



# Test Report (Class II Permissive Change)

Product Name	JukeBlox Networked Media Module	
Model No	CX870-3B-D,CX870-3B-D60	
FCC ID.	ZQO-CX8703B	

Applicant	STANDARD MICROSYSTEMS CORPORATION
Address	3930, EAST RAY ROAD SUITE 200, PHOENIX,
	ARIZONA, 85044-7176,UNITED STATES

Date of Receipt	March 19, 2012
Issue Date	April 09, 2012
Report No.	123296R-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: April 09, 2012

Report No.: 123296R-RFUSP42V01



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

Product Name	JukeBlox Networked Media Module		
Applicant	STANDARD MICROSYSTEMS CORPORATION		
Address	3930, EAST RAY ROAD SUITE 200, PHOENIX, ARIZONA,		
	85044-7176,UNITED STATES		
Manufacturer	DONG GUAN G-COM COMPUTER CO., LTD		
Model No.	CX870-3B-D,CX870-3B-D60		
FCC ID.	ZQO-CX8703B		
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: 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: Dita Fluang

( Senior Adm. Specialist / Rita Huang )

Tested By : Jack Hsu

(Engineer / Jack Hsu)

Approved By :

(Manager / Vincent Lin)



## TABLE OF CONTENTS

Description		Page	
1.	GENERAL INFORMATION	4	
1.1.	EUT Description		
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		
2.1.	Test Equipment	(	
2.2.	Test Setup		
2.3.	Limits	10	
2.4.	Test Procedure	10	
2.5.	Uncertainty	10	
2.6.	Test Result of Conducted Emission	11	
3.	Peak Power Output	19	
3.1.	Test Equipment	19	
3.2.	Test Setup		
3.3.	Limits		
3.4.	Test Procedure	19	
3.5.	Uncertainty	19	
3.6.	Test Result of Peak Power Output		
4.	Radiated Emission	24	
4.1.	Test Equipment	24	
4.2.	Test Setup	25	
4.3.	Limits	26	
4.4.	Test Procedure	27	
4.5.	Uncertainty	27	
4.6.	Test Result of Radiated Emission.	28	
5.	Band Edge	48	
5.1.	Test Equipment	48	
5.2.	Test Setup		
5.3.	Limits		
5.4.	Test Procedure		
5.5.	Uncertainty		
5.6.	Test Result of Band Edge	51	
6.	EMI Reduction Method During Compliance Testing	67	
A 441 4 1 .	FUT Total Photos would		

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.	CX870-3B-D,CX870-3B-D60		
FCC ID.	ZQO-CX8703B		
Frequency Range	2412-2462MHz for 802.11b/g		
Number of Channels	Channels 802.11b/g: 11		
Data Speed	peed 802.11b: 1-11Mbps, 802.11g: 6-54Mbps		
Type of Modulation	802.11b:DSSS (DBPSK, DQPSK, CCK)		
	802.11g:OFDM (BPSK, QPSK, 16QAM, 64QAM)		
Antenna Type	PIFA, PCB		
Antenna Gain Refer to the table "Antenna List"			
Channel Control	Auto		

#### **Antenna List**

Model Number of Module	Antenna Type / Model Number	Antenna Gain	Final test
CX870-3B-D	D PIFA Antenna / MSA-0354-2G4C1-A1, black 300mm cable		Yes
	PIFA Antenna / MSA-0345-2G4C1-A1 gray 300mm cable		
	PIFA Antenna / MSA-0354-2G4C1-A3, black 200mm cable	2 dBi	Yes
	PIFA Antenna / MSA-0345-2G4C1-A3, gray 200mm cable		
	PIFA Antenna / MSA-5103-2G4C1-A1, black 200mm cable	2 dBi	N/A
GYYOTO AD D (0	PIFA Antenna / MSA-5403-2G4C1-A1, gray 200mm cable		
CX870-3B-D60	PIFA Antenna / MSA-5103-2G4C1-A3, black 300mm cable	1.7 dBi	N/A
	PIFA Antenna / MSA-5403-2G4C1-A3, gray 300mm cable		
	PIFA Antenna / MSA-5103-2G4C1-A2, black 400mm cable	1.4 dBi	N/A
	PIFA Antenna / MSA-5403-2G4C1-A2, gray 400mm cable		

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

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



#### Note:

- 1. The EUT is a JukeBlox Networked Media Module with a built-in 2.4GHz WLAN transceiver.
- 2. The antenna of EUT is conforming to FCC 15.203.
- 3. This is requesting a Class II permissive change for FCC ID: ZQO-CX8703B. Originally grantedon 07/12/2011.

The differences are listed as below:

Change #1: Add model number: CX870-3B-D,CX870-3B-D60

Change #2: Add the shielding in bottom side of PCB.

Change #3: Add memory size of SDRAM

Change #4: The original granted is dipole antenna, add four PIFA antennas.

The different of the each model is shown as below:

Model Number	Description		
	1. Add SDRAM, 32M (Hynix / Winbond)		
CX870-3B-D	2. Have shield on bottom side		
	3. ANT-PIFA (300mm), black and gray		
	1. Add SDRAM, 64M (ISSI IS42S16320B-6TL / ISSI IS42S16320D-6TL)		
CX870-3B-D60	2. Have shield on bottom side		
	3. ANT-PIFA (with 200mm cable, 300mm cable, 400mm cable), black and gray		

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



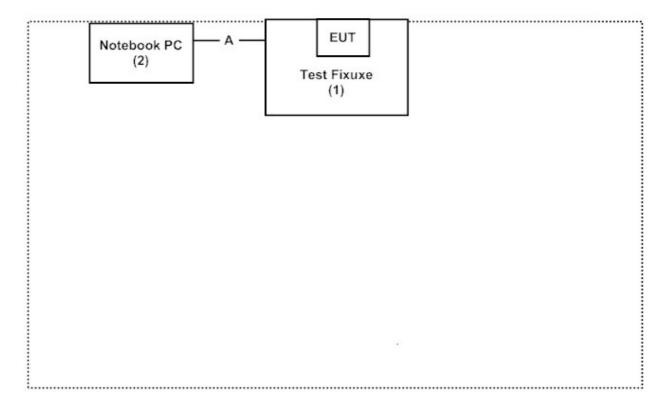
## 1.3. Tested System Details

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

Product		Manufacturer	Model No.	Serial No.	FCC ID	Power Cord
1	Test Fixuxe	Lite-on	N/A	N/A	N/A	N/A
2	Notebook PC	DELL	PPT	N/A	DoC	Non-Shielded, 0.8m

	Signal Cable Type	Signal cable Description
4	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) Execute command on the notebook.
- (3) Configure the test mode, the test channel, and the data rate.
- (4) Start the continuous transmission.
- (5) Verify that the EUT works properly.



## 1.6. Test Facility

Ambient conditions in the laboratory:

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

The related certificate for our laboratories about the test site and management system can be downloaded from

QuieTek Corporation's Web Site: http://www.quietek.com/tw/ctg/cts/accreditations.htm

The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site: <a href="http://www.quietek.com/">http://www.quietek.com/</a>

Site Description: File on

**Federal Communications Commission** 

FCC Engineering Laboratory 7435 Oakland Mills Road Columbia, MD 21046

Registration Number: 92195

Accreditation on NVLAP NVLAP Lab Code: 200533-0

Site Name: Quietek Corporation Site Address: No.5-22, Ruishukeng,

Linkou Dist. New Taipei City 24451,

Taiwan, R.O.C.

