

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:

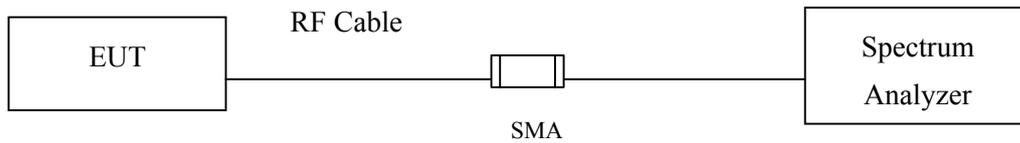
The following test equipments are used during the band edge tests:

Test Site	Equipment	Manufacturer	Model No./Serial No.	Last Cal.	
☒ Site # 3		Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2012
	X	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2012
		Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2012
		Pre-Amplifier	QTK	QTK-AMP-03 / 0003	May, 2012
	X	Pre-Amplifier	QTK	AP-180C / CHM_0906076	Sep., 2012
		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., 2012
	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

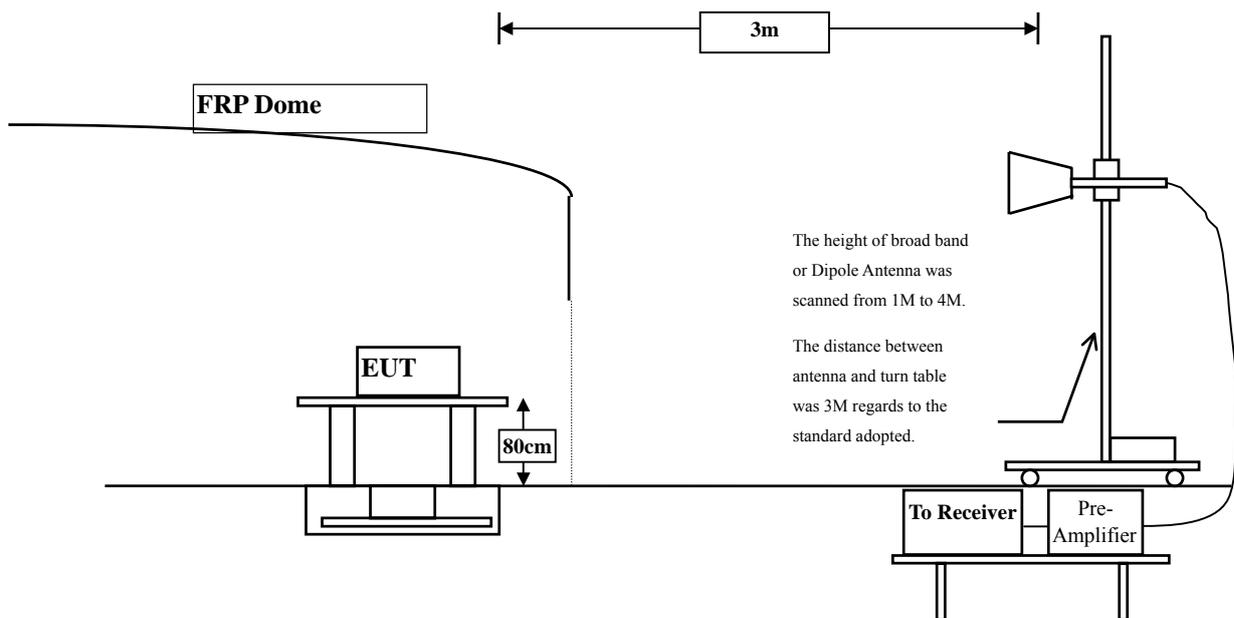
- Note:
1. All instruments are calibrated every one year.
 2. The test instruments marked by “X” are used to measure the final test results.

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 : Notebook PC
 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)	2390.000	31.509	25.423	56.932	74.00	54.00	Pass
01 (Peak)	2413.200	31.647	63.518	95.165	--	--	Pass
01 (Average)	2390.000	31.509	11.875	43.384	74.00	54.00	Pass
01 (Average)	2411.200	31.632	58.474	90.106	--	--	Pass

Figure Channel 01:

Horizontal (Peak)

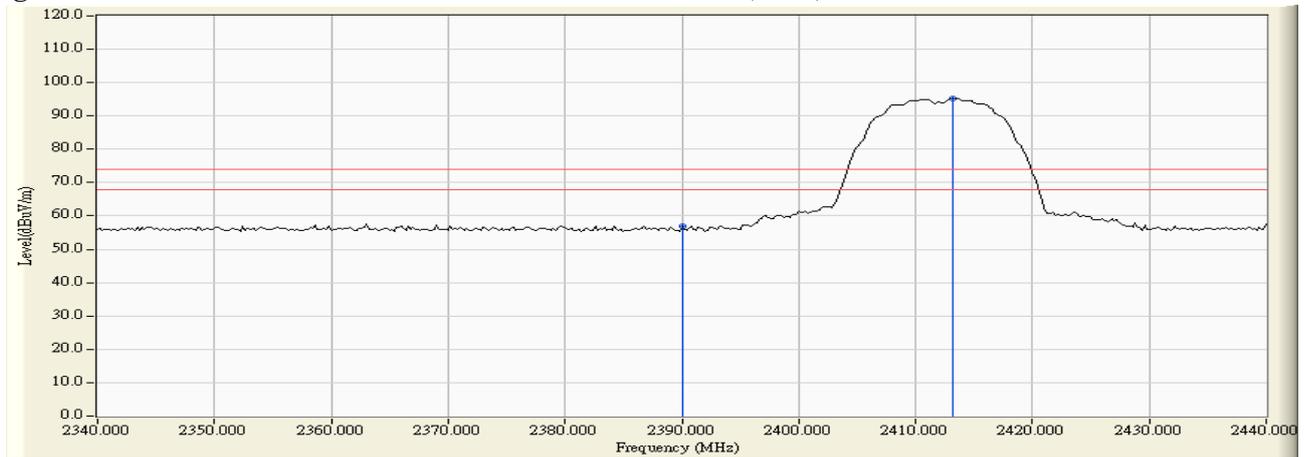
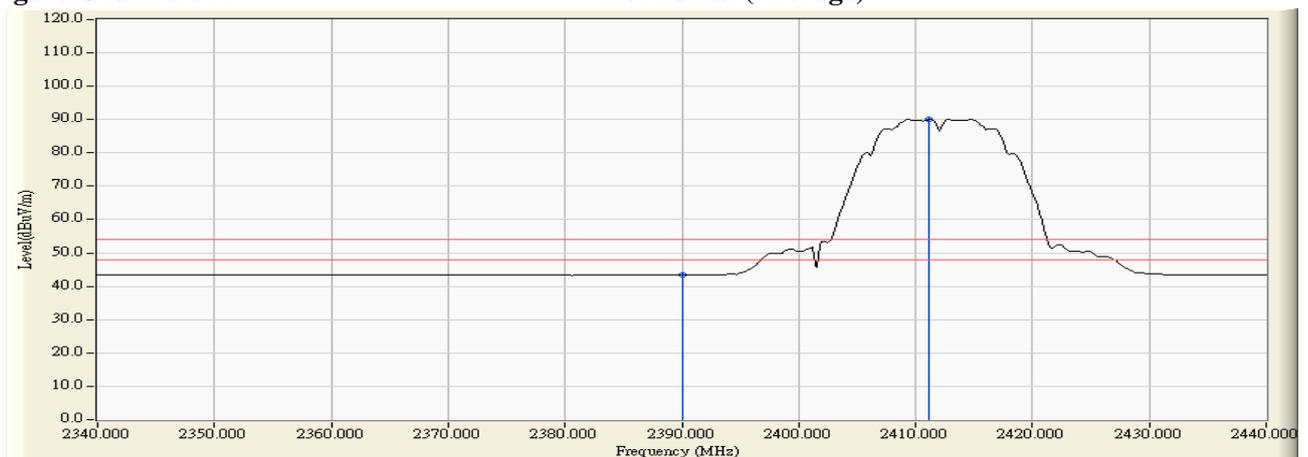


Figure Channel 01:

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 : Notebook PC
 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)	2390.000	30.915	24.559	55.474	74.00	54.00	Pass
01 (Peak)	2413.000	30.956	66.162	97.118	--	--	Pass
01 (Average)	2390.000	30.915	11.886	42.801	74.00	54.00	Pass
01 (Average)	2411.200	30.944	61.454	92.398	--	--	Pass

Figure Channel 01: Vertical (Peak)

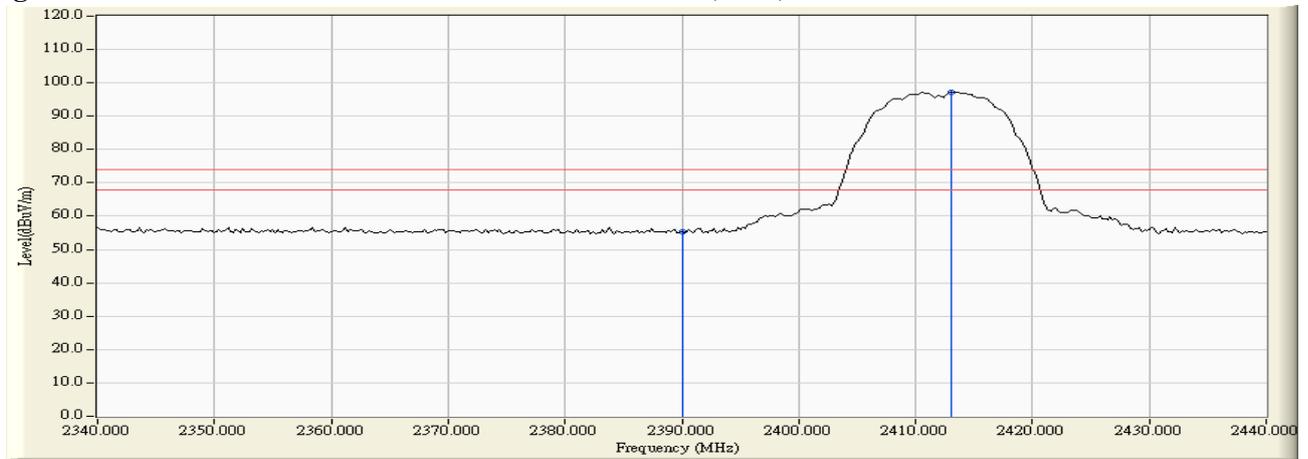
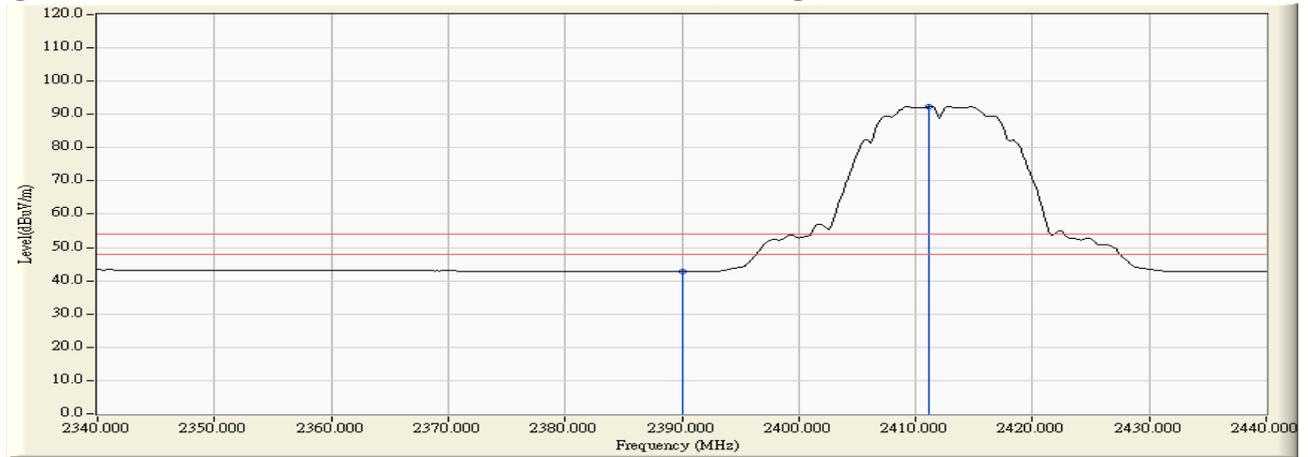


Figure Channel 01: Vertical (Average)



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 : Notebook PC
 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)	2460.900	32.011	64.720	96.731	--	--	Pass
11 (Peak)	2483.500	32.182	24.585	56.767	74.00	54.00	Pass
11 (Average)	2461.100	32.013	60.568	92.581	--	--	Pass
11 (Average)	2483.500	32.182	11.875	44.057	74.00	54.00	Pass

Figure Channel 11: Horizontal (Peak)

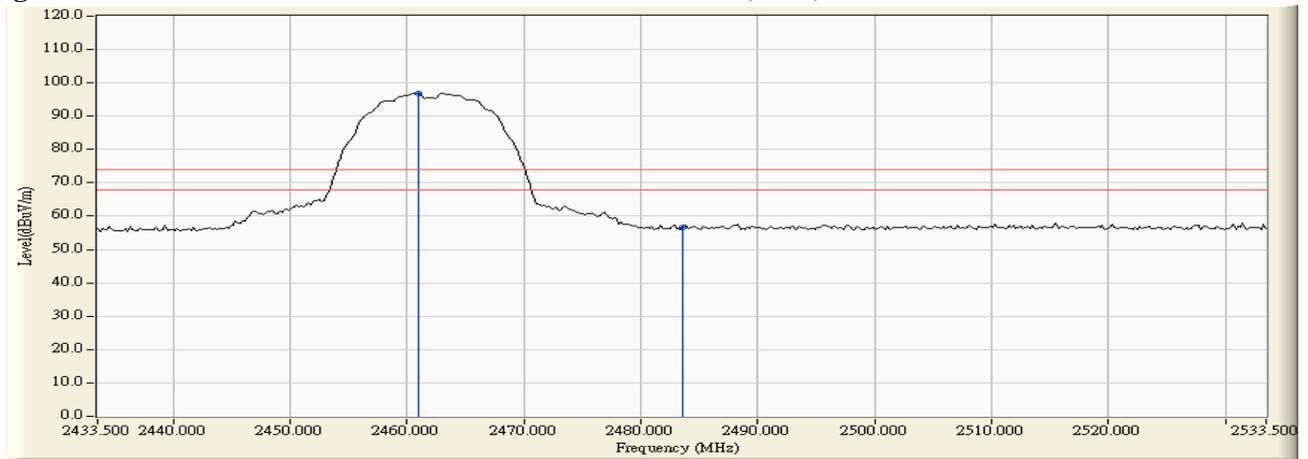
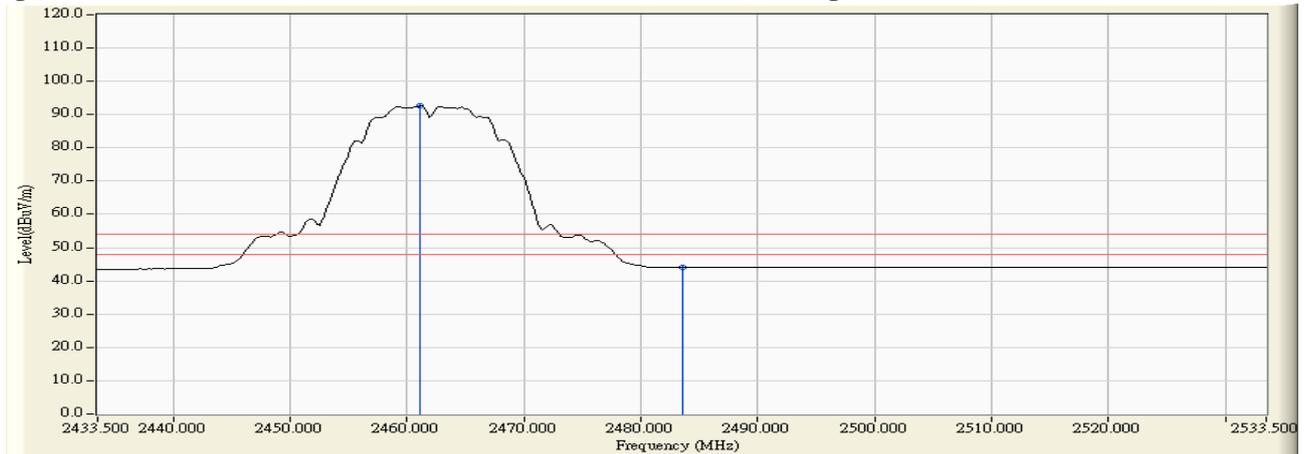


Figure Channel 11: Horizontal (Average)



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 : Notebook PC
 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)	2460.900	31.283	66.274	97.557	--	--	Pass
11 (Peak)	2483.500	31.435	23.968	55.403	74.00	54.00	Pass
11 (Average)	2461.300	31.286	61.478	92.764	--	--	Pass
11 (Average)	2483.500	31.435	11.915	43.350	74.00	54.00	Pass

Figure Channel 11: Vertical (Peak)

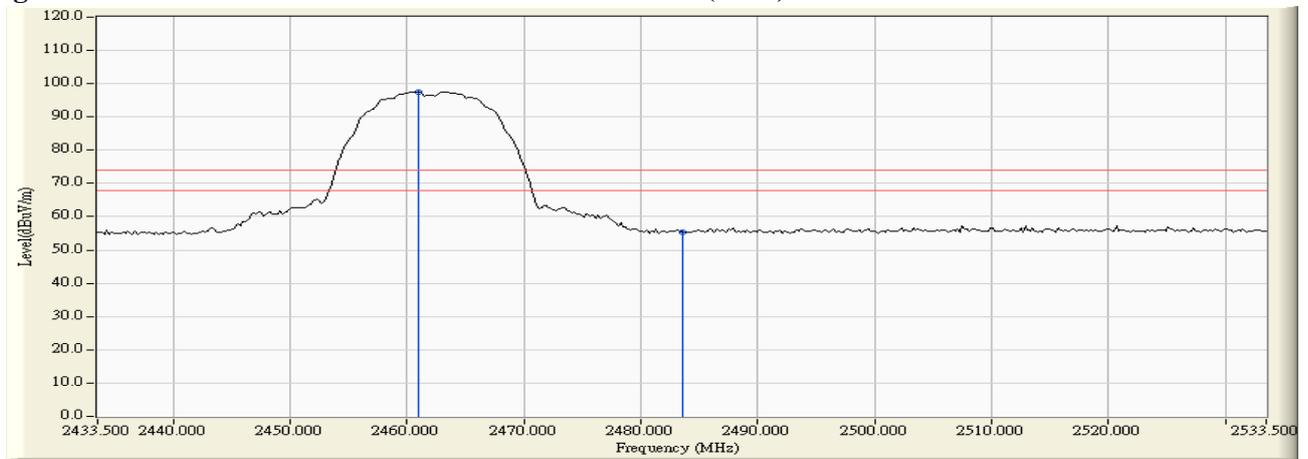
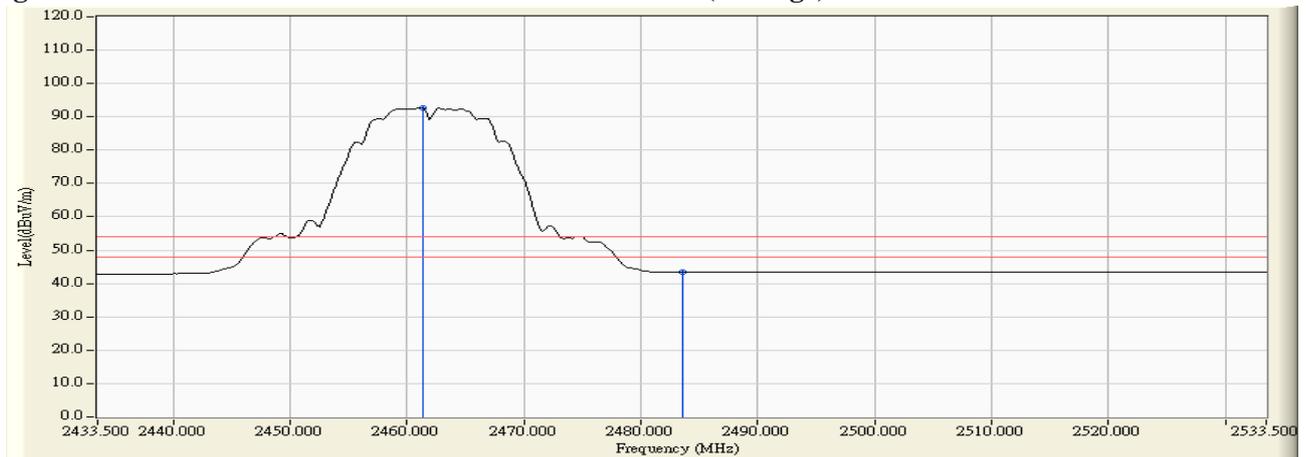


Figure Channel 11: Vertical (Average)



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 : Notebook PC
 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	31.509	30.944	62.453	74.00	54.00	Pass
01 (Peak)	2415.600	31.665	67.035	98.701	--	--	Pass
01(Average)	2390.000	31.509	13.855	45.364	74.00	54.00	Pass
01(Average)	2408.600	31.616	57.084	88.699	--	--	Pass

Figure Channel 01: Horizontal (Peak)

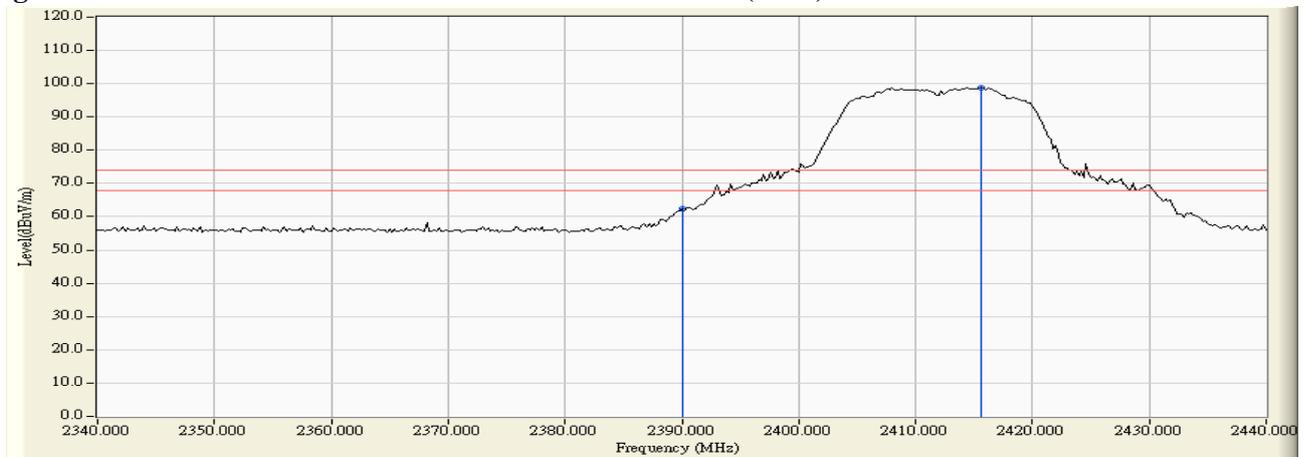
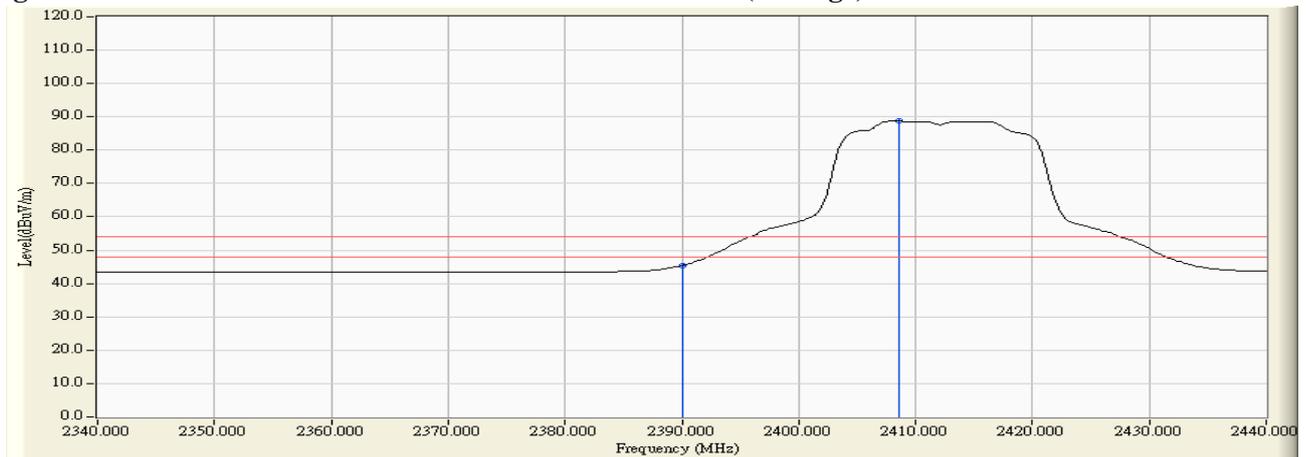


Figure Channel 01: Horizontal (Average)



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 : Notebook PC
 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)	2389.600	30.917	32.081	62.998	74.00	54.00	Pass
01 (Peak)	2390.000	30.915	31.415	62.330	74.00	54.00	Pass
01 (Peak)	2415.000	30.970	69.652	100.622	--	--	Pass
01 (Average)	2390.000	30.915	15.126	46.041	74.00	54.00	Pass
01 (Average)	2415.800	30.975	59.783	90.758	--	--	Pass

Figure Channel 01:

Vertical (Peak)

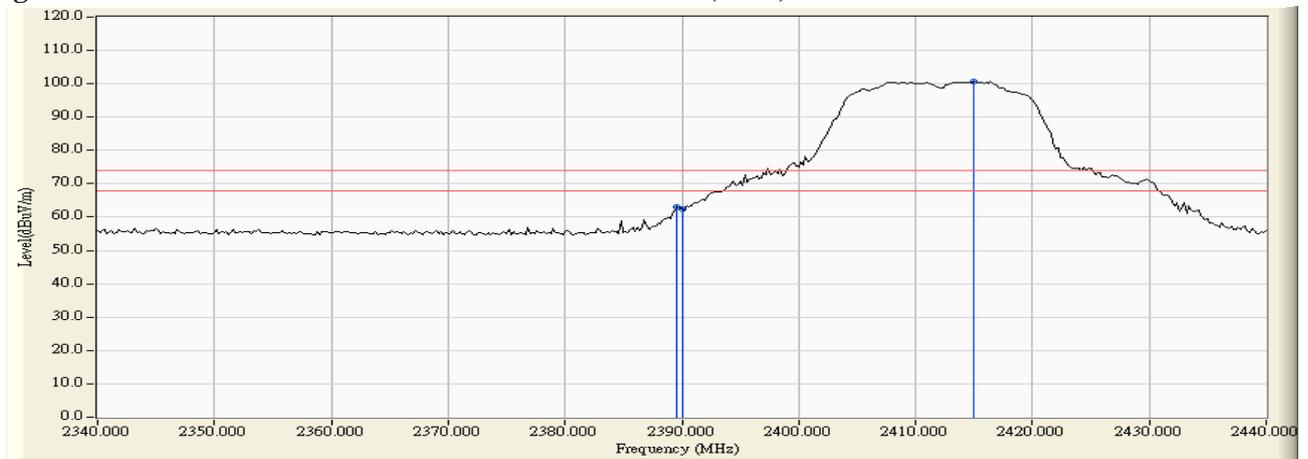
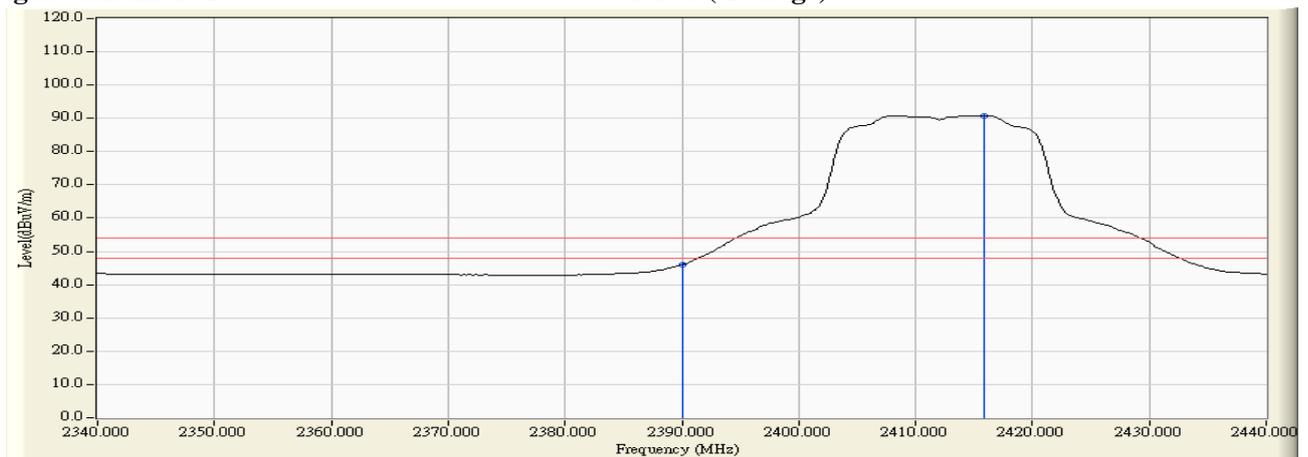


Figure Channel 01:

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 : Notebook PC
 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)	2461.100	32.013	65.196	97.209	--	--	Pass
11 (Peak)	2483.500	32.182	26.914	59.096	74.00	54.00	Pass
11 (Average)	2460.300	32.006	55.418	87.425	--	--	Pass
11 (Average)	2483.500	32.182	12.550	44.732	74.00	54.00	Pass

Figure Channel 11: Horizontal (Peak)

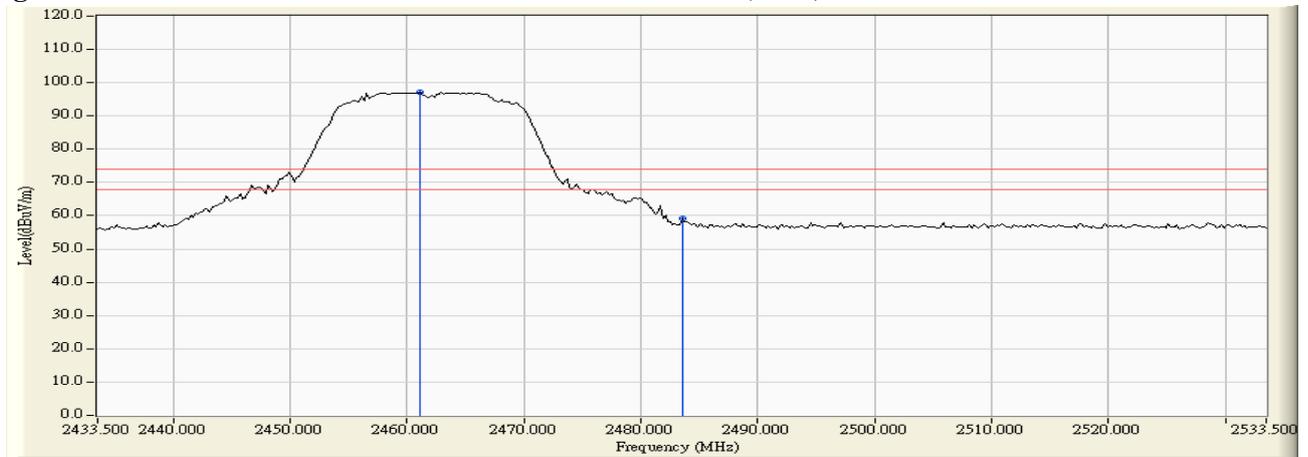
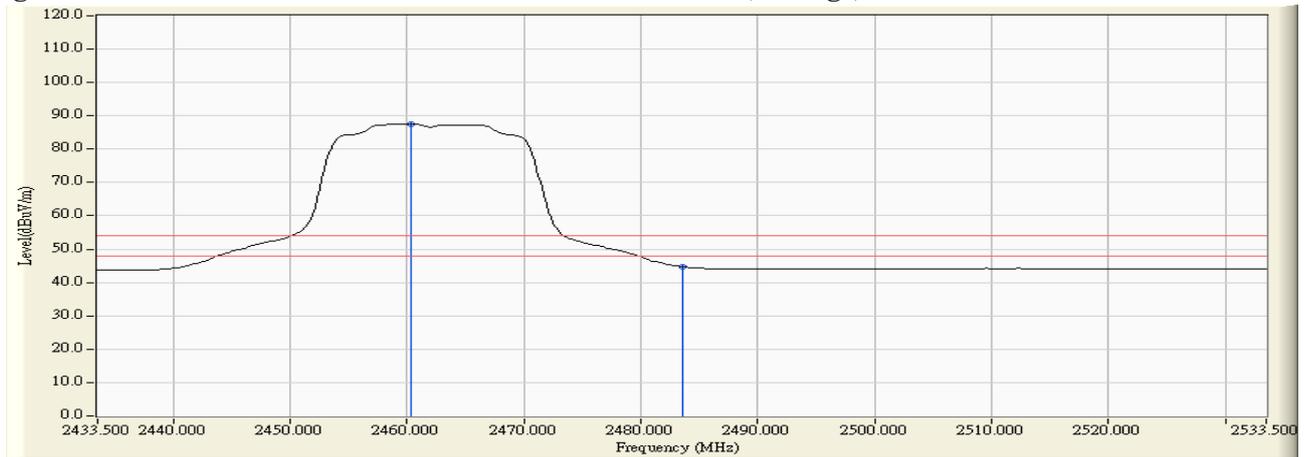


Figure Channel 11: Horizontal (Average)



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 : Notebook PC
 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)	2463.500	31.300	66.447	97.747	--	--	Pass
11 (Peak)	2483.500	31.435	27.433	58.868	74.00	54.00	Pass
11 (Average)	2465.900	31.317	56.597	87.914	--	--	Pass
11 (Average)	2483.500	31.435	12.878	44.313	74.00	54.00	Pass

Figure Channel 11: Vertical (Peak)

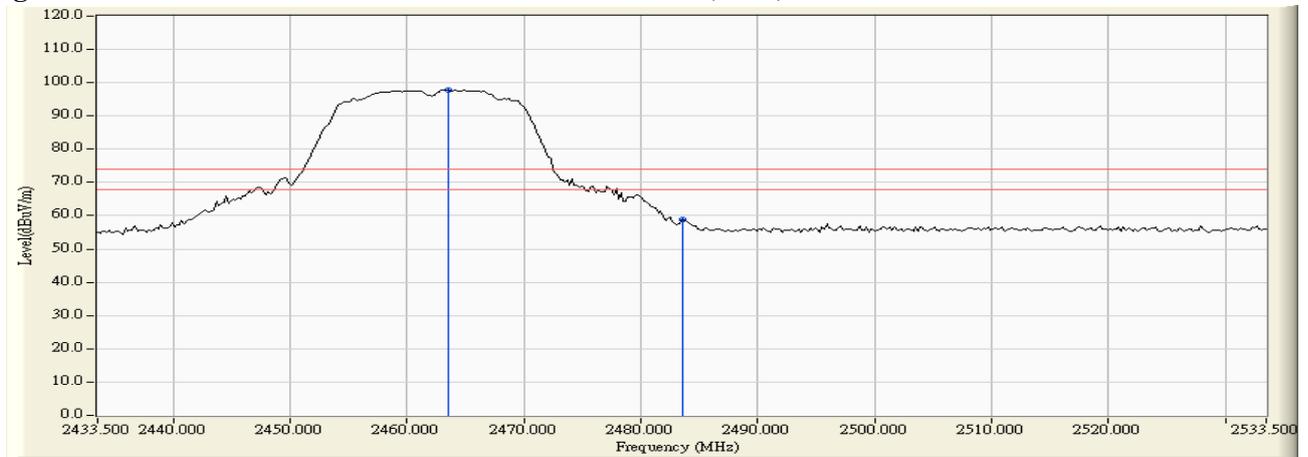
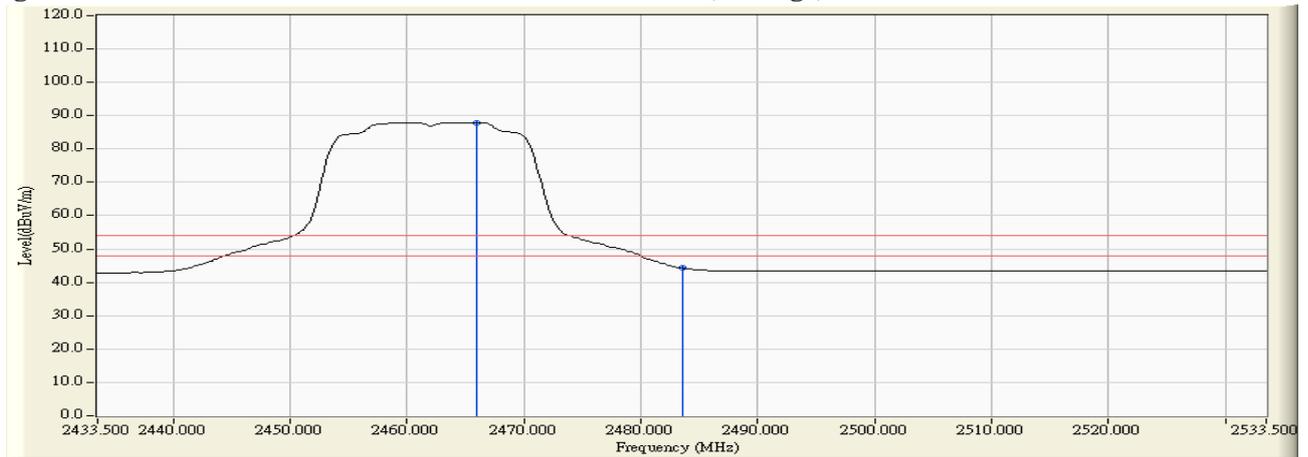


Figure Channel 11: Vertical (Average)



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 : Notebook PC
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit - 802.11n-20BW_14.4Mbps(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)	2390.000	31.509	29.871	61.380	74.00	54.00	Pass
01 (Peak)	2415.800	31.667	71.054	102.721	--	--	Pass
01 (Average)	2390.000	31.509	15.742	47.251	74.00	54.00	Pass
01 (Average)	2414.800	31.660	58.258	89.918	--	--	Pass

Figure Channel 01: Horizontal (Peak)

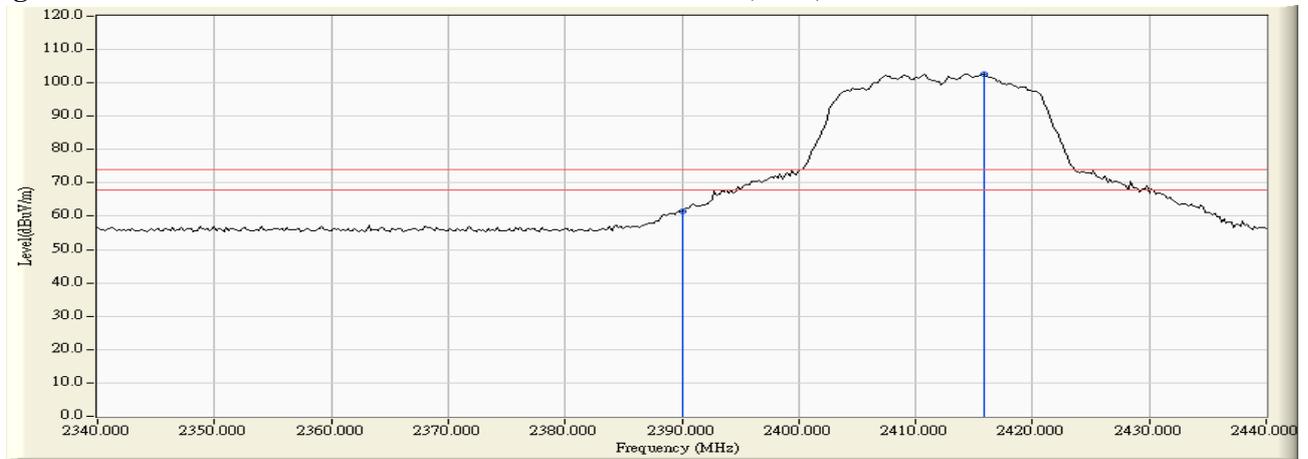
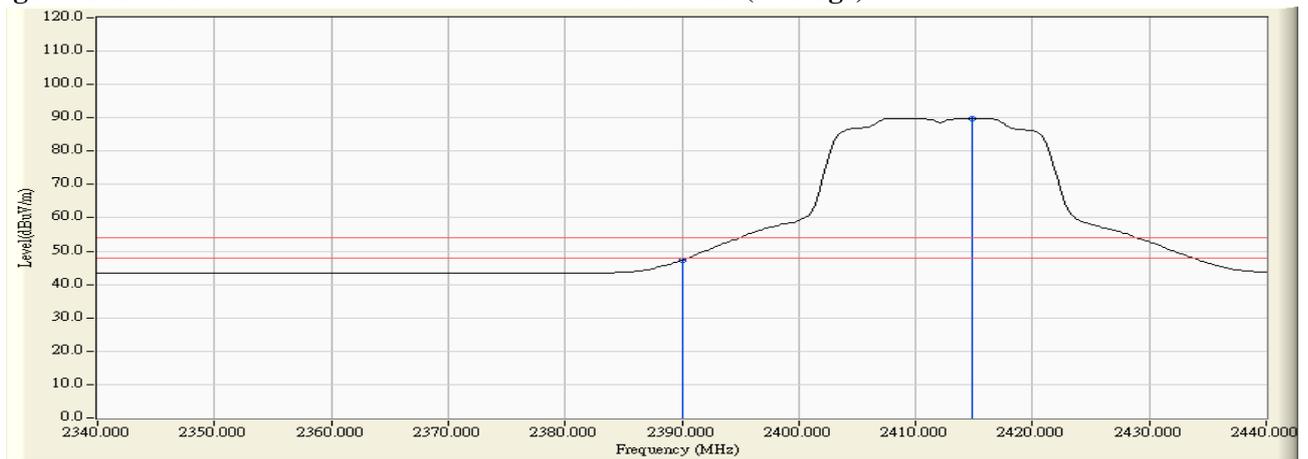


Figure Channel 01: Horizontal (Average)



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 : Notebook PC
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit - 802.11n-20BW_14.4Mbps(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	30.915	31.029	61.944	74.00	54.00	Pass
01 (Peak)	2410.800	30.942	70.552	101.494	--	--	Pass
01 (Average)	2390.000	30.915	15.355	46.270	74.00	54.00	Pass
01 (Average)	2415.400	30.972	57.660	88.632	--	--	Pass

Figure Channel 01:

Vertical (Peak)

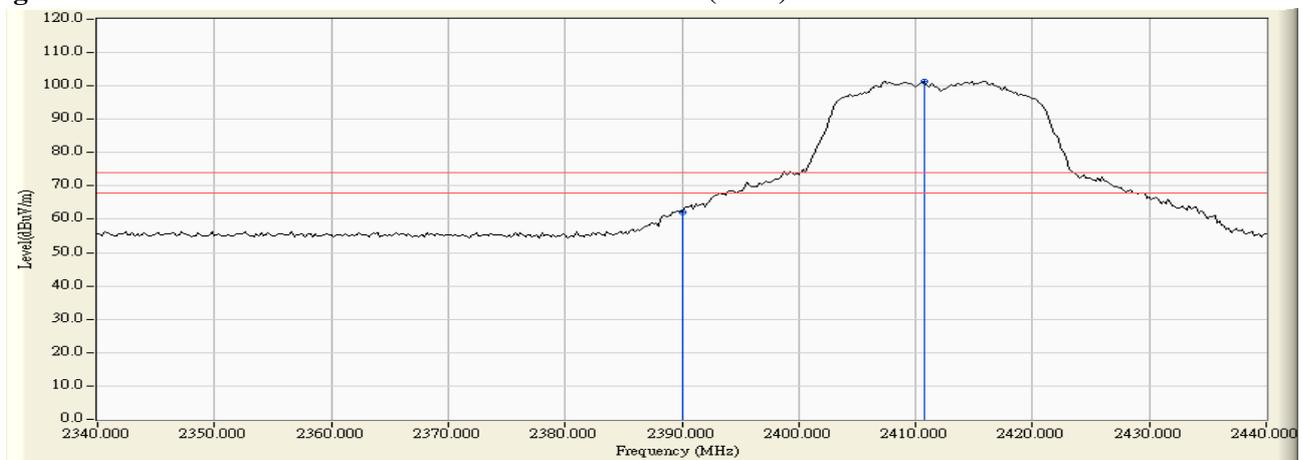
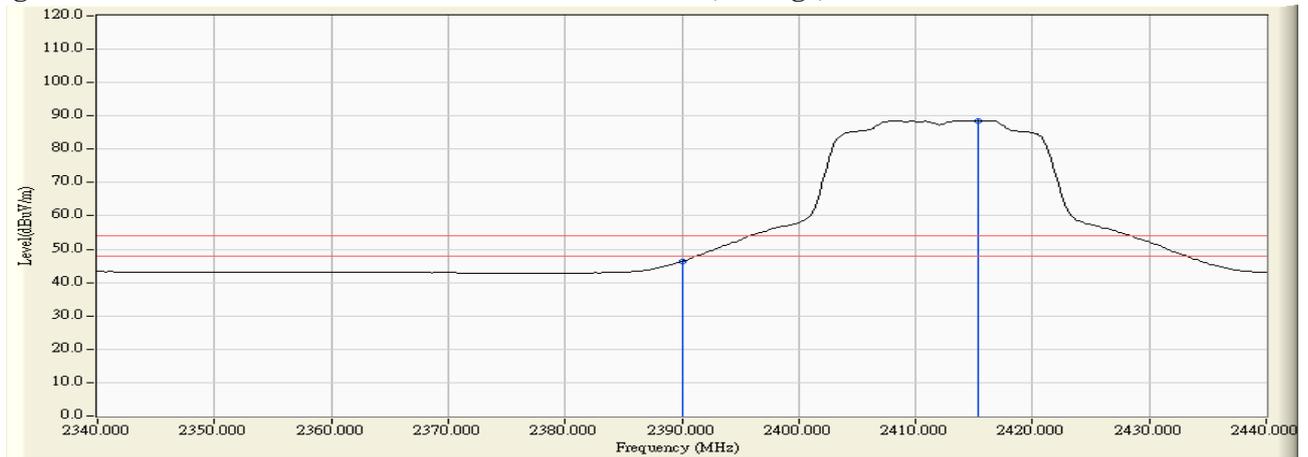


Figure Channel 01:

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 : Notebook PC
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit - 802.11n-20BW_14.4Mbps(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)	2464.300	32.037	66.086	98.123	--	--	Pass
11 (Peak)	2483.500	32.182	26.723	58.905	74.00	54.00	Pass
11 (Average)	2465.900	32.049	53.372	85.421	--	--	Pass
11 (Average)	2483.500	32.182	12.883	45.065	74.00	54.00	Pass

Figure Channel 11: Horizontal (Peak)

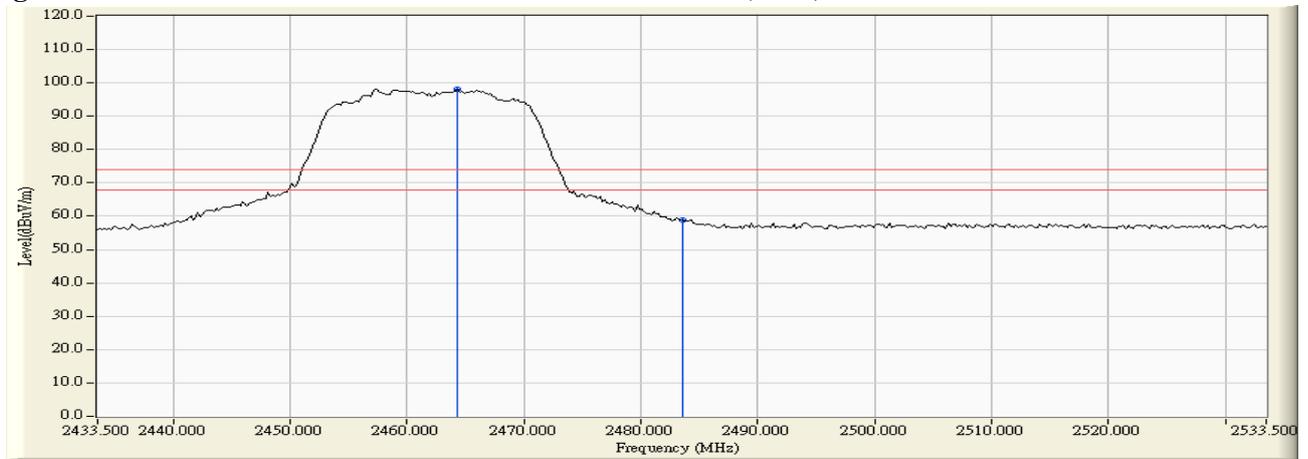
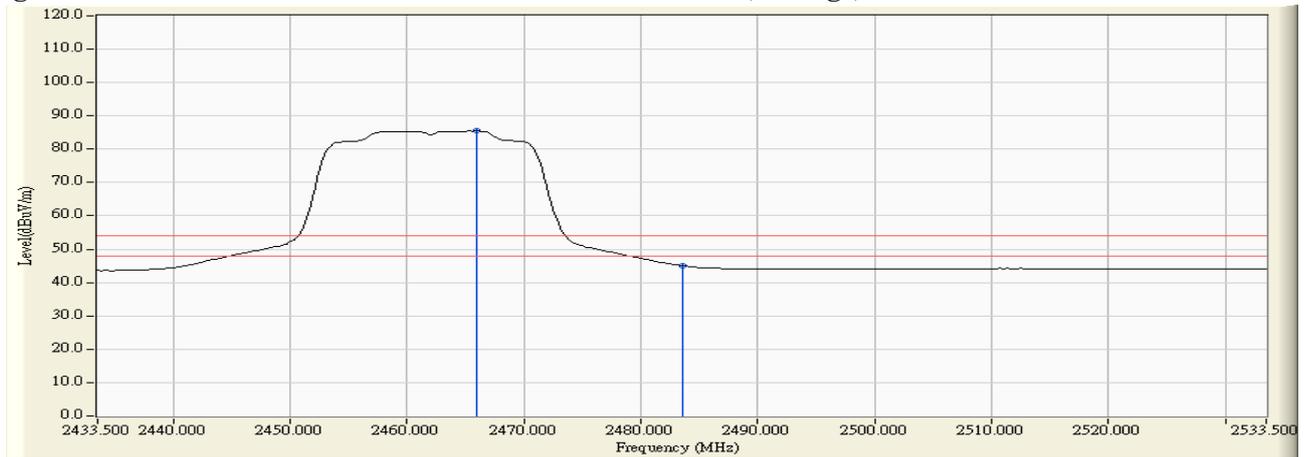


Figure Channel 11: Horizontal (Average)



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 : Notebook PC
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit - 802.11n-20BW_14.4Mbps(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)	2459.300	31.272	67.333	98.605	--	--	--
11 (Peak)	2483.500	31.435	29.759	61.194	74.00	54.00	Pass
11 (Average)	2466.100	31.318	55.026	86.344	--	--	--
11 (Average)	2483.500	31.435	13.363	44.798	74.00	54.00	Pass

Figure Channel 11: Vertical (Peak)

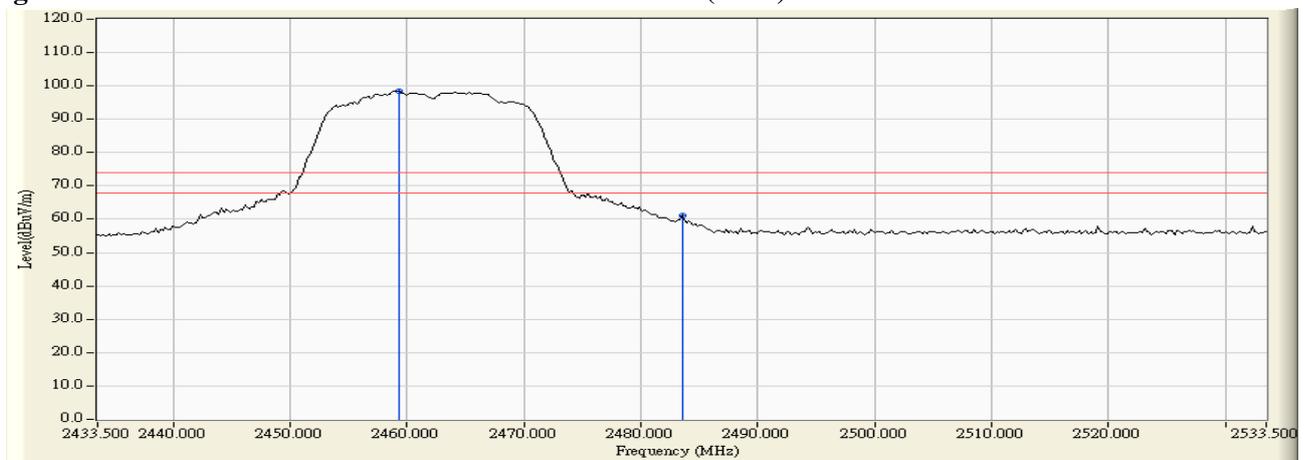
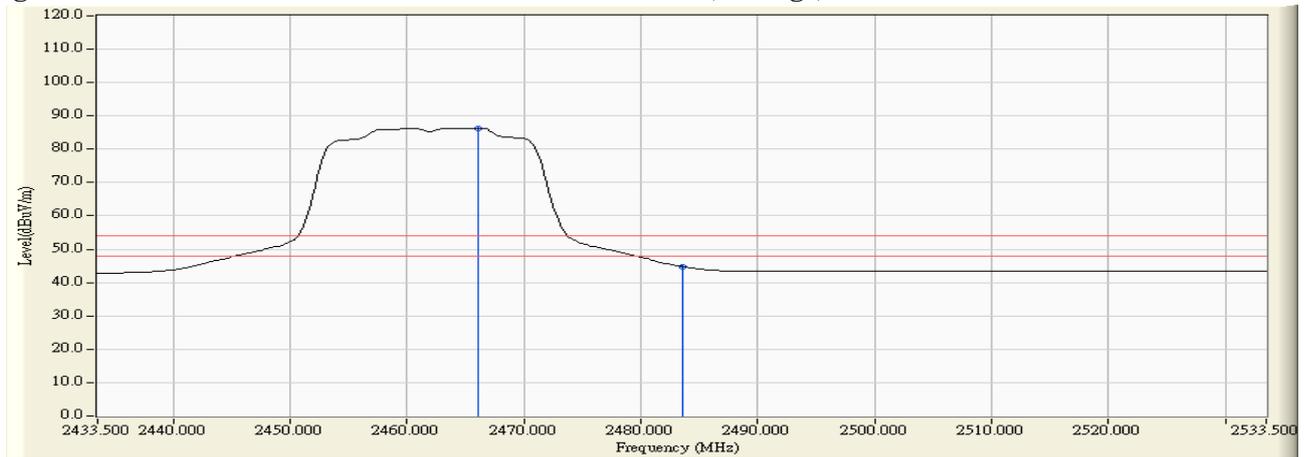


Figure Channel 11: Vertical (Average)



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 : Notebook PC
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 5: Transmit - 802.11n-40BW_30Mbps(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)	2390.000	31.509	25.982	57.491	74.00	54.00	Pass
01 (Peak)	2414.200	31.655	58.916	90.571	--	--	Pass
01 (Average)	2390.000	31.509	12.382	43.891	74.00	54.00	Pass
01 (Average)	2415.200	31.662	45.829	77.492	--	--	Pass

Figure Channel 01: Horizontal (Peak)

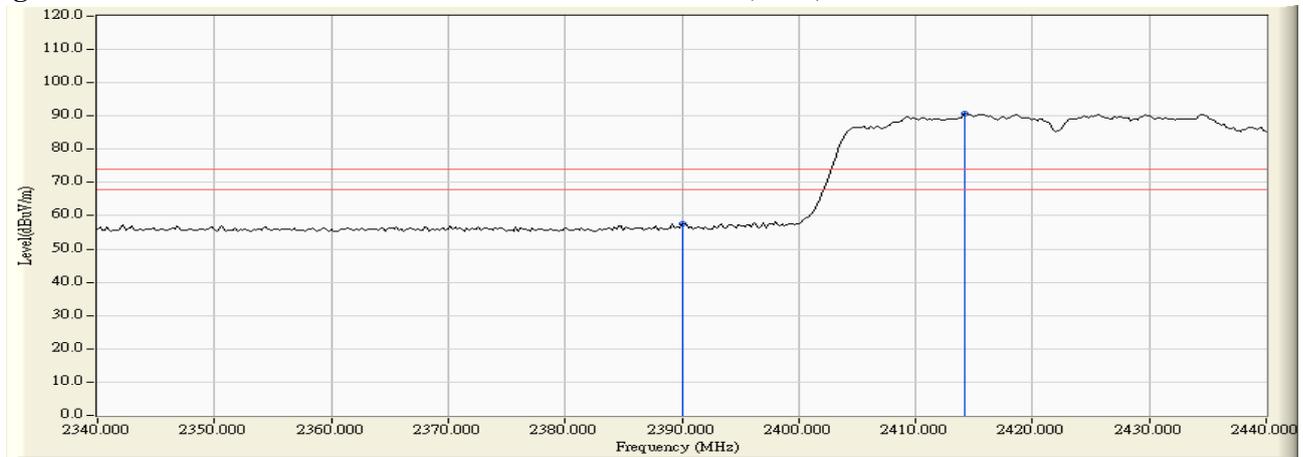
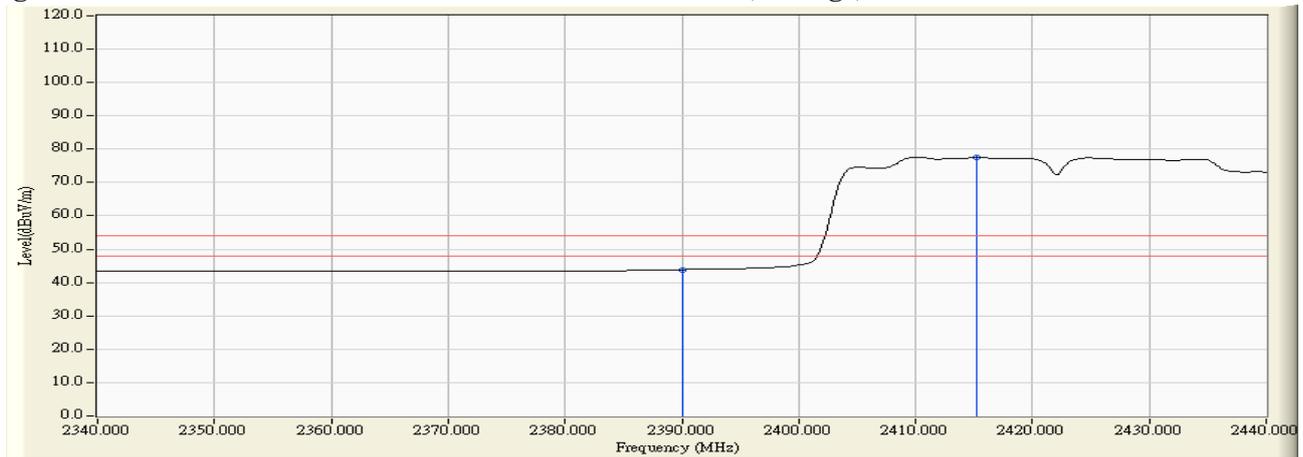


Figure Channel 01: Horizontal (Average)



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 : Notebook PC
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 5: Transmit - 802.11n-40BW_30Mbps(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	30.915	25.547	56.462	74.00	54.00	Pass
01 (Peak)	2429.800	31.070	59.734	90.804	--	--	Pass
01 (Average)	2390.000	30.915	12.245	43.160	74.00	54.00	Pass
01 (Average)	2424.800	31.036	45.677	76.713	--	--	Pass

Figure Channel 01:

Vertical (Peak)

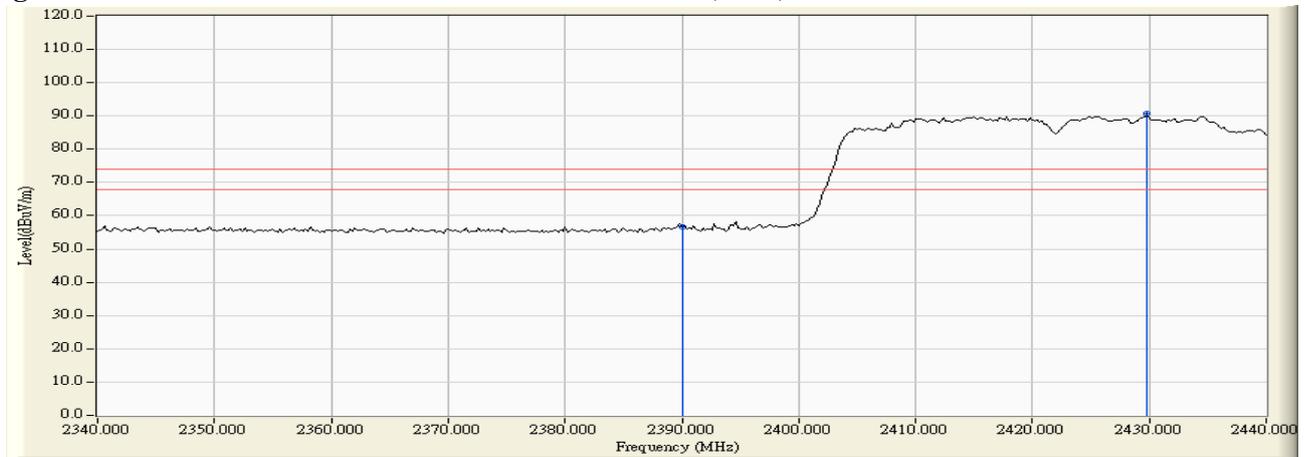
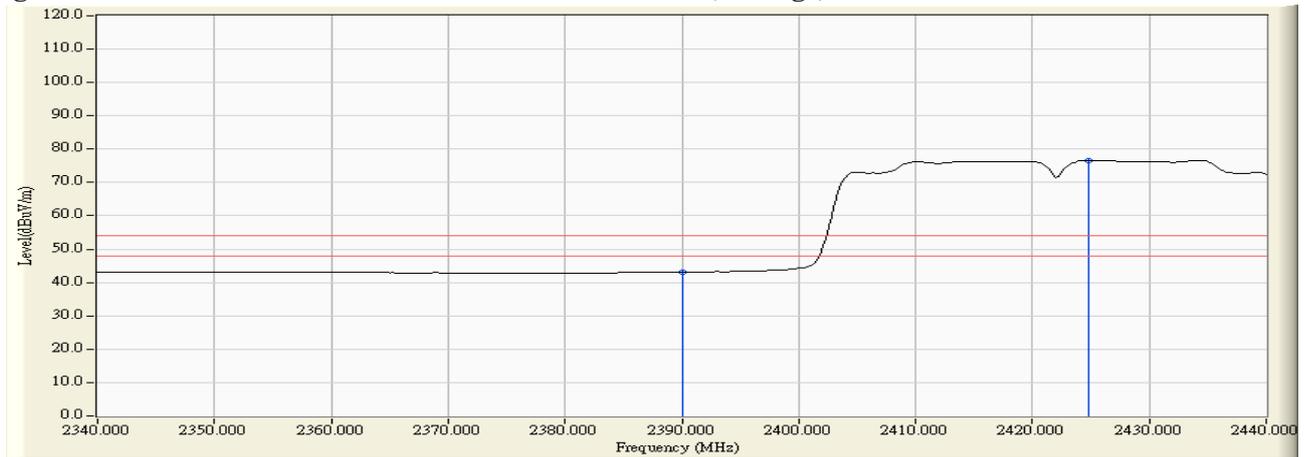


Figure Channel 01:

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 : Notebook PC
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 5: Transmit - 802.11n-40BW_30Mbps(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)	2444.300	31.885	59.286	91.171	--	--	Pass
07 (Peak)	2483.500	32.182	27.791	59.973	74.00	54.00	Pass
07 (Average)	2454.500	31.962	45.580	77.543	--	--	Pass
07 (Average)	2483.500	32.182	12.935	45.117	74.00	54.00	Pass

Figure Channel 07: Horizontal (Peak)

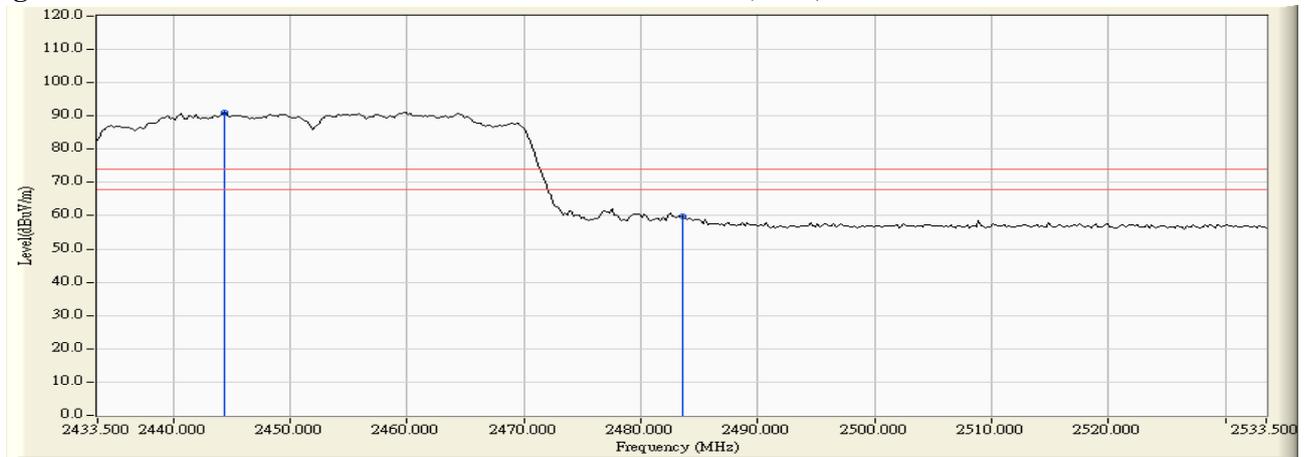


Figure Channel 07: Horizontal (Average)



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 : Notebook PC
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 5: Transmit - 802.11n-40BW_30Mbps(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)	2459.700	31.275	60.124	91.399	--	--	Pass
07 (Peak)	2483.500	31.435	27.380	58.815	74.00	54.00	Pass
07 (Average)	2454.900	31.242	46.794	78.036	--	--	Pass
07 (Average)	2483.500	31.435	13.397	44.832	74.00	54.00	Pass

Figure Channel 07: Vertical (Peak)

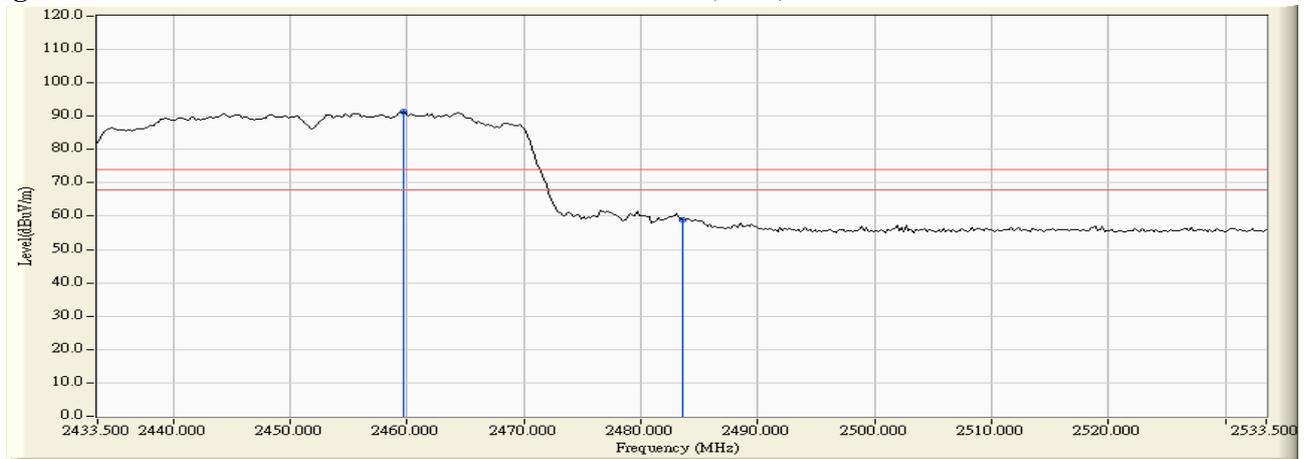
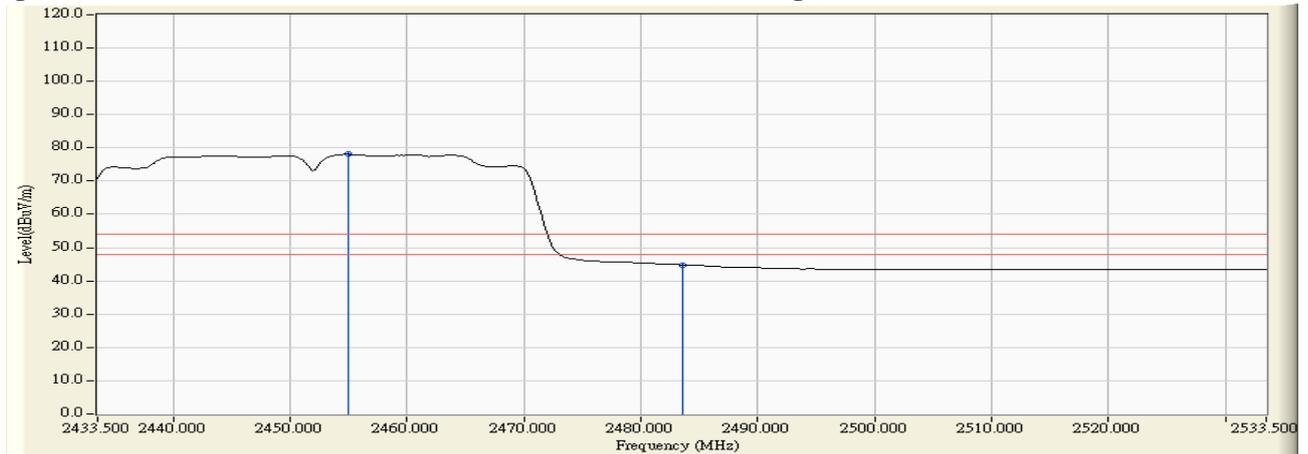


Figure Channel 01: Vertical (Average)



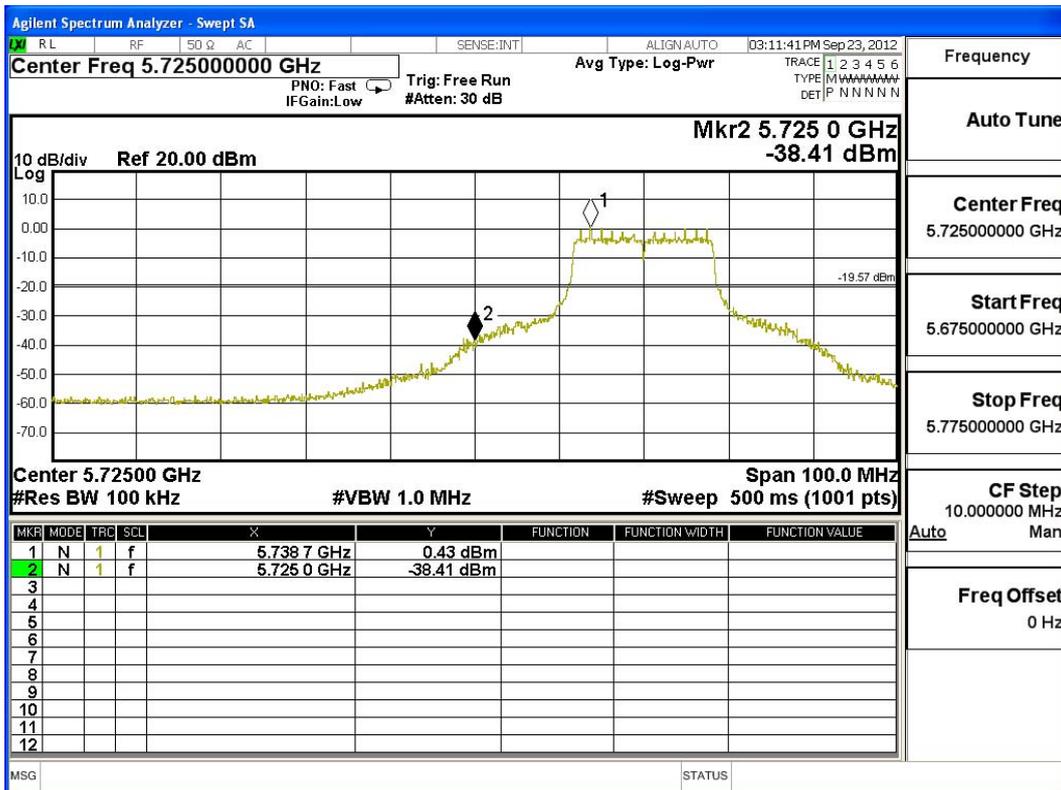
Note:

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 : Notebook PC
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit - 802.11a 6Mbps

Chain A

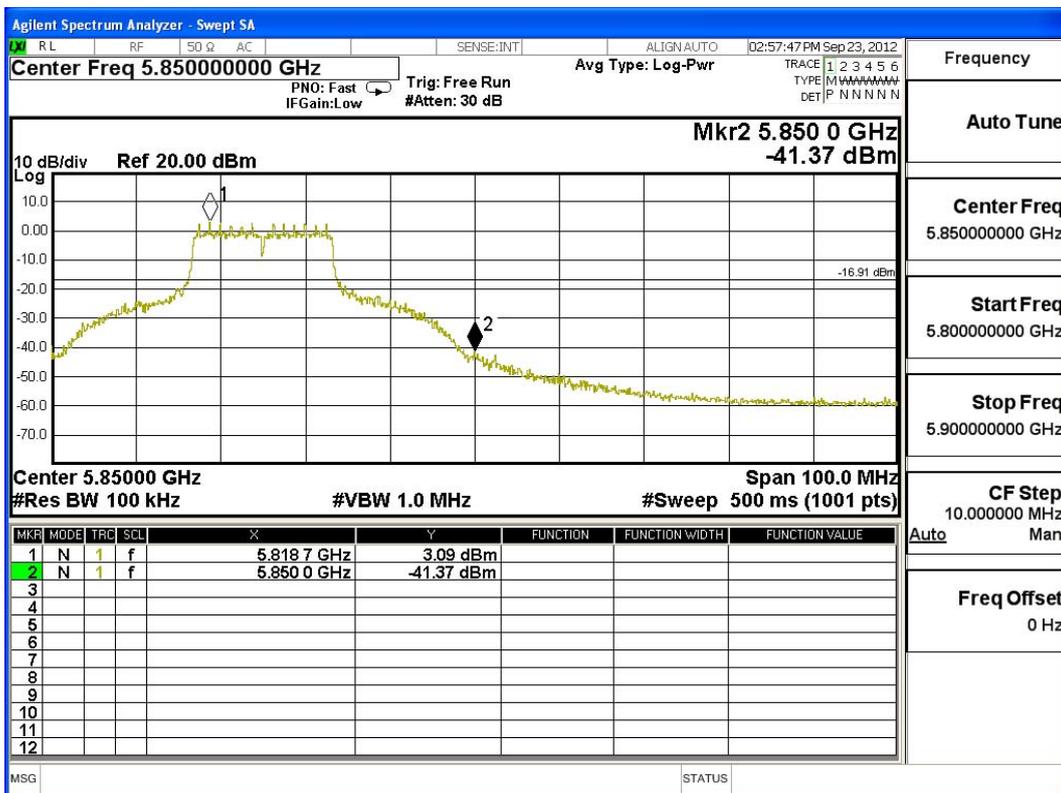
Test Frequency (MHz)	Measurement Level Δ (dB)	Limit Δ (dB)	Result
5745	38.84	>20	PASS



Product : Notebook PC
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit - 802.11a 6Mbps

Chain A

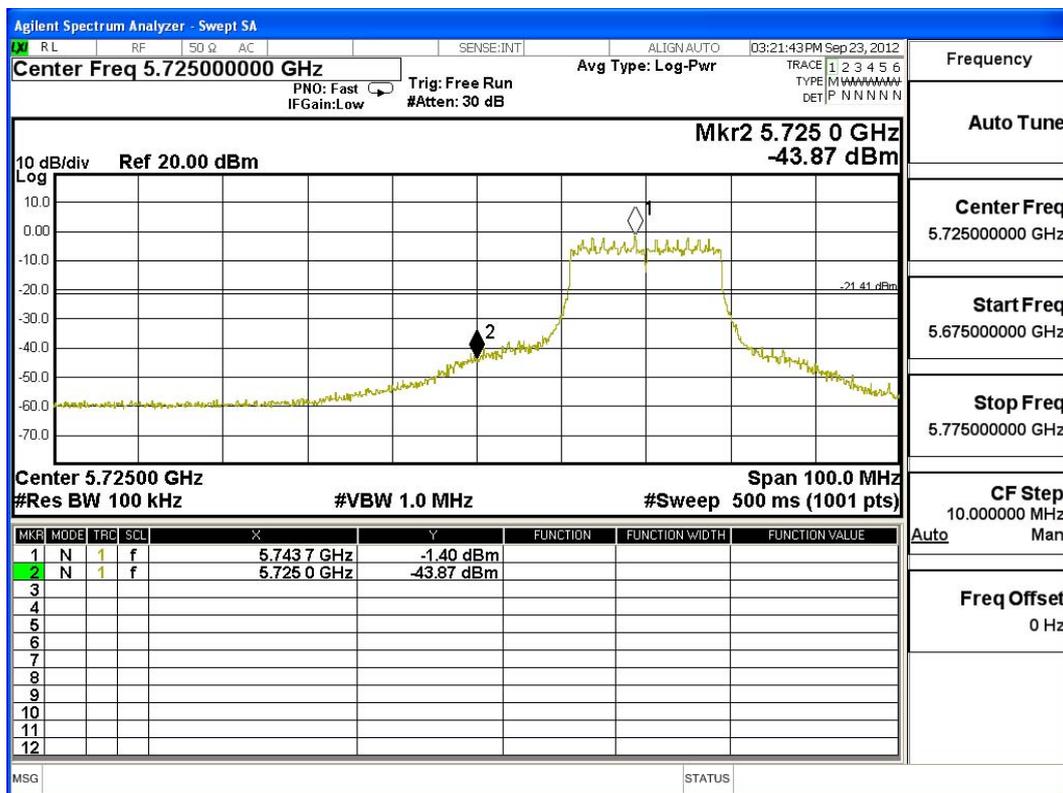
Test Frequency (MHz)	Measurement Level Δ (dB)	Limit Δ (dB)	Result
5825	44.46	>20	PASS



Product : Notebook PC
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit - 802.11n-20BW_14.4Mbps(5G Band)

Chain A

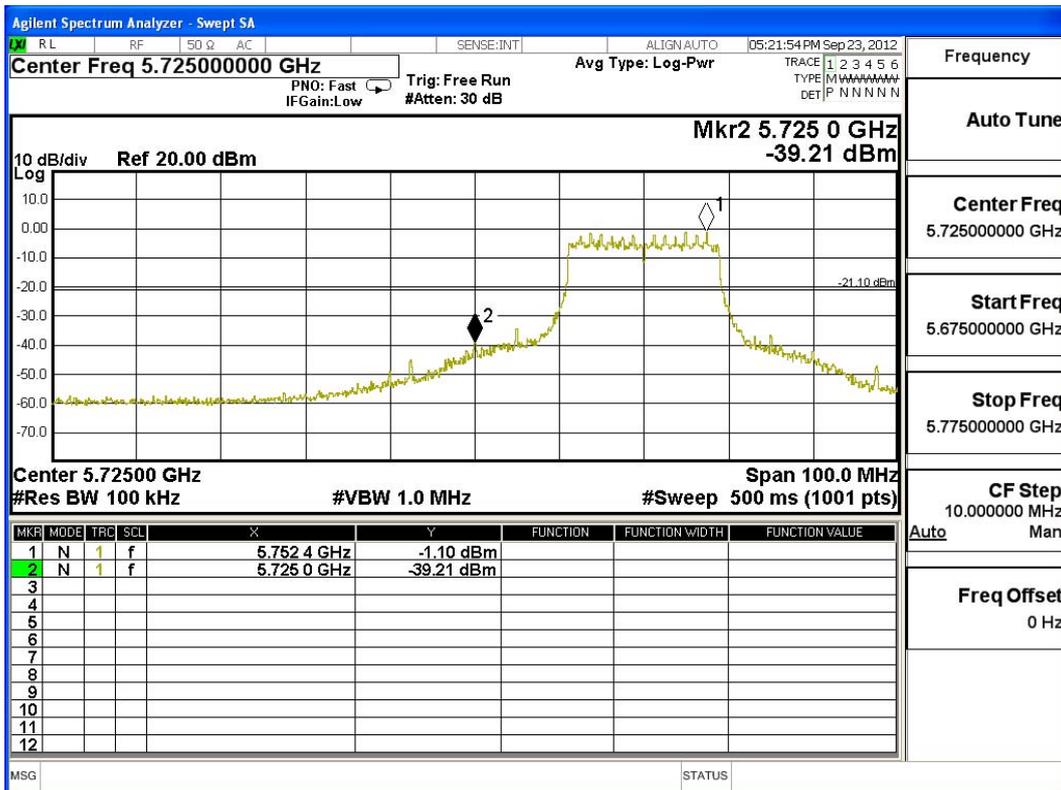
Test Frequency (MHz)	Measurement Level Δ (dB)	Limit Δ (dB)	Result
5745	42.47	>20	PASS



Product : Notebook PC
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit - 802.11n-20BW_14.4Mbps(5G Band)

Chain B

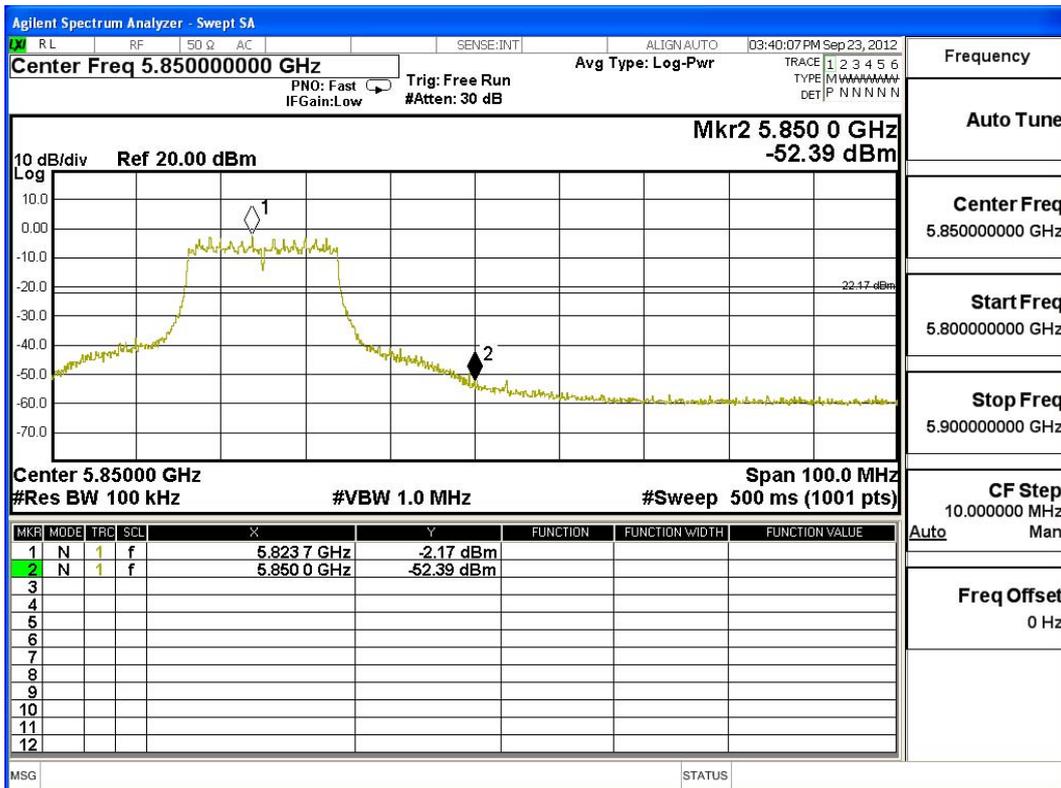
Test Frequency (MHz)	Measurement Level Δ (dB)	Limit Δ (dB)	Result
5745	38.11	>20	PASS



Product : Notebook PC
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit - 802.11n-20BW_14.4Mbps(5G Band)

Chain A

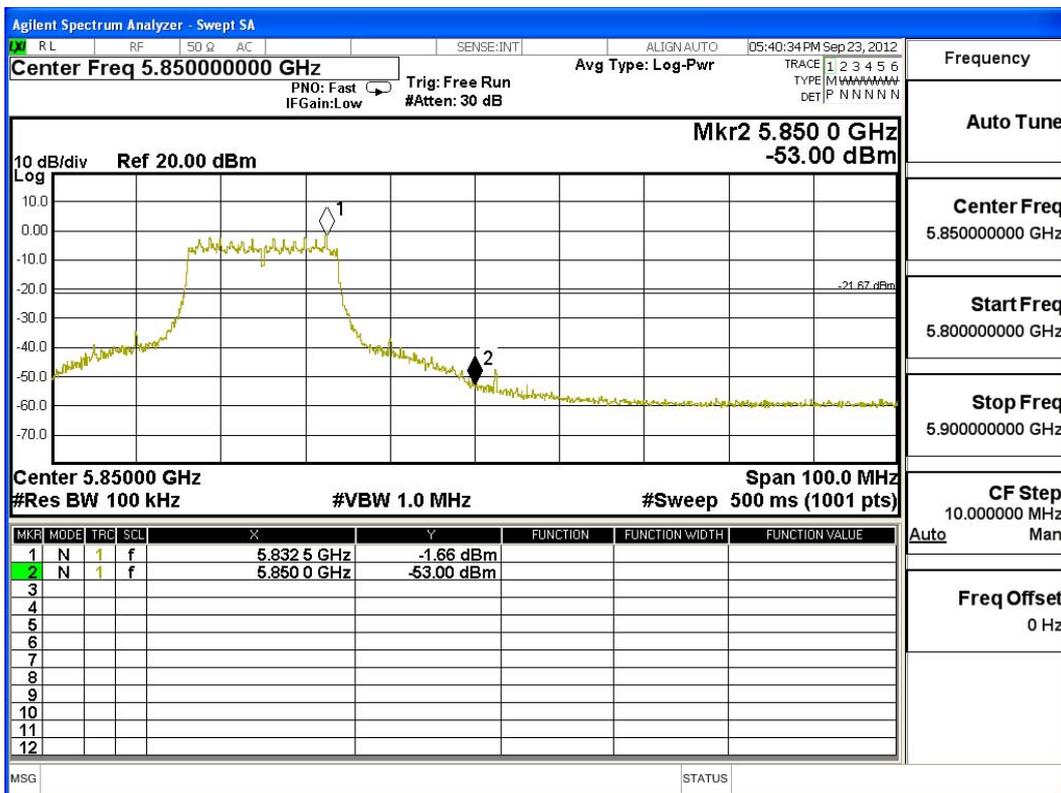
Test Frequency (MHz)	Measurement Level Δ (dB)	Limit Δ (dB)	Result
5825	50.22	>20	PASS



Product : Notebook PC
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit - 802.11n-20BW_14.4Mbps(5G Band)

Chain B

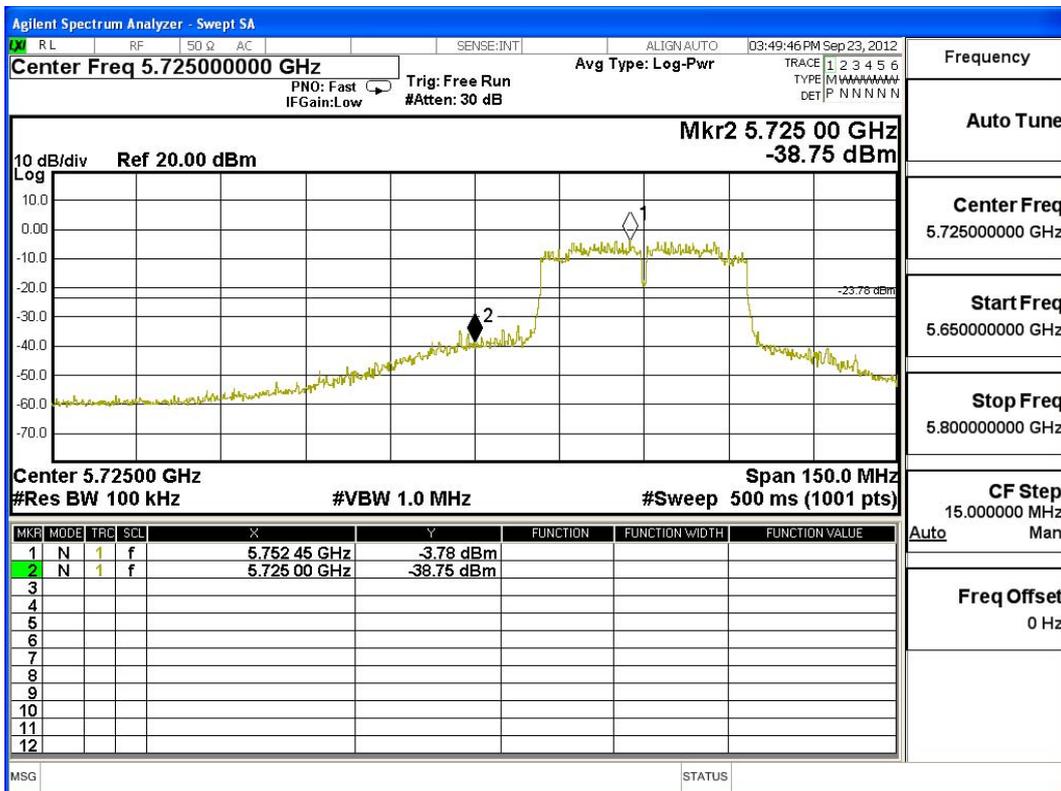
Test Frequency (MHz)	Measurement Level Δ (dB)	Limit Δ (dB)	Result
5825	51.34	>20	PASS



Product : Notebook PC
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 7: Transmit - 802.11n-40BW_30Mbps(5G Band)

Chain A

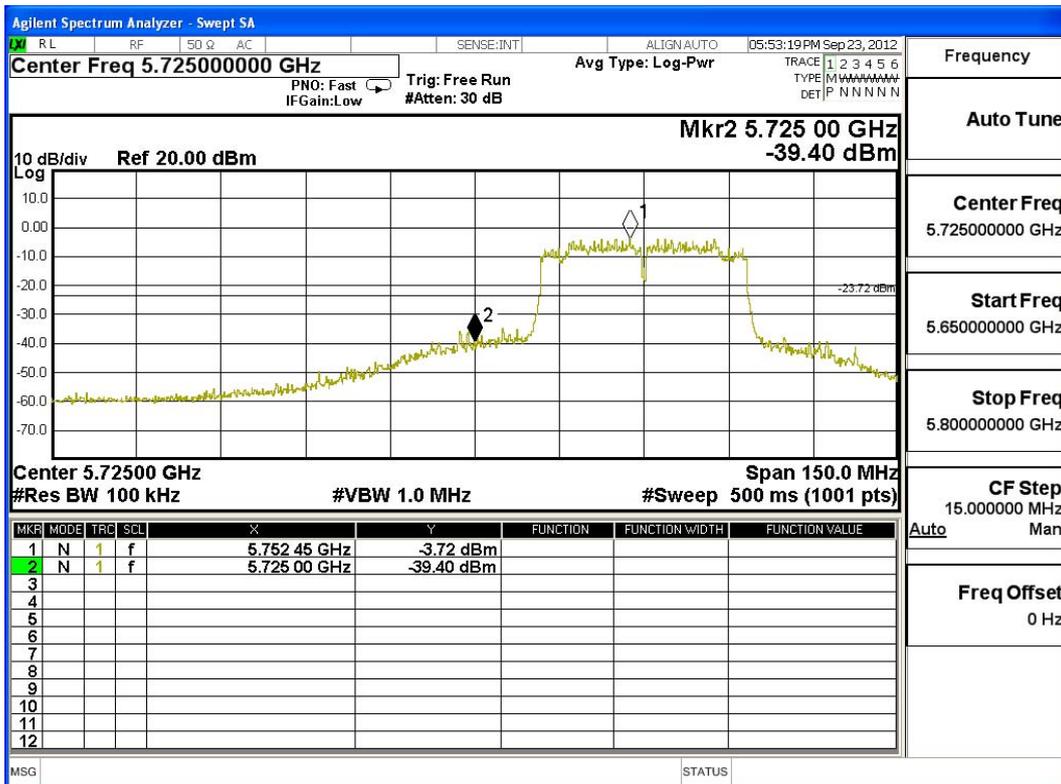
Test Frequency (MHz)	Measurement Level Δ (dB)	Limit Δ (dB)	Result
5755	34.97	>20	PASS



Product : Notebook PC
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 7: Transmit - 802.11n-40BW_30Mbps(5G Band)

Chain B

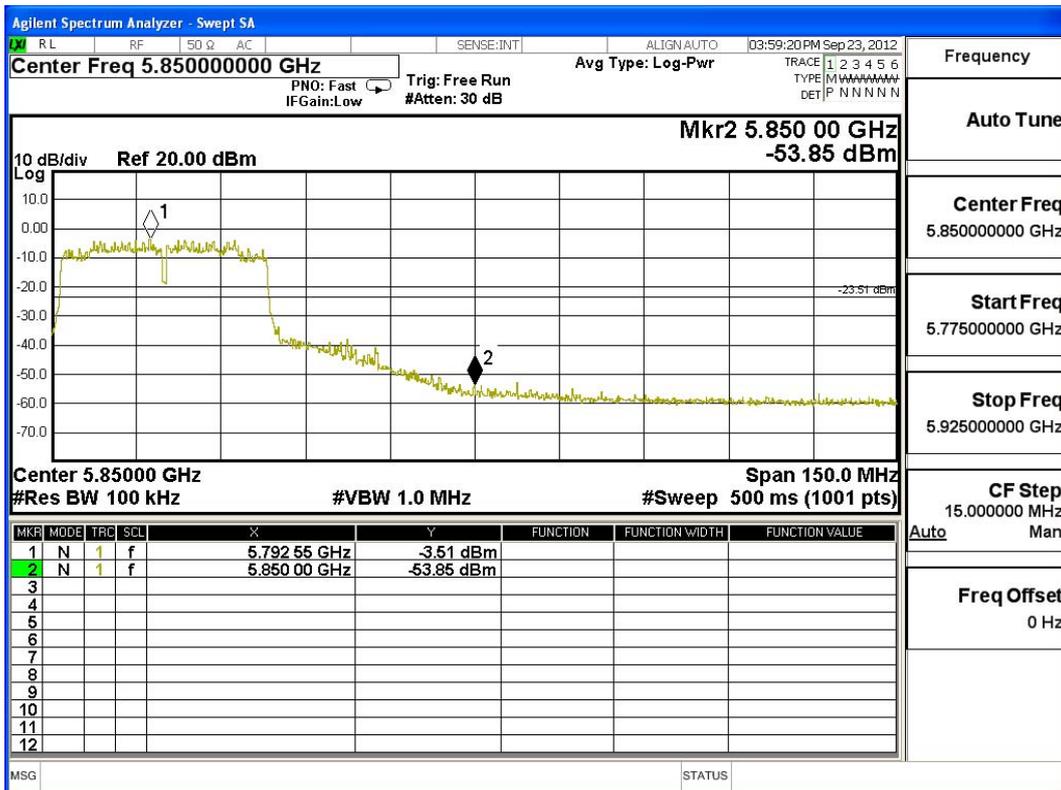
Test Frequency (MHz)	Measurement Level Δ (dB)	Limit Δ (dB)	Result
5755	35.68	>20	PASS



Product : Notebook PC
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 7: Transmit - 802.11n-40BW_30Mbps(5G Band)

Chain A

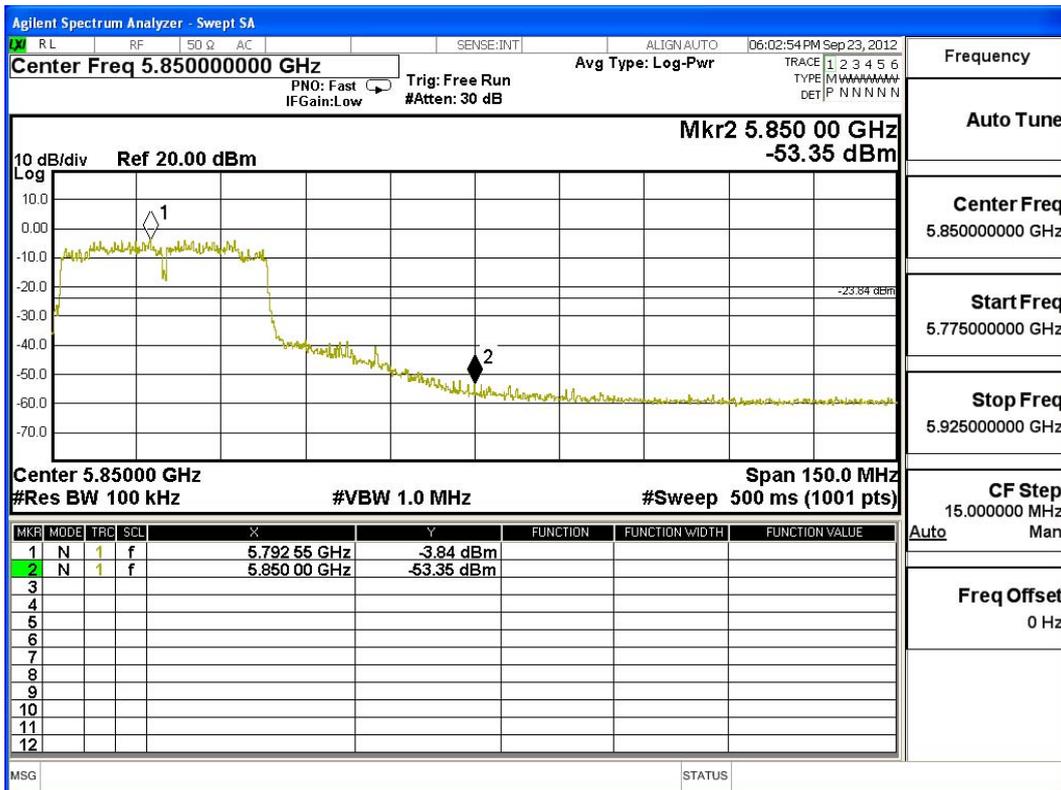
Test Frequency (MHz)	Measurement Level Δ (dB)	Limit Δ (dB)	Result
5795	50.34	>20	PASS



Product : Notebook PC
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 7: Transmit - 802.11n-40BW_30Mbps(5G Band)

Chain B

Test Frequency (MHz)	Measurement Level Δ (dB)	Limit Δ (dB)	Result
5795	49.51	>20	PASS



7. Occupied Bandwidth

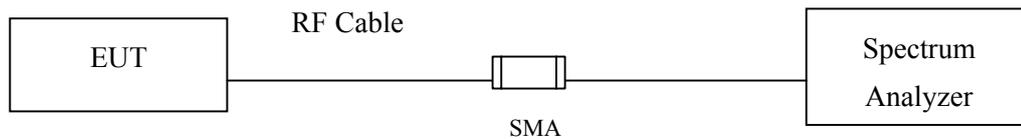
7.1. Test Equipment

	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 ≥ 3*RBW

7.5. Uncertainty

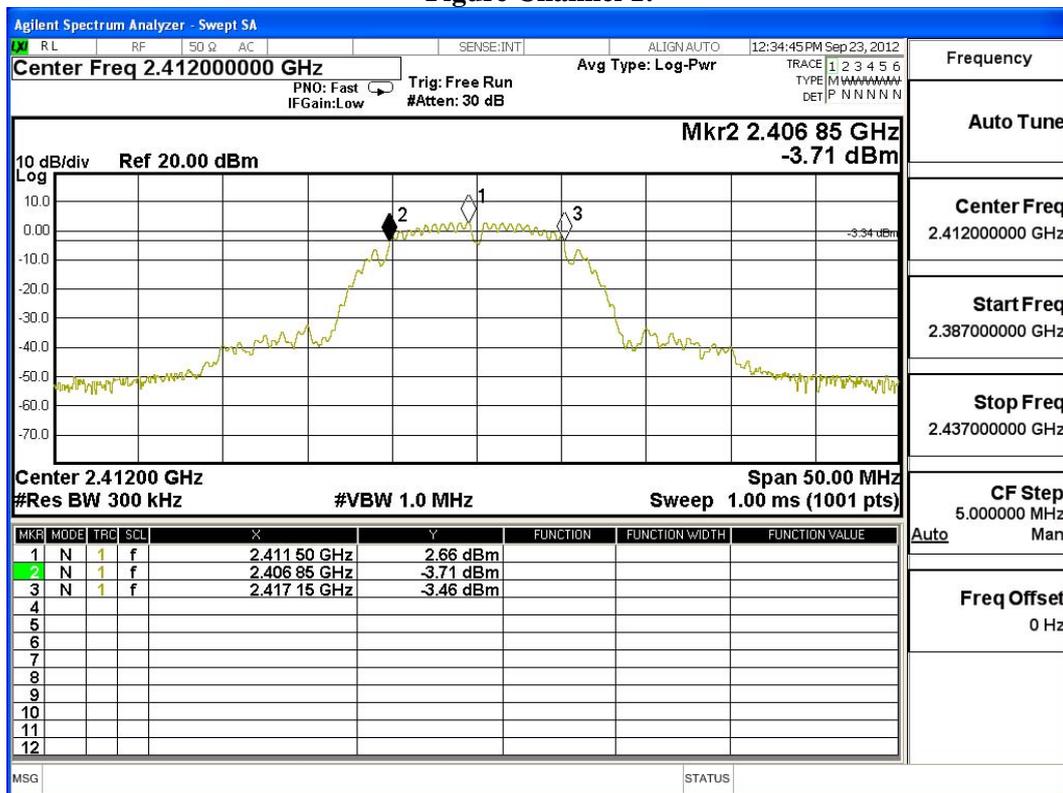
± 150Hz

7.6. Test Result of Occupied Bandwidth

Product : Notebook PC
 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	10300	>500	Pass

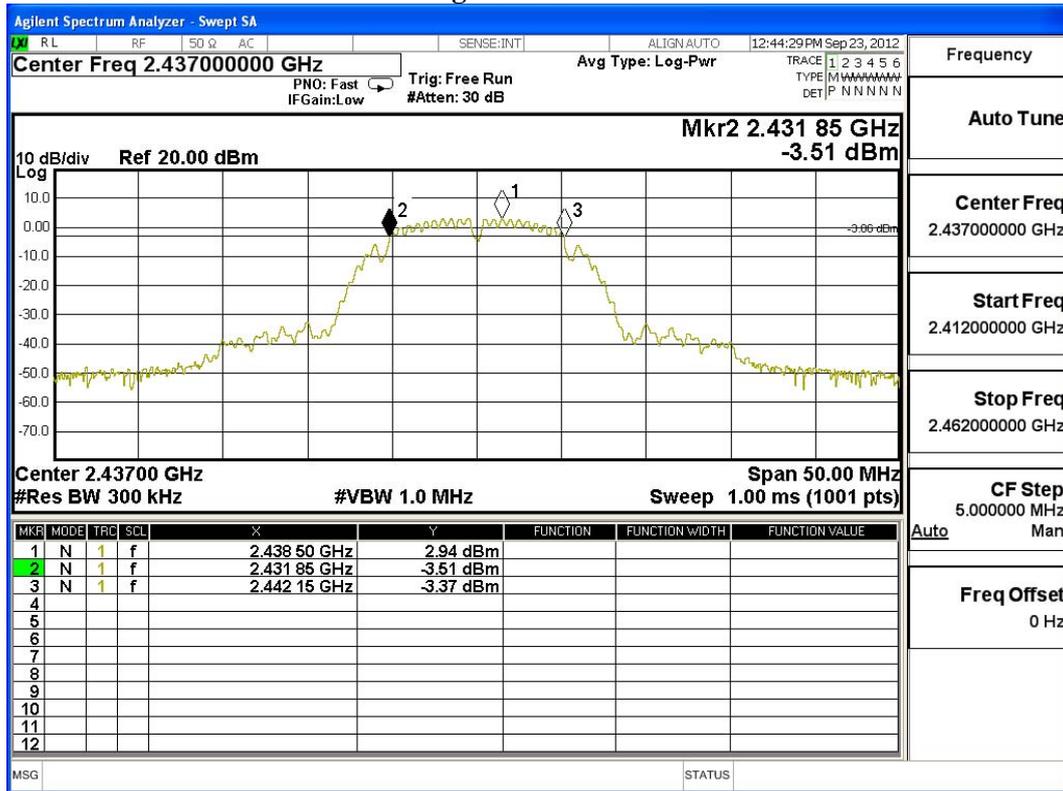
Figure Channel 1:



Product : Notebook PC
 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	10300	>500	Pass

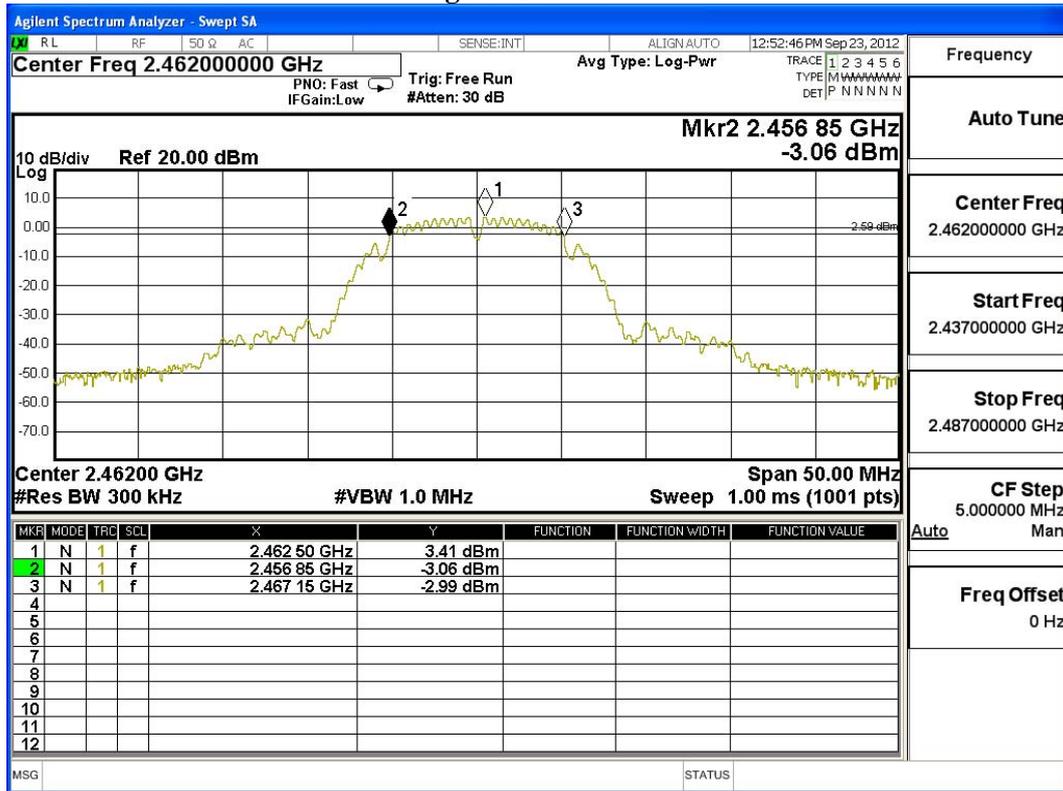
Figure Channel 6:



Product : Notebook PC
 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

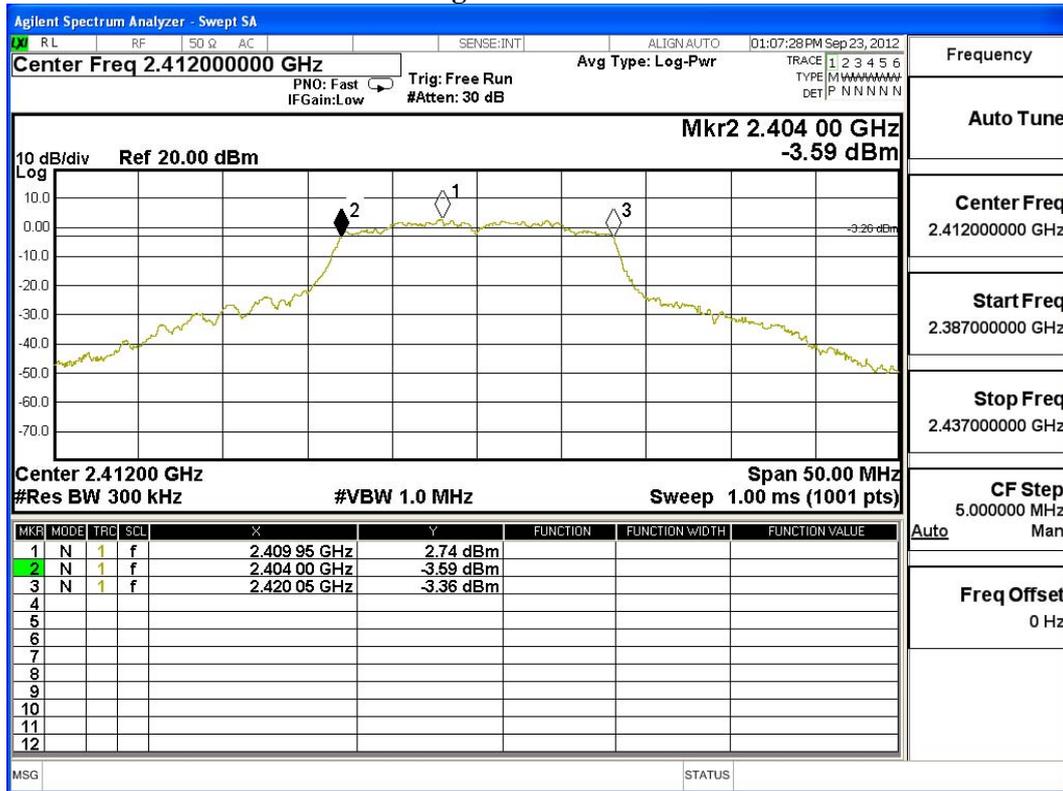
Figure Channel 11:



Product : Notebook PC
 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	16050	>500	Pass

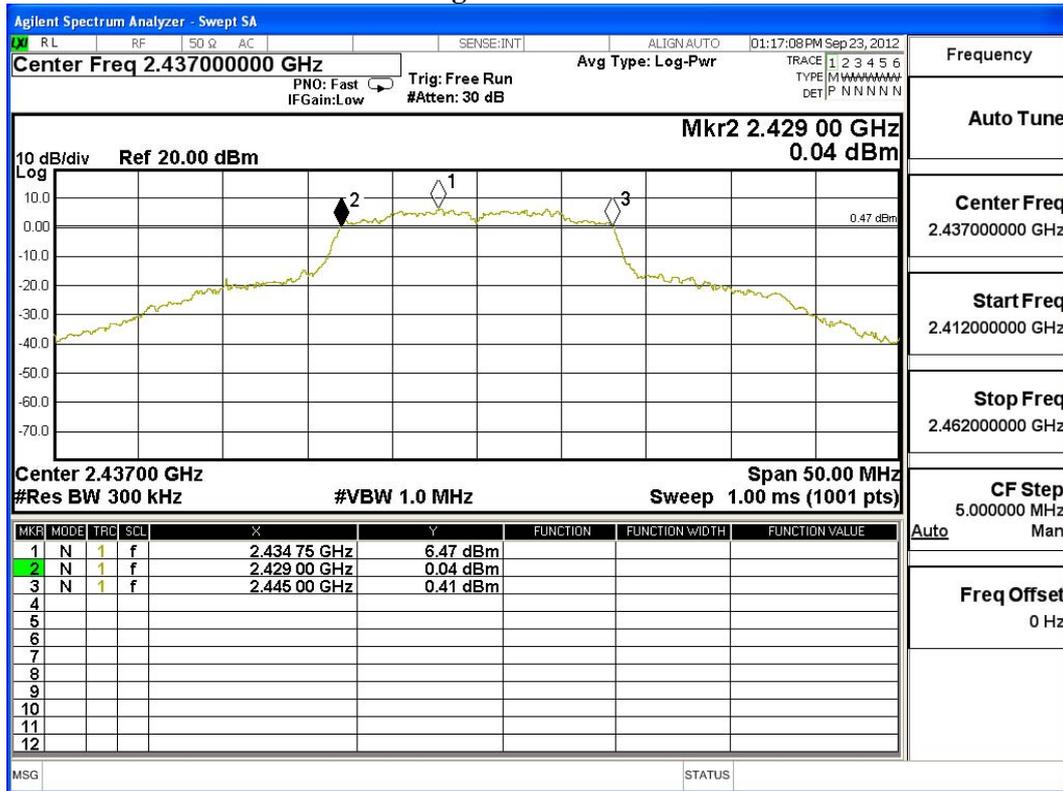
Figure Channel 1:



Product : Notebook PC
 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	16000	>500	Pass

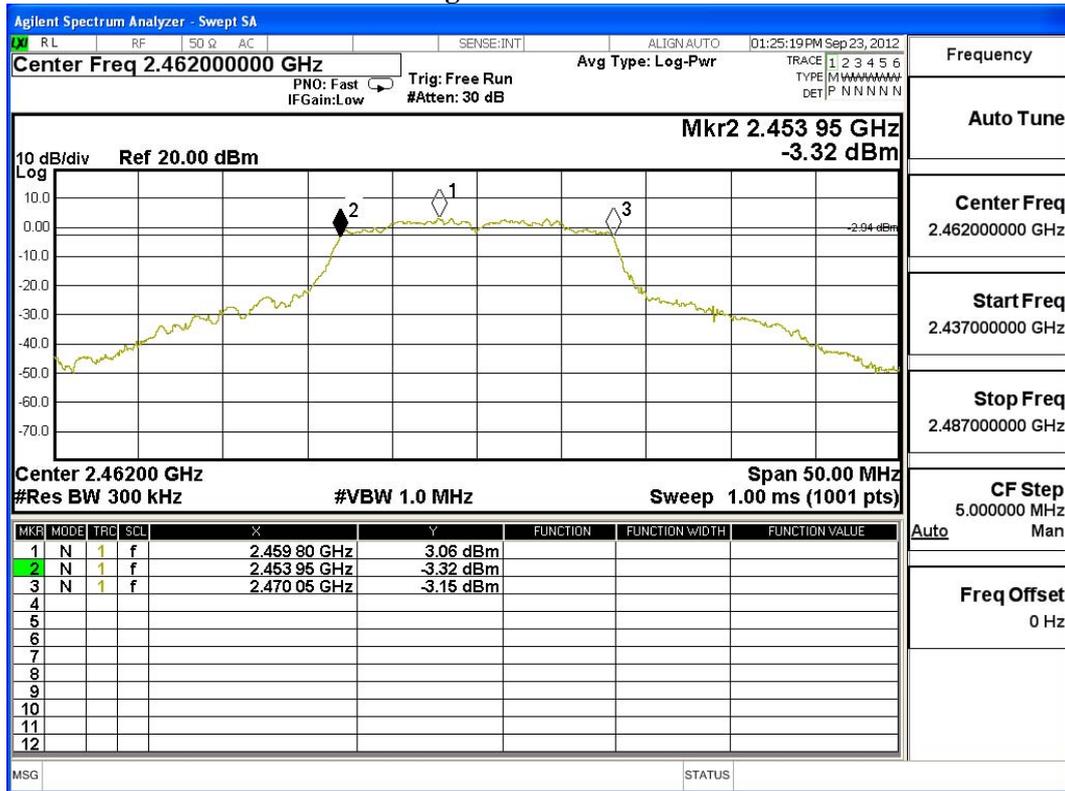
Figure Channel 6:



Product : Notebook PC
 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	16100	>500	Pass

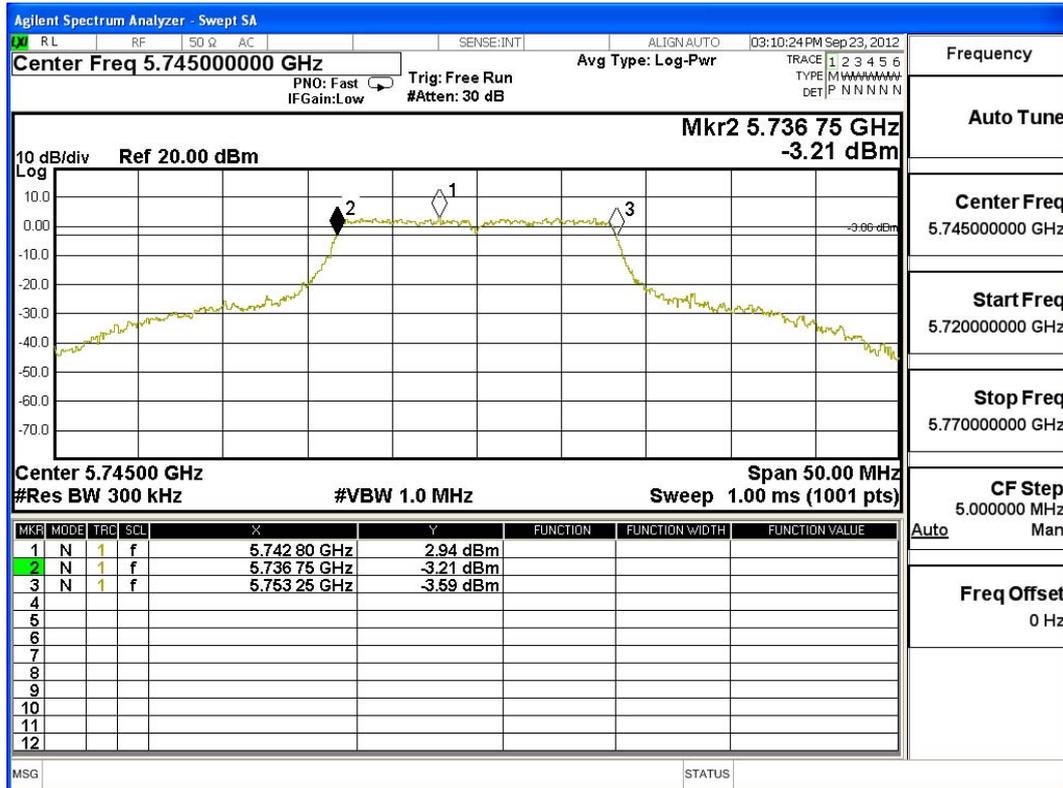
Figure Channel 11:



Product : Notebook PC
 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	16500	>500	Pass

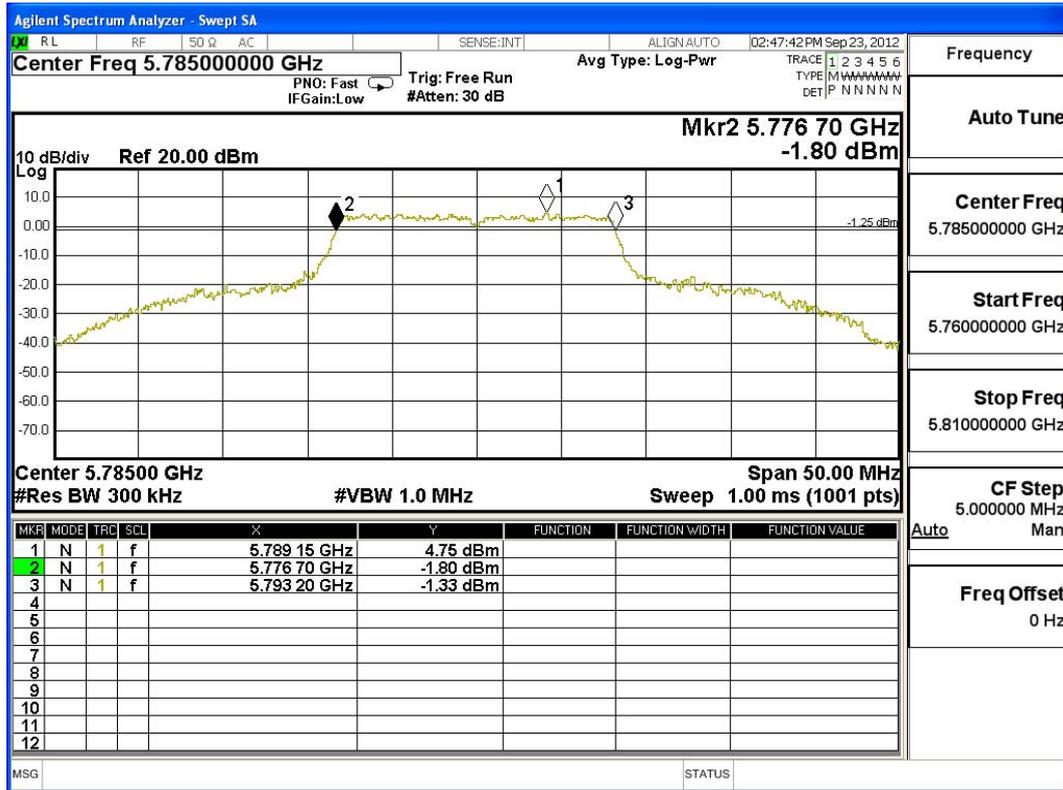
Figure Channel 149:



Product : Notebook PC
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit - 802.11a 6Mbps (5785MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
157	5785.00	16500	>500	Pass

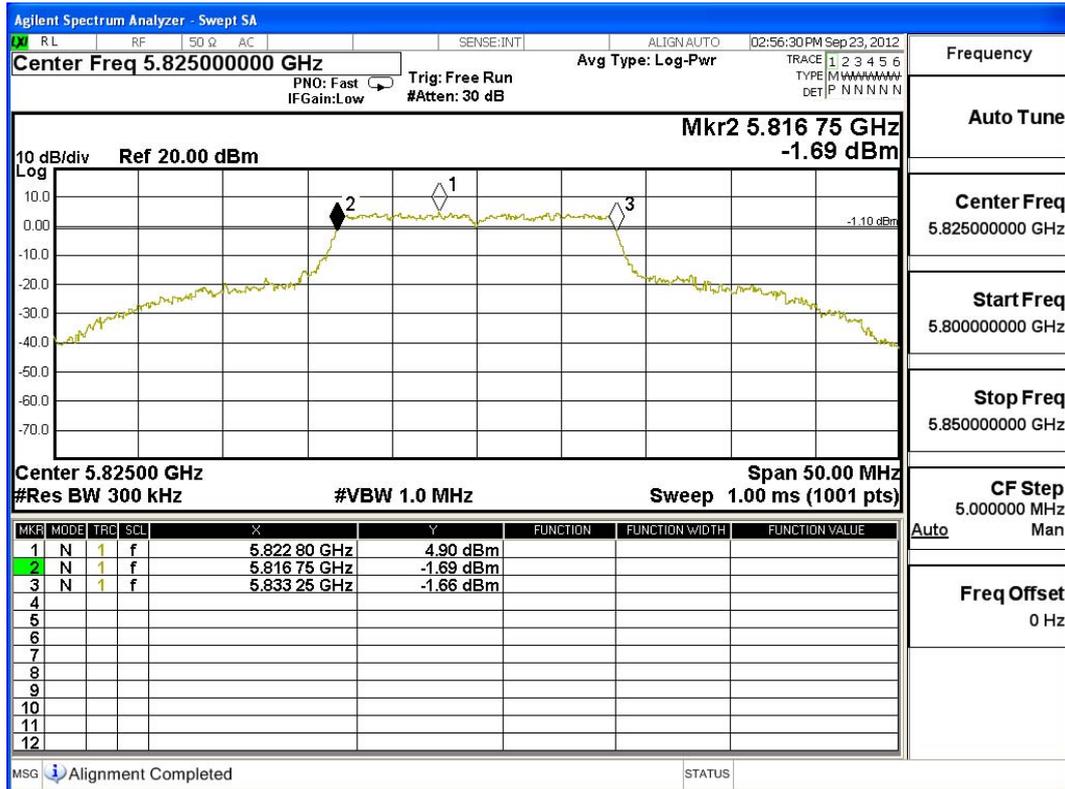
Figure Channel 157:



Product : Notebook PC
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit - 802.11a 6Mbps (5825MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
165	5825.00	16500	>500	Pass

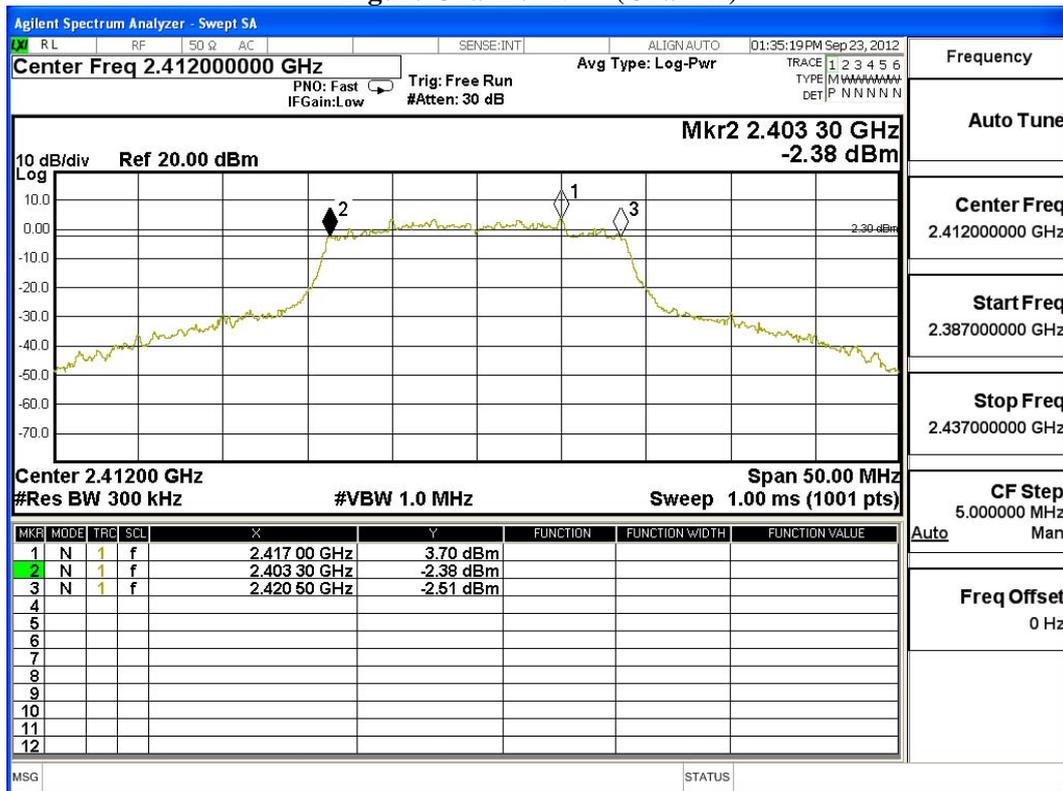
Figure Channel 165:



Product : Notebook PC
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit - 802.11n-20BW_14.4Mbps(2.4G Band) (2412MHz)

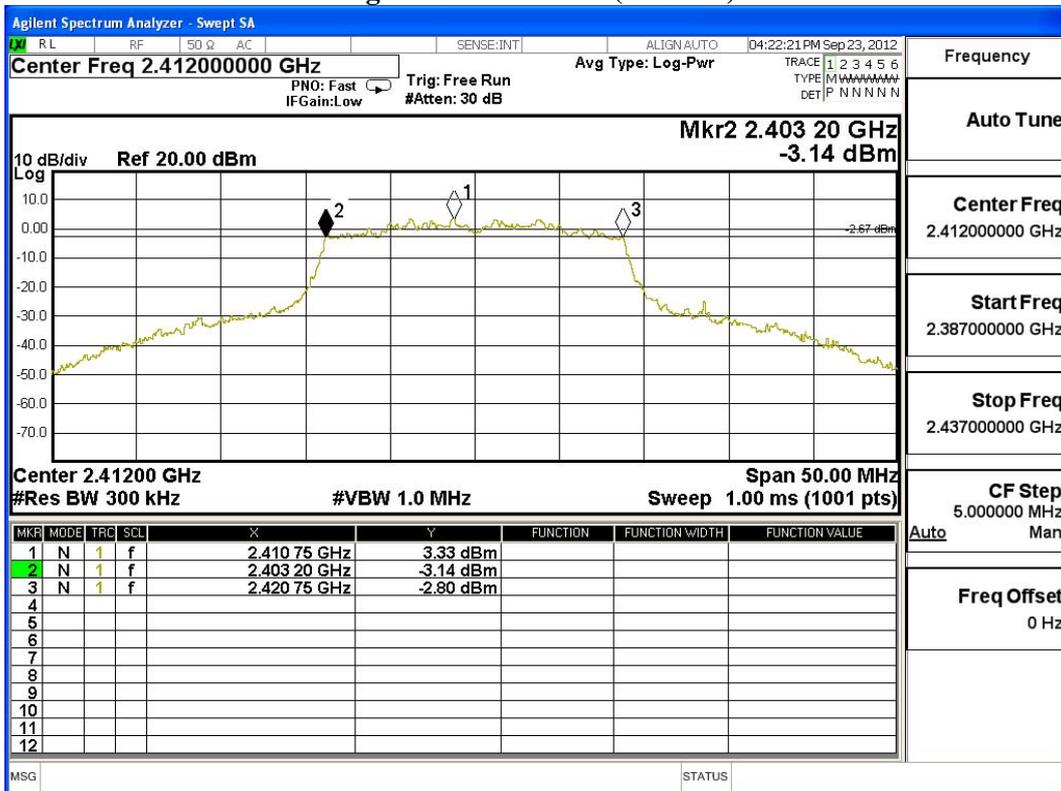
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
1	2412.00	17200	>500	Pass

Figure Channel 1: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
1	2412.00	17550	>500	Pass

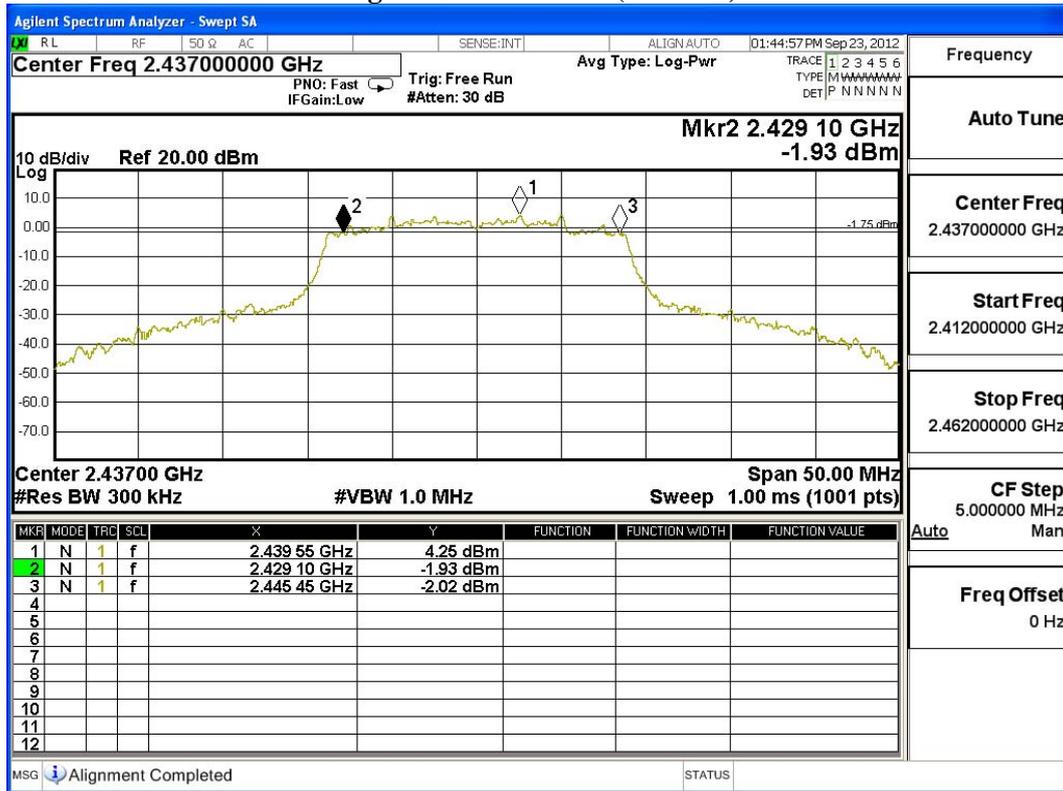
Figure Channel 1: (Chain B)



Product : Notebook PC
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit - 802.11n-20BW_14.4Mbps(2.4G Band) (2437MHz)

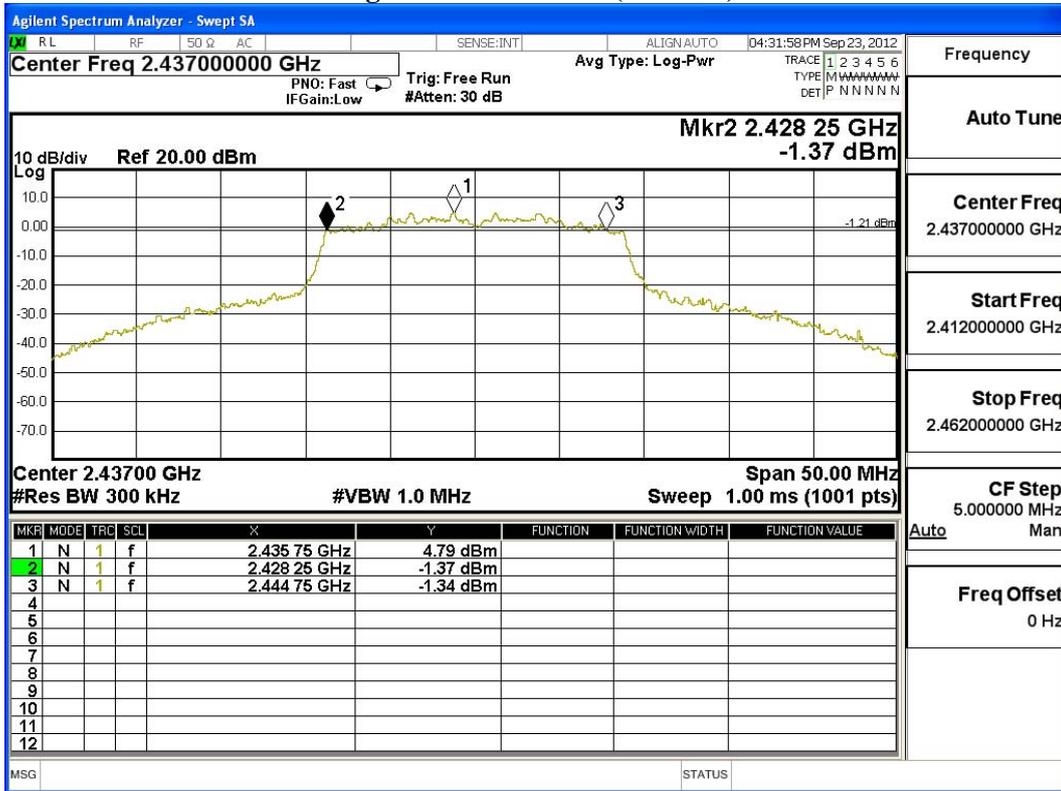
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6	2437.00	16350	>500	Pass

Figure Channel 6: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6	2437.00	16500	>500	Pass

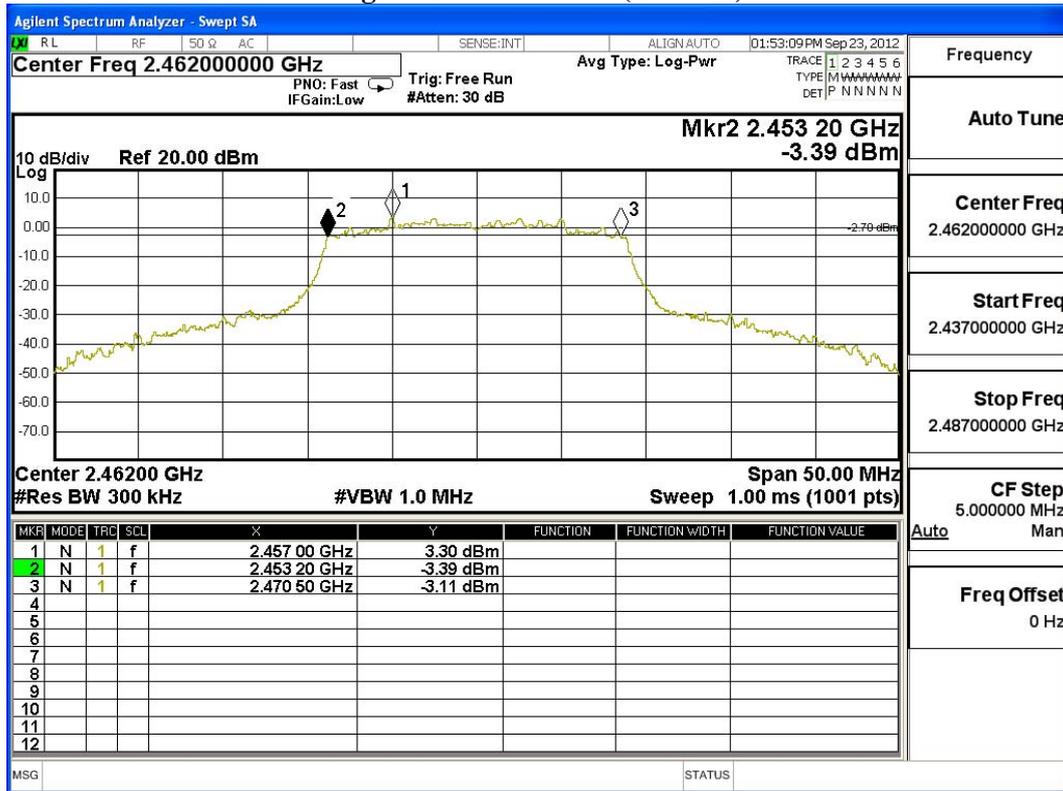
Figure Channel 6: (Chain B)



Product : Notebook PC
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit - 802.11n-20BW_14.4Mbps(2.4G Band) (2462MHz)

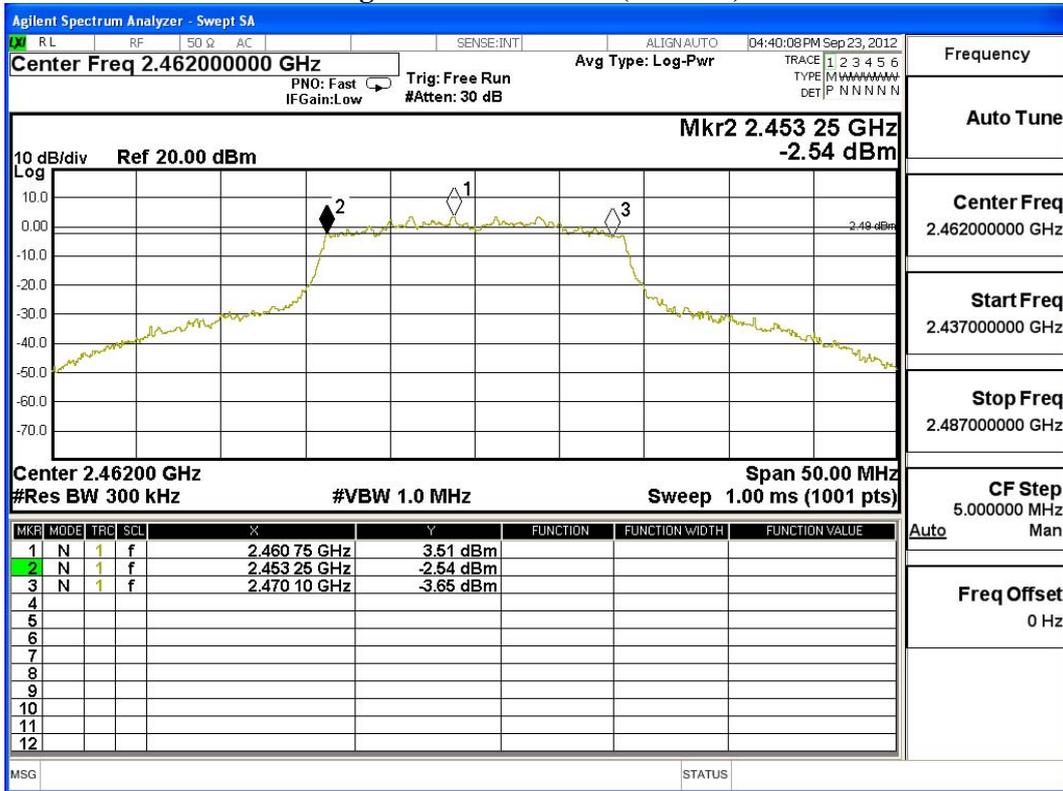
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
11	2462.00	17300	>500	Pass

Figure Channel 11: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
11	2462.00	16850	>500	Pass

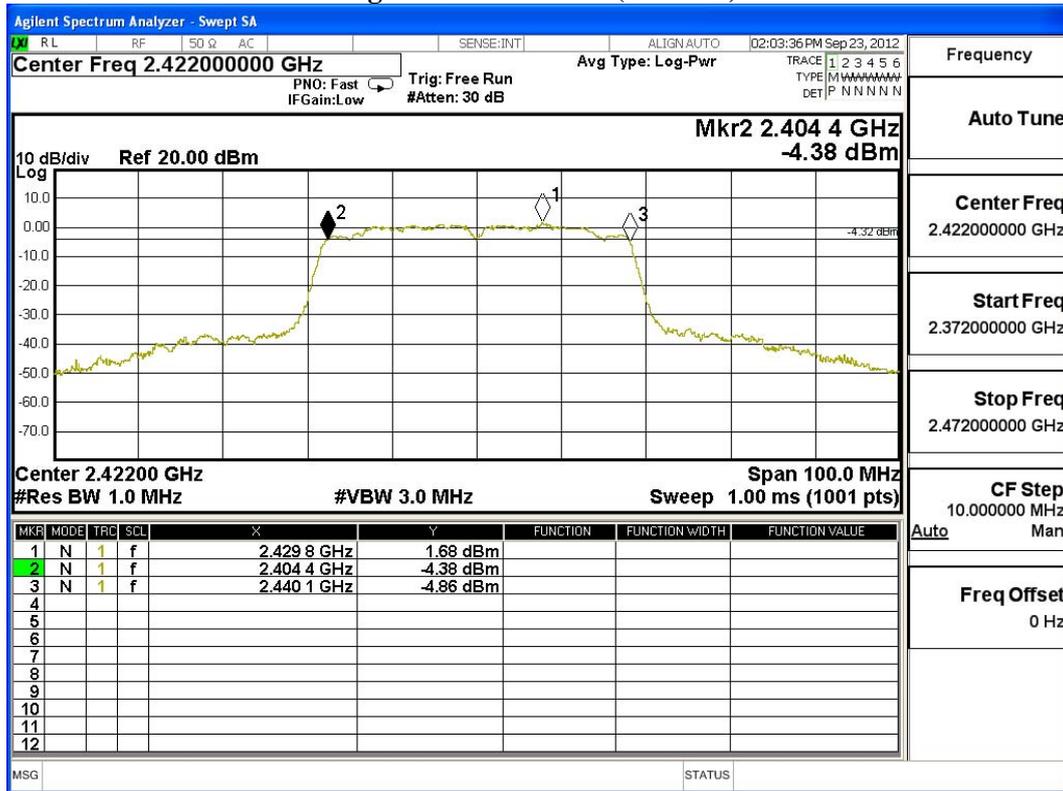
Figure Channel 11: (Chain B)



Product : Notebook PC
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 5: Transmit - 802.11n-40BW_30Mbps(2.4G Band) (2422MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
3	2422.00	35700	>500	Pass

Figure Channel 3: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
3	2422.00	35700	>500	Pass

Figure Channel 3: (Chain B)

