

**ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT
INTENTIONAL RADIATOR CERTIFICATION TO
FCC PART 15 SUBPART C REQUIREMENT**

OF

Goji play

MODEL No.: MAB0726S

BRAND NAME: Blue Goji

FCC ID: 2AADEMAB0726S

REPORT NO: KAD130517055E

ISSUE DATE: June 04, 2013

Prepared for

BLUE GOJI CORP.

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Prepared by

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VERIFICATION OF COMPLIANCE

Applicant:	BLUE GOJI CORP. 2933 Bunker Hill Lane Suite 100 Santa Clara, CA 95054, USA
Manufacturer:	BLUE GOJI CORP. 2933 Bunker Hill Lane Suite 100 Santa Clara, CA 95054, USA
Product Description:	Goji play
Brand Name:	Blue Goji
Model Number:	MAB0726S
Serial Number:	N/A
File Number:	KAD130517055E
Date of Test:	May 17, 2013 to June 04, 2013

We hereby certify that:

The above equipment was tested by DONGGUAN EMTEK CO., LTD. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4 (2009) and the energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits of FCC Rules Part 15.247.

The test results of this report relate only to the tested sample identified in this report.

Approved By



Sam.Lv / Q.A. Manager
DONGGUAN EMTEK CO., LTD.

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1. GENERAL INFORMATION

1.1 Product Description

The BLUE GOJI CORP. Model: MAB0726S (referred to as the EUT in this report)

The EUT is an short range, lower power transmitter as an Input Device. It is designed by way of utilizing the following modulation achieves the system operating.

- A). Operation Frequency: 2402-2480MHz
- B). Modulation: Bluetooth 4.0 : GFSK
- C). Number of Channel: 40
- D). Channel space: 2MHz
- E). Rated RF Output Power: -7.38dBm
- F). Antenna Type: Internal PCB antenna
- G). Antenna GAIN: 0dBi
- H). Input Rating: DC 5V, 1A come from adapter
- I). Information for adapter:
 - Model No.:WH-827
 - Input: AC 100-240V, 50-60Hz, 0.15A
 - Output: DC 5V, 1A

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
00	2402	14	2430	28	2458
01	2404	15	2432	29	2460
02	2406	16	2434	30	2462
03	2408	17	2436	31	2464
04	2410	18	2438	32	2466
05	2412	19	2440	33	2468
06	2414	20	2442	34	2470
07	2416	21	2444	35	2472
08	2418	22	2446	36	2474
09	2420	23	2448	37	2476
10	2422	24	2450	38	2478
11	2424	25	2452	39	2480
12	2426	26	2454		
13	2428	27	2456		

Note:

1. This device is a 2.4GHz Goji play included 2.4GHz Bluetooth function.
2. Test of channel was included the lowest middle and highest frequency in highest data rate and to perform the test, then record on this report.

1.2 Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for FCC ID: 2AADEMAB0726S filing to comply with Section 15.247 of the FCC Part 15, Subpart C Rules and FCC Public Notice DA 00-705.

1.3 Test Methodology

Both conducted and radiated testing were performed according to the procedures in ANSI C63.4 (2009). Radiated testing was performed at an antenna to EUT distance 3 meters.

Tested in accordance with FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03 (April 2013) for compliance to FCC 47CFR 15.247 requirements.

1.4 Special Accessories

Not available for this EUT intended for grant.

1.5 Equipment Modifications

Not available for this EUT intended for grant.

1.6 Test Facility

Site Description	
EMC Lab.	: Accredited by Industry Canada, January 13, 2011 The Certificate Registration Number. is 9444A
Name of Firm	: DONGGUAN EMTEK CO., LTD
Site Location	: No.281, Guantai Road, Nancheng District, Dongguan, Guangdong, China

2. System Test Configuration

2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

2.2 EUT Exercise

The Transmitter was operated in the normal operating mode. the Tx frequency was fixed which was for the purpose of the measurements.

2.3 Test Procedure

2.3.1 Conducted Emissions

The EUT is placed on a turn table which is 0.8 m above ground plane. According to the requirements in Section 13.1.4.1 of ANSI C63.4-2009. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak and average detector mode.

2.3.2 Radiated Emissions

The EUT is placed on a turn table which is 0.8 m above ground plane. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter(EUT) was rotated through three orthogonal axes according to the requirements in Section 13.1.4.1 of ANSI C63.4-2009.

2.4 Configuration of Tested System

Fig. 2-1 Configuration of Tested System

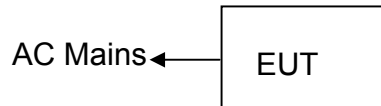


Table 2-1 Equipment Used in Tested System

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID	Series No.	Note
1.	Goji play	N/A	MAB0726S	2DDAEMAB0726S	N/A	EUT

Note:

- (1) Unless otherwise denoted as EUT in 『Remark』 column , device(s) used in tested system is a support equipment.

3. Description of test modes

The EUT is battery powered and only for charging connected to the AC lines via AC Adaptor. This is Digital Transmission system(DTS) and have one type of modulation GFSK.

The 3 channels of lower, medium and higher were chosen for test.

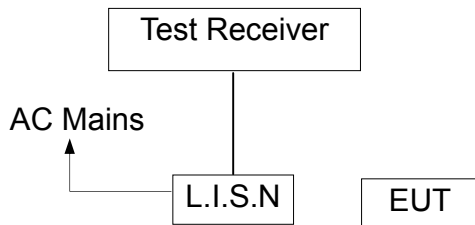
1. For lowest channel : 2402MHz(Channel 00)
2. For middle channel : 2440MHz(Channel 19)
3. For highest channel: 2480MHz(Channel 39)

4. Conducted Emissions Test

4.1 Measurement Procedure:

1. The EUT was placed on a table, which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all frequency measured was complete.

4.2 Test SET-UP (Block Diagram of Configuration)



4.3 Measurement Equipment Used:

Conducted Emission Test Site # 4					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	Last Cal.	Due date
Test Receiver	Rohde & Schwarz	ESCS30	828985/018	05/15/2013	05/15/2014
L.I.S.N	Rohde & Schwarz	ESH2-Z5	834549/005	05/16/2013	05/16/2014
L.I.S.N	Rohde & Schwarz	ESH2-Z5	834549/005	05/18/2013	05/18/2014
50ΩCoaxial Switch	Anritsu	MP59B	M20531	05/20/2013	05/20/2014

4.4 Conducted Emission Limit

(7) Conducted Emission

Frequency(MHz)	Quasi-peak	Average
0.15-0.5	66-56	56-46
0.5-5.0	56	46
5.0-30.0	60	50

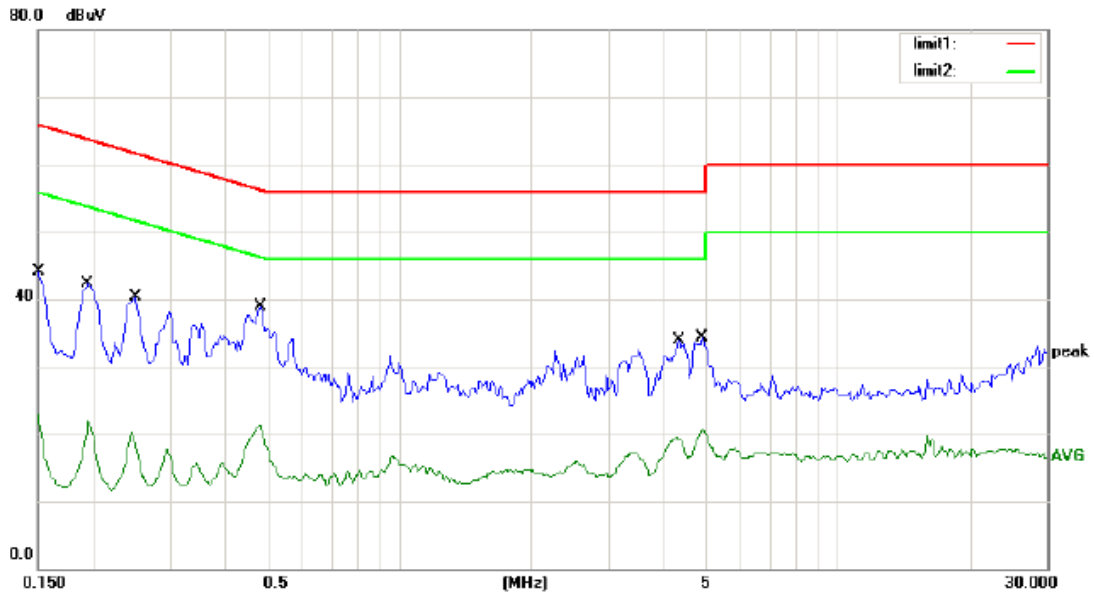
Note:

1. The lower limit shall apply at the transition frequencies
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

4.5 Measurement Result:

PASS.

