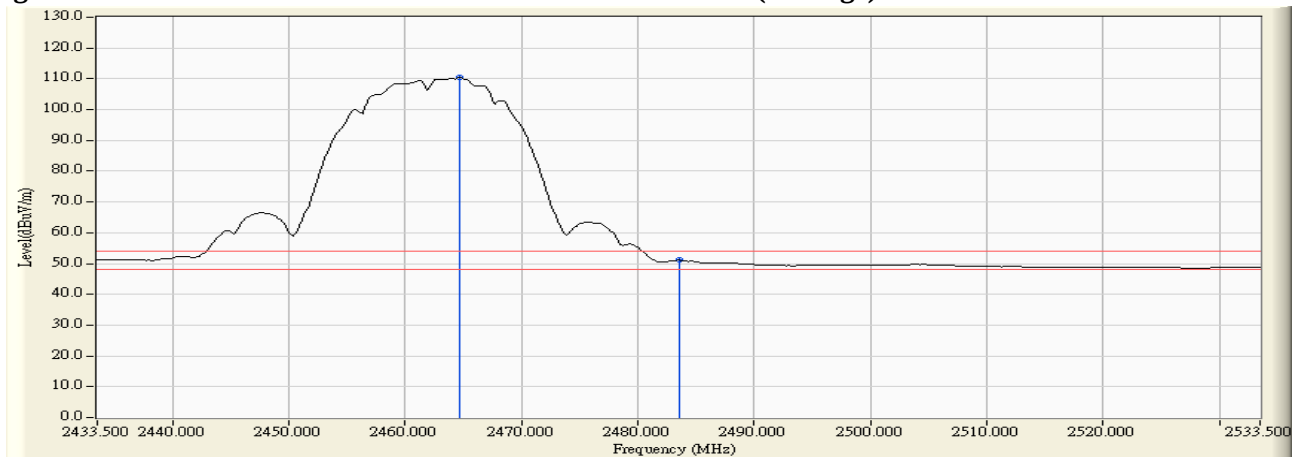


Figure Channel 11: VERTICAL (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Access Point/Sensor
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz) (Internal Antenna)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
01 (Peak)	2389.600	31.508	37.828	69.336	74.00	54.00	Pass
01 (Peak)	2390.000	31.509	35.518	67.027	74.00	54.00	Pass
01 (Peak)	2413.800	31.651	84.204	115.856	--	--	Pass
01 (Average)	2390.000	31.509	20.729	52.238	74.00	54.00	Pass
01 (Average)	2414.000	31.654	73.319	104.972	--	--	Pass

Figure Channel 01: Horizontal (Peak)

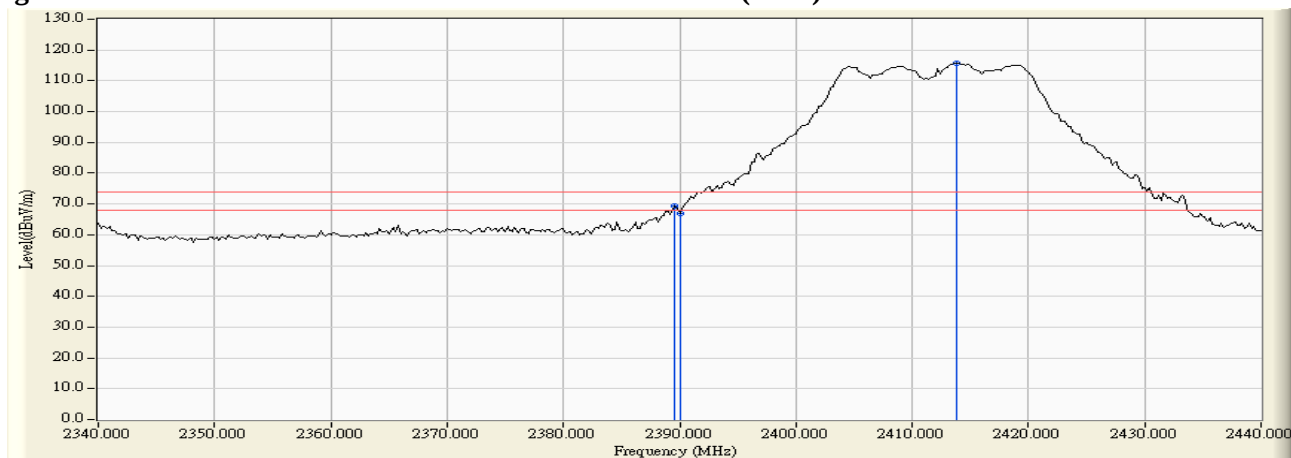
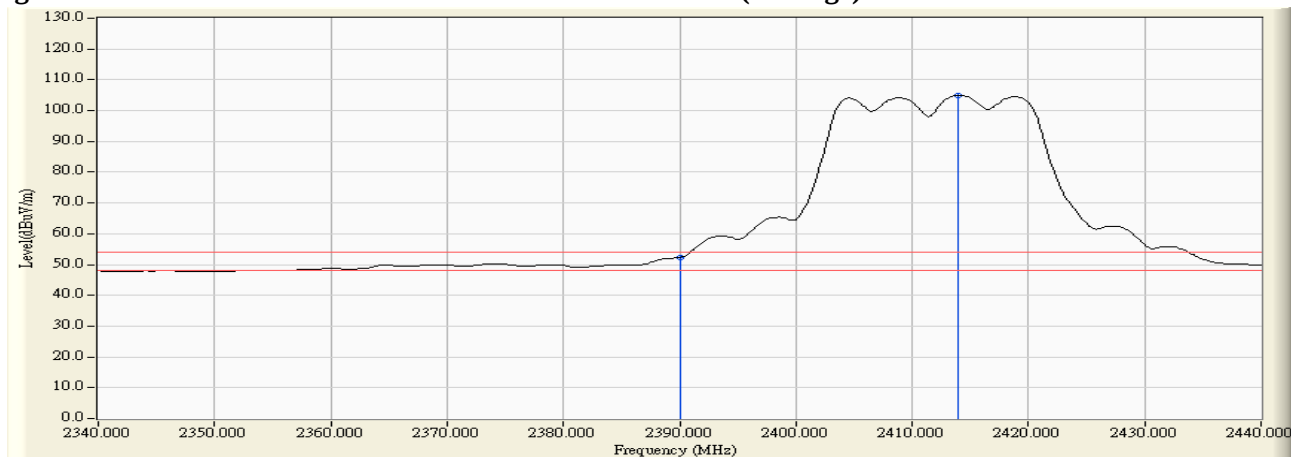


Figure Channel 01: Horizontal (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Access Point/Sensor
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz) (Internal Antenna)

RF Radiated Measurement (VERTICAL):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
01 (Peak)	2390.000	30.915	38.531	69.446	74.00	54.00	Pass
01 (Peak)	2412.800	30.955	83.733	114.688	--	--	Pass
01 (Average)	2390.000	30.915	21.376	52.291	74.00	54.00	Pass
01 (Average)	2413.400	30.959	71.452	102.411	--	--	Pass

Figure Channel 01:

VERTICAL (Peak)

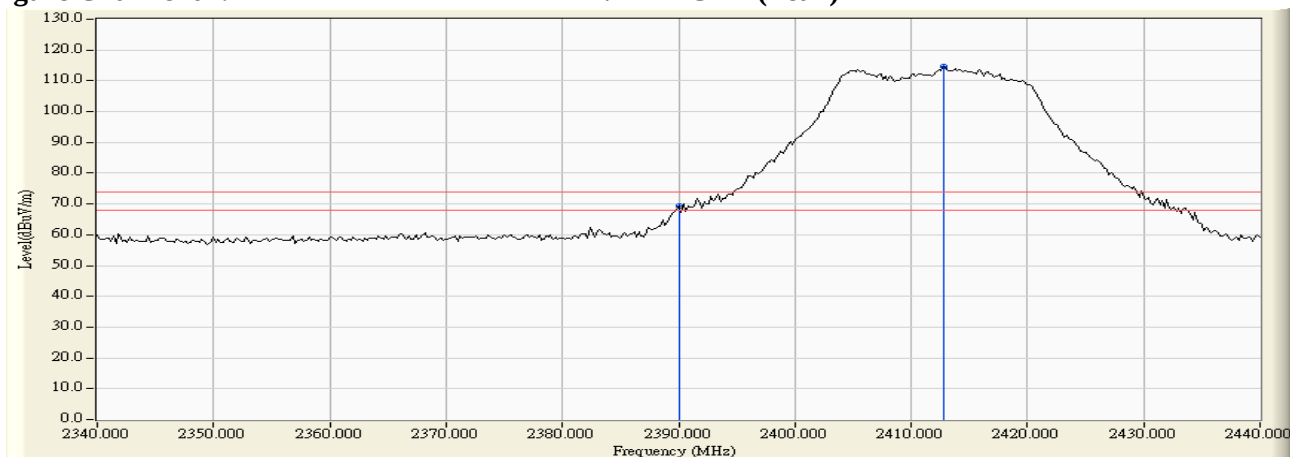
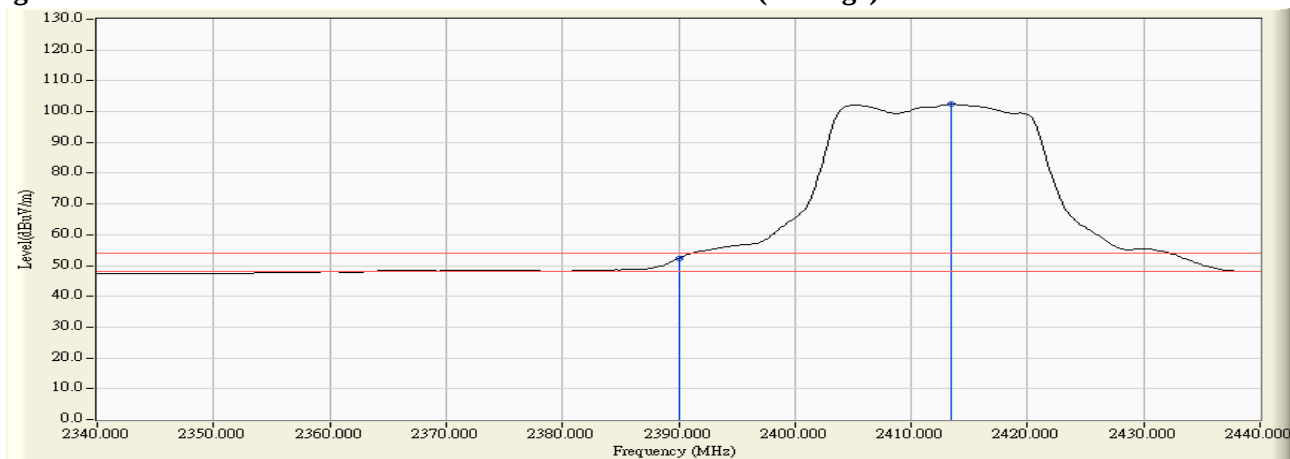


Figure Channel 01:

VERTICAL (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Access Point/Sensor
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462MHz) (Internal Antenna)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
11 (Peak)	2463.700	32.032	82.742	114.774	--	--	Pass
11 (Peak)	2483.500	32.182	37.129	69.311	74.00	54.00	Pass
11 (Average)	2463.700	32.032	71.945	103.977	--	--	Pass
11 (Average)	2483.500	32.182	21.226	53.408	74.00	54.00	Pass

Figure Channel 11: Horizontal (Peak)

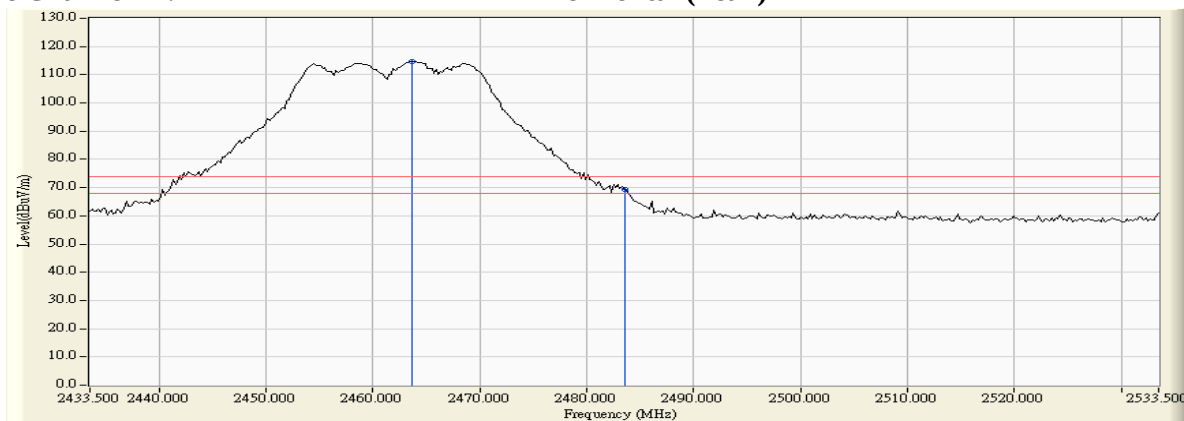
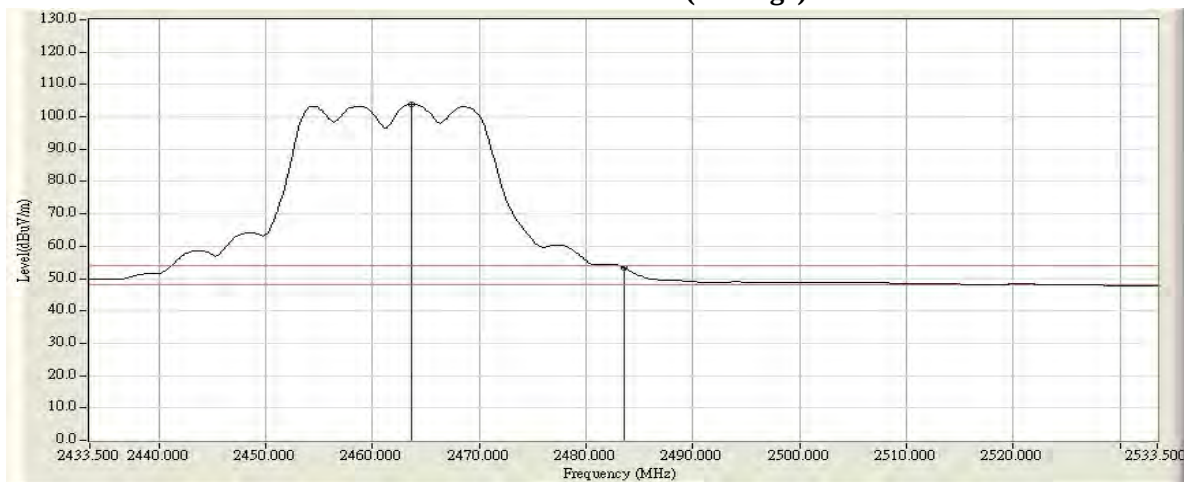


Figure Channel 11: Horizontal (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Access Point/Sensor
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462MHz) (Internal Antenna)

RF Radiated Measurement (VERTICAL):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
11 (Peak)	2456.300	31.251	81.949	113.200	--	--	Pass
11 (Peak)	2483.500	31.435	37.869	69.304	74.00	54.00	Pass
11 (Average)	2455.100	31.243	70.830	102.073	--	--	Pass
11 (Average)	2483.500	31.435	20.315	51.750	74.00	54.00	Pass

Figure Channel 11: VERTICAL (Peak)

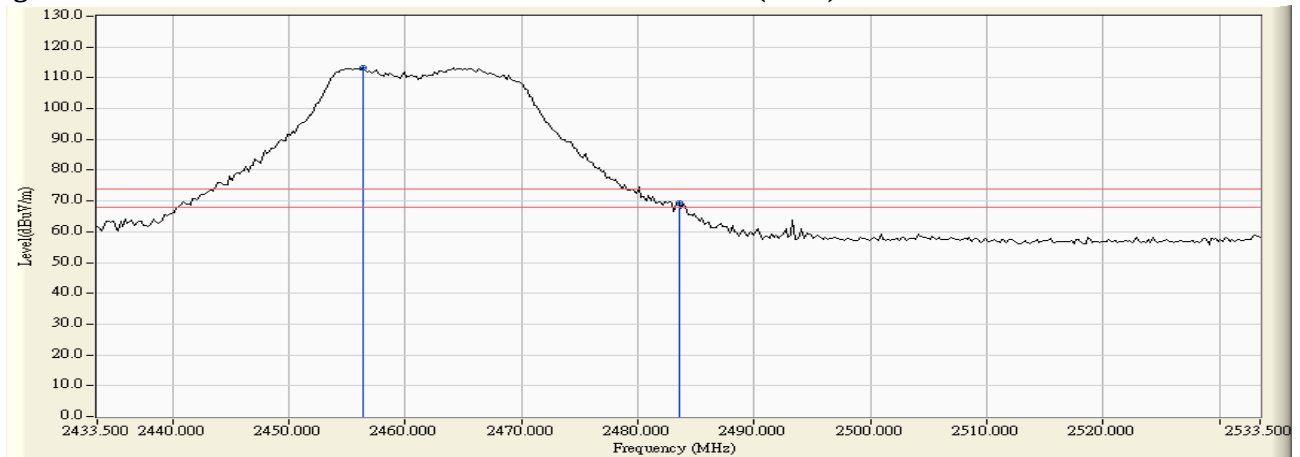
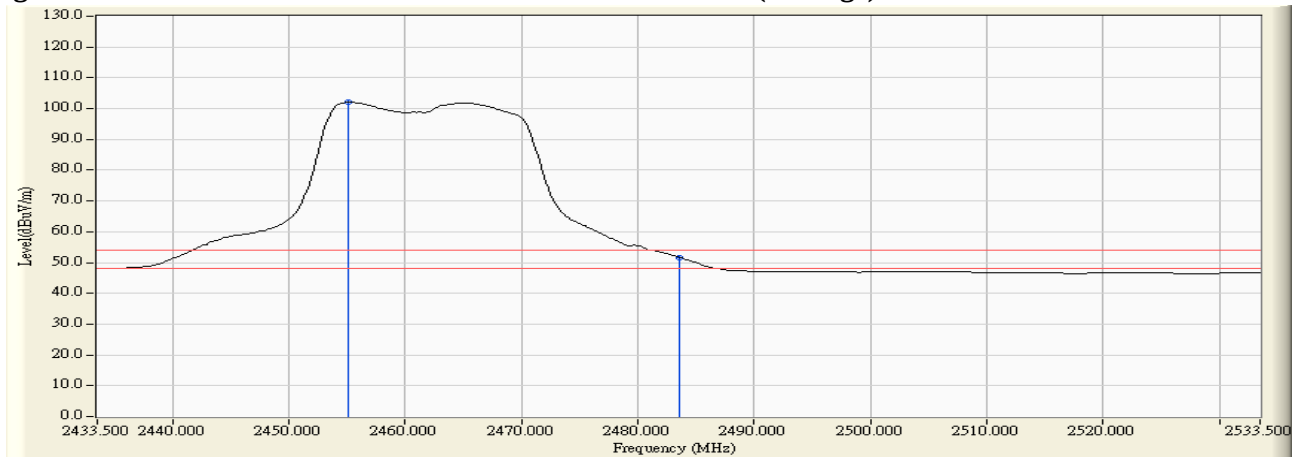


Figure Channel 11: VERTICAL (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Access Point/Sensor
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n 21.7Mbps 20M-BW) (2412MHz) (Internal Antenna)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
01 (Peak)	2389.800	31.508	41.649	73.157	74.00	54.00	Pass
01 (Peak)	2390.000	31.509	39.931	71.440	74.00	54.00	Pass
01 (Peak)	2405.200	31.594	85.129	116.723	--	--	Pass
01 (Average)	2390.000	31.509	21.206	52.715	74.00	54.00	Pass
01 (Average)	2406.000	31.598	73.101	104.700	--	--	Pass

Figure Channel 01: Horizontal (Peak)

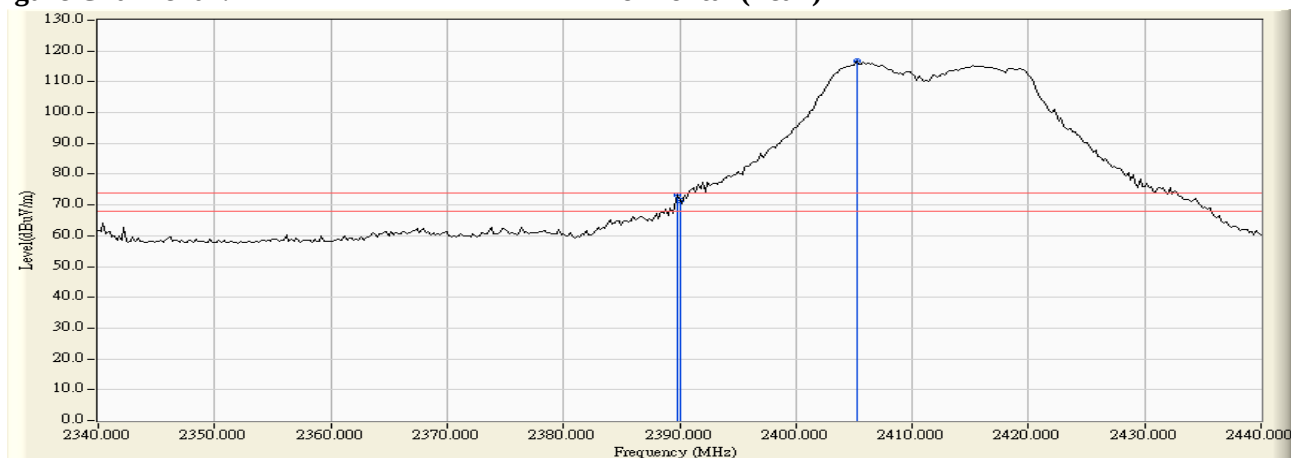
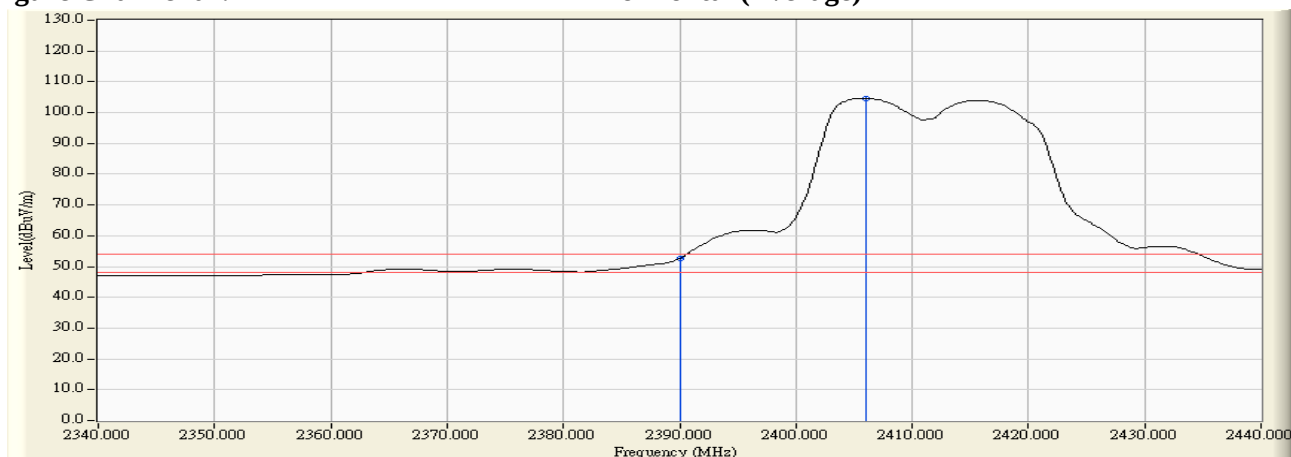


Figure Channel 01: Horizontal (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Access Point/Sensor
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n 21.7Mbps 20M-BW) (2412MHz) (Internal Antenna)

RF Radiated Measurement (VERTICAL):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
01 (Peak)	2390.000	30.915	36.384	67.299	74.00	54.00	Pass
01 (Peak)	2407.000	30.931	82.882	113.813	--	--	Pass
01 (Average)	2390.000	30.915	20.066	50.981	74.00	54.00	Pass
01 (Average)	2405.600	30.927	70.953	101.880	--	--	Pass

Figure Channel 01:

VERTICAL (Peak)

