



## Test Report (Class II Permissive Change)

Product Name	JukeBlox Networked Media Module
Model No	CX870-3LB
FCC ID.	PPQ-CX8703LB

Applicant	LITE-ON TECHNOLOGY CORP.
Address	4F, 90, Chien 1 Road, Chung Ho, Taipei Hsien 235, Taiwan, R.O.C.

Date of Receipt	Dec. 13, 2012
Issue Date	Dec. 28, 2012
Report No.	12C249R-RFUSP42V01
Report Version	V1.0



The test results relate only to the samples tested.

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# Test Report Certification

Issue Date: Dec. 28, 2012

Report No.: 12C249R-RFUSP42V01



**Accredited by NIST (NVLAP)**  
NVLAP Lab Code: 200533-0

Product Name	JukeBlox Networked Media Module
Applicant	LITE-ON TECHNOLOGY CORP.
Address	4F, 90, Chien 1 Road, Chung Ho, Taipei Hsien 235, Taiwan, R.O.C.
Manufacturer	DONG GUAN G-COM COMPUTER CO., LTD.
Model No.	CX870-3LB
FCC ID.	PPQ-CX8703LB
EUT Rated Voltage	DC 3.3V
EUT Test Voltage	AC 120V/60Hz
Trade Name	PICO Module
Applicable Standard	FCC CFR Title 47 Part 15 Subpart C: 2010 ANSI C63.4: 2003, ANSI C63.10: 2009
Test Result	Complied

The test results relate only to the samples tested.

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Documented By :

A handwritten signature in blue ink that reads "Anita Chou".

( Senior Engineering Adm. Specialist /  
Anita Chou )

Tested By :

A handwritten signature in blue ink that reads "Alan Chen".

( Engineer / Alan Chen )

Approved By :

A handwritten signature in blue ink that reads "Vincent Lin".

( Manager / Vincent Lin )

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Attachment 1: EUT Test Photographs

Attachment 2: EUT Detailed Photographs

## 1. GENERAL INFORMATION

### 1.1. EUT Description

Product Name	JukeBlox Networked Media Module
Trade Name	PICO Module
Model No.	CX870-3LB
FCC ID.	PPQ-CX8703LB
Frequency Range	2412-2462MHz for 802.11b/g
Number of Channels	802.11b/g: 11
Data Speed	802.11b: 1-11Mbps, 802.11g: 6-54Mbps
Type of Modulation	802.11b:DSSS (DBPSK, DQPSK, CCK) 802.11g:OFDM (BPSK, QPSK, 16QAM, 64QAM)
Antenna Type	Inverted-F Antenna
Antenna Gain	Refer to the table "Antenna List"
Channel Control	Auto

#### Antenna List

No.	Manufacturer	Model No.	Peak Gain
1	Tyco Electronics	2174241-2 (Length of cable: 390mm)	2.67 dBi for 2.4GHz
2	Tyco Electronics	2174241-1 (Length of cable: 330mm)	2.19 dBi 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

## 802.11b/g Center Frequency of Each Channel:

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

## Note:

1. The EUT is a JukeBlox Networked Media Module with a built-in 2.4GHz WLAN transceiver.
2. This module only support the action of the main antenna (1T1R), the aux antenna through firmware control, does not perform any action.
3. This is requesting a Class II permissive change for FCC ID: PPQ-CX8703LB. Originally granted on 12/24/2012.

The major change filed under this application is:

Change #1: Addition 2 new antenna: (1) Tyco Electronics / 2174241-2 antenna gain: 2.67dBi.  
(2) Tyco Electronics / 2174241-1 antenna gain: 2.19dBi.

4. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
5. Lowest and highest data rates are tested in each mode. Only worst case is shown in the report.  
(802.11b is 1Mbps 、 802.11g is 6Mbps)
6. These tests are conducted on a sample for the purpose of demonstrating compliance of 802.11b/g transmitter with Part 15 Subpart C Paragraph 15.247 of spread spectrum devices.

Test Mode:	Mode 1: Transmit (802.11b 1Mbps)
	Mode 2: Transmit (802.11g 6Mbps)

### 1.3. Tested System Details

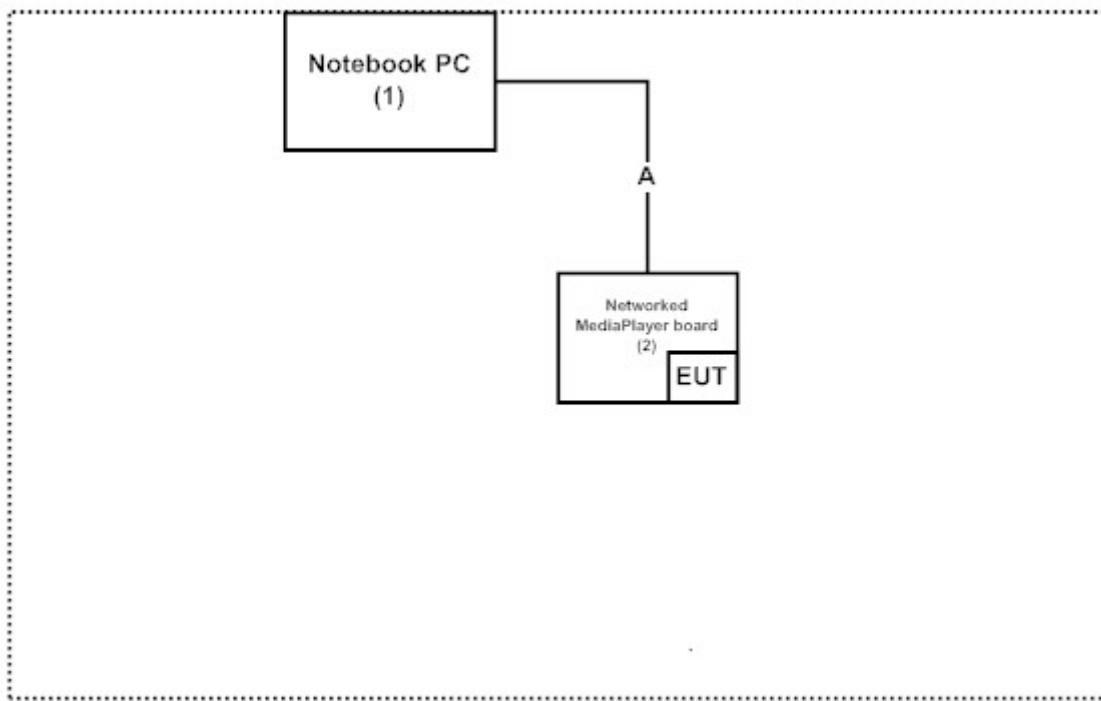
The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product	Manufacturer	Model No.	Serial No.	FCC ID	Power Cord
1 Notebook PC	DELL	PPT	N/A	DoC	Non-Shielded, 0.8m
2 Networked Media Player board	LITE-ON	EVM CE2	008	N/A	N/A

\*The Networked Media Player board is support the module card functions host (Ethernet, USB Host, audio, video/LCD and control formats).

Signal Cable Type	Signal cable Description
A RS-232 Cable	Shielded, 1.5m

### 1.4. Configuration of Tested System



### 1.5. EUT Exercise Software

- (1) Setup the EUT as shown in section 1.4
- (2) Execute command on the notebook.
- (3) Configure the test mode, the test channel, and the data rate.
- (4) Start the continuous transmission.
- (5) Verify that the EUT works properly.