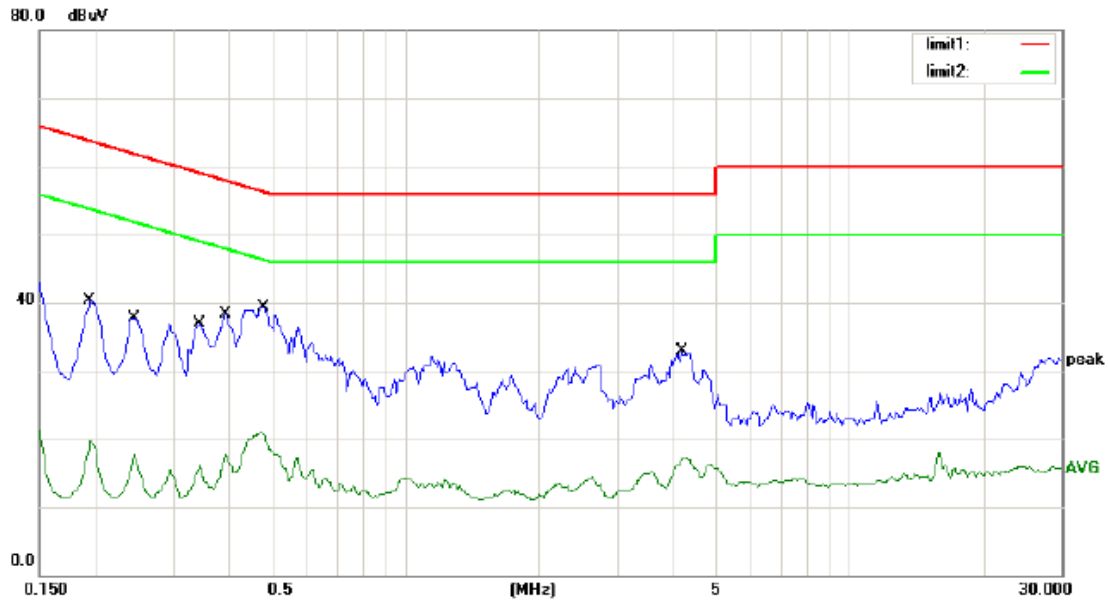
Please refer to the attached data.



Site site #1 Phase: **L1** Temperature: 26
Limit: (CE)FCC PART 15 class C_QP Power: AC 120V/60Hz Humidity: 60 %
Mode: TX
Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1500	44.15	0.00	44.15	66.00	-21.85	QP	
2		0.1500	22.80	0.00	22.80	56.00	-33.20	AVG	
3		0.1950	42.36	0.00	42.36	63.82	-21.46	QP	
4		0.1950	21.91	0.00	21.91	53.82	-31.91	AVG	
5		0.2500	40.31	0.00	40.31	61.76	-21.45	QP	
6		0.2500	20.38	0.00	20.38	51.76	-31.38	AVG	
7	*	0.4850	38.92	0.00	38.92	56.25	-17.33	QP	
8		0.4850	21.40	0.00	21.40	46.25	-24.85	AVG	
9		4.3400	33.90	0.00	33.90	56.00	-22.10	QP	
10		4.3400	19.57	0.00	19.57	46.00	-26.43	AVG	
11		4.9000	34.30	0.00	34.30	56.00	-21.70	QP	
12		4.9000	20.68	0.00	20.68	46.00	-25.32	AVG	

*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver.



Site site #1 Phase: **N** Temperature: 26
Limit: (CE)FCC PART 15 class C_QP Power: AC 120V/60Hz Humidity: 60 %
Mode: TX
Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1950	40.30	0.00	40.30	63.82	-23.52	QP	
2		0.1950	19.76	0.00	19.76	53.82	-34.06	AVG	
3		0.2450	37.73	0.00	37.73	61.92	-24.19	QP	
4		0.2450	17.64	0.00	17.64	51.92	-34.28	AVG	
5		0.3450	36.88	0.00	36.88	59.08	-22.20	QP	
6		0.3450	16.04	0.00	16.04	49.08	-33.04	AVG	
7		0.3950	38.36	0.00	38.36	57.96	-19.60	QP	
8		0.3950	17.84	0.00	17.84	47.96	-30.12	AVG	
9	*	0.4800	39.34	0.00	39.34	56.34	-17.00	QP	
10		0.4800	20.97	0.00	20.97	46.34	-25.37	AVG	
11		4.1800	32.99	0.00	32.99	56.00	-23.01	QP	
12		4.1800	17.23	0.00	17.23	46.00	-28.77	AVG	

*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver.

