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

OF

See and Share Video Monitor

MODEL No.: Y7685P

BRAND NAME: Tomy

Date Code: G2913TFL00

FCC ID: BMWTFY7685P

REPORT NO: ED130826200E

ISSUE DATE: October 16, 2013

Prepared for

TOMY International, Inc.
1111 W. 22nd Street Suite 320 Oak Brook, IL 60523 United States

Prepared by

DONGGUAN EMTEK CO., LTD.

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VERIFICATION OF COMPLIANCE

Applicant:	TOMY International, Inc. 1111 W. 22nd Street Suite 320 Oak Brook, IL 60523 United States
Manufacturer:	TELEFIELD LIFESTYLE LTD. Units 609 Bio-Informatics Centre, Hong Kong
Product Description:	See and Share Video Monitor
Brand Name:	Tomy
Model Number:	Y7685P
Serial Number:	N/A
File Number:	ED130826200E
Date of Test:	August 20, 2013 to September 16, 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.

Table of Contents

1. GENERAL INFORMATION

1.1 Product Description

The TOMY International, Inc. Model: Y7685P (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: 2407.5-2470.5MHz
B). Modulation: GFSK
C). Number of Channel: 21
D). Channel space: 3MHz
E). Rated RF Output Power: 9.24dBm
F). Antenna Type: Internal PCB antenna
G). Antenna GAIN: 0dBi
H). Input Rating: DC 6V, 500mA come from adapter
I). Information for adapter:
Model No.: SW-060055A
Input: AC 100-240V, 50/60Hz, 0.2A Max
Output: DC 6.0V, 500mA

Declaration for FHSS Devices

Additional declaration part according to FCC 15.247(a) for a 2407.5-2470.5MHz FHSS devices.

1. Frequency range

The frequency range of this device is 2407.5-2470.5MHz as declared by the applicant.

2. hopping sequences

Example of a 21 hopping sequences:
3, 4, 6, 8, 7, 4, 13, 13, 17, 14, 1, 6, 9, 10, 21, 4, 7, 19, 20, 17, 18

3. Equally average use of frequencies in data mode

The use of frequencies will be pseudo randomly generated by the use of different channel sequence tables.

So the used hopping sequence will be always different from the one before and an equally average use of the frequencies is guaranteed.

4. The receiver input bandwidth

The input bandwidth of the receiver is 2208 KHz. This will be part of the device manufacturing test.

1.2 Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for FCC ID: BMWTFY7685P 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 a placed on as 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 a placed on as 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

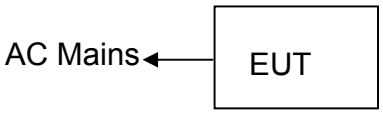


Table 2-1 Equipment Used in Tested System

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID	Series No.	Note
1.	See and Share Video Monitor	Tomy	Y7685P	BMWTFY7685P	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 : 2407.5MHz(Channel 00)
2. For middle channel : 2440.5MHz(Channel 11)
3. For highest channel: 2470.5MHz(Channel 21)

Channel Lists:

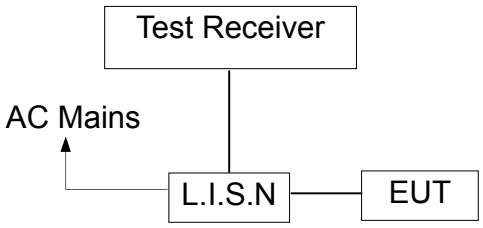
Channel	Frequency (MHz)	Channel	Frequency (MHz)
00	2407.5	14	2449.5
01	2410.5	15	2452.5
02	2413.5	16	2455.5
03	2416.5	17	2458.5
04	2419.5	18	2461.5
05	2422.5	19	2464.5
06	2425.5	20	2467.5
07	2428.5	21	2470.5
08	2431.5		
09	2434.5		
10	2437.5		
11	2440.5		
12	2443.5		
13	2446.5		

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	May 18, 2013	May 18, 2014
L.I.S.N	Rohde & Schwarz	ESH2-Z5	834549/005	May 18, 2013	May 18, 2014
L.I.S.N	Rohde & Schwarz	ESH2-Z5	834549/005	May 18, 2013	May 18, 2014
50ΩCoaxial Switch	Anritsu	MP59B	M20531	May 18, 2013	May 18, 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

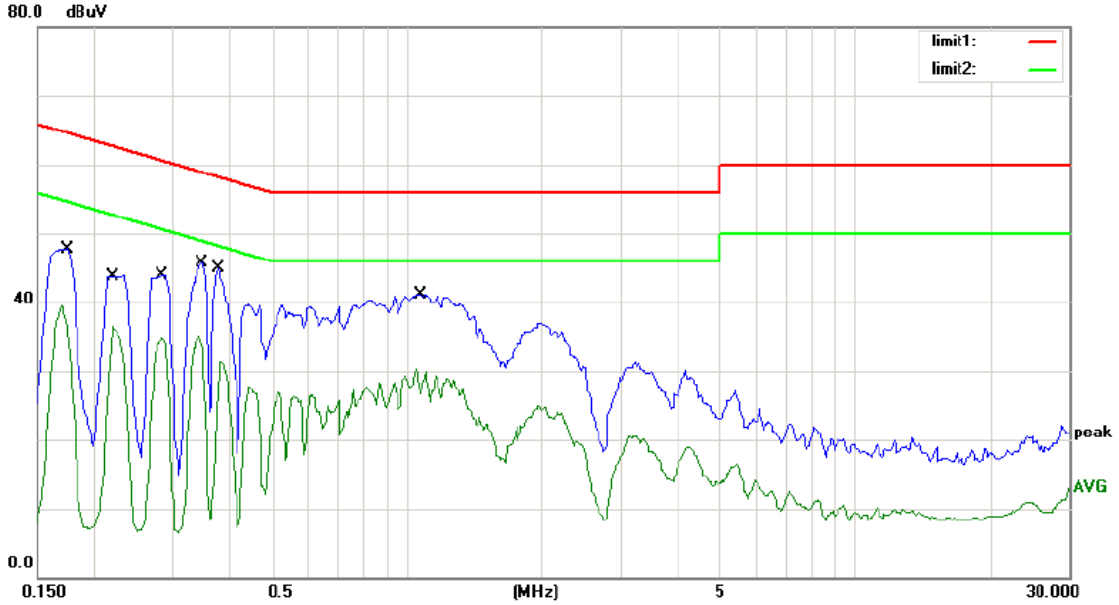
Note:

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.

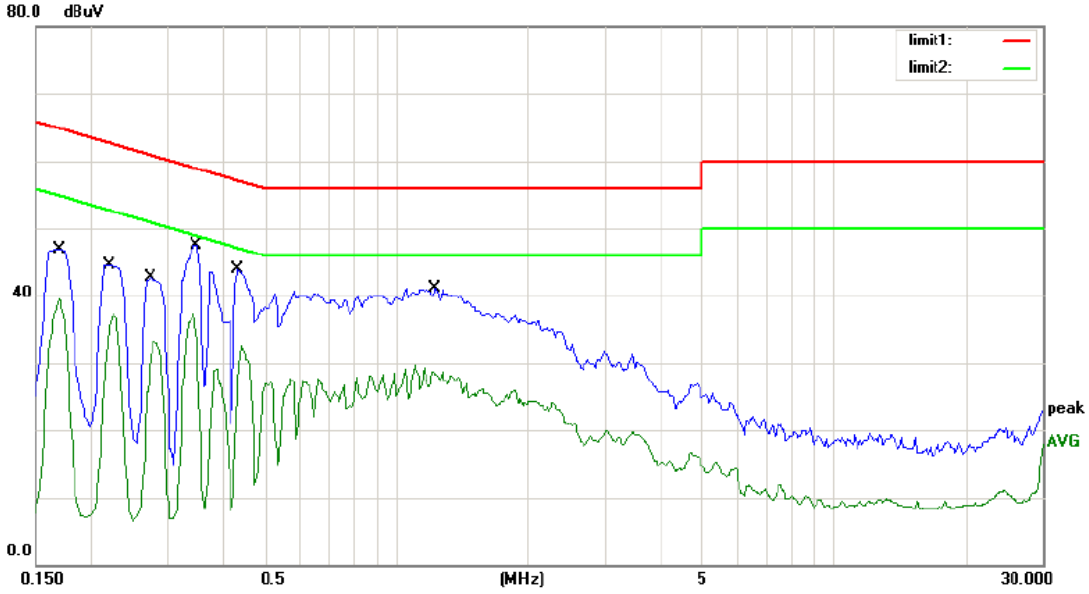
Please refer to the attached data.



