

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	Sep. 04, 2012
Issue Date	Nov. 19, 2012
Report No.	12B209R-RFUSP42V01
Report Version	V1.0



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 NVLAP any agency of the U.S. Government

Test Report Certification

Issue Date: Nov. 19, 2012 Report No.: 12B209R-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.

:

:

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 NVLAP any agency of the U.S. Government

Documented By

Rita Fluang

(Senior Adm. Specialist / Rita Huang)

Tested By

Luo

(Engineer / Nowal Kuo)

Approved By

(Manager / Vincent Lin)

TABLE OF CONTENTS

Γ	Description	Page
1.	GENERAL INFORMATION	5
1.1.	EUT Description	5
1.2.	Operational Description	
1.3.	Tested System Details	
1.4.	Configuration of Tested System	
1.5.	EUT Exercise Software	
1.6.	Test Facility	
2.	Conducted Emission	10
2.1.	Test Equipment	
2.2.	Test Setup	10
2.3.	Limits	
2.4.	Test Procedure	
2.5.	Uncertainty	
2.6.	Test Result of Conducted Emission	
3.	Peak Power Output	14
3.1.	Test Equipment	14
3.2.	Test Setup	
3.3.	Limits	
3.4.	Test Procedure	14
3.5.	Uncertainty	14
3.6.	Test Result of Peak Power Output	
4.	Radiated Emission	17
4.1.	Test Equipment	
4.2.	Test Setup	
4.3.	Limits	19
4.4.	Test Procedure	20
4.5.	Uncertainty	20
4.6.	Test Result of Radiated Emission	
5.	RF antenna conducted test	
5.1.	Test Equipment	
5.2.	Test Setup	
5.3.	Limits	
5.4.	Test Procedure	
5.5.	Uncertainty	
5.6.	Test Result of RF antenna conducted test	
6.	Band Edge	43
6.1.	Test Equipment	
6.2.	Test Setup	
6.3.	Limits	44
6.4.	Test Procedure	45
6.5.	Uncertainty	45

QuieTer

7.	Occupied Bandwidth	54
7.1.	Test Equipment	
7.2.	Test Setup	
7.3.	Limits	
7.4.	Test Procedure	
7.5.	Uncertainty	
7.6.	Test Result of Occupied Bandwidth	
8.	Power Density	61
8.1.	Test Equipment	61
8.2.	Test Setup	61
8.3.	Limits	
8.4.	Test Procedure	61
8.5.	Uncertainty	61
8.6.	Test Result of Power Density	
9.	EMI Reduction Method During Compliance Testing	

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 Linear polarization			
Antenna Gain	Refer to the table "Antenna List"		
Channel Control	Auto		

Antenna List

No.	Manufacturer	Part No.	Peak Gain
1	SKYTECH UNION INC.	1-888-241-00	1.28 dBi for 2.4GHz
2	LEAD JUMP Development LTD.	1-888-241-00	0.84 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:	1 2		1 2		1 2		1 2
Channel 05:							
Channel 09:	2452 MHz	Channel 10:	2457 MHz	Channel 11:	2462 MHz		

- 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. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
- 4. 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)
- 5. 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

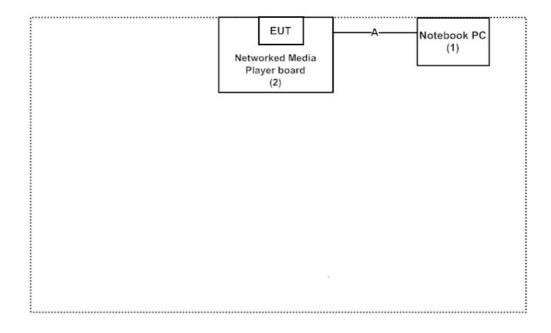
The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

Pro	duct	Manufacturer	Model No.	Serial No.	FCC ID	Power Cord
1		DELL		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		Non-Shielded, 2.0m

1.4. Configuration of Tested System



1.5. EUT Exercise Software

- (1) Setup the EUT as shown in section 1.4
- (2) Install the module card on the Networked Media Player board.
- (3) Execute command on the notebook.
- (4) Configure the test mode, the test channel, and the data rate.
- (5) Start the continuous transmission.
- (6) 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: <u>http://www.quietek.com/tw/ctg/cts/accreditations.htm</u> The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site: <u>http://www.quietek.com/</u>

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 : <u>service@quietek.com</u>

FCC Accreditation Number: TW1014

2. Conducted Emission

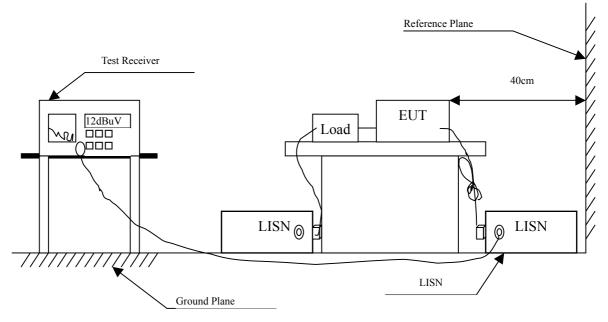
2.1. Test Equipment

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, 2012	
2	L.I.S.N.	R & S	ESH3-Z5/825016/6	May, 2012	EUT
3	L.I.S.N.	Kyoritsu	KNW-407/8-1420-3	May, 2012	Peripherals
4	Pulse Limiter	R & S	ESH3-Z2	May, 2012	
5	No.1 Shielded Roo	m		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 C63.4: 2003 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)

Frequency	Correct	Reading Measurement		Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV	dB	dBuV
Line 1					
Quasi-Peak					
0.166	9.830	26.270	36.100	-29.443	65.543
0.216	9.830	18.700	28.530	-35.584	64.114
0.322	9.830	32.580	42.410	-18.676	61.086
0.673	9.830	32.270	42.100	-13.900	56.000
1.920	9.840	8.960	18.800	-37.200	56.000
7.177	9.923	17.010	26.933	-33.067	60.000
Average					
0.166	9.830	15.760	25.590	-29.953	55.543
0.216	9.830	8.690	18.520	-35.594	54.114
0.322	9.830	22.170	32.000	-19.086	51.086
0.673	9.830	22.420	32.250	-13.750	46.000
1.920	9.840	6.540	16.380	-29.620	46.000
7.177	9.923	11.010	20.933	-29.067	50.000

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 Test Item Power Line	 JukeBlox Networked Media Module Conducted Emission Test Line 2 									
Test Mode	: Mode 2: Transmit (802.11g 6Mbps) (2437MHz)									
				,						
Frequency	Correct	Reading	Measurement	Margin	Limit					
	Factor	Level	Level							
MHz	dB	dBuV	dBuV	dB	dBuV					
Line 2										
Quasi-Peak										
0.177	9.834	27.880	37.714	-27.515	65.229					
0.302	9.837	19.450	29.287	-32.370	61.657					
0.681	9.840	30.530	40.370	-15.630	56.000					
1.443	9.850	11.590	21.440	-34.560	56.000					
7.443	9.969	15.310	25.279	-34.721	60.000					
14.056	10.185	15.160	25.345	-34.655	60.000					
Average										
0.177	9.834	15.870	25.704	-29.525	55.229					
0.302	9.837	3.180	13.017	-38.640	51.657					
0.681	9.840	23.310	33.150	-12.850	46.000					
1.443	9.850	5.340	15.190	-30.810	46.000					
7.443	9.969	9.050	19.019	-30.981	50.000					
14.056	10.185	8.680	18.865	-31.135	50.000					

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

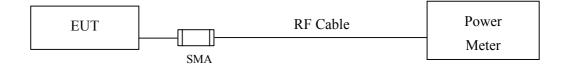
3. Peak Power Output

3.1. Test Equipment

_	Equipment	Manufacturer	Model No./Serial No.	Last Cal.					
Х	Power Meter	Anritsu	ML2495A/6K00003357	May, 2012					
Х	Power Sensor	Anritsu	MA2411B/0738448	Jun, 2012					
Note:									
1.	All equipments are c	alibrated with trac	eable calibrations. Each calibra	ation 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 ANSI C63.10: 2009 for compliance to FCC 47CFR 15.247 requirements.

3.5. Uncertainty

 \pm 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	For d	· ·	e Power ata Rate (N	Лbps)	Peak Power	Required	Pagult
	(MHz)		2	5.5	11	1	Limit	Result
			Measurement Level (dBm)					
01	2412	15.95				18.61	<30dBm	Pass
06	2437	15.98	15.82	15.76	15.61	18.83	<30dBm	Pass
11	2462	15.93				18.84	<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)

	Fraguanay	Average PowerPeakFor different Data Rate (Mbps)Power									Required	
Channel No	Frequency (MHz)	6	9	12	18	24	36	48	54	6	Limit	Result
			Measurement Level (dBm)									
01	2412	14.4								22.17	<30dBm	Pass
06	2437	14.38	14.32	14.29	14.24	14.19	14.12	14.05	13.98	22.18	<30dBm	Pass
11	2462	14.32								22.42	<30dBm	Pass

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

4. Radiated Emission

4.1. Test Equipment

Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
Site # 3	Х	Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2012
	Х	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2012
	Х	Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2012
	Х	Pre-Amplifier	Agilent	8447D/2944A09549	Sep., 2012
	Х	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2012
	Х	Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2012
	Х	Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2012
	Х	Controller	QuieTek	QTK-CONTROLLER/ CTRL3	N/A
	Х	Coaxial Switch	Anritsu	MP59B/6200265729	N/A

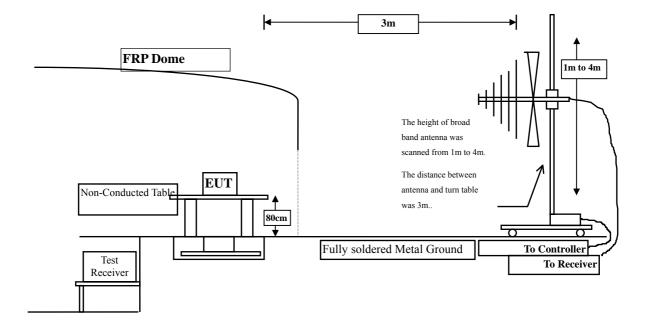
The following test equipment are used during the radiated emission test:

Note: 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

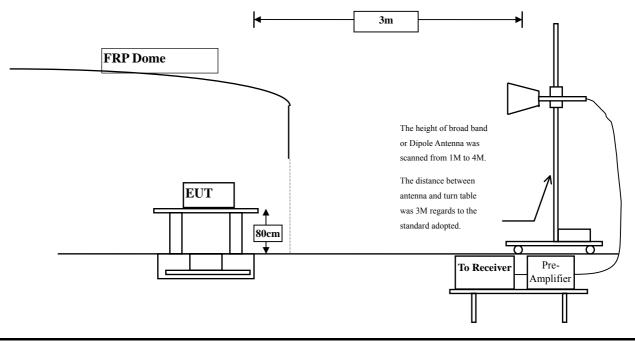
2. The test instruments marked with "X" are used to measure the final test results.

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	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)

4.4. Test Procedure

The EUT was setup according to ANSI C63.4, 2003 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 C63.4:2003 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 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)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4824.000	2.428	42.280	44.709	-29.291	74.000
7236.000	9.177	39.710	48.887	-25.113	74.000
9648.000	10.019	39.310	49.330	-24.670	74.000
Average Detector:					
Vertical					
Peak Detector:					
4824.000	2.836	41.300	44.137	-29.863	74.000
7236.000	9.676	39.410	49.086	-24.914	74.000
9648.000	10.556	39.470	50.027	-23.973	74.000

Average Detector:

--

- 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 1:	Transmit (802.11	lb 1Mbps) (2437 MH	z)		
Frequency	Correct	Reading	Measurement	Margin	Limit	
	Factor	Level	Level			
MHz	dB	dBuV	dBuV/m	dB	dBuV/m	
Horizontal						
Peak Detector:						
4874.000	2.076	43.220	45.297	-28.703	74.000	
7311.000	9.512	37.940	47.452	-26.548	74.000	
9748.000	9.630	38.910	48.540	-25.460	74.000	
Average Detector:						
Vertical						
Peak Detector:						
4874.000	2.532	40.360	42.892	-31.108	74.000	
7311.000	10.089	37.570	47.659	-26.341	74.000	
9748.000	10.266	38.620	48.887	-25.113	74.000	

- 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 OA					
Test Mode	: Mode 1:	Transmit (802.11	b 1Mbps) (2462 MH	z)		
Frequency	Correct	Reading	Measurement	Margin	Limit	
	Factor	Level	Level			
MHz	dB	dBuV	dBuV/m	dB	dBuV/m	
Horizontal						
Peak Detector:						
4924.000	2.191	40.250	42.441	-31.559	74.000	
7386.000	10.373	38.090	48.464	-25.536	74.000	
9848.000	9.964	39.500	49.464	-24.536	74.000	
Average Detector:						
Vertical						
Peak Detector:						
4924.000	2.805	40.490	43.295	-30.705	74.000	
7386.000	11.180	38.720	49.900	-24.100	74.000	
9848.000	10.801	39.090	49.891	-24.109	74.000	