TEL: 886-2-8601-3788 / FAX: 886-2-8601-3789

E-Mail: service@quietek.com

FCC Accreditation Number: TW1014



## 2. Conducted Emission

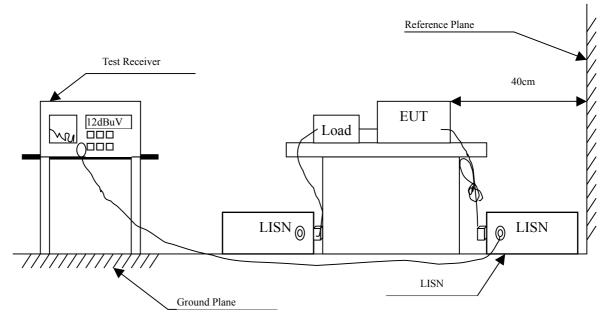
## 2.1. Test Equipment

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, 2011	
2	L.I.S.N.	R & S	ESH3-Z5/825016/6	May, 2011	EUT
3	L.I.S.N.	Kyoritsu	KNW-407/8-1420-3	May, 2011	Peripherals
4	Pulse Limiter	R & S	ESH3-Z2	May, 2011	
5	No.1 Shielded Room			N/A	

Note: All instruments are calibrated every one year.

## 2.2. Test Setup





#### 2.3. Limits

FCC Part 15 Subpart C Paragraph 15.207 (dBuV) Limit								
Frequency	Limits							
MHz	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) - Hynix SDRAM

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV	dB	dBuV
Line 1					
Quasi-Peak					
0.166	9.840	34.830	44.670	-20.873	65.543
0.232	9.840	27.160	37.000	-26.657	63.657
0.470	9.840	25.610	35.450	-21.407	56.857
0.748	9.850	20.960	30.810	-25.190	56.000
1.306	9.850	20.440	30.290	-25.710	56.000
18.806	10.130	12.040	22.170	-37.830	60.000
Average					
0.166	9.840	28.970	38.810	-16.733	55.543
0.232	9.840	19.620	29.460	-24.197	53.657
0.470	9.840	18.790	28.630	-18.227	46.857
0.748	9.850	16.750	26.600	-19.400	46.000
1.306	9.850	14.770	24.620	-21.380	46.000
18.806	10.130	7.060	17.190	-32.810	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



Test Item : Conducted Emission Test

Power Line : Line 2

Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437MHz) - Hynix SDRAM

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV	dB	dBuV
Line 2					
Quasi-Peak					
0.170	9.840	32.930	42.770	-22.659	65.429
0.263	9.840	23.370	33.210	-29.561	62.771
0.420	9.840	29.160	39.000	-19.286	58.286
0.787	9.840	17.230	27.070	-28.930	56.000
1.306	9.850	19.810	29.660	-26.340	56.000
2.861	9.860	18.740	28.600	-27.400	56.000
Average					
0.170	9.840	25.270	35.110	-20.319	55.429
0.263	9.840	11.050	20.890	-31.881	52.771
0.420	9.840	22.350	32.190	-16.096	48.286
0.787	9.840	8.700	18.540	-27.460	46.000
1.306	9.850	14.970	24.820	-21.180	46.000
2.861	9.860	12.960	22.820	-23.180	46.000

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



Test Item : Conducted Emission Test

Power Line : Line 1

Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437MHz) - Winbond SDRAM

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV	dB	dBuV
Line 1					_
Quasi-Peak					
0.193	9.840	30.360	40.200	-24.571	64.771
0.291	9.840	21.190	31.030	-30.941	61.971
0.416	9.840	27.570	37.410	-20.990	58.400
0.783	9.850	22.280	32.130	-23.870	56.000
1.666	9.860	21.970	31.830	-24.170	56.000
11.845	10.053	16.100	26.153	-33.847	60.000
Average					
0.193	9.840	21.100	30.940	-23.831	54.771
0.291	9.840	17.980	27.820	-24.151	51.971
0.416	9.840	20.510	30.350	-18.050	48.400
0.783	9.850	16.320	26.170	-19.830	46.000
1.666	9.860	15.530	25.390	-20.610	46.000
11.845	10.053	10.710	20.763	-29.237	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



Test Item : Conducted Emission Test

Power Line : Line 2

Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437MHz) - Winbond SDRAM

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV	dB	dBuV
Line 2					
Quasi-Peak					
0.150	9.843	37.190	47.033	-18.967	66.000
0.173	9.840	31.350	41.190	-24.153	65.343
0.404	9.840	31.860	41.700	-17.043	58.743
0.748	9.840	21.210	31.050	-24.950	56.000
1.048	9.840	20.380	30.220	-25.780	56.000
11.408	10.105	15.400	25.505	-34.495	60.000
Average					
0.150	9.843	18.790	28.633	-27.367	56.000
0.173	9.840	21.000	30.840	-24.503	55.343
0.404	9.840	28.400	38.240	-10.503	48.743
0.748	9.840	14.640	24.480	-21.520	46.000
1.048	9.840	15.050	24.890	-21.110	46.000
11.408	10.105	10.820	20.925	-29.075	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



Test Item : Conducted Emission Test

Power Line : Line 1

Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437MHz) - ISSI IS42S16320B-6TL

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV	dB	dBuV
Line 1					_
Quasi-Peak					
0.158	9.841	34.500	44.341	-21.430	65.771
0.271	9.840	22.920	32.760	-29.783	62.543
0.404	9.840	30.020	39.860	-18.883	58.743
0.470	9.840	29.850	39.690	-17.167	56.857
0.677	9.840	19.040	28.880	-27.120	56.000
1.685	9.860	21.500	31.360	-24.640	56.000
Average					
0.158	9.841	18.390	28.231	-27.540	55.771
0.271	9.840	17.550	27.390	-25.153	52.543
0.404	9.840	26.260	36.100	-12.643	48.743
0.470	9.840	25.270	35.110	-11.747	46.857
0.677	9.840	11.690	21.530	-24.470	46.000
1.685	9.860	16.430	26.290	-19.710	46.000

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



Test Item : Conducted Emission Test

Power Line : Line 2

Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437MHz) - ISSI IS42S16320B-6TL

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV	dB	dBuV
Line 2					
Quasi-Peak					
0.150	9.843	32.260	42.103	-23.897	66.000
0.166	9.840	34.340	44.180	-21.363	65.543
0.228	9.840	26.860	36.700	-27.071	63.771
0.400	9.840	28.330	38.170	-20.687	58.857
0.759	9.840	22.750	32.590	-23.410	56.000
12.041	10.116	15.000	25.116	-34.884	60.000
Average					
0.150	9.843	20.380	30.223	-25.777	56.000
0.166	9.840	23.840	33.680	-21.863	55.543
0.228	9.840	18.780	28.620	-25.151	53.771
0.400	9.840	24.090	33.930	-14.927	48.857
0.759	9.840	14.940	24.780	-21.220	46.000
12.041	10.116	9.820	19.936	-30.064	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



Test Item : Conducted Emission Test

Power Line : Line 1

Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437MHz) - ISSI IS42S16320D-6TL

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV	dB	dBuV
Line 1					_
Quasi-Peak					
0.170	9.840	32.870	42.710	-22.719	65.429
0.209	9.840	24.830	34.670	-29.644	64.314
0.412	9.840	30.610	40.450	-18.064	58.514
0.494	9.840	23.250	33.090	-23.081	56.171
0.685	9.840	20.250	30.090	-25.910	56.000
1.572	9.860	22.620	32.480	-23.520	56.000
Average					
0.170	9.840	18.460	28.300	-27.129	55.429
0.209	9.840	17.070	26.910	-27.404	54.314
0.412	9.840	24.980	34.820	-13.694	48.514
0.494	9.840	15.940	25.780	-20.391	46.171
0.685	9.840	15.840	25.680	-20.320	46.000
1.572	9.860	16.070	25.930	-20.070	46.000