Site site #1 Phase: *L1* Temperature: 24
Limit: (CE)FCC PART 15 class C_QP Power: AC 120V/60Hz Humidity: 65 %
Mode: TX
Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1720	44.50	0.00	44.50	64.86	-20.36	QP	
2		0.1720	39.44	0.00	39.44	54.86	-15.42	AVG	
3		0.2200	40.90	0.00	40.90	62.82	-21.92	QP	
4		0.2200	36.45	0.00	36.45	52.82	-16.37	AVG	
5		0.2850	40.70	0.00	40.70	60.67	-19.97	QP	
6		0.2850	34.93	0.00	34.93	50.67	-15.74	AVG	
7		0.3500	42.50	0.00	42.50	58.96	-16.46	QP	
8	*	0.3500	35.10	0.00	35.10	48.96	-13.86	AVG	
9		0.3800	41.20	0.00	41.20	58.28	-17.08	QP	
10		0.3800	31.37	0.00	31.37	48.28	-16.91	AVG	
11		1.0652	37.40	0.00	37.40	56.00	-18.60	QP	
12		1.0652	30.24	0.00	30.24	46.00	-15.76	AVG	

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



Site site #1 Phase: N Temperature: 24
Limit: (CE)FCC PART 15 class C_QP Power: AC 120V/60Hz Humidity: 65 %
Mode: TX
Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1700	44.10	0.00	44.10	64.96	-20.86	QP	
2		0.1700	38.79	0.00	38.79	54.96	-16.17	AVG	
3		0.2220	42.10	0.00	42.10	62.74	-20.64	QP	
4		0.2220	37.20	0.00	37.20	52.74	-15.54	AVG	
5		0.2750	40.30	0.00	40.30	60.97	-20.67	QP	
6		0.2750	33.06	0.00	33.06	50.97	-17.91	AVG	
7		0.3500	45.50	0.00	45.50	58.96	-13.46	QP	
8	*	0.3500	37.20	0.00	37.20	48.96	-11.76	AVG	
9		0.4350	41.60	0.00	41.60	57.16	-15.56	QP	
10		0.4350	32.43	0.00	32.43	47.16	-14.73	AVG	
11		1.2350	38.70	0.00	38.70	56.00	-17.30	QP	
12		1.2350	28.68	0.00	28.68	46.00	-17.32	AVG	

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

4.6 Conducted Measurement Photos:

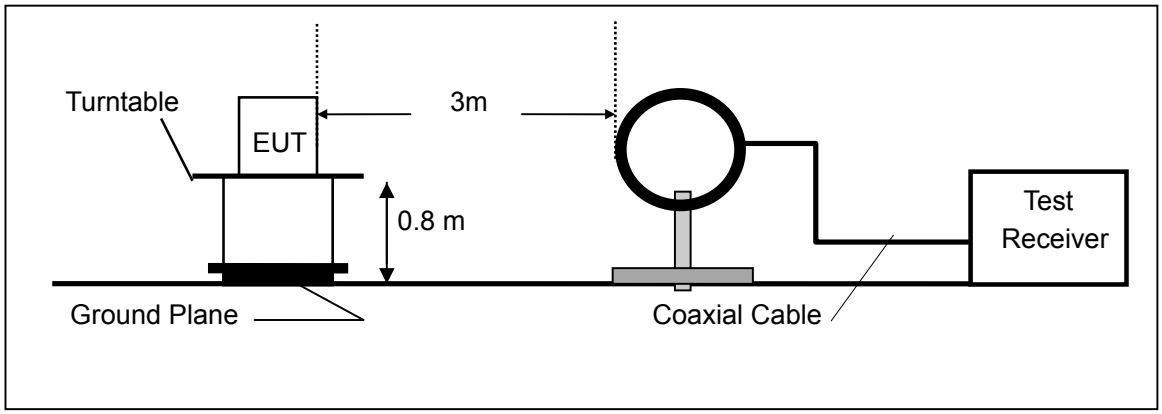
5. Radiated Emission Test

5.1 Measurement Procedure

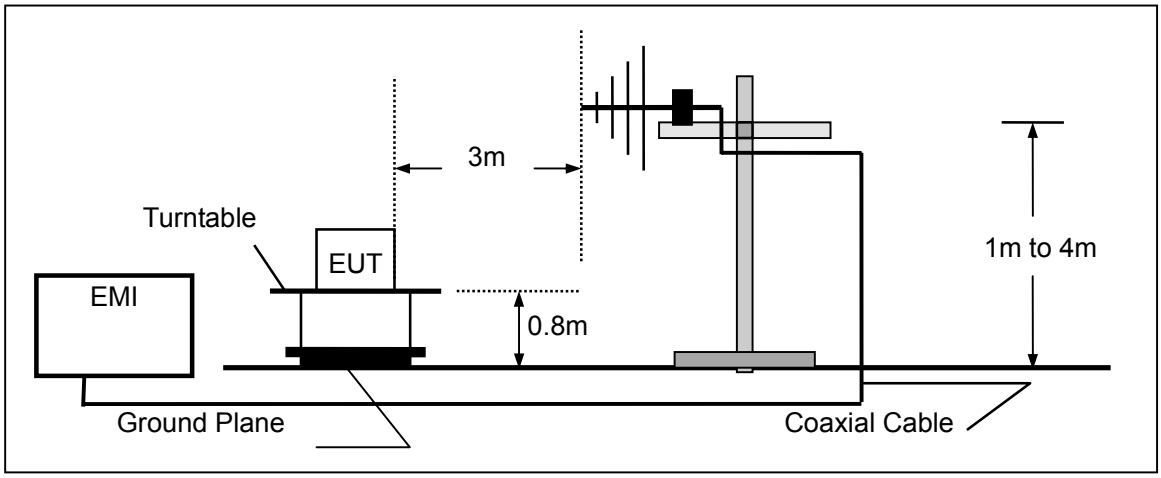
1 The EUT was placed on a turn table which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
4. Repeat above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

5.2 Test SET-UP (Block Diagram of Configuration)

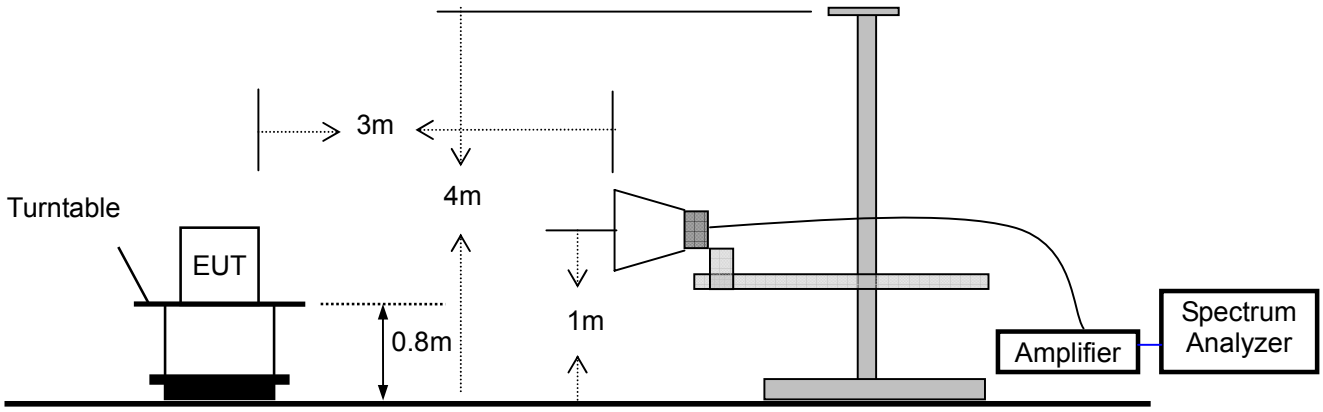
(A) Radiated Emission Test Set-Up, Frequency Below 30MHz



