FCC Test Report

(Class II Permissive Change)

Product Name	JukeBlox Networked Media Module
Model No	CR870-2Q
FCC ID.	TTUCR870-2Q

Applicant	Bang & Olufsen A/S
Address	Peter-Bangs-Vej 15, DK-7600 Struer, Denmark

Date of Receipt	Nov. 01, 2013
Issue Date	Nov. 13, 2013
Report No.	13B0028R-RFUSP02V00-A
Report Version	V1.0

Testing Laboratory
0914

Test Report Certification

Issue Date: Nov. 13, 2013
Report No.: 13B0028R-RFUSP02V00-A

Product Name	JukeBlox Networked Media Module
Applicant	Bang & Olufsen A/S
Address	Peter-Bangs-Vej 15, DK-7600 Struer, Denmark
Manufacturer	DONG GUAN G-COM COMPUTER CO., LTD.
Model No.	CR870-2Q
FCC ID.	TTUCR870-2Q
EUT Rated Voltage	DC 3.3V
EUT Test Voltage	AC 120V/60Hz
Trade Name	Bang & Olufsen
Applicable Standard	FCC CFR Title 47 Part 15 Subpart C: 2012 ANSI C63.4: 2003, ANSI C63.10: 2009, FCC KDB 558074
Test Result	Complied

The test results relate only to the samples tested.
The test report shall not be reproduced except in full without the written approval of QuieTek Corporation.
This report must not be used to claim product endorsement by TAF any agency of the U.S. Government

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Tested By : Vincent chu
(Engineer / Vincent Chu)

Approved By :
(Director / Vincent Lin)

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1. GENERAL INFORMATION

1.1. EUT Description

Product Name	JukeBlox Networked Media Module
Trade Name	Bang & Olufsen
Model No.	CR870-2Q
FCC ID.	TTUCR870-2Q
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	PIFA / Monopole
Antenna Gain	Refer to the table “Antenna List”
Channel Control	Auto

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	Tyco Electronics	2173050-1	Puck / single band	1.6dBi for 2.4 GHz
2	D&M Premium Sound Solutions	3104 137 0099	Monopole	0.1dBi for 2.4 GHz

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

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. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
3. 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)
4. 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.
5. The radiation measurements are performed in X, Y, Z axis positioning. Only the worst case is shown in the report.
6. This is to request a Class II permissive change for FCC ID: TTUCR870-2Q, originally granted on 14/11/2011.

   The major change filed under this application is:

   Change #1: Addition 2 new antennas.

   Change #2: Addition a new SDRAM manufacturer Winbond, the original is Hynix.

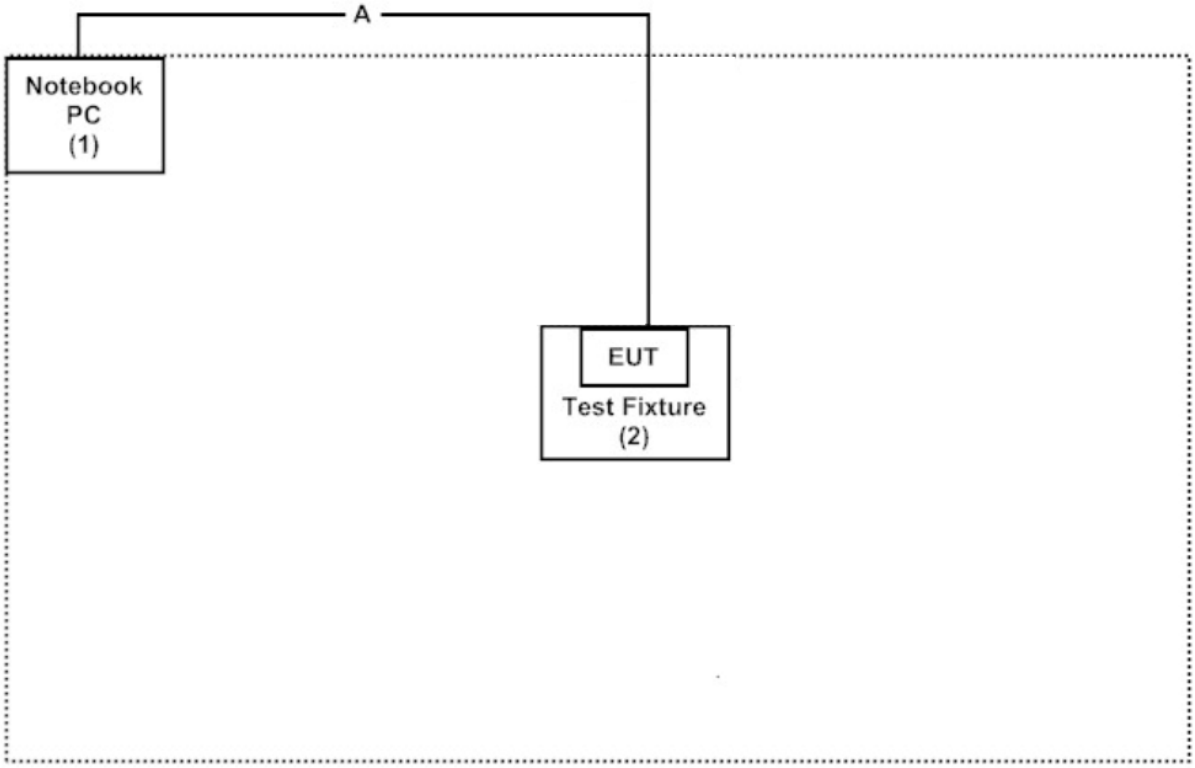
1.3. Tested System Details

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	Notebook PC	DELL	PP18L	42649348672	Non-Shielded, 0.8m
2	Test Fixture	LITEON	N/A	N/A	N/A

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 PC.

(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	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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Registration Number: 92195

Site Name: Quietek Corporation
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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

FCC Accreditation Number: TW1014

2. Conducted Emission

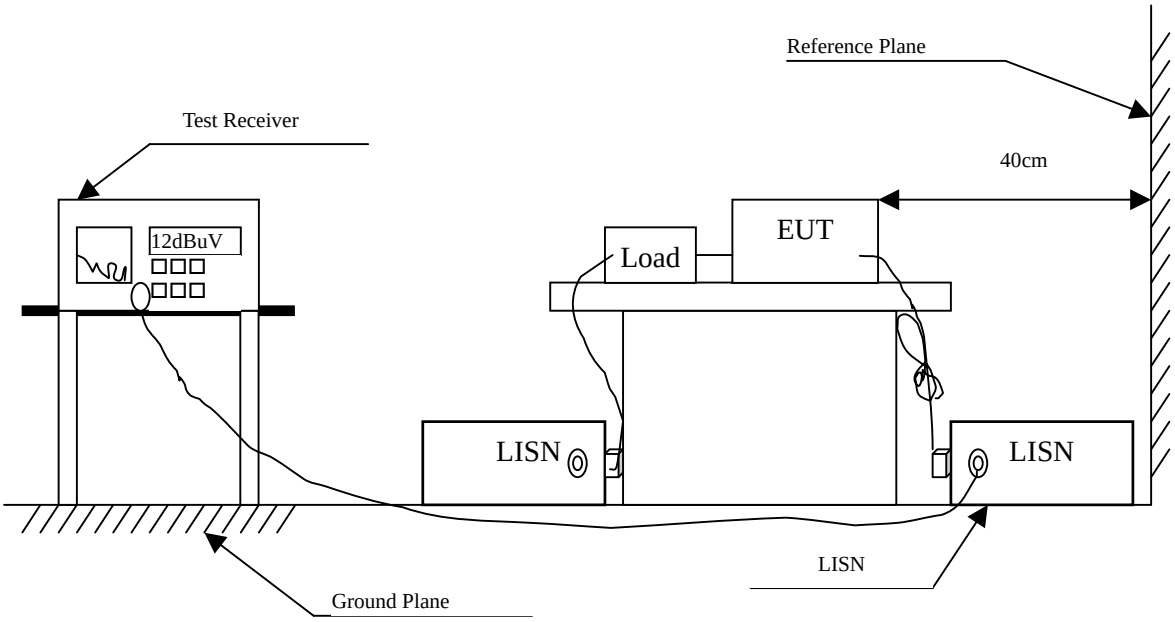
2.1. Test Equipment

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

Item	Instrument	Manufacturer	Type No./Serial No	Last Cal.	Remark
1	Test Receiver	R & S	ESCS 30/825442/17	May, 2013	
2	L.I.S.N.	R & S	ESH3-Z5/825016/6	May, 2013	EUT
3	L.I.S.N.	Kyoritsu	KNW-407/8-1420-3	May, 2013	Peripherals
4	Pulse Limiter	R & S	ESH3-Z2	May, 2013	
5	No.1 Shielded Room			N/A	

Note: All instruments are calibrated every one year.

2.2. Test Setup



2.3. Limits

FCC Part 15 Subpart C Paragraph 15.207 (dBuV) Limit		
Frequency MHz	Limits	
	QP	AVG
0.15 - 0.50	66-56	56-46
0.50-5.0	56	46
5.0 - 30	60	50

2.4. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10: 2009 on conducted measurement.

Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

2.5. Uncertainty

± 2.26 dB

2.6. Test Result of Conducted Emission

Product : JukeBlox Networked Media Module
Test Item : Conducted Emission Test
Power Line : Line 1
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437MHz) (Winbond)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
Line 1					
Quasi-Peak					
0.150	9.696	48.520	58.216	-7.784	66.000
0.189	9.698	43.670	53.368	-11.518	64.886
0.232	9.700	40.280	49.980	-13.677	63.657
0.306	9.704	32.920	42.624	-18.919	61.543
0.509	9.713	38.140	47.853	-8.147	56.000
0.595	9.717	33.250	42.967	-13.033	56.000
Average					
0.150	9.696	34.100	43.796	-12.204	56.000
0.189	9.698	30.140	39.838	-15.048	54.886
0.232	9.700	30.310	40.010	-13.647	53.657
0.306	9.704	22.700	32.404	-19.139	51.543
0.509	9.713	31.110	40.823	-5.177	46.000
0.595	9.717	25.380	35.097	-10.903	46.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " " means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Product : JukeBlox Networked Media Module
Test Item : Conducted Emission Test
Power Line : Line 2
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437MHz) (Winbond)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
Line 2					
Quasi-Peak					
0.150	9.676	48.440	58.116	-7.884	66.000
0.189	9.678	43.730	53.408	-11.478	64.886
0.236	9.680	39.940	49.620	-13.923	63.543
0.267	9.682	35.700	45.382	-17.275	62.657
0.502	9.692	36.540	46.232	-9.768	56.000
1.822	9.772	28.930	38.702	-17.298	56.000
Average					
0.150	9.676	34.040	43.716	-12.284	56.000
0.189	9.678	30.360	40.038	-14.848	54.886
0.236	9.680	28.590	38.270	-15.273	53.543
0.267	9.682	23.570	33.252	-19.405	52.657
0.502	9.692	29.000	38.692	-7.308	46.000
1.822	9.772	22.190	31.962	-14.038	46.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. “ “ means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

3. Peak Power Output

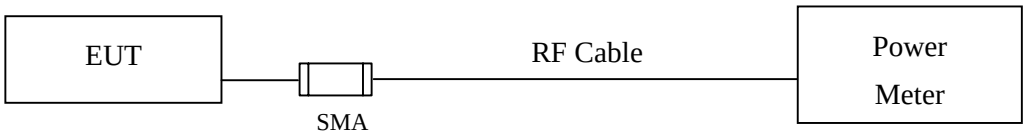
3.1. Test Equipment

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

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



3.3. Limits

The maximum peak power shall be less 1 Watt.

3.4. Test Procedure

The EUT was tested according to DTS test procedure of KDB 558074 for compliance to FCC 47CFR 15.247 requirements. The maximum peak conducted output power using KDB 558074 section 9.1.3 PKPM1 Peak power meter method.