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



Test Item : Conducted Emission Test

Power Line : Line 2

Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437MHz) - ISSI IS42S16320D-6TL

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV	dB	dBuV
Line 2					_
Quasi-Peak					
0.162	9.840	33.930	43.770	-21.887	65.657
0.216	9.840	27.340	37.180	-26.934	64.114
0.283	9.840	21.990	31.830	-30.370	62.200
0.412	9.840	30.090	39.930	-18.584	58.514
0.783	9.840	22.850	32.690	-23.310	56.000
1.349	9.850	19.820	29.670	-26.330	56.000
Average					
0.162	9.840	28.890	38.730	-16.927	55.657
0.216	9.840	19.750	29.590	-24.524	54.114
0.283	9.840	20.170	30.010	-22.190	52.200
0.412	9.840	24.510	34.350	-14.164	48.514
0.783	9.840	16.830	26.670	-19.330	46.000
1.349	9.850	12.570	22.420	-23.580	46.000

- 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

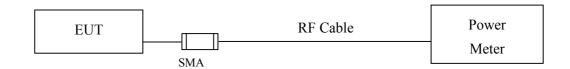
## 3.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Power Meter	Anritsu	ML2495A/6K00003357	May, 2011
X	Power Sensor	Anritsu	MA2411B/0738448	Jun, 2011
Note:				

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

## 3.2. Test Setup

Conducted Measurement



## 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 Mar. 2005 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

## 3.5. Uncertainty

± 1.27 dB



## 3.6. Test Result of Peak Power Output

Product : JukeBlox Networked Media Module

Test Item : Peak Power Output Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11b 1Mbps) - Hynix SDRAM

Channel No.	Frequency	Average Power For different Data Rate (Mbps)			Peak Power	Required	Result	
Channel No	(MHz)	1	2	5.5	11	1	Limit	Kesuit
			Measurement Level (dBm)					
01	2412	19.23				21.20	<30dBm	Pass
06	2437	19.28	19.23	19.19	19.13	21.12	<30dBm	Pass
11	2462	17.20				19.47	<30dBm	Pass



Test Item : Peak Power Output Data

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11g 6Mbps) - Hynix SDRAM

	Francisco		F		•	e Power		s)		Peak Power	Required	
Channel No	Frequency (MHz)	6	9	12	18	24	36	48	54	6	Limit	Result
				N	Aeasure	ement L	evel (d	Bm)				
01	2412	15.61	-						-	23.52	<30dBm	Pass
06	2437	17.62	17.58	17.51	17.49	17.45	17.43	17.39	17.34	23.96	<30dBm	Pass
11	2462	12.75								21.72	<30dBm	Pass



Test Item : Peak Power Output Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11b 1Mbps) - ISSI IS42S16320B-6TL

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)				Peak Power	Required	Result
		1	2	5.5	11	1	Limit	Result
			Measur	ement Lev	vel (dBm)			
01	2412	19.40				21.52	<30dBm	Pass
06	2437	19.53	19.46	19.41	19.35	21.47	<30dBm	Pass
11	2462	17.28				19.69	<30dBm	Pass



Test Item : Peak Power Output Data

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11g 6Mbps) - ISSI IS42S16320B-6TL

	Γ		F		•	e Power		s)		Peak Power	De serios d	
Channel No	Frequency (MHz)	6	9	12	18	24	36	48	54	6	Required  Limit	Result
				N	Measure	ement L	evel (d	Bm)				
01	2412	15.67							!	23.72	<30dBm	Pass
06	2437	17.9	17.87	17.84	17.79	17.75	17.73	17.7	17.69	24.16	<30dBm	Pass
11	2462	12.70								21.99	<30dBm	Pass



## 4. Radiated Emission

## 4.1. Test Equipment

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

Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
⊠Site # 3	X	Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2011
	X	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2011
	X	Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2011
	X	Pre-Amplifier	Agilent	8447D/2944A09549	Sep., 2011
	X	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2011
	X	Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2011
	X	Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2012
	X	Controller	QuieTek	QTK-CONTROLLER/ CTRL3	N/A
	X	Coaxial Switch	Anritsu	MP59B/6200265729	N/A

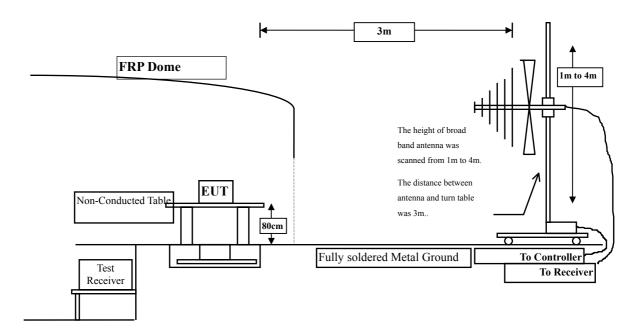
Note: 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

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

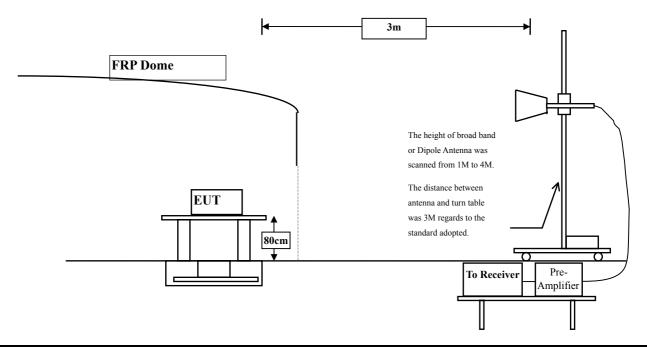


## 4.2. Test Setup

Radiated Emission Below 1GHz



Radiated Emission Above 1GHz



Page: 25 of 70



## 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 Mar. 2005 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

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

The antenna is scanned between 1 meter and 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.4:2003 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) - Hynix SDRAM

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
<b>Peak Detector:</b>					
4824.000	0.428	47.370	47.799	-26.201	74.000
7236.000	7.177	39.680	46.857	-27.143	74.000
9648.000	8.019	42.176	50.196	-23.804	74.000
<b>Average Detector:</b>					
Vertical					
<b>Peak Detector:</b>					
4824.000	0.836	45.100	45.937	-28.063	74.000
7236.000	7.676	39.150	46.826	-27.174	74.000
9648.000	8.556	43.780	52.337	-21.663	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.



Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2437 MHz) - Hynix SDRAM

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
<b>Peak Detector:</b>					
4874.000	0.076	44.400	44.477	-29.523	74.000
7311.000	7.512	39.960	47.472	-26.528	74.000
9748.000	7.630	42.731	50.361	-23.639	74.000
Average Detector:					
Vertical					
<b>Peak Detector:</b>					
4874.000	0.532	44.530	45.062	-28.938	74.000
7311.000	8.089	38.420	46.509	-27.491	74.000
9748.000	8.266	43.726	51.993	-22.007	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.



Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462 MHz) - Hynix SDRAM

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4924.000	0.191	42.470	42.661	-31.339	74.000
7386.000	8.373	38.190	46.564	-27.436	74.000
9848.000	7.964	42.150	50.114	-23.886	74.000
Average Detector:					
Vertical					
Peak Detector:					
4924.000	0.805	41.440	42.245	-31.755	74.000
7386.000	9.180	37.530	46.710	-27.290	74.000
9848.000	8.801	42.680	51.481	-22.519	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.



Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz) - Hynix SDRAM

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
<b>Peak Detector:</b>					
4824.000	0.428	41.430	41.859	-32.141	74.000
7236.000	7.177	39.540	46.717	-27.283	74.000
9648.000	8.019	44.290	52.310	-21.690	74.000
<b>Average Detector:</b>					
Vertical					
Peak Detector:					
4824.000	0.836	39.850	40.687	-33.313	74.000
7236.000	7.676	38.850	46.526	-27.474	74.000
9648.000	8.556	39.500	48.057	-25.943	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.



Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437 MHz) - Hynix SDRAM

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4874.000	0.076	42.850	42.927	-31.073	74.000
7311.000	7.512	39.510	47.022	-26.978	74.000
9748.000	7.630	46.235	53.865	-20.135	74.000
Average Detector:					
Peak Detector:					
4874.000	0.532	41.220	41.752	-32.248	74.000
7311.000	8.089	38.790	46.879	-27.121	74.000
9748.000	8.266	47.010	55.277	-18.723	74.000
Average Detector:					
9748.000	8.266	31.070	39.337	-14.663	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.



Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462 MHz) - Hynix SDRAM

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4924.000	0.191	40.100	40.291	-33.709	74.000
7386.000	8.373	37.460	45.834	-28.166	74.000
9848.000	7.964	38.870	46.834	-27.166	74.000
Average Detector:					
Vertical					
Peak Detector:					
4924.000	0.805	41.170	41.975	-32.025	74.000
7386.000	9.180	37.730	46.910	-27.090	74.000
9848.000	8.801	39.430	48.231	-25.769	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.



Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz) - ISSI IS42S16320B-6TL

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
<b>Peak Detector:</b>					
4824.000	0.428	43.480	43.909	-30.091	74.000
7236.000	7.177	38.910	46.087	-27.913	74.000
9648.000	8.019	44.352	52.372	-21.628	74.000
Average Detector:					
Vertical					
Peak Detector:					
4824.000	0.836	42.560	43.397	-30.603	74.000
7236.000	7.676	38.530	46.206	-27.794	74.000
9648.000	8.556	44.180	52.737	-21.263	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.



Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2437 MHz) - ISSI IS42S16320B-6TL

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
<b>Peak Detector:</b>					
4874.000	0.076	44.270	44.347	-29.653	74.000
7311.000	7.512	38.780	46.292	-27.708	74.000
9748.000	7.630	43.601	51.231	-22.769	74.000
Average Detector:					
Vertical					
<b>Peak Detector:</b>					
4874.000	0.532	42.970	43.502	-30.498	74.000
7311.000	8.089	37.770	45.859	-28.141	74.000
9748.000	8.266	44.952	53.219	-20.781	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.



Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462 MHz) - ISSI IS42S16320B-6TL

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					_
Peak Detector:					
4924.000	0.191	42.190	42.381	-31.619	74.000
7386.000	8.373	37.670	46.044	-27.956	74.000
9848.000	7.964	42.921	50.885	-23.115	74.000
<b>Average Detector:</b>					
Vertical					
Peak Detector:					
4924.000	0.805	42.030	42.835	-31.165	74.000
7386.000	9.180	37.630	46.810	-27.190	74.000
9848.000	8.801	42.989	51.790	-22.210	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.



Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz) - ISSI IS42S16320B-6TL

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
<b>Peak Detector:</b>					
4824.000	0.428	41.420	41.849	-32.151	74.000
7236.000	7.177	39.130	46.307	-27.693	74.000
9648.000	8.019	40.420	48.440	-25.560	74.000
<b>Average Detector:</b>					
Vertical					
Peak Detector:					
4824.000	0.836	41.400	42.237	-31.763	74.000
7236.000	7.676	38.450	46.126	-27.874	74.000
9648.000	8.556	44.530	53.087	-20.913	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.



Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437 MHz) - ISSI IS42S16320B-6TL

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4874.000	0.076	40.430	40.507	-33.493	74.000
7311.000	7.512	38.650	46.162	-27.838	74.000
9748.000	7.630	43.830	51.460	-22.540	74.000
<b>Average Detector:</b>					
Peak Detector:					
4874.000	0.532	41.470	42.002	-31.998	74.000
7311.000	8.089	38.920	47.009	-26.991	74.000
9748.000	8.266	45.344	53.611	-20.389	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.



Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462 MHz) - ISSI IS42S16320B-6TL

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
<b>Peak Detector:</b>					
4924.000	0.191	40.400	40.591	-33.409	74.000
7386.000	8.373	39.040	47.414	-26.586	74.000
9848.000	7.964	42.069	50.033	-23.967	74.000
<b>Average Detector:</b>					
Vertical					
<b>Peak Detector:</b>					
4924.000	0.805	40.700	41.505	-32.495	74.000
7386.000	9.180	38.230	47.410	-26.590	74.000
9848.000	8.801	43.170	51.971	-22.029	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.



Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11b 1Mbps)(2437 MHz) - Hynix SDRAM

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
249.220	-6.216	33.664	27.448	-18.552	46.000
480.080	1.870	33.178	35.048	-10.952	46.000
559.620	2.147	33.169	35.316	-10.684	46.000
625.580	1.419	32.232	33.652	-12.348	46.000
800.180	6.417	28.105	34.522	-11.478	46.000
875.840	5.816	31.381	37.197	-8.803	46.000
Vertical					
121.180	-3.559	30.248	26.689	-16.811	43.500
227.880	-6.169	28.468	22.300	-23.700	46.000
379.200	0.881	24.689	25.570	-20.430	46.000
617.820	0.958	26.670	27.628	-18.372	46.000
875.840	0.516	30.674	31.190	-14.810	46.000
961.200	3.310	26.019	29.329	-24.671	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.



Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11g 6Mbps)(2437 MHz) Hynix SDRAM

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
249.220	-6.216	33.529	27.313	-18.687	46.000
375.320	0.918	26.749	27.667	-18.333	46.000
480.080	1.870	33.579	35.449	-10.551	46.000
559.620	2.147	35.800	37.947	-8.053	46.000
625.580	1.419	32.353	33.773	-12.227	46.000
875.840	5.816	31.951	37.767	-8.233	46.000
Vertical					
123.120	-3.630	29.475	25.845	-17.655	43.500
379.200	0.881	23.519	24.400	-21.600	46.000
617.820	0.958	28.162	29.120	-16.880	46.000
806.000	3.686	22.440	26.126	-19.874	46.000
875.840	0.516	30.462	30.978	-15.022	46.000
961.200	3.310	25.366	28.676	-25.324	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.



Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11b 1Mbps)(2437 MHz) - Winbond SDRAM

Frequency	Correct	Reading	Reading Measurement		Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					_
111.480	-7.489	39.456	31.968	-11.532	43.500
400.540	0.942	35.234	36.176	-9.824	46.000
507.240	2.529	38.913	41.442	-4.558	46.000
610.060	3.657	32.205	35.862	-10.138	46.000
790.480	6.363	31.055	37.418	-8.582	46.000
875.840	5.816	31.695	37.511	-8.489	46.000
Vertical					
303.540	-3.998	38.336	34.338	-11.662	46.000
507.240	0.429	38.282	38.711	-7.289	46.000
666.320	-0.951	37.267	36.316	-9.684	46.000
790.480	2.693	34.265	36.958	-9.042	46.000
875.840	0.516	31.669	32.185	-13.815	46.000
967.020	3.889	29.740	33.629	-20.371	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.



Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11g 6Mbps)(2437 MHz) - Winbond SDRAM

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
158.040	-9.272	45.594	36.322	-7.178	43.500
507.240	2.529	37.072	39.601	-6.399	46.000
664.380	1.882	35.926	37.808	-8.192	46.000
745.860	3.906	32.820	36.726	-9.274	46.000
790.480	6.363	31.327	37.690	-8.310	46.000
875.840	5.816	32.864	38.680	-7.320	46.000
Vertical					
111.480	-3.439	34.603	31.165	-12.335	43.500
507.240	0.429	33.876	34.305	-11.695	46.000
666.320	-0.951	37.297	36.346	-9.654	46.000
745.860	1.316	32.648	33.964	-12.036	46.000
790.480	2.693	34.014	36.707	-9.293	46.000
953.440	3.015	31.896	34.911	-11.089	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.



Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11b 1Mbps)(2437 MHz) - ISSI IS42S16320B-6TL

Frequency	Correct	Reading	Reading Measurement		Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
39.700	-3.625	30.202	26.577	-13.423	40.000
319.060	-4.585	37.088	32.503	-13.497	46.000
625.580	1.419	32.276	33.696	-12.304	46.000
720.640	3.826	32.406	36.232	-9.768	46.000
800.180	6.417	30.801	37.218	-8.782	46.000
875.840	5.816	36.698	42.514	-3.486	46.000
Vertical					
45.520	-10.625	39.776	29.151	-10.849	40.000
121.180	-3.559	30.924	27.365	-16.135	43.500
617.820	0.958	27.988	28.946	-17.054	46.000
800.180	2.637	29.931	32.568	-13.432	46.000
875.840	0.516	32.946	33.462	-12.538	46.000
961.200	3.310	26.286	29.596	-24.404	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.



Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11g 6Mbps)(2437 MHz) - ISSI IS42S16320B-6TL

Frequency	Correct	Reading	Reading Measurement		Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
319.060	-4.585	35.034	30.449	-15.551	46.000
480.080	1.870	31.680	33.550	-12.450	46.000
625.580	1.419	32.748	34.168	-11.832	46.000
800.180	6.417	36.536	42.953	-3.047	46.000
875.840	5.816	36.940	42.756	-3.244	46.000
961.200	6.810	28.255	35.065	-18.935	54.000
Vertical					
47.460	-11.425	40.594	29.169	-10.831	40.000
617.820	0.958	28.619	29.577	-16.423	46.000
749.740	2.023	26.664	28.687	-17.313	46.000
800.180	2.637	28.546	31.183	-14.817	46.000
875.840	0.516	34.334	34.850	-11.150	46.000
961.200	3.310	25.875	29.185	-24.815	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.



Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11b 1Mbps)(2437 MHz) - ISSI IS42S16320D-6TL

Frequency	Correct	Reading	Reading Measurement		Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
319.060	-4.585	37.774	33.189	-12.811	46.000
458.740	3.298	27.085	30.383	-15.617	46.000
625.580	1.419	28.981	30.401	-15.599	46.000
800.180	6.417	27.139	33.556	-12.444	46.000
875.840	5.816	34.313	40.129	-5.871	46.000
961.200	6.810	27.826	34.636	-19.364	54.000
Vertical					
45.520	-10.625	41.108	30.483	-9.517	40.000
617.820	0.958	27.693	28.651	-17.349	46.000
800.180	2.637	24.244	26.881	-19.119	46.000
875.840	0.516	28.749	29.265	-16.735	46.000
961.200	3.310	24.401	27.711	-26.289	54.000
1000.000	-1.166	38.588	37.422	-16.578	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.



Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11g 6Mbps)(2437 MHz) - ISSI IS42S16320D-6TL

Frequency	Correct	Reading Measurement		Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
39.700	-3.625	32.585	28.960	-11.040	40.000
319.060	-4.585	35.877	31.292	-14.708	46.000
458.740	3.298	27.779	31.077	-14.923	46.000
625.580	1.419	29.394	30.814	-15.186	46.000
800.180	6.417	26.633	33.050	-12.950	46.000
875.840	5.816	33.915	39.731	-6.269	46.000
Vertical					
43.580	-10.919	40.337	29.418	-10.582	40.000
123.120	-3.630	28.752	25.122	-18.378	43.500
617.820	0.958	27.939	28.897	-17.103	46.000
769.140	2.558	24.526	27.084	-18.916	46.000
875.840	0.516	28.826	29.342	-16.658	46.000
961.200	3.310	24.945	28.255	-25.745	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. Band Edge

# 5.1. 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, 2011
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2011
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2012

#### Note:

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

## **RF Radiated Measurement:**

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

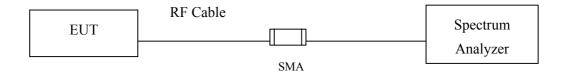
Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
⊠Site # 3		Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2011
	X	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2011
		Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2011
	X	Pre-Amplifier	Agilent	8447D/2944A09549	Sep., 2011
	X	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2011
		Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2011
	X	Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2012
	X	Controller	QuieTek	QTK-CONTROLLER/ CTRL3	N/A
	X	Coaxial Switch	Anritsu	MP59B/6200265729	N/A

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

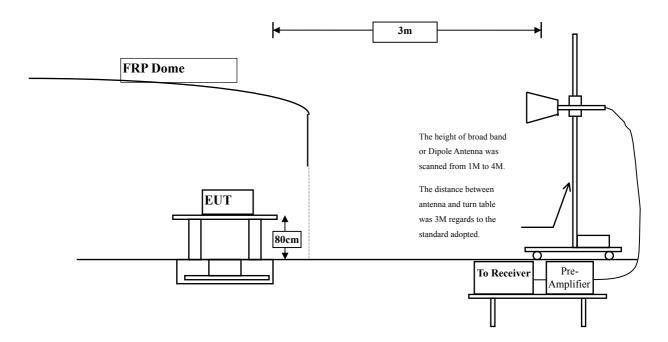


## 5.2. Test Setup

## **RF Conducted Measurement**



#### **RF Radiated Measurement:**



## 5.3. Limits

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



## **5.4.** Test Procedure

The EUT was setup according to ANSI C63.4, 2003 and tested according to DTS test procedure of Mar. 2005 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

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

The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.4:2003 on radiated measurement.

