FCC Test Report

Product Name	Security Appliance
Model No	ZA-SA3500G
FCC ID.	2AA5WSA3500G

Applicant	NEC Platforms, Ltd.
Address	2-3, tsukasa-machi, kanda, chiyoda-ku, Tokyo 101-8532 Japan

Date of Receipt	Apr. 28, 2016
Issue Date	Jun. 06, 2016
Report No.	1650058R-RFUSP25V00
Report Version	V1.0

Testing Laboratory
3023

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: Jun. 06, 2016
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Product Name	Security Appliance
Applicant	NEC Platforms, Ltd.
Address	2-3, tsukasa-machi, kanda, chiyoda-ku, Tokyo 101-8532 Japan
Manufacturer	NEC Platforms, Ltd.
Model No.	ZA-SA3500G
EUT Rated Voltage	AC 100V~240V, 50/60Hz
EUT Test Voltage	AC 120V/60Hz
Trade Name	NEC
Applicable Standard	FCC CFR Title 47 Part 15 Subpart C: 2016 ANSI C63.4: 2014, ANSI C63.10: 2013 KDB 558074 D01 DTS Meas Guidance v03r05
Test Result	Complied

Documented By : Anita Chou

(Senior Engineering Adm. Specialist / Anita Chou)

Tested By : Jen Chen

(Assistant Engineer / Jen Chen)

Approved By :

(Director / Vincent Lin)

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1. GENERAL INFORMATION

1.1. EUT Description

Product Name	Security Appliance
Trade Name	NEC
Model No.	ZA-SA3500G
FCC ID.	2AA5WSA3500G
Frequency Range	802.11b/g/n-20MHz: 2412-2462MHz, 802.11n-40MHz: 2422-2452MHz
Number of Channels	802.11b/g/n-20MHz: 11, 802.11n-40MHz: 7
Data Speed	802.11b: 1-11Mbps, 802.11a/g: 6-54Mbps, 802.11n: up to 300Mbps
Type of Modulation	802.11b:DSSS, DBPSK, DQPSK, CCK 802.11g/n: OFDM, BPSK, QPSK, 16QAM, 64QAM
Antenna Type	Omni antenna (external) Sprit ring resonator antenna (Internal)
Antenna Gain	Refer to the table “Antenna List”
Channel Control	Auto
RJ45 Cable	Non-shielded, 2.0m
Power Adapter	MFR: NEC, M/N: CVW1215N Input: AC 100~240V~ 50/60Hz, 0.4A Output: DC 12V, 1.5A Cable Out: Non-shielded, 1.2m

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	Master Wave	98241PSAX002 (External)	Omni antenna	3.57dBi for 2.4GHz
2	NEC Platforms, Ltd.	SA3500G (ANT0A) / (ANT1A) (Internal)	Sprit ring resonator antenna	-1.6dBi for 2.4GHz

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 (2.4G Band) Center Working 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. This device is an Security Appliance with a built-in 2.4GHz WLAN transceiver.
2. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
3. 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 14.4Mbps and, 802.11n(40M-BW) is 30Mbps).
4. At result of pretests, module supports dual-channel transmission, only the worst case is shown in the report. (802.11b is chain A, 802.11g is chain B)
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.

Test Mode:	Mode 1: Transmit (802.11b 1Mbps)
	Mode 2: Transmit (802.11g 6Mbps)
	Mode 3: Transmit (802.11n-20BW)_14.4Mbps(2.4G Band)
	Mode 4: Transmit (802.11n-40BW)_30Mbps(2.4G Band)

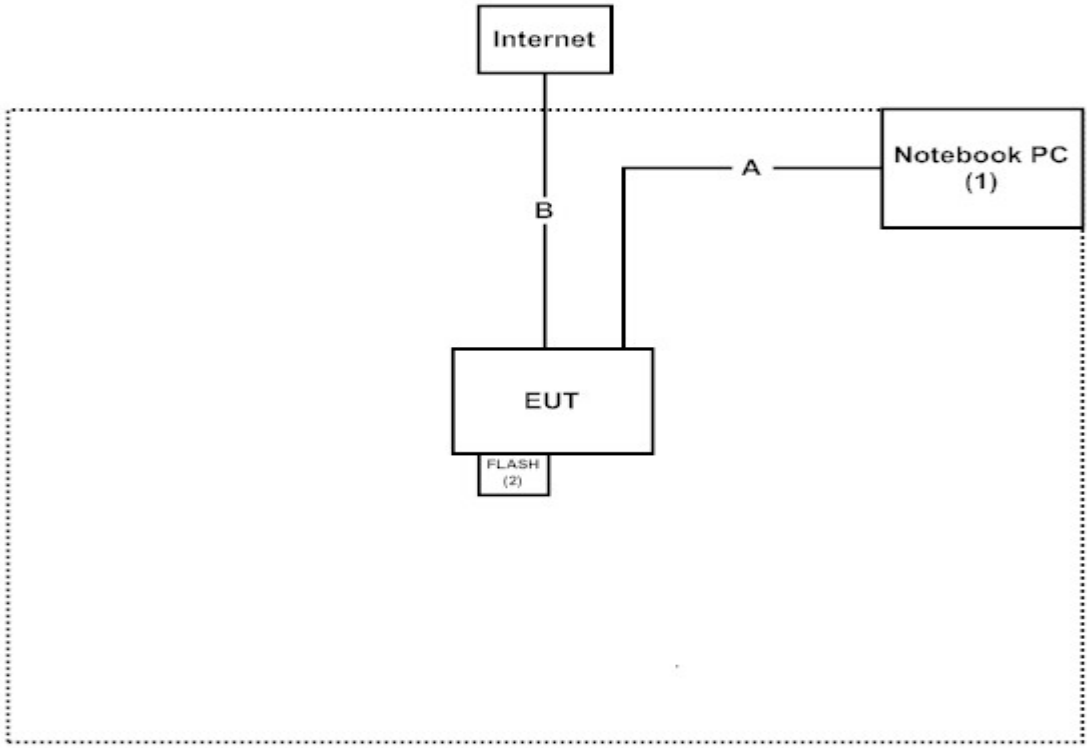
1.3. Tested System Details

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	Latitude E5440	FS9TK32	Non-Shielded, 0.8m
2	FLASH	Transcend	JetFlash110	155422-2931	N/A

Signal Cable Type		Signal cable Description
A	RJ45 Cable	Non-shielded, 2.0m
B	RJ45 Cable	Non-Shielded, 3m, four PCS.

1.4. Configuration of Tested System



1.5. EUT Exercise Software

(1) Setup the EUT as shown on 1.4
(2) Execute “ART2-GUI 2.3” program on the Notebook PC.
(3) Configure the test mode, the test channel, and the data rate.
(4) Start the continuous transmission.
(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/

FCC Accreditation Number: TW1014

Site Name: Quietek Corporation
Site Address: No.5-22, Ruishukeng,
Linkou Dist. New Taipei City 24451,
Taiwan, R.O.C.
TEL : 886-2-8601-3788 / FAX : 886-2-8601-3789
E-Mail : service@quietek.com

2. Conducted Emission

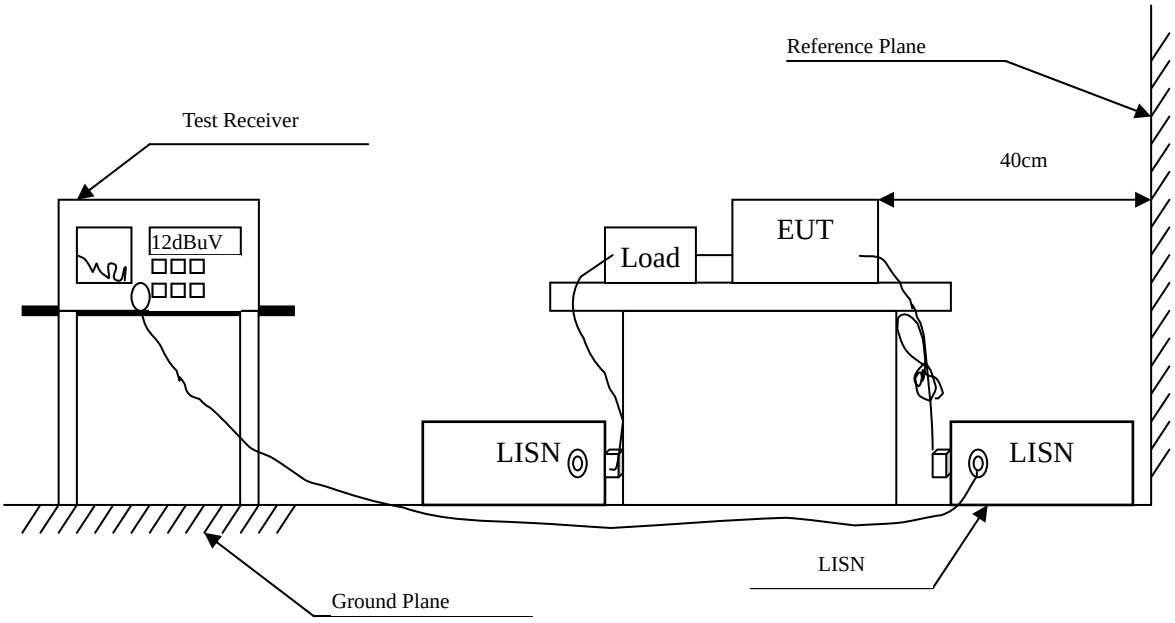
2.1. Test Equipment

	Equipment	Manufacturer	Model No. / Serial No.	Last Cal.	Due Cal.	Remark
X	Test Receiver	R & S	ESCS 30 / 825442/018	Sep., 2015	Sep., 2016	
X	Artificial Mains Network	R & S	ENV4200 / 848411/10	Feb., 2016	Feb., 2017	Peripherals
X	LISN	R & S	ESH3-Z5 / 825562/002	Feb., 2016	Feb., 2017	EUT
	DC LISN	Schwarzbeck	8226 / 176	Mar, 2016	Mar, 2017	EUT
X	Pulse Limiter	R & S	ESH3-Z2 / 357.8810.52	Feb., 2016	Feb., 2017	
	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 (dBuV) 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: 2014 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

Product : Security Appliance
Test Item : Conducted Emission Test
Power Line : Line 1
Test Mode : Mode 4: Transmit (802.11n-40BW)_30Mbps(2.4G Band) (2437MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
Line 1					
Quasi-Peak					
0.162	9.781	40.420	50.201	-15.456	65.657
0.244	9.778	31.780	41.558	-21.756	63.314
0.412	9.781	20.640	30.421	-28.093	58.514
0.822	9.823	24.780	34.603	-21.397	56.000
8.423	10.066	16.120	26.186	-33.814	60.000
26.326	10.190	23.480	33.670	-26.330	60.000
Average					
0.162	9.781	29.470	39.251	-16.406	55.657
0.244	9.778	23.740	33.518	-19.796	53.314
0.412	9.781	10.590	20.371	-28.143	48.514
0.822	9.823	18.620	28.443	-17.557	46.000
8.423	10.066	3.670	13.736	-36.264	50.000
26.326	10.190	11.700	21.890	-28.110	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " " means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Product : Security Appliance
Test Item : Conducted Emission Test
Power Line : Line 2
Test Mode : Mode 4: Transmit (802.11n-40BW)_30Mbps(2.4G Band) (2437MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
Line 2					
Quasi-Peak					
0.162	9.832	39.970	49.802	-15.855	65.657
0.244	9.838	32.330	42.168	-21.146	63.314
0.408	9.851	21.910	31.761	-26.868	58.629
0.818	9.883	26.870	36.753	-19.247	56.000
8.619	10.158	15.780	25.938	-34.062	60.000
26.564	10.412	24.670	35.082	-24.918	60.000
Average					
0.162	9.832	29.690	39.522	-16.135	55.657
0.244	9.838	25.230	35.068	-18.246	53.314
0.408	9.851	15.300	25.151	-23.478	48.629
0.818	9.883	23.420	33.303	-12.697	46.000
8.619	10.158	2.690	12.848	-37.152	50.000
26.564	10.412	12.890	23.302	-26.698	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. “ “ means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Product : Security Appliance
Test Item : Conducted Emission Test
Power Line : Line 1
Test Mode : Mode 4: Transmit (802.11n-40BW)_30Mbps(2.4G Band) (2437MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
Line 1					
Quasi-Peak					
0.162	9.781	39.510	49.291	-16.366	65.657
0.248	9.778	28.740	38.518	-24.682	63.200
0.408	9.781	21.390	31.171	-27.458	58.629
0.814	9.822	27.770	37.592	-18.408	56.000
1.712	9.902	15.720	25.622	-30.378	56.000
25.974	10.188	20.720	30.908	-29.092	60.000
Average					
0.162	9.781	39.510	49.291	-16.366	65.657
0.248	9.778	28.740	38.518	-24.682	63.200
0.408	9.781	21.390	31.171	-27.458	58.629
0.814	9.822	27.770	37.592	-18.408	56.000
1.712	9.902	15.720	25.622	-30.378	56.000
25.974	10.188	20.720	30.908	-29.092	60.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. “ “ means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Product : Security Appliance
Test Item : Conducted Emission Test
Power Line : Line 2
Test Mode : Mode 4: Transmit (802.11n-40BW)_30Mbps(2.4G Band) (2437MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
Line 2					
Quasi-Peak					
0.162	9.832	38.880	48.712	-16.945	65.657
0.326	9.844	24.430	34.274	-26.697	60.971
0.736	9.876	23.040	32.916	-23.084	56.000
1.142	9.908	20.040	29.948	-26.052	56.000
2.509	10.009	19.760	29.769	-26.231	56.000
26.349	10.410	21.870	32.280	-27.720	60.000
Average					
0.162	9.832	29.180	39.012	-16.645	55.657
0.326	9.844	18.330	28.174	-22.797	50.971
0.736	9.876	17.150	27.026	-18.974	46.000
1.142	9.908	13.820	23.728	-22.272	46.000
2.509	10.009	10.080	20.089	-25.911	46.000
26.349	10.410	10.040	20.450	-29.550	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. “ “ means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

3. Maximum Conducted Power

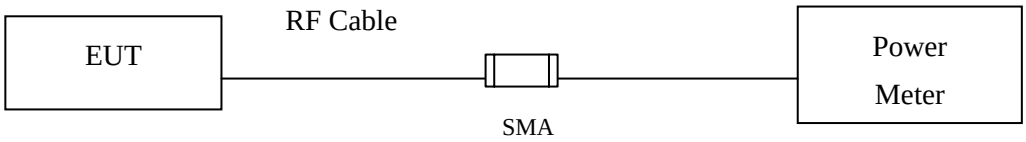
3.1. Test Equipment

Equipment		Manufacturer	Model No./Serial No.	Last Cal.	Due Cal.
X	Power Meter	Anritsu	ML2495A/6K00003357	May, 2016	May, 2017
X	Power Sensor	Anritsu	MA2411B/0738448	Jun, 2016	Jun, 2017
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2016	Jun, 2017
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2016	Jun, 2017
	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2016	Apr., 2017

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 average power shall be less 1 Watt. (Section 15.247 (b)(3))

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 v03r04 section 9.1.2 PKPM1 Peak power meter method.

3.5. Uncertainty

± 1.27 dB

3.6. Test Result of Maximum Conducted Power

Product : Security Appliance
Test Item : Maximum Conducted Power
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps)

CHAIN A

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)				Peak Power	Required Limit	Result
		1	2	5.5	11	1		
		Measurement Level (dBm)						
01	2412	8.77	--	--	--	11.48	<30dBm	Pass
06	2437	9.13	9.01	8.92	8.78	11.90	<30dBm	Pass
11	2462	8.75	--	--	--	11.55	<30dBm	Pass

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)				Peak Power	Required Limit	Result
		1	2	5.5	11	1		
		Measurement Level (dBm)						
01	2412	9.01	--	--	--	11.84	<30dBm	Pass
06	2437	8.61	8.52	8.43	8.33	11.87	<30dBm	Pass
11	2462	8.97	--	--	--	11.70	<30dBm	Pass

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

Product : Security Appliance
Test Item : Maximum Conducted Power
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps)

CHAIN A

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power	Required Limit	Result
		6	9	12	18	24	36	48	54	6		
		Measurement Level (dBm)										
01	2412	11.32	--	--	--	--	--	--	--	22	<30dBm	Pass
06	2437	11.72	11.65	11.59	11.45	11.35	11.29	11.12	11.02	22.03	<30dBm	Pass
11	2462	11.32	--	--	--	--	--	--	--	21.72	<30dBm	Pass

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)								Peak Power	Required Limit	Result
		6	9	12	18	24	36	48	54	6		
		Measurement Level (dBm)										
01	2412	11.63	--	--	--	--	--	--	--	22.08	<30dBm	Pass
06	2437	11.62	11.54	11.48	11.32	11.24	11.12	11.05	10.99	22.14	<30dBm	Pass
11	2462	11.44	--	--	--	--	--	--	--	22.03	<30dBm	Pass

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

Product : Security Appliance
Test Item : Maximum Conducted Power
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-20BW)_14.4Mbps(2.4G Band)

CHAIN A

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power
		14.4	28.9	43.3	57.8	86.7	115.6	130	144.4	14.4
		Measurement Level (dBm)								
01	2412	11.32	--	--	--	--	--	--	--	22.03
06	2437	11.83	11.74	11.65	11.59	11.48	11.41	11.35	11.25	22.43
11	2462	11.41	--	--	--	--	--	--	--	22.40

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)								Peak Power
		14.4	28.9	43.3	57.8	86.7	115.6	130	144.4	14.4
		Measurement Level (dBm)								
01	2412	11.59	--	--	--	--	--	--	--	22.07
06	2437	11.44	11.37	11.28	11.23	11.14	11.03	10.98	10.94	22.18
11	2462	11.38	--	--	--	--	--	--	--	22.14

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

CHAIN A+B

Channel	Frequency (MHz)	Data Rata (Mbps)	Chain A Power (dBm)	Chain B Power (dBm)	Chain A+B Power (dBm)	Limit (dBm)	Result
1	2412	14.4	22.03	22.07	25.06	<30dBm	Pass
6	2437	14.4	22.43	22.18	25.32	<30dBm	Pass
11	2462	14.4	22.40	22.14	25.28	<30dBm	Pass

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

Product : Security Appliance
Test Item : Maximum Conducted Power
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n-40BW)_30Mbps(2.4G Band)

CHAIN A

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power
		30	60	90	120	180	240	270	300	30
		Measurement Level (dBm)								
3	2422	11.84	--	--	--	--	--	--	--	22.47
6	2437	9.23	9.19	9.11	9.05	9.01	8.94	8.88	8.82	19.19
9	2452	9.33	--	--	--	--	--	--	--	19.24

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)								Peak Power
		30	60	90	120	180	240	270	300	30
		Measurement Level (dBm)								
3	2422	12.25	--	--	--	--	--	--	--	22.69
6	2437	11.93	11.87	11.78	11.71	11.62	11.57	11.52	11.41	22.44
9	2452	11.96	--	--	--	--	--	--	--	22.54

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

CHAIN A+B

Channel	Frequency (MHz)	Data Rata (Mbps)	Chain A Power (dBm)	Chain B Power (dBm)	Chain A+B Power (dBm)	Limit (dBm)	Result
3	2422	30	22.47	22.69	25.59	<30dBm	Pass
6	2437	30	19.19	22.44	24.12	<30dBm	Pass
9	2452	30	19.24	22.54	24.21	<30dBm	Pass

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

4. Radiated Emission

4.1. Test Equipment

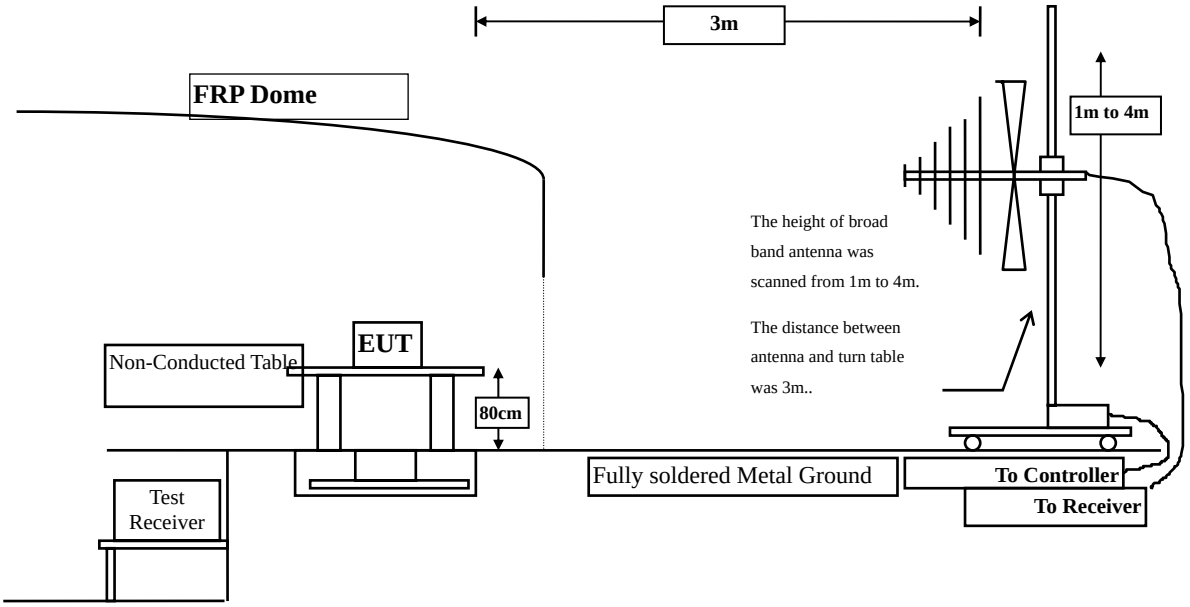
The following test equipments are used during the radiated emission test:

Test Site	Equipment		Manufacturer	Model No./Serial No.	Last Cal.	Due Cal.
☒Site # 3	X	Magnetic Loop Antenna	Teseq	HLA6121/ 37133	Sep, 2015	Sep, 2016
	X	Bilog Antenna	Schaffner Chase	CBL6112B/ 2707	Jun, 2016	Jun, 2017
	X	EMI Test Receiver	R&S	ESCS 30/838251/ 001	Jun, 2016	Jun, 2017
	X	Coaxial Cable	QTK(Arnist)	RG 214/ LC003-RG	Jun, 2016	Jun, 2017
	X	Coaxial signal switch	Arnist	MP59B/ 6200798682	Jun, 2016	Jun, 2017

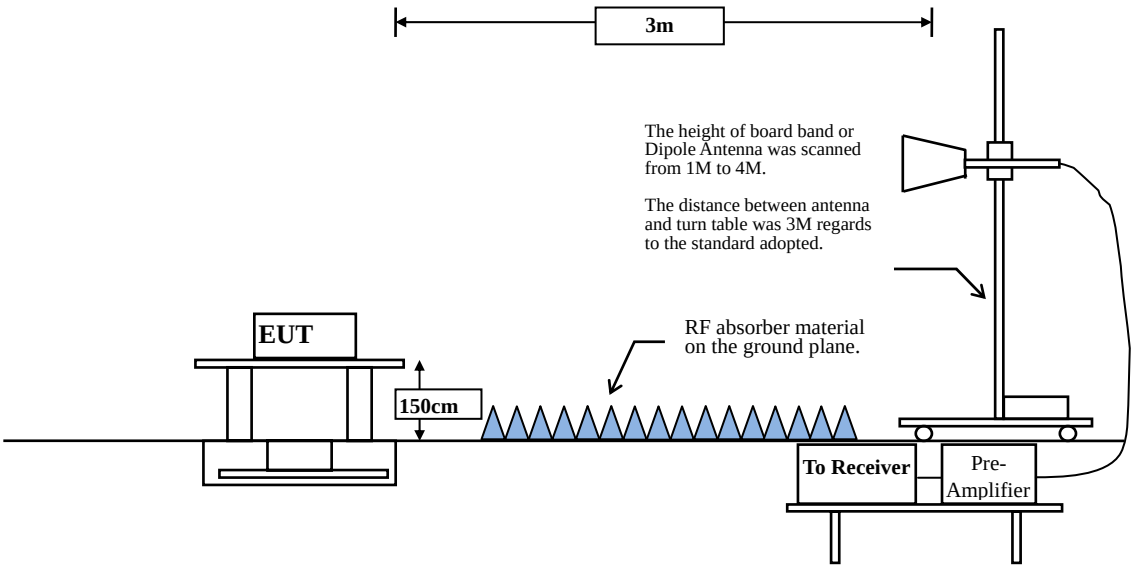
Note: 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with “X” are used to measure the final test results.

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 30dB 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 (dBuV/m) = 20 log E field strength (uV/m)

4.4. Test Procedure

The EUT was setup according to ANSI C63.10: 2013 and tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.

Measuring the frequency range below 1GHz, the EUT is placed on a turn table which is 0.8 meter above ground,when measuring the frequency range above 1GHz, the EUT is placed on a turn table which is 1.5 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: 2013 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 measurement frequency range form 9kHz - 10th Harmonic of fundamental was investigated.

4.5. Uncertainty

± 3.9 dB above 1GHz

± 3.8 dB below 1GHz

4.6. Test Result of Radiated Emission

Product : Security Appliance
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz) (External)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4824.000	2.428	41.580	44.009	-29.991	74.000
7236.000	9.177	38.560	47.737	-26.263	74.000
9648.000	10.019	39.870	49.890	-24.110	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4824.000	2.836	41.050	43.887	-30.113	74.000
7236.000	9.676	39.390	49.066	-24.934	74.000
9648.000	10.556	39.150	49.707	-24.293	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 : Security Appliance
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2437MHz) (External)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4874.000	2.076	40.590	42.667	-31.333	74.000
7311.000	9.512	40.370	49.882	-24.118	74.000
9748.000	9.630	38.680	48.310	-25.690	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4874.000	2.532	41.040	43.572	-30.428	74.000
7311.000	10.089	38.430	48.519	-25.481	74.000
9748.000	10.266	39.100	49.367	-24.633	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 : Security Appliance
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462MHz) (External)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4924.000	2.191	41.180	43.371	-30.629	74.000
7386.000	10.373	38.410	48.784	-25.216	74.000
9848.000	9.964	39.040	49.004	-24.996	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4924.000	2.805	41.320	44.125	-29.875	74.000
7386.000	11.180	38.260	49.440	-24.560	74.000
9848.000	10.801	38.430	49.231	-24.769	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 : Security Appliance
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz) (External)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4824.000	2.428	40.900	43.329	-30.671	74.000
7236.000	9.177	38.310	47.487	-26.513	74.000
9648.000	10.019	39.060	49.080	-24.920	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4824.000	2.836	40.330	43.167	-30.833	74.000
7236.000	9.676	38.660	48.336	-25.664	74.000
9648.000	10.556	39.680	50.237	-23.763	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 : Security Appliance
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437MHz) (External)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4874.000	2.076	41.270	43.347	-30.653	74.000
7311.000	9.512	39.120	48.632	-25.368	74.000
9748.000	9.630	38.410	48.040	-25.960	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4874.000	2.532	40.510	43.042	-30.958	74.000
7311.000	10.089	39.310	49.399	-24.601	74.000
9748.000	10.266	38.990	49.257	-24.743	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 : Security Appliance
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462MHz) (External)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4924.000	2.191	41.140	43.331	-30.669	74.000
7386.000	10.373	38.600	48.974	-25.026	74.000
9848.000	9.964	39.020	48.984	-25.016	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4924.000	2.805	39.910	42.715	-31.285	74.000
7386.000	11.180	37.910	49.090	-24.910	74.000
9848.000	10.801	38.820	49.621	-24.379	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 : Security Appliance
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-20BW)_14.4Mbps(2.4G Band) (2412MHz) (External)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4824.000	2.428	41.850	44.279	-29.721	74.000
7236.000	9.177	40.500	49.677	-24.323	74.000
9648.000	10.019	40.000	50.020	-23.980	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4824.000	2.836	40.390	43.227	-30.773	74.000
7236.000	9.676	38.790	48.466	-25.534	74.000
9648.000	10.556	39.530	50.087	-23.913	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 : Security Appliance
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-20BW)_14.4Mbps(2.4G Band) (2437MHz) (External)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4874.000	2.076	41.550	43.627	-30.373	74.000
7311.000	9.512	39.210	48.722	-25.278	74.000
9748.000	9.630	38.720	48.350	-25.650	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4874.000	2.532	40.440	42.972	-31.028	74.000
7311.000	10.089	40.800	50.889	-23.111	74.000
9748.000	10.266	38.770	49.037	-24.963	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 : Security Appliance
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-20BW)_14.4Mbps(2.4G Band) (2462MHz) (External)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4924.000	2.191	40.560	42.751	-31.249	74.000
7386.000	10.373	38.690	49.064	-24.936	74.000
9848.000	9.964	37.940	47.904	-26.096	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4924.000	2.805	40.650	43.455	-30.545	74.000
7386.000	11.180	39.310	50.490	-23.510	74.000
9848.000	10.801	38.030	48.831	-25.169	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 : Security Appliance
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n-40BW)_30Mbps(2.4G Band) (2422MHz) (External)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4844.000	2.280	40.930	43.211	-30.789	74.000
7266.000	9.106	38.430	47.536	-26.464	74.000
9688.000	9.663	39.170	48.833	-25.167	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4844.000	2.707	40.860	43.568	-30.432	74.000
7266.000	9.626	38.730	48.356	-25.644	74.000
9688.000	10.284	38.940	49.224	-24.776	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 : Security Appliance
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n-40BW)_30Mbps(2.4G Band) (2437MHz) (External)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4874.000	2.076	40.670	42.747	-31.253	74.000
7311.000	9.512	39.100	48.612	-25.388	74.000
9748.000	9.630	38.910	48.540	-25.460	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4874.000	2.532	40.980	43.512	-30.488	74.000
7311.000	10.089	38.790	48.879	-25.121	74.000
9748.000	10.266	38.250	48.517	-25.483	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 : Security Appliance
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n-40BW)_30Mbps(2.4G Band) (2452MHz) (External)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4904.000	2.000	41.070	43.071	-30.929	74.000
7356.000	10.308	39.260	49.568	-24.432	74.000
9808.000	9.850	39.790	49.640	-24.360	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4904.000	2.513	40.610	43.124	-30.876	74.000
7356.000	11.022	39.120	50.142	-23.858	74.000
9808.000	10.512	39.420	49.932	-24.068	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 : Security Appliance
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz) (Internal)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4824.000	2.428	40.730	43.159	-30.841	74.000
7236.000	9.177	39.270	48.447	-25.553	74.000
9648.000	10.019	39.670	49.690	-24.310	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4824.000	2.836	40.650	43.487	-30.513	74.000
7236.000	9.676	38.410	48.086	-25.914	74.000
9648.000	10.556	38.760	49.317	-24.683	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 : Security Appliance
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2437MHz) (Internal)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4874.000	2.076	40.750	42.827	-31.173	74.000
7311.000	9.512	39.260	48.772	-25.228	74.000
9748.000	9.630	38.670	48.300	-25.700	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4874.000	2.532	40.640	43.172	-30.828	74.000
7311.000	10.089	38.810	48.899	-25.101	74.000
9748.000	10.266	39.090	49.357	-24.643	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 : Security Appliance
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462MHz) (Internal)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4924.000	2.191	41.190	43.381	-30.619	74.000
7386.000	10.373	37.820	48.194	-25.806	74.000
9848.000	9.964	38.340	48.304	-25.696	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4924.000	2.805	40.340	43.145	-30.855	74.000
7386.000	11.180	37.980	49.160	-24.840	74.000
9848.000	10.801	38.470	49.271	-24.729	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 : Security Appliance
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz) (Internal)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4824.000	2.428	40.930	43.359	-30.641	74.000
7236.000	9.177	39.650	48.827	-25.173	74.000
9648.000	10.019	39.260	49.280	-24.720	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4824.000	2.836	40.570	43.407	-30.593	74.000
7236.000	9.676	39.270	48.946	-25.054	74.000
9648.000	10.556	38.760	49.317	-24.683	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 : Security Appliance
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437MHz) (Internal)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4874.000	2.076	41.720	43.797	-30.203	74.000
7311.000	9.512	39.670	49.182	-24.818	74.000
9748.000	9.630	38.140	47.770	-26.230	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4874.000	2.532	40.950	43.482	-30.518	74.000
7311.000	10.089	38.930	49.019	-24.981	74.000
9748.000	10.266	38.410	48.677	-25.323	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 : Security Appliance
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462MHz) (Internal)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4924.000	2.191	40.430	42.621	-31.379	74.000
7386.000	10.373	38.640	49.014	-24.986	74.000
9848.000	9.964	38.670	48.634	-25.366	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4924.000	2.805	41.570	44.375	-29.625	74.000
7386.000	11.180	40.320	51.500	-22.500	74.000
9848.000	10.801	38.380	49.181	-24.819	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 : Security Appliance
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-20BW)_14.4Mbps(2.4G Band) (2412MHz) (Internal)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4824.000	2.428	41.150	43.579	-30.421	74.000
7236.000	9.177	43.910	53.087	-20.913	74.000
9648.000	10.019	39.280	49.300	-24.700	74.000
Average Detector:					
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Vertical					
Peak Detector:					
4824.000	2.836	41.290	44.127	-29.873	74.000
7236.000	9.676	43.750	53.426	-20.574	74.000
9648.000	10.556	38.330	48.887	-25.113	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 : Security Appliance
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-20BW)_14.4Mbps(2.4G Band) (2437MHz) (Internal)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4874.000	2.076	40.400	42.477	-31.523	74.000
7311.000	9.512	39.190	48.702	-25.298	74.000
9748.000	9.630	38.750	48.380	-25.620	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4874.000	2.532	40.600	43.132	-30.868	74.000
7311.000	10.089	39.280	49.369	-24.631	74.000
9748.000	10.266	38.060	48.327	-25.673	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 : Security Appliance
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-20BW)_14.4Mbps(2.4G Band) (2462MHz) (Internal)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4924.000	2.191	40.490	42.681	-31.319	74.000
7386.000	10.373	38.020	48.394	-25.606	74.000
9848.000	9.964	38.580	48.544	-25.456	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4924.000	2.805	39.940	42.745	-31.255	74.000
7386.000	11.180	38.450	49.630	-24.370	74.000
9848.000	10.801	38.650	49.451	-24.549	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 : Security Appliance
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n-40BW)_30Mbps(2.4G Band) (2422MHz) (Internal)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4844.000	2.280	41.820	44.101	-29.899	74.000
7266.000	9.106	43.350	52.456	-21.544	74.000
9688.000	9.663	38.910	48.573	-25.427	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4844.000	2.707	41.240	43.948	-30.052	74.000
7266.000	9.626	41.200	50.826	-23.174	74.000
9688.000	10.284	38.500	48.784	-25.216	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 : Security Appliance
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n-40BW)_30Mbps(2.4G Band) (2437MHz) (Internal)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4874.000	2.076	42.310	44.387	-29.613	74.000
7311.000	9.512	43.560	53.072	-20.928	74.000
9748.000	9.630	38.350	47.980	-26.020	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4874.000	2.532	41.650	44.182	-29.818	74.000
7311.000	10.089	41.650	51.739	-22.261	74.000
9748.000	10.266	42.790	53.057	-20.943	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 : Security Appliance
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n-40BW)_30Mbps(2.4G Band) (2452MHz) (Internal)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4904.000	2.000	42.520	44.521	-29.479	74.000
7356.000	10.308	42.340	52.648	-21.352	74.000
9808.000	9.850	37.850	47.700	-26.300	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4904.000	2.513	41.810	44.324	-29.676	74.000
7356.000	11.022	41.000	52.022	-21.978	74.000
9808.000	10.512	38.120	48.632	-25.368	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 : Security Appliance
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2437MHz) (External)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
92.080	-11.413	45.310	33.897	-9.603	43.500
187.140	-11.217	40.591	29.374	-14.126	43.500
375.320	0.918	31.083	32.001	-13.999	46.000
499.480	1.991	27.299	29.289	-16.711	46.000
674.080	2.713	32.738	35.451	-10.549	46.000
875.840	5.816	27.407	33.223	-12.777	46.000
Vertical					
125.060	-3.725	43.345	39.620	-3.880	43.500
375.320	0.388	31.315	31.703	-14.297	46.000
499.480	-0.199	27.502	27.302	-18.698	46.000
674.080	0.003	32.181	32.184	-13.816	46.000
749.740	2.023	26.224	28.247	-17.753	46.000
875.840	0.516	26.308	26.824	-19.176	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 : Security Appliance
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437MHz) (External)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
125.060	-7.335	43.102	35.767	-7.733	43.500
185.200	-12.281	40.469	28.188	-15.312	43.500
375.320	0.918	30.260	31.178	-14.822	46.000
499.480	1.991	29.846	31.836	-14.164	46.000
674.080	2.713	33.000	35.713	-10.287	46.000
875.840	5.816	27.196	33.012	-12.988	46.000
Vertical					
125.060	-3.725	42.854	39.129	-4.371	43.500
183.260	-3.735	38.223	34.488	-9.012	43.500
375.320	0.388	30.290	30.678	-15.322	46.000
499.480	-0.199	28.753	28.553	-17.447	46.000
674.080	0.003	31.847	31.850	-14.150	46.000
875.840	0.516	25.995	26.511	-19.489	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 : Security Appliance
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-20BW)_14.4Mbps(2.4G Band) (2437MHz) (External)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
125.060	-7.335	42.877	35.542	-7.958	43.500
187.140	-11.217	40.954	29.737	-13.763	43.500
375.320	0.918	29.808	30.726	-15.274	46.000
542.160	3.925	23.368	27.293	-18.707	46.000
674.080	2.713	32.325	35.038	-10.962	46.000
875.840	5.816	27.492	33.308	-12.692	46.000
Vertical					
90.140	-4.175	43.228	39.053	-4.447	43.500
183.260	-3.735	38.709	34.974	-8.526	43.500
375.320	0.388	28.677	29.065	-16.935	46.000
608.120	2.175	23.401	25.576	-20.424	46.000
749.740	2.023	26.438	28.461	-17.539	46.000
875.840	0.516	25.334	25.850	-20.150	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 : Security Appliance
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n-40BW)_30Mbps(2.4G Band) (2437MHz) (External)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
125.060	-7.335	42.664	35.329	-8.171	43.500
375.320	0.918	30.783	31.701	-14.299	46.000
499.480	1.991	28.416	30.406	-15.594	46.000
674.080	2.713	31.343	34.056	-11.944	46.000
749.740	3.963	27.319	31.282	-14.718	46.000
875.840	5.816	26.237	32.053	-13.947	46.000
Vertical					
90.140	-4.175	43.777	39.602	-3.898	43.500
181.320	-1.910	38.282	36.372	-7.128	43.500
375.320	0.388	28.858	29.246	-16.754	46.000
499.480	-0.199	29.237	29.037	-16.963	46.000
674.080	0.003	32.186	32.189	-13.811	46.000
875.840	0.516	26.140	26.656	-19.344	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 : Security Appliance
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2437MHz) (Internal)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
138.640	-7.519	37.082	29.563	-13.937	43.500
249.220	-6.216	35.447	29.231	-16.769	46.000
375.320	0.918	28.796	29.714	-16.286	46.000
499.480	1.991	31.506	33.496	-12.504	46.000
749.740	3.963	27.367	31.330	-14.670	46.000
875.840	5.816	29.116	34.932	-11.068	46.000
Vertical					
92.080	-5.373	44.303	38.930	-4.570	43.500
249.220	-5.096	33.557	28.461	-17.539	46.000
375.320	0.388	27.669	28.057	-17.943	46.000
499.480	-0.199	27.057	26.857	-19.143	46.000
674.080	0.003	31.557	31.560	-14.440	46.000
875.840	0.516	28.366	28.882	-17.118	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 : Security Appliance
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437MHz) (Internal)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
95.960	-10.326	41.116	30.790	-12.710	43.500
187.140	-11.217	37.453	26.236	-17.264	43.500
249.220	-6.216	33.424	27.208	-18.792	46.000
499.480	1.991	25.900	27.890	-18.110	46.000
674.080	2.713	30.217	32.930	-13.070	46.000
875.840	5.816	27.326	33.142	-12.858	46.000
Vertical					
179.380	-0.824	37.889	37.065	-6.435	43.500
249.220	-5.096	35.355	30.259	-15.741	46.000
499.480	-0.199	27.181	26.981	-19.019	46.000
674.080	0.003	29.809	29.812	-16.188	46.000
784.660	2.736	22.331	25.067	-20.933	46.000
875.840	0.516	27.212	27.728	-18.272	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 : Security Appliance
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-20BW)_14.4Mbps(2.4G Band) (2437MHz) (Internal)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
94.020	-10.730	43.433	32.703	-10.797	43.500
249.220	-6.216	32.329	26.113	-19.887	46.000
361.740	-0.006	28.128	28.121	-17.879	46.000
499.480	1.991	27.080	29.070	-16.930	46.000
674.080	2.713	29.898	32.611	-13.389	46.000
875.840	5.816	25.934	31.750	-14.250	46.000
Vertical					
179.380	-0.824	39.110	38.286	-5.214	43.500
375.320	0.388	28.421	28.809	-17.191	46.000
499.480	-0.199	29.496	29.296	-16.704	46.000
674.080	0.003	30.825	30.828	-15.172	46.000
749.740	2.023	27.596	29.619	-16.381	46.000
875.840	0.516	29.325	29.841	-16.159	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 : Security Appliance
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n-40BW)_30Mbps(2.4G Band) (2437MHz) (Internal)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
95.960	-10.326	45.084	34.758	-8.742	43.500
249.220	-6.216	31.922	25.706	-20.294	46.000
375.320	0.918	28.918	29.836	-16.164	46.000
499.480	1.991	31.733	33.723	-12.277	46.000
674.080	2.713	30.085	32.798	-13.202	46.000
875.840	5.816	28.943	34.759	-11.241	46.000
Vertical					
179.380	-0.824	37.833	37.009	-6.491	43.500
249.220	-5.096	33.461	28.365	-17.635	46.000
499.480	-0.199	25.666	25.466	-20.534	46.000
674.080	0.003	31.112	31.115	-14.885	46.000
749.740	2.023	24.554	26.577	-19.423	46.000
875.840	0.516	27.076	27.592	-18.408	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

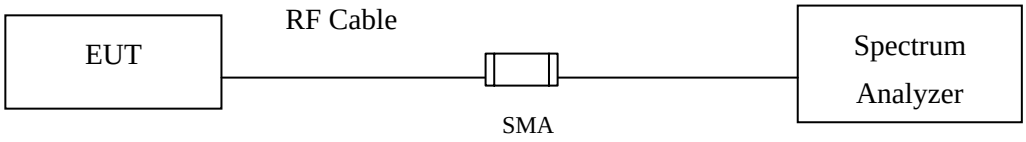
5.1. Test Equipment

Equipment		Manufacturer	Model No./Serial No.	Last Cal.	Due Cal.
X	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2016	Jun, 2017
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2016	Jun, 2017
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2016	Apr., 2017

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 30 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.

