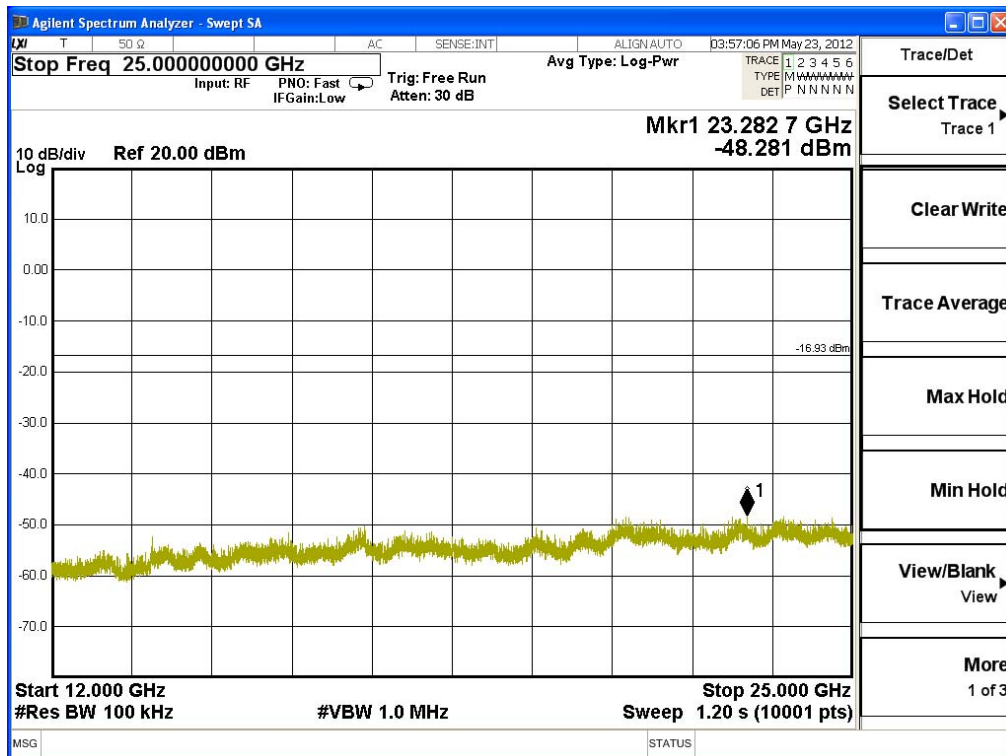
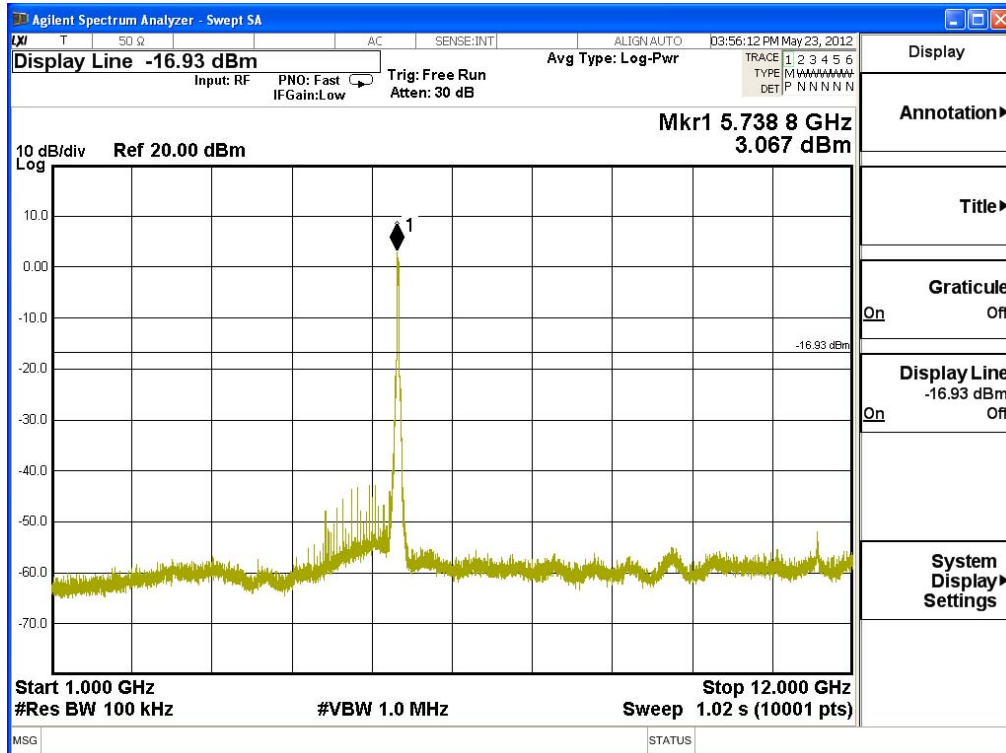
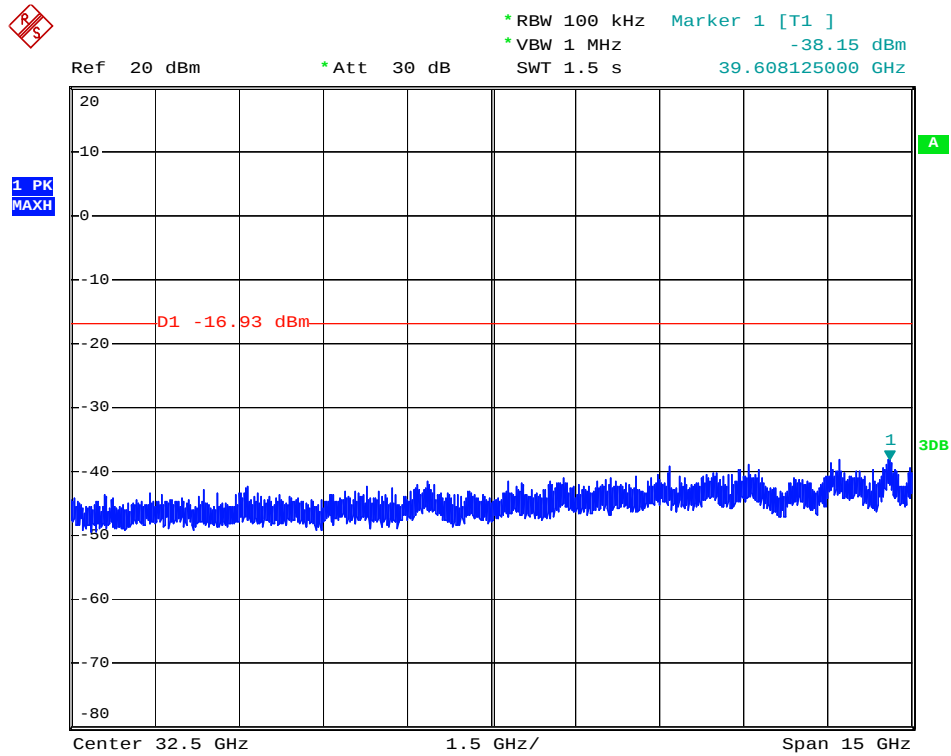
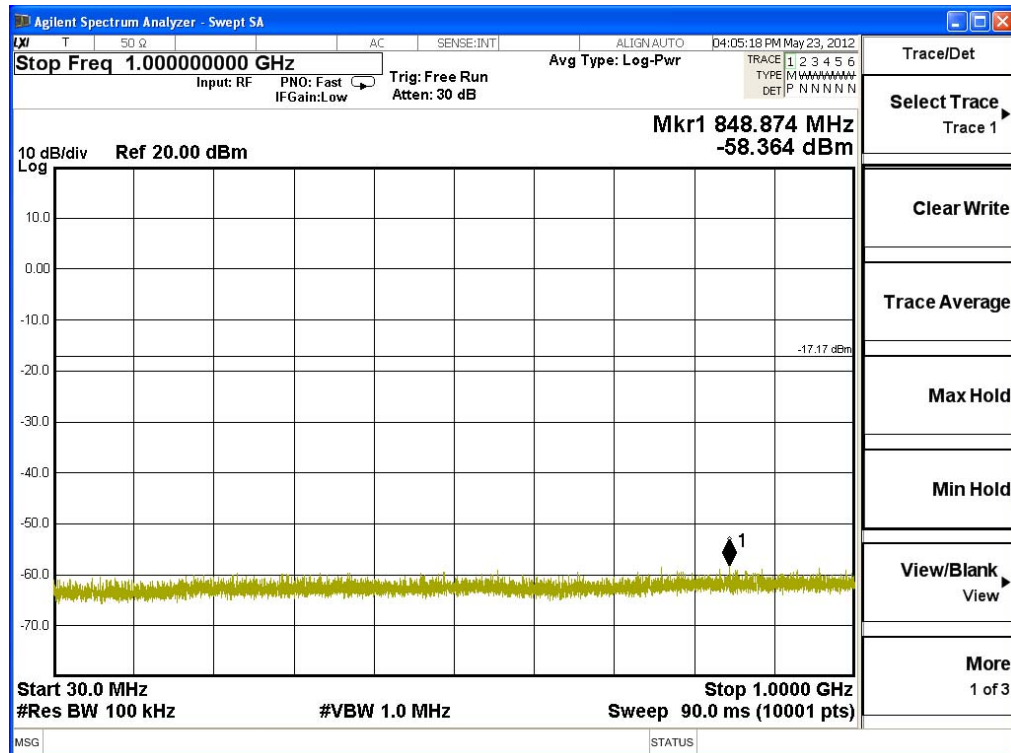


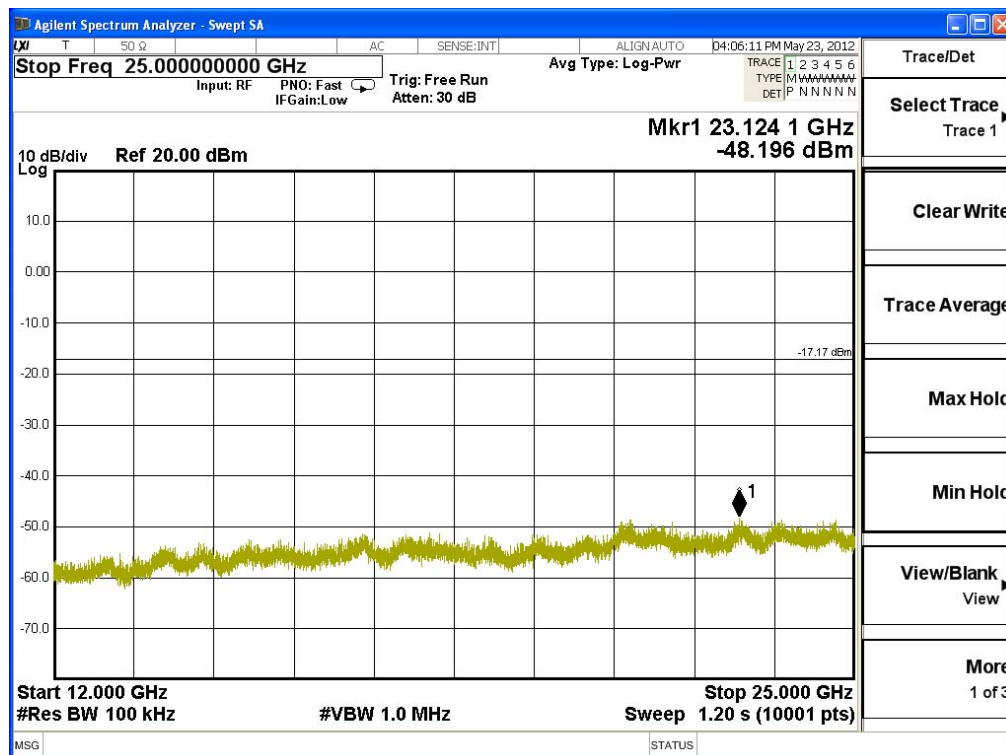
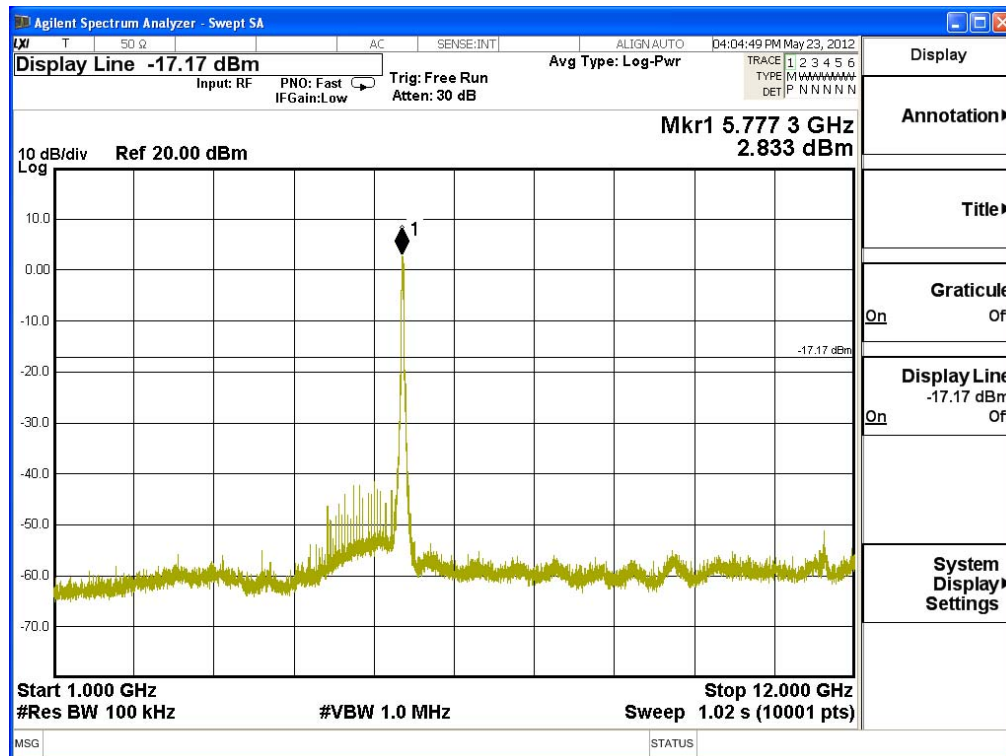


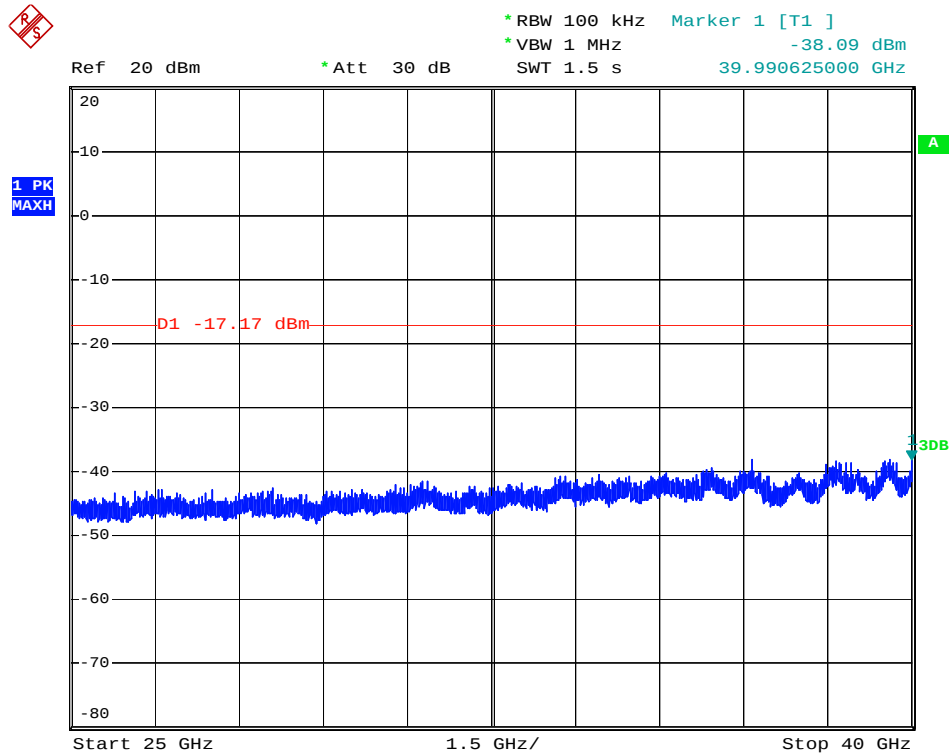


Date: 24.MAY.2012 10:42:10

Channel 159 (5795MHz) 30MHz -40GHz-Chain B

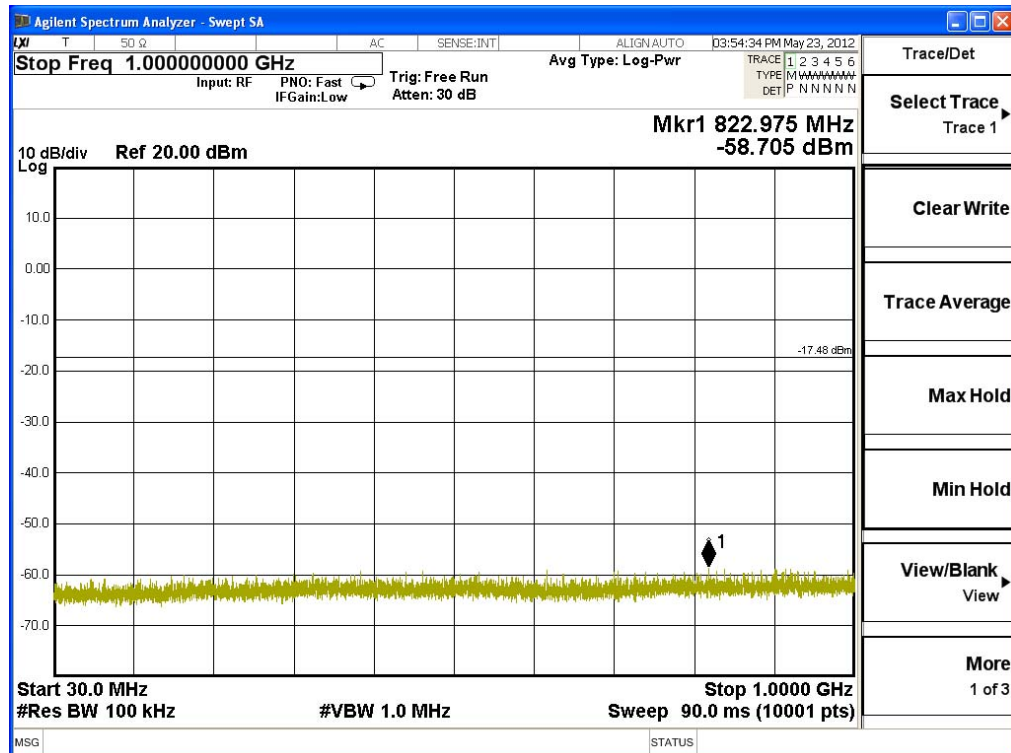


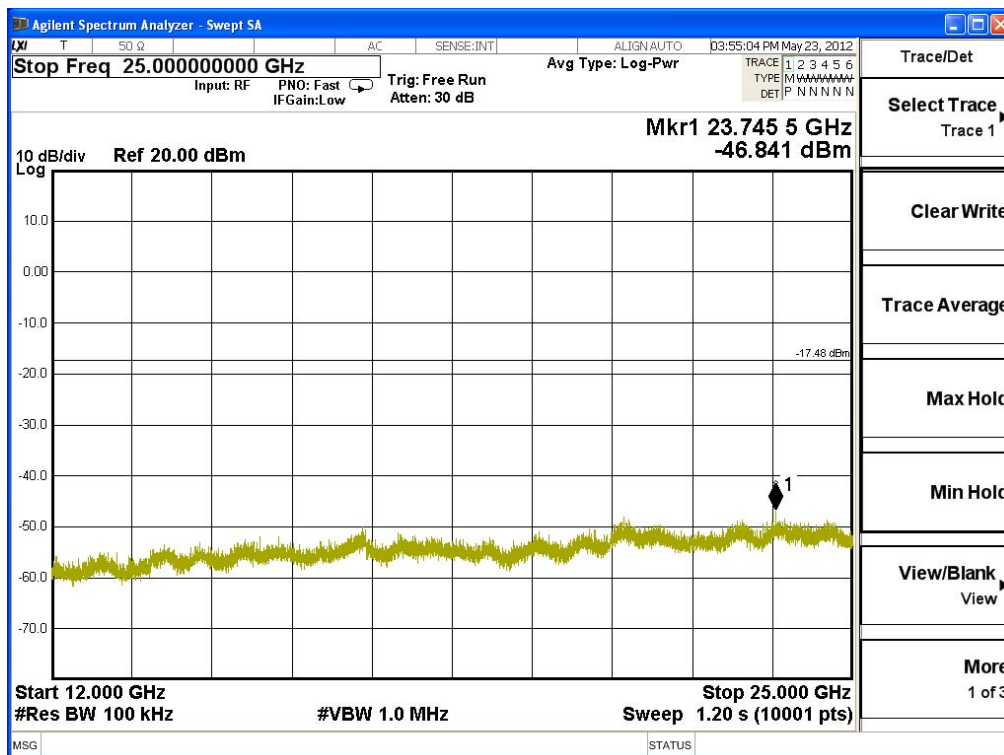
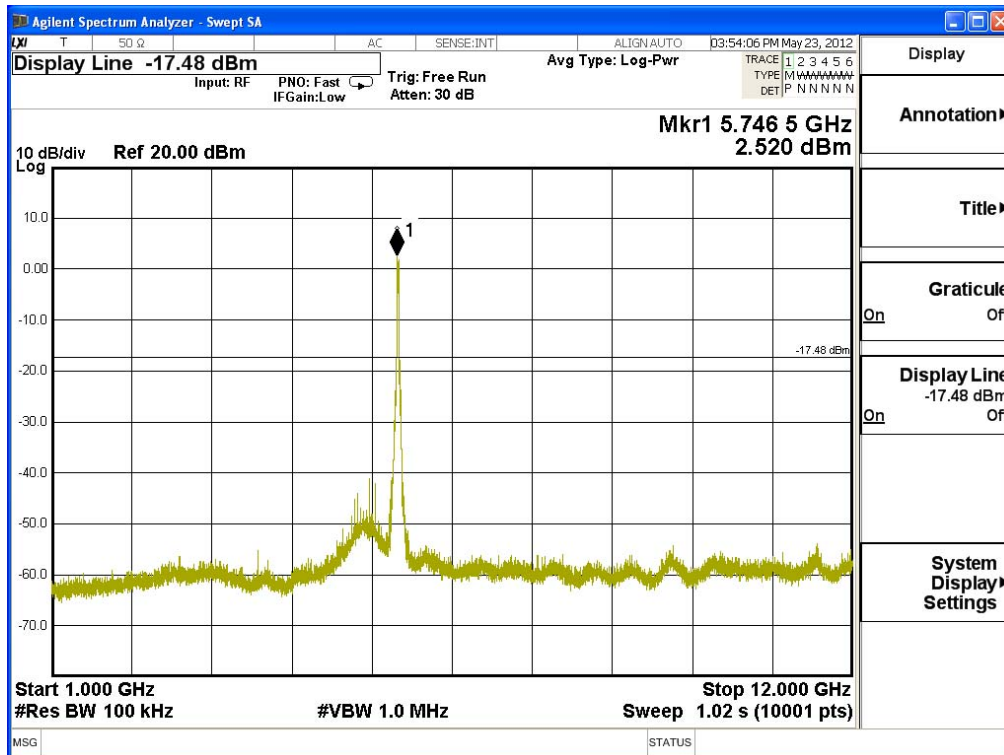