--

- 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 (802.11	g 6Mbps) (2412MHz	z)			
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
4824.000	2.428	45.250	47.679	-26.321	74.000		
7236.000	9.177	39.410	48.587	-25.413	74.000		
9648.000	10.019	39.870	49.890	-24.110	74.000		
Average Detector:							
Vertical							
Peak Detector:							
4824.000	2.836	41.280	44.117	-29.883	74.000		
7236.000	9.676	38.790	48.466	-25.534	74.000		
9648.000	10.556	39.870	50.427	-23.573	74.000		

--

- 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 OA	: No.3 OATS					
Test Mode	: Mode 2:	Transmit (802.11	g 6Mbps) (2437 MH	z)			
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
4874.000	2.076	43.730	45.807	-28.193	74.000		
7311.000	9.512	38.370	47.882	-26.118	74.000		
9748.000	9.630	38.640	48.270	-25.730	74.000		
Average Detector:							
Peak Detector:							
4874.000	2.532	41.250	43.782	-30.218	74.000		
7311.000	10.089	37.870	47.959	-26.041	74.000		
9748.000	10.266	38.190	48.457	-25.543	74.000		

--

- 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 Test Item Test Site Test Mode	 JukeBlox Networked Media Module Harmonic Radiated Emission Data No.3 OATS Mode 2: Transmit (802.11g 6Mbps) (2462 MHz) 				
Test Mode	: Mode 2:	11anshint (802.11	g 0100ps) (2402 1011	Ζ)	
Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4924.000	2.191	40.520	42.711	-31.289	74.000
7386.000	10.373	38.010	48.384	-25.616	74.000
9848.000	9.964	39.460	49.424	-24.576	74.000
Average Detector:					
Vertical					
Peak Detector:					
4924.000	2.805	40.480	43.285	-30.715	74.000
7386.000	11.180	38.070	49.250	-24.750	74.000
9848.000	10.801	39.050	49.851	-24.149	74.000

--

- 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 Test Item Test Site Test Mode	 JukeBlox Networked Media Module General Radiated Emission Data No.3 OATS Mode 1: Transmit (802.11b 1Mbps)(2437 MHz) 				
Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
101.780	-9.100	35.130	26.029	-17.471	43.500
268.620	-5.522	35.700	30.178	-15.822	46.000
406.360	0.628	30.839	31.468	-14.532	46.000
507.240	2.529	32.642	35.171	-10.829	46.000
666.320	1.879	31.714	33.593	-12.407	46.000
875.840	5.816	31.441	37.257	-8.743	46.000
Vertical					
159.980	-5.120	36.151	31.030	-12.470	43.500
317.120	-4.119	34.486	30.366	-15.634	46.000
507.240	0.429	31.699	32.128	-13.872	46.000
608.120	2.175	27.729	29.904	-16.096	46.000
747.800	1.665	33.072	34.737	-11.263	46.000
875.840	0.516	34.511	35.027	-10.973	46.000

- 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 (802.11	g 6Mbps)(2437 MHz	z)		
Frequency	Correct	Reading	Measurement	Margin	Limit	
	Factor	Level	Level			
MHz	dB	dBuV	dBuV/m	dB	dBuV/m	
Horizontal						
103.720	-8.230	33.954	25.723	-17.777	43.500	
264.740	-5.501	38.071	32.571	-13.429	46.000	
406.360	0.628	30.309	30.938	-15.062	46.000	
507.240	2.529	33.400	35.929	-10.071	46.000	
664.380	1.882	31.249	33.131	-12.869	46.000	
875.840	5.816	31.450	37.266	-8.734	46.000	
Vertical						
158.040	-5.172	35.018	29.846	-13.654	43.500	
317.120	-4.119	35.365	31.245	-14.755	46.000	
507.240	0.429	30.892	31.321	-14.679	46.000	
666.320	-0.951	34.916	33.965	-12.035	46.000	
749.740	2.023	32.506	34.529	-11.471	46.000	
961.200	3.310	31.714	35.024	-18.976	54.000	

- 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.

5. **RF** antenna conducted test

5.1. Test Equipment

_	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2012
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2012
Х	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.

5.2. Test Setup

RF antenna Conducted Measurement:



5.3. Limits

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

5.4. Test Procedure

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

Set RBW = 100 kHz, Set VBW> RBW, scan up through 10th harmonic.

5.5. Uncertainty

The measurement uncertainty Conducted is defined as \pm 1.27dB

5.6. Test Result of RF antenna conducted test

Product	:	JukeBlox Networked Media Module
Test Item	:	RF antenna conducted test
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps)

Channel 01 (2412MHz)

gilent Spectrum An				INT REF		ALIGNAUTO	10:14:29 8	M Sep 06, 2012	6
	515.000000	PNO: Fast 😱	Trig: Free #Atten: 30	Run	Avg Type		TRAC TYP	E 1 2 3 4 5 6 E MWWWWW T P N N N N N	Frequency
	f 20.00 dBm	IFGain:Low	#Atten: 30	a B		Mkr	1 994.2	77 MHz 75 dBm	Auto Tune
10.0									Center Free 515.000000 MH
10.0								-15.45 dBm	Start Fre 30.000000 M⊢
20.0									Stop Fre 1.000000000 G⊦
0.0								1	CF Ste 97.000000 MH <u>Auto</u> Ma
	apara di kana di kana dipara para di Antoni di kana di kana di para di para di para di kana d	tala da la constitución de la const	hangi kilipin k	anta II an I ang pa		ligen and a sign from the first for	kadaratikat politikaj na konstructiva	later bei en en el managementes	Freq Offs
70.0									
Start 30.0 MH Res BW 100		#VBW	1.0 MHz		ŝ	Sweep 9		0000 GHz 0001 pts)	
Isg 🕕 Alignment	Completed				9	STATUS			

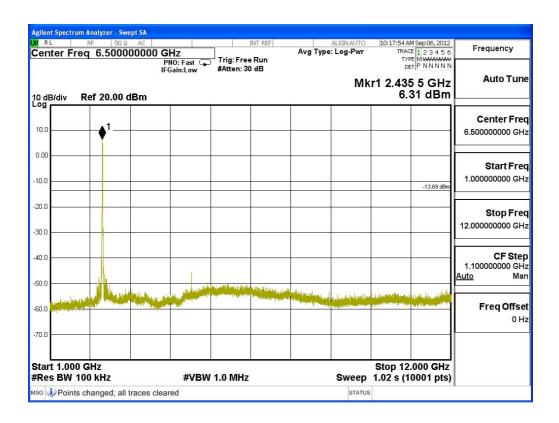
<mark>gilent Spectrum Analyzer - Swep</mark> <mark>Ø R L RF 50 Ω</mark>	AC	INT REF	ALIGNAUTO		
Center Freq 6.50000	0000 GHz PNO: Fast IEGain:Low	Trig: Free Run #Atten: 30 dB	Avg Type: Log-Pwr	TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P N N N N N	-
0 dB/div Ref 20.00 dE			Μ	kr1 2.413 5 GHz 4.55 dBm	
.og					Center Free
10.0					6.500000000 GH
0.00					Start Fre
10.0				-15.45 dBm	1.000000000 GH
20.0					Stop Fre
30.0					12.000000000 GH
40.0					CF Ste
50.0		contradicate states of			1.100000000 GH <u>Auto</u> Ma
50.0 Contraction				And the property of the property of the second s	Freq Offse
					он
70.0					
Start 1.000 GHz	#\/D\\	1.0 MHz		Stop 12.000 GHz	
Res BW 100 kHz		T.U MIMZ	Swee	o 1.02 s (10001 pts)	1

C RL RF	50 Ω	AC			INT REF		ALIGN AUTO	10:14:59 AM Sep 06, 20	112
Center Freq		000000	PNO: Fast 😱	Trig: Free #Atten: 30	Run	Avg Type	: Log-Pwr	TRACE 1 2 3 4 5 TYPE MWWW DET P N N N	Frequency
0 dB/div Re	f 20.00 d		IFGain:Low	#Atten: 30	dB		Mkr	1 23.606 4 GH -40.91 dB	z Auto Tune
10.0									Center Fre 18.500000000 GH
10.0								-15.45 d	Start Fre 12.000000000 GH
20.0									Stop Fre 25.00000000 Gi
10.0 50.0		de too h	a a secondaria da como de la como	L	and a little on the second				CF Ste 1.30000000 Gi Auto Mi
0.0 probablishing public publ		and and the second		1	an din Hara				Freq Offs
70.0 tart 12.000 G Res BW 100			#\/B\M	1.0 MHz			Sweep	Stop 25.000 GF 1.20 s (10001 pt	
Contraction of the second	ge.png> sa		#*64*	1.0 10112			Oweep	1.20 3 (10001 p)	.3)



								Agilent Spectrum
Frequency	10:18:25 AM Sep 06, 2012 TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P N N N N N		ALIGN Avg Type: Log] Trig: Free	PNO: Fast 😱	50 Ω AC 515.000000 N	XI RL Center Frec
Auto Tune	1 704.441 MHz -55.30 dBm	/lkr1		dB	#Atten: 30	IFGain:Low	⁻ 20.00 dBm	10 dB/div R
Center Free 515.000000 MH								10.0
Start Free 30.000000 MH	-13.69 dBm							-10.0
Stop Free 1.000000000 GH								30.0
CF Ste 97.000000 MH Auto Ma			1_					40.0
Freq Offse 0 H	na a george a tha an	an failte a Iorrain a	lovelle Hile level	nda (protostano posiste Protopioni plonta la pos	da sa kapita da seconda Terrar da seconda seconda			60.0 <mark>athradaliana</mark>
	Stop 1.0000 GHz							70.0
).0 ms (10001 pts)	p 90 TATUS			1.0 MHz	#vBW		#Res BW 10

Channel 06 (2437MHz)



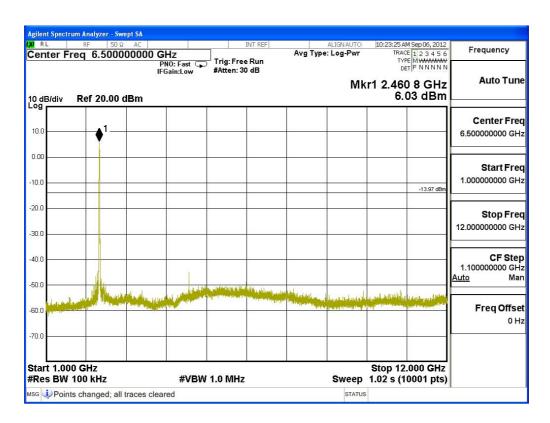


Agiler		<mark>Analyzer - Sw</mark> RF 50 Ω				INT REF		ALIGN AUTO	10,10,55,1	M Sep 06, 2012	
	ter Frec		000000] Trig: Free			: Log-Pwr	TRAC	E 123456	Frequency
10 di Log	PRU: rast ب #Atten: 30 dB ه ه ه ه ه ه ه ه ه ه ه ه ه ه ه ه ه ه										
10.0			<u>~</u>								Center Freq 18.50000000 GHz
0.00 -10.0										-13.69 dBm	Start Freq 12.000000000 GHz
-20.0 -30.0											Stop Freq 25.000000000 GHz
-40.0				to dentile	a second second	and any of the part of the full	Allowed by all and				CF Step 1.30000000 GHz <u>Auto</u> Man
-60.0		I for provide the	al de la constant de		i 2 shekar iyo da ƙasar u	faldetifden partition					Freq Offset 0 Hz
	t 12.000 s BW 10			#VBW	1.0 MHz			Sweep		.000 GHz 0001 pts)	
MSG 🤇	Alignme	nt Complete	ed					STATUS	;		



enter F	RF 50 req 515.0	00000 MH	IZ NO: Fast 😱] Trig: Free	NT REF	Avg Ty	ALIGNAUTO	10:23:56 AM Sep 06, 201 TRACE 1 2 3 4 5 TYPE MWWWW	6 Frequency
0 dB/div	Ref 20.00	IF	Gain:Low	#Atten: 30) dB		Mk	^{DET} ^{P NNNN} 1 934.525 MH: -55.02 dBn	z Auto Tur
									Center Fro 515.000000 Mi
.00								-13.97 dB	Start Fr 30.000000 M
1.0 1.0									Stop Fr 1.000000000 G
1.0 1.0								1	CF St 97.000000 M <u>Auto</u> M
).0 444 444					ada ayal dal dara sa Tana sa sa sa sa	h at e plane en e		thad have been performed in the growth of the performance of the perfo	Freq Offs 0
art 30.0	MHz 100 kHz		#VBW	1.0 MHz			Sweep 9	Stop 1.0000 GH	