3.5. Uncertainty

± 1.27 dB

3.6. 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	1		
		Measurement Level (dBm)						
01	2412	12.91	--	--	--	15.47	<30dBm	Pass
06	2437	13.08	12.88	12.79	12.63	15.53	<30dBm	Pass
11	2462	13.04	--	--	--	15.52	<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	6		
		Measurement Level (dBm)										
01	2412	11.35	--	--	--	--	--	--	--	21.44	<30dBm	Pass
06	2437	11.41	11.08	10.92	10.81	10.73	10.66	10.57	10.51	21.82	<30dBm	Pass
11	2462	11.37	--	--	--	--	--	--	--	21.41	<30dBm	Pass

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

4. Radiated Emission

4.1. Test Equipment

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

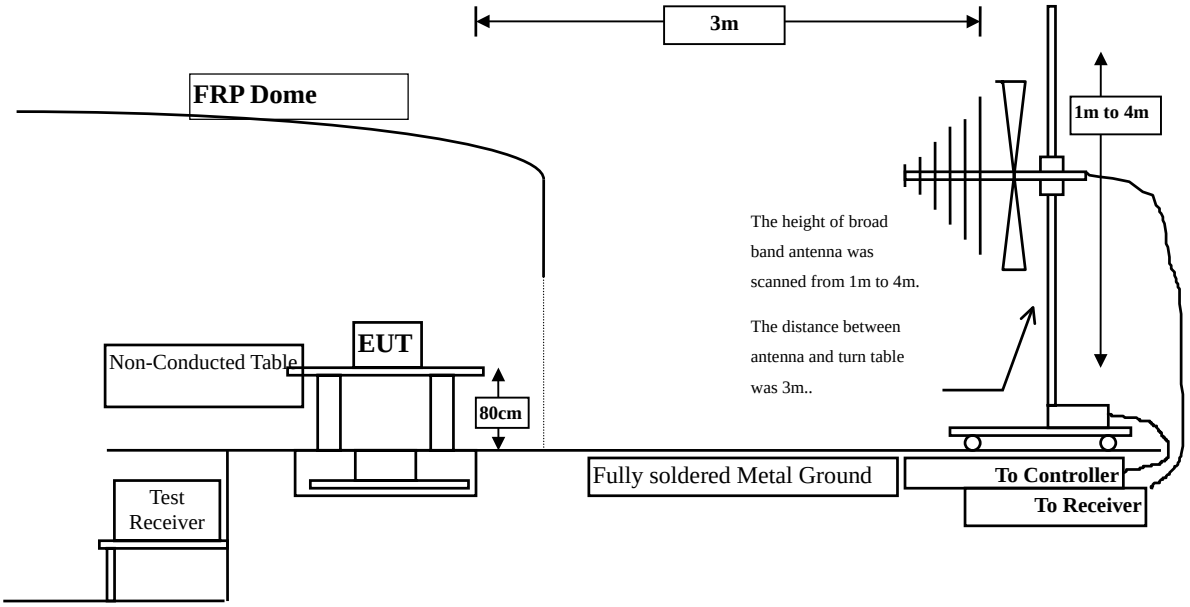
Test Site	Equipment		Manufacturer	Model No./Serial No.	Last Cal.
☒Site # 3	X	Loop Antenna	Teseq	HLA6120 / 26739	Jul., 2013
	X	Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2012
	X	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2013
	X	Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2013
	X	Pre-Amplifier	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., 2013
	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.

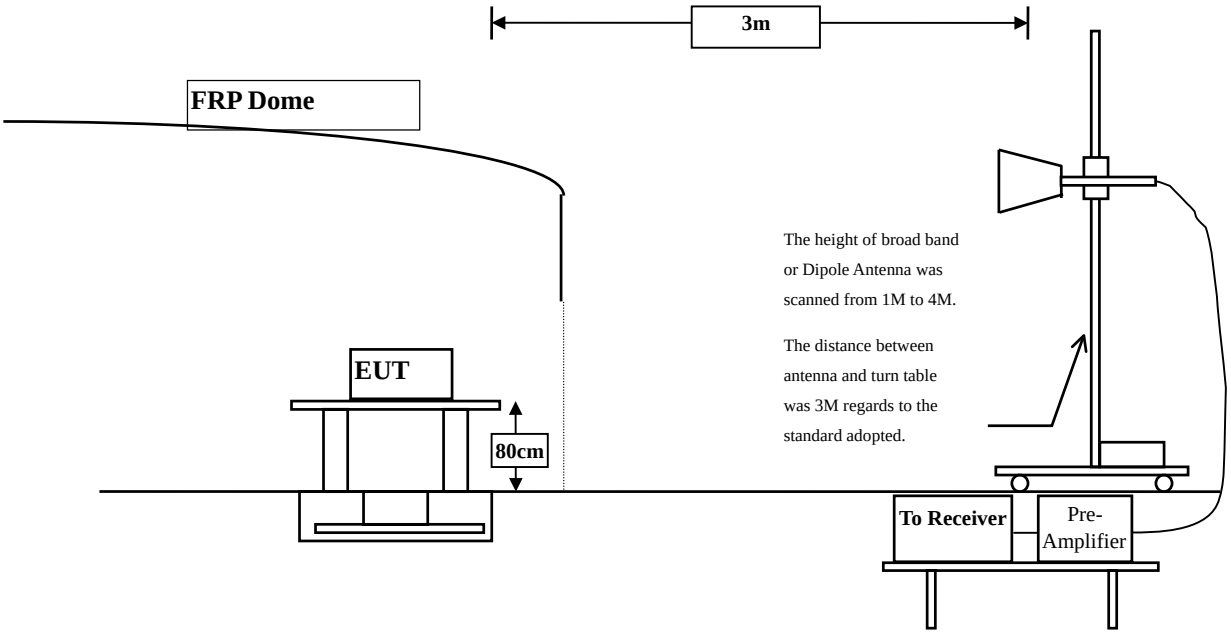
2. The test instruments marked with “X” are used to measure the final test results.

4.2. Test Setup

Radiated Emission Below 1GHz



Radiated Emission Above 1GHz



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.

FCC Part 15 Subpart C Paragraph 15.209(a) 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: E field strength (dBuV/m) = 20 log E field strength (uV/m)

4.4. Test Procedure

The EUT was setup according to ANSI C63.10, 2009 and tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.

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

The antenna is scanned 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 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 in the Open Area Test Site on the Final Measurement.

The frequency range from 9KHz to 10th harminics is checked.

4.5. Uncertainty

± 3.9 dB above 1GHz

± 3.8 dB below 1GHz

4.6. 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) (Monopole Antenna)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4824.000	3.261	37.920	41.181	-32.819	74.000
7236.000	10.650	36.500	47.150	-26.850	74.000
9648.000	13.337	36.870	50.206	-23.794	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4824.000	6.421	37.380	43.801	-30.199	74.000
7236.000	11.495	36.750	48.245	-25.755	74.000
9648.000	13.807	36.840	50.646	-23.354	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. " * ", 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.
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) (Monopole Antenna)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	Db	dBuV	dBuV/m	Db	dBuV/m
Horizontal Peak Detector:					
4874.000	3.038	37.980	41.017	-32.983	74.000
7311.000	11.795	35.820	47.614	-26.386	74.000
9748.000	12.635	37.190	49.825	-24.175	74.000
Average Detector:					
--					
Vertical Peak Detector:					
4874.000	5.812	37.670	43.481	-30.519	74.000
7311.000	12.630	35.410	48.039	-25.961	74.000
9748.000	13.126	36.660	49.786	-24.214	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. " * ", 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.
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) (Monopole Antenna)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	Db	dBuV	dBuV/m	Db	dBuV/m
Horizontal Peak Detector:					
4924.000	2.858	37.380	40.237	-33.763	74.000
7386.000	12.127	34.790	46.918	-27.082	74.000
9848.000	12.852	37.310	50.163	-23.837	74.000
Average Detector:					
--					
Vertical Peak Detector:					
4924.000	5.521	37.720	43.240	-30.760	74.000
7386.000	13.254	35.360	48.614	-25.386	74.000
9848.000	13.367	36.790	50.157	-23.843	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. " * ", 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.
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) (Monopole Antenna)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	Db	dBuV	dBuV/m	Db	dBuV/m
Horizontal					
Peak Detector:					
4824.000	3.261	38.580	41.841	-32.159	74.000
7236.000	10.650	36.120	46.770	-27.230	74.000
9648.000	13.337	37.330	50.666	-23.334	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4824.000	6.421	37.400	43.821	-30.179	74.000
7236.000	11.495	36.630	48.125	-25.875	74.000
9648.000	13.807	36.860	50.666	-23.334	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. " * ", 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.
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) (Monopole Antenna)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	Db	dBuV	dBuV/m	Db	dBuV/m
Horizontal Peak Detector:					
4874.000	3.038	37.930	40.967	-33.033	74.000
7311.000	11.795	35.480	47.274	-26.726	74.000
9748.000	12.635	36.960	49.595	-24.405	74.000
Average Detector:					
--					
Vertical Peak Detector:					
4874.000	5.812	37.160	42.971	-31.029	74.000
7311.000	12.630	35.460	48.089	-25.911	74.000
9748.000	13.126	37.350	50.476	-23.524	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. " * ", 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.
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) (Monopole Antenna)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	Db	dBuV	dBuV/m	Db	dBuV/m
Horizontal Peak Detector:					
4924.000	2.858	37.540	40.397	-33.603	74.000
7386.000	12.127	34.870	46.998	-27.002	74.000
9848.000	12.852	37.650	50.503	-23.497	74.000
Average Detector:					
--					
Vertical Peak Detector:					
4924.000	5.521	37.260	42.780	-31.220	74.000
7386.000	13.254	35.130	48.384	-25.616	74.000
9848.000	13.367	37.520	50.887	-23.113	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. " * ", 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.
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) (2412MHz) (Puck Antenna)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4824.000	3.261	37.720	40.981	-33.019	74.000
7236.000	10.650	36.100	46.750	-27.250	74.000
9648.000	13.337	35.970	49.306	-24.694	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4824.000	6.421	37.270	43.691	-30.309	74.000
7236.000	11.495	36.660	48.155	-25.845	74.000
9648.000	13.807	35.920	49.726	-24.274	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. " * ", 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.
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) (Puck Antenna)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	Db	dBuV	dBuV/m	Db	dBuV/m
Horizontal Peak Detector:					
4874.000	3.038	37.140	40.177	-33.823	74.000
7311.000	11.795	35.610	47.404	-26.596	74.000
9748.000	12.635	38.140	50.775	-23.225	74.000
Average Detector:					
--					
Vertical Peak Detector:					
4874.000	5.812	37.470	43.281	-30.719	74.000
7311.000	12.630	34.140	46.769	-27.231	74.000
9748.000	13.126	37.110	50.236	-23.764	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. " * ", 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.
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) (Puck Antenna)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	Db	dBuV	dBuV/m	Db	dBuV/m
Horizontal Peak Detector:					
4924.000	2.858	37.210	40.067	-33.933	74.000
7386.000	12.127	35.120	47.248	-26.752	74.000
9848.000	12.852	37.370	50.223	-23.777	74.000
Average Detector:					
--					
Vertical Peak Detector:					
4924.000	5.521	37.120	42.640	-31.360	74.000
7386.000	13.254	35.420	48.674	-25.326	74.000
9848.000	13.367	37.440	50.807	-23.193	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. " * ", 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.
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) (Puck Antenna)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	Db	dBuV	dBuV/m	Db	dBuV/m
Horizontal					
Peak Detector:					
4824.000	3.261	38.240	41.501	-32.499	74.000
7236.000	10.650	35.910	46.560	-27.440	74.000
9648.000	13.337	37.480	50.816	-23.184	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4824.000	6.421	37.550	43.971	-30.029	74.000
7236.000	11.495	37.090	48.585	-25.415	74.000
9648.000	13.807	36.590	50.396	-23.604	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. " * ", 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.
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) (Puck Antenna)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	Db	dBuV	dBuV/m	Db	dBuV/m
Horizontal Peak Detector:					
4874.000	3.038	38.240	41.277	-32.723	74.000
7311.000	11.795	35.880	47.674	-26.326	74.000
9748.000	12.635	36.720	49.355	-24.645	74.000
Average Detector:					
--					
Vertical Peak Detector:					
4874.000	5.812	37.690	43.501	-30.499	74.000
7311.000	12.630	35.600	48.229	-25.771	74.000
9748.000	13.126	38.100	51.226	-22.774	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. " * ", 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.
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) (Puck Antenna)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	Db	dBuV	dBuV/m	Db	dBuV/m
Horizontal Peak Detector:					
4924.000	2.858	37.210	40.067	-33.933	74.000
7386.000	12.127	35.210	47.338	-26.662	74.000
9848.000	12.852	37.120	49.973	-24.027	74.000
Average Detector:					
--					
Vertical Peak Detector:					
4924.000	5.521	37.180	42.700	-31.300	74.000
7386.000	13.254	35.390	48.644	-25.356	74.000
9848.000	13.367	38.420	51.787	-22.213	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. " * ", 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.
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) (Monopole Antenna) (SDRAM-Hynix)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
97.440	-7.691	44.210	36.519	-6.981	43.500
244.490	-6.392	37.260	30.868	-15.132	46.000
385.020	-1.350	33.328	31.978	-14.022	46.000
499.690	0.059	32.360	32.420	-13.580	46.000
659.520	2.108	25.630	27.738	-18.262	46.000
920.300	6.469	28.660	35.129	-10.871	46.000
Vertical					
121.600	-3.838	36.290	32.452	-11.048	43.500
201.980	-7.777	37.265	29.488	-14.012	43.500
369.280	-2.837	27.620	24.783	-21.217	46.000
507.240	-0.471	24.076	23.605	-22.395	46.000
678.820	0.732	31.266	31.998	-14.002	46.000
926.230	5.812	22.890	28.703	-17.297	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.