## 1.6. Test Facility

Ambient conditions in the laboratory:

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

The related certificate for our laboratories about the test site and management system can be downloaded from QuieTek Corporation's Web Site: <http://www.quietek.com/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  
Columbia, MD 21046  
Registration Number: 92195

Accreditation on NVLAP  
NVLAP Lab Code: 200533-0

Site Name: Quietek Corporation  
Site Address: No.5-22, Ruishukeng,  
Linkou Dist. New Taipei City 24451,  
Taiwan, R.O.C.  
TEL: 886-2-8601-3788 / FAX : 886-2-8601-3789  
E-Mail : [service@quietek.com](mailto:service@quietek.com)

FCC Accreditation Number: TW1014

## 2. Peak Power Output

### 2.1. Test Equipment

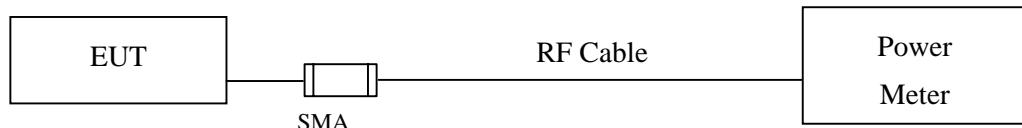
Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X Power Meter	Anritsu	ML2495A/6K00003357	May, 2012
X Power Sensor	Anritsu	MA2411B/0738448	Jun, 2012

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.

### 2.2. Test Setup

Conducted Measurement



### 2.3. Limits

The maximum peak power shall be less 1 Watt.

### 2.4. Test Procedure

The EUT was tested according to DTS test procedure of ANSI C63.10: 2009 for compliance to FCC 47CFR 15.247 requirements.

### 2.5. Uncertainty

± 1.27 dB

## 2.6. Test Result of Peak Power Output

Product : JukeBlox Networked Media Module  
 Test Item : Peak Power Output Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11b 1Mbps)

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)				Peak Power	Required Limit	Result
		1	2	5.5	11			
		Measurement Level (dBm)						
01	2412	16.42	--	--	--	18.81	<30dBm	Pass
06	2437	16.39	16.35	16.31	16.28	18.79	<30dBm	Pass
11	2462	16.33	--	--	--	18.76	<30dBm	Pass

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

Product : JukeBlox Networked Media Module  
 Test Item : Peak Power Output Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11g 6Mbps)

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power	Required Limit	Result
		6	9	12	18	24	36	48	54			
		Measurement Level (dBm)										
01	2412	15.02	--	--	--	--	--	--	--	22.45	<30dBm	Pass
06	2437	14.89	14.86	14.84	14.81	14.78	14.75	14.56	14.52	22.57	<30dBm	Pass
11	2462	12.59	--	--	--	--	--	--	--	22.01	<30dBm	Pass

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

### 3. Radiated Emission

#### 3.1. Test Equipment

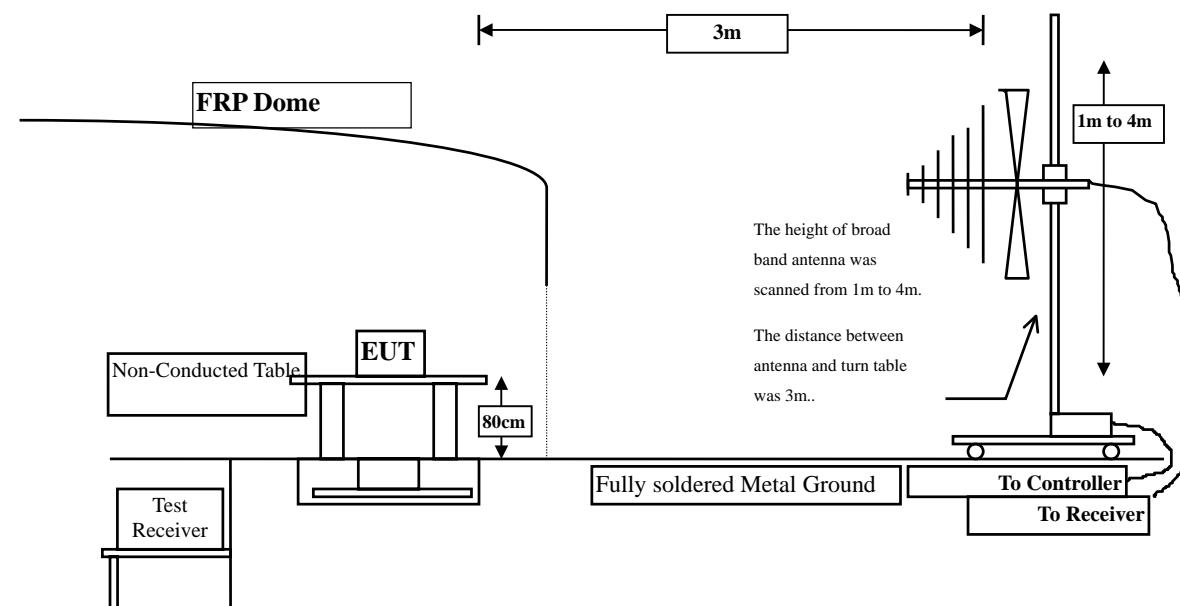
The following test equipment are used during the radiated emission test:

Test Site	Equipment		Manufacturer	Model No./Serial No.	Last Cal.
☒ Site # 3	X	Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2012
	X	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2012
	X	Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2012
	X	Pre-Amplifier	Agilent	8447D/2944A09549	Sep., 2012
	X	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2012
	X	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

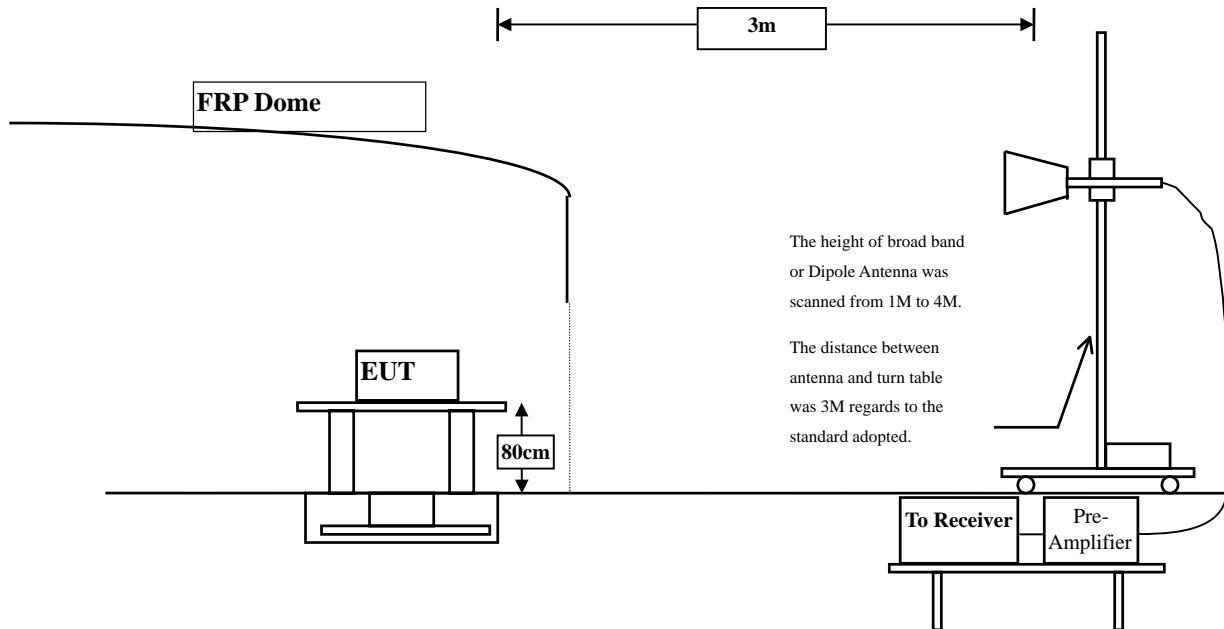
Note: 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.  
2. The test instruments marked with "X" are used to measure the final test results.