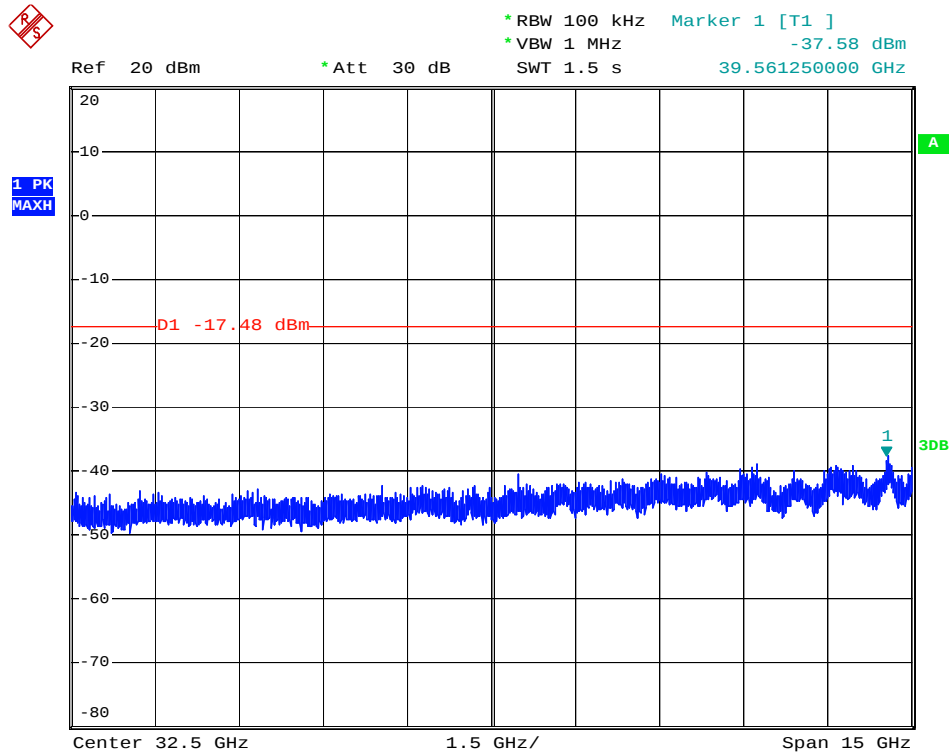


Date: 24.MAY.2012 10:44:24

Channel 151 (5755MHz) 30MHz -40GHz-Chain C

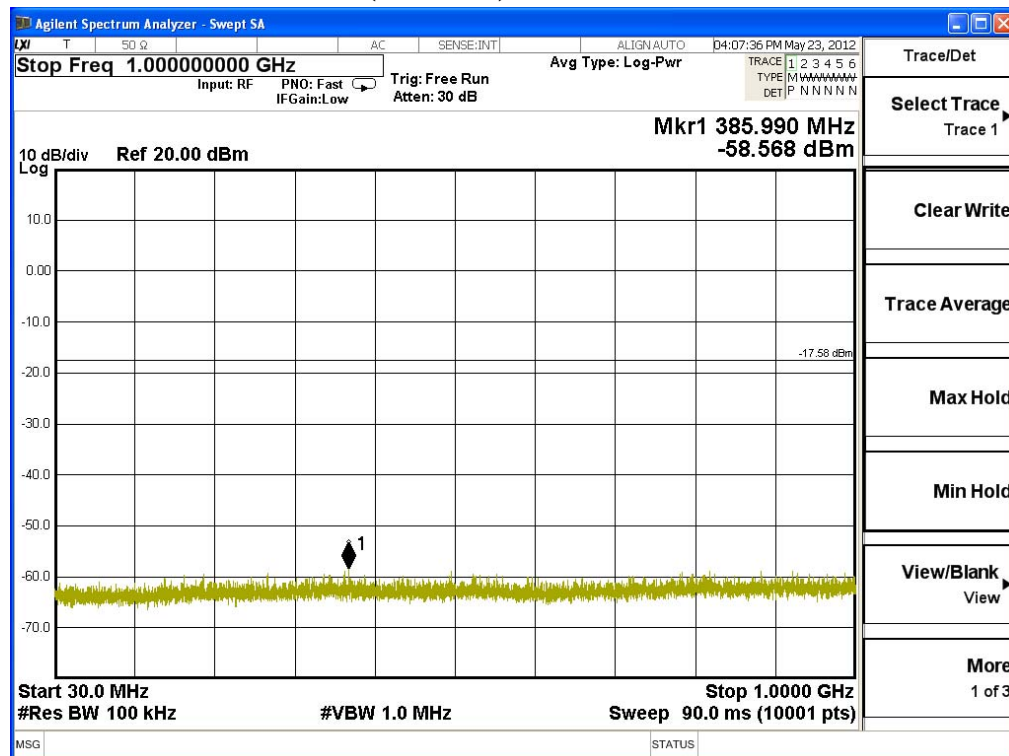


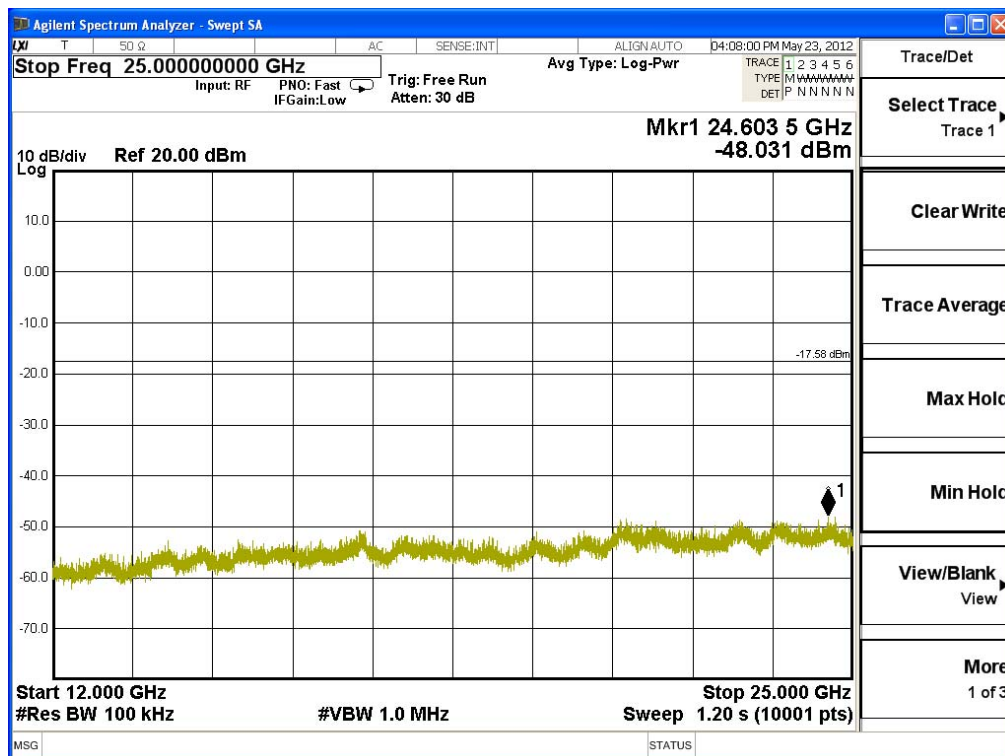
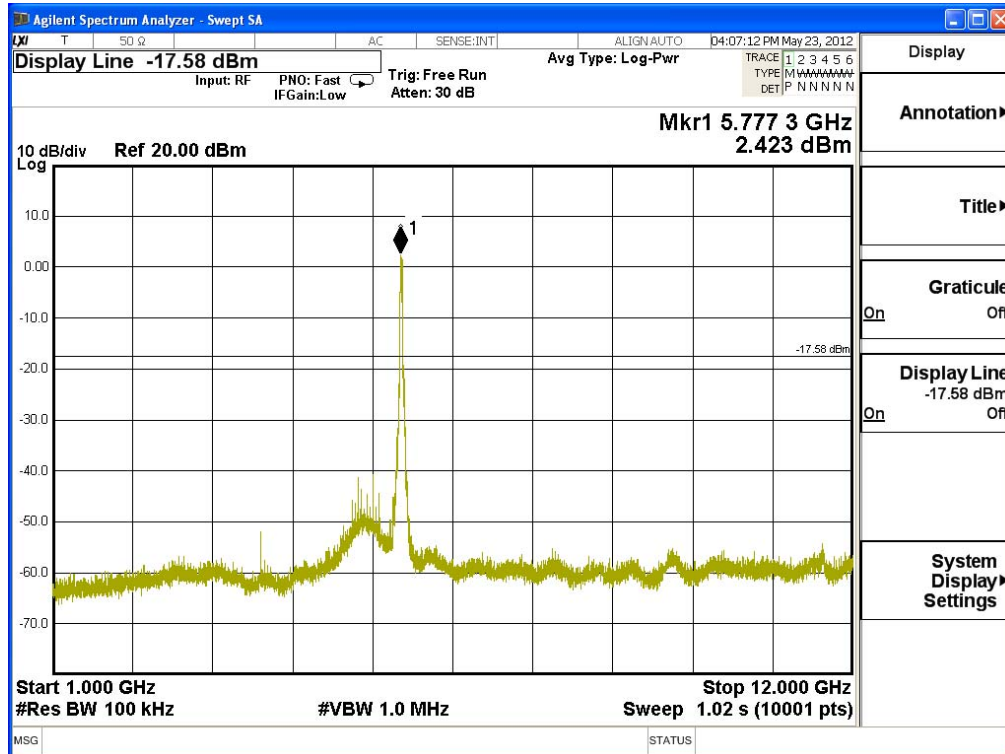


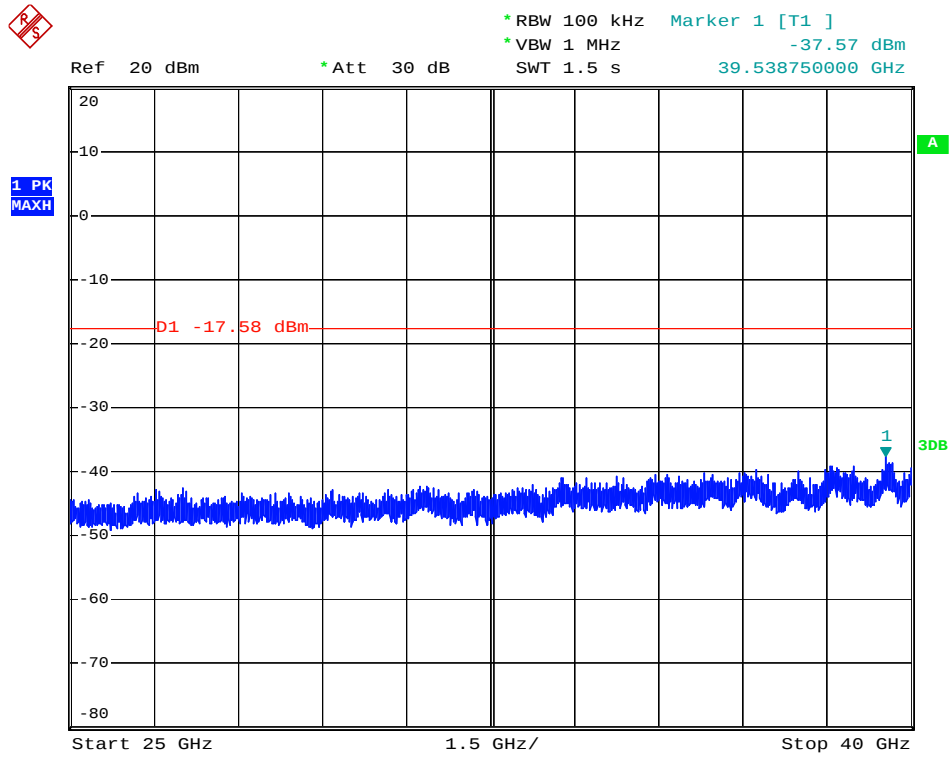


Date: 24.MAY.2012 10:42:46

Channel 159 (5795MHz) 30MHz -40GHz-Chain C







Date: 24.MAY.2012 10:45:09

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.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2012
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2012
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2012

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:

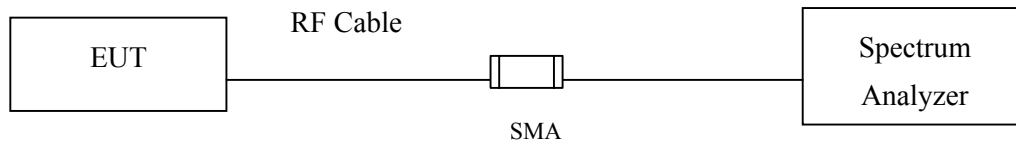
The following test equipments are used during the band edge tests:

Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
Site # 3		Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2011
	X	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2011
		Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2011
		Pre-Amplifier	QTK	QTK-AMP-03 / 0003	May, 2012
	X	Pre-Amplifier	QTK	AP-180C / CHM_0906076	Sep., 2011
		Pre-Amplifier	MITEQ	AMF-4D-180400-45-6P/ 925975	Mar, 2012
	X	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2012
		Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2011
	X	Coaxial Cable	Quietek	QTK-CABLE/ CAB5	Feb., 2012
	X	Controller	Quietek	QTK-CONTROLLER/ CTRL3	N/A
	X	Coaxial Switch	Anritsu	MP59B/6200265729	N/A

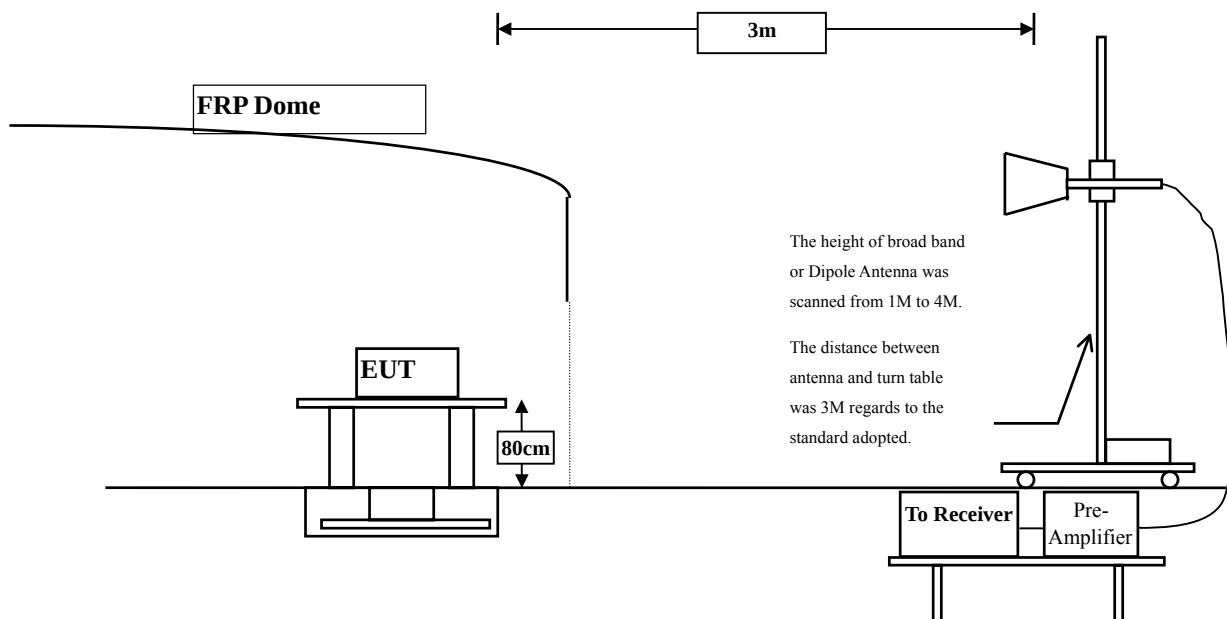
- Note:
1. All instruments are calibrated every one year.
 2. The test instruments marked by "X" are used to measure the final test results.

6.2. Test Setup

RF Conducted Measurement



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 C63.4, 2003 and tested according to DTS test procedure of Jan. 2012 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

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

The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.4:2003 on radiated measurement.