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) (Monopole Antenna) (SDRAM-Hynix)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
181.620	-12.175	41.711	29.537	-13.963	43.500
308.280	-3.495	37.620	34.125	-11.875	46.000
417.610	-3.234	27.620	24.386	-21.614	46.000
511.140	1.500	34.110	35.610	-10.390	46.000
681.510	2.850	33.670	36.520	-9.480	46.000
749.770	3.325	35.002	38.327	-7.673	46.000
Vertical					
101.620	-0.010	33.144	33.133	-10.367	43.500
237.170	-9.057	39.810	30.753	-15.247	46.000
311.980	-6.858	30.921	24.063	-21.937	46.000
437.630	-8.723	35.811	27.089	-18.911	46.000
651.340	-4.672	31.280	26.609	-19.391	46.000
831.220	2.561	27.489	30.050	-15.950	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.

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) (Monopole Antenna) (SDRAM-Winbond)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
111.480	-7.914	45.199	37.285	-6.215	43.500
243.400	-6.441	41.909	35.468	-10.532	46.000
385.020	-1.350	33.328	31.978	-14.022	46.000
507.240	0.759	34.184	34.943	-11.057	46.000
666.320	2.031	30.513	32.545	-13.455	46.000
916.580	6.144	30.111	36.255	-9.745	46.000
Vertical					
123.120	-3.921	40.524	36.603	-6.897	43.500
198.780	-8.221	38.295	30.074	-13.426	43.500
371.440	-2.737	26.847	24.110	-21.890	46.000
507.240	-0.471	24.076	23.605	-22.395	46.000
699.300	0.695	30.177	30.872	-15.128	46.000
928.220	6.203	23.693	29.896	-16.104	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.

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) (Monopole Antenna) (SDRAM-Winbond)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
196.840	-10.946	44.729	33.783	-9.717	43.500
319.060	-4.317	42.842	38.525	-7.475	46.000
431.580	-2.099	28.983	26.884	-19.116	46.000
507.240	0.759	36.649	37.408	-8.592	46.000
695.420	3.438	35.370	38.808	-7.192	46.000
749.740	3.320	36.034	39.354	-6.646	46.000
Vertical					
49.400	-7.108	36.222	29.114	-10.886	40.000
128.940	-4.128	38.155	34.027	-9.473	43.500
237.580	-8.970	40.415	31.445	-14.555	46.000
344.280	-3.171	31.943	28.773	-17.227	46.000
749.740	2.510	34.349	36.859	-9.141	46.000
831.220	2.561	30.789	33.350	-12.650	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.

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) (Puck Antenna) (SDRAM-Hynix)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
101.210	-7.251	44.270	37.020	-6.480	43.500
238.800	-7.143	40.898	33.755	-12.245	46.000
380.290	-0.964	35.870	34.906	-11.094	46.000
503.210	0.135	35.411	35.546	-10.454	46.000
666.320	2.031	29.913	31.945	-14.055	46.000
916.580	6.144	28.411	34.555	-11.445	46.000
Vertical					
113.420	-1.849	38.660	36.811	-6.689	43.500
207.620	-7.754	39.140	31.386	-12.114	43.500
380.680	-1.496	28.619	27.122	-18.878	46.000
499.570	-0.846	31.640	30.795	-15.205	46.000
701.820	0.171	31.211	31.382	-14.618	46.000
928.220	6.203	26.993	33.196	-12.804	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.

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) (Puck Antenna) (SDRAM-Hynix)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
197.880	-10.794	41.410	30.617	-12.883	43.500
301.890	-3.330	39.991	36.662	-9.338	46.000
433.820	-1.959	30.741	28.782	-17.218	46.000
507.110	0.727	37.140	37.866	-8.134	46.000
741.820	3.347	35.130	38.476	-7.524	46.000
899.170	5.439	30.580	36.019	-9.981	46.000
Vertical					
102.820	-0.091	31.740	31.649	-11.851	43.500
201.880	-7.782	39.240	31.458	-12.042	43.500
328.980	-5.066	32.294	27.227	-18.773	46.000
503.240	-0.848	36.980	36.132	-9.868	46.000
749.740	2.510	31.949	34.459	-11.541	46.000
831.220	2.561	32.789	35.350	-10.650	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.

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) (Puck Antenna) (SDRAM-Winbond)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
98.910	-7.562	41.280	33.718	-9.782	43.500
201.530	-10.702	40.141	29.439	-14.061	43.500
380.290	-0.964	33.870	32.906	-13.094	46.000
497.622	-0.258	38.640	38.382	-7.618	46.000
666.320	2.031	29.313	31.345	-14.655	46.000
922.830	6.306	26.841	33.147	-12.853	46.000
Vertical					
101.640	-0.011	36.277	36.265	-7.235	43.500
205.640	-7.674	40.320	32.647	-10.853	43.500
367.890	-2.609	30.541	27.932	-18.068	46.000
499.570	-0.846	27.640	26.795	-19.205	46.000
701.820	0.171	28.111	28.282	-17.718	46.000
928.220	6.203	24.593	30.796	-15.204	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.

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) (Puck Antenna) (SDRAM-Winbond)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
183.417	-12.305	40.920	28.615	-14.885	43.500
297.630	-3.634	39.611	35.977	-10.023	46.000
401.580	-2.264	32.899	30.635	-15.365	46.000
515.360	1.617	31.500	33.118	-12.882	46.000
741.820	3.347	29.030	32.376	-13.624	46.000
899.170	5.439	31.080	36.519	-9.481	46.000
Vertical					
99.864	-0.019	30.744	30.725	-12.775	43.500
210.370	-7.879	38.467	30.589	-12.911	43.500
311.890	-6.857	37.961	31.104	-14.896	46.000
502.710	-0.832	33.480	32.648	-13.352	46.000
791.680	2.902	30.980	33.881	-12.119	46.000
902.840	2.996	31.090	34.086	-11.914	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.

5. Band Edge

5.1. Test Equipment

RF Radiated Measurement:

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

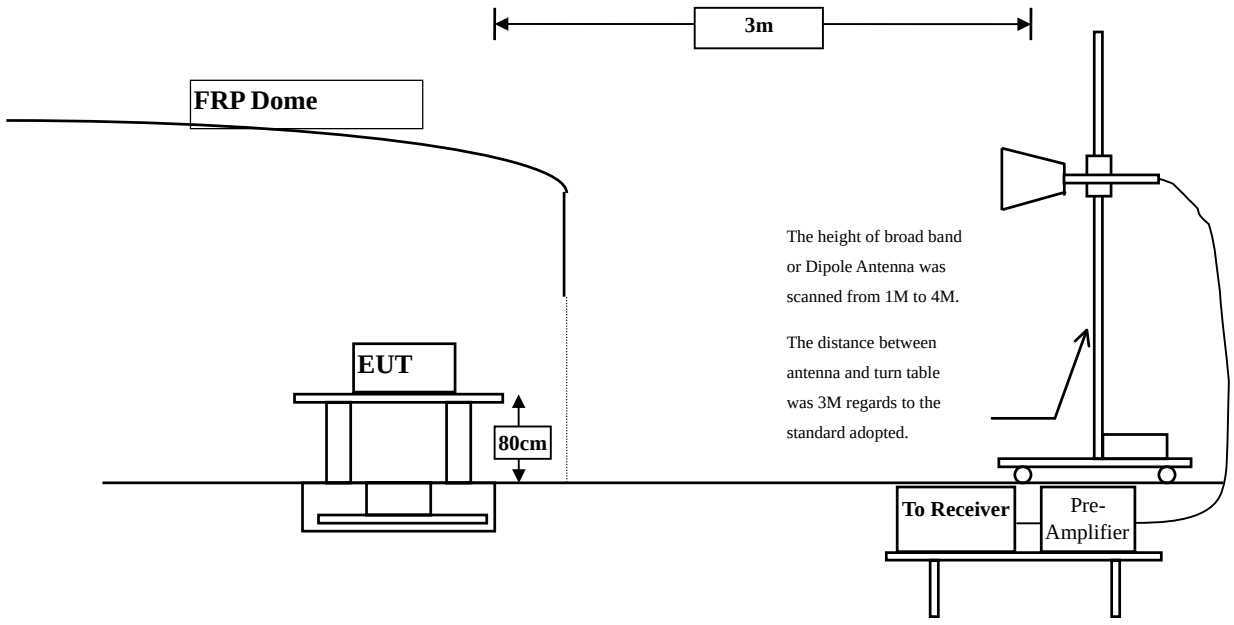
Test Site	Equipment		Manufacturer	Model No./Serial No.	Last Cal.
☒Site # 3		Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2013
	X	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2013
		Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2013
	X	Pre-Amplifier	Agilent	8447D/2944A09549	Sep., 2013
	X	Spectrum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

5.2. Test Setup

RF Radiated Measurement:



5.3. 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.

5.4. Test Procedure

The EUT was setup according to ANSI C63.10, 2009 and tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.
The EUT is placed on a turn table which is 0.8 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10:2009 on radiated measurement.

5.5. Uncertainty

± 3.9 dB above 1GHz
± 3.8 dB below 1GHz

5.6. 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) (Monopole Antenna)

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)	2388.000	31.501	26.406	57.907	74.000	54.000	Pass
01 (Peak)	2390.000	31.509	25.085	56.594	74.000	54.000	Pass
01 (Peak)	2413.000	31.646	71.947	103.593	--	--	--
01 (Average)	2384.800	31.489	14.285	45.774	74.000	54.000	Pass
01 (Average)	2390.000	31.509	14.033	45.542	74.000	54.000	Pass
01 (Average)	2414.800	31.660	67.675	99.335	--	--	--

Figure Channel 01: Horizontal (Peak)