#### 3.2. Test Setup

##### Radiated Emission Below 1GHz



### Radiated Emission Above 1GHz



### 3.3. Limits

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

FCC Part 15 Subpart C Paragraph 15.209(a) Limits		
Frequency MHz	uV/m @3m	dBuV/m@3m
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

Remarks: E field strength (dBuV/m) =  $20 \log E$  field strength (uV/m)

### **3.4. Test Procedure**

The EUT was setup according to ANSI C63.10, 2009 and tested according to DTS test procedure of ANSI C63.10: 2009 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 between 1 meter and 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10:2009 on radiated measurement.

The resolution bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

Radiated emission measurements below 1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

The measurement is divided into the Preliminary Measurement and the Final Measurement.

The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB bandwidth of the antenna.

The worst radiated emission is measured in the Open Area Test Site on the Final Measurement.

The frequency range from 30MHz to 10th harmonics is checked.

### **3.5. Uncertainty**

± 3.9 dB above 1GHz

± 3.8 dB below 1GHz

### 3.6. Test Result of Radiated Emission

Product : JukeBlox Networked Media Module  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
4824.000	2.428	46.950	49.379	-24.621	74.000
7236.000	9.177	38.900	48.077	-25.923	74.000
9648.000	10.019	39.150	49.170	-24.830	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
4824.000	2.836	43.090	45.927	-28.073	74.000
7236.000	9.676	38.950	48.626	-25.374	74.000
9648.000	10.556	39.180	49.737	-24.263	74.000

#### Average Detector:

--

#### Note:

7. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
8. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
9. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
10. Measurement Level = Reading Level + Correct Factor.
11. Correct Factor = Antenna factor + Cable loss -Amplifier gain.
12. 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 : JukeBlox Networked Media Module  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2437 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
4874.000	2.076	49.980	52.057	-21.943	74.000
7311.000	9.512	39.180	48.692	-25.308	74.000
9748.000	9.630	39.480	49.110	-24.890	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
4874.000	2.532	44.470	47.002	-26.998	74.000
7311.000	9.512	38.590	48.102	-25.898	74.000
9748.000	9.630	40.010	49.640	-24.360	74.000

**Average Detector:**

--

**Note:**

13. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
14. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
15. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
16. Measurement Level = Reading Level + Correct Factor.
17. Correct Factor = Antenna factor + Cable loss -Amplifier gain.
18. 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 : JukeBlox Networked Media Module  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462 MHz)

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

### Horizontal

#### Peak Detector:

4924.000	2.191	47.840	50.031	-23.969	74.000
7386.000	11.180	37.890	49.070	-24.930	74.000
9848.000	10.801	39.150	49.951	-24.049	74.000

#### Average Detector:

--

### Vertical

#### Peak Detector:

4924.000	2.805	43.150	45.955	-28.045	74.000
7286.000	9.744	37.100	46.845	-27.155	74.000
9848.000	10.801	39.550	50.351	-23.649	74.000

#### Average Detector:

--

### Note:

19. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
20. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
21. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
22. Measurement Level = Reading Level + Correct Factor.
23. Correct Factor = Antenna factor + Cable loss -Amplifier gain.
24. 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 : JukeBlox Networked Media Module  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
4824.000	2.428	53.330	55.759	-18.241	74.000
7236.000	9.177	40.260	49.437	-24.563	74.000
9648.000	10.019	38.670	48.690	-25.310	74.000
<b>Average Detector:</b>					
4824.000	2.428	34.390	36.819	-17.181	54.000
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
4824.000	2.836	45.900	48.737	-25.263	74.000
7236.000	9.676	37.980	47.656	-26.344	74.000
9648.000	10.556	39.590	50.147	-23.853	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 : JukeBlox Networked Media Module  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
4874.000	2.076	52.490	54.567	-19.433	74.000
7311.000	9.512	39.150	48.662	-25.338	74.000
9748.000	9.630	38.890	48.520	-25.480	74.000
<b>Average Detector:</b>					
4874.000	2.076	34.820	36.897	-17.103	54.000
<b>Peak Detector:</b>					
4874.000	2.532	47.260	49.792	-24.208	74.000
7311.000	10.089	37.990	48.079	-25.921	74.000
9748.000	10.266	39.050	49.317	-24.683	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 : JukeBlox Networked Media Module  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462 MHz)

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

### Horizontal

#### Peak Detector:

4924.000	2.191	46.150	48.341	-25.659	74.000
7386.000	10.373	39.150	49.524	-24.476	74.000
9848.000	9.964	39.590	49.554	-24.446	74.000

#### Average Detector:

--

### Vertical

#### Peak Detector:

4924.000	2.805	42.550	45.355	-28.645	74.000
7386.000	11.180	38.890	50.070	-23.930	74.000
9848.000	10.801	39.660	50.461	-23.539	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 : JukeBlox Networked Media Module  
 Test Item : General Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11b 1Mbps)(2437 MHz)

Frequency MHz	Correct Factor	Reading dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
97.900	-10.097	42.538	32.441	-11.059	43.500
243.400	-6.546	41.132	34.586	-11.414	46.000
400.540	0.942	33.004	33.946	-12.054	46.000
567.380	1.961	31.187	33.148	-12.852	46.000
728.400	3.841	33.861	37.701	-8.299	46.000
875.840	5.816	30.410	36.226	-9.774	46.000
<b>Vertical</b>					
97.900	-6.437	42.538	36.101	-7.399	43.500
233.700	-6.798	40.680	33.882	-12.118	46.000
398.600	-2.371	37.464	35.093	-10.907	46.000
602.300	1.704	30.319	32.023	-13.977	46.000
749.740	2.023	30.359	32.382	-13.618	46.000
928.220	3.640	28.644	32.284	-13.716	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.

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

Frequency MHz	Correct Factor	Reading Level dB	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
97.900	-10.097	42.538	32.441	-11.059	43.500
243.400	-6.546	41.132	34.586	-11.414	46.000
400.540	0.942	33.004	33.946	-12.054	46.000
480.080	1.870	32.012	33.882	-12.118	46.000
666.320	1.879	26.277	28.156	-17.844	46.000
831.220	7.121	25.304	32.425	-13.575	46.000
<b>Vertical</b>					
92.080	-5.373	37.161	31.788	-11.712	43.500
208.480	-5.585	38.289	32.703	-10.797	43.500
383.080	0.195	29.144	29.339	-16.661	46.000
530.520	1.192	27.157	28.349	-17.651	46.000
728.400	-0.799	33.861	33.061	-12.939	46.000
875.840	0.516	30.410	30.926	-15.074	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.