Channel 11 (2462MHz)





	trum Analyzer - Sv	wept SA						
Center	RF 50		GHz]	INT REF	ALIGNAUTO	10:24:27 AM Sep 06, 201 TRACE 1 2 3 4 5	Frequency
10 dB/div	Ref 20.00	PI IFC	NO: Fast 😱 Gain:Low	┘ Trig: Free #Atten: 30		Mkr	1 23.676 6 GHz -41.33 dBm	Auto Tune
10.0						 		Center Freq 18.50000000 GHz
-10.0							-13.97 dBr	Start Freq 12.000000000 GHz
-20.0		_						Stop Freq 25.000000000 GHz
-40.0	at the selection of the			a la constant de la constant		a statistica and a statist		CF Step 1.300000000 GHz <u>Auto</u> Man
		and a first second start of a first second start of a first second second second second second second second s	reils presenten and a star		and a second of a			Freq Offset 0 Hz
-70.0 Start 12.						8-5	Stop 25.000 GHz	
	V 100 kHz e <lmage.png> :</lmage.png>	saved	#VBW	1.0 MHz		Sweep STATUS	1.20 s (10001 pts)

Product	:	JukeBlox Networked Media Module
Test Item	:	RF Antenna Conducted Spurious
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps)

Channel 01 (2412MHz)

Agilent Spectrum Analyzer - Si					
RL RF 50 Center Freq 515.00	00000 MHz	Trig: Free Run	ALIGNAUTO Avg Type: Log-Pwr	10:28:13 AM Sep 06, 2012 TRACE 1 2 3 4 5 6 TYPE MWWWWW	Frequency
10 dB/div Ref 20.00	PNO: Fast G IFGain:Low	#Atten: 30 dB	Mkr	1 942.867 MHz -54.98 dBm	Auto Tune
10.0					Center Fred 515.000000 MHz
-10.0					Start Free 30.000000 MH:
-20.0				-18.34 dBm	Stop Fred 1.000000000 GH:
-40.0					CF Stej 97.000000 MH Auto Ma
50.0 	ter felten berde politik beginn ble en de felte politik er sterener Andere en de service berde besendigt van de service stere terener de felte bester	This because a second state of the last second s	n de enne en filden til blitten beskellen skinesteren bit Fre en beskellen blitten beskellen skinesteren bit	1	Freq Offse
-70.0					
Start 30.0 MHz #Res BW 100 kHz	#VBW	1.0 MHz	Sweep 9	Stop 1.0000 GHz 0.0 ms (10001 pts)	
MSG 🔱 File <image.png></image.png>	saved		STATUS		

gilent Spectrum RL		<u> </u>		INT REF		ALIGN AUTO	10:27:42 A	M Sep 06, 2012	-
	q 6.500000	000 GHz	Trig: Fre			e: Log-Pwr	TRAC TV	E 123456	Frequency
		PNO: Fast IFGain:Low	ч р т				D		
	Ref 20.00 dBn	n				Mk		68 GHz 66 dBm	Auto Tu
og									Contra Fr
10.0									Center Fr 6.50000000 G
0.0	1								6.50000000 G
0.00									
									Start Fr
0.0									1.000000000 G
								-18.34 dBm	
0.0								TO OT GOM	Stop Fr
									12.000000000 G
0.0						1			12.0000000000
0.0									CF St 1.100000000 G
	141								Auto N
0.0				all to Habelden	Mul Harn				
and Indexed	IN THE REAL PROPERTY OF	ALL HARMEN		a manufacture of the second	All House and the second	an a	The second s		Freq Off
0.0								1	0
0.0									
A 4 000							Stop 12	.000 GHz	
Res BW 10	00 kHz	000000	BW 1.0 MHz			Sweep	1.02 s (1	0001 pts)	
tart 1.000 Res BW 10		000000	BW 1.0 MHz			Sweep status	1.02 s (1	0001 pts)	
Res BW 10	00 kHz changed; all trac	es cleared	BW 1.0 MHz	2			1.02 s (1	0001 pts)	
Res BW 10	DO KHz changed; all trace Analyzer - Swept S	es cleared	BW 1.0 MHz	INT REF			1.02 s (1	0001 pts)	
Res BW 10 Points of ilent Spectrum	DO KHz changed; all trace Analyzer - Swept S	es cleared		INT REF		STATUS	1.02 s (1	0001 pts)	Frequency
Res BW 10 Points of ilent Spectrum	DO KHZ changed; all trac Analyzer - Swept S RF 50 Ω Ai	es cleared	Trig: Fre	INT REF		STATUS	1.02 s (1	0001 pts)	Frequency
Res BW 10 Points of ilent Spectrum	DO KHZ changed; all trac Analyzer - Swept S RF 50 Ω Ai	A C D000 GHz PN0: Fast	Trig: Fre	INT REF		ALIGNAUTO	1.02 s (1 10:28:44 A TRAC TY D 1 23.63	0001 pts) M Sep 06, 2012 П 2 3 4 5 6 рег Милики ет Р N N N N 8 9 GHz	Frequency
Res BW 10	DO KHZ changed; all trac Analyzer - Swept S RF 50 Ω Ai	A C D000 GHz PNO: Fast IFGain:Low	Trig: Fre	INT REF		ALIGNAUTO	1.02 s (1 10:28:44 A TRAC TY D 1 23.63	0001 pts) M Sep 06, 2012 E 1 2 3 4 5 6 M WWWWW ET P N N N N N	Frequency
Res BW 1(Dent Spectrum RL enter Fre dB/div	00 kHz changed; all trac nalyzer - Swept S RF 50 Ω Ar q 18.500000	A C D000 GHz PNO: Fast IFGain:Low	Trig: Fre	INT REF		ALIGNAUTO	1.02 s (1 10:28:44 A TRAC TY D 1 23.63	0001 pts) M Sep 06, 2012 П 2 3 4 5 6 рег Милики ет Р N N N N 8 9 GHz	Frequency
Res BW 10 Points o ilent Spectrum RL enter Fre dB/div P	00 kHz changed; all trac nalyzer - Swept S RF 50 Ω Ar q 18.500000	A C D000 GHz PNO: Fast IFGain:Low	Trig: Fre	INT REF		ALIGNAUTO	1.02 s (1 10:28:44 A TRAC TY D 1 23.63	0001 pts) M Sep 06, 2012 П 2 3 4 5 6 рег Милики ет Р N N N N 8 9 GHz	Frequency Auto Tu Center Fr
Res BW 10 Points o ilent Spectrum RL enter Fre dB/div P	00 kHz changed; all trac nalyzer - Swept S RF 50 Ω Ar q 18.500000	A C D000 GHz PNO: Fast IFGain:Low	Trig: Fre	INT REF		ALIGNAUTO	1.02 s (1 10:28:44 A TRAC TY D 1 23.63	0001 pts) M Sep 06, 2012 П 2 3 4 5 6 рег Милики ет Р N N N N 8 9 GHz	Frequency Auto Tu Center Fr
Res BW 10 Points of ilent Spectrum RL enter Fre dB/div g 0.0	00 kHz changed; all trac nalyzer - Swept S RF 50 Ω Ar q 18.500000	A C D000 GHz PNO: Fast IFGain:Low	Trig: Fre	INT REF		ALIGNAUTO	1.02 s (1 10:28:44 A TRAC TY D 1 23.63	0001 pts) M Sep 06, 2012 П 2 3 4 5 6 рег Милики ет Р N N N N 8 9 GHz	Frequency Auto Tu Center Fr
dB/div F	00 kHz changed; all trac nalyzer - Swept S RF 50 Ω Ar q 18.500000	A C D000 GHz PNO: Fast IFGain:Low	Trig: Fre	INT REF		ALIGNAUTO	1.02 s (1 10:28:44 A TRAC TY D 1 23.63	0001 pts) M Sep 06, 2012 П 2 3 4 5 6 рег Милики ет Р N N N N 8 9 GHz	Frequency Auto Tu Center Fr 18.50000000 G
dB/div F	00 kHz changed; all trac nalyzer - Swept S RF 50 Ω Ar q 18.500000	A C D OOO GHZ PNO: Fast IFGain:Low	Trig: Fre	INT REF		ALIGNAUTO	1.02 s (1 10:28:44 A TRAC TY D 1 23.63	0001 pts) M Sep 06, 2012 П 2 3 4 5 6 рег Милики ет Р N N N N 8 9 GHz	Frequency Auto Tu Center Fr 18.50000000 c
dB/div F	00 kHz changed; all trac nalyzer - Swept S RF 50 Ω Ar q 18.500000	A C D OOO GHZ PNO: Fast IFGain:Low	Trig: Fre	INT REF		ALIGNAUTO	1.02 s (1 10:28:44 A TRAC TY D 1 23.63	0001 pts)	Frequency Auto Tu Center Fr 18.50000000 c
Res BW 10 Points of ilent Spectrum RL enter Fre dB/div 00 00 00 00	00 kHz changed; all trac nalyzer - Swept S RF 50 Ω Ar q 18.500000	A C D OOO GHZ PNO: Fast IFGain:Low	Trig: Fre	INT REF		ALIGNAUTO	1.02 s (1 10:28:44 A TRAC TY D 1 23.63	0001 pts) M Sep 06, 2012 П 2 3 4 5 6 рег Милики ет Р N N N N 8 9 GHz	Frequency Auto Tu Center Fi 18.50000000 G Start Fi 12.000000000 G
Res BW 10 Points of ilent Spectrum RL enter Fre dB/div 00 00 00 00	00 kHz changed; all trac nalyzer - Swept S RF 50 Ω Ar q 18.500000	A C D OOO GHZ PNO: Fast IFGain:Low	Trig: Fre	INT REF		ALIGNAUTO	1.02 s (1 10:28:44 A TRAC TY D 1 23.63	0001 pts)	Frequency Auto Tu Center Fr 18.50000000 G Start Fr 12.00000000 G Stop Fr
Res BW 10 Points c ilent Spectrum RL enter Fre odB/div D 0 0 0 0 0 0 0 0 0 0 0 0 0	00 kHz changed; all trac nalyzer - Swept S RF 50 Ω Ar q 18.500000	A C D OOO GHZ PNO: Fast IFGain:Low	Trig: Fre	INT REF		ALIGNAUTO	1.02 s (1 10:28:44 A TRAC TY D 1 23.63	0001 pts)	Frequency Auto Tu Center Fr 18.50000000 G Start Fr 12.00000000 G Stop Fr
Res BW 10 G Points G ilent Spectrum RL enter Fre 0 dB/div 0.0 0.0 0.0 0.0	00 kHz changed; all trac nalyzer - Swept S RF 50 Ω Ar q 18.500000	A C D OOO GHZ PNO: Fast IFGain:Low	Trig: Fre	INT REF		ALIGNAUTO	1.02 s (1 10:28:44 A TRAC TY D 1 23.63	0001 pts)	Frequency Auto Tu Center Fr 18.500000000 G Start Fr 12.000000000 G Stop Fr 25.000000000 G
Res BW 10 Points c ilent Spectrum RL enter Fre odB/div B 0 0 0 0 0 0 0 0 0 0 0 0 0	00 kHz changed; all trac nalyzer - Swept S RF 50 Ω Ar q 18.500000	A C DOD GH2 PN0: Fast IFGain:Low	Trig: Fre #Atten: 3	INT REF	Avg Type	status aLiGNAUTO : Log-Pwr Mkr	1.02 s (1	0001 pts)	Frequency Auto Tu Center Fr 18.50000000 G Start Fr 12.00000000 G Stop Fr 25.00000000 G CF St
Res BW 10 Points of ilent Spectrum RL od B/div F gg 0.0 0.0 0.0 0.0 0.0 0.0 0.0	00 kHz changed; all trac. Analyzer - Swept S RF 50 Ω Ar q 18.500000 Ref 20.00 dBn	A C DOD GH2 PN0: Fast IFGain:Low	Trig: Fre #Atten: 3	INT REF	Avg Type	status aLiGNAUTO : Log-Pwr Mkr	1.02 s (1	0001 pts)	Frequency Auto Tu Center Fr 18.500000000 G Start Fr 12.000000000 G Stop Fr 25.00000000 G 1.30000000 G
Res BW 10 Points of ilent Spectrum RL od B/div F gg 0.0 0.0 0.0 0.0 0.0 0.0 0.0	00 kHz changed; all trac. PARE 50 Ω A q 18.500000 Ref 20.00 dBn	A DOUD GHZ PRO: Fast IFGain:Low	Trig: Fre #Atten: 3	INT REF	Avg Type	status aLiGNAUTO : Log-Pwr Mkr	1.02 s (1	0001 pts)	Frequency Auto Tu Center Fr 18.500000000 G Start Fr 12.000000000 G Stop Fr 25.00000000 G CF St 1.30000000 G
Res BW 10 Points of ilent Spectrum RL enter Fre odB/div F g 0.0 0.0 0.0 0.0 0.0 0.0 0.0	00 kHz changed; all trac. Analyzer - Swept S RF 50 2 Ar g 18.500000 Ref 20.00 dBn	A DOUD GHZ PRO: Fast IFGain:Low	Trig: Fre #Atten: 3	INT REF	Avg Type	status aLiGNAUTO : Log-Pwr Mkr	1.02 s (1	0001 pts)	Frequency Auto Tu Center Fr 18.500000000 G Start Fr 12.000000000 G Stop Fr 25.00000000 G L.300000000 G Auto Tu
Res BW 10 Points of ilent Spectrum RL enter Fre odB/div F g 0.0 0.0 0.0 0.0 0.0 0.0 0.0	00 kHz changed; all trac. Analyzer - Swept S RF 50 2 Ar g 18.500000 Ref 20.00 dBn	A DOUD GHZ PRO: Fast IFGain:Low	Trig: Fre #Atten: 3	INT REF	Avg Type	status aLiGNAUTO : Log-Pwr Mkr	1.02 s (1	0001 pts)	Frequency Auto Tu Center Fr 18.500000000 G Start Fr 12.000000000 G Stop Fr 25.00000000 G L.300000000 G Auto Tu Freq Offs
Res BW 10 Points of Points of RL of enter Fre 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	00 kHz changed; all trac. Analyzer - Swept S RF 50 2 Ar g 18.500000 Ref 20.00 dBn	A DOUD GHZ PRO: Fast IFGain:Low	Trig: Fre #Atten: 3	INT REF	Avg Type	status aLiGNAUTO : Log-Pwr Mkr	1.02 s (1	0001 pts)	Frequency Auto Tu Center Fr 18.500000000 G Start Fr 12.000000000 G Stop Fr 25.00000000 G L.300000000 G Auto Tu Freq Offs
Res BW 10 Points of Points of RL Points o	00 kHz changed; all trac. Analyzer - Swept S RF 50 2 Ar g 18.500000 Ref 20.00 dBn	A DOUD GHZ PRO: Fast IFGain:Low	Trig: Fre #Atten: 3	INT REF	Avg Type	status aLiGNAUTO : Log-Pwr Mkr	1.02 s (1	0001 pts)	Frequency Auto Tu Center Fr 18.500000000 G Start Fr 12.000000000 G Stop Fr 25.00000000 G L.300000000 G Auto Tu Freq Offs
Res BW 10 Points of Points of RL Points o	00 kHz changed; all trac. Analyzer - Swept S RF 50 2 Ar g 18.500000 Ref 20.00 dBn	A DOUD GHZ PRO: Fast IFGain:Low	Trig: Fre #Atten: 3	INT REF	Avg Type	status aLiGNAUTO : Log-Pwr Mkr	1.02 s (1	0001 pts)	Frequency Auto Tu Center Fr 18.500000000 G Start Fr 12.000000000 G Stop Fr 25.00000000 G CF St 1.30000000 G
Res BW 10 G Points G Points G Points C	00 kHz changed; all trac. Analyzer - Swept S RF 50 2 Ar q 18.500000 Ref 20.00 dBn	A DOUD GHZ PRO: Fast IFGain:Low	Trig: Fre #Atten: 3	INT REF	Avg Type	status aLiGNAUTO : Log-Pwr Mkr	1.02 s (1	0001 pts)	Frequency Auto Tu Center Fr 18.500000000 G Start Fr 12.000000000 G Stop Fr 25.00000000 G L.300000000 G Auto Tu Freq Offs
Res BW 10 G Points of P	D0 kHz changed; all trac. Analyzer - Swept S RF 50 Q Ar q 18.500000 Ref 20.00 dBn 	es cleared A C PNO: Fast IFGain:Low n	Trig: Fre #Atten: 3	INT REF	Avg Type	status alienauto : Log-Pwr Mkr	1.02 s (1	0001 pts)	Frequency Auto Tu Center Fr 18.50000000 G Start Fr 12.00000000 G Stop Fr 25.00000000 G Auto Tu Freq Offs 0