(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	May 18, 2013	May 18, 2014
Pre-Amplifier	HP	8447D	2944A07999	May 11, 2013	May 11, 2014
Bilog Antenna	Schwarzbeck	VULB9163	142	May 28, 2013	May 28, 2014
Loop Antenna	Schwarzbeck	FMZB 1519	012	May 28, 2013	May 28, 2014
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170399	May 18, 2013	May 18, 2014
Horn Antenna	Schwarzbeck	BBHA 9120	D143	May 29, 2013	May 29, 2014
Cable	Schwarzbeck	AK9513	ACRX1	May 29, 2013	May 29, 2014
Cable	Rosenberger	N/A	FP2RX2	May 29, 2013	May 29, 2014
Cable	Schwarzbeck	AK9513	CRPX1	May 29, 2013	May 29, 2014
Cable	Schwarzbeck	AK9513	CRRX2	May 18, 2013	May 18, 2014
Pre-Amplifier	A.H.	PAM-0126	1415261	May 29, 2013	May 29, 2014

5.4 Radiated emission limit

Frequency MHz	Distance Meter	Field Strength uV/m	Field Strength dBuV/m
0.009 – 0.490	300	10000 * 2400/F(KHz)	20log 2400/F(KHz) + 80
0.490 – 1.705	30	100 * 24000/F(KHz)	20log 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 :	August 25, 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 :	August 25, 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
137.6700	V	32.52	43.50	-10.98	PK
149.3100	V	28.98	43.50	-14.52	PK
149.3100	V	28.98	43.50	-14.52	PK
161.9200	V	29.98	43.50	-13.52	PK
288.0200	V	32.92	46.00	-13.08	PK
293.8400	V	34.75	46.00	-11.25	PK
113.4200	H	33.85	43.50	-9.65	PK
126.0300	H	35.91	43.50	-7.59	PK
129.9100	H	37.47	43.50	-6.03	PK
137.6700	H	34.52	43.50	-8.98	PK
149.3100	H	33.79	43.50	-9.71	PK
173.5600	H	33.94	43.50	-9.56	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 11)	Test Date :	August 25, 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
137.3700	V	32.34	43.50	-11.16	PK
149.4500	V	29.57	43.50	-13.93	PK
149.7400	V	28.34	43.50	-15.16	PK
161.4200	V	29.41	43.50	-14.09	PK
284.6300	V	32.36	46.00	-13.64	PK
293.4600	V	34.43	46.00	-11.57	PK
113.4700	H	33.65	43.50	-9.85	PK
126.3300	H	35.46	43.50	-8.04	PK
129.5600	H	37.78	43.50	-5.72	PK
137.5700	H	34.52	43.50	-8.98	PK
144.6500	H	33.76	43.50	-9.74	PK
173.6700	H	33.46	43.50	-10.04	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 21)	Test Date :	August 25, 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
137.2700	V	32.45	43.50	-11.05	PK
146.4500	V	28.63	43.50	-14.87	PK
149.3700	V	28.48	43.50	-15.02	PK
161.5300	V	28.64	43.50	-14.86	PK
288.0500	V	34.42	46.00	-11.58	PK
293.4500	V	34.55	46.00	-11.45	PK
113.2400	H	33.27	43.50	-10.23	PK
126.5300	H	34.47	43.50	-9.03	PK
129.4100	H	37.34	43.50	-6.16	PK
137.5700	H	34.57	43.50	-8.93	PK
147.6700	H	35.59	43.50	-7.91	PK
175.5600	H	37.73	43.50	-5.77	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 00)	Test Date :	September 07, 2013
Frequency Range:	1-25GHz	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)	
		PK	AV	PK	AV	PK	AV
2407.5	V	64.34	49.34	74	54	-9.66	-4.66
4815	V	62.57	48.56	74	54	-11.43	-5.44
7222.5	V	61.45	47.34	74	54	-12.55	-6.66
9630	V	59.46	46.45	74	54	-14.54	-7.55
12037.5	V	57.75	45.47	74	54	-16.25	-8.53
2407.5	H	65.23	50.45	74	54	-8.77	-3.55
4815	H	63.45	48.29	74	54	-10.55	-5.71
7222.5	H	61.54	48.56	74	54	-12.46	-5.44
9630	H	60.45	47.34	74	54	-13.55	-6.66
12037.5	H	57.16	46.45	74	54	-16.84	-7.55

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 (Channel 11)	Test Date :	September 07, 2013
Frequency Range:	1-25GHz	Temperature :	25 ℃
Test Result:	PASS	Humidity :	50 %
Measured Distance:	3m	Test By:	Andy

Freq.	Ant. Pol.	Emission Level(dBuV/m		Limit 3m(dBuV/m)		Margin(dB)	
(MHz)	H/V	PK	AV	PK	AV	PK	AV
2440.5	V	65.56	50.56	74	54	-8.44	-3.44
4881	V	64.45	49.53	74	54	-9.55	-4.47
7321.5	V	63.45	48.42	74	54	-10.55	-5.58
9762	V	59.46	47.45	74	54	-14.54	-6.55
12202.5	V	58.64	46.63	74	54	-15.36	-7.37
2440.5	H	64.34	49.64	74	54	-9.66	-4.36
4881	H	61.52	48.25	74	54	-12.48	-5.75
7321.5	H	60.35	47.41	74	54	-13.65	-6.59
9762	H	59.64	46.65	74	54	-14.36	-7.35
12202.5	H	58.34	46.47	74	54	-15.66	-7.53

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.

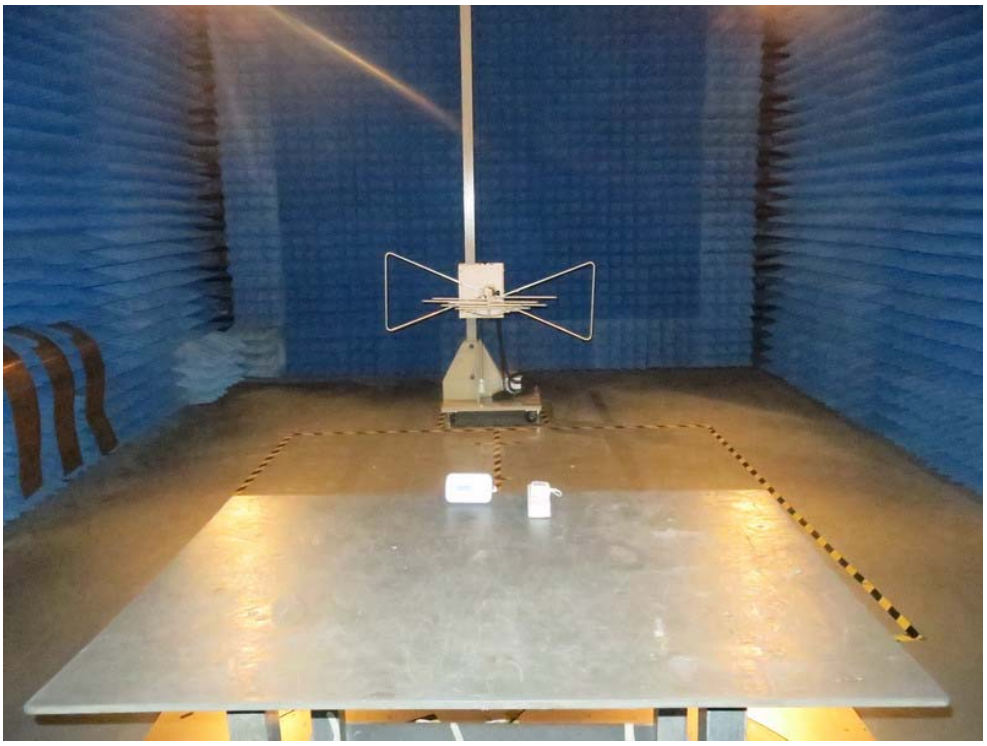
Operation Mode:	TX Mode (Channel 21)	Test Date :	September 07, 2013
Frequency Range:	1-25GHz	Temperature :	25 ℃
Test Result:	PASS	Humidity :	50 %
Measured Distance:	3m	Test By:	Andy