## 4. Band Edge

### 4.1. 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:

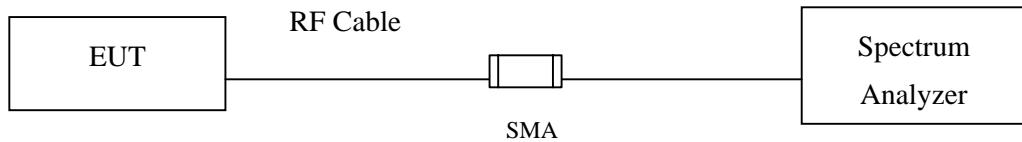
Test Site	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X Site # 3	Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2012
	X Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2012
	Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2012
	X Pre-Amplifier	Agilent	8447D/2944A09549	Sep., 2012
	X Spectrum Analyzer	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:

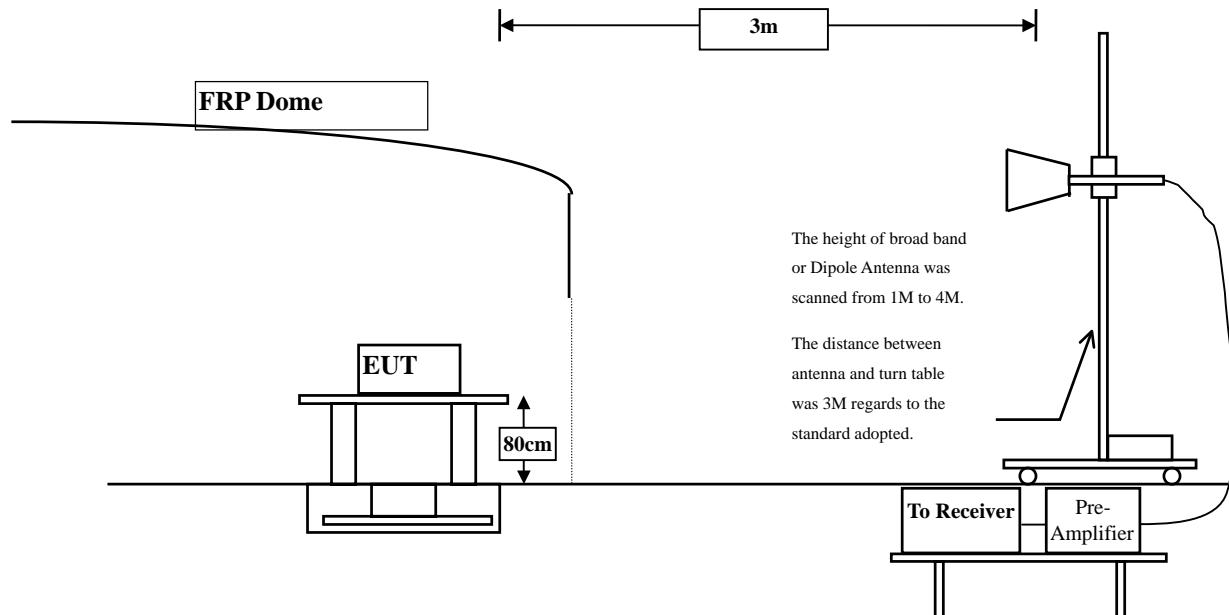
1. All instruments are calibrated every one year.
2. The test instruments marked by “X” are used to measure the final test results.

## 4.2. Test Setup

### RF Conducted Measurement



### RF Radiated Measurement:



## 4.3. Limits

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

#### **4.4. Test Procedure**

The EUT was setup according to ANSI C63.10: 2009 and tested according to DTS test procedure of ANSI C63.10: 2009 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.

#### **4.5. Uncertainty**

± 3.9 dB above 1GHz

± 3.8 dB below 1GHz

## 4.6. Test Result of Band Edge

Product : JukeBlox Networked Media Module  
 Test Item : Band Edge Data  
 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)	2386.600	33.736	26.300	60.036	74.000	54.000	Pass
01 (Peak)	2390.000	33.739	25.108	58.847	74.000	54.000	Pass
01 (Peak)	2414.800	33.778	76.522	110.301	--	--	--
01 (Average)	2387.600	33.737	15.181	48.918	74.000	54.000	Pass
01 (Average)	2390.000	33.739	13.978	47.717	74.000	54.000	Pass
01 (Average)	2414.000	33.776	70.328	104.105	--	--	--

Figure Channel 01:

Horizontal (Peak)

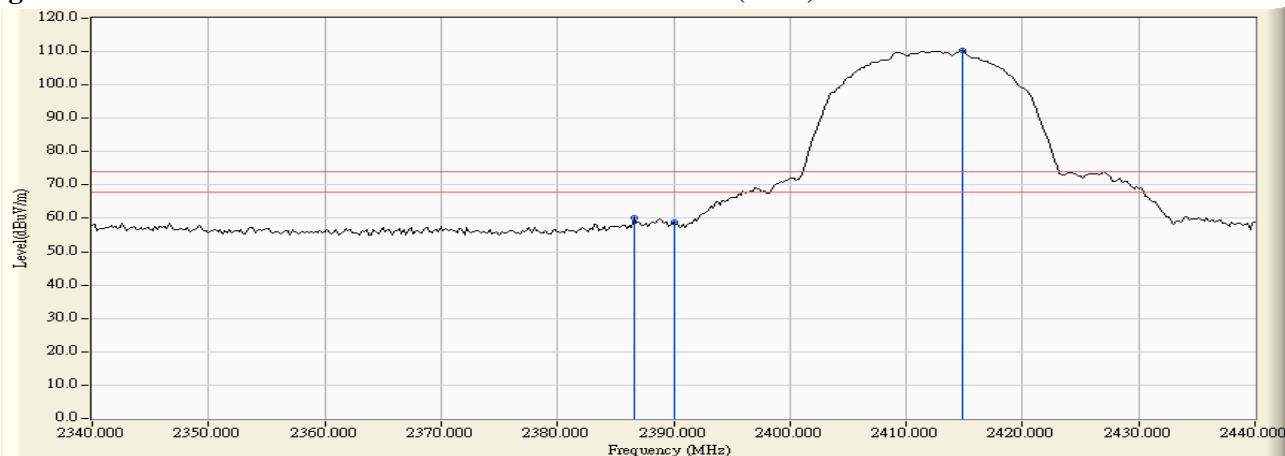
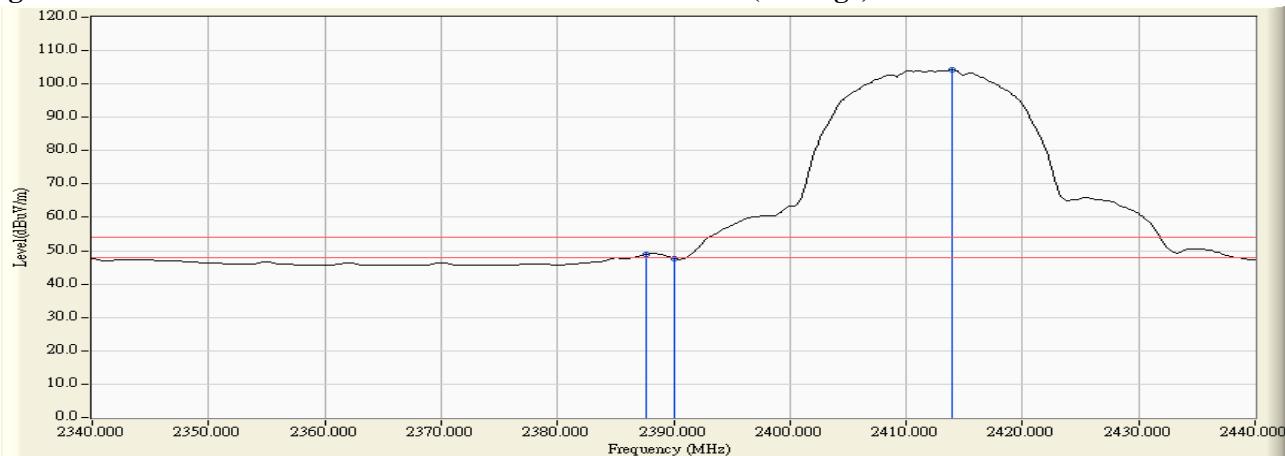


Figure Channel 01:

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.