4.6 Conducted Measurement Photos:



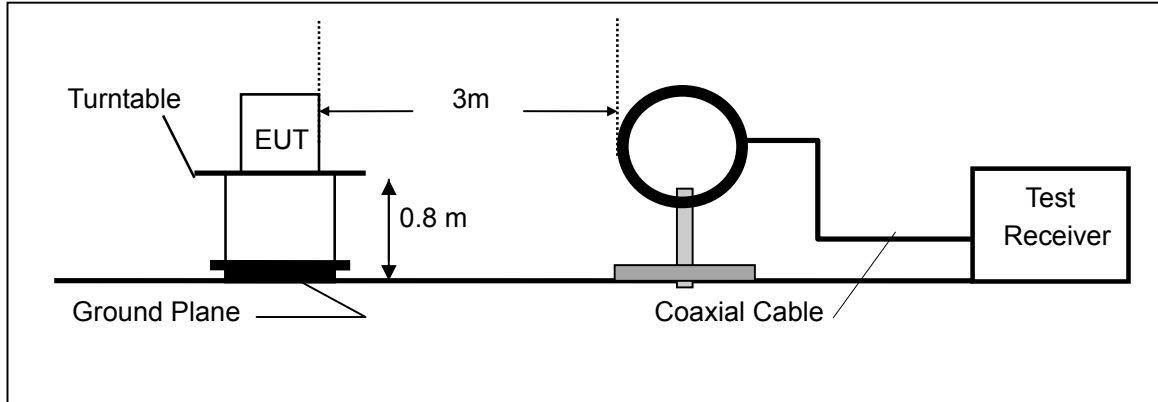
5. Radiated Emission Test

5.1 Measurement Procedure

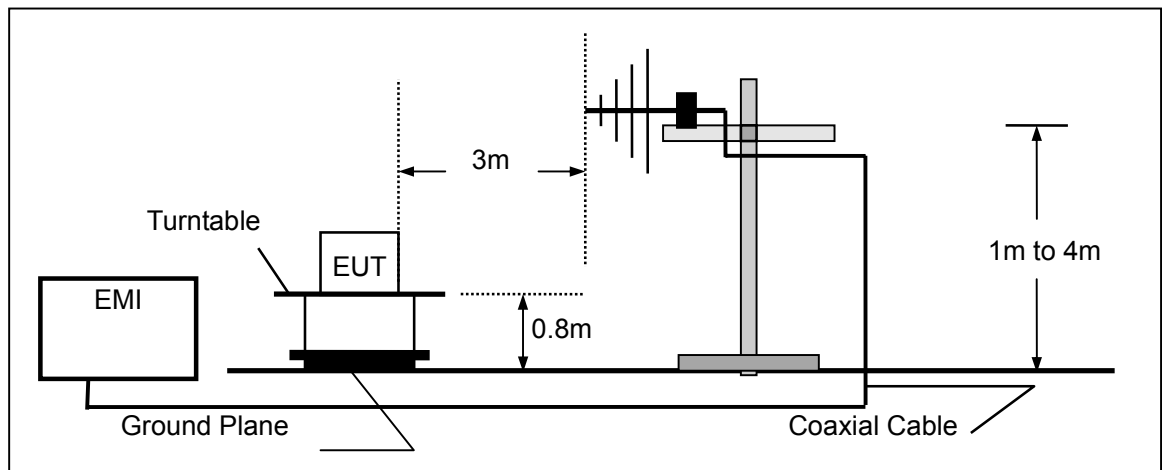
- 1 The EUT was placed on a turn table which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
4. Repeat above procedures until all frequency measured were complete.

5.2 Test SET-UP (Block Diagram of Configuration)

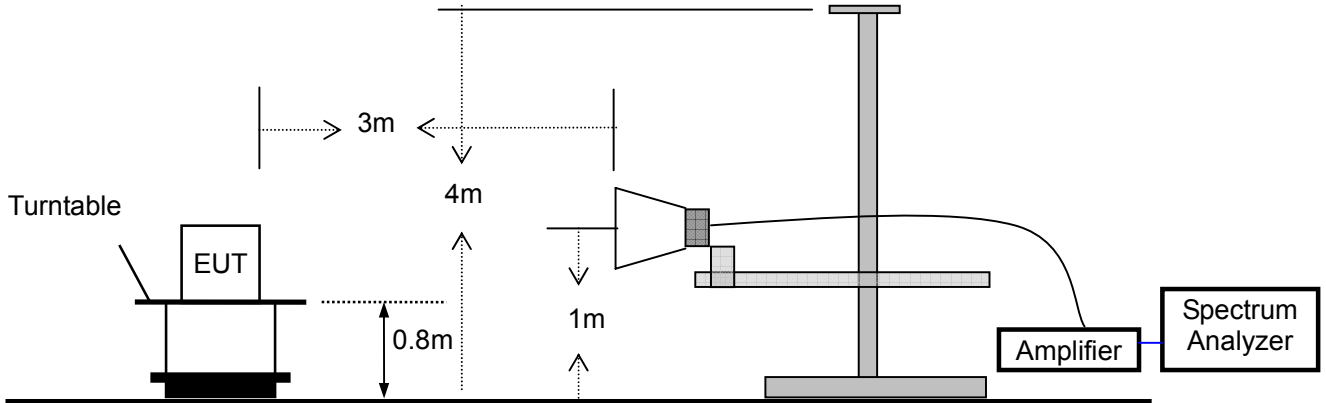
(A) Radiated Emission Test Set-Up, Frequency Below 30MHz



(B) Radiated Emission Test Set-Up, Frequency Below 1000MHz



(C) Radiated Emission Test Set-Up, Frequency above 1000MHz



5.3 Measurement Equipment Used:

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
EMI Test Receiver	Rohde & Schwarz	ESU	1302.6005.26	06/15/2013	06/15/2014
Pre-Amplifier	HP	8447D	2944A07999	06/02/2013	06/02/2014
Bilog Antenna	Schwarzbeck	VULB9163	142	06/03/2013	06/03/2014
Loop Antenna	ARA	PLA-1030/B	1029	06/03/2013	06/03/2014
Horn Antenna	Schwarzbeck	BBHA9170	BBHA9170399	06/04/2013	06/04/2014
Horn Antenna	Schwarzbeck	BBHA 9120	D143	06/04/2013	06/04/2014
Cable	Schwarzbeck	AK9513	ACRX1	06/15/2013	06/15/2014
Cable	Schwarzbeck	N/A	FP2RX2	05/15/2013	05/15/2014
Cable	Schwarzbeck	AK9513	CRPX1	05/17/2013	05/17/2014
Cable	Schwarzbeck	AK9513	CRRX2	05/22/2013	05/22/2014

5.4 Radiated emission limit

Frequency MHz	Distance Meter	Field Strength	
		uV/m	dBuV/m
0.009 – 0.490	300	10000 *	20log 2400/F(KHz) + 80
		2400/F(KHz)	
0.490 – 1.705	30	100 *	20log 24000/F(KHz) +
		24000/F(KHz)	40
1.705 – 30.00	30	100* 30	20log 30 + 40
30~88	3	100	40.0
88~216	3	150	43.5
216~960	3	200	46.0
Above 960	3	500	54.0

Note: The frequencies above 1000MHz, as measured using instrumentation with a peak detector function was corresponding to 20dB above maximum permitted average limit.

5.5 Measurement Result

Operation Mode: TX Test Date : June 2, 2013
Frequency Range: 9KHz~30MHz Temperature : 28℃
Test Result: PASS Humidity : 65 %
Measured Distance: 3m Test By: WOLF

Freq. (MHz)	Ant.Pol. H/V	Emission Level (dBuV/m)	Limit 3m (dBuV/m)	Over (dB)
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Note: the amplitude of spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.

Operation Mode: TX Mode(Channel 00) Test Date : May 30, 2013
Frequency Range: 30~1000MHz Temperature : 25℃
Test Result: PASS Humidity : 50%
Measured Distance: 3m Test By: Andy

Freq. (MHz)	Ant.Pol. H/V	Emission Level (dBuV/m)	Limit 3m (dBuV/m)	Margin (dB)	Note
48.430	V	25.25	40.00	-14.75	PK
61.040	V	27.10	40.00	-12.90	PK
98.870	V	28.94	43.50	-14.56	PK
165.800	V	26.18	43.50	-17.32	PK
183.260	V	28.09	43.50	-15.41	PK
224.970	V	26.22	46.00	-19.78	PK
54.250	H	17.19	40.00	-22.81	PK
98.870	H	21.02	43.50	-22.48	PK
154.160	H	23.89	43.50	-19.61	PK
160.950	H	22.65	43.50	-20.86	PK
181.320	H	21.82	43.50	-21.68	PK
215.270	H	19.77	43.50	-23.73	PK

Note: (1) All Readings are Peak Value.
(2) Emission Level= Reading Level+ Probe Factor +Cable Loss
(3) The average measurement was not performed when the peak measured data under the limit of average detection.

Operation Mode: TX Mode(Channel 19) Test Date : May 30, 2013
Frequency Range: 30~1000MHz Temperature : 25 °C
Test Result: PASS Humidity : 50 %
Measured Distance: 3m Test By: Andy

Freq. (MHz)	Ant.Pol. H/V	Emission Level (dBuV/m)	Limit 3m (dBuV/m)	Margin (dB)	Note
43.420	V	25.26	40.00	-14.74	PK
61.240	V	23.44	40.00	-16.56	PK
95.340	V	28.75	43.50	-14.75	PK
163.550	V	24.43	43.50	-19.07	PK
183.440	V	28.66	43.50	-14.84	PK
223.640	V	26.43	46.00	-19.57	PK
53.640	H	17.63	40.00	-22.37	PK
94.770	H	21.06	43.50	-22.44	PK
154.740	H	23.87	43.50	-19.63	PK
160.960	H	25.43	43.50	-18.07	PK
181.350	H	21.54	43.50	-21.96	PK
213.650	H	13.73	43.50	-29.77	PK

Note: (1) All Readings are Peak Value and AV.
(2) Emission Level= Reading Level+ Probe Factor +Cable Loss.
(3) The average measurement was not performed when the peak measured data under the limit of average detection.