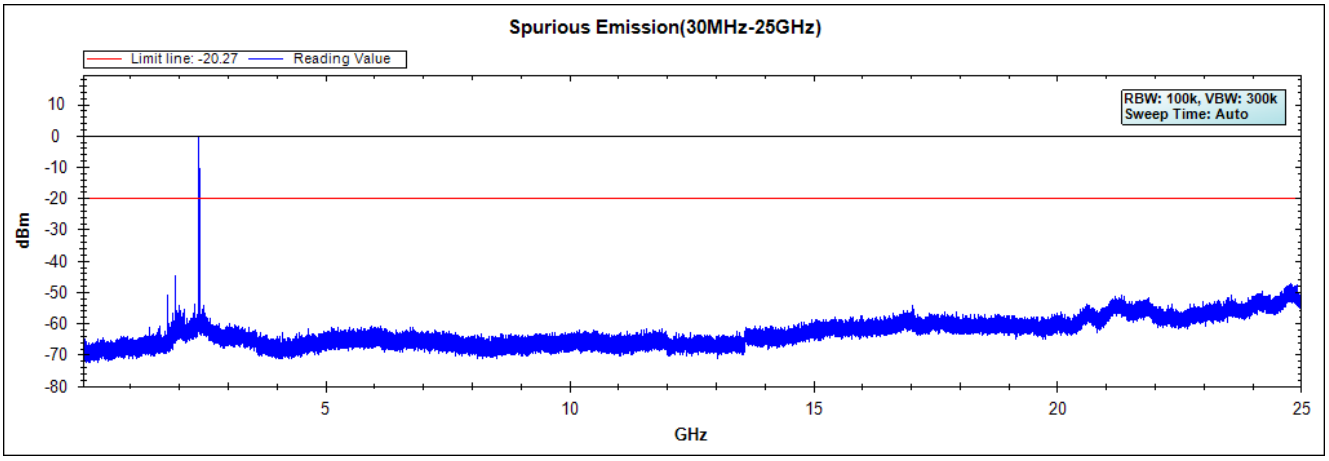
5.5. Uncertainty

The measurement uncertainty
Conducted is defined as ± 1.27dB

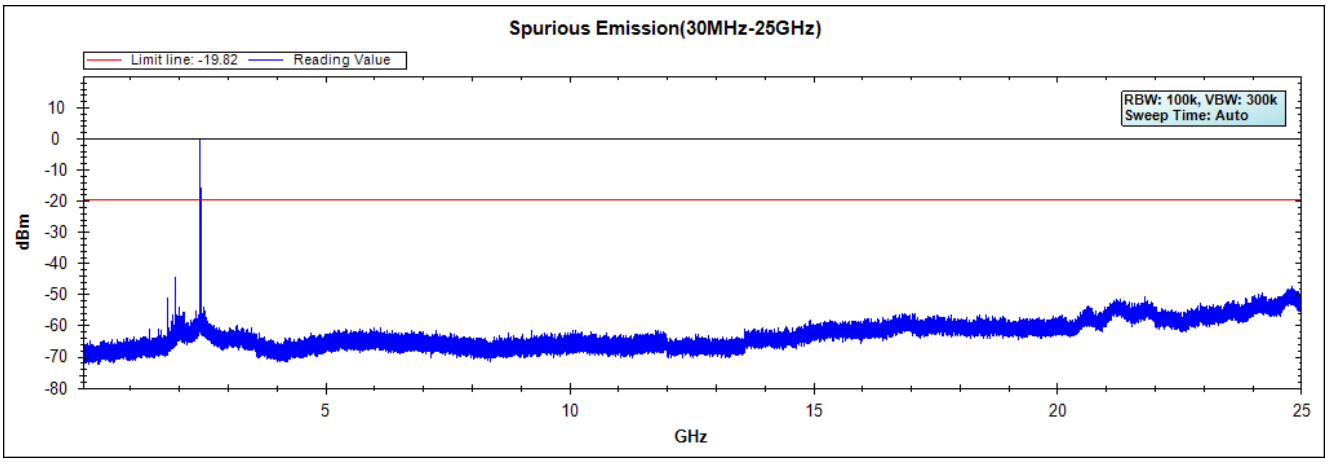
5.6. Test Result of RF antenna conducted test

Product : Security Appliance
Test Item : RF antenna conducted test
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps)

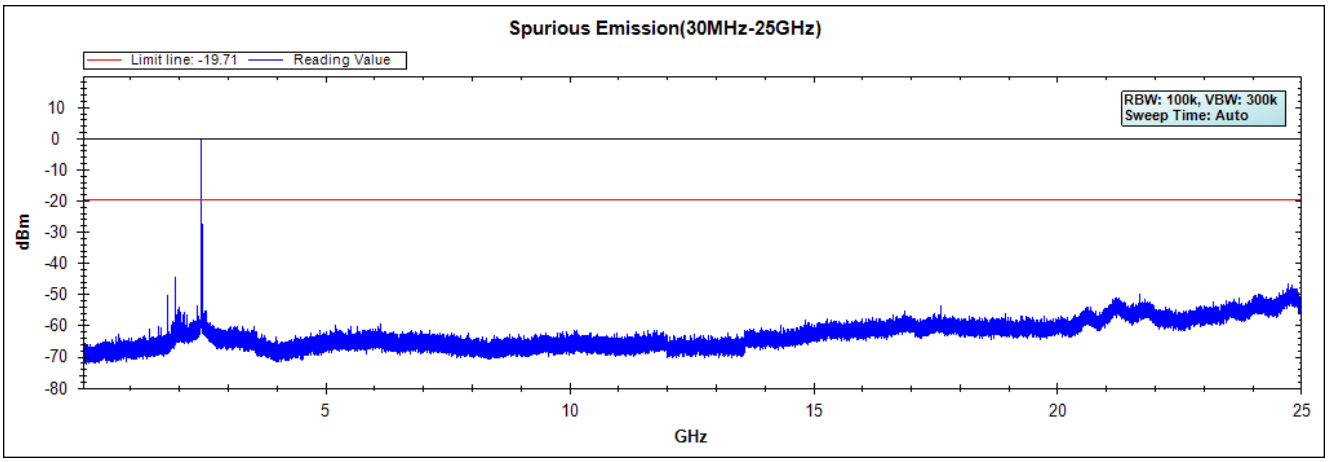
Channel 01 (2412MHz) 30MHz-25GHz



Channel 06 (2437MHz) 30MHz -25GHz



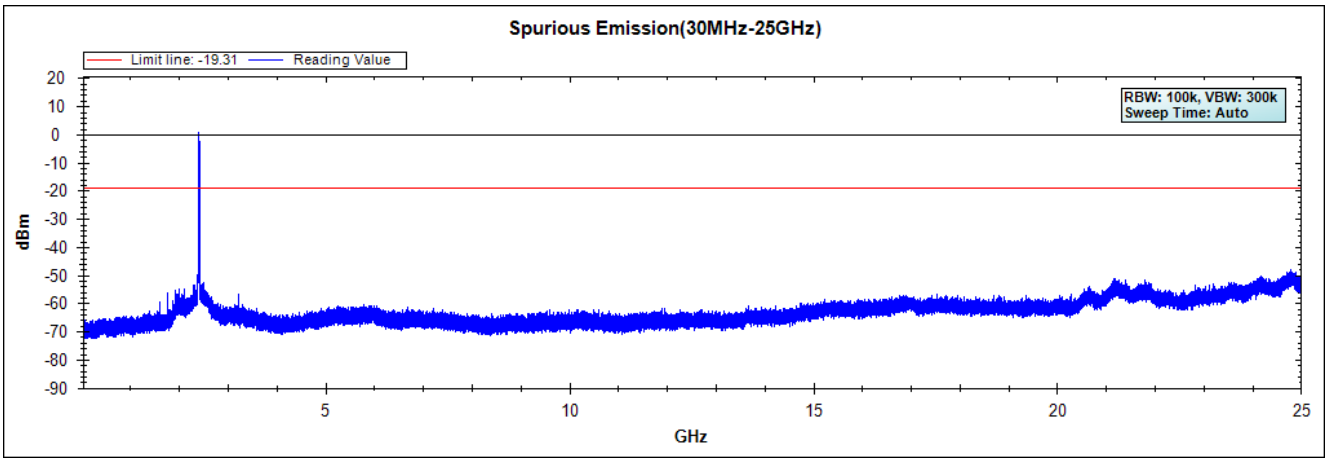
Channel 11 (2462MHz) 30MHz -25GHz



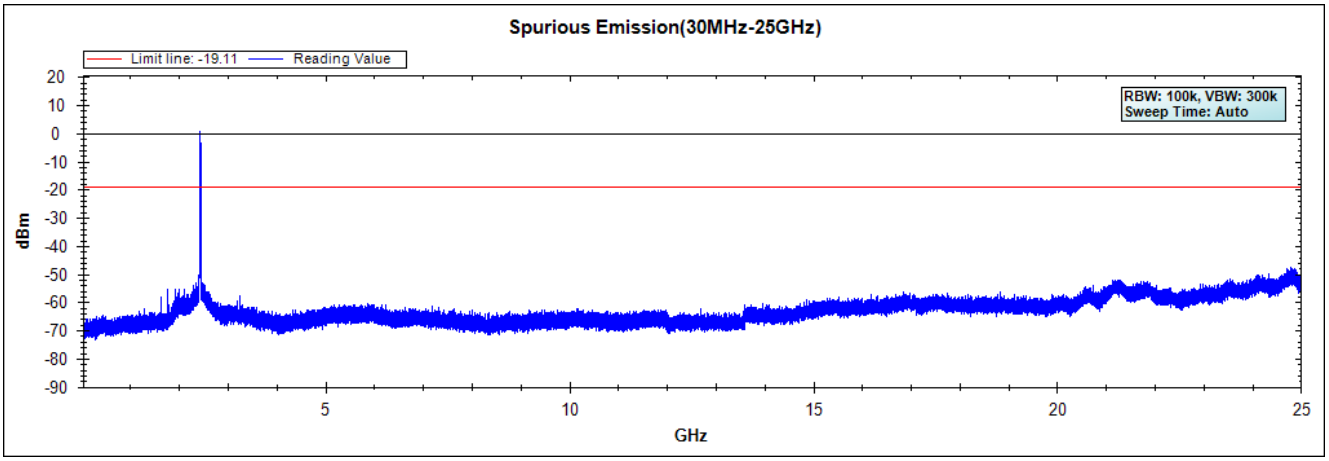
Note: The above test pattern is synthesized by multiple of the frequency range.

Product : Security Appliance
Test Item : RF Antenna Conducted Spurious
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps)

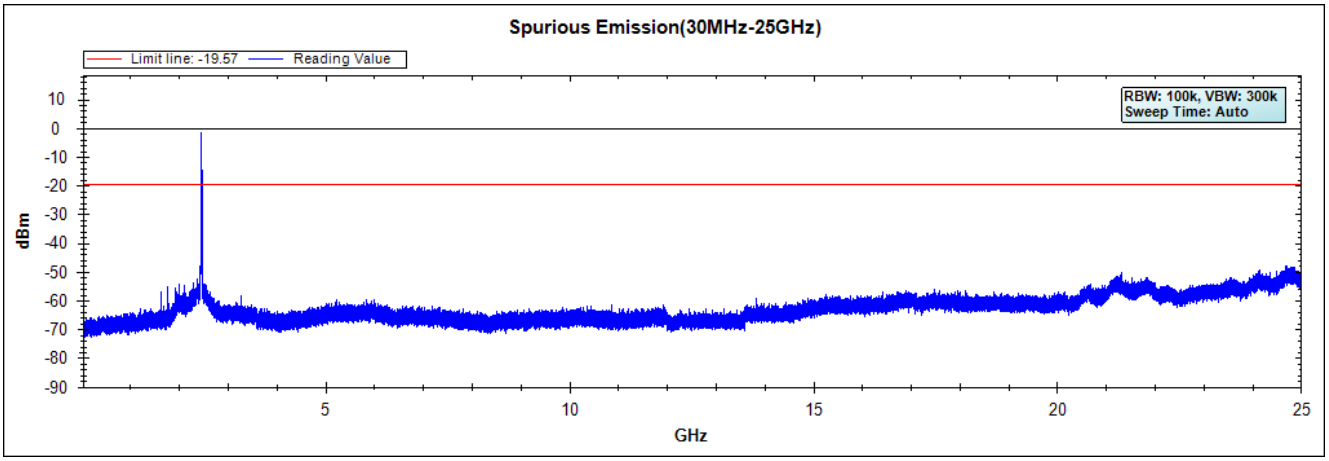
Channel 01 (2412MHz) 30MHz -25GHz



Channel 06 (2437MHz) 30MHz -25GHz



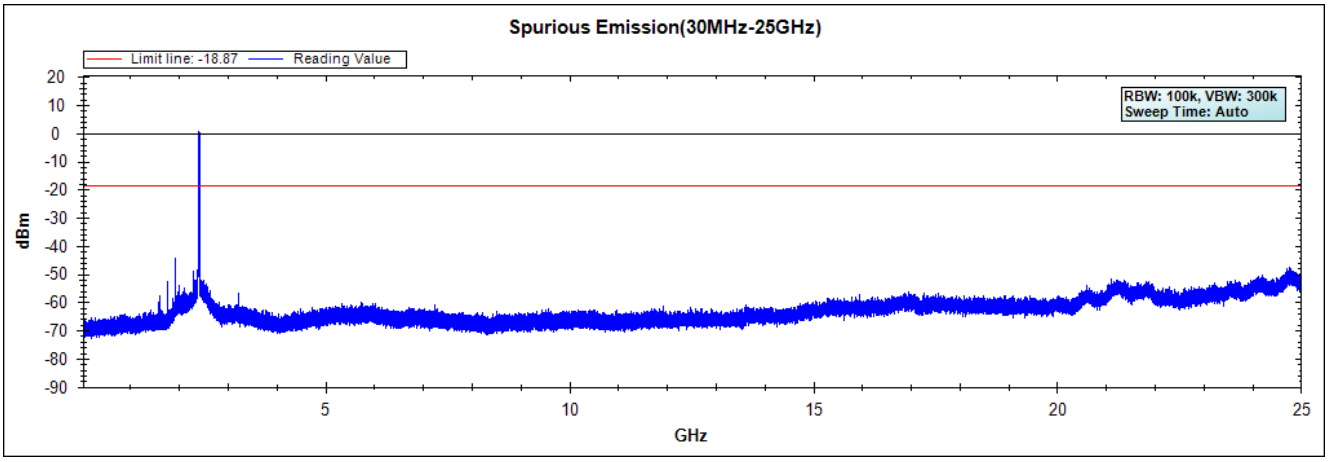
Channel 11 (2462MHz) 30MHz -25GHz



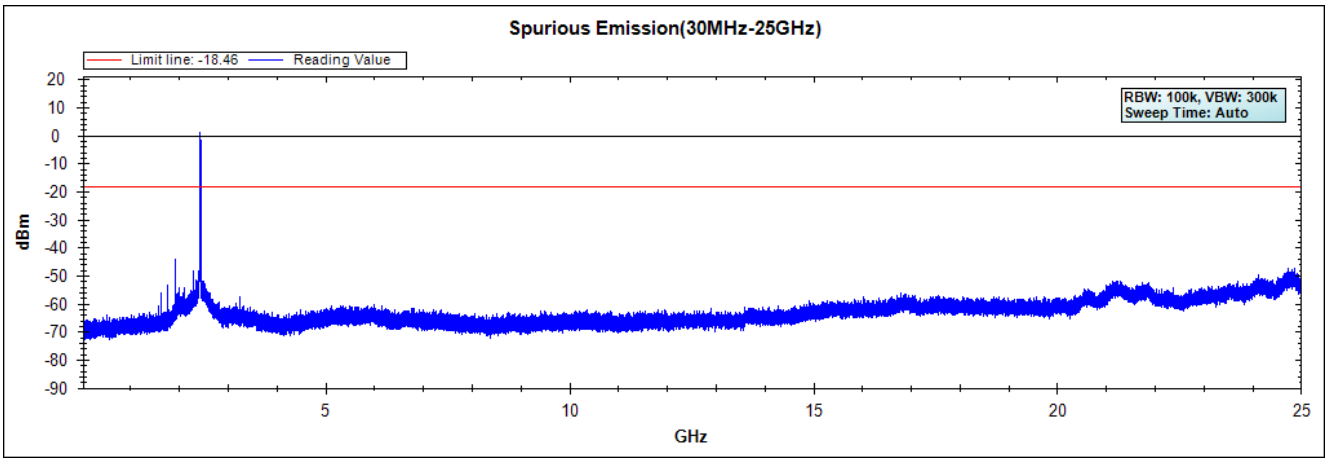
Note: The above test pattern is synthesized by multiple of the frequency range.

Product : Security Appliance
Test Item : RF Antenna Conducted Spurious
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-20BW)_14.4Mbps(2.4G Band)

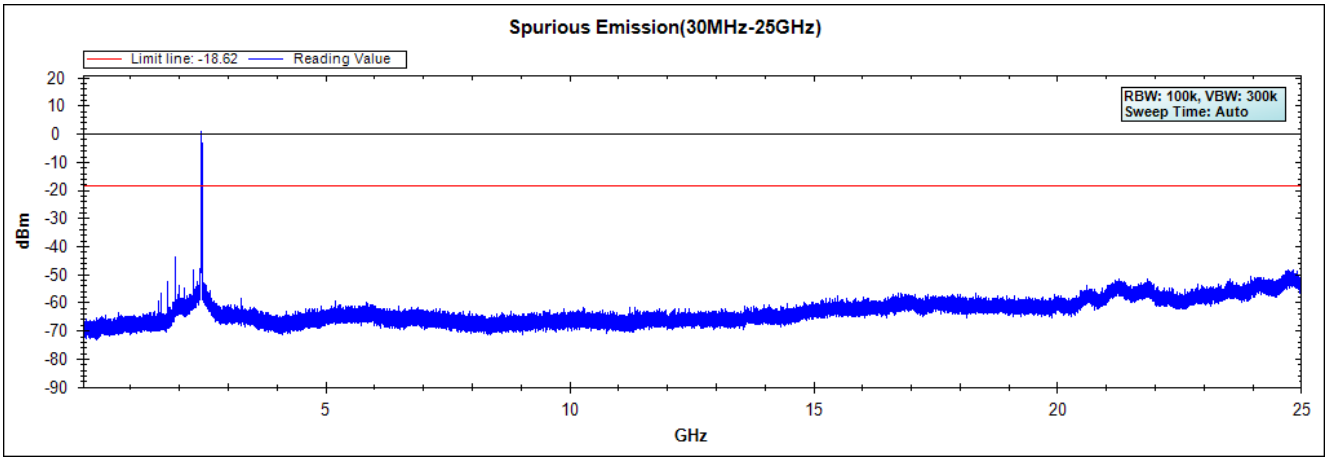
Channel 01 (2412MHz) 30MHz -25GHz-Chain A



Channel 06 (2437MHz) 30MHz -25GHz-Chain A

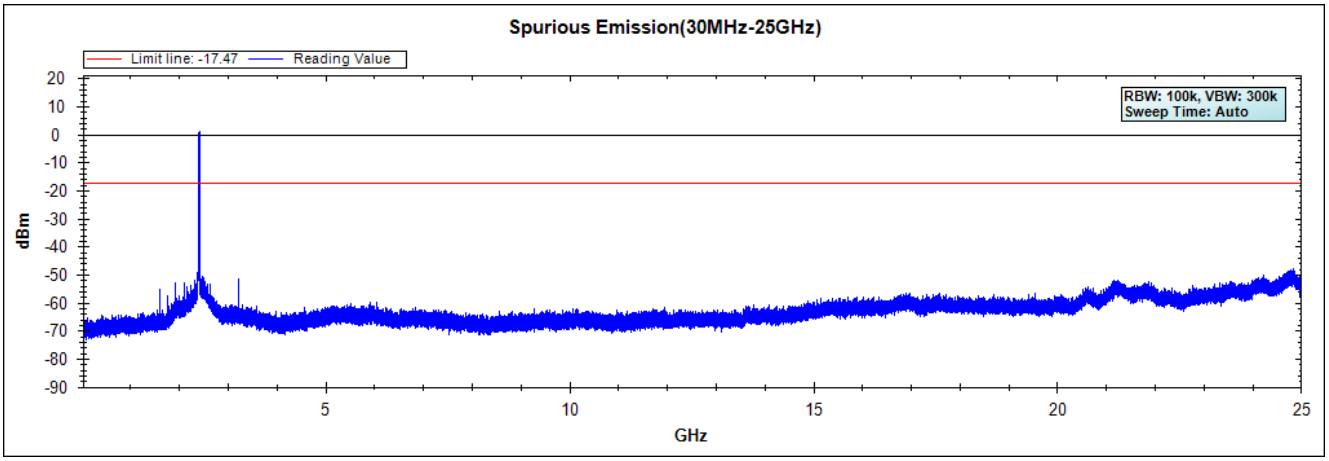


Channel 11 (2462MHz) 30MHz -25GHz-Chain A

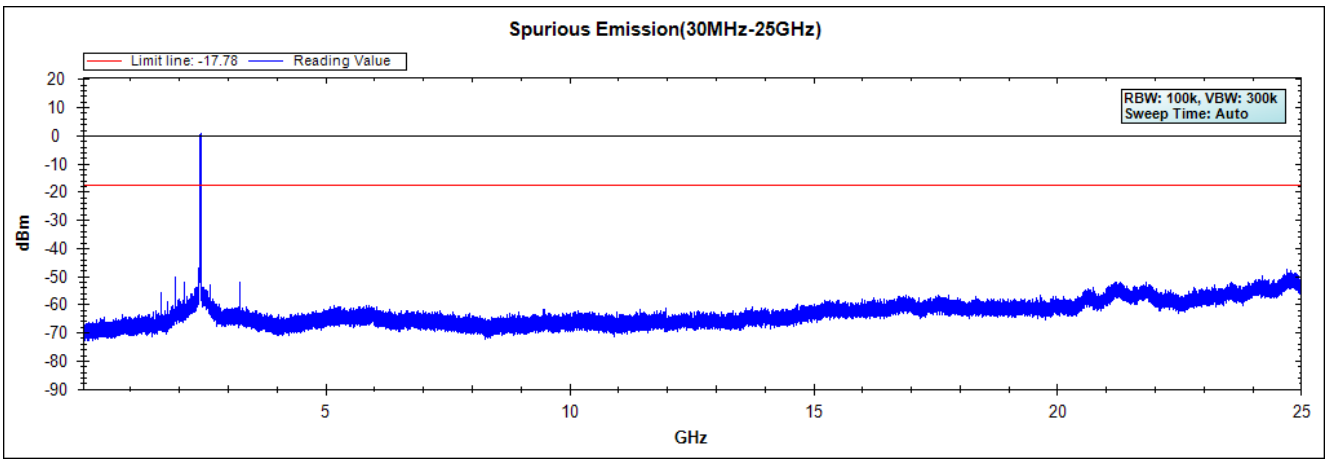


Note: The above test pattern is synthesized by multiple of the frequency range.

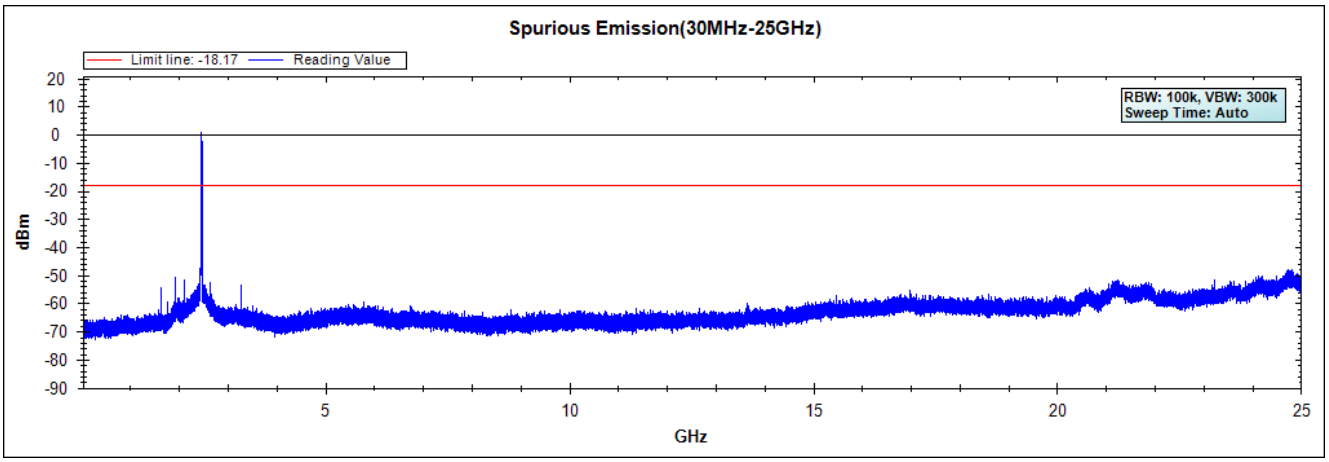
Channel 01 (2412MHz) 30MHz -25GHz-Chain B



Channel 06 (2437MHz) 30MHz -25GHz-Chain B



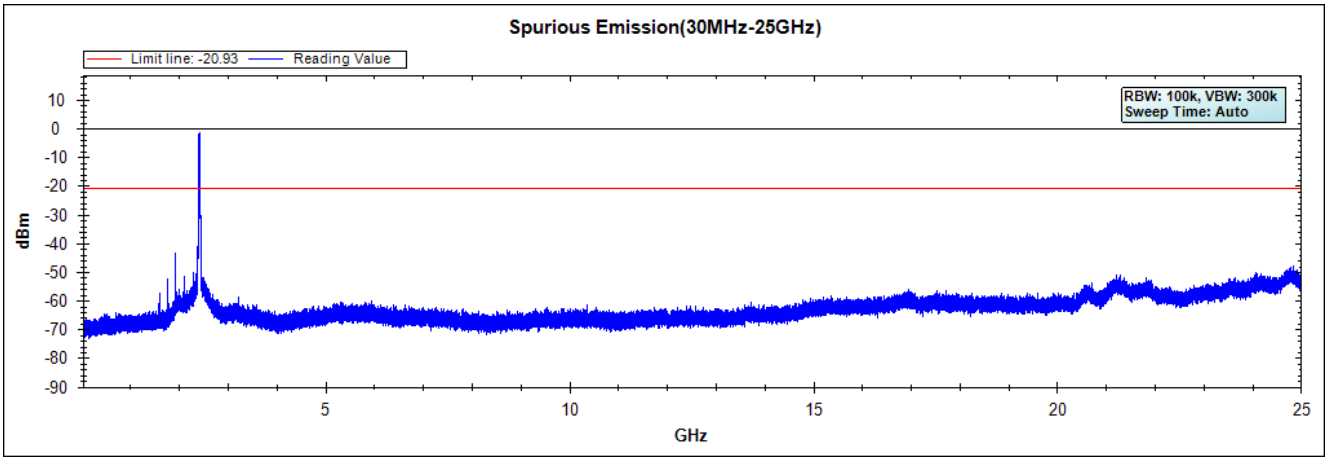
Channel 11 (2462MHz) 30MHz -25GHz-Chain B



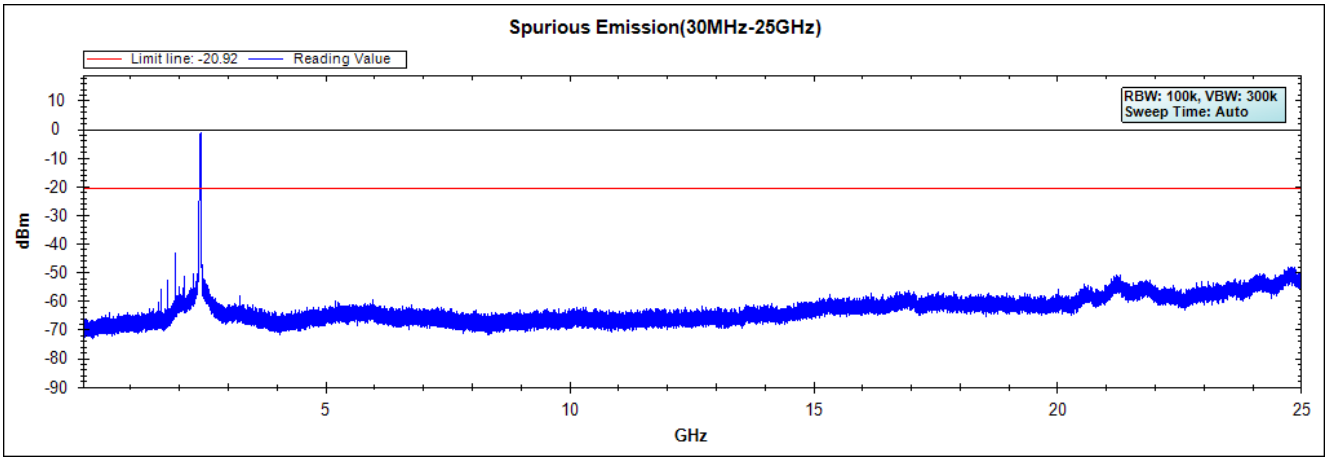
Note: The above test pattern is synthesized by multiple of the frequency range.