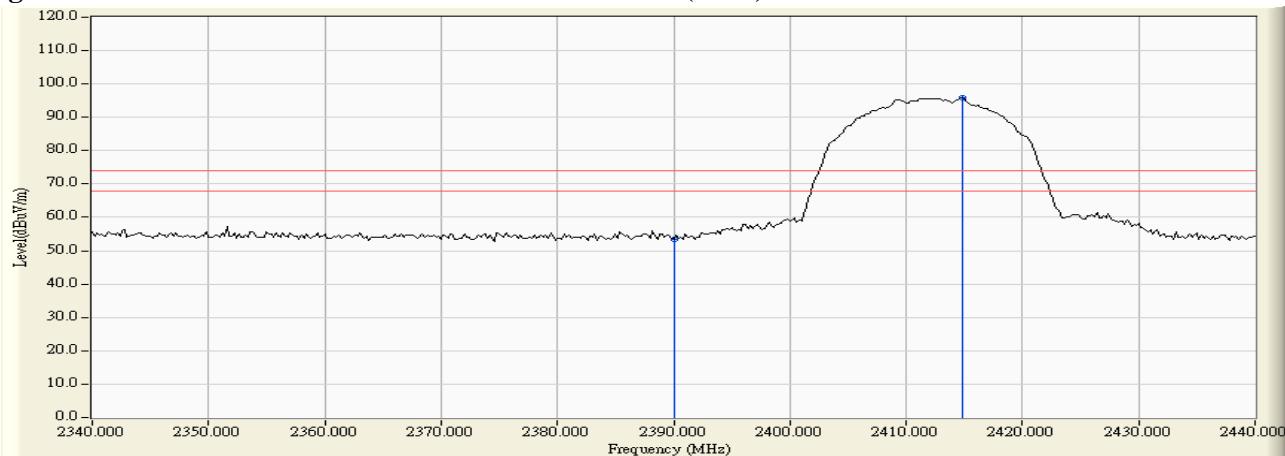
Product : JukeBlox Networked Media Module  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11b 1Mbps)

#### 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	32.267	21.179	53.446	74.000	54.000	Pass
01 (Peak)	2414.800	32.261	63.497	95.759	--	--	--
01 (Average)	2390.000	32.267	11.811	44.078	74.000	54.000	Pass
01 (Average)	2414.000	32.257	57.435	89.693	--	--	--

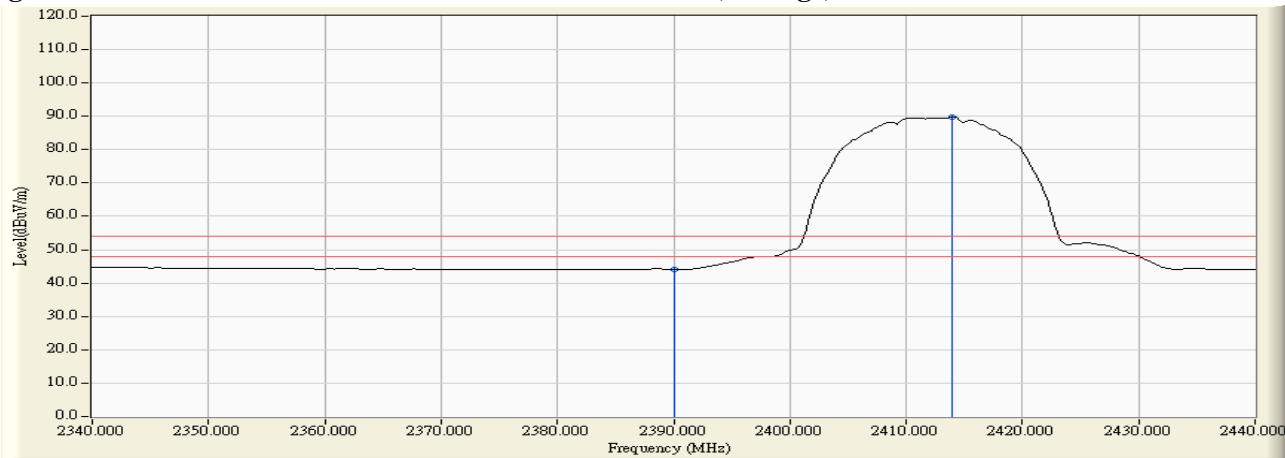
**Figure Channel 01:**

**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.

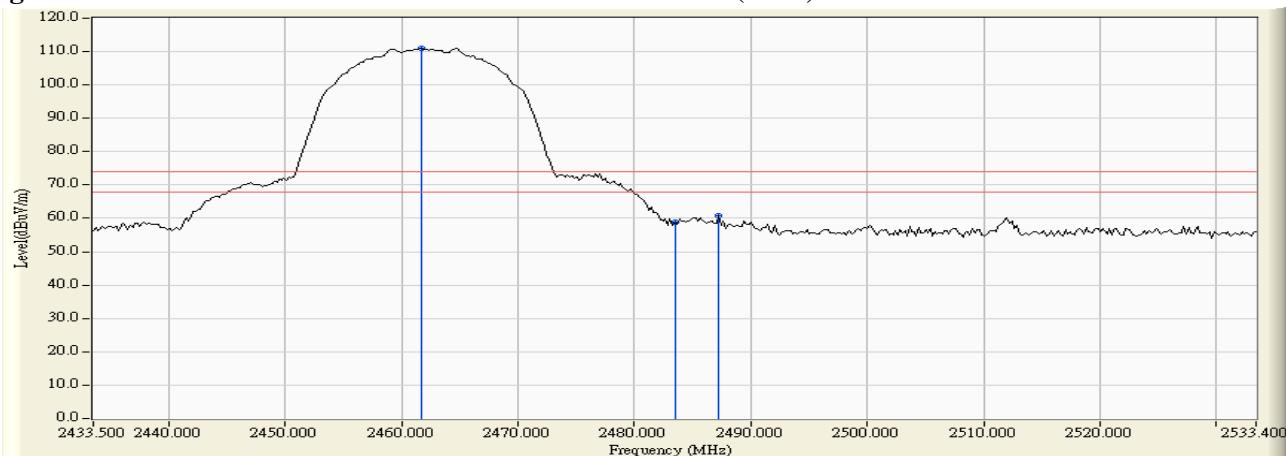
Product : JukeBlox Networked Media Module  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11b 1Mbps)

**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)	2461.672	33.892	77.072	110.964	--	--	--
11 (Peak)	2483.500	33.951	24.887	58.837	74.000	54.000	Pass
11 (Peak)	2487.246	33.959	26.814	60.774	74.000	54.000	Pass
11 (Average)	2460.073	33.887	70.982	104.870	--	--	--
11 (Average)	2483.500	33.951	15.905	49.855	74.000	54.000	Pass
11 (Average)	2486.047	33.956	16.413	50.370	74.000	54.000	Pass