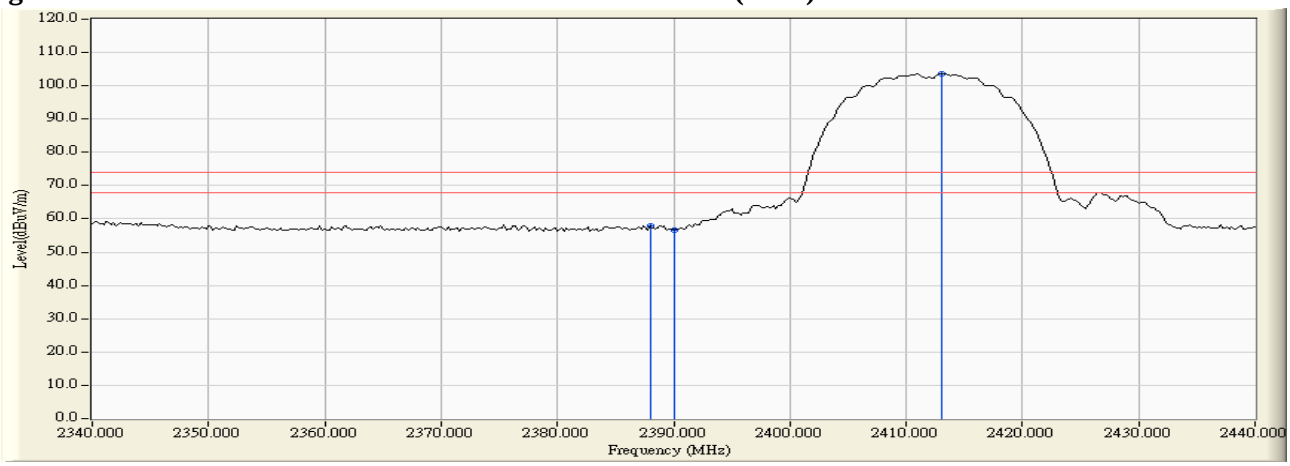
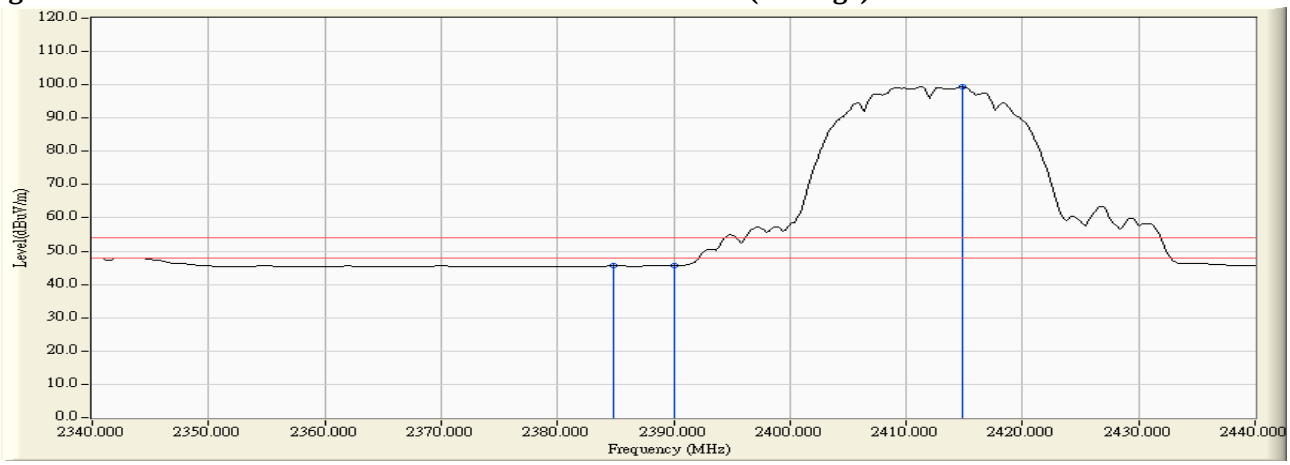


Figure Channel 01: Horizontal (Average)



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) (Monopole Antenna)

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)	2387.400	30.927	25.324	56.251	74.000	54.000	Pass
01 (Peak)	2390.000	30.915	25.118	56.033	74.000	54.000	Pass
01 (Peak)	2413.000	30.956	64.465	95.421	--	--	--
01 (Average)	2385.400	30.937	13.818	44.755	74.000	54.000	Pass
01 (Average)	2390.000	30.915	13.754	44.669	74.000	54.000	Pass
01 (Average)	2414.800	30.968	60.491	91.459	--	--	--

Figure Channel 01: Vertical (Peak)

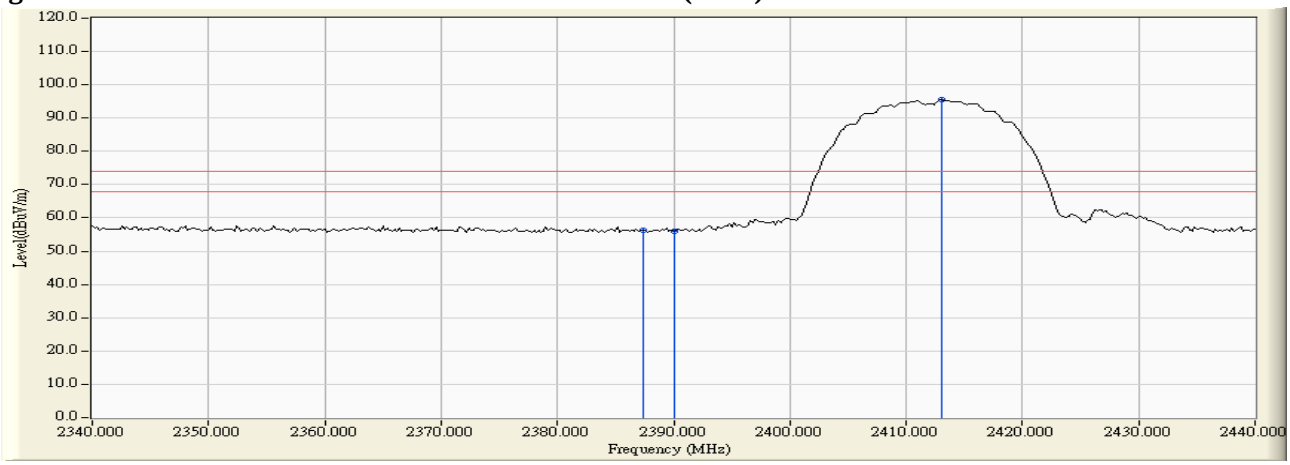
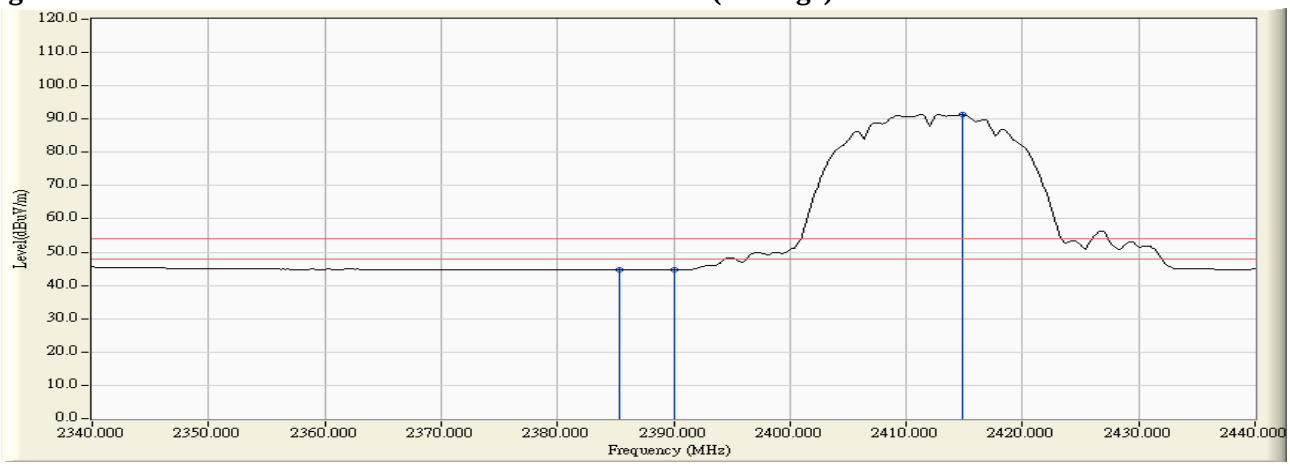


Figure Channel 01: Vertical (Average)



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) (Monopole Antenna)

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)	2462.900	32.026	71.241	103.267	--	--	--
11 (Peak)	2483.500	32.182	26.021	58.203	74.000	54.000	Pass
11 (Peak)	2484.700	32.192	26.692	58.883	74.000	54.000	Pass
11 (Average)	2461.100	32.013	67.168	99.181	--	--	--
11 (Average)	2483.500	32.182	14.444	46.626	74.000	54.000	Pass
11 (Average)	2512.100	32.249	16.503	48.751	74.000	54.000	Pass

Figure Channel 11: Horizontal (Peak)

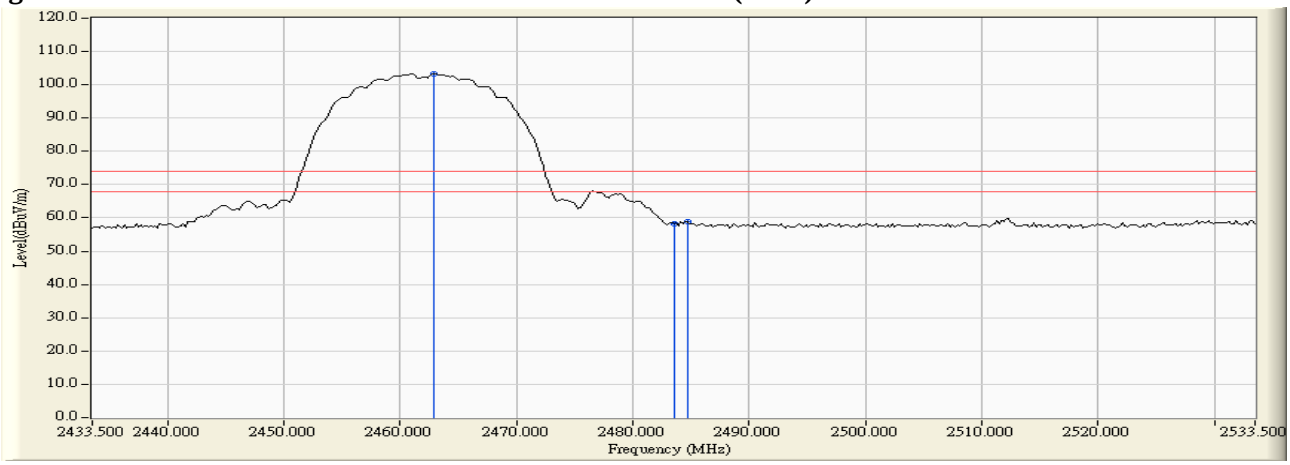


Figure Channel 11: Horizontal (Average)

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) (Monopole Antenna)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2460.900	31.283	66.137	97.420	--	--	--
11 (Peak)	2483.500	31.435	27.538	58.973	74.000	54.000	Pass
11 (Average)	2461.100	31.285	61.794	93.078	--	--	--
11 (Average)	2483.500	31.435	13.885	45.320	74.000	54.000	Pass

Figure Channel 11: Vertical (Peak)

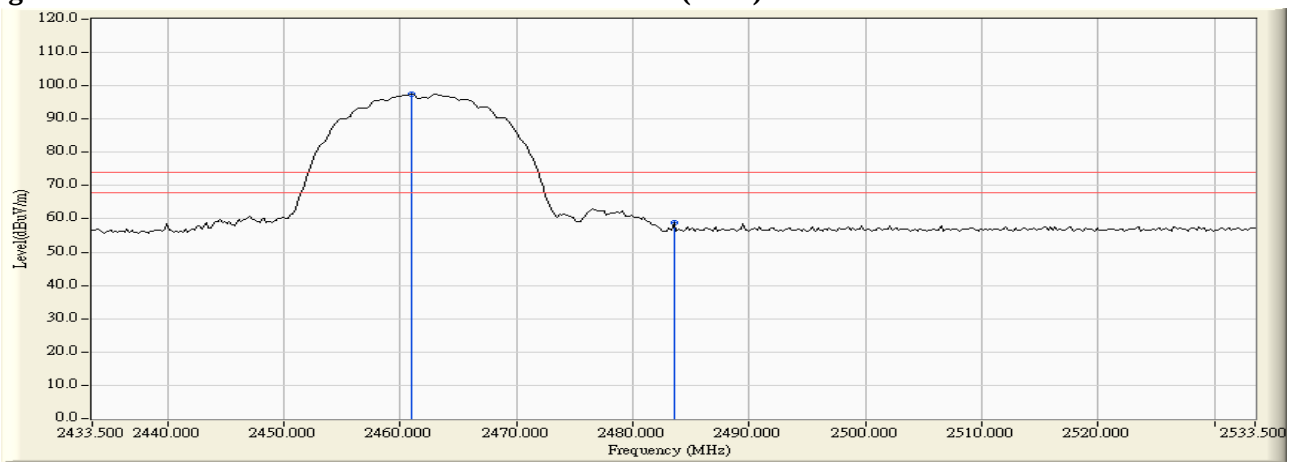


Figure Channel 11: Vertical (Average)

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) (Monopole Antenna)

