

# 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	Mar. 25, 2014
Issued Date	Apr. 14, 2014
Report No.	1430488R-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: Apr. 14, 2014

Report No.: 1430488R-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

Documented By :



( Senior Adm. Specialist / Rita Huang )

Tested By :



( Engineer / Andy Lin )

Approved By :



( 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) / $\pi$ /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: N542L / Q502L
Power Adapter	MFR: DELTA (ASUS), M/N: ADP-45BW B Input: 100-240V, 50-60Hz, 1.2A Output: DC 19V $\pm$ 2.37A Cable out: Non-Shielded, 1.8m

#### Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	ACON	APP6P-701148 (Main)(Aux)	PIFA	-0.74dBi For 2.4GHz
2	INPAQ	WA-F-LBLB-04-022 (Main)(Aux)	PIFA	-0.96dBi 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: N542L, Q502L

#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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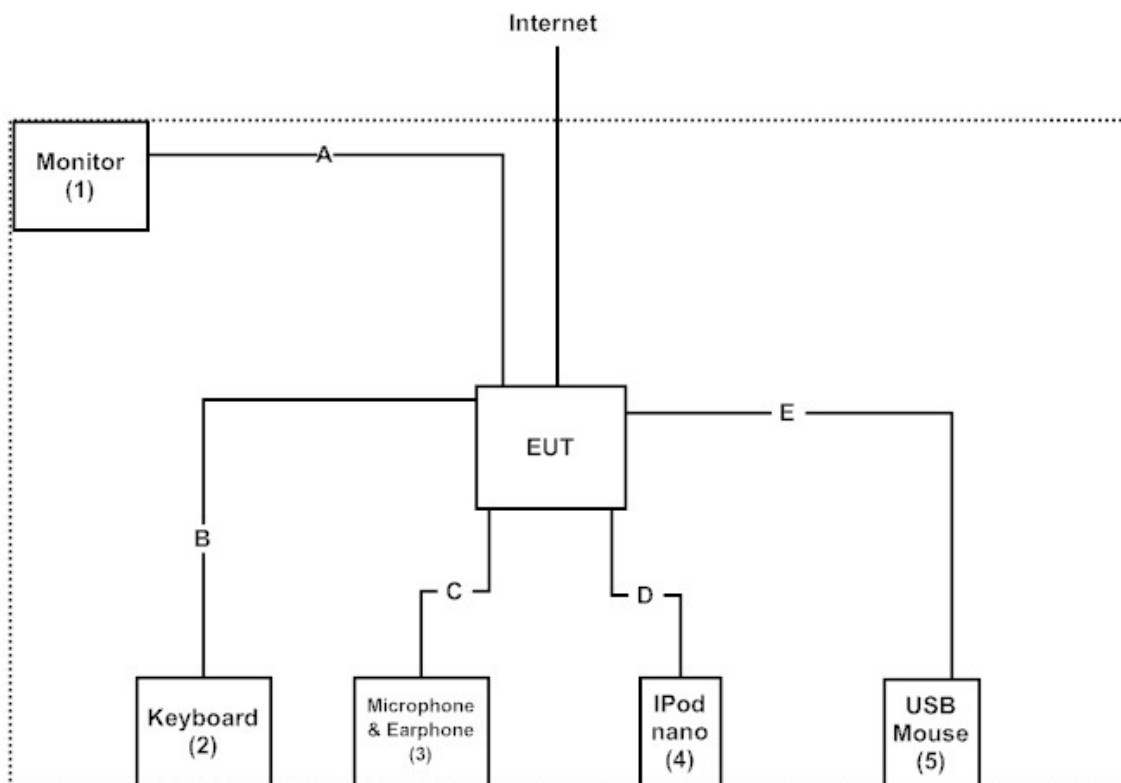
### 1.3. Tested System Details

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 Keyboard	Logitech	Y-UR83	SY853UK	N/A
3 Microphone & Earphone	PCHOME	N/A	N/A	N/A
4 iPod nano	Apple	A1199	YM709RBUVQ5	N/A
5 USB Mouse	Logitech	M-BE58	HCA24311616	N/A

Signal Cable Type	Signal cable Description
A HDMI Cable	Non-Shielded, 1.6m
B Keyboard Cable	Non-Shielded, 1.7m
C Microphone & Earphone Cable	Non-Shielded, 1.6m
D I-Pod Cable	Non-Shielded, 1.2m
E Mouse Cable	Non-Shielded, 1.8m
F LAN Cable	Non-Shielded, 2.0m

### 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  
Federal Communications Commission  
FCC Engineering Laboratory  
7435 Oakland Mills Road  
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FCC Accreditation Number: TW1014



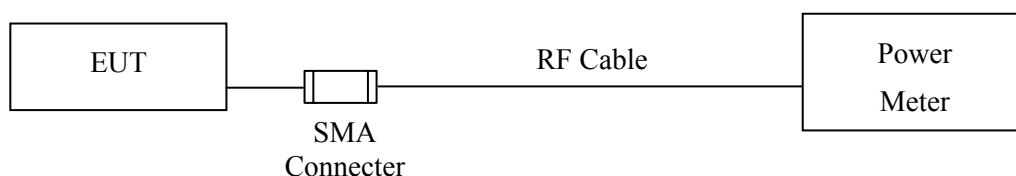
## 2. Peak Power Output

### 2.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Power Meter	Anritsu	ML2495A/6K00003357	May, 2013
X	Power Sensor	Anritsu	MA2411B/0738448	Jun., 2013
	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

$\pm 1.27$  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	3.34	1 Watt= 30 dBm	Pass
Channel 39	2441.00	4.12	1 Watt= 30 dBm	Pass
Channel 78	2480.00	4.87	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	2.91	1 Watt= 30 dBm	Pass
Channel 39	2441.00	3.85	1 Watt= 30 dBm	Pass
Channel 78	2480.00	4.56	1 Watt= 30 dBm	Pass