Product : Security Appliance
Test Item : RF Antenna Conducted Spurious
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n-40BW)_30Mbps(2.4G Band)

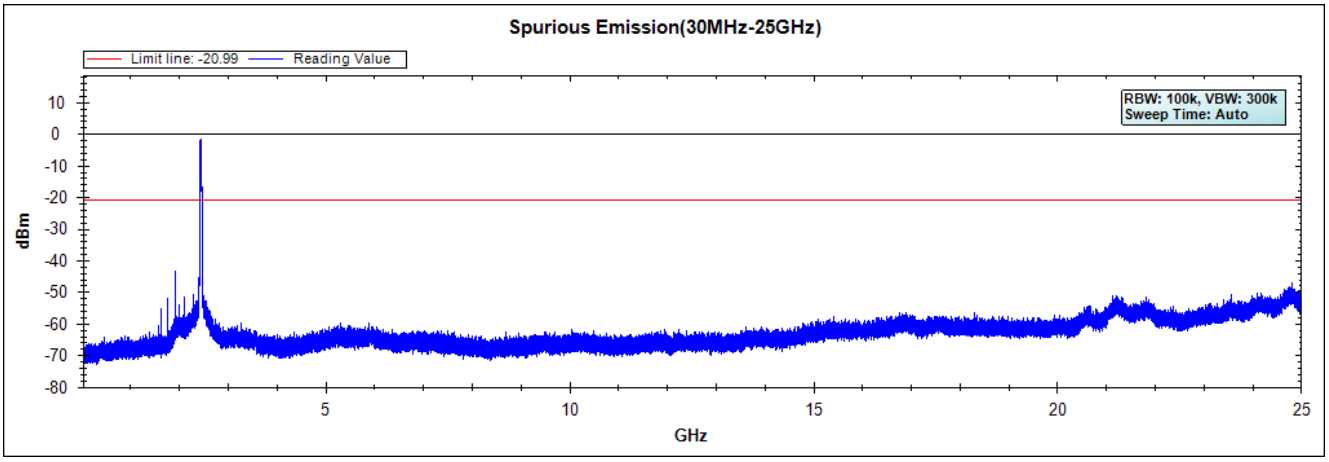
Channel 03 (2422MHz) 30MHz -25GHz-Chain A



Channel 06 (2437MHz) 30MHz -25GHz-Chain A

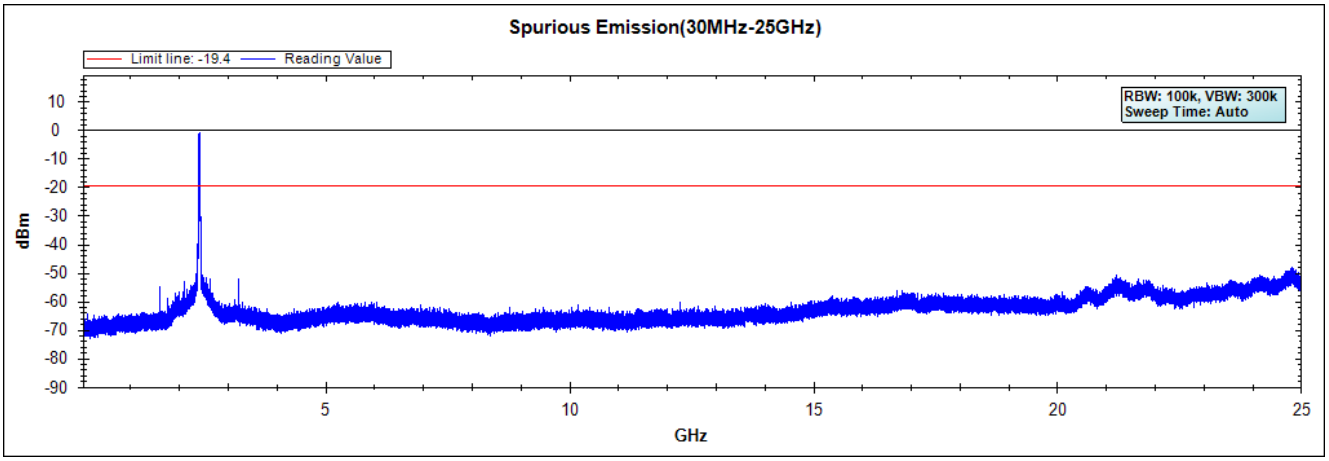


Channel 09 (2452MHz) 30MHz -25GHz-Chain A

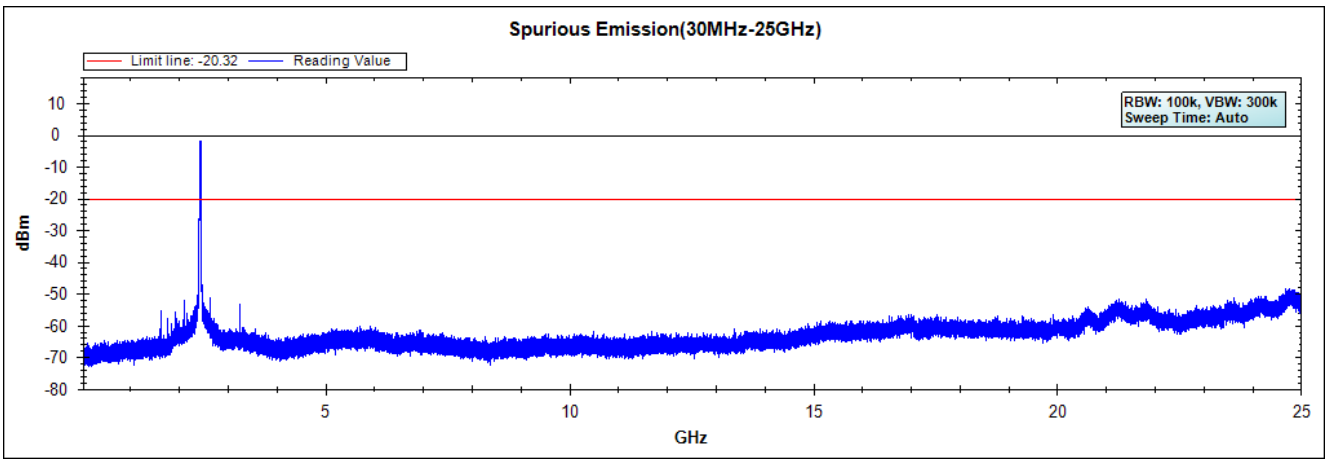


Note: The above test pattern is synthesized by multiple of the frequency range.

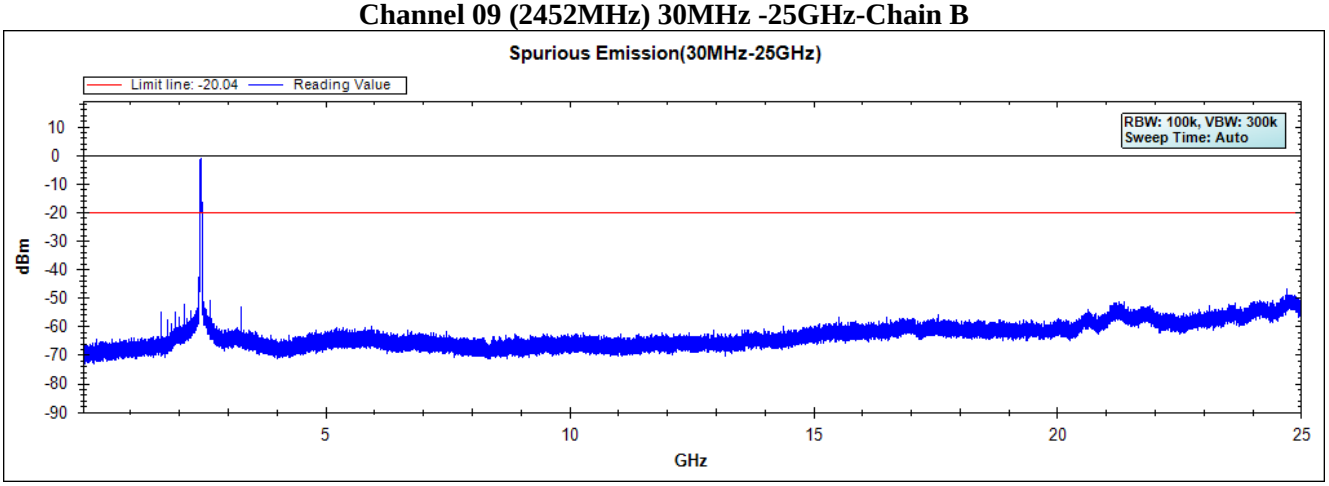
Channel 03 (2422MHz) 30MHz -25GHz-Chain B



Channel 06 (2437MHz) 30MHz -25GHz-Chain B



Channel 09 (2452MHz) 30MHz -25GHz-Chain B



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

6. Band Edge

6.1. Test Equipment

RF Conducted Measurement

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

Equipment		Manufacturer	Model No./Serial No.	Last Cal.	Due Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2016	Jun, 2017
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2016	Jun, 2017
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2016	Apr., 2017

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.

RF Radiated Measurement:

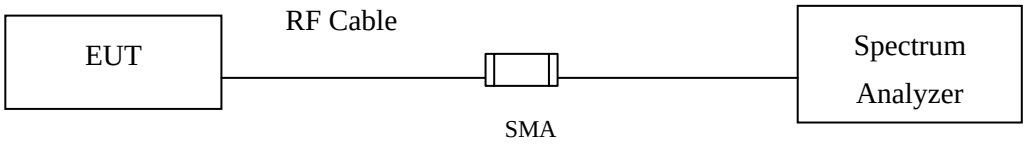
The following test equipments are used during the band edge tests:

Test Site	Equipment		Manufacturer	Model No./Serial No.	Last Cal.	Due Cal.
☒CB # 8	X	Spectrum Analyzer	R&S	FSP40/ 100339	Oct, 2015	Oct, 2016
	X	Horn Antenna	ETS-Lindgren	3117/ 35205	Mar, 2016	Mar, 2017
	X	Horn Antenna	Schwarzbeck	BBHA9170/209	Jan, 2016	Jan, 2017
	X	Horn Antenna	TRC	AH-0801/95051	Aug, 2015	Aug, 2016
	X	Pre-Amplifier	EMCI	EMC012630SE/980210	Jan, 2016	Jan, 2017
	X	Pre-Amplifier	MITEQ	JS41-001040000-58-5P/153945	Jul, 2015	Jul, 2016
	X	Pre-Amplifier	NARDA	DBL-1840N506/013	Jul, 2015	Jul, 2016

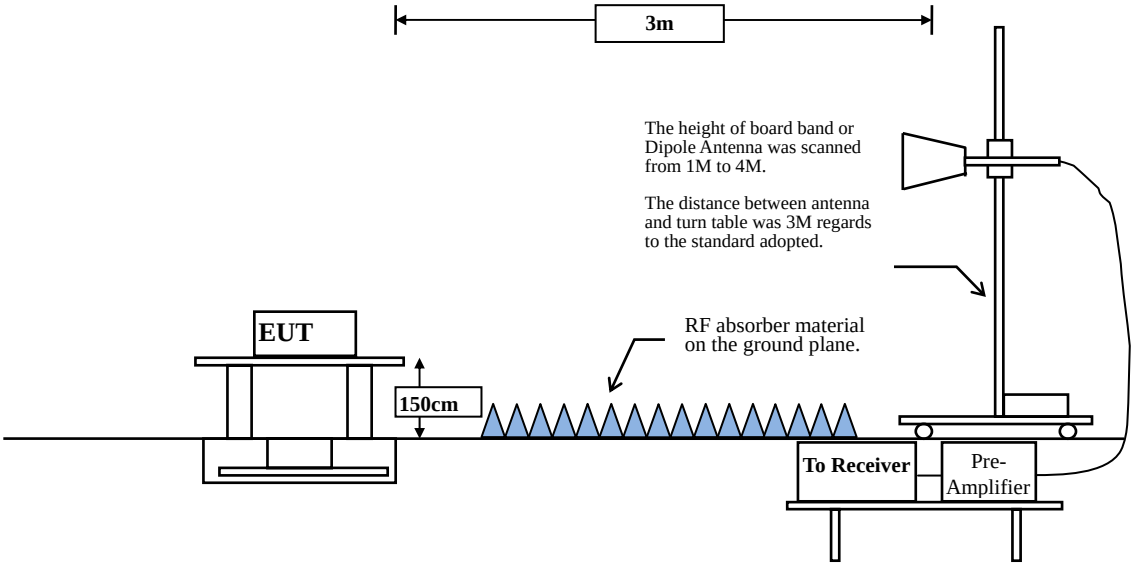
Note: 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with “X” are used to measure the final test results.

6.2. Test Setup

RF Conducted Measurement



Radiated Emission above 1GHz



6.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 30dB 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, 2013 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 1.5 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 C63.10:2013 on radiated measurement.

6.5. Uncertainty

± 3.9 dB above 1GHz
± 3.8 dB below 1GHz

6.6. Test Result of Band Edge

Product : Security Appliance
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (External)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2387.800	-2.697	51.523	48.826	74.00	54.00	Pass
01 (Peak)	2390.000	-2.687	50.274	47.587	74.00	54.00	Pass
01 (Peak)	2398.400	-2.663	56.638	53.975	74.00	54.00	Pass
01 (Peak)	2400.000	-2.660	55.214	52.554	--	--	--
01 (Peak)	2413.000	-2.642	102.884	100.241	--	--	--
01 (Average)	2390.000	-2.687	38.582	35.895	74.00	54.00	Pass
01 (Average)	2398.200	-2.663	48.485	45.822	74.00	54.00	Pass
01 (Average)	2400.000	-2.660	43.767	41.107	--	--	--
01 (Average)	2411.200	-2.643	98.637	95.994	--	--	--

Figure Channel 01: Horizontal (Peak)

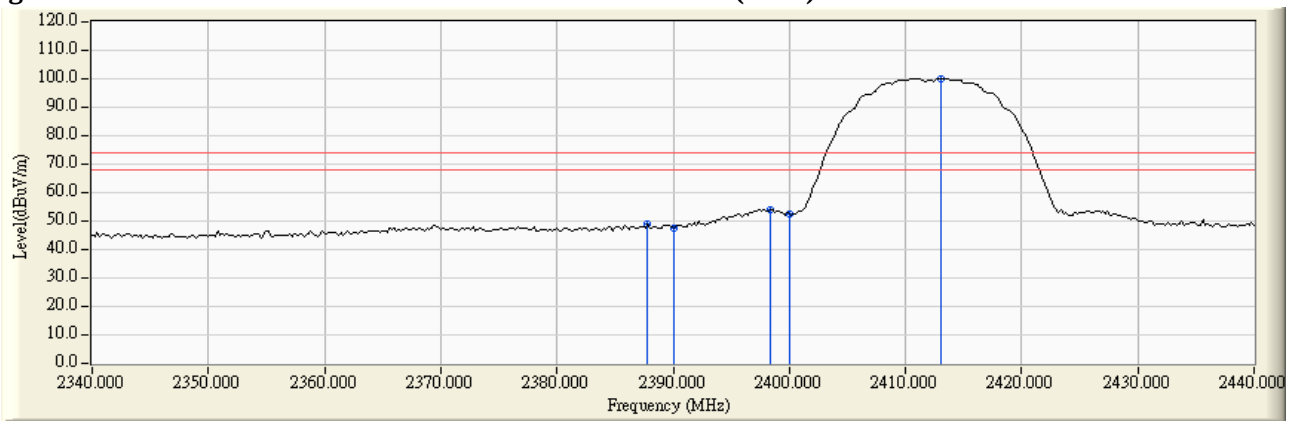
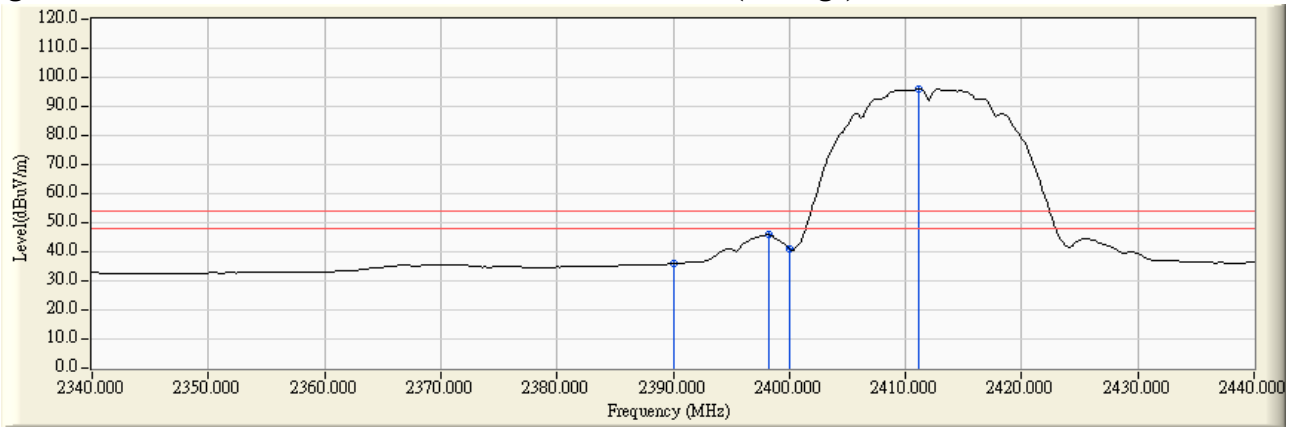


Figure Channel 01: Horizontal (Average)



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 : Security Appliance
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (External)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2388.400	-4.154	50.757	46.604	74.00	54.00	Pass
01 (Peak)	2390.000	-4.159	49.649	45.490	74.00	54.00	Pass
01 (Peak)	2397.000	-4.172	54.098	49.926	74.00	54.00	Pass
01 (Peak)	2400.000	-4.171	52.597	48.426	--	--	--
01 (Peak)	2413.000	-4.163	99.606	95.442	--	--	--
01 (Average)	2390.000	-4.159	37.928	33.769	74.00	54.00	Pass
01 (Average)	2398.000	-4.171	44.215	40.044	74.00	54.00	Pass
01 (Average)	2400.000	-4.171	40.660	36.489	--	--	--
01 (Average)	2411.200	-4.168	95.483	91.315	--	--	--

Figure Channel 01: Vertical (Peak)

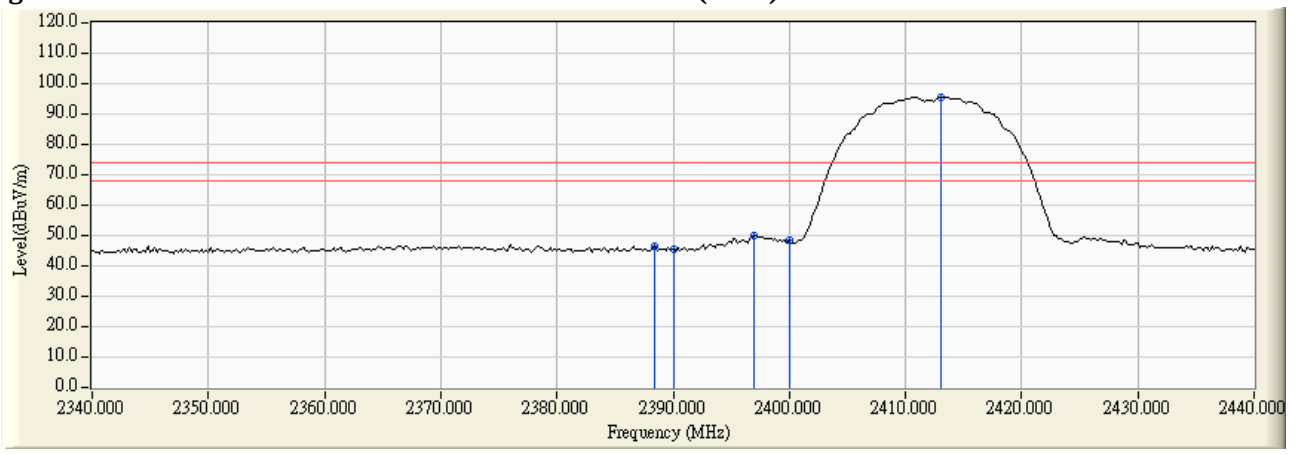
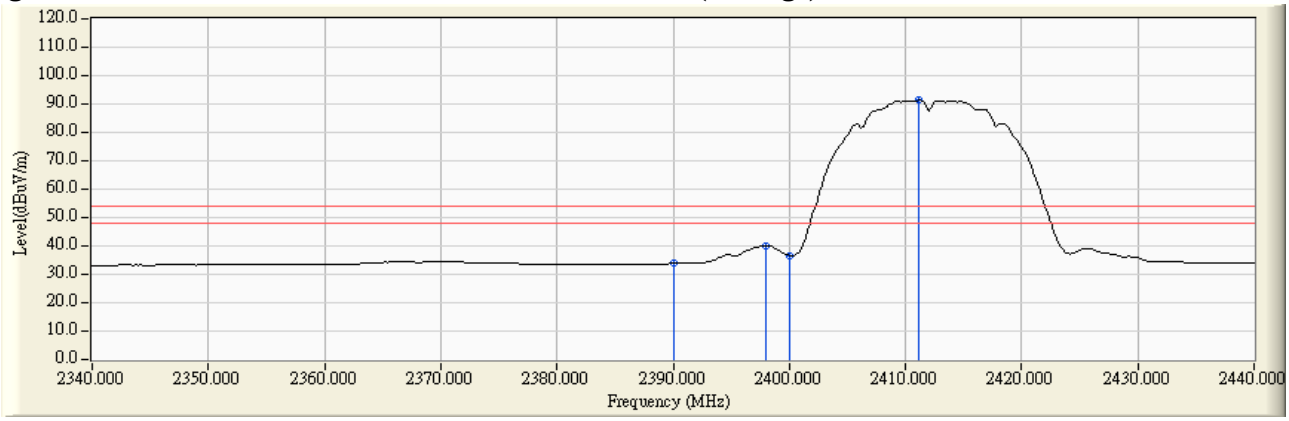


Figure Channel 01: Vertical (Average)



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 : Security Appliance
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (External)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2463.100	-2.622	104.575	101.953	--	--	--
11 (Peak)	2483.500	-2.601	52.385	49.783	74.00	54.00	Pass
11 (Peak)	2499.500	-2.608	55.814	53.205	74.00	54.00	Pass
11 (Average)	2461.100	-2.623	100.082	97.459	--	--	--
11 (Average)	2483.500	-2.601	40.258	37.656	74.00	54.00	Pass

Figure Channel 11: Horizontal (Peak)

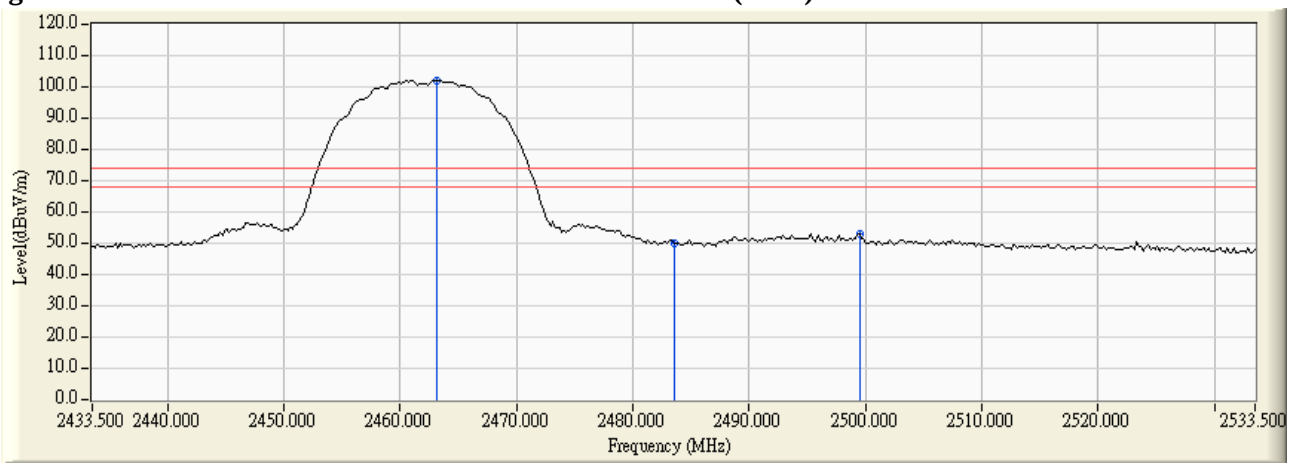
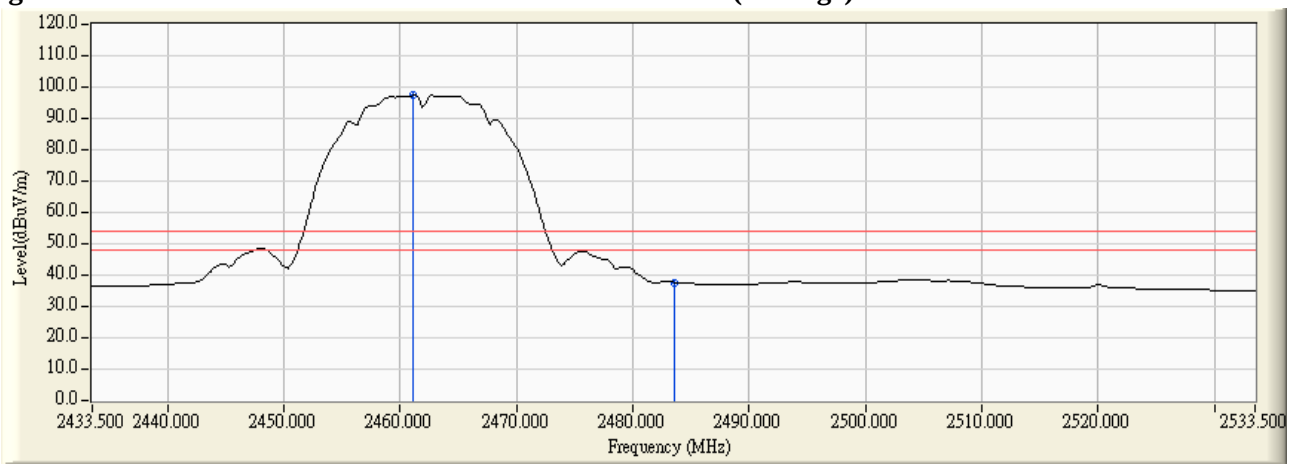


Figure Channel 11: Horizontal (Average)



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 : Security Appliance
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (External)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2460.500	-4.039	98.333	94.294	--	--	--
11 (Peak)	2483.500	-3.966	48.237	44.270	74.00	54.00	Pass
11 (Peak)	2487.500	-3.954	48.961	45.007	74.00	54.00	Pass
11 (Average)	2461.100	-4.037	94.148	90.111	--	--	--
11 (Average)	2483.500	-3.966	36.414	32.447	74.00	54.00	Pass

Figure Channel 11: Vertical (Peak)

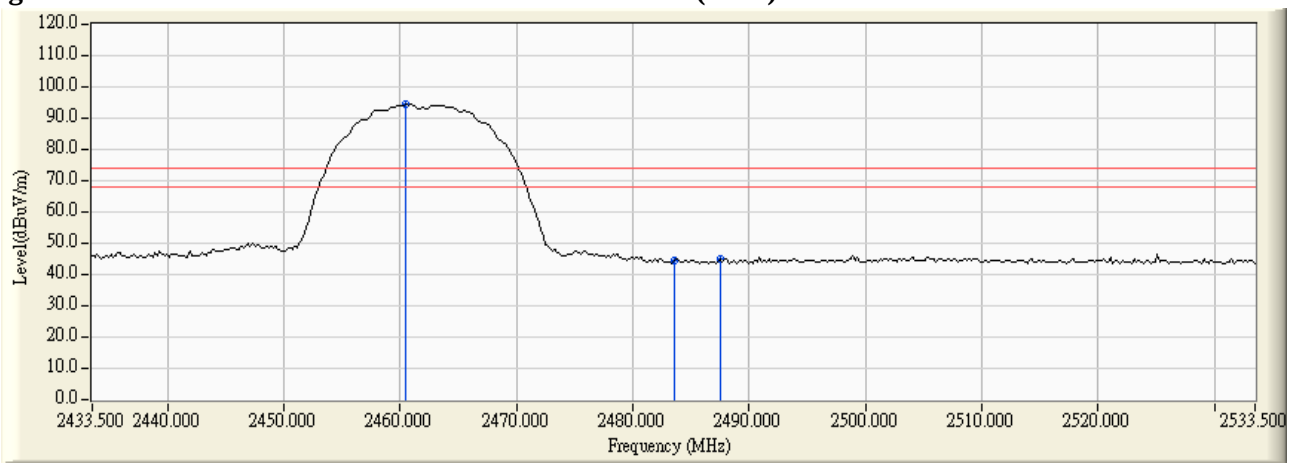
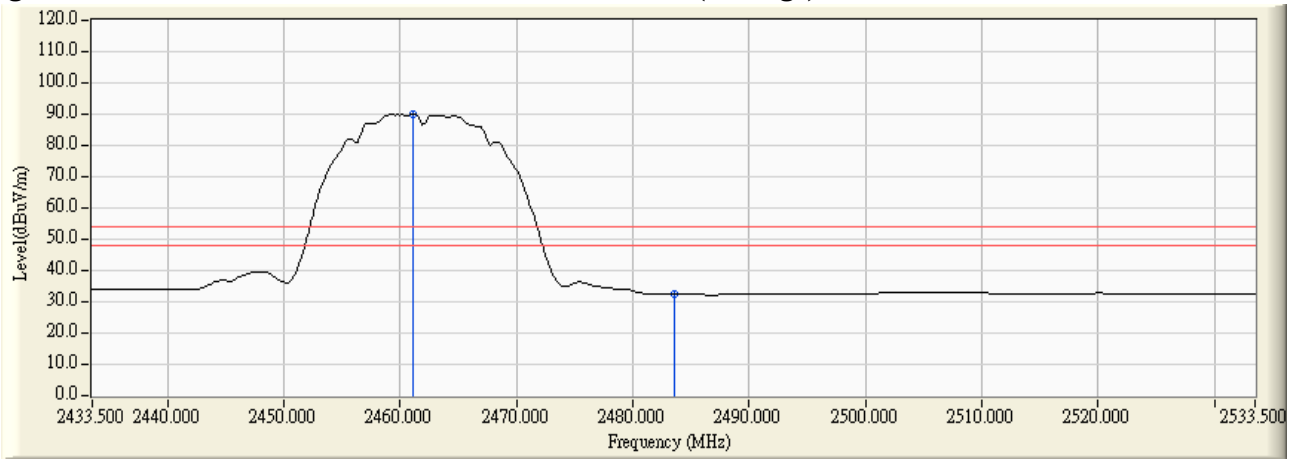


Figure Channel 11: Vertical (Average)



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 : Security Appliance
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (External)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2390.000	-2.687	64.755	62.068	74.00	54.00	Pass
01 (Peak)	2400.000	-2.660	84.777	82.117	--	--	--
01 (Peak)	2414.200	-2.643	107.918	105.275	--	--	--
01(Average)	2390.000	-2.687	46.312	43.625	74.00	54.00	Pass
01(Average)	2400.000	-2.660	59.188	56.528	--	--	--
01(Average)	2417.600	-2.642	95.292	92.650	--	--	--

Figure Channel 01: Horizontal (Peak)

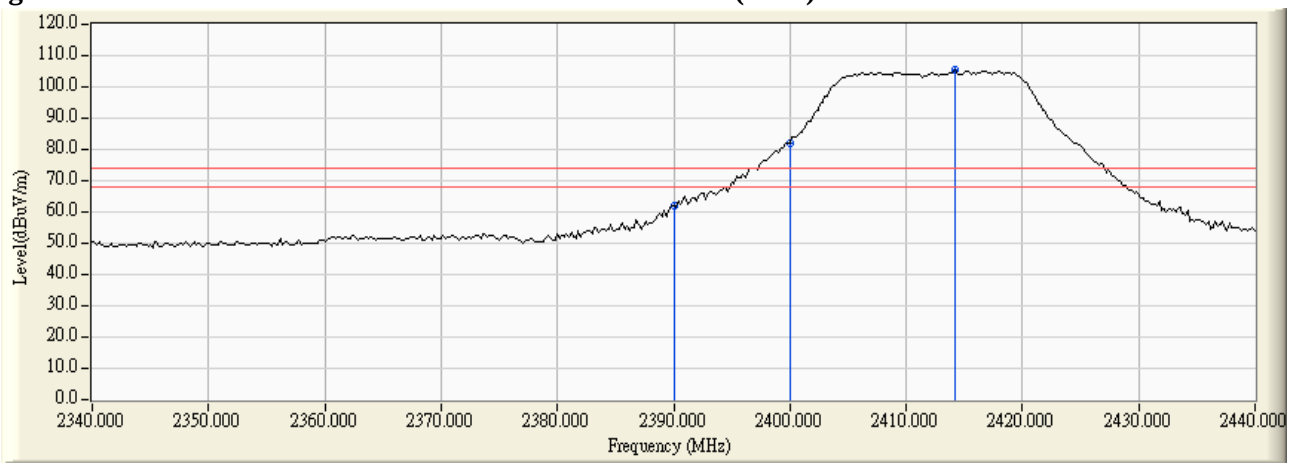
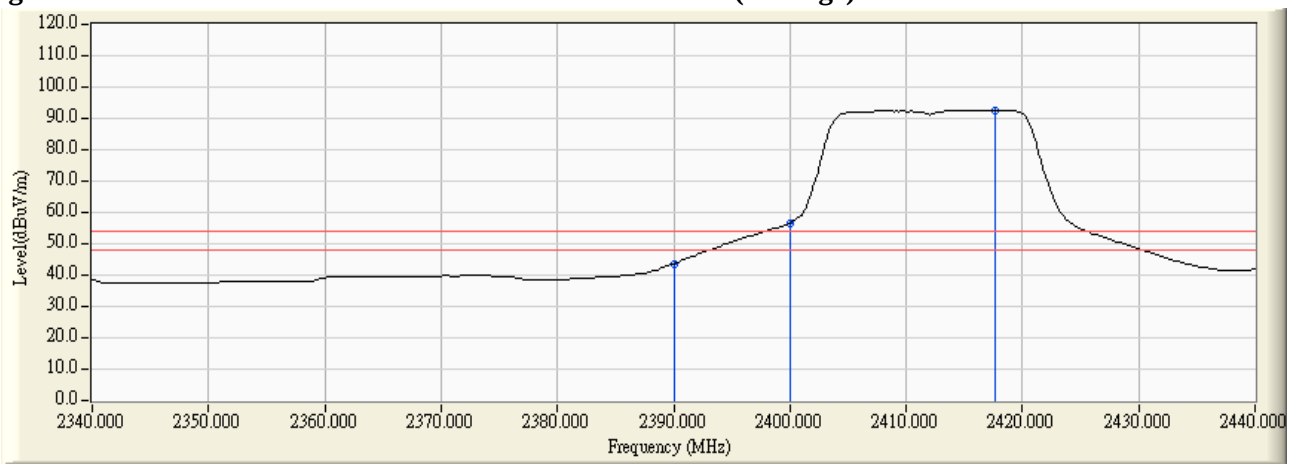


Figure Channel 01: Horizontal (Average)



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 : Security Appliance
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (External)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2390.000	-4.159	61.512	57.353	74.00	54.00	Pass
01 (Peak)	2400.000	-4.171	83.040	78.869	--	--	--
01 (Peak)	2415.000	-4.159	105.839	101.680	--	--	--
01 (Average)	2390.000	-4.159	43.851	39.692	74.00	54.00	Pass
01 (Average)	2400.000	-4.171	56.046	51.875	--	--	--
01 (Average)	2418.200	-4.151	92.476	88.325	--	--	--

Figure Channel 01: Vertical (Peak)

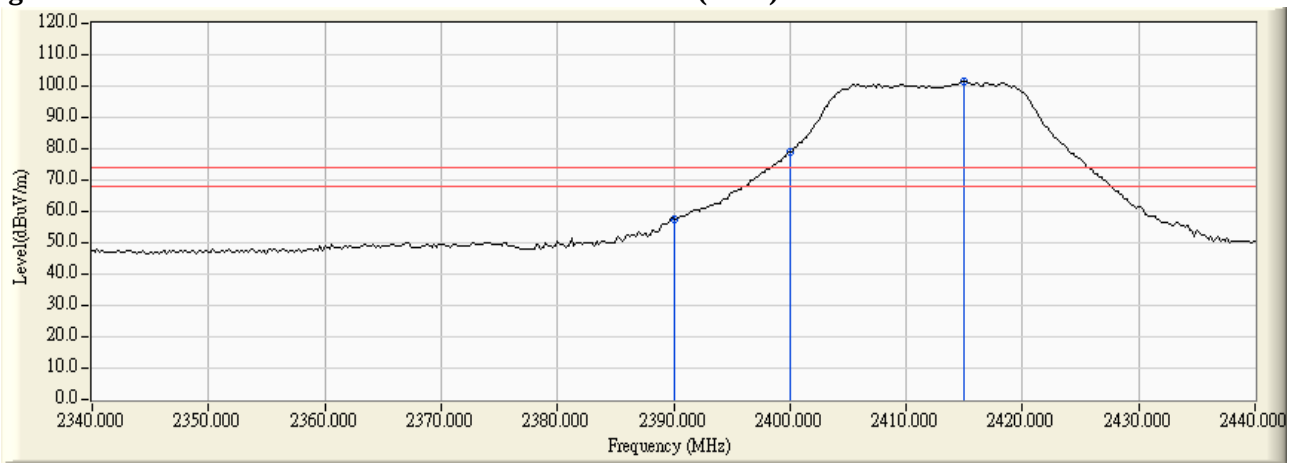
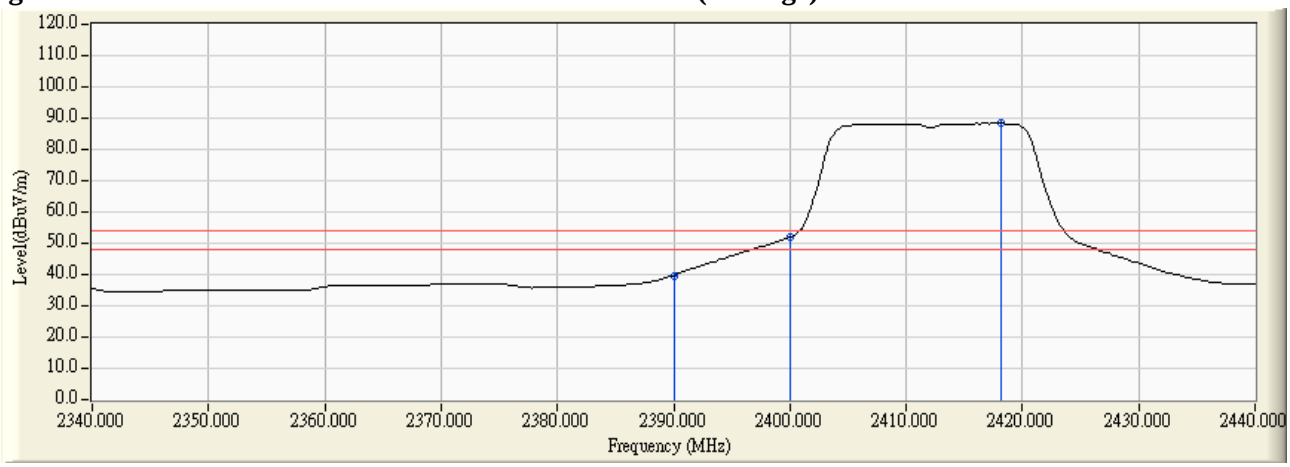


Figure Channel 01: Vertical (Average)



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 : Security Appliance
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (External)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2465.900	-2.619	109.542	106.923	--	--	--
11 (Peak)	2483.500	-2.601	63.497	60.895	74.00	54.00	Pass
11 (Average)	2467.700	-2.617	96.961	94.344	--	--	--
11 (Average)	2483.500	-2.601	47.347	44.745	74.00	54.00	Pass

Figure Channel 11: Horizontal (Peak)