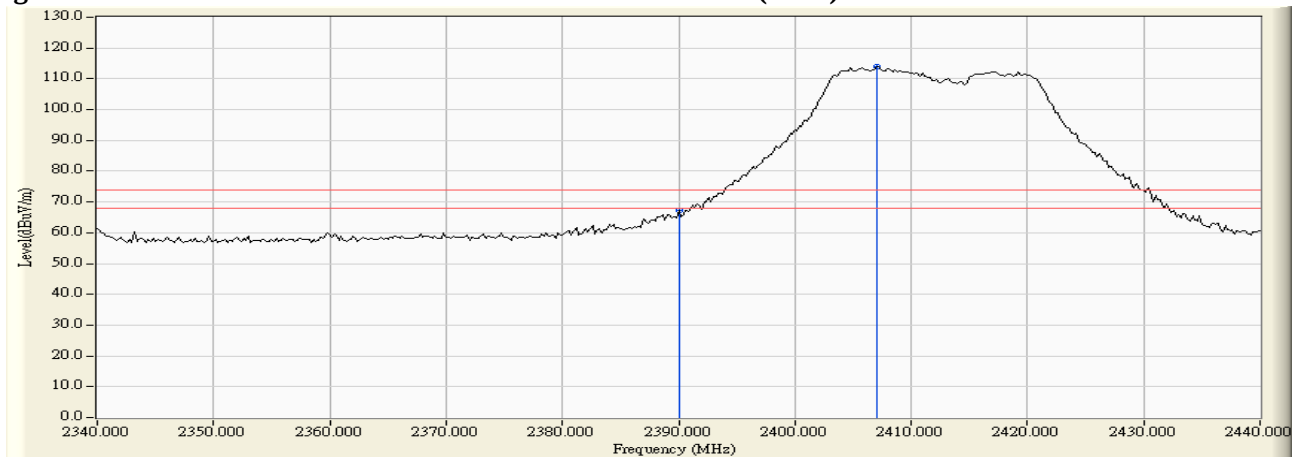
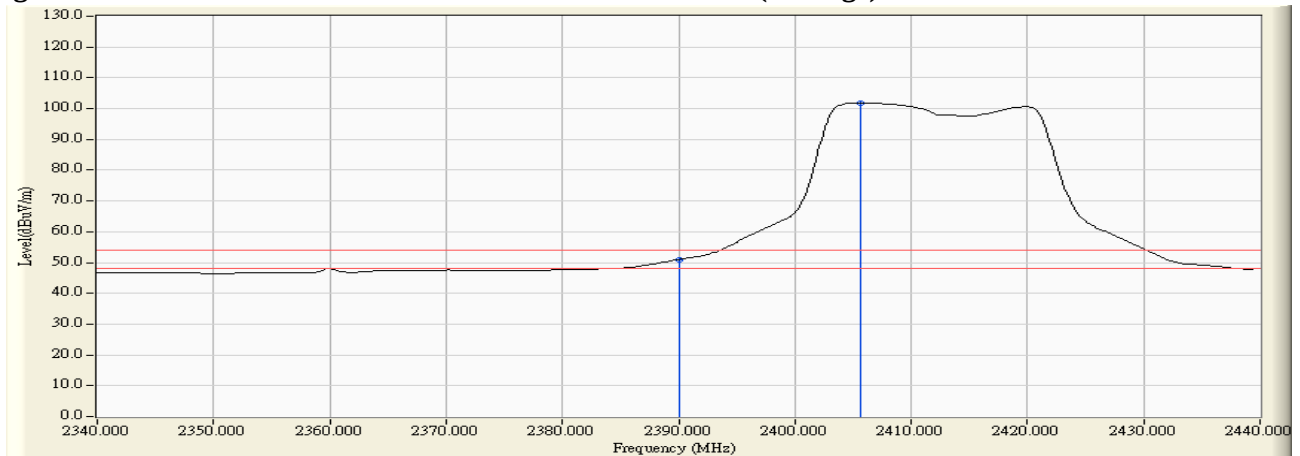


Figure Channel 01:

VERTICAL (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Access Point/Sensor
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n 21.7Mbps 20M-BW) (2462MHz) (Internal Antenna)

RF Radiated Measurement (HORIZONTAL):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
11 (Peak)	2468.100	32.065	82.461	114.526	--	--	Pass
11 (Peak)	2483.500	32.182	33.457	65.639	74.00	54.00	Pass
11 (Peak)	2485.300	32.196	34.755	66.951	74.00	54.00	Pass
11 (Average)	2469.100	32.073	71.566	103.639	--	--	Pass
11 (Average)	2483.500	32.182	18.446	50.628	74.00	54.00	Pass

Figure Channel 11: HORIZONTAL (Peak)

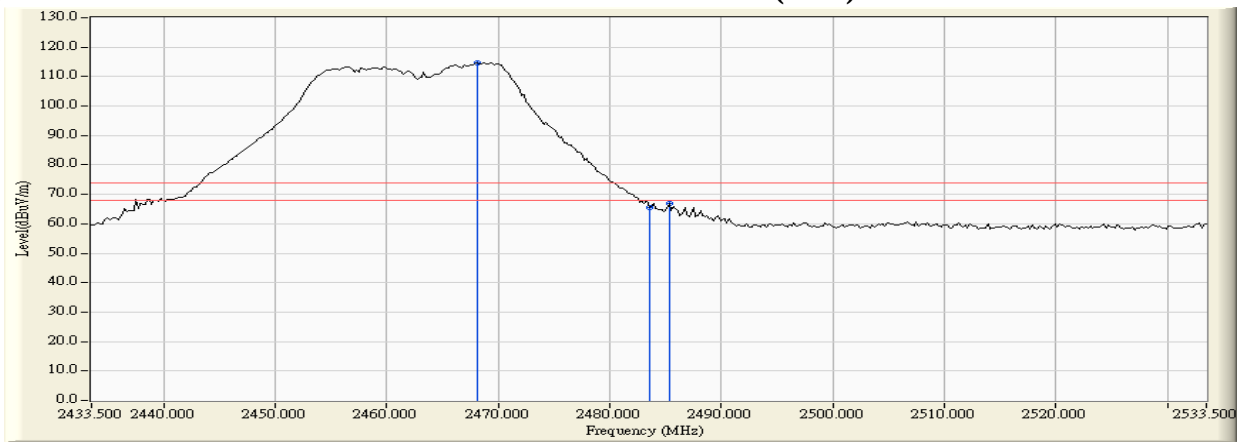
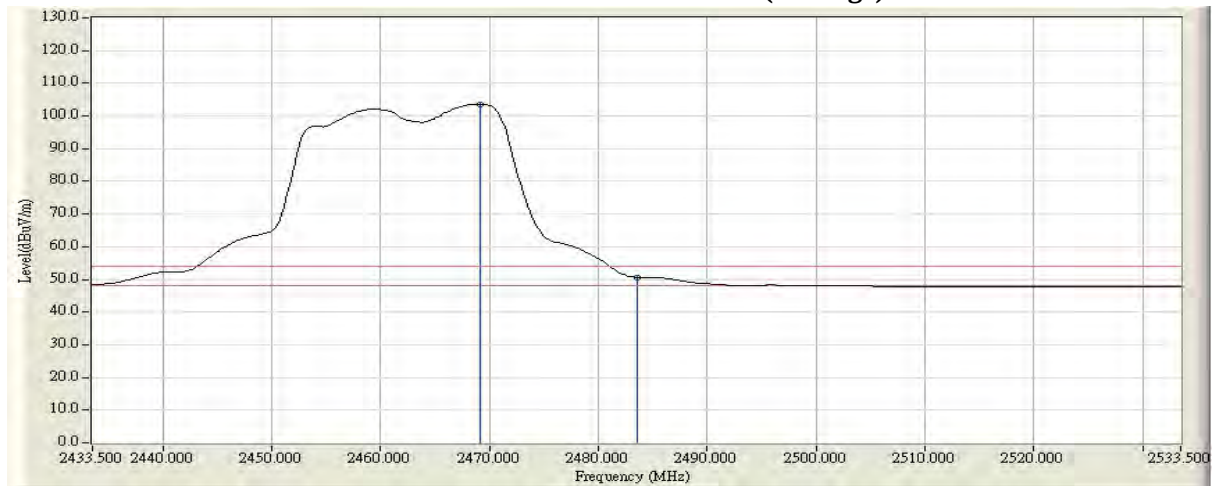


Figure Channel 11: HORIZONTAL (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Access Point/Sensor
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n 21.7Mbps 20M-BW) (2462MHz) (Internal Antenna)

RF Radiated Measurement (VERTICAL):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
11 (Peak)	2469.500	31.341	82.383	113.724	--	--	Pass
11 (Peak)	2483.500	31.435	34.582	66.017	74.00	54.00	Pass
11 (Average)	2469.500	31.341	71.504	102.845	--	--	Pass
11 (Average)	2483.500	31.435	18.272	49.707	74.00	54.00	Pass

Figure Channel 11: VERTICAL (Peak)

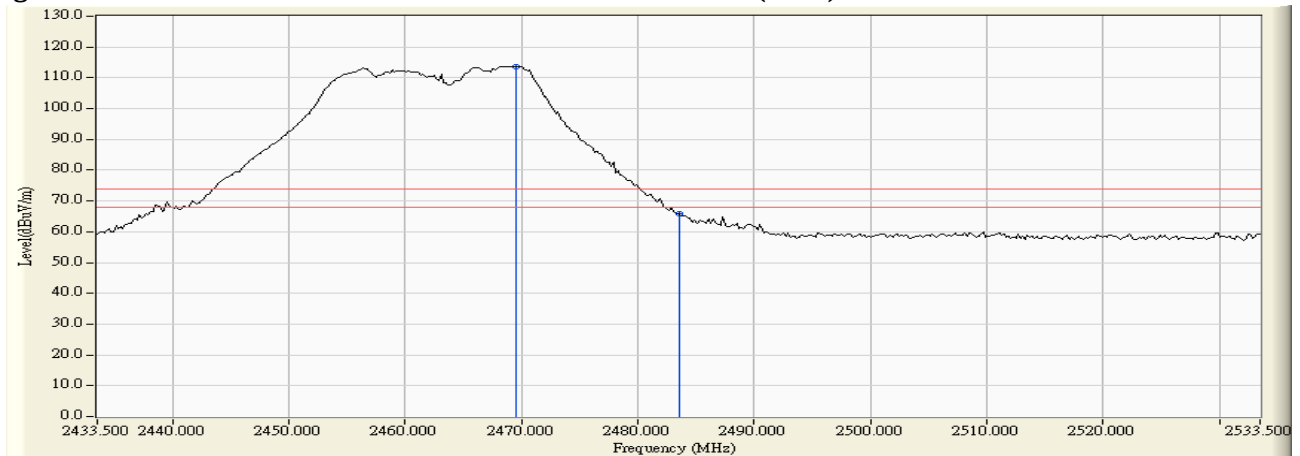
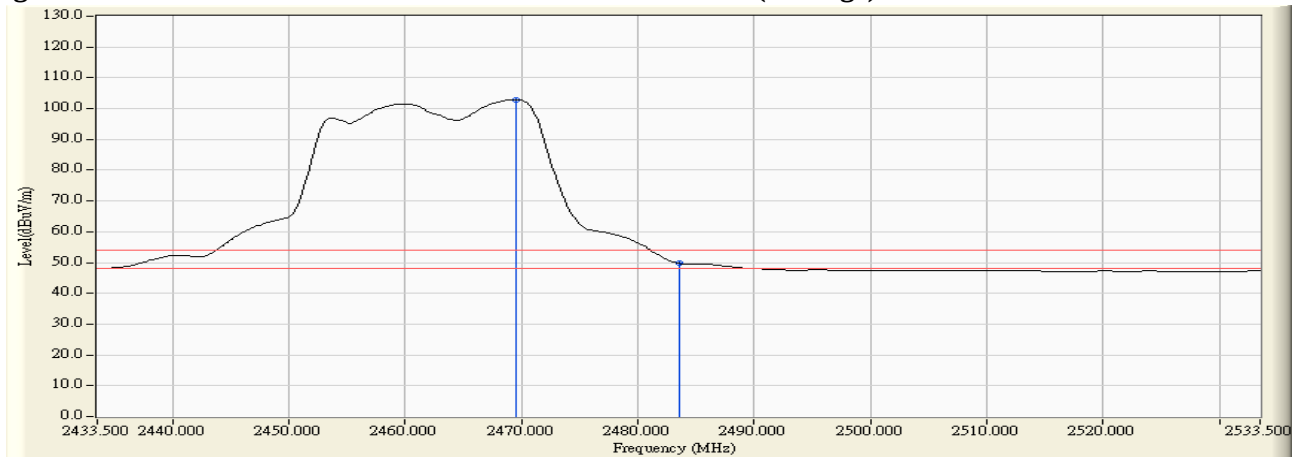


Figure Channel 11: VERTICAL (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Access Point/Sensor
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n 45Mbps 40M-BW) (2422MHz) (Internal Antenna)

RF Radiated Measurement (HORIZONTAL):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
03 (Peak)	2390.000	31.509	38.570	70.079	74.00	54.00	Pass
03 (Peak)	2430.200	31.777	77.866	109.644	--	--	Pass
03 (Average)	2390.000	31.509	22.334	53.843	74.00	54.00	Pass
03 (Average)	2430.400	31.779	66.109	97.888	--	--	Pass

Figure Channel 03:

HORIZONTAL (Peak)

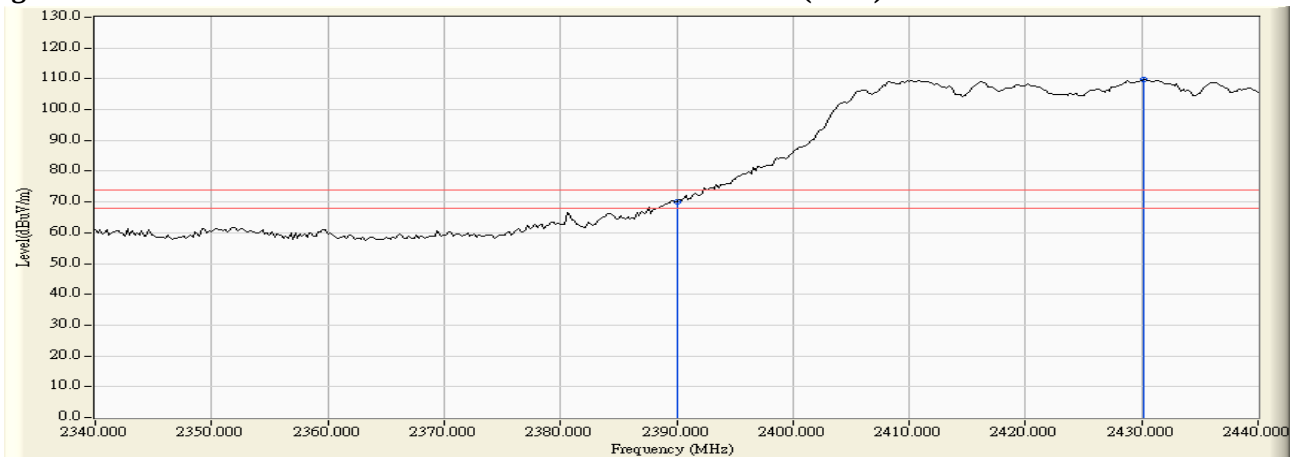
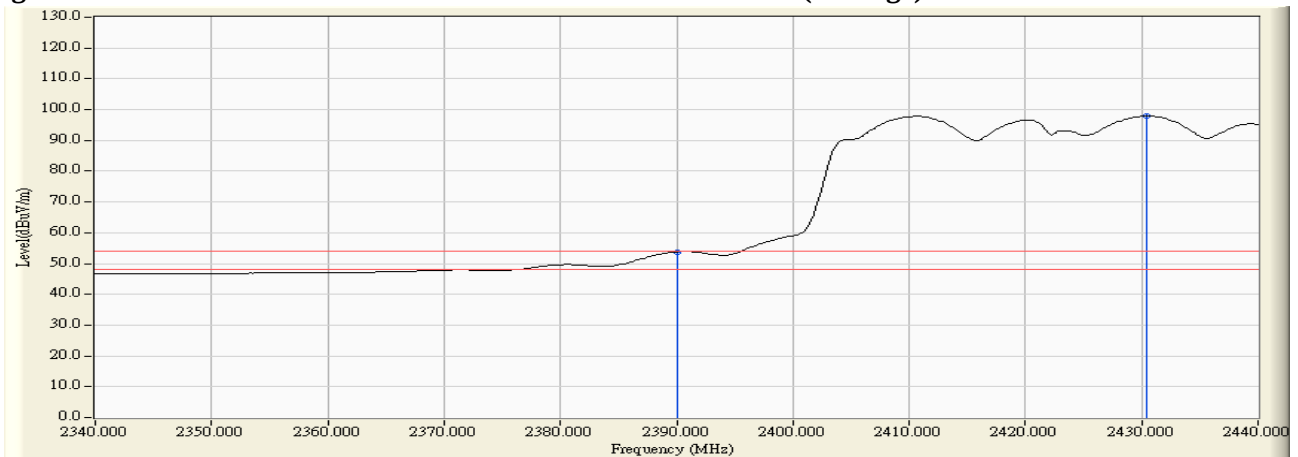


Figure Channel 03:

HORIZONTAL (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Access Point/Sensor
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n 45Mbps 40M-BW) (2422MHz) (Internal Antenna)

RF Radiated Measurement (VERTICAL):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
03 (Peak)	2388.800	30.921	36.085	67.006	74.00	54.00	Pass
03 (Peak)	2390.000	30.915	35.100	66.015	74.00	54.00	Pass
03 (Peak)	2415.400	30.972	78.013	108.985	--	--	Pass
03 (Average)	2390.000	30.915	20.121	51.036	74.00	54.00	Pass
03 (Average)	2415.600	30.973	65.108	96.082	--	--	Pass

Figure Channel 03:

VERTICAL (Peak)

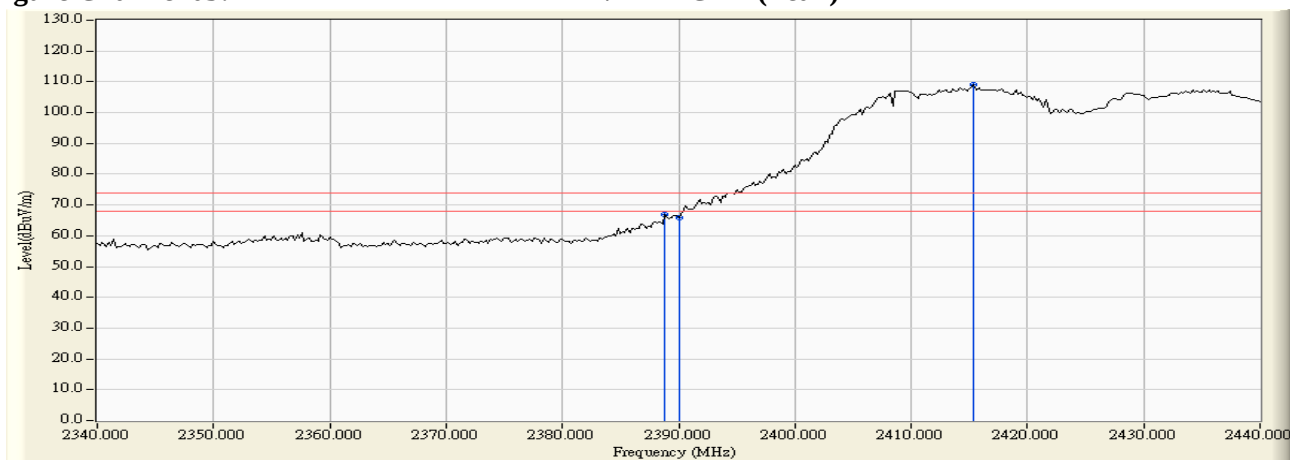
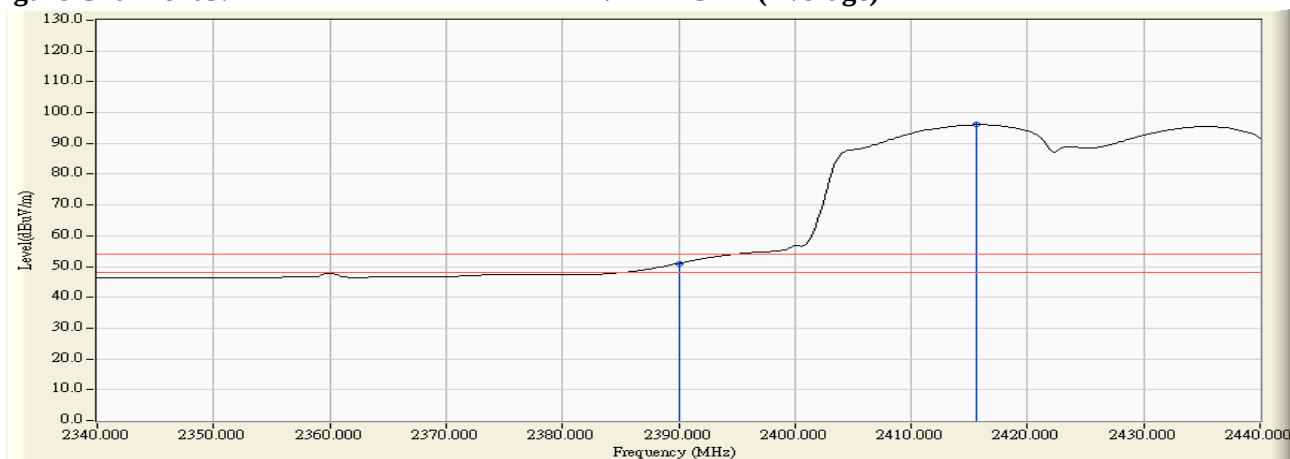


Figure Channel 03:

VERTICAL (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Access Point/Sensor
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n 45Mbps 40M-BW) (2452MHz) (Internal Antenna)

RF Radiated Measurement (HORIZONTAL):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
09 (Peak)	2444.900	31.889	79.265	111.155	--	--	Pass
09 (Peak)	2483.500	32.182	40.163	72.345	74.00	54.00	Pass
09 (Average)	2444.900	31.927	66.477	98.405	--	--	Pass
09 (Average)	2483.500	32.182	19.012	51.194	74.00	54.00	Pass

Figure Channel 09:

HORIZONTAL (Peak)

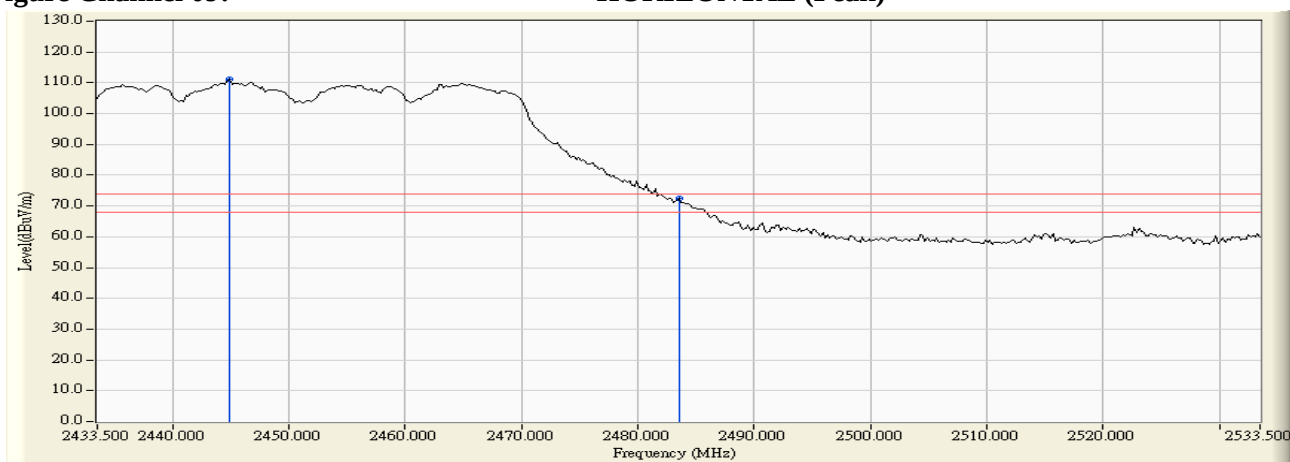
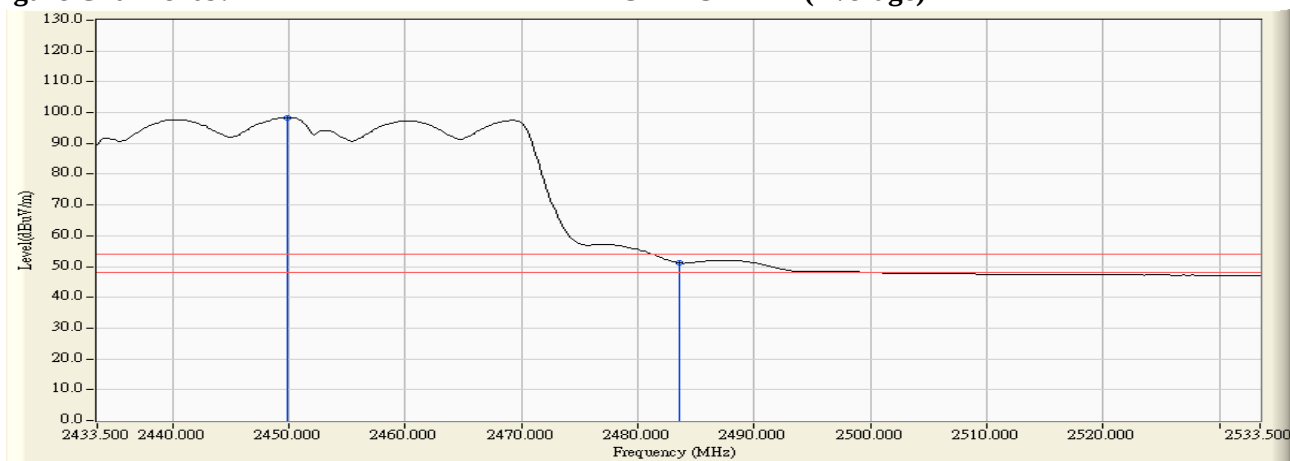