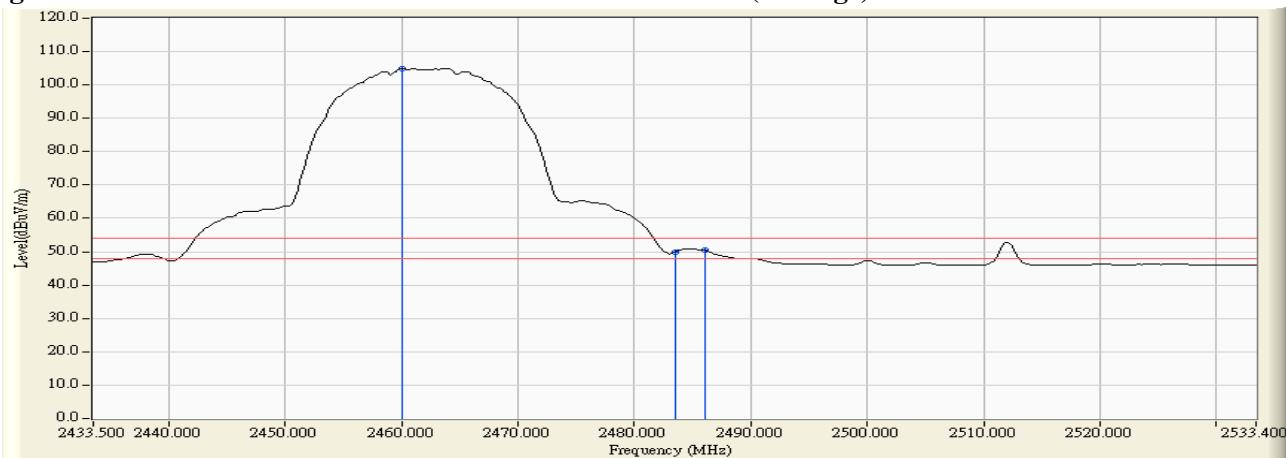
**Figure Channel 11:**

**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 : JukeBlox Networked Media Module  
 Test Item : Band Edge Data  
 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)	2461.872	32.480	62.651	95.131	--	--	--
11 (Peak)	2483.500	32.586	22.351	54.936	74.000	54.000	Pass
11 (Peak)	2486.047	32.597	23.166	55.763	74.000	54.000	Pass
11 (Average)	2460.073	32.471	56.594	89.065	--	--	--
11 (Average)	2483.500	32.586	11.831	44.416	74.000	54.000	Pass

Figure Channel 11:

Vertical (Peak)

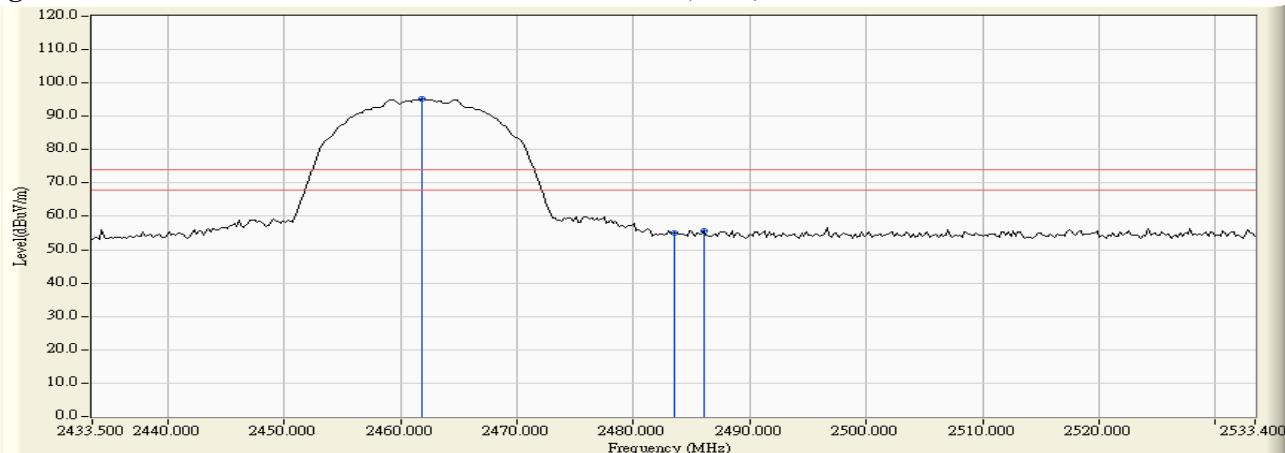
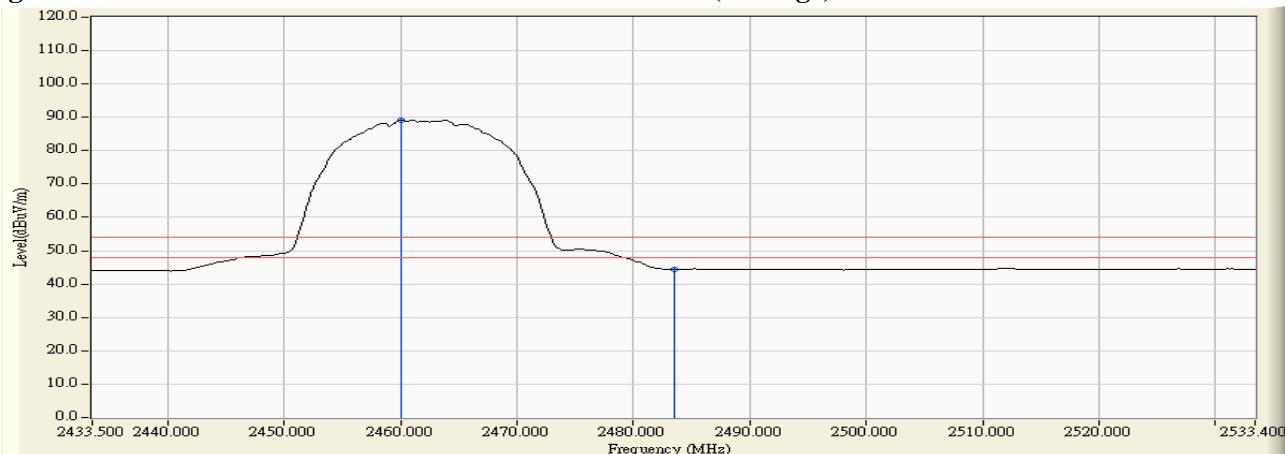


Figure Channel 11:

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.

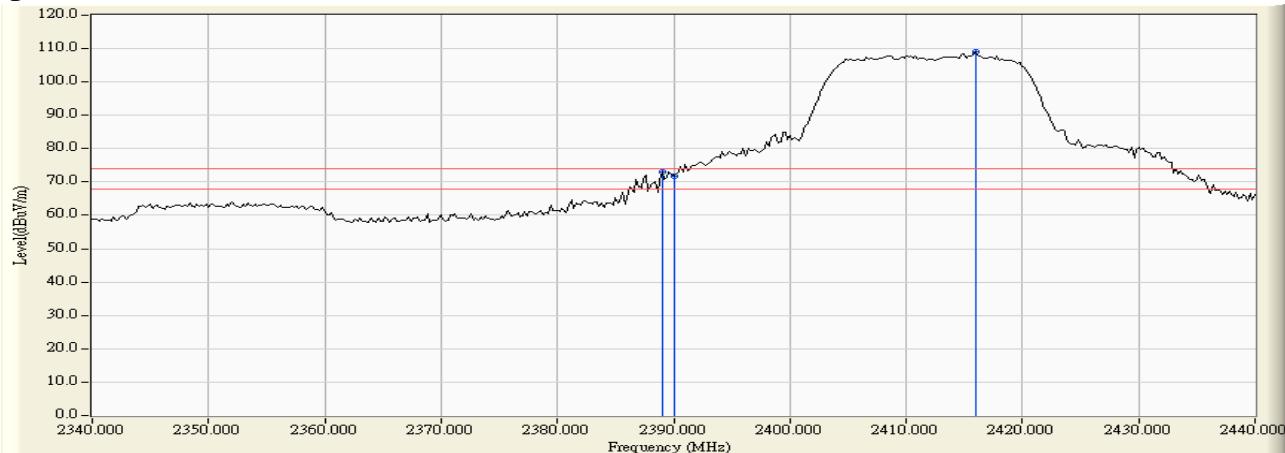
Product : JukeBlox Networked Media Module  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11g 6Mbps)

**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)	2389.000	33.737	39.413	73.151	74.000	54.000	Pass
01 (Peak)	2390.000	33.739	37.964	71.703	74.000	54.000	Pass
01 (Peak)	2416.000	33.782	75.176	108.957	--	--	--
01 (Average)	2390.000	33.739	19.538	53.277	74.000	54.000	Pass
01 (Average)	2414.400	33.778	62.968	96.746	--	--	--