6.5. Uncertainty

± 3.9 dB above 1GHz

± 3.8 dB below 1GHz

6.6. Test Result of Band Edge

Product : 802.11 a/b/g/n, 2.4G/5G 3T3R Wireless Module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps)

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)	2383.167	31.734	25.756	57.489	74.00	54.00	Pass
01 (Peak)	2390.000	31.739	24.675	56.414	74.00	54.00	Pass
01 (Peak)	2413.000	31.775	67.862	99.636	--	--	Pass
01 (Average)	2390.000	31.739	13.025	44.764	74.00	54.00	Pass
01 (Average)	2411.167	31.770	64.951	96.721	--	--	Pass

Figure Channel 01:

Horizontal (Peak)

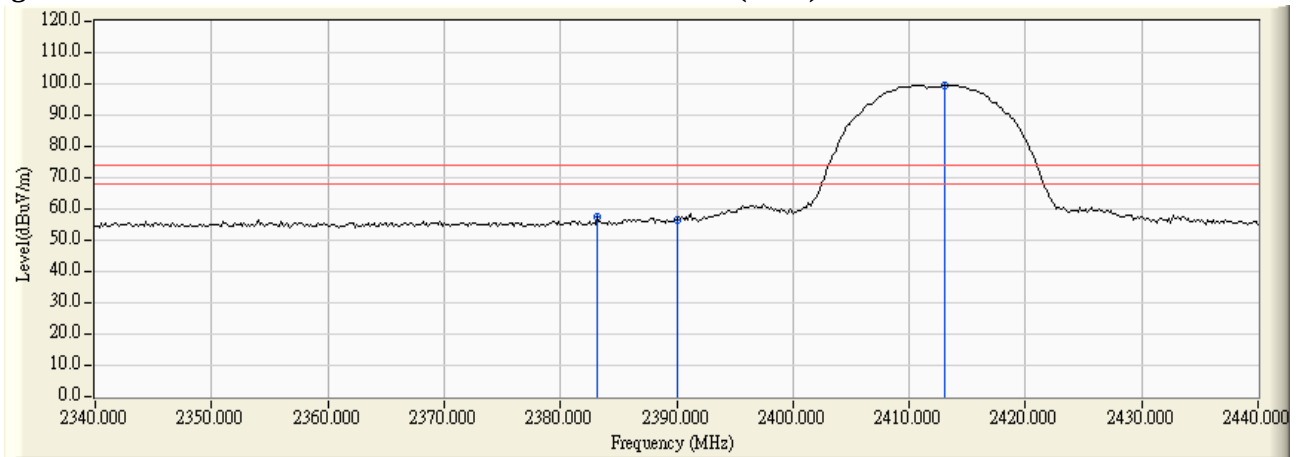
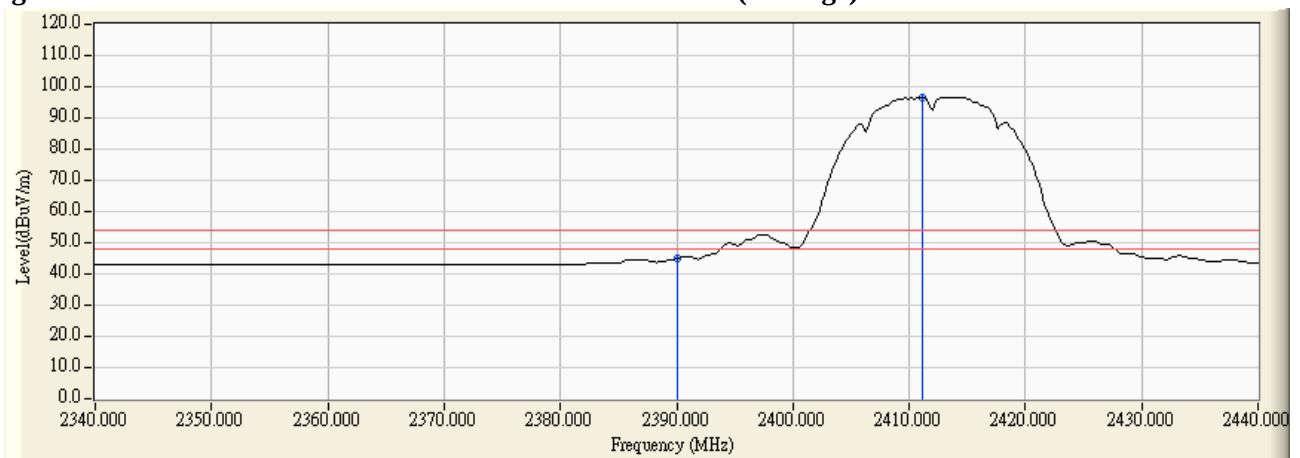


Figure Channel 01:

Horizontal (Average)



Note:

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

Product : 802.11 a/b/g/n, 2.4G/5G 3T3R Wireless Module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps)

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)	2386.167	30.294	30.710	61.004	74.00	54.00	Pass
01 (Peak)	2390.000	30.267	30.727	60.994	74.00	54.00	Pass
01 (Peak)	2413.000	30.254	79.446	109.699	--	--	Pass
01 (Average)	2386.167	30.294	21.807	52.101	74.00	54.00	Pass
01 (Average)	2390.000	30.267	21.621	51.888	74.00	54.00	Pass
01 (Average)	2411.167	30.245	76.731	106.976	--	--	Pass

Figure Channel 01:

Vertical (Peak)

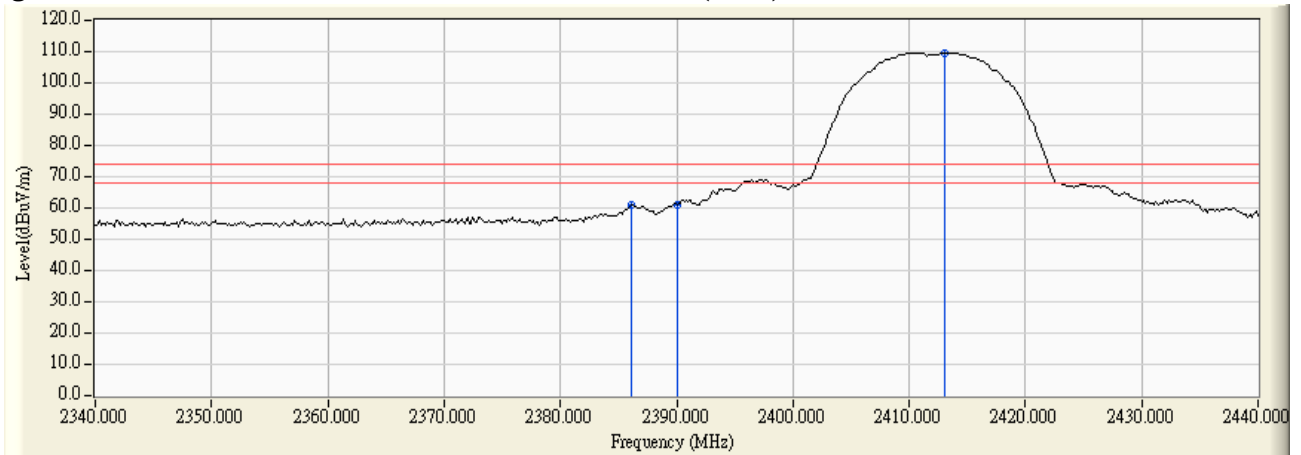
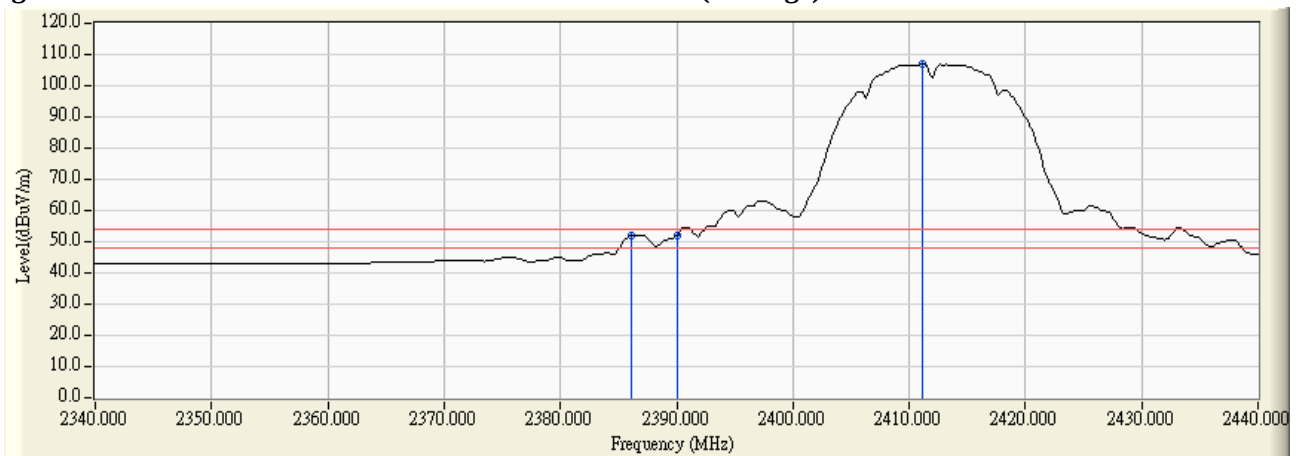


Figure Channel 01:

Vertical (Average)



Note:

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

Product : 802.11 a/b/g/n, 2.4G/5G 3T3R Wireless Module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps)

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)	2463.000	31.895	67.725	99.620	--	--	Pass
11 (Peak)	2483.500	31.951	25.756	57.706	74.00	54.00	Pass
11 (Average)	2461.167	31.890	64.779	96.669	--	--	Pass
11 (Average)	2483.500	31.951	13.121	45.071	74.00	54.00	Pass

Figure Channel 11: Horizontal (Peak)

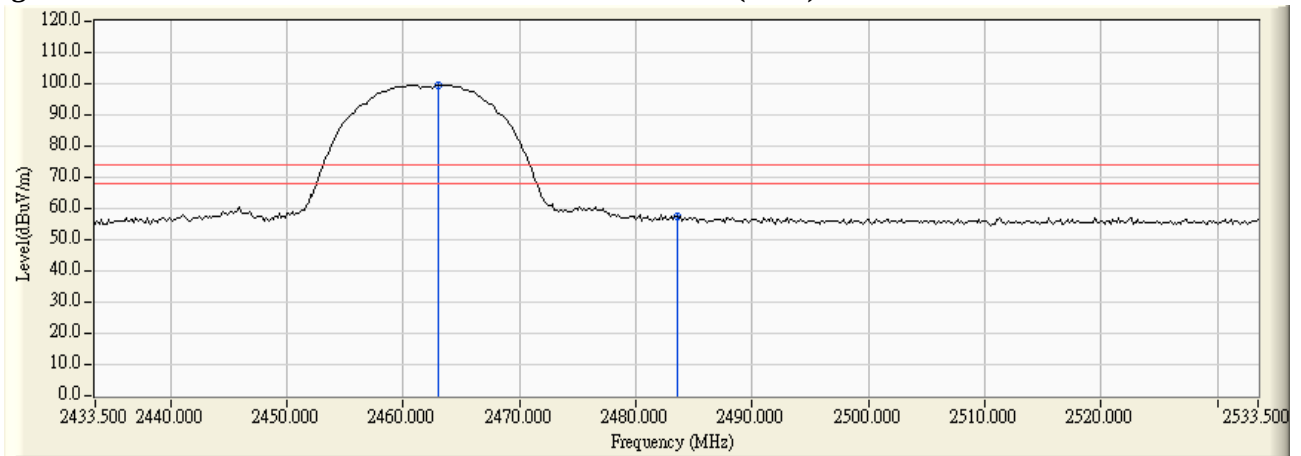
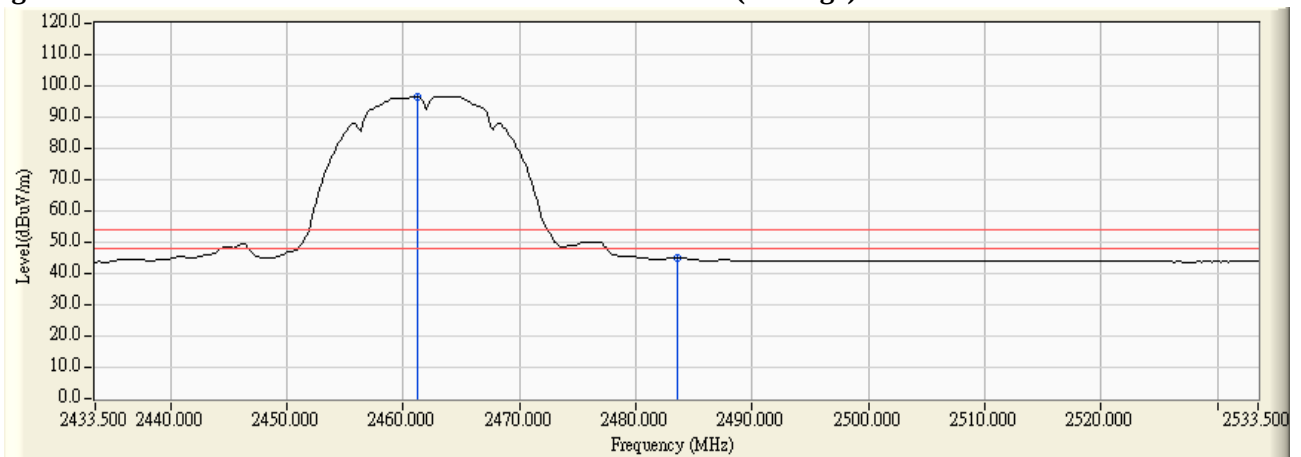


Figure Channel 11: Horizontal (Average)



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 : 802.11 a/b/g/n, 2.4G/5G 3T3R Wireless Module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps)

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)	2463.000	30.485	79.498	109.983	--	--	Pass
11 (Peak)	2483.500	30.586	31.372	61.957	74.00	54.00	Pass
11 (Average)	2461.167	30.476	76.449	106.925	--	--	Pass
11 (Average)	2483.500	30.586	22.029	52.614	74.00	54.00	Pass

Figure Channel 11: Vertical (Peak)

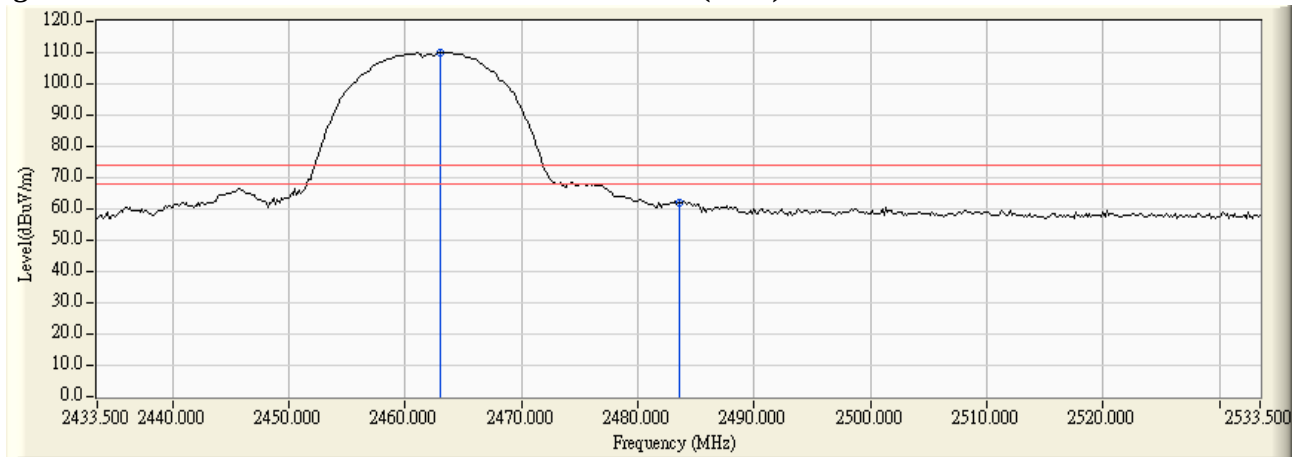
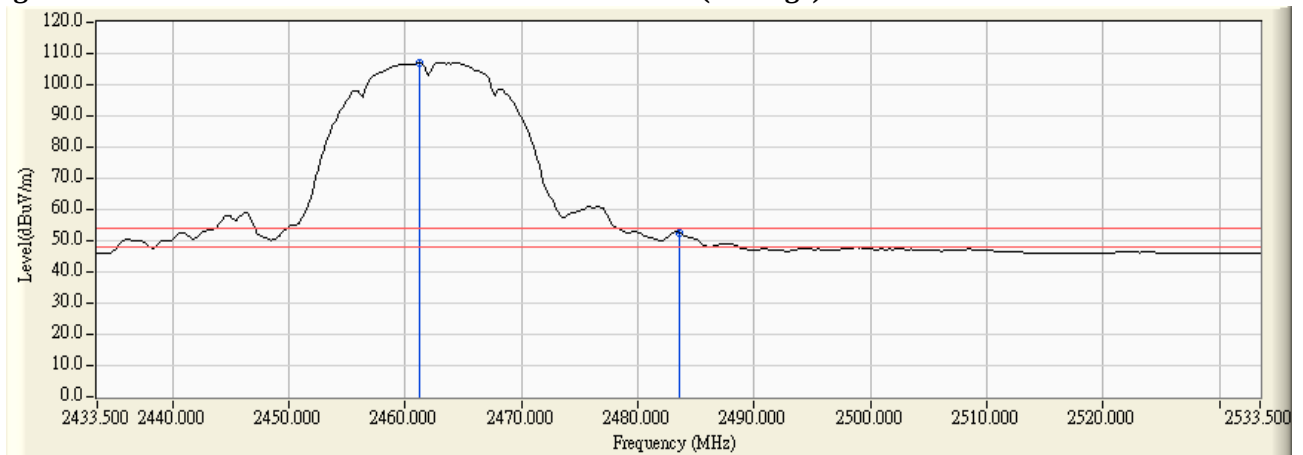


Figure Channel 11: Vertical (Average)



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 : 802.11 a/b/g/n, 2.4G/5G 3T3R Wireless Module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps)

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	31.739	31.465	63.204	74.00	54.00	Pass
01 (Peak)	2414.833	31.778	69.280	101.059	--	--	Pass
01(Average)	2390.000	31.739	14.508	46.247	74.00	54.00	Pass
01 (Average)	2417.667	31.785	56.830	88.615	--	--	Pass

Figure Channel 01:

Horizontal (Peak)

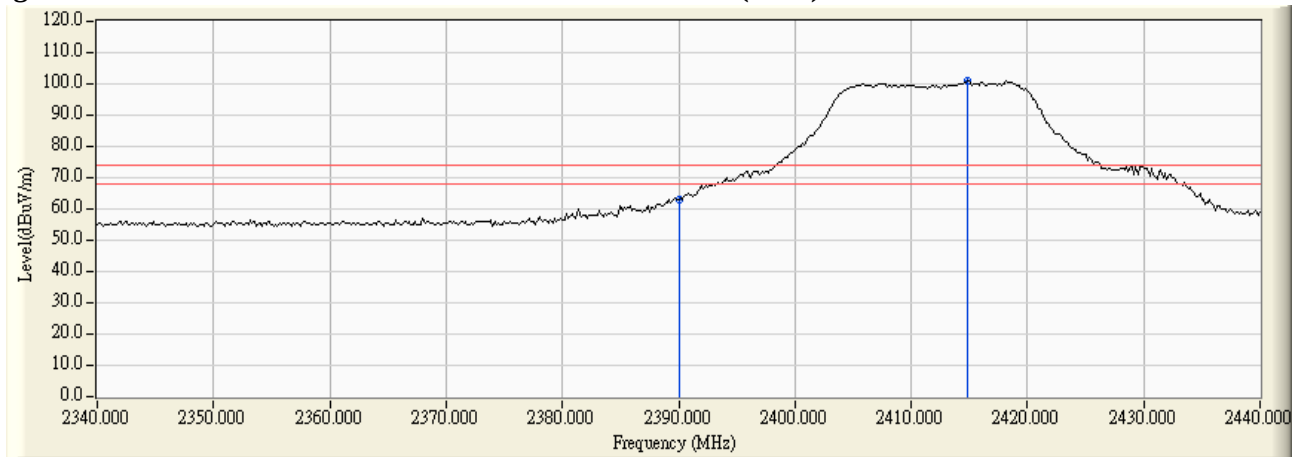
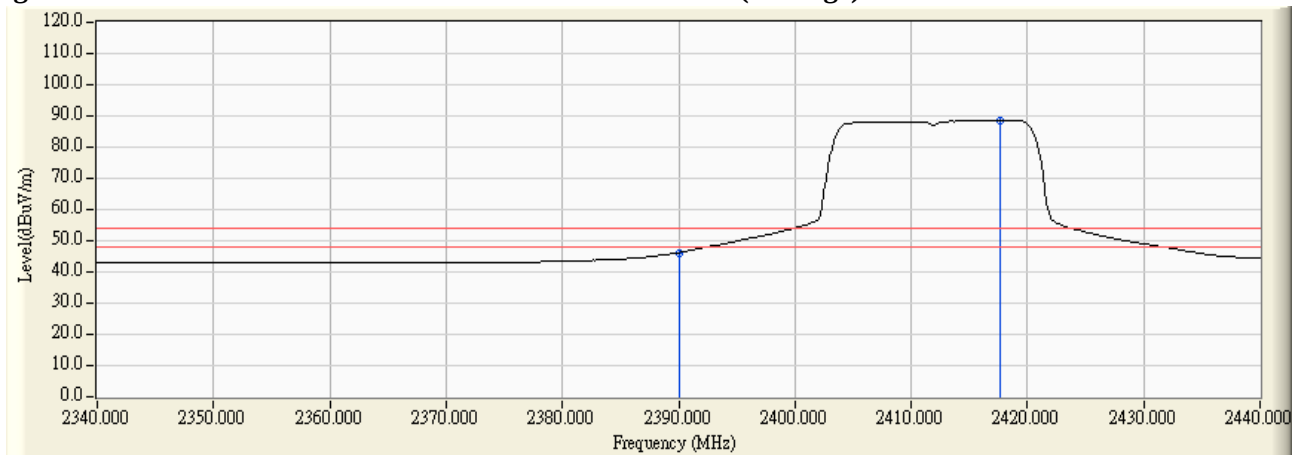


Figure Channel 01:

Horizontal (Average)



Note:

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

Product : 802.11 a/b/g/n, 2.4G/5G 3T3R Wireless Module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps)

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	30.267	41.854	72.121	74.00	54.00	Pass
01 (Peak)	2417.167	30.272	80.449	110.721	--	--	Pass
01 (Average)	2390.000	30.267	21.936	52.203	74.00	54.00	Pass
01 (Average)	2417.167	30.272	67.617	97.889	--	--	Pass

Figure Channel 01:

Vertical (Peak)