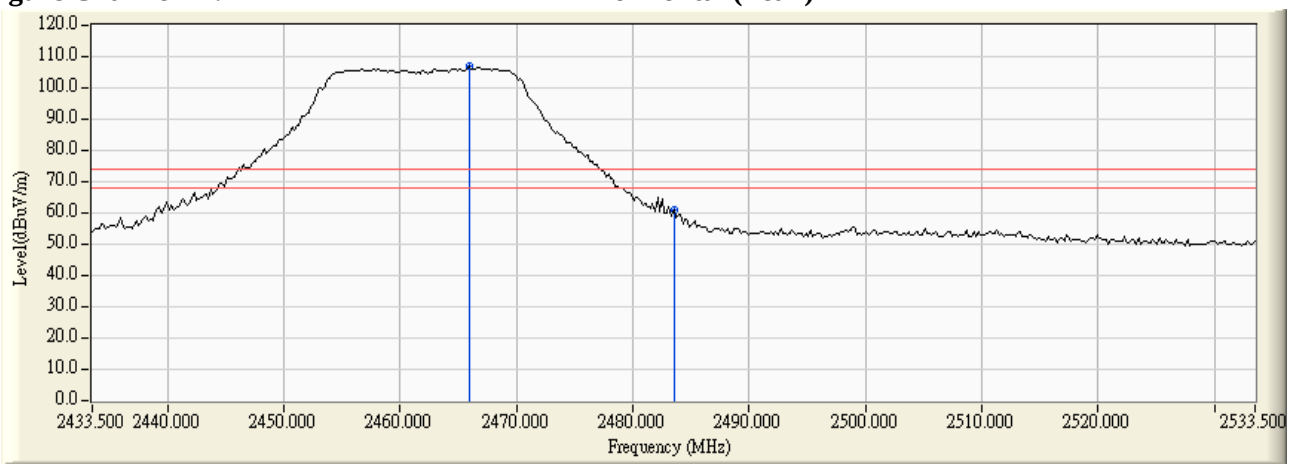
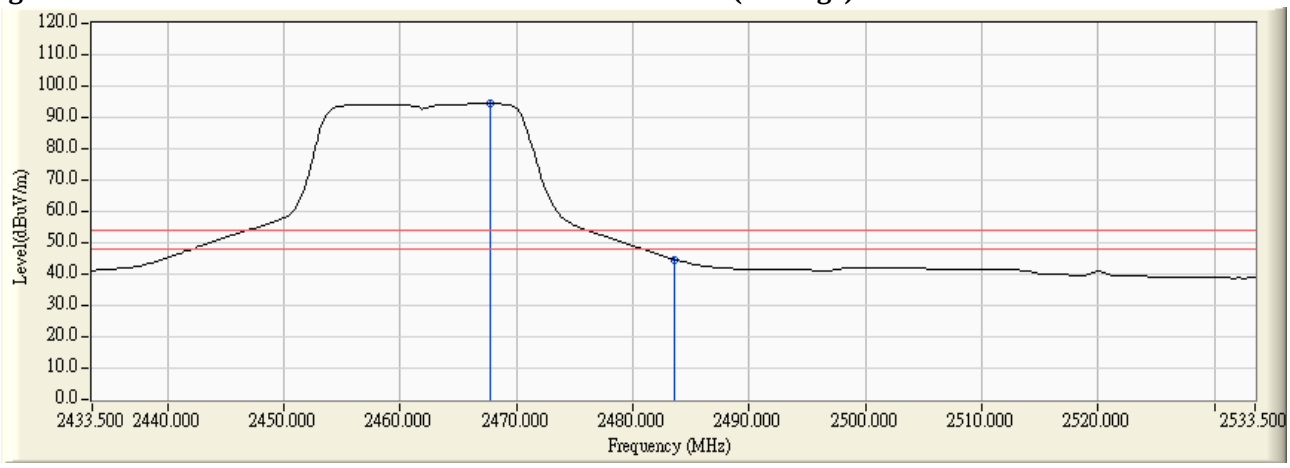


Figure Channel 11: Horizontal (Average)



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 : Security Appliance
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (External)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2457.300	-4.049	104.365	100.316	--	--	--
11 (Peak)	2483.500	-3.966	53.799	49.832	74.00	54.00	Pass
11 (Peak)	2485.100	-3.961	53.848	49.886	74.00	54.00	Pass
11 (Average)	2455.900	-4.053	91.662	87.609	--	--	--
11 (Average)	2483.500	-3.966	39.983	36.016	74.00	54.00	Pass

Figure Channel 11: Vertical (Peak)

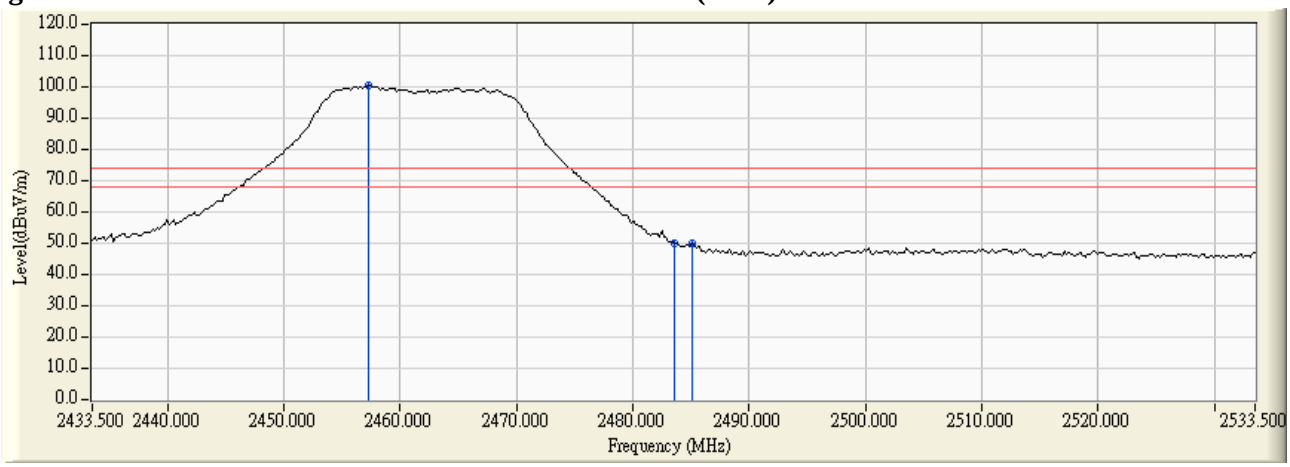
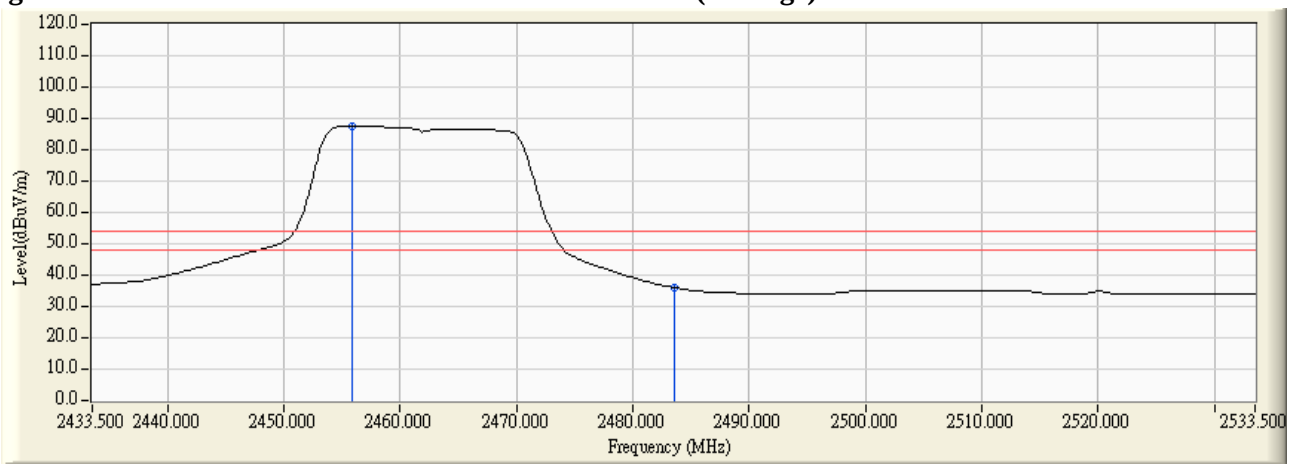


Figure Channel 11: Vertical (Average)



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 : Security Appliance
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-20BW)_14.4Mbps(2.4G Band) (External)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2390.000	-2.687	69.516	66.829	74.00	54.00	Pass
01 (Peak)	2400.000	-2.660	90.245	87.585	--	--	--
01 (Peak)	2412.800	-2.642	111.976	109.333	--	--	--
01 (Average)	2390.000	-2.687	51.629	48.942	74.00	54.00	Pass
01 (Average)	2400.000	-2.660	62.664	60.004	--	--	--
01 (Average)	2406.800	-2.650	95.936	93.286	--	--	--

Figure Channel 01: Horizontal (Peak)

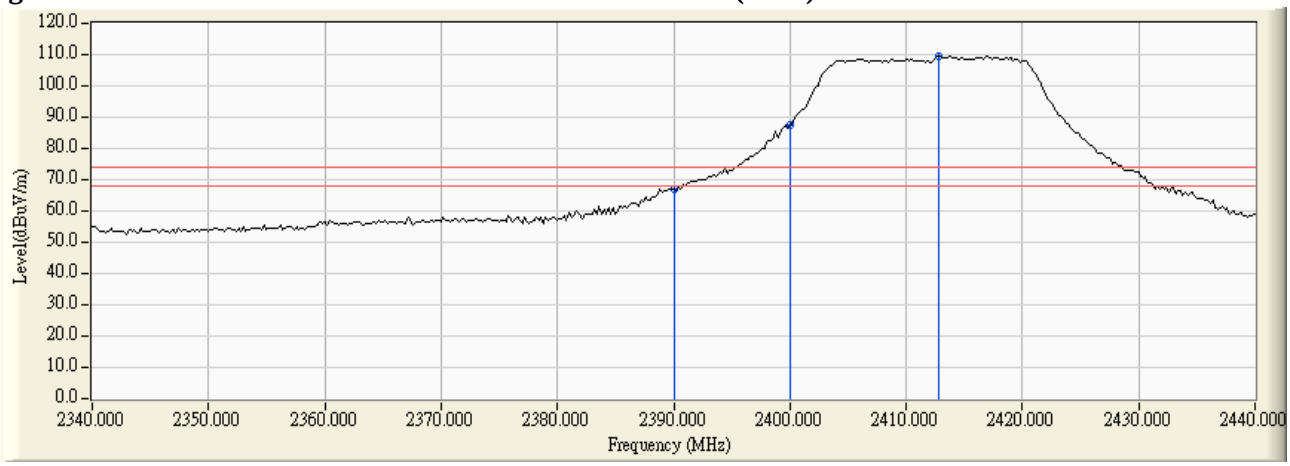
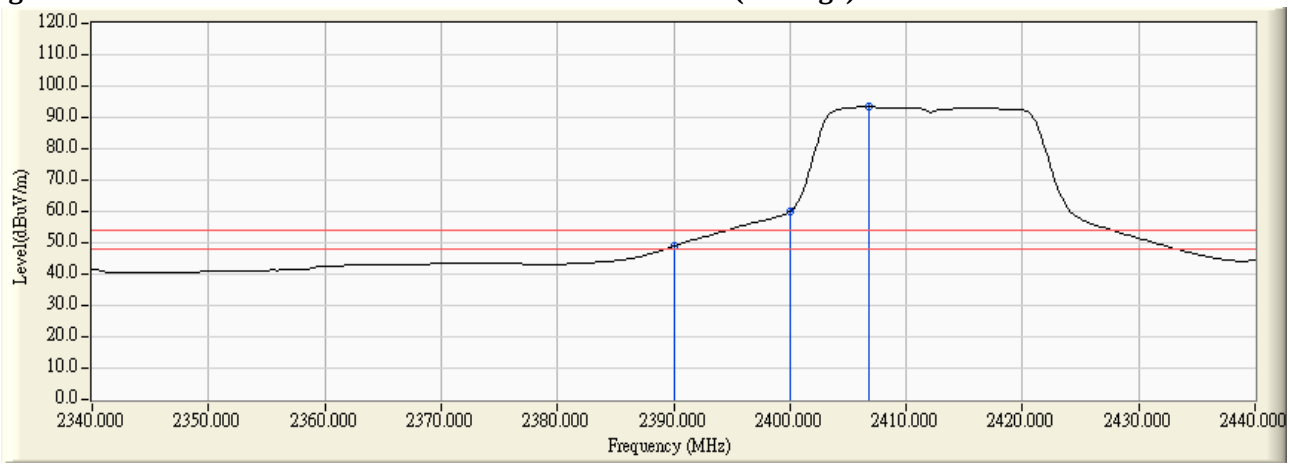


Figure Channel 01: Horizontal (Average)



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 : Security Appliance
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-20BW)_14.4Mbps(2.4G Band) (External)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2389.400	-4.156	64.667	60.510	74.00	54.00	Pass
01 (Peak)	2390.000	-4.159	63.517	59.358	74.00	54.00	Pass
01 (Peak)	2400.000	-4.171	86.152	81.981	--	--	--
01 (Peak)	2417.000	-4.154	109.035	104.881	--	--	--
01 (Average)	2390.000	-4.159	47.415	43.256	74.00	54.00	Pass
01 (Average)	2400.000	-4.171	58.510	54.339	--	--	--
01 (Average)	2416.800	-4.155	93.000	88.845	--	--	--

Figure Channel 01: Vertical (Peak)

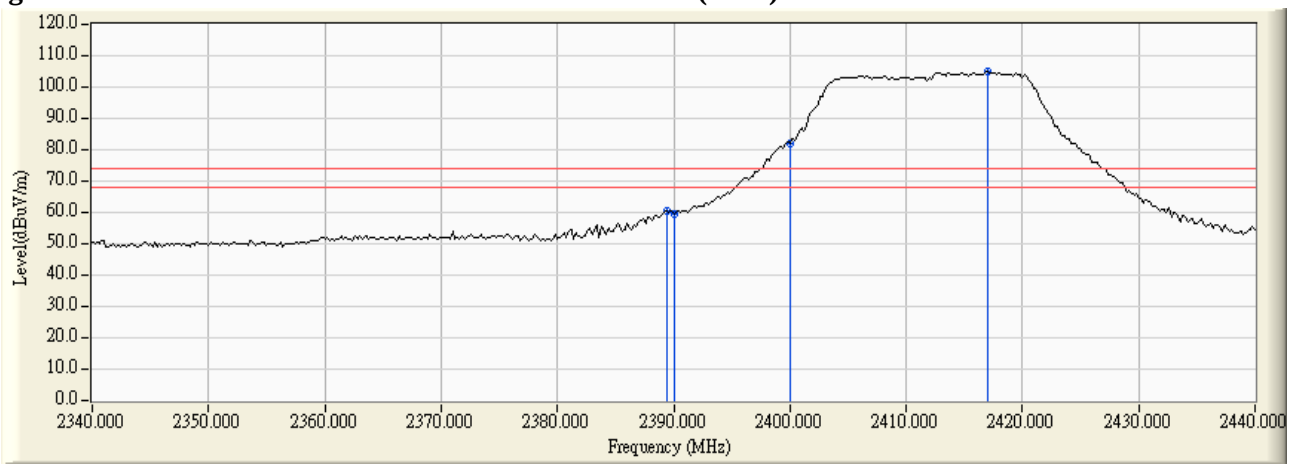
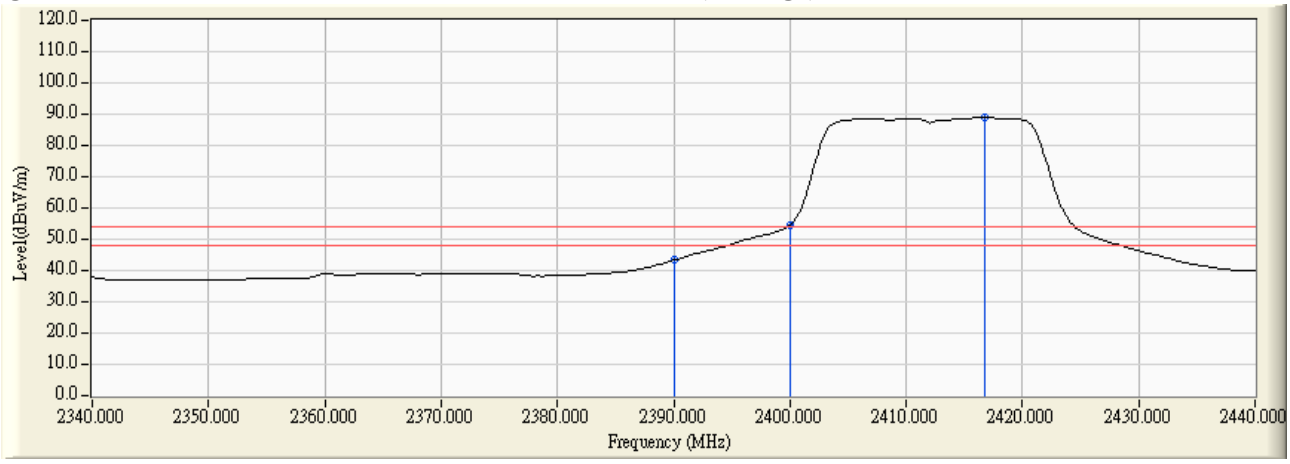


Figure Channel 01: Vertical (Average)



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 : Security Appliance
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-20BW)_14.4Mbps(2.4G Band) (External)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2467.500	-2.618	112.302	109.685	--	--	--
11 (Peak)	2483.500	-2.601	69.704	67.102	74.00	54.00	Pass
11 (Peak)	2483.700	-2.601	70.121	67.519	74.00	54.00	Pass
11 (Average)	2466.300	-2.618	96.087	93.469	--	--	--
11 (Average)	2483.500	-2.601	50.006	47.404	74.00	54.00	Pass

Figure Channel 11: Horizontal (Peak)

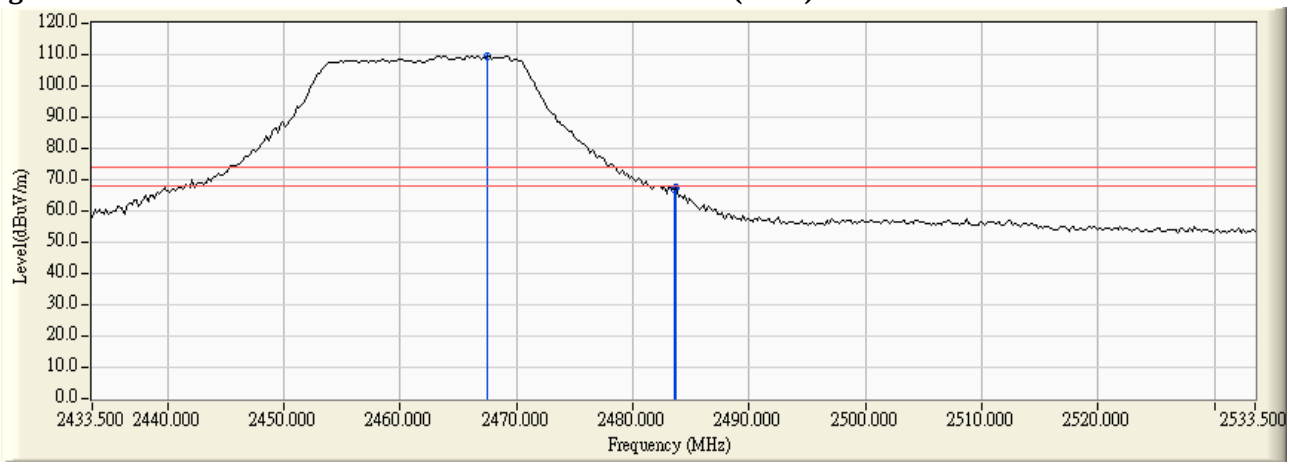
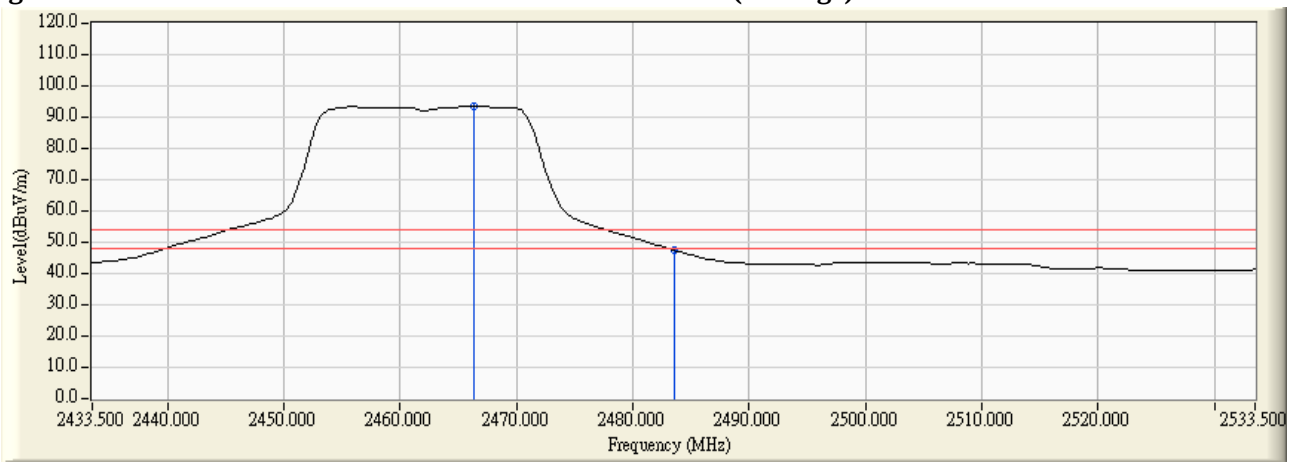


Figure Channel 11: Horizontal (Average)



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 : Security Appliance
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-20BW)_14.4Mbps(2.4G Band) (External)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2462.700	-4.032	107.342	103.310	--	--	--
11 (Peak)	2483.500	-3.966	58.143	54.176	74.00	54.00	Pass
11 (Peak)	2484.900	-3.962	58.576	54.614	74.00	54.00	Pass
11 (Average)	2456.100	-4.052	92.017	87.965	--	--	--
11 (Average)	2483.500	-3.966	44.162	40.195	74.00	54.00	Pass

Figure Channel 11: Vertical (Peak)

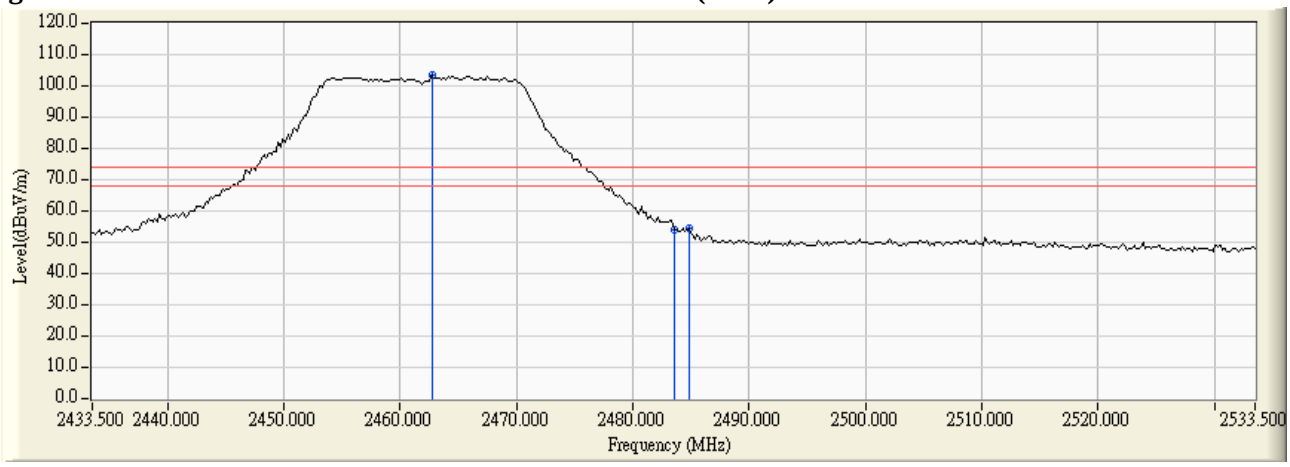
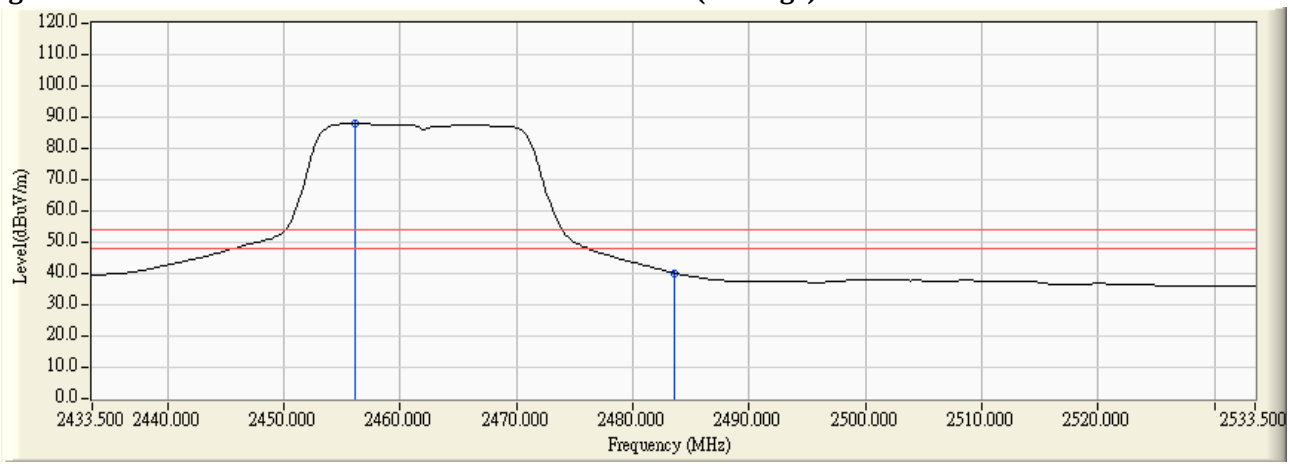


Figure Channel 11: Vertical (Average)



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 : Security Appliance
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n-40BW)_30Mbps(2.4G Band) (External)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
03 (Peak)	2387.600	-2.697	72.271	69.574	74.00	54.00	Pass
03 (Peak)	2390.000	-2.687	71.565	68.878	74.00	54.00	Pass
03 (Peak)	2400.000	-2.660	87.133	84.473	--	--	--
03 (Peak)	2438.000	-2.637	107.643	105.006	--	--	--
03 (Average)	2390.000	-2.687	54.472	51.785	74.00	54.00	Pass
03 (Average)	2400.000	-2.660	60.042	57.382	--	--	--
03 (Average)	2408.200	-2.648	89.864	87.216	--	--	--

Figure Channel 01: Horizontal (Peak)

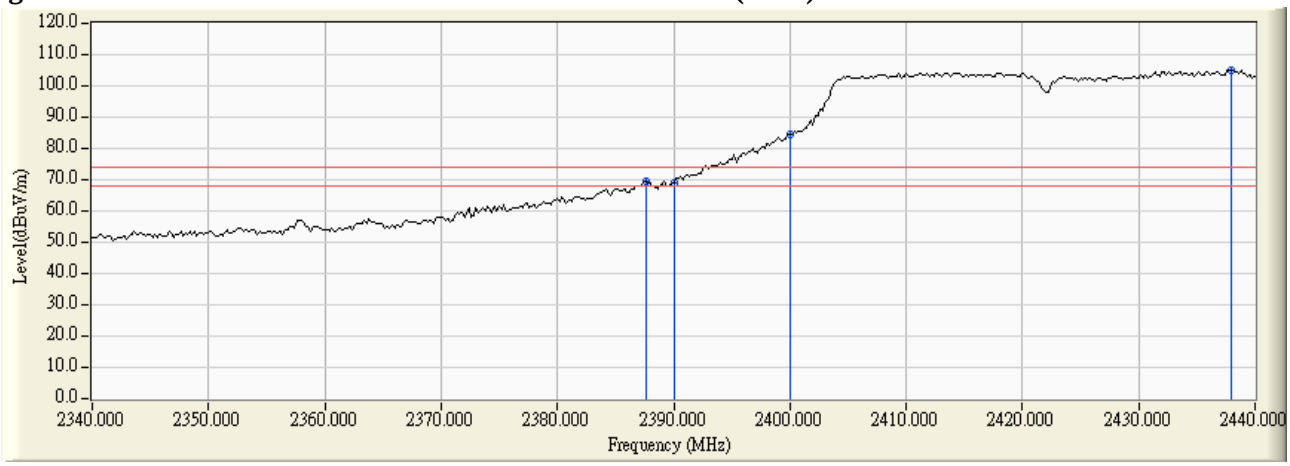
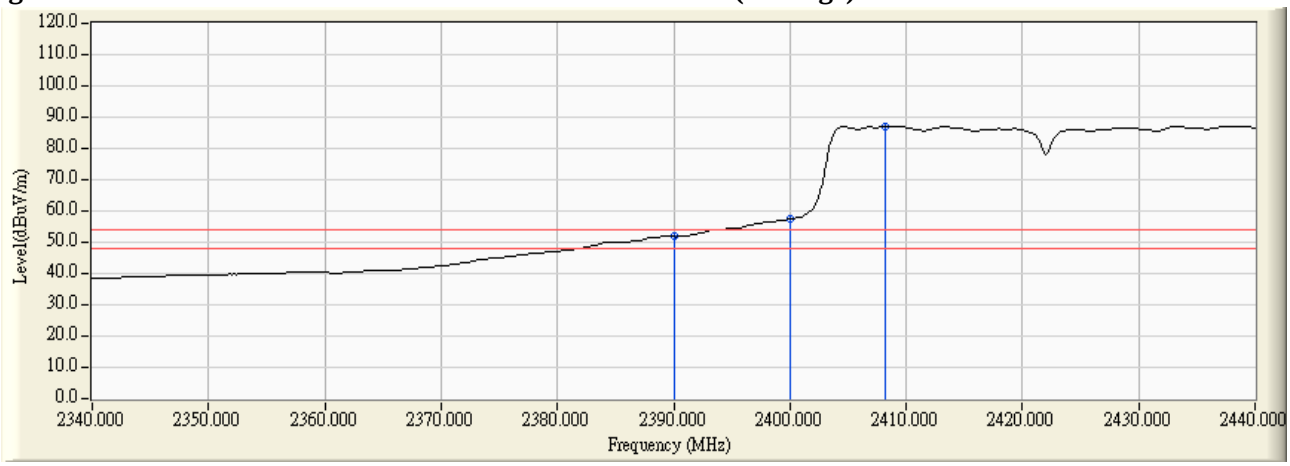


Figure Channel 01: Horizontal (Average)



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 : Security Appliance
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n-40BW)_30Mbps(2.4G Band) (External)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
03 (Peak)	2390.000	-4.159	70.572	66.413	74.00	54.00	Pass
03 (Peak)	2400.000	-4.171	85.789	81.618	--	--	--
03 (Peak)	2431.400	-4.119	106.616	102.496	--	--	--
03 (Average)	2390.000	-4.159	52.324	48.165	74.00	54.00	Pass
03 (Average)	2400.000	-4.171	56.980	52.809	--	--	--
03 (Average)	2435.800	-4.109	89.431	85.322	--	--	--

Figure Channel 01: Vertical (Peak)

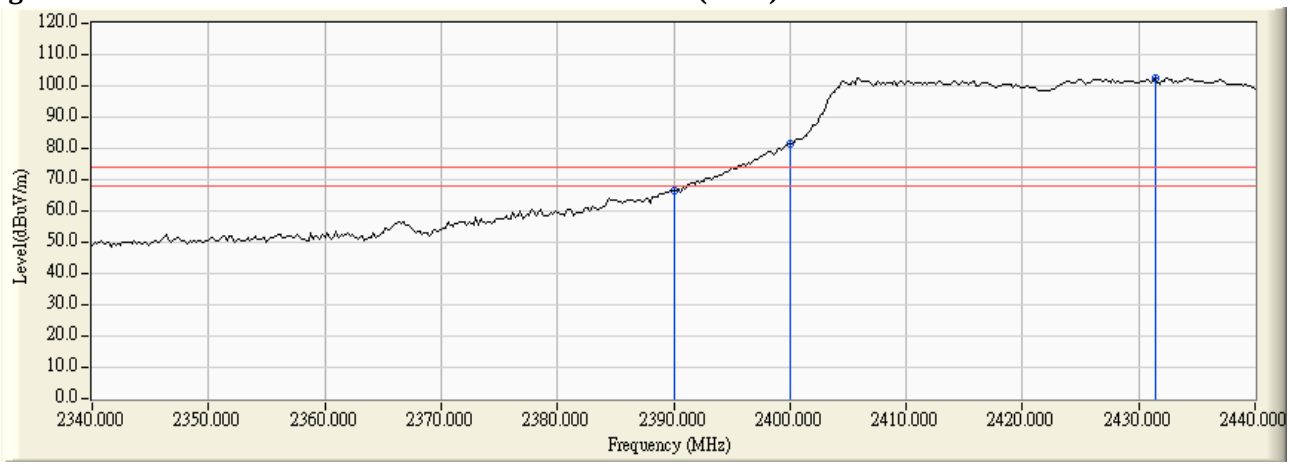
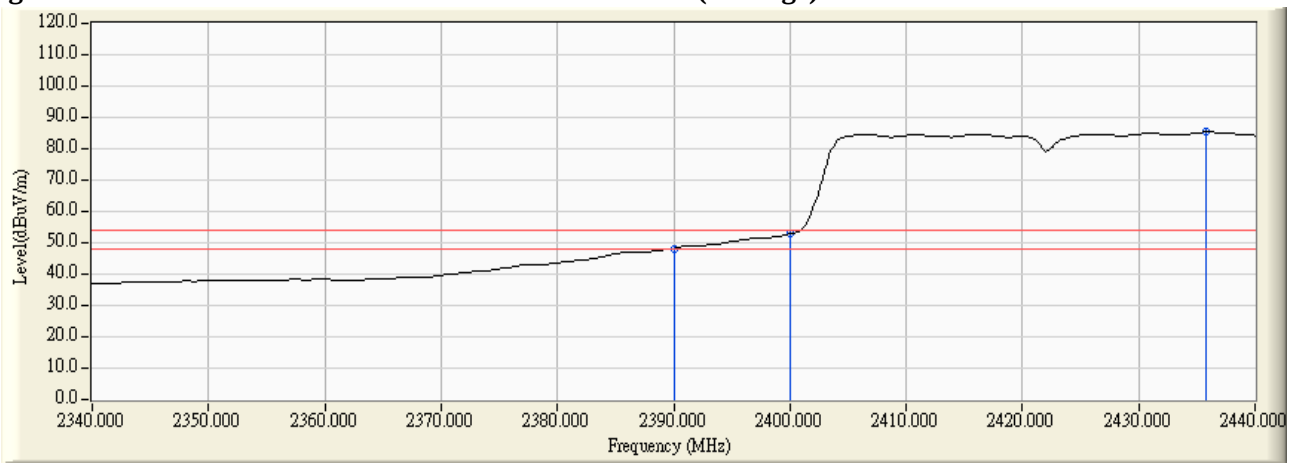


Figure Channel 01: Vertical (Average)



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 : Security Appliance
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n-40BW)_30Mbps(2.4G Band) (External)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
09 (Peak)	2464.300	-2.620	109.922	107.302	--	--	--
09 (Peak)	2483.500	-2.601	74.933	72.331	74.00	54.00	Pass
09 (Average)	2467.900	-2.616	92.239	89.622	--	--	--
09 (Average)	2483.500	-2.601	54.870	52.268	74.00	54.00	Pass

Figure Channel 07: Horizontal (Peak)

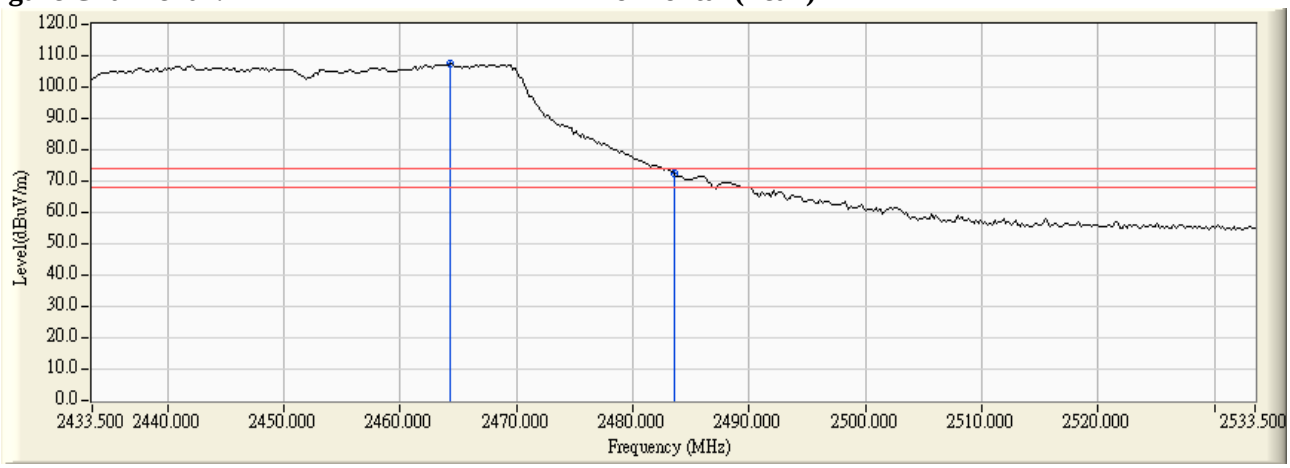
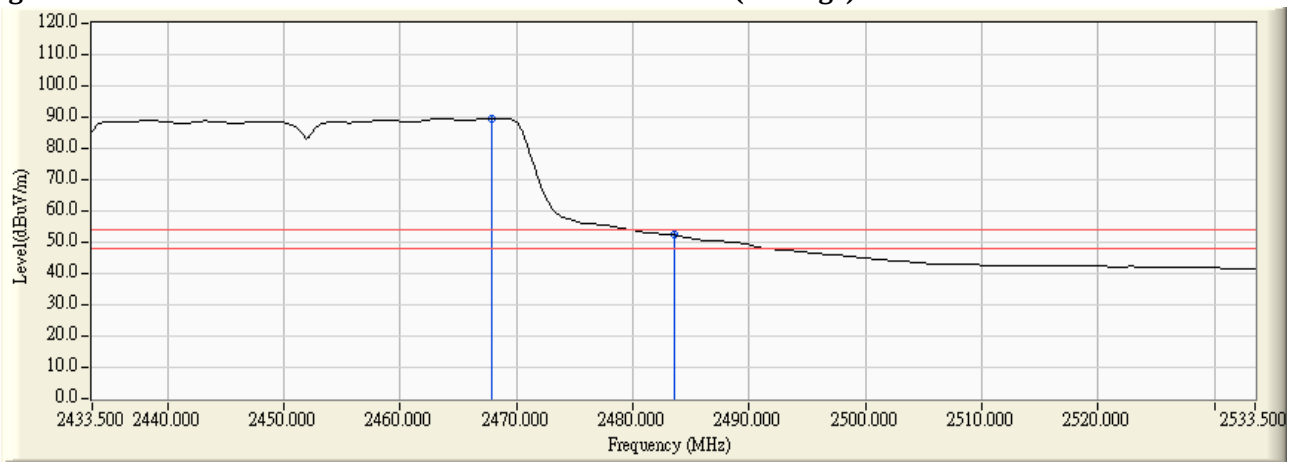