### 3. Radiated Emission

#### 3.1. Test Equipment

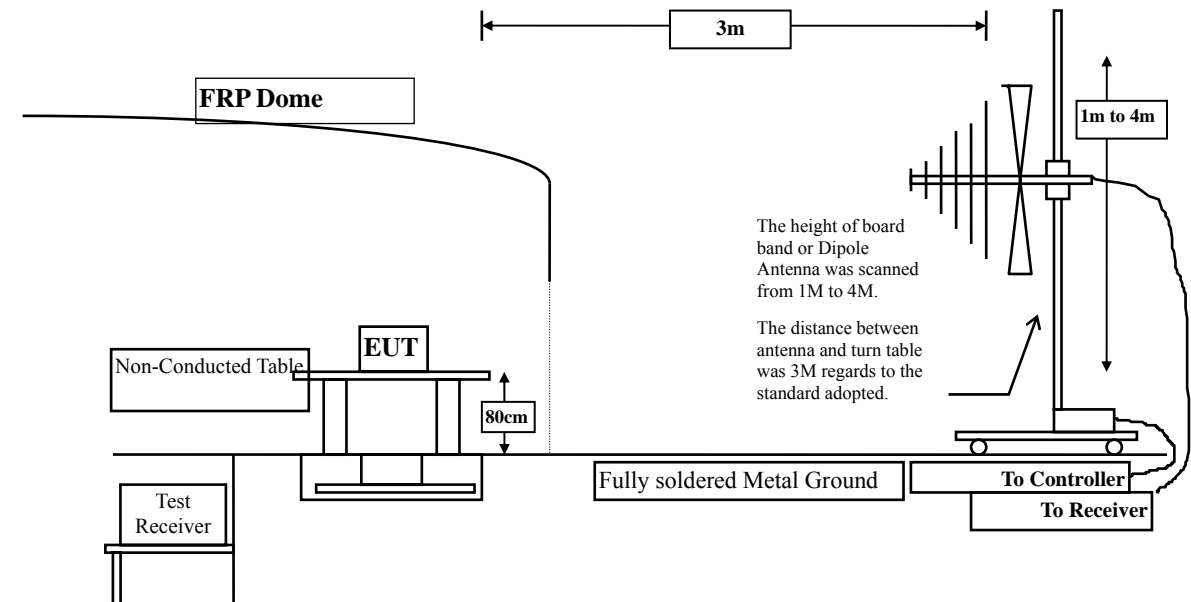
The following test equipments are used during the radiated emission test:

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, 2013
	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

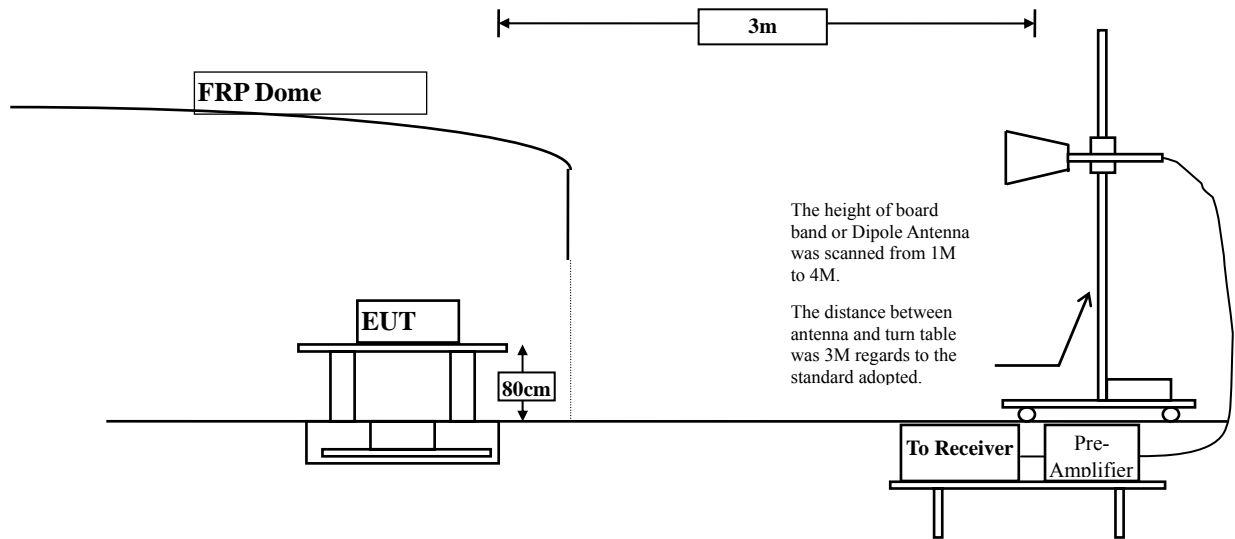
- Note: 1. All equipments are calibrated every one year.  
2. The test instruments marked by “X” are used to measure the final test results.

#### 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 from 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	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV/m	dB	dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
4804.000	3.327	38.690	42.017	-31.983	74.000
7206.000	10.136	37.240	47.376	-26.624	74.000
9608.000	13.706	37.230	50.936	-23.064	74.000
<b>Average</b>					
<b>Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
4804.000	6.638	42.070	48.707	-25.293	74.000
7260.000	11.885	37.510	49.395	-24.605	74.000
9608.000	14.103	37.420	51.523	-22.477	74.000
<b>Average</b>					
<b>Detector:</b>					
--					

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	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV/m	dB	dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
4882.000	3.001	41.010	44.011	-29.989	74.000
7323.000	11.846	37.210	49.057	-24.943	74.000
9764.000	12.563	37.110	49.673	-24.327	74.000
<b>Average</b>					
<b>Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
4882.000	5.713	38.970	44.684	-29.316	74.000
7323.000	12.727	37.200	49.928	-24.072	74.000
9764.000	13.028	36.070	49.098	-24.902	74.000
<b>Average</b>					
<b>Detector:</b>					
--					

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	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV/m	dB	dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
4960.000	2.760	37.210	39.970	-34.030	74.000
7440.000	12.567	36.190	48.756	-25.244	74.000
9920.000	13.456	36.480	49.936	-24.064	74.000
<b>Average</b>					
<b>Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
4960.000	5.557	41.020	46.577	-27.423	74.000
7440.000	13.426	37.110	50.535	-23.465	74.000
9920.000	13.958	35.980	49.938	-24.062	74.000
<b>Average</b>					
<b>Detector:</b>					
--					

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	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m

#### Horizontal

##### Peak Detector:

4804.000	3.327	38.440	41.767	-32.233	74.000
7206.000	10.136	36.890	47.026	-26.974	74.000
9608.000	13.706	38.640	52.346	-21.654	74.000

##### Average

##### Detector:

--

#### Vertical

##### Peak Detector:

4804.000	6.638	39.620	46.257	-27.743	74.000
7206.000	11.005	38.410	49.415	-24.585	74.000
9608.000	14.103	36.850	50.953	-23.047	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	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV/m	dB	dBuV/m

#### Horizontal

##### Peak Detector:

4882.000	3.001	39.220	42.221	-31.779	74.000
7323.000	11.846	37.050	48.897	-25.103	74.000
9764.000	12.563	36.820	49.383	-24.617	74.000

##### Average

##### Detector:

--

#### Vertical

##### Peak Detector:

4882.000	5.713	37.770	43.484	-30.516	74.000
7323.000	12.727	36.490	49.218	-24.782	74.000
9764.000	13.028	36.710	49.738	-24.262	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	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV/m	dB	dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
4960.000	2.760	41.260	44.020	-29.980	74.000
7440.000	12.567	35.270	47.836	-26.164	74.000
9920.000	13.456	35.980	49.436	-24.564	74.000
<b>Average</b>					
<b>Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
4960.000	5.557	38.910	44.467	-29.533	74.000
7440.000	13.426	36.580	50.005	-23.995	74.000
9920.000	13.958	37.890	51.848	-22.152	74.000
<b>Average</b>					
<b>Detector:</b>					
--					