Operation Mode: TX Mode(Channel 39) Test Date : May 30, 2013
Frequency Range: 30~1000MHz Temperature : 25 °C
Test Result: PASS Humidity : 50 %
Measured Distance: 3m Test By: Andy

Freq. (MHz)	Ant.Pol. H/V	Emission Level (dBuV/m)	Limit 3m (dBuV/m)	Margin (dB)	Note
43.410	V	28.55	40.00	-11.45	PK
61.640	V	27.67	40.00	-12.33	PK
93.430	V	26.99	43.50	-16.51	PK
164.330	V	26.89	43.50	-16.61	PK
183.420	V	28.56	43.50	-14.94	PK
223.420	V	24.08	46.00	-21.92	PK
54.240	H	17.19	40.00	-22.81	PK
98.330	H	23.05	43.50	-20.45	PK
154.140	H	23.82	43.50	-19.68	PK
162.440	H	22.65	43.50	-20.85	PK
151.340	H	21.84	43.50	-21.66	PK
225.230	H	14.33	43.50	-29.17	PK

Note: (1) All Readings are Peak Value and AV.
(2) Emission Level= Reading Level+ Probe Factor +Cable Loss
(3) The average measurement was not performed when the peak measured data under the limit of average detection.

Operation Mode: TX Mode (CH00: 2402MHz) Test Date : May 30, 2013
Frequency Range: 1-25GHz Temperature : 25 °C
Test Result: PASS Humidity : 50 %
Measured Distance: 3m Test By: Andy

Freq. (MHz)	Ant. Pol. H/V	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Margin(dB)	
		PK	AV	PK	AV	PK	AV
2402	V	56.42	46.12	74	54	-17.58	-7.88
4804	V	59.24	47.33	74	54	-14.76	-6.67
7206	V	58.35	46.47	74	54	-15.65	-7.53
9608	V	60.12	47.05	74	54	-13.88	-6.95
12010	V	57.40	46.02	74	54	-16.60	-7.98
2400	H	58.33	46.89	74	54	-15.67	-7.11
4804	H	58.36	46.61	74	54	-15.64	-7.39
7206	H	59.76	47.44	74	54	-14.24	-6.56
9608	H	58.24	47.12	74	54	-15.76	-6.88
12010	H	56.05	45.06	74	54	-17.95	-8.94

Other harmonics emissions are lower than 20dB below the allowable limit.

Note: (1) All Readings are Peak Value and AV.
(2) Emission Level= Reading Level+ Probe Factor +Cable Loss.
(3) The average measurement was not performed when the peak measured data under the limit of average detection.

Operation Mode: TX Mode (CH19: 2440MHz) Test Date : May 30, 2013
Frequency Range: 1-25GHz Temperature : 25 °C
Test Result: PASS Humidity : 50 %
Measured Distance: 3m Test By: Andy

Freq. (MHz)	Ant. Pol. H/V	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Margin(dB)	
		PK	AV	PK	AV	PK	AV
4882	V	58.25	44.21	74	54	-15.75	-9.79
7323	V	59.46	45.69	74	54	-14.54	-8.31
9764	V	58.71	44.01	74	54	-15.29	-9.99
12205	V	60.84	46.24	74	54	-13.16	-7.76
4882	H	59.02	45.07	74	54	-14.98	-8.93
7323	H	58.55	44.93	74	54	-15.45	-9.07
9764	H	59.09	45.89	74	54	-14.91	-8.11
12205	H	60.78	46.55	74	54	-13.22	-7.45

Other harmonics emissions are lower than 20dB below the allowable limit.

Note: (1) All Readings are Peak Value and AV.
(2) Emission Level= Reading Level+ Probe Factor +Cable Loss.
(3) The average measurement was not performed when the peak measured data under the limit of average detection.

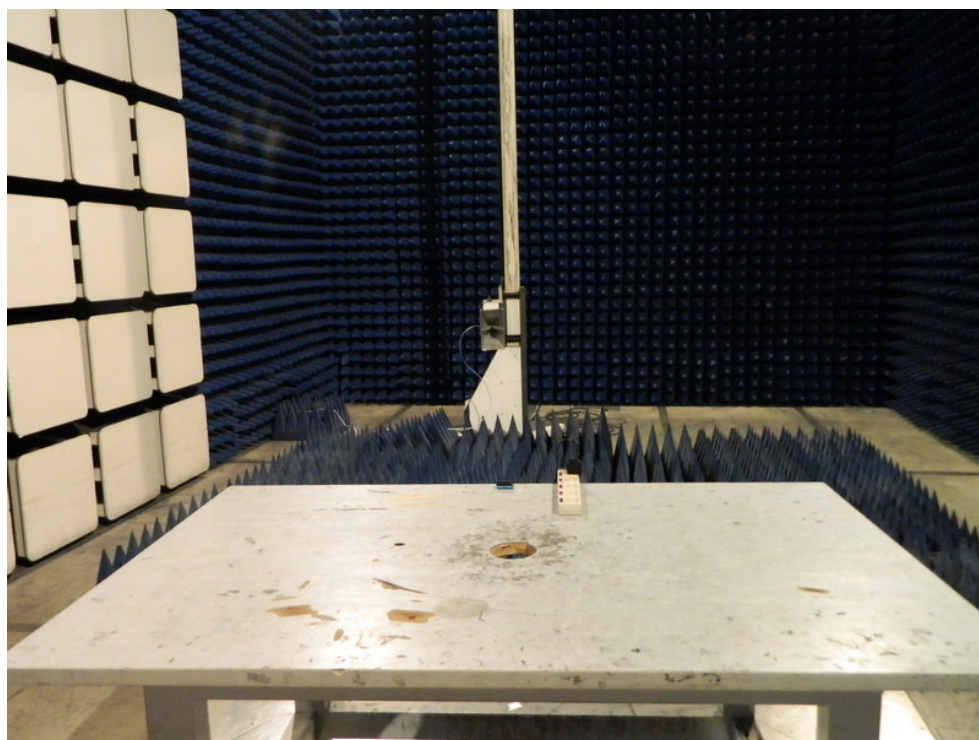
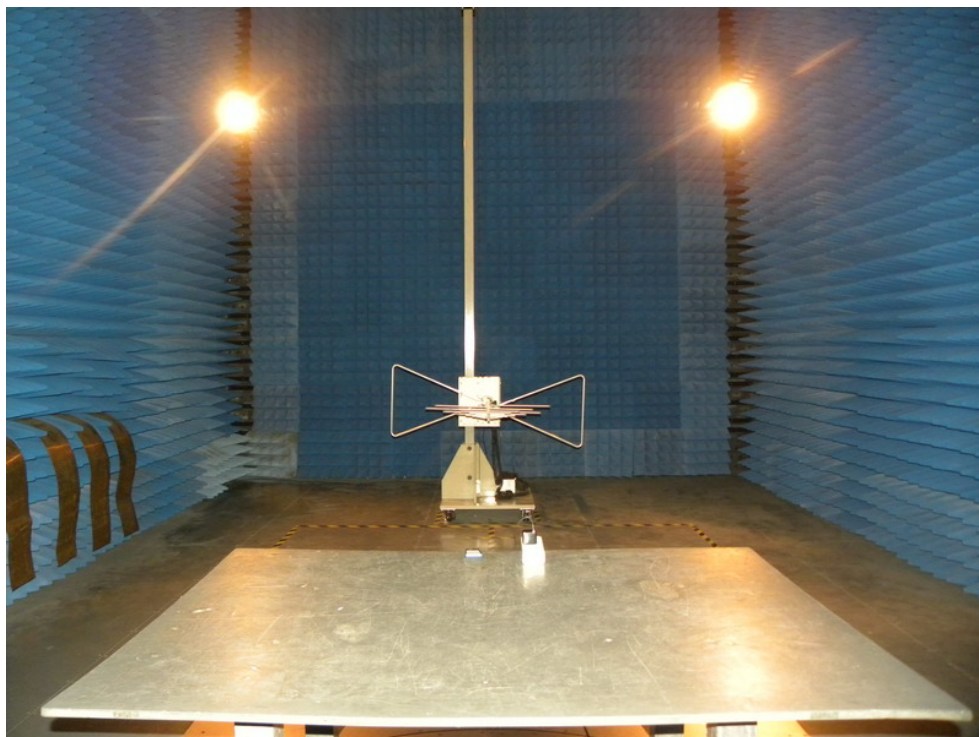
Operation Mode: TX Mode (CH39: 2480MHz) Test Date : May 30, 2013
Frequency Range: 1-25GHz Temperature : 25 °C
Test Result: PASS Humidity : 50 %
Measured Distance: 3m Test By: Andy