Figure Channel 07: Horizontal (Average)



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 : Security Appliance
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n-40BW)_30Mbps(2.4G Band) (External)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
09 (Peak)	2439.500	-4.100	105.821	101.721	--	--	--
09 (Peak)	2483.500	-3.966	69.270	65.303	74.00	54.00	Pass
09 (Average)	2438.100	-4.103	89.022	84.918	--	--	--
09 (Average)	2483.500	-3.966	49.323	45.356	74.00	54.00	Pass

Figure Channel 07: Vertical (Peak)

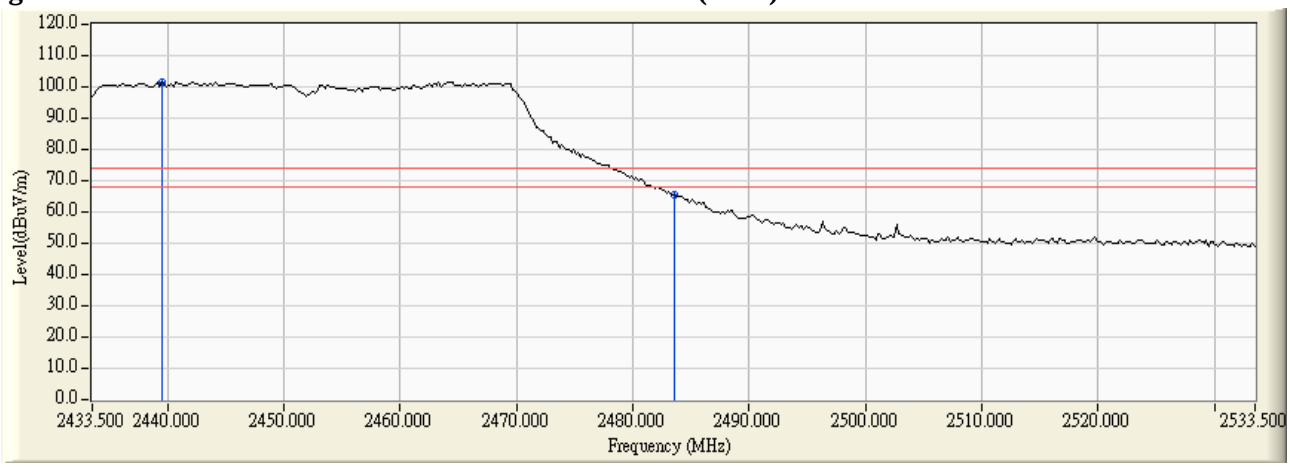
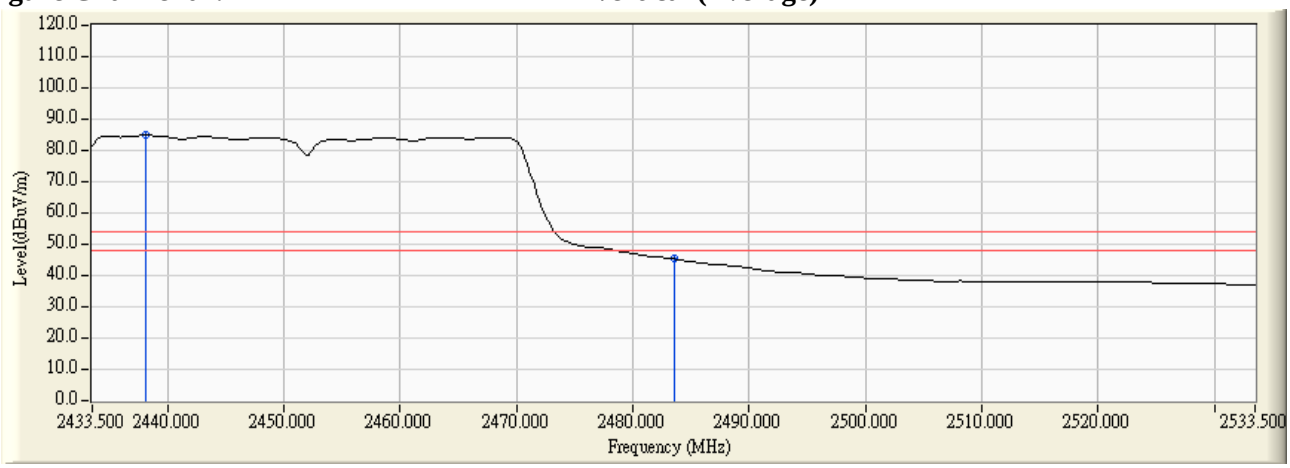


Figure Channel 07: Vertical (Average)



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 : Security Appliance
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (Internal)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2390.000	-2.687	52.237	49.550	74.00	54.00	Pass
01 (Peak)	2397.000	-2.665	56.501	53.836	74.00	54.00	Pass
01 (Peak)	2400.000	-2.660	55.062	52.402	--	--	--
01 (Peak)	2413.200	-2.643	102.662	100.019	--	--	--
01 (Average)	2390.000	-2.687	39.625	36.938	74.00	54.00	Pass
01 (Average)	2398.000	-2.663	47.133	44.470	74.00	54.00	Pass
01 (Average)	2400.000	-2.660	43.674	41.014	--	--	--
01 (Average)	2411.200	-2.643	98.272	95.629	--	--	--

Figure Channel 01: Horizontal (Peak)

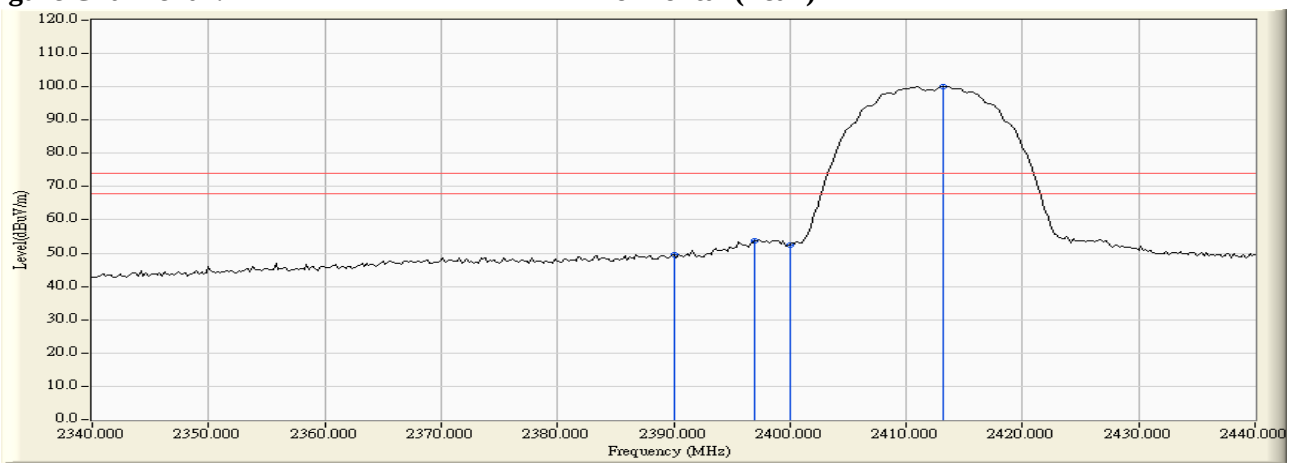
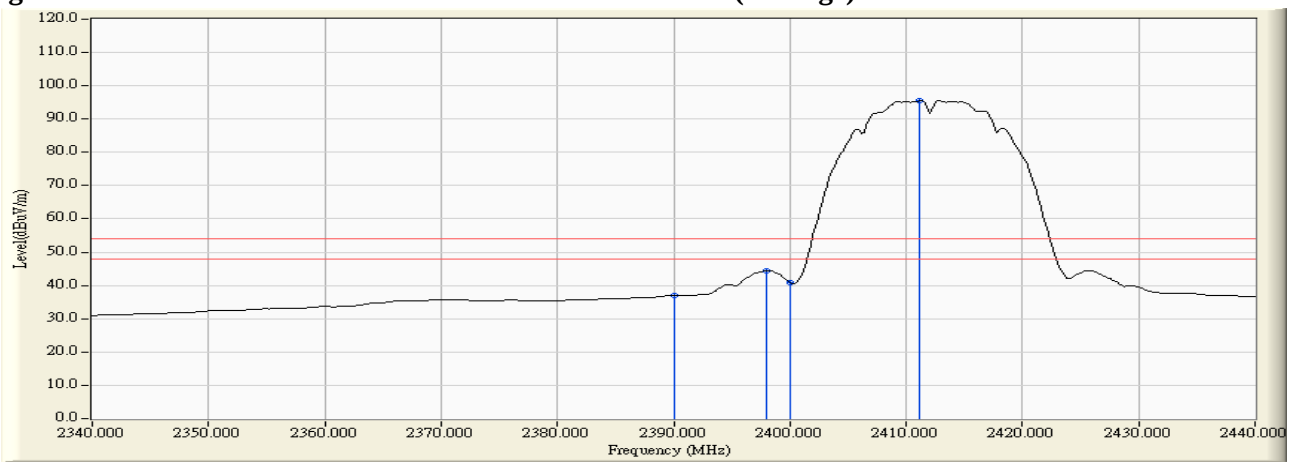


Figure Channel 01: Horizontal (Average)



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 : Security Appliance
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (Internal)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2376.600	-4.115	51.193	47.079	74.00	54.00	Pass
01 (Peak)	2390.000	-4.159	50.114	45.955	74.00	54.00	Pass
01 (Peak)	2397.400	-4.171	54.612	50.440	74.00	54.00	Pass
01 (Peak)	2400.000	-4.171	52.528	48.357	--	--	--
01 (Peak)	2413.000	-4.163	100.133	95.969	--	--	--
01 (Average)	2390.000	-4.159	38.494	34.335	74.00	54.00	Pass
01 (Average)	2397.800	-4.171	44.037	39.866	74.00	54.00	Pass
01 (Average)	2400.000	-4.171	41.419	37.248	--	--	--
01 (Average)	2411.200	-4.168	95.847	91.679	--	--	--

Figure Channel 01: Vertical (Peak)

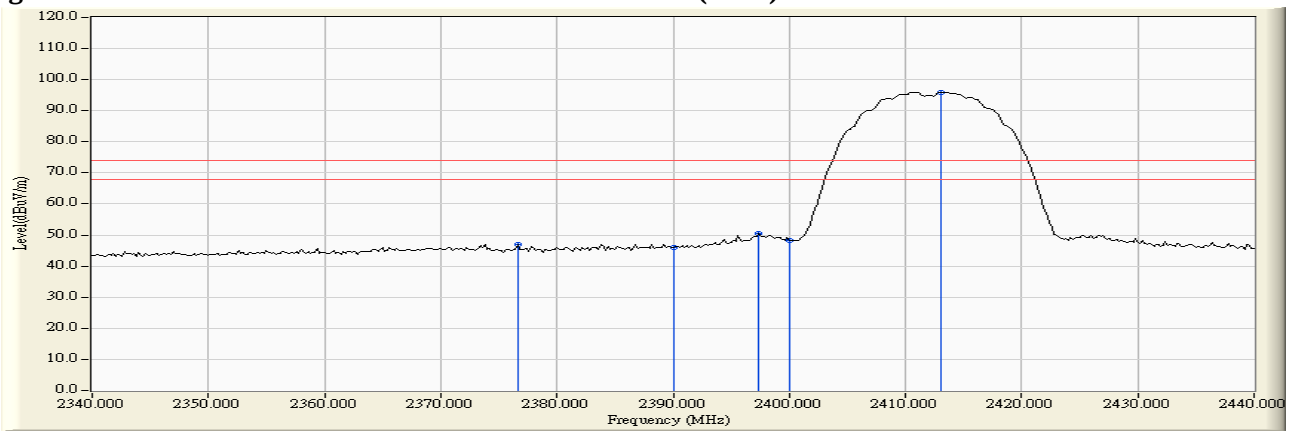
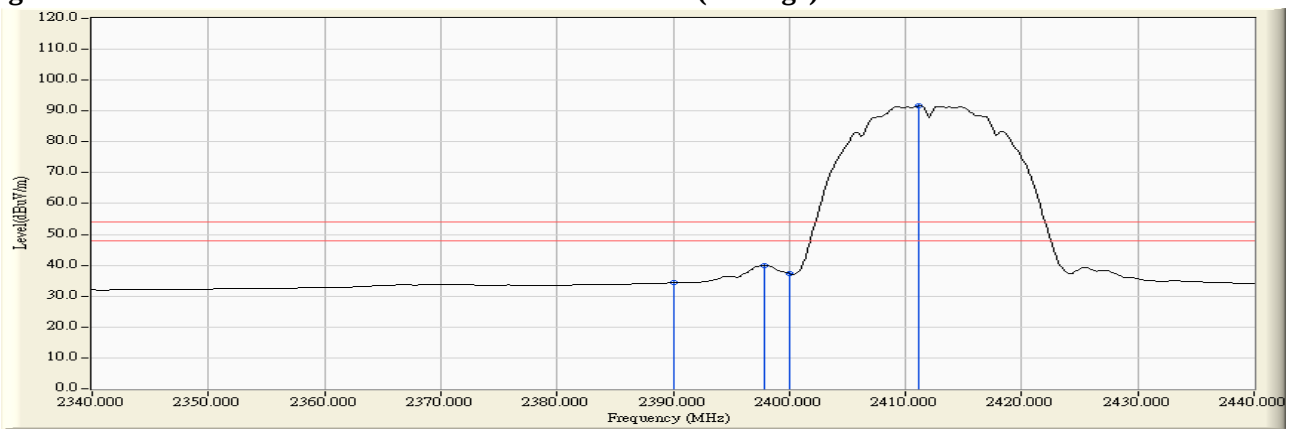


Figure Channel 01: Vertical (Average)



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 : Security Appliance
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (Internal)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2460.500	-2.623	100.398	97.774	--	--	--
11 (Peak)	2483.500	-2.601	48.883	46.281	74.00	54.00	Pass
11 (Peak)	2488.300	-2.598	50.105	47.508	74.00	54.00	Pass
11 (Average)	2461.300	-2.624	96.061	93.438	--	--	--
11 (Average)	2483.500	-2.601	38.771	36.169	74.00	54.00	Pass

Figure Channel 11: Horizontal (Peak)

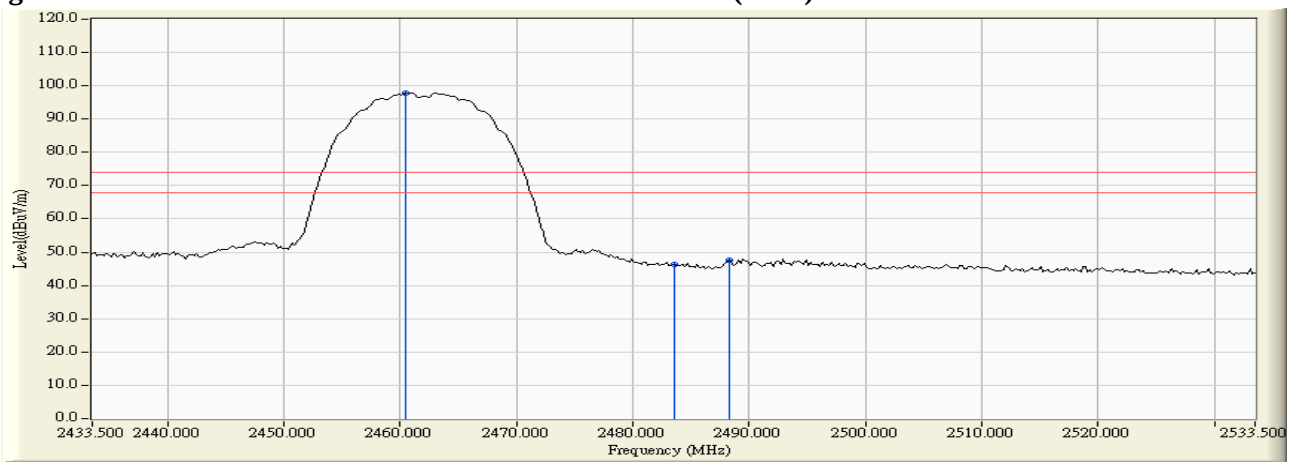
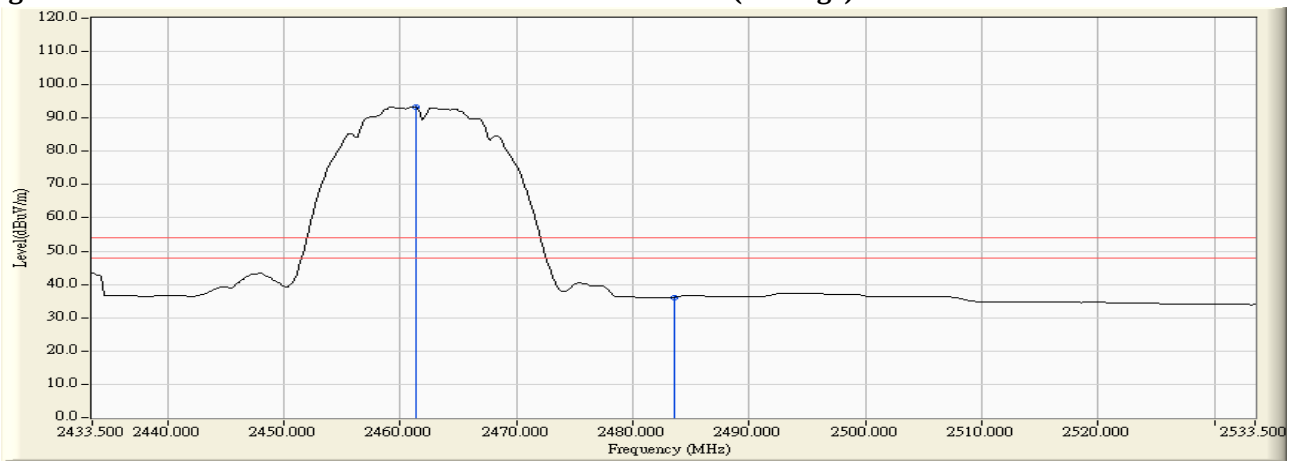


Figure Channel 11: Horizontal (Average)



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 : Security Appliance
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (Internal)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2462.900	-4.032	99.122	95.090	--	--	--
11 (Peak)	2483.500	-3.966	49.624	45.657	74.00	54.00	Pass
11 (Peak)	2488.300	-3.952	51.399	47.447	74.00	54.00	Pass
11 (Average)	2461.100	-4.037	94.800	90.763	--	--	--
11 (Average)	2483.500	-3.966	38.161	34.194	74.00	54.00	Pass

Figure Channel 11: Vertical (Peak)

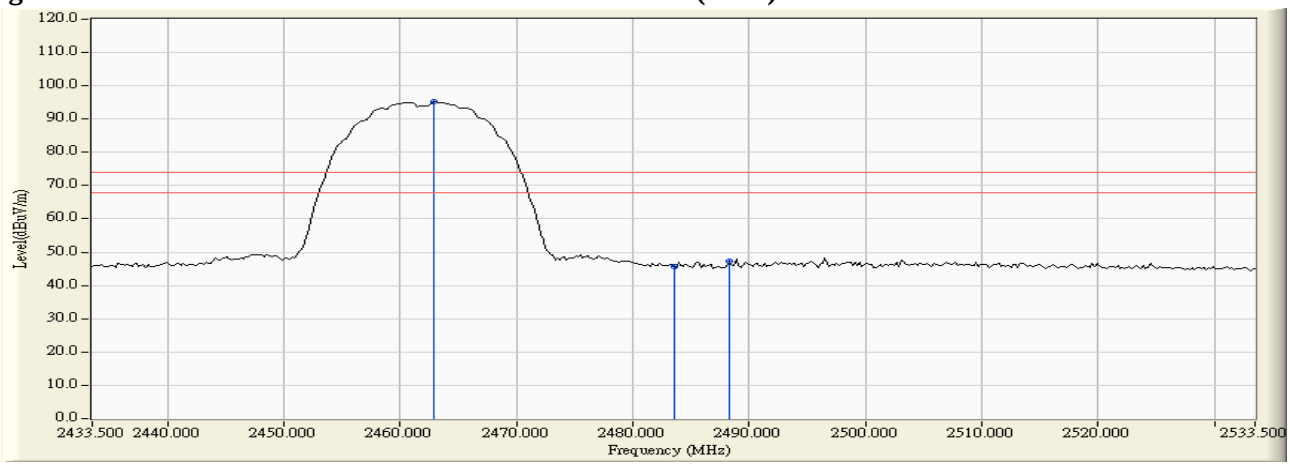
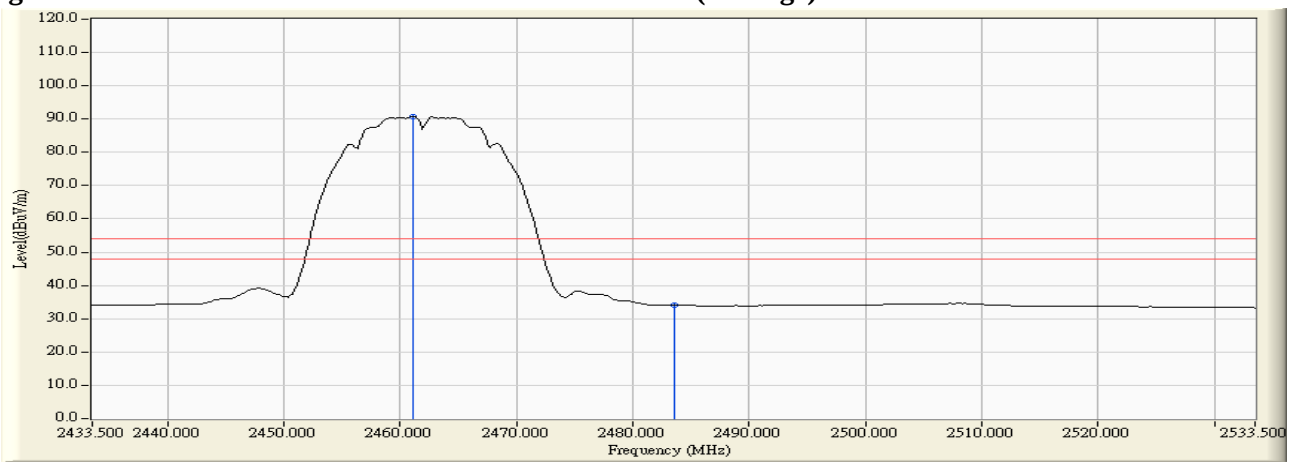


Figure Channel 11: Vertical (Average)



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 : Security Appliance
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (Internal)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2387.600	-2.697	64.224	61.527	74.00	54.00	Pass
01 (Peak)	2390.000	-2.687	63.440	60.753	74.00	54.00	Pass
01 (Peak)	2400.000	-2.660	85.684	83.024	--	--	--
01 (Peak)	2416.800	-2.642	108.444	105.802	--	--	--
01(Average)	2390.000	-2.687	47.172	44.485	74.00	54.00	Pass
01(Average)	2400.000	-2.660	58.748	56.088	--	--	--
01(Average)	2416.600	-2.642	95.755	93.113	--	--	--

Figure Channel 01: Horizontal (Peak)

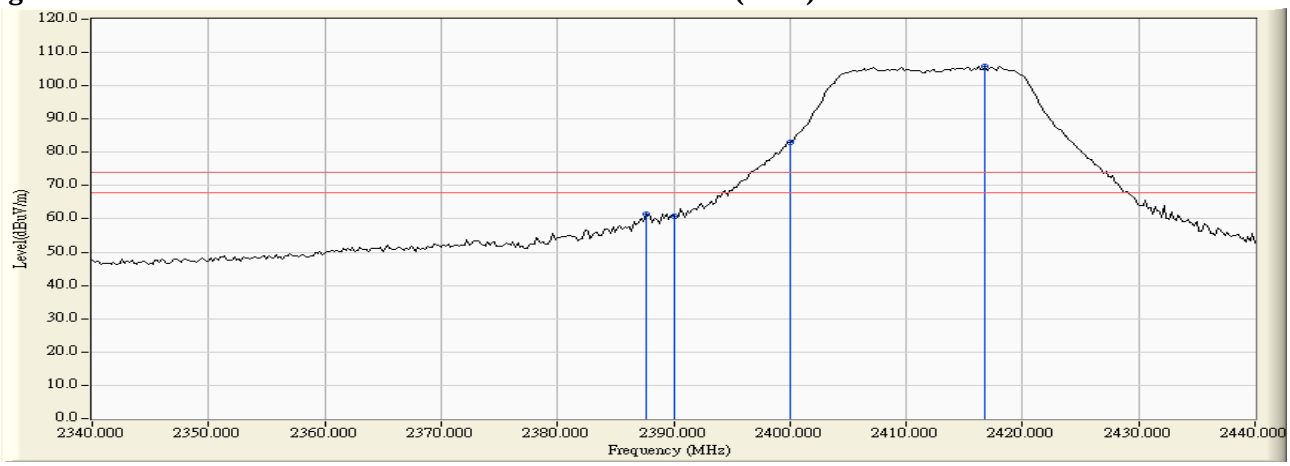
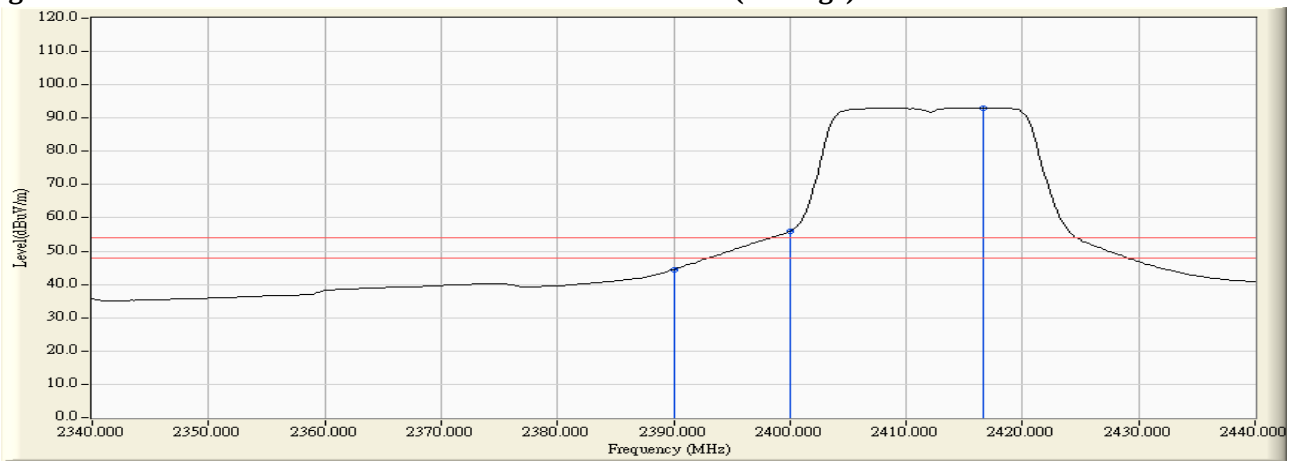


Figure Channel 01: Horizontal (Average)



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 : Security Appliance
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (Internal)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2390.000	-4.159	62.010	57.851	74.00	54.00	Pass
01 (Peak)	2400.000	-4.171	83.544	79.373	--	--	--
01 (Peak)	2415.000	-4.159	107.011	102.852	--	--	--
01 (Average)	2390.000	-4.159	44.477	40.318	74.00	54.00	Pass
01 (Average)	2400.000	-4.171	55.967	51.796	--	--	--
01 (Average)	2417.200	-4.154	93.586	89.432	--	--	--

Figure Channel 01: Vertical (Peak)

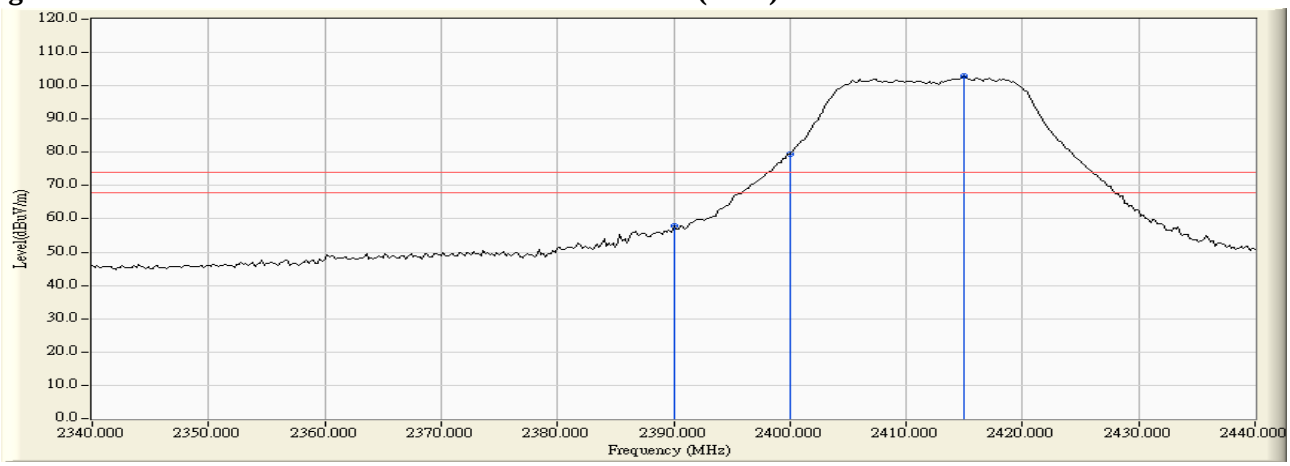
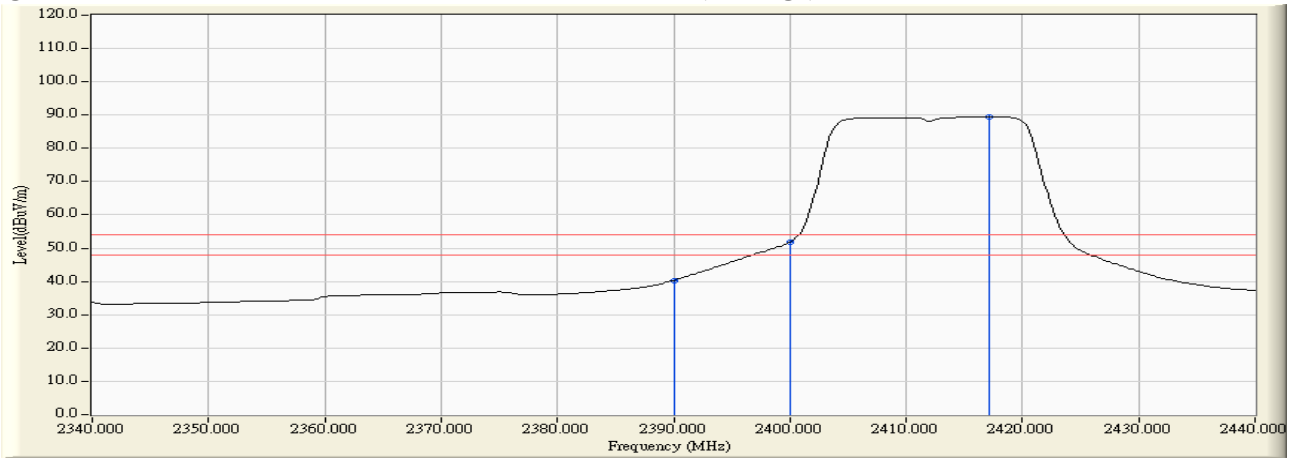


Figure Channel 01: Vertical (Average)



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 : Security Appliance
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (Internal)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2455.500	-2.627	106.668	104.041	--	--	--
11 (Peak)	2483.500	-2.601	58.016	55.414	74.00	54.00	Pass
11 (Average)	2455.900	-2.627	93.985	91.358	--	--	--
11 (Average)	2483.500	-2.601	42.436	39.834	74.00	54.00	Pass

Figure Channel 11: Horizontal (Peak)

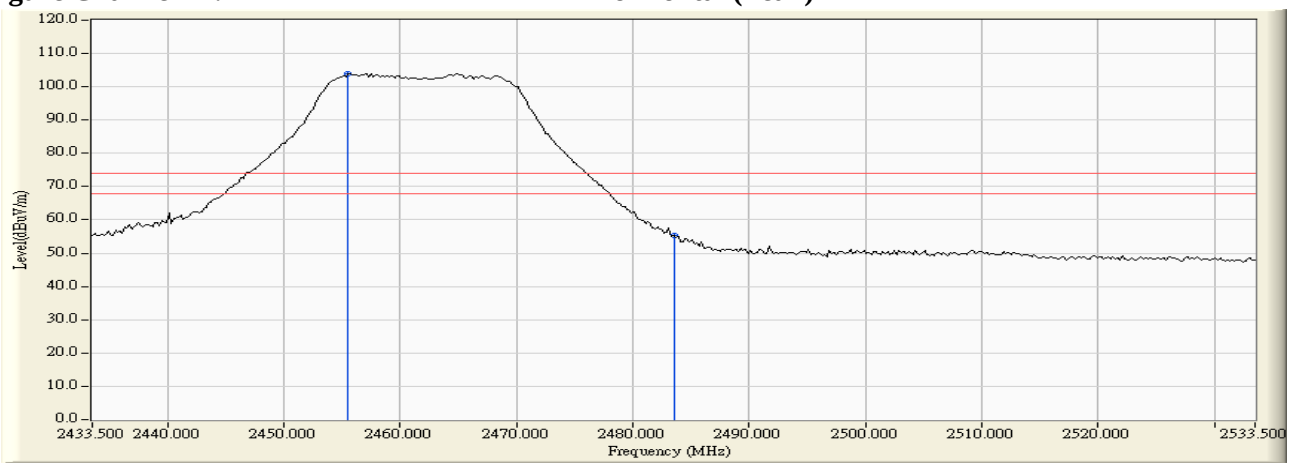
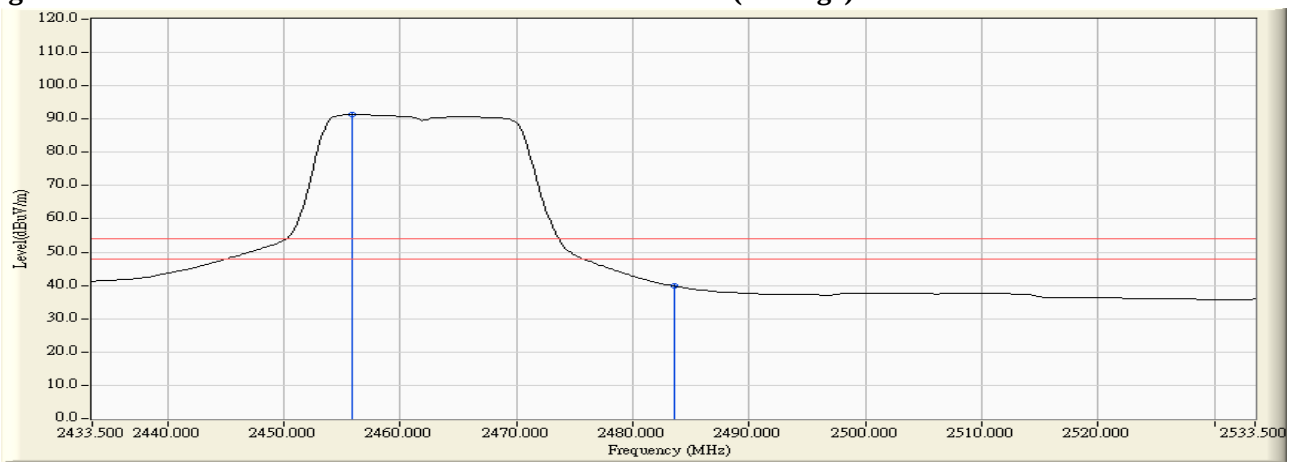


Figure Channel 11: Horizontal (Average)



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 : Security Appliance
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (Internal)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2464.700	-4.026	105.356	101.330	--	--	--
11 (Peak)	2483.500	-3.966	54.924	50.957	74.00	54.00	Pass
11 (Peak)	2484.500	-3.964	56.837	52.873	74.00	54.00	Pass
11 (Average)	2456.900	-4.050	92.659	88.609	--	--	--
11 (Average)	2483.500	-3.966	42.203	38.236	74.00	54.00	Pass