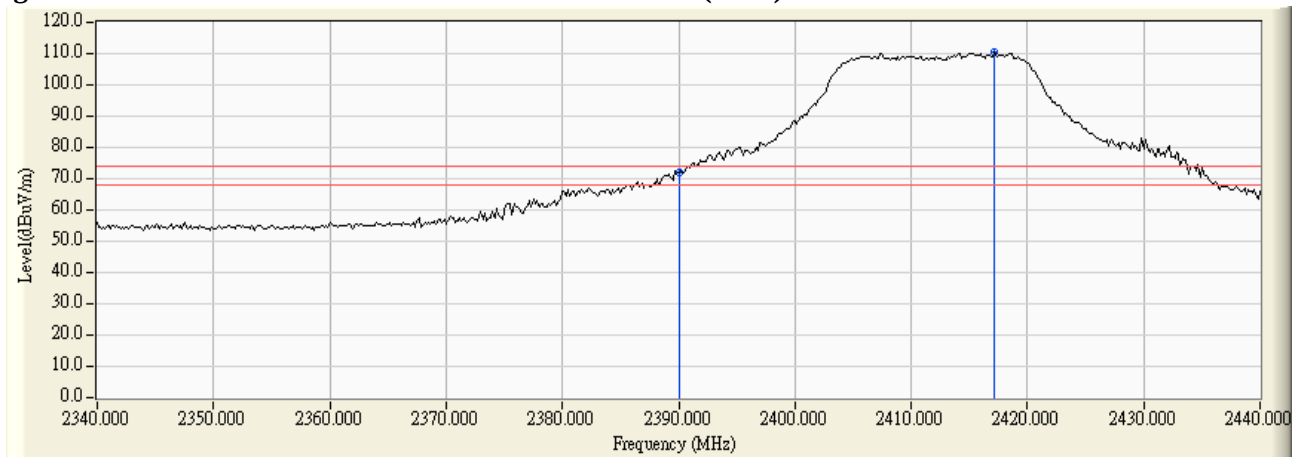
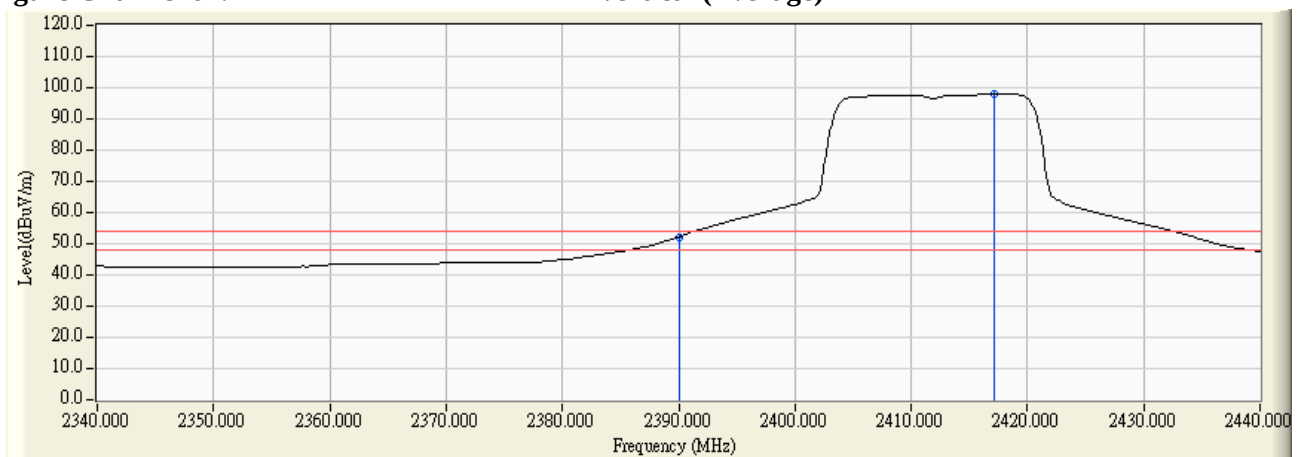


Figure Channel 01:

Vertical (Average)



Note:

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

Product : 802.11 a/b/g/n, 2.4G/5G 3T3R Wireless Module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps)

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)	2466.833	31.905	67.593	99.498	--	--	Pass
11 (Peak)	2483.500	31.951	29.516	61.466	74.00	54.00	Pass
11 (Peak)	2484.500	31.953	29.817	61.769	74.00	54.00	
11 (Average)	2464.667	31.900	55.279	87.178	--	--	Pass
11 (Average)	2483.500	31.951	13.050	45.000	74.00	54.00	Pass

Figure Channel 11:

Horizontal (Peak)

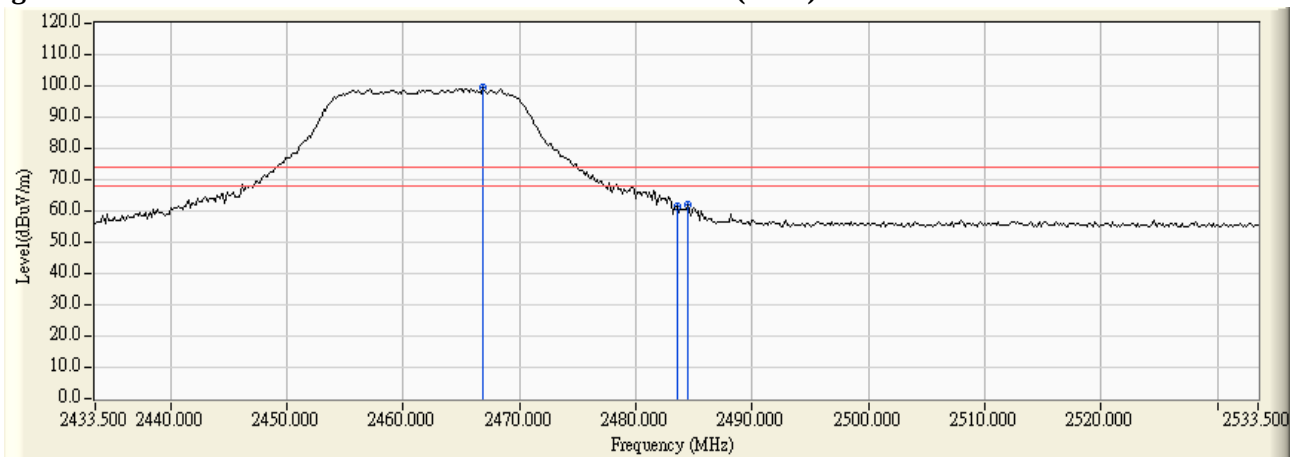
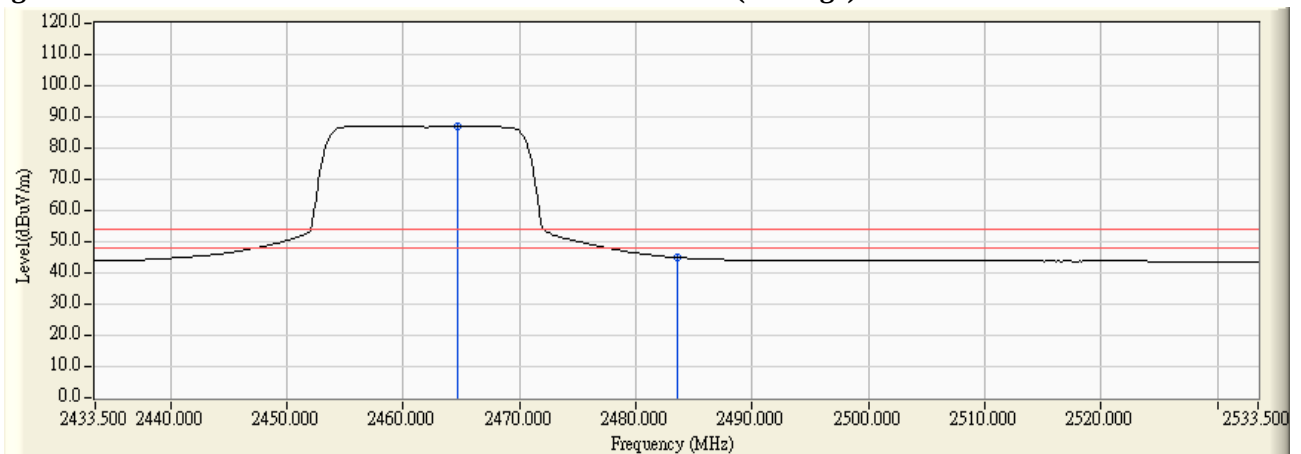


Figure Channel 11:

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 : 802.11 a/b/g/n, 2.4G/5G 3T3R Wireless Module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps)

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)	2464.833	30.494	79.225	109.719	--	--	Pass
11 (Peak)	2483.500	30.586	40.739	71.324	74.00	54.00	Pass
11 (Average)	2465.333	30.496	66.223	96.720	--	--	Pass
11 (Average)	2483.500	30.586	19.307	49.892	74.00	54.00	Pass

Figure Channel 11: Vertical (Peak)

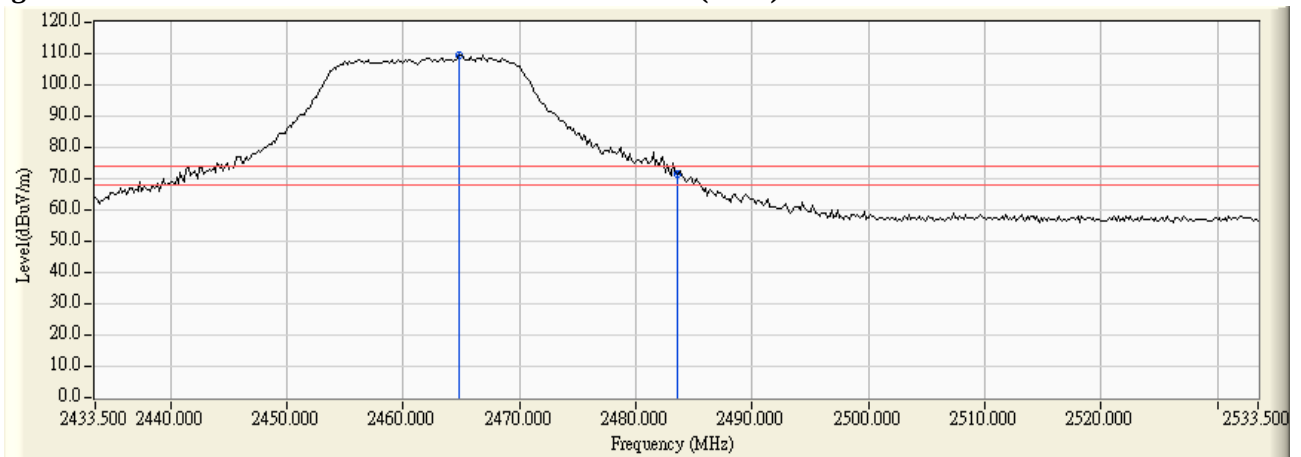
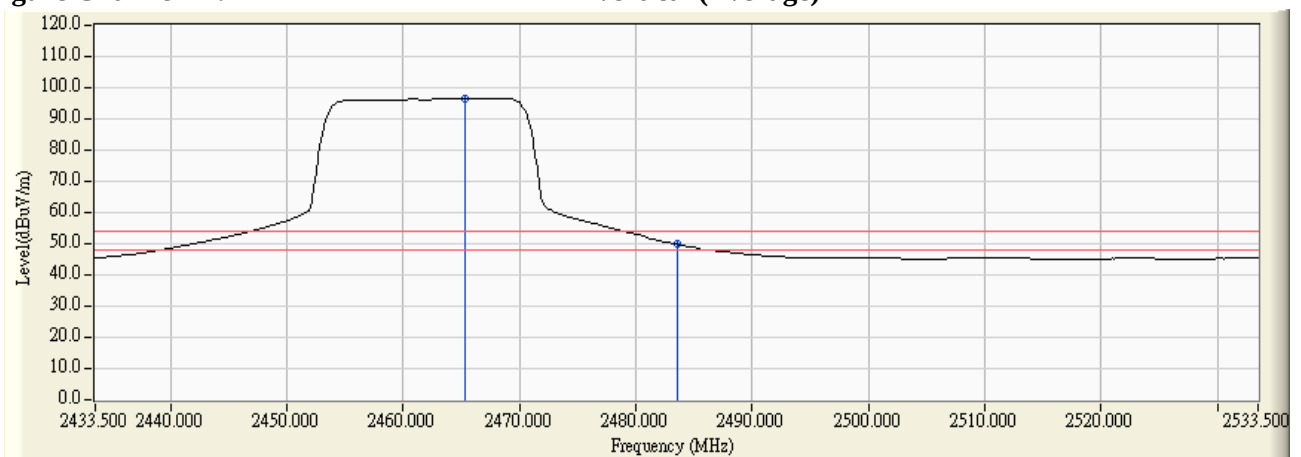


Figure Channel 11: Vertical (Average)



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 : 802.11 a/b/g/n, 2.4G/5G 3T3R Wireless Module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit - 802.11n-20BW_21.7Mbps(2.4G Band)

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)	2389.333	31.738	30.737	62.475	74.00	54.00	Pass
01 (Peak)	2390.000	31.739	30.591	62.330	74.00	54.00	Pass
01 (Peak)	2417.833	31.786	70.440	102.226	--	--	Pass
01 (Average)	2390.000	31.739	13.146	44.885	74.00	54.00	Pass
01 (Average)	2417.833	31.786	52.943	84.729	--	--	Pass

Figure Channel 01:

Horizontal (Peak)

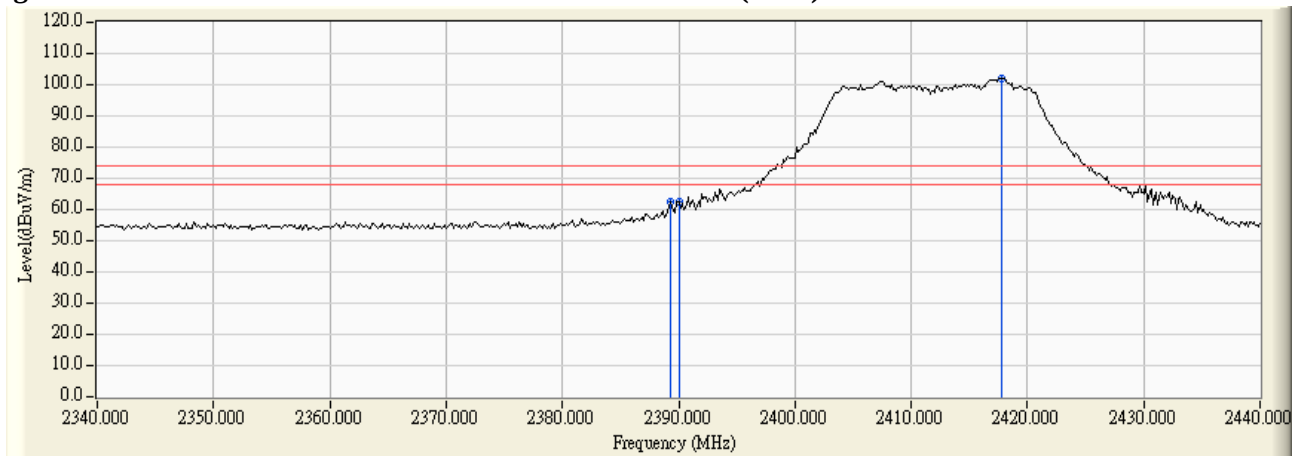
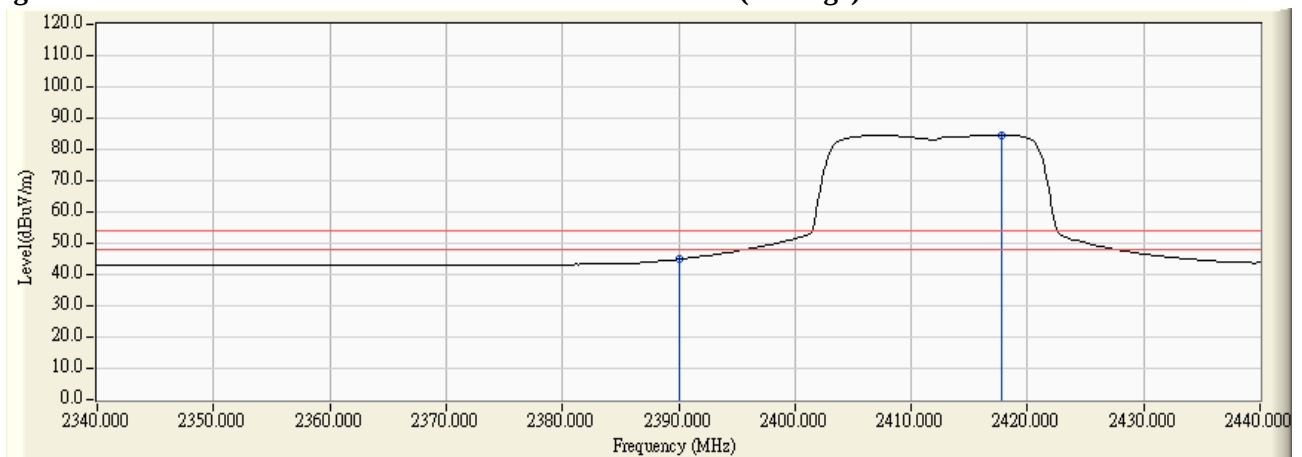


Figure Channel 01:

Horizontal (Average)



Note:

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

Product : 802.11 a/b/g/n, 2.4G/5G 3T3R Wireless Module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit - 802.11n-20BW_21.7Mbps(2.4G Band)

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)	2389.833	30.268	41.729	71.997	74.00	54.00	Pass
01 (Peak)	2390.000	30.267	40.846	71.113	74.00	54.00	Pass
01 (Peak)	2417.833	30.276	83.238	113.513	--	--	Pass
01 (Average)	2390.000	30.267	19.939	50.206	74.00	54.00	Pass
01 (Average)	2417.833	30.276	64.071	94.346	--	--	Pass

Figure Channel 01: Vertical (Peak)

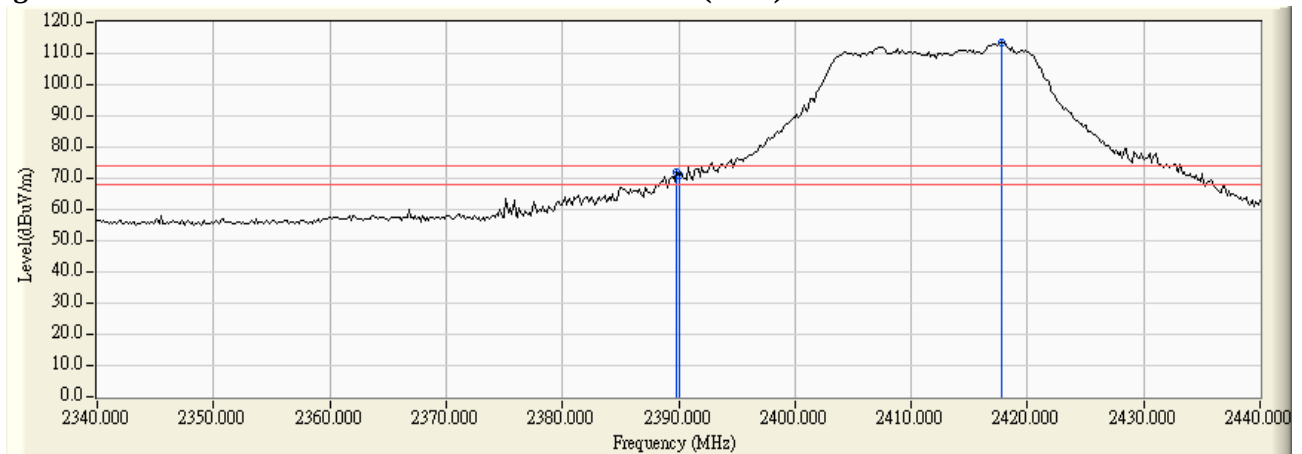
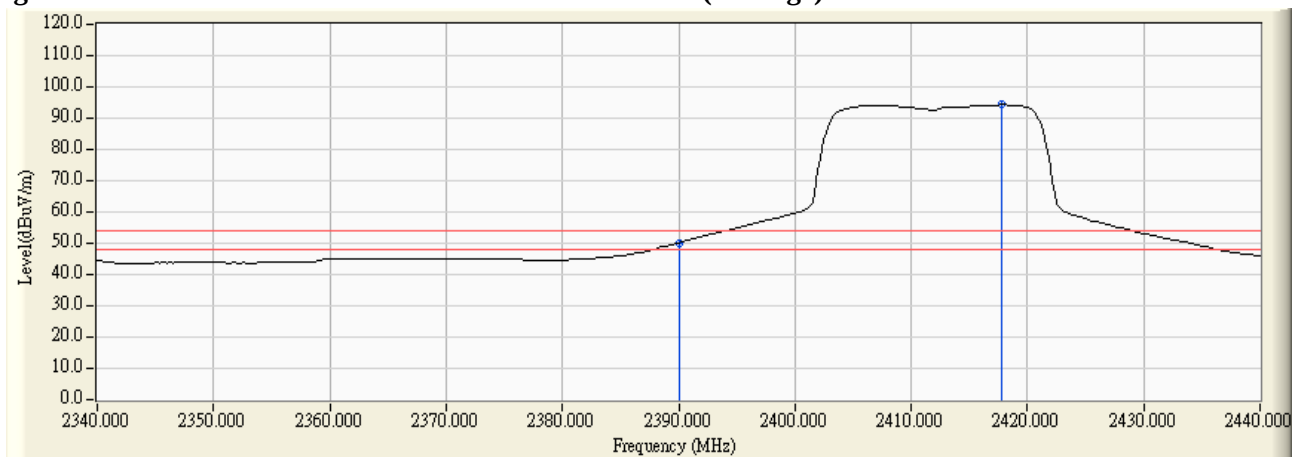