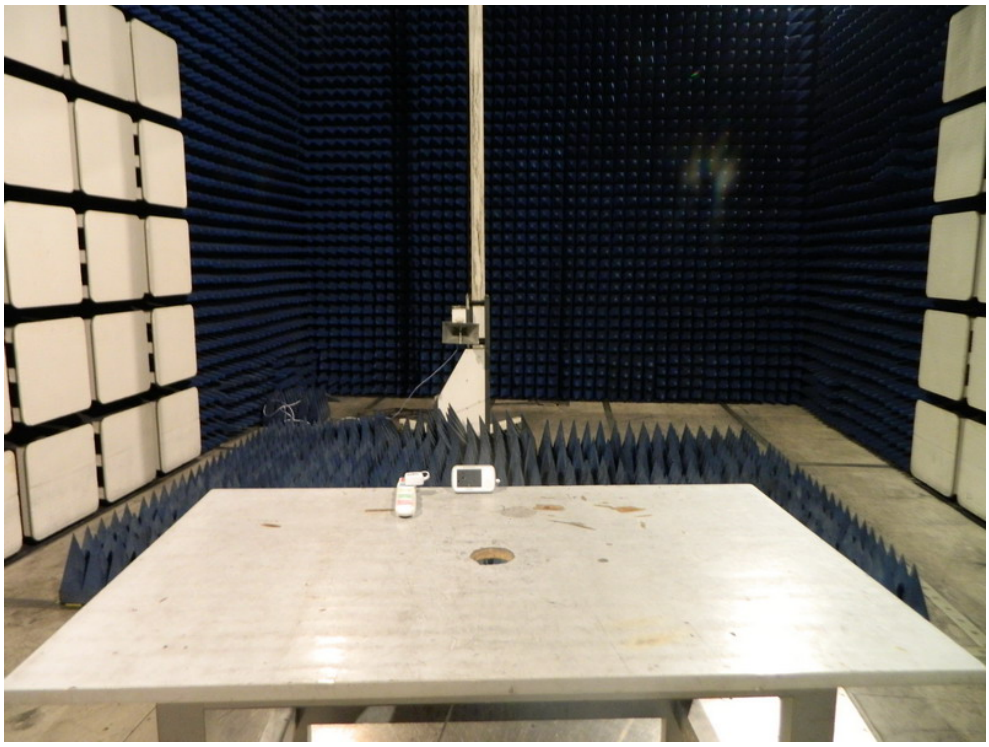
Freq. (MHz)	Ant. Pol. H/V	Emission Level(dBuV/m		Limit 3m(dBuV/m)		Margin(dB)	
		PK	AV	PK	AV	PK	AV
2470.5	V	64.43	49.43	74	54	-9.57	-4.57
4941	V	63.73	48.67	74	54	-10.27	-5.33
7411.5	V	62.56	48.14	74	54	-11.44	-5.86
9882	V	61.23	47.56	74	54	-12.77	-6.44
12352.5	V	60.53	46.44	74	54	-13.47	-7.56
2470.5	H	66.45	49.56	74	54	-7.55	-4.44
4941	H	65.67	48.52	74	54	-8.33	-5.48
7411.5	H	64.46	47.34	74	54	-9.54	-6.66
9882	H	63.56	46.45	74	54	-10.44	-7.55
12352.5	H	61.37	45.24	74	54	-12.63	-8.76

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:



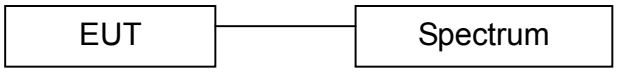


6. 6dB Bandwidth Measurement

6.1 Measurement Procedure

The EUT was operating in Wireless 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

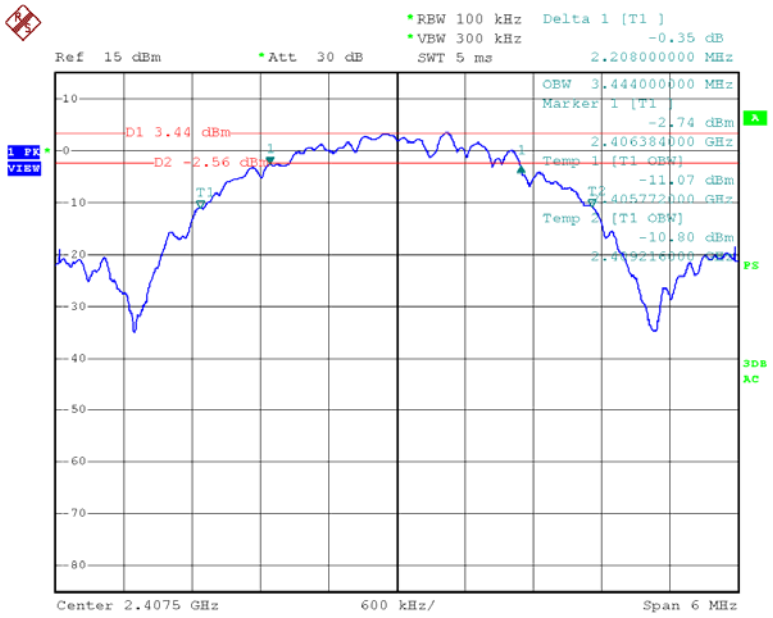
The minimum 6dB bandwidth shall be at least 500kHz.

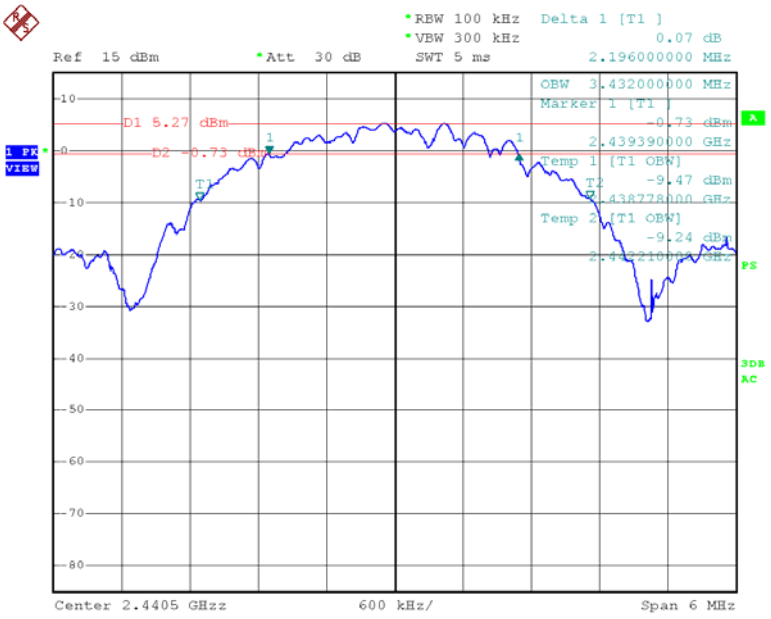
6.5 Measurement Results:

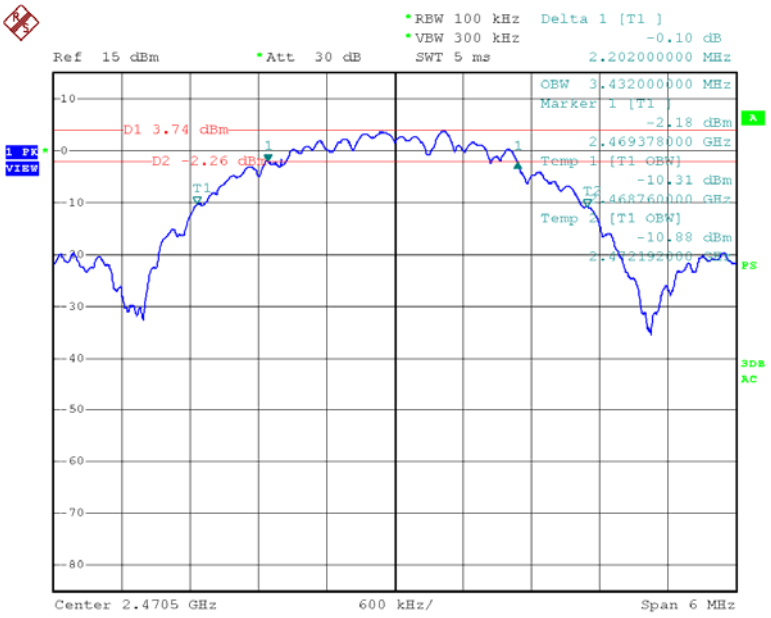
Refer to attached data chart.

Spectrum Detector:	PK	Test Date :	August 25, 2013
Test By:	Andy	Temperature :	25 ℃
Test Result:	PASS	Humidity :	50 %

Channel number	Channel frequency (MHz)	Measurement level (KHz)	Required Limit (KHz)
00	2407.5	2208	>500
11	2441.5	2196	>500
21	2470.5	2202	>500




RBW 100 kHz
VBW 300 kHz
SWT 5 ms
Delta 1 [T1]
0.07 dB
2.196000000 MHz
Ref 15 dBm
Att 30 dB
OBW 3.432000000 MHz
Marker 1 [T1]
-0.73 dBm
2.439390000 GHz
Temp 1 [T1 OBW]
-9.47 dBm
Temp 2 [T1 OBW]
-9.24 dBm
D1 5.27 dBm
D2 -0.73 dBm
Center 2.4405 GHzz
600 kHz/
Span 6 MHz

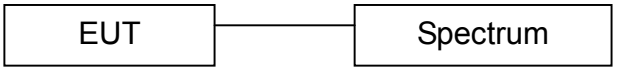

RBW 100 kHz
VBW 300 kHz
SWT 5 ms
Delta 1 [T1]
-0.10 dB
2.202000000 MHz
Ref 15 dBm
Att 30 dB
OBW 3.432000000 MHz
Marker 1 [T1]
-2.18 dBm
2.469378000 GHz
Temp 1 [T1 OBW]
-10.31 dBm
Temp 2 [T1 OBW]
-10.88 dBm
D1 3.74 dBm
D2 -2.26 dBm
Center 2.4705 GHz
600 kHz/
Span 6 MHz

7. MAX IMUM PEAK OUTPUT POWER TEST

7.1 Measurement Procedure

a. The Transmitter output (antenna port) was connected to the spectrum Analyzer.
b. Turn on the EUT and then record the peak power value.
c. 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

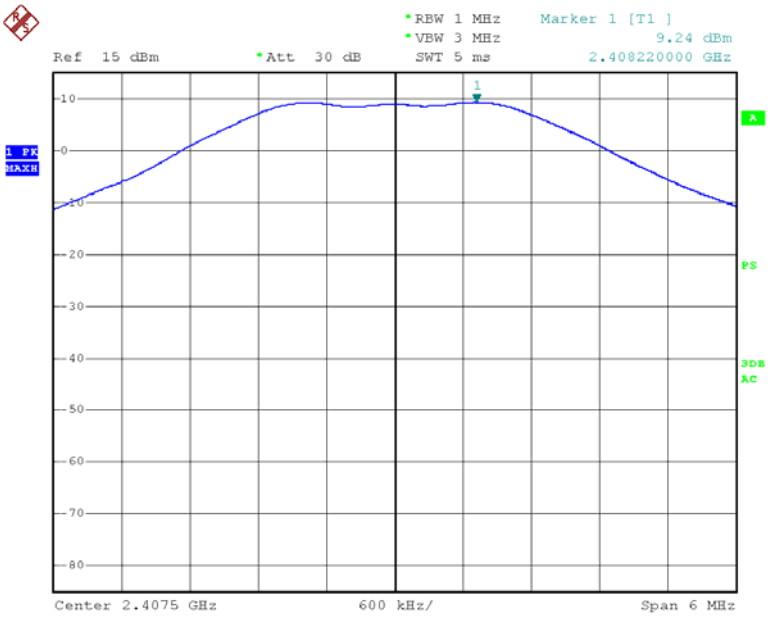
The maximum peak power shall be less 1Watt.

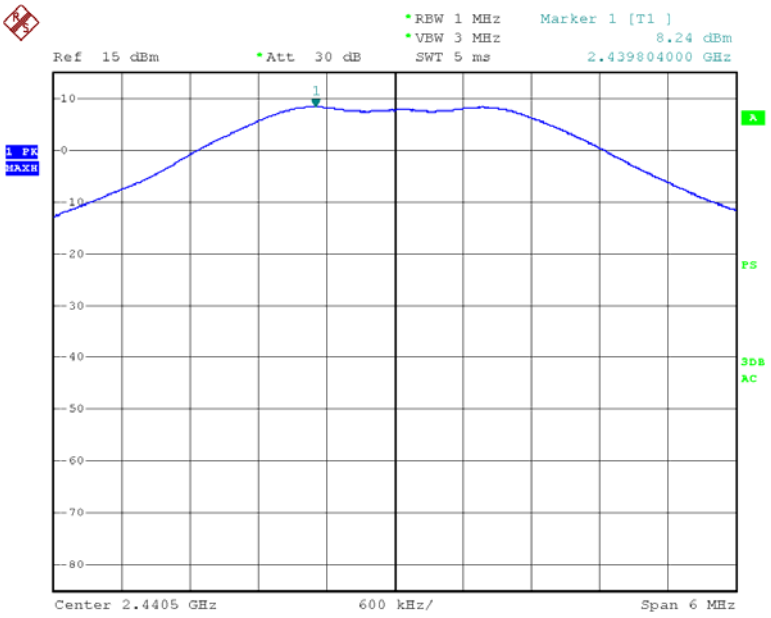
7.5 Measurement Results:

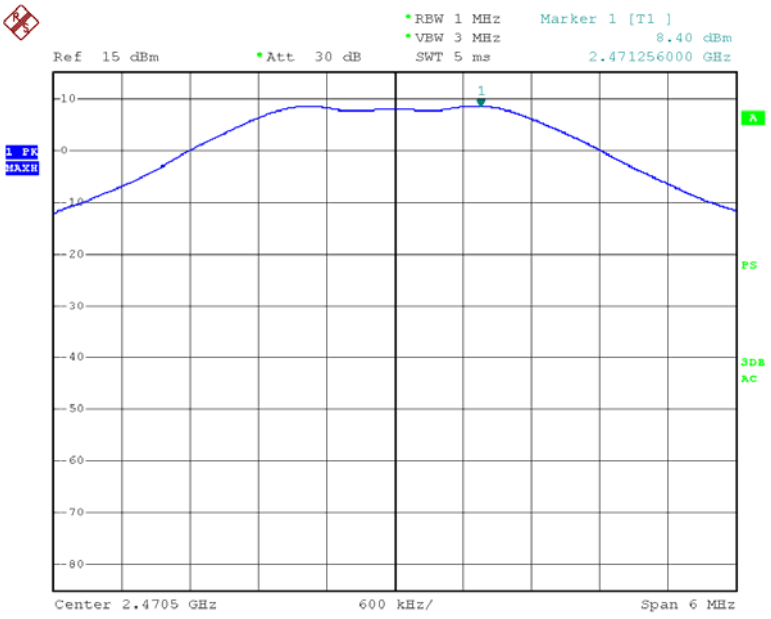
Refer to attached data chart.