Figure Channel 11: Vertical (Peak)

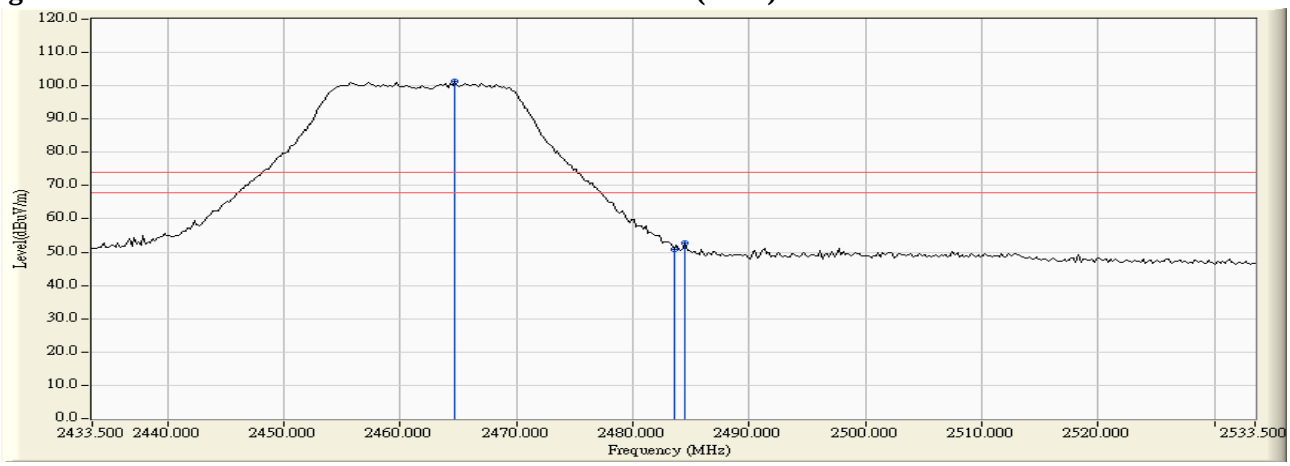
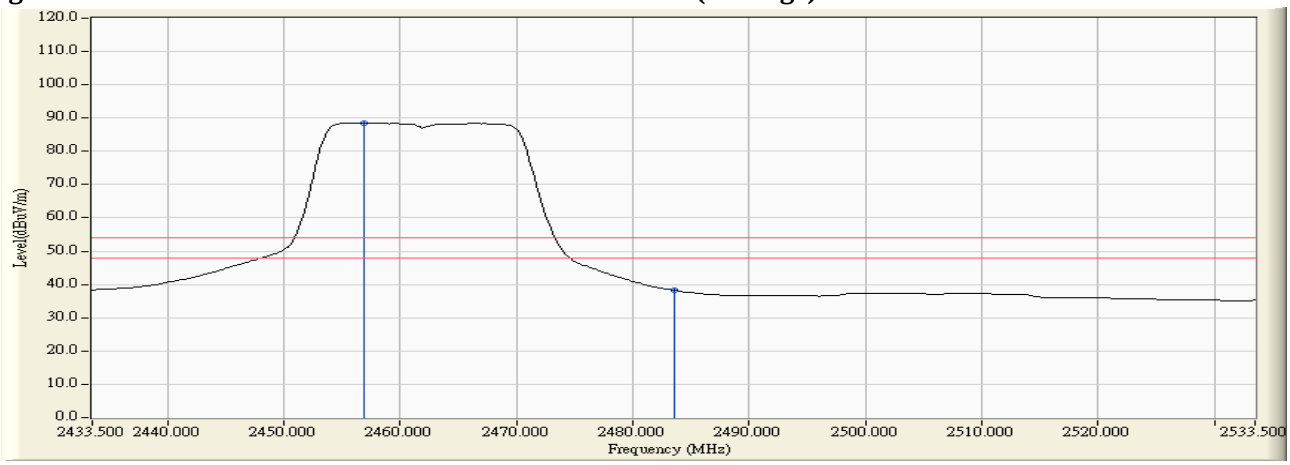


Figure Channel 11: Vertical (Average)



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 : Security Appliance
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-20BW)_14.4Mbps(2.4G Band) (Internal)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2390.000	-2.687	67.854	65.167	74.00	54.00	Pass
01 (Peak)	2400.000	-2.660	87.724	85.064	--	--	--
01 (Peak)	2406.400	-2.650	111.230	108.579	--	--	--
01 (Average)	2390.000	-2.687	49.791	47.104	74.00	54.00	Pass
01 (Average)	2400.000	-2.660	60.382	57.722	--	--	--
01 (Average)	2408.400	-2.647	94.391	91.743	--	--	--

Figure Channel 01: Horizontal (Peak)

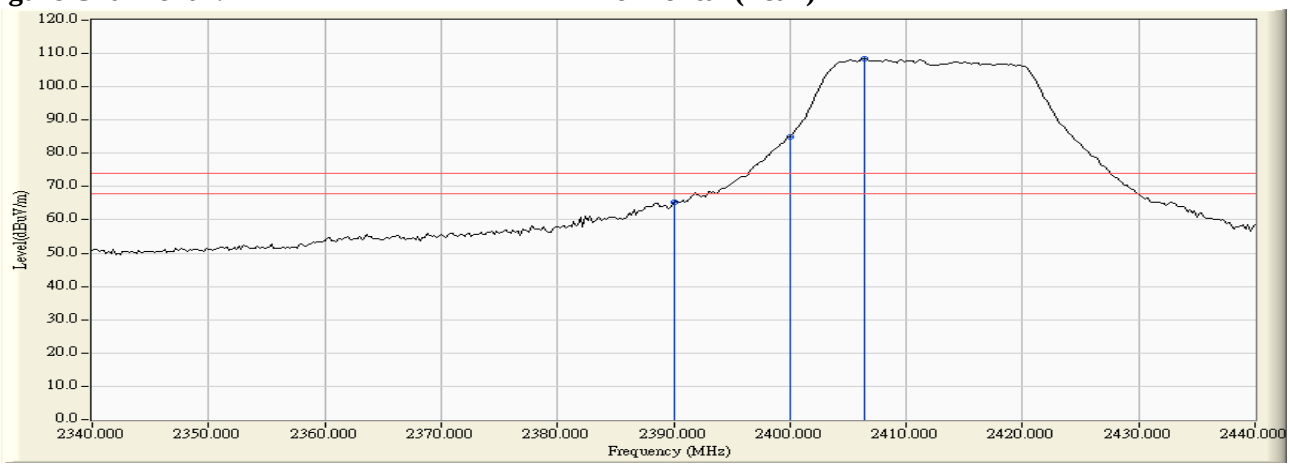
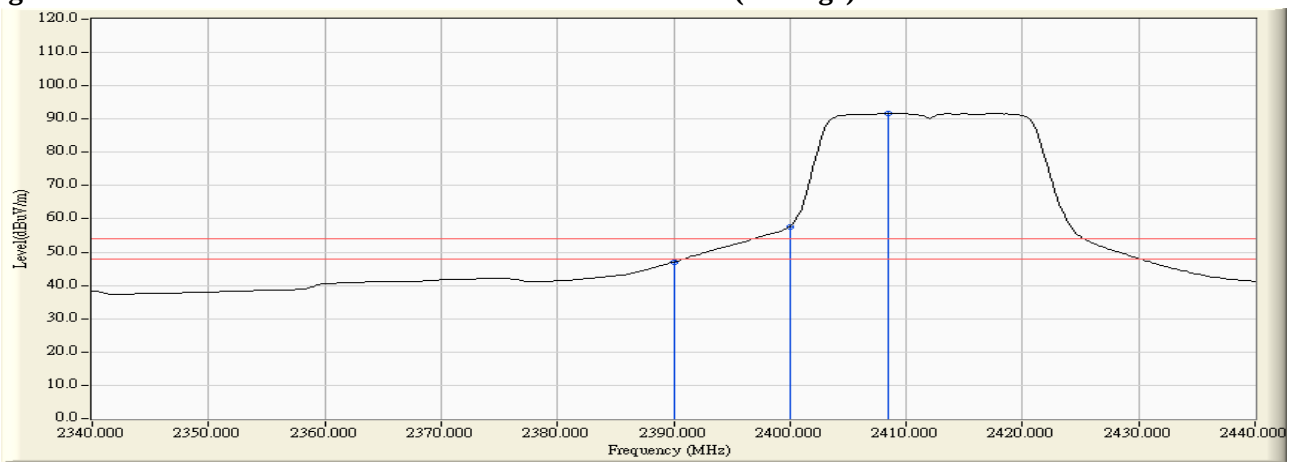


Figure Channel 01: Horizontal (Average)



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 : Security Appliance
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-20BW)_14.4Mbps(2.4G Band) (Internal)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2390.000	-4.159	64.495	60.336	74.00	54.00	Pass
01 (Peak)	2400.000	-4.171	85.405	81.234	--	--	--
01 (Peak)	2417.000	-4.154	109.408	105.254	--	--	--
01 (Average)	2390.000	-4.159	49.033	44.874	74.00	54.00	Pass
01 (Average)	2400.000	-4.171	59.323	55.152	--	--	--
01 (Average)	2407.000	-4.170	93.523	89.353	--	--	--

Figure Channel 01: Vertical (Peak)

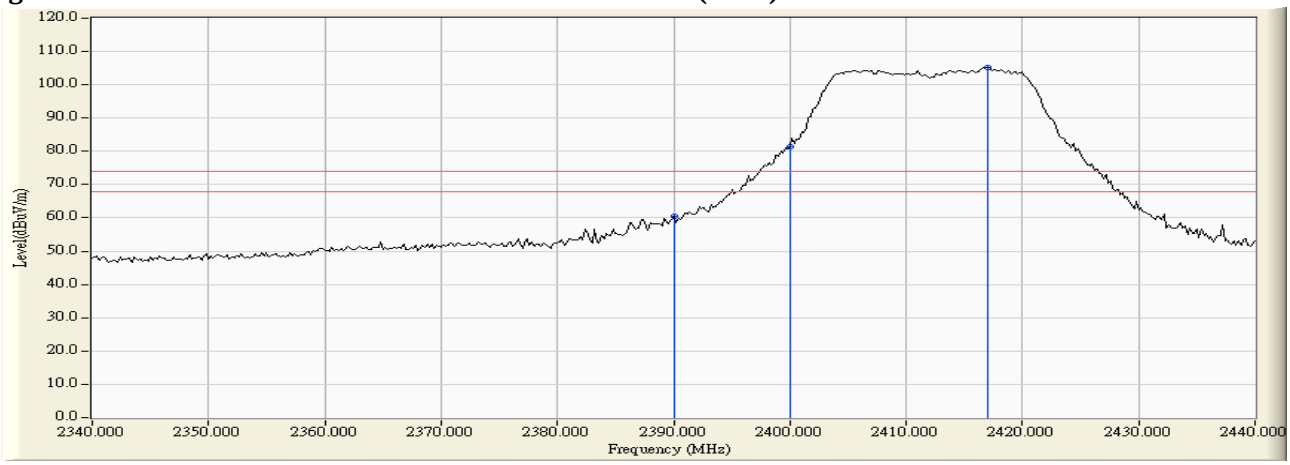
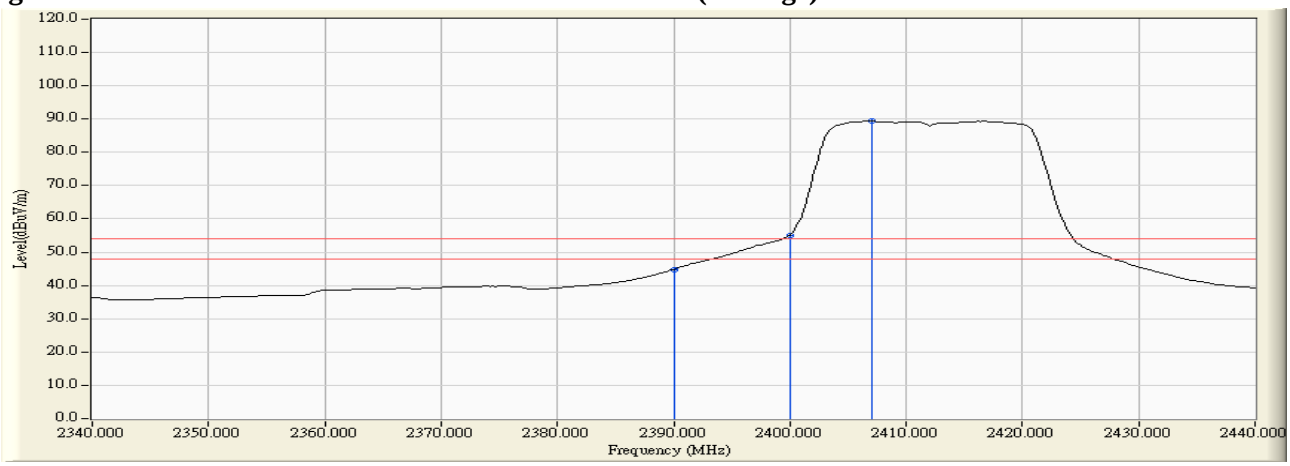


Figure Channel 01: Vertical (Average)



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 : Security Appliance
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-20BW)_14.4Mbps(2.4G Band) (Internal)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2468.300	-2.616	108.296	105.679	--	--	--
11 (Peak)	2483.500	-2.601	59.874	57.272	74.00	54.00	Pass
11 (Peak)	2484.300	-2.602	60.980	58.379	74.00	54.00	Pass
11 (Average)	2455.500	-2.627	92.497	89.870	--	--	--
11 (Average)	2483.500	-2.601	43.778	41.176	74.00	54.00	Pass

Figure Channel 11: Horizontal (Peak)

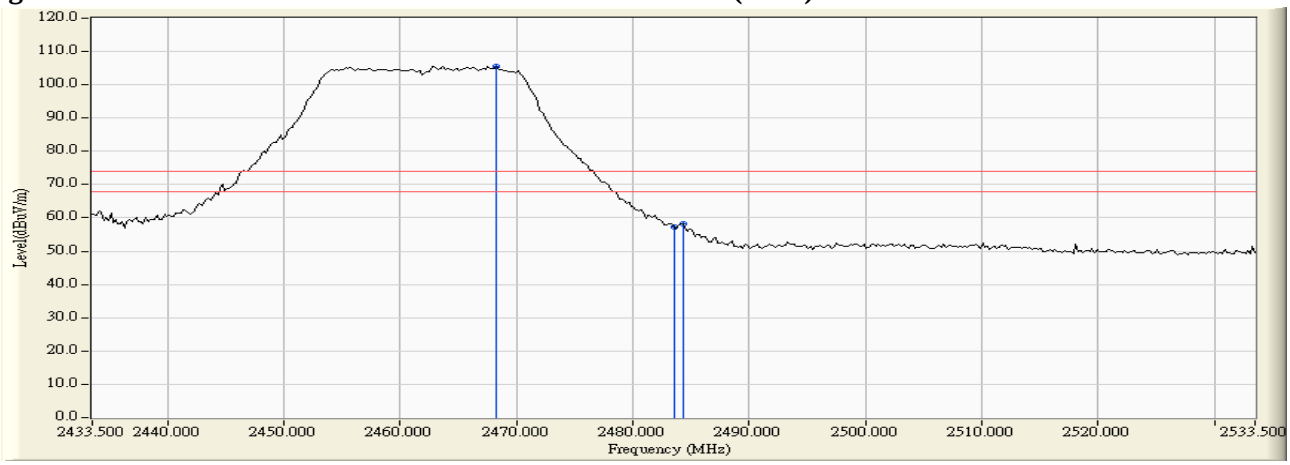
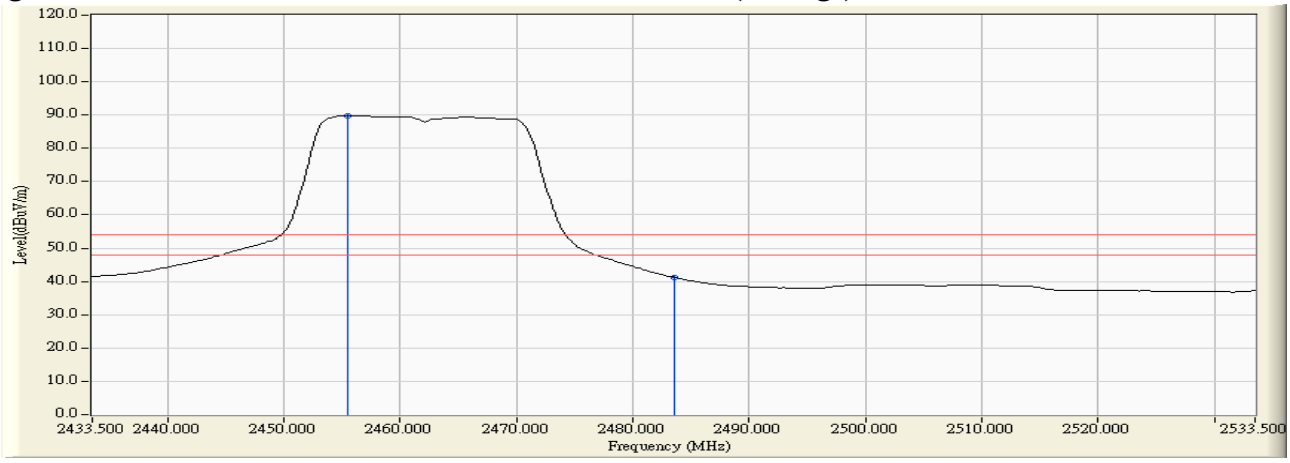


Figure Channel 11: Horizontal (Average)



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 : Security Appliance
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-20BW)_14.4Mbps(2.4G Band) (Internal)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2467.900	-4.016	107.783	103.767	--	--	--
11 (Peak)	2483.500	-3.966	59.036	55.069	74.00	54.00	Pass
11 (Average)	2455.900	-4.053	91.910	87.857	--	--	--
11 (Average)	2483.500	-3.966	43.510	39.543	74.00	54.00	Pass

Figure Channel 11: Vertical (Peak)

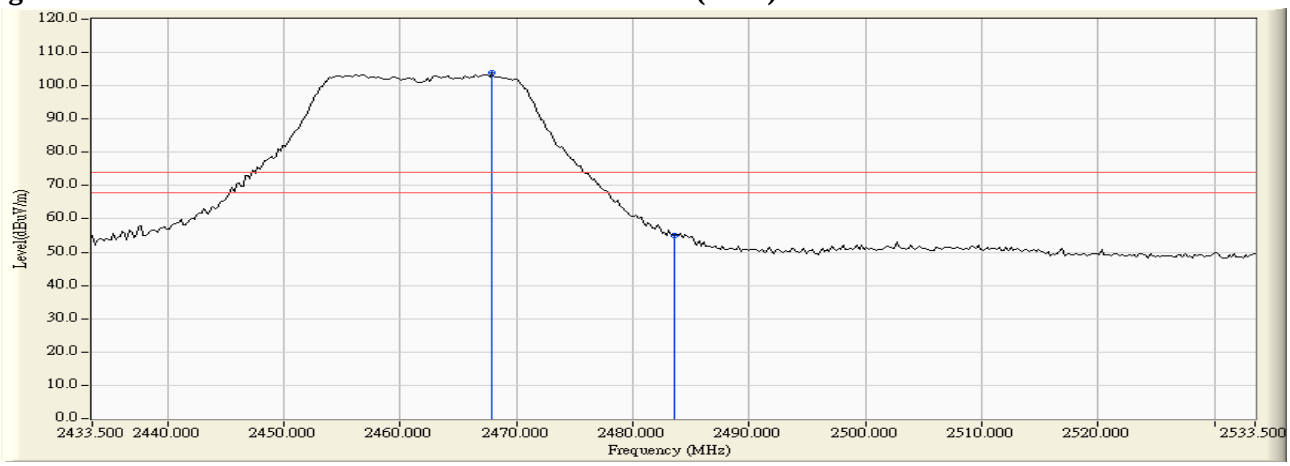
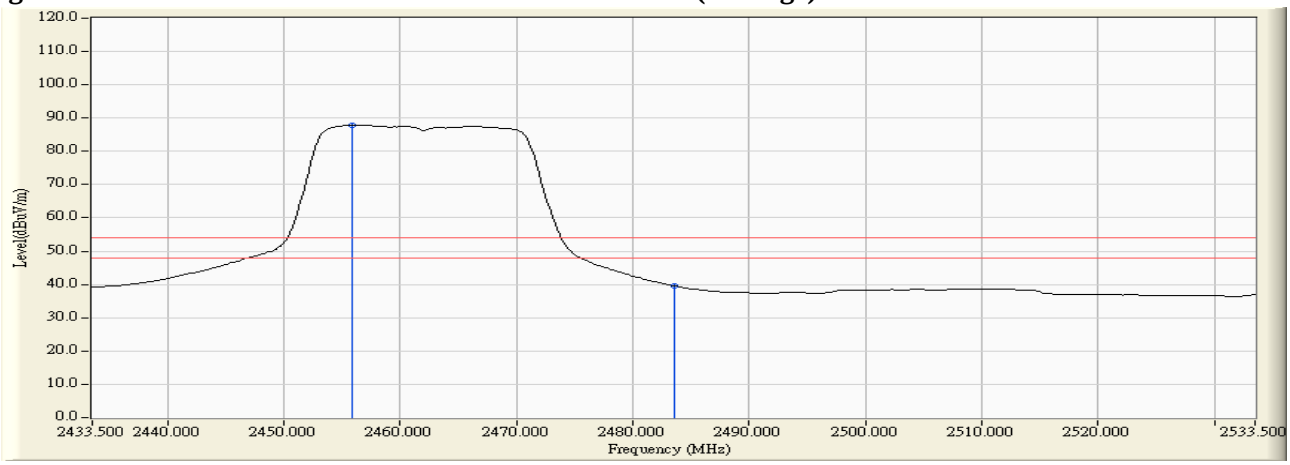


Figure Channel 11: Vertical (Average)



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 : Security Appliance
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n-40BW)_30Mbps(2.4G Band) (Internal)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
03 (Peak)	2390.000	-2.687	72.412	69.725	74.00	54.00	Pass
03 (Peak)	2400.000	-2.660	86.418	83.758	--	--	--
03 (Peak)	2412.000	-2.644	107.001	104.358	--	--	--
03 (Average)	2390.000	-2.687	52.897	50.210	74.00	54.00	Pass
03 (Average)	2400.000	-2.660	58.312	55.652	--	--	--
03 (Average)	2408.400	-2.647	88.890	86.242	--	--	--

Figure Channel 01: Horizontal (Peak)

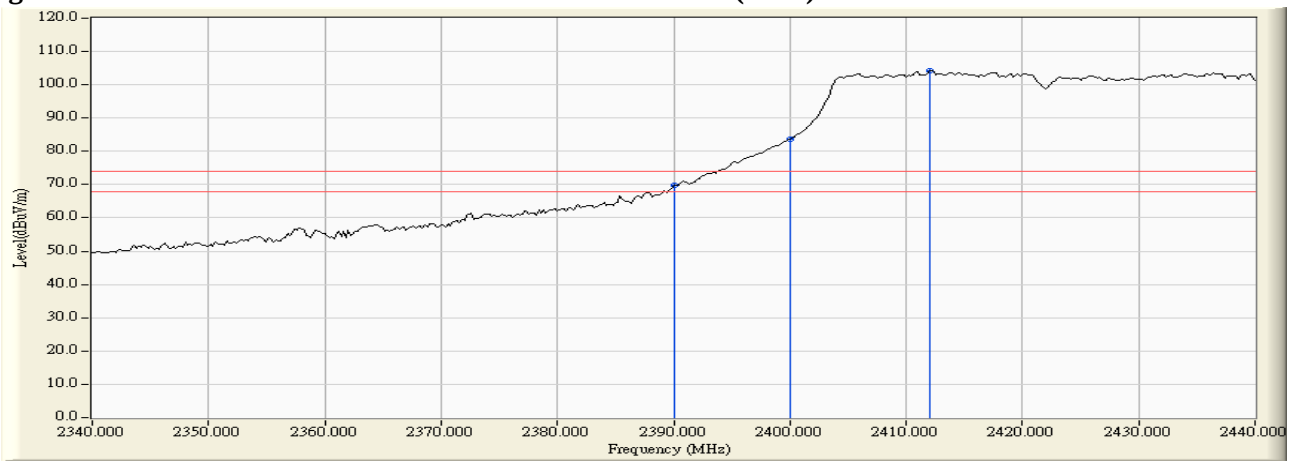
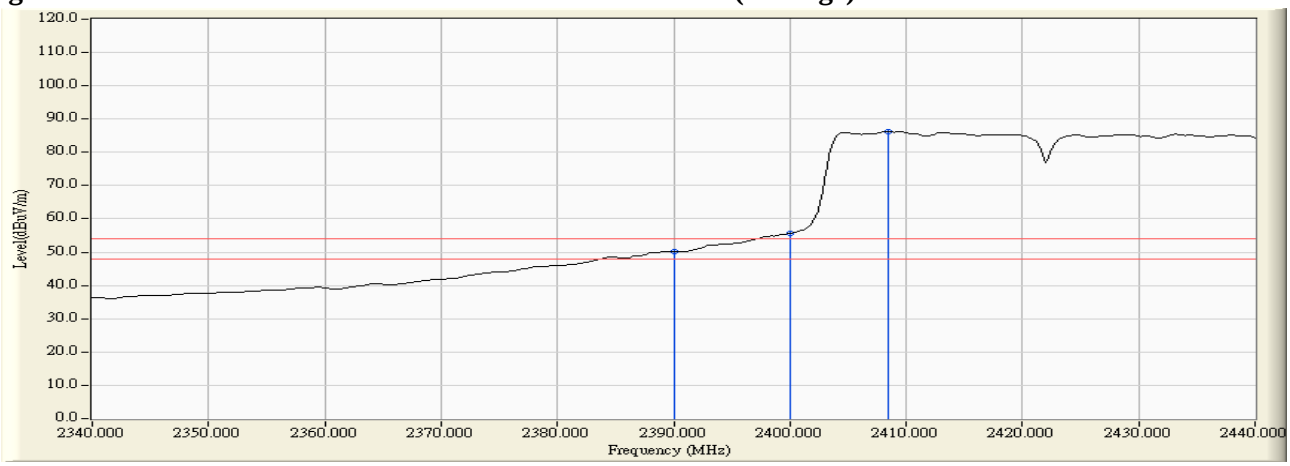


Figure Channel 01: Horizontal (Average)



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 : Security Appliance
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n-40BW)_30Mbps(2.4G Band) (Internal)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
03 (Peak)	2389.200	-4.156	71.026	66.870	74.00	54.00	Pass
03 (Peak)	2390.000	-4.159	69.891	65.732	74.00	54.00	Pass
03 (Peak)	2400.000	-4.171	85.940	81.769	--	--	--
03 (Peak)	2409.600	-4.169	106.498	102.329	--	--	--
03 (Average)	2390.000	-4.159	53.168	49.009	74.00	54.00	Pass
03 (Average)	2400.000	-4.171	57.104	52.933	--	--	--
03 (Average)	2407.000	-4.170	89.173	85.003	--	--	--

Figure Channel 01: Vertical (Peak)

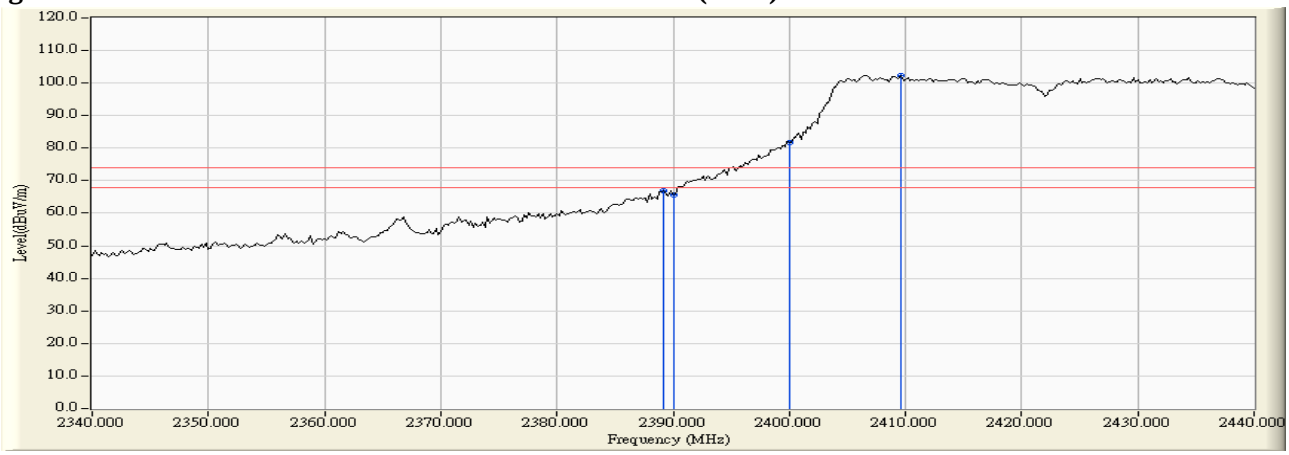
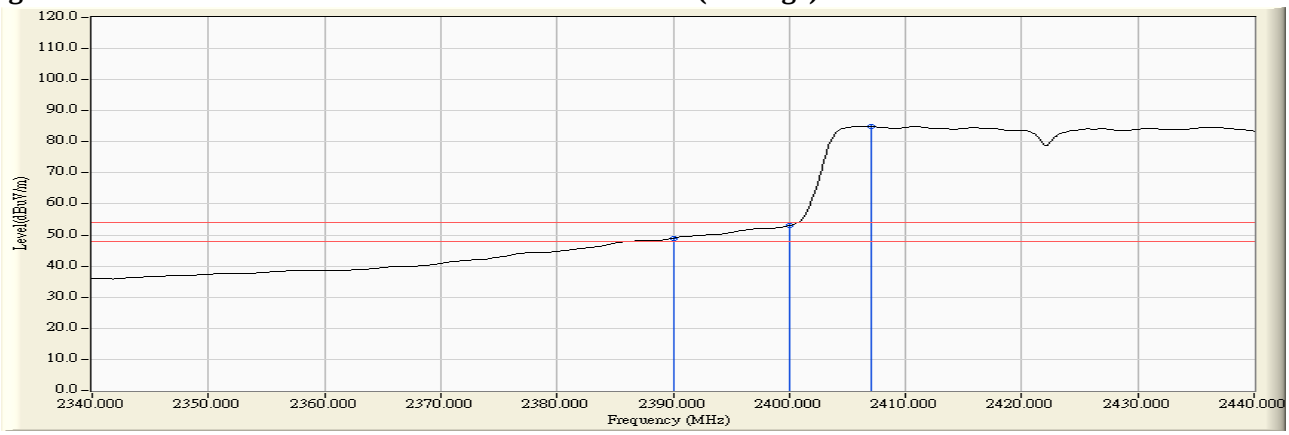


Figure Channel 01: Vertical (Average)



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 : Security Appliance
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n-40BW)_30Mbps(2.4G Band) (Internal)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
09 (Peak)	2441.900	-2.637	106.994	104.358	--	--	--
09 (Peak)	2483.500	-2.601	68.867	66.265	74.00	54.00	Pass
09 (Average)	2438.100	-2.637	89.408	86.771	--	--	--
09 (Average)	2483.500	-2.601	48.183	45.581	74.00	54.00	Pass

Figure Channel 07: Horizontal (Peak)

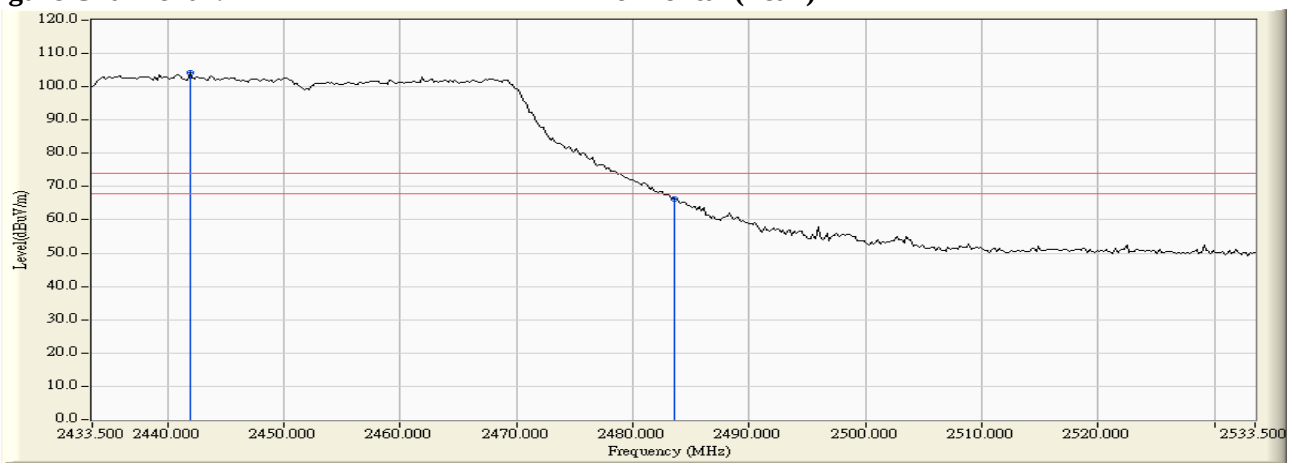
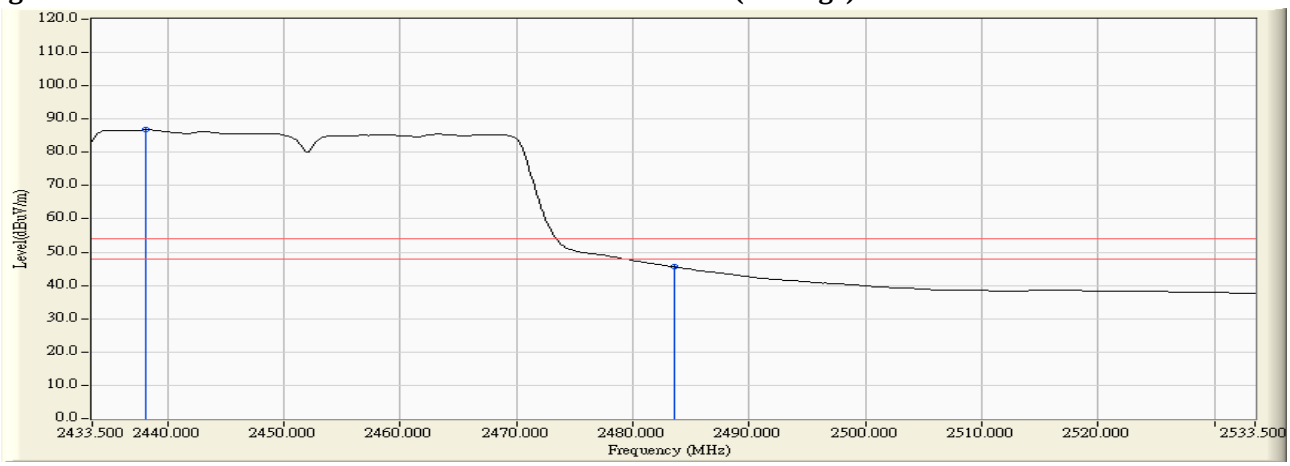


Figure Channel 07: Horizontal (Average)



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 : Security Appliance
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n-40BW)_30Mbps(2.4G Band) (Internal)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
09 (Peak)	2435.300	-4.111	106.169	102.059	--	--	--
09 (Peak)	2483.500	-3.966	70.083	66.116	74.00	54.00	Pass
09 (Average)	2436.700	-4.107	88.516	84.409	--	--	--
09 (Average)	2483.500	-3.966	47.815	43.848	74.00	54.00	Pass

Figure Channel 07: Vertical (Peak)

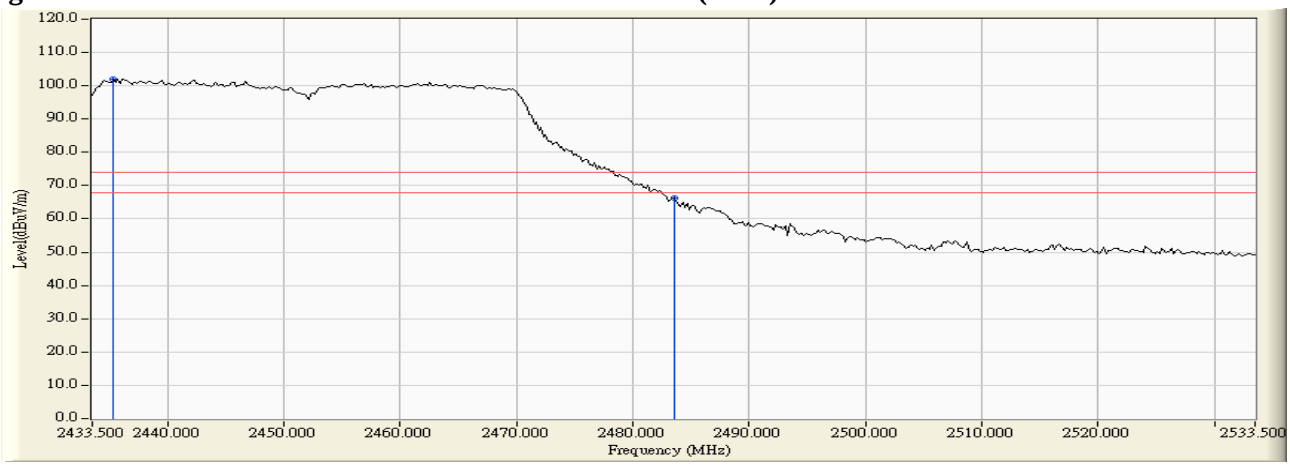
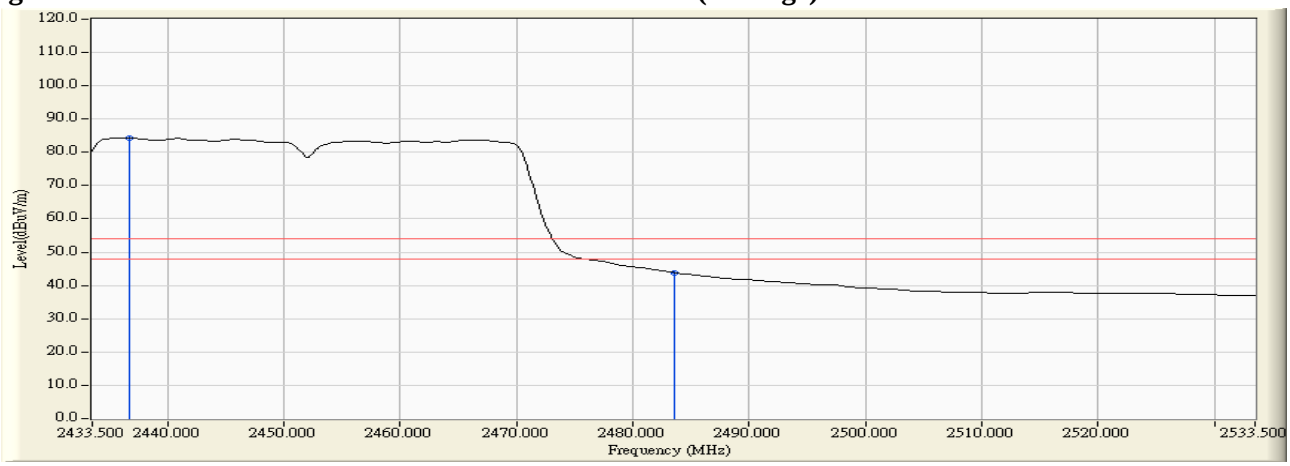


Figure Channel 07: Vertical (Average)



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.