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
<b>Horizontal</b>					
112.470	-8.527	44.670	36.144	-7.356	43.500
277.390	-6.240	45.980	39.740	-6.260	46.000
401.140	-2.768	38.170	35.402	-10.598	46.000
502.360	-0.378	31.640	31.262	-14.738	46.000
664.740	1.584	37.650	39.234	-6.766	46.000
897.690	4.793	32.610	37.403	-8.597	46.000
<b>Vertical</b>					
144.890	-6.589	30.312	23.723	-19.777	43.500
372.930	-3.008	28.997	25.990	-20.010	46.000
473.580	-5.036	32.910	27.874	-18.126	46.000
554.860	-5.364	28.190	22.826	-23.174	46.000
797.630	2.444	29.340	31.783	-14.217	46.000
967.230	7.552	24.780	32.332	-21.668	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	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV/m	dB	dBuV/m
<b>Horizontal</b>					
141.200	-10.770	47.890	37.120	-6.380	43.500
277.630	-6.227	41.900	35.673	-10.327	46.000
390.170	-2.391	38.930	36.540	-9.460	46.000
501.140	-0.390	34.537	34.147	-11.853	46.000
667.810	1.556	35.940	37.495	-8.505	46.000
817.630	5.243	35.460	40.703	-5.297	46.000
<b>Vertical</b>					
166.380	-8.341	29.710	21.369	-22.131	43.500
383.860	-3.081	36.190	33.109	-12.891	46.000
466.740	-5.237	32.971	27.734	-18.266	46.000
592.670	-5.319	28.710	23.390	-22.610	46.000
799.140	2.421	27.880	30.302	-15.698	46.000
902.890	2.526	31.541	34.068	-11.932	46.000

Note:

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

#### 4. Band Edge

##### 4.1. Test Equipment

###### RF Radiated Measurement:

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

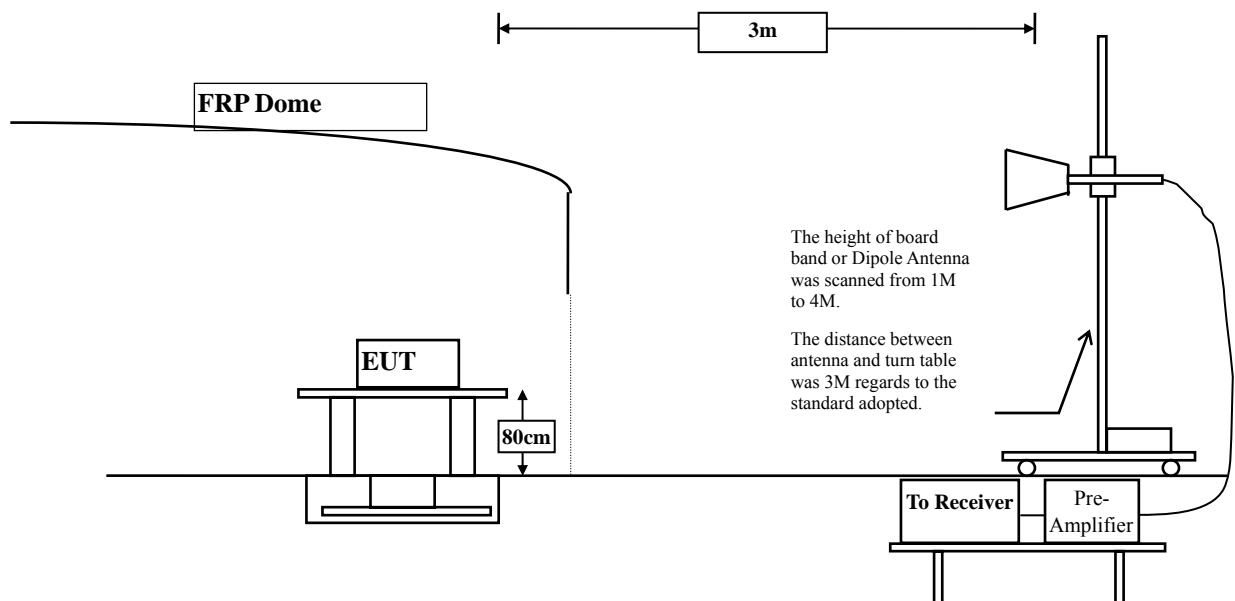
Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
☒ Site # 3		Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2013
	X	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2013
		Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2013
	X	Pre-Amplifier	Agilent	8447D/2944A09549	Sep., 2013
	X	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2013
		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)	2382.100	6.796	44.675	51.471	74.00	54.00	Pass
00 (Peak)	2390.000	6.803	39.985	46.788	74.00	54.00	Pass
00 (Peak)	2400.000	6.838	58.604	65.442	--	--	Pass
00 (Peak)	2402.100	6.845	96.954	103.799	--	--	Pass
00 (Average)	2382.000	6.797	36.383	43.180	74.00	54.00	Pass
00 (Average)	2390.000	6.803	28.656	35.459	74.00	54.00	Pass
00 (Average)	2400.000	6.838	43.116	49.954	--	--	Pass
00 (Average)	2402.000	6.845	82.684	89.529	--	--	Pass

Figure Channel 00: Horizontal (Peak)

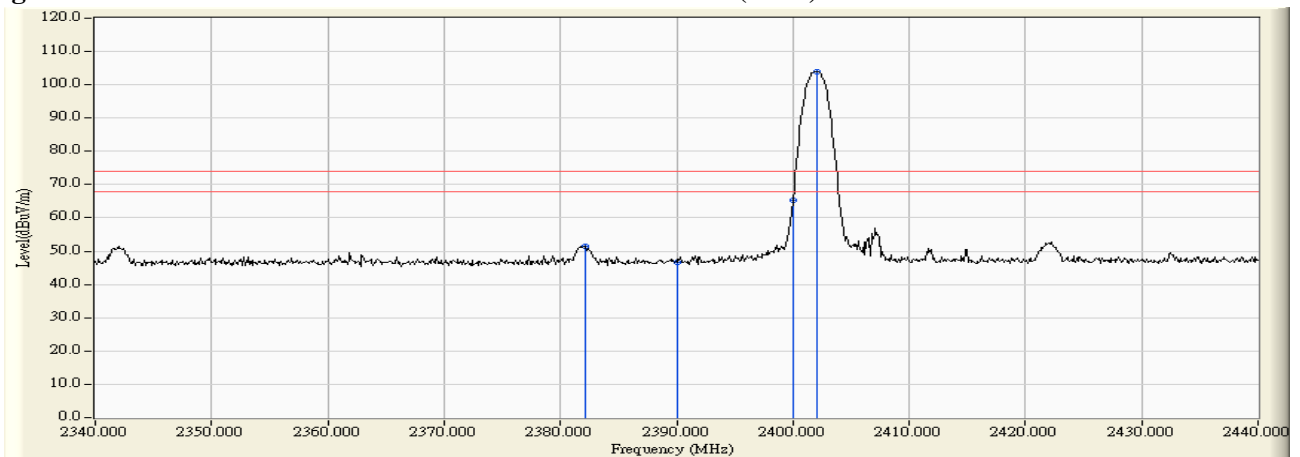
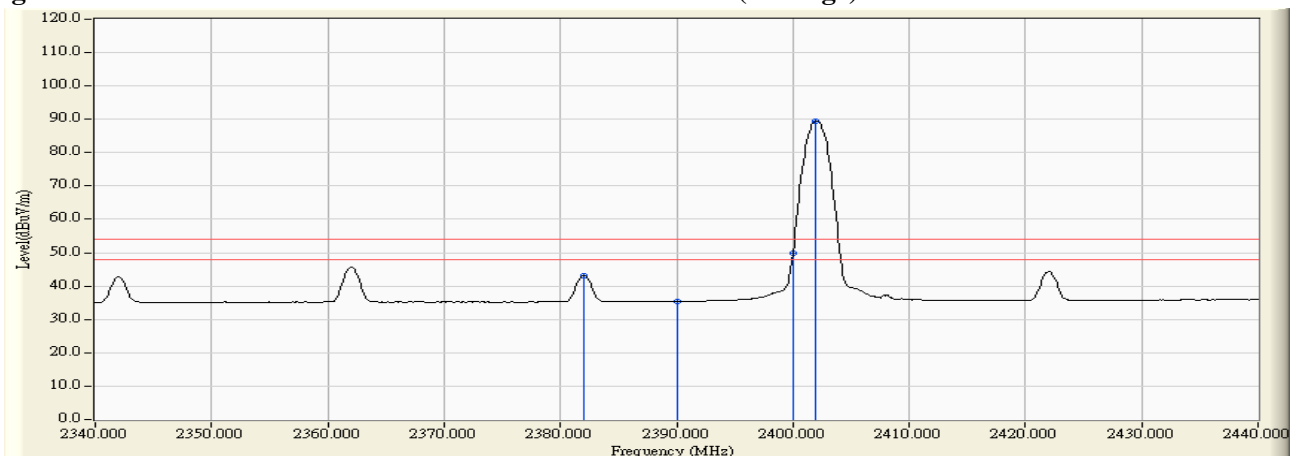