Figure Channel 09:

HORIZONTAL (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Access Point/Sensor
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n 45Mbps 40M-BW) (2452MHz) (Internal Antenna)

RF Radiated Measurement (VERTICAL):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
09 (Peak)	2436.500	31.116	77.148	108.264	--	--	Pass
09 (Peak)	2483.500	31.435	34.486	65.921	74.00	54.00	Pass
09 (Peak)	2483.900	31.438	35.562	67.000	74.00	54.00	Pass
09 (Average)	2436.300	31.114	65.036	96.150	--	--	Pass
09 (Average)	2483.500	31.435	17.958	49.393	74.00	54.00	Pass

Figure Channel 09: VERTICAL (Peak)

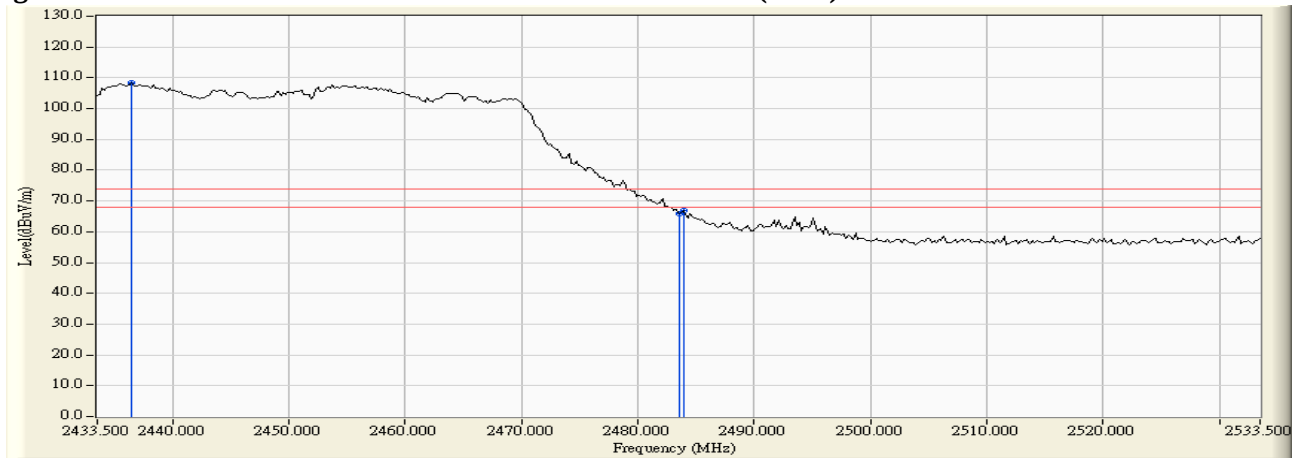
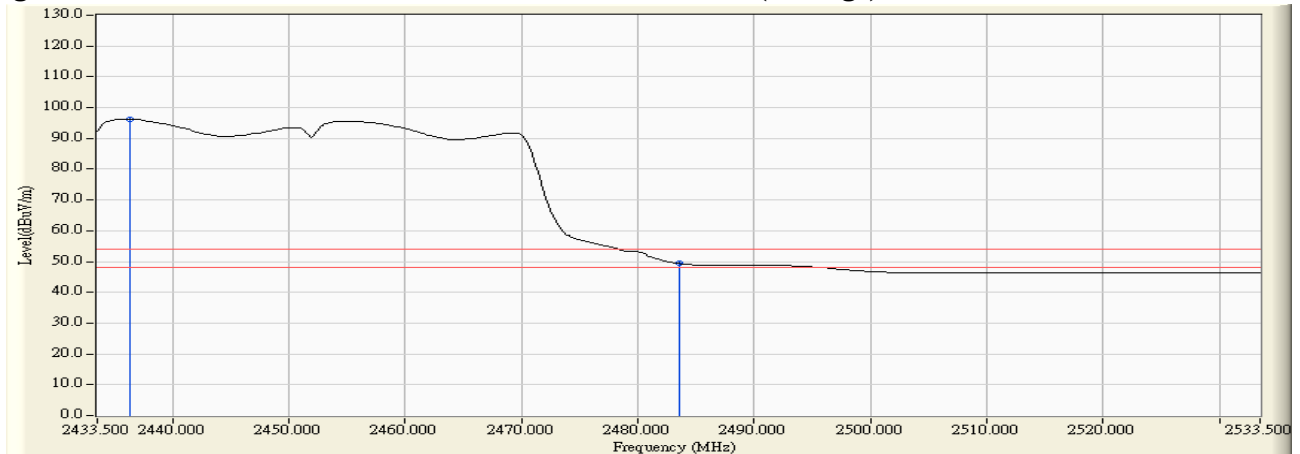


Figure Channel 09: VERTICAL (Average)

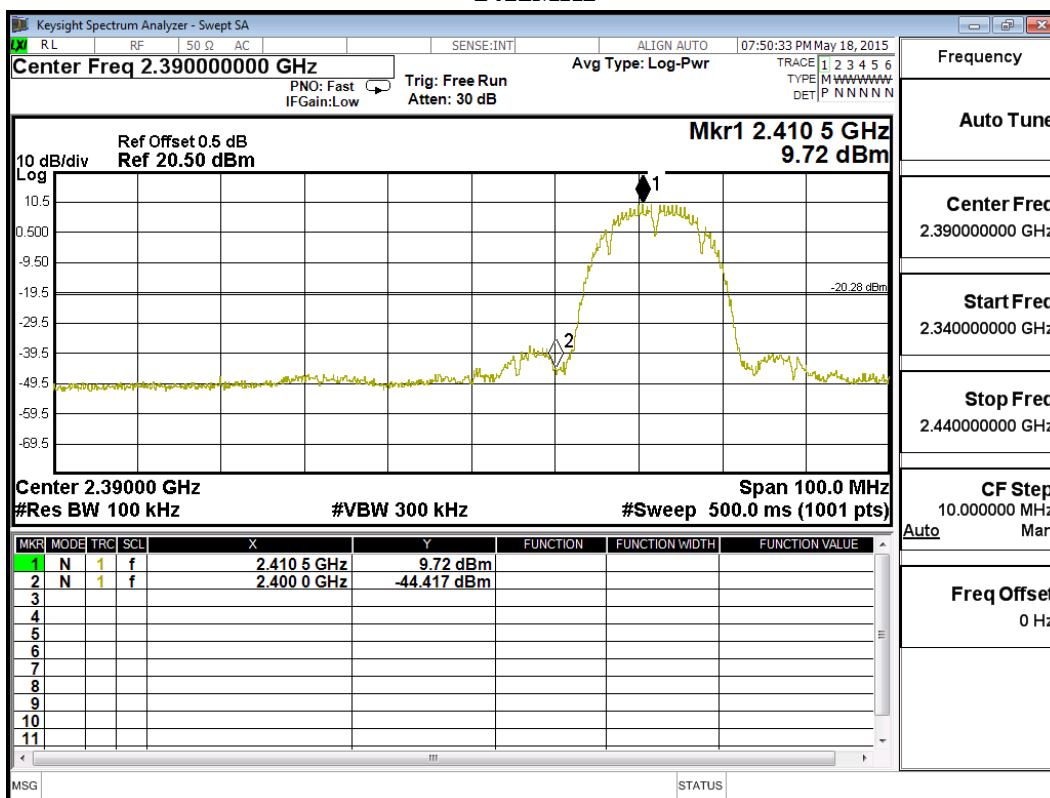


- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

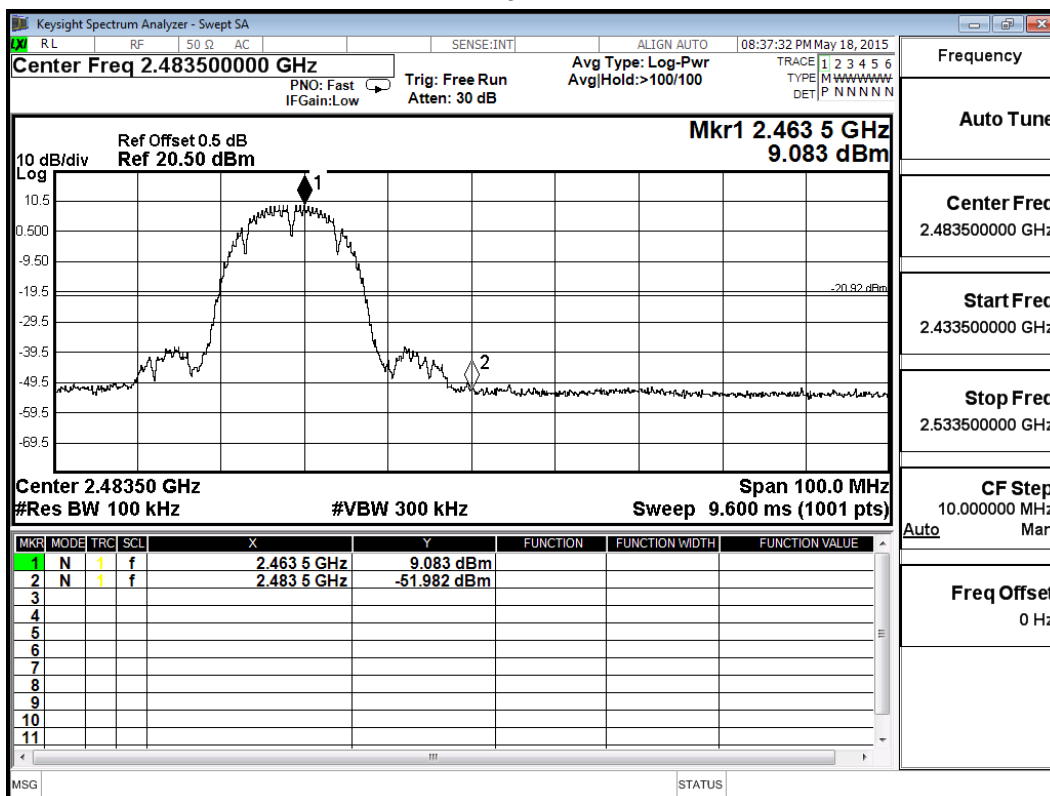
Product : Access Point/Sensor
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (Internal Antenna)

Test Frequency (MHz)	Chain	Measurement Level Δ (dB)	Limit Δ (dB)	Result
2412	A	54.14	>30	PASS
2462	A	61.07	>30	PASS

2412MHz



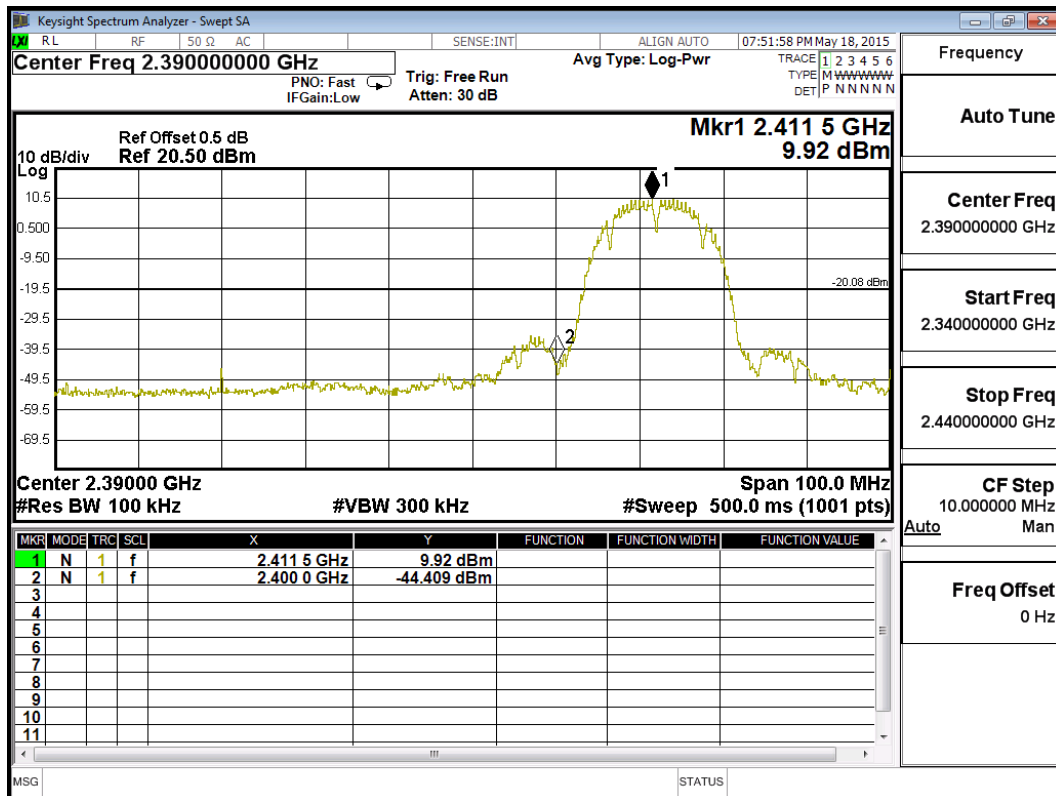
2462MHz



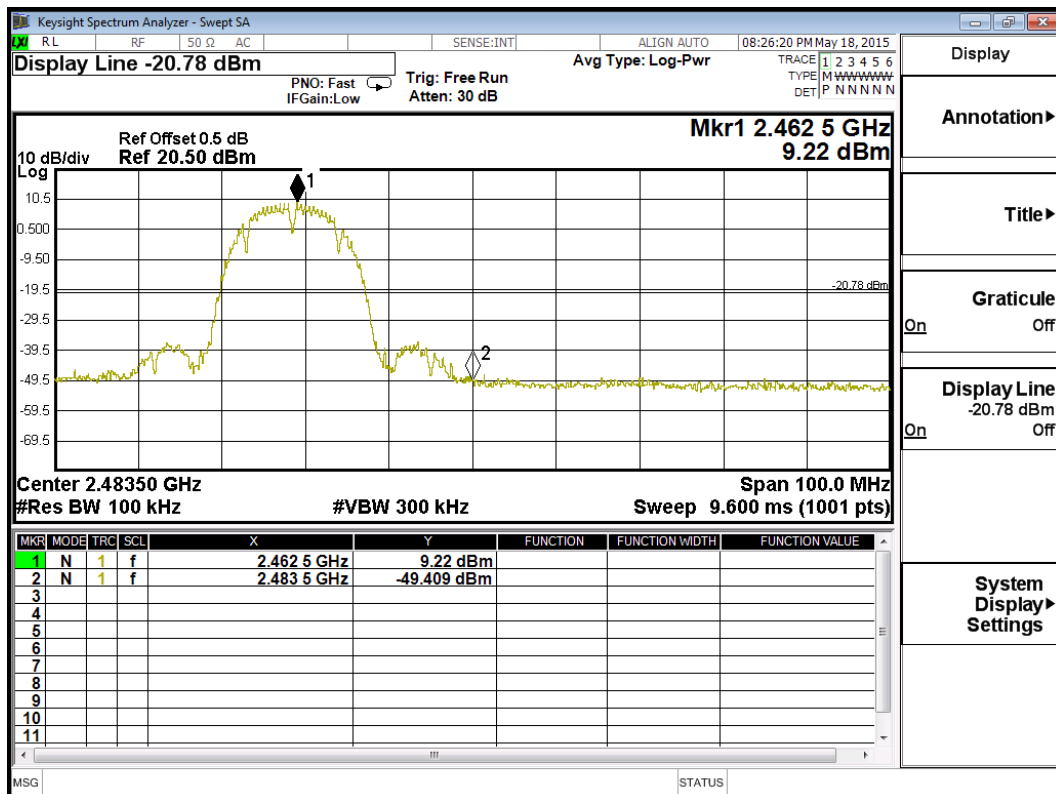
Product : Access Point/Sensor
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (Internal Antenna)

Test Frequency (MHz)	Chain	Measurement Level Δ (dB)	Limit Δ (dB)	Result
2412	B	54.33	>30	PASS
2462	B	58.63	>30	PASS

2412MHz



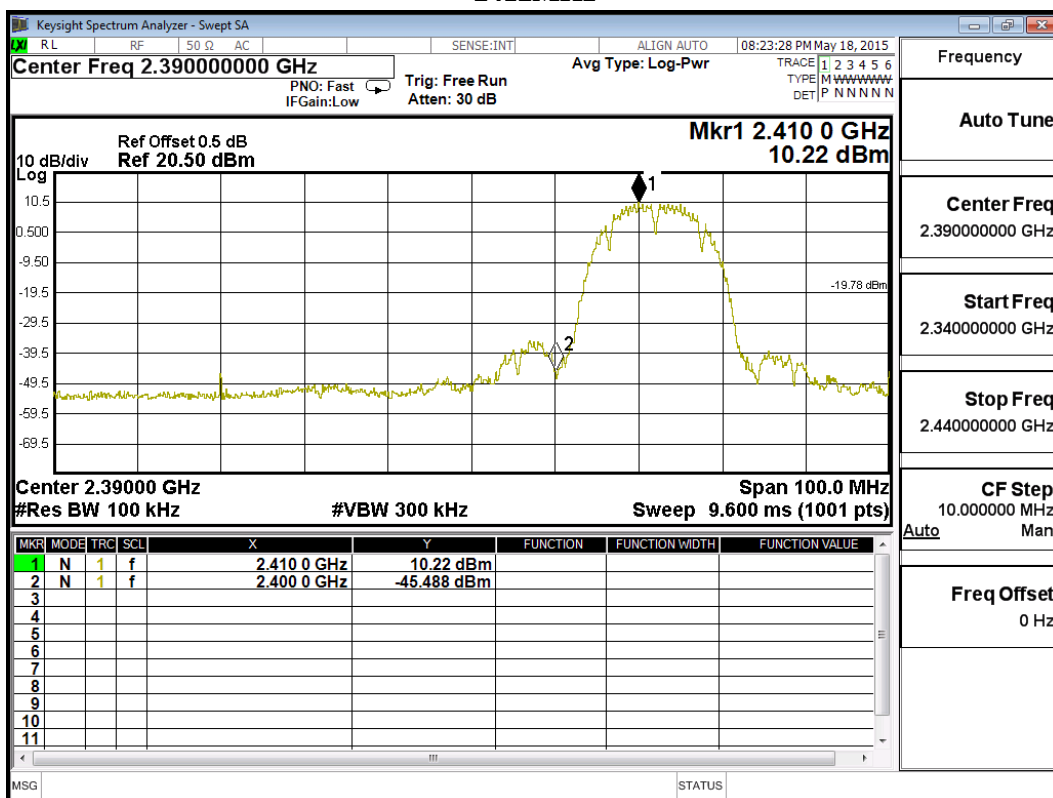
2462MHz



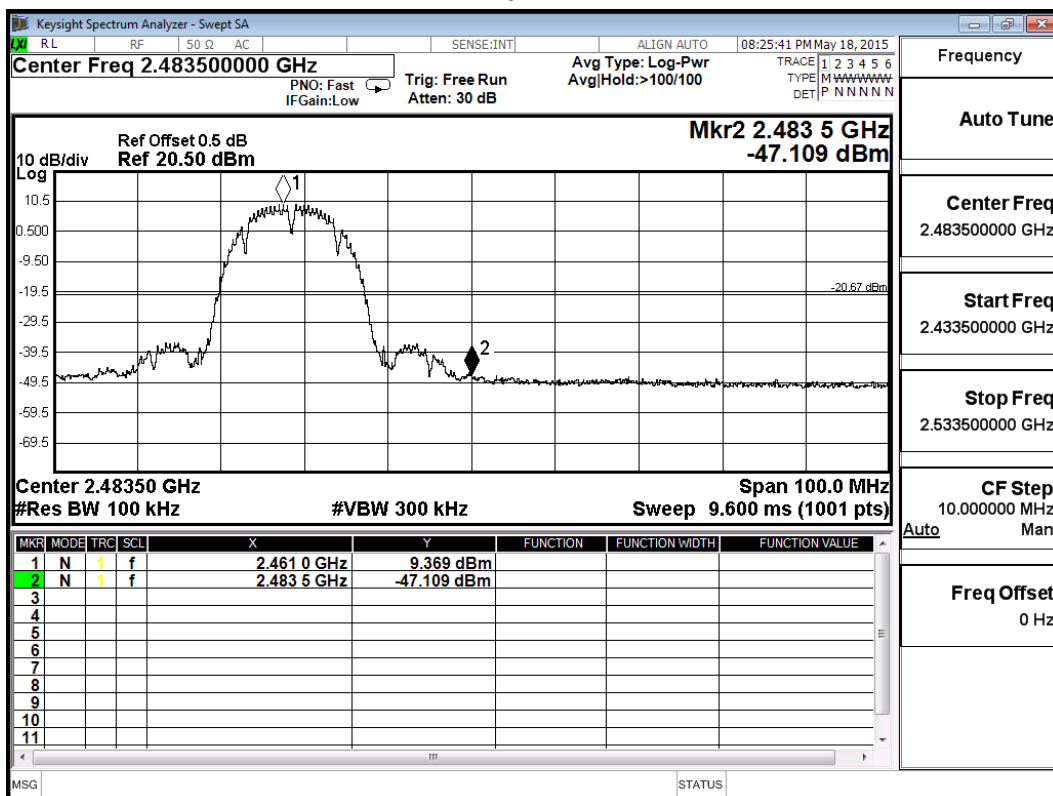
Product : Access Point/Sensor
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (Internal Antenna)

Test Frequency (MHz)	Chain	Measurement Level Δ (dB)	Limit Δ (dB)	Result
2412	C	55.71	>30	PASS
2462	C	56.48	>30	PASS

2412MHz



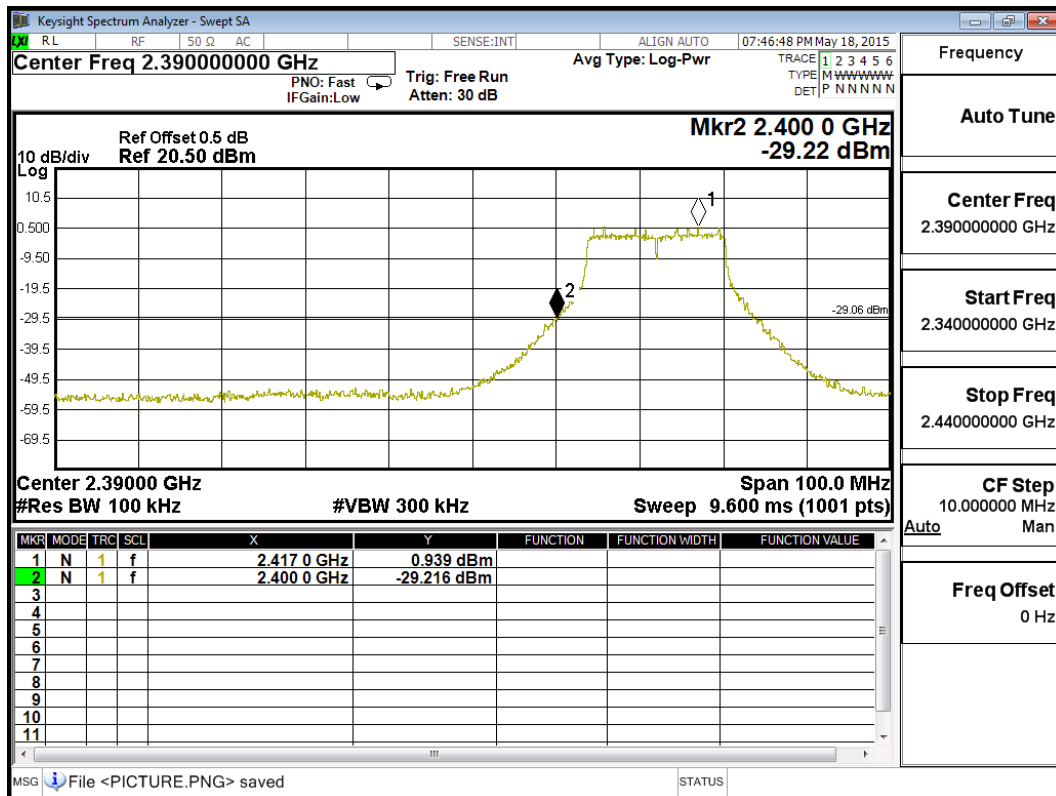
2462MHz



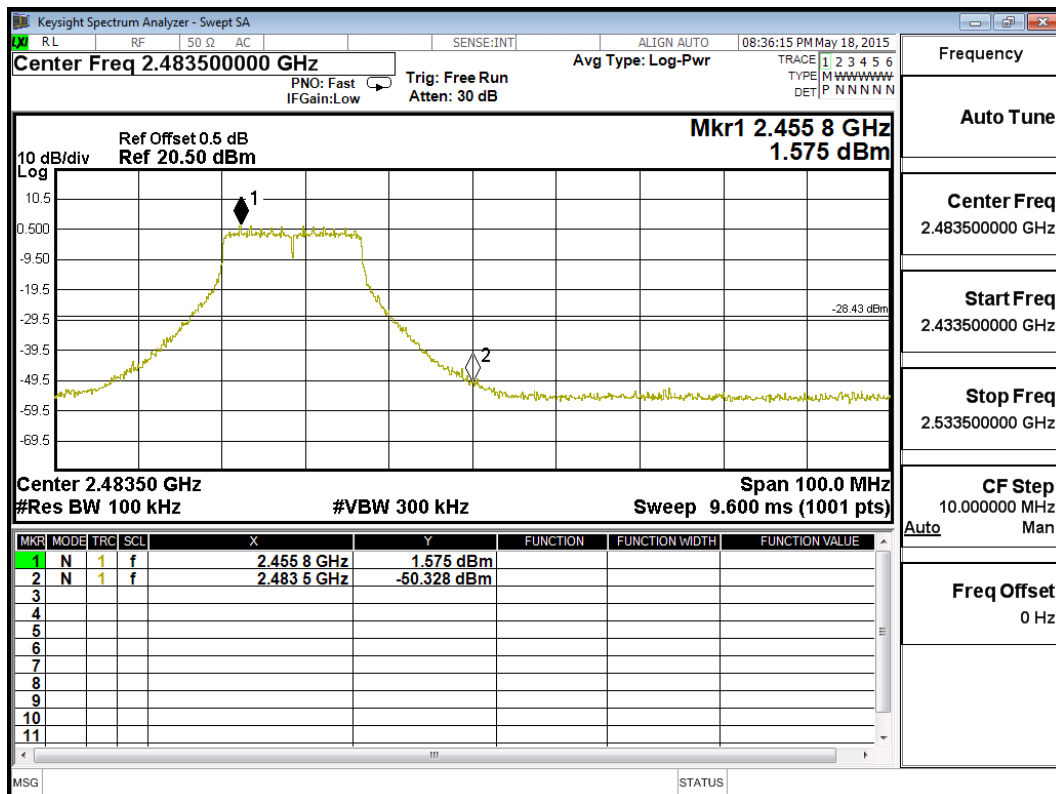
Product : Access Point/Sensor
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (Internal Antenna)