7. 6dB Bandwidth

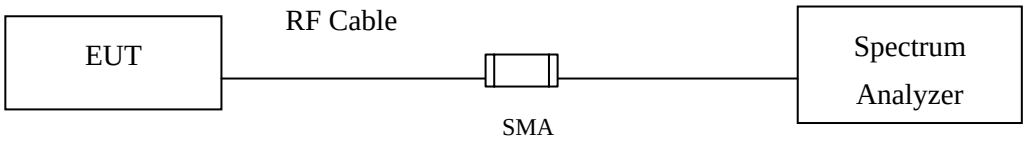
7.1. Test Equipment

Equipment		Manufacturer	Model No./Serial No.	Last Cal.	Due Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2016	Jun, 2017
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2016	Jun, 2017
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2016	Apr., 2017

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, 2013; tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.

Set RBW = 1-5% of the emission bandwidth, VBW≥3*RBW

7.5. Uncertainty

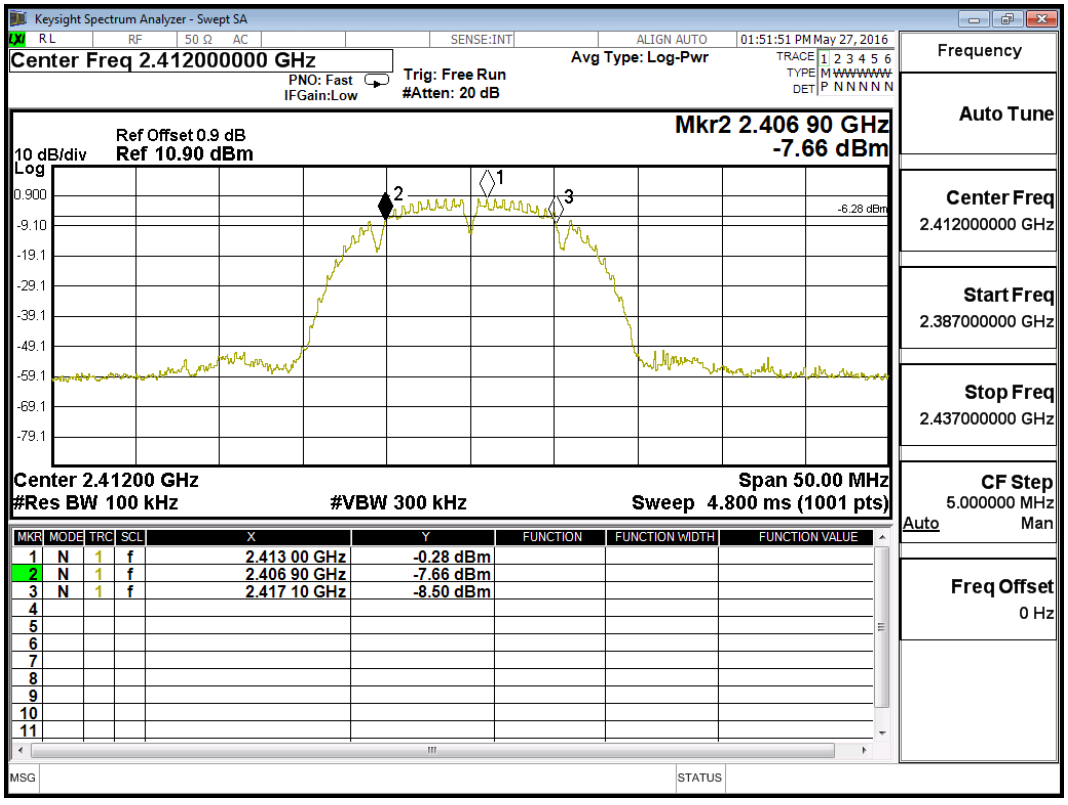
± 150Hz

7.6. Test Result of 6dB Bandwidth

Product : Security Appliance
Test Item : 6dB Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
1	2412.00	10200	>500	Pass

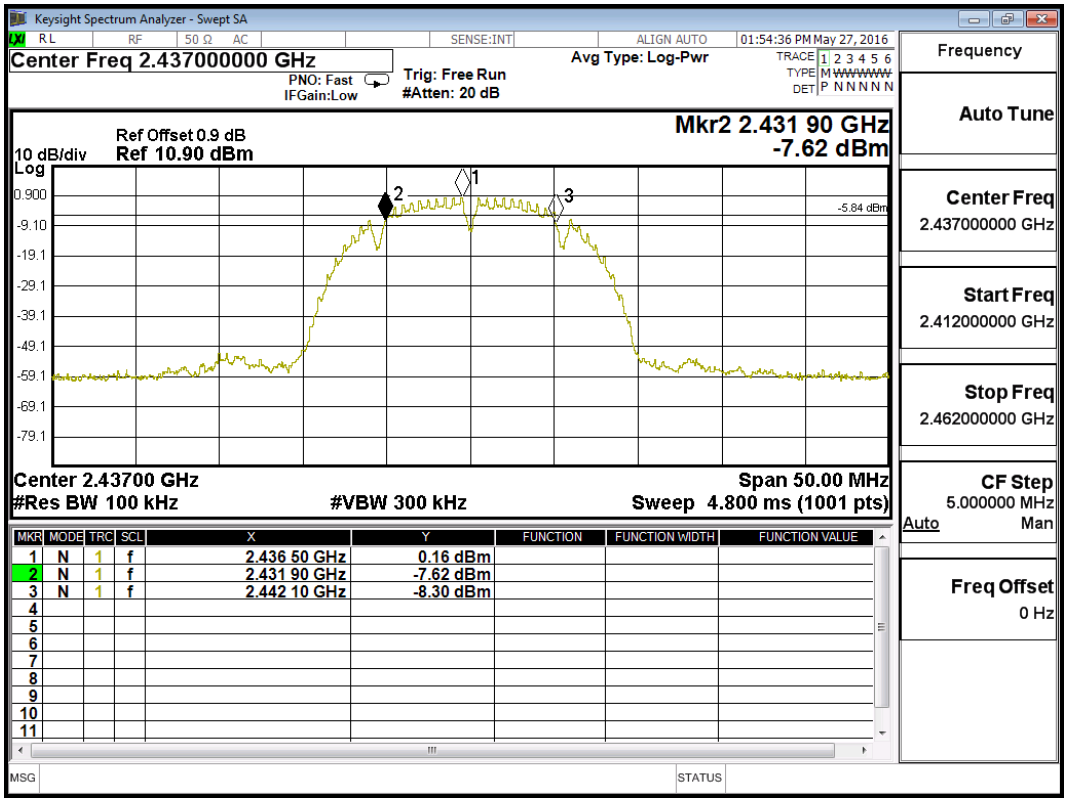
Figure Channel 1:



Product : Security Appliance
Test Item : 6dB Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6	2437.00	10200	>500	Pass

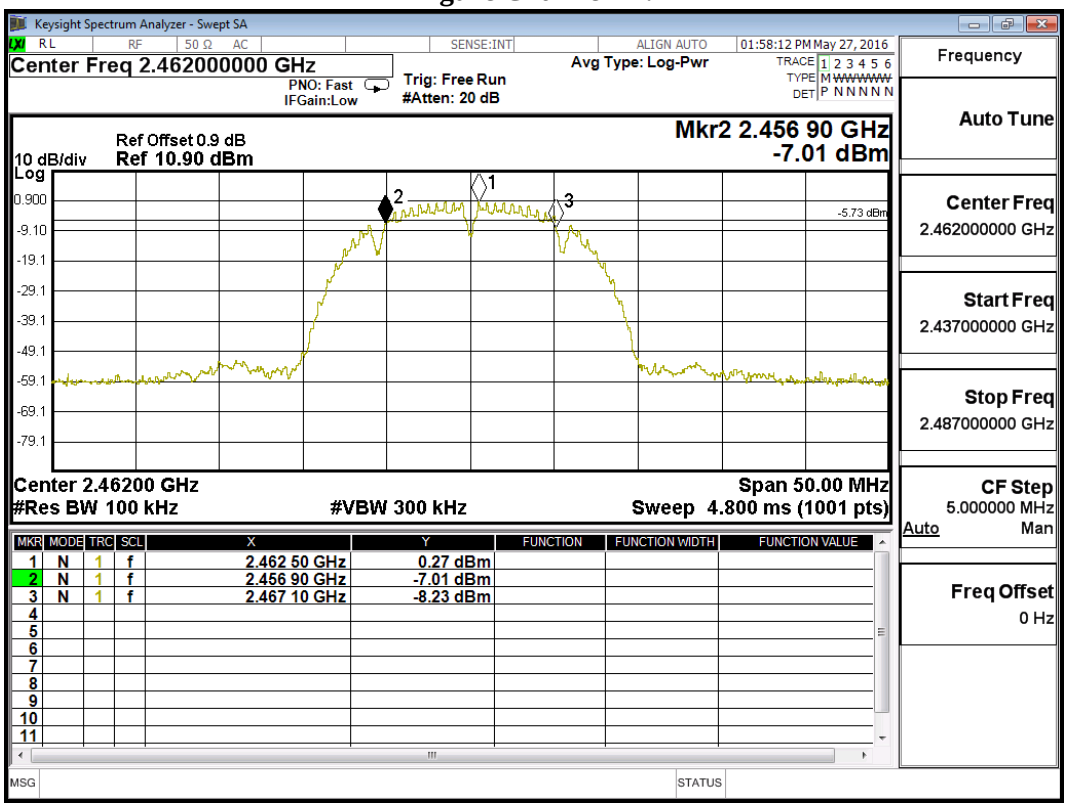
Figure Channel 6:



Product : Security Appliance
Test Item : 6dB Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
11	2462.00	10200	>500	Pass

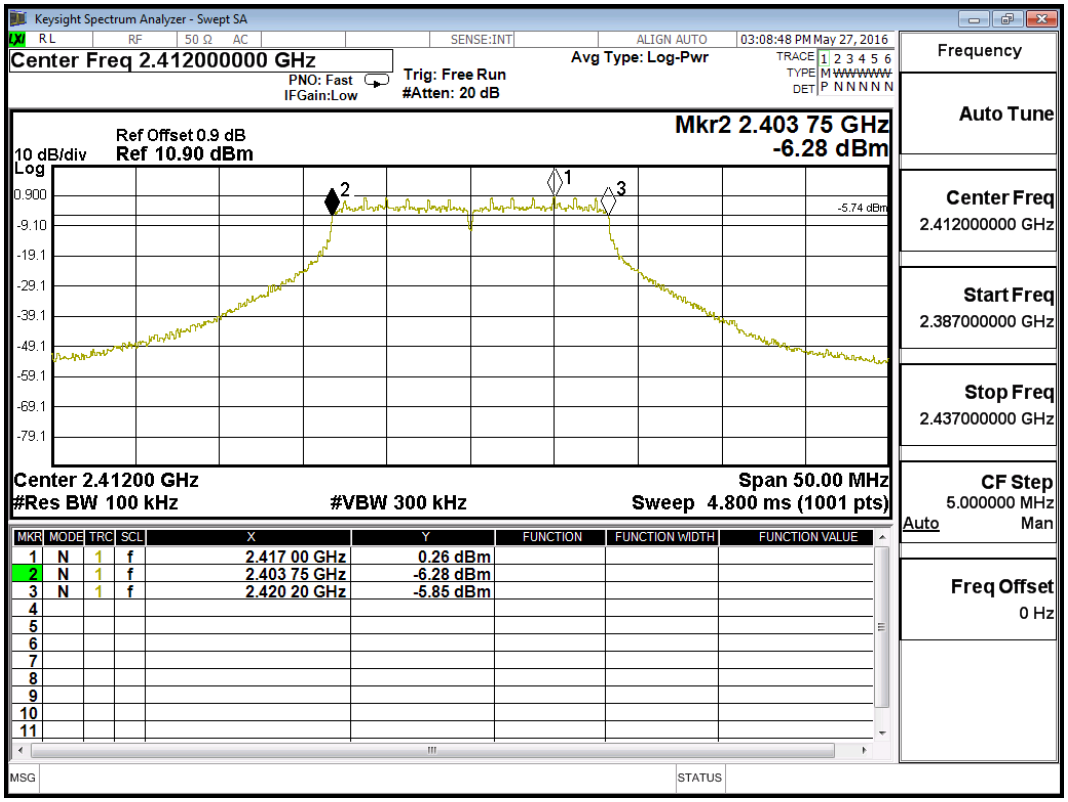
Figure Channel 11:



Product : Security Appliance
Test Item : 6dB Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
1	2412.00	16450	>500	Pass

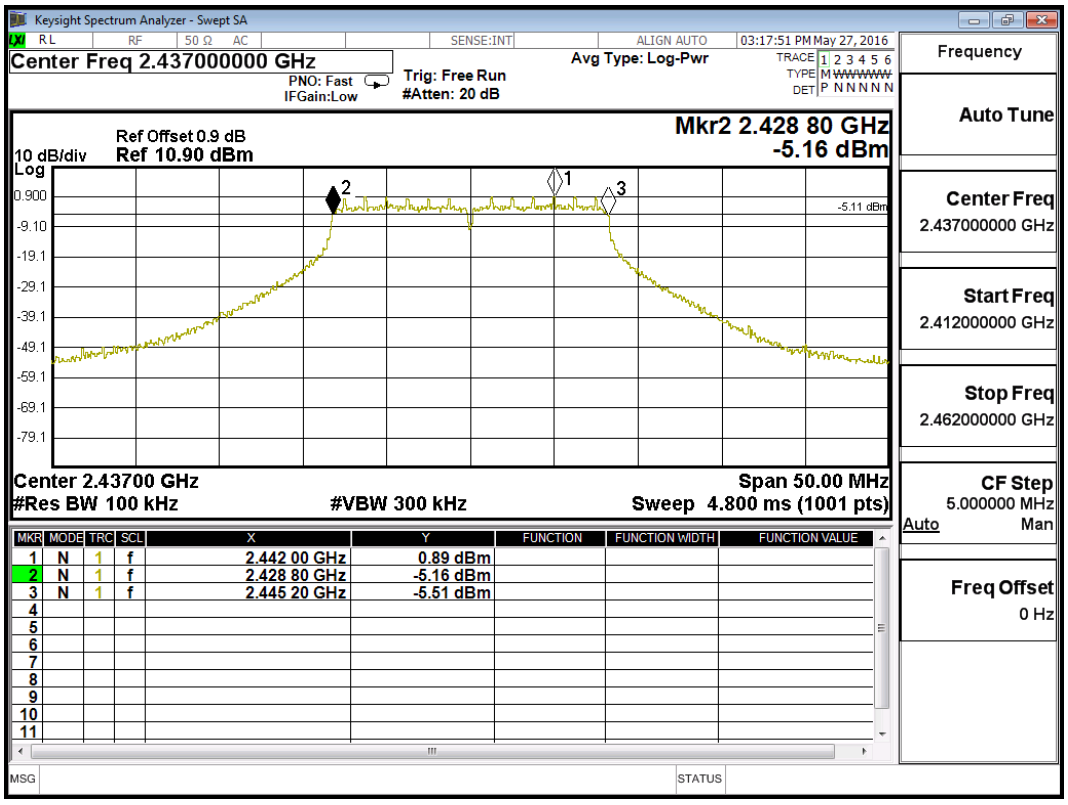
Figure Channel 1:



Product : Security Appliance
Test Item : 6dB Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6	2437.00	16400	>500	Pass

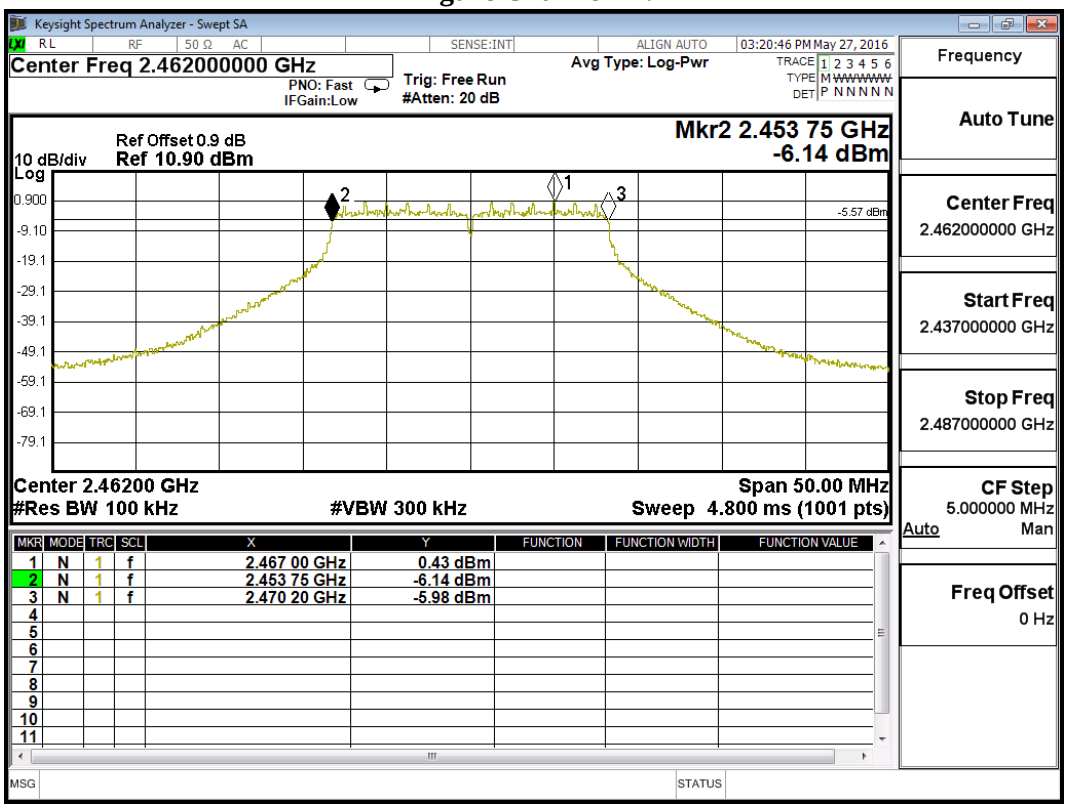
Figure Channel 6:



Product : Security Appliance
Test Item : 6dB Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
11	2462.00	16450	>500	Pass

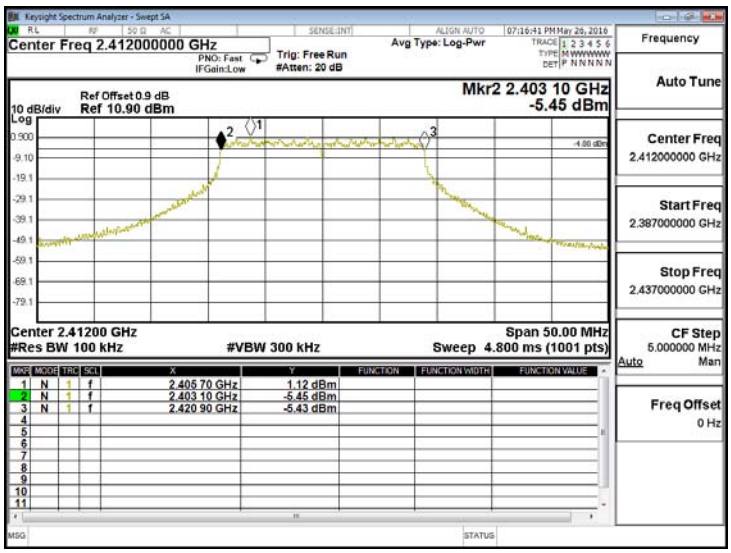
Figure Channel 11:



Product : Security Appliance
Test Item : 6dB Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-20BW)_14.4Mbps(2.4G Band) (2412MHz)

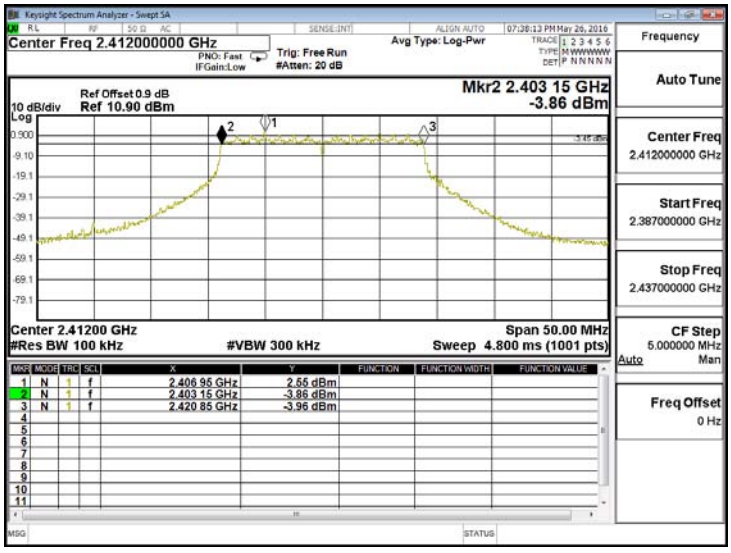
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
1	2412.00	17800	>500	Pass

Figure Channel 1: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
1	2412.00	17700	>500	Pass

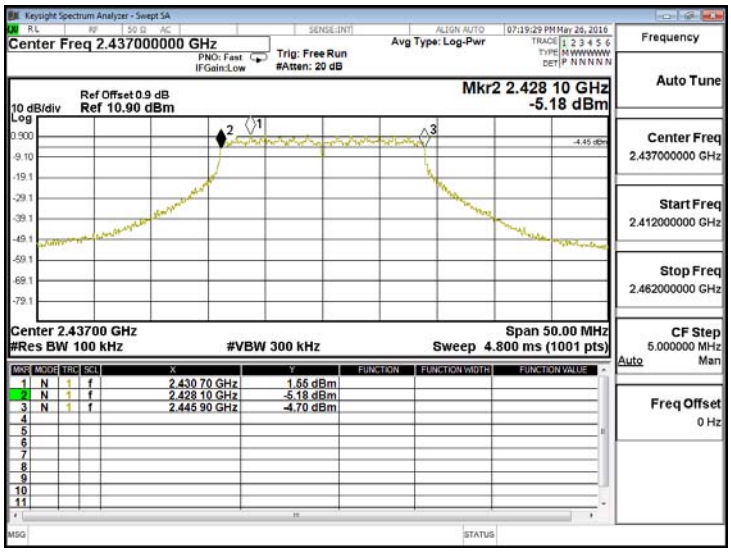
Figure Channel 1: (Chain B)



Product : Security Appliance
Test Item : 6dB Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-20BW)_14.4Mbps(2.4G Band) (2437MHz)

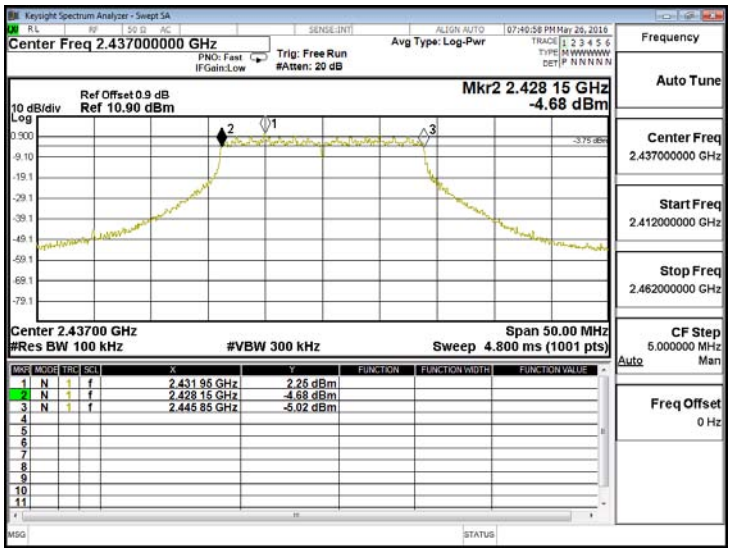
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6	2437.00	17800	>500	Pass

Figure Channel 6: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6	2437.00	17700	>500	Pass

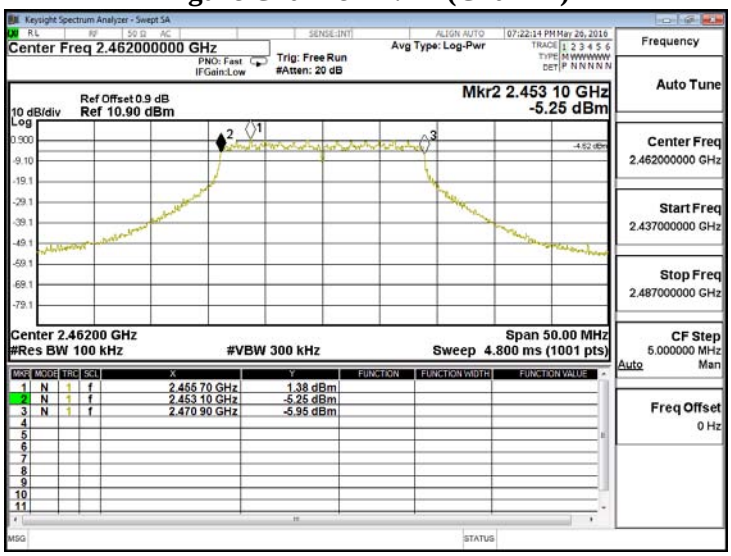
Figure Channel 6: (Chain B)



Product : Security Appliance
Test Item : 6dB Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-20BW)_14.4Mbps(2.4G Band) (2462MHz)

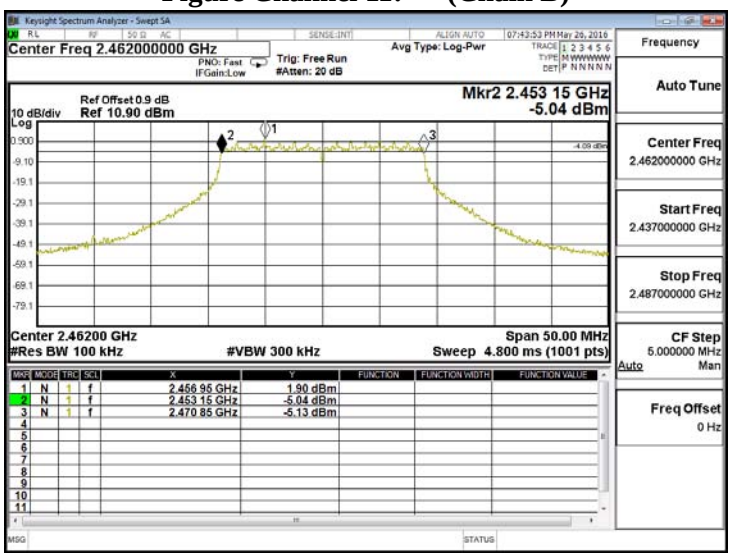
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
11	2462.00	17800	>500	Pass

Figure Channel 11: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
11	2462.00	17700	>500	Pass

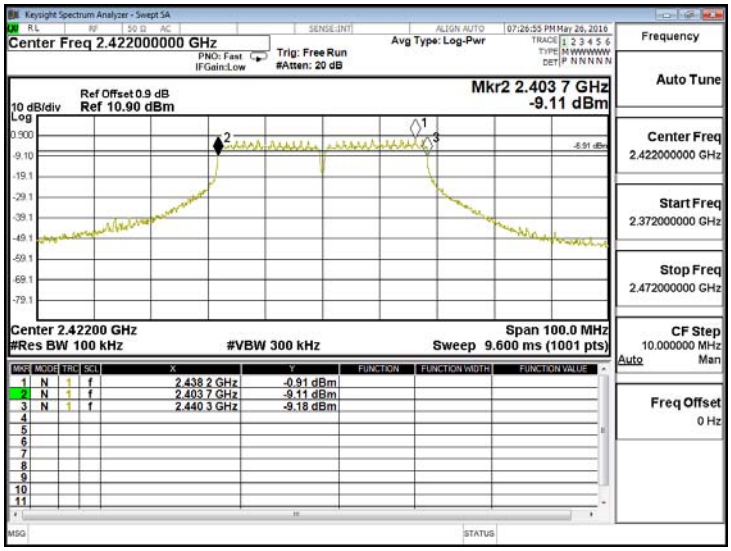
Figure Channel 11: (Chain B)



Product : Security Appliance
Test Item : 6dB Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n-40BW)_30Mbps(2.4G Band) (2422MHz)

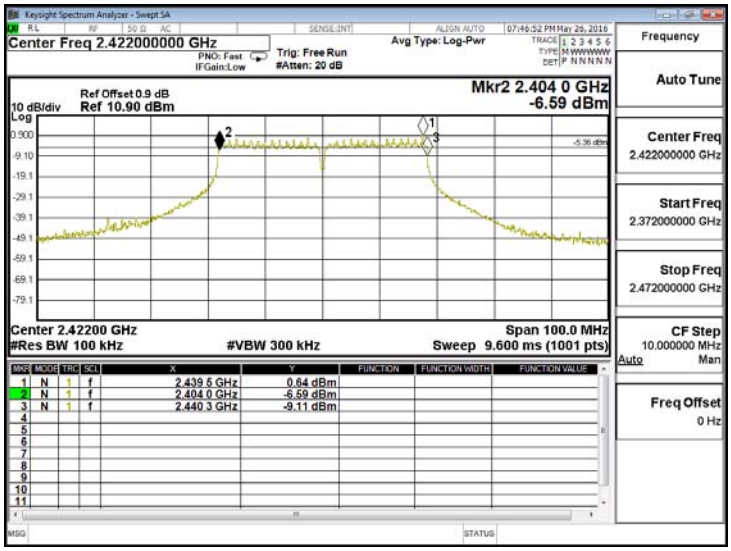
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
3	2422.00	36600	>500	Pass

Figure Channel 3: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
3	2422.00	36300	>500	Pass

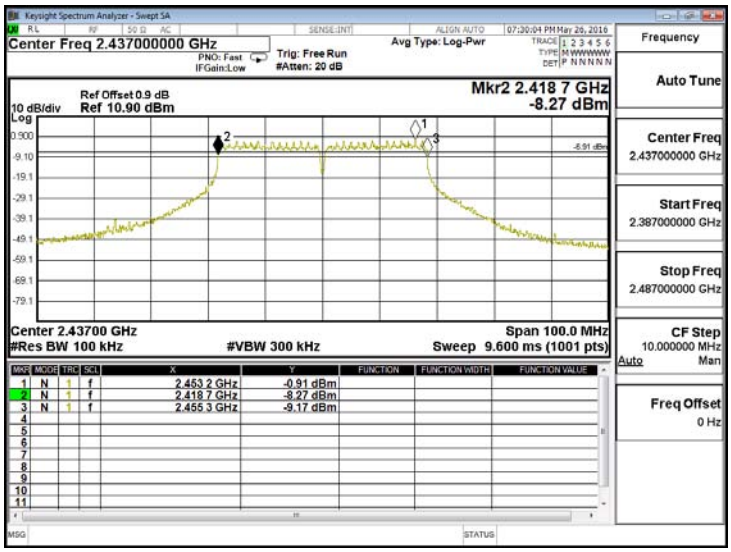
Figure Channel 3: (Chain B)



Product : Security Appliance
Test Item : 6dB Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n-40BW)_30Mbps(2.4G Band) (2437MHz)

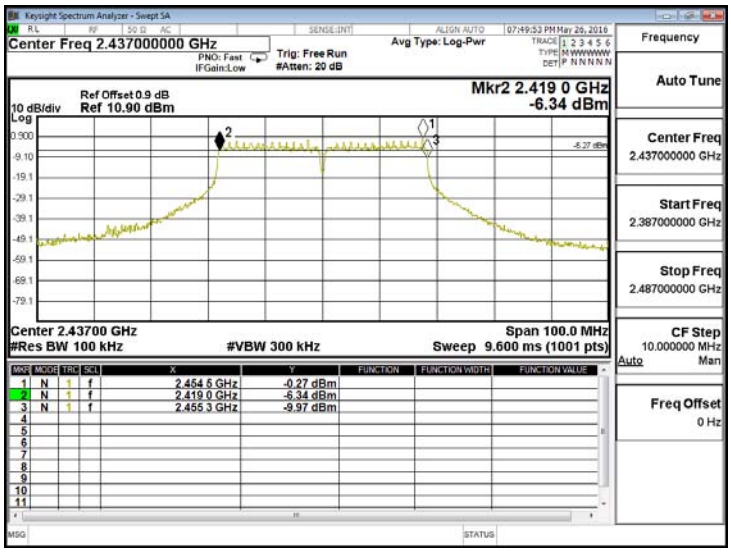
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6	2437.00	36600	>500	Pass

Figure Channel 6: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6	2437.00	36300	>500	Pass

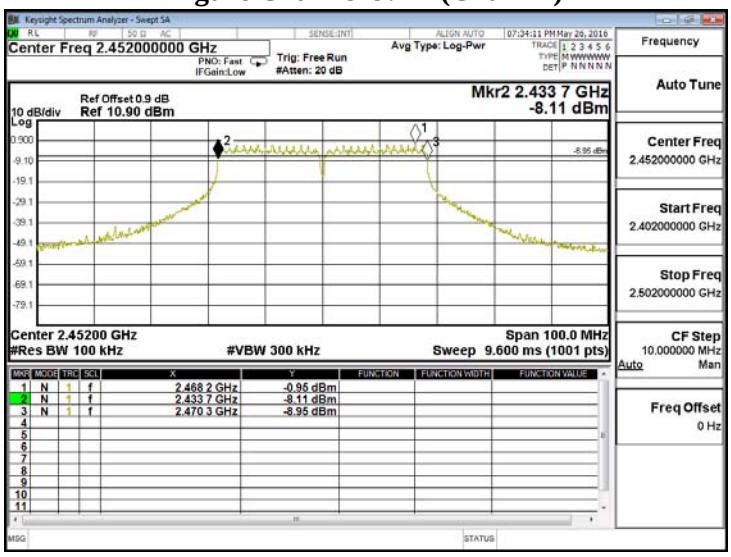
Figure Channel 6: (Chain B)



Product : Security Appliance
Test Item : 6dB Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n-40BW)_30Mbps(2.4G Band) (2452MHz)

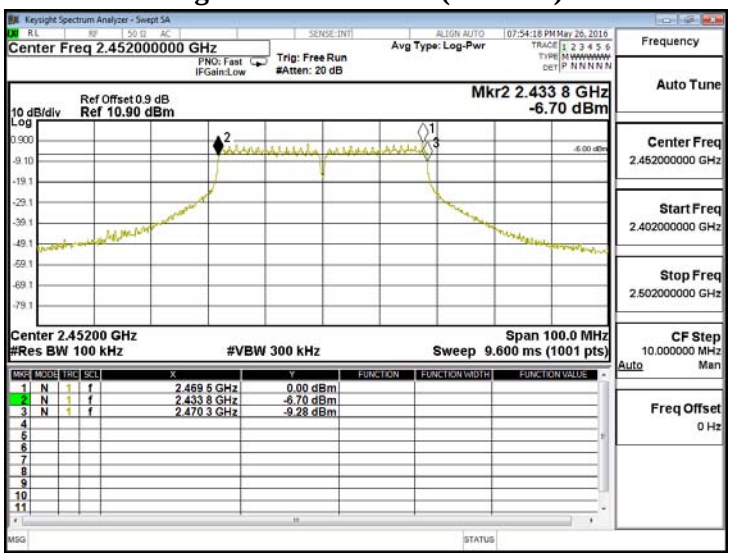
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
9	2452.00	36600	>500	Pass

Figure Channel 9: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
9	2452.00	36500	>500	Pass

Figure Channel 9: (Chain B)



8. Power Density

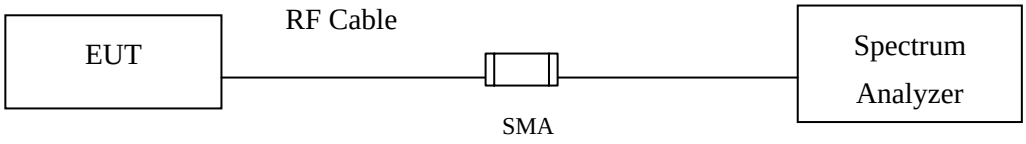
8.1. Test Equipment

Equipment		Manufacturer	Model No./Serial No.	Last Cal.	Due Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2016	Jun, 2017
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2016	Jun, 2017
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2016	Apr., 2017

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.

