

FCC Test Report

(Class II Permissive Change)

Product Name	Model 7260HMW Wireless Network Adapter
Model No.	7260HMW
FCC ID.	MSQ7260H

Applicant	ASUSTeK COMPUTER INC.
Address	4F, No. 150, Li-Te Rd., Peitou, Taipei, Taiwan

Date of Receipt	May 08, 2014
Issued Date	Jun. 12, 2014
Report No.	1450257R-RFUSP23V00
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 of the equipment and evaluated measurement uncertainty herein.

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Test Report

Issued Date: Jun. 12, 2014

Report No.: 1450257R-RFUSP23V00



Product Name	Model 7260HMW Wireless Network Adapter
Applicant	ASUSTeK COMPUTER INC.
Address	4F, No. 150, Li-Te Rd., Peitou, Taipei, Taiwan
Manufacturer	Intel Mobile Communications
Model No.	7260HMW
FCC ID.	MSQ7260H
EUT Rated Voltage	DC 3.3V (via Mini-PCI Express slot)
EUT Test Voltage	AC 120V/ 60Hz
Trade Name	Intel
Applicable Standard	FCC CFR Title 47 Part 15 Subpart C: 2012 ANSI C63.10: 2009
Test Result	Complied

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Tested By : Andy Lin
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Approved By : Vincent Lin
(Director / Vincent Lin)

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1. GENERAL INFORMATION

1.1. EUT Description

Product Name	Model 7260HMW Wireless Network Adapter
Trade Name	Intel
Model No.	7260HMW
FCC ID.	MSQ7260H
Frequency Range	2402 – 2480MHz
Channel Number	79
Type of Modulation	FHSS: GFSK(1Mbps) / π /4DQPSK(2Mbps) / 8DPSK(3Mbps)
Antenna Type	PIFA Antenna
Channel Control	Auto
Antenna Gain	Refer to the table “Antenna List”
Test Platform.(Notebook PC)	Brand Name: ASUS, M/N: Q551L / N591L
Power Adapter	MFR : PI, M/N : AD887320 INPUT : 100-240V, 50-60Hz, 1.5A OUTPUT : 19V, 3.42A Cable out : Non-shielded, 2.3m

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	ACON	APP6P-701177 (Main)(Aux)	PIFA	1.12dBi For 2.4GHz
2	INPAQ	WA-F-LBLB-04-025 (Main)(Aux)	PIFA	1.01dBi For 2.4GHz

Note: 1. The antenna of EUT is conform to FCC 15.203.

2. Only the higher gain antenna was tested and recorded in this report.

Center Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 00:	2402 MHz	Channel 20:	2422 MHz	Channel 40:	2442 MHz	Channel 60:	2462 MHz
Channel 01:	2403 MHz	Channel 21:	2423 MHz	Channel 41:	2443 MHz	Channel 61:	2463 MHz
Channel 02:	2404 MHz	Channel 22:	2424 MHz	Channel 42:	2444 MHz	Channel 62:	2464 MHz
Channel 03:	2405 MHz	Channel 23:	2425 MHz	Channel 43:	2445 MHz	Channel 63:	2465 MHz
Channel 04:	2406 MHz	Channel 24:	2426 MHz	Channel 44:	2446 MHz	Channel 64:	2466 MHz
Channel 05:	2407 MHz	Channel 25:	2427 MHz	Channel 45:	2447 MHz	Channel 65:	2467 MHz
Channel 06:	2408 MHz	Channel 26:	2428 MHz	Channel 46:	2448 MHz	Channel 66:	2468 MHz
Channel 07:	2409 MHz	Channel 27:	2429 MHz	Channel 47:	2449 MHz	Channel 67:	2469 MHz
Channel 08:	2410 MHz	Channel 28:	2430 MHz	Channel 48:	2450 MHz	Channel 68:	2470 MHz
Channel 09:	2411 MHz	Channel 29:	2431 MHz	Channel 49:	2451 MHz	Channel 69:	2471 MHz
Channel 10:	2412 MHz	Channel 30:	2432 MHz	Channel 50:	2452 MHz	Channel 70:	2472 MHz
Channel 11:	2413 MHz	Channel 31:	2433 MHz	Channel 51:	2453 MHz	Channel 71:	2473 MHz
Channel 12:	2414 MHz	Channel 32:	2434 MHz	Channel 52:	2454 MHz	Channel 72:	2474 MHz
Channel 13:	2415 MHz	Channel 33:	2435 MHz	Channel 53:	2455 MHz	Channel 73:	2475 MHz
Channel 14:	2416 MHz	Channel 34:	2436 MHz	Channel 54:	2456 MHz	Channel 74:	2476 MHz
Channel 15:	2417 MHz	Channel 35:	2437 MHz	Channel 55:	2457 MHz	Channel 75:	2477 MHz
Channel 16:	2418 MHz	Channel 36:	2438 MHz	Channel 56:	2458 MHz	Channel 76:	2478 MHz
Channel 17:	2419 MHz	Channel 37:	2439 MHz	Channel 57:	2459 MHz	Channel 77:	2479 MHz
Channel 18:	2420 MHz	Channel 38:	2440 MHz	Channel 58:	2460 MHz	Channel 78:	2480 MHz
Channel 19:	2421 MHz	Channel 39:	2441 MHz	Channel 59:	2461 MHz		

Note:

1. The EUT is a Model 7260HMW Wireless Network Adapter with a built-in WLAN and Bluetooth V4.0 V3.0, V2.1+EDR transceiver, this report for Bluetooth V3.0, V2.1+EDR.
2. The Hardware is identical for two models, the differences between the models is sale via different distributors.
3. These tests were conducted on a sample for the purpose of demonstrating compliance of Bluetooth transmitter with Part 15 Subpart C Paragraph 15.247 for spread spectrum devices.
4. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
5. Bluetooth operation was evaluated at both 1Mb/s and 3Mb/s data rates. 2Mb/s data rate was found, through pre-testing, to produce emissions similar to those for 3Mb/s.
6. This is to request a Class II permissive change for FCC ID: MSQ7260H, originally granted on 04/19/2014.

The major change filed under this application is:

Change #1: Additional Chassis added, Model number: Q551L, N591L

#2: Reduce the Output Power through firmware (only reduce Wi-Fi Power, Bluetooth power haven't changes).

#3: Addition two new antennas, the antenna type is the same, the antenna gain is smaller than the original application.

Test Mode	Mode 1: Transmit - 1Mbps (GFSK) Mode 2: Transmit - 3Mbps (8DPSK)
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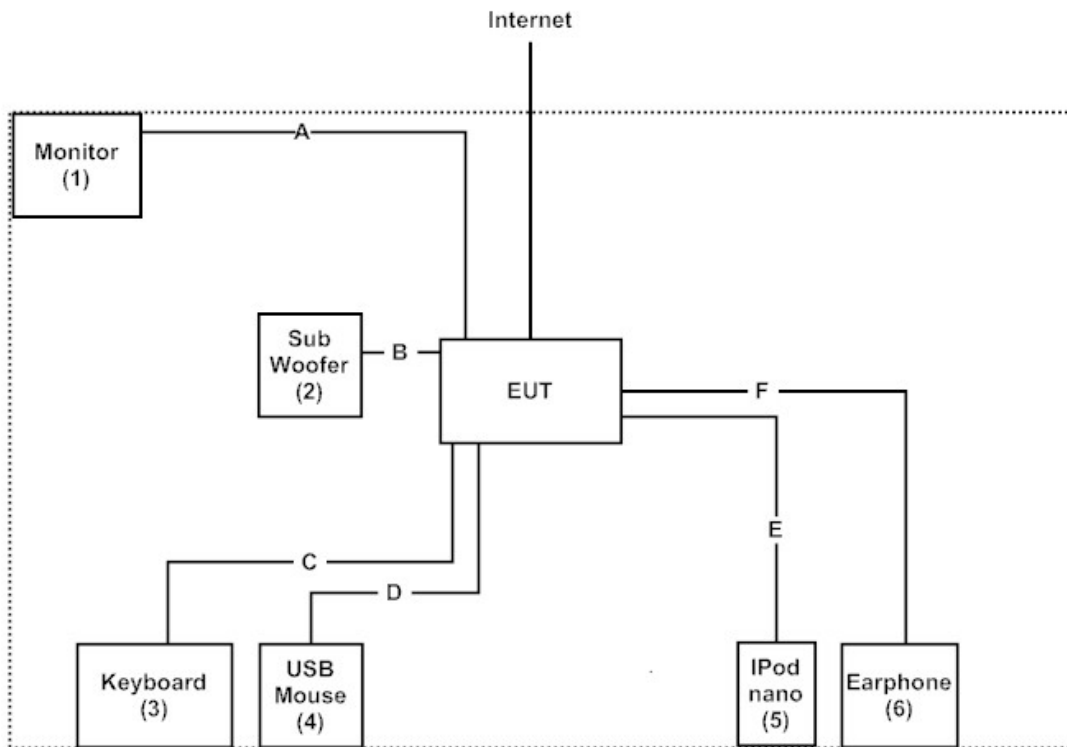
1.3. Tested System Details