RL	RF 50 \$	2 AC		1	INT REF		ALIGN AUTO		M Sep 06, 2012	Fraguanay
enter Fr	eq 515.00	00000 MH	IZ NO: Fast ⊊	Trig: Free	Run	Avg Type	: Log-Pwr	TRAI TY	CE 1 2 3 4 5 6 PE MWWWWWW ET P N N N N N	Frequency
		IĖ	Gain:Low	#Atten: 30	dB		10101			Auto Tun
							Mkr		49 MHz 89 dBm	Auto Tuli
dB/div g	Ref 20.00	dBm						-J4.		
										Center Fre
0.0			2							515.000000 MH
00										
										Start Fre
										30.000000 MH
									-18.09 dBm	
0.0		2								Stop Fre
										1.000000000 GH
0.0										
i.o										CF Ste
										97.000000 MH
.0									1	<u>Auto</u> Ma
1. L.A.	والمالة معصم الماري		a di si ta sa si stude	والمتعادية والمتعادية	tellinghe of the second		alilia desetable d	le contras a literati	un allebraide	
	and the descent of the second		and a subject of the	Surelinski hadionis	in the second second		and a second second		a tradition of the state of the	Freq Offs 0 H
1.0										UT OF
1.0										
art 30.0								Stop 1.0	0000 CHz	
oc BM			#\/B\M				ween O			
	100 kHz	aved	#VBW	1.0 MHz		\$	• • • • •		0001 pts)	
1		aved	#VBW	1.0 MHz		\$	Sweep 90 Status			
ient Spectru	100 kHz :Image.png> s um Analyzer - Sw	vept SA	#VBW				STATUS).0 ms (1	0001 pts)	
S ➡ File < lent Spectru RL	100 kHz Image.png> s um Analyzer - Sw RF 50 S	vept SA 2 AC			INT REF		• • • • •	0.0 ms (1 10:35:47 A TRA	M Sep 06, 2012	Frequency
S ➡ File < lent Spectru RL	100 kHz :Image.png> s um Analyzer - Sw	vept SA 2 A⊂ 000000 G P	HZ N0: Fast ⊂		Run		STATUS	0.0 ms (1 10:35:47 A TRA	0001 pts)	Frequency
S ➡ File < lent Spectru RL	100 kHz Image.png> s um Analyzer - Sw RF 50 S	vept SA 2 A⊂ 000000 G P	Hz) Trig: Free	Run		STATUS ALIGNAUTO : Log-Pwr	0.0 ms (1 10:35:47 A TRA TY D	M Sep 06, 2012	Frequency Auto Tur
lent Spectru RL enter Fr	100 kHz Image.png> s um Analyzer - Sw RF 50 S	<mark>zept SA</mark> ≥ AC 000000 G P IF	HZ N0: Fast ⊂) Trig: Free	Run		STATUS ALIGNAUTO : Log-Pwr	0.0 ms (1 10:35:47 A TRAI TRAI TRAI TRAI TRAI TRAI	M Sep 06, 2012 22 1 2 3 4 5 6 P N N N N N	
S ➡ File < lent Spectru RL	100 kHz :Image.png> s um Analyzer - Sv RF 50 C req 6.5000	<mark>zept SA</mark> ≥ AC 000000 G P IF	HZ N0: Fast ⊂) Trig: Free	Run		STATUS ALIGNAUTO : Log-Pwr	0.0 ms (1 10:35:47 A TRAI TRAI TRAI TRAI TRAI TRAI	M Sep 06, 2012 T 1 2 3 4 5 6 PE M WWW ET P NNNN 2 1 GHz	Auto Tur
lent Spectru RL enter Fr	100 kHz :Image.png> s um Analyzer - Sv RF 50 C req 6.5000	<mark>zept SA</mark> ≥ AC 000000 G P IF	HZ N0: Fast ⊂) Trig: Free	Run		STATUS ALIGNAUTO : Log-Pwr	0.0 ms (1 10:35:47 A TRAI TRAI TRAI TRAI TRAI TRAI	M Sep 06, 2012 T 1 2 3 4 5 6 PE M WWW ET P NNNN 2 1 GHz	Auto Tur Center Fre
dB/div	100 kHz :Image.png> s um Analyzer - Sv RF 50 C req 6.5000	<mark>zept SA</mark> ≥ AC 000000 G P IF	HZ N0: Fast ⊂) Trig: Free	Run		STATUS ALIGNAUTO : Log-Pwr	0.0 ms (1 10:35:47 A TRAI TRAI TRAI TRAI TRAI TRAI	M Sep 06, 2012 T 1 2 3 4 5 6 PE M WWW ET P NNNN 2 1 GHz	Auto Tur Center Fre
dB/div	100 kHz Image.png> s m Analyzer - Sw ℝF 50 0 req 6.5000 Ref 20.00	<mark>zept SA</mark> ≥ AC 000000 G P IF	HZ N0: Fast ⊂) Trig: Free	Run		STATUS ALIGNAUTO : Log-Pwr	0.0 ms (1 10:35:47 A TRAI TRAI TRAI TRAI TRAI TRAI	M Sep 06, 2012 T 1 2 3 4 5 6 PE M WWW ET P NNNN 2 1 GHz	Auto Tur Center Fre 6.50000000 GH
dB/div g 0.0	100 kHz Image.png> s m Analyzer - Sw ℝF 50 0 req 6.5000 Ref 20.00	<mark>zept SA</mark> ≥ AC 000000 G P IF	HZ N0: Fast ⊂) Trig: Free	Run		STATUS ALIGNAUTO : Log-Pwr	0.0 ms (1 10:35:47 A TRAI TRAI TRAI TRAI TRAI TRAI	M Sep 06, 2012 T 1 2 3 4 5 6 PE M WWW ET P NNNN 2 1 GHz	Auto Tur Center Fre 6.50000000 GH Start Fre
dB/div	100 kHz Image.png> s m Analyzer - Sw ℝF 50 0 req 6.5000 Ref 20.00	<mark>zept SA</mark> ≥ AC 000000 G P IF	HZ N0: Fast ⊂) Trig: Free	Run		STATUS ALIGNAUTO : Log-Pwr	0.0 ms (1 10:35:47 A TRAI TRAI TRAI TRAI TRAI TRAI	M Sep 06, 2012 TE 1 2 3 4 5 6 RE M WWWWW TP NNNN 2 1 GHz 91 dBm	Auto Tur Center Fre 6.50000000 GH Start Fre
dB/div g 0.0	100 kHz Image.png> s m Analyzer - Sw ℝF 50 0 req 6.5000 Ref 20.00	<mark>zept SA</mark> ≥ AC 000000 G P IF	HZ N0: Fast ⊂) Trig: Free	Run		STATUS ALIGNAUTO : Log-Pwr	0.0 ms (1 10:35:47 A TRAI TRAI TRAI TRAI TRAI TRAI	M Sep 06, 2012 T 1 2 3 4 5 6 PE M WWW ET P NNNN 2 1 GHz	Auto Tur Center Fre 6.50000000 Gł Start Fre 1.00000000 Gł
dB/div g 0.0	100 kHz Image.png> s m Analyzer - Sw ℝF 50 0 req 6.5000 Ref 20.00	<mark>zept SA</mark> ≥ AC 000000 G P IF	HZ N0: Fast ⊂) Trig: Free	Run		STATUS ALIGNAUTO : Log-Pwr	0.0 ms (1 10:35:47 A TRAI TRAI TRAI TRAI TRAI TRAI	M Sep 06, 2012 TE 1 2 3 4 5 6 RE M WWWWW TP NNNN 2 1 GHz 91 dBm	Auto Tur Center Fre 6.50000000 GF Start Fre 1.00000000 GF Stop Fre
dB/div g 0.0	100 kHz Image.png> s m Analyzer - Sw ℝF 50 0 req 6.5000 Ref 20.00	<mark>zept SA</mark> ≥ AC 000000 G P IF	HZ N0: Fast ⊂) Trig: Free	Run		STATUS ALIGNAUTO : Log-Pwr	0.0 ms (1 10:35:47 A TRAI TRAI TRAI TRAI TRAI TRAI	M Sep 06, 2012 TE 1 2 3 4 5 6 RE M WWWWW TP NNNN 2 1 GHz 91 dBm	Auto Tur Center Fre 6.50000000 GF Start Fre 1.00000000 GF Stop Fre
Image: Spectrum RL Image:	100 kHz Image.png> s m Analyzer - Sw ℝF 50 0 req 6.5000 Ref 20.00	<mark>zept SA</mark> ≥ AC 000000 G P IF	HZ N0: Fast ⊂) Trig: Free	Run		STATUS ALIGNAUTO : Log-Pwr	0.0 ms (1 10:35:47 A TRAI TRAI TRAI TRAI TRAI TRAI	M Sep 06, 2012 TE 1 2 3 4 5 6 RE M WWWWW TP NNNN 2 1 GHz 91 dBm	Auto Tur Center Fre 6.50000000 GF Start Fre 1.000000000 GF 12.00000000 GF
dB/div g 00 00 00 00	100 kHz Image.png> s m Analyzer - Sw ℝF 50 0 req 6.5000 Ref 20.00	<mark>zept SA</mark> ≥ AC 000000 G P IF	HZ N0: Fast ⊂) Trig: Free	Run		STATUS ALIGNAUTO : Log-Pwr	0.0 ms (1 10:35:47 A TRAI TRAI TRAI TRAI TRAI TRAI	M Sep 06, 2012 TE 1 2 3 4 5 6 RE M WWWWW TP NNNN 2 1 GHz 91 dBm	Auto Tur Center Fre 6.50000000 GF 1.00000000 GF 12.00000000 GF 12.00000000 GF
Image: Sector of the	100 kHz Image.png> s m Analyzer - Sw ℝF 50 0 req 6.5000 Ref 20.00	<mark>zept SA</mark> ≥ AC 000000 G P IF	Hz Goin:Low	Atten: 30	Run dB	Avg Type	status ALIGNAUTO Log-Pwr Mk	0.0 ms (1	M Sep 06, 2012 TE 1 2 3 4 5 6 FE MWWWWW TP NNNN 2 1 GHz 91 dBm -18.09 dBm	Auto Tur Center Fre 6.50000000 GH Start Fre 1.00000000 GH 12.00000000 GH CF Ste 1.100000000 GH
Image: Spectrum RL Image:	100 kHz Image.png> s RF 503 req 6.5000 Ref 20.00 1 1 1 1 1 1 1 1 1 1 1 1 1	/ept 5A 2 AC 1000000 G P IF dBm	Hz NO: Fast G Gain:Low	Atten: 30		Avg Type	status	0.0 ms (1	M Sep 06, 2012 TE 1 2 3 4 5 6 PE MWWWW ET P NNNN 2 1 GHz 91 dBm -18.09 dBm	Auto Tur Center Fre 6.50000000 GH Start Fre 1.00000000 GH 12.00000000 GH CF Ste 1.100000000 GH
Image: Sector of the	100 kHz Image.png> s RF 503 req 6.5000 Ref 20.00 1 1 1 1 1 1 1 1 1 1 1 1 1	<mark>zept SA</mark> ≥ AC 000000 G P IF	Hz NO: Fast G Gain:Low	/ Trig: Free #Atten: 30		Avg Type	STATUS ALIGNAUTO : Log-Pwr	0.0 ms (1	M Sep 06, 2012 TE 1 2 3 4 5 6 PE MWWWW ET P NNNN 2 1 GHz 91 dBm -18.09 dBm	Auto Tur Center Fre 6.50000000 GH Start Fre 1.00000000 GH 12.00000000 GH 1.10000000 GH Auto Ma
Image: Spectrum RL Image:	100 kHz Image.png> s RF 503 req 6.5000 Ref 20.00 1 1 1 1 1 1 1 1 1 1 1 1 1	/ept SA 2 AC 000000 G P IF dBm	Hz NO: Fast G Gain:Low	/ Trig: Free #Atten: 30		Avg Type	status	0.0 ms (1	M Sep 06, 2012 TE 1 2 3 4 5 6 PE MWWWW ET P NNNN 2 1 GHz 91 dBm -18.09 dBm	Auto Tur Center Fre 6.50000000 GF 1.00000000 GF 12.00000000 GF 12.00000000 GF 1.100000000 GF Auto Ma
Image: Spectrum RL Image:	100 kHz Image.png> s RF 503 req 6.5000 Ref 20.00 1 1 1 1 1 1 1 1 1 1 1 1 1	/ept SA 2 AC 000000 G P IF dBm	Hz NO: Fast G Gain:Low	/ Trig: Free #Atten: 30		Avg Type	status	0.0 ms (1	M Sep 06, 2012 TE 1 2 3 4 5 6 PE MWWWW ET P NNNN 2 1 GHz 91 dBm -18.09 dBm	Auto Tur Center Fre 6.50000000 GF 1.00000000 GF 12.00000000 GF 12.00000000 GF 1.100000000 GF Auto Ma
Image: Spectrum RL Image: Spectrum RL RL Image: Spectrum RL Image: Spectrum RL Image: Spectrum RL	100 kHz Image.png> s RF 503 req 6.5000 Ref 20.00 1 1 1 1 1 1 1 1 1 1 1 1 1	/ept SA 2 AC 000000 G P IF dBm	Hz NO: Fast G Gain:Low	/ Trig: Free #Atten: 30		Avg Type	status	0.0 ms (1	M Sep 06, 2012 TE 1 2 3 4 5 6 PE MWWWW ET P NNNN 2 1 GHz 91 dBm -18.09 dBm	Auto Tur Center Fre 6.50000000 GF 1.00000000 GF 12.00000000 GF 12.00000000 GF 1.100000000 GF Auto Ma
Image: Spectrum RL Image: Spectrum RL RL Image: Spectrum RL Image: Spectrum RL Image: Spectrum RL	100 kHz Image.png> s RF 50 S Ref 20.00 1 1 1 1 1 1 1 1 1 1 1 1 1	/ept SA 2 AC 000000 G P IF dBm	Hz NO: Fast G Gain:Low	/ Trig: Free #Atten: 30		Avg Type	status	0.0 ms (1	M Sep 06, 2012 TE 1 2 3 4 5 6 PE MWWWW ET P NNNN 2 1 GHz 91 dBm -18.09 dBm	Auto Tun Center Fre 6.50000000 GF 1.00000000 GF 12.00000000 GF 12.00000000 GF
Image: Spectrum RL RL Image: Spectrum RL	100 kHz Image.png> s RF 50 C Ref 20.00 1 0 GHz	/ept SA 2 AC 000000 G P IF dBm	Hz NO: Fast G Gain:Low	Atten: 30		Avg Type	STATUS	0.0 ms (1	M Sep 06, 2012 TE 1 2 3 4 5 6 P NNNNN 2 1 GHz 91 dBm -18.09 dBm	Auto Tur Center Fre 6.50000000 GF 1.00000000 GF 12.00000000 GF 12.00000000 GF 1.100000000 GF Auto Ma