Freq. (MHz)	Ant. Pol. H/V	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Margin(dB)	
		PK	AV	PK	AV	PK	AV
2480	V	60.12	46.21	74	54	-13.88	-7.79
4960	V	59.28	46.58	74	54	-14.72	-7.42
7440	V	58.47	45.31	74	54	-15.53	-8.69
9920	V	59.89	45.25	74	54	-14.11	-8.75
12400	V	60.25	46.66	74	54	-13.75	-7.34
2483.5	H	61.41	46.52	74	54	-12.59	-7.48
4960	H	58.02	45.35	74	54	-15.98	-8.65
7440	H	59.45	46.88	74	54	-14.55	-7.12
9920	H	58.41	45.81	74	54	-15.59	-8.19
12400	H	60.87	47.68	74	54	-13.13	-6.32

Other harmonics emissions are lower than 20dB below the allowable limit.

Note: (1) All Readings are Peak Value and AV.
(2) Emission Level= Reading Level+ Probe Factor +Cable Loss.
(3) The average measurement was not performed when the peak measured data under the limit of average detection.

5.6 Radiated Measurement Photos:

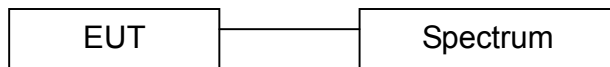


6. 6dB Bandwidth Measurement

6.1 Measurement Procedure

The EUT was operating in Bluetooth mode or could be controlled its channel. Printed out the test result from the spectrum by hard copy function.

6.2 Test SET-UP (Block Diagram of Configuration)



6.3 Measurement Equipment Used:

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	Agilent	E4407B	88156318	05/29/2013	05/29/2014

6.4 Limit

The minimum 6dB bandwidth shall be at least 500kHz.

6.5 Measurement Results:

Refer to attached data chart.

Spectrum Detector:	PK	Test Date :	June 01, 2013
Test By:	Andy	Temperature :	25 °C
Test Result:	PASS	Humidity :	50 %

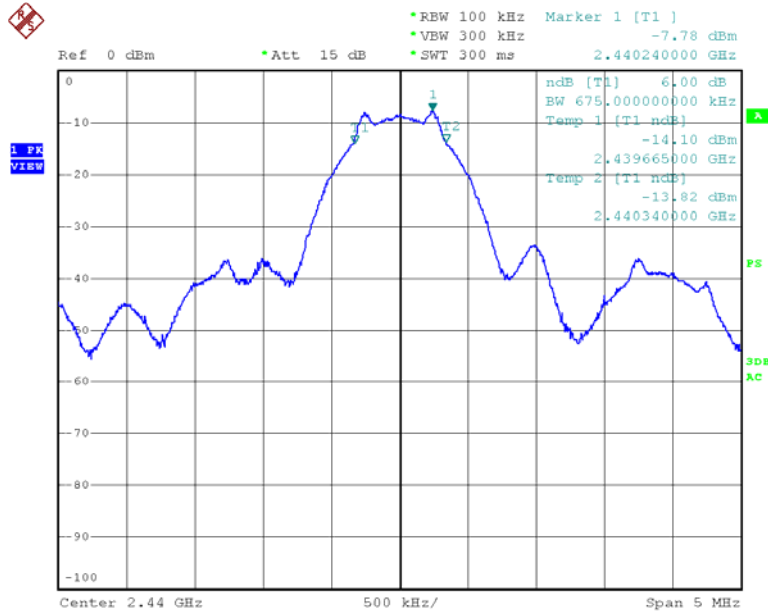
Channel number	Channel frequency (MHz)	Measurement level (KHz)	Required Limit (KHz)
01	2404	670	>500
19	2440	675	>500
39	2480	670	>500

Channel 01:



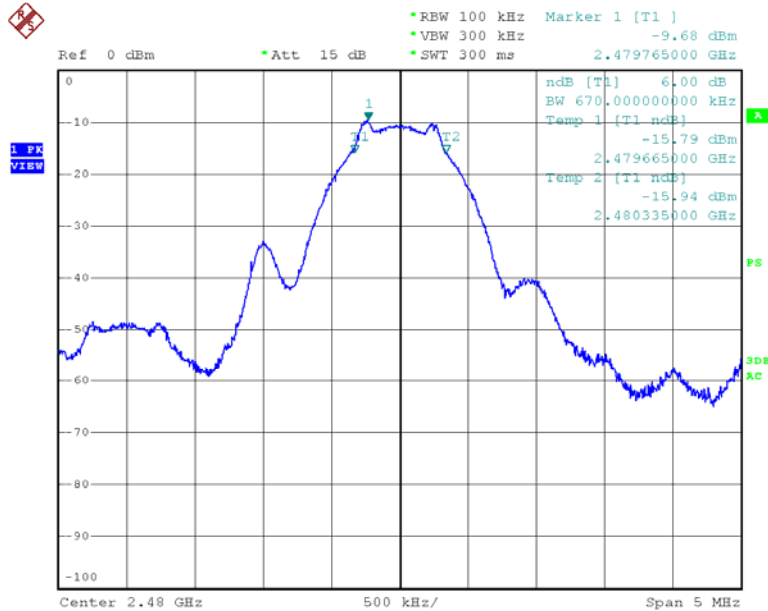
Date: 1.JUN.2013 19:20:09

Channel 19:



Date: 1.JUN.2013 18:44:18

Channel 39:



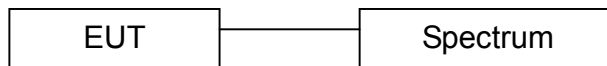
Date: 4.JUN.2013 14:38:09

7. MAXIMUM PEAK OUTPUT POWER TEST

7.1 Measurement Procedure

- The Transmitter output (antenna port) was connected to the spectrum Analyzer.
- Turn on the EUT and then record the peak power value.
- Repeat above procedures on all channels needed to be tested.

7.2 Test SET-UP (Block Diagram of Configuration)



7.3 Measurement Equipment Used:

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	Agilent	E4407B	88156318	05/29/2013	05/29/2014

7.4 Peak Power output limit

The maximum peak power shall be less 1Watt.