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)	2388.200	31.502	33.071	64.573	74.000	54.000	Pass
01 (Peak)	2390.000	31.509	31.059	62.568	74.000	54.000	Pass
01 (Peak)	2415.800	31.667	74.459	106.126	--	--	--
01 (Average)	2390.000	31.509	16.221	47.730	74.000	54.000	Pass
01 (Average)	2407.000	31.605	58.258	89.863	--	--	--

Figure Channel 01: Horizontal (Peak)

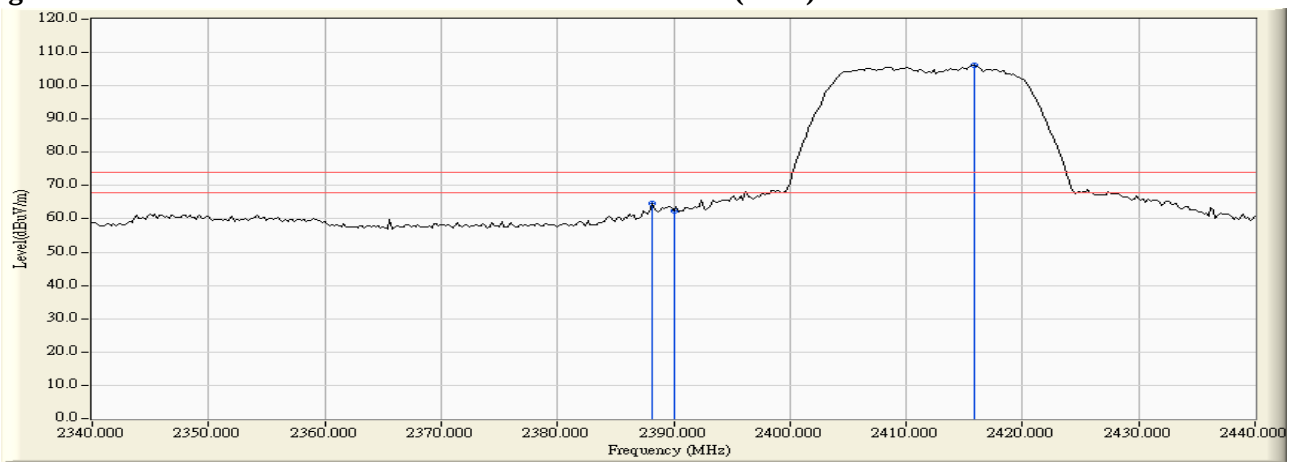
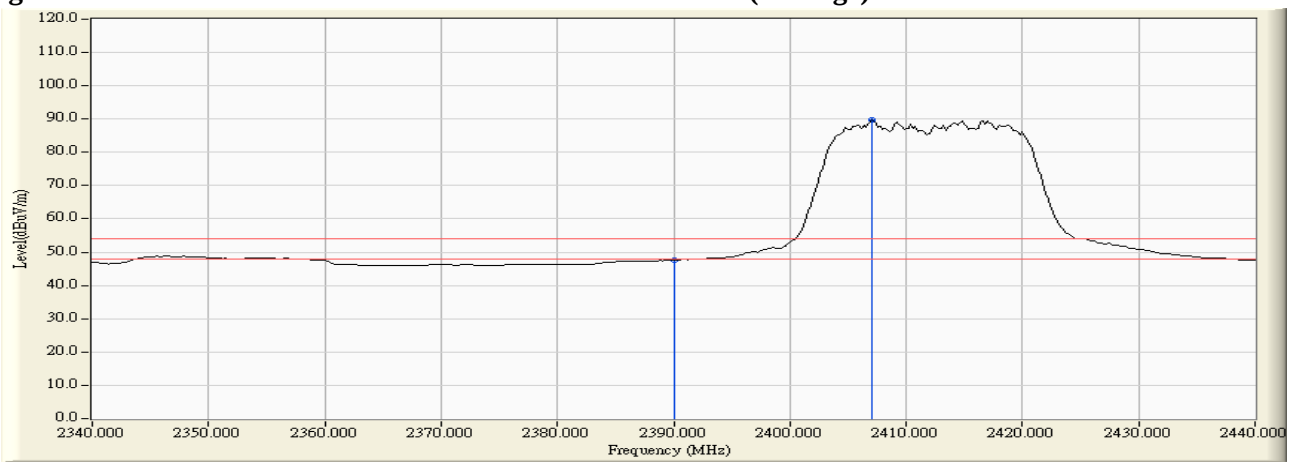


Figure Channel 01: Horizontal (Average)



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 etection.

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

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2390.000	30.915	27.912	58.827	74.000	54.000	Pass
01 (Peak)	2416.000	30.977	69.452	100.428	--	--	--
01 (Average)	2390.000	30.915	14.763	45.678	74.000	54.000	Pass
01 (Average)	2407.200	30.931	53.340	84.272	--	--	--

Figure Channel 01: Vertical (Peak)

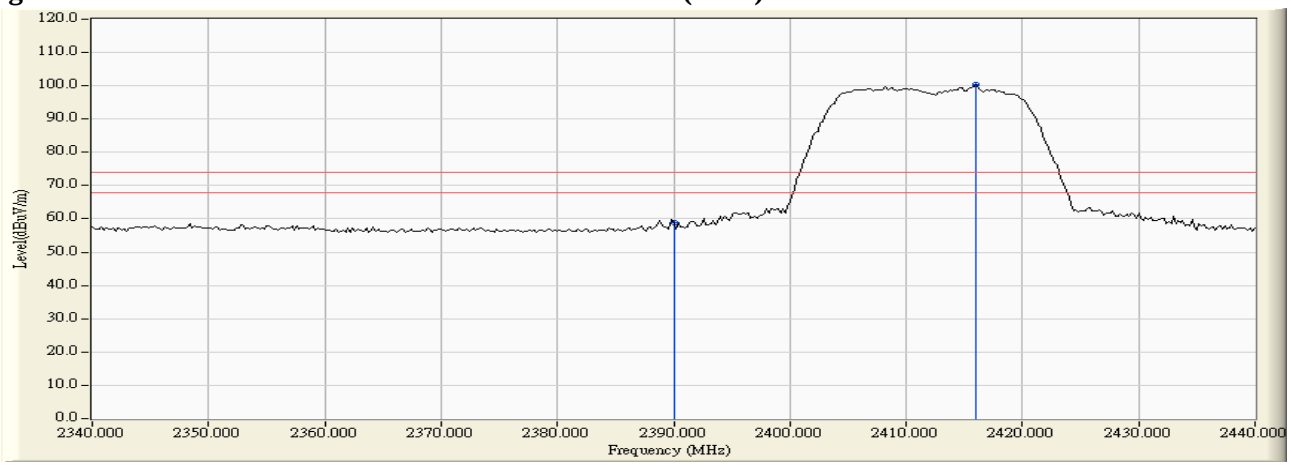
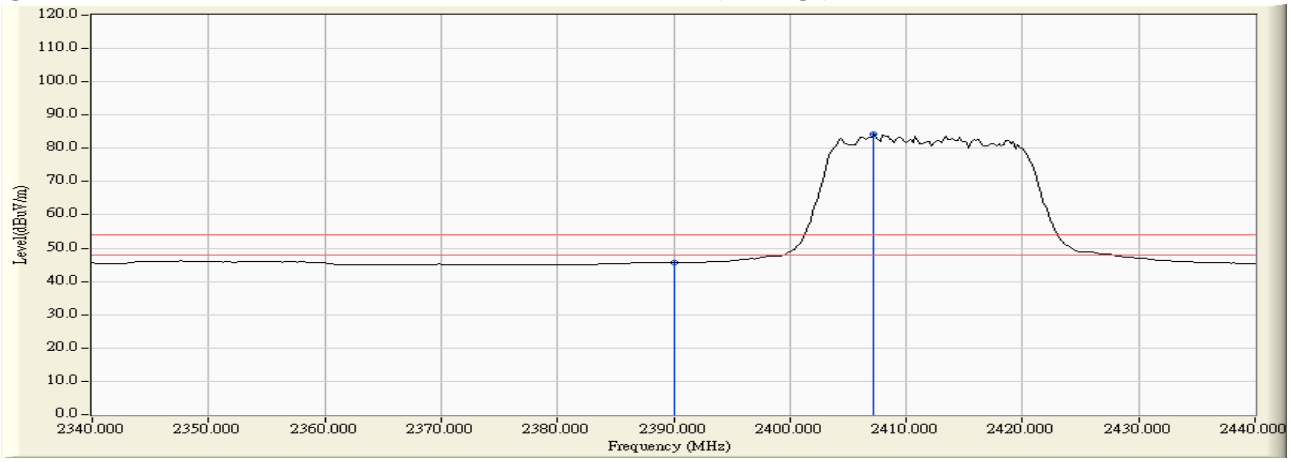


Figure Channel 01: Vertical (Average)



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) (Monopole Antenna)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2466.100	32.051	73.641	105.691	--	--	--
11 (Peak)	2483.500	32.182	33.399	65.581	74.000	54.000	Pass
11 (Average)	2458.900	31.997	57.255	89.251	--	--	--
11 (Average)	2483.500	32.182	17.325	49.507	74.000	54.000	Pass

Figure Channel 11: Horizontal (Peak)

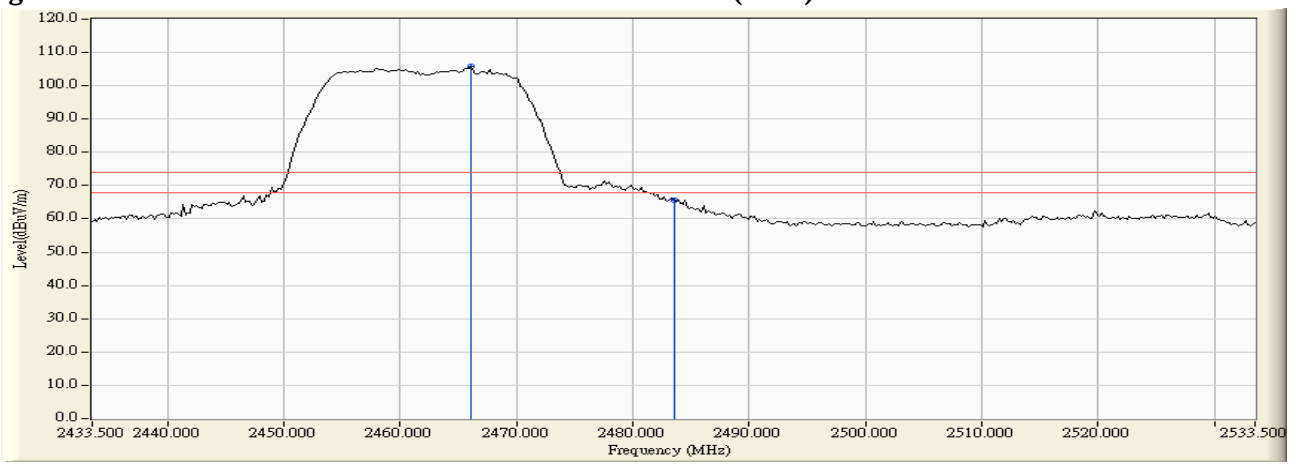
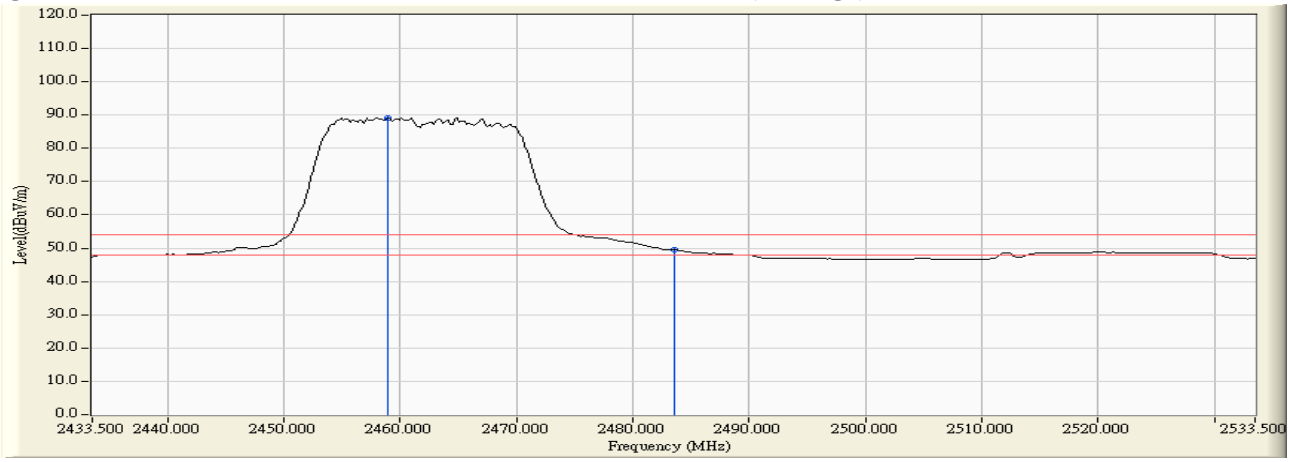


Figure Channel 11: Horizontal (Average)



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 etection.