Channel 06 (2437MHz)



Agilent Spectrum								
Center Fred	RF 50 Ω 18.5000	000000	SHz 10: Fast 😱] Trig: Free		ALIGNAUTO : Log-Pwr	10:36:49 AM Sep 06, 2012 TRACE 1 2 3 4 5 (TYPE M WWWWW DET P N N N N	Frequency
10 dB/div R	ef 20.00 d		ain:Low	#Atten: 30	dB	Mkr	1 23.745 5 GHz -39.95 dBm	Auto Tune
10.0								Center Freq 18.50000000 GHz
-10.0								Start Freq 12.000000000 GHz
-20.0							-18.09 dBn	Stop Freq 25.00000000 GHz
-40.0		a kilaan da ka	and the second second	a dalama dina	frankrik av jog son Tr			CF Step 1.300000000 GHz <u>Auto</u> Man
-60.0 <mark>- Angelingene</mark>			The second s					Freq Offset
-70.0 Start 12.000 #Res BW 100			#VBM	1.0 MHz		Sween	Stop 25.000 GHz 1.20 s (10001 pts	
MSG DW TO		ived	#*0	1.0 10112		 STATUS		/



enter Fi					NT REF		ALIGN AUTO		M Sep 06, 2012	Frequency
	req 515.000		HZ PNO: Fast 🖵	Trig: Free	Run	Avg Type	e: Log-Pwr	TYF	^Е 123456 ЕМ МИМИ	
		IF	Gain:Low	#Atten: 30	dB					
							Mkr		74 MHz	Auto Tu
) dB/div	Ref 20.00 dl	Bm						-55.3	24 dBm	
3										Center Fro
0.0										515.000000 MI
.00										
										Start Fr
0.0					-					30.000000 M
0.0									-19.72 dBm	Stop Fr
										1.000000000 G
0.0									<u>.</u>	
0.0										CF St 97.000000 M
										<u>Auto</u> M
0.0								1-		
	- 19 al a stand and stand and a stand	Lagentletan	All us delivers a series	and public alteral	alout plint part	Interlevents	du shata t	den en page antile antes a	nder der gestellen besterne.	Freq Offs
An Architecture		and the failed for	the product of the product of	a free way in the second	a providence of	and the second	- In - I - I - I - I - I - I - I - I - I			0
0.0					-					
tart 30.0 Res BW			#\/D\M	1.0 MHz			Cwoon 0		0000 GHz 0001 pts)	
CO DW	100 KHZ		77 1 1 1 1 1	1.0 10112			oween a	0.0 1113 (1	0001 pts)	
c DEilo d		(od								
iG 🔱 File <	<lmage.png> sav</lmage.png>	ved					STATUS			I
	<lmage.png> sav um Analyzer - Swep</lmage.png>								,	1
ilent Spectr R L	um Analyzer - Swep RF 50 Ω	ot SA AC		I I	NT REF		STATUS	10:40:12 A	M Sep 06, 2012	Frequency
ilent Spectr R L	um Analyzer - Swep	ot SA AC		Trig: Free	Run		STATUS	10:40:12 A TRAC TYF	E 123456 E M WWWW	Frequency
ilent Spectr R L	um Analyzer - Swep RF 50 Ω	ot SA AC 0000 G	SHZ PNO: Fast ⊂ Gain:Low	7	Run		ALIGN AUTO e: Log-Pwr	10:40:12 A TRAC TYF DE	E 1 2 3 4 5 6 PE MWWWWW T P N N N N N	
ilent Spectr RL enter Fi	um Analyzer - Swep RF 50 Ω req 6.50000	ot SA AC 0000 G F IF	PNO: Fast 🖵	Trig: Free	Run		ALIGN AUTO e: Log-Pwr	10:40:12 A TRAC TYF DE	E 123456 MWWWWWWW PNNNNN 7 4 GHz	
ilent Spectr RL enter Fi	um Analyzer - Swep RF 50 Ω	ot SA AC 0000 G F IF	PNO: Fast 🖵	Trig: Free	Run		ALIGN AUTO e: Log-Pwr	10:40:12 A TRAC TYF DE	E 1 2 3 4 5 6 PE MWWWWW T P N N N N N	
ilent Spectr RL enter Fi	um Analyzer - Swep RF 50 Ω req 6.50000	ot SA AC 0000 G F IF	PNO: Fast 🖵	Trig: Free	Run		ALIGN AUTO e: Log-Pwr	10:40:12 A TRAC TYF DE	E 123456 MWWWWWWW PNNNNN 7 4 GHz	Auto Tu
dB/div	um Analyzer - Swep RF 50 Ω req 6.50000	ot SA AC 0000 G F IF	PNO: Fast 🖵	Trig: Free	Run		ALIGN AUTO e: Log-Pwr	10:40:12 A TRAC TYF DE	E 123456 MWWWWWWW PNNNNN 7 4 GHz	Auto Tu Center Fr
dB/div	um Analyzer - Swep RF 50 Ω req 6.50000	ot SA AC 0000 G F IF	PNO: Fast 🖵	Trig: Free	Run		ALIGN AUTO e: Log-Pwr	10:40:12 A TRAC TYF DE	E 123456 MWWWWWWW PNNNNN 7 4 GHz	Auto Tu Center Fr
dB/div	um Analyzer - Swep RF 50 Ω req 6.50000 Ref 20.00 dt	ot SA AC 0000 G F IF	PNO: Fast 🖵	Trig: Free	Run		ALIGN AUTO e: Log-Pwr	10:40:12 A TRAC TYF DE	E 123456 MWWWWWWW PNNNNN 7 4 GHz	Auto Tu Center Fr 6.50000000 G
dB/div	um Analyzer - Swep RF 50 Ω req 6.50000 Ref 20.00 dt	ot SA AC 0000 G F IF	PNO: Fast 🖵	Trig: Free	Run		ALIGN AUTO e: Log-Pwr	10:40:12 A TRAC TYF DE	E 123456 MWWWWWWW PNNNNN 7 4 GHz	Auto Tu Center Fr 6.50000000 G Start Fr
dB/div 9 00	um Analyzer - Swep RF 50 Ω req 6.50000 Ref 20.00 dt	ot SA AC 0000 G F IF	PNO: Fast 🖵	Trig: Free	Run		ALIGN AUTO e: Log-Pwr	10:40:12 A TRAC TYF DE	E 123456 MWWWWWWW PNNNNN 7 4 GHz	Auto Tu Center Fr 6.50000000 G Start Fr
dB/div g 0.0 0.0	um Analyzer - Swep RF 50 Ω req 6.50000 Ref 20.00 dt	ot SA AC 0000 G F IF	PNO: Fast 🖵	Trig: Free	Run		ALIGN AUTO e: Log-Pwr	10:40:12 A TRAC TYF DE	¹ 123456 ² P NNNN 7 4 GHz 28 dBm	Auto Tu Center Fr 6.50000000 G Start Fr
ilent Spectr RL enter Fr dB/div 9 0.0 0.0 0.0	um Analyzer - Swep RF 50 Ω req 6.50000 Ref 20.00 dt	ot SA AC 0000 G F IF	PNO: Fast 🖵	Trig: Free	Run		ALIGN AUTO e: Log-Pwr	10:40:12 A TRAC TYF DE	E 123456 MWWWWWWW PNNNNN 7 4 GHz	Auto Tu Center Fr 6.50000000 G Start Fr 1.00000000 G
dB/div 9 0.0 0.0 0.0	um Analyzer - Swep RF 50 Ω req 6.50000 Ref 20.00 dt	ot SA AC 0000 G F IF	PNO: Fast 🖵	Trig: Free	Run		ALIGN AUTO e: Log-Pwr	10:40:12 A TRAC TYF DE	¹ 123456 ² P NNNN 7 4 GHz 28 dBm	Auto Tu Center Fr 6.50000000 G Start Fr 1.000000000 G Stop Fr
dB/div 9 0.0 0.0 0.0	um Analyzer - Swep RF 50 Ω req 6.50000 Ref 20.00 dt	ot SA AC 0000 G F IF	PNO: Fast 🖵	Trig: Free	Run		ALIGN AUTO e: Log-Pwr	10:40:12 A TRAC TYF DE	¹ 123456 ² P NNNN 7 4 GHz 28 dBm	Auto Tu Center Fr 6.50000000 G Start Fr 1.000000000 G Stop Fr
ilent Spectr RL enter Fr dB/div 29 0.0 0.0 0.0 0.0 0.0 0.0	um Analyzer - Swep RF 50 Ω req 6.50000 Ref 20.00 dt	ot SA AC 0000 G F IF	PNO: Fast 🖵	Trig: Free	Run		ALIGN AUTO e: Log-Pwr	10:40:12 A TRAC TYF DE	¹ 123456 ² P NNNN 7 4 GHz 28 dBm	Auto Tu Center Fr 6.50000000 G Start Fr 1.00000000 G Stop Fr 12.00000000 G
ilent Spectr RL enter Fr dB/div 29 0.0 0.0 0.0 0.0 0.0 0.0	um Analyzer - Swep RF 50 Ω req 6.50000 Ref 20.00 dt	ot SA AC 0000 G F IF	PNO: Fast 🖵	Trig: Free	Run		ALIGN AUTO e: Log-Pwr	10:40:12 A TRAC TYF DE	¹ 123456 ² P NNNN 7 4 GHz 28 dBm	
ilent Spectr RL enter Fr od B/div od 0 00 00 00 00 00 00 00 00 00	um Analyzer - Swep RF 50 Ω req 6.50000 Ref 20.00 dt	ot SA AC 0000 G F IF	PNO: Fast G	Trig: Free #Atten: 30	Run dB	Avg Type	ALIGNAUTO E: Log-Pwr Mk	10:40:12A TRAC TYP D r1 2.46 0.1	-19.72 dBm	Auto Tu Center Fr 6.50000000 G Start Fr 1.00000000 G Stop Fr 12.00000000 G
ilent Spectr RL Penter Fr 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	m Analyzer - Swep RF 50 Ω req 6.50000 Ref 20.00 dt	AC AC 00000 C F IF Bm	PNO: Fast G	Trig: Free #Atten: 30	Run dB	Avg Type	ALIGNAUTO E: Log-Pwr Mk	10:40:12A TRAC TYP D r1 2.46 0.1	-19.72 dBm	Auto Tu Center Fr 6.50000000 G Start Fr 1.00000000 G Stop Fr 12.00000000 G
ient Spectr RL enter Fr g g 0.0 0.0 0.0 0.0 0.0 0.0 0.	m Analyzer - Swep RF 50 Ω req 6.50000 Ref 20.00 dt	ot SA AC 0000 G F IF	PNO: Fast G	Trig: Free	Run dB	Avg Type	ALIGNAUTO E: Log-Pwr Mk	10:40:12A TRAC TYP D r1 2.46 0.1	-19.72 dBm	Auto Tu Center Fr 6.50000000 G Start Fr 1.00000000 G Stop Fr 12.00000000 G L1.00000000 G Auto M
ient Spectr RL enter Fr g g 0.0 0.0 0.0 0.0 0.0 0.0 0.	m Analyzer - Swep RF 50 Ω req 6.50000 Ref 20.00 dt	AC AC 00000 C F IF Bm	PNO: Fast G	Trig: Free #Atten: 30	Run dB	Avg Type	ALIGNAUTO E: Log-Pwr Mk	10-40:12 A TYS D r1 2.46: 0.2	-19.72 dBm	Auto Tu Center Fr 6.50000000 G Start Fr 1.00000000 G Stop Fr 12.00000000 G Auto M
dB/div g g 0.0 0.0 0.0 0.0 0.0 0.0	m Analyzer - Swep RF 50 Ω req 6.50000 Ref 20.00 dt	AC AC 00000 C F IF Bm	PNO: Fast G	Trig: Free #Atten: 30	Run dB	Avg Type	ALIGNAUTO E: Log-Pwr Mk	10-40:12 A TYS D r1 2.46: 0.2	-19.72 dBm	Auto Tu Center Fr 6.50000000 G Start Fr 1.00000000 G Stop Fr 12.00000000 G Auto M
ilent Spectr RL enter Fr d B/div 9 0.0 0.0 0.0 0.0 0.0 0.0 0.0	m Analyzer - Swep RF 50 Ω req 6.50000 Ref 20.00 dt	AC AC 00000 C F IF Bm	PNO: Fast G	Trig: Free #Atten: 30	Run dB	Avg Type	ALIGNAUTO E: Log-Pwr Mk	10-40:12 A TYS D r1 2.46: 0.2	-19.72 dBm	Auto Tu Center Fr 6.50000000 G Start Fr 1.00000000 G Stop Fr 12.00000000 G
ilent Spectr RL enter Fr 0 dB/div 9 0.0 0.0 0.0 0.0 0.0 0.0 0.0	m Analyzer - Swep RF 50 Ω req 6.50000 Ref 20.00 dt	AC AC 00000 C F IF Bm	PNO: Fast G	Trig: Free #Atten: 30	Run dB	Avg Type	ALIGNAUTO E: Log-Pwr Mk	10:40:12.4 TRAC TYP D r1 2.46: 0.:	-19.72 dBm	Auto Tu Center Fr 6.50000000 G Start Fr 1.00000000 G Stop Fr 12.00000000 G Auto M
ilent Spectr RL enter Fr dB/div 9 0.0 0.0 0.0 0.0 0.0 0.0 0.0	m Analyzer - Swep RF 50 Ω req 6.50000 Ref 20.00 dt	AC AC 00000 C F IF Bm	PNO: Fast G	Trig: Free #Atten: 30	Run dB	Avg Type	ALIGNAUTO E Log-Pwr Mk	10:40:12.4 TRAC TYP D r1 2.46: 0.1	-19.72 dBm	Auto Tu Center Fr 6.500000000 G Start Fr 1.000000000 G Stop Fr 12.000000000 G Auto Tu Freq Offs 0