Figure Channel 00: Horizontal (Average)



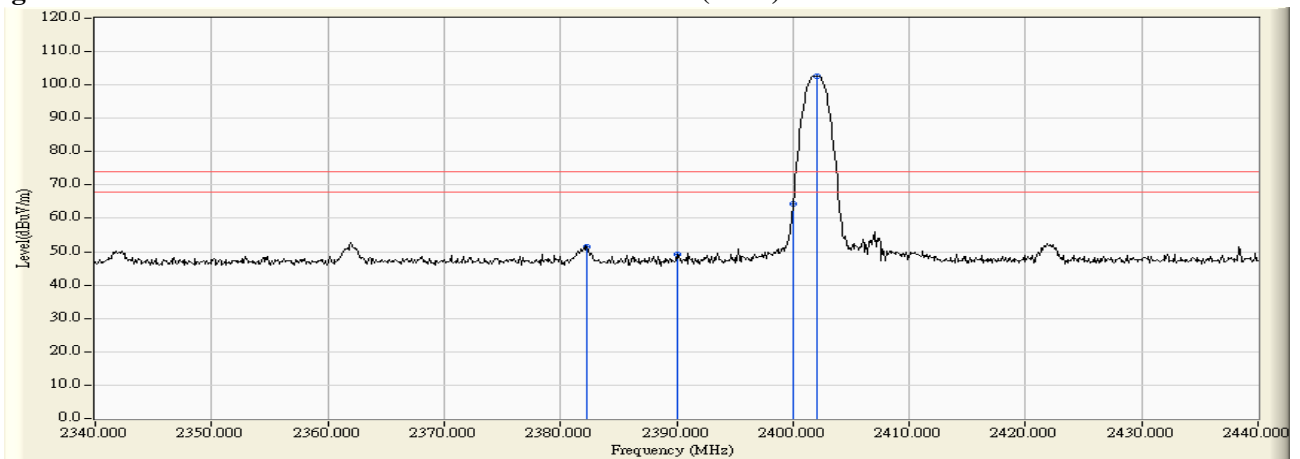
- Note: 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.  
 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.  
 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.  
 4. “ \* ”, means this data is the worst emission level.  
 5. Measurement 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)

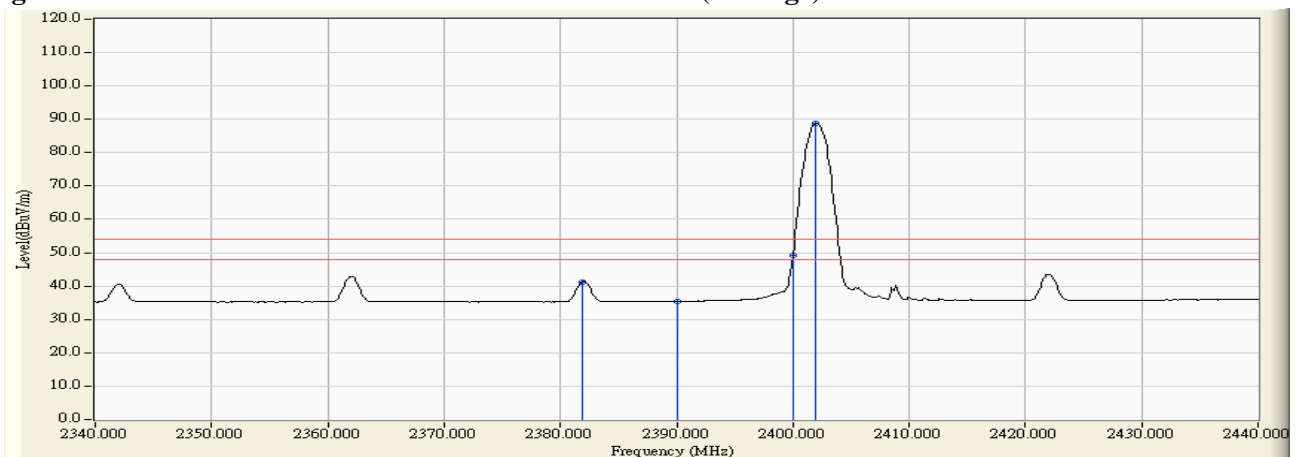
**RF Radiated Measurement (Vertical):**

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)	2382.300	6.795	44.825	51.620	74.00	54.00	Pass
00 (Peak)	2390.000	6.803	42.281	49.084	74.00	54.00	Pass
00 (Peak)	2400.000	6.838	57.642	64.480	--	--	Pass
00 (Peak)	2402.100	6.845	95.887	102.732	--	--	Pass
00 (Average)	2381.900	6.798	34.519	41.316	74.00	54.00	Pass
00 (Average)	2390.000	6.803	28.636	35.439	74.00	54.00	Pass
00 (Average)	2400.000	6.838	42.272	49.110	--	--	Pass
00 (Average)	2402.000	6.845	81.839	88.684	--	--	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.

