

FCC Test Report

Product Name	VISUAL PRESENTER
Model No	TX-1
FCC ID.	X3XTX-1

Applicant	ELMO COMPANY, LIMITED
Address	6-14, Meizen-cho, Mizuho-ku, Nagoya, 467-8567, JAPAN

Date of Receipt	Jan. 12, 2016
Issue Date	Feb. 18, 2016
Report No.	1610198R-RFUSP25V00
Report Version	V1.0



The test results relate only to the samples tested.

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

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Test Report

Issue Date: Feb. 18, 2016

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Product Name	VISUAL PRESENTER
Applicant	ELMO COMPANY, LIMITED
Address	6-14, Meizen-cho, Mizuho-ku, Nagoya, 467-8567, JAPAN
Manufacturer	ELMO COMPANY, LIMITED
Model No.	TX-1
FCC ID.	X3XTX-1
EUT Rated Voltage	AC 100-240V, 50/60Hz
EUT Test Voltage	AC 120V/60Hz
Trade Name	ELMO
Applicable Standard	FCC CFR Title 47 Part 15 Subpart C: 2014 ANSI C63.4: 2014, ANSI C63.10: 2013 KDB 558074 D01 DTS Meas Guidance v03r04
Test Result	Complied

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Tested By : Ken chen
(Engineer / Ken Chen)


Approved By : 
(Director / Vincent Lin)

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Attachment 1: EUT Test Photographs

Attachment 2: EUT Detailed Photographs

1. GENERAL INFORMATION

1.1. EUT Description

Product Name	VISUAL PRESENTER
Trade Name	ELMO
Model No.	TX-1
FCC ID.	X3XTX-1
Frequency Range	802.11b/g/n-20MHz:2412-2462MHz,802.11n-40MHz:2422-2452MHz
Number of Channels	802.11b/g/n-20MHz: 11, n-40MHz: 7
Data Speed	802.11b: 1-11Mbps, 802.11g: 6-54Mbps, 802.11n: up to 150Mbps
Type of Modulation	802.11b:DSSS (DBPSK, DQPSK, CCK) 802.11g/n:OFDM (BPSK, QPSK, 16QAM, 64QAM)
Antenna Type	Cross Dipole Antenna
Antenna Gain	Refer to the table “Antenna List”
Channel Control	Auto
USB Cable	Non-Shielded, 1.8m, with one ferrite core bonded.
Power Adapter	MFR: UNIFIVE, M/N: UNI312-0520 Input: AC 100-240V,50/60Hz, 0.4A Output: DC 5V, 2A Cable Out: Non-Shielded, 1.8m

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	ELMO	N/A	Cross Dipole Antenna	0.82dBi for 2.4 GHz

Note: The antenna of EUT conforms to FCC 15.203.

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

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

802.11n-40MHz Center Frequency of Each Channel:

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

Note:

1. The EUT is a VISUAL PRESENTER 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. At result of pretests, module supports dual-channel transmission, only the worst case is shown in the report.
4. Lowest and highest data rates are tested in each mode. Only worst case is shown in the report. (802.11b is 1Mbps 、 802.11g is 6Mbps 、 802.11n(20M-BW) is 7.2Mbps and 802.11n(40M-BW) is 15Mbps)
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 MCS0 7.2Mbps 20M-BW)
	Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)

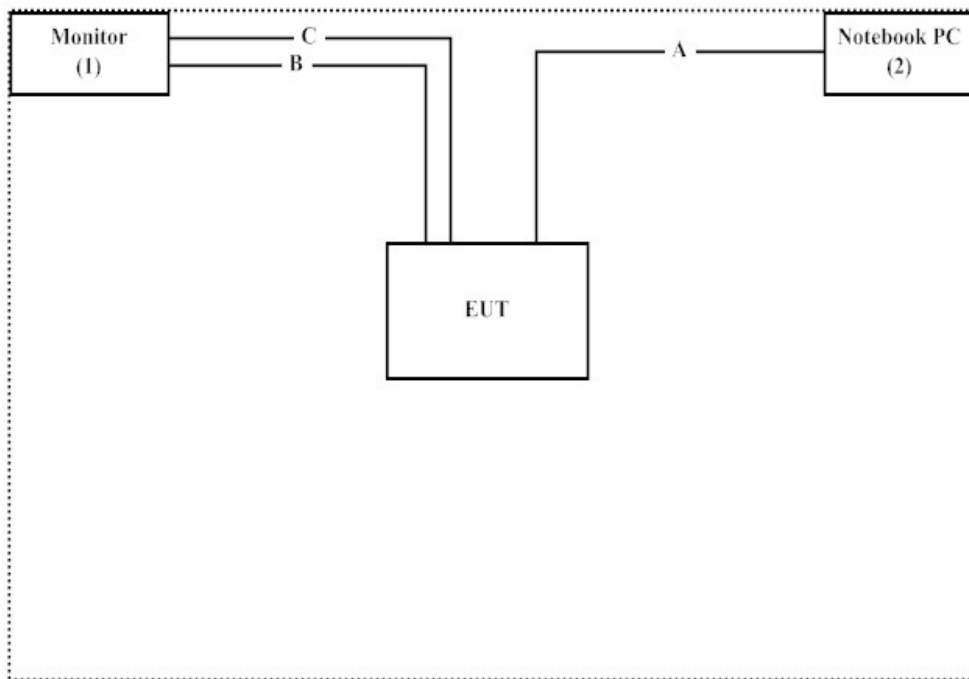
1.3. Tested System Details

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

Product	Manufacturer	Model No.	Serial No.	Power Cord
1 Monitor	Dell	2407WFPb	CN-0FC255-46633-638-1J JS	Non-Shielded, 1.8m
2 Notebook PC	DELL	Latitude E5440	74BTK32	Non-Shielded, 0.8m

Signal Cable Type	Signal cable Description
A USB Cable	Shielded, 1.6m
B D-SUB Cable	Shielded, 1.8m, with two ferrite cores bonded.
C HDMI Cable	Shielded, 1.8m

1.4. Configuration of Tested System



1.5. EUT Exercise Software

1. Setup the EUT as shown in Section 1.4.
2. Execute software “RF Test Tool V00.00.0004” on the EUT.
3. Configure the test mode, the test channel, and the data rate.
4. Press “OK” to start the continuous Transmit.
5. Verify that the EUT works properly.

1.6. Test Facility

Ambient conditions in the laboratory:

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

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

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

Site Description: File on
Federal Communications Commission
FCC Engineering Laboratory
7435 Oakland Mills Road
Columbia, MD 21046
Registration Number: 92195

Site Name: Quietek Corporation
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FCC Accreditation Number: TW1014

2. Conducted Emission

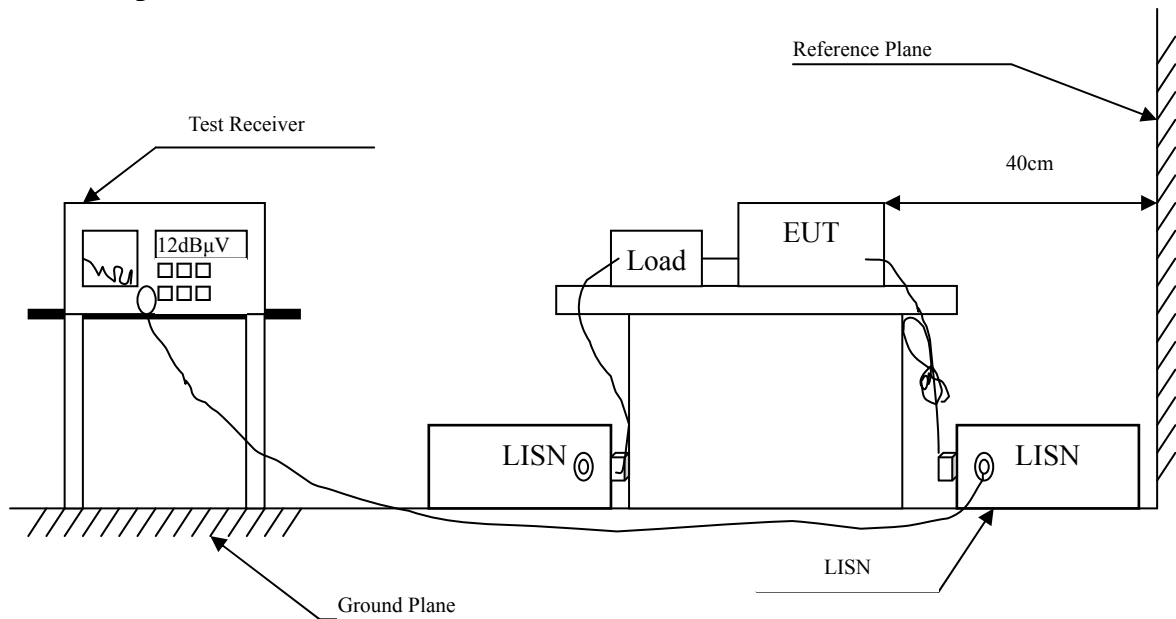
2.1. Test Equipment

	Equipment	Manufacturer	Model No. / Serial No.	Last Cal.	Remark
X	Test Receiver	R & S	ESCS 30 / 825442/018	Sep., 2015	
X	Artificial Mains Network	R & S	ENV4200 / 848411/10	Feb., 2016	Peripherals
X	LISN	R & S	ESH3-Z5 / 825562/002	Feb., 2016	EUT
	DC LISN	Schwarzbeck	8226 / 176	Mar., 2015	EUT
X	Pulse Limiter	R & S	ESH3-Z2 / 357.8810.52	Feb., 2016	
	No.1 Shielded Room				

Note:

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

2.2. Test Setup



2.3. Limits

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

2.4. Test Procedure

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

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 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 : VISUAL PRESENTER
 Test Item : Conducted Emission Test
 Power Line : Line 1
 Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2437MHz)

Frequency MHz	Correct Factor dB	Reading Level dBµV	Measurement Level dBµV	Margin dB	Limit dBµV
Line 1					
Quasi-Peak					
0.150	9.671	35.850	45.521	-20.479	66.000
0.209	9.661	25.990	35.651	-28.663	64.314
0.552	9.680	32.450	42.130	-13.870	56.000
1.533	9.743	21.390	31.133	-24.867	56.000
2.263	9.781	22.110	31.891	-24.109	56.000
18.357	10.047	12.430	22.477	-37.523	60.000
Average					
0.150	9.671	24.130	33.801	-22.199	56.000
0.209	9.661	16.370	26.031	-28.283	54.314
0.552	9.680	29.700	39.380	-6.620	46.000
1.533	9.743	14.660	24.403	-21.597	46.000
2.263	9.781	14.080	23.861	-22.139	46.000
18.357	10.047	2.050	12.097	-37.903	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 : VISUAL PRESENTER
 Test Item : Conducted Emission Test
 Power Line : Line 2
 Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2437MHz)

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV	Margin dB	Limit dBμV
Line 2					
Quasi-Peak					
0.150	9.671	35.040	44.711	-21.289	66.000
0.181	9.662	31.750	41.412	-23.702	65.114
0.552	9.680	31.500	41.180	-14.820	56.000
1.556	9.744	20.520	30.264	-25.736	56.000
2.326	9.783	23.200	32.983	-23.017	56.000
18.689	10.170	13.650	23.820	-36.180	60.000
Average					
0.150	9.671	21.610	31.281	-24.719	56.000
0.181	9.662	19.710	29.372	-25.742	55.114
0.552	9.680	27.950	37.630	-8.370	46.000
1.556	9.744	14.620	24.364	-21.636	46.000
2.326	9.783	14.970	24.753	-21.247	46.000
18.689	10.170	4.220	14.390	-35.610	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. Peak Power Output

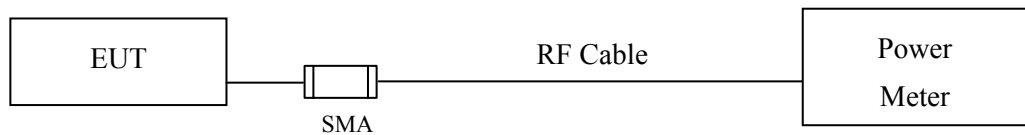
3.1. Test Equipment

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

Note:

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

3.2. Test Setup



3.3. Limits

The maximum peak power shall be less 1 Watt.

3.4. Test Procedure

The EUT was tested according to DTS test procedure of KDB 558074 for compliance to FCC 47CFR 15.247 requirements. The maximum peak conducted output power using KDB 558074 D01 DTS Meas Guidance v03r04 section 9.1.2 PKPM1 Peak power meter method.

3.5. Uncertainty

± 1.27 dB

3.6. Test Result of Peak Power Output

Product : VISUAL PRESENTER
Test Item : Peak Power Output Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps)

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)				Peak Power	Required Limit	Result
		1	2	5.5	11			
		Measurement Level (dBm)						
01	2412	11.63	--	--	--	14.39	<30dBm	Pass
06	2437	12.50	12.32	12.14	11.95	15.04	<30dBm	Pass
11	2462	13.18	--	--	--	15.67	<30dBm	Pass

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

Product : VISUAL PRESENTER
 Test Item : Peak Power Output Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps)

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	10.62	--	--	--	--	--	--	--	19.94	<30dBm	Pass
06	2437	11.91	11.74	11.18	10.95	10.78	10.68	10.51	10.14	20.85	<30dBm	Pass
11	2462	12.81	--	--	--	--	--	--	--	21.10	<30dBm	Pass

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

Product : VISUAL PRESENTER
 Test Item : Peak Power Output Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

Channel No	Frequency (MHz)	Average Power								Peak Power	Required Limit	Result
		For different Data Rate (Mbps)										
		7.2	14.4	21.7	28.9	43.3	57.8	65	72.2	7.2		
Measurement Level (dBm)												
01	2412	10.53	--	--	--	--	--	--	--	19.45	<30dBm	Pass
06	2437	12.03	11.87	11.75	11.61	11.52	11.43	11.24	11.08	20.54	<30dBm	Pass
11	2462	13.05	--	--	--	--	--	--	--	21.08	<30dBm	Pass

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

Product : VISUAL PRESENTER
 Test Item : Peak Power Output Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power	Required Limit	Result
		15	30	45	60	90	120	135	150			
		Measurement Level (dBm)										
03	2422	11.23	--	--	--	--	--	--	--	20.45	<30dBm	Pass
06	2437	12.66	12.48	12.31	12.24	12.1	11.95	11.75	11.53	21.27	<30dBm	Pass
09	2452	12.82	--	--	--	--	--	--	--	21.21	<30dBm	Pass

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

4. Radiated Emission

4.1. Test Equipment

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

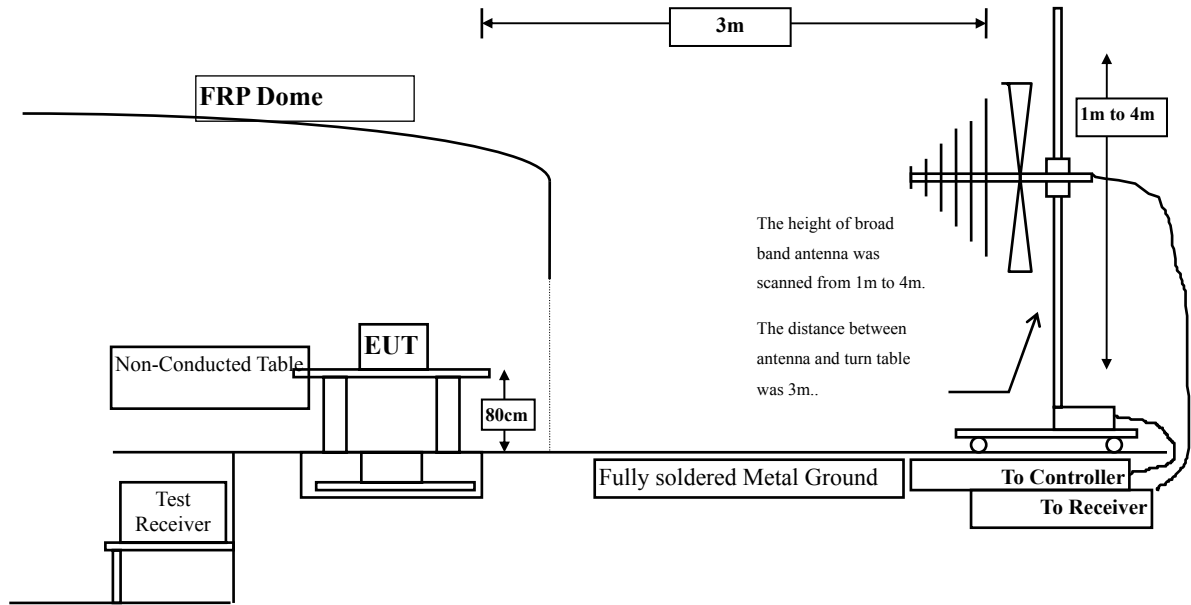
Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
☒ Site # 3	X	Magnetic Loop Antenna	Teseq	HLA6121/ 37133	Sep., 2015
	X	Bilog Antenna	Schaffner Chase	CBL6112B/ 2707	Jun., 2015
	X	EMI Test Receiver	R&S	ESCS 30/838251/ 001	Jun., 2015
	X	Coaxial Cable	QTK(Arnist)	RG 214/ LC003-RG	Jun., 2015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

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

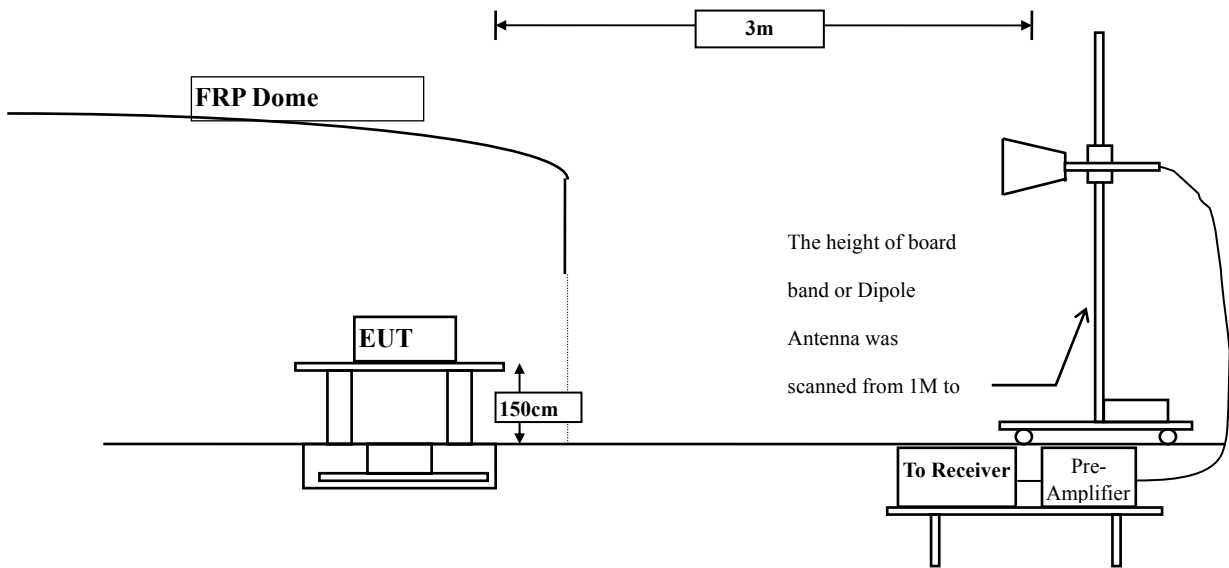
- Note: 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with "X" are used to measure the final test results.

4.2. Test Setup

Radiated Emission Below 1GHz



Radiated Emission Above 1GHz



4.3. Limits

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

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

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

4.4. Test Procedure

The EUT was setup according to ANSI C63.10: 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 from 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 : VISUAL PRESENTER
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

Frequency MHz	Correct Factor dB	Reading Level dB μ V	Measurement Level dB μ V/m	Margin dB	Limit dB μ V/m
Horizontal					
Peak Detector:					
4824.000	2.428	41.160	43.589	-30.411	74.000
7236.000	9.177	38.910	48.087	-25.913	74.000
9648.000	10.019	39.550	49.570	-24.430	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4824.000	2.836	41.490	44.327	-29.673	74.000
7236.000	9.676	38.500	48.176	-25.824	74.000
9648.000	10.556	38.700	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 : VISUAL PRESENTER
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2437 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector:					
4874.000	2.076	40.160	42.237	-31.763	74.000
7311.000	9.512	38.030	47.542	-26.458	74.000
9748.000	9.630	39.415	49.045	-24.955	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4874.000	2.532	40.640	43.172	-30.828	74.000
7311.000	10.089	37.950	48.039	-25.961	74.000
9748.000	10.266	39.070	49.337	-24.663	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 : VISUAL PRESENTER
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462 MHz)

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

Horizontal

Peak Detector:

4924.000	2.191	40.150	42.341	-31.659	74.000
7386.000	10.373	37.370	47.744	-26.256	74.000
9848.000	9.964	39.060	49.024	-24.976	74.000

Average Detector:

--

Vertical

Peak Detector:

4924.000	2.805	40.060	42.865	-31.135	74.000
7386.000	11.180	38.620	49.800	-24.200	74.000
9848.000	10.801	39.150	49.951	-24.049	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 : VISUAL PRESENTER
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

Frequency MHz	Correct Factor dB	Reading Level dB μ V	Measurement Level dB μ V/m	Margin dB	Limit dB μ V/m
Horizontal					
Peak Detector:					
4824.000	2.428	41.580	44.009	-29.991	74.000
7236.000	9.177	39.150	48.327	-25.673	74.000
9648.000	10.019	40.852	50.872	-23.128	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4824.000	2.836	41.590	44.427	-29.573	74.000
7236.000	9.676	38.960	48.636	-25.364	74.000
9648.000	10.556	39.600	50.157	-23.843	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 : VISUAL PRESENTER
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector:					
4874.000	2.076	40.560	42.637	-31.363	74.000
7311.000	9.512	39.510	49.022	-24.978	74.000
9748.000	9.630	38.954	48.584	-25.416	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4874.000	2.532	41.520	44.052	-29.948	74.000
7311.000	10.089	38.632	48.721	-25.279	74.000
9748.000	10.266	39.541	49.808	-24.192	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 : VISUAL PRESENTER
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462 MHz)

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

Peak Detector:

4924.000	2.191	40.250	42.441	-31.559	74.000
7386.000	10.373	38.966	49.340	-24.660	74.000
9848.000	9.964	40.120	50.084	-23.916	74.000

Average Detector:

--

Vertical

Peak Detector:

4924.000	2.805	41.563	44.368	-29.632	74.000
7386.000	11.180	39.674	50.854	-23.146	74.000
9848.000	10.801	40.128	50.929	-23.071	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 : VISUAL PRESENTER
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)(2412MHz)

Frequency MHz	Correct Factor dB	Reading Level dB μ V	Measurement Level dB μ V/m	Margin dB	Limit dB μ V/m
Horizontal					
Peak Detector:					
4824.000	2.428	42.550	44.979	-29.021	74.000
7236.000	9.177	39.336	48.513	-25.487	74.000
9648.000	10.019	39.966	49.986	-24.014	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4824.000	2.836	42.315	45.152	-28.848	74.000
7236.000	9.676	39.841	49.517	-24.483	74.000
9648.000	10.556	40.521	51.078	-22.922	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 : VISUAL PRESENTER
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2437 MHz)

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

Peak Detector:

4874.000	2.076	41.574	43.651	-30.349	74.000
7311.000	9.512	39.840	49.352	-24.648	74.000
9748.000	9.630	39.555	49.185	-24.815	74.000

Average Detector:

--

Vertical

Peak Detector:

4874.000	2.532	40.523	43.055	-30.945	74.000
7311.000	10.089	39.651	49.740	-24.260	74.000
9748.000	10.266	40.541	50.808	-23.192	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 : VISUAL PRESENTER
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2462 MHz)

Frequency MHz	Correct Factor dB	Reading Level dB μ V	Measurement Level dB μ V/m	Margin dB	Limit dB μ V/m
Horizontal					
Peak Detector:					
4924.000	2.191	42.211	44.402	-29.598	74.000
7386.000	10.373	39.652	50.026	-23.974	74.000
9848.000	9.964	39.680	49.644	-24.356	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4924.000	2.805	41.523	44.328	-29.672	74.000
7386.000	11.180	39.854	51.034	-22.966	74.000
9848.000	10.801	39.364	50.165	-23.835	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 : VISUAL PRESENTER
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)(2422MHz)

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

Peak Detector:

4844.000	2.280	42.242	44.523	-29.477	74.000
7266.000	9.106	39.845	48.951	-25.049	74.000
9688.000	9.663	40.547	50.210	-23.790	74.000

Average Detector:

--

Vertical

Peak Detector:

4844.000	2.707	41.503	44.211	-29.789	74.000
7266.000	9.626	38.970	48.596	-25.404	74.000
9688.000	10.284	40.327	50.611	-23.389	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 : VISUAL PRESENTER
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2437 MHz)

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

Peak Detector:

4874.000	2.076	40.124	42.201	-31.799	74.000
7311.000	9.512	39.852	49.364	-24.636	74.000
9748.000	9.630	39.165	48.795	-25.205	74.000

Average Detector:

--

Vertical

Peak Detector:

4874.000	2.532	41.135	43.667	-30.333	74.000
7311.000	10.089	40.198	50.287	-23.713	74.000
9748.000	10.266	41.255	51.522	-22.478	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 : VISUAL PRESENTER
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)(2452 MHz)

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

Peak Detector:

4904.000	2.000	41.659	43.660	-30.340	74.000
7356.000	10.308	38.355	48.663	-25.337	74.000
9808.000	9.850	40.780	50.630	-23.370	74.000

Average Detector:

--

Vertical

Peak Detector:

4904.000	2.513	42.009	44.523	-29.477	74.000
7356.000	11.022	37.619	48.641	-25.359	74.000
9808.000	10.512	40.062	50.574	-23.426	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 : VISUAL PRESENTER
 Test Item : General Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps)(2437 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
212.360	-10.540	39.660	29.120	-14.380	43.500
346.220	-1.490	36.651	35.160	-10.840	46.000
489.780	1.326	35.913	37.239	-8.761	46.000
619.760	1.866	36.205	38.071	-7.929	46.000
778.840	4.951	32.853	37.804	-8.196	46.000
906.880	5.880	24.870	30.750	-15.250	46.000
Vertical					
258.920	-5.029	37.115	32.086	-13.914	46.000
402.480	-3.650	37.009	33.359	-12.641	46.000
526.640	0.960	35.309	36.269	-9.731	46.000
687.660	2.124	35.863	37.987	-8.013	46.000
827.340	2.430	35.249	37.679	-8.321	46.000
961.200	3.110	30.341	33.451	-20.549	54.000

Note:

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

Product : VISUAL PRESENTER
 Test Item : General Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps)(2437 MHz)

Frequency MHz	Correct Factor dB	Reading Level dB μ V	Measurement Level dB μ V/m	Margin dB	Limit dB μ V/m
Horizontal					
218.180	-10.376	41.317	30.941	-15.059	46.000
342.340	-2.710	39.136	36.426	-9.574	46.000
464.560	2.760	36.553	39.313	-6.687	46.000
588.720	3.060	36.057	39.117	-6.883	46.000
745.860	3.700	34.823	38.523	-7.477	46.000
918.520	6.468	26.429	32.897	-13.103	46.000
Vertical					
225.940	-6.410	36.393	29.983	-16.017	46.000
375.320	0.286	32.767	33.052	-12.948	46.000
547.980	0.030	37.341	37.371	-8.629	46.000
660.500	-1.267	38.380	37.113	-8.887	46.000
809.880	2.770	34.859	37.629	-8.371	46.000
968.960	3.740	28.249	31.989	-22.011	54.000

Note:

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

Product : VISUAL PRESENTER
 Test Item : General Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)(2437 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
229.820	-8.137	39.876	31.739	-14.261	46.000
377.260	1.008	34.579	35.587	-10.413	46.000
491.720	1.350	35.632	36.982	-9.018	46.000
631.400	1.085	35.462	36.547	-9.453	46.000
786.600	5.594	32.238	37.833	-8.167	46.000
935.980	6.530	24.993	31.523	-14.477	46.000
Vertical					
237.580	-6.670	38.367	31.697	-14.303	46.000
383.080	0.099	35.345	35.444	-10.556	46.000
515.000	-0.107	38.357	38.250	-7.750	46.000
679.900	1.058	36.793	37.851	-8.149	46.000
813.760	2.620	34.918	37.538	-8.462	46.000
949.560	2.944	31.395	34.339	-11.661	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 : VISUAL PRESENTER
 Test Item : General Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)(2437 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
227.880	-8.908	39.587	30.680	-15.320	46.000
381.140	1.292	33.572	34.864	-11.136	46.000
505.300	1.940	33.626	35.566	-10.434	46.000
652.740	1.744	35.107	36.851	-9.149	46.000
819.580	6.690	29.440	36.130	-9.870	46.000
957.320	6.410	24.973	31.383	-14.617	46.000
Vertical					
214.300	-6.018	35.210	29.191	-14.309	43.500
338.460	-1.792	38.039	36.246	-9.754	46.000
460.680	-2.080	40.091	38.011	-7.989	46.000
596.480	0.677	37.132	37.809	-8.191	46.000
796.300	2.400	33.969	36.369	-9.631	46.000
941.800	3.240	28.841	32.081	-13.919	46.000

Note:

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

5. RF antenna conducted test

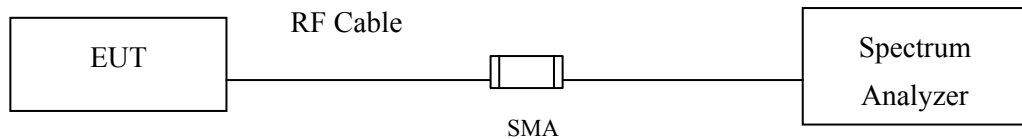
5.1. Test Equipment

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

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

5.2. Test Setup

RF antenna Conducted Measurement:



5.3. Limits

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

5.4. Test Procedure

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

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

5.5. Uncertainty

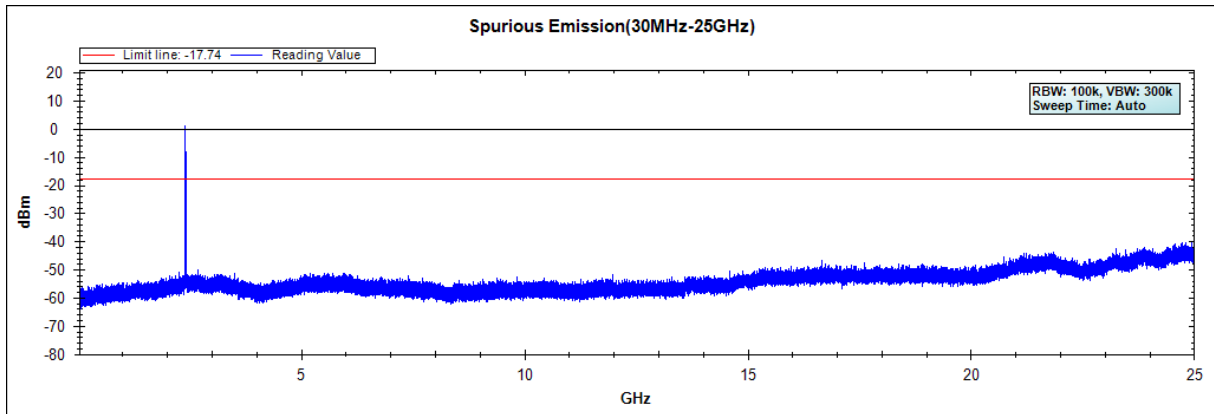
The measurement uncertainty

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

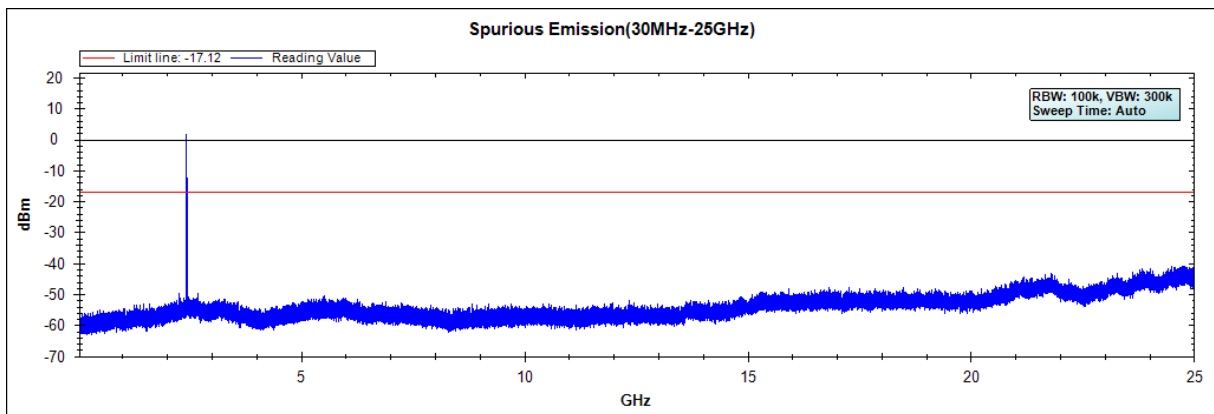
5.6. Test Result of RF antenna conducted test

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

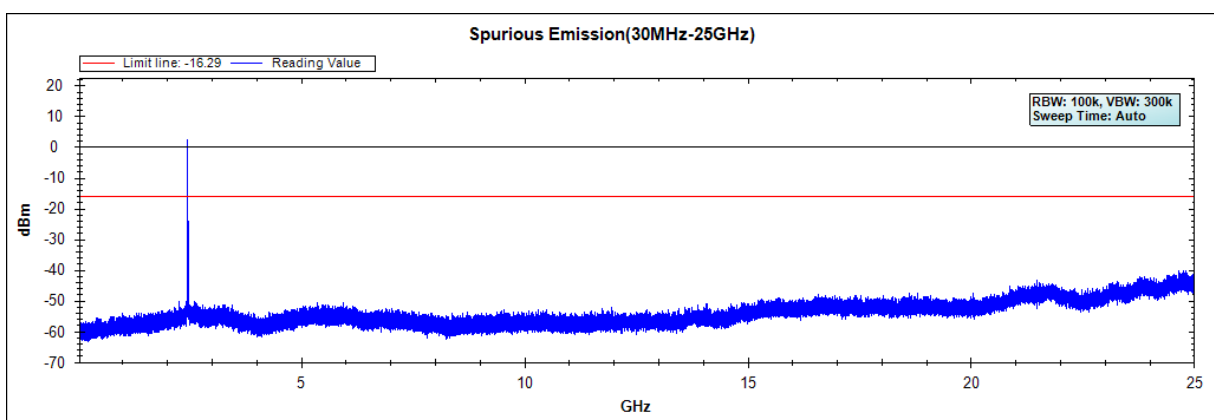
Channel 01 (2412MHz) 30MHz-25GHz



Channel 06 (2437MHz) 30MHz-25GHz



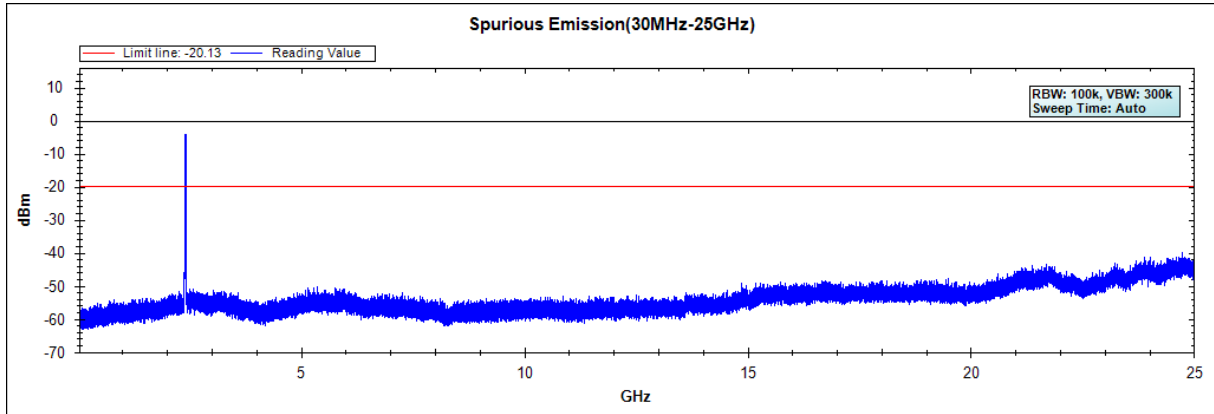
Channel 11 (2462MHz) 30MHz-25GHz



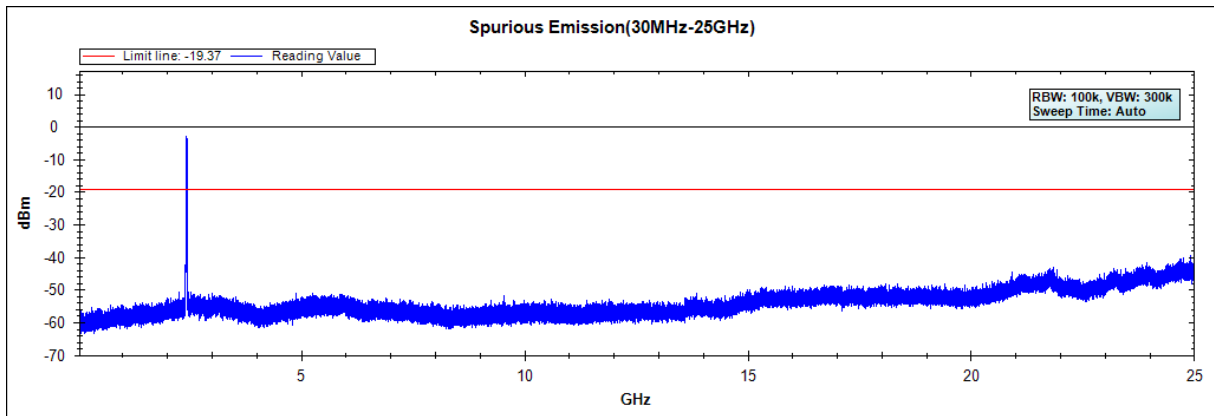
Note: The above test pattern is synthesized by multiple of the frequency range.

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

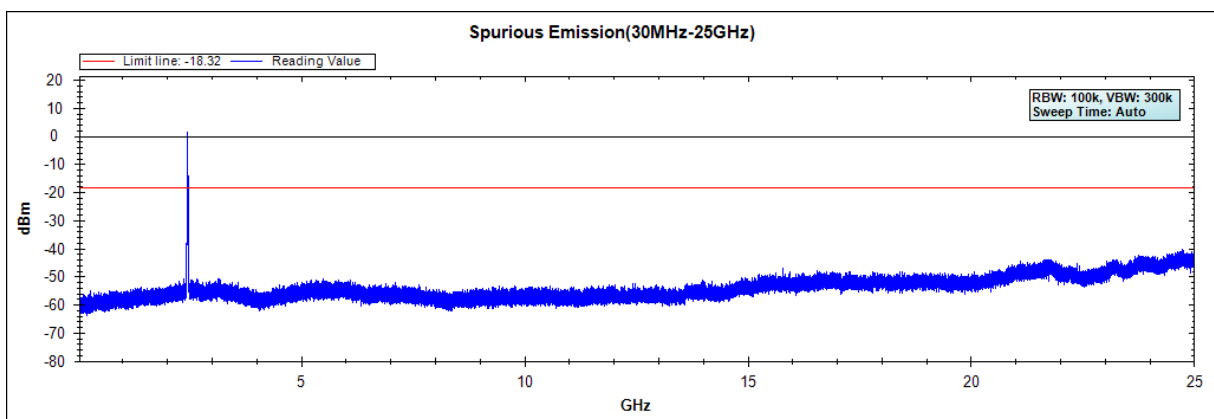
Channel 01 (2412MHz) 30MHz-25GHz



Channel 06 (2437MHz) 30MHz-25GHz



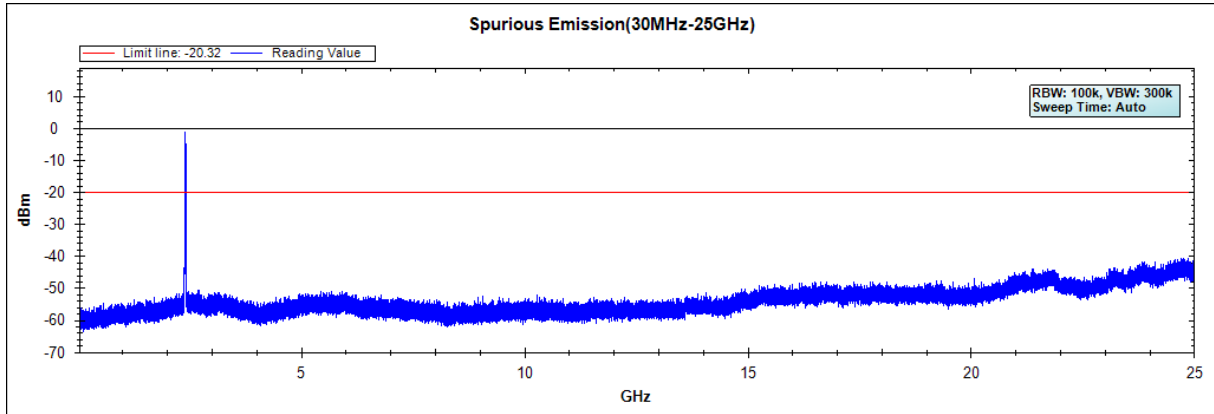
Channel 11 (2462MHz) 30MHz-25GHz



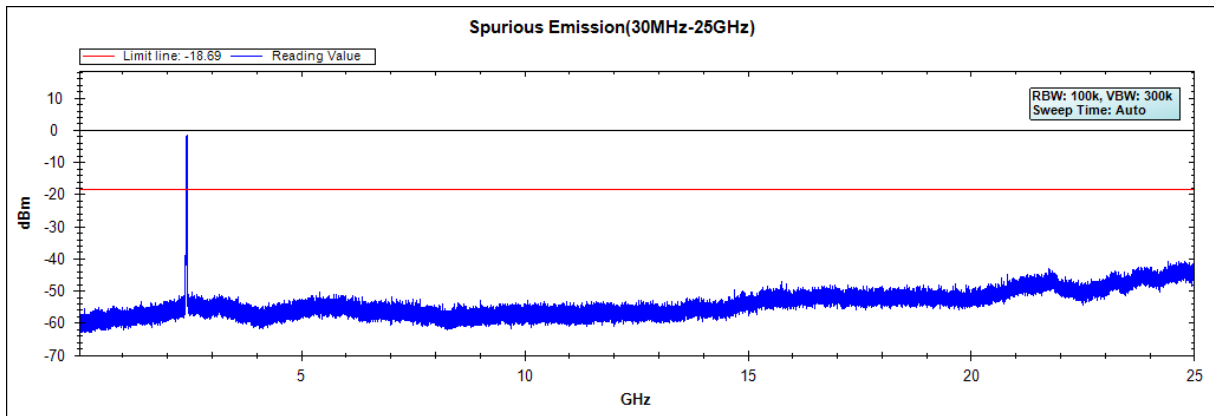
Note: The above test pattern is synthesized by multiple of the frequency range.

Product : VISUAL PRESENTER
 Test Item : RF Antenna Conducted Spurious
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

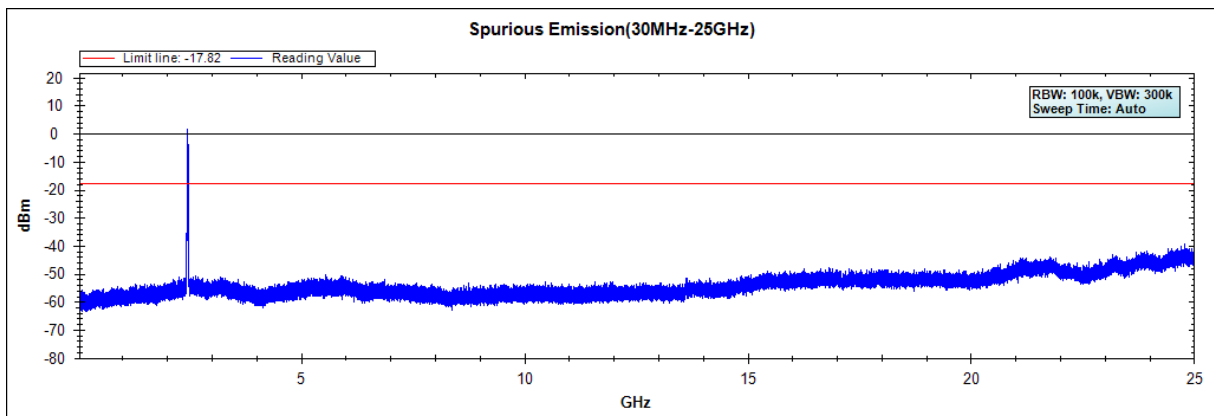
Channel 01 (2412MHz) 30MHz-25GHz



Channel 06 (2437MHz) 30MHz-25GHz



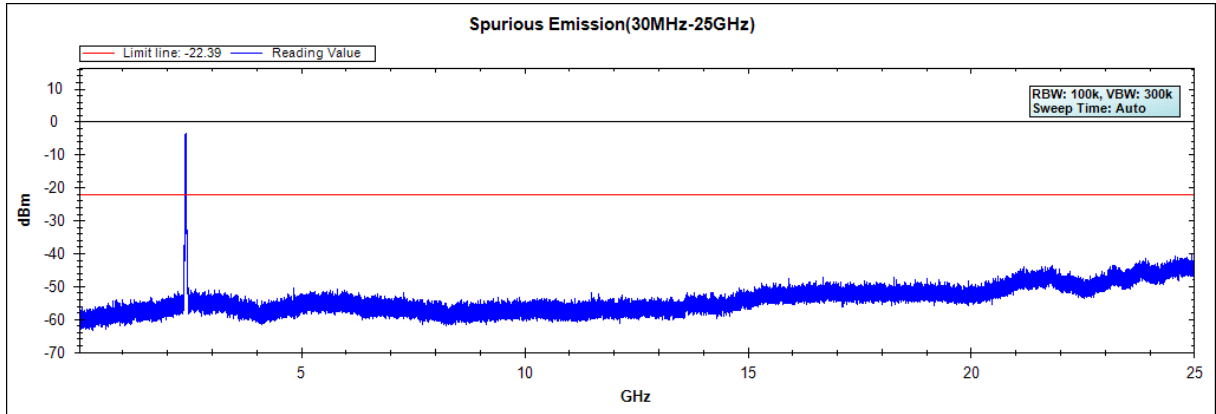
Channel 11 (2462MHz) 30MHz-25GHz



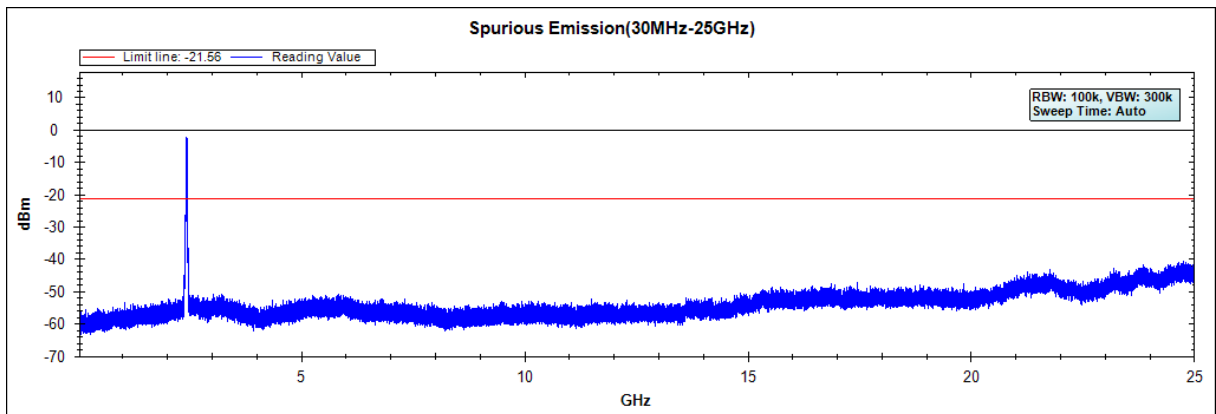
Note: The above test pattern is synthesized by multiple of the frequency range.

Product : VISUAL PRESENTER
 Test Item : RF Antenna Conducted Spurious
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)

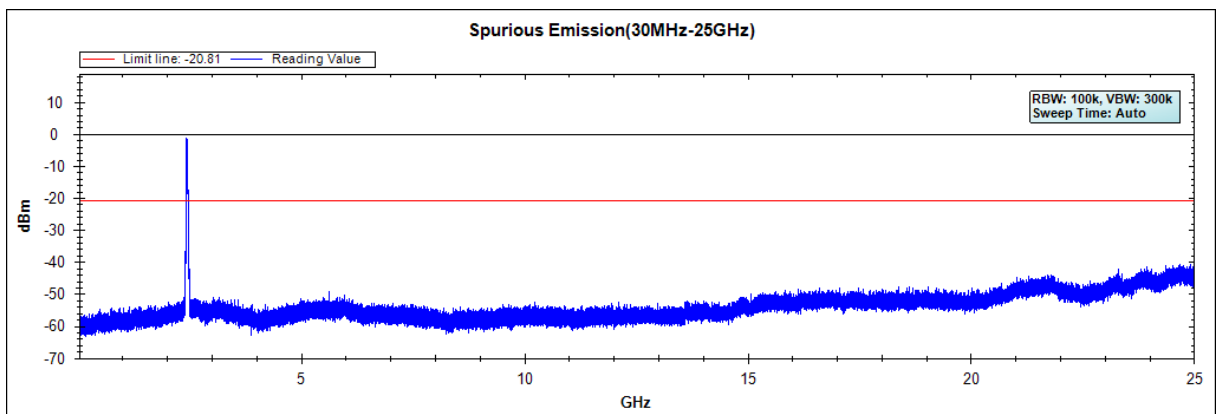
Channel 01 (2422MHz) 30MHz-25GHz



Channel 04 (2437MHz) 30MHz-25GHz



Channel 07 (2452MHz) 30MHz-25GHz



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

6. Band Edge

6.1. Test Equipment

RF Radiated Measurement:

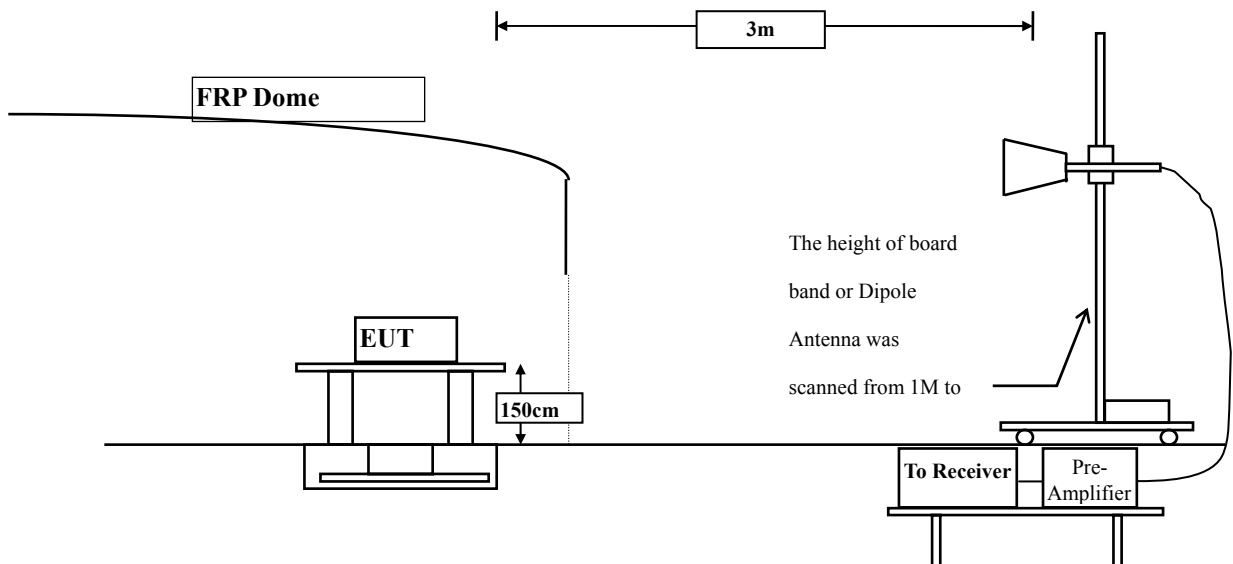
The following test equipments are used during the band edge tests:

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

- Note:
1. All instruments are calibrated every one year.
 2. The test instruments marked by “X” are used to measure the final test results.

6.2. Test Setup

RF Radiated Measurement:



6.3. Limits

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

6.4. Test Procedure

The EUT was setup according to ANSI C63.10, 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 : VISUAL PRESENTER
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
01 (Peak)	2390.000	33.739	21.997	55.736	74.00	54.00	Pass
01 (Peak)	2398.800	33.750	26.211	59.960	74.00	54.00	Pass
01 (Peak)	2400.000	33.752	22.789	56.540	--	--	--
01 (Peak)	2413.200	33.775	69.122	102.897	--	--	--
01 (Average)	2390.000	33.739	13.777	47.516	74.00	54.00	Pass
01 (Average)	2398.000	33.748	17.516	51.264	74.00	54.00	Pass
01 (Average)	2400.000	33.752	15.360	49.111	--	--	--
01 (Average)	2411.200	33.770	65.235	99.005	--	--	--

Figure Channel 01: Horizontal (Peak)

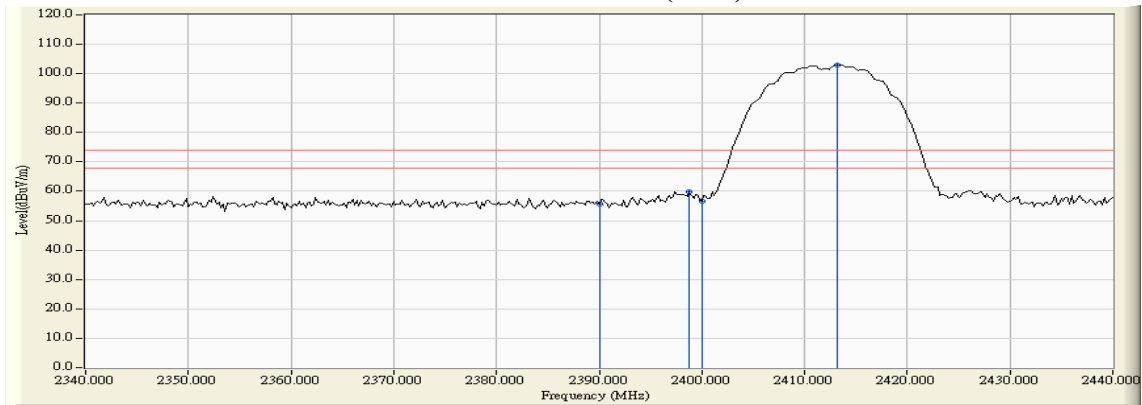
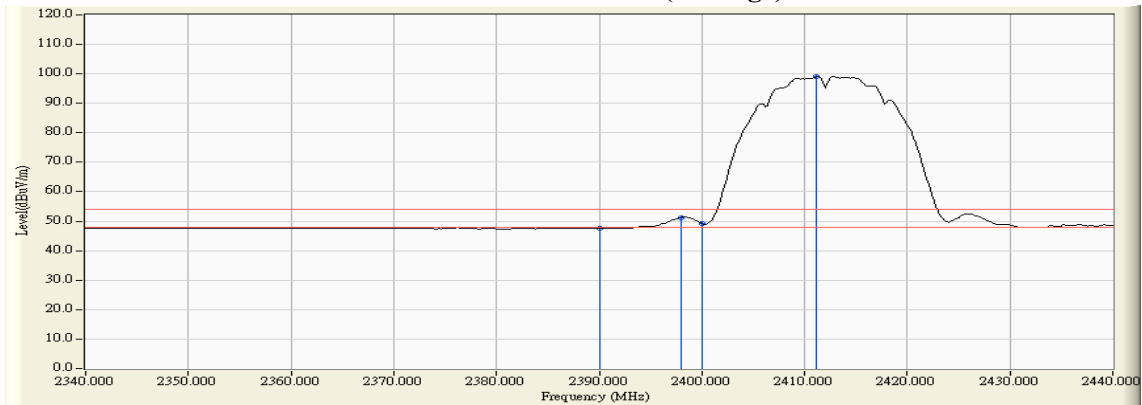


Figure Channel 01: Horizontal (Average)



- 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 : VISUAL PRESENTER
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

RF Radiated Measurement (VERTICAL):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
01 (Peak)	2348.800	32.576	25.420	57.996	74.00	54.00	Pass
01 (Peak)	2390.000	32.267	23.352	55.619	74.00	54.00	Pass
01 (Peak)	2400.000	32.241	23.783	56.024	--	--	--
01 (Peak)	2413.000	32.254	57.914	90.167	--	--	--
01 (Average)	2390.000	32.267	13.613	45.880	74.00	54.00	Pass
01 (Average)	2400.000	32.241	13.674	45.915	--	--	--
01 (Average)	2414.600	32.261	53.733	85.994	--	--	--

Figure Channel 01: VERTICAL (Peak)

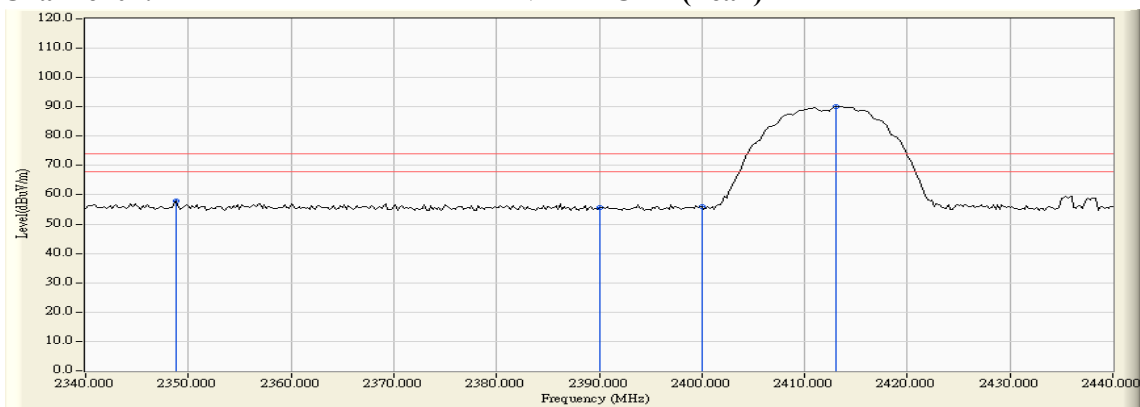
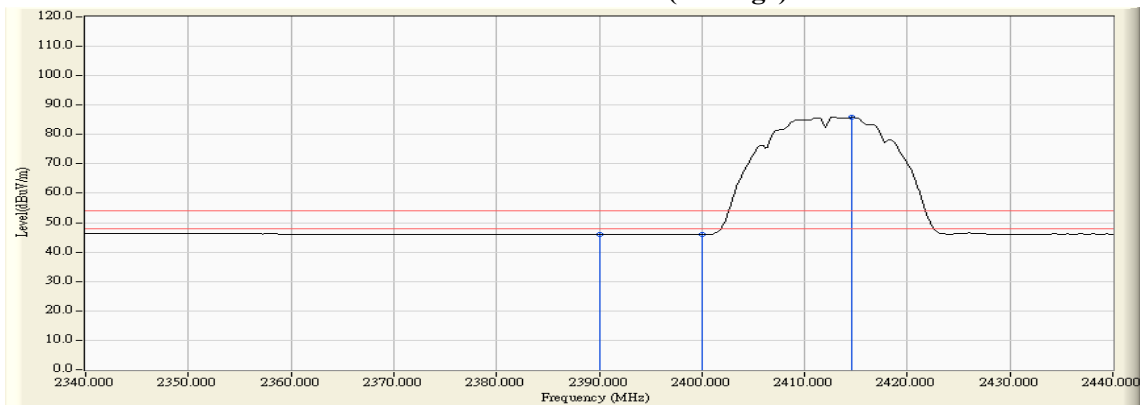


Figure Channel 01: VERTICAL (Average)



- 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 : VISUAL PRESENTER
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462MHz)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
11 (Peak)	2459.300	33.886	73.522	107.408	--	--	--
11 (Peak)	2483.500	33.951	26.007	59.957	74.00	54.00	Pass
11 (Average)	2461.100	33.890	67.157	101.047	--	--	--
11 (Average)	2483.500	33.951	14.964	48.914	74.00	54.00	Pass

Figure Channel 11: Horizontal (Peak)

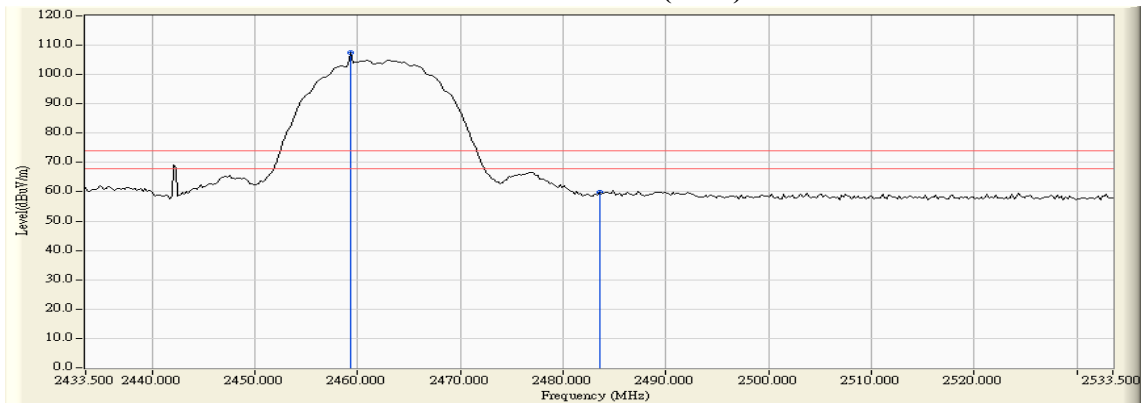


Figure Channel 11: Horizontal (Average)



- 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 : VISUAL PRESENTER
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462MHz)

RF Radiated Measurement (VERTICAL):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
11 (Peak)	2460.900	32.476	59.064	91.539	--	--	--
11 (Peak)	2483.500	32.586	24.054	56.639	74.00	54.00	Pass
11 (Average)	2461.100	32.476	55.180	87.656	--	--	--
11 (Average)	2483.500	32.586	13.608	46.193	74.00	54.00	Pass

Figure Channel 11: VERTICAL (Peak)

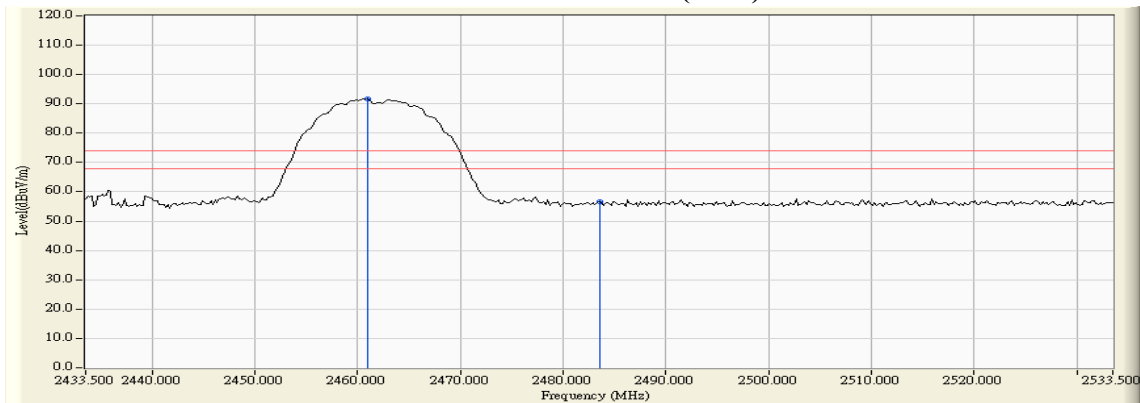
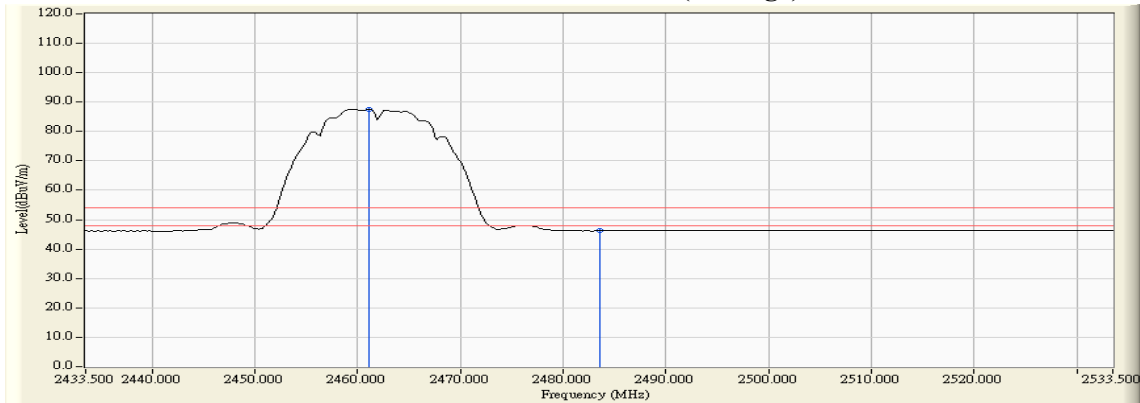


Figure Channel 11: VERTICAL (Average)



- 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 : VISUAL PRESENTER
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
01 (Peak)	2390.000	33.739	30.259	63.998	74.00	54.00	Pass
01 (Peak)	2400.000	33.752	48.227	81.978	--	--	--
01 (Peak)	2407.600	33.764	70.575	104.339	--	--	--
01 (Average)	2390.000	33.739	15.654	49.393	74.00	54.00	Pass
01 (Average)	2400.000	33.752	26.717	60.468	--	--	--
01 (Average)	2417.400	33.784	60.607	94.392	--	--	--

Figure Channel 01: Horizontal (Peak)

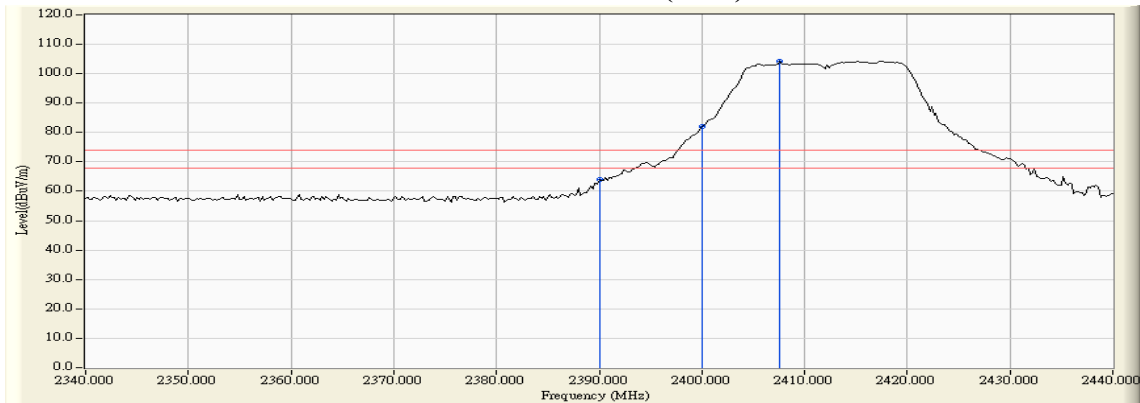
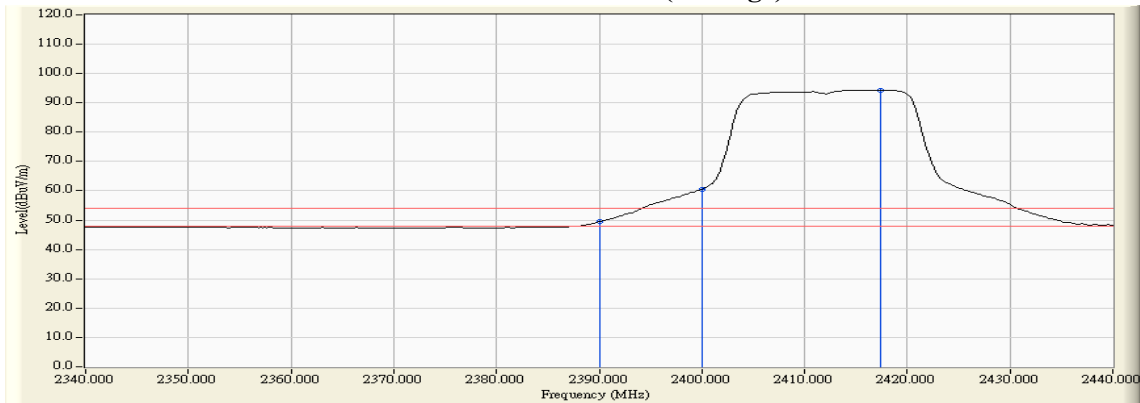


Figure Channel 01: Horizontal (Average)



- 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 : VISUAL PRESENTER
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

RF Radiated Measurement (VERTICAL):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
01 (Peak)	2352.400	32.544	26.263	58.807	74.00	54.00	Pass
01 (Peak)	2390.000	32.267	23.377	55.644	74.00	54.00	Pass
01 (Peak)	2400.000	32.241	36.079	68.320	--	--	--
01 (Peak)	2417.600	32.274	59.144	91.418	--	--	--
01 (Average)	2390.000	32.267	13.741	46.008	74.00	54.00	Pass
01 (Average)	2400.000	32.241	17.589	49.830	--	--	--
01 (Average)	2417.400	32.273	49.612	81.885	--	--	--

Figure Channel 01: VERTICAL (Peak)

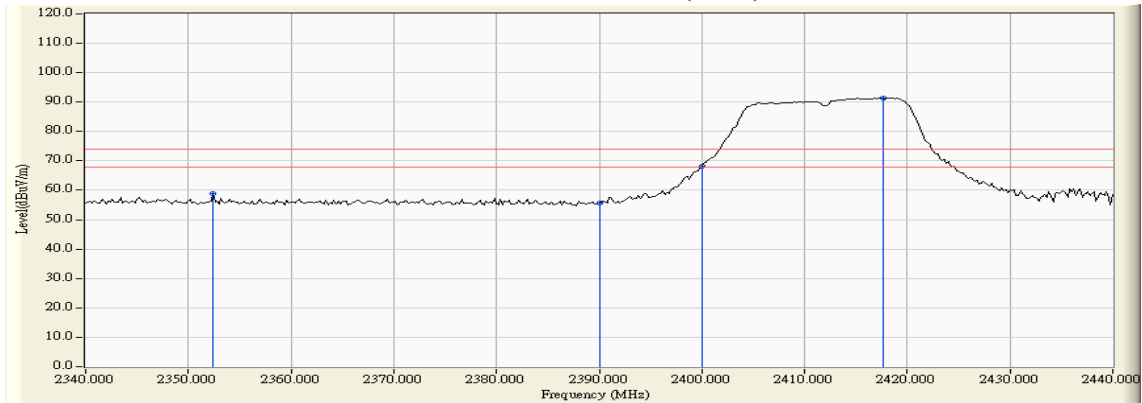
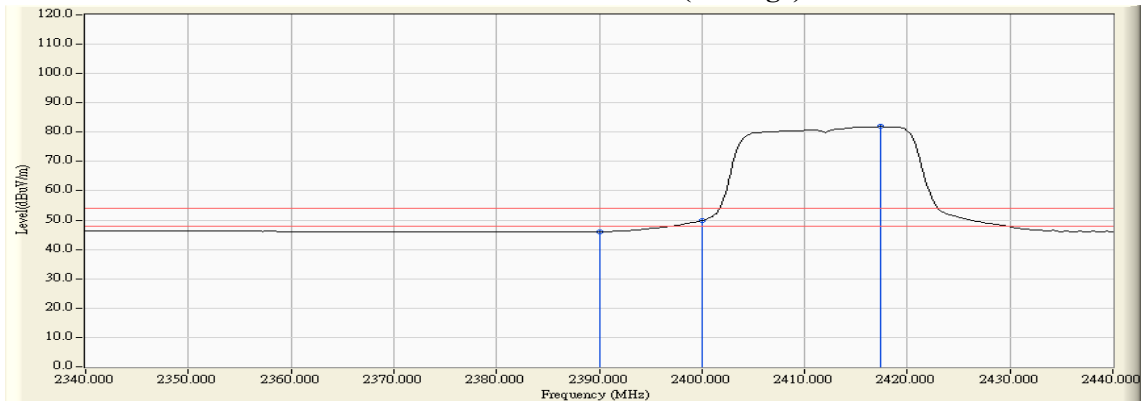


Figure Channel 01: VERTICAL (Average)



- 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 : VISUAL PRESENTER
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462MHz)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
11 (Peak)	2457.500	33.881	72.456	106.337	--	--	--
11 (Peak)	2483.500	33.951	38.880	72.830	74.00	54.00	Pass
11 (Average)	2466.100	33.904	61.366	95.269	--	--	--
11 (Average)	2483.500	33.951	19.521	53.471	74.00	54.00	Pass

Figure Channel 11: Horizontal (Peak)

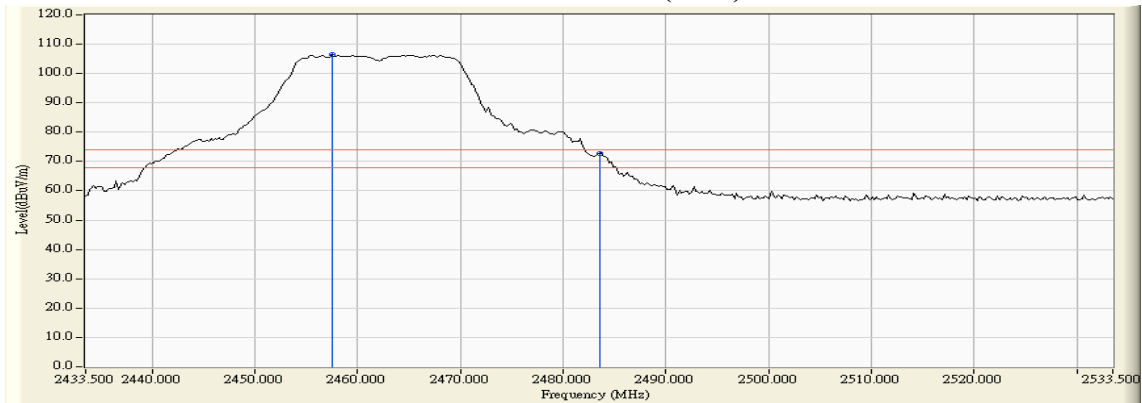
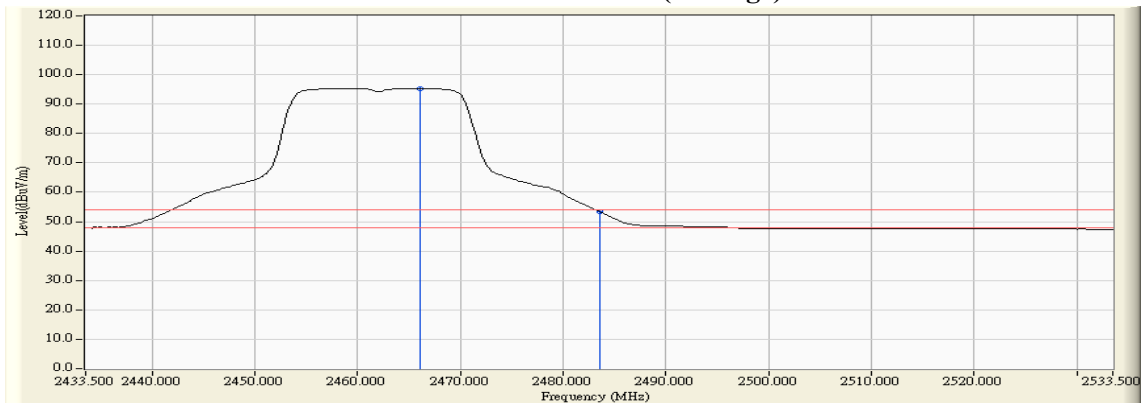


Figure Channel 11: Horizontal (Average)



- 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 : VISUAL PRESENTER
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462MHz)

RF Radiated Measurement (VERTICAL):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
11 (Peak)	2455.500	32.450	59.895	92.344	--	--	--
11 (Peak)	2483.500	32.586	24.907	57.492	74.00	54.00	Pass
11 (Average)	2457.100	32.458	50.077	82.534	--	--	--
11 (Average)	2483.500	32.586	13.923	46.508	74.00	54.00	Pass

Figure Channel 11: VERTICAL (Peak)

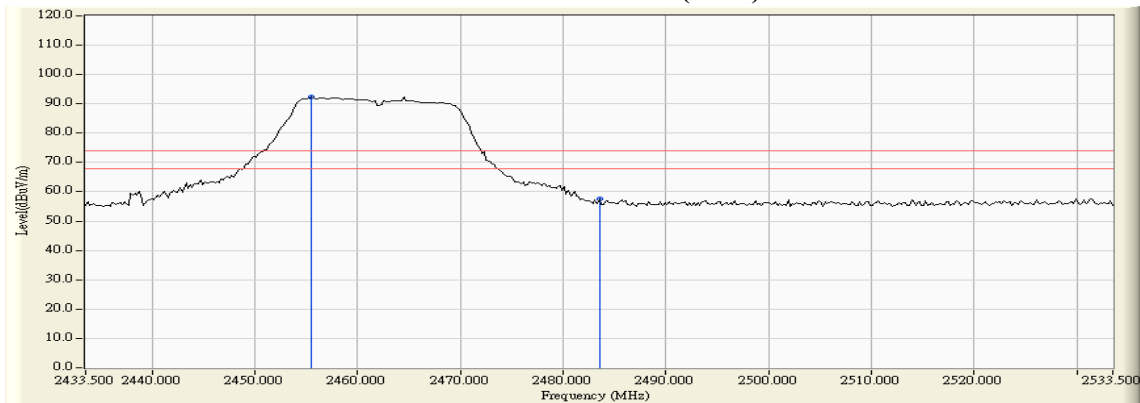
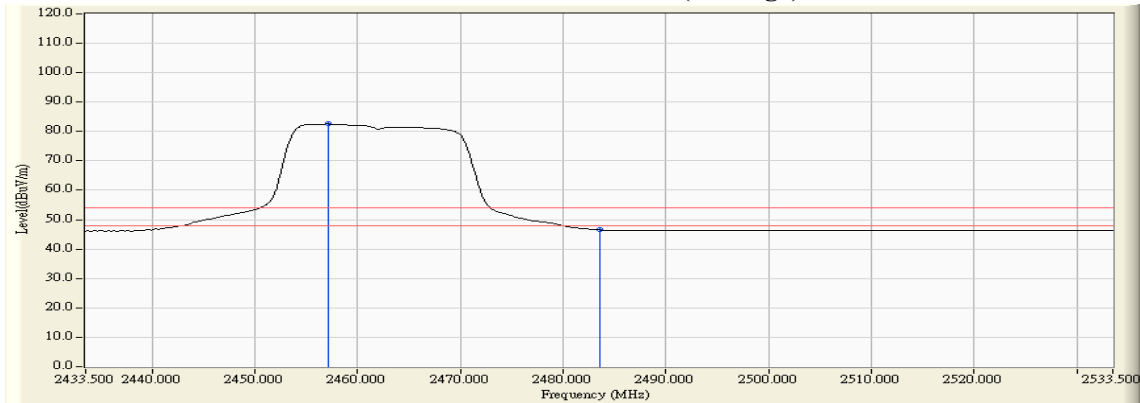


Figure Channel 11: VERTICAL (Average)



- 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 : VISUAL PRESENTER
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2412MHz)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
01 (Peak)	2390.000	33.739	34.207	67.946	74.00	54.00	Pass
01 (Peak)	2400.000	33.752	48.105	81.856	--	--	--
01 (Peak)	2409.000	33.766	70.401	104.167	--	--	--
01 (Average)	2390.000	33.739	16.919	50.658	74.00	54.00	Pass
01 (Average)	2400.000	33.752	26.737	60.488	--	--	--
01 (Average)	2417.400	33.784	60.311	94.096	--	--	--

Figure Channel 01: Horizontal (Peak)

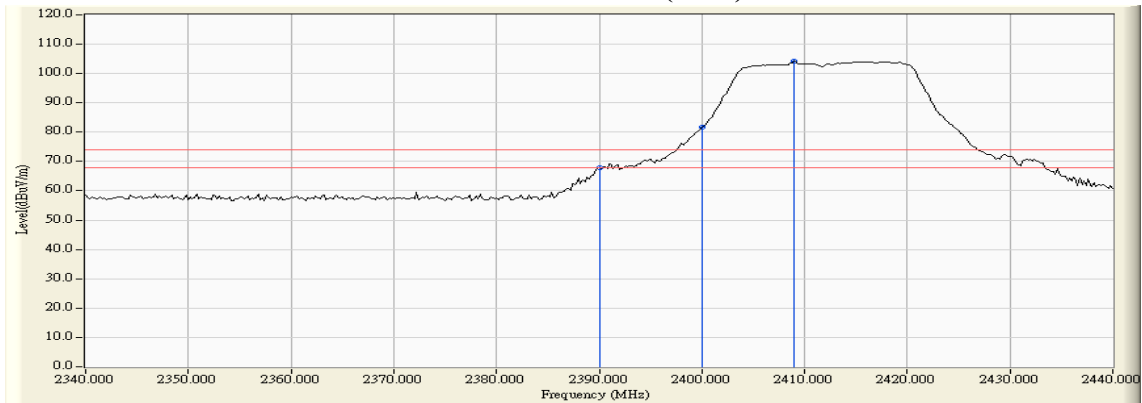
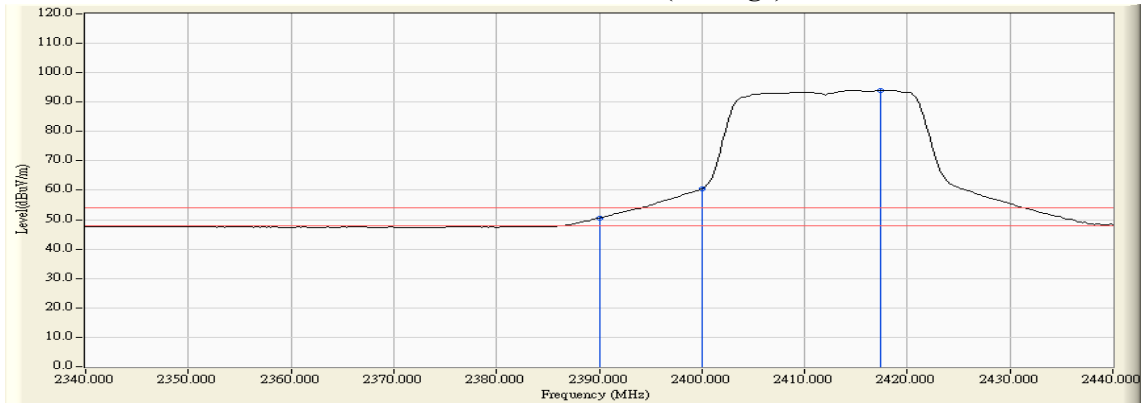


Figure Channel 01: Horizontal (Average)



- 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 : VISUAL PRESENTER
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2412MHz)

RF Radiated Measurement (VERTICAL):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
01 (Peak)	2390.000	32.267	24.124	56.391	74.00	54.00	Pass
01 (Peak)	2400.000	32.241	36.142	68.383	--	--	--
01 (Peak)	2418.000	32.276	59.080	91.356	--	--	--
01 (Average)	2390.000	32.267	13.919	46.186	74.00	54.00	Pass
01 (Average)	2400.000	32.241	17.624	49.865	--	--	--
01 (Average)	2417.400	32.273	49.283	81.556	--	--	--

Figure Channel 01: VERTICAL (Peak)

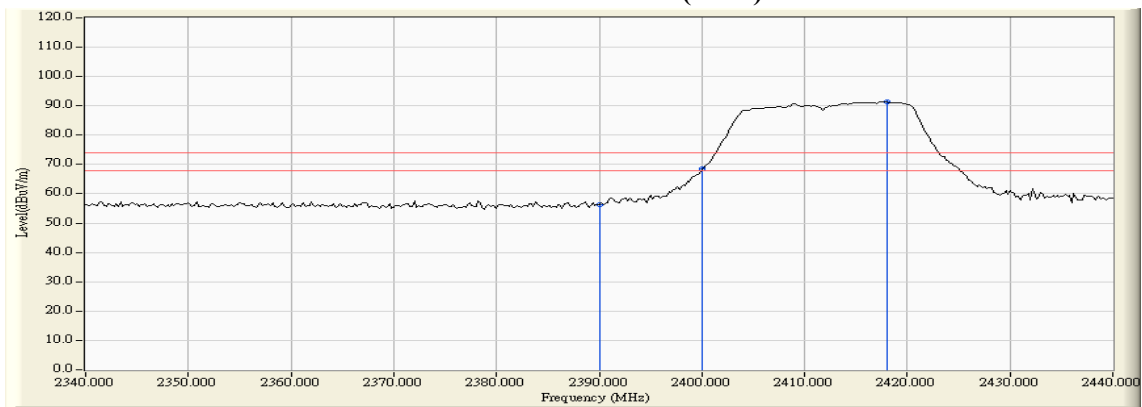
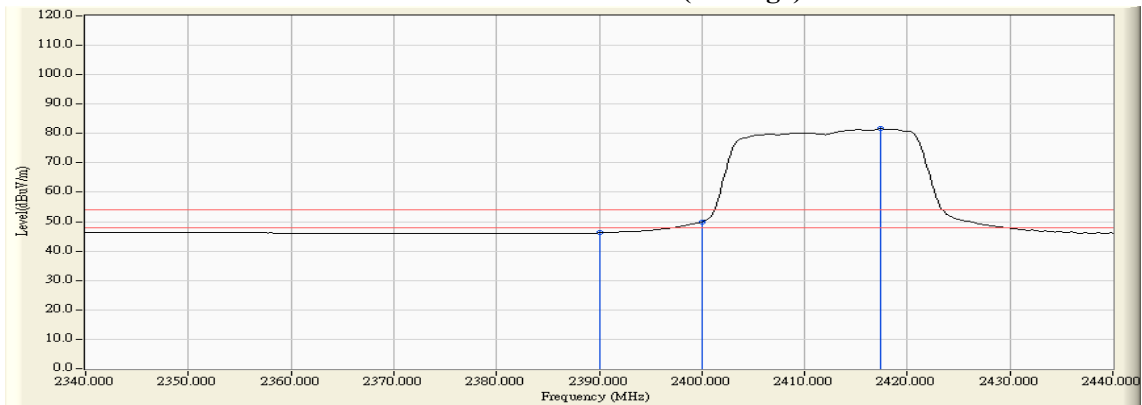


Figure Channel 01: VERTICAL (Average)



- 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 : VISUAL PRESENTER
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2462MHz)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
11 (Peak)	2458.900	33.885	69.539	103.424	--	--	--
11 (Peak)	2483.500	33.951	33.689	67.639	74.00	54.00	Pass
11 (Average)	2467.500	33.906	58.806	92.713	--	--	--
11 (Average)	2483.500	33.951	17.512	51.462	74.00	54.00	Pass

Figure Channel 11: Horizontal (Peak)

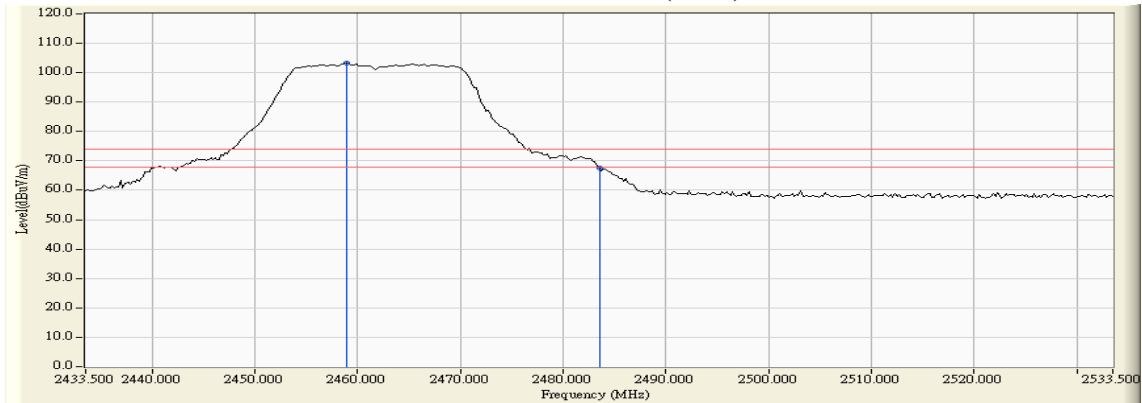
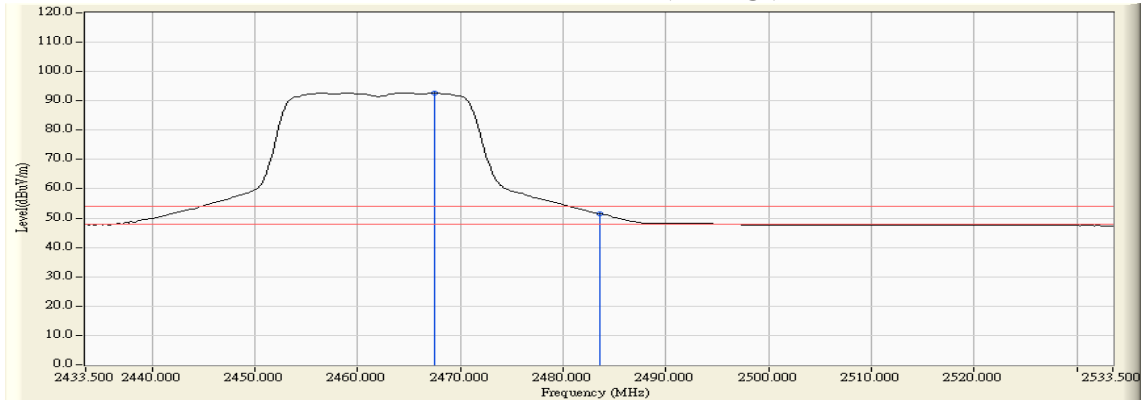


Figure Channel 11: Horizontal (Average)



- 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 : VISUAL PRESENTER
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2462MHz)

RF Radiated Measurement (VERTICAL):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
11 (Peak)	2458.900	32.466	57.765	90.231	--	--	--
11 (Peak)	2483.500	32.586	24.614	57.199	74.00	54.00	Pass
11 (Average)	2456.500	32.454	47.558	80.012	--	--	--
11 (Average)	2483.500	32.586	13.740	46.325	74.00	54.00	Pass

Figure Channel 11: VERTICAL (Peak)

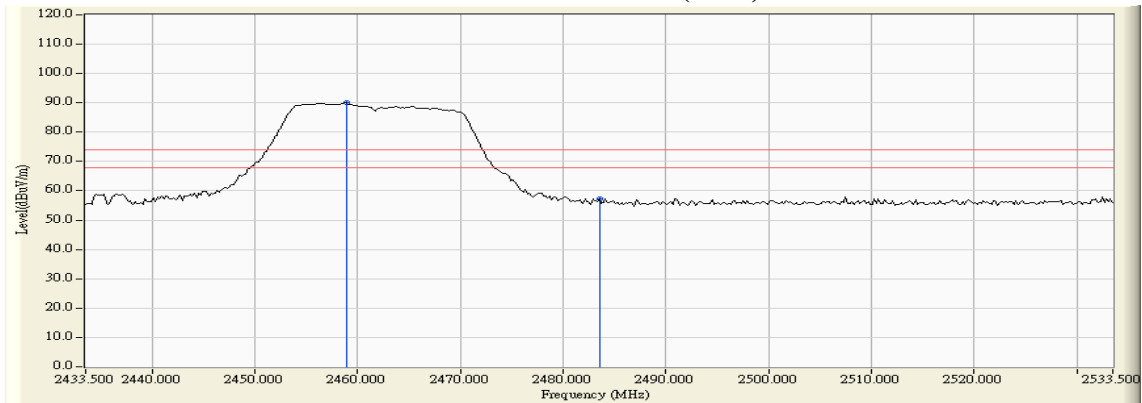
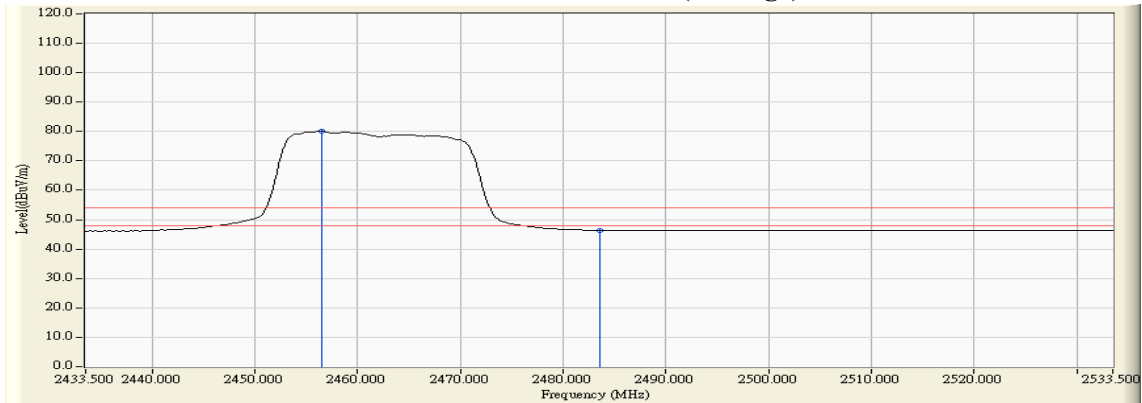


Figure Channel 11: VERTICAL (Average)



- 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 : VISUAL PRESENTER
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2422MHz)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
03 (Peak)	2390.000	33.739	34.653	68.392	74.00	54.00	Pass
03 (Peak)	2400.000	33.752	46.739	80.490	--	--	--
03 (Peak)	2432.400	33.820	69.349	103.169	--	--	--
03 (Average)	2390.000	33.739	19.256	52.995	74.00	54.00	Pass
03 (Average)	2400.000	33.752	23.563	57.314	--	--	--
03 (Average)	2433.600	33.823	56.696	90.519	--	--	--

Figure Channel 03: Horizontal (Peak)

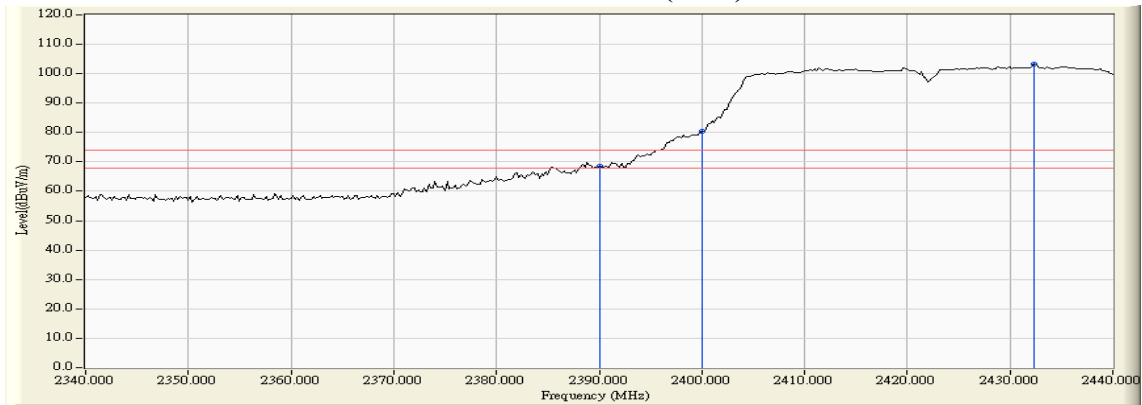
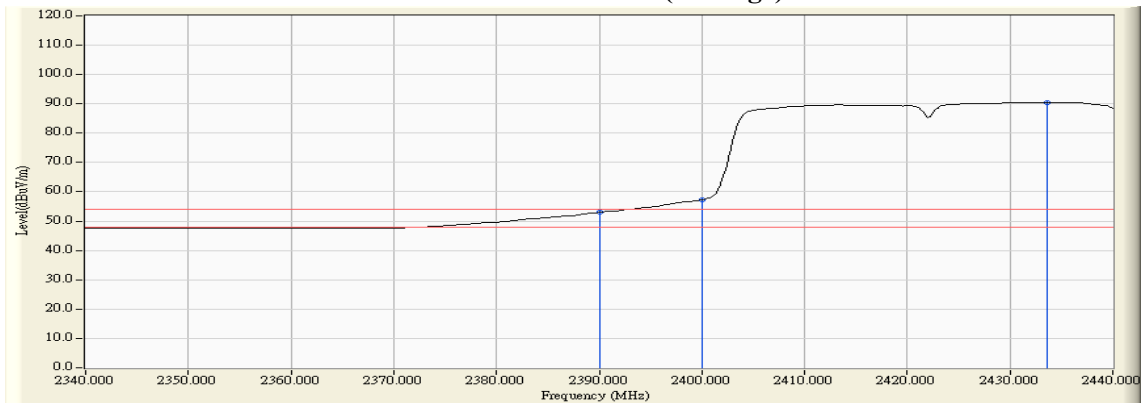


Figure Channel 03: Horizontal (Average)



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

Product : VISUAL PRESENTER
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2422MHz)

RF Radiated Measurement (VERTICAL):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
03 (Peak)	2390.000	32.267	25.106	57.373	74.00	54.00	Pass
03 (Peak)	2400.000	32.241	33.556	65.797	--	--	--
03 (Peak)	2432.400	32.341	56.946	89.287	--	--	--
03 (Average)	2390.000	32.267	14.239	46.506	74.00	54.00	Pass
03 (Average)	2400.000	32.241	16.075	48.316	--	--	--
03 (Average)	2433.400	32.346	46.293	78.638	--	--	--

Figure Channel 03: VERTICAL (Peak)

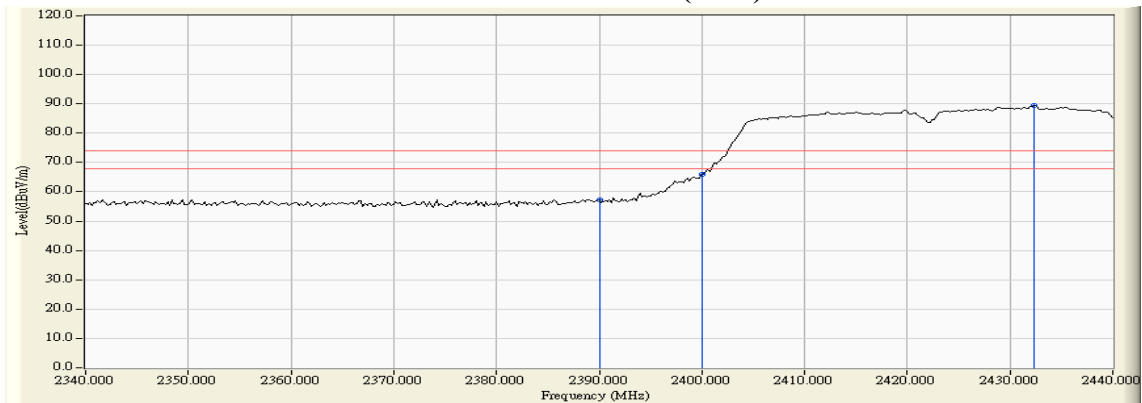
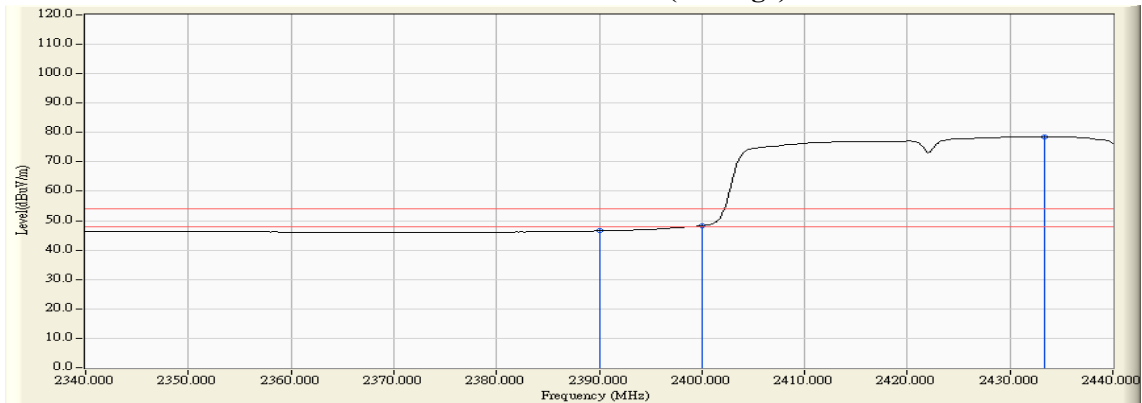


Figure Channel 03: VERTICAL (Average)



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

Product : VISUAL PRESENTER
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2452MHz)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
09 (Peak)	2458.300	33.883	70.195	104.078	--	--	--
09 (Peak)	2483.500	33.951	36.994	70.944	74.00	54.00	Pass
09 (Peak)	2488.500	33.964	37.816	71.779	74.00	54.00	Pass
09 (Average)	2463.500	33.896	54.758	88.654	--	--	--
09 (Average)	2483.500	33.951	18.896	52.846	74.00	54.00	Pass

Figure Channel 09: Horizontal (Peak)

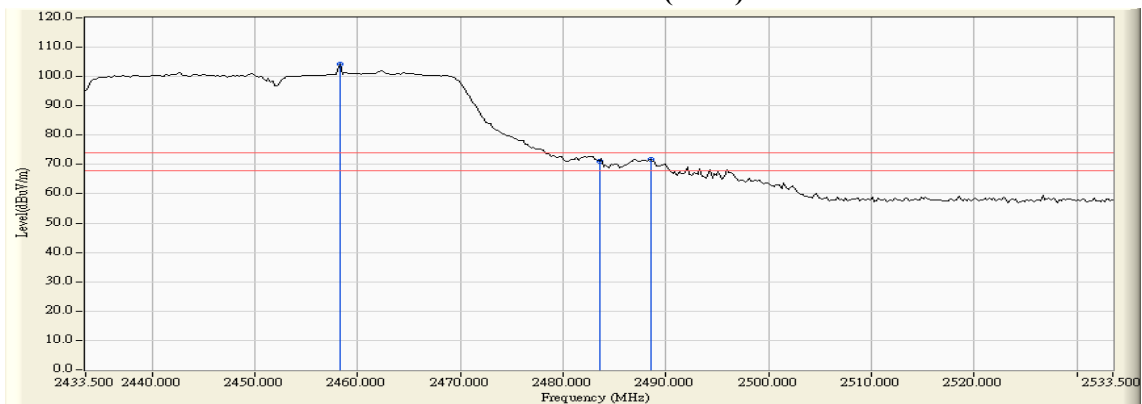
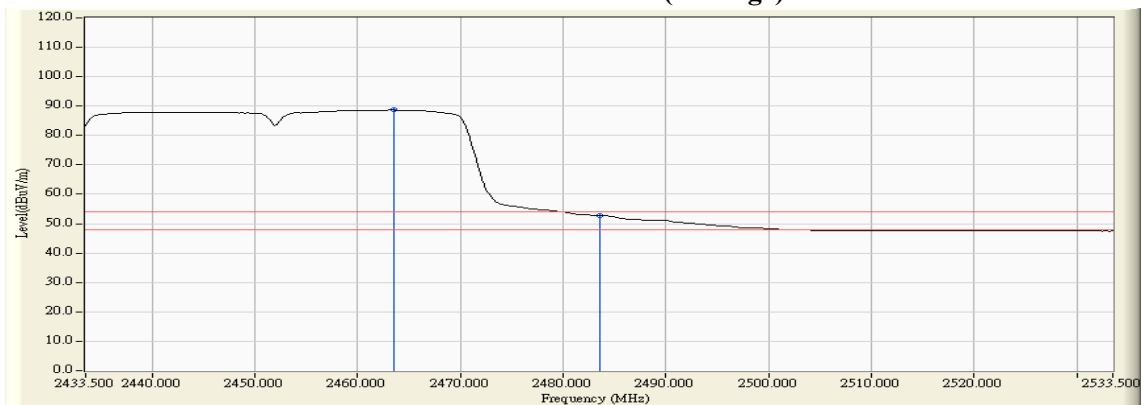


Figure Channel 09: Horizontal (Average)



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

Product : VISUAL PRESENTER
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2452MHz)

RF Radiated Measurement (VERTICAL):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
09 (Peak)	2440.700	32.379	54.688	87.067	--	--	--
09 (Peak)	2483.500	32.586	24.250	56.835	74.00	54.00	Pass
09 (Average)	2443.100	32.389	43.763	76.153	--	--	--
09 (Average)	2483.500	32.586	13.830	46.415	74.00	54.00	Pass

Figure Channel 09: VERTICAL (Peak)

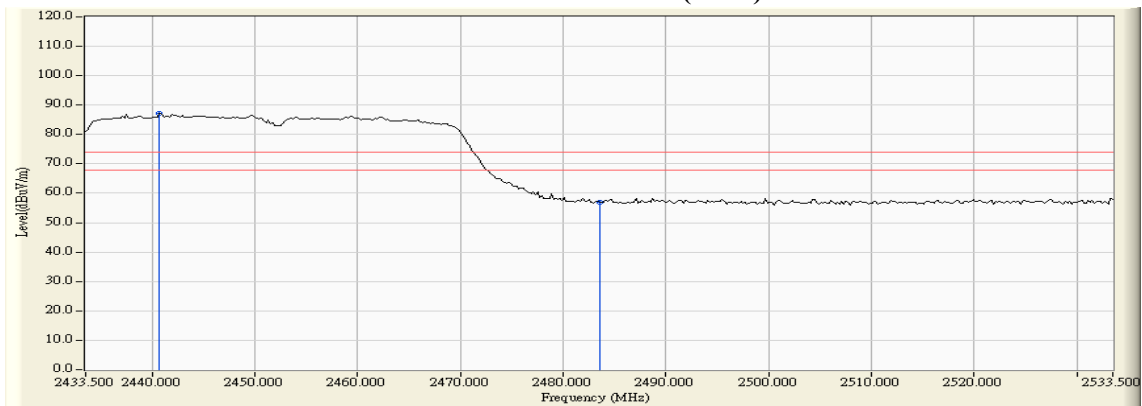
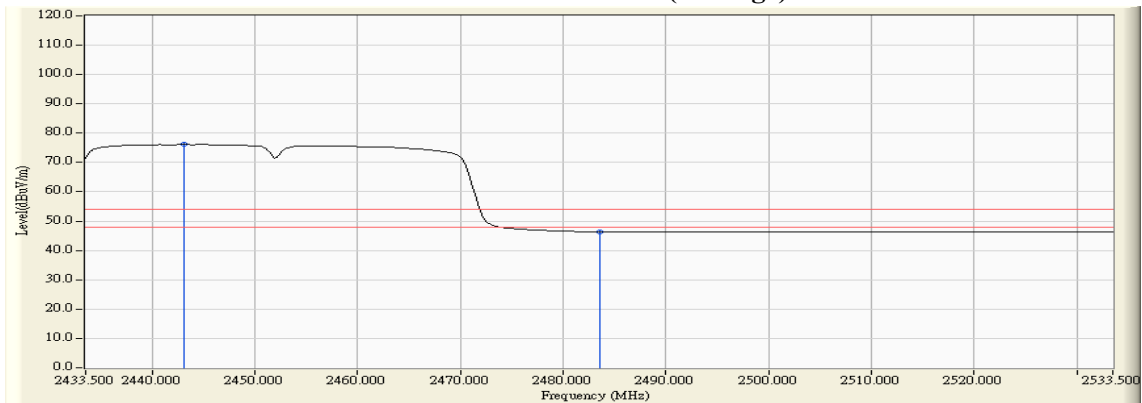


Figure Channel 09: VERTICAL (Average)



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

7. Occupied Bandwidth

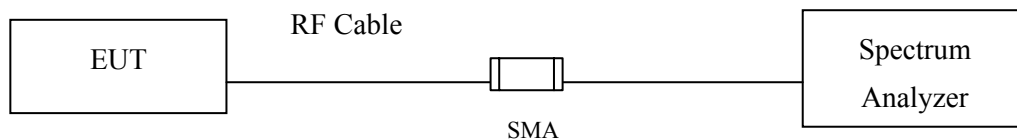
7.1. Test Equipment

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

Note:

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

7.2. Test Setup



7.3. Limits

The minimum bandwidth shall be at least 500 kHz.

7.4. Test Procedure

The EUT was setup according to ANSI C63.4: 2014; tested according to DTS test procedure of Jan KDB558074 for compliance to FCC 47CFR 15.247 requirements.

7.5. Uncertainty

± 150Hz

7.6. Test Result of Occupied Bandwidth

Product : VISUAL PRESENTER
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	2412	10150	>500	Pass
06	2437	10150	>500	Pass
11	2462	9700	>500	Pass

Figure Channel 01:

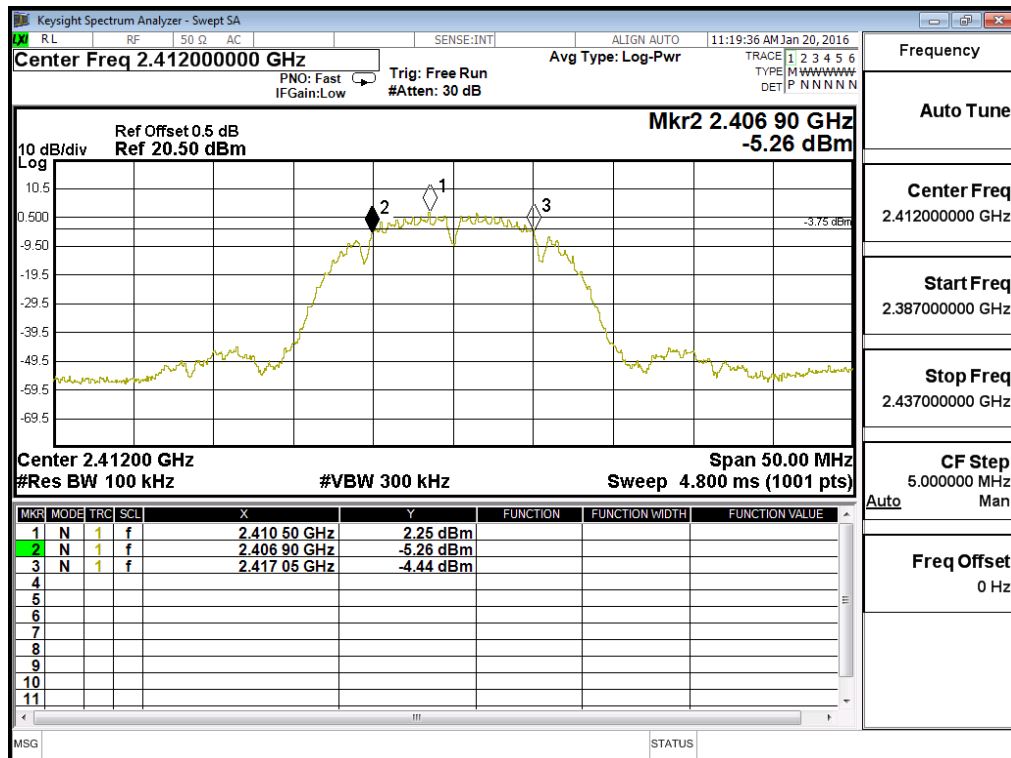


Figure Channel 06:

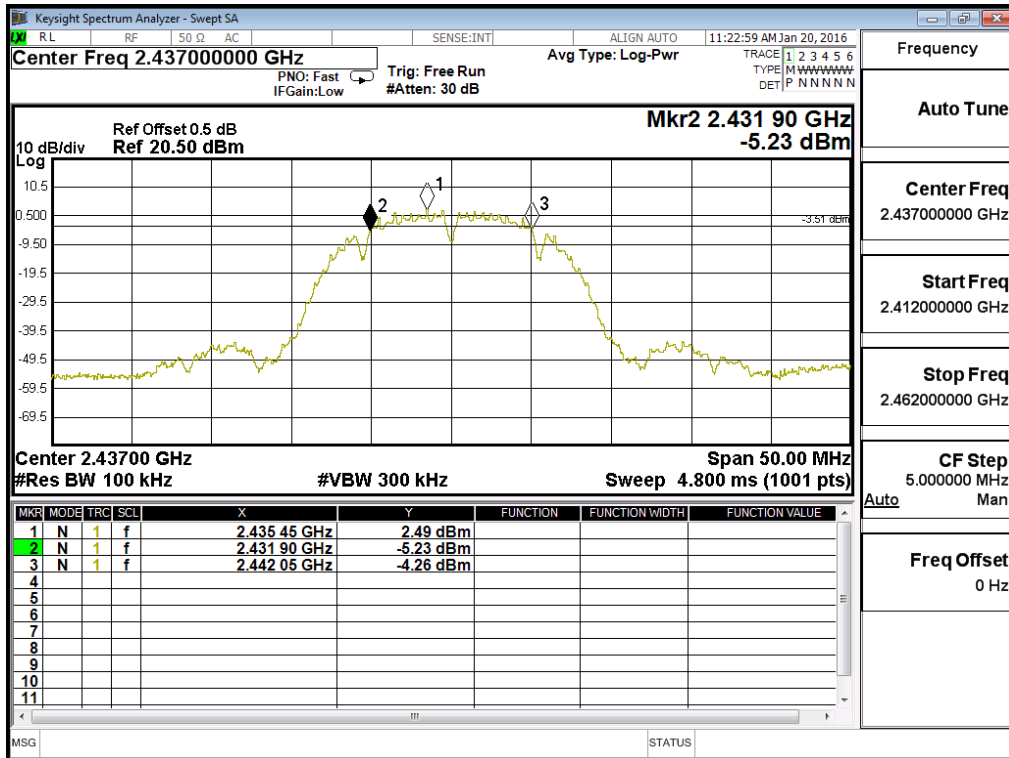
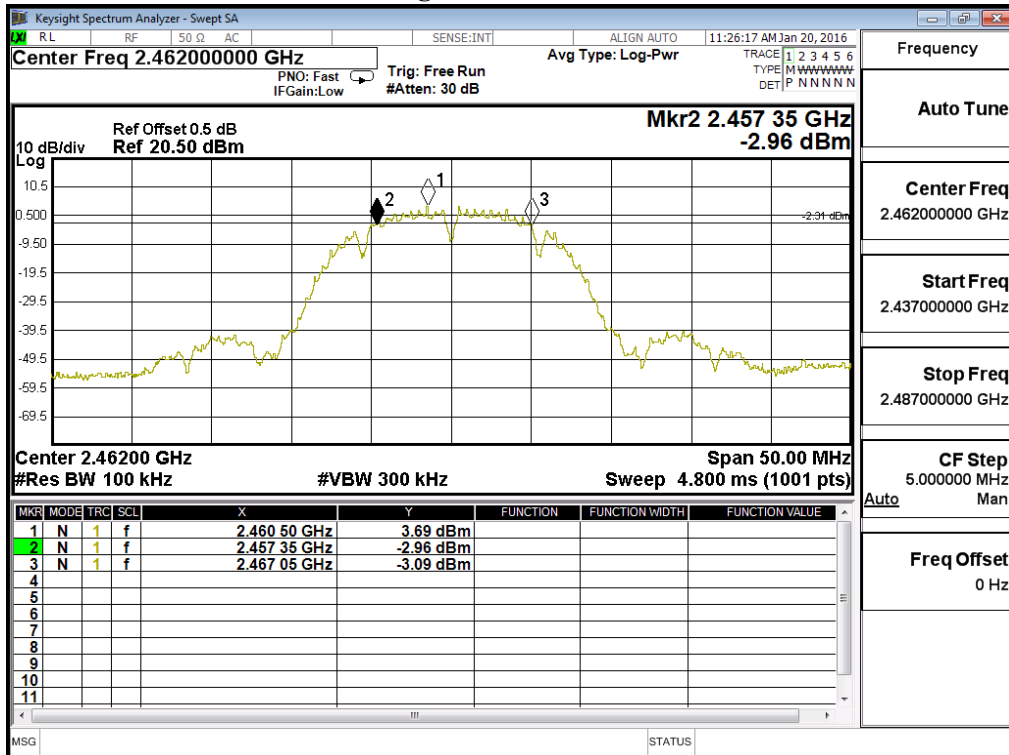


Figure Channel 11:



Product : VISUAL PRESENTER
 Test Item : Occupied 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
01	2412	16400	>500	Pass
06	2437	16400	>500	Pass
11	2462	16400	>500	Pass

Figure Channel 01:

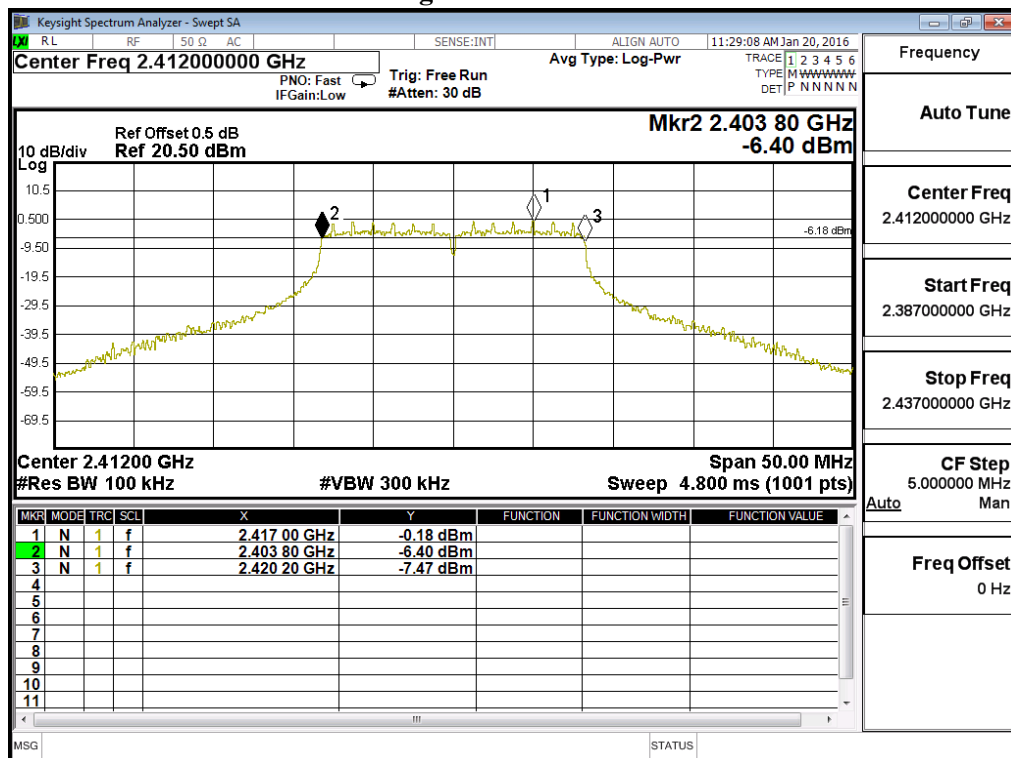


Figure Channel 06:

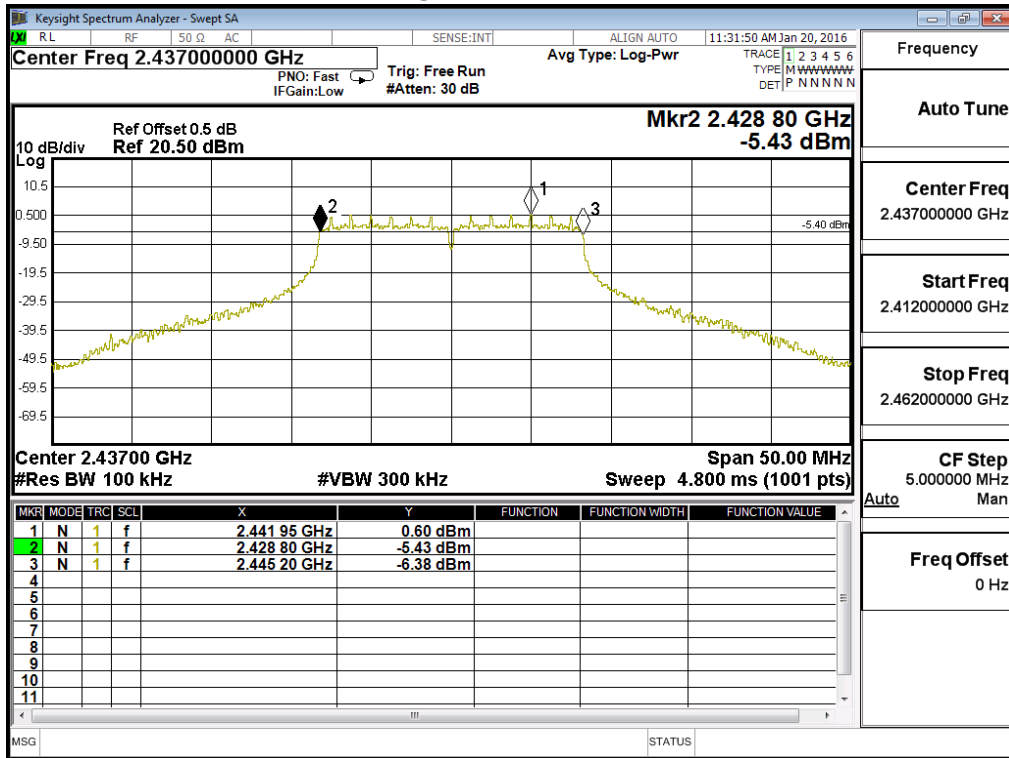
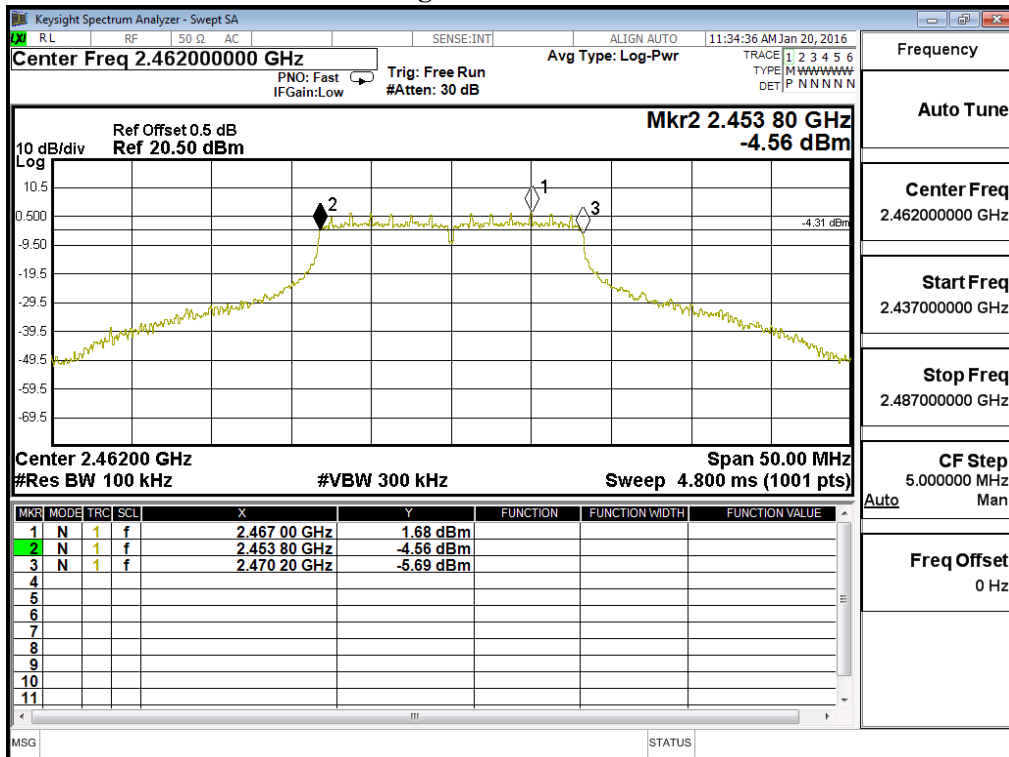


Figure Channel 11:



Product : VISUAL PRESENTER
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	2412	17200	>500	Pass
06	2437	17150	>500	Pass
11	2462	17350	>500	Pass

Figure Channel 01:

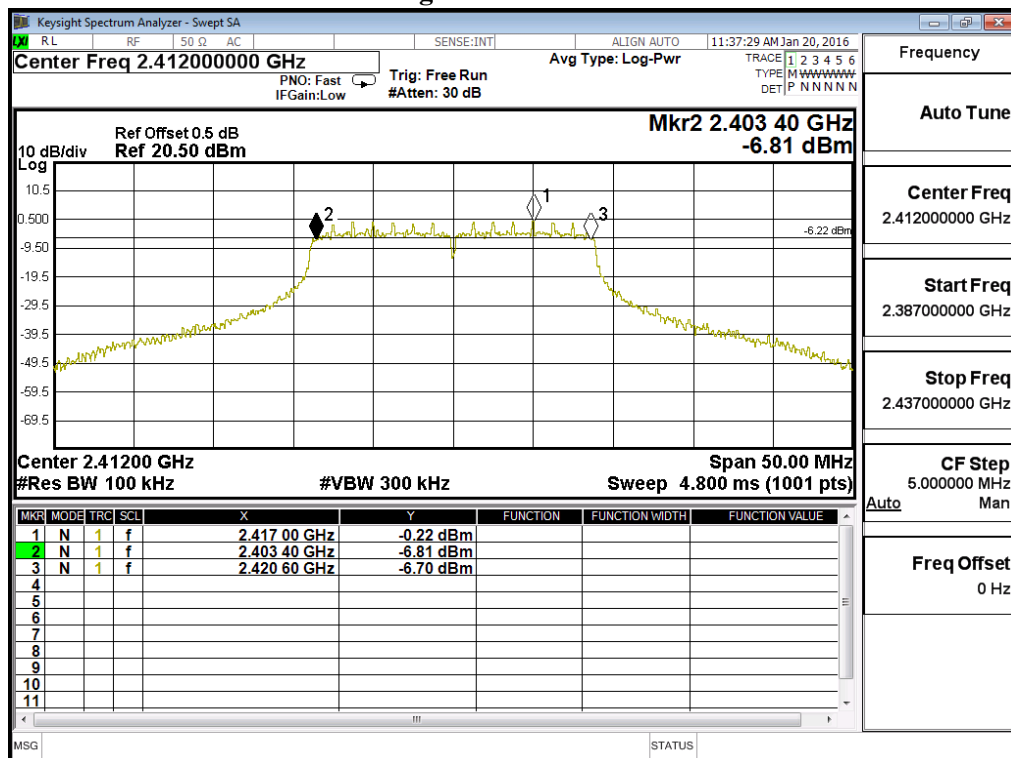


Figure Channel 06:

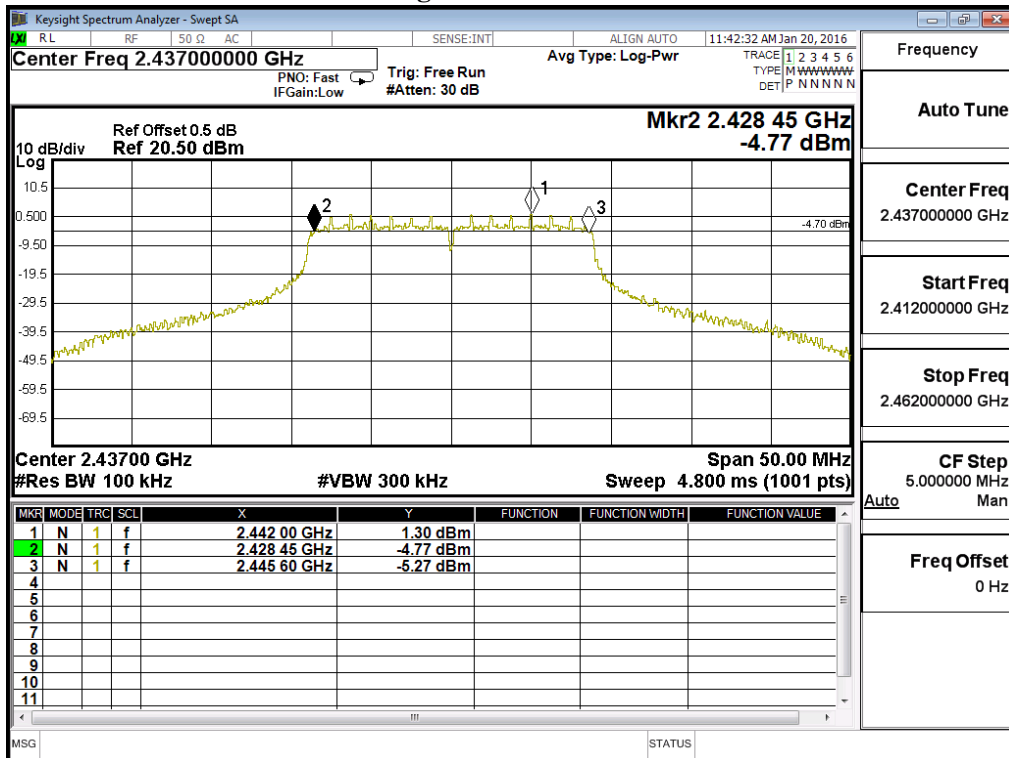
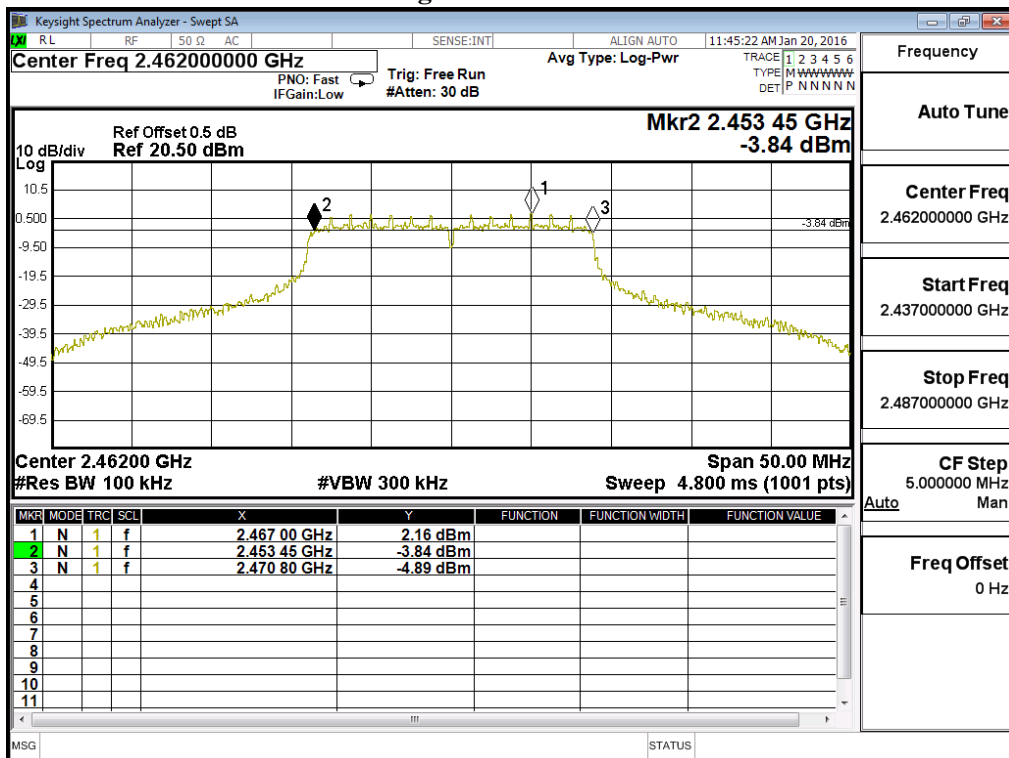


Figure Channel 11:



Product : VISUAL PRESENTER
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
03	2422	36100	>500	Pass
06	2437	36100	>500	Pass
09	2452	36200	>500	Pass

Figure Channel 03:

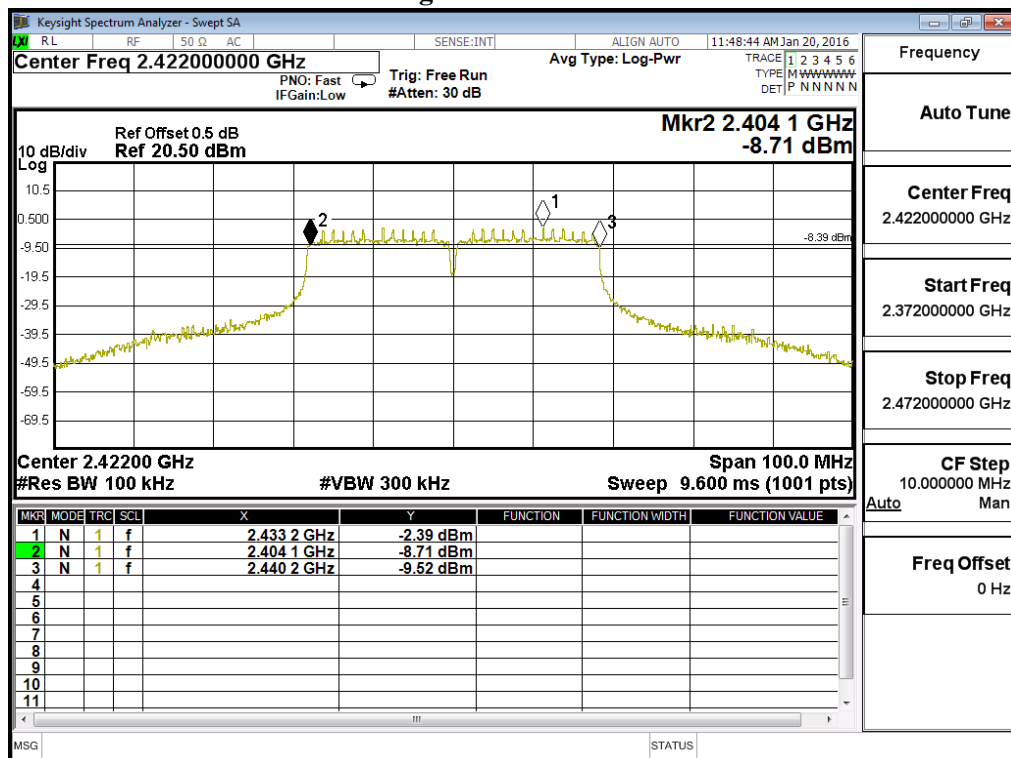


Figure Channel 06:

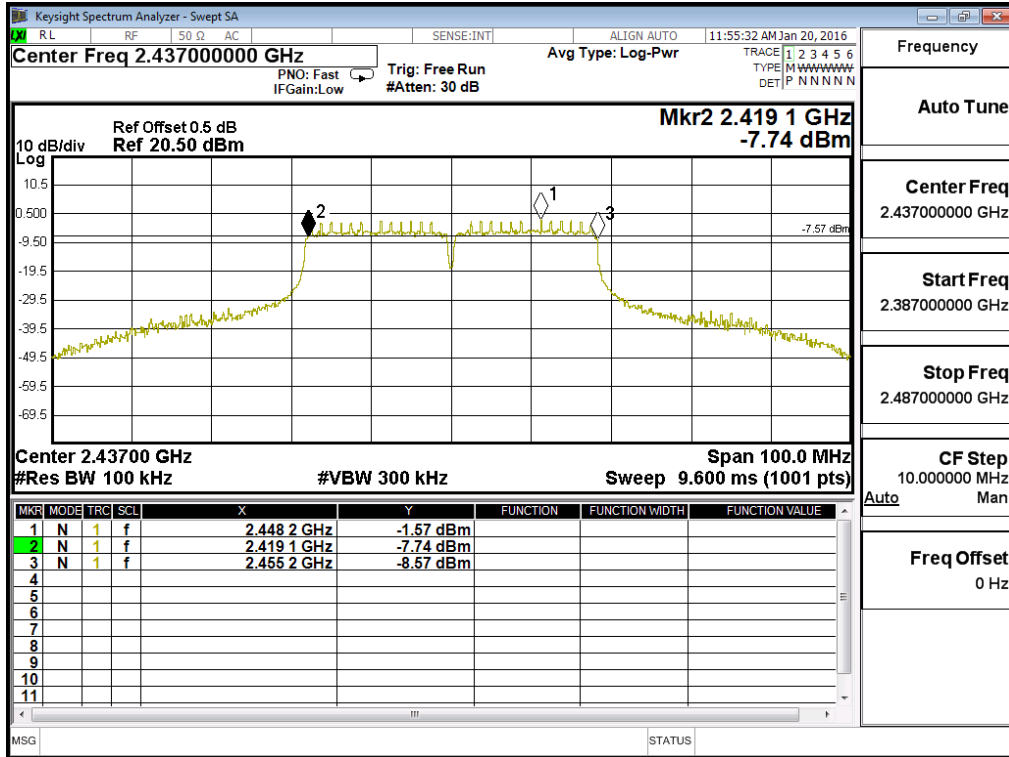
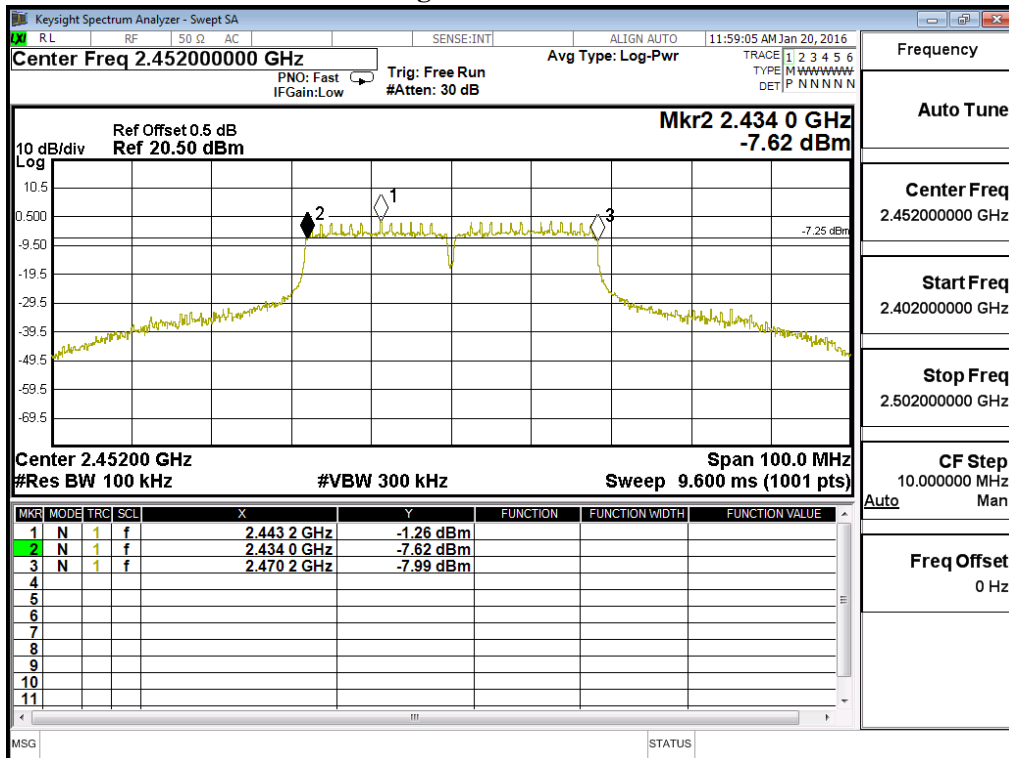


Figure Channel 09:



8. Power Density

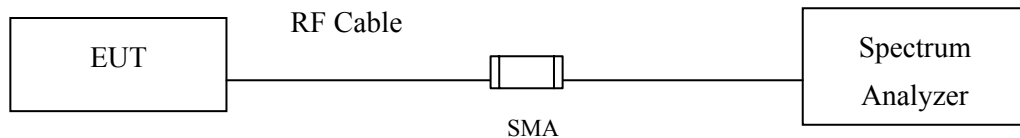
8.1. Test Equipment

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

Note:

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

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 : VISUAL PRESENTER
 Test Item : Power Density Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
01	2412	2.260	< 8dBm	Pass
06	2437	2.880	< 8dBm	Pass
11	2462	3.710	< 8dBm	Pass

Figure Channel 01:

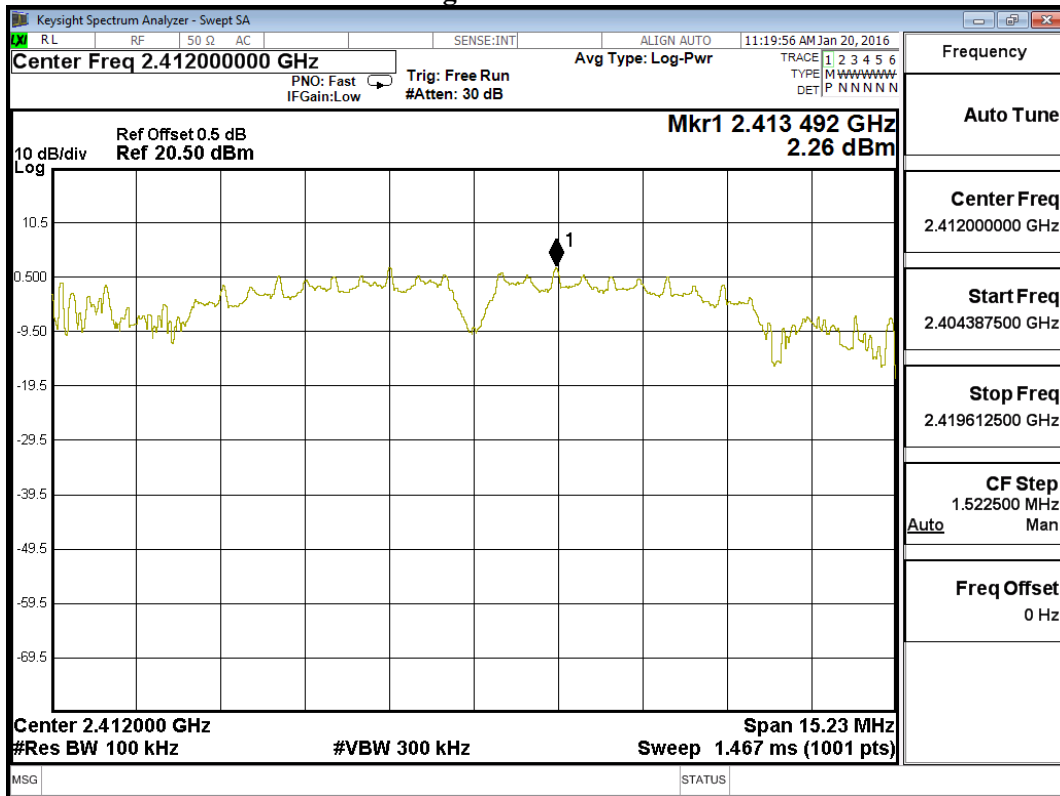


Figure Channel 06:

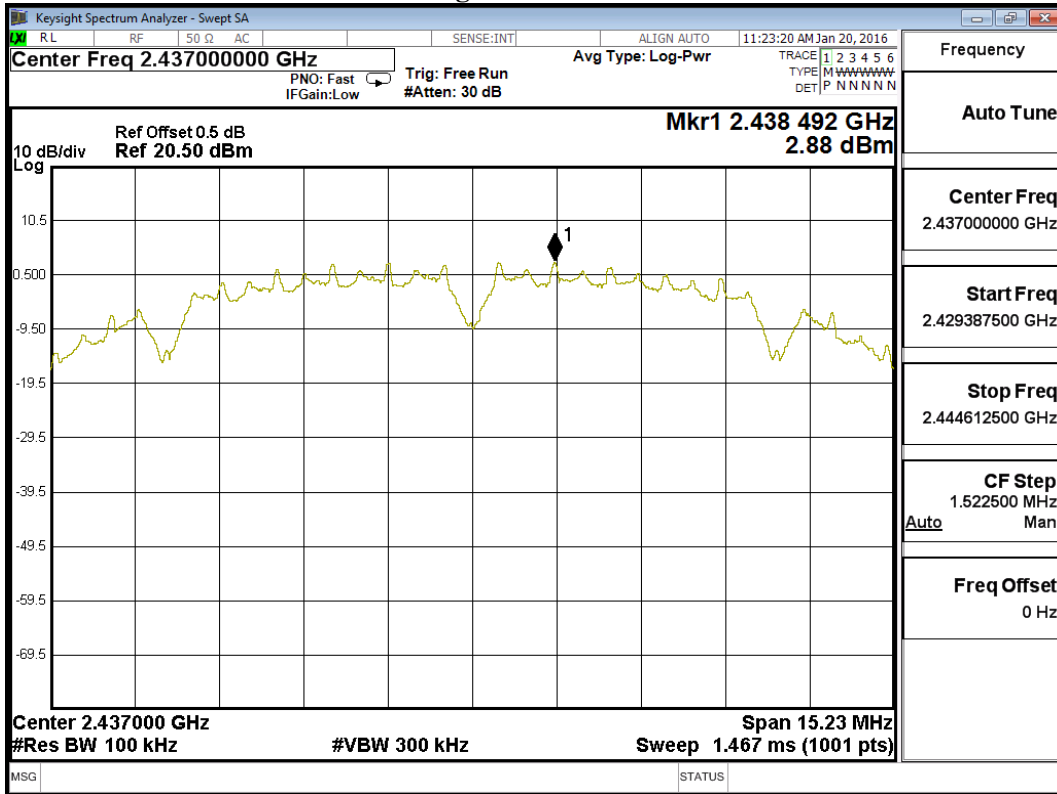
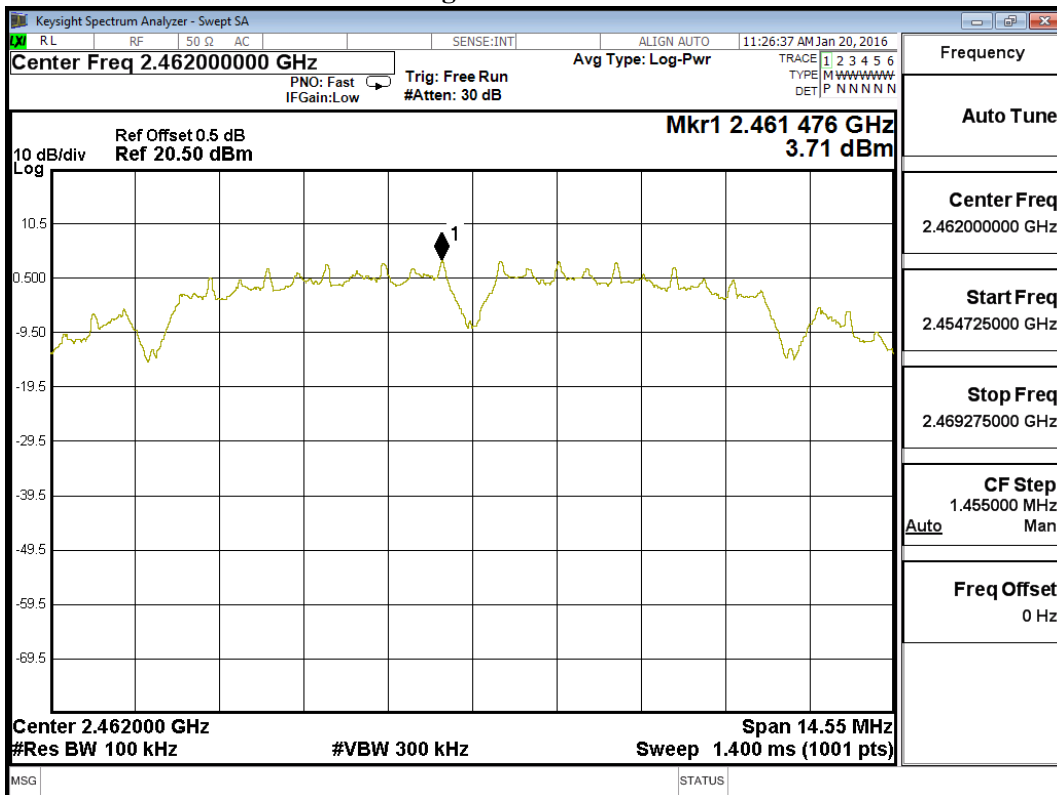


Figure Channel 11:



Product : VISUAL PRESENTER
 Test Item : Power Density Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
01	2412	-0.130	< 8dBm	Pass
06	2437	0.630	< 8dBm	Pass
11	2462	1.680	< 8dBm	Pass

Figure Channel 01:

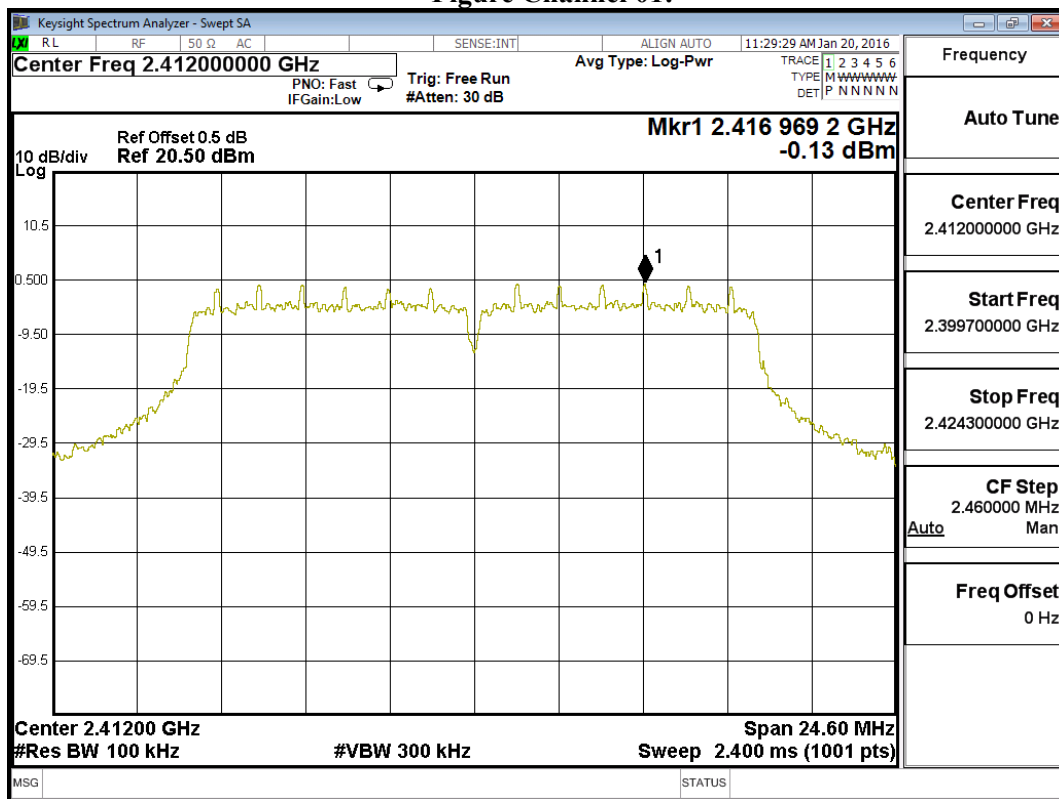


Figure Channel 06:

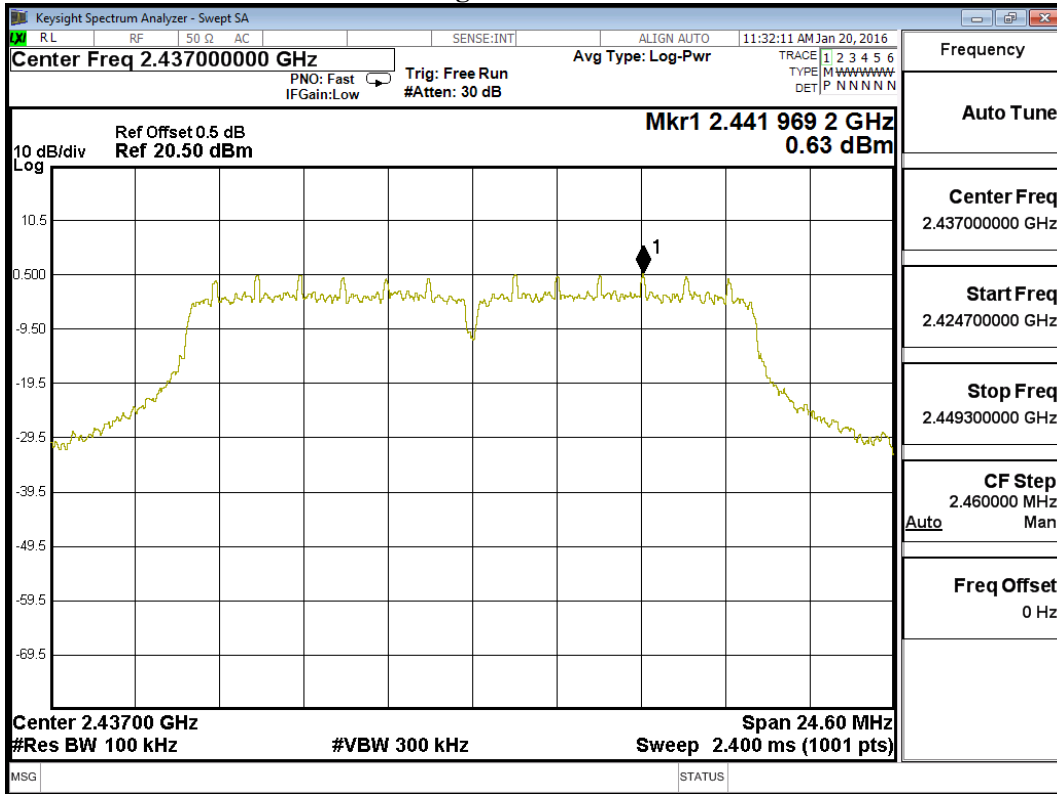
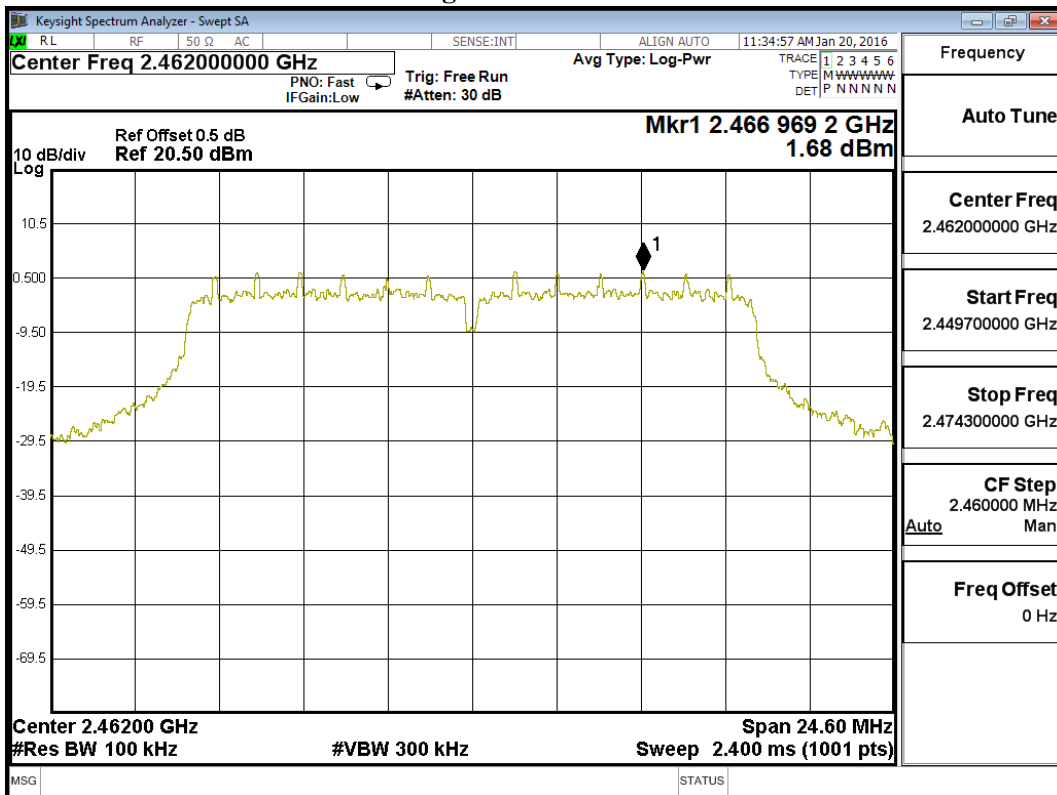


Figure Channel 11:



Product : VISUAL PRESENTER
 Test Item : Power Density Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
01	2412	-0.320	< 8dBm	Pass
06	2437	1.310	< 8dBm	Pass
11	2462	2.180	< 8dBm	Pass

Figure Channel 01:

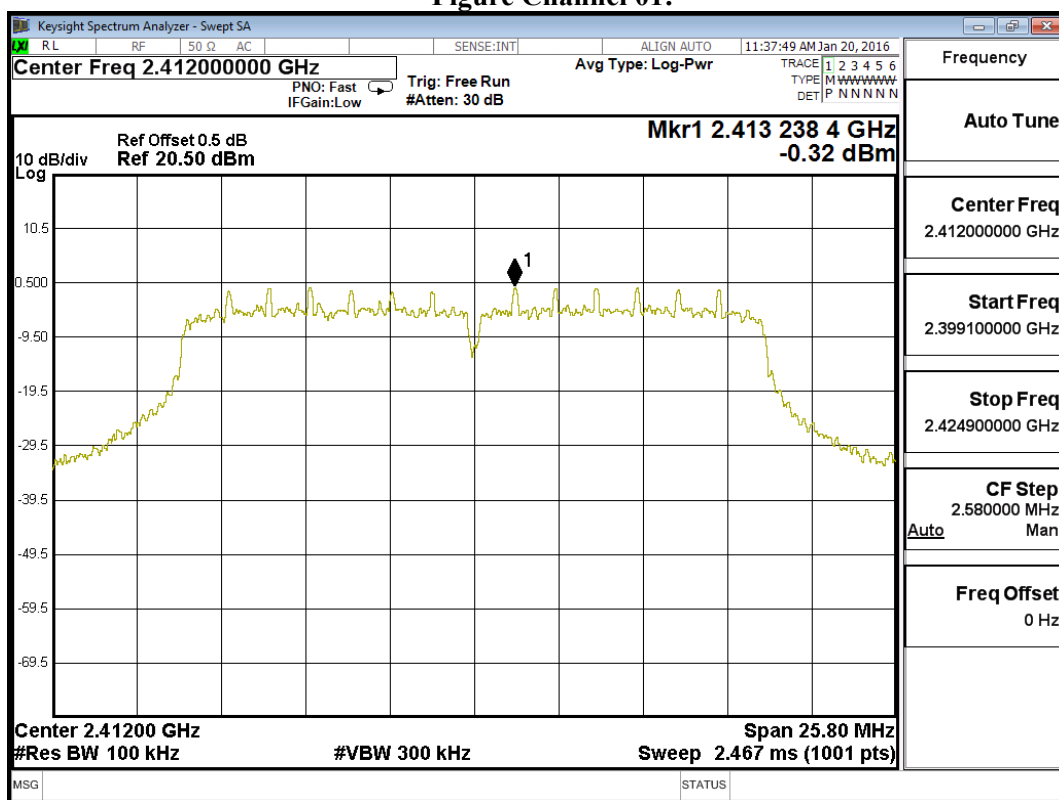


Figure Channel 06:

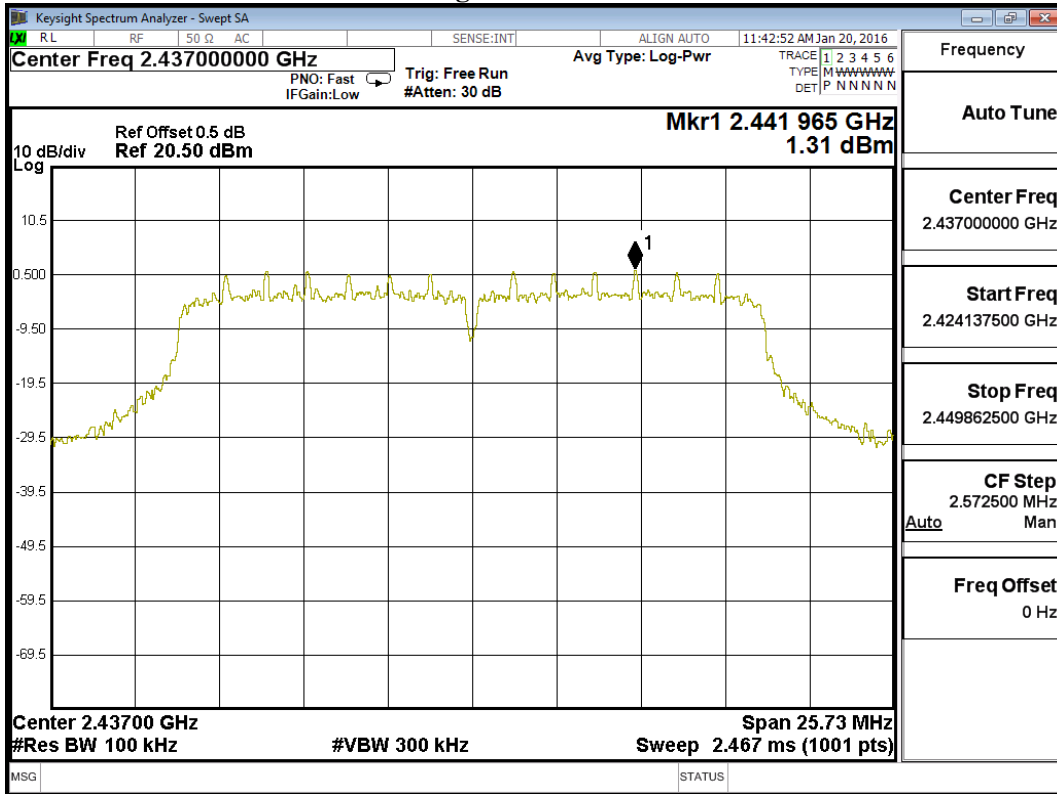
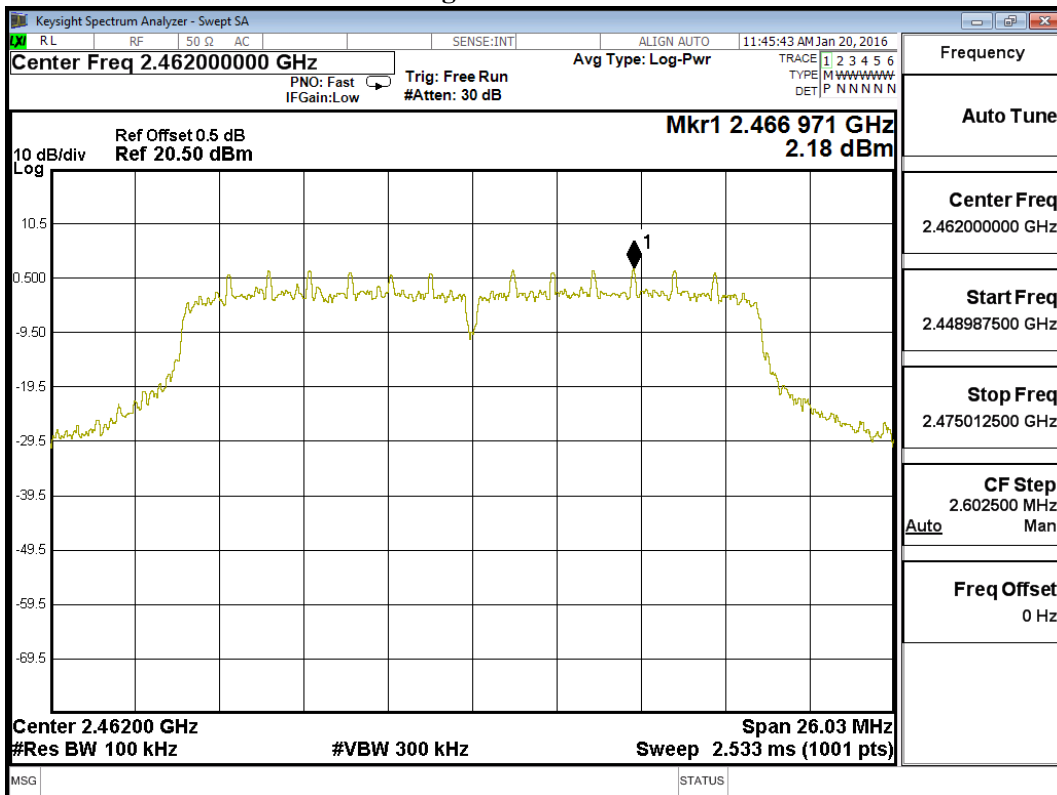


Figure Channel 11:



Product : VISUAL PRESENTER
 Test Item : Power Density Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
03	2422	-2.390	< 8dBm	Pass
06	2437	-1.560	< 8dBm	Pass
09	2452	-0.810	< 8dBm	Pass

Figure Channel 03:

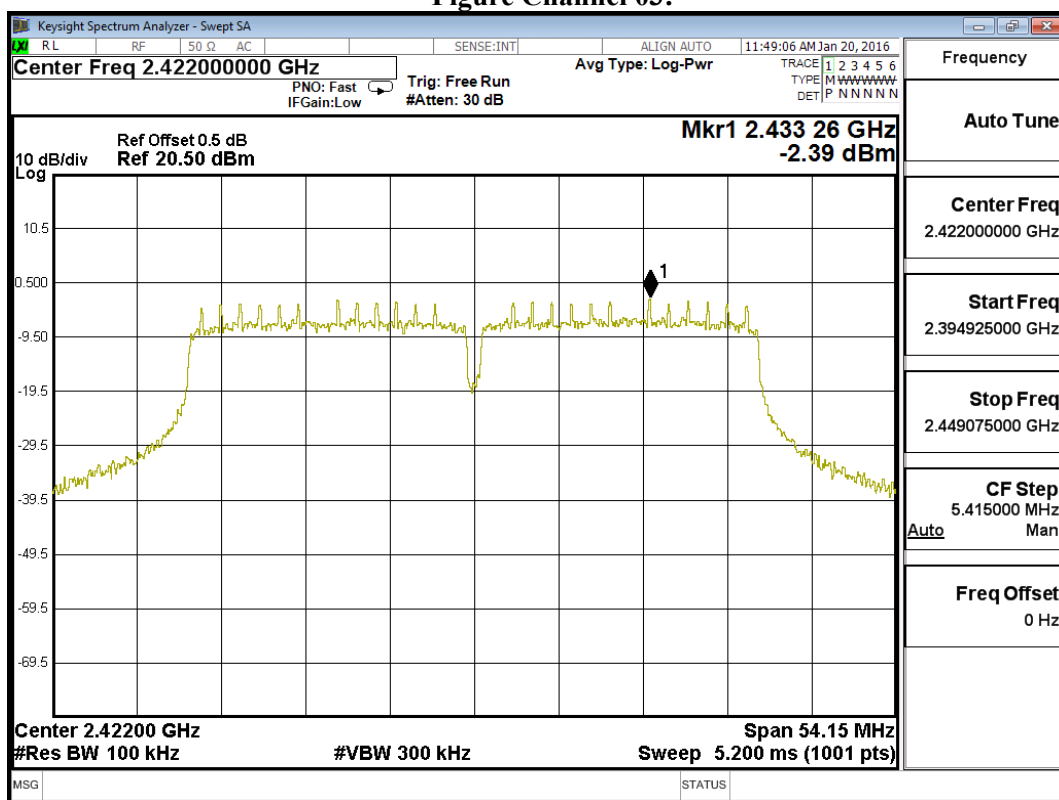


Figure Channel 06:

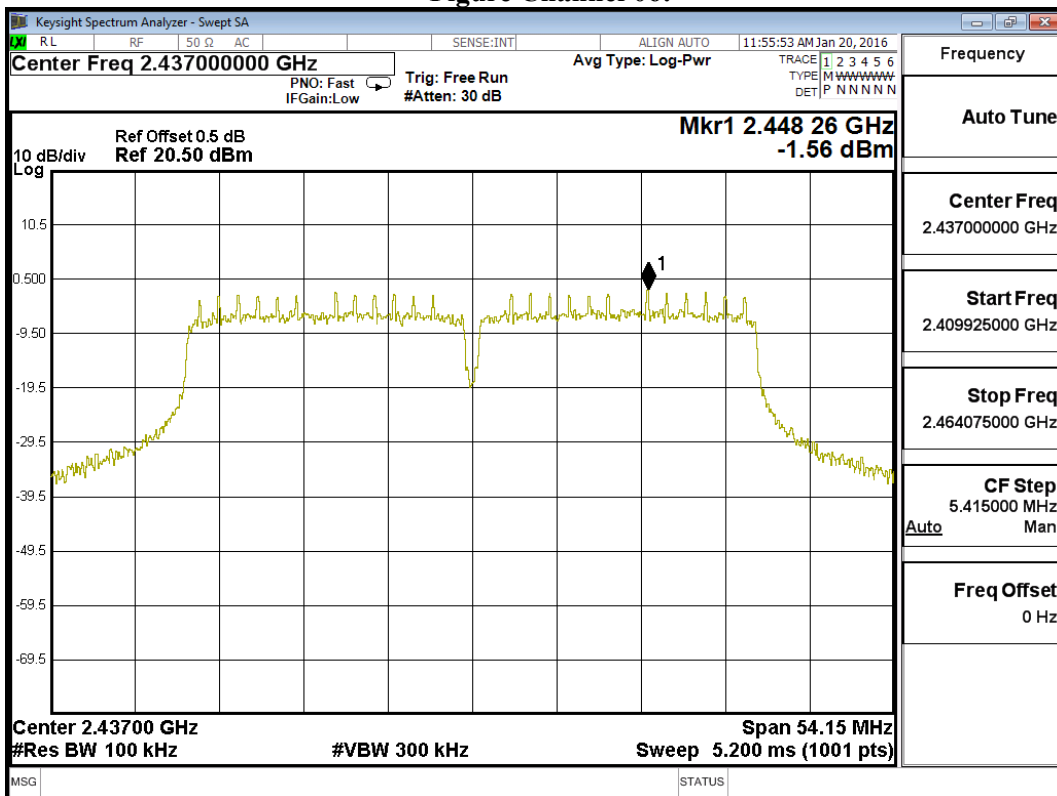
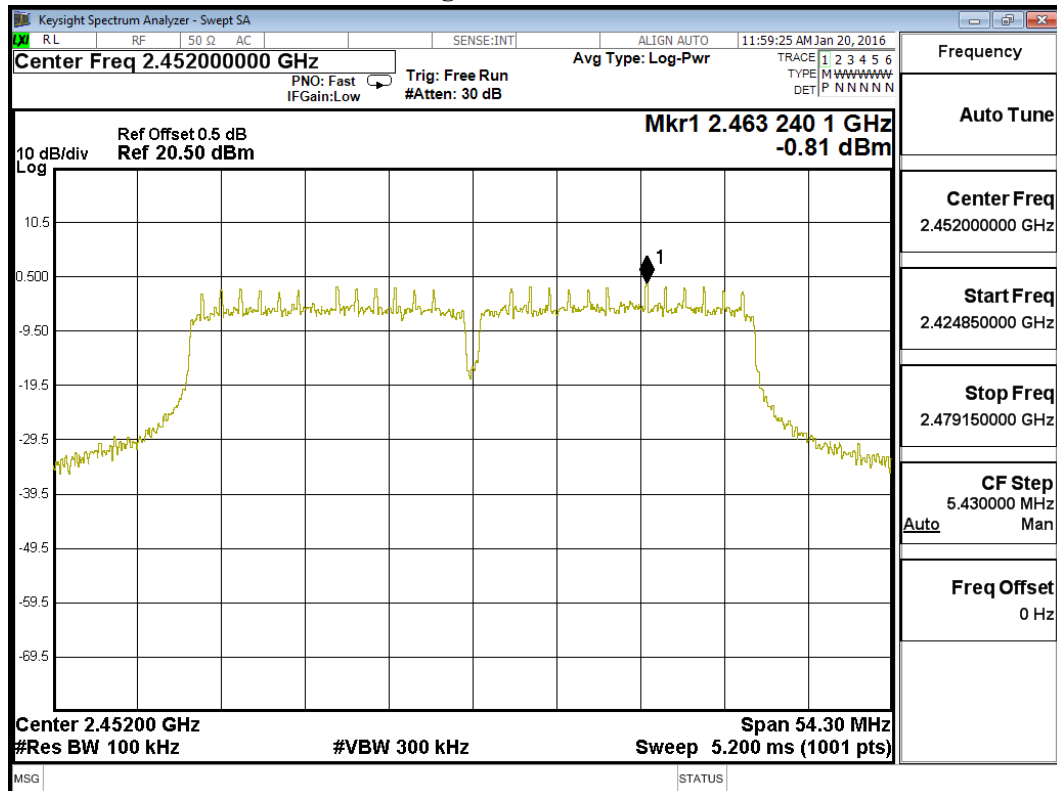


Figure Channel 09:



9. EMI Reduction Method During Compliance Testing

No modification was made during testing.