Channel 11 (2462MHz)



		Analyzer - Sv									
tx∥ ℝ Cen	L Iter Fre	RF 50 9 q 18.500	0000000	GHz N0: Fast 🔾	Trig: Free		Avg Type	ALIGNAUTO	TRAC	M Sep 06, 2012 E 1 2 3 4 5 6 E MWWWWW	Frequency
10 di Log	B/div F	Ref 20.00	IF	Gain:Low	#Atten: 30			Mkr	1 23.68	o 5 GHz 21 dBm	Auto Tune
10.0											Center Freq 18.50000000 GHz
0.00 -10.0											Start Freq 12.000000000 GHz
-20.0 -30.0										-19.72 dBm	Stop Freq 25.000000000 GHz
-40.0			in the state of th		a n dat ministra	a har alaar II ahaa	hand been at here	la sva s ¹ lesa (b. la sva s			CF Step 1.30000000 GHz <u>Auto</u> Man
-50.0 -60.0			op had beginned and an and an and an			the other all the					Freq Offset 0 Hz
-70.0	+ 12 000								Stop 25		
	t 12.000 s BW 10			#VBW	1.0 MHz			Sweep		.000 GHz 0001 pts)	
MSG 🤇	🎝 File <in< td=""><td>nage.png> s</td><td>aved</td><td></td><td></td><td></td><td></td><td>STATUS</td><td></td><td></td><td></td></in<>	nage.png> s	aved					STATUS			

6. Band Edge

6.1. Test Equipment

RF Conducted Measurement

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

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2012
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2012
Х	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.
\Box Site # 3		Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2012
	Х	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2012
		Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2012
	Х	Pre-Amplifier	Agilent	8447D/2944A09549	Sep., 2012
	Х	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2012
		Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2012
	Х	Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2012
	Х	Controller	QuieTek	QTK-CONTROLLER/ CTRL3	N/A
	Х	Coaxial Switch	Anritsu	MP59B/6200265729	N/A

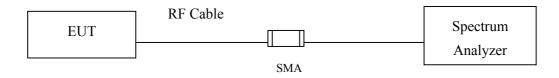
Note:

1. All instruments are calibrated every one year.

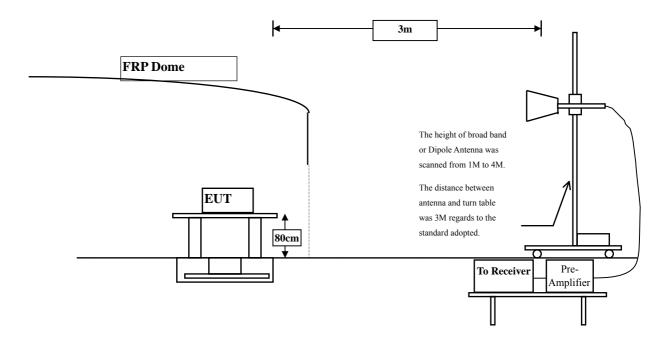
2. The test instruments marked by "X" are used to measure the final test results.

6.2. Test Setup

RF Conducted Measurement:



RF Radiated Measurement:



6.3. Limits

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

6.4. Test Procedure

The EUT was setup according to ANSI C63.4, 2003 and tested according to DTS test procedure of 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 C63.4:2003 on radiated measurement.

6.5. Uncertainty

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

6.6. Test Result of Band Edge

Product	:	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)	2390.000	33.739	38.342	72.081	74.000	54.000	Pass
01 (Peak)	2411.900	33.771	76.750	110.522			
01 (Average)	2386.400	33.736	16.579	50.315	74.000	54.000	Pass
01 (Average)	2390.000	33.739	13.958	47.697	74.000	54.000	Pass
01 (Average)	2411.300	33.770	68.303	102.073			

Figure Channel 01:

Horizontal (Peak)

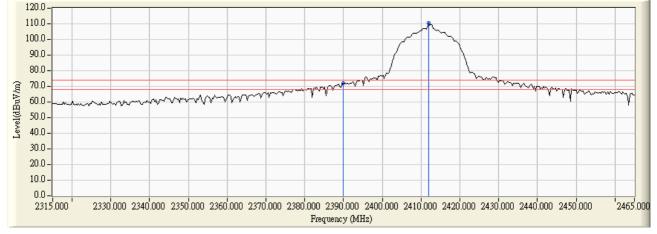
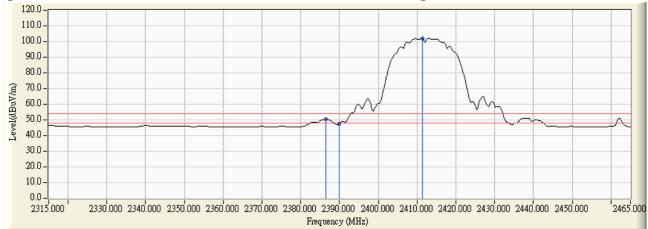


Figure Channel 01:

Horizontal (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3MHz, 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.

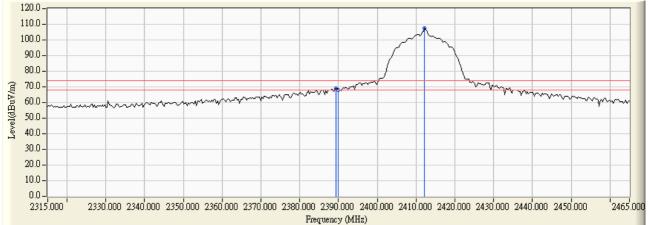
Product	:	JukeBlox Networked Media Module
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps)

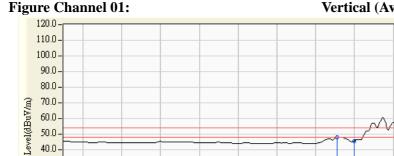
RF Radiated Measurement (Vertical):

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Kesult
01 (Peak)	2389.400	32.271	36.679	68.950	74.000	54.000	Pass
01 (Peak)	2390.000	32.267	35.943	68.210	74.000	54.000	Pass
01 (Peak)	2412.200	32.250	75.016	107.266			
01 (Average)	2385.500	32.299	15.557	47.855	74.000	54.000	Pass
01 (Average)	2390.000	32.267	13.447	45.714	74.000	54.000	Pass
01 (Average)	2411.300	32.246	66.326	98.572			

Figure Channel 01:

Vertical (Peak)





Vertical (Average)



- 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.
- Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto. 3.
- "*", means this data is the worst emission level. 4.
- 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	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Kesuit
11 (Peak)	2461.900	33.892	77.119	111.011			
11 (Peak)	2483.500	33.951	37.901	71.851	74.000	54.000	Pass
11 (Average)	2461.300	33.890	68.231	102.122			
11 (Average)	2483.500	33.951	13.718	47.668	74.000	54.000	Pass
11 (Average)	2488.300	33.962	17.413	51.375	74.000	54.000	Pass

Figure Channel 11:

Horizontal (Peak)