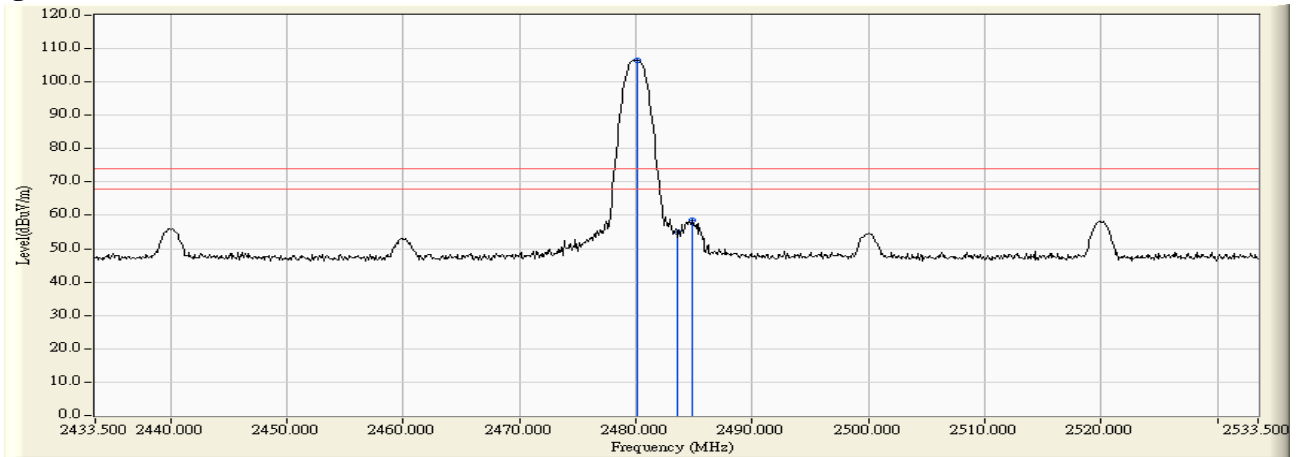
Product : Model 7260HMW Wireless Network Adapter  
 Test Item : Band Edge  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit - 1Mbps (GFSK)

**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	7.204	99.359	106.563	--	--	Pass
78 (Peak)	2483.500	7.235	47.764	54.999	74.00	54.00	Pass
78 (Peak)	2484.900	7.247	51.463	58.710	74.00	54.00	Pass
78 (Average)	2480.000	7.203	84.637	91.840	--	--	Pass
78 (Average)	2483.500	7.235	33.704	40.939	74.00	54.00	Pass

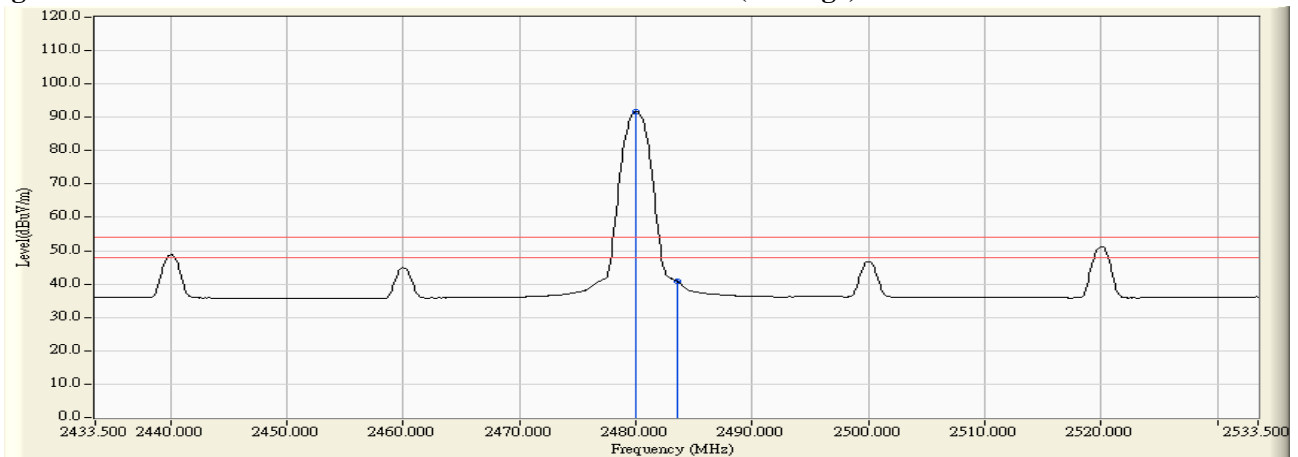
**Figure Channel 78:**

**Horizontal (Peak)**



**Figure Channel 78:**

**Horizontal (Average)**



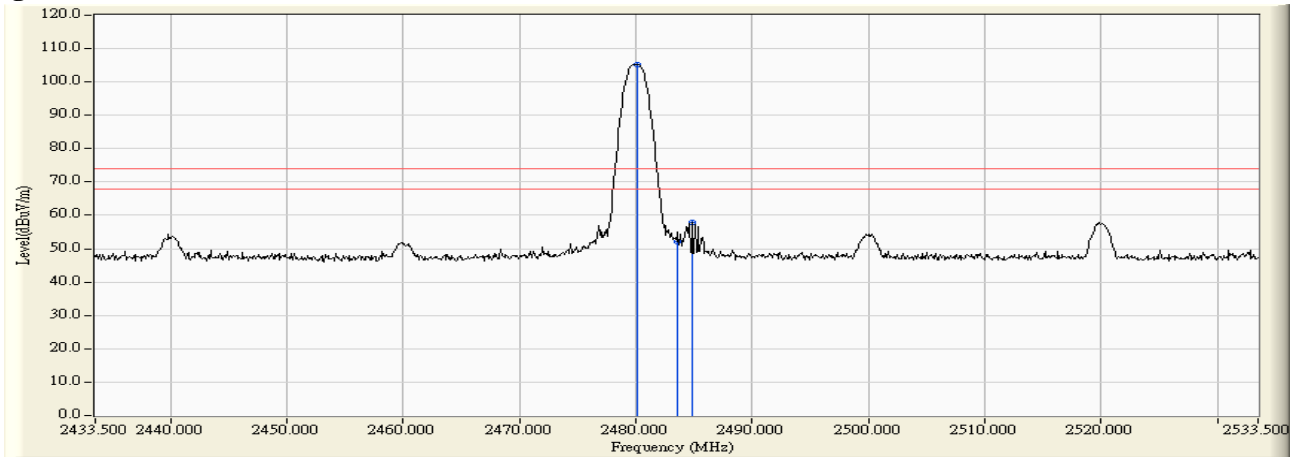
- Note: 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.  
 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.  
 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.  
 4. “ \* ”, means this data is the worst emission level.  
 5. Measurement 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)