Spectrum Detector:	PK	Test Date :	August 28, 2013
Test By:	Andy	Temperature :	25 ℃
Test Result:	PASS	Humidity :	50 %

Channel number	Channel Frequency (MHz)	Peak Power output(dBm)	Peak Power Limit(W)	Pass/Fail
00	2407.5	**9.24**	1W(30dBm)	PASS
11	2440.5	8.24	1W(30dBm)	PASS
21	2470.5	8.40	1W(30dBm)	PASS


RBW 1 MHz
VBW 3 MHz
SWT 5 ms
Marker 1 [T1]
9.24 dBm
2.408220000 GHz
Ref 15 dBm
Att 30 dB
1 PK MAXH
A
PS
3DB AC
Center 2.4075 GHz
600 kHz/
Span 6 MHz


RBW 1 MHz
VBW 3 MHz
SWT 5 ms
Marker 1 [T1]
8.24 dBm
2.439804000 GHz
Ref 15 dBm
Att 30 dB
1 PK MAXH
A
PS
3DB AC
Center 2.4405 GHz
600 kHz/
Span 6 MHz

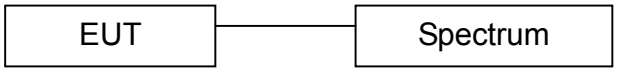

RBW 1 MHz
VBW 3 MHz
SWT 5 ms
Marker 1 [T1]
8.40 dBm
2.471256000 GHz
Ref 15 dBm
Att 30 dB
1 PK
MAXH
10
0
-10
-20
-30
-40
-50
-60
-70
-80
A
PS
3DB
AC
Center 2.4705 GHz
600 kHz/
Span 6 MHz

8. Power Spectral Density Measurement

8.1 Measurement Procedure

The EUT was operating in Wireless 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.

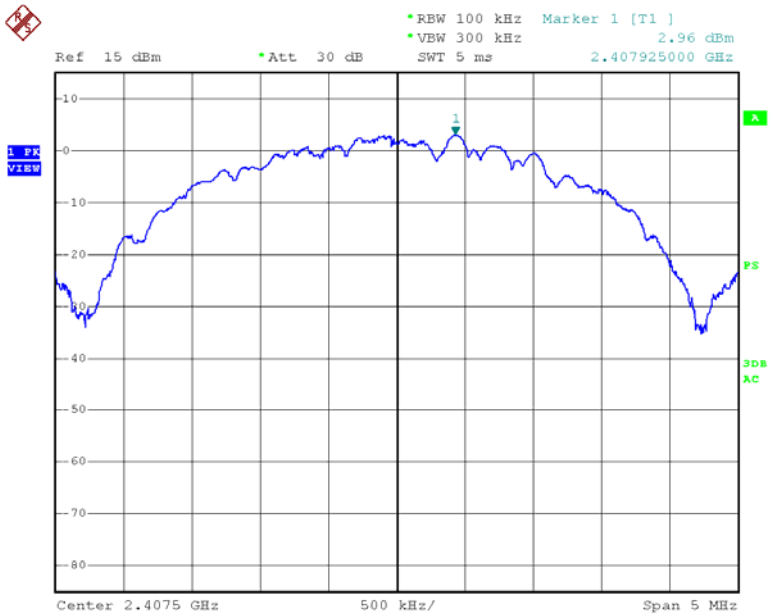
8.5 Measurement Results:

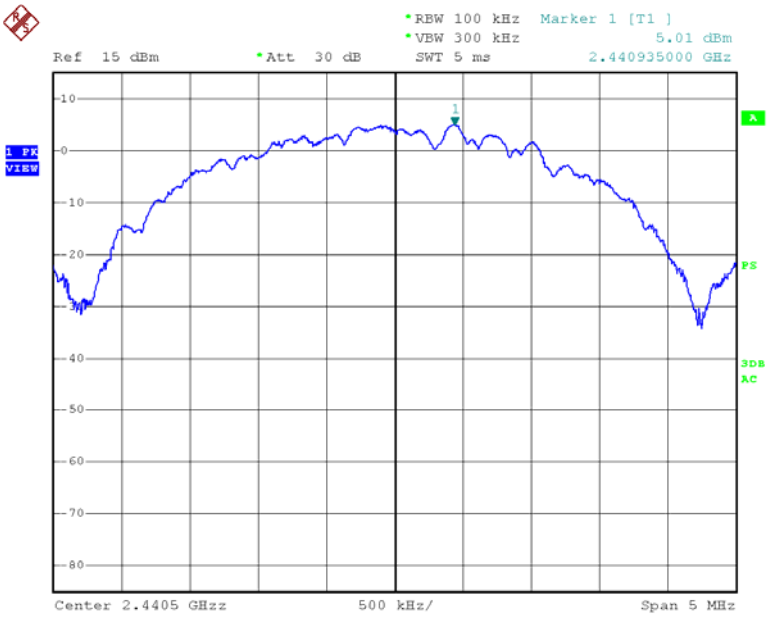
Refer to attached data chart.

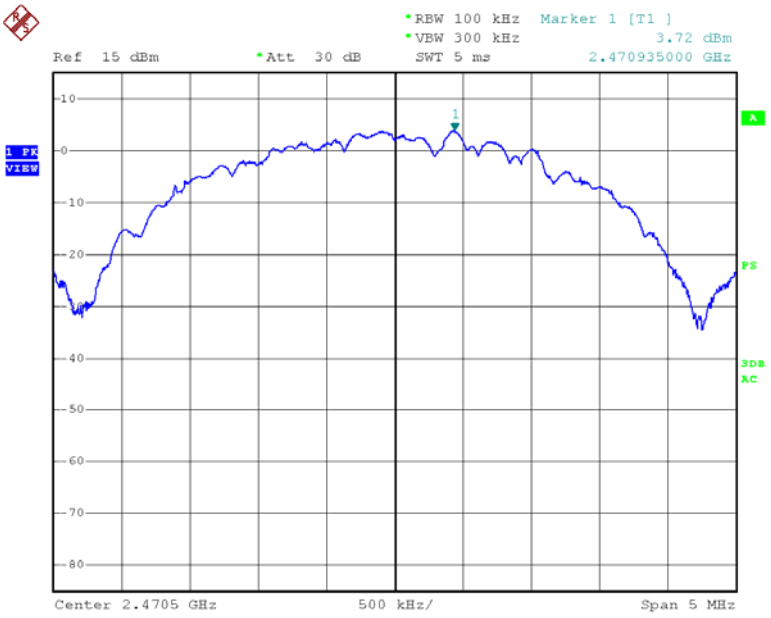
Spectrum Detector:	PK	Test Date :	August 25, 2013
Test By:	Andy	Temperature :	25 ℃
Test Result:	PASS	Humidity :	50 %