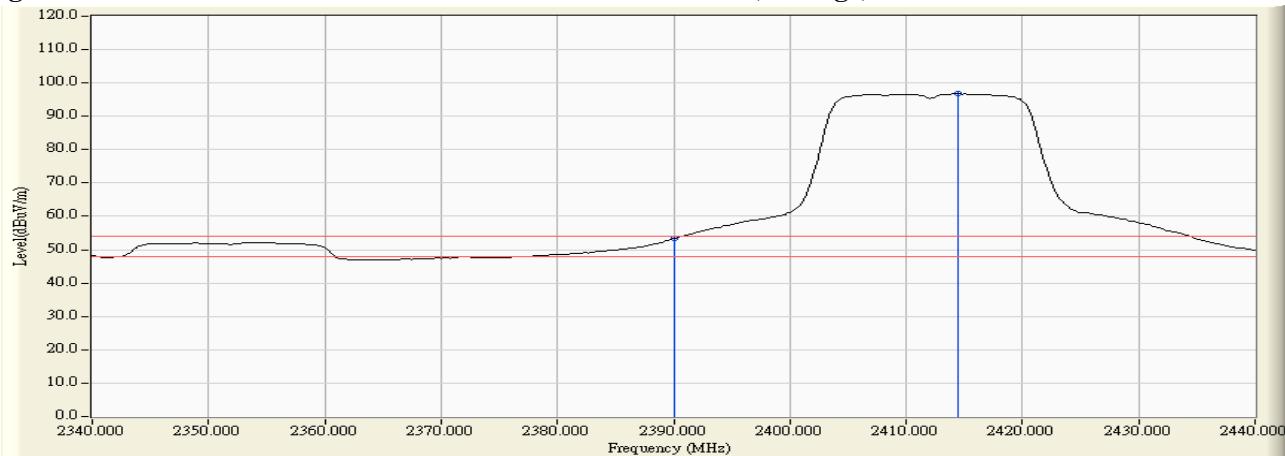
**Figure Channel 01:**

**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 : JukeBlox Networked Media Module  
 Test Item : Band Edge Data  
 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)	2389.800	32.268	35.670	67.938	74.000	54.000	Pass
01 (Peak)	2390.000	32.267	32.799	65.066	74.000	54.000	Pass
01 (Peak)	2416.000	32.267	68.427	100.694	--	--	--
01 (Average)	2390.000	32.267	15.772	48.039	74.000	54.000	Pass
01 (Average)	2409.200	32.244	56.750	88.994	--	--	--

Figure Channel 01:

Vertical (Peak)

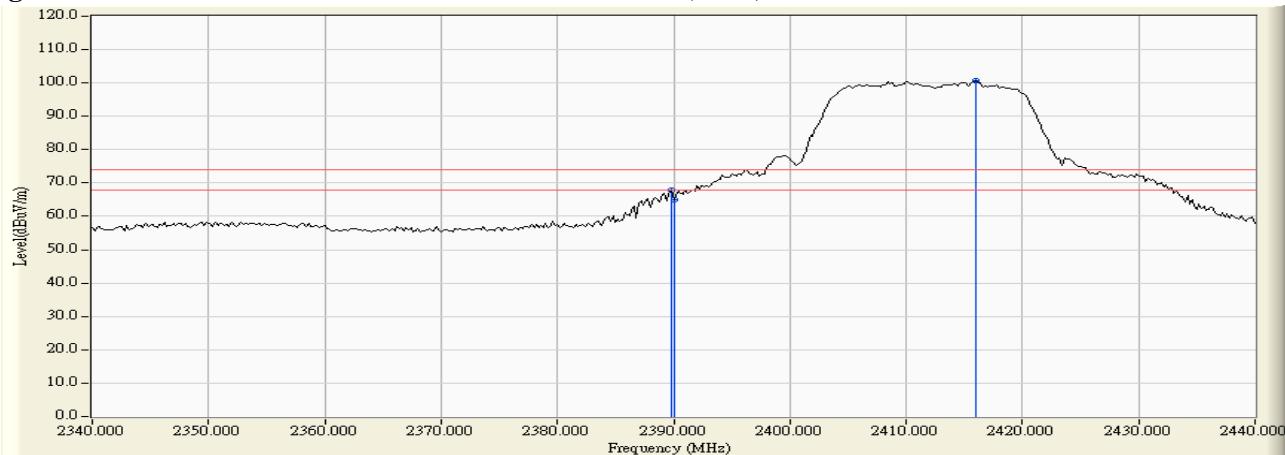
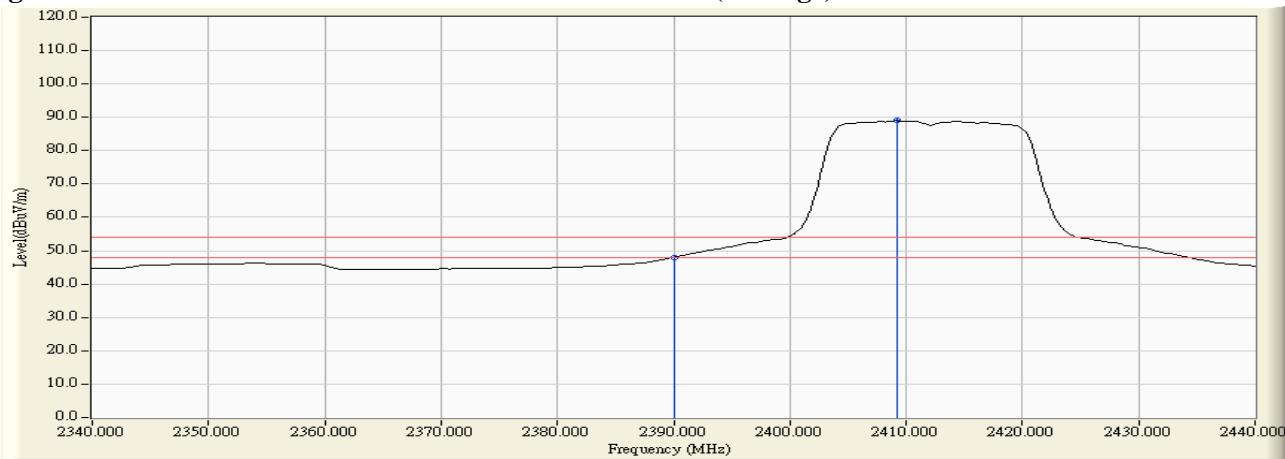


Figure Channel 01:

Vertical (Average)



Note:

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

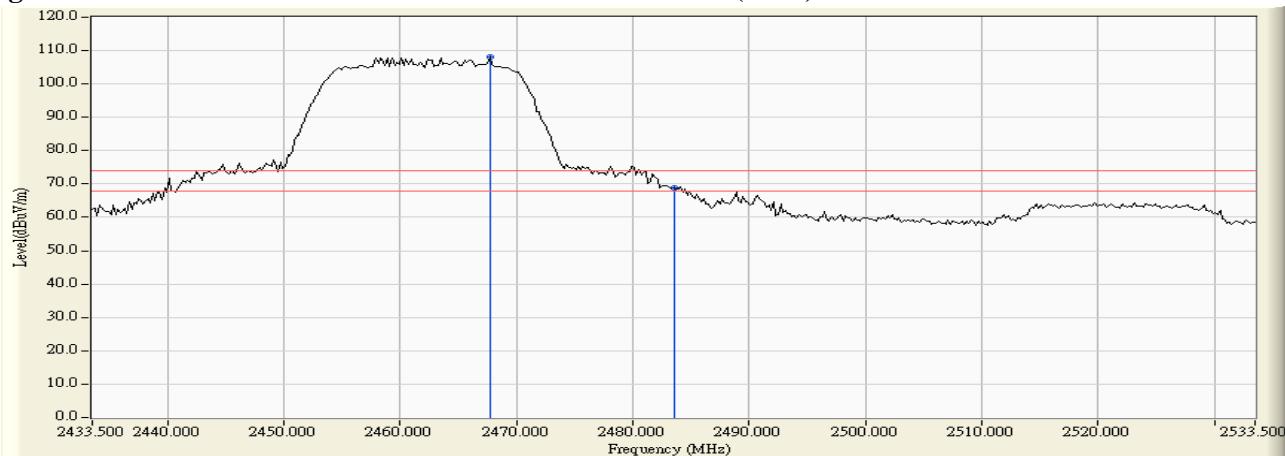
Product : JukeBlox Networked Media Module  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11g 6Mbps)