Figure Channel 01: Vertical (Average)



Note:

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

Product : 802.11 a/b/g/n, 2.4G/5G 3T3R Wireless Module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit - 802.11n-20BW_21.7Mbps(2.4G Band)

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)	2454.333	31.873	66.609	98.482	--	--	Pass
11 (Peak)	2483.500	31.951	24.720	56.670	74.00	54.00	Pass
11 (Peak)	2485.833	31.956	26.533	58.489	74.00	54.00	Pass
11 (Average)	2465.167	31.901	50.195	82.096	--	--	Pass
11 (Average)	2483.500	31.951	12.202	44.152	74.00	54.00	Pass

Figure Channel 11:

Horizontal (Peak)

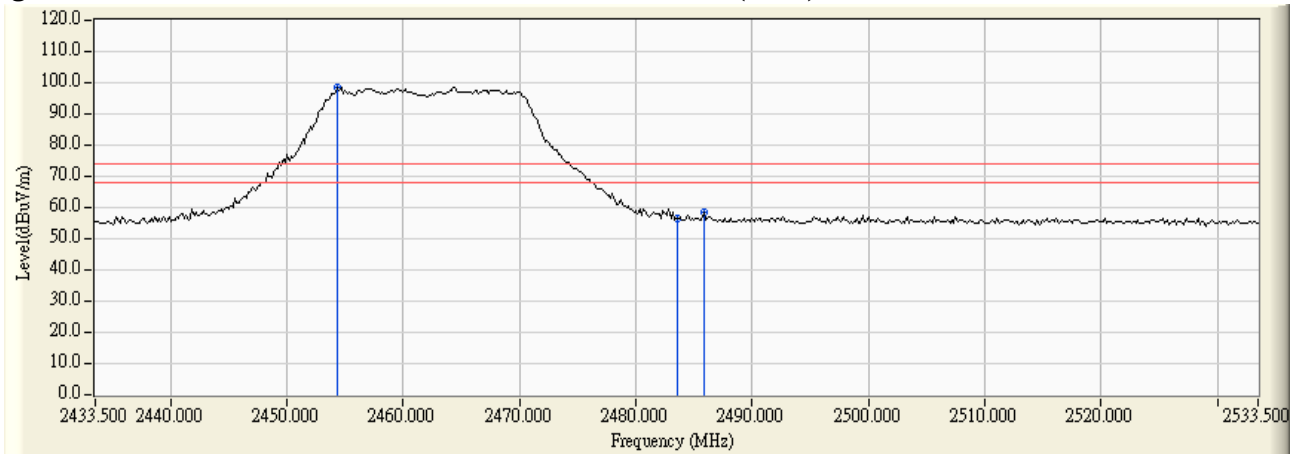
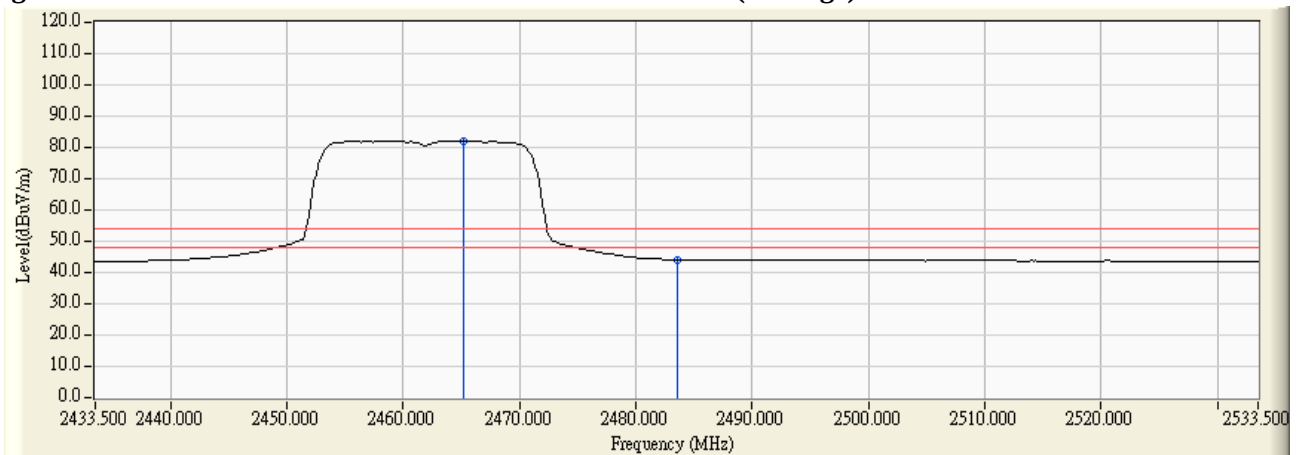


Figure Channel 11:

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 : 802.11 a/b/g/n, 2.4G/5G 3T3R Wireless Module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit - 802.11n-20BW_21.7Mbps(2.4G Band)

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)	2467.000	30.504	81.592	112.097	74.00	54.00	Pass
11 (Peak)	2483.500	30.586	41.831	72.416	74.00	54.00	Pass
11 (Average)	2466.000	30.500	63.556	94.056	74.00	54.00	Pass
11 (Average)	2483.500	30.586	19.431	50.016	--	--	Pass

Figure Channel 11: Vertical (Peak)

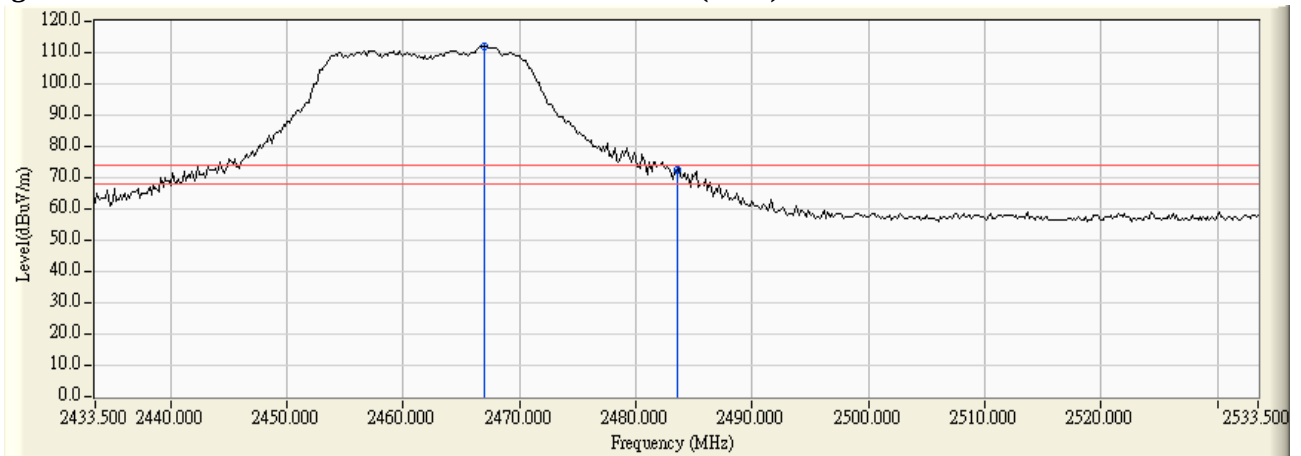
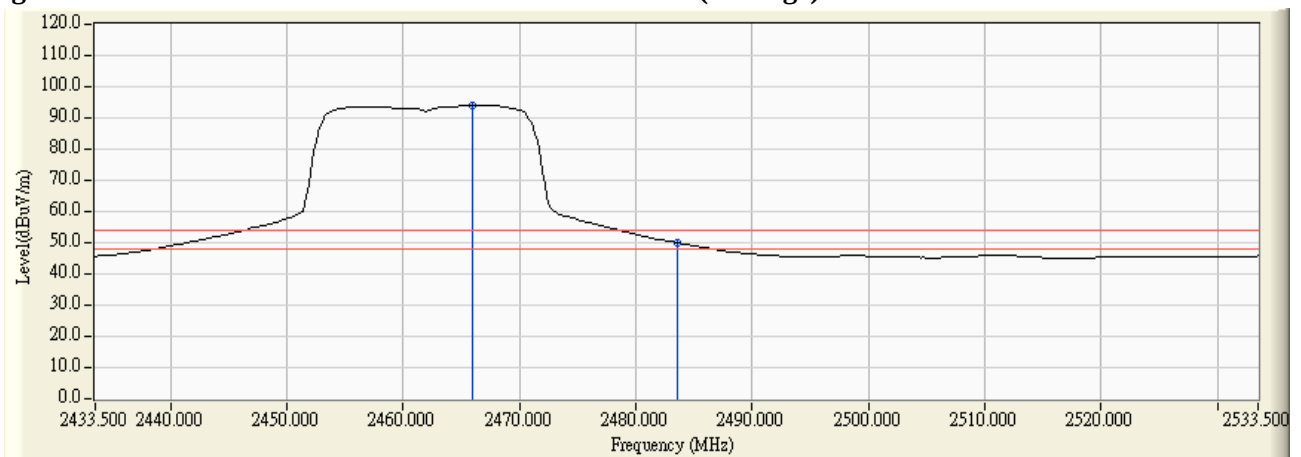


Figure Channel 11: Vertical (Average)



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 : 802.11 a/b/g/n, 2.4G/5G 3T3R Wireless Module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 5: Transmit - 802.11n-40BW_45Mbps(2.4G Band)

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)	2389.833	31.738	31.450	63.189	74.00	54.00	Pass
01 (Peak)	2390.000	31.739	28.463	60.202	74.00	54.00	Pass
01 (Peak)	2437.333	31.832	65.417	97.249	--	--	Pass
01 (Average)	2390.000	31.739	13.516	45.255	74.00	54.00	Pass
01 (Average)	2430.833	31.817	48.102	79.918	--	--	Pass

Figure Channel 01:

Horizontal (Peak)

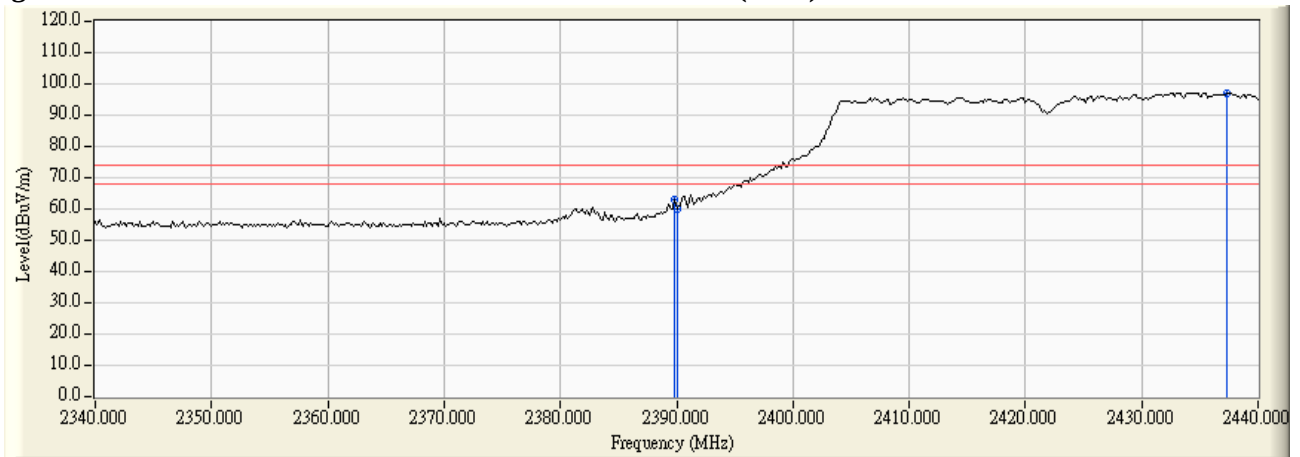
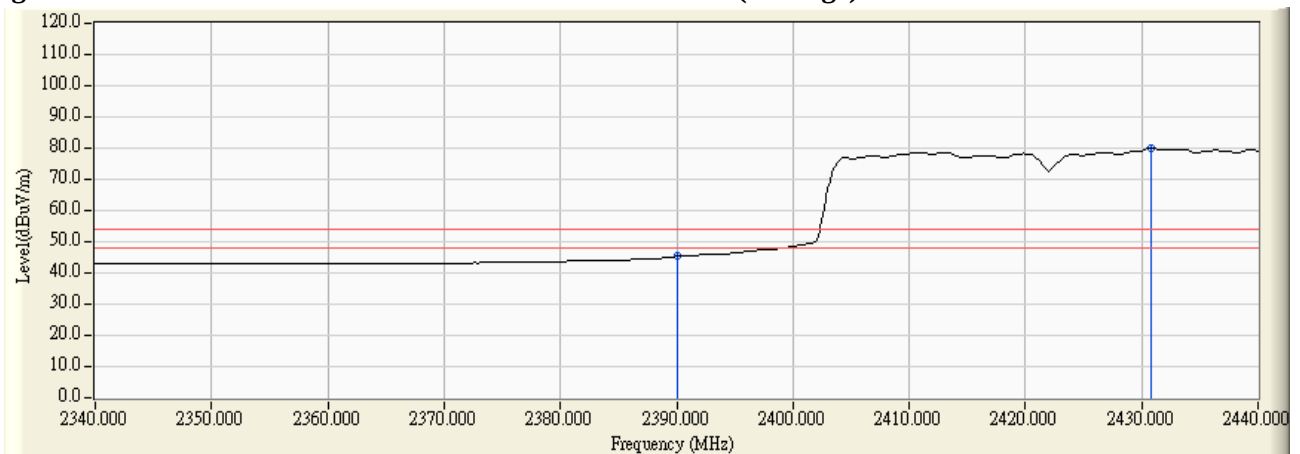


Figure Channel 01:

Horizontal (Average)



Note:

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

Product : 802.11 a/b/g/n, 2.4G/5G 3T3R Wireless Module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 5: Transmit - 802.11n-40BW_45Mbps(2.4G Band)

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	30.267	41.433	71.700	74.00	54.00	Pass
01 (Peak)	2436.833	30.360	78.067	108.428	--	--	Pass
01 (Average)	2390.000	30.267	22.161	52.428	74.00	54.00	Pass
01 (Average)	2436.167	30.359	59.019	89.377	--	--	Pass

Figure Channel 01:

Vertical (Peak)

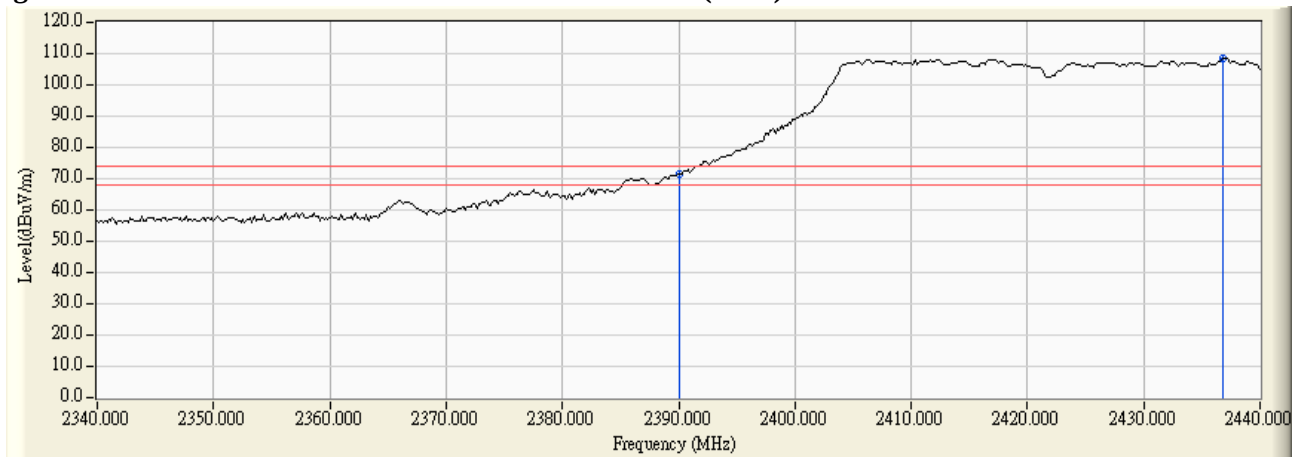
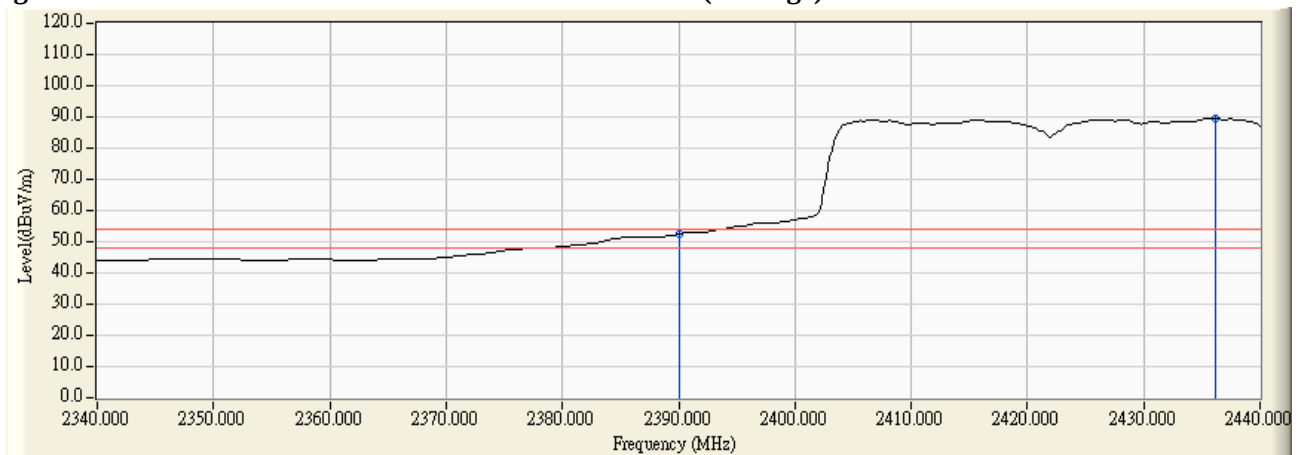


Figure Channel 01:

Vertical (Average)



Note:

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

Product : 802.11 a/b/g/n, 2.4G/5G 3T3R Wireless Module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 5: Transmit - 802.11n-40BW_45Mbps(2.4G Band)

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
07 (Peak)	2462.500	31.894	61.720	93.614	--	--	Pass
07 (Peak)	2483.500	31.951	27.288	59.238	74.00	54.00	Pass
07 (Peak)	2484.333	31.951	27.817	59.769	74.00	54.00	Pass
07 (Average)	2463.500	31.896	45.341	77.237	--	--	Pass
07 (Average)	2483.500	31.951	13.164	45.114	74.00	54.00	Pass

Figure Channel 07:

Horizontal (Peak)