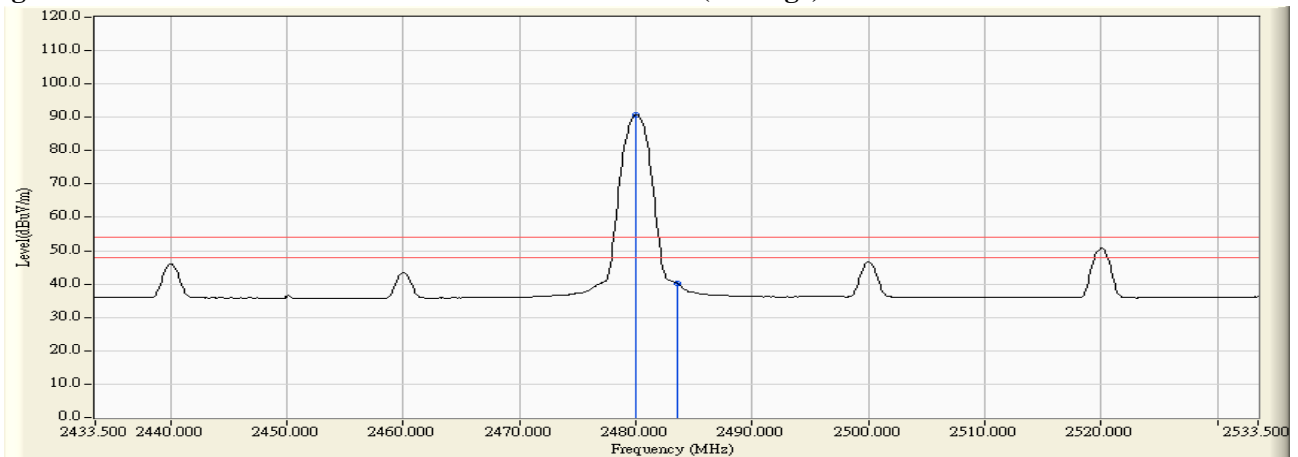
**RF Radiated Measurement (Vertical):**

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	7.204	98.077	105.281	--	--	Pass
78 (Peak)	2483.500	7.235	44.926	52.161	74.00	54.00	Pass
78 (Peak)	2484.900	7.247	50.818	58.065	74.00	54.00	Pass
78 (Average)	2480.000	7.203	83.610	90.813	--	--	Pass
78 (Average)	2483.500	7.235	33.044	40.279	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.

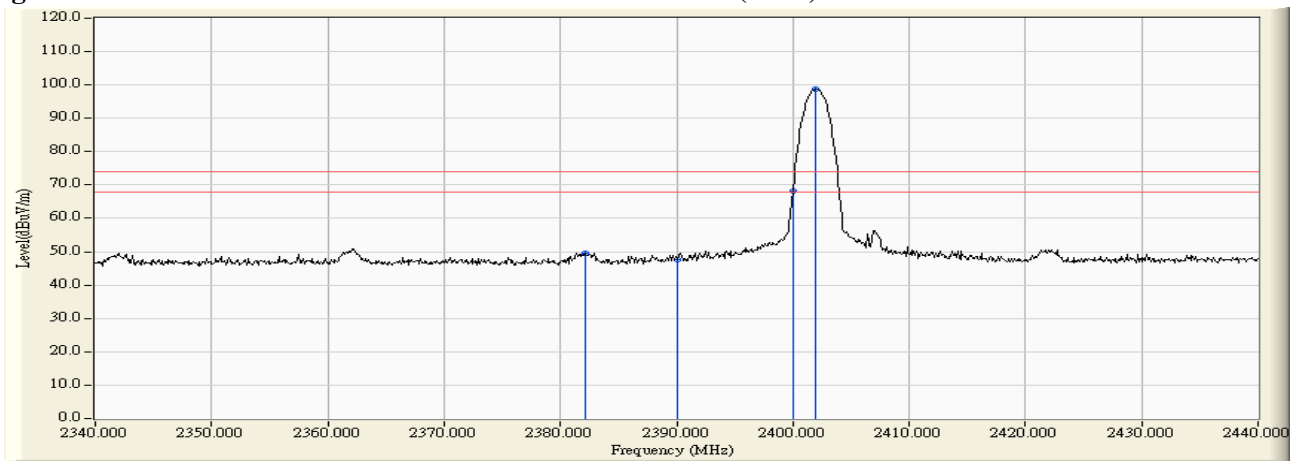
Product : Model 7260HMW Wireless Network Adapter  
 Test Item : Band Edge  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit - 3Mbps (8DPSK)

**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)	2382.100	6.796	42.643	49.439	74.00	54.00	Pass
00 (Peak)	2390.000	6.803	40.670	47.473	74.00	54.00	Pass
00 (Peak)	2400.000	6.838	61.490	68.328	--	--	Pass
00 (Peak)	2402.000	6.845	91.891	98.736	--	--	Pass
00 (Average)	2382.000	6.797	31.125	37.922	74.00	54.00	Pass
00 (Average)	2390.000	6.803	28.669	35.472	74.00	54.00	Pass
00 (Average)	2400.000	6.838	47.079	53.917	--	--	Pass
00 (Average)	2402.000	6.845	76.804	83.649	--	--	Pass