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

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)	2465.900	31.317	69.064	100.381	--	--	--
11 (Peak)	2483.500	31.435	27.595	59.030	74.000	54.000	Pass
11 (Peak)	2483.900	31.438	28.927	60.365	74.000	54.000	Pass
11 (Average)	2463.700	31.302	53.199	84.501	--	--	--
11 (Average)	2483.500	31.435	15.431	46.866	74.000	54.000	Pass

Figure Channel 11: Vertical (Peak)

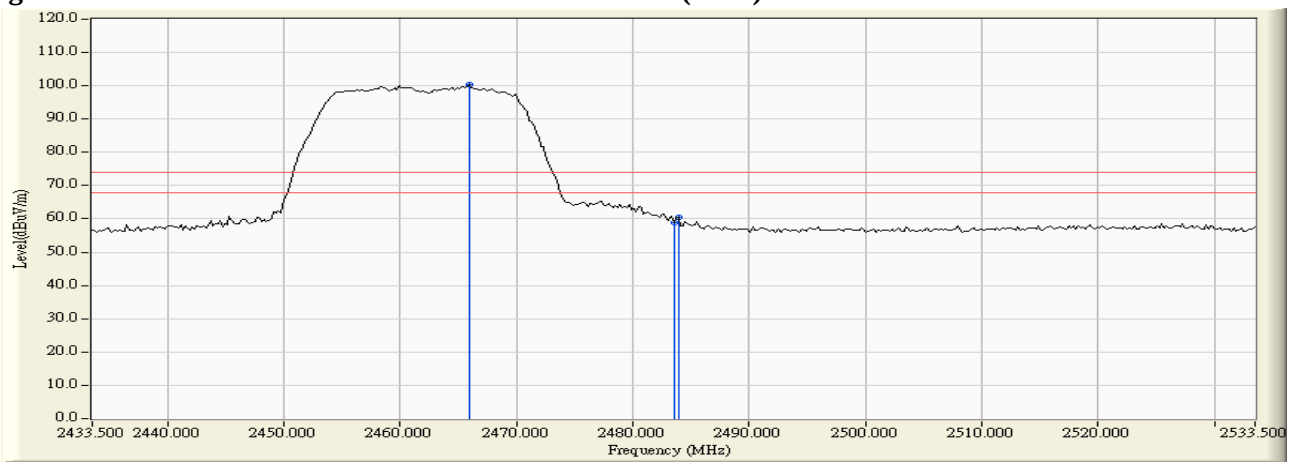
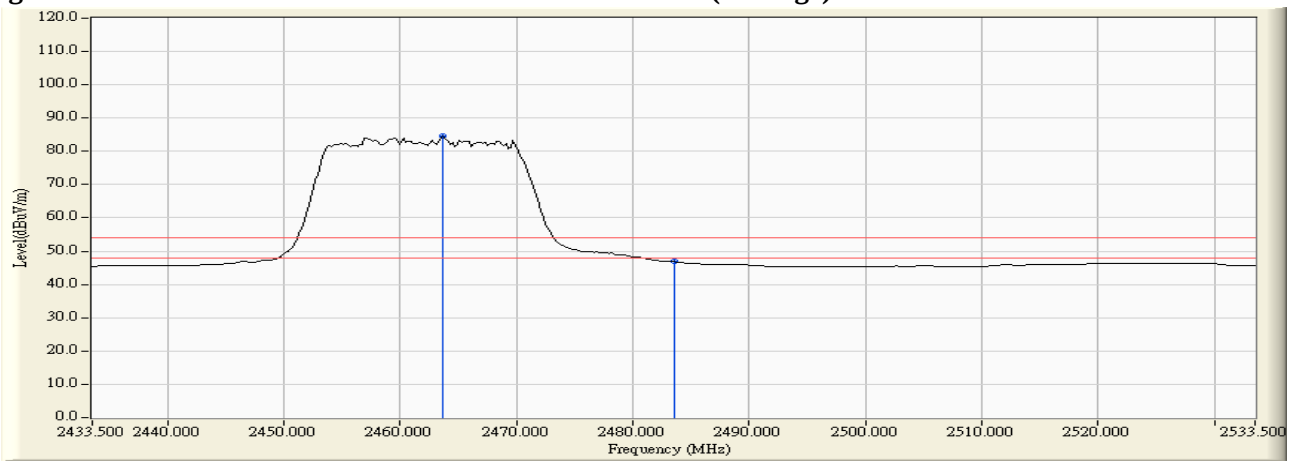


Figure Channel 11: Vertical (Average)



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 1: Transmit (802.11b 1Mbps) (Puck Antenna)

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)	2384.800	31.489	25.034	56.523	74.000	54.000	Pass
01 (Peak)	2390.000	31.509	24.037	55.546	74.000	54.000	Pass
01 (Peak)	2413.000	31.646	68.782	100.428	--	--	--
01 (Average)	2390.000	31.509	12.344	43.853	74.000	54.000	Pass
01 (Average)	2411.200	31.632	65.043	96.675	--	--	Pass

Figure Channel 01: Horizontal (Peak)

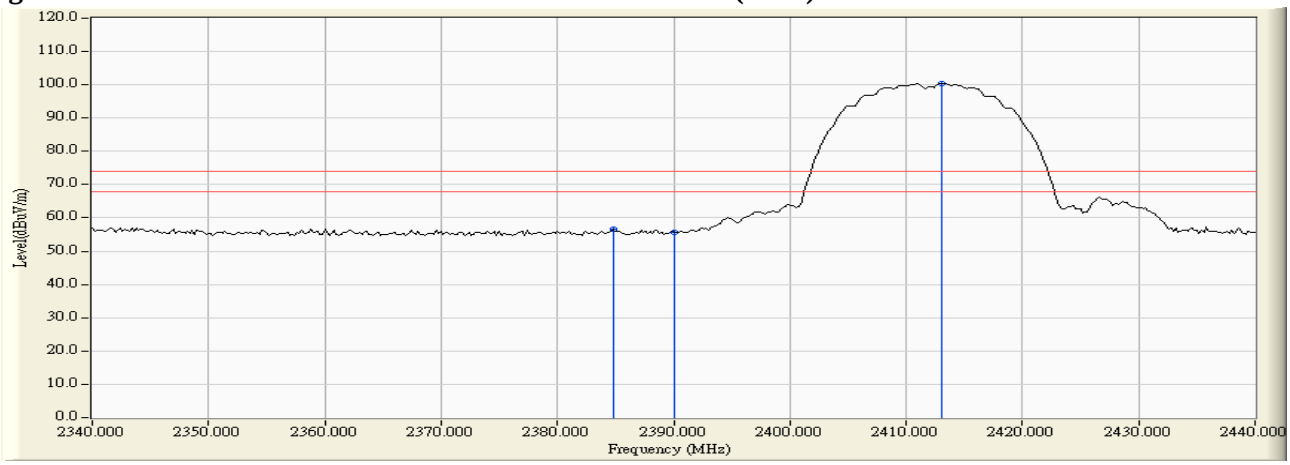
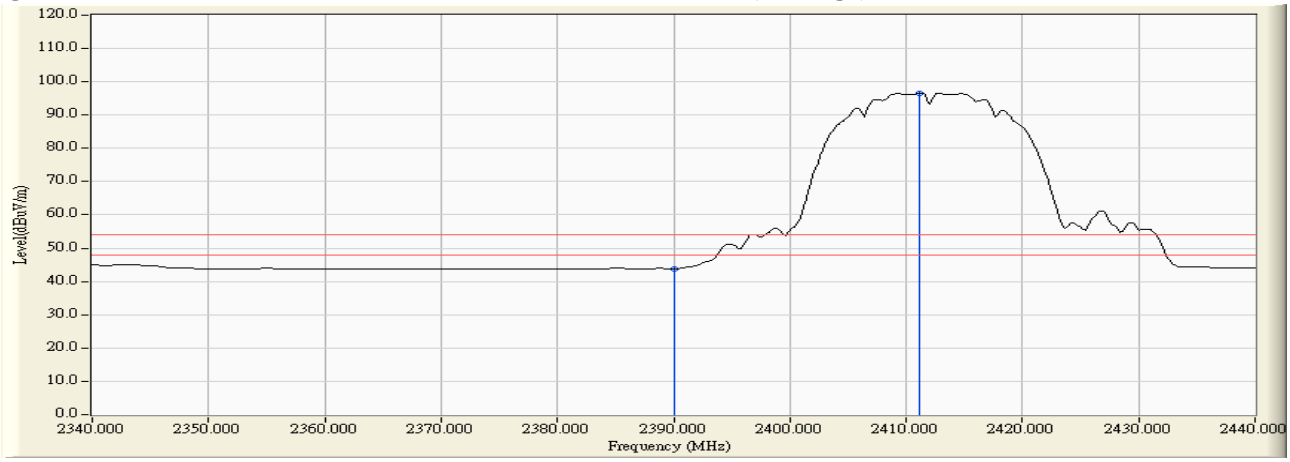


Figure Channel 01: Horizontal (Average)



Note:

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

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

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)	2378.200	30.970	25.293	56.263	74.000	54.000	Pass
01 (Peak)	2390.000	30.915	24.402	55.317	74.000	54.000	Pass
01 (Peak)	2413.000	30.956	67.099	98.055	--	--	--
01 (Average)	2390.000	30.915	12.221	43.136	74.000	54.000	Pass
01 (Average)	2414.800	30.968	63.256	94.224	--	--	--

Figure Channel 01: Vertical (Peak)

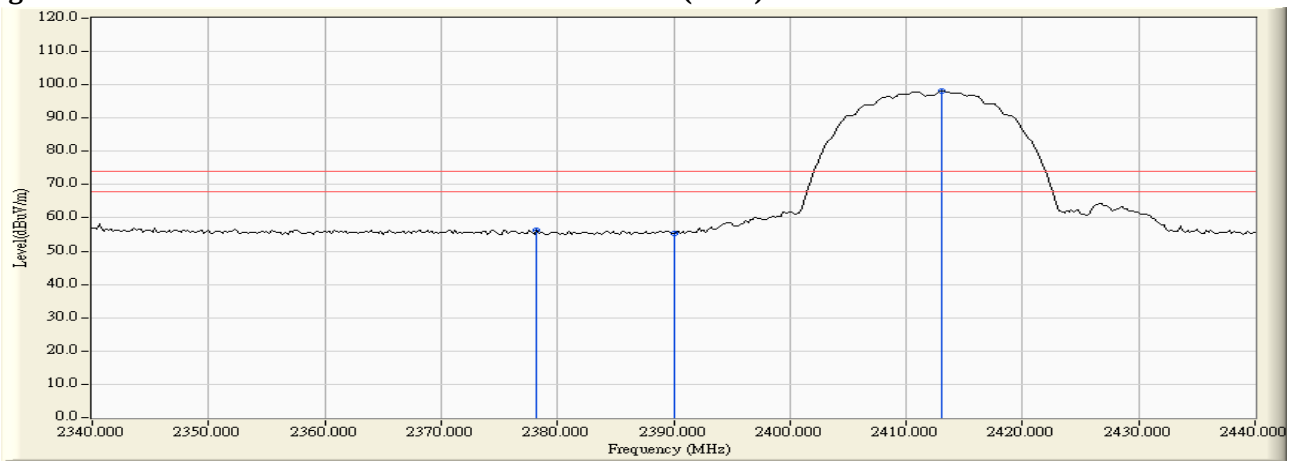
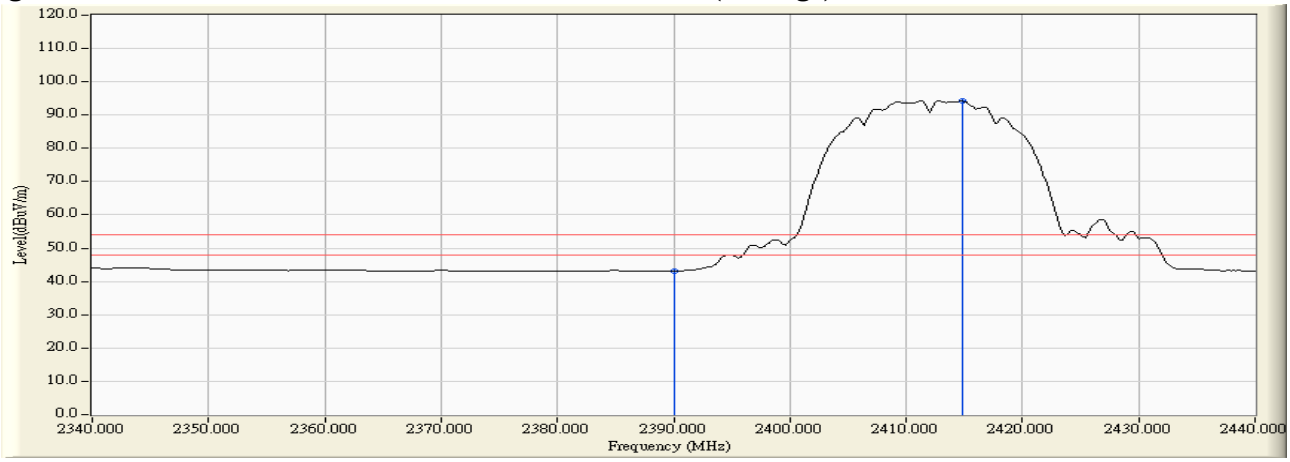