## 5.5. Uncertainty

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



# 5.6. Test Result of Band Edge

Product : JukeBlox Networked Media Module

Test Item : Band Edge Data
Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11b 1Mbps) - Hynix SDRAM

## Fundamental Filed Strength

Antenna Pole	Frequency [MHz]	Correction Factor [dB/m]	Reading Level [dBuV]	Emission Level [dBuV/m]	Detector
Horizontal	2412	31.771	76.3	108.072	Peak
Horizontal	2412	31.771	66.25	98.022	Average
Vertical	2412	30.248	76.18	106.429	Peak
Vertical	2412	30.248	66.24	96.489	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz Average detector: RBW=1MHz, VBW=10Hz

## Band Edge Test Data

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	Δ (dB)	Band Edge Field Strength (dBuV/m)	Limit (dBuV/m)	Detector
Horizontal	2390	108.072	39.884	68.188	74.000	Peak
Horizontal	2386.5	98.022	51.622	46.4	54.000	Average
Vertical	2390	106.429	39.884	66.545	74.000	Peak
Vertical	2386.5	96.489	51.622	44.867	54.000	Average

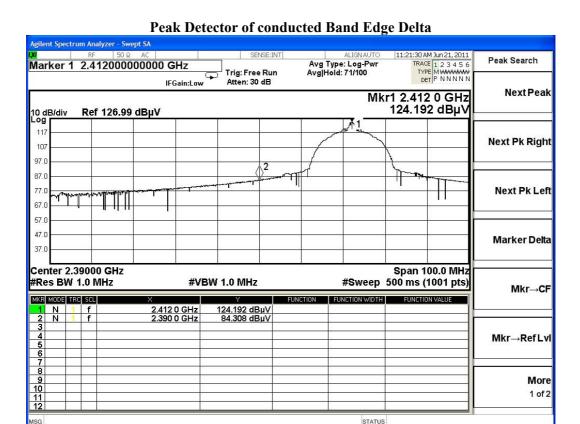
## Note:

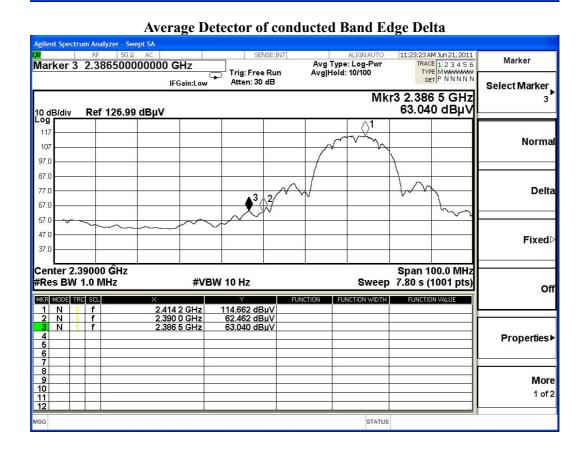
The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength =  $F - \Delta$ 

F = Fundamental field Strength (Peak or Average)









Test Item : Band Edge Data
Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11b 1Mbps) - Hynix SDRAM

## Fundamental Filed Strength

Antenna	Frequency	<b>Correction Factor</b>	Reading Level	<b>Emission Level</b>	Detector
Pole	[MHz]	[dB/m]	[dBuV]	[dBuV/m]	
Horizontal	2462	31.892	75.74	107.632	Peak
Horizontal	2462	31.892	66.2	98.092	Average
Vertical	2462	30.48	74.19	104.67	Peak
Vertical	2462	30.48	64.77	95.25	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz Average detector: RBW=1MHz, VBW=10Hz

## Band Edge Test Data

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	Δ (dB)	Band Edge Field Strength (dBuV/m)	Limit (dBuV/m)	Detector
Horizontal	2483.5	107.632	39.246	68.386	74.000	Peak
Horizontal	2487.8	98.092	51.155	46.937	54.000	Average
Vertical	2483.5	104.67	39.246	65.424	74.000	Peak
Vertical	2487.8	95.25	51.155	44.095	54.000	Average

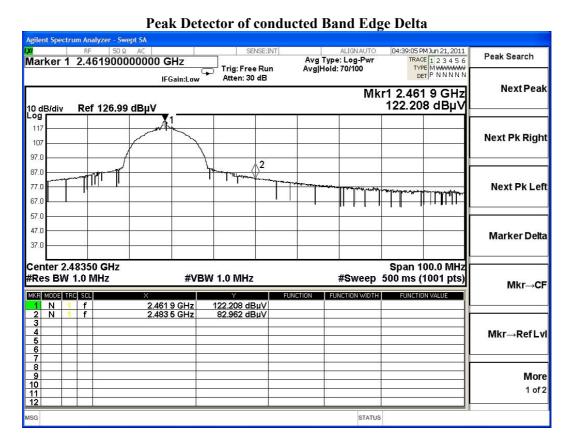
### Note:

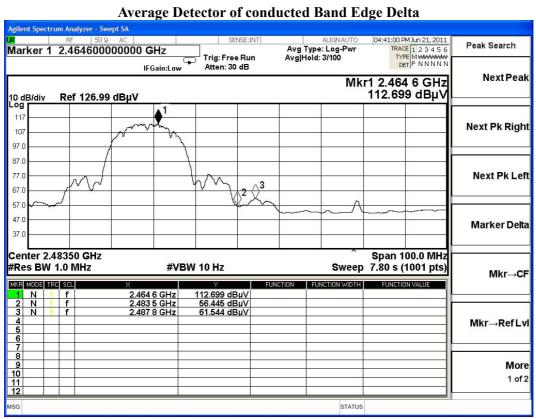
The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength =  $F - \Delta$ 

F = Fundamental field Strength (Peak or Average)









Test Item : Band Edge Data
Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11g 6Mbps) - Hynix SDRAM

## Fundamental Filed Strength

Antenna	Frequency	<b>Correction Factor</b>	Reading Level Emission Level		Detector
Pole	[MHz]	[dB/m]	[dBuV]	[dBuV/m]	
Horizontal	2412	31.771	72.36	104.132	Peak
Horizontal	2412	31.771	56.05	87.822	Average
Vertical	2412	30.248	71.83	102.079	Peak
Vertical	2412	30.248	55.2	85.449	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz Average detector: RBW=1MHz, VBW=10Hz

## Band Edge Test Data

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	Δ (dB)	Band Edge Field Strength (dBuV/m)	Limit (dBuV/m)	Detector
Horizontal	2390	104.132	35.883	68.249	74.000	Peak
Horizontal	2390	87.822	39.804	48.018	54.000	Average
Vertical	2390	102.079	35.883	66.196	74.000	Peak
Vertical	2390	85.449	39.804	45.645	54.000	Average

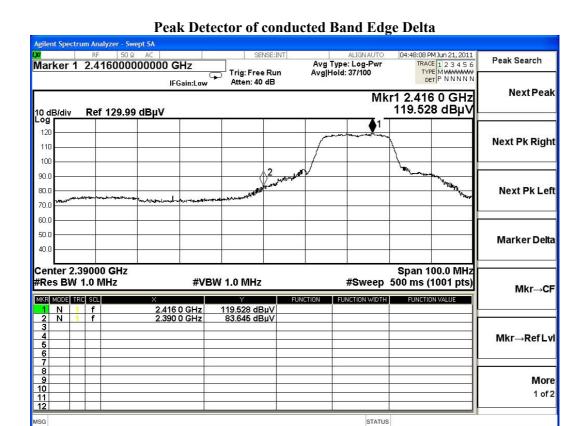
### Note:

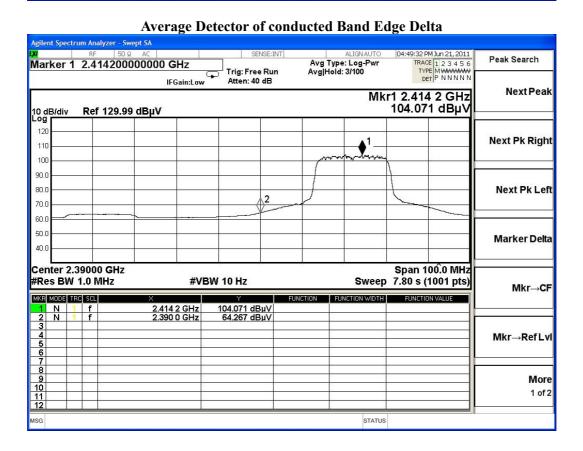
The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength =  $F - \Delta$ 

F = Fundamental field Strength (Peak or Average)