Test Frequency (MHz)	Chain	Measurement Level Δ (dB)	Limit Δ (dB)	Result
2412	A	30.16	>30	PASS
2462	A	51.90	>30	PASS

2412MHz



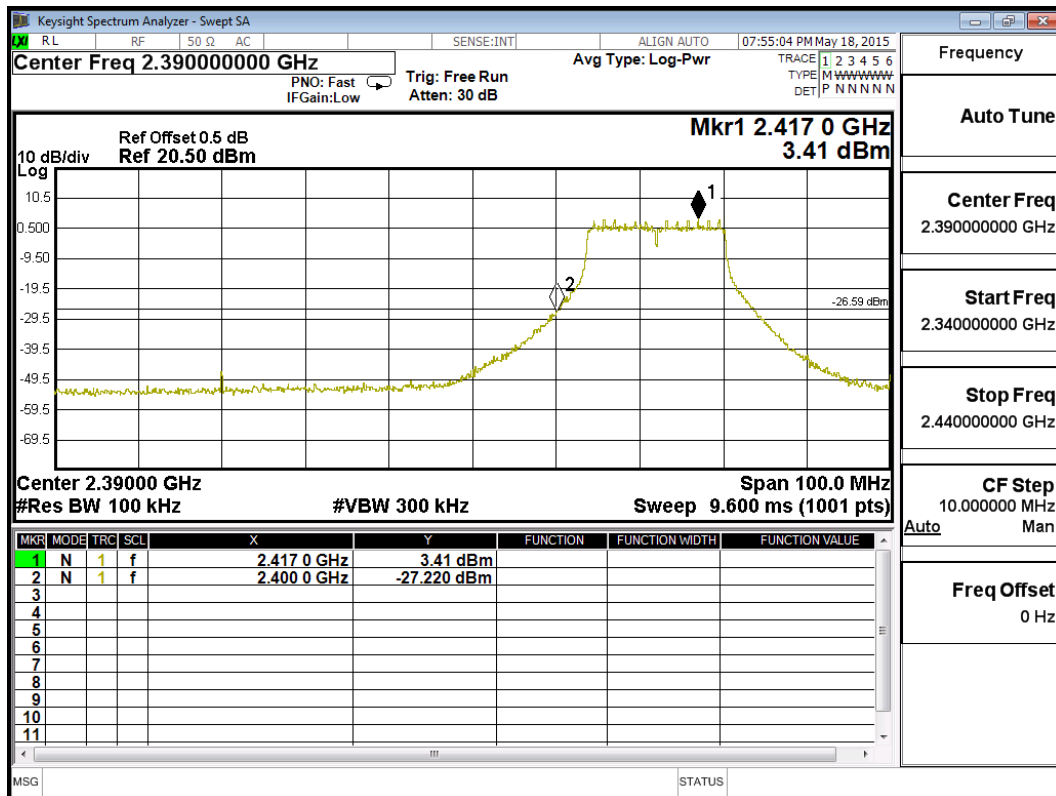
2462MHz



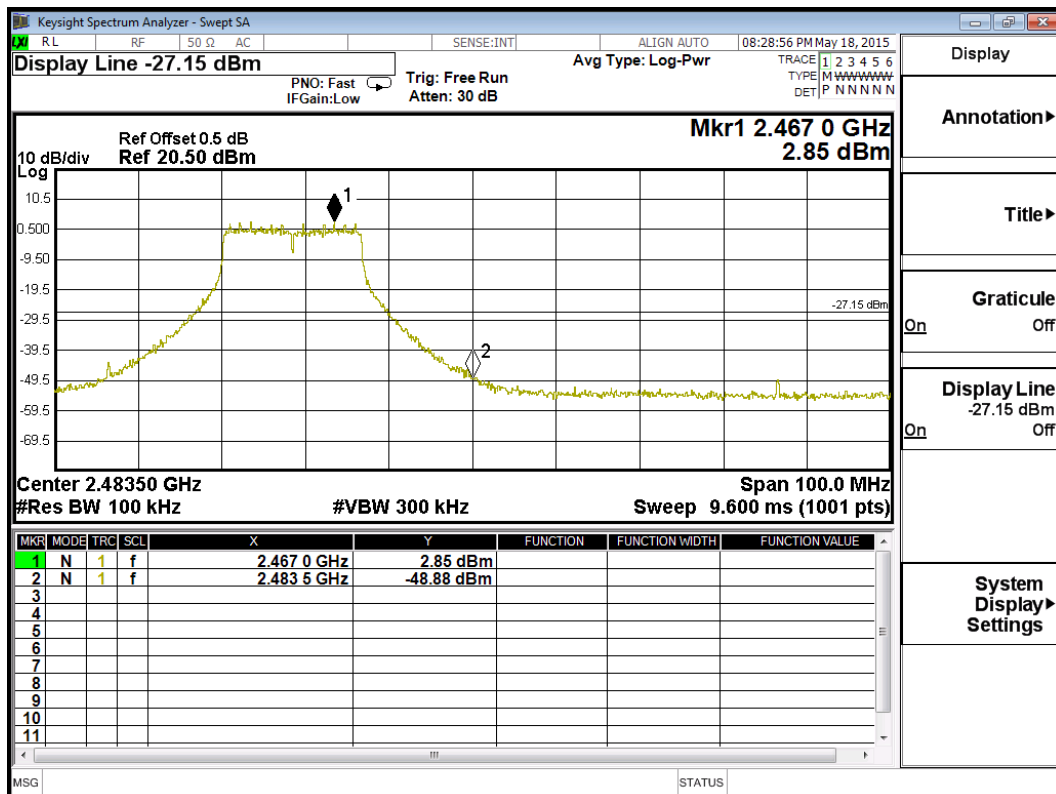
Product : Access Point/Sensor
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (Internal Antenna)

Test Frequency (MHz)	Chain	Measurement Level Δ (dB)	Limit Δ (dB)	Result
2412	B	30.63	>30	PASS
2462	B	51.73	>30	PASS

2412MHz



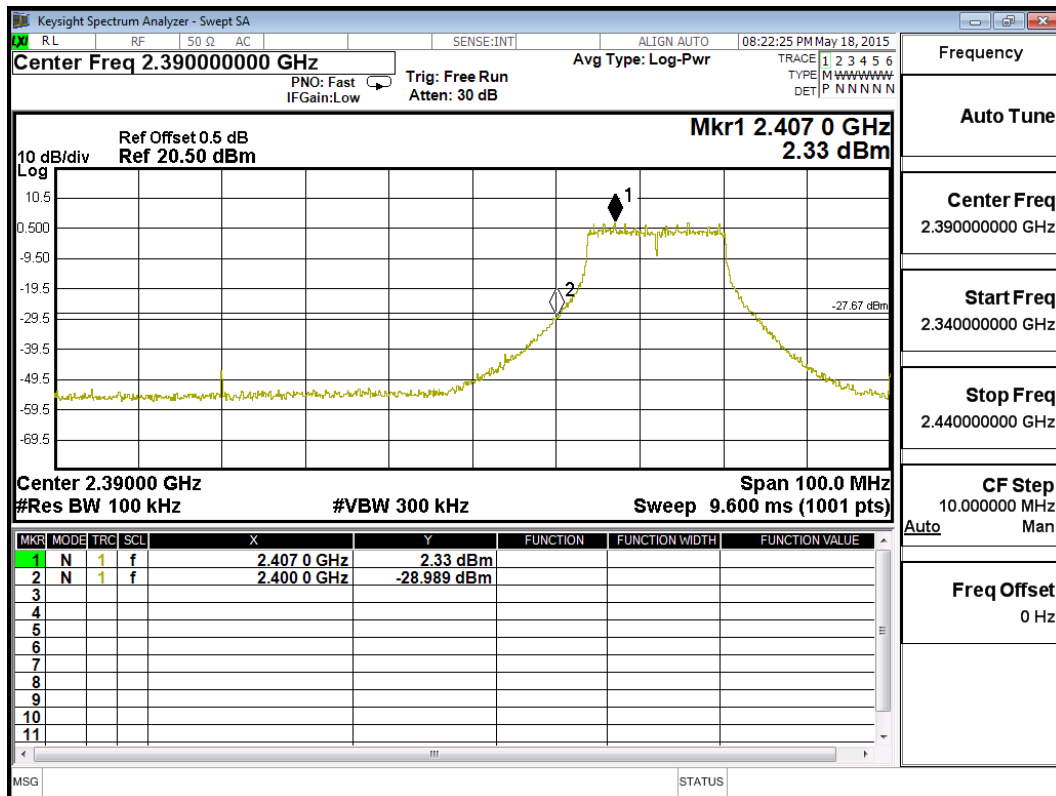
2462MHz



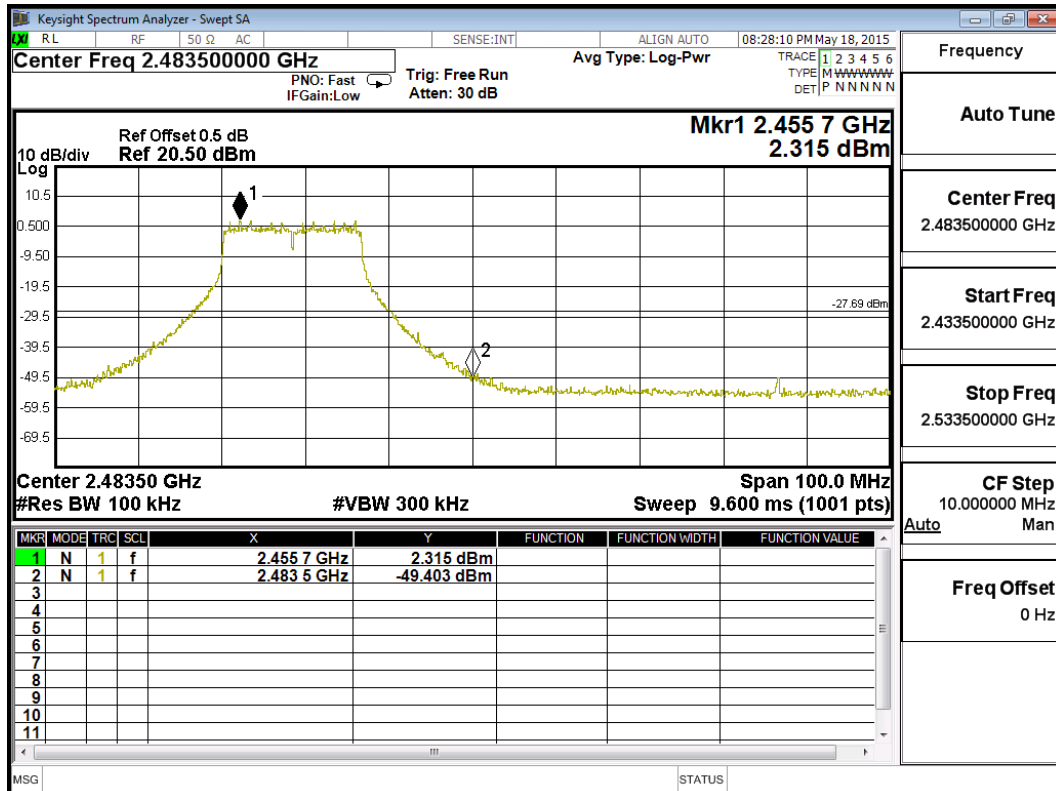
Product : Access Point/Sensor
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (Internal Antenna)

Test Frequency (MHz)	Chain	Measurement Level Δ (dB)	Limit Δ (dB)	Result
2412	C	31.32	>30	PASS
2462	C	51.72	>30	PASS

2412MHz



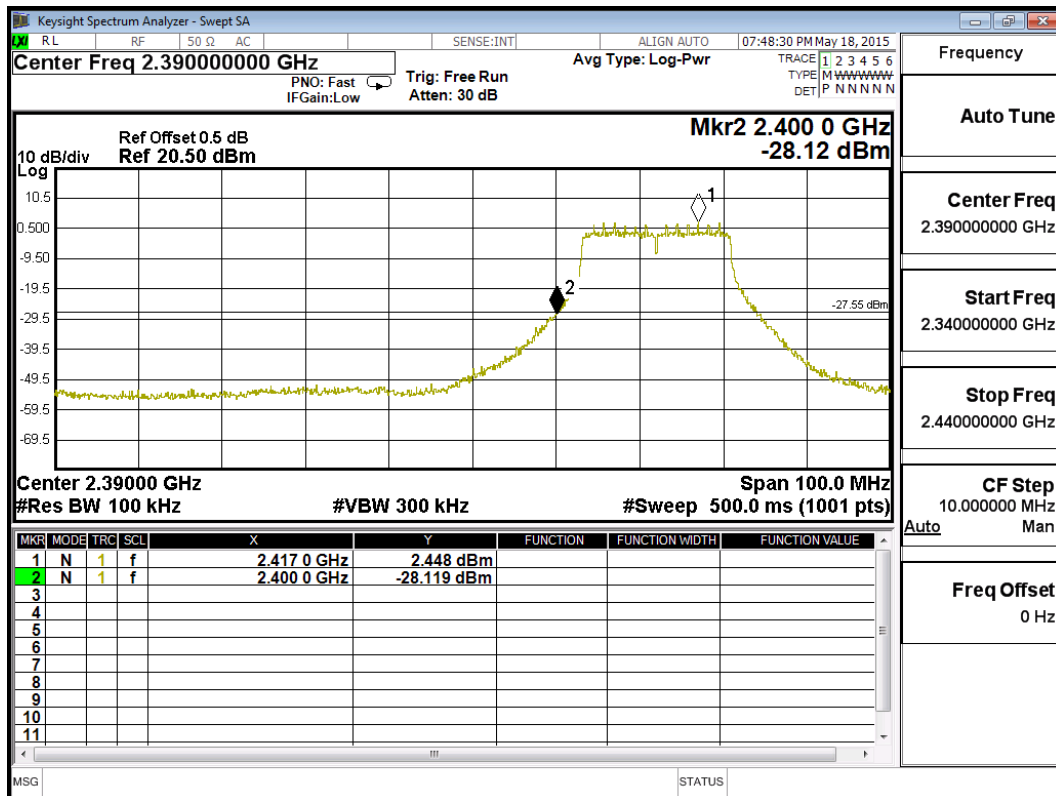
2462MHz



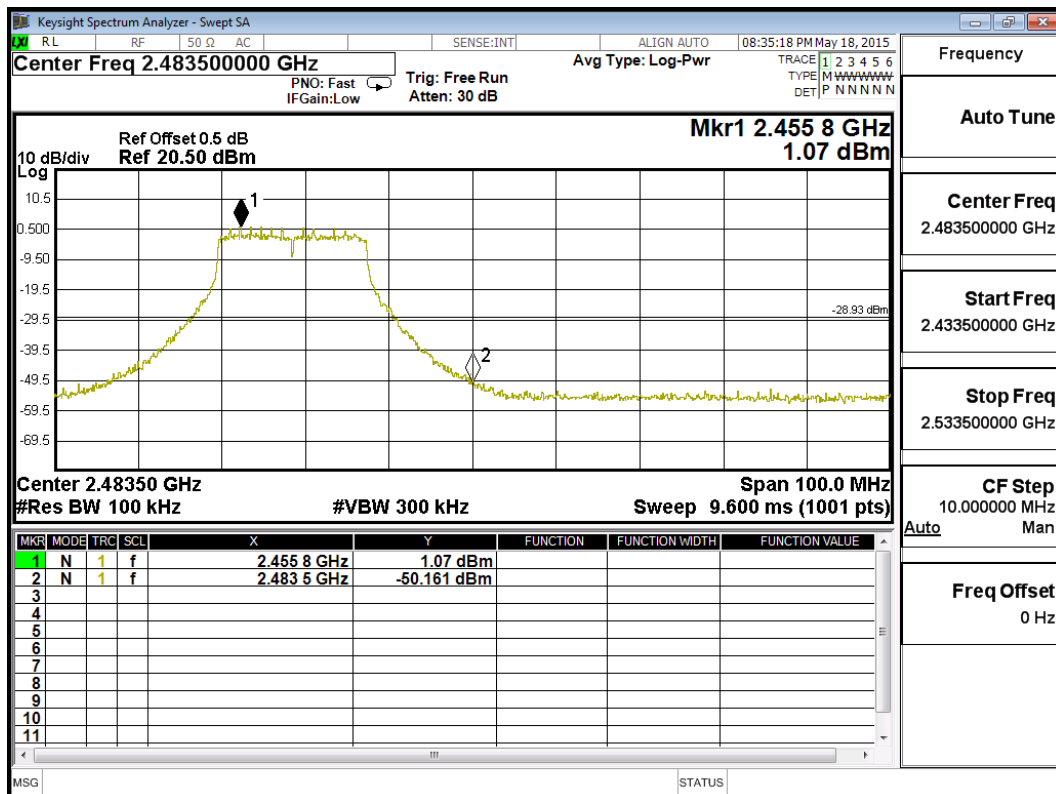
Product : Access Point/Sensor
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n 21.7Mbps 20M-BW) (Internal Antenna)

Test Frequency (MHz)	Chain	Measurement Level Δ (dB)	Limit Δ (dB)	Result
2412	A	30.57	>30	PASS
2462	A	51.23	>30	PASS

2412MHz



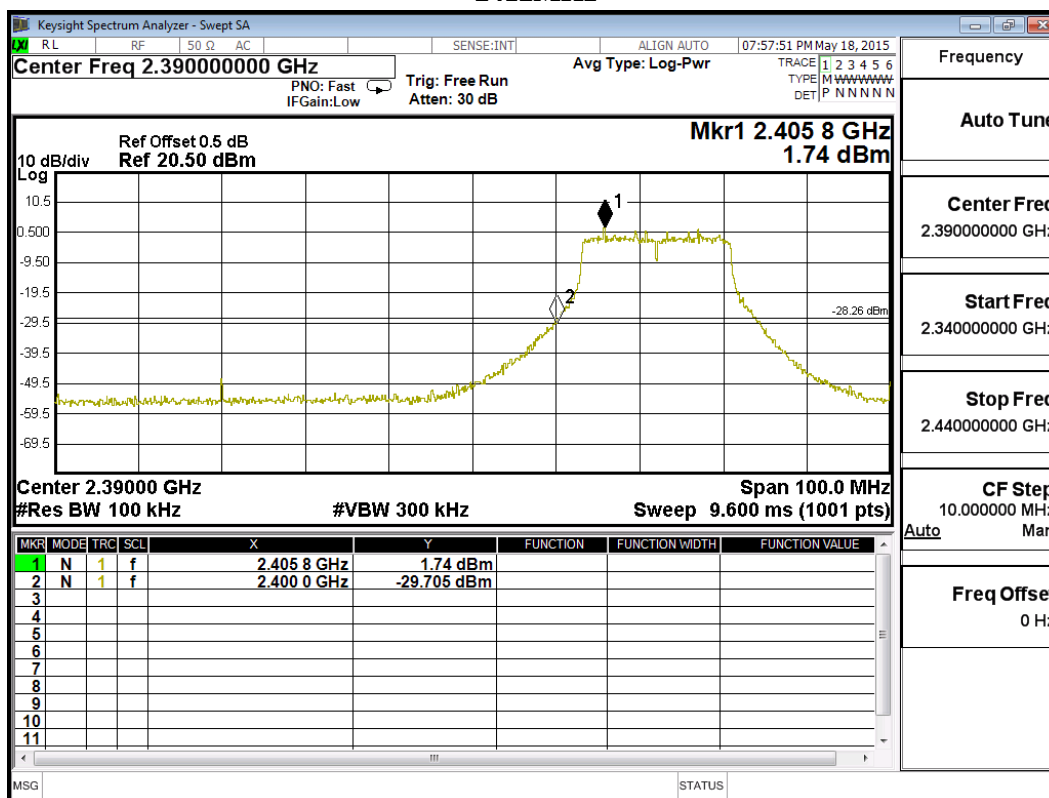
2462MHz



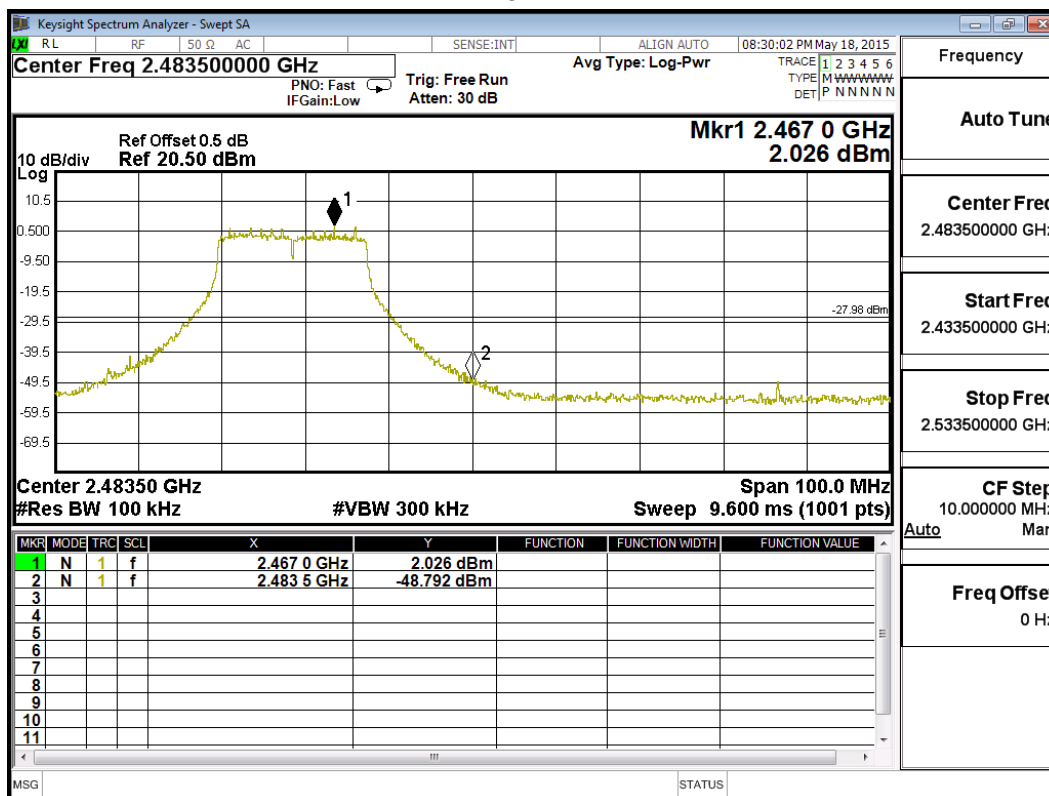
Product : Access Point/Sensor
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n 21.7Mbps 20M-BW) (Internal Antenna)

Test Frequency (MHz)	Chain	Measurement Level Δ (dB)	Limit Δ (dB)	Result
2412	B	31.45	>30	PASS
2462	B	50.82	>30	PASS

2412MHz



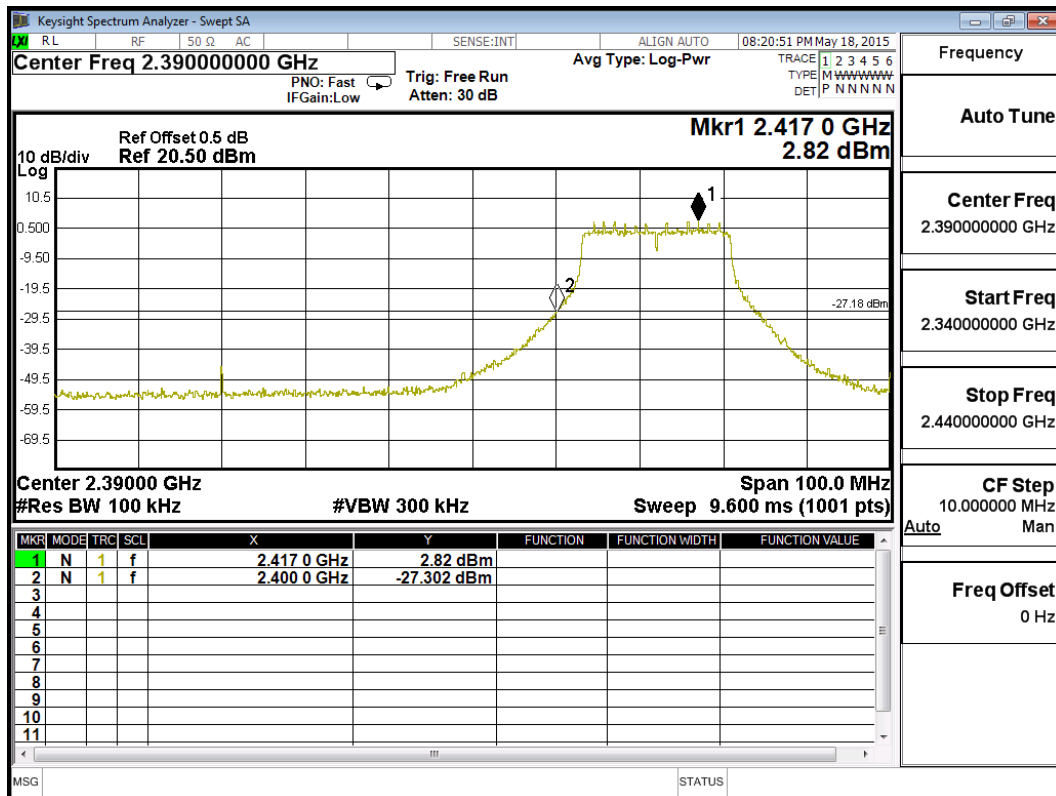
2462MHz



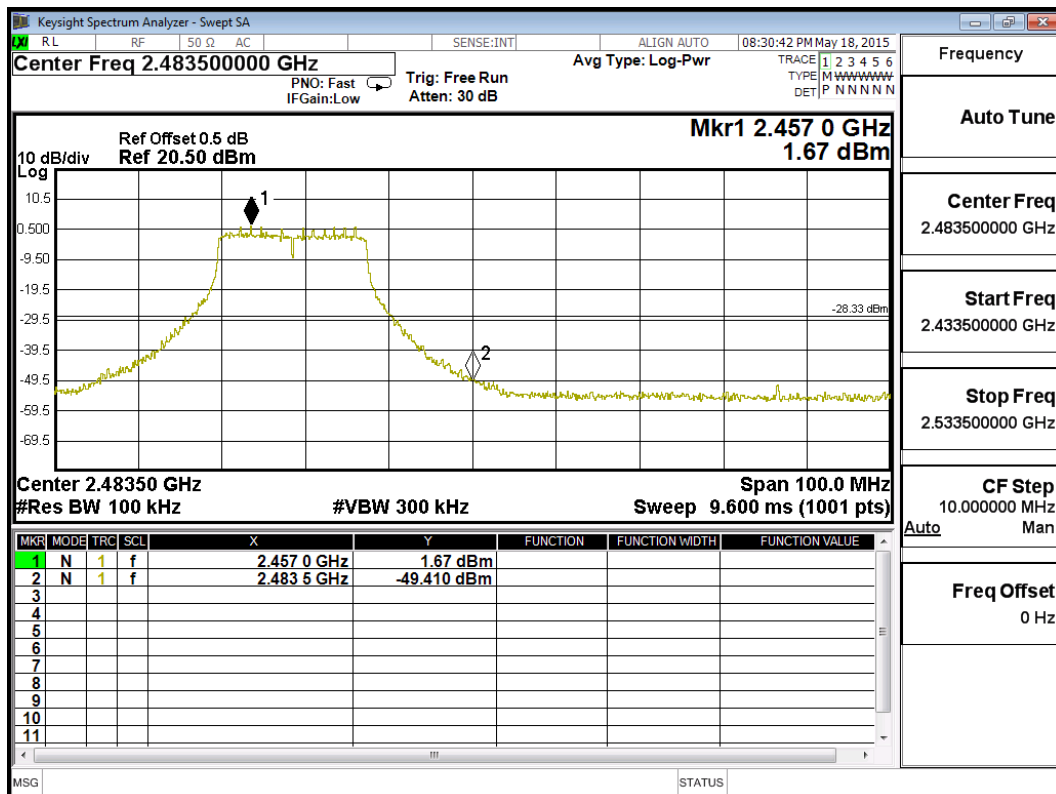
Product : Access Point/Sensor
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n 21.7Mbps 20M-BW) (Internal Antenna)

Test Frequency (MHz)	Chain	Measurement Level Δ (dB)	Limit Δ (dB)	Result
2412	C	30.12	>30	PASS
2462	C	51.08	>30	PASS

2412MHz



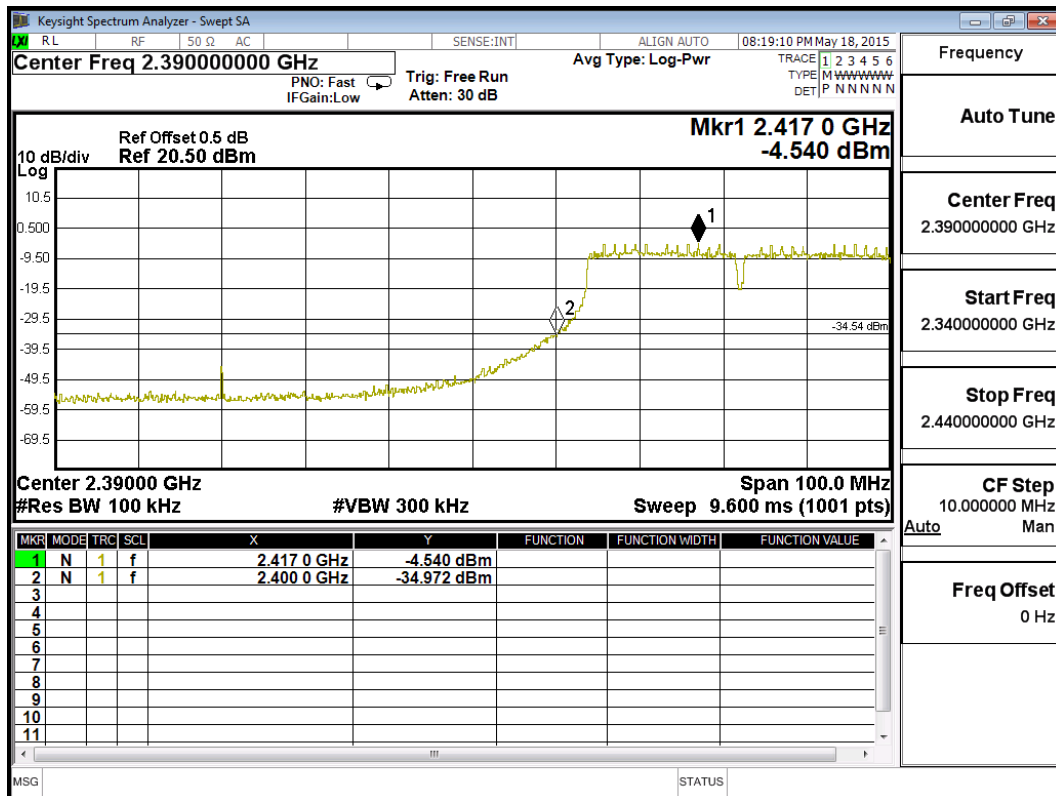
2462MHz



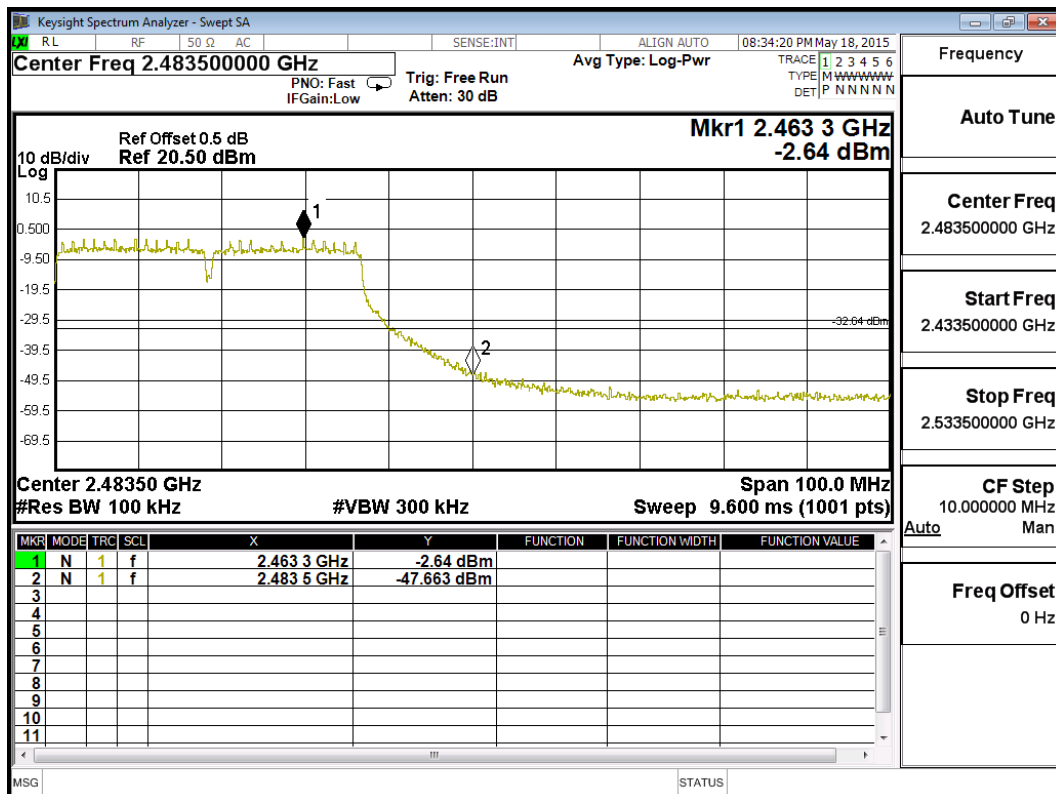
Product : Access Point/Sensor
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit (802.11n 45Mbps 40M-BW) (Internal Antenna)

Test Frequency (MHz)	Chain	Measurement Level Δ (dB)	Limit Δ (dB)	Result
2422	A	30.43	>30	PASS
2452	A	45.02	>30	PASS

2422MHz



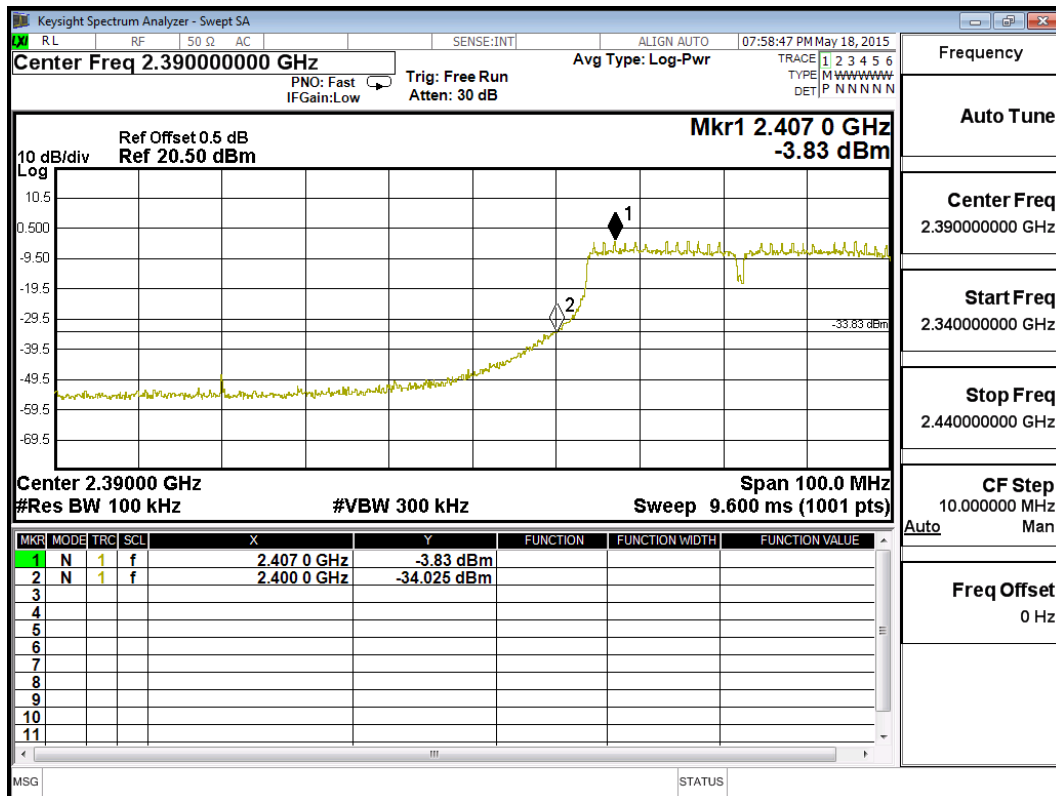
2452MHz



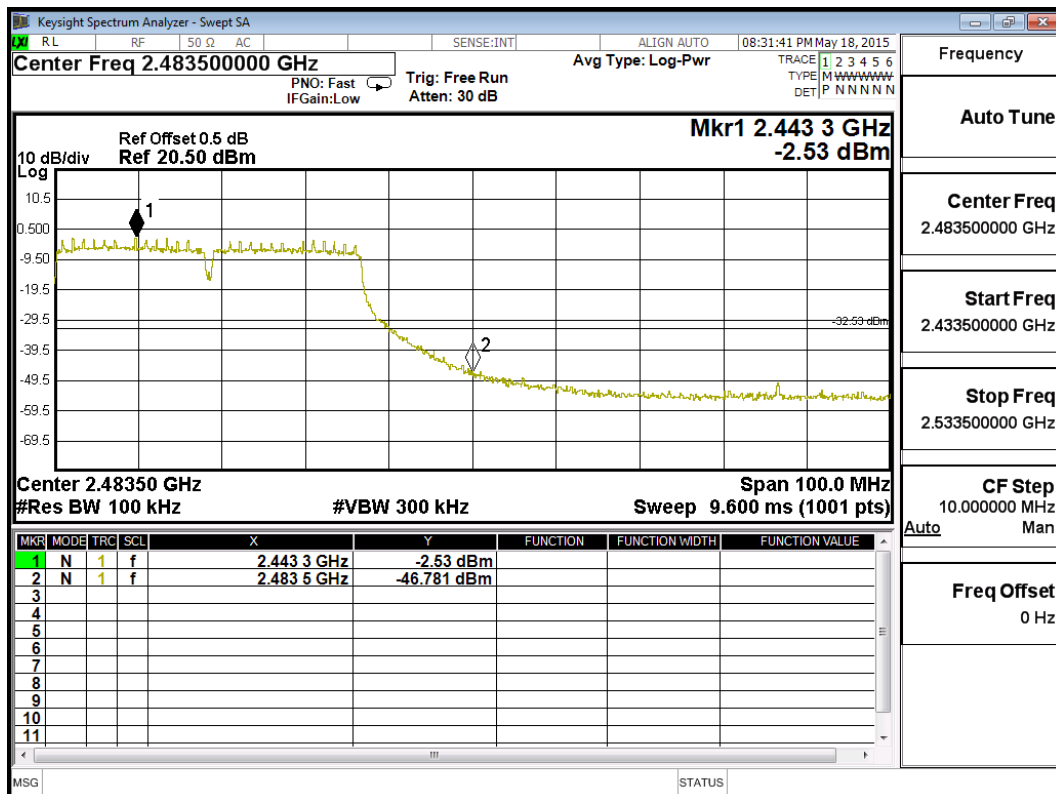
Product : Access Point/Sensor
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit (802.11n 45Mbps 40M-BW) (Internal Antenna)

Test Frequency (MHz)	Chain	Measurement Level Δ (dB)	Limit Δ (dB)	Result
2422	B	30.20	>30	PASS
2452	B	44.25	>30	PASS

2422MHz



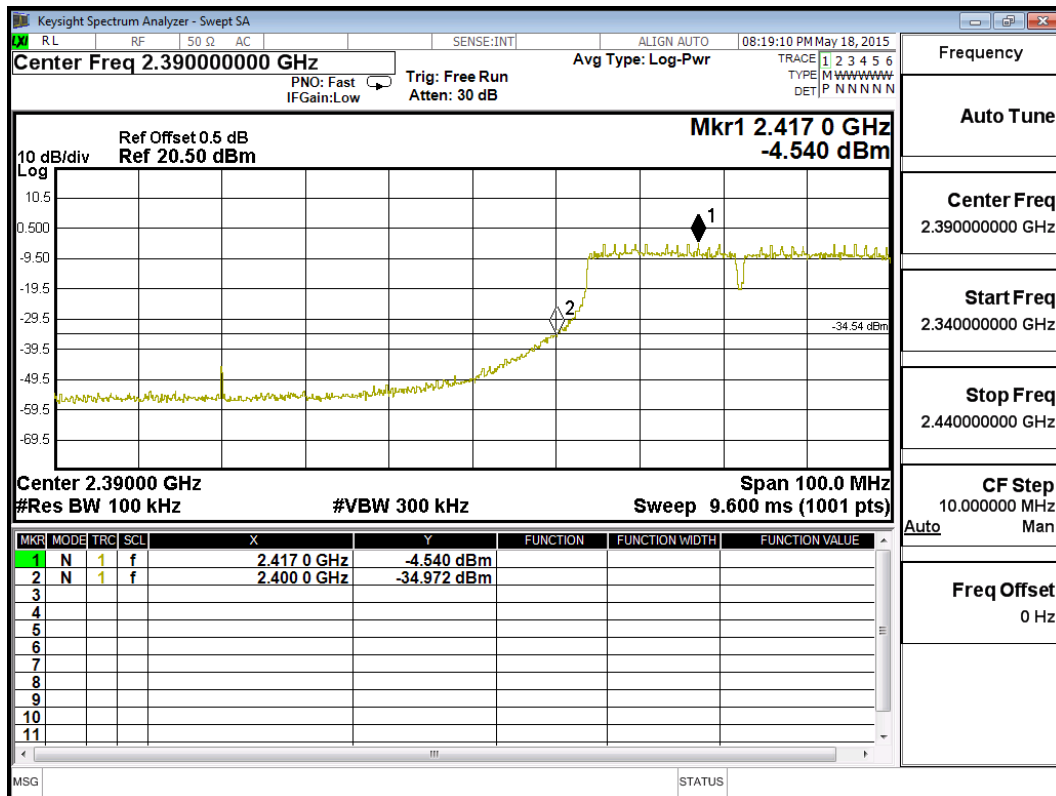
2452MHz



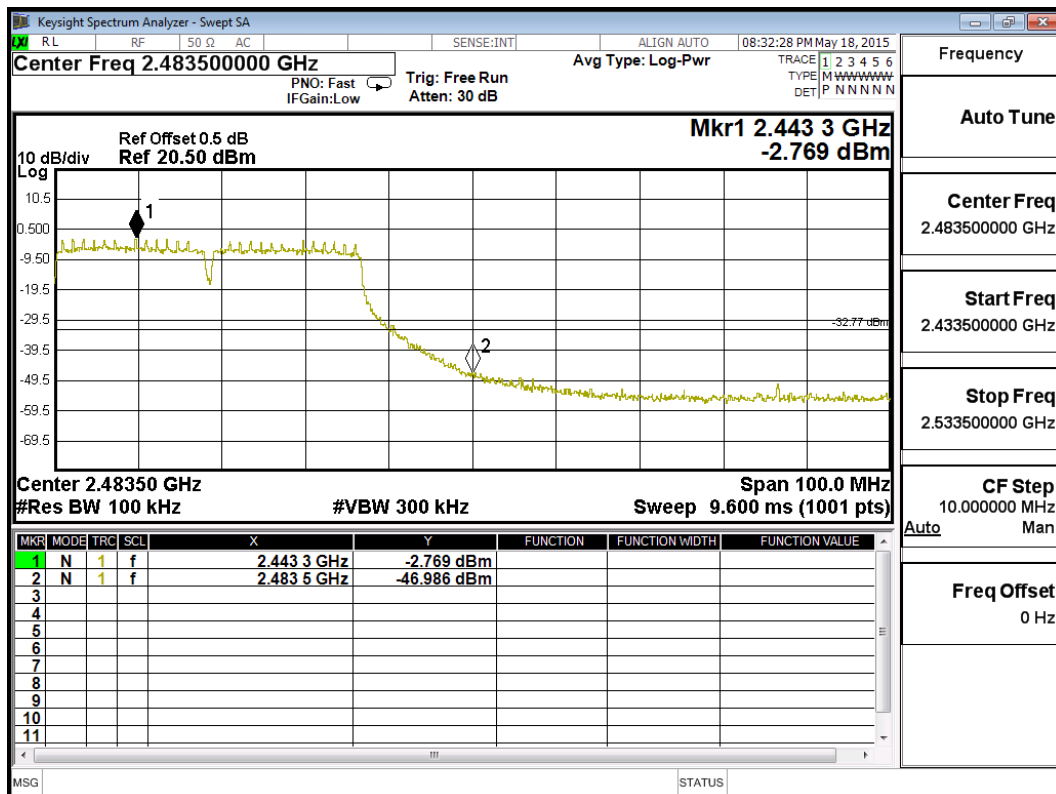
Product : Access Point/Sensor
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit (802.11n 45Mbps 40M-BW) (Internal Antenna)

Test Frequency (MHz)	Chain	Measurement Level Δ (dB)	Limit Δ (dB)	Result
2422	C	30.43	>30	PASS
2452	C	44.22	>30	PASS

2422MHz



2452MHz



7. Occupied Bandwidth

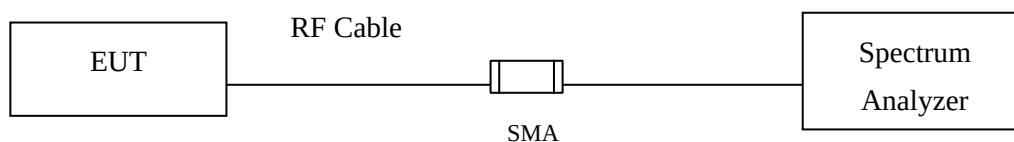
7.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun., 2014
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun., 2014
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2015

Note:

1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with “X” are used to measure the final test results.

7.2. Test Setup



7.3. Limits

The minimum bandwidth shall be at least 500 kHz.

7.4. Test Procedure

The EUT was setup according to ANSI C63.10: 2009; tested according to DTS test procedure of Jan KDB558074 for compliance to FCC 47CFR 15.247 requirements.

7.5. Uncertainty

$\pm 150\text{Hz}$

7.6. Test Result of Occupied Bandwidth

Product : Access Point/Sensor
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (External Antenna)

Channel No.	Chain	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	A	2412	10200	>500	Pass
06	A	2437	10200	>500	Pass
11	A	2462	10200	>500	Pass
01	B	2412	10200	>500	Pass
06	B	2437	10150	>500	Pass
11	B	2462	10200	>500	Pass
01	C	2412	10150	>500	Pass
06	C	2437	10150	>500	Pass
11	C	2462	10200	>500	Pass

Figure Channel 01: (Chain A)

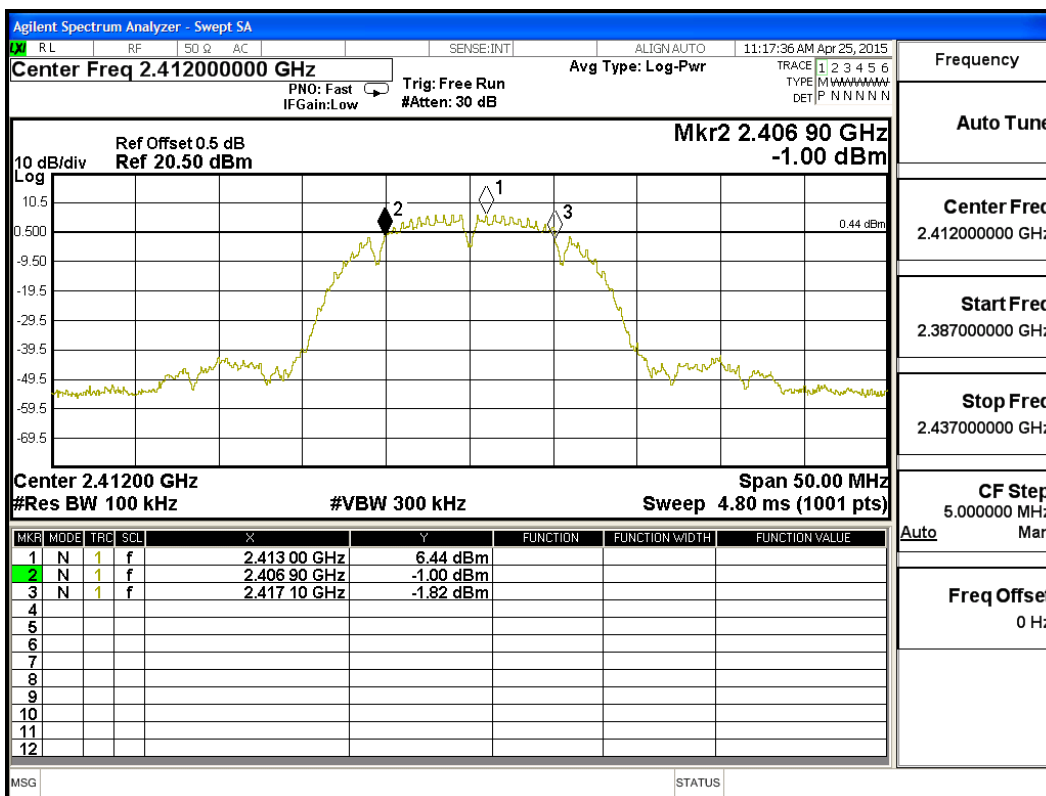
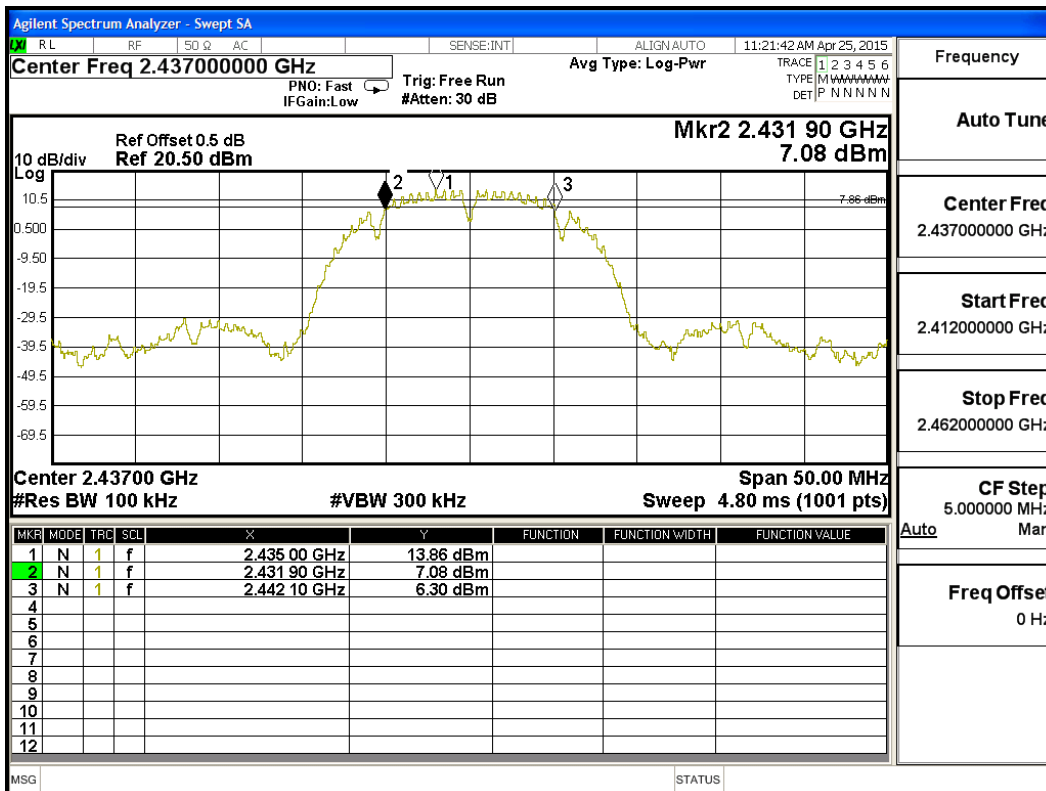


Figure Channel 06: (Chain A)



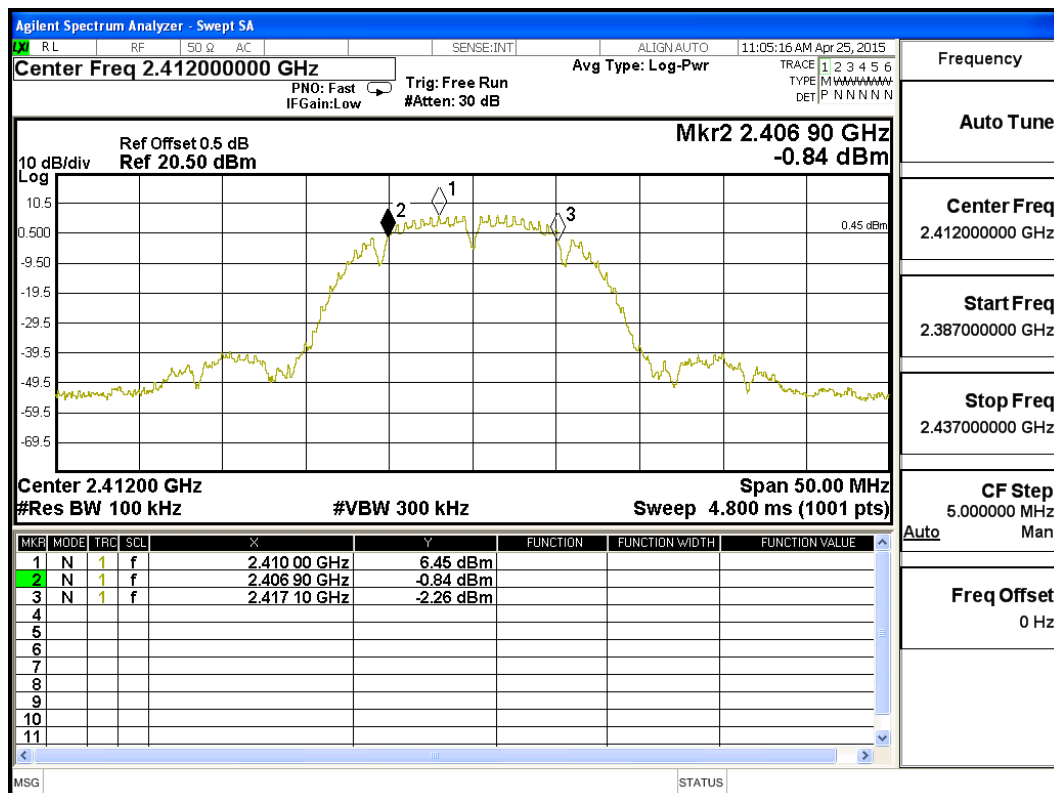
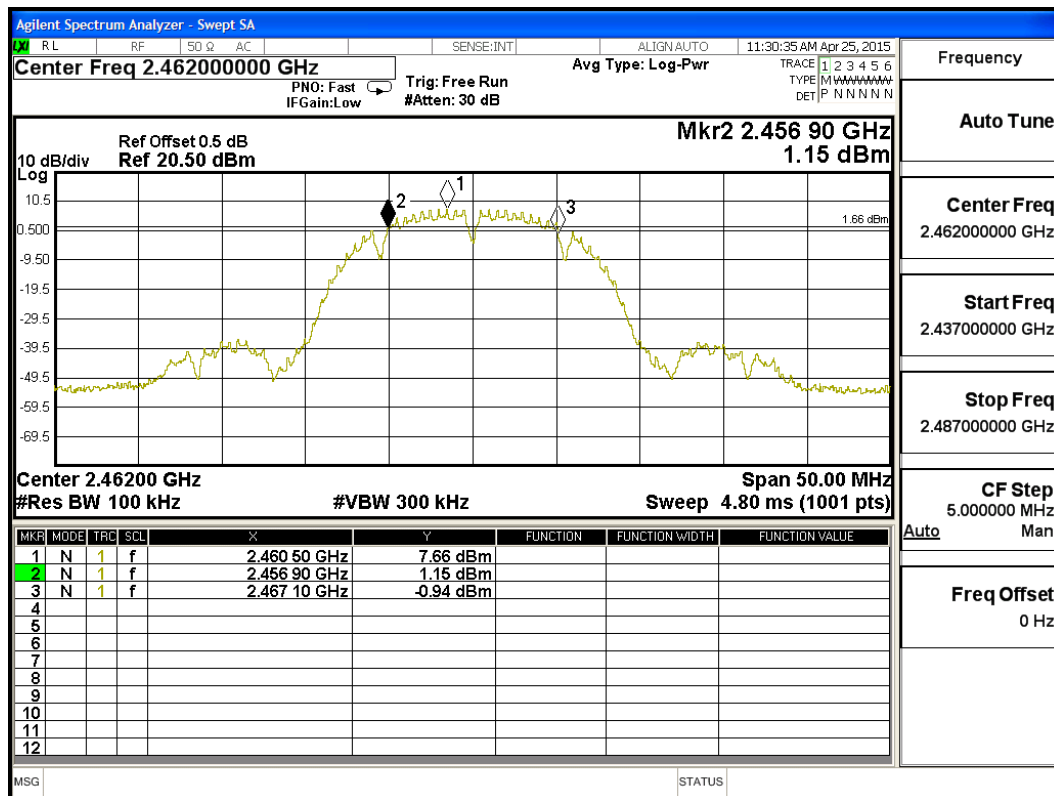


Figure Channel 06: (Chain B)

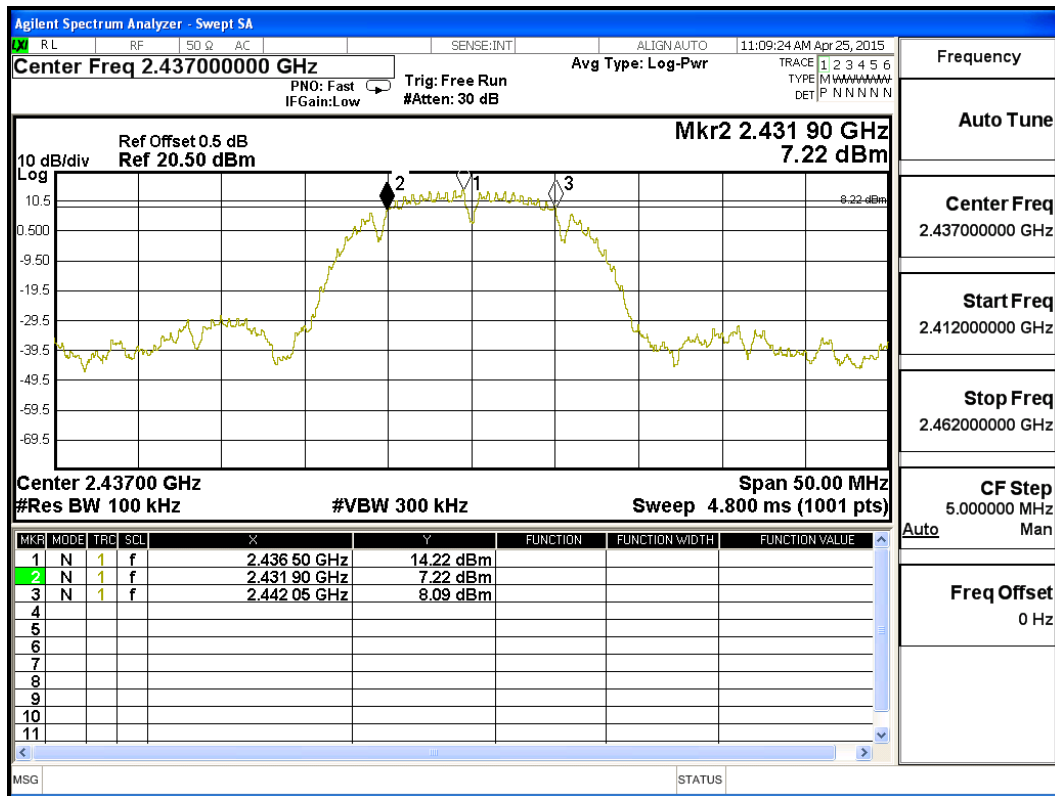


Figure Channel 11: (Chain B)

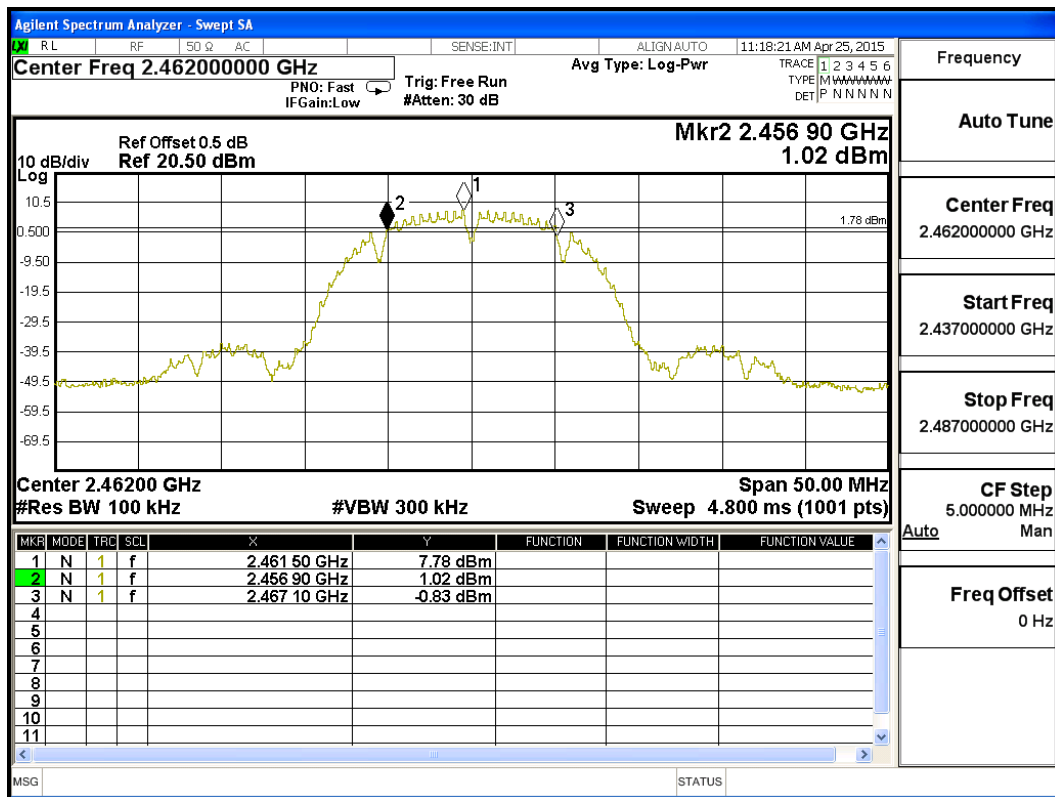


Figure Channel 01: (Chain C)

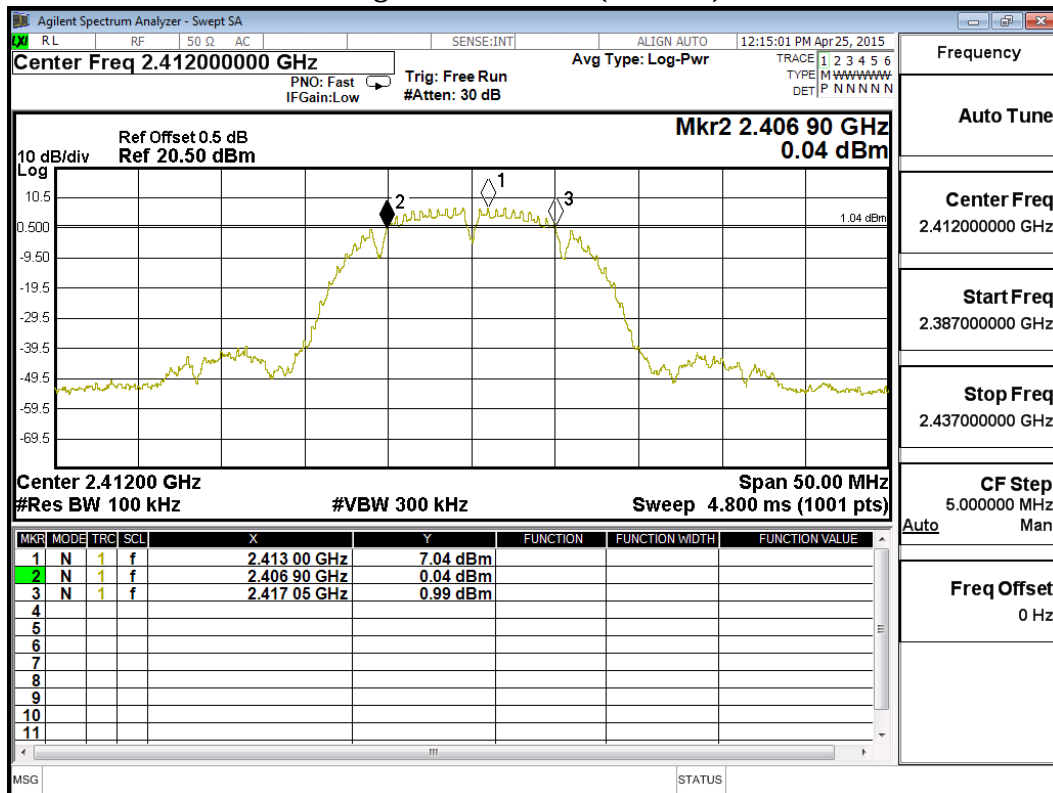


Figure Channel 06: (Chain C)

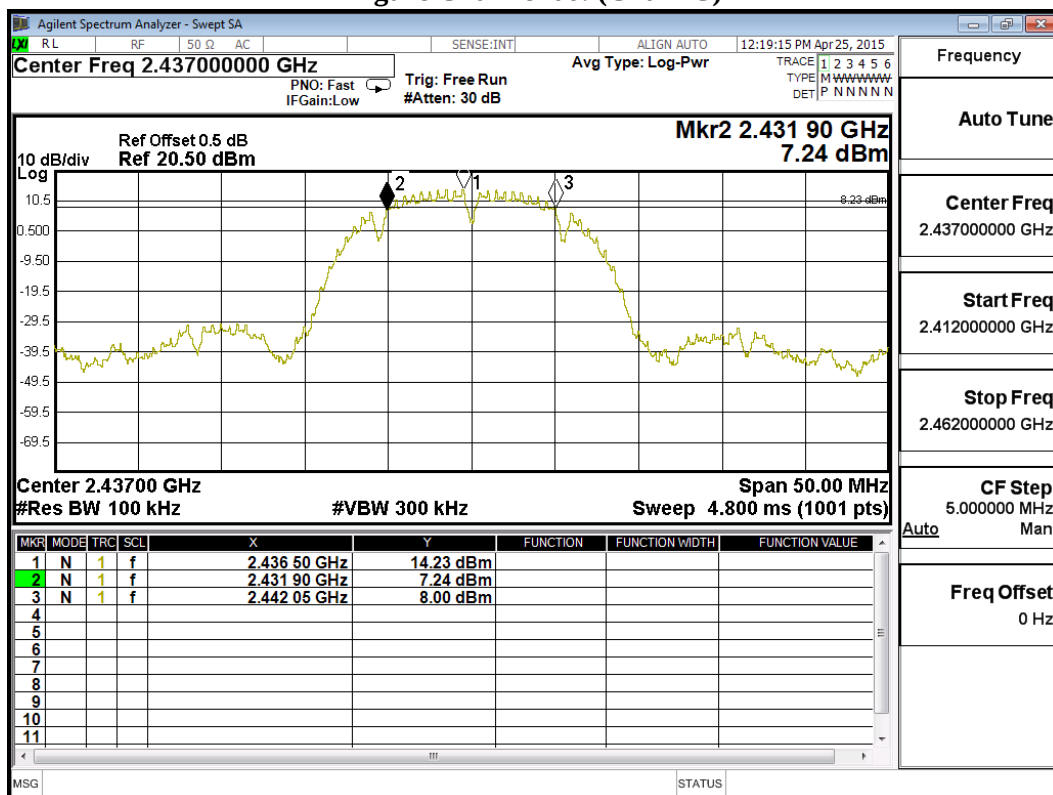
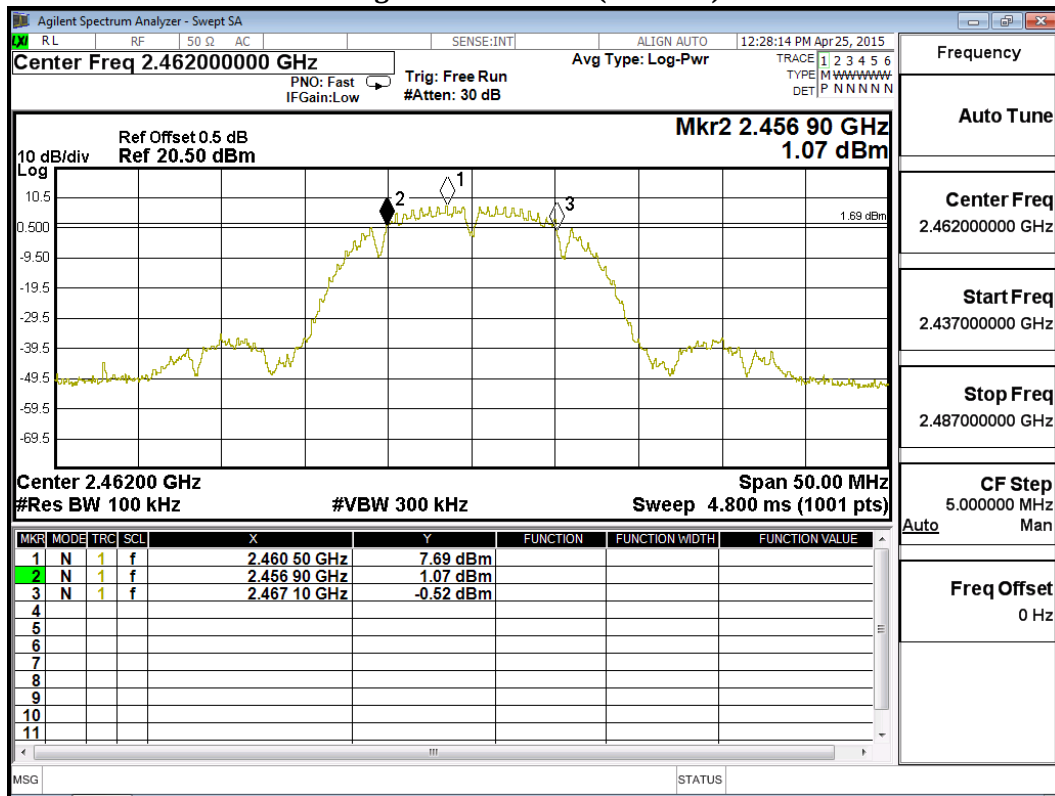


Figure Channel 11: (Chain C)



Product : Access Point/Sensor
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (External Antenna)

Channel No.	Chain	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	A	2412	16500	>500	Pass
06	A	2437	16500	>500	Pass
11	A	2462	16450	>500	Pass
01	B	2412	16500	>500	Pass
06	B	2437	16450	>500	Pass
11	B	2462	16500	>500	Pass
01	C	2412	16500	>500	Pass
06	C	2437	16500	>500	Pass
11	C	2462	16500	>500	Pass

Figure Channel 01: (Chain A)

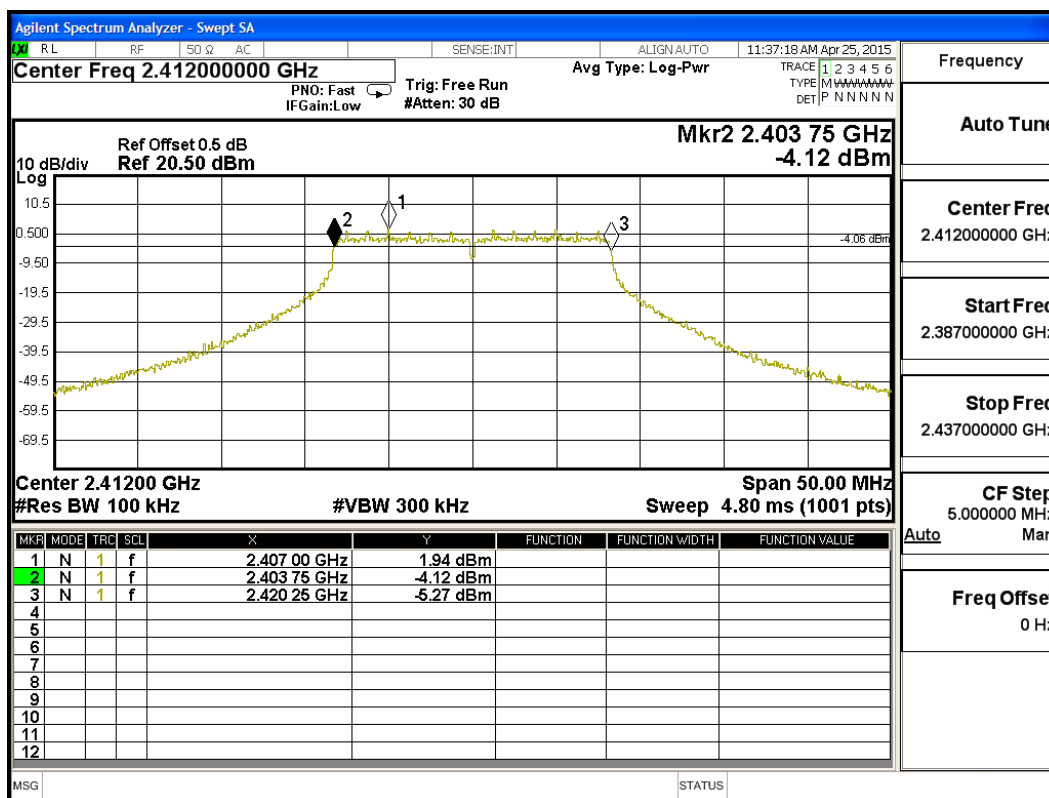


Figure Channel 06: (Chain A)

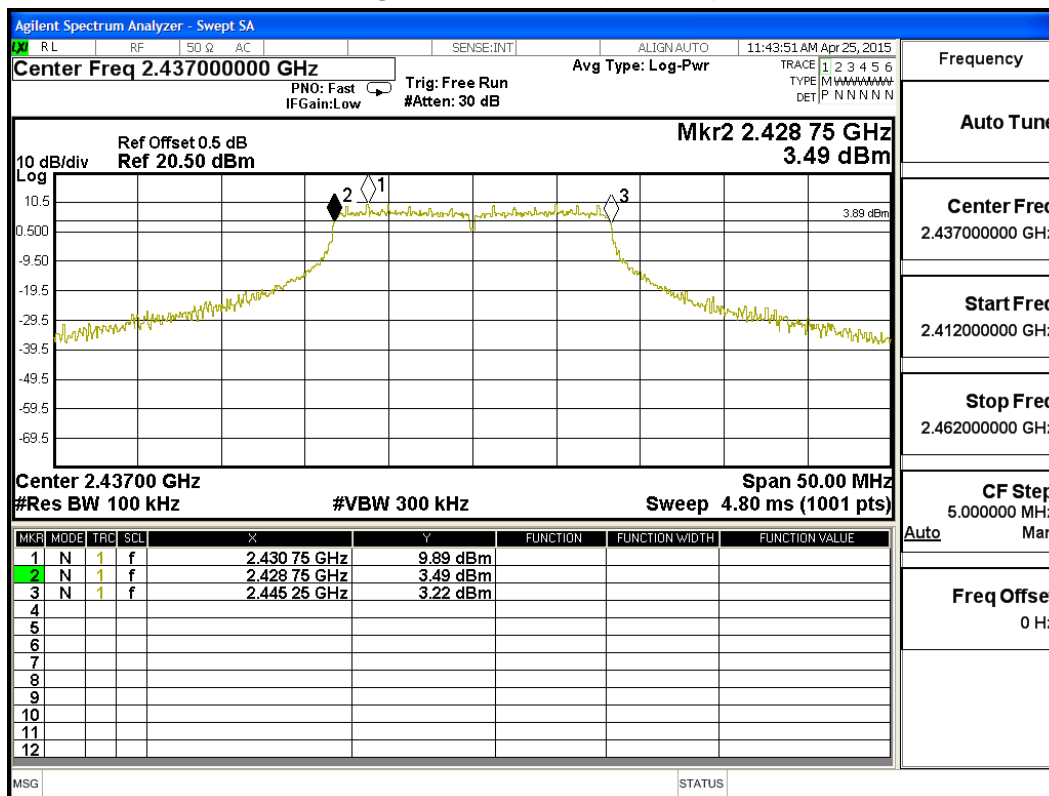


Figure Channel 11: (Chain A)

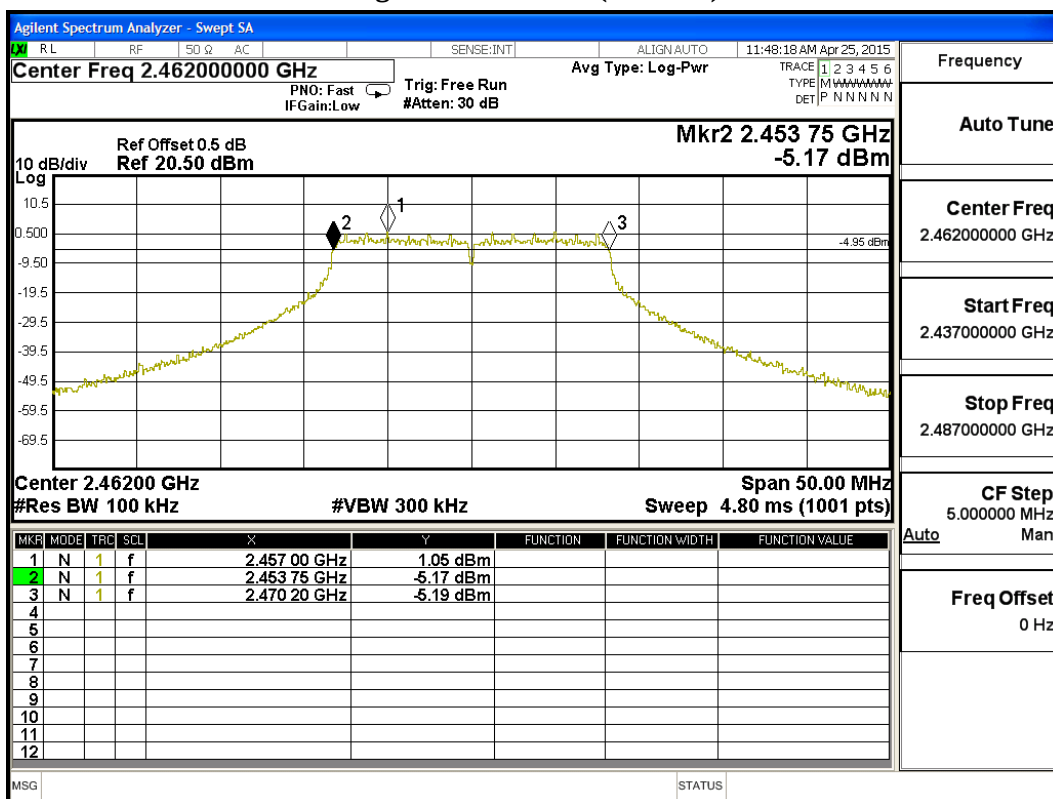


Figure Channel 01: (Chain B)

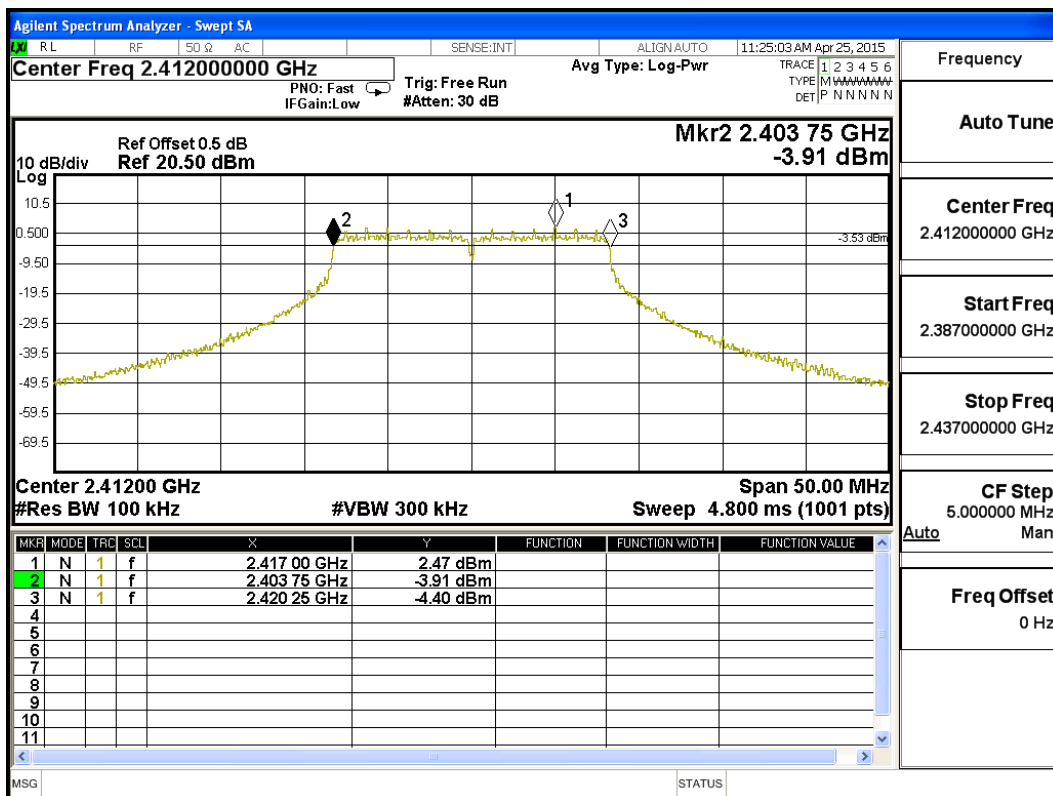


Figure Channel 06: (Chain B)

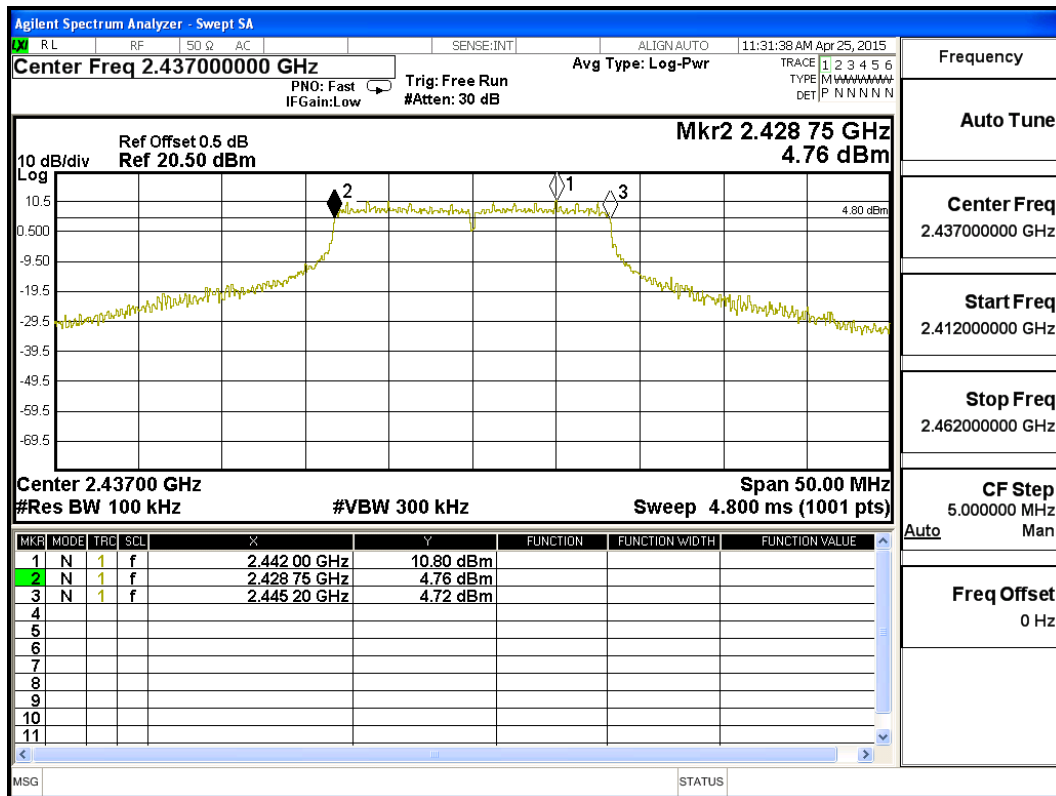


Figure Channel 11: (Chain B)

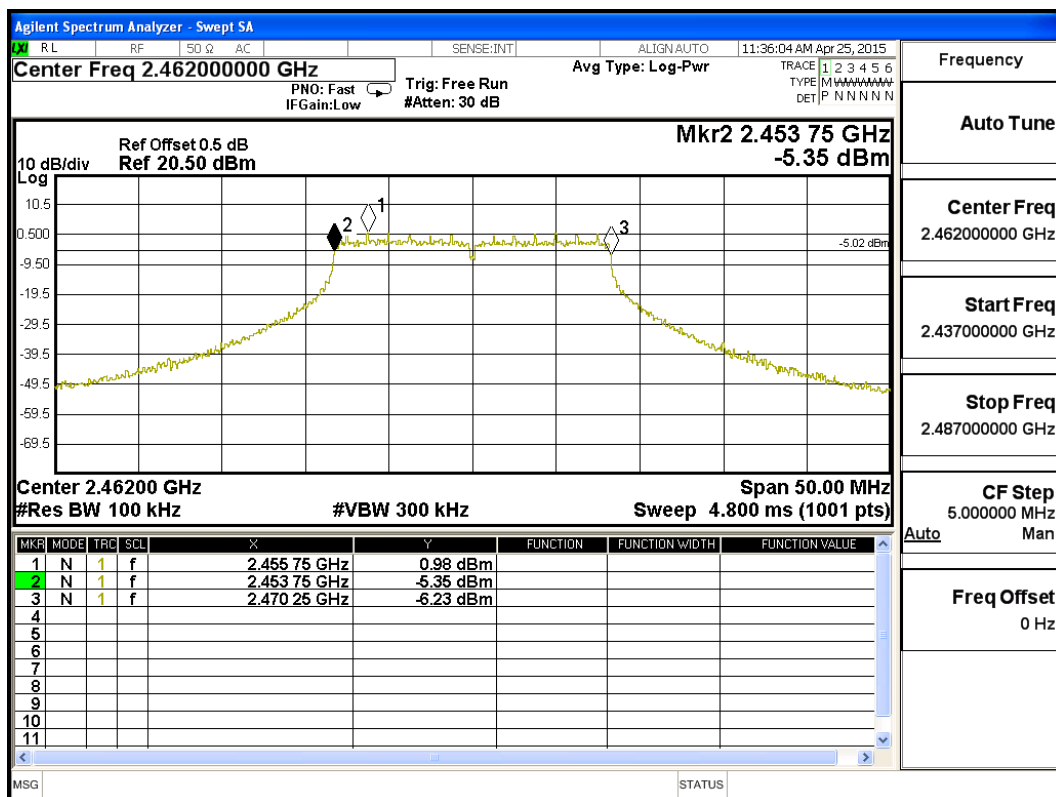


Figure Channel 01: (Chain C)

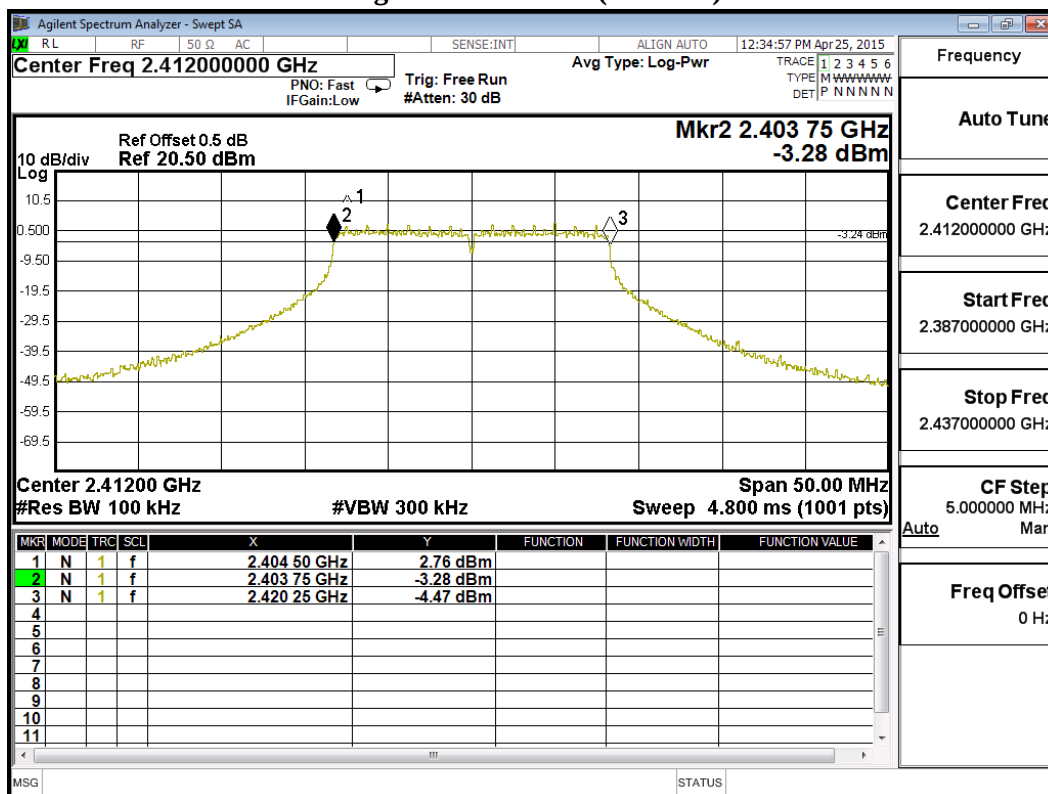


Figure Channel 06: (Chain C)

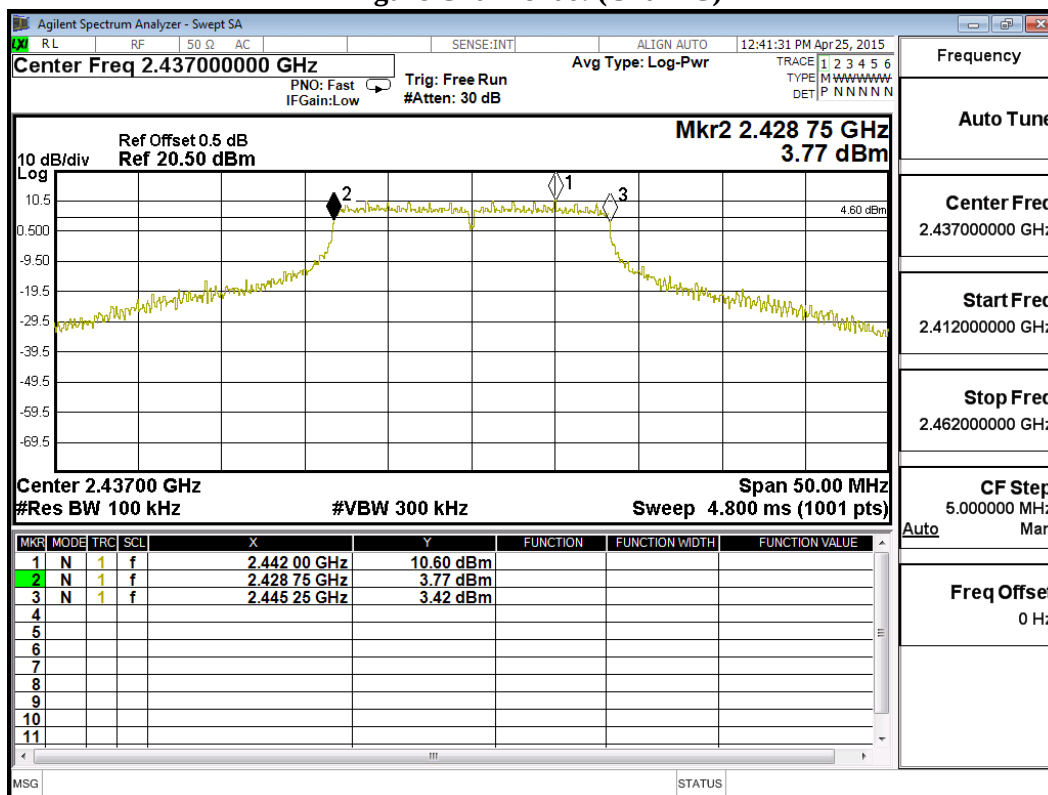
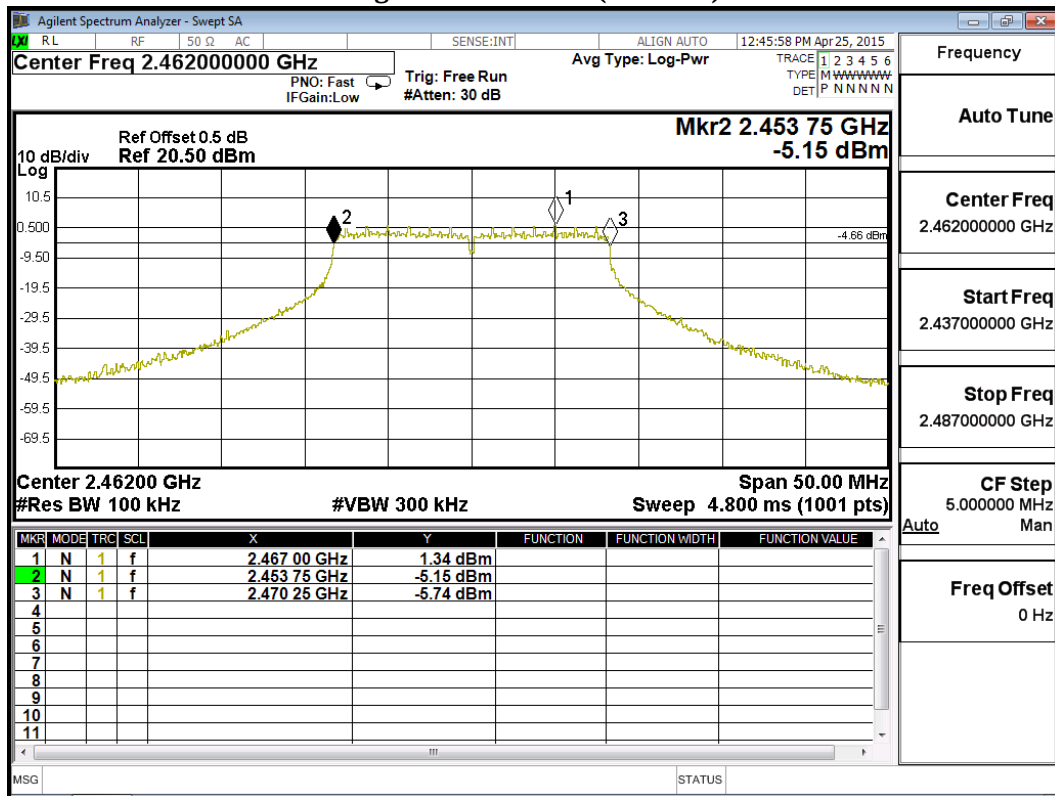


Figure Channel 11: (Chain C)



Product : Access Point/Sensor
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n 21.7Mbps 20M-BW) (External Antenna)

Channel No.	Chain	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	A	2412	17700	>500	Pass
06	A	2437	17700	>500	Pass
11	A	2462	17650	>500	Pass
01	B	2412	17750	>500	Pass
06	B	2437	17700	>500	Pass
11	B	2462	17700	>500	Pass
01	C	2412	17700	>500	Pass
06	C	2437	17700	>500	Pass
11	C	2462	17750	>500	Pass

Figure Channel 01: (Chain A)

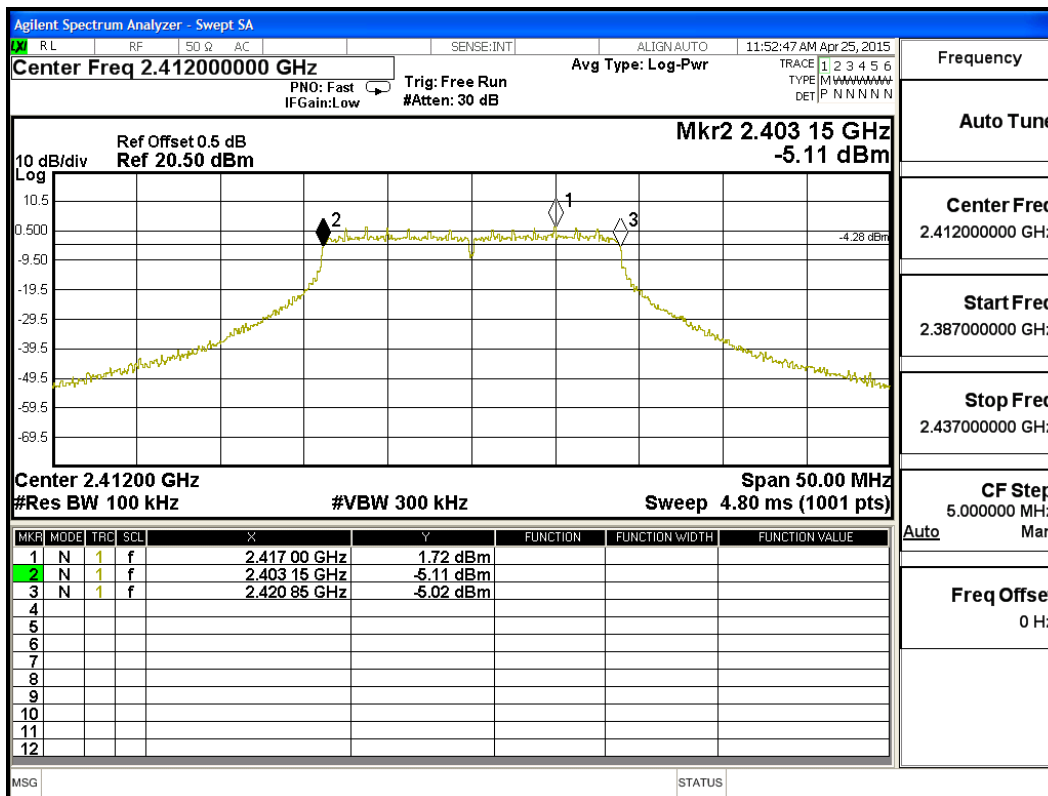


Figure Channel 06: (Chain A)

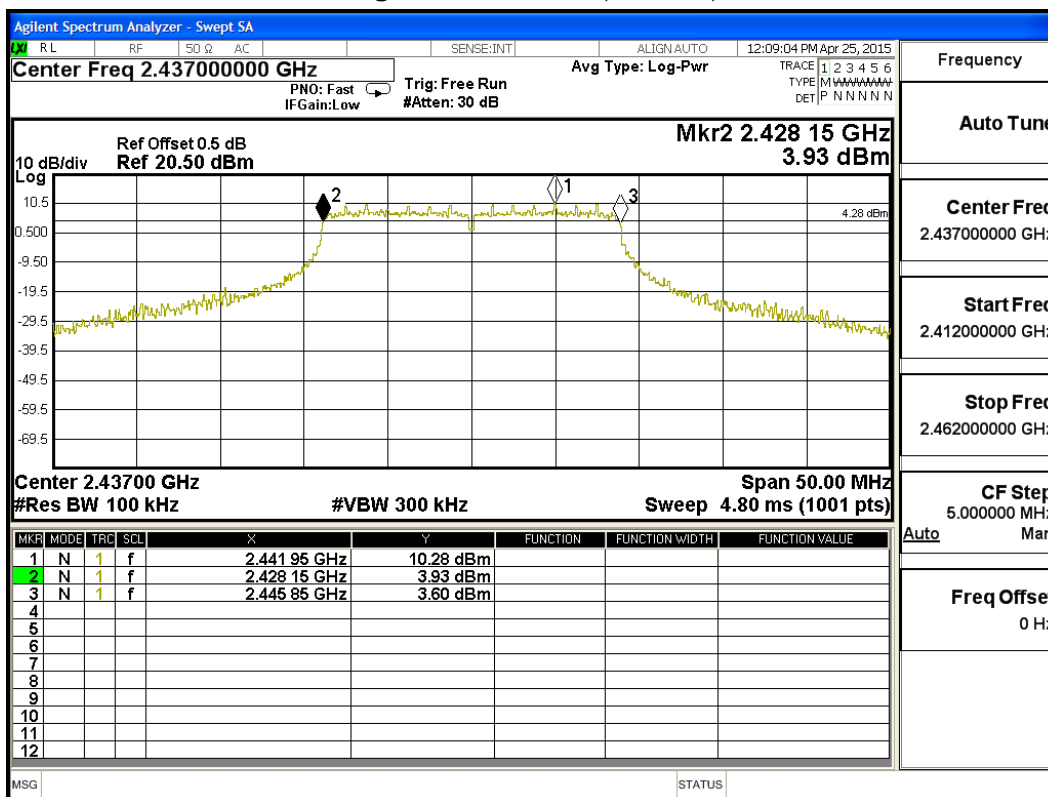


Figure Channel 11: (Chain A)

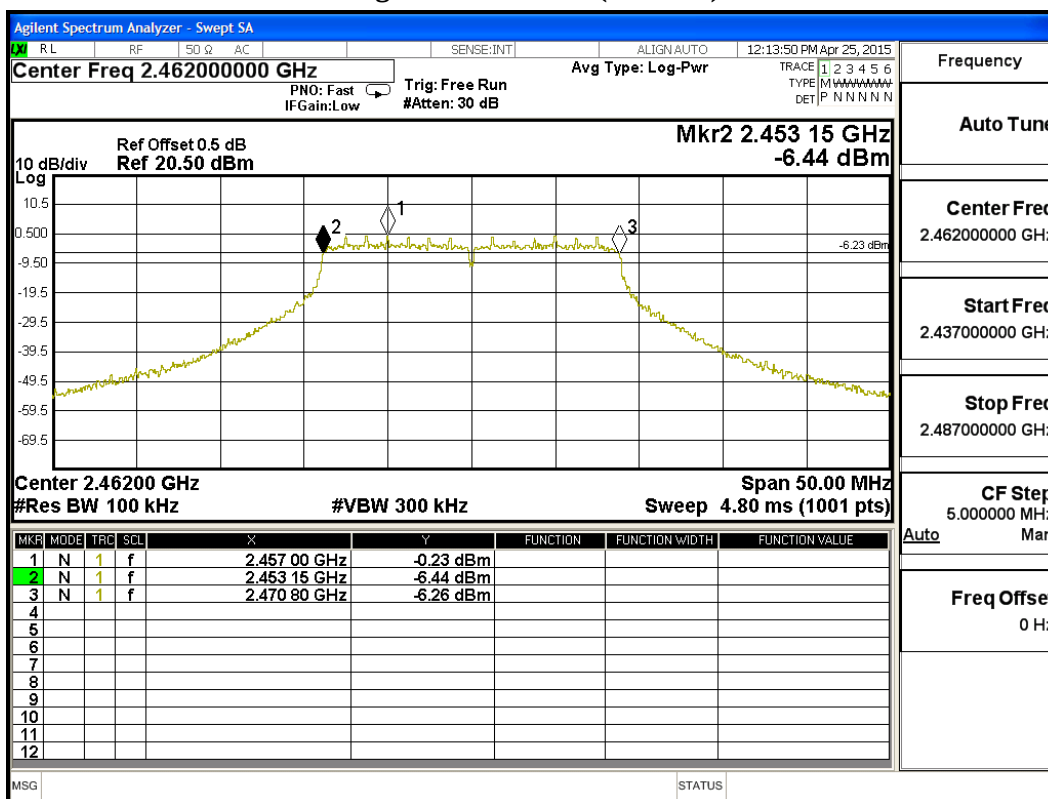


Figure Channel 01: (Chain B)

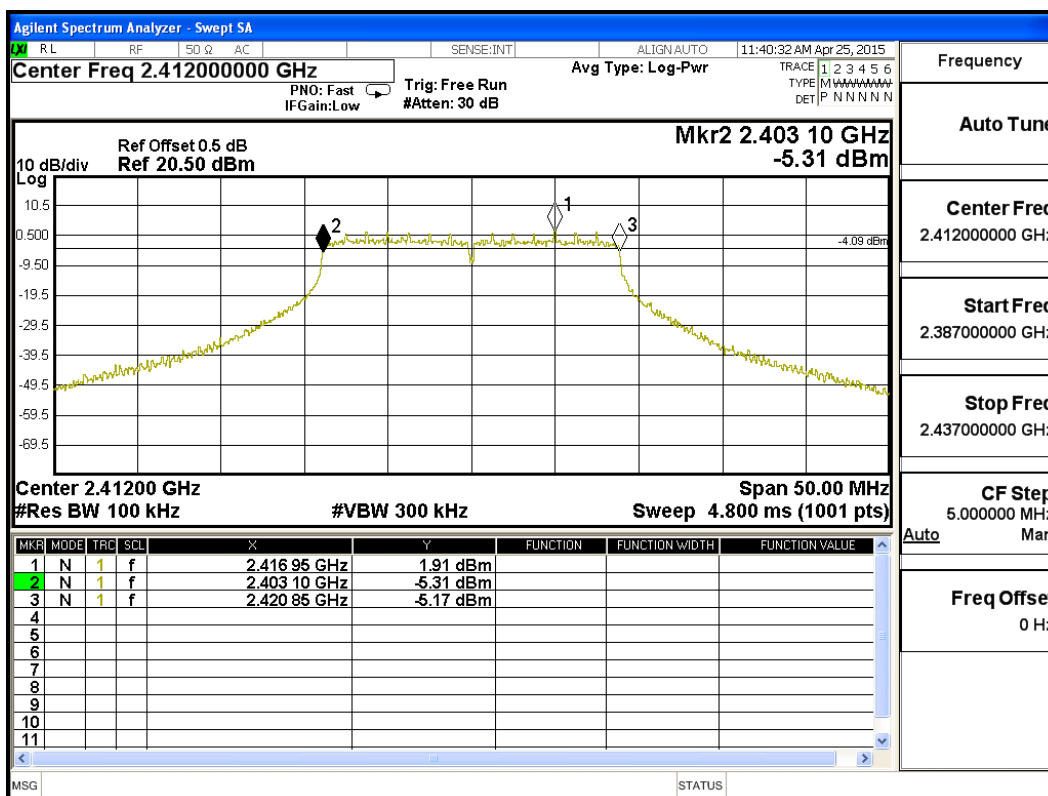


Figure Channel 06: (Chain B)

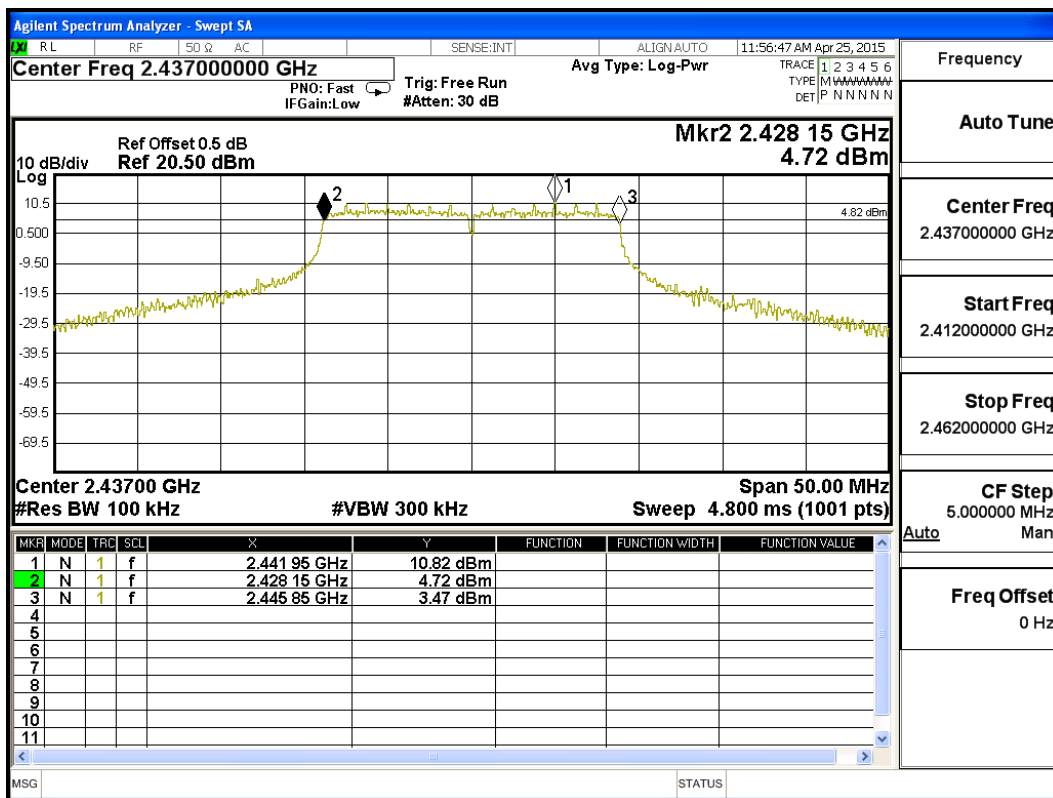


Figure Channel 11: (Chain B)

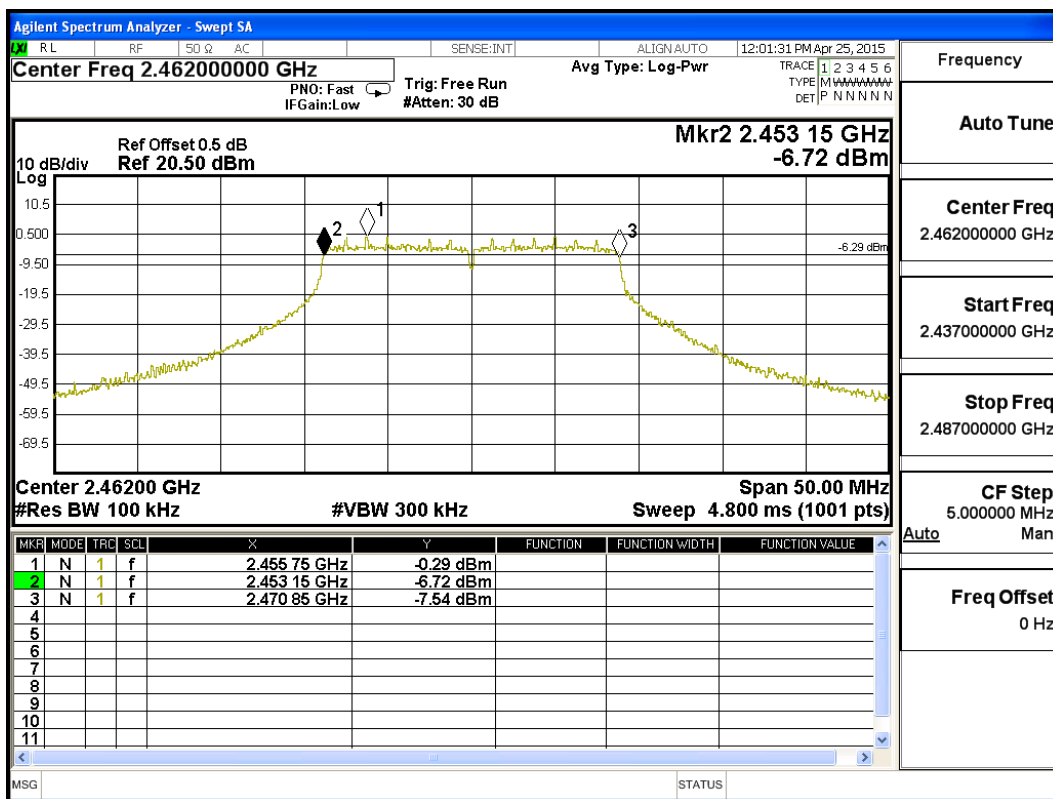


Figure Channel 01: (Chain C)

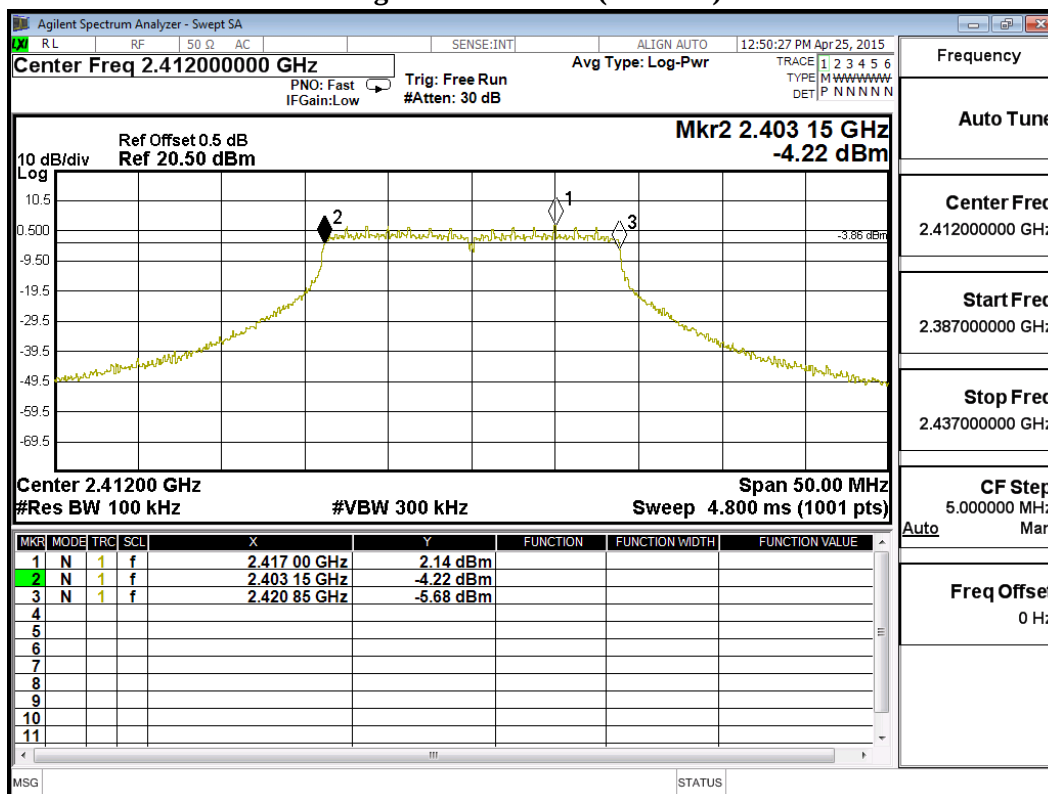


Figure Channel 06: (Chain C)

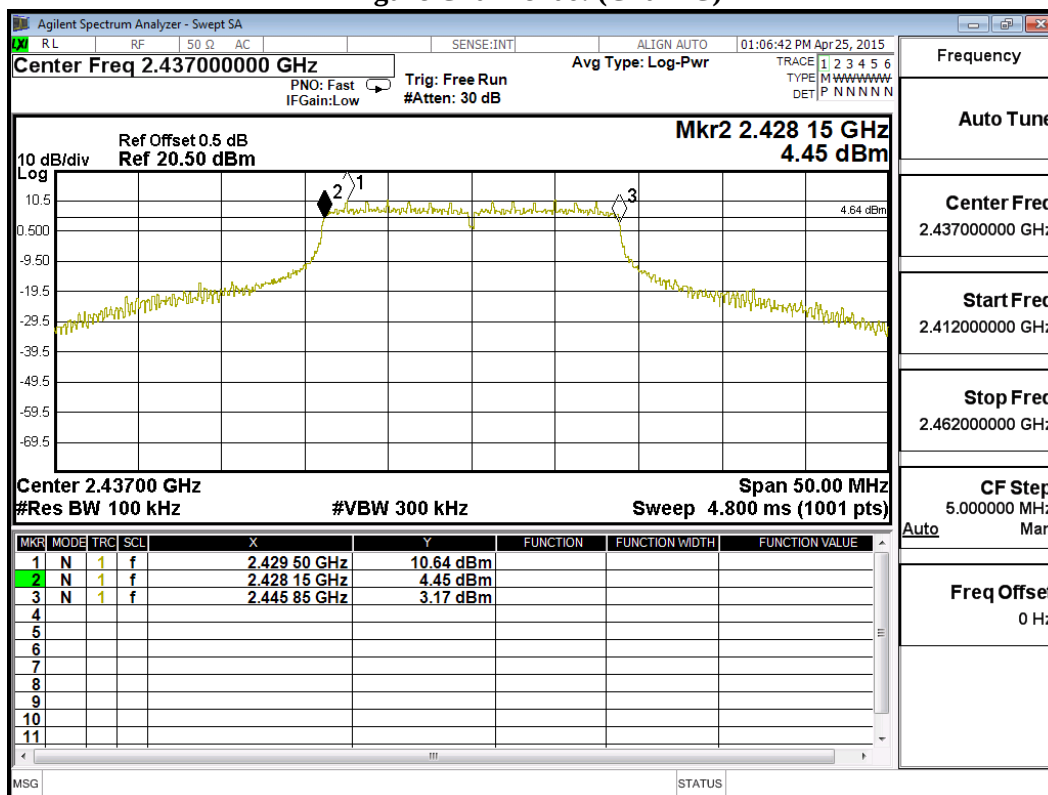
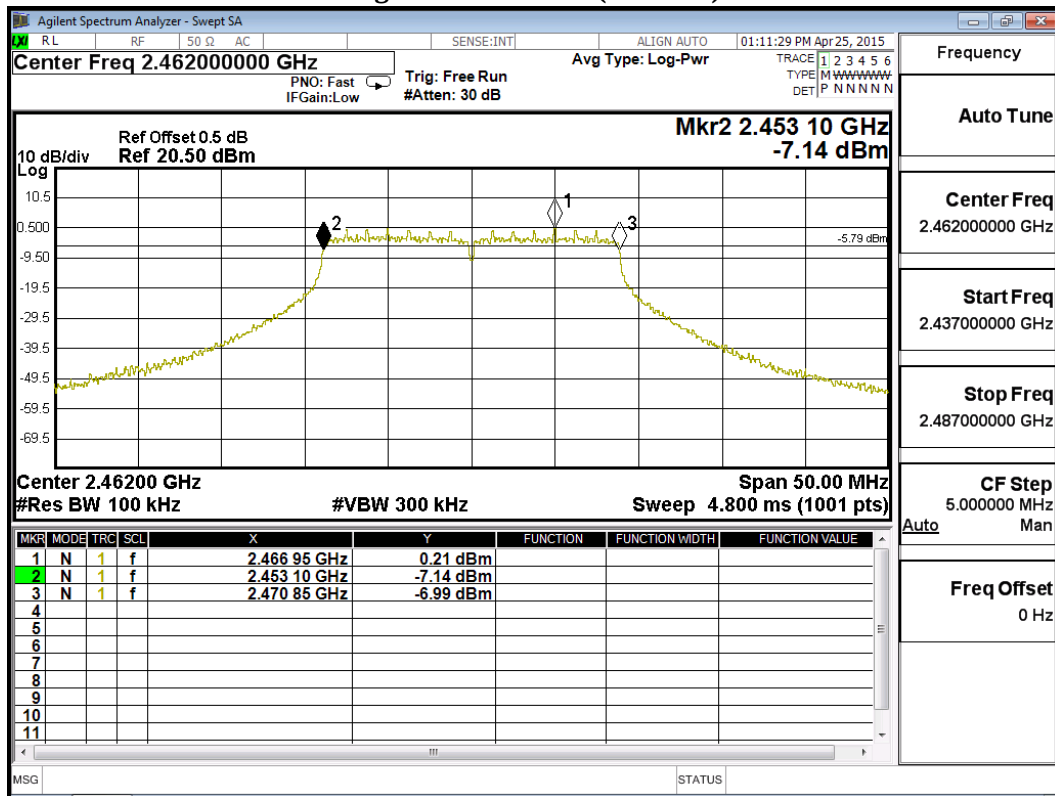


Figure Channel 11: (Chain C)



Product : Access Point/Sensor
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit (802.11n 45Mbps 40M-BW) (External Antenna)

Channel No.	Chain	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
03	A	2422	36500	>500	Pass
06	A	2437	36500	>500	Pass
09	A	2452	36500	>500	Pass
03	B	2422	36500	>500	Pass
06	B	2437	36500	>500	Pass
09	B	2452	36500	>500	Pass
03	C	2422	36300	>500	Pass
06	C	2437	36500	>500	Pass
09	C	2452	36500	>500	Pass

Figure Channel 03: (Chain A)

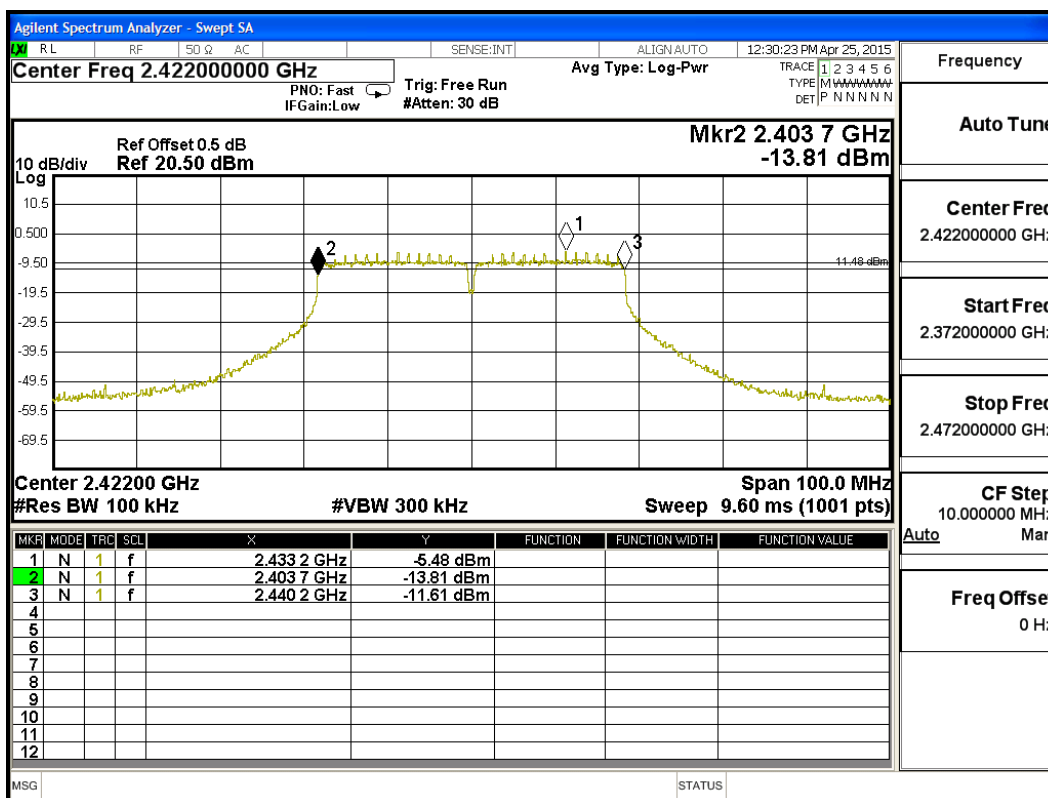


Figure Channel 06: (Chain A)