Channel number	Channel frequency (MHz)	Measurement level (dBm)		Required Limit (dBm)	Pass/Fail
00	2407.5	2.96	-8.18	8	PASS
11	2440.5	5.01	-6.60	8	PASS
21	2470.5	3.72	-7.55	8	PASS

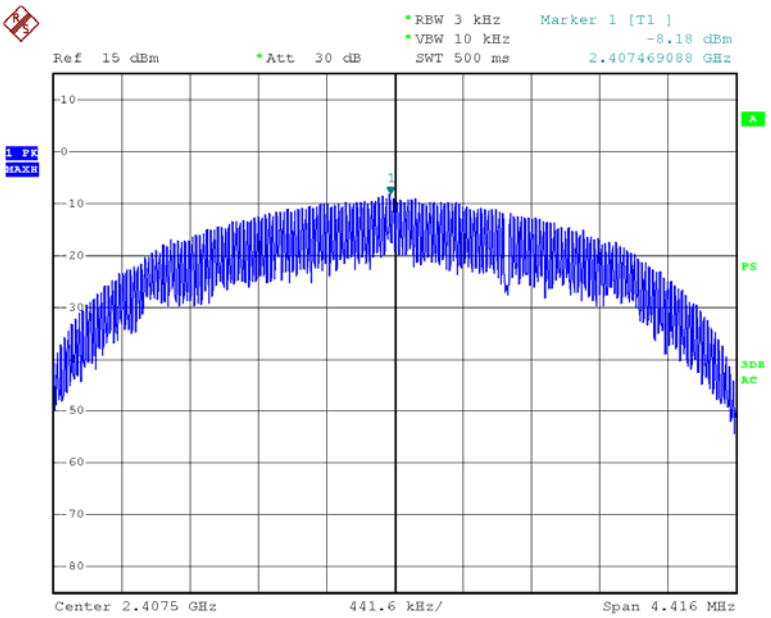
PSD 100kHz Plot:

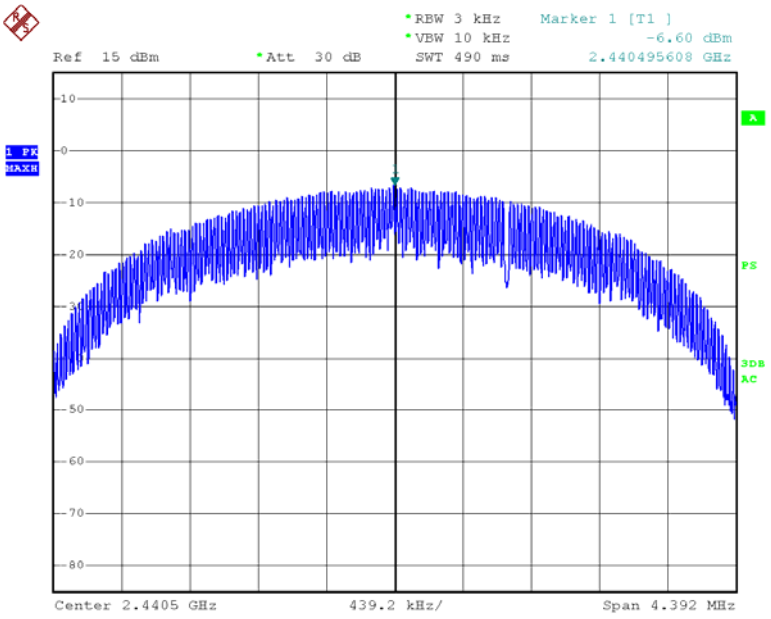


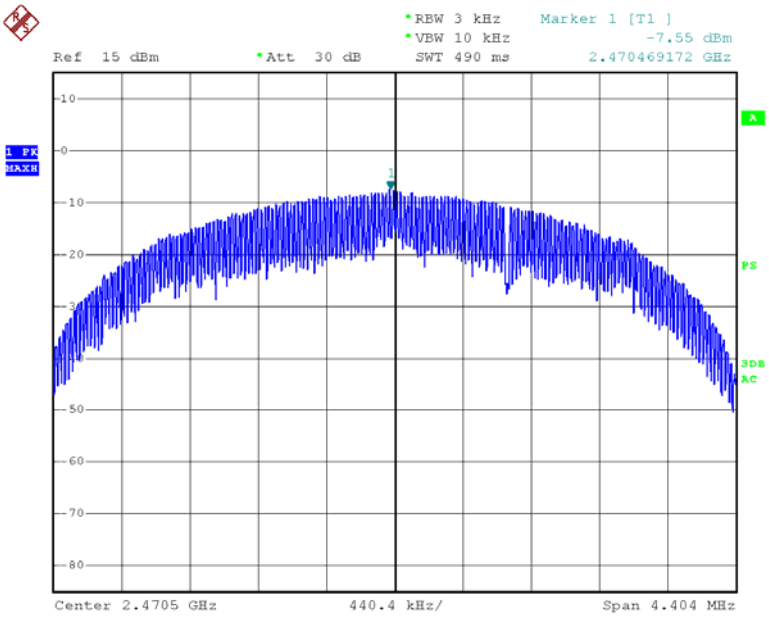

RBW 100 kHz
VBW 300 kHz
SWT 5 ms
Marker 1 [T1]
5.01 dBm
2.440935000 GHz
Ref 15 dBm
Att 30 dB
1 PK VIEW
A
PS
3DB AC
Center 2.4405 GHzz
500 kHz/
Span 5 MHz


RBW 100 kHz
VBW 300 kHz
SWT 5 ms
Marker 1 [T1]
3.72 dBm
2.470935000 GHz
Ref 15 dBm
Att 30 dB
1 PK VIEW
A
PS
3DB AC
Center 2.4705 GHz
500 kHz/
Span 5 MHz

PSD 3KHz Plot:





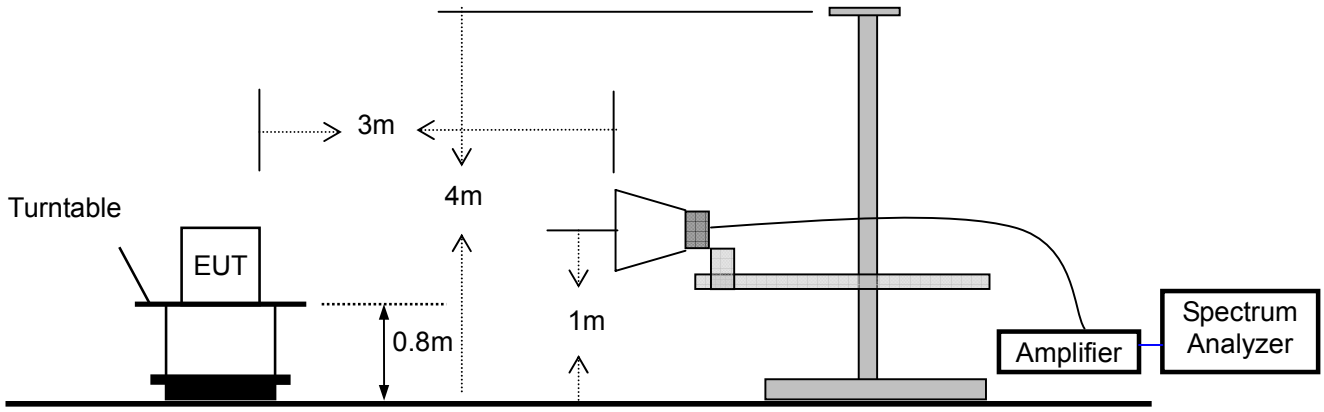

RBW 3 kHz
VBW 10 kHz
SWT 490 ms
Marker 1 [T1]
-7.55 dBm
2.470469172 GHz
Ref 15 dBm
Att 30 dB
1 PK
MAXH
A
PS
3DB
AC
10
0
10
20
30
50
60
70
80
Center 2.4705 GHz
440.4 kHz/
Span 4.404 MHz

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.