Figure Channel 01: Vertical (Average)



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) (Puck Antenna)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2460.900	32.011	67.869	99.880	--	--	--
11 (Peak)	2483.500	32.182	24.175	56.357	74.000	54.000	Pass
11 (Peak)	2488.700	32.222	25.811	58.032	74.000	54.000	Pass
11 (Average)	2461.100	32.013	64.260	96.273	--	--	--
11 (Average)	2483.500	32.182	12.493	44.675	74.000	54.000	Pass

Figure Channel 11: Horizontal (Peak)

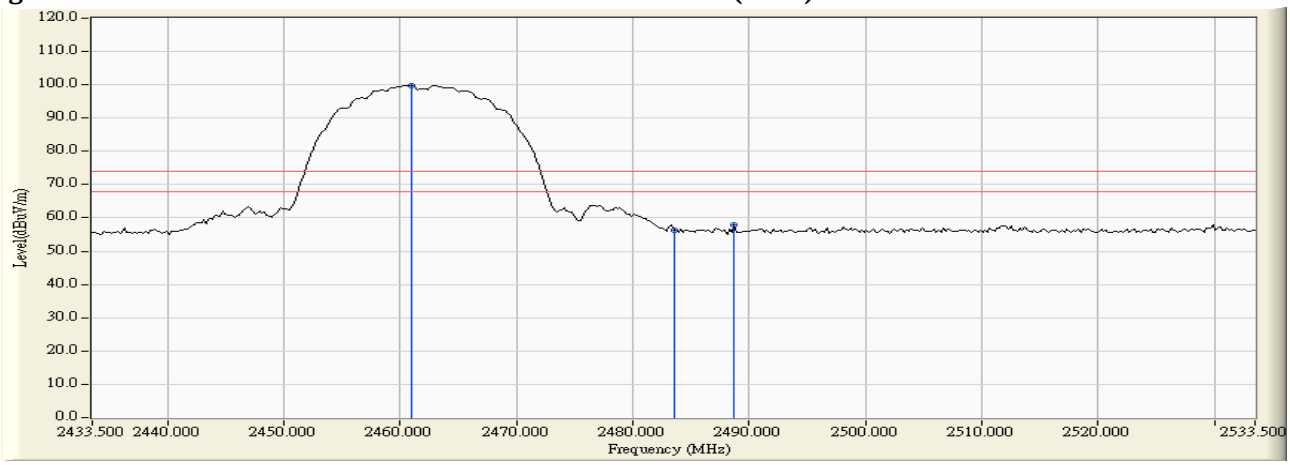


Figure Channel 11: Horizontal (Average)

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) (Puck Antenna)

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)	2462.900	31.296	66.541	97.837	--	--	--
11 (Peak)	2483.500	31.435	24.613	56.048	74.000	54.000	Pass
11 (Peak)	2500.300	31.528	24.850	56.378	74.000	54.000	Pass
11 (Average)	2461.100	31.285	62.786	94.070	--	--	--
11 (Average)	2483.500	31.435	12.599	44.034	74.000	54.000	Pass

Figure Channel 11: Vertical (Peak)

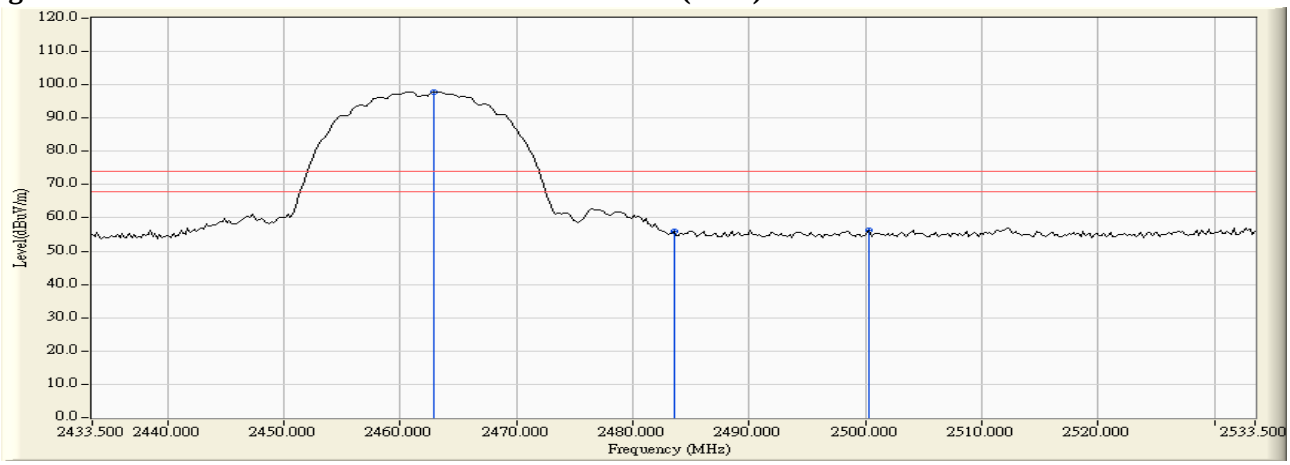


Figure Channel 11: Vertical (Average)

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) (Puck Antenna)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2390.000	31.509	27.784	59.293	74.000	54.000	Pass
01 (Peak)	2416.000	31.670	71.729	103.398	--	--	--
01 (Average)	2390.000	31.509	13.790	45.299	74.000	54.000	Pass
01 (Average)	2410.800	31.629	54.787	86.416	--	--	--

Figure Channel 01: Horizontal (Peak)

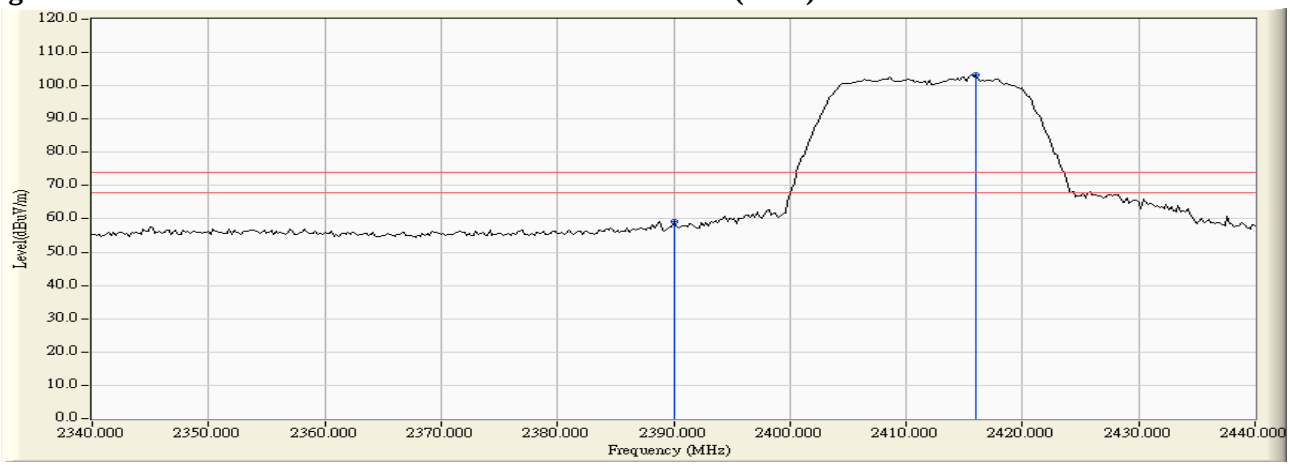
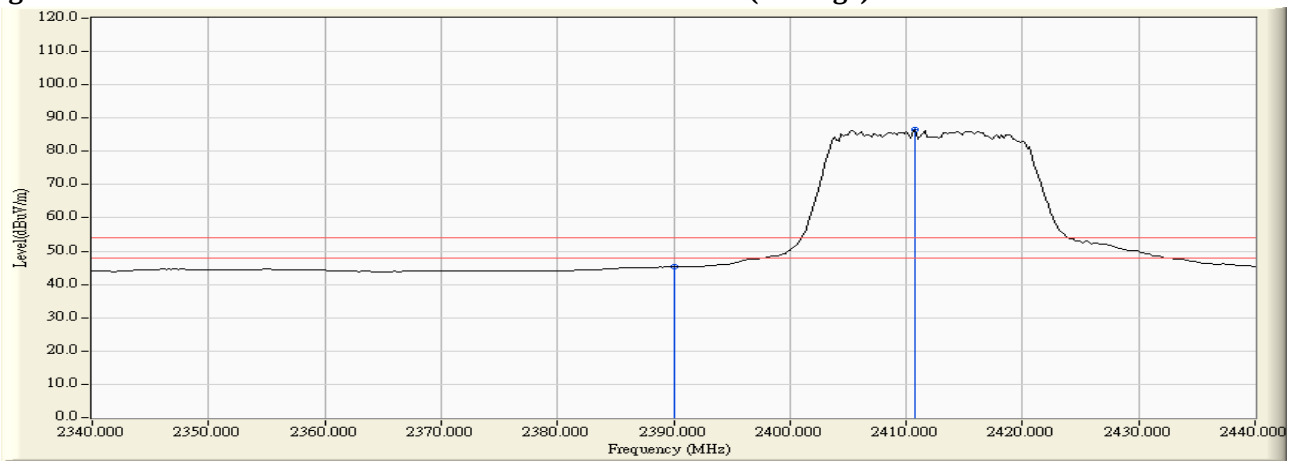


Figure Channel 01: Horizontal (Average)



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 etection.