Test Item : Band Edge Data
Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11g 6Mbps) - Hynix SDRAM

## Fundamental Filed Strength

Antenna	Frequency	<b>Correction Factor</b>	Reading Level	<b>Emission Level</b>	Detector
Pole	[MHz]	[dB/m]	[dBuV]	[dBuV/m]	
Horizontal	2462	31.892	72.27	104.162	Peak
Horizontal	2462	31.892	54.74	86.632	Average
Vertical	2462	30.48	70.69	101.17	Peak
Vertical	2462	30.48	53.2	83.68	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz Average detector: RBW=1MHz, VBW=10Hz

### Band Edge Test Data

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	Δ (dB)	Band Edge Field Strength (dBuV/m)	Limit (dBuV/m)	Detector
Horizontal	2483.5	104.162	39.203	64.959	74.000	Peak
Horizontal	2483.5	86.632	37.676	48.956	54.000	Average
Vertical	2483.5	101.17	39.203	61.967	74.000	Peak
Vertical	2483.5	83.68	37.676	46.004	54.000	Average

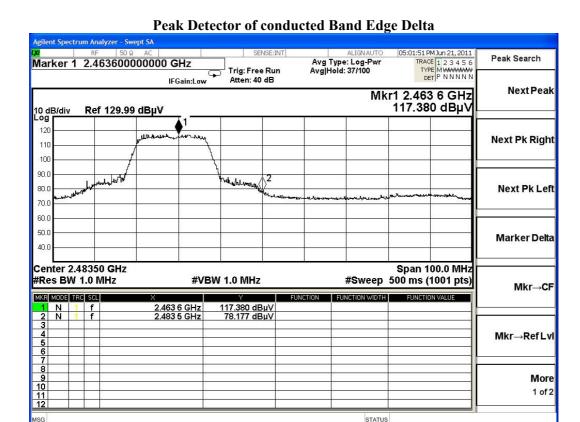
## Note:

The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength =  $F - \Delta$ 

F = Fundamental field Strength (Peak or Average)





#### Average Detector of conducted Band Edge Delta Agilent Spectrum Analyzer - Swept SA 05:02:39 PM Jun 21, 2011 TRACE 1 2 3 4 5 6 TYPE MWWWWW Peak Search Marker 1 2.463100000000 GHz Avg Type: Log-Pwr Avg|Hold: 3/100 Trig: Free Run DET P N N N N IFGain:Low Atten: 40 dB **Next Peak** Mkr1 2.463 1 GHz 101.295 dBµV 10 dB/div Log Ref 129.99 dBµV 120 **Next Pk Right** 110 100 90.0 80.0 **Next Pk Left** 70.0 60.0 50.0 Marker Delta 40.0 Center 2.48350 GHz Span 100.0 MHz Sweep 7.80 s (1001 pts) #Res BW 1.0 MHz **#VBW 10 Hz** Mkr→CF MKR MODE TRC SCL FUNCTION FUNCTION WIDTH FUNCTION VALUE 101.295 dBμV 63.619 dBμV Mkr→RefLvl More 1 of 2 STATUS



Test Item : Band Edge Data
Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11b 1Mbps) - ISSI IS42S16320B-6TL

## Fundamental Filed Strength

Antenna	Frequency	<b>Correction Factor</b>	Reading Level	<b>Emission Level</b>	Detector
Pole	[MHz]	[dB/m]	[dBuV]	[dBuV/m]	
Horizontal	2412	31.771	77.36	109.132	Peak
Horizontal	2412	31.771	67.4	99.172	Average
Vertical	2412	30.248	75.84	106.089	Peak
Vertical	2412	30.248	65.98	96.229	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz Average detector: RBW=1MHz, VBW=10Hz

## Band Edge Test Data

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	Δ (dB)	Band Edge Field Strength (dBuV/m)	Limit (dBuV/m)	Detector
Horizontal	2390	109.132	39.884	69.248	74.000	Peak
Horizontal	2386.5	99.172	51.622	47.55	54.000	Average
Vertical	2390	106.089	39.884	66.205	74.000	Peak
Vertical	2386.5	96.229	51.622	44.607	54.000	Average

### Note:

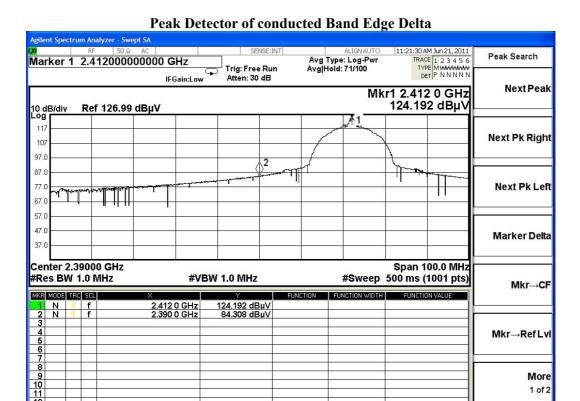
The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength =  $F - \Delta$ 

F = Fundamental field Strength (Peak or Average)



ISG



STATUS

#### Average Detector of conducted Band Edge Delta ent Spectrum Analyzer - Swept SA 3:23 AM Jun 21, 2011 TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P N N N N Marker Marker 3 2.386500000000 GHz Avg Type: Log-Pwr Avg|Hold: 10/100 Trig: Free Run IFGain:Low Atten: 30 dB Select Marker Mkr3 2.386 5 GHz 63.040 dBµV 10 dB/div Log Ref 126.99 dBµV 117 Norma 107 97.0 87.0 Delta 77.0 67.0 57.0 47.0 **Fixed** 37.0 Center 2.39000 ĜHz Span 100.0 MHz #Res BW 1.0 MHz **#VBW 10 Hz** Sweep 7.80 s (1001 pts) Off 2.414 2 GHz 2.390 0 GHz 2.386 5 GHz 114.662 dBµV 62.462 dBµV 63.040 dBµV Properties > More 10 11 12 1 of 2 STATUS ISG



Test Item : Band Edge Data
Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11b 1Mbps) - ISSI IS42S16320B-6TL

## Fundamental Filed Strength

Antenna	Frequency	<b>Correction Factor</b>	Reading Level Emission Level		Detector
Pole	[MHz]	[dB/m]	[dBuV]	[dBuV/m]	
Horizontal	2462	31.892	74.08	105.972	Peak
Horizontal	2462	31.892	64.35	96.242	Average
Vertical	2462	30.48	72.2	102.68	Peak
Vertical	2462	30.48	62.15	92.63	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz Average detector: RBW=1MHz, VBW=10Hz

## Band Edge Test Data

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	Δ (dB)	Band Edge Field Strength (dBuV/m)	Limit (dBuV/m)	Detector
Horizontal	2483.5	105.972	39.246	66.726	74.000	Peak
Horizontal	2487.8	96.242	51.155	45.087	54.000	Average
Vertical	2483.5	102.68	39.246	63.434	74.000	Peak
Vertical	2487.8	92.63	51.155	41.475	54.000	Average

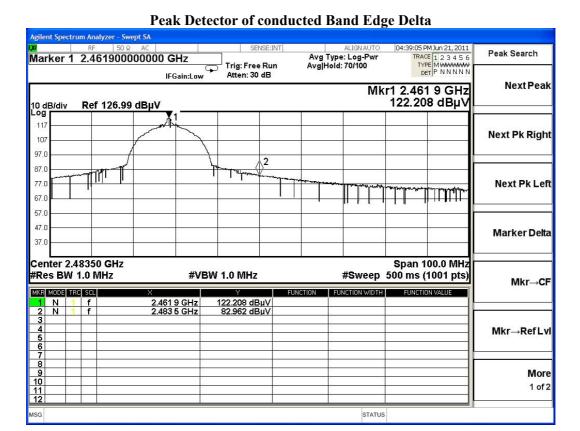
### Note:

The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength =  $F - \Delta$ 

F = Fundamental field Strength (Peak or Average)





#### Average Detector of conducted Band Edge Delta 04:41:00 PM Jun 21, 2011 TRACE 1 2 3 4 5 6 TYPE M WWWWWW DET P N N N N N Peak Search Marker 1 2.464600000000 GHz Avg Type: Log-Pwr Avg|Hold: 3/100 Trig: Free Run IFGain:Low Atten: 30 dB **Next Peak** Mkr1 2.464 6 GHz 112.699 dBµV Ref 126.99 dBµV **Next Pk Right** 107 97.0 87.0 77 f **Next Pk Left** NV 67.0 57.0 47.0 Marker Delta 37.0 Center 2.48350 GHz Span 100.0 MHz #Res BW 1.0 MHz **#VBW 10 Hz** Sweep 7.80 s (1001 pts) Mkr→CF 112.699 dBµV 56.445 dBµV 61.544 dBµV 2.464 6 GHz 2.483 5 GHz 2.487 8 GHz Mkr→RefLvI More 10 11 12 1 of 2 ISG STATUS



Test Item : Band Edge Data
Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11g 6Mbps) - ISSI IS42S16320B-6TL

## Fundamental Filed Strength

Antenna	Frequency	<b>Correction Factor</b>	Reading Level	<b>Emission Level</b>	Detector
Pole	[MHz]	[dB/m]	[dBuV]	[dBuV/m]	
Horizontal	2412	31.771	72.93	104.702	Peak
Horizontal	2412	31.771	56.07	87.842	Average
Vertical	2412	30.248	71.13	101.379	Peak
Vertical	2412	30.248	55.04	85.289	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz Average detector: RBW=1MHz, VBW=10Hz

## Band Edge Test Data

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	Δ (dB)	Band Edge Field Strength (dBuV/m)	Limit (dBuV/m)	Detector
Horizontal	2390	104.702	35.883	68.819	74.000	Peak
Horizontal	2390	87.842	39.804	48.038	54.000	Average
Vertical	2390	101.379	35.883	65.496	74.000	Peak
Vertical	2390	85.289	39.804	45.485	54.000	Average

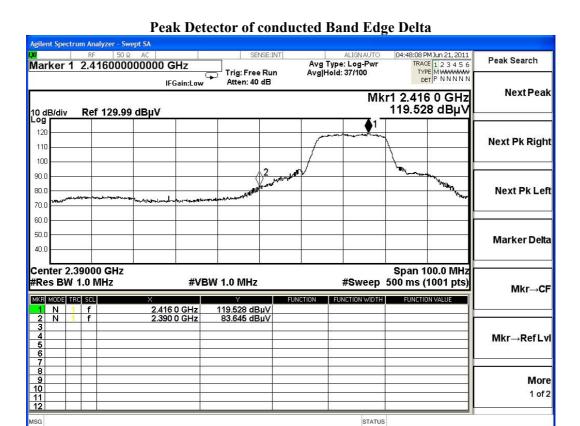
### Note:

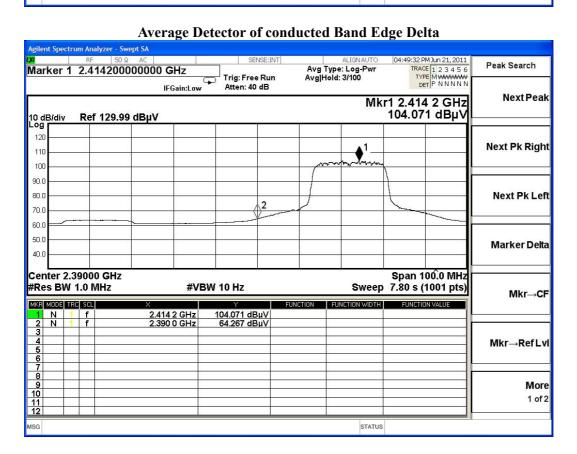
The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength =  $F - \Delta$ 

F = Fundamental field Strength (Peak or Average)









Test Item : Band Edge Data
Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11g 6Mbps) - ISSI IS42S16320B-6TL

## Fundamental Filed Strength

Antenna	Frequency	<b>Correction Factor</b>	Reading Level	<b>Emission Level</b>	Detector
Pole	[MHz]	[dB/m]	[dBuV]	[dBuV/m]	
Horizontal	2462	31.892	72.21	104.102	Peak
Horizontal	2462	31.892	55.55	87.442	Average
Vertical	2462	30.48	70.32	100.8	Peak
Vertical	2462	30.48	53.86	84.34	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz Average detector: RBW=1MHz, VBW=10Hz

## Band Edge Test Data

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	Δ (dB)	Band Edge Field Strength (dBuV/m)	Limit (dBuV/m)	Detector
Horizontal	2483.5	104.102	39.203	64.899	74.000	Peak
Horizontal	2483.5	87.442	37.676	49.766	54.000	Average
Vertical	2483.5	100.8	39.203	61.597	74.000	Peak
Vertical	2483.5	84.34	37.676	46.664	54.000	Average

## Note:

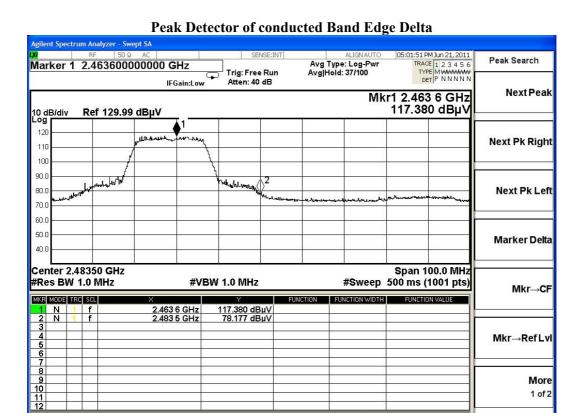
The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength =  $F - \Delta$ 

F = Fundamental field Strength (Peak or Average)



ISG



STATUS

#### Average Detector of conducted Band Edge Delta ent Spectrum Analyzer - Swept SA 2:39 PM Jun 21, 2011 TRACE 1 2 3 4 5 6 TYPE M WWWWWW DET P N N N N N Peak Search Marker 1 2.463100000000 GHz Avg Type: Log-Pwr Avg|Hold: 3/100 Trig: Free Run IFGain:Low Atten: 40 dB **Next Peak** Mkr1 2.463 1 GHz 101.295 dBµV 10 dB/div Log Ref 129.99 dBµV 120 **Next Pk Right** 110 100 90.0 **Next Pk Left** 80.0 70.0 60.0 50.0 Marker Delta 40.0 Center 2.48350 GHz Span 100.0 MHz #Res BW 1.0 MHz **#VBW 10 Hz** Sweep 7.80 s (1001 pts) Mkr→CF 2.463 1 GHz 2.483 5 GHz 101.295 dBµV 63.619 dBµV Mkr→RefLvI More 10 11 12 1 of 2 STATUS ISG



# 6. EMI Reduction Method During Compliance Testing

No modification was made during testing.



Attachment 1: EUT Test Photographs



# Attachment 2: EUT Detailed Photographs