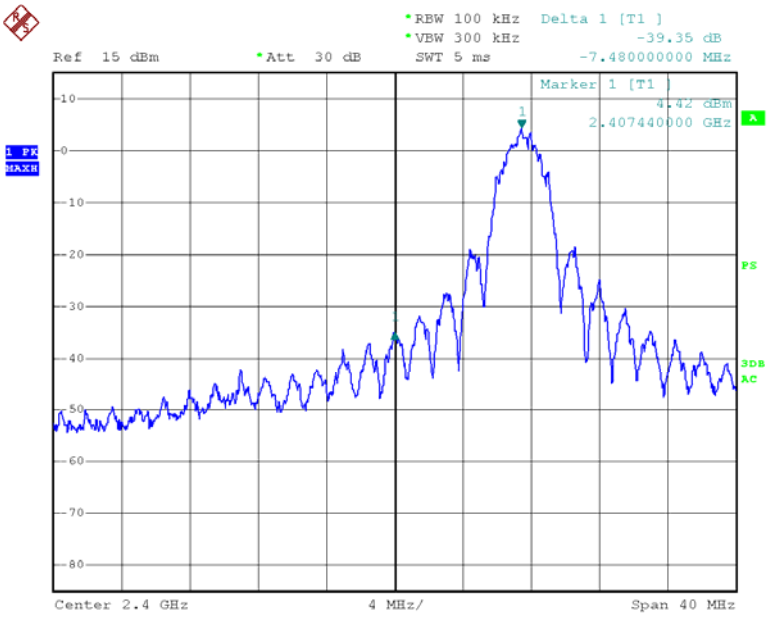
Spectrum Detector:	PK	Test Date :	August 25, 2013
Test By:	Andy	Temperature :	25 ℃
Test Result:	PASS	Humidity :	50 %

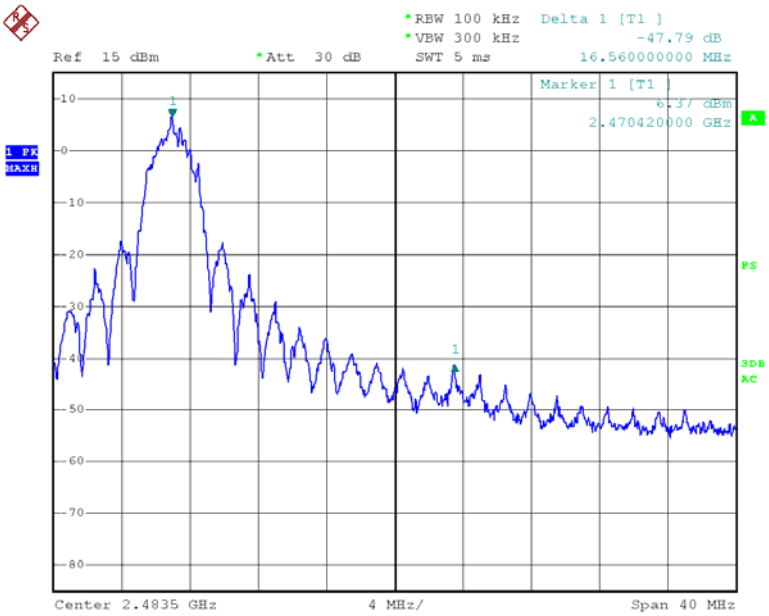
1.Conducted Test

Frequency (MHz)	Peak Power Output(dBm)	Emission read Value(dBm)	Result of Band edge(dBc)	Band edge Limit(dBc)
<2400	4.42	-39.35	43.77	>20dBc
>2483.5	6.37	-47.79	54.16	>20dBc

2.Radiated emission Test

Frequency (MHz)	Antenna polarization (H/V)	Emission (dBuV/m)		Band edge Limit (dBuV/m)	
		PK	AV	PK	AV
<2400	V	51.34	38.23	74.00	54.00
	V	50.84	38.67	74.00	54.00
	V	49.38	37.21	74.00	54.00
>2483.5	V	45.56	38.52	74.00	54.00
	V	47.47	36.53	74.00	54.00
	V	48.45	35.83	74.00	54.00


RBW 100 kHz
VBW 300 kHz
SWT 5 ms
Delta 1 [T1]
-39.35 dB
-7.480000000 MHz
Ref 15 dBm
Att 30 dB
Marker 1 [T1]
4.42 dBm
2.407440000 GHz
1 PK MAXH
PS
3DB AC
Center 2.4 GHz
4 MHz/
Span 40 MHz


RBW 100 kHz
VBW 300 kHz
SWT 5 ms
Delta 1 [T1]
-47.79 dB
16.560000000 MHz
Ref 15 dBm
Att 30 dB
Marker 1 [T1]
6.37 dBm
2.470420000 GHz
1 PK MAXH
PS
3DB AC
Center 2.4835 GHz
4 MHz/
Span 40 MHz

10 Antenna Application

10.1 Antenna requirement

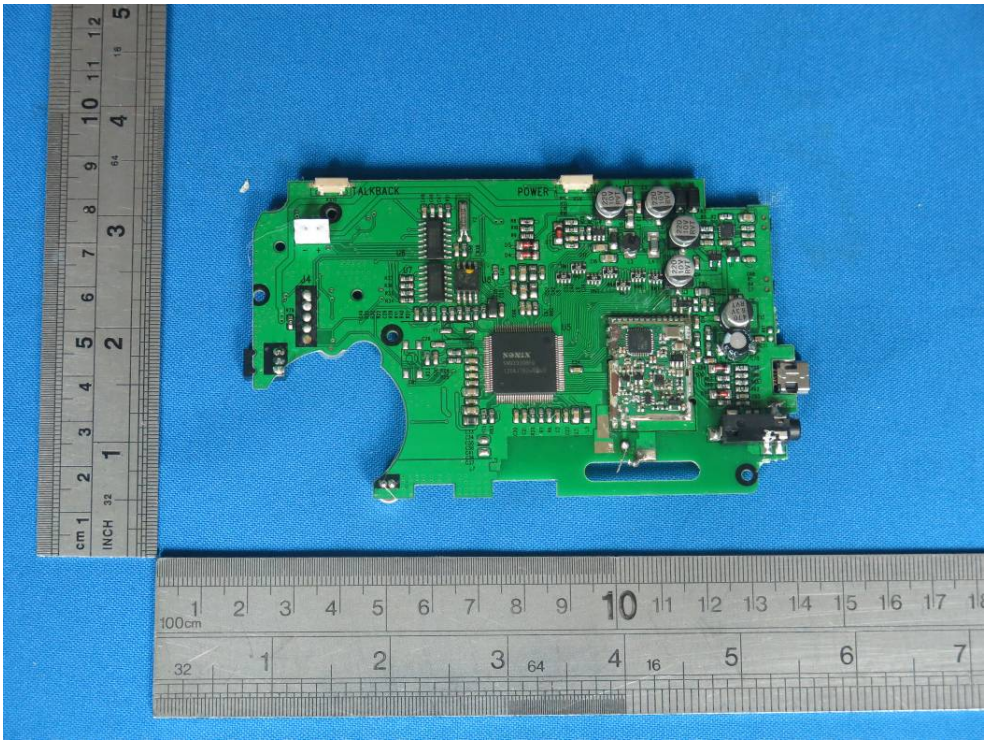
Except for special regulations, the Low-power Radio-frequency Devices must not be equipped with any jacket for installing an antenna with extension cable. An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited. Further, this requirement does not apply to intentional radiators that must be professionally installed.

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)


first years


TALKBACK
POWER