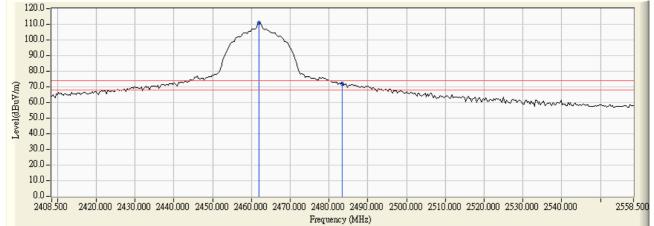
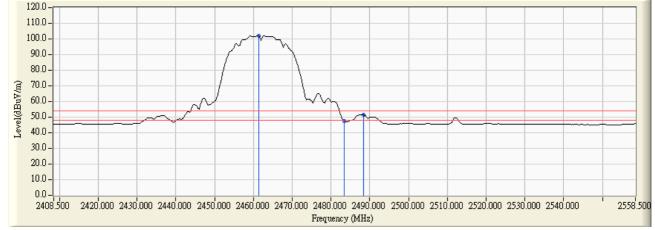


Figure Channel 11:

Horizontal (Average)



- 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	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Kesuit
11 (Peak)	2461.900	32.480	75.076	107.556			
11 (Peak)	2483.500	32.586	34.533	67.118	74.000	54.000	Pass
11 (Peak)	2485.600	32.595	35.311	67.906	74.000	54.000	Pass
11 (Average)	2461.000	32.476	65.190	97.666			
11 (Average)	2483.500	32.586	12.288	44.873	74.000	54.000	Pass
11 (Average)	2488.000	32.607	14.175	46.782	74.000	54.000	Pass

Figure Channel 11:

Vertical (Peak)

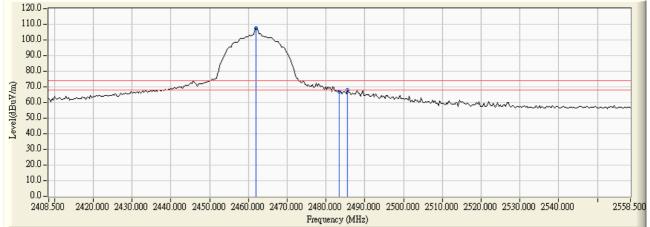
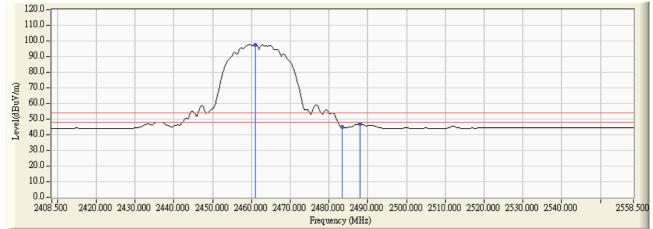


Figure Channel 11:

Vertical (Average)



- 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.

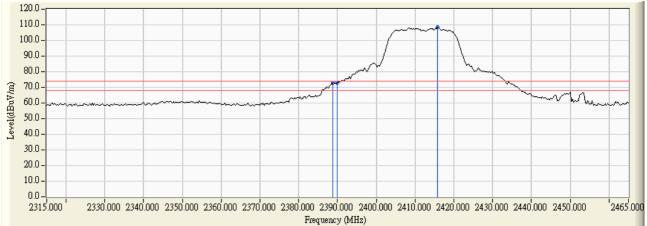
Product	:	JukeBlox Networked Media Module
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps)

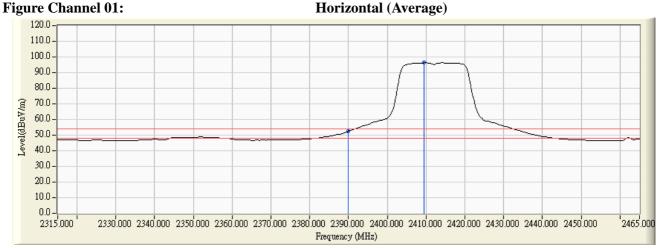
RF Radiated Measurement (Horizontal):

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)	2388.800	33.738	39.110	72.848	74.000	54.000	Pass
01 (Peak)	2390.000	33.739	39.284	73.023	74.000	54.000	Pass
01 (Peak)	2415.800	33.781	74.514	108.295			
01 (Average)	2390.000	33.739	18.756	52.495	74.000	54.000	Pass
01 (Average)	2409.500	33.768	62.558	96.325			

Figure Channel 01:

Horizontal (Peak)





- 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.

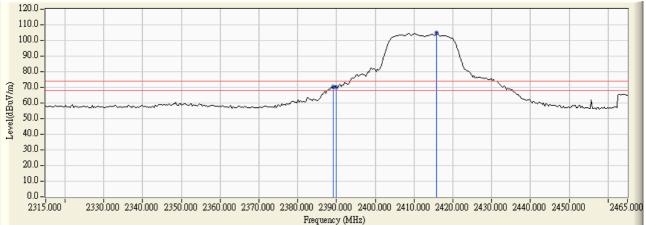
Product	:	JukeBlox Networked Media Module
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps)

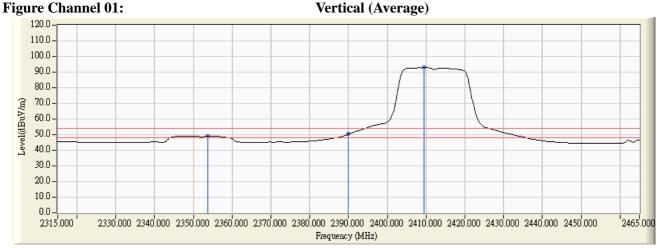
RF Radiated Measurement (Vertical):

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
01 (Peak)	2389.100	32.274	38.432	70.705	74.000	54.000	Pass
01 (Peak)	2390.000	32.267	37.535	69.802	74.000	54.000	Pass
01 (Peak)	2415.800	32.266	72.550	104.816			
01 (Average)	2353.700	32.533	16.554	49.087	74.000	54.000	Pass
01 (Average)	2390.000	32.267	18.006	50.273	74.000	54.000	Pass
01 (Average)	2409.500	32.245	60.738	92.982			

Figure Channel 01:

Vertical (Peak)





- 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.

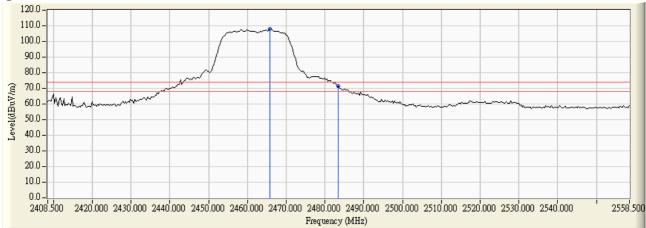
Product	:	JukeBlox Networked Media Module
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps)

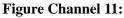
RF Radiated Measurement (Horizontal):

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
11 (Peak)	2465.800	33.902	74.290	108.193			
11 (Peak)	2483.500	33.951	37.344	71.294	74.000	54.000	Pass
11 (Average)	2459.800	33.887	61.897	95.784			
11 (Average)	2483.500	33.951	18.956	52.906	74.000	54.000	Pass

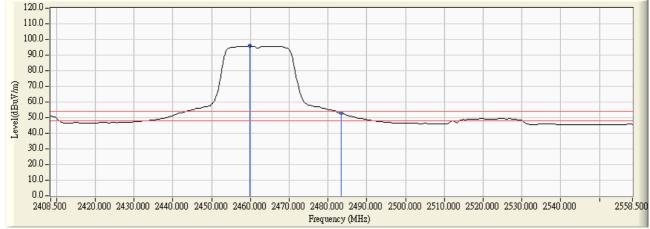
Figure Channel 11:

Horizontal (Peak)





Horizontal (Average)



- 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.

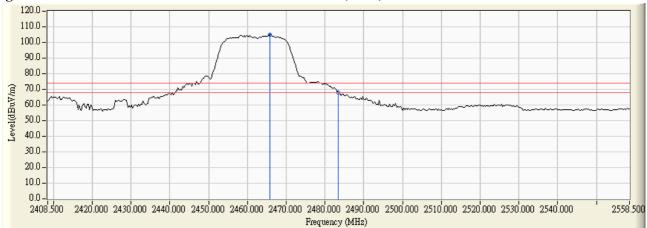
Product	:	JukeBlox Networked Media Module
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps)

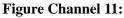
RF Radiated Measurement (Vertical):

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
11 (Peak)	2465.800	32.499	72.343	104.842			
11 (Peak)	2483.500	32.586	35.330	67.915	74.000	54.000	Pass
11 (Average)	2459.500	32.468	60.403	92.871			
11 (Average)	2483.500	32.586	17.836	50.421	74.000	54.000	Pass

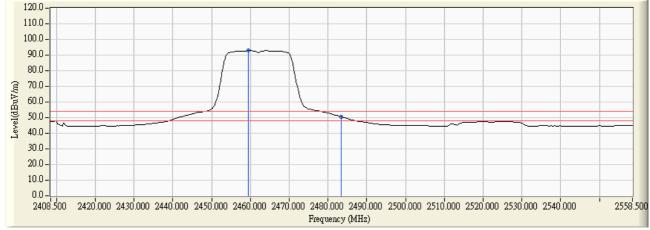
Figure Channel 11:

Vertical (Peak)





Vertical (Average)



- 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.

7. Occupied Bandwidth

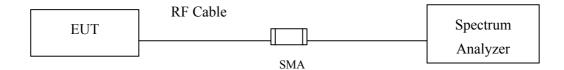
7.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2012
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2012
Х	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2012

Note:

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

7.2. Test Setup



7.3. Limits

The minimum bandwidth shall be at least 500 kHz.

7.4. Test Procedure

The EUT was setup according to ANSI C63.4, 2003; tested according to DTS test procedure of ANSI C63.10: 2009 for compliance to FCC 47CFR 15.247 requirements. Set RBW = 1-5% of the emission bandwidth, VBW \geq 3*RBW

7.5. Uncertainty

 \pm 150Hz

7.6. Test Result of Occupied Bandwidth

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

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
1	2412	10300	>500	Pass

Figure Channel 1:

lent Spectrum Analyzer - Sw RL RF 50 ឆ enter Freg 2.4120	AC	INT REF	Avg Type:			M Sep 06, 2012	Frequency
riter Freq 2.4120	PNO: Fast G IFGain:Low	Trig: Free Run #Atten: 30 dB	org type.		TYP	E MWWWWW F P N N N N N	Auto Tur
Mkr2 2.406 85 GHz طB/div Ref 20.00 dBm 1.10 dBm							
99 0.0		21	3			1.87 dBm	Center Fre
00	mag		www			1.01 dbii	2.412000000 G
).0	al al				e		Start Fr
				We VY	Manul		2.387000000 G
							Stop Fr
1.0							2.437000000 G
enter 2.41200 GHz Res BW 300 kHz	#VB1	N 1.0 MHz		Sweep '		0.00 MHz 1001 pts)	CF St
R MODE TRC SCL	× 2.411 65 GHz	Y 11	JNCTION FUNC	CTION WIDTH	FUNCTIO	IN VALUE	5.000000 M Auto N
2 N 1 F 3 N 1 F	2.406 85 GHz 2.417 15 GHz	1.10 dBm 0.90 dBm					Freq Offs
4 5 3							0
7 3 9							
2				STATUS			

Product	:	JukeBlox Networked Media Module
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6	2437	10300	>500	Pass

Figure Channel 6:

ilent Spectrum Analyzer - Sw RL RF 50 S	2 AC	INT REF	ALIGNAUTO	10:17:21 AM Sep 06, 2012	Frequency
enter Freq 2.4370	100000 GHz PNO: Fast G IFGain:Low	Trig: Free Run #Atten: 30 dB	Avg Type: Log-Pwr	TRACE 1 2 3 4 5 6 TYPE M WWWWWW DET P N N N N N	
dB/div Ref 20.00	dBm		Mkr	2 2.431 85 GHz 2.86 dBm	Auto Tur
		2 1 2		3.24 dBm	Center Fre
.00	Jun wood		- Chronie		2.437000000 G
0.0	Manner		Where and	Mr. Aug. Company and a second	Start Fr
	Sec. all.		.sh. e.	THUN M	2.412000000 G
0.0					Stop Fr
0.0					2.462000000 G
enter 2.43700 GHz Res BW 300 kHz	#VBV	V 1.0 MHz	Sweep	Span 50.00 MHz 1.00 ms (1001 pts)	CF St 5.000000 M
R MODE TRO SCL 1 N 1 f	× 2.436 75 GHz	9.24 dBm	JNCTION FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> M
2 N 1 f 3 N 1 f 4	2.431 85 GHz 2.442 15 GHz	2.86 dBm 2.81 dBm			Freq Offs
5 5 7					0
3					
0 1 2					
3			STATUS		

Product	:	JukeBlox Networked Media Module
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
11	2462	12300	>500	Pass

Figure Channel 11:

Agilent Spectrum Analyzer - Swep	ot SA		an an			
RL RF 50 Ω Center Freq 2.46200	AC 0000 GHz	INT REF	ALIO Avg Type: Lo	og-Pwr TRAG	M Sep 06, 2012	Frequency
	PNO: Fast G	J Trig: Free Run #Atten: 30 dB		Mkr2 2.455		Auto Tune
10 dB/div Ref 20.00 dl	Bm				17 dBm	
10.0 0.00	-Nort	mm	my 3		1.85 dBm	Center Fred 2.462000000 GHz
-10.0	J.M.		- Vy			
-20.0 -30.0 -40.0	where he had a second s			Denter		Start Fred 2.437000000 GH2
-50.0						Stop Fred
-60.0						2.487000000 GH:
Center 2.46200 GHz #Res BW 300 kHz	#VBV	/ 1.0 MHz	Sv	Span 5 weep 1.00 ms (0.00 MHz 1001 pts)	CF Ster 5.000000 MH
MKR MODE TRC SCL	× 2.461 40 GHz	7 7.84 dBm	FUNCTION FUNCTION	ON WIDTH FUNCTI	ON VALUE	<u>Auto</u> Mar
2 N 1 f 3 N 1 f 4 5 6	2.455 85 GHz 2.468 15 GHz	1.17 dBm 1.61 dBm				Freq Offse 0 Ha
7 8				2		
9 10 11						
12			- 			
мsg 🤳 Alignment Completed				STATUS		

Product	:	JukeBlox Networked Media Module
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
1	2412	16550	>500	Pass

Figure Channel 1:

Agilent Spectrum Analyzer - Swept					
RL RF 50Ω Center Freq 2.412000	PNO: Fast 😱	INT REF Trig: Free Run	ALIGNAUTO Avg Type: Log-Pwr	10:27:08 AM Sep 06, 2012 TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P N N N N N	Frequency
10 dB/div Ref 20.00 dB	IFGain:Low	#Atten: 30 dB	Mkr	2 2.403 70 GHz -1.47 dBm	Auto Tun
-og 10.0 0.00	2	1	3	-0.38 dBm	Center Fre 2.412000000 G⊦
20.0 30.0 40.0 cc ¹ 44/ ¹⁴ 4- ¹⁴ 1 ¹⁴ 2 ¹ 4	million of the		and the second s	and the stranger and a stranger	Start Fre 2.387000000 GF
50.0					Stop Fre 2.437000000 GH
enter 2.41200 GHz Res BW 300 kHz	#VBW	1.0 MHz		Span 50.00 MHz 1.00 ms (1001 pts)	CF Ste 5.000000 Mi
MODE TEC SCI 1 N 1 f 2 N 1 f 3 N 1 f 4 - - - 5 - - - 6 - - - 7 - - - 8 - - - 9 - - - 10 - - -	X 2.414 10 GHz 2.403 70 GHz 2.420 25 GHz	Y F 5.62 dBm -1.47 dBm -1.20 dBm	INCTION FUNCTION WIDTH	FUNCTION VALUE	Auto Ma Freq Offs 0 H
11 12 SG			STATUS		

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

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6	2437	16500	>500	Pass

Figure Channel 6:

Agilent Spectrum Analyzer - Swe					
RL RF 50 Ω Center Freq 2.4370		INT REF	ALIGNAUT Avg Type: Log-Pw	r TRACE 123456	Frequency
10 dB/div Ref 20.00 d	IFGain:Low	₩Atten: 30 dB	Mł	r2 2.428 70 GHz 1.50 dBm-	Auto Tun
-og 10.0 0.00	<u></u>	1	3	-0.07 dBm	Center Fre 2.437000000 GH
20.0 30.0 40.0	wood home was			hynora ar Mary Warran yr ar yr	Start Fre 2.412000000 GF
50.0 50.0 70.0					Stop Fre 2.462000000 GH
enter 2.43700 GHz Res BW 300 kHz		N 1.0 MHz		Span 50.00 MHz 1.00 ms (1001 pts)	CF Ste 5.000000 Mi
MODE TRC SCL 1 N 1 f 2 N 1 f 3 N 1 f 4 - - - 5 - - - 6 - - -	× 2.431 80 GHz 2.428 70 GHz 2.445 20 GHz	Y 5.93 dBm -1.50 dBm -0.52 dBm	FUNCTION FUNCTION WID	TH FUNCTION VALUE	Auto Ma Freq Offs 0 H
7 8 9 10 11 11 12 11					
SG			STAT	rus	

Product	:	JukeBlox Networked Media Module
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
11	2462	16450	>500	Pass

Figure Channel 11:

Agilent Spectrum Analyzer - Swept SA				
ଅଧି RL RF 50 ହ ନ⊄ Center Freq 2.462000000 GHz PN0: Fast	INT REF	ALIGN AUTO Avg Type: Log-Pwr	10:39:39 AM Sep 06, 2012 TRACE 1 2 3 4 5 6 TYPE MWWWWW	Frequency
IFGain:Lov		Mkr	2 2.453 75 GHz -0.35 dBm	Auto Tune
10.0 0.00 -10.0		and 3	0.02 dBm	Center Free 2.462000000 GH:
-20.0 -30.0 -40.0			manna	Start Free 2.437000000 GH
-60.0				Stop Fre 2.487000000 G⊦
	BW 1.0 MHz		Span 50.00 MHz 1.00 ms (1001 pts)	CF Ste 5.000000 MH
MKR MODE TER SQL X 1 N 1 f 2.464 25 GHz 2 N 1 f 2.453 75 GHz 3 N 1 f 2.470 20 GHz 4 - - - 5 - - - 6 - - - 7 - - - 8 - - - 9 - 10 - -	6.02 dBm -0.35 dBm -0.12 dBm		FUNCTION VALUE	Auto Ma Freq Offse 0 H
11		STATUS		

8. Power Density

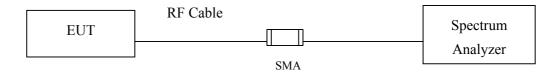
8.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2012
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2012
Х	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.

8.2. Test Setup



8.3. Limits

The transmitted power density averaged over any 1 second interval shall not be greater +8dBm in any 3kHz bandwidth.

8.4. Test Procedure

The EUT was setup according to ANSI C63.4, 2003; tested according to DTS test procedure of ANSI C63.10: 2009 for compliance to FCC 47CFR 15.247 requirements. Set RBW= 100 kHz, VBW \geq 300KHz, SPAN to 5-30 % greater than the EBW, Scale the observed power level to an equivalent value in 3 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log (3 kHz/100 kHz = -15.2 dB).

8.5. Uncertainty

 \pm 1.27 dB

8.6. Test Result of Power Density

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

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	-9.633	< 8dBm	Pass

Figure Channel 1:

gilent Spectrum Analyzer - S RL RF 50	Ω AC	INT REF	- Al	.IGN AUTO	10:15:32 AM Sep 06, 2013	
enter Freq 2.412	000000 GHz PN0: Fast		Avg Type: L Avg Hold:>1	.og-Pwr	TRACE 1 2 3 4 5 TYPE MWWWWW DET P N N N N	Frequency
Ref Offset - 0 dB/div Ref 4.80 (#Atten: 30 dB		Mkr′	1 2.410 98 GHz -9.633 dBm	Auto Tun
5.20						Center Fre 2.412000000 GH
5.2 25.2	Manna		Maria		when have a first of the second secon	Start Fro 2.402000000 Gi
5.2 M 5.2					\	Stop Fr 2.422000000 G
5.2						CF Sto 2.000000 M Auto M
5.2						Freq Offs
5.2						
enter 2.41200 GHz Res BW 100 kHz	#VBI	₩ 300 kHz	s	weep	Span 20.00 MHz 1.93 ms (1001 pts	
G 🜙 Alignment Comple	ted			STATUS		1

Product	:	JukeBlox Networked Media Module
Test Item	:	Power Density Data
Test Site	:	No.3OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
6	2437	-7.578	< 8dBm	Pass

Figure Channel 6:

enter Freq	50 Ω AC 2.437000000] Trig: Free F	T REF	Avg Type Avg Hold:		TRACI	1 Sep 06, 2012 1 2 3 4 5 6 E MWWWWW	Frequency
dB/div Ref	Offset -15.2 dB 4.80 dBm	PNO: Fast 🆵 IFGain:Low	#Atten: 30 d		inghiota.		DE 2.437	^₁ ₽ NNNNN 98 GHz 78 dBm	Auto Tur
20		r	MM	1 Mrs	MM	Δ. a			Center Fre 2.437000000 GF
5.2 5.2	m V						M	M.	Start Fr 2.427000000 G
5.2									Stop Fr 2.447000000 G
5.2									CF Sto 2.000000 M <u>Auto</u> M
5.2									Freq Offs 0
5.2									
enter 2.43700 Res BW 100 I		#VBW	300 kHz			Sweep 1		0.00 MHz 1001 pts)	

:	JukeBlox Networked Media Module
:	Power Density Data
:	No.3 OATS
:	Mode 1: Transmit (802.11b 1Mbps) (2462MHz)
	:

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
11	2462	-7.473	< 8dBm	Pass

Figure Channel 11:

enter Fi	RF 50 Ω A req 2.462000	000 GHz PNO: Fast	Trig: Free			ALIGN AUTO : Log-Pwr >100/100	TRAC TYP	M Sep 06, 2012 E 1 2 3 4 5 6 E M WWWWWW T P N N N N N	Frequency
0 dB/div	Ref Offset -15.2 Ref 4.80 dBm		#Atten: 30) dB		Mkr1	2.460	98 GHz 73 dBm	Auto Tun
5.20		mm	1 NAVA	Mr	m	٥			Center Fre 2.462000000 GH
5.2 5.2	man		`````````````````````````````````	V			why why	Ly L	Start Fro 2.452000000 GI
5.2								- J	Stop Fr 2.472000000 G
5.2									CF Sto 2.000000 M <u>Auto</u> M
5.2									Freq Offs 0
enter 2.4	6200 GHz						Span 2	0.00 MHz	
Res BW		#VE	3W 300 kHz			Sweep 1			

Product	:	JukeBlox Networked Media Module
Test Item	:	Power Density Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	-12.460	< 8dBm	Pass

Figure Channel 1:

RL enter F	RF 50 Ω req 2.412000		INT REF	Avg Type	ALIGNAUTO	10:29:17 AM Sep 06, 201 TRACE 1 2 3 4 5	
		PNO: Fast 🕞 IFGain:Low	⊡່ Trig: Free Run #Atten: 30 dB	Avg Hold:	>100/100	TYPE MWWWW DET P N N N N	N Auto Tur
) dB/div	Ref Offset -15.2 Ref 4.80 dBr					-12.460 dBm	
							Center Fre
.20			↓ 1				2.412000000 Gł
5.2	Antonentin	understand	water man	and the second	what	Amm	Otort Er.
5.2			۲.J				Start Fre 2.402000000 Gi
ww	-5 ⁷					- WWW	
5.2 And T						- Phan	
5.2							2.422000000 G
5.2				_			CF Ste
5.2							2.000000 M Auto M
0.2							
5.2				-			Freq Offs
5.2				-			
	41200 GHz 100 kHz	#\/R\/	/ 300 kHz		Sween 1	Span 20.00 MH: .93 ms (1001 pts	
IG DVV		#VDV	4 500 MIZ		STATUS		,

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

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
6	2437	-12.661	< 8dBm	Pass

Figure Channel 6:

enter F	RF 50 Ω req 2.43700		SHZ PNO: Fast 😱	Trig: Free #Atten: 30		Avg Type Avg Hold	ALIGNAUTO :: Log-Pwr :>100/100	10:37:21 AM Sep 06, 20 TRACE 1 2 3 4 5 TYPE M WWWW DET P N N N N	Frequency
dB/div	Ref Offset -15. Ref 4.80 dB	2 dB	Gain:Luw	inden. ot			Mkr1	l 2.431 98 GH -12.661 dBi	z Auto Tun
.20		1							Center Fre 2.437000000 GH
5.2	Multimeter	yenlown	An the second and the second and the second se	noralistania b	Jame	umlroom A	mar Anna	how hy	Start Fre 2.427000000 Gi
5.2 mm ^{n/~}									Stop Fr 2.447000000 G
5.2									CF Sto 2.000000 M <u>Auto</u> M
5.2									Freq Offs 0
5.2									
	43700 GHz 100 kHz		#VBW	300 kHz			Sweep 1	Span 20.00 MH I.93 ms (1001 pt	
G							STATUS		

Product	:	JukeBlox Networked Media Module
Test Item	:	Power Density Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
11	2462	-12.946	< 8dBm	Pass

Figure Channel 11:

S.20	:-15.2 dB	Sain:Low	#Atten: 30	ab		Mkr1	1000000 100000000000000000000000000000	P NNNNN	Select Trace
5.20	▲1				Mkr1 2.456 96 GHz -12.946 dBm				Trace 1
5.2									Clear Wri
5.2	ntmontmon	Amandra	malma	mantin	whent	whiling	manny		Trace Avera
5.2 Www.armar 5.2								W oly	Max He
.2									Min He
.2								[View/Blan Vie
enter 2.46200 GHz	z	#\/B\#	300 kHz			Swoon	Span 20. .93 ms (1)		М с 1 с

9. EMI Reduction Method During Compliance Testing

No modification was made during testing.

Attachment 1: EUT Test Photographs

Attachment 2: EUT Detailed Photographs