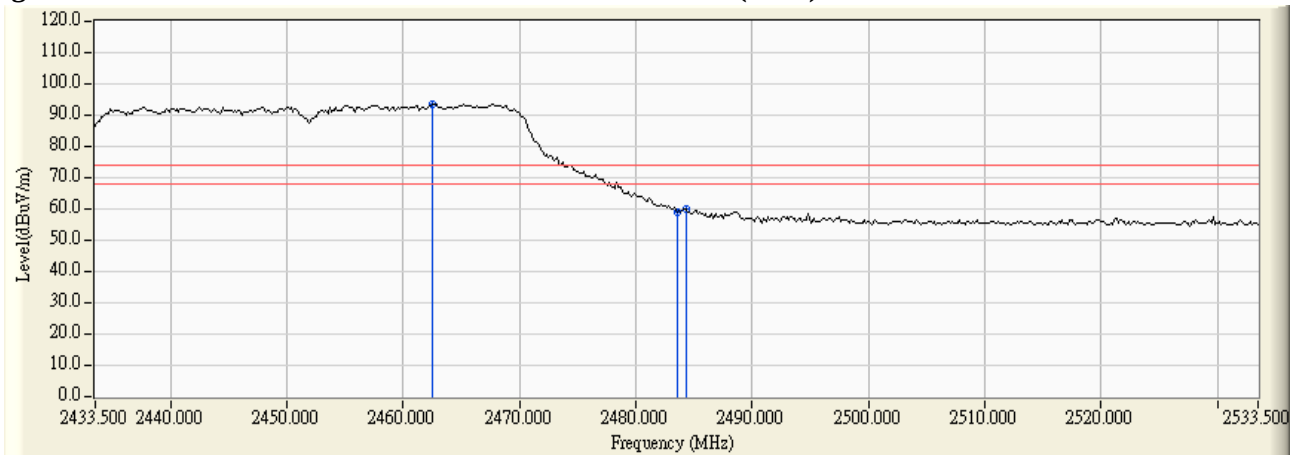
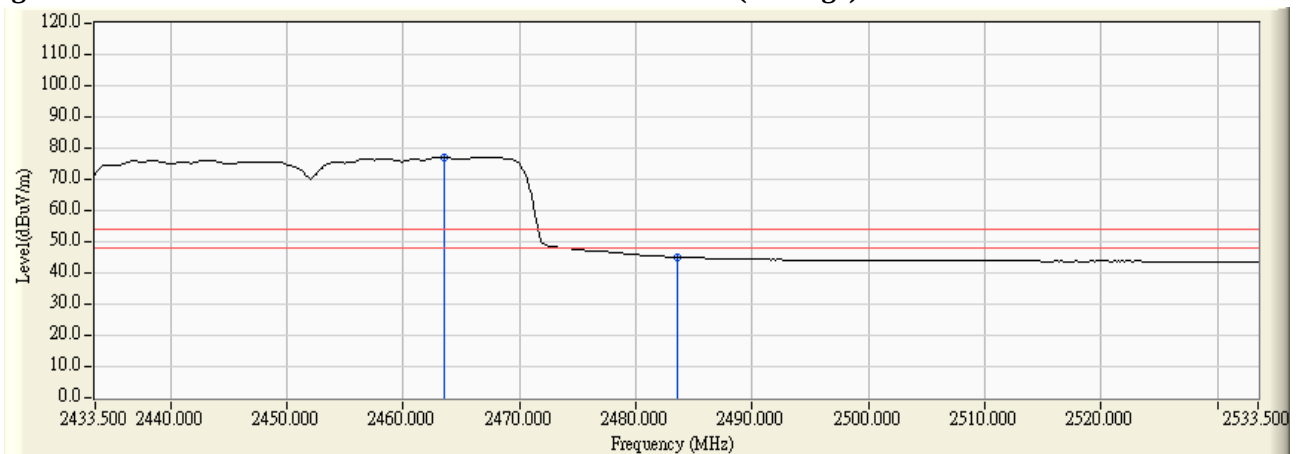


Figure Channel 07:

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 : 802.11 a/b/g/n, 2.4G/5G 3T3R Wireless Module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 5: Transmit - 802.11n-40BW_45Mbps(2.4G Band)

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
07 (Peak)	2469.333	30.515	76.218	106.734	--	--	Pass
07 (Peak)	2483.500	30.586	41.568	72.153	74.00	54.00	Pass
07 (Average)	2469.000	30.514	58.099	88.613	--	--	Pass
07 (Average)	2483.500	30.586	19.922	50.507	74.00	54.00	Pass

Figure Channel 07: Vertical (Peak)

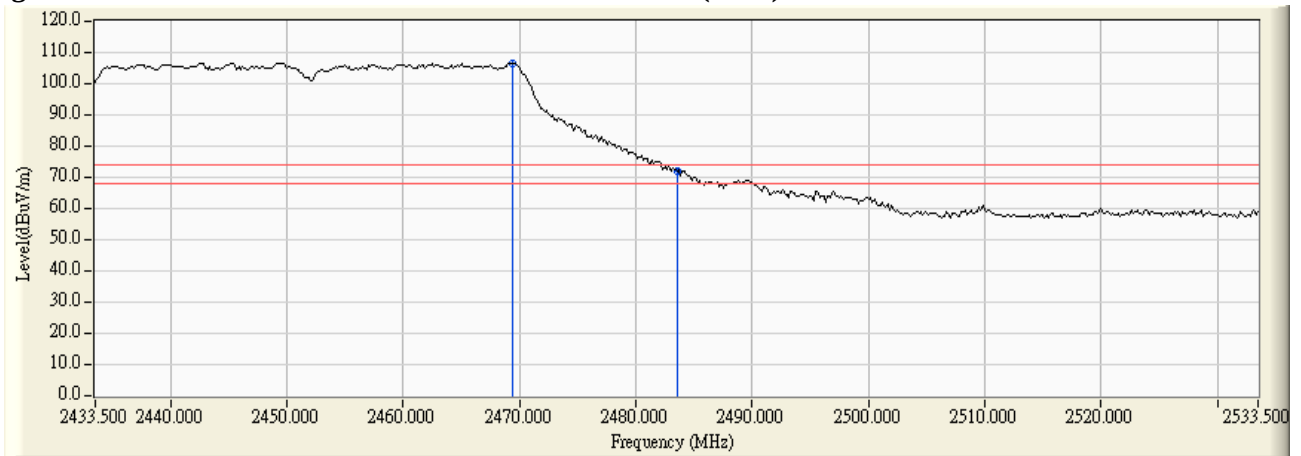
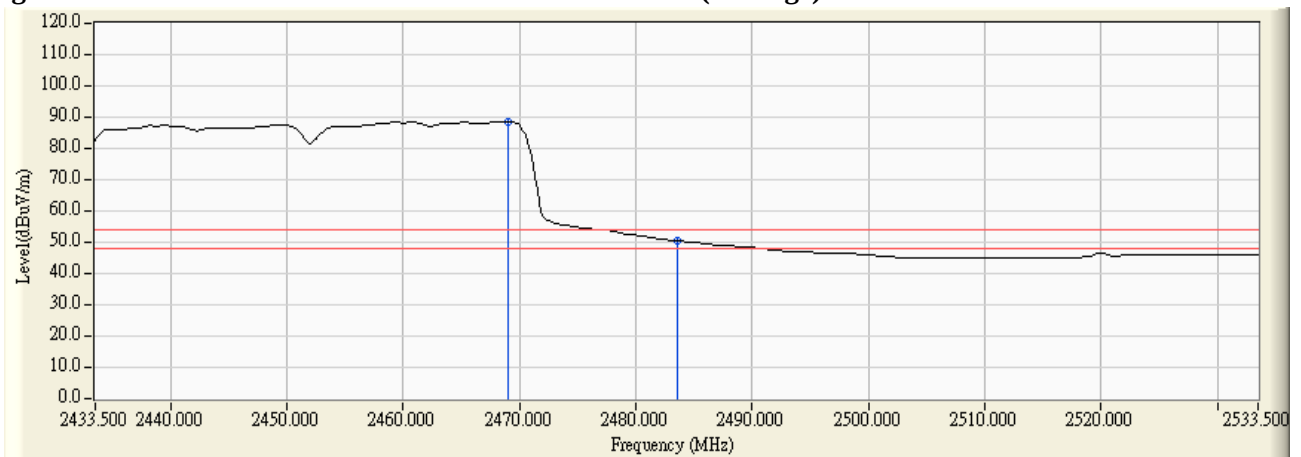


Figure Channel 01: Vertical (Average)

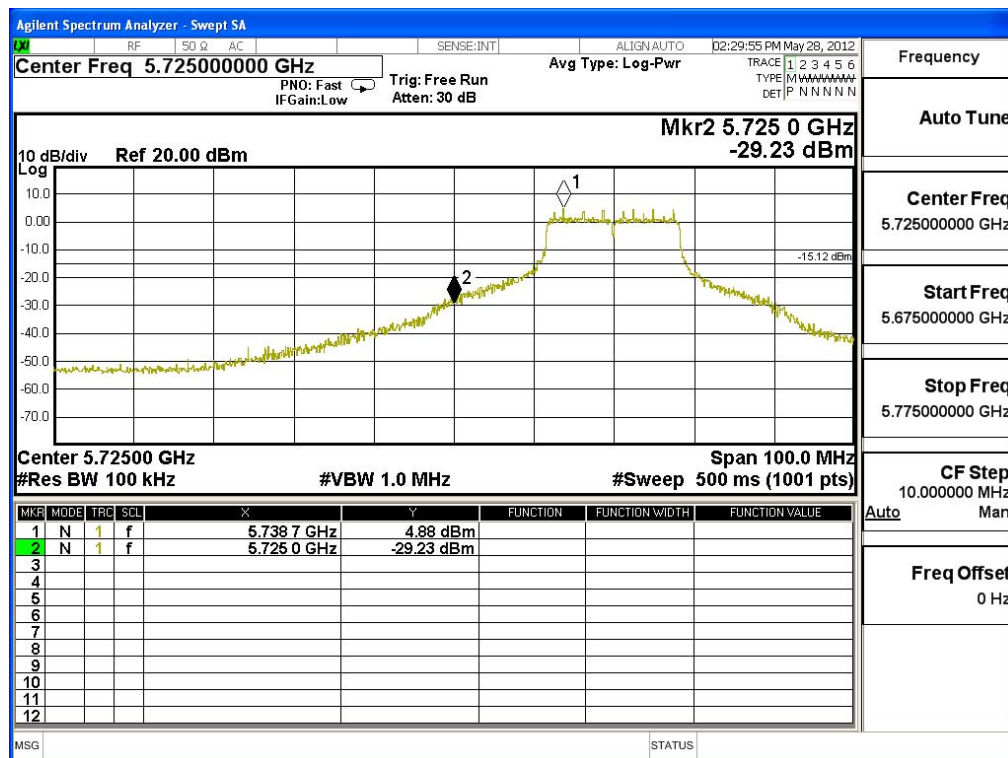


Note:

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.

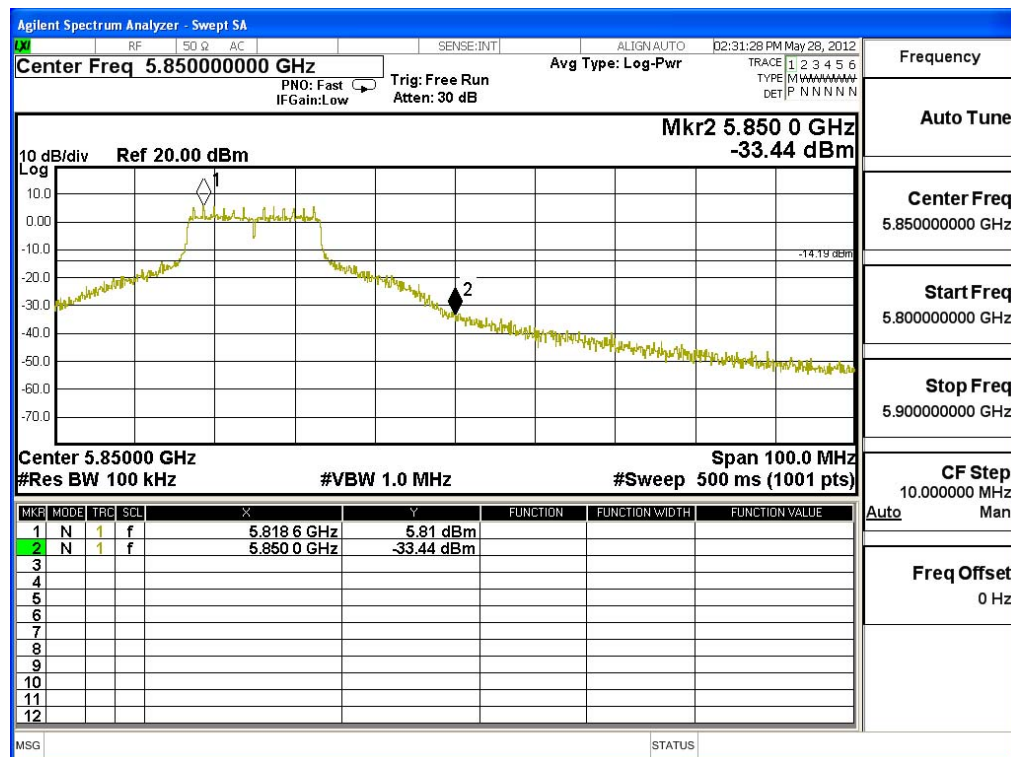
Product : 802.11 a/b/g/n, 2.4G/5G 3T3R Wireless Module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit - 802.11a 6Mbps

Test Frequency (MHz)	Measurement Level Δ (dB)	Limit Δ (dB)	Result
5745	34.11	>20	PASS



Product : 802.11 a/b/g/n, 2.4G/5G 3T3R Wireless Module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit - 802.11a 6Mbps

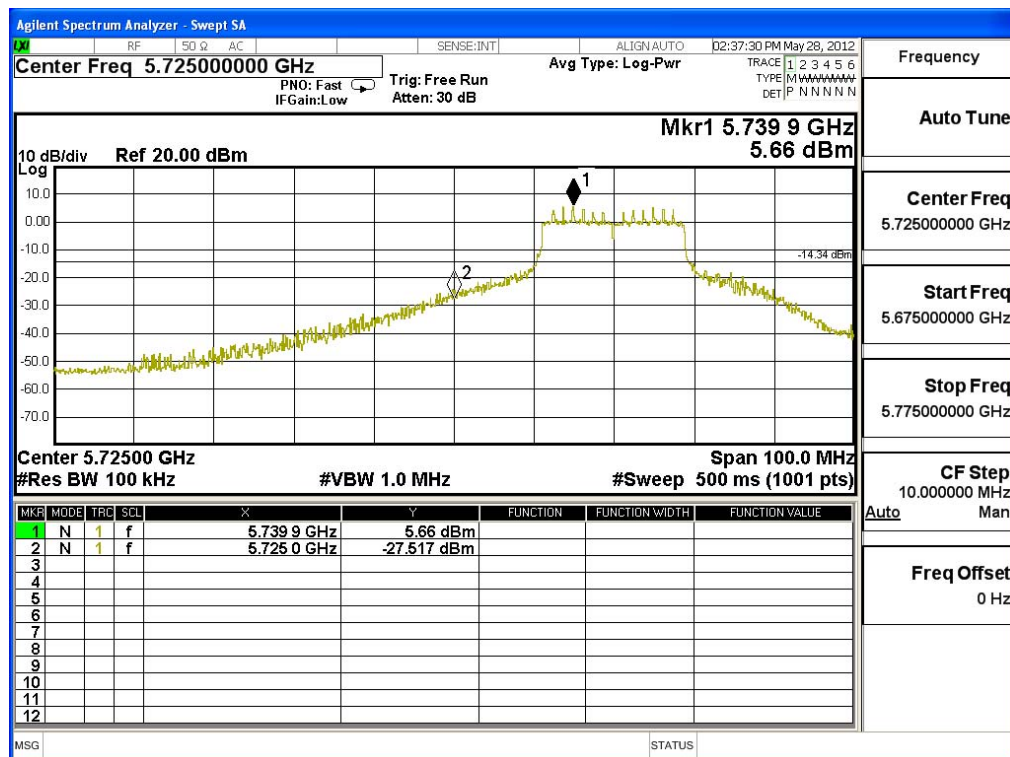
Test Frequency (MHz)	Measurement Level Δ (dB)	Limit Δ (dB)	Result
5825	39.25	>20	PASS



Product : 802.11 a/b/g/n, 2.4G/5G 3T3R Wireless Module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit - 802.11n-20BW_21.7Mbps(5G Band)

Chain A

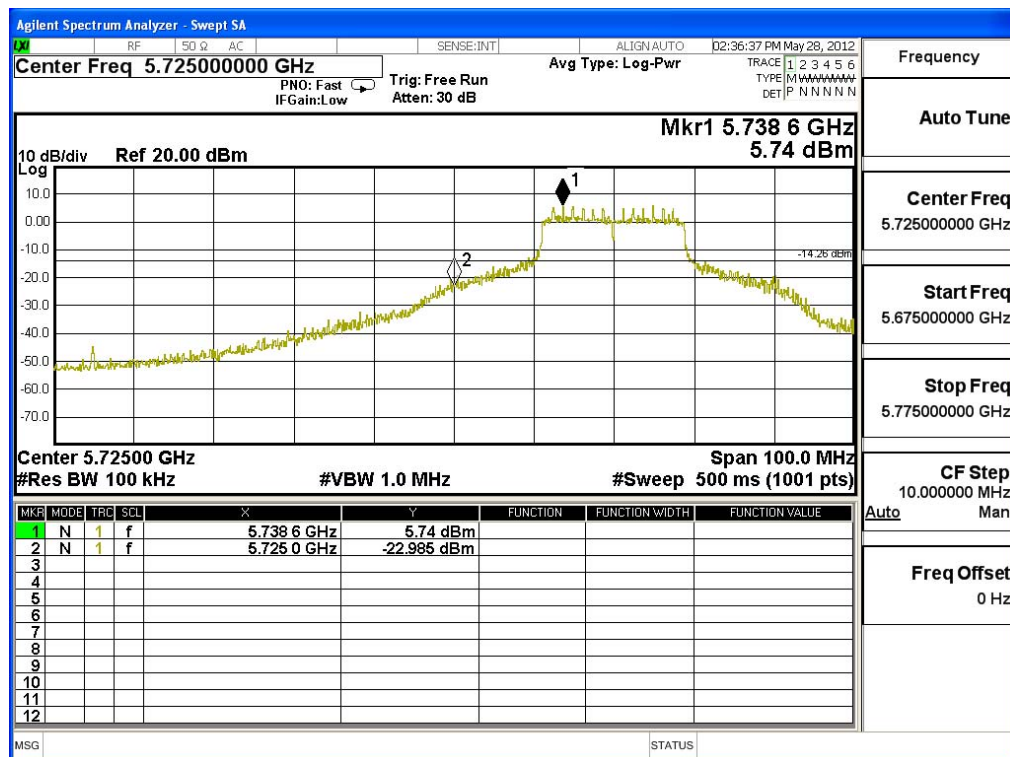
Test Frequency (MHz)	Measurement Level Δ (dB)	Limit Δ (dB)	Result
5745	33.167	>20	PASS



Product : 802.11 a/b/g/n, 2.4G/5G 3T3R Wireless Module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit - 802.11n-20BW_21.7Mbps(5G Band)

Chain B

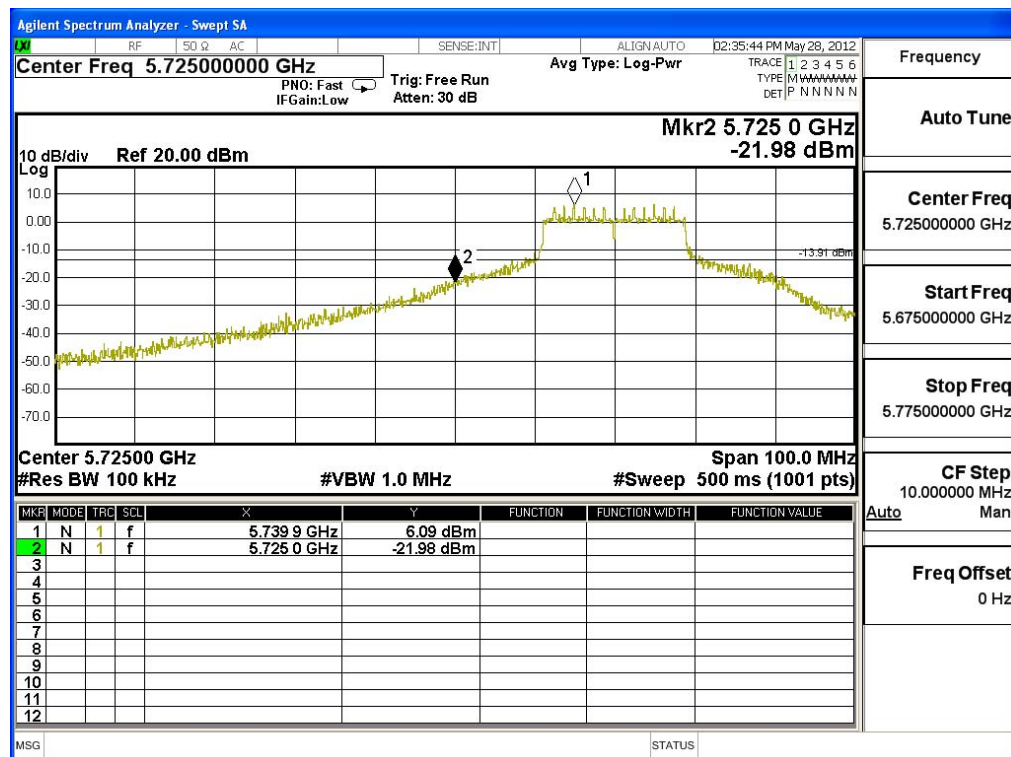
Test Frequency (MHz)	Measurement Level Δ (dB)	Limit Δ (dB)	Result
5745	28.725	>20	PASS



Product : 802.11 a/b/g/n, 2.4G/5G 3T3R Wireless Module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit - 802.11n-20BW_21.7Mbps(5G Band)