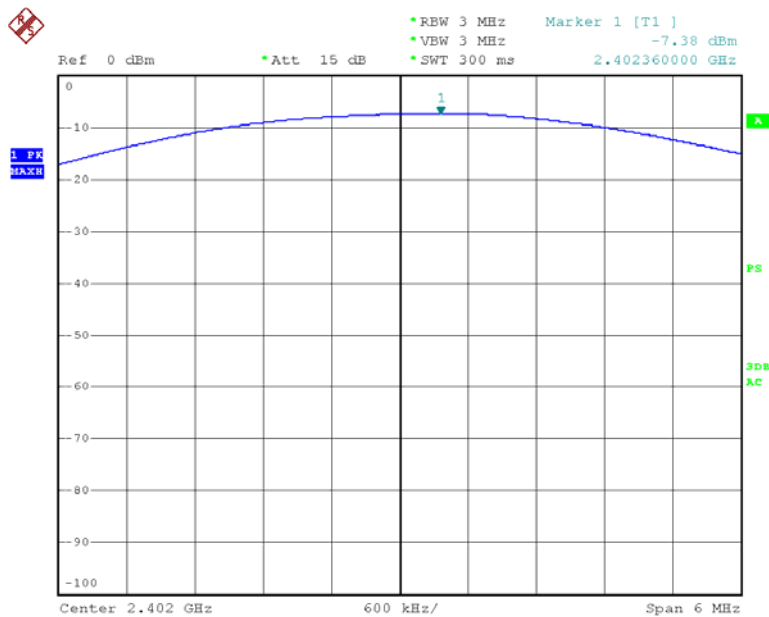
7.5 Measurement Results:

Refer to attached data chart.

Spectrum Detector:	PK	Test Date :	June 01, 2013
Test By:	Andy	Temperature :	25 °C
Test Result:	PASS	Humidity :	50 %

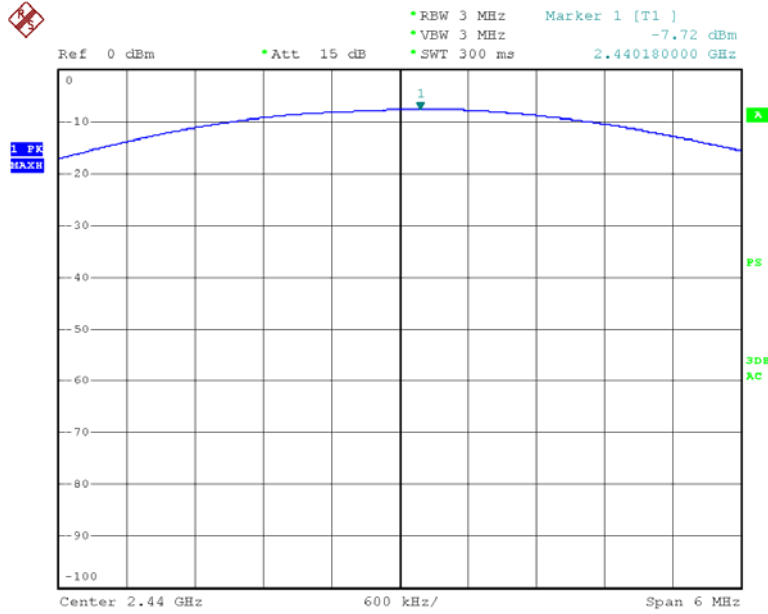
Channel number	Channel Frequency (MHz)	Peak Power output(dBm)	Peak Power Limit(W)	Pass/Fail
01	2402	-7.38	1W(30dBm)	PASS
19	2440	-7.72	1W(30dBm)	PASS
39	2480	-9.49	1W(30dBm)	PASS

Channel 01



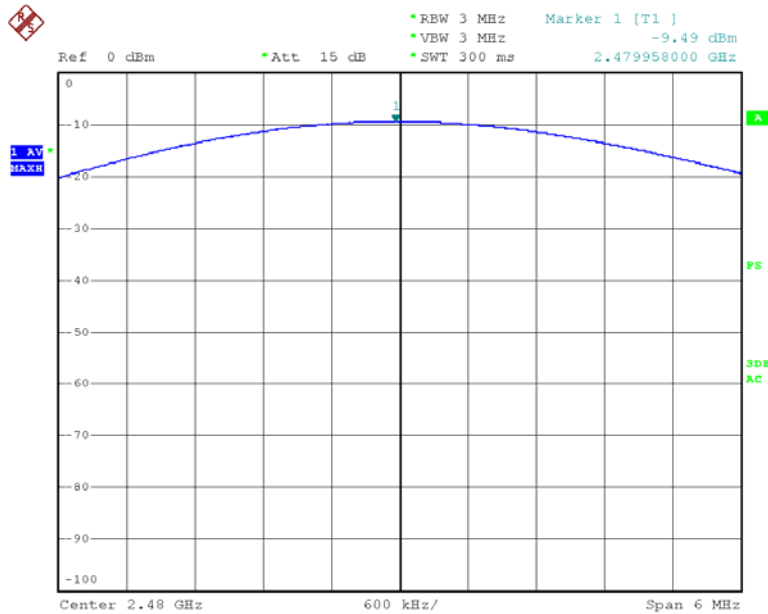
Date: 1.JUN.2013 19:11:22

Channel 19



Date: 1.JUN.2013 18:39:50

Channel 39



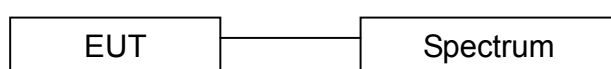
Date: 4.JUN.2013 14:43:08

8. Power Spectral Density Measurement

8.1 Measurement Procedure

The EUT was operating in Bluetooth mode or could be controlled its channel. Printed out the test result from the spectrum by hard copy function.

8.2 Test SET-UP (Block Diagram of Configuration)



8.3 Measurement Equipment Used:

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	Agilent	E4407B	88156318	05/29/2013	05/29/2014

8.4 Measurement Procedure

8.4.1 The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.

8.4.2. Set to the maximum power setting and enable the EUT transmit continuously.

8.4.3. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 3 kHz. Video bandwidth VBW = 10 kHz In order to make an accurate measurement, set the span to 1.5 times DTS Channel Bandwidth. (6dB BW)

8.4.4. Detector = peak, Sweep time = auto couple, Trace mode = max hold, Allow trace to fully stabilize. Use the peak marker function to determine the maximum power level.

8.4.5. Measure and record the results in the test report.

8.4.6. The Measured power density (dBm)/ 100KHz is a reference level and used as 20dBc down limit line for Conducted Band Edges and Conducted Spurious Emission.

8.5 Measurement Results:

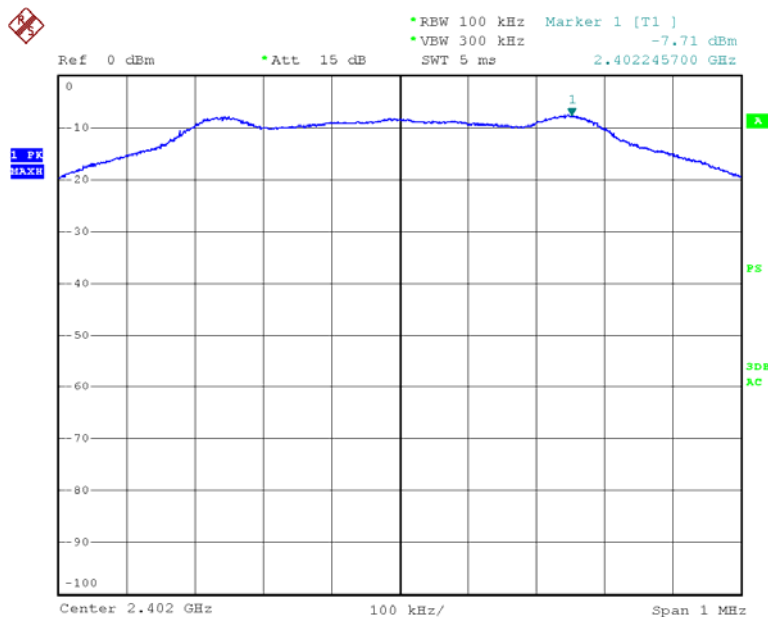
Refer to attached data chart.