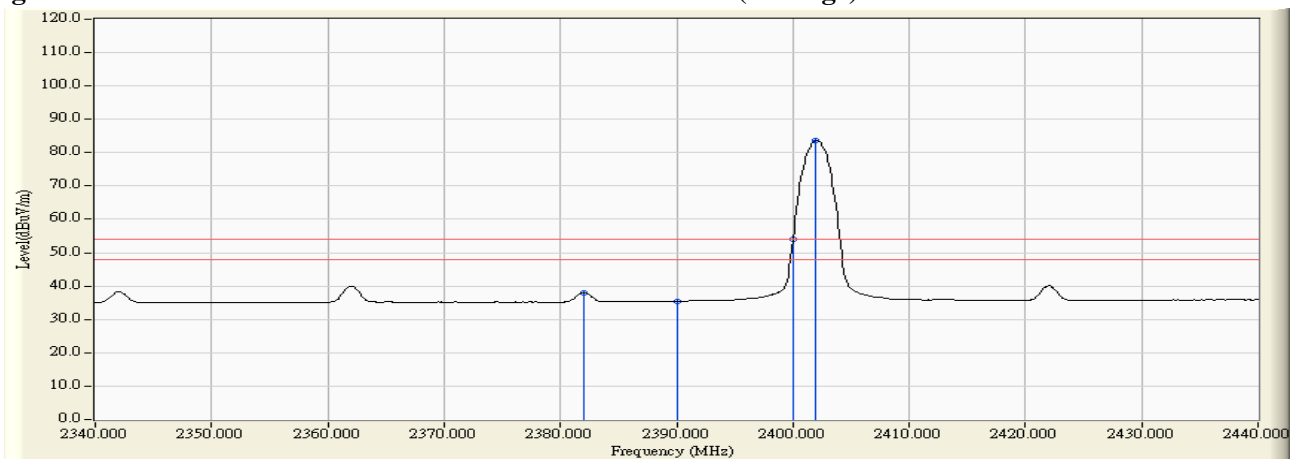
**Figure Channel 00:**

**Horizontal (Peak)**



**Figure Channel 00:**

**Horizontal (Average)**



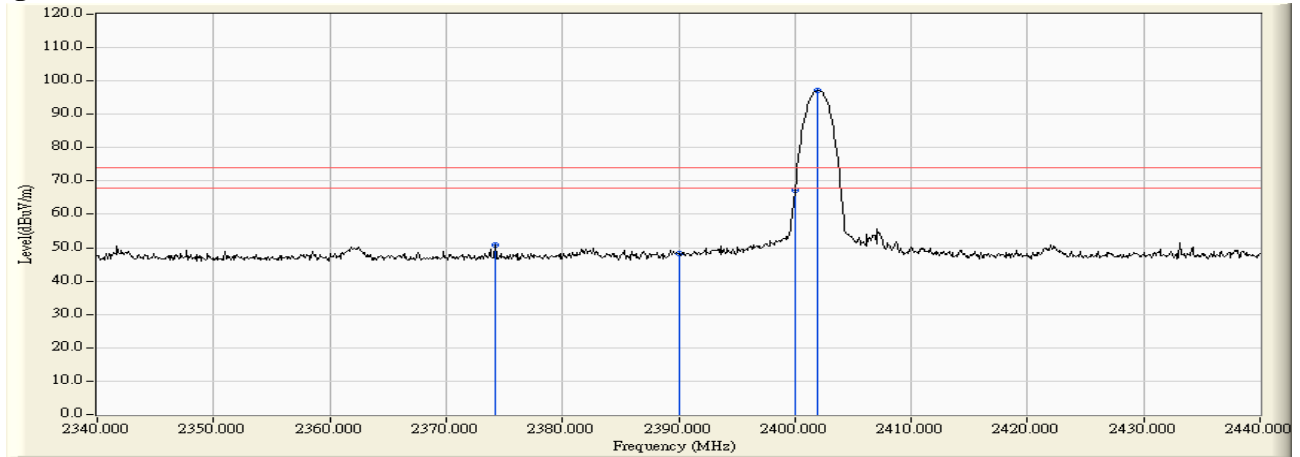
- Note: 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.  
 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.  
 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.  
 4. “ \* ”, means this data is the worst emission level.  
 5. Measurement 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)

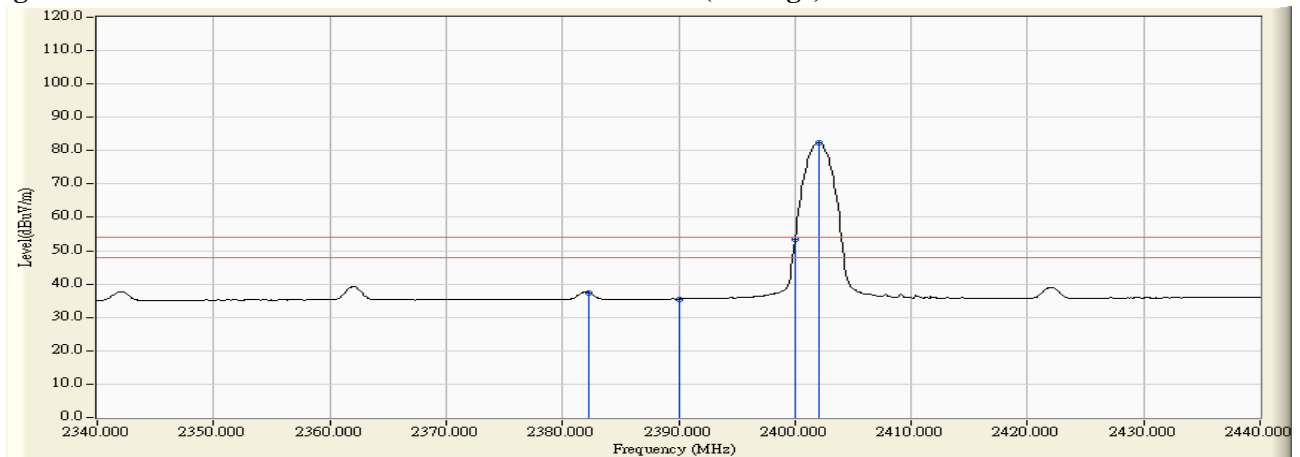
**RF Radiated Measurement (Vertical):**

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)	2374.200	6.853	43.937	50.790	74.00	54.00	Pass
00 (Peak)	2390.000	6.803	41.429	48.232	74.00	54.00	Pass
00 (Peak)	2400.000	6.838	60.438	67.276	--	--	Pass
00 (Peak)	2402.000	6.845	90.254	97.099	--	--	Pass
00 (Average)	2382.300	6.795	30.610	37.405	74.00	54.00	Pass
00 (Average)	2390.000	6.803	28.738	35.541	74.00	54.00	Pass
00 (Average)	2400.000	6.838	46.556	53.394	--	--	Pass
00 (Average)	2402.100	6.845	75.491	82.336	--	--	Pass

**Figure Channel 00: Vertical (Peak)**



**Figure Channel 00: Vertical (Average)**



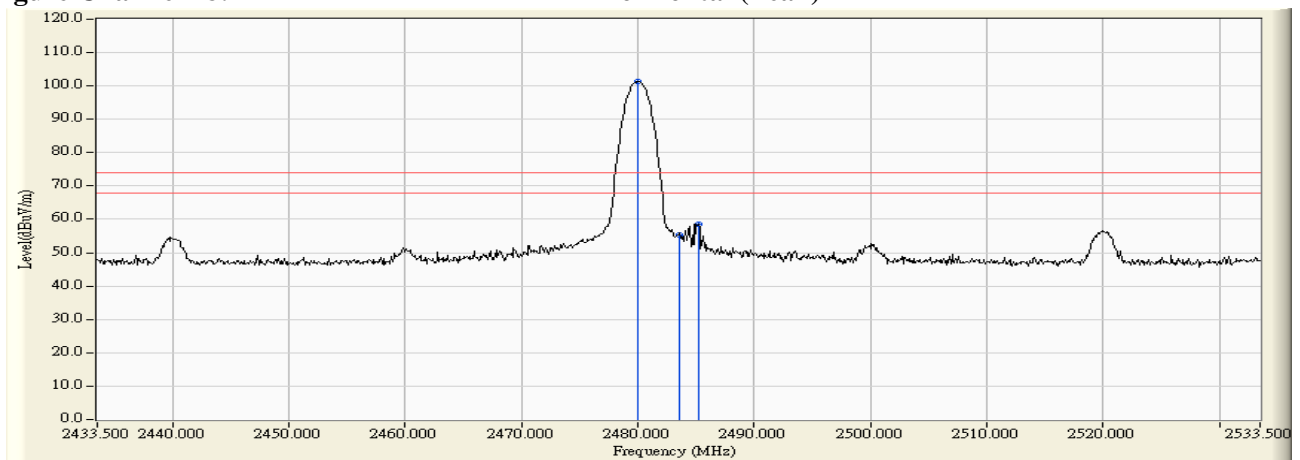
- Note: 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.  
 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.  
 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.  
 4. “ \* ”, means this data is the worst emission level.  
 5. Measurement 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)