**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)	2467.700	33.908	74.084	107.992	--	--	--
11 (Peak)	2483.500	33.951	34.932	68.882	74.000	54.000	Pass
11 (Average)	2463.700	33.897	61.273	95.170	--	--	--
11 (Average)	2483.500	33.951	18.809	52.759	74.000	54.000	Pass

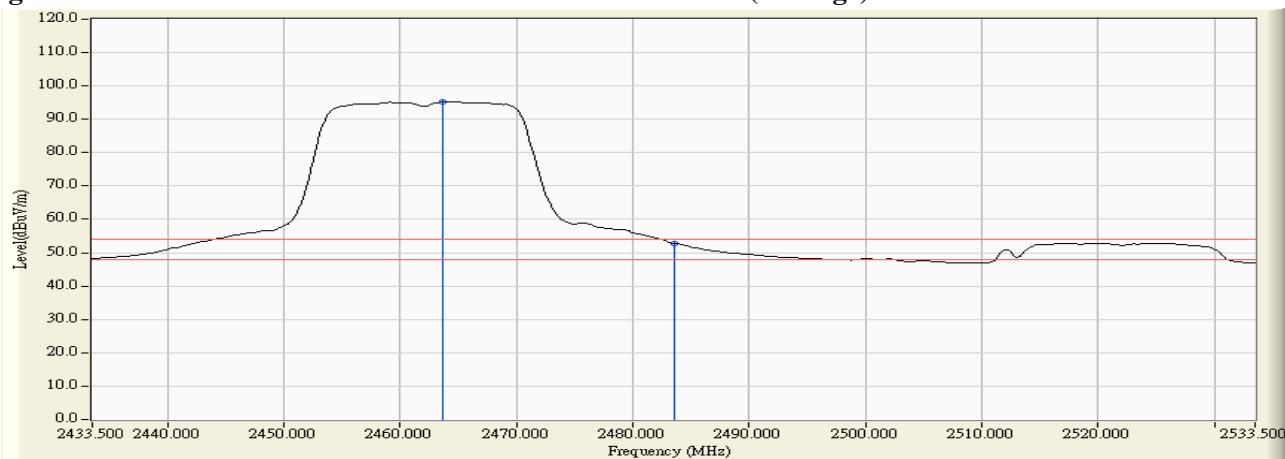
**Figure Channel 11:**

**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.

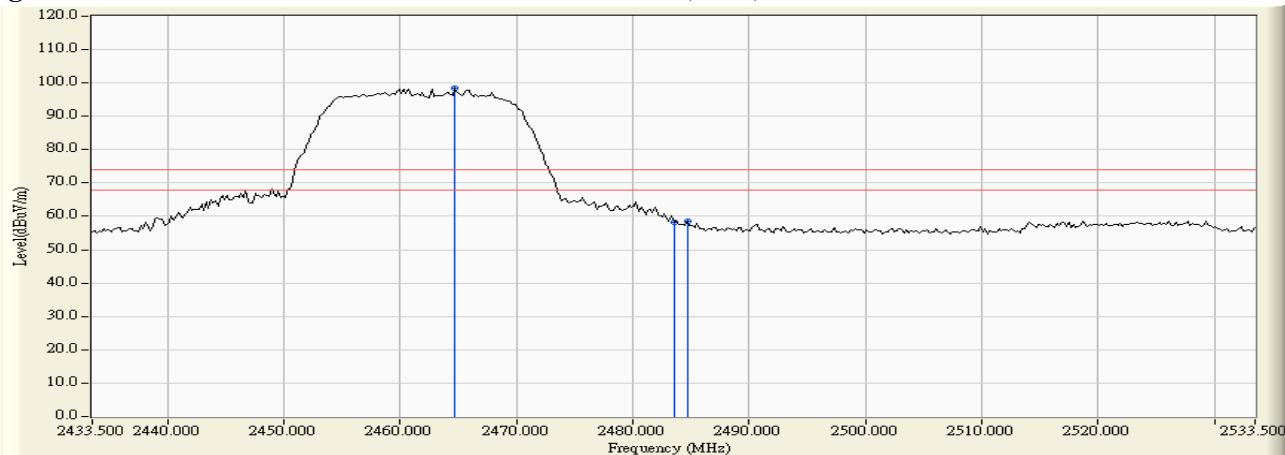
Product : JukeBlox Networked Media Module  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11g 6Mbps)

**RF Radiated Measurement (Vertical):**

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2464.700	32.494	65.952	98.445	--	--	--
11 (Peak)	2483.500	32.586	25.599	58.184	74.000	54.000	Pass
11 (Peak)	2484.700	32.591	26.027	58.618	74.000	54.000	Pass
11 (Average)	2459.700	32.469	53.786	86.255	--	--	--
11 (Average)	2483.500	32.586	13.473	46.058	74.000	54.000	Pass

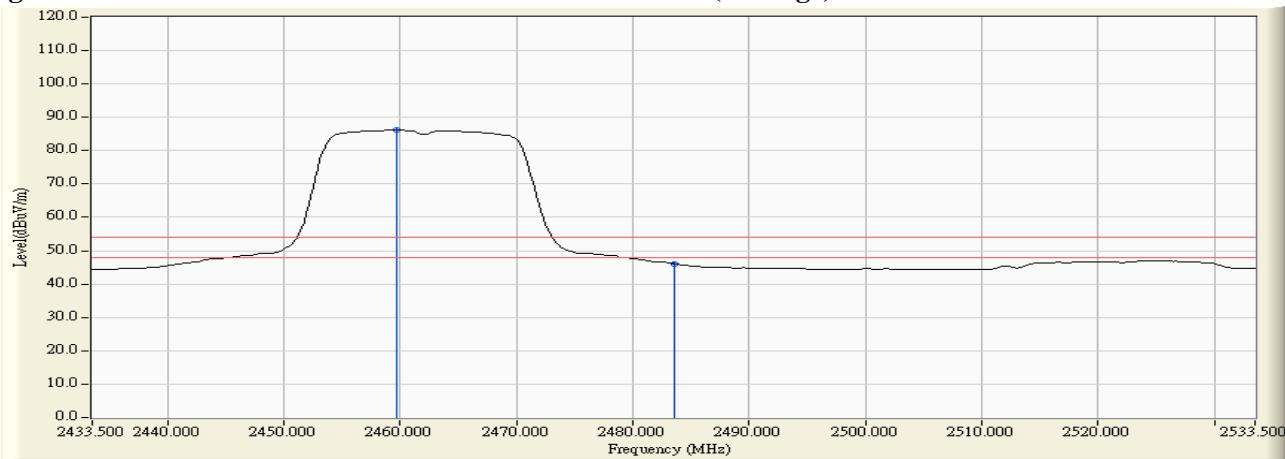
**Figure Channel 11:**

**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.

**5. EMI Reduction Method During Compliance Testing**

No modification was made during testing.