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	ST2320LF	CN-QM2NN6-72892-221-C9WS	Non-Shielded, 1.8m
2	Sub Woofer	ASUS	N/A	N/A	N/A
3	Keyboard	DELL	SK-8115	MY-0DJ325-71619-6A3-1918	N/A
4	USB Mouse	Logitech	M-U0003	LZ024HR	N/A
5	iPod nano	Apple	A1199	7R649LBKVQ5	N/A
6	Earphone	Dr.AV	CD-806B	N/A	N/A

Signal Cable Type	Signal cable Description	
A	HDMI Cable	Non-Shielded, 1.3m
B	Speaker Cable	Non-Shielded, 0.45
C	Keyboard Cable	Non-Shielded, 1.7m, with one ferrite core bonded.
D	Mouse Cable	Non-Shielded, 1.8m
E	I-Pod Cable	Non-Shielded, 1.2m
F	Earphone Cable	Non-Shielded, 1.6m

1.4. Configuration of Tested System



1.5. EUT Exercise Software

- (1) Setup the EUT as shown in Section 1.4
- (2) Execute "DRTU Ver1.7.0-778" program on the Notebook PC.
- (3) Configure the test mode, the test channel, and the data rate.
- (4) Start transmits continually.
- (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	30-65
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/tw/ctg/cts/accreditations.htm>

The address and introduction of Quietek Corporation's laboratories can be founded in our Web site:

<http://www.quietek.com/>

Site Description: File on
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FCC Engineering Laboratory
7435 Oakland Mills Road
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FCC Accreditation Number: TW1014

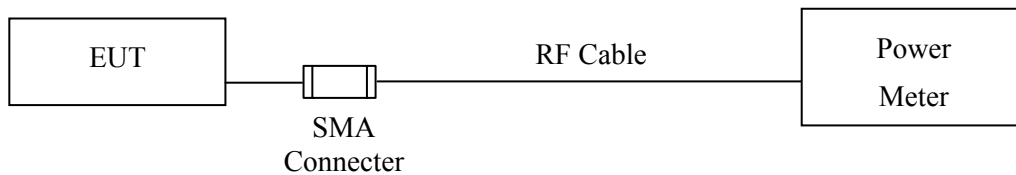
2. Peak Power Output

2.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Power Meter	Anritsu	ML2495A/6K00003357	May, 2014
X	Power Sensor	Anritsu	MA2411B/0738448	Jun., 2014
	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2014

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. Limit

The maximum peak power shall be less 1Watt.

2.4. Test Procedure

The EUT was setup to ANSI C63.10: 2009; tested to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR 15.247 requirements.

Note: the power meter have a video bandwidth that is greater than or equal to the measurement bandwidth, (Anritsu/ MA2411B video bandwidth: 65MHz)

2.5. Uncertainty

± 1.27 dB

2.6. Test Result of Peak Power Output

Product : Model 7260HMW Wireless Network Adapter
Test Item : Peak Power Output
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit - 1Mbps (GFSK)

Channel No.	Frequency (MHz)	Measurement (dBm)	Required Limit	Result
Channel 00	2402.00	2.88	1 Watt= 30 dBm	Pass
Channel 39	2441.00	3.68	1 Watt= 30 dBm	Pass
Channel 78	2480.00	4.57	1 Watt= 30 dBm	Pass

Product : Model 7260HMW Wireless Network Adapter
Test Item : Peak Power Output
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit - 3Mbps (8DPSK)

Channel No.	Frequency (MHz)	Measurement (dBm)	Required Limit	Result
Channel 00	2402.00	3.11	1 Watt= 30 dBm	Pass
Channel 39	2441.00	3.92	1 Watt= 30 dBm	Pass
Channel 78	2480.00	4.76	1 Watt= 30 dBm	Pass

3. Radiated Emission

3.1. Test Equipment

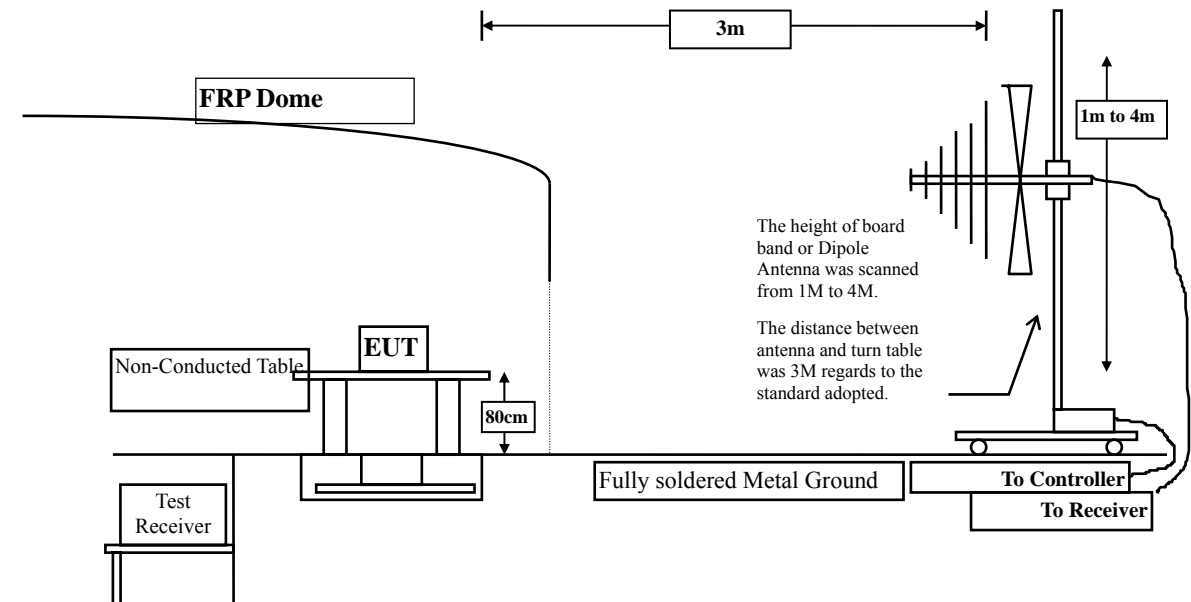
The following test equipments are used during the radiated emission test:

Test Site	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
☒ Site # 3	X Loop Antenna	Teseq	HLA6120 / 26739	Jul., 2013
	X Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2013
	X Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2013
	X Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2013
	X Pre-Amplifier	Agilent	8447D/2944A09549	Sep., 2013
	X Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2014
	X Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2013
	X Coaxial Cable	Quietek	QTK-CABLE/ CAB5	Feb., 2014
	X Controller	Quietek	QTK-CONTROLLER/ CTRL3	N/A
	X Coaxial Switch	Anritsu	MP59B/6200265729	N/A

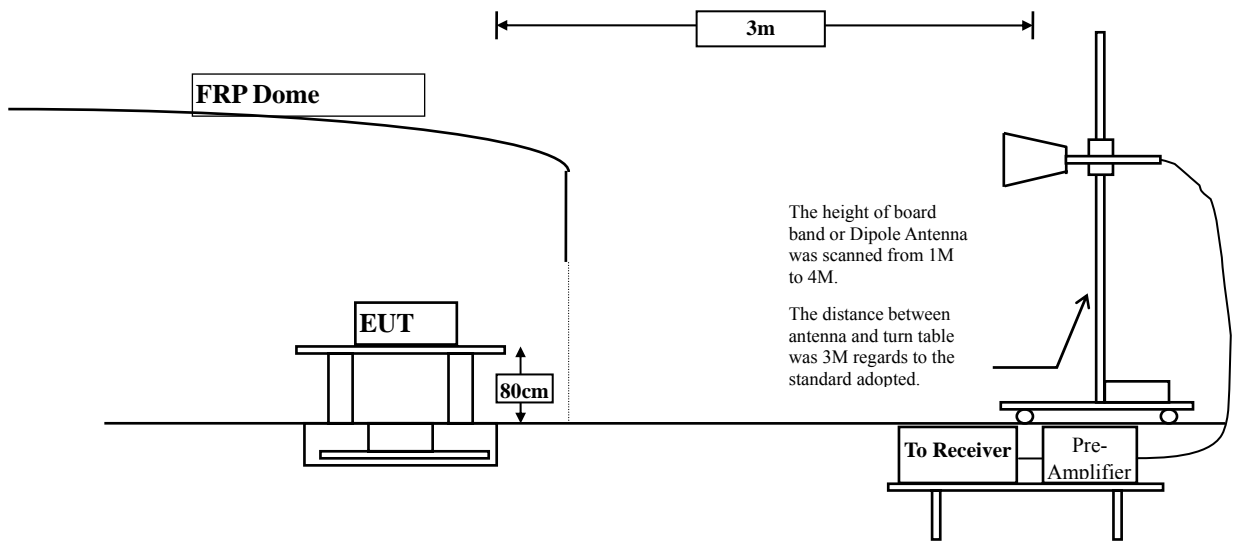
- Note:
1. All equipments are calibrated every one year.
 2. The test instruments marked by “X” are used to measure the final test results.

3.2. Test Setup

Below 1GHz



Above 1GHz



3.3. Limits

➤ General Radiated Emission 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 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:
1. RF Voltage (dBuV) = 20 log RF Voltage (uV)
 2. In the Above Table, the tighter limit applies at the band edges.
 3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

3.4. Test Procedure

The EUT was setup according to ANSI C63.10, 2009 and tested according to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR 15.247 requirements.

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

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

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 on the Final Measurement.

The measurement frequency range form 9kHz - 10th Harmonic of fundamental was investigated.

3.5. Uncertainty

± 3.9 dB above 1GHz

± 3.8 dB below 1GHz

3.6. Test Result of Radiated Emission

Product : Model 7260HMW Wireless Network Adapter
 Test Item : Harmonic Radiated Emission
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit - 1Mbps (GFSK)(2402MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
4804.000	3.327	37.040	40.367	-33.633	74.000
7206.000	10.136	36.410	46.546	-27.454	74.000
9608.000	13.706	35.740	49.446	-24.554	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4804.000	6.638	39.500	46.137	-27.863	74.000
7206.000	11.005	36.600	47.605	-26.395	74.000
9608.000	14.103	36.110	50.213	-23.787	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 : Model 7260HMW Wireless Network Adapter
 Test Item : Harmonic Radiated Emission
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit - 1Mbps (GFSK)(2441MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
4882.000	3.001	37.140	40.141	-33.859	74.000
7323.000	11.846	36.420	48.267	-25.733	74.000
9764.000	12.563	36.980	49.543	-24.457	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4882.000	5.713	37.560	43.274	-30.726	74.000
7323.000	12.727	35.980	48.708	-25.292	74.000
9764.000	13.028	37.470	50.498	-23.502	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 : Model 7260HMW Wireless Network Adapter
 Test Item : Harmonic Radiated Emission
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit - 1Mbps (GFSK)(2480MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
4960.000	2.760	36.970	39.730	-34.270	74.000
7440.000	12.567	34.640	47.206	-26.794	74.000
9920.000	13.456	36.410	49.866	-24.134	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4960.000	5.557	37.410	42.967	-31.033	74.000
7440.000	13.426	35.690	49.115	-24.885	74.000
9920.000	13.958	36.510	50.468	-23.532	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 : Model 7260HMW Wireless Network Adapter
 Test Item : Harmonic Radiated Emission
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit - 3Mbps (8DPSK)(2402MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
4804.000	3.327	36.770	40.097	-33.903	74.000
7206.000	10.136	36.800	46.936	-27.064	74.000
9608.000	13.706	36.090	49.796	-24.204	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4804.000	6.638	39.830	46.467	-27.533	74.000
7206.000	11.005	37.020	48.025	-25.975	74.000
9608.000	14.103	37.190	51.293	-22.707	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 : Model 7260HMW Wireless Network Adapter
 Test Item : Harmonic Radiated Emission
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit - 3Mbps (8DPSK) (2441MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
4882.000	3.001	36.940	39.941	-34.059	74.000
7323.000	11.846	35.310	47.157	-26.843	74.000
9764.000	12.563	36.800	49.363	-24.637	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4882.000	5.713	37.220	42.934	-31.066	74.000
7323.000	12.727	35.690	48.418	-25.582	74.000
9764.000	13.028	36.610	49.638	-24.362	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 : Model 7260HMW Wireless Network Adapter
 Test Item : Harmonic Radiated Emission
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit - 3Mbps (8DPSK) (2480MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
4960.000	2.760	36.850	39.610	-34.390	74.000
7440.000	12.567	35.170	47.736	-26.264	74.000
9920.000	13.456	36.250	49.706	-24.294	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4960.000	5.557	38.200	43.757	-30.243	74.000
7440.000	13.426	34.740	48.165	-25.835	74.000
9920.000	13.958	36.030	49.988	-24.012	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.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : Model 7260HMW Wireless Network Adapter
 Test Item : General Radiated Emission
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit - 1Mbps (GFSK) (2441MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
241.460	-6.590	27.935	21.345	-24.655	46.000
346.220	-1.347	29.525	28.178	-17.822	46.000
511.120	3.173	25.461	28.634	-17.366	46.000
689.600	3.642	22.815	26.457	-19.543	46.000
837.040	6.016	25.183	31.199	-14.801	46.000
928.220	7.230	24.790	32.020	-13.980	46.000
Vertical					
159.980	-5.120	30.753	25.632	-17.868	43.500
377.260	0.647	28.880	29.527	-16.473	46.000
511.120	0.783	26.027	26.810	-19.190	46.000
689.600	2.302	22.874	25.176	-20.824	46.000
827.340	2.711	23.918	26.629	-19.371	46.000
963.140	3.581	27.760	31.341	-22.659	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 : Model 7260HMW Wireless Network Adapter
 Test Item : General Radiated Emission
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit - 3Mbps (8DPSK) (2441MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
39.700	-3.625	30.426	26.801	-13.199	40.000
262.800	-5.484	26.024	20.540	-25.460	46.000
400.540	0.942	26.705	27.647	-18.353	46.000
544.100	4.373	23.705	28.078	-17.922	46.000
831.220	7.121	23.529	30.650	-15.350	46.000
980.600	7.314	27.285	34.599	-19.401	54.000
Vertical					
45.520	-10.625	39.251	28.626	-11.374	40.000
159.980	-5.120	31.159	26.038	-17.462	43.500
381.140	0.816	28.510	29.326	-16.674	46.000
606.180	2.246	23.815	26.061	-19.939	46.000
784.660	2.736	24.265	27.001	-18.999	46.000
970.900	2.967	27.905	30.872	-23.128	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.

4. Band Edge

4.1. Test Equipment

RF Radiated Measurement:

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

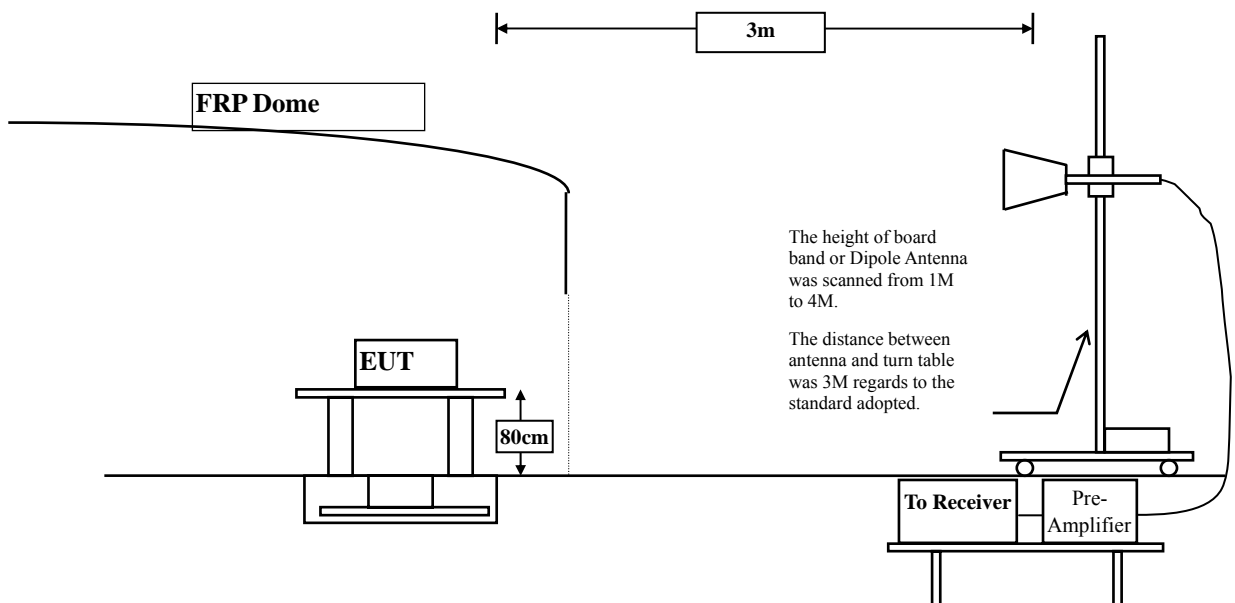
Test Site	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
☒ Site # 3	Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2013
	X Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2013
	Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2013
	X Pre-Amplifier	Agilent	8447D/2944A09549	Sep., 2013
	X Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2014
	Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2013
	X Coaxial Cable	Quietek	QTK-CABLE/ CAB5	Feb., 2014
	X Controller	Quietek	QTK-CONTROLLER/ CTRL3	N/A
	X Coaxial Switch	Anritsu	MP59B/6200265729	N/A

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

4.2. Test Setup

RF Radiated Measurement:

Above 1GHz



4.3. Limit

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)).

4.4. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 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 can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10: 2009 on radiated measurement.

The bandwidth below 1GHz setting on the field strength meter is 120 kHz, above 1GHz are 1 MHz. The EUT was setup to ANSI C63.10: 2009; tested to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR 15.247 requirements.

4.5. Uncertainty

± 3.9 dB above 1GHz

± 3.8 dB below 1GHz

4.6. Test Result of Band Edge

Product : Model 7260HMW Wireless Network Adapter
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit - 1Mbps (GFSK)

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
00 (Peak)	2341.800	11.669	43.908	55.577	74.00	54.00	Pass
00 (Peak)	2361.600	11.785	47.044	58.829	74.00	54.00	Pass
00 (Peak)	2382.000	11.676	44.126	55.801	74.00	54.00	Pass
00 (Peak)	2390.000	11.672	38.373	50.045	74.00	54.00	Pass
00 (Peak)	2400.000	11.703	73.752	85.454	--	--	Pass
00 (Peak)	2402.200	11.709	96.470	108.179	--	--	Pass
00 (Average)	2342.000	11.671	35.856	47.527	74.00	54.00	Pass
00 (Average)	2362.200	11.787	39.573	51.360	74.00	54.00	Pass
00 (Average)	2381.800	11.677	36.264	47.941	74.00	54.00	Pass
00 (Average)	2390.000	11.672	26.860	38.532	74.00	54.00	Pass
00 (Average)	2400.000	11.703	60.489	72.191	--	--	Pass
00 (Average)	2402.000	11.709	80.918	92.627	--	--	Pass

Figure Channel 00: Horizontal (Peak)

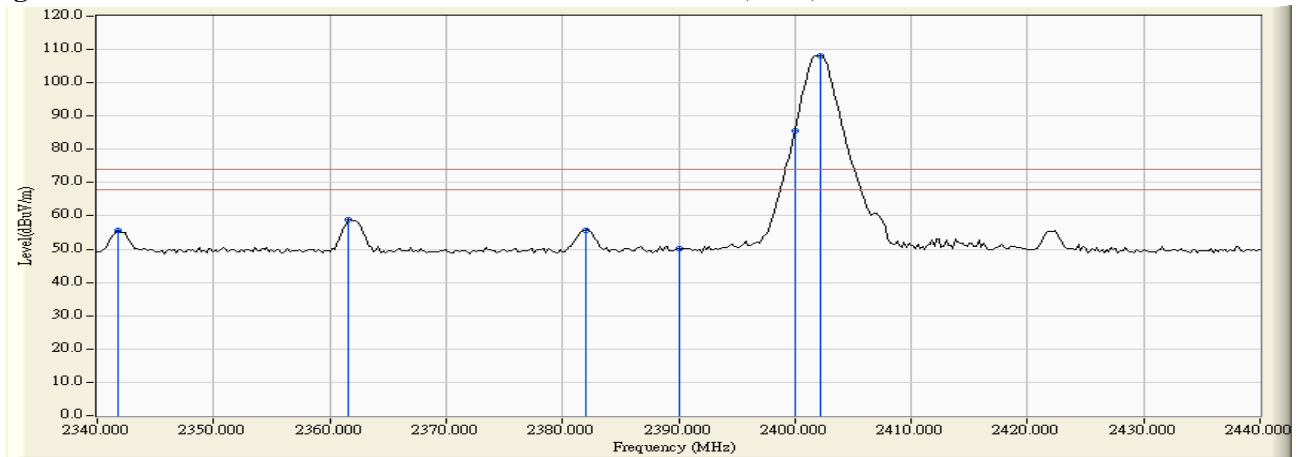
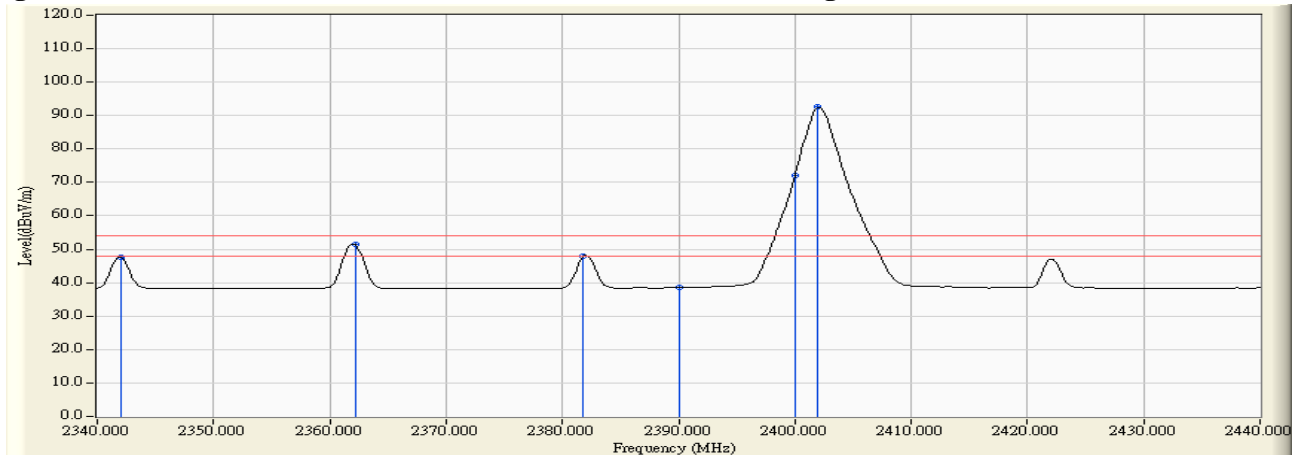


Figure Channel 00: Horizontal (Average)



- 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 : Model 7260HMW Wireless Network Adapter
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit - 1Mbps (GFSK)

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
00 (Peak)	2342.200	11.673	42.210	53.883	74.00	54.00	Pass
00 (Peak)	2362.200	11.787	44.679	56.466	74.00	54.00	Pass
00 (Peak)	2382.400	11.672	42.066	53.738	74.00	54.00	Pass
00 (Peak)	2390.000	11.672	37.354	49.026	74.00	54.00	Pass
00 (Peak)	2400.000	11.703	70.153	81.855	--	--	Pass
00 (Peak)	2402.200	11.709	92.927	104.636	--	--	Pass
00 (Average)	2342.000	11.671	34.323	45.994	74.00	54.00	Pass
00 (Average)	2362.000	11.787	37.023	48.810	74.00	54.00	Pass
00 (Average)	2382.200	11.674	33.595	45.269	74.00	54.00	Pass
00 (Average)	2390.000	11.672	26.645	38.317	74.00	54.00	Pass
00 (Average)	2400.000	11.703	57.671	69.373	--	--	Pass
00 (Average)	2402.000	11.709	78.400	90.109	--	--	Pass

Figure Channel 00: Vertical (Peak)

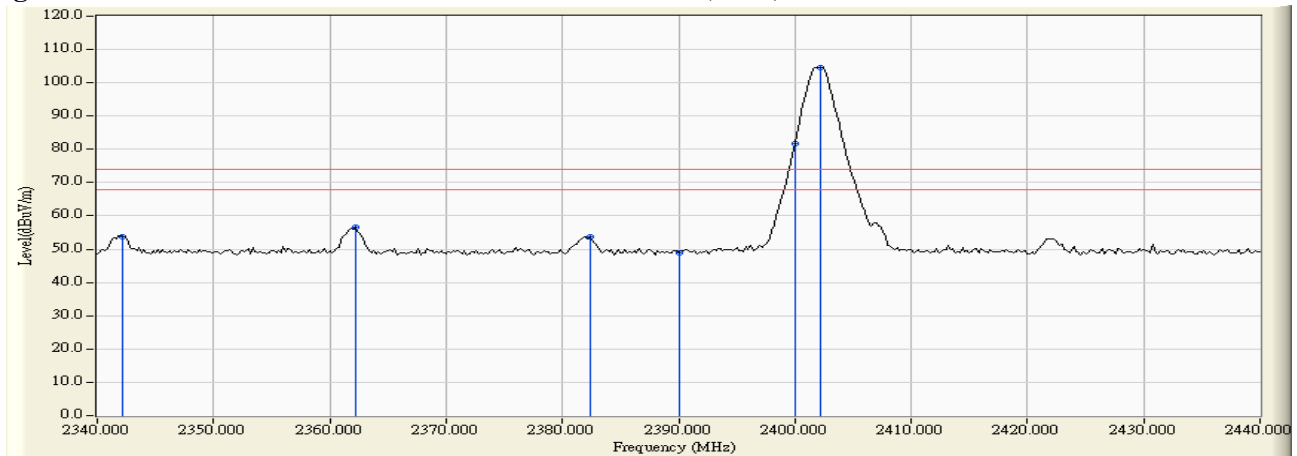
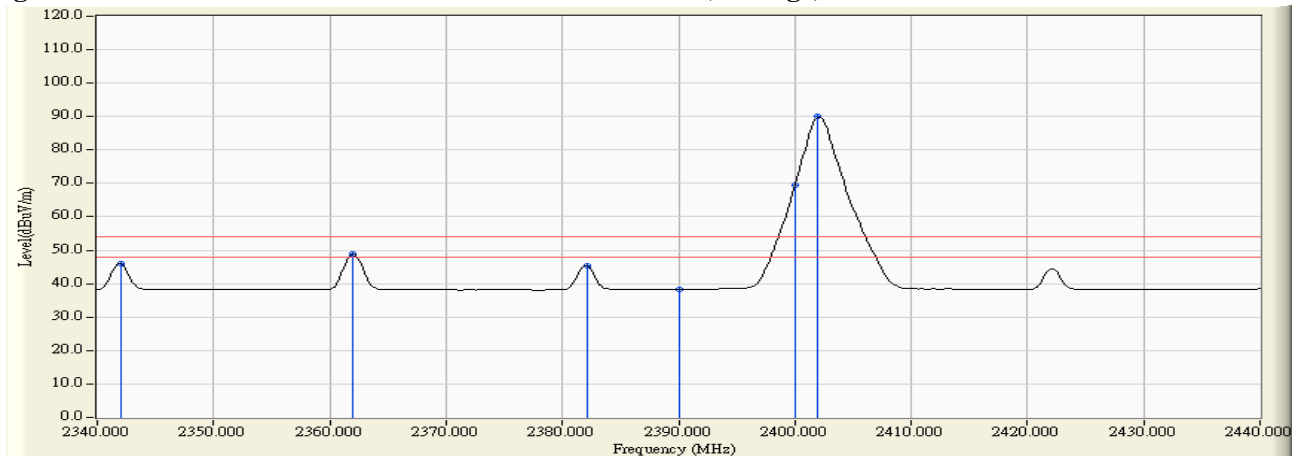


Figure Channel 00: Vertical (Average)



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 : Model 7260HMW Wireless Network Adapter
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit - 1Mbps (GFSK)

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
78 (Peak)	2480.100	12.022	92.271	104.294	--	--	Pass
78 (Peak)	2483.500	12.049	53.245	65.294	74.00	54.00	Pass
78 (Average)	2480.100	12.022	73.777	85.800	--	--	Pass
78 (Average)	2483.500	12.049	40.935	52.984	74.00	54.00	Pass

Figure Channel 78: Horizontal (Peak)

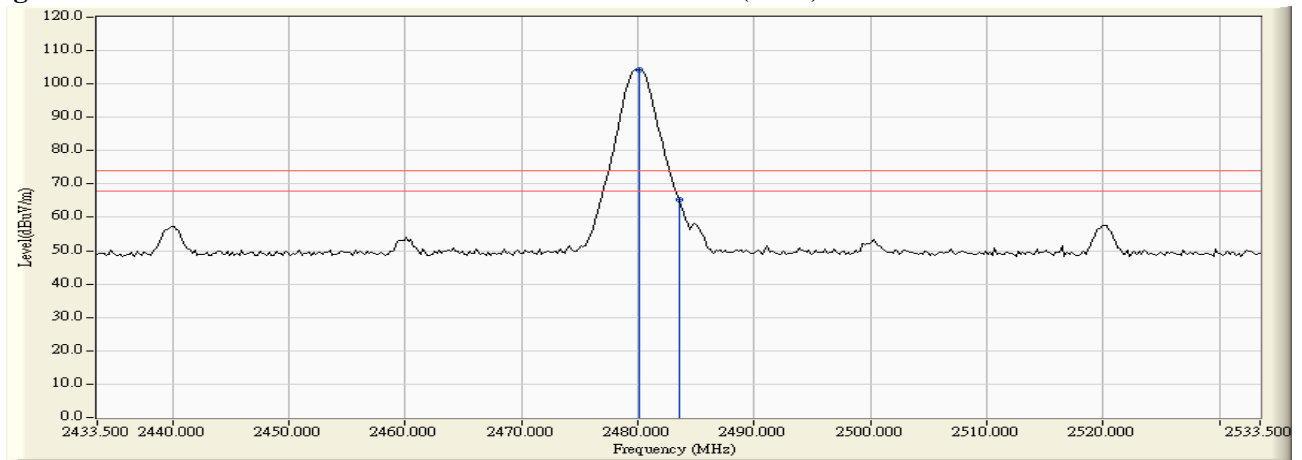
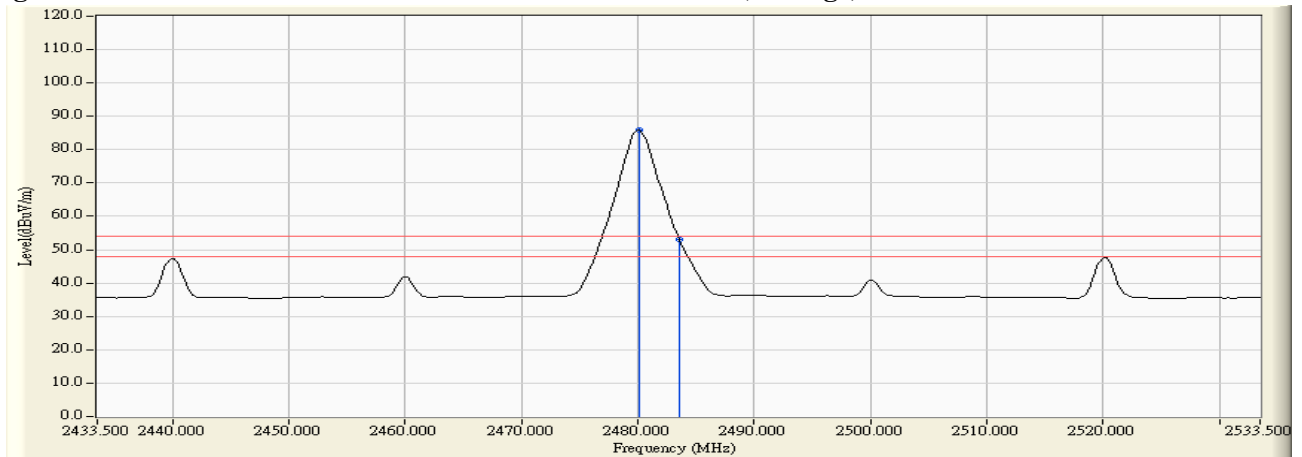


Figure Channel 78: Horizontal (Average)



- 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 : Model 7260HMW Wireless Network Adapter
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit - 1Mbps (GFSK)

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
78 (Peak)	2480.100	12.022	87.596	99.619	--	--	Pass
78 (Peak)	2483.500	12.049	48.630	60.679	74.00	54.00	Pass
78 (Average)	2480.100	12.022	73.141	85.164	--	--	Pass
78 (Average)	2483.500	12.049	40.847	52.896	74.00	54.00	Pass

Figure Channel 78: Vertical (Peak)

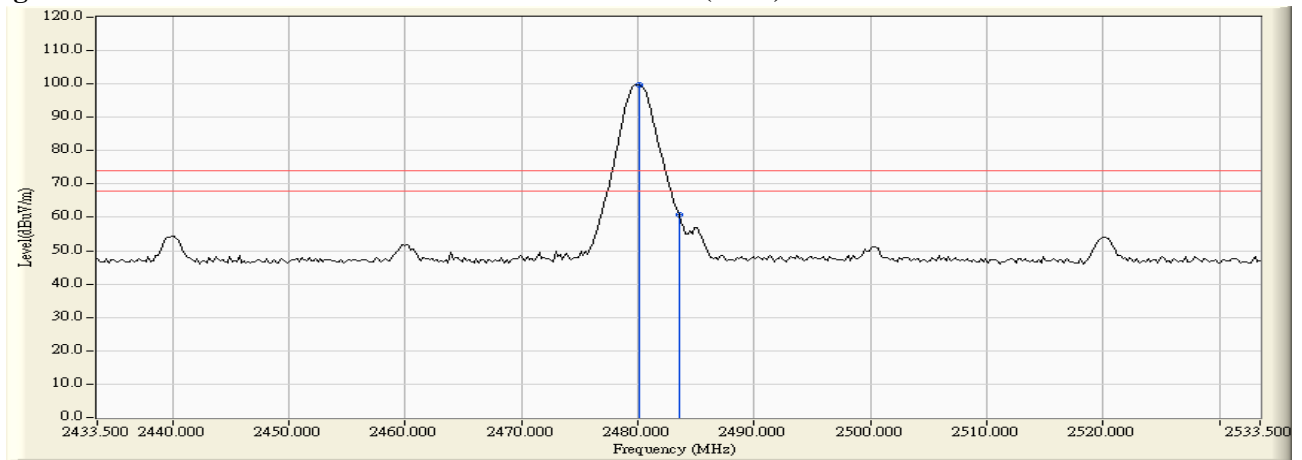
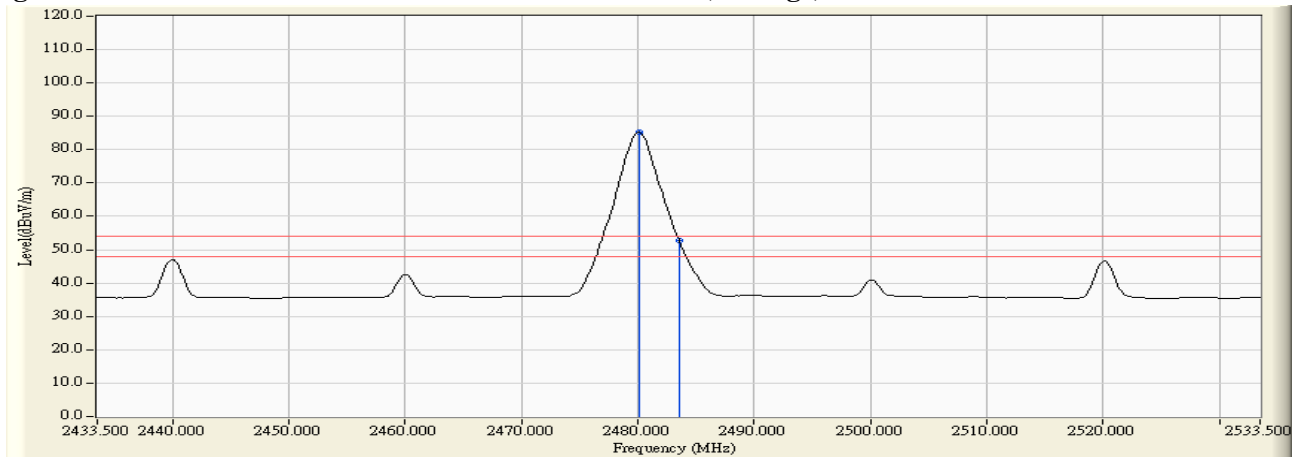


Figure Channel 78: Vertical (Average)



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 : Model 7260HMW Wireless Network Adapter
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit - 3Mbps (8DPSK)

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
00 (Peak)	2341.600	11.666	40.396	52.063	74.00	54.00	Pass
00 (Peak)	2362.200	11.787	43.538	55.325	74.00	54.00	Pass
00 (Peak)	2390.000	11.672	40.440	52.112	74.00	54.00	Pass
00 (Peak)	2400.000	11.703	70.921	82.623	--	--	Pass
00 (Peak)	2402.000	11.709	91.444	103.153	--	--	Pass
00 (Average)	2342.000	11.671	30.902	42.573	74.00	54.00	Pass
00 (Average)	2361.800	11.786	34.332	46.118	74.00	54.00	Pass
00 (Average)	2381.800	11.677	30.464	42.141	74.00	54.00	Pass
00 (Average)	2390.000	11.672	24.702	36.374	74.00	54.00	Pass
00 (Average)	2400.000	11.703	55.583	67.285	--	--	Pass
00 (Average)	2402.000	11.709	75.317	87.326	--	--	Pass

Figure Channel 00: Horizontal (Peak)

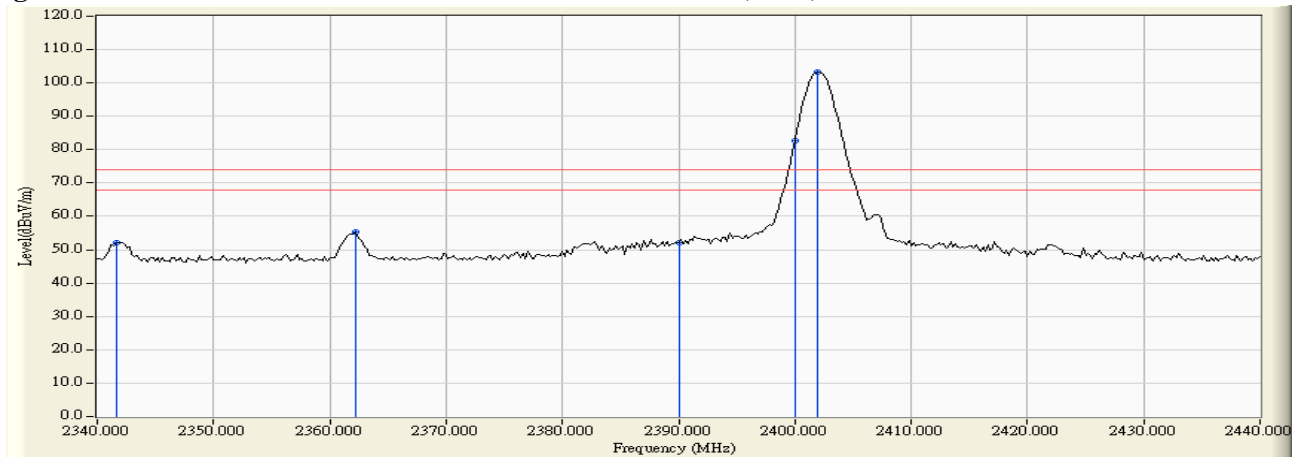
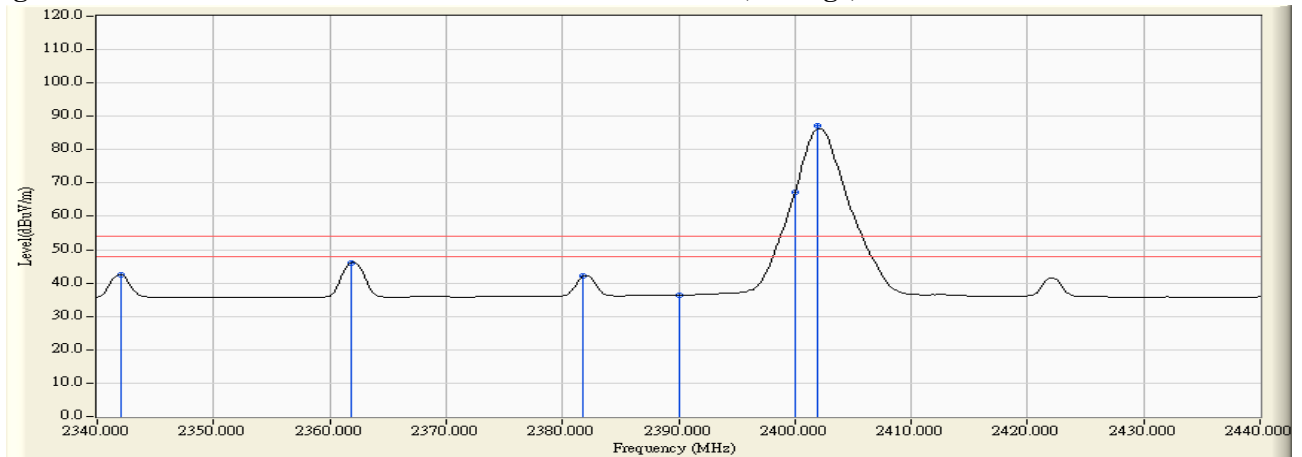


Figure Channel 00: Horizontal (Average)



- 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 : Model 7260HMW Wireless Network Adapter
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit - 3Mbps (8DPSK)

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
00 (Peak)	2341.800	11.669	39.704	51.373	74.00	54.00	Pass
00 (Peak)	2361.800	11.786	42.044	53.830	74.00	54.00	Pass
00 (Peak)	2390.000	11.672	38.820	50.492	74.00	54.00	Pass
00 (Peak)	2400.000	11.703	67.194	78.896	--	--	Pass
00 (Peak)	2402.000	11.709	87.702	99.411	--	--	Pass
00 (Average)	2341.800	11.669	28.681	40.350	74.00	54.00	Pass
00 (Average)	2361.600	11.785	31.194	42.979	74.00	54.00	Pass
00 (Average)	2381.600	11.678	27.635	39.314	74.00	54.00	Pass
00 (Average)	2390.000	11.672	24.313	35.985	74.00	54.00	Pass
00 (Average)	2400.000	11.703	51.795	63.497	--	--	Pass
00 (Average)	2402.000	11.709	71.932	83.641	--	--	Pass

Figure Channel 00: Vertical (Peak)

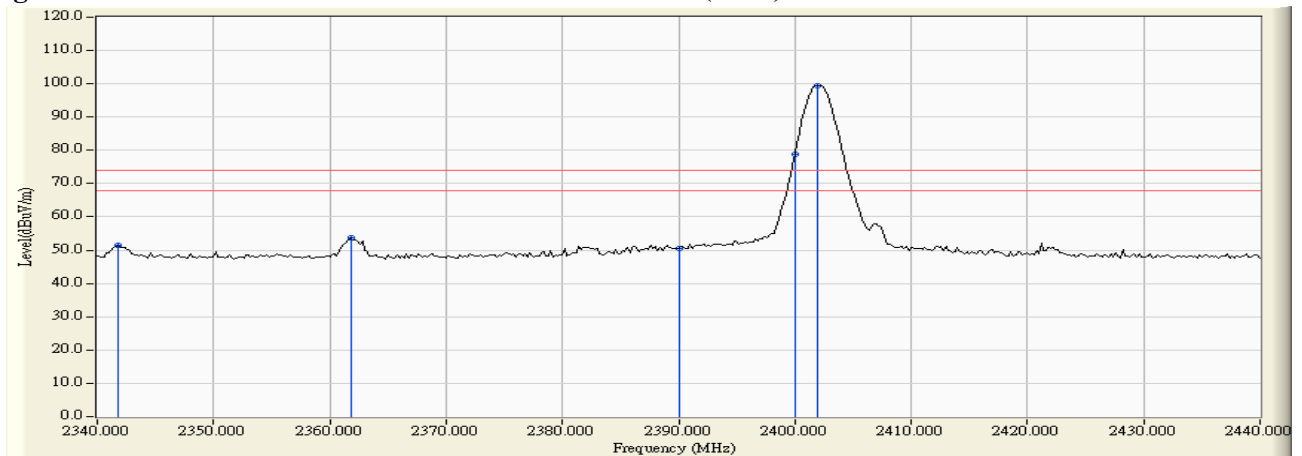
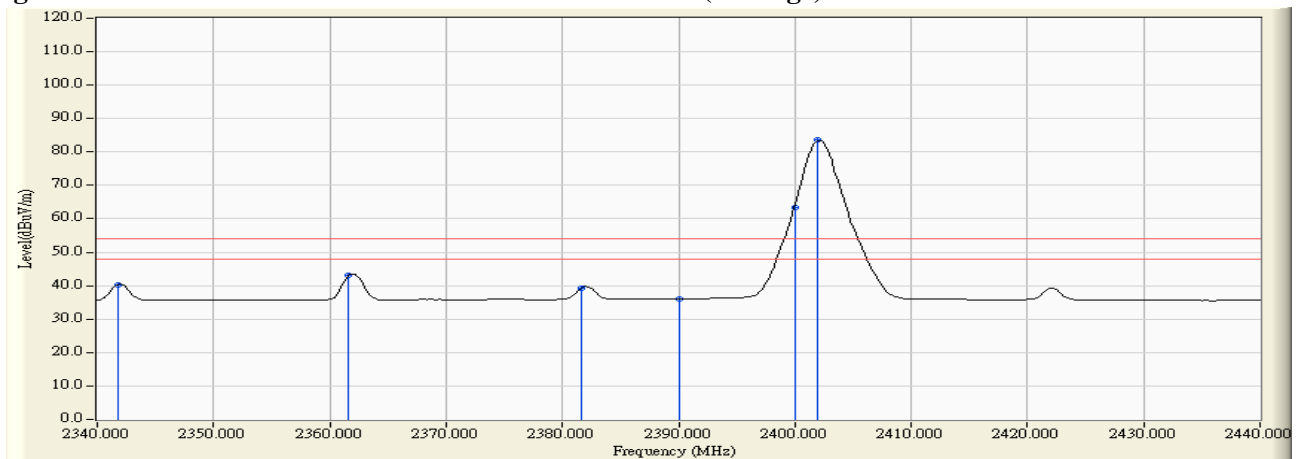


Figure Channel 00: Vertical (Average)



- 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 : Model 7260HMW Wireless Network Adapter
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit - 3Mbps (8DPSK)

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
78 (Peak)	2479.900	12.021	87.088	99.109	--	--	Pass
78 (Peak)	2483.500	12.049	49.165	61.214	74.00	54.00	Pass
78 (Average)	2480.100	12.022	71.036	83.059	--	--	Pass
78 (Average)	2483.500	12.049	40.884	52.933	74.00	54.00	Pass

Figure Channel 78: Horizontal (Peak)

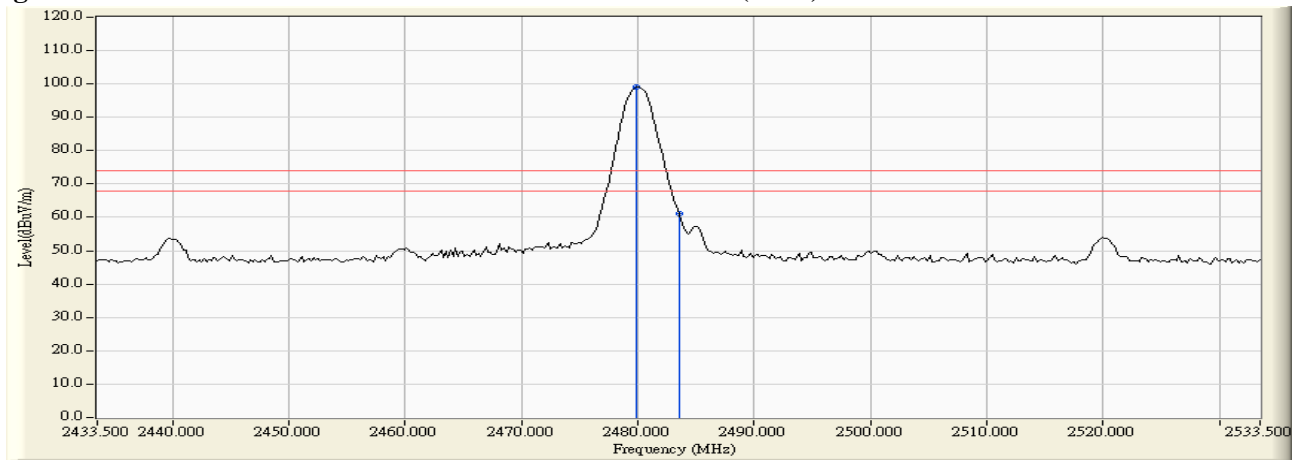
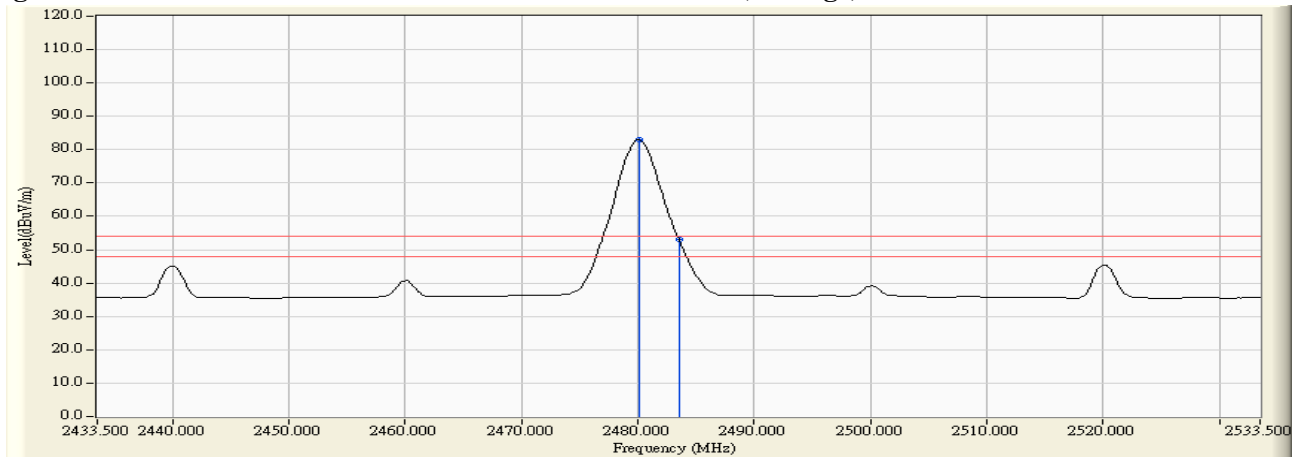


Figure Channel 78: Horizontal (Average)



- 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 : Model 7260HMW Wireless Network Adapter
 Test Item : Band Edge
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit - 3Mbps (8DPSK)

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
78 (Peak)	2480.100	12.022	86.675	98.698	--	--	Pass
78 (Peak)	2483.500	12.049	49.095	61.144	74.00	54.00	Pass
78 (Average)	2480.100	12.022	70.859	82.882	--	--	Pass
78 (Average)	2483.500	12.049	40.583	52.632	74.00	54.00	Pass

Figure Channel 78: Vertical (Peak)

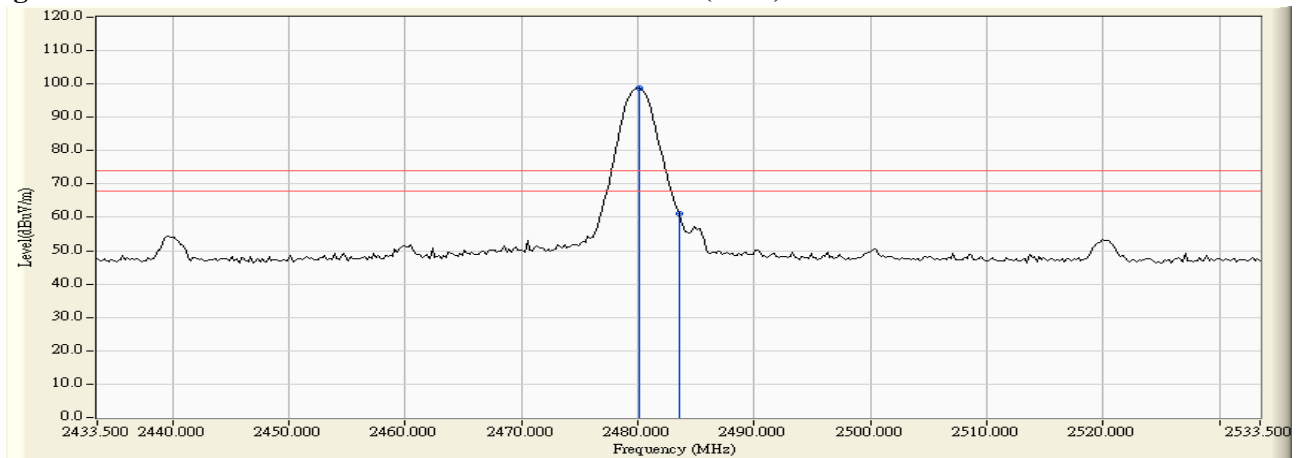
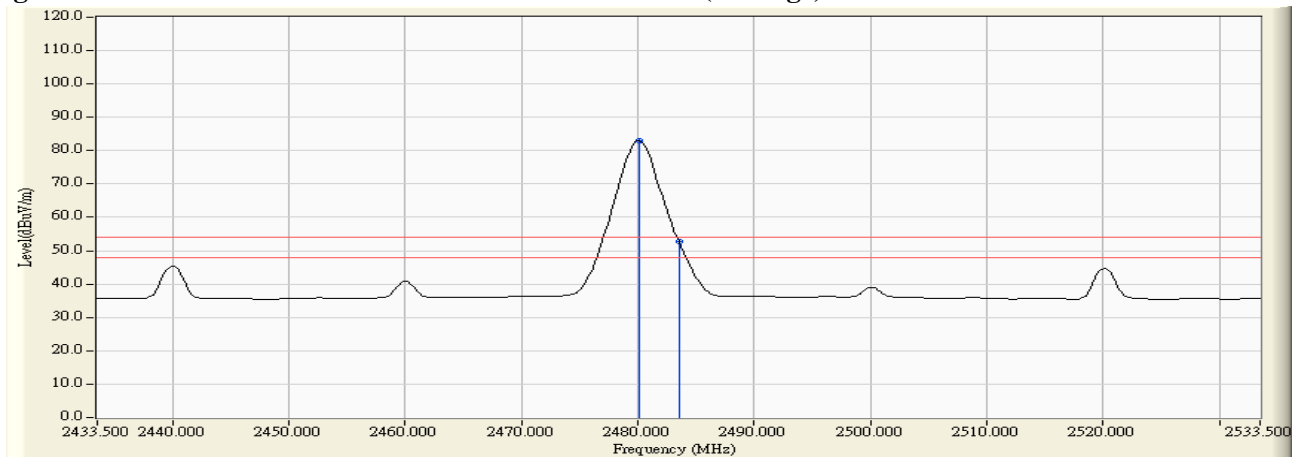


Figure Channel 78: Vertical (Average)



- 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.

5. EMI Reduction Method During Compliance Testing

No modification was made during testing.

Attachment 1: EUT Test Photographs

Attachment 2: EUT Detailed Photographs