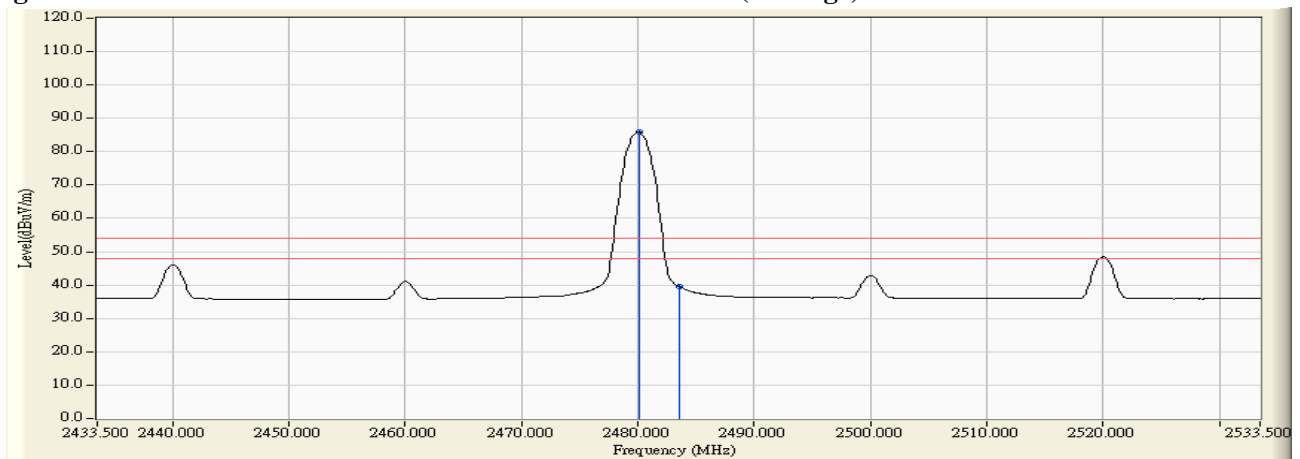
**RF Radiated Measurement (Horizontal):**

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)	2480.000	7.203	94.132	101.335	--	--	Pass
78 (Peak)	2483.500	7.235	48.227	55.462	74.00	54.00	Pass
78 (Peak)	2485.200	7.250	51.188	58.438	74.00	54.00	Pass
78 (Average)	2480.100	7.204	78.675	85.879	--	--	Pass
78 (Average)	2483.500	7.235	32.330	39.565	74.00	54.00	Pass

**Figure Channel 78: Horizontal (Peak)**



**Figure Channel 78: Horizontal (Average)**



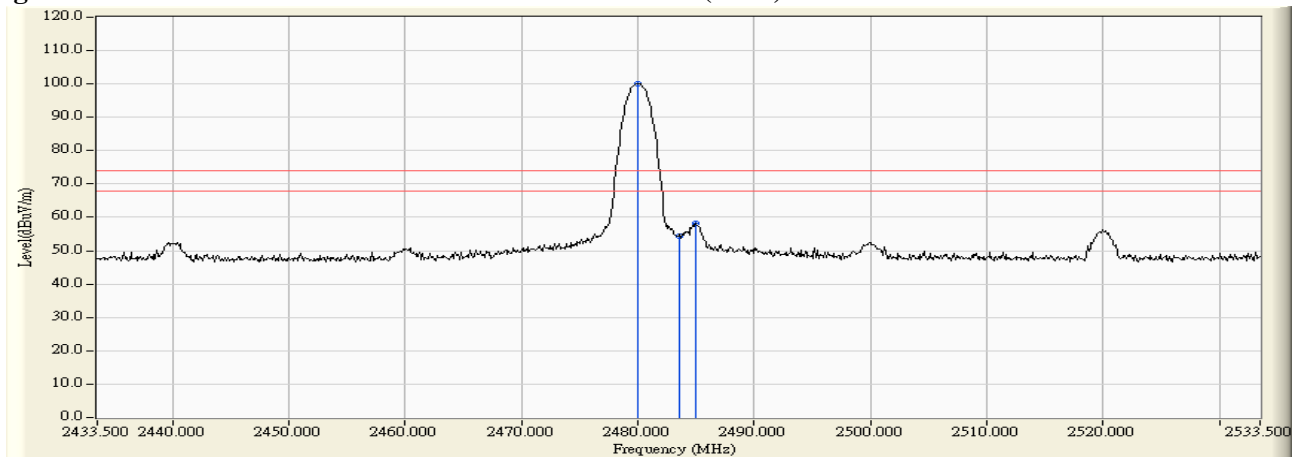
- Note: 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.  
 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.  
 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.  
 4. “ \* ”, means this data is the worst emission level.  
 5. Measurement 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)

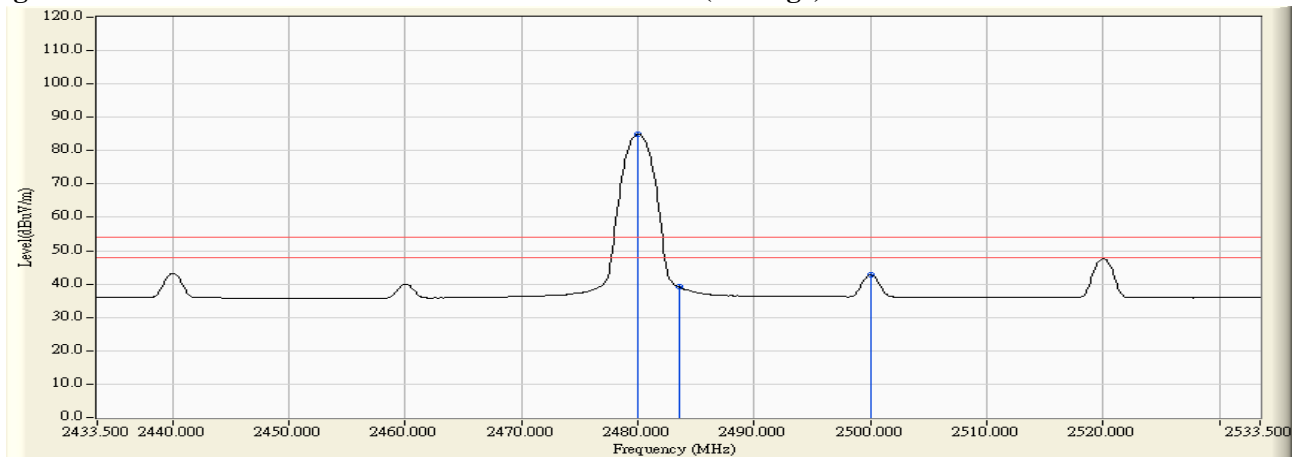
**RF Radiated Measurement (Vertical):**

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)	2480.000	7.203	92.994	100.197	--	--	Pass
78 (Peak)	2483.500	7.235	47.111	54.346	74.00	54.00	Pass
78 (Peak)	2485.000	7.248	50.867	58.115	74.00	54.00	Pass
78 (Average)	2480.000	7.203	77.762	84.965	--	--	Pass
78 (Average)	2483.500	7.235	31.860	39.095	74.00	54.00	Pass
78 (Average)	2500.000	7.247	35.499	42.747	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