8.2. Test Setup



8.3. Limits

The transmitted power density averaged over any 1 second interval shall not be greater +8dBm in any 3kHz bandwidth.

8.4. Test Procedure

The EUT was setup according to ANSI C63.10, 2013; tested according to DTS test procedure of KDB 558074 for compliance to FCC 47CFR 15.247 requirements.
The maximum power spectral density using KDB 558074 section 10.2 PKPSD (peak PSD) method.

8.5. Uncertainty

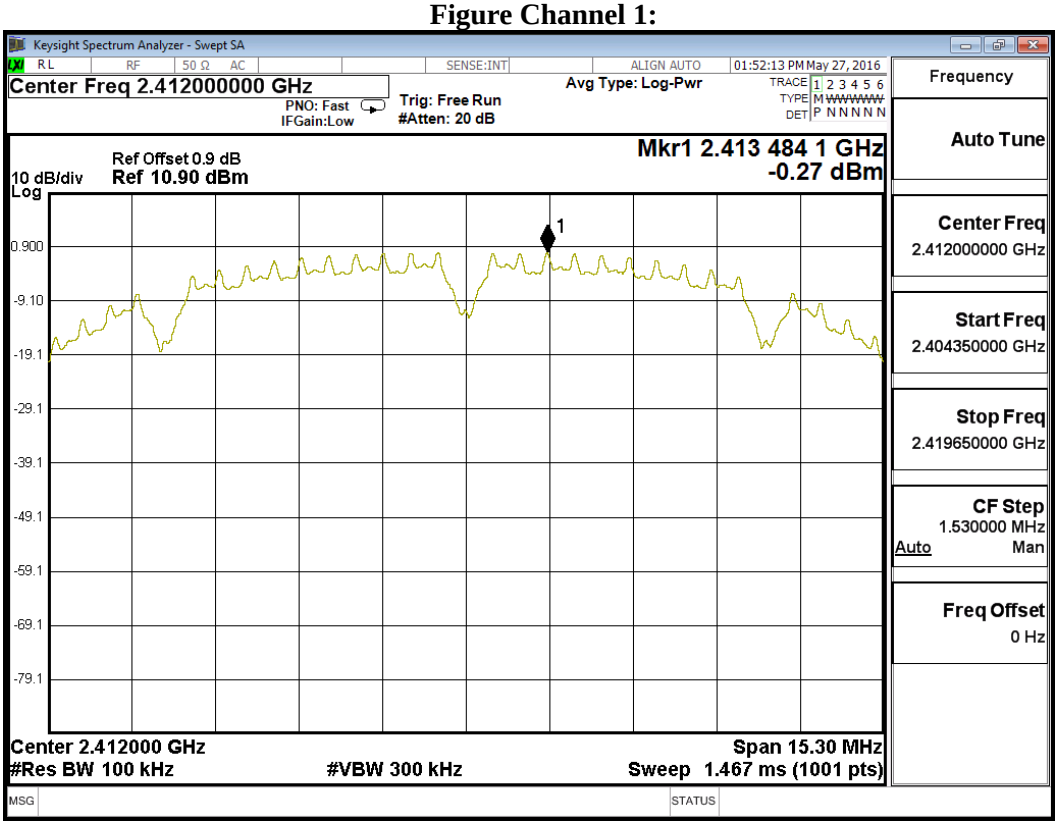
± 1.27 dB

8.6. Test Result of Power Density

Product : Security Appliance
Test Item : Power Density Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	-0.27	≦8dBm	Pass

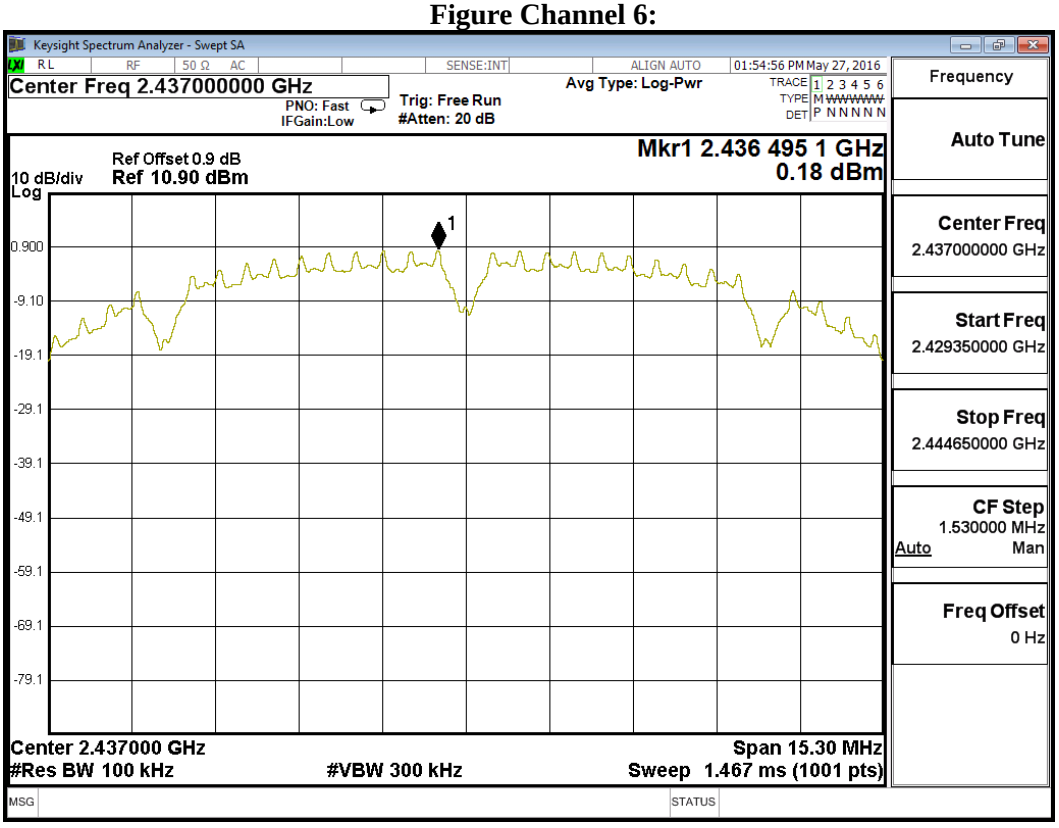
Figure Channel 1:



Product : Security Appliance
Test Item : Power Density Data
Test Site : No.3OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2437MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
6	2437	0.18	≦8dBm	Pass

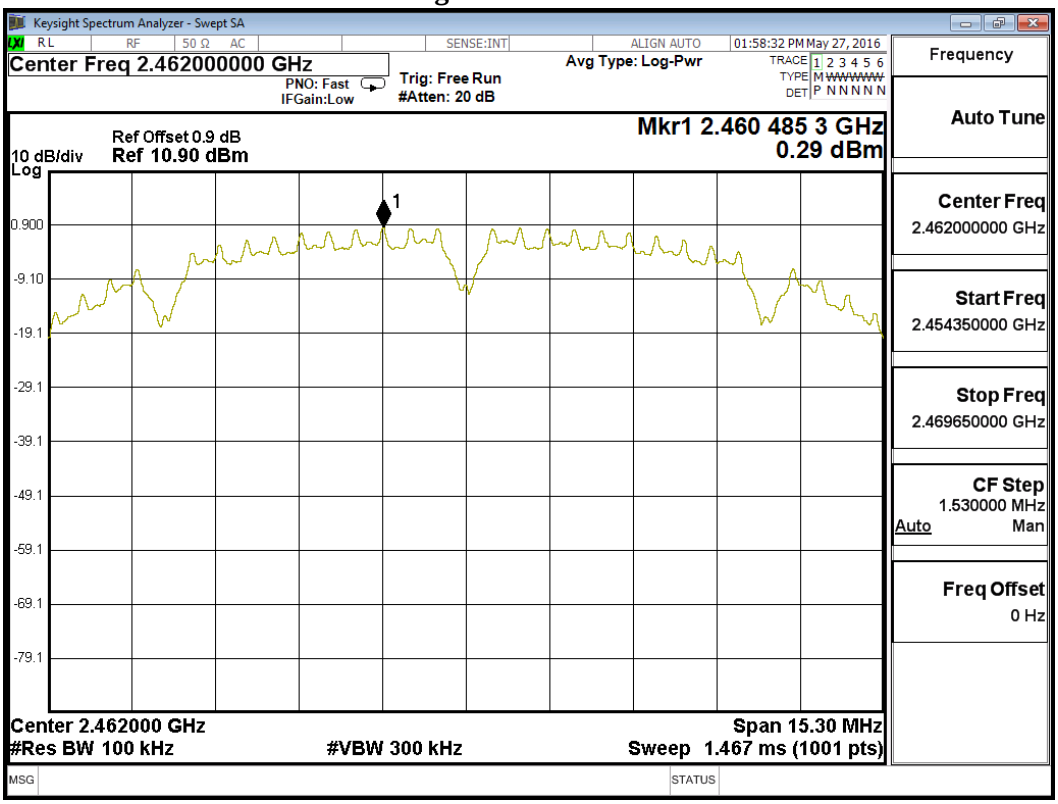
Figure Channel 6:



Product : Security Appliance
Test Item : Power Density Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
11	2462	0.29	≦8dBm	Pass

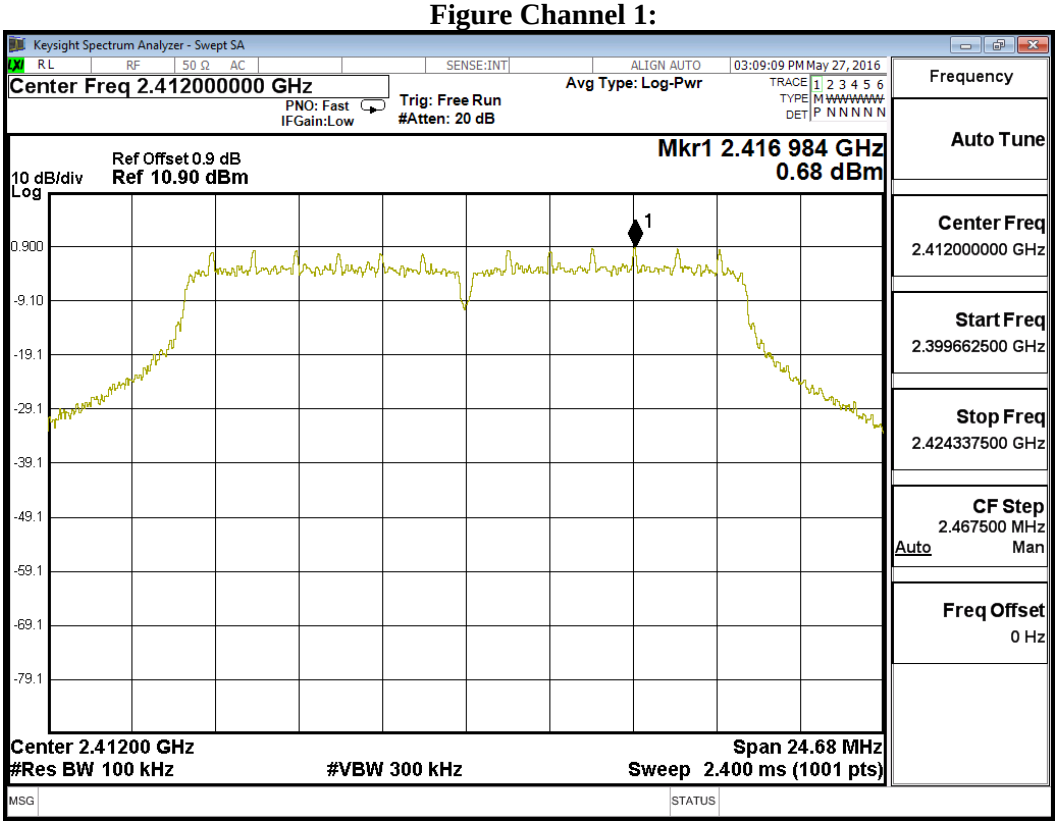
Figure Channel 11:



Product : Security Appliance
Test Item : Power Density Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	0.68	≦8dBm	Pass

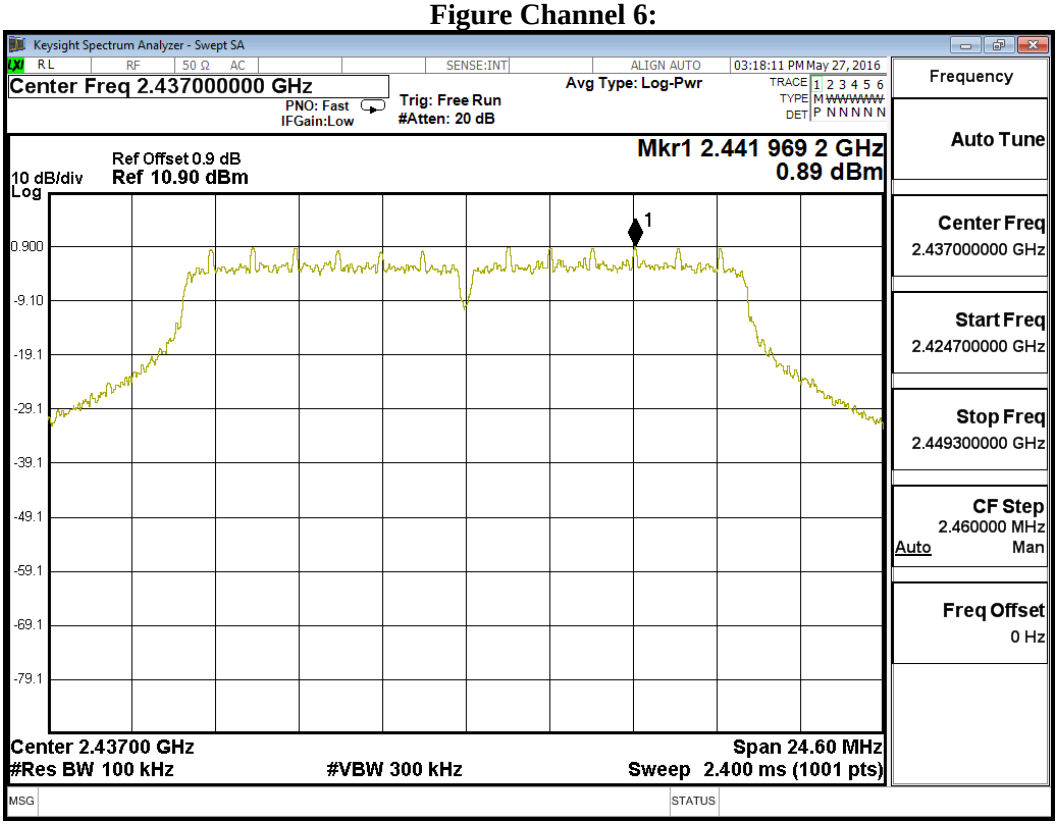
Figure Channel 1:



Product : Security Appliance
Test Item : Power Density Data
Test Site : No.3OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
6	2437	0.89	≦8dBm	Pass

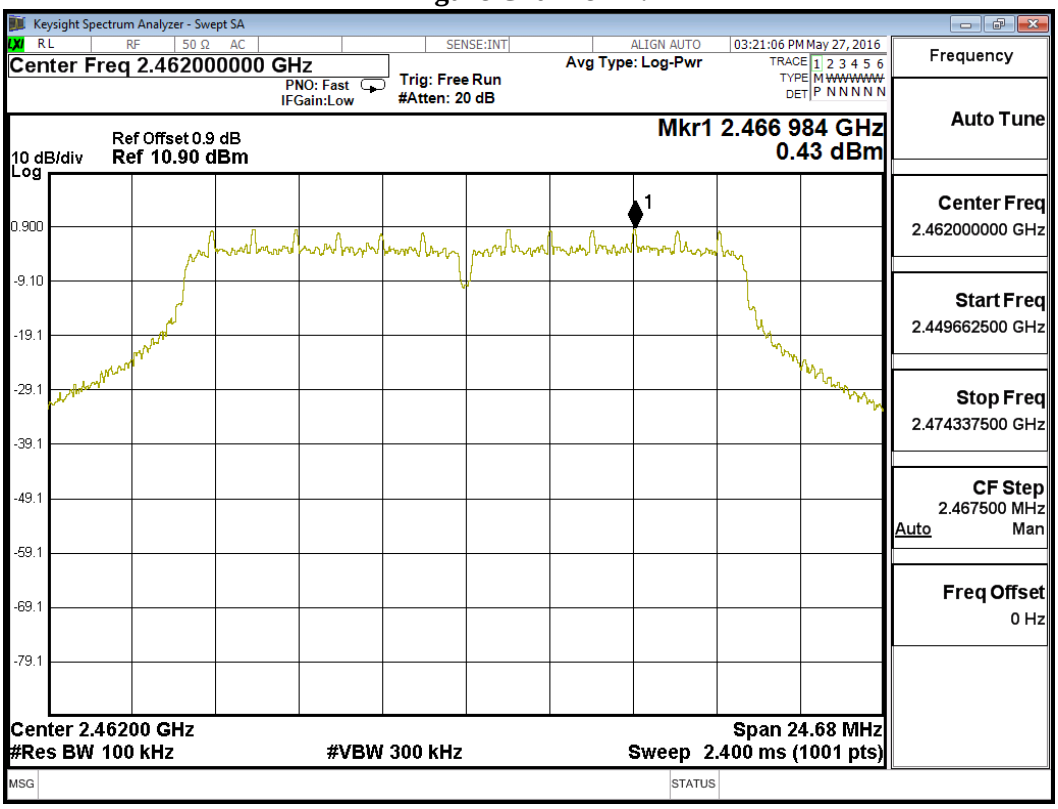
Figure Channel 6:



Product : Security Appliance
Test Item : Power Density Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
11	2462	0.43	≦8dBm	Pass

Figure Channel 11:



Product : Security Appliance
Test Item : Power Density Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-20BW)_14.4Mbps(2.4G Band) (2412MHz)

CHAIN	PPSD/MHz (dBm)	Total PPSD/MHz (dBm)1	Limit	Result
A	1.130	4.140	≦8dBm	Pass
B	2.530	5.540	≦8dBm	Pass

Note 1: The quantity 10*log 2 (two antennas) is added to the spectrum peak value according to document 662911 D01.

Figure Channel 1: (Chain A)

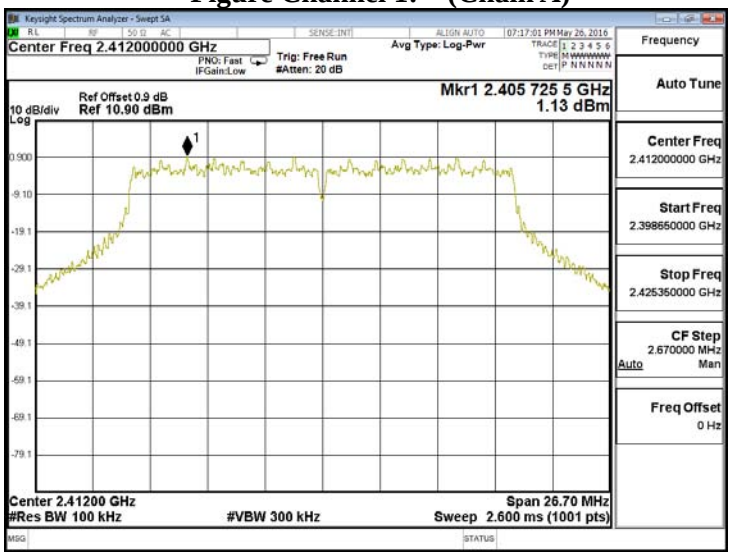
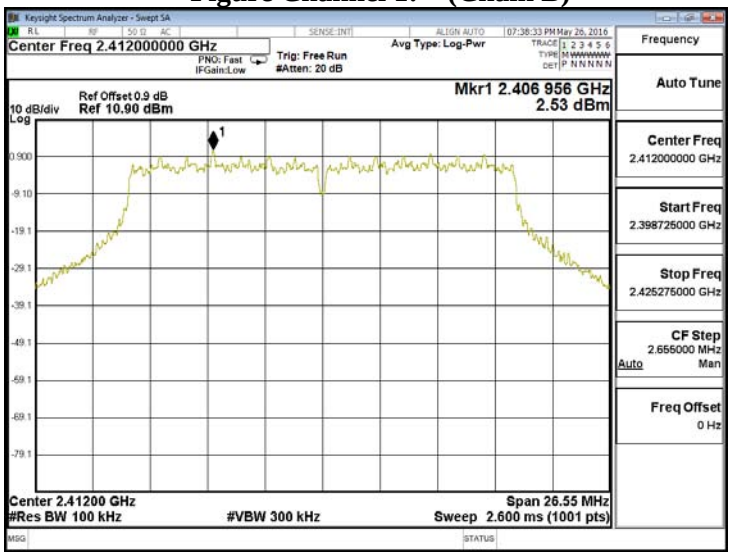


Figure Channel 1: (Chain B)



Product : Security Appliance
Test Item : Power Density Data
Test Site : No.3OATS
Test Mode : Mode 3: Transmit (802.11n-20BW)_14.4Mbps(2.4G Band) (2437MHz)

CHAIN	PPSD/MHz (dBm)	Total PPSD/MHz (dBm)1	Limit	Result
A	1.540	4.550	≦8dBm	Pass
B	2.220	5.230	≦8dBm	Pass

Note 1: The quantity 10*log 2 (two antennas) is added to the spectrum peak value according to document 662911 D01.

Figure Channel 6: (Chain A)

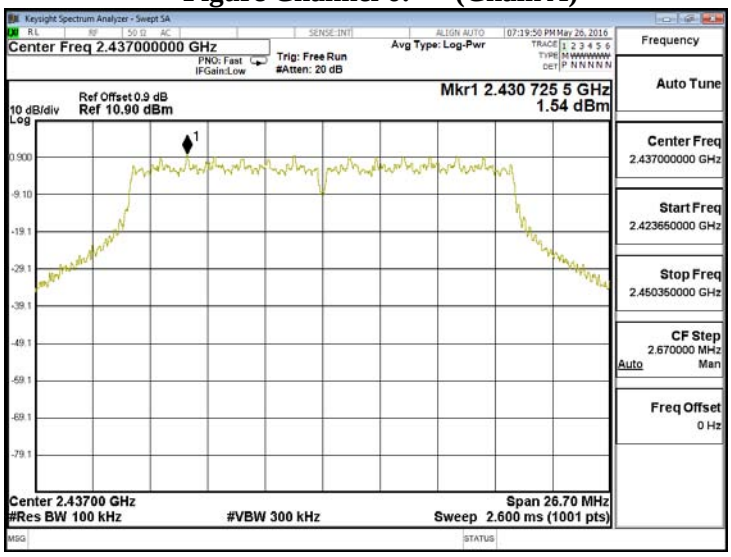
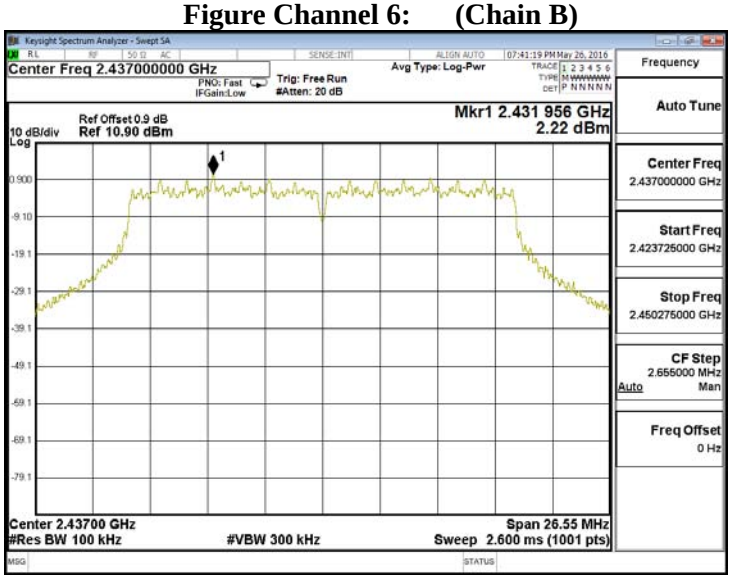


Figure Channel 6: (Chain B)



Product : Security Appliance
Test Item : Power Density Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-20BW)_14.4Mbps(2.4G Band) (2462MHz)

CHAIN	PPSD/MHz (dBm)	Total PPSD/MHz (dBm)1	Limit	Result
A	1.380	4.390	≦8dBm	Pass
B	1.830	4.840	≦8dBm	Pass

Note 1: The quantity 10*log 2 (two antennas) is added to the spectrum peak value according to document 662911 D01.

Figure Channel 11: (Chain A)

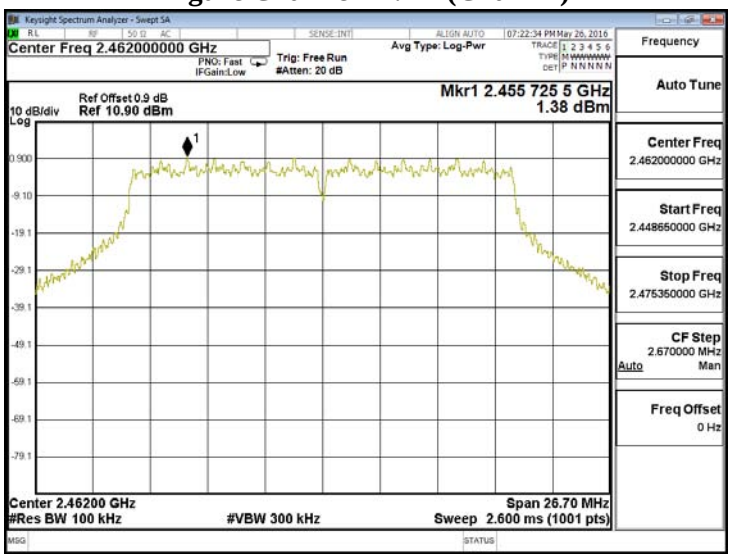
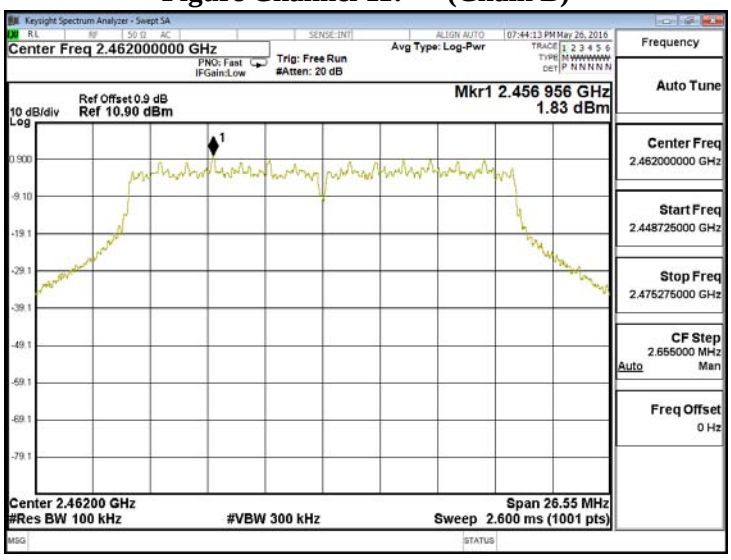


Figure Channel 11: (Chain B)



Product : Security Appliance
Test Item : Power Density Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n-40BW)_30Mbps(2.4G Band) (2422MHz)

CHAIN	PPSD/MHz (dBm)	Total PPSD/MHz (dBm)1	Limit	Result
A	-0.930	2.080	≦8dBm	Pass
B	0.590	3.600	≦8dBm	Pass

Note 1: The quantity 10*log 2 (two antennas) is added to the spectrum peak value according to document 662911 D01.

Figure Channel 3: (Chain A)

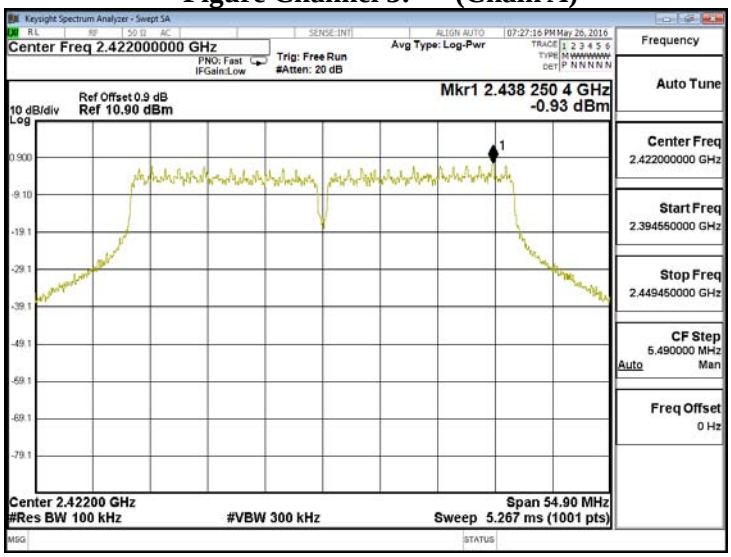
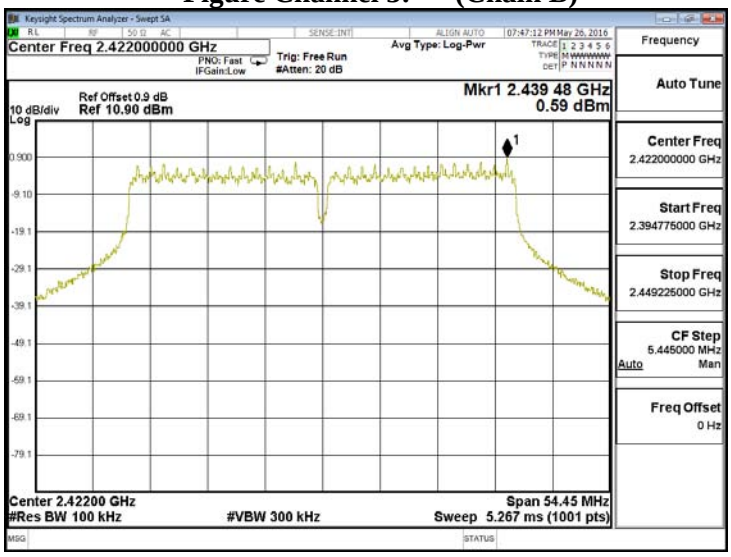


Figure Channel 3: (Chain B)



Product : Security Appliance
Test Item : Power Density Data
Test Site : No.3OATS
Test Mode : Mode 4: Transmit (802.11n-40BW)_30Mbps(2.4G Band) (2437MHz)

CHAIN	PPSD/MHz (dBm)	Total PPSD/MHz (dBm)1	Limit	Result
A	-0.920	2.090	≦8dBm	Pass
B	-0.320	2.690	≦8dBm	Pass

Note 1: The quantity 10*log 2 (two antennas) is added to the spectrum peak value according to document 662911 D01.

Figure Channel 6: (Chain A)

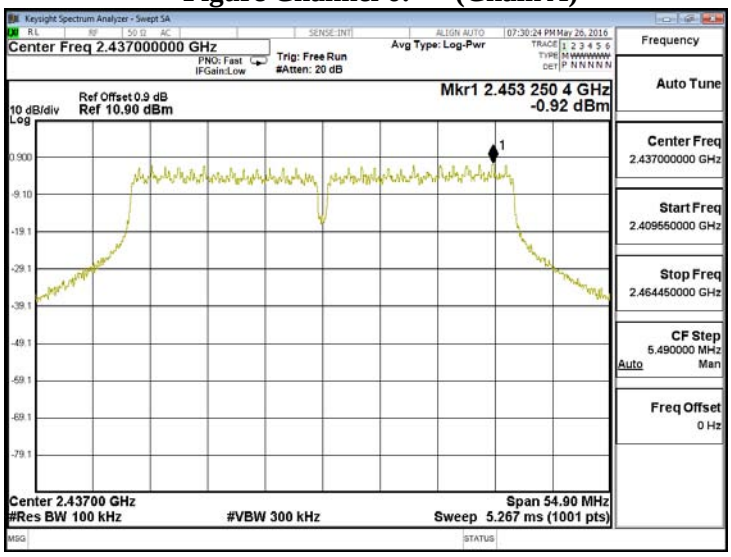
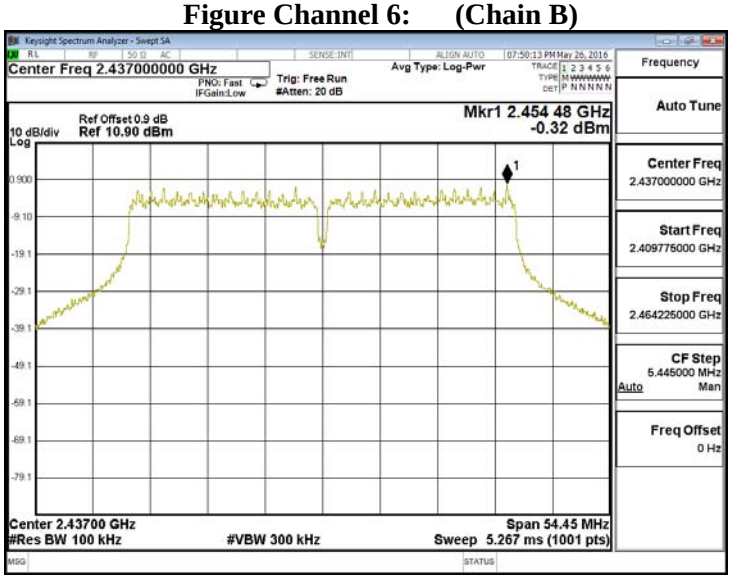


Figure Channel 6: (Chain B)



Product : Security Appliance
Test Item : Power Density Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11n-40BW)_30Mbps(2.4G Band) (2452MHz)

CHAIN	PPSD/MHz (dBm)	Total PPSD/MHz (dBm)1	Limit	Result
A	-0.990	2.020	≦8dBm	Pass
B	-0.040	2.970	≦8dBm	Pass

Note 1: The quantity 10*log 2 (two antennas) is added to the spectrum peak value according to document 662911 D01.

Figure Channel 9: (Chain A)

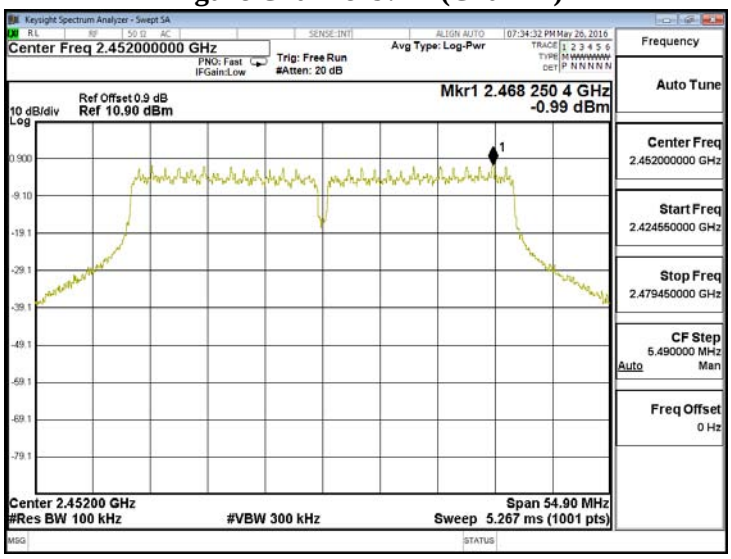
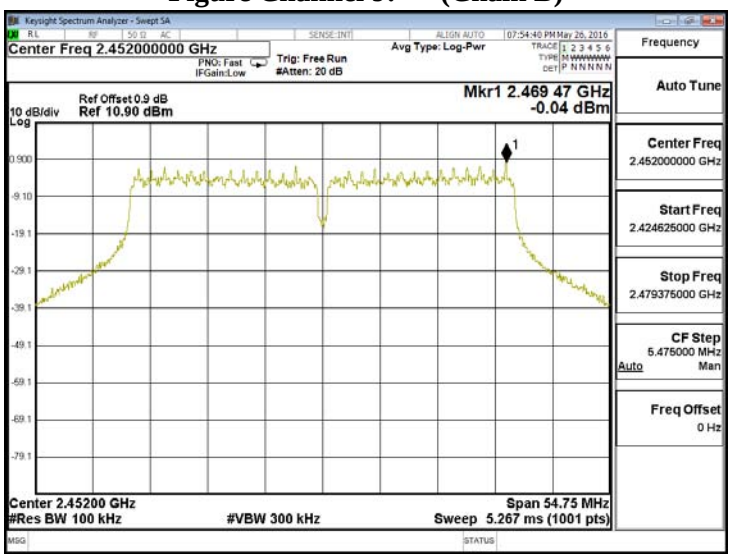


Figure Channel 9: (Chain B)



9. EMI Reduction Method During Compliance Testing

No modification was made during testing.

Attachment 1: EUT Test Photographs

Attachment 2: EUT Detailed Photographs