Spectrum Detector:	PK	Test Date :	June 01, 2013
Test By:	Andy	Temperature :	25 °C
Test Result:	PASS	Humidity :	50 %

Channel number	Channel frequency (MHz)	Measurement level (dBm)		Required Limit (dBm)	Pass/Fail
01	2404	-7.71	-19.04	8	PASS
19	2440	-7.79	-21.74	8	PASS
39	2480	-9.62	-21.78	8	PASS

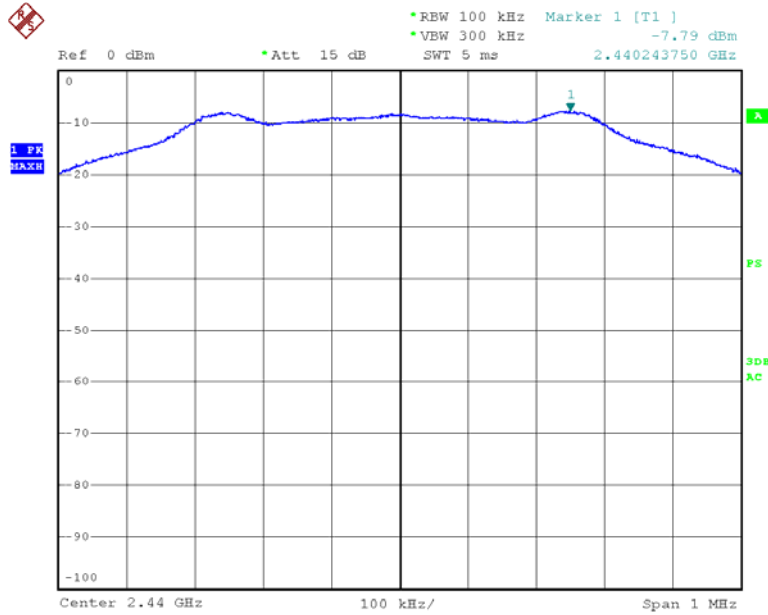
PSD 100kHz Plot:

Channel 01



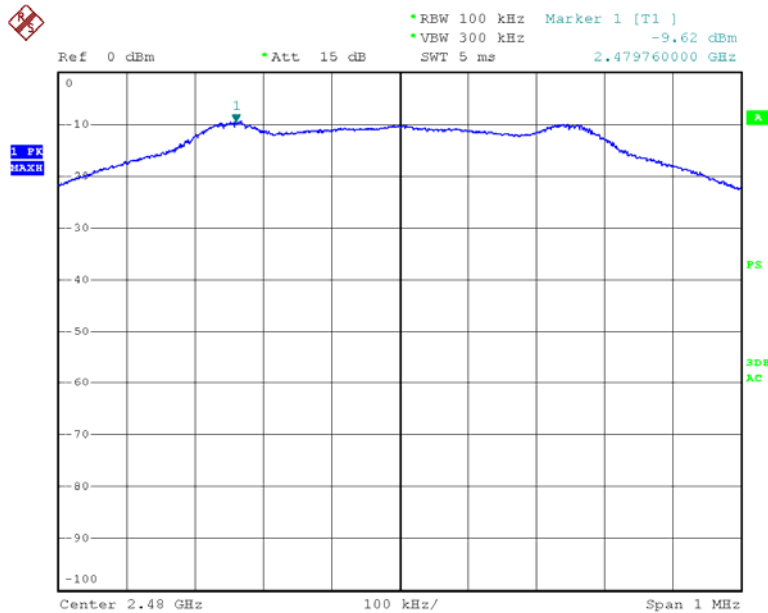
Date: 1.JUN.2013 19:26:28

Channel 19



Date: 1.JUN.2013 18:54:14

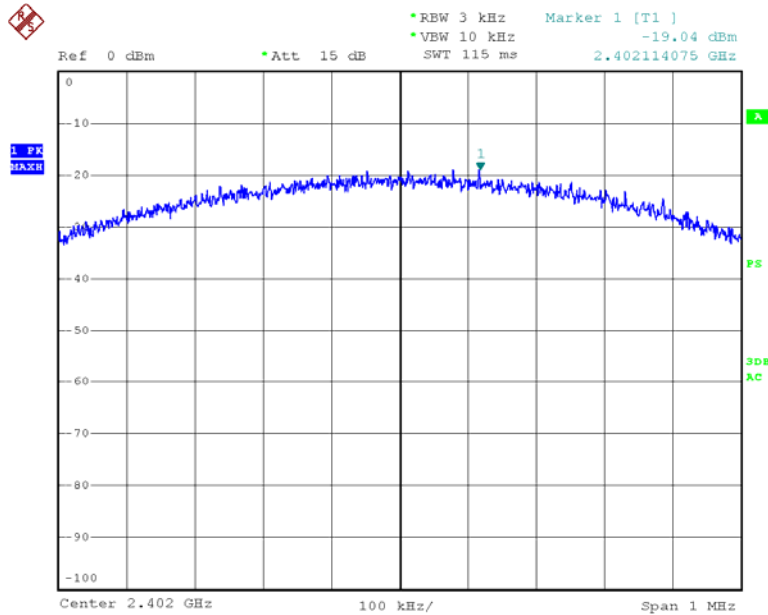
Channel 39



Date: 4.JUN.2013 14:50:53

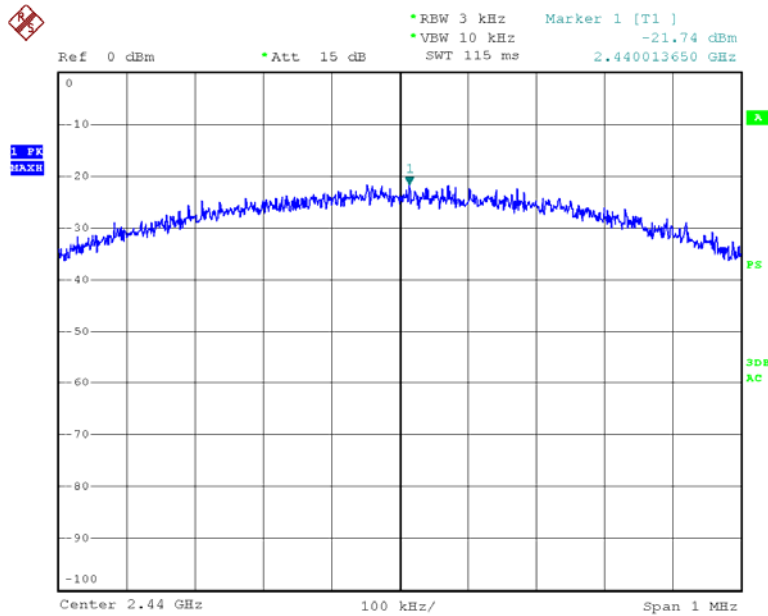
PSD 3KHz Plot:

Channel 01



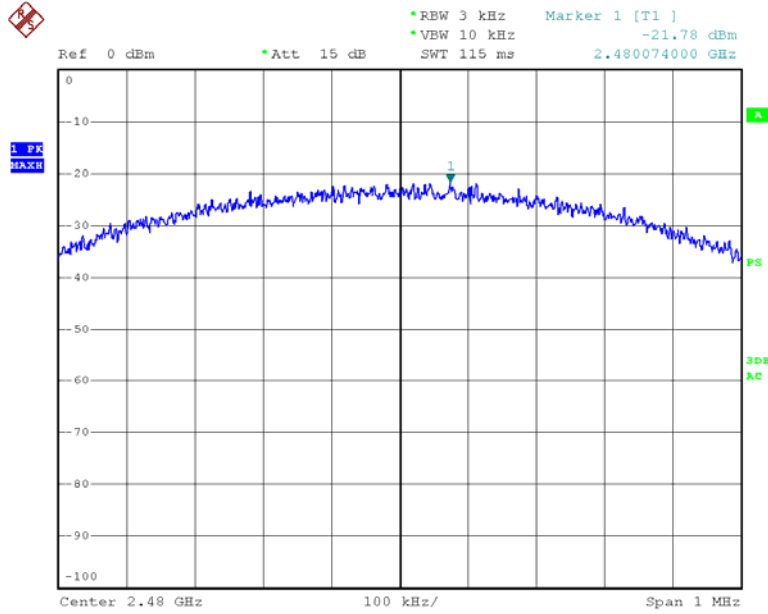
Date: 1.JUN.2013 19:27:50

Channel 19



Date: 1.JUN.2013 18:58:01

Channel 39



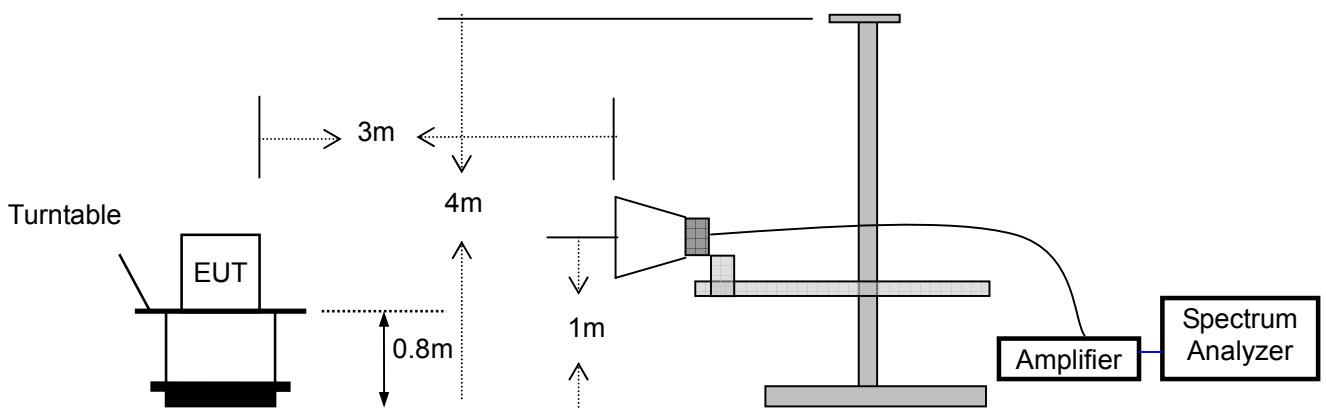
Date: 4.JUN.2013 14:49:49

9. Band EDGE test

9.1 Measurement Procedure

1. The EUT was Operating in hopping mode or could be controlled its channel. Printed out test result from the spectrum by hard copy function.
2. The EUT was placed on a turn table which is 0.8m above ground plane.
3. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
4. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
5. Repeat above procedures until all frequency measured were complete.

9.2 Test SET-UP (Block Diagram of Configuration)



9.3 Measurement Equipment Used:

Same as 5.3 Radiated Emission Measurement.

9.4 Measurement Results:

Refer to attached data chart.

Spectrum Detector: PK Test Date : June 01, 2013
Test By: Andy Temperature : 25 °C
Test Result: PASS Humidity : 50 %

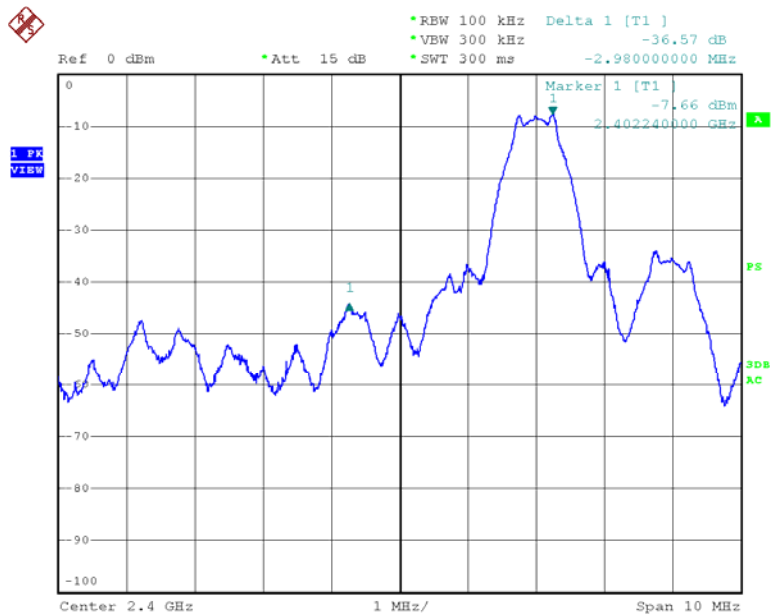
1. Conducted Test

Frequency (MHz)	Peak Power Output(dBm)	Emission read Value(dBm)	Result of Band edge(dBc)	Band edge Limit(dBc)
<2400	-7.66	-36.57	28.91	>20dBc
>2483.5	-10.37	-45.98	35.61	>20dBc

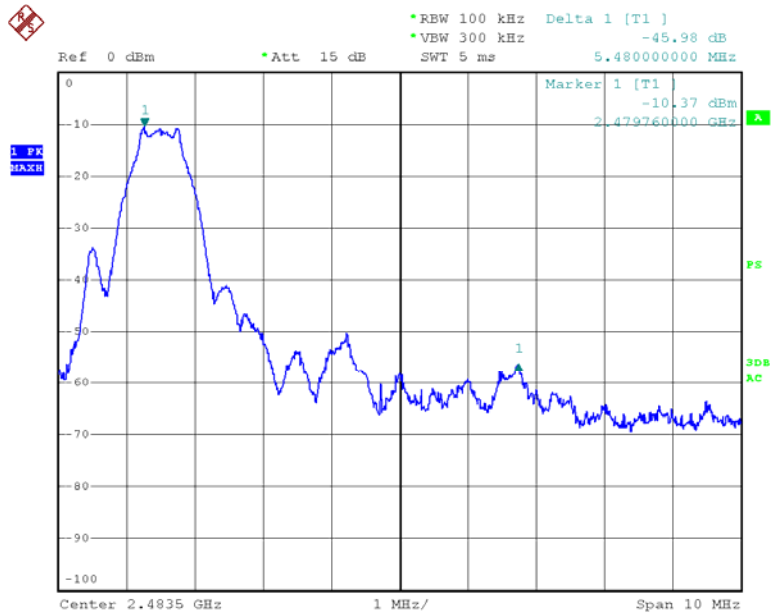
2. Radiated emission Test

Frequency (MHz)	Operating Mode	Antenna polarization (H/V)	Emission (dBuV/m)		Band edge Limit (dBuV/m)	
			PK	AV	PK	AV
<2400	op-mode 1	V	51.19	38.33	74.00	54.00
	op-mode 6	V	52.33	39.63	74.00	54.00
	op-mode 10	V	48.53	37.22	74.00	54.00
>2483.5	op-mode 3	V	49.44	38.42	74.00	54.00
	op-mode 8	V	41.33	36.43	74.00	54.00
	op-mode 12	V	49.84	33.12	74.00	54.00

Channel 01



Date: 1.JUN.2013 19:30:57



Date: 4.JUN.2013 14:57:47

10 Antenna Application

10.1 Antenna requirement

The EUT'S antenna is met the requirement of FCC part 15C section 15.203 and 15.247.

FCC part 15C section 15.247 requirements:

Systems operating in the 2402-2480MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum peak output power of the intentional radiator is reduced by 1dB for every 3dB that the directional gain of the antenna exceeds 6dBi.

10.2 Result

The EUT's antenna is an internal PCB antenna and integrated on PCB, The antenna's gain is 0dBi and meets the requirement.

APPENDIX I (Photos of EUT)

General Appearance of the EUT







Antenna