Chain C

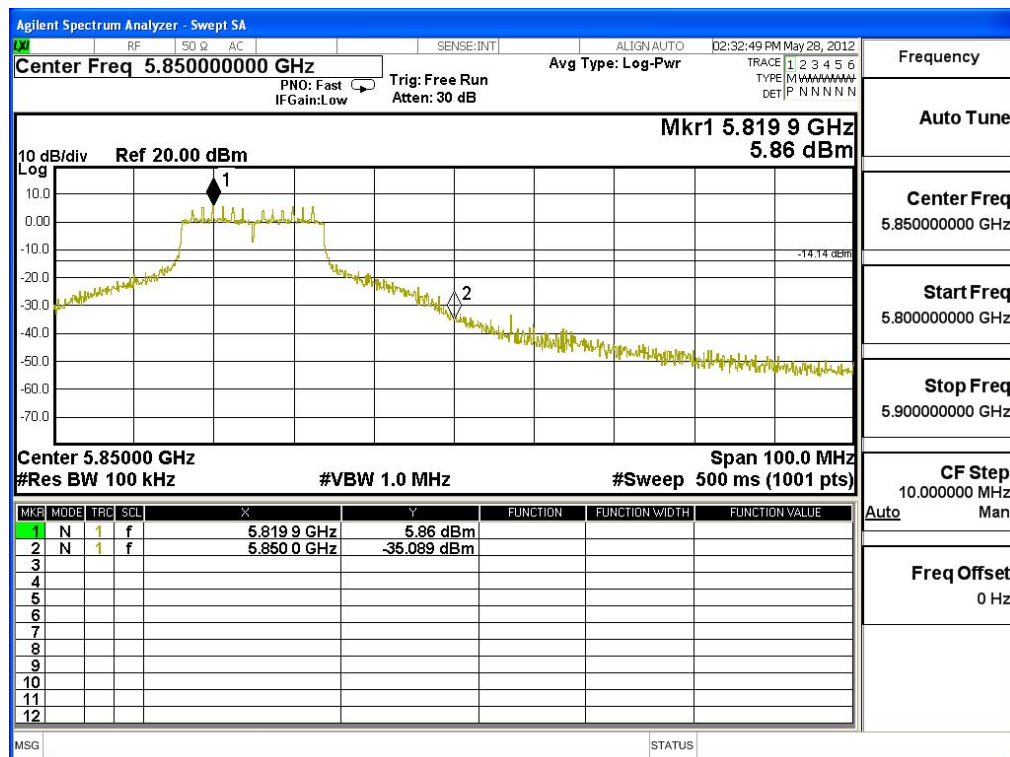
Test Frequency (MHz)	Measurement Level Δ (dB)	Limit Δ (dB)	Result
5745	28.07	>20	PASS



Product : 802.11 a/b/g/n, 2.4G/5G 3T3R Wireless Module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit - 802.11n-20BW_21.7Mbps(5G Band)

Chain A

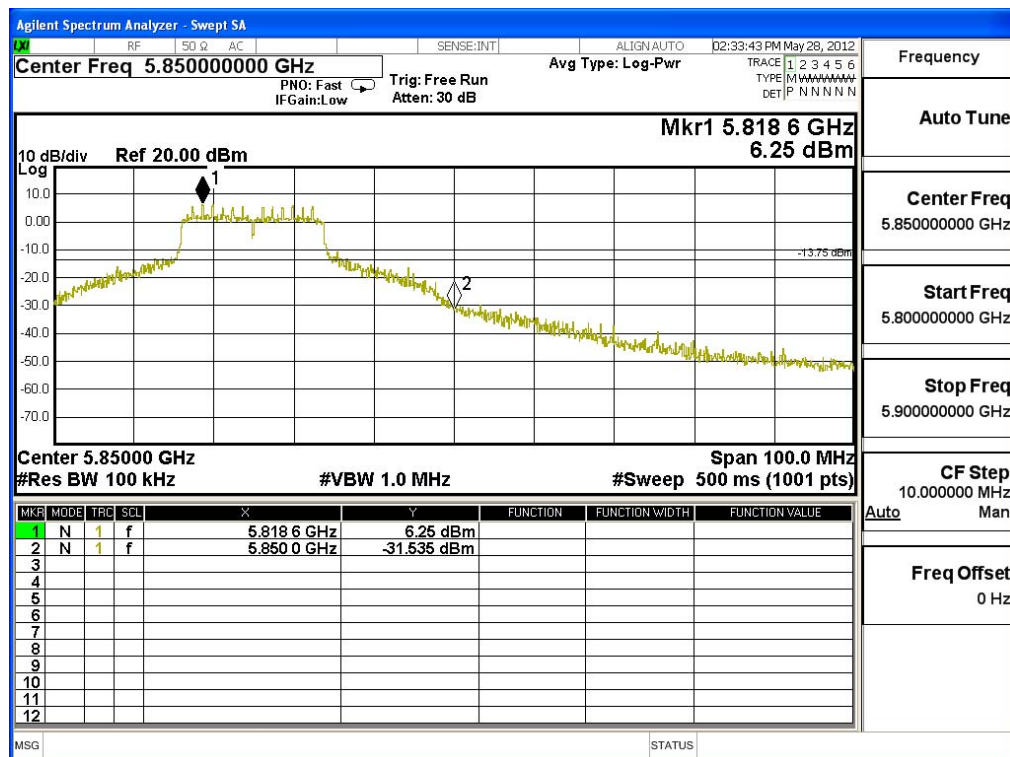
Test Frequency (MHz)	Measurement Level Δ (dB)	Limit Δ (dB)	Result
5825	40.949	>20	PASS



Product : 802.11 a/b/g/n, 2.4G/5G 3T3R Wireless Module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit - 802.11n-20BW_21.7Mbps(5G Band)

Chain B

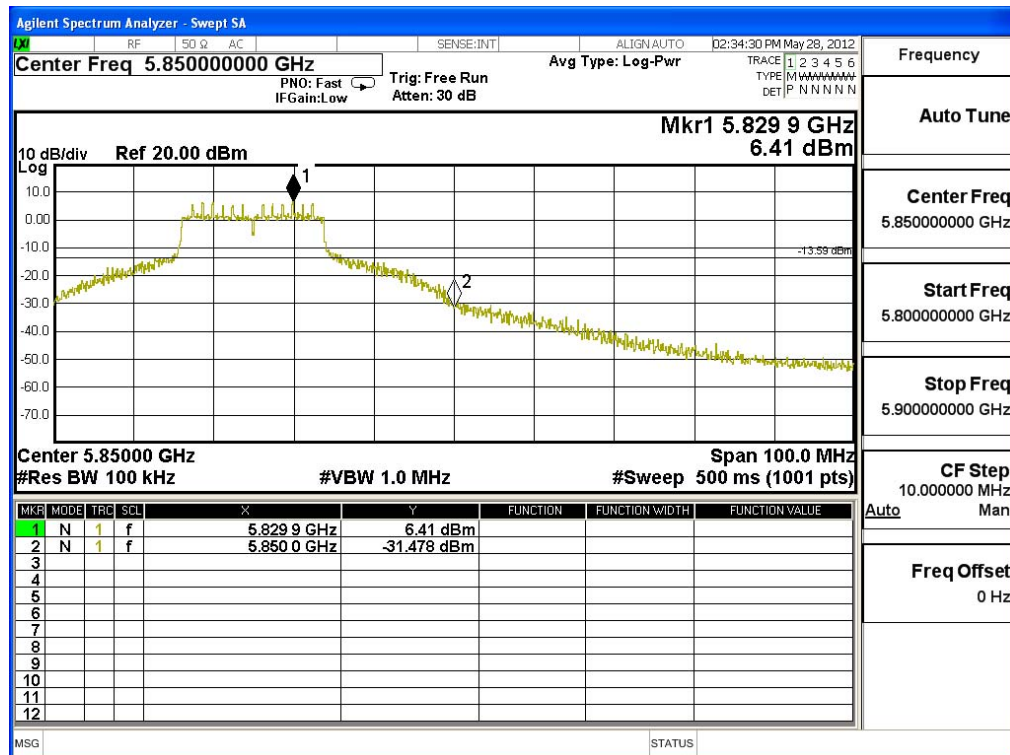
Test Frequency (MHz)	Measurement Level Δ (dB)	Limit Δ (dB)	Result
5825	37.785	>20	PASS



Product : 802.11 a/b/g/n, 2.4G/5G 3T3R Wireless Module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit - 802.11n-20BW_21.7Mbps(5G Band)

Chain C

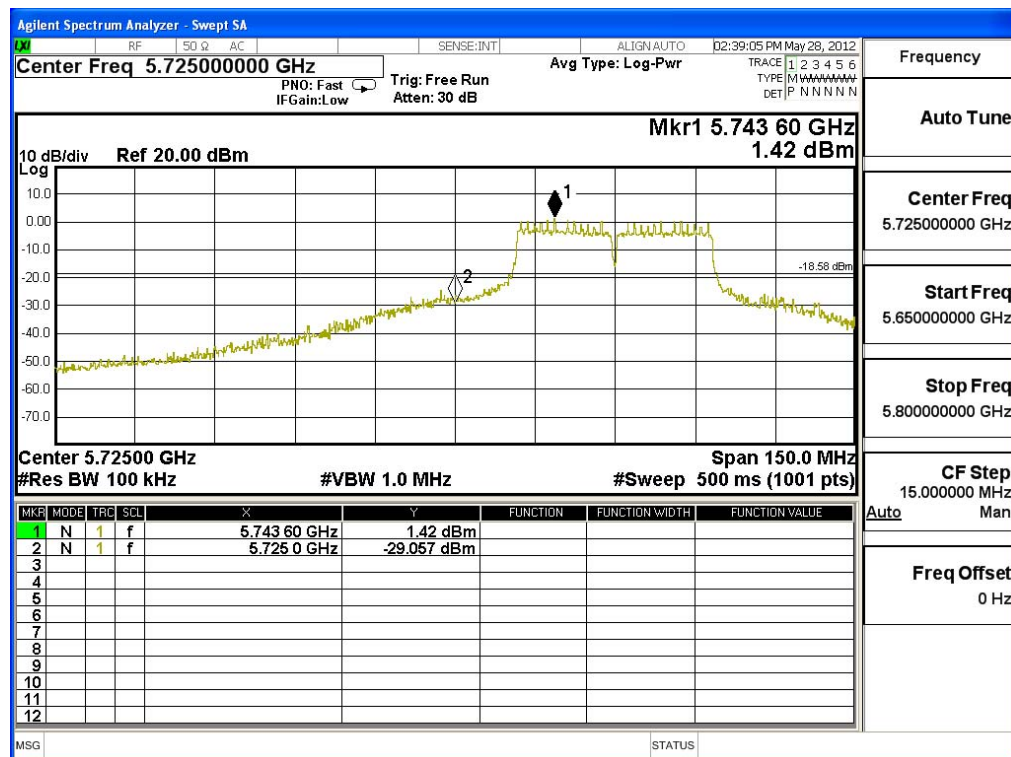
Test Frequency (MHz)	Measurement Level Δ (dB)	Limit Δ (dB)	Result
5825	37.888	>20	PASS



Product : 802.11 a/b/g/n, 2.4G/5G 3T3R Wireless Module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 7: Transmit - 802.11n-40BW_45Mbps(5G Band)

Chain A

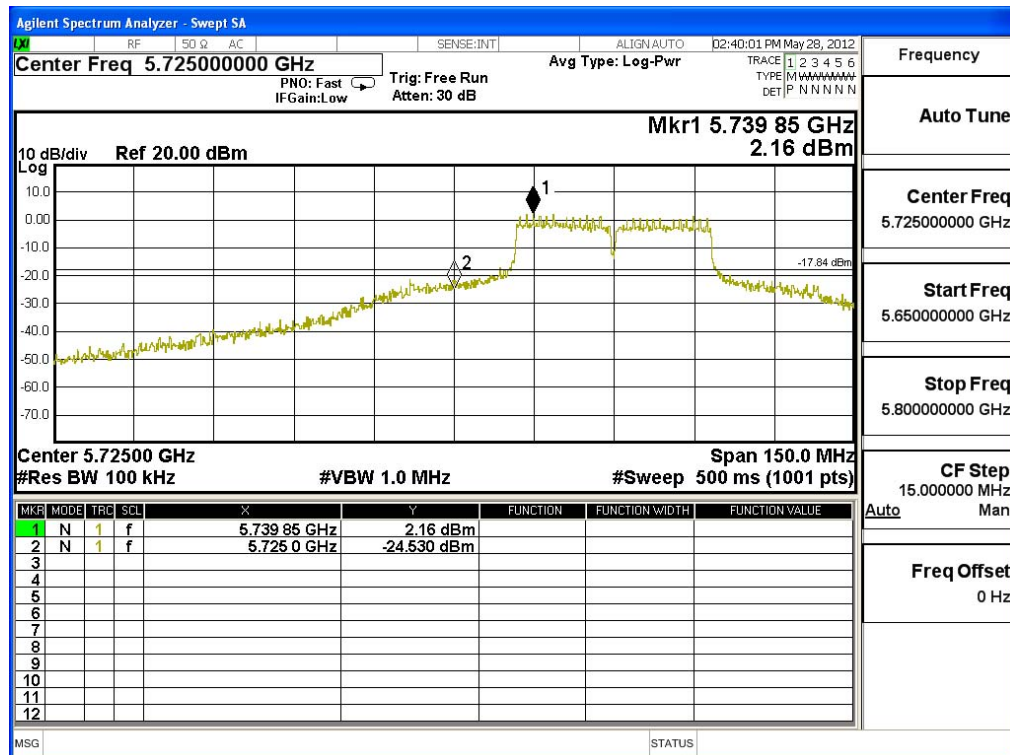
Test Frequency (MHz)	Measurement Level Δ (dB)	Limit Δ (dB)	Result
5755	30.477	>20	PASS



Product : 802.11 a/b/g/n, 2.4G/5G 3T3R Wireless Module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 7: Transmit - 802.11n-40BW_45Mbps(5G Band)

Chain B

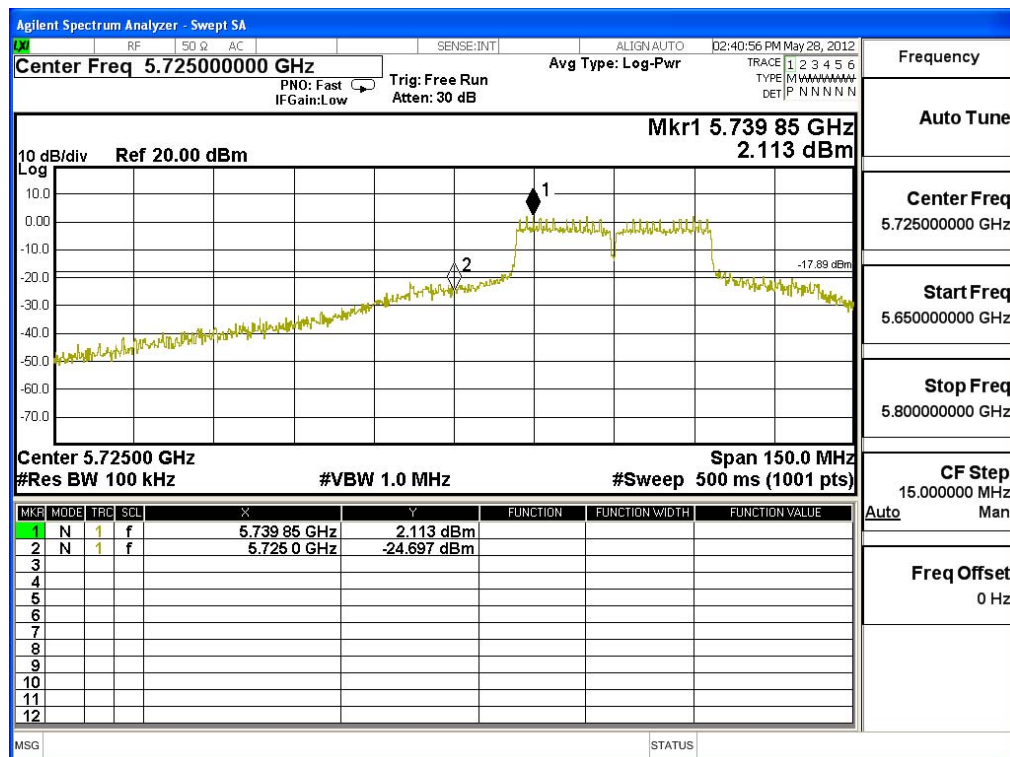
Test Frequency (MHz)	Measurement Level Δ (dB)	Limit Δ (dB)	Result
5755	26.69	>20	PASS



Product : 802.11 a/b/g/n, 2.4G/5G 3T3R Wireless Module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 7: Transmit - 802.11n-40BW_45Mbps(5G Band)

Chain C

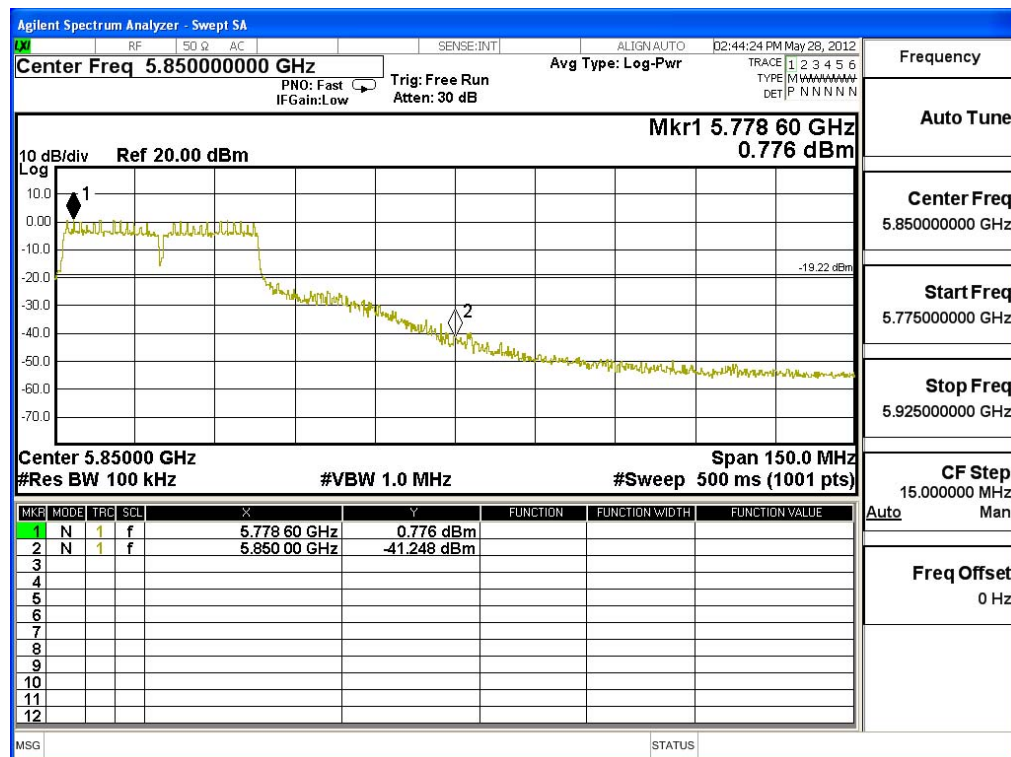
Test Frequency (MHz)	Measurement Level Δ (dB)	Limit Δ (dB)	Result
5755	26.81	>20	PASS



Product : 802.11 a/b/g/n, 2.4G/5G 3T3R Wireless Module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 7: Transmit - 802.11n-40BW_45Mbps(5G Band)

Chain A

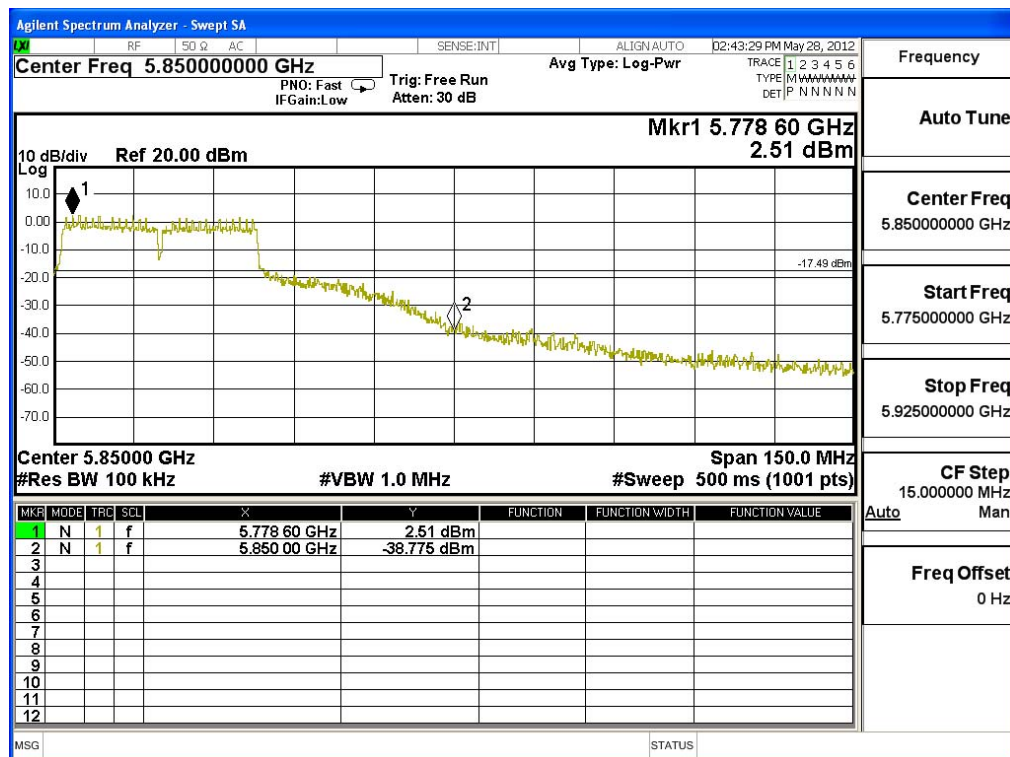
Test Frequency (MHz)	Measurement Level Δ (dB)	Limit Δ (dB)	Result
5795	42.024	>20	PASS