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

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2390.000	30.915	24.967	55.882	74.000	54.000	Pass
01 (Peak)	2416.000	30.977	68.210	99.186	--	--	--
01 (Average)	2390.000	30.915	13.014	43.929	74.000	54.000	Pass
01 (Average)	2414.000	30.963	52.955	83.918	--	--	--

Figure Channel 01: Vertical (Peak)

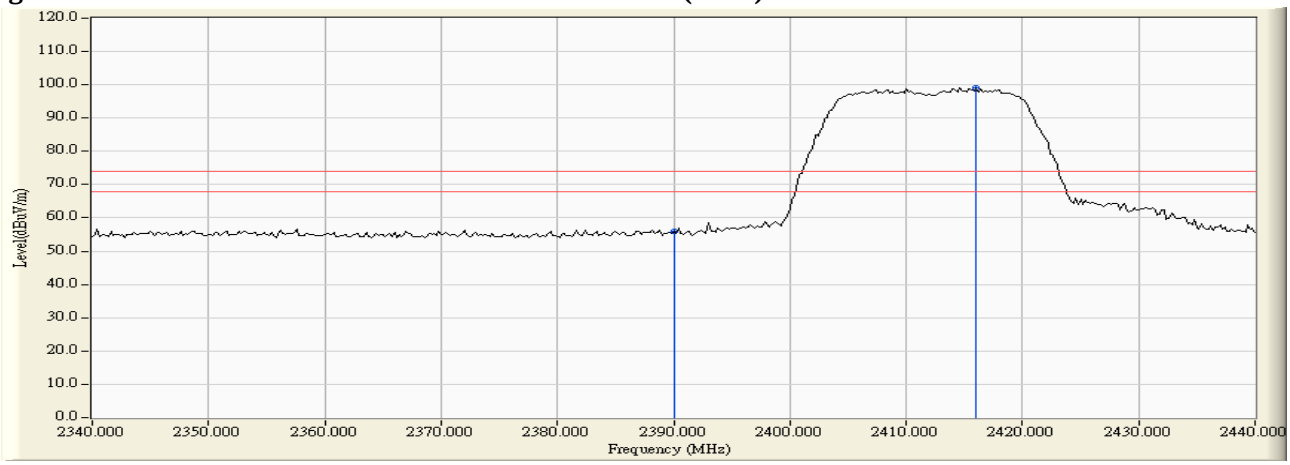
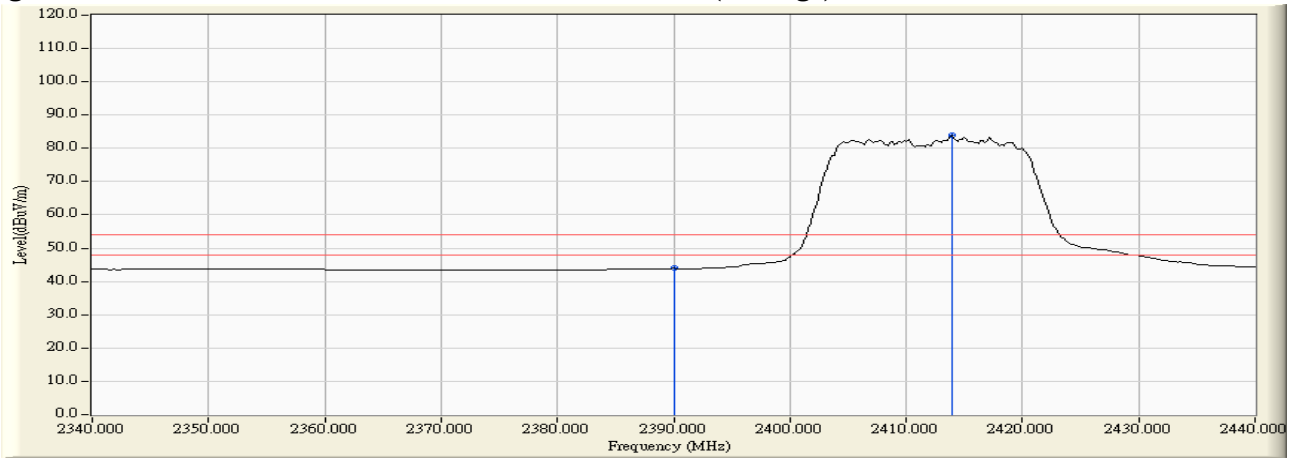


Figure Channel 01: Vertical (Average)



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) (Puck Antenna)

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)	2465.700	32.047	70.689	102.736	--	--	--
11 (Peak)	2483.500	32.182	30.279	62.461	74.000	54.000	Pass
11 (Peak)	2484.700	32.192	30.631	62.822	74.000	54.000	Pass
11 (Average)	2460.300	32.006	54.576	86.583	--	--	--
11 (Average)	2483.500	32.182	14.388	46.570	74.000	54.000	Pass

Figure Channel 11: Horizontal (Peak)

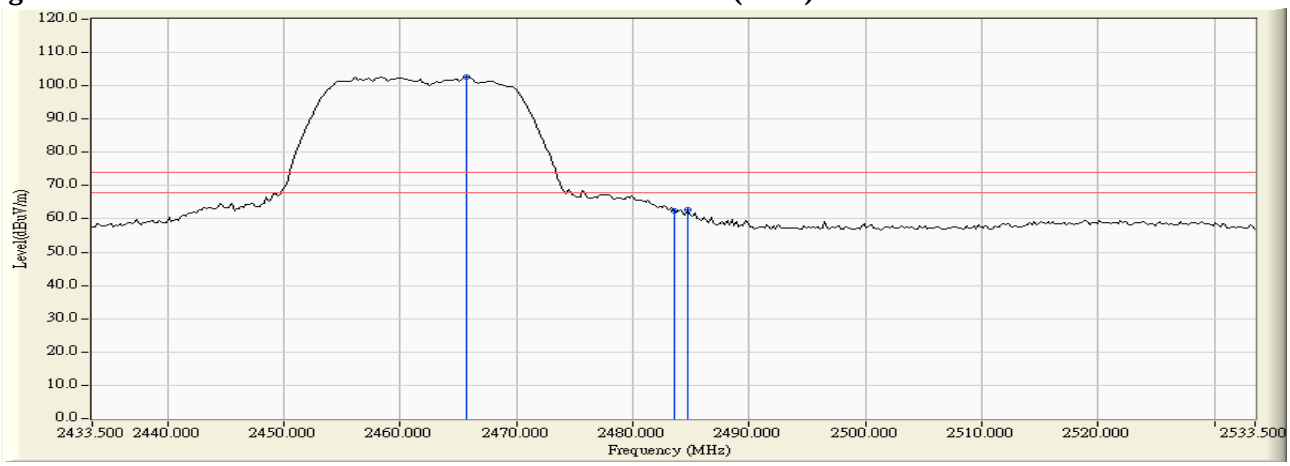
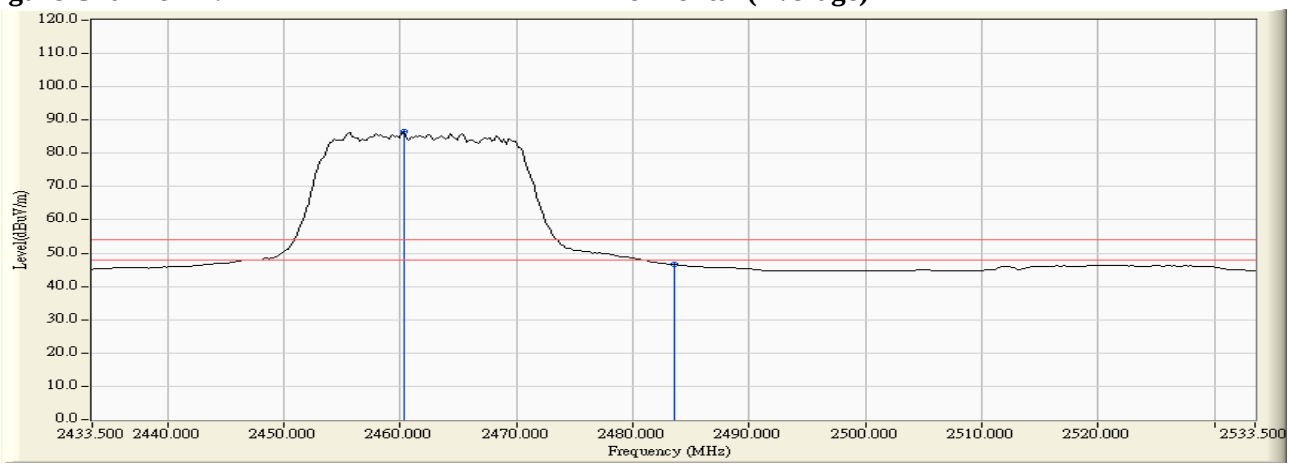


Figure Channel 11: Horizontal (Average)



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 etection.

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

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)	2465.700	31.315	68.580	99.895	--	--	--
11 (Peak)	2483.500	31.435	29.401	60.836	74.000	54.000	Pass
11 (Average)	2457.900	31.262	52.551	83.813	--	--	--
11 (Average)	2483.500	31.435	14.323	45.758	74.000	54.000	Pass

Figure Channel 11: Vertical (Peak)

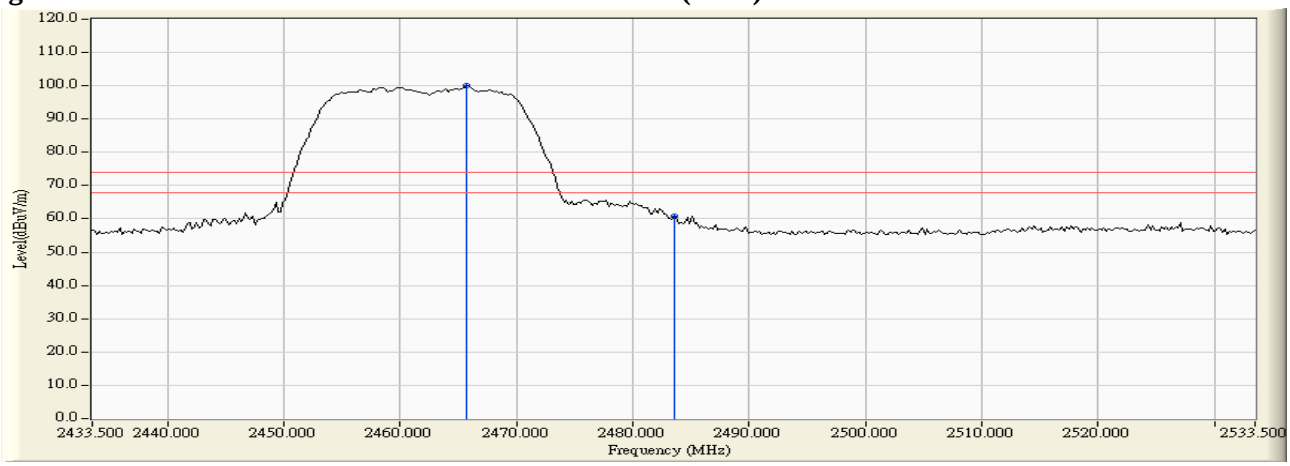
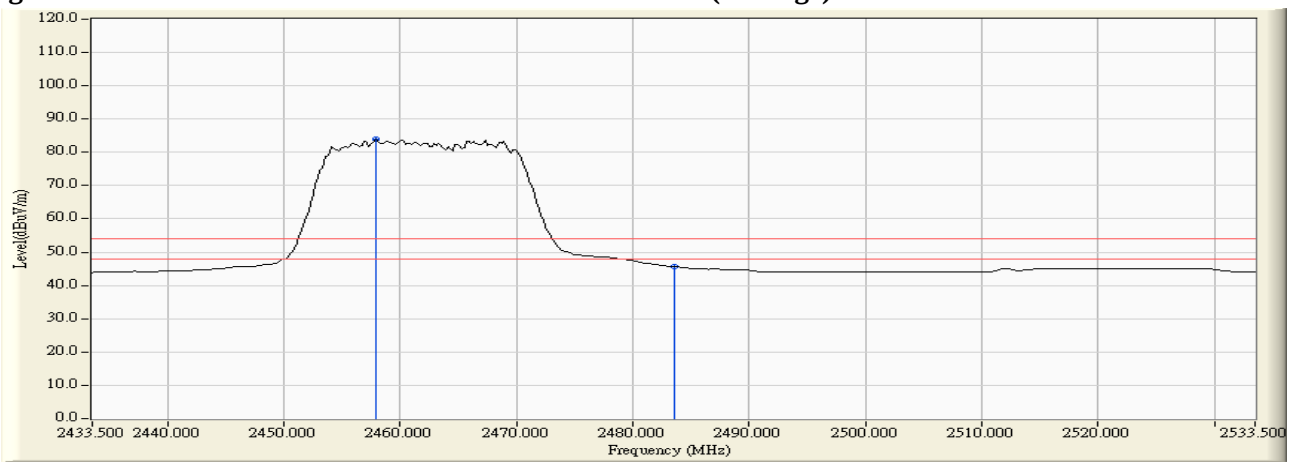


Figure Channel 11: Vertical (Average)



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.

6. EMI Reduction Method During Compliance Testing

No modification was made during testing.