Product : 802.11 a/b/g/n, 2.4G/5G 3T3R Wireless Module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 7: Transmit - 802.11n-40BW_45Mbps(5G Band)

Chain B

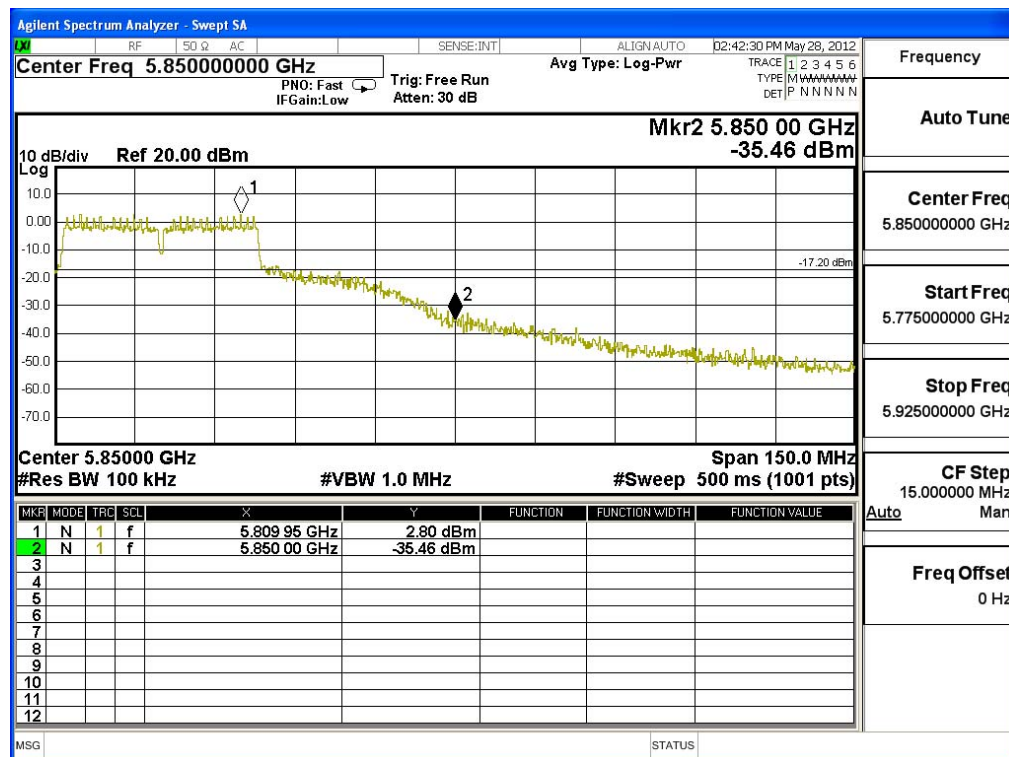
Test Frequency (MHz)	Measurement Level Δ (dB)	Limit Δ (dB)	Result
5795	41.285	>20	PASS



Product : 802.11 a/b/g/n, 2.4G/5G 3T3R Wireless Module
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 7: Transmit - 802.11n-40BW_45Mbps(5G Band)

Chain C

Test Frequency (MHz)	Measurement Level Δ (dB)	Limit Δ (dB)	Result
5795	38.26	>20	PASS



7. Occupied Bandwidth

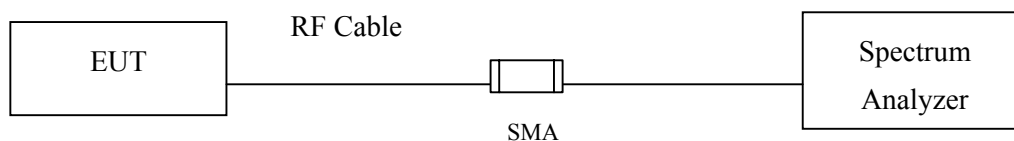
7.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2012
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2012
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2012

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, 2003; tested according to DTS test procedure of Jan. 2012 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

Set RBW = 1-5% of the emission bandwidth, VBW $\geq$ 3*RBW

7.5. Uncertainty

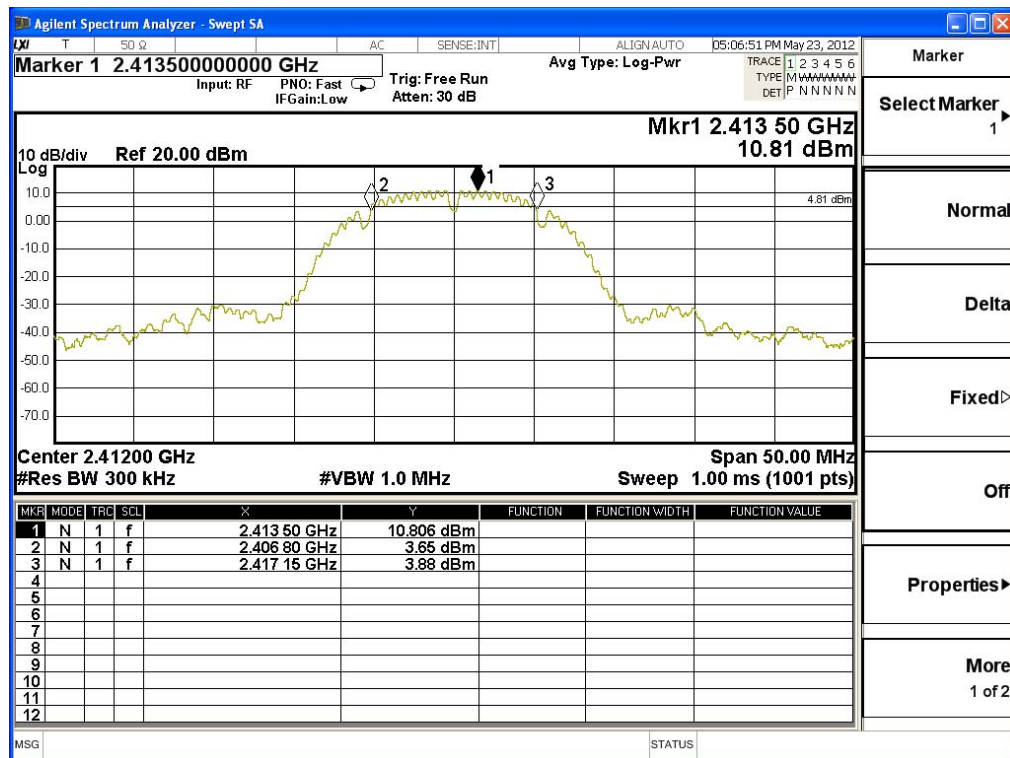
$\pm 150\text{Hz}$

7.6. Test Result of Occupied Bandwidth

Product : 802.11 a/b/g/n, 2.4G/5G 3T3R Wireless Module
 Test Item : Occupied 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	10350	>500	Pass

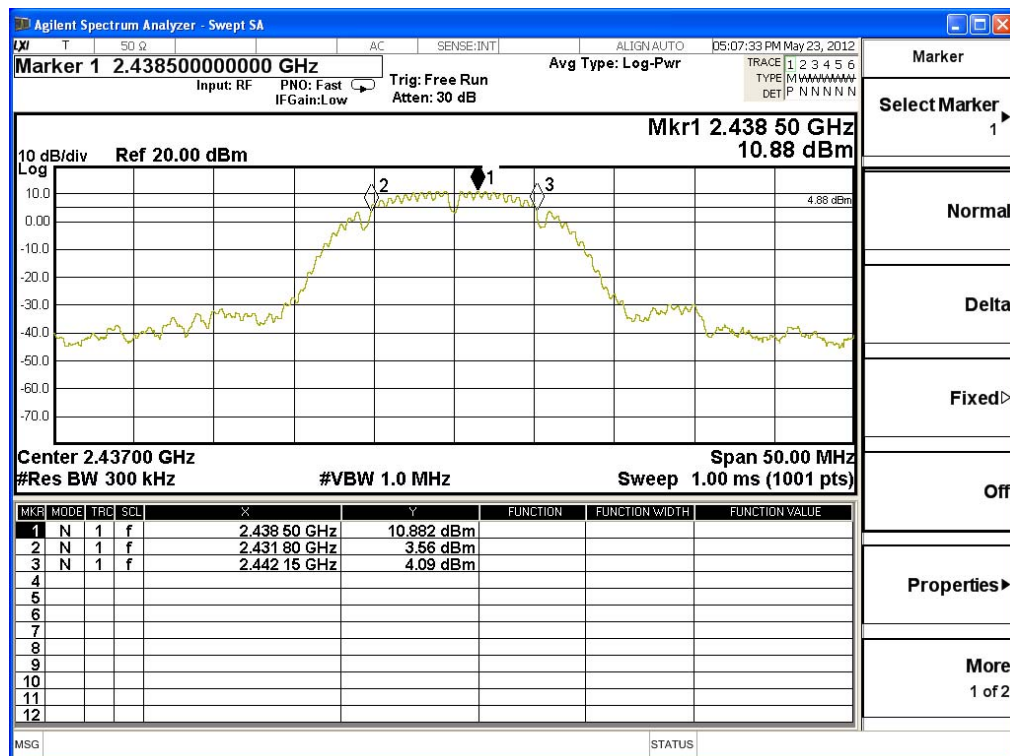
Figure Channel 1:



Product : 802.11 a/b/g/n, 2.4G/5G 3T3R Wireless Module
 Test Item : Occupied 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	10350	>500	Pass

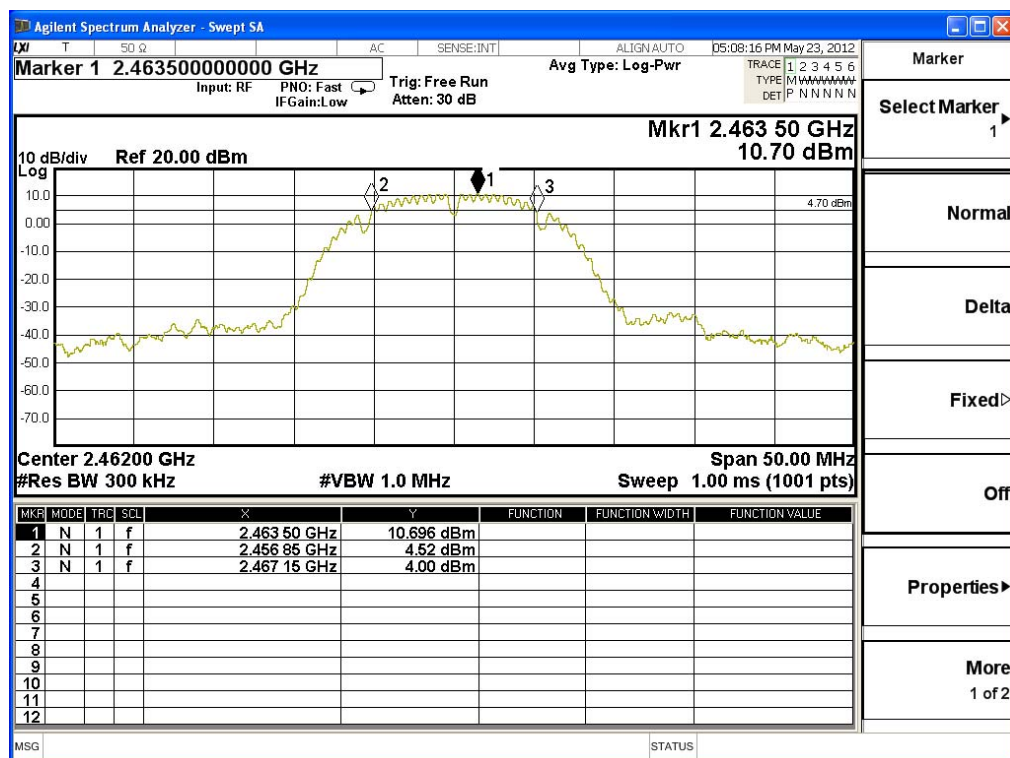
Figure Channel 6:



Product : 802.11 a/b/g/n, 2.4G/5G 3T3R Wireless Module
 Test Item : Occupied 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	10300	>500	Pass

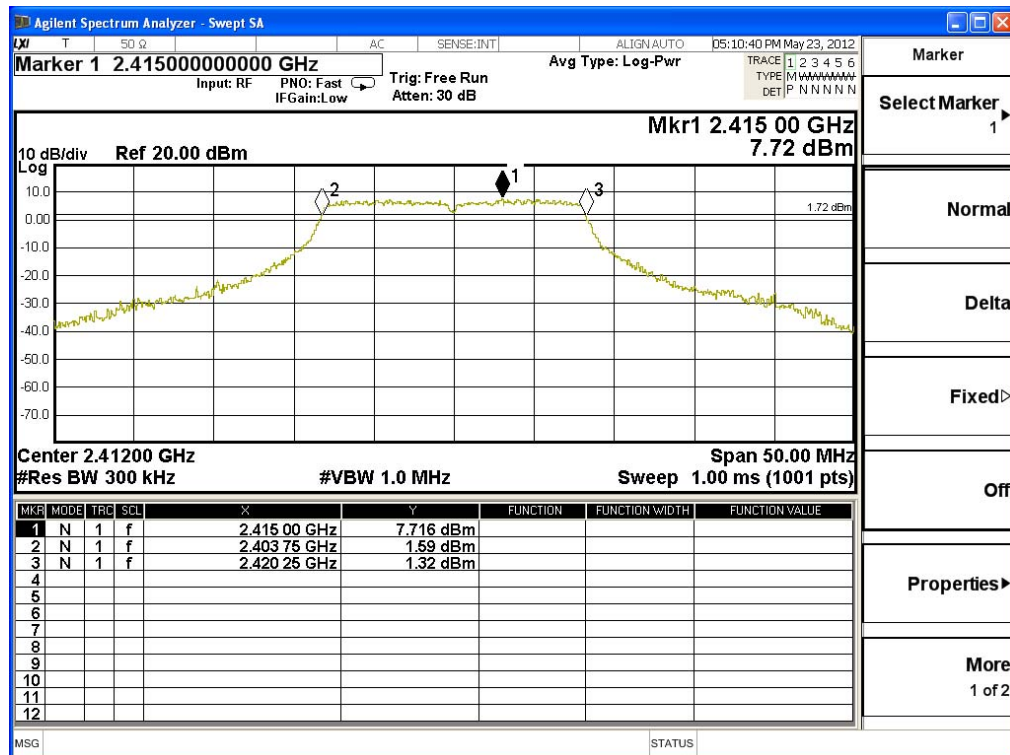
Figure Channel 11:



Product : 802.11 a/b/g/n, 2.4G/5G 3T3R Wireless Module
 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
1	2412.00	16500	>500	Pass

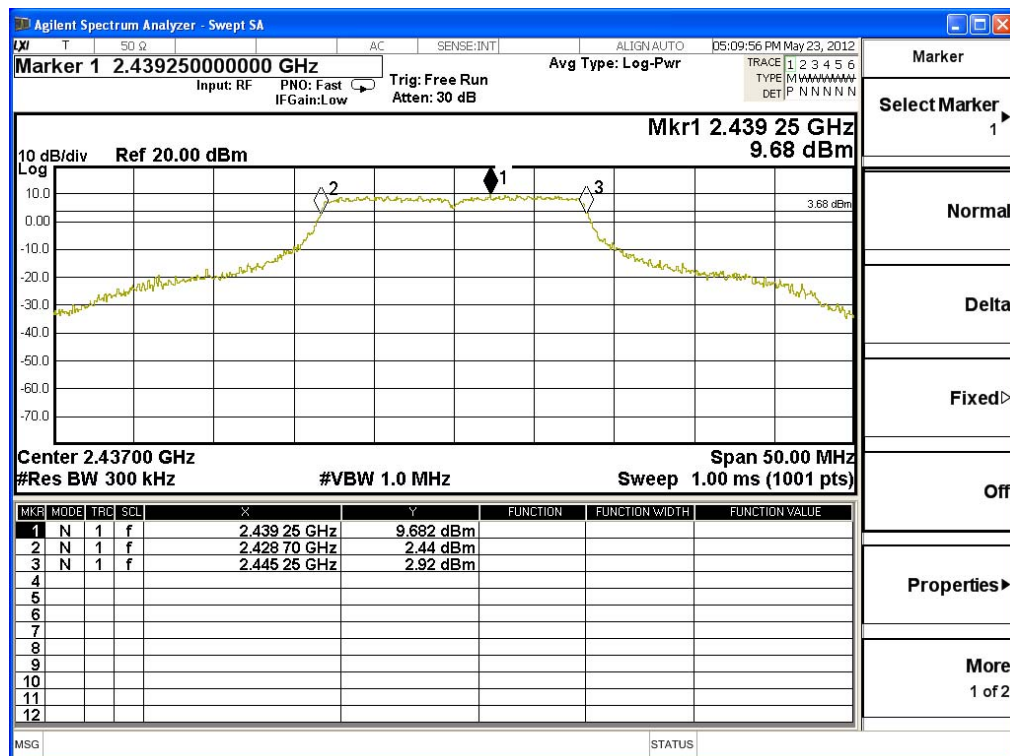
Figure Channel 1:



Product : 802.11 a/b/g/n, 2.4G/5G 3T3R Wireless Module
 Test Item : Occupied 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	16550	>500	Pass

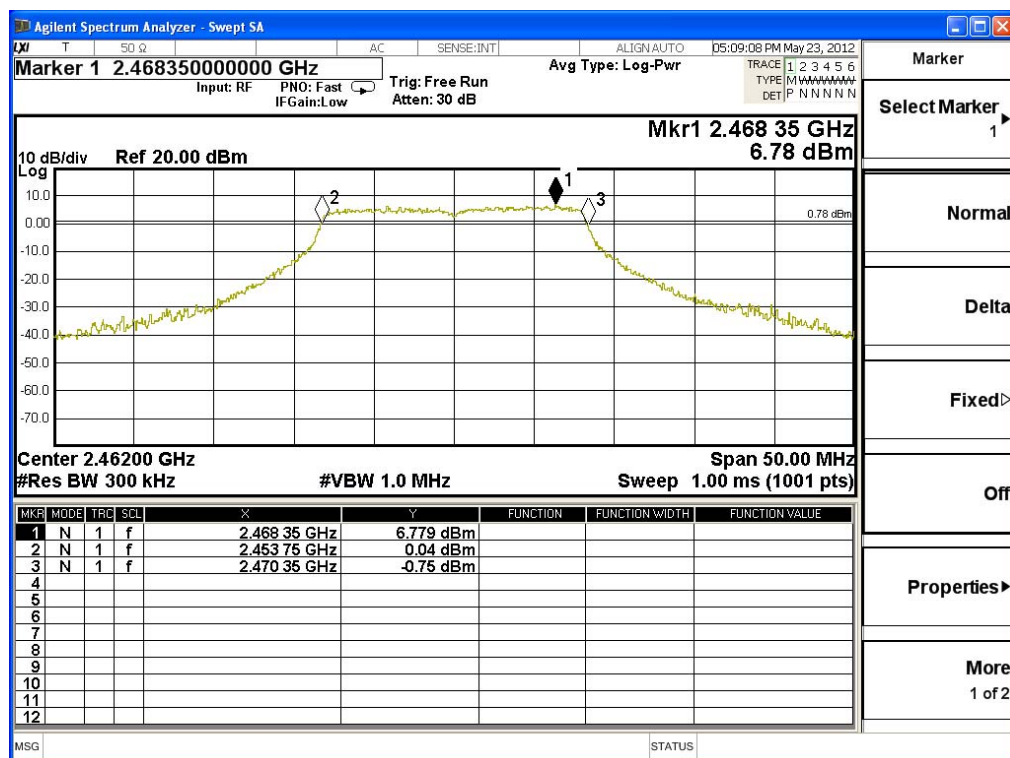
Figure Channel 6:



Product : 802.11 a/b/g/n, 2.4G/5G 3T3R Wireless Module
 Test Item : Occupied 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	16600	>500	Pass

Figure Channel 11:



Product : 802.11 a/b/g/n, 2.4G/5G 3T3R Wireless Module
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit - 802.11a 6Mbps (5745MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
149	5745.00	16550	>500	Pass

Figure Channel 149:

