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

OF

BLUETOOTH HEADSET

FCC ID: ULOSH-800

MODEL No.: SH-800

BRAND NAME: N/A

REPORT NO: WE06070006

ISSUE DATE: Oct 23, 2006

Prepared for

SHENZHEN SKYPOWER INDUSTRY DEVELOPMENT CO., LTD.
2408A, SEG PLAZA HUAQIANG NORTH RD, SHENZHEN

Prepared by

SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO., LTD.

d.b.a.
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VERIFICATION OF COMPLIANCE

Applicant:	Shenzhen Skypower Industry Development Co., Ltd. 2408A, SEG Plaza Huaqiang North RD, Shenzhen
Product Description:	Bluetooth Headset
Brand Name:	N/A
Model Number:	SH-800
Serial Number:	N/A
File Number:	WE06070006
Date of Test:	Sep 10, 2006 ~ Oct 16, 2006

We hereby certify that:

The above equipment was tested by SHENZHEN HUA TONG WEI INTERNATIONAL INSPECTION 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 (2003) and the energy emitted by the sample EUT tested as described in this report is in compliance with 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 ***Reviewed By***

Jimmy Li / Executive Manager
SHENZHEN HUA TONG WEI
INTERNATIONAL INSPECTION CO., LTD.

Tracy Qi / Testing Engineer
SHENZHEN HUA TONG WEI
INTERNATIONAL INSPECTION CO., LTD.

Table of Contents

1. GENERAL INFORMATION

1.1 PRODUCT DESCRIPTION

The Shenzhen Skypower Industry Development Co., Ltd., Model: SH-800 is a Bluetooth Headset.

The EUT is compliance with Bluetooth Standard.

A major technical descriptions of EUT is described as following:

A). Operation Frequency: 2402~2480MHz, 79 channels
B). Modulation type: FHSS
C). Antenna Designation: Micro-strip Antenna, -1.12 dBi, Non-User Replaceable(Fixed)
D). Power Supply: DC 4.2 V From Battery

1.2 RELATED SUBMITTAL(S) / GRANT (S)

This submittal(s) (test report) is intended for FCC ID: ULOSH-800 filing to comply with Section 15.247 of the FCC Part 15, Subpart C Rules. The composite system (receiver) is compliance with Subpart B is authorized under a Declaration of Conformity procedure.

1.3 TEST METHODOLOGY

Both conducted and radiated testing were performed according to the procedures in ANSI C63.4 (2003). Radiated testing was performed at an antenna to EUT distance 3 meters.

1.4 TEST FACILITY

The fully anechoic chamber test site and conducted measurement facility used to collect the radiated data is located on the address of SHENZHEN HUA TONG WEI INTERNATIONAL INSPECTION CO., LTD Huatongwei Building, Keji Rd. 12 S., High-tech Park, Nanshan District, Shenzhen, Guangdong, P.R.China.
The fully anechoic chamber Test Sites and the Line Conducted labs are constructed and calibrated to meet the FCC requirements in documents ANSI C63.4: 2003 and CISPR 22/EN 55022 requirements.

1.5 SPECIAL ACCESSORIES

Not available for this EUT intended for grant.

1.6 EQUIPMENT MODIFICATIONS

Not available for this EUT intended for grant.

1.7 LABORATORY ACCREDITATIONS AND LISTINGS

The test facility is recognized, certified, or accredited by the following organizations:

CNAL-Lab Code: L1225
Shenzhen Huatongwei International Inspection Co., Ltd has been assessed and proved to be in compliance with CNAL/AC01: 2003 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC 17025: 1999 General Requirements) for the Competence of Testing and Calibration Laboratories.

A2LA-Lab Cert. No. 2243.01
Shenzhen Huatongwei International Inspection Co., Ltd, EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 1999 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing. Valid time is from Aug 24, 2005 to Sept 30, 2007.

FCC-Registration No.: 662850
Shenzhen Huatongwei International Inspection Co., Ltd, EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Registration 662850, November 17, 2003.

IC-Registration No.: 5377
The 3m Alternate Test Site of Shenzhen Huatongwei International Inspection Co., Ltd has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 5377 on November 28th, 2005.

ACA
Shenzhen Huatongwei International Inspection Co., Ltd, EMC Laboratory can also perform testing for the Australian C-Tick mark as a result of our A2LA accreditation.

NEMKO-Aut. No.: ELA125

Shenzhen Huatongwei International Inspection Co., Ltd has been assessed the quality assurance system, the testing facilities, qualifications and testing practices of the relevant parts of the organization. The quality assurance system of the Laboratory has been validated against ISO/IEC 17025 or equivalent. The laboratory also fulfils the conditions described in Nemko Document NLA-10.

VCCI

The 3m Semi-anechoic chamber (12.2m×7.95m×6.7m) and Shielded Room (8m×4m×3m) of Shenzhen Huatongwei International Inspection Co., Ltd has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-1920 and C-2067 respectively. Date of Registration: July 28, 2004. Valid time is until November 16, 2006.

The Shielded Room (8m×4m×3m) of Shenzhen Huatongwei International Inspection Co., Ltd has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: T-175 respectively. Date of Registration: July 28, 2004. Valid time is until July 27, 2007.

2. SYSTEM TEST CONFIGURATION

2.1 EUT CONFIGURATION

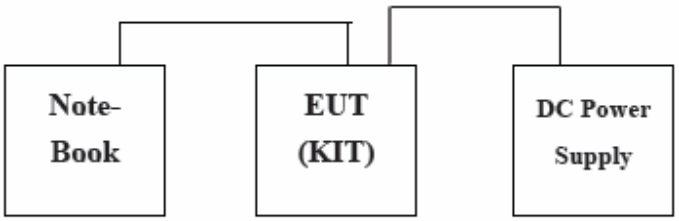
The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

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 CONFIGURATION OF TESTED SYSTEM

Fig. 2-1 Configuration of Tested System



Tested System (Fixed channel)

Table 2-1 Equipment Used in Tested System

No.	Product	Manufacturer	Model No.	Serial No.	FCC ID
1	Notebook PC	IBM	R50e	L3-XGMC3	DoC

3. SUMMARY OF TEST RESULTS

FCC Rules	Description Of Test	Result
§15.207(a)	Conducted Emission	Compliant
§15.247(b)(1)	Peak Output Power	Compliant
§15.247(a)	20dB Bandwidth	Compliant
§15.247(c)	100 KHz Bandwidth Of Frequency Band Edges	Compliant
§15.209(a) (f)	Spurious Emission	Compliant
§15.247(a)(1)	Frequency Separation	Compliant
§15.247(a)(1)(iii)	Number of hopping frequency	Compliant
§15.247(a)(1)(iii)	Time of Occupancy	Compliant
§15.247	Peak Power Density	Compliant
§15.203, §15.247(b)(4)(i)	Antenna Requirement	Compliant
§1.1310	RF Exposure	Compliant

4. DESCRIPTION OF TEST MODES

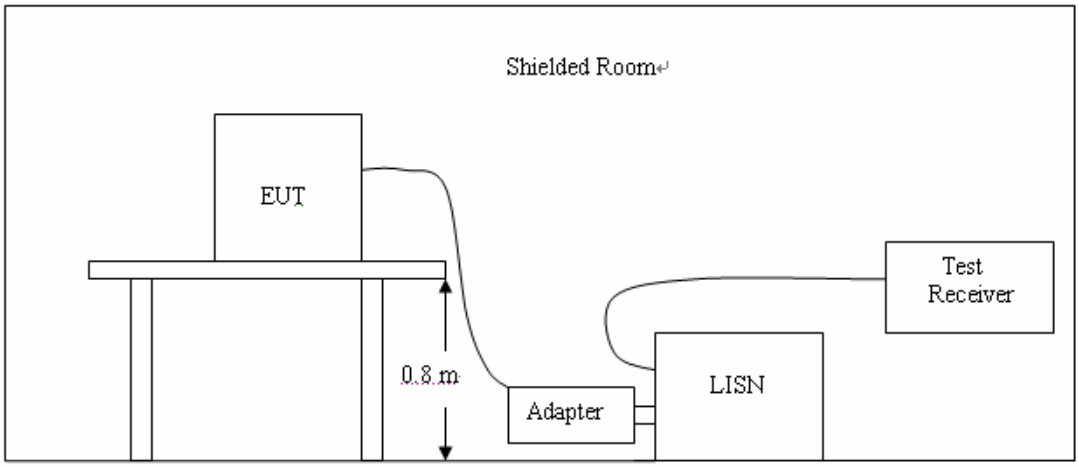
1. The EUT has been tested under normal operating condition.
2. Test program used to control the EUT for staying in continuous transmitting and receiving mode is programmed.
   Channel low (2402MHz), mid (2441MHz) and high (2480MHz) with highest data rate are chosen for full testing.

5. CONDUCTED EMISSIONS TEST

5.1 MEASUREMENT PROCEDURE:

1 The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. The EUT is a tabletop system; a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.4.
2 Support equipment, if needed, was placed as per ANSI C63.4.
3 All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.
4 The EUT received DC8V power from the adapter, the adapter received AC120V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
5 All support equipments received AC power from a second LISN, if any.
6 The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
7 Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.
8 During the above scans, the emissions were maximized by cable manipulation.

5.2 TEST SET-UP (Block Diagram of Configuration)



5.3 MEASUREMENT EQUIPMENT USED:

Conducted Emission Test Site # 3					
EQUIPMENT TYPE	**MFR**	**MODEL NUMBER**	**SERIAL NUMBER**	**LAST CAL.**	**CAL DUE.**
EMI TEST RECEIVER	ROHDE &SCHWARZ	ESCS30	100038	2005/11	2006/11
ARTIFICIAL MAINS	ROHDE &SCHWARZ	ESH2-Z5	100028	2005/11	2006/11
PULSE LIMITER	ROHDE &SCHWARZ	ESHSZ2	100044	2005/11	2006/11
EMI TEST SOFTWARE	ROHDE &SCHWARZ	ES-K1 1.71	N/A	2005/11	2006/11

***Note**: Each piece of equipment is scheduled for calibration once a year.*

5.4 CONDUCTED POWER LINE EMISSION LIMIT

For unintentional device, according to § 15.107(a) Line Conducted Emission Limits is as following：

Frequency (MHz)	**Maximum RF Line Voltage (dBμv)**			
	CLASS A		**CLASS B**	
	Q.P.	**Ave.**	**Q.P.**	**Ave**
0.15 - 0.50	79	66	66-56*	56-46*
0.50 - 5.00	73	60	56	46
5.00 - 30.0	73	60	60	50

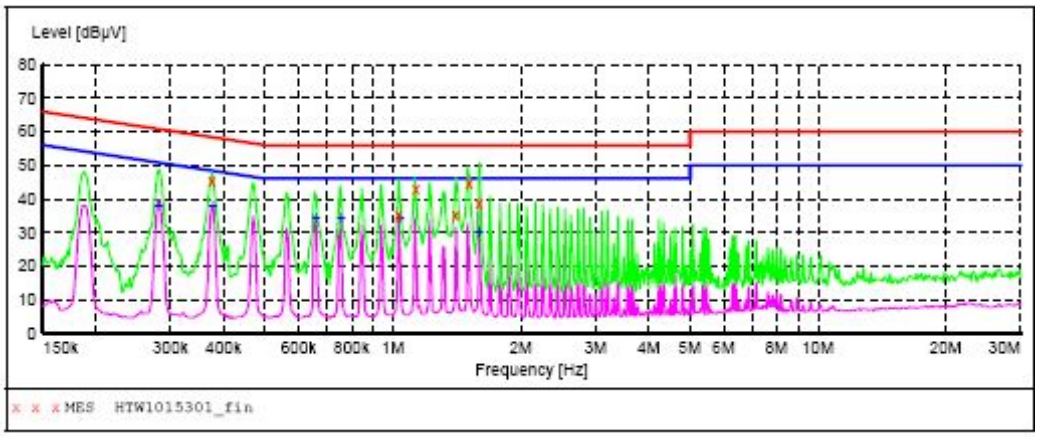
* Decreasing linearly with the logarithm of the frequency

For intentional device, according to §15.207(a) Line Conducted Emission Limit is same as above table.

5.5 MEASUREMENT RESULT:

Company	Shenzhen Skypower Industry Development Co., Ltd.	Test Date	2006/10/15
Product Name	Bluetooth Headset	Test By	Tracy Qi
Model Name	SH-800	TEMP&Humidity	25°C, 53%

LINE



MEASUREMENT RESULT: "HTW1015301_fin"

10/15/2006 10:35AM

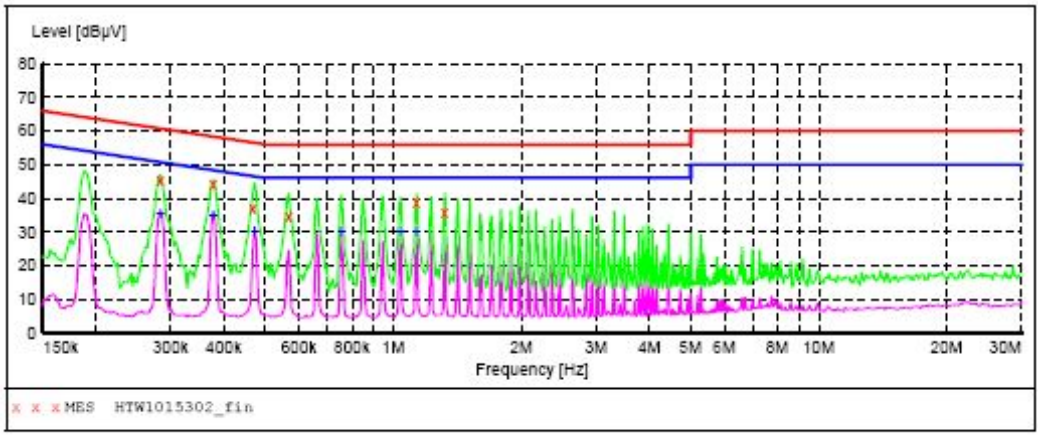
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.375016	45.20	10.1	58	13.2	QP	L1	GND
1.031668	35.40	10.2	56	20.6	QP	L1	GND
1.135177	43.00	10.2	56	13.0	QP	L1	GND
1.407662	34.80	10.2	56	21.2	QP	L1	GND
1.512320	44.60	10.2	56	11.4	QP	L1	GND
1.599071	39.00	10.2	56	17.0	QP	L1	GND

MEASUREMENT RESULT: "HTW1015301_fin2"

10/15/2006 10:35AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.281494	38.30	10.1	51	12.5	AV	L1	GND
0.376010	38.00	10.1	48	10.3	AV	L1	GND
0.660310	34.50	10.1	46	11.5	AV	L1	GND
0.756100	34.40	10.1	46	11.6	AV	L1	GND
1.039920	34.50	10.2	46	11.5	AV	L1	GND
1.599071	30.20	10.2	46	15.8	AV	L1	GND

NEUTRAL



MEASUREMENT RESULT: "HTW1015302_fin"

10/15/2006 10:51AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.283742	45.30	10.1	61	15.4	QP	N	GND
0.378010	43.90	10.1	58	14.4	QP	N	GND
0.468750	37.10	10.1	57	19.4	QP	N	GND
0.567544	34.50	10.1	56	21.5	QP	N	GND
1.135179	38.80	10.2	56	17.2	QP	N	GND
1.320732	35.80	10.2	56	20.2	QP	N	GND

MEASUREMENT RESULT: "HTW1015302_fin2"

10/15/2006 10:51AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.283742	35.80	10.1	51	14.9	AV	N	GND
0.378010	35.00	10.1	48	13.3	AV	N	GND
0.472500	30.60	10.1	47	15.9	AV	N	GND
0.756091	30.60	10.1	46	15.4	AV	N	GND
1.039913	30.20	10.2	46	15.8	AV	N	GND
1.135179	30.50	10.2	46	15.5	AV	N	GND

REMARKS：

1. *Correction Factor = Insertion loss + cable loss*
2. *Margin value = Emission level – Limit value*
3. *The EUT was set to be normal operation condition. Each Ethernet port was connected and data paylead was transmittied at highest data rate.*

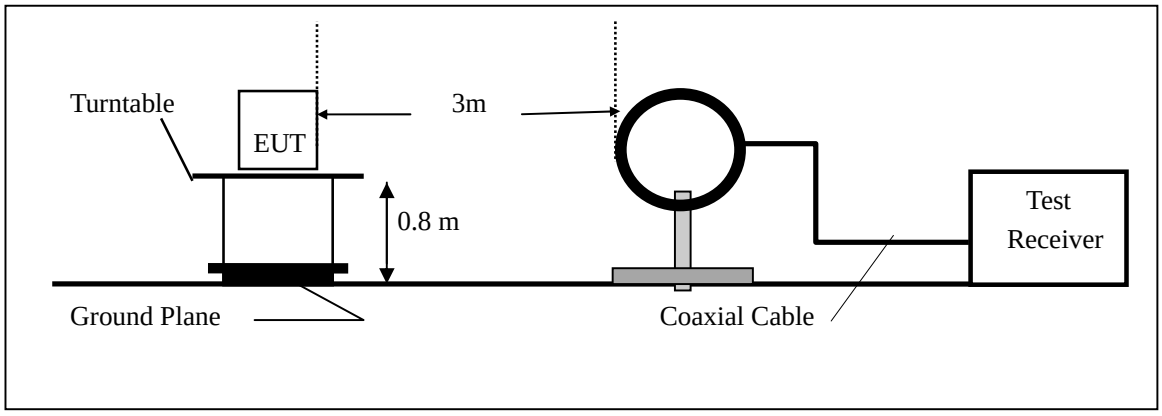
6. SPURIOUS RADIATED EMISSION TEST

6.1 MEASUREMENT PROCEDURE

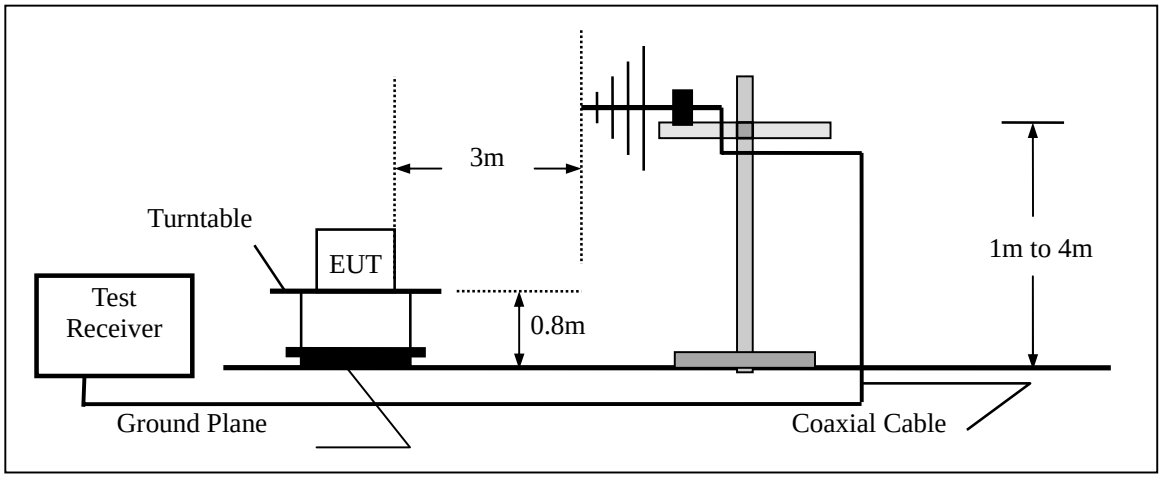
1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. Maximum procedure was performed by raising the receiving antenna from 1m to 4m and rotating the turn table from 0℃ to 360℃ to acquire the highest emissions from EUT
3. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
4. Repeat above procedures until all frequency measurements have been completed.

6.2 TEST SET-UP (Block Diagram of Configuration)

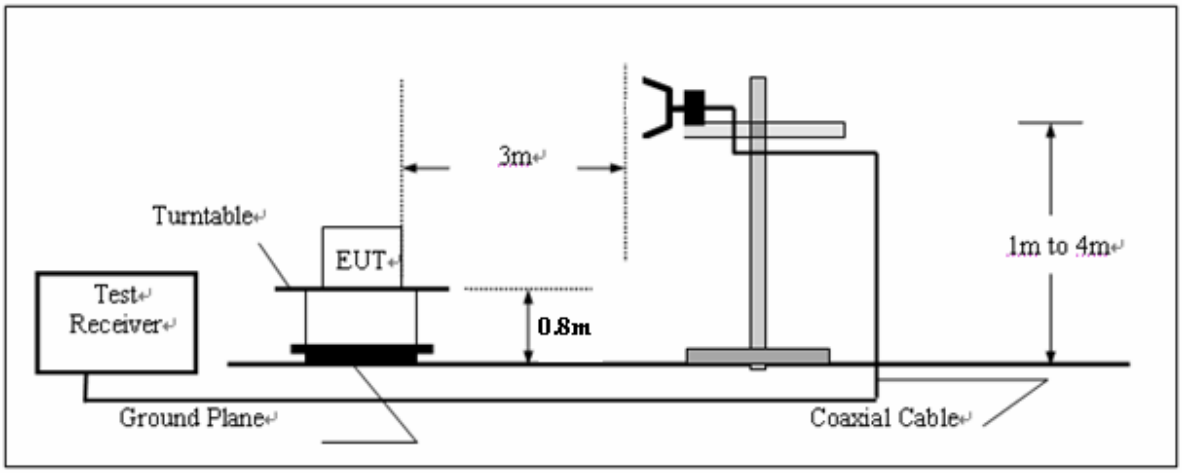
(A) Radiated Emission Test Set-Up, Frequency Below 30MHz



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



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



6.3 MEASUREMENT EQUIPMENT USED:

3/5 Anechoic Chamber Radiation Test Site # 4					
EQUIPMENT TYPE	**MFR**	**MODEL NUMBER**	**SERIAL NUMBER**	**LAST CAL.**	**CAL DUE.**
ULTRA-BROADBAND ANTENNA	ROHDE &SCHWARZ	HL562	100015	2005/11	2006/11
EMI TEST RECEIVER	ROHDE & SCHWARZ	ESI 26	100009	2005/11	2006/11
RF TEST PANEL	ROHDE & SCHWARZ	TS / RSP	335015/ 0017	N/A	N/A
TURNTABLE	ETS	2088	2149	N/A	N/A
HORN ANTENNA	ROHDE & SCHWARZ	HF906	100039	2005/11	2006/11
ANTENNA MAST	ETS	2075	2346	N/A	N/A
EMI TEST SOFTWARE	ROHDE & SCHWARZ	ES-K1 1.71	N/A	2005/11	2006/11

***Note**: Each piece of equipment is scheduled for calibration once a year.*

6.4 FIELD STRENGTH CALCULATION

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor(if any) from the measured reading. The basic equation with a sample calculation is as follows:

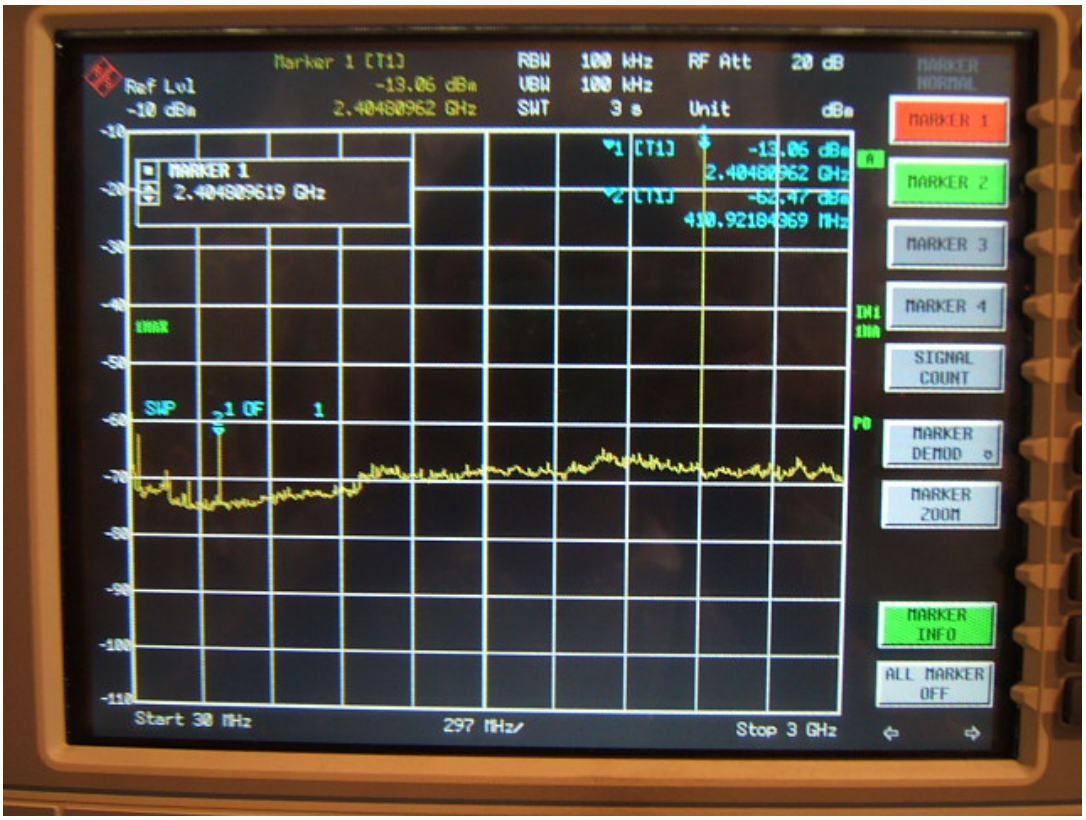
FS = RA + AF + CL - AG

Where	FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
	RA = Reading Amplitude	AG = Amplifier Gain
	AF = Antenna Factor	

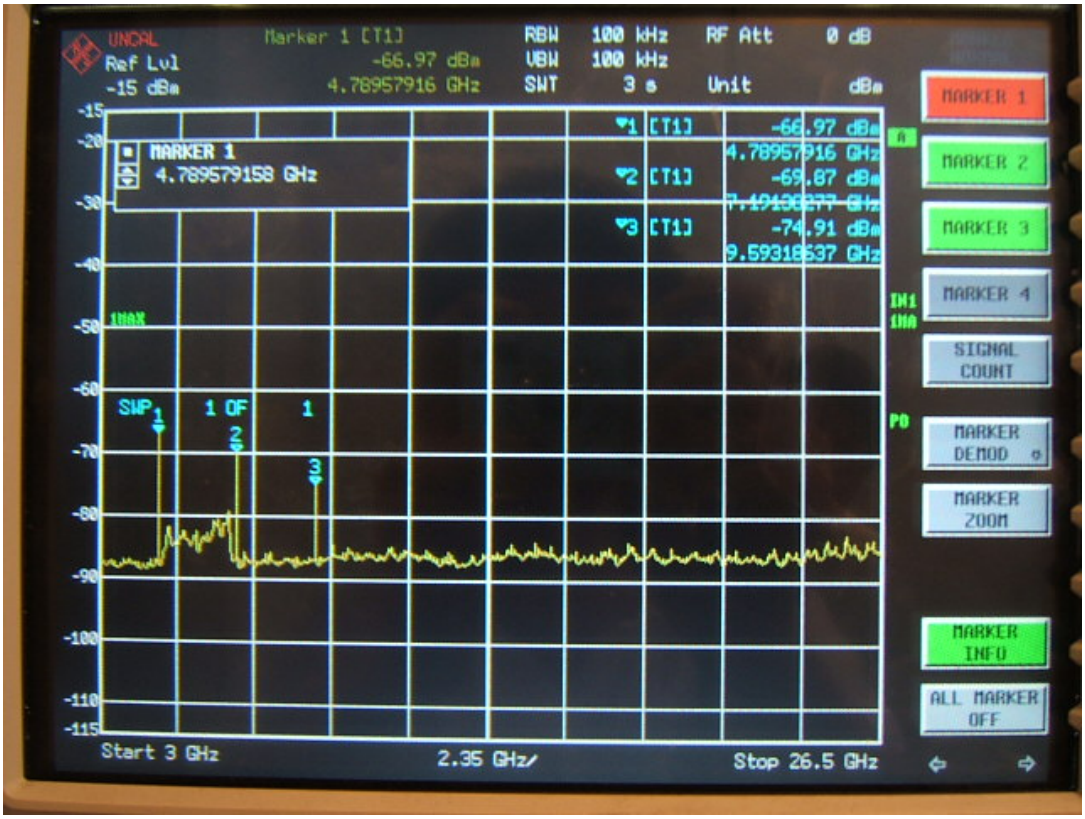
6.5 MEASUREMENT RESULT

Refer to attach tabular data sheets.

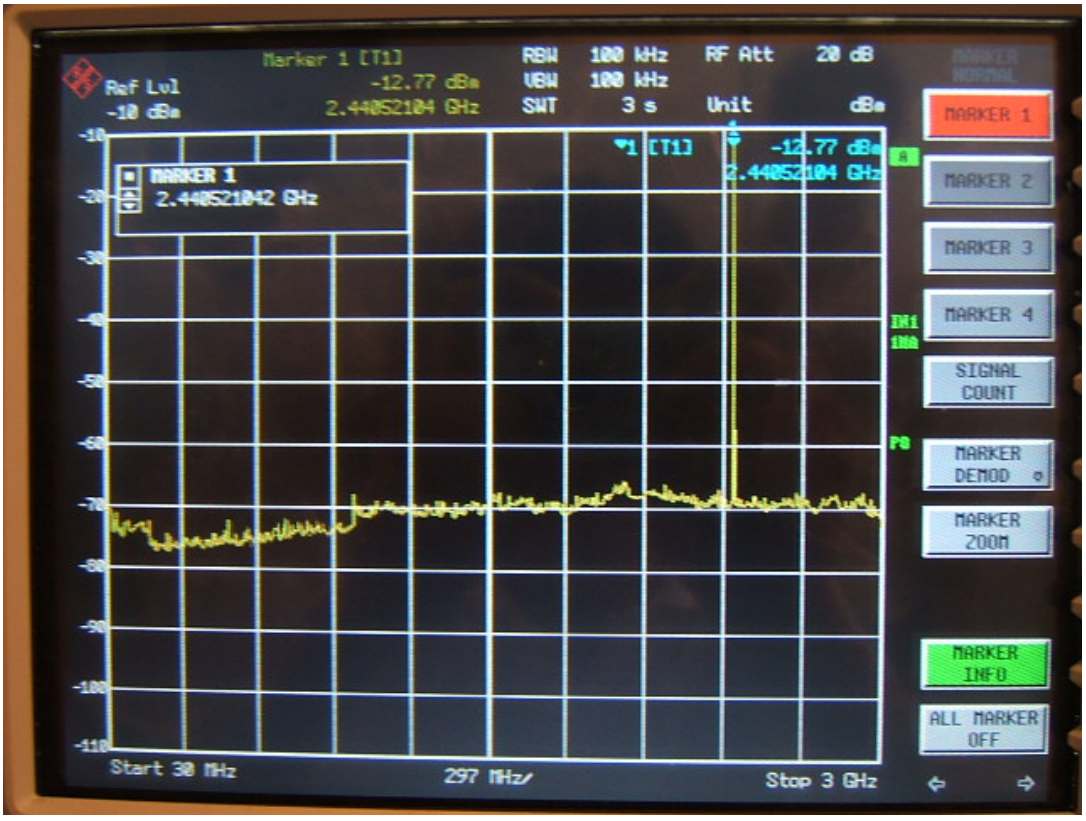
Conducted Spurious Emission Measurement Results
CH Low 30MHz – 3GHz



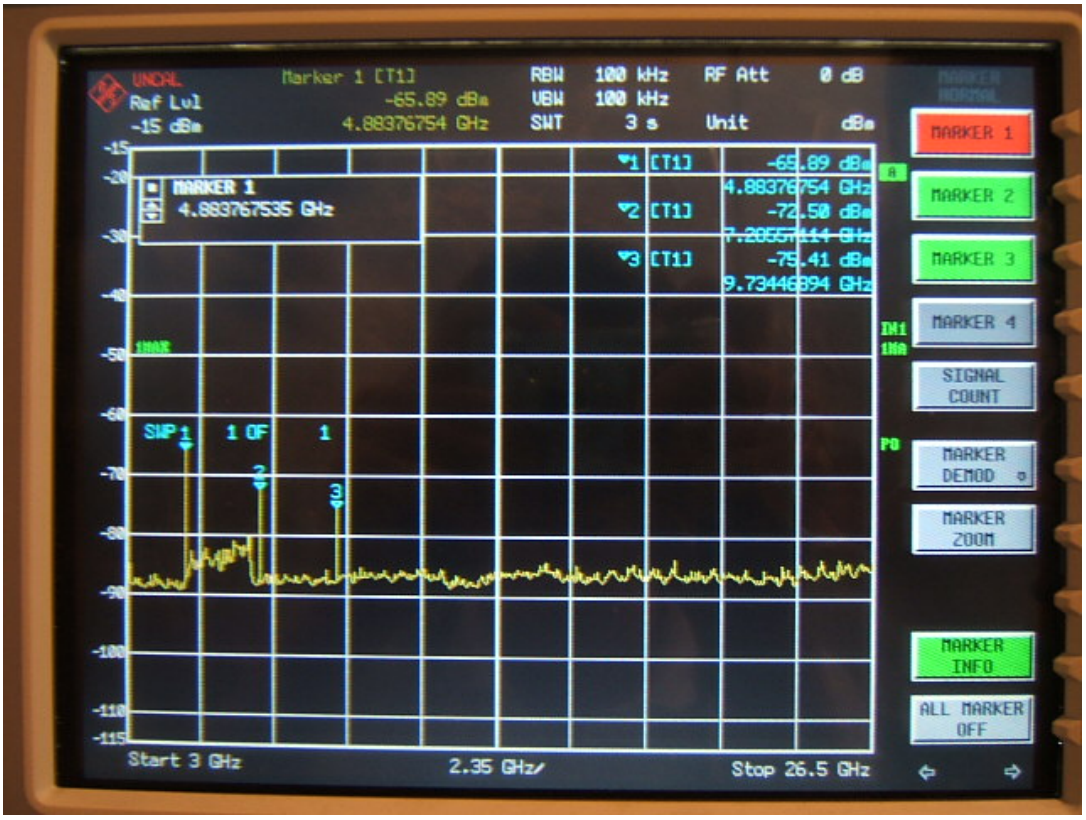
CH Low 3G Hz – 26.5GHz



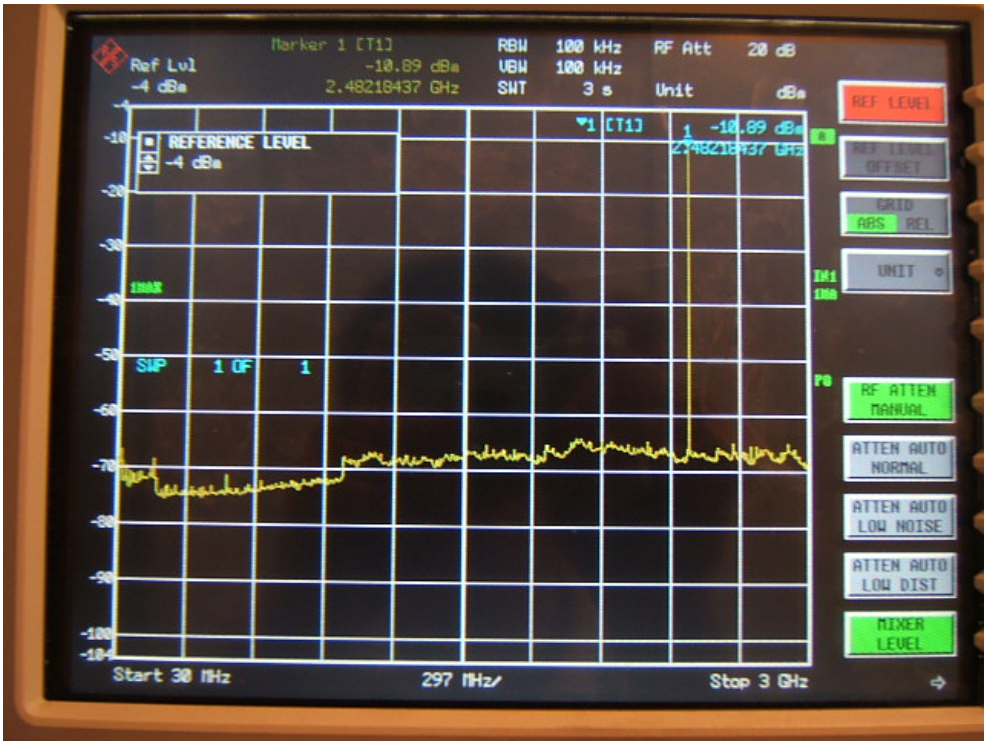
CH Mid 30MHz – 3GHz



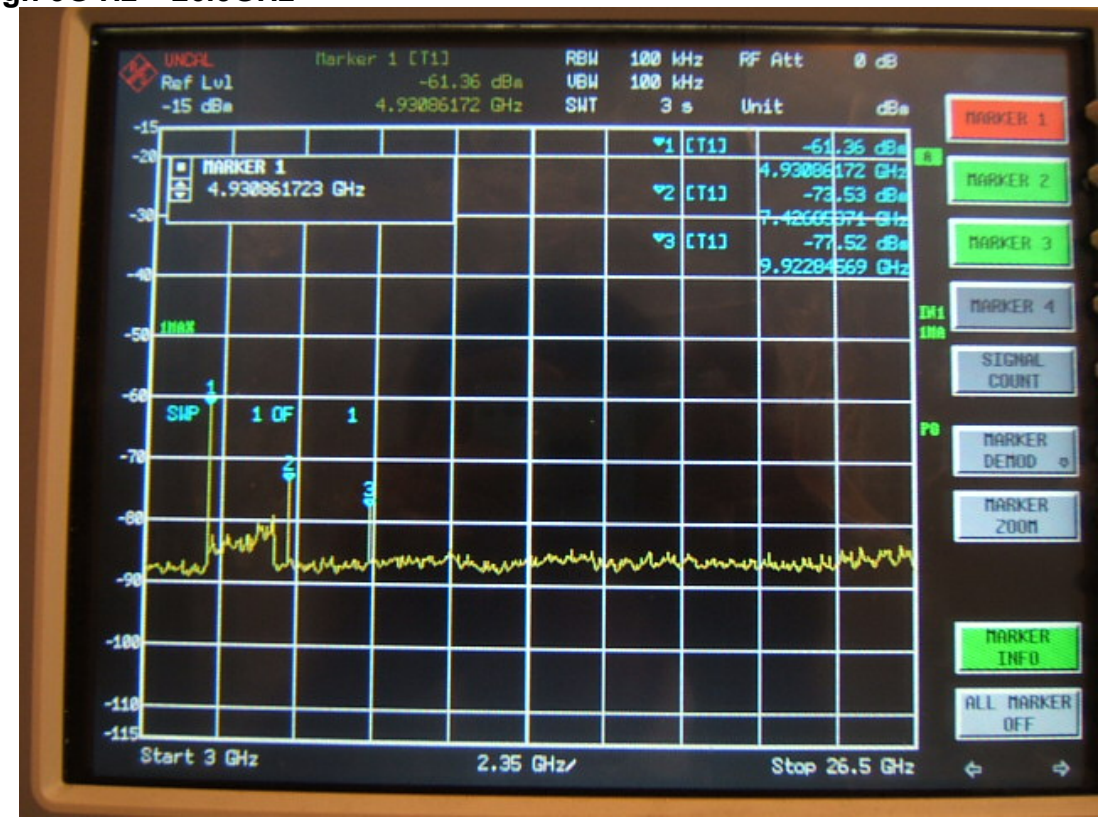
CH Mid 3G Hz – 26.5GHz



CH High 30MHz – 3GHz



CH High 3G Hz – 26.5GHz



Radiated Spurious Emission Measurement Result (below 1GHz)

Operation Mode: TX CH Low
Fundamental Frequency: 2402 MHz
Temperature: 25 ℃
Humidity: 55%

Test Date: Sep 08, 2006
Test By : Tracy
Pol : Ver./Hor.

Freq. (MHz)	Ant.Pol. H/V	DetectorMode (PK/AV)	Reading (dBuV)	Ant./CL/ Amp. CF(dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
35.83	V	Peak	3.60	17.90	21.50	40.00	-18.50
76.65	V	Peak	4.60	11.50	16.10	40.00	-23.90
171.90	V	Peak	20.60	10.70	31.30	43.50	-12.20
173.85	V	Peak	22.00	10.70	32.70	43.50	-10.80
554.85	V	Peak	5.00	21.70	26.70	46.00	-19.30
712.30	V	Peak	6.50	26.50	33.00	46.00	-13.00
35.83	H	Peak	7.9	17.90	25.80	40.00	-14.20
86.37	H	Peak	5.70	11.80	17.50	40.00	-22.50
162.18	H	Peak	18.20	10.70	28.90	43.50	-14.60
175.79	H	Peak	18.40	10.80	29.20	43.50	-14.30
556.79	H	Peak	4.70	21.70	26.40	46.00	-19.60
688.98	H	Peak	6.70	26.40	33.10	46.00	-12.90

Remark：

(1) Measuring frequencies from 30 MHz to the 1 GHz。

(2) Radiated emissions measured in frequency range from 30MHz to 1000MHz were made with an instrument using Peak/QP detector mode.

(3) Data of measurement within this frequency range shown "--- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of EMI Test Receiver was 120KHz for measuring from 30 MHz to 1 GHz.

Radiated Spurious Emission Measurement Result (below 1GHz)

Operation Mode: TX CH Mid
Fundamental Frequency: 2441 MHz
Temperature: 25 ℃
Humidity: 55%

Test Date: Sep 08, 2006
Test By: Tracy
Pol: Ver. /Hor.

Freq. (MHz)	Ant.Pol. H/V	DetectorMode (PK/AV)	Reading (dBuV)	Ant./CL/ Amp. CF(dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
35.83	V	Peak	5.30	17.90	23.20	40.00	-16.80
84.43	V	Peak	3.50	11.80	15.30	40.00	-24.70
168.02	V	Peak	21.50	10.70	32.20	43.50	-11.30
173.85	V	Peak	20.20	10.70	30.90	43.50	-12.60
556.79	V	Peak	4.60	21.70	26.30	46.00	-19.70
655.93	V	Peak	6.60	25.30	31.90	46.00	-14.10
35.83	H	Peak	8.30	17.90	26.20	40.00	-13.80
86.37	H	Peak	5.20	11.80	17.00	40.00	-23.00
169.96	H	Peak	20.00	10.70	30.70	43.50	-12.80
173.85	H	Peak	19.20	10.70	29.90	43.50	-13.60
350.74	H	Peak	9.60	17.30	26.90	46.00	-19.10
955.29	H	Peak	6.20	26.40	32.60	46.00	-13.40

Remark：

(1) Measuring frequencies from 30 MHz to the 1 GHz。

(2) Radiated emissions measured in frequency range from 30MHz to 1000MHz were made with an instrument using Peak/QP detector mode.

(3) Data of measurement within this frequency range shown "--- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of EMI Test Receiver was 120KHz for measuring from 30 MHz to 1 GHz.

Radiated Spurious Emission Measurement Result (below 1GHz)

Operation Mode: TX CH High
Fundamental Frequency: 2480 MHz
Temperature: 25 ℃
Humidity: 55%

Test Date: Sep 08, 2006
Test By : Tracy
Pol : Ver./Hor.

Freq. (MHz)	Ant.Pol. H/V	DetectorMode (PK/AV)	Reading (dBuV)	Ant./CL/ Amp. CF(dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
33.89	V	Peak	6.50	19.00	25.50	40.00	-14.50
78.60	V	Peak	4.20	11.40	15.60	40.00	-24.40
171.90	V	Peak	22.00	10.70	32.70	43.50	-10.80
173.85	V	Peak	21.20	10.70	31.90	43.50	-11.60
550.96	V	Peak	4.90	21.50	26.40	46.00	-19.60
947.52	V	Peak	5.30	26.30	31.60	46.00	-14.40
35.83	H	Peak	7.50	17.90	25.40	40.00	-14.60
86.37	H	Peak	4.90	11.80	16.70	40.00	-23.30
169.96	H	Peak	19.60	10.70	30.30	43.50	-13.20
173.85	H	Peak	18.10	10.70	28.80	43.50	-14.70
517.92	H	Peak	5.50	20.90	26.40	46.00	-19.60
953.35	H	Peak	5.80	26.40	32.20	46.00	-13.80

Remark：

(1) Measuring frequencies from 30 MHz to the 1 GHz。

(2) Radiated emissions measured in frequency range from 30MHz to 1000MHz were made with an instrument using Peak/QP detector mode.

(3) Data of measurement within this frequency range shown "--- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of EMI Test Receiver was 120KHz for measuring from 30 MHz to 1 GHz.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode: TX CH Low Test Date: Sep 08, 2006
Fundamental Frequency: 2402 MHz Test By : Tracy
Temperature: 25 ℃ Pol : Ver.
Humidity: 55%

Freq. (MHz)	Peak Reading (dBuV)	A V Reading (dBuV)	Ant./CL/ Amp. CF(dB	Actual FS Peak (dBuV/m	AV (dBuV/m	Peak Limit (dBuV/m)	AV Limit dBuV/m	Margin (dB)
1613.23	42.20	--	-7.20	35.00	--	74.00	54.00	-19.00
3997.99	41.70	--	2.10	43.80	--	74.00	54.00	-10.20
4804.00	----							
7206.00	----							
9608.00	----							
12010.00	----							
14412.00	----							
16814.00	----							
19216.00	----							
21618.00	----							
24020.00	----							

Remark：

(1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.

(2) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode of the emission shown in Actual FS column.

(3) Data of measurement within this frequency range shown "--- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) Spectrum Peak Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.
Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode: TX CH Low Test Date: Sep 08, 2006
Fundamental Frequency: 2402 MHz Test By: Tracy
Temperature: 25 ℃ Pol : Hor.
Humidity: 55%

Freq. (MHz)	Peak Reading (dBuV)	A V Reading (dBuV)	Ant./CL/ Amp. CF(dB	Actual FS Peak (dBuV/m	AV (dBuV/m	Peak Limit (dBuV/m)	AV Limit dBuV/m	Margin (dB)
4134.00	42.10	--	2.10	44.20	--	74.00	54.00	-9.80
4804.00	----							
7206.00	----							
9608.00	----							
12010.00	----							
14412.00	----							
16814.00	----							
19216.00	----							
21618.00	----							
24020.00	----							

Remark：

(1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.

(2) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode of the emission shown in Actual FS column.

(3) Data of measurement within this frequency range shown "--- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) Spectrum Peak Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.
Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode: TX CH Mid Test Date: Sep 08, 2006
Fundamental Frequency: 2441MHz Test By: Tracy
Temperature: 25 ℃ Pol : Hor.
Humidity: 55%

Freq. (MHz)	Peak Reading (dBuV)	A V Reading (dBuV)	Ant./CL/ Amp. CF(dB	Actual FS Peak (dBuV/m	AV (dBuV/m	Peak Limit (dBuV/m)	AV Limit dBuV/m	Margin (dB)
3997.00	41.70	--	2.10	43.80	--	74.00	54.00	-9.80
4882.00	----							
7323.00	----							
9764.00	----							
12205.00	----							
14646.00	----							
17087.00	----							
19528.00	----							
21969.00	----							
24410.00	----							

Remark：

(1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.

(2) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode of the emission shown in Actual FS column.

(3) Data of measurement within this frequency range shown "--- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) Spectrum Peak Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.
Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode: TX CH Mid Test Date: Sep 08, 2006
Fundamental Frequency: 2441MHz Test By: Tracy
Temperature: 25 ℃ Pol : Ver.
Humidity: 55%

Freq. (MHz)	Peak Reading (dBuV)	A V Reading (dBuV)	Ant./CL/ Amp. CF(dB	Actual FS Peak (dBuV/m	AV (dBuV/m	Peak Limit (dBuV/m)	AV Limit dBuV/m	Margin (dB)
1638.25	44.60	--	-7.10	37.50	--	74.00	54.00	-16.50
3986.50	37.50	--	2.10	39.60	--	74.00	54.00	-14.40
4882.00	----							
7323.00	----							
9764.00	----							
12205.00	----							
14646.00	----							
17087.00	----							
19528.00	----							
21969.00	----							
24410.00	----							

Remark：

(1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.

(2) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode of the emission shown in Actual FS column.

(3) Data of measurement within this frequency range shown "--- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) Spectrum Peak Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.
Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode: TX CH High Test Date: Sep 08, 2006
Fundamental Frequency: 2480MHz Test By: Tracy
Temperature: 25 ℃ Pol : Hor.
Humidity: 55%

Freq. (MHz)	Peak Reading (dBuV)	A V Reading (dBuV)	Ant./CL/ Amp. CF(dB	Actual FS Peak (dBuV/m	AV (dBuV/m	Peak Limit (dBuV/m)	AV Limit dBuV/m	Margin (dB)
1511.00	42.60	--	-7.80	34.80	--	74.00	54.00	-19.20
4202.00	41.70	--	2.20	43.90	--	74.00	54.00	-10.10
4960.00	----							
7440.00	----							
9920.00	----							
12400.00	----							
14800.00	----							
17360.00	----							
19840.00	----							
22320.00	----							
24800.00	----							

Remark：

(1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.

(2) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode of the emission shown in Actual FS column.

(3) Data of measurement within this frequency range shown "--- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) Spectrum Peak Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.
Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode: TX CH High Test Date: Sep 08, 2006
Fundamental Frequency: 2480MHz Test By: Tracy
Temperature: 25 ℃ Pol : Ver.
Humidity: 55%

Freq. (MHz)	Peak Reading (dBuV)	A V Reading (dBuV)	Ant./CL/ Amp. CF(dB	Actual FS Peak (dBuV/m	AV (dBuV/m	Peak Limit (dBuV/m)	AV Limit dBuV/m	Margin (dB)
1306.61	44.00	--	-8.50	35.50	--	74.00	54.00	-18.50
4066.00	41.60	--	2.10	43.70	--	74.00	54.00	-10.30
4960.00	----							
7440.00	----							
9920.00	----							
12400.00	----							
14800.00	----							
17360.00	----							
19840.00	----							
22320.00	----							
24800.00	----							

Remark：

(1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.

(2) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode of the emission shown in Actual FS column.

(3) Data of measurement within this frequency range shown "--- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) Spectrum Peak Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.
Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

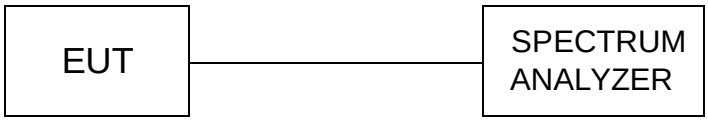
7. 20dB BANDWIDTH MEASUREMENT

7.1 MEASUREMENT PROCEDURE

1. Place the EUT on the table and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set the spectrum analyzer as RBW=10 KHz (1% of Bandwidth).Span=3MHz, Sweep=auto
4. Mark the peak frequency and -20dB (upper and lower) frequency.
5. Repeat above procedures until all frequency measured were complete.

Note: For frequency hopping systems operating in the 2400MHz-2483.5MHz no limit for 20dB bandwidth.

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.
EMI TEST RECEIVER	ROHDE & SCHWARZ	ESI 26	100009	2005/11	2006/11

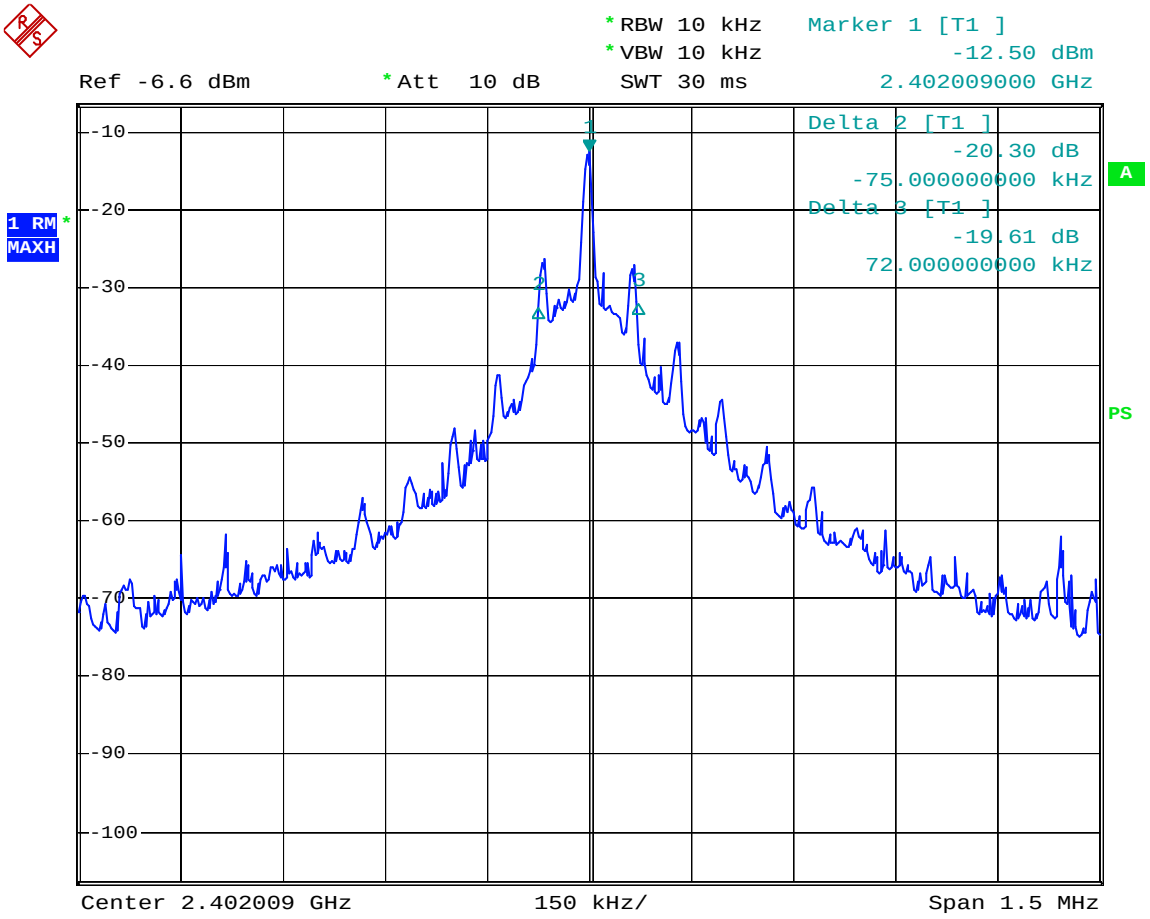
***Note**: Each piece of equipment is scheduled for calibration once a year.*

7.4 MEASUREMENT RESULTS:

Channel	20 dB Bandwidth (MHz)	Pass / Fail
Lower	0.147	PASS
Mid	0.168	PASS
Higher	0.174	PASS

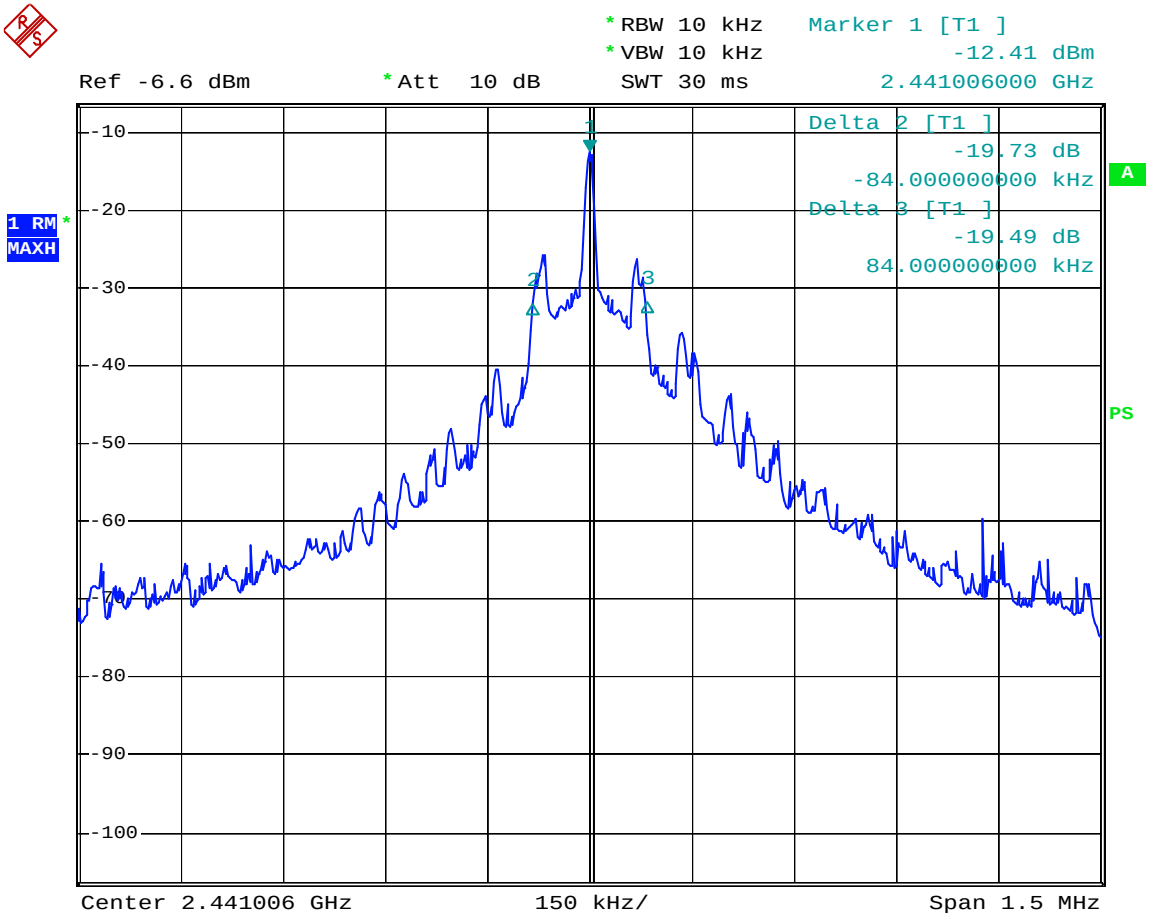
20dB Bandwidth Test Plots:

Channel Low



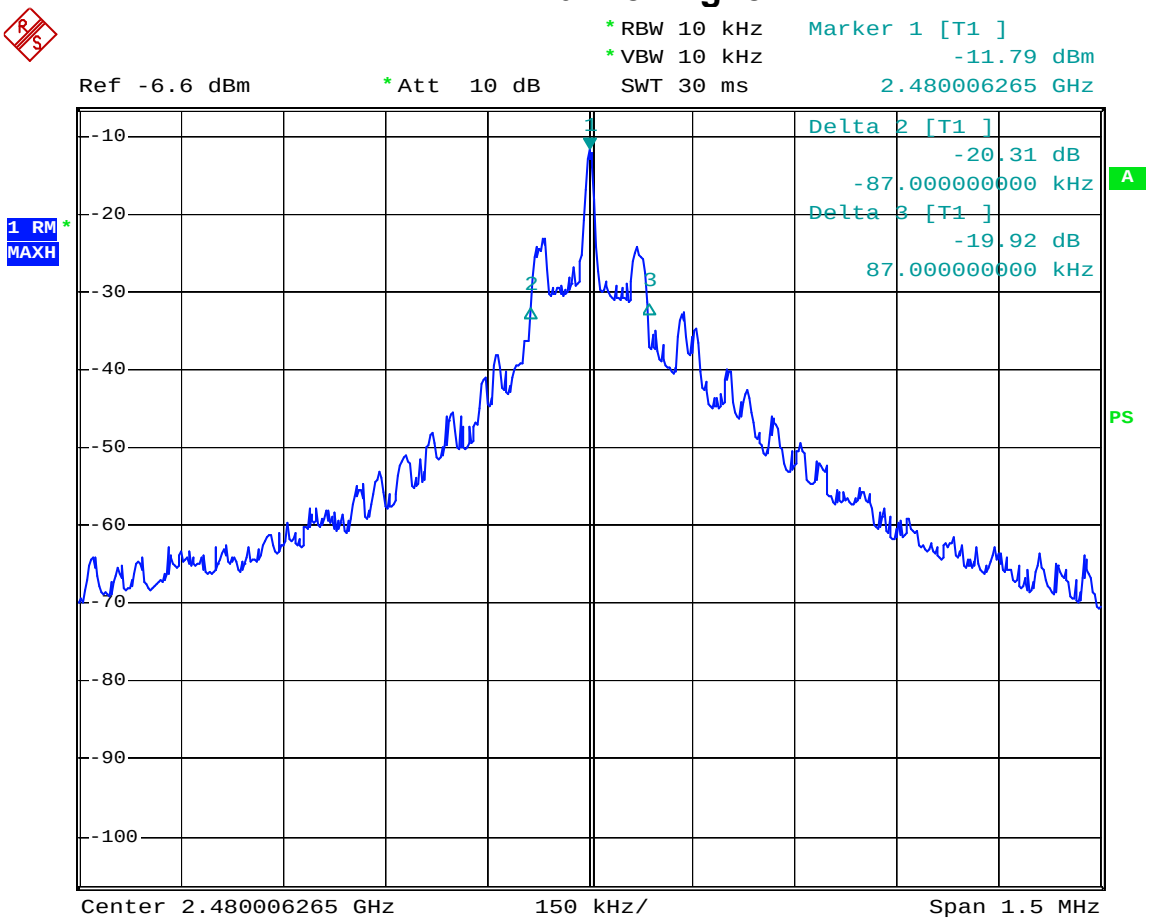
Date: 8.SEP.2006 13:05:40

Channel Mid



Date: 8.SEP.2006 13:03:18

Channel Higher



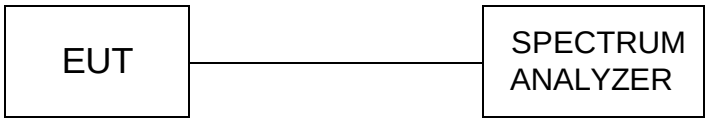
Date: 8.SEP.2006 13:00:28

8. PEAK OUTPUT POWER MEASUREMENT

8.1 MEASUREMENT PROCEDURE

1. Place the EUT on the table and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set the spectrum analyzer as RBW, VBW = 1MHz
4. Repeat above procedures until all frequency measured were complete

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.
EMI TEST RECEIVER	ROHDE & SCHWARZ	ESI 26	100009	2005/11	2006/11

***Note**: Each piece of equipment is scheduled for calibration once a year.*

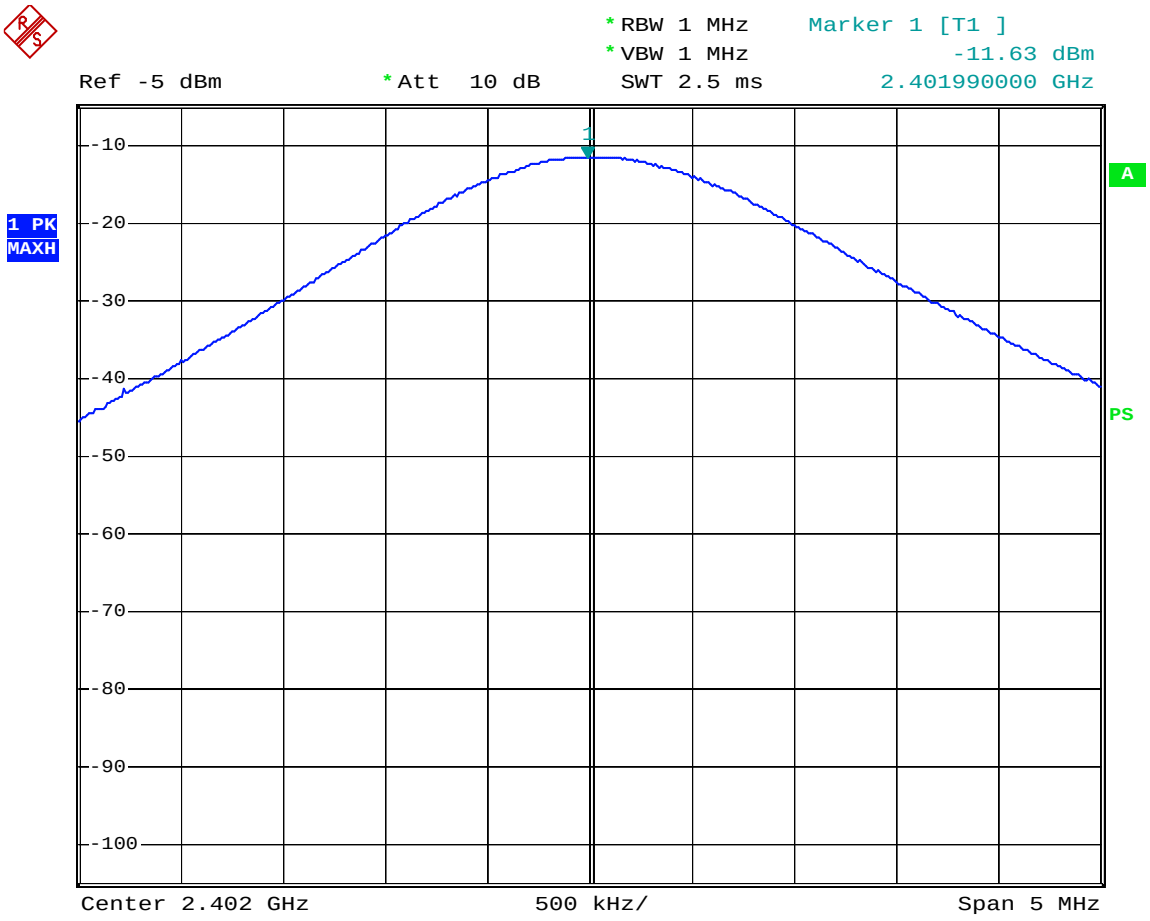
8.4 LIMITS OF MAXIMUM PEAK OUTPUT POWER

The Peak Output Power Measurement limits are 30dBm.

8.5 MEASUREMENT RESULTS:

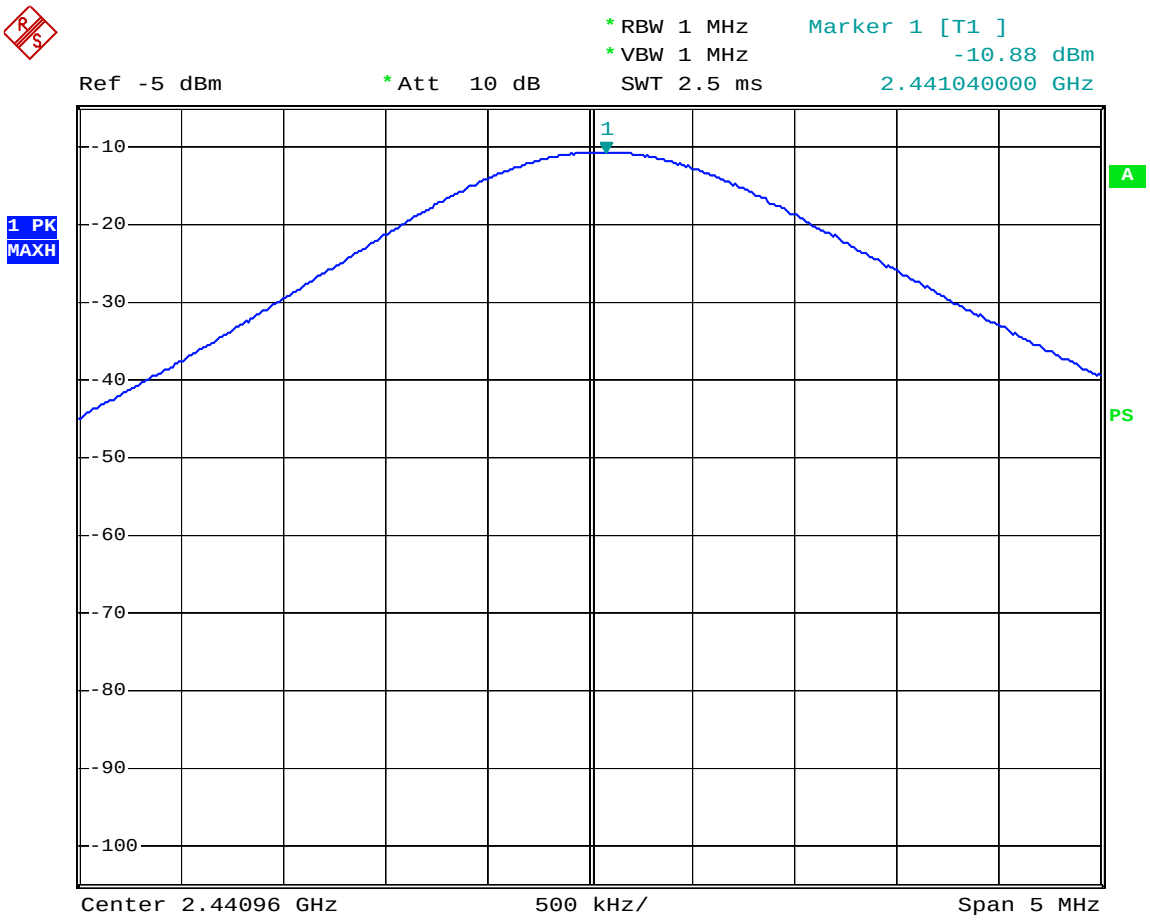
Channel	Channel Frequency (MHz)	Peak Power Output (dBm)	Peak Power Limit (dBm)	Pass / Fail
LOW	2402.00	-11.63	30	PASS
MID	2441.00	-10.88	30	PASS
HIGH	2480.00	-10.72	30	PASS

Photo of Peak Output Power Measurement:
Channel Low



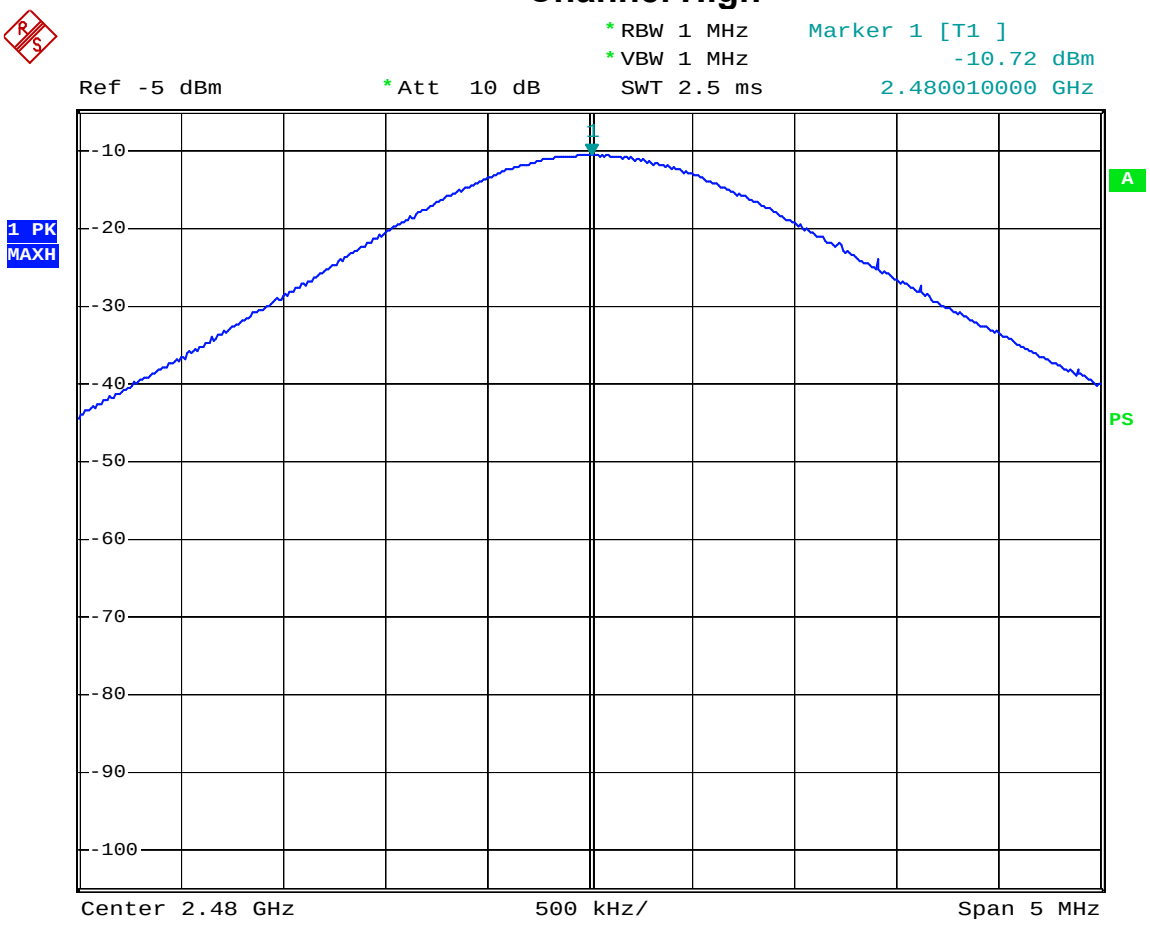
Date: 8.SEP.2006 12:48:35

Channel Mid



Date: 8.SEP.2006 12:50:41

Channel High



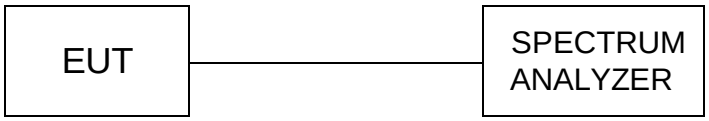
Date: 8.SEP.2006 12:53:25

9. PEAK POWER SPECTRAL DENSITY MEASUREMENT

9.1 MEASUREMENT PROCEDURE

The transmitter output was connected to the spectrum analyzer, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3KHz RBW and 30KHz VBW, set sweep time=span / 3KHz.
The power spectral density was measured and recorded.
The sweep time is allowed to be longer than span / 3 KHz for a full response of the mixer in the spectrum analyzer.

9.2 TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)



9.3 MEASUREMENT EQUIPMENT USED:

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
EMI TEST RECEIVER	ROHDE & SCHWARZ	ESI 26	100009	2005/11	2006/11

***Note**: Each piece of equipment is scheduled for calibration once a year.*

9.4 LIMITS OF MAXIMUM PEAK OUTPUT POWER

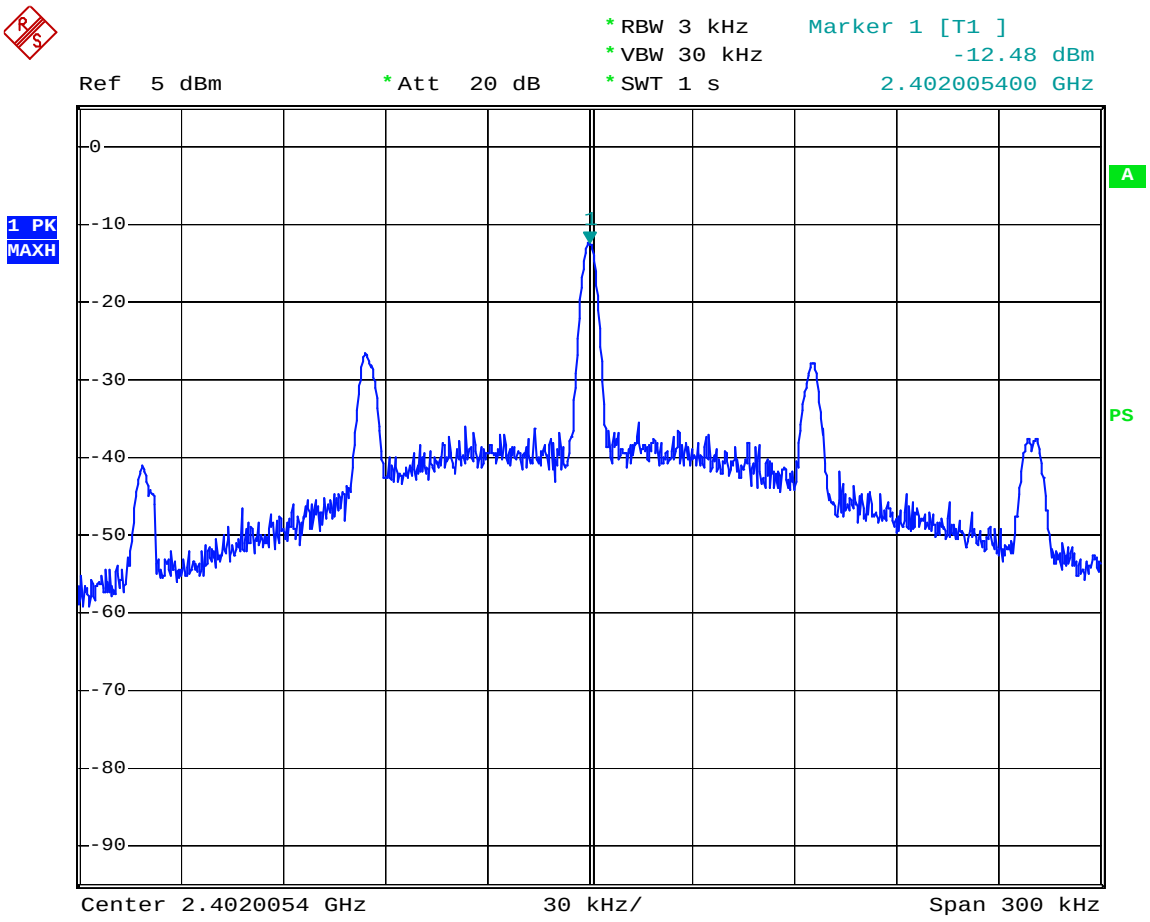
The Maximum Power Spectral Density Measurement is 8dBm/3KHz.

9.5 MEASUREMENT RESULTS:

Channel	Channel Frequency (MHz)	Final RF Power Density Level(dBm)	Maxmum Limit (dBm)	Pass / Fail
LOW	2402.00	-12.48	8	PASS
MID	2441.00	-12.24	8	PASS
HIGH	2480.00	-11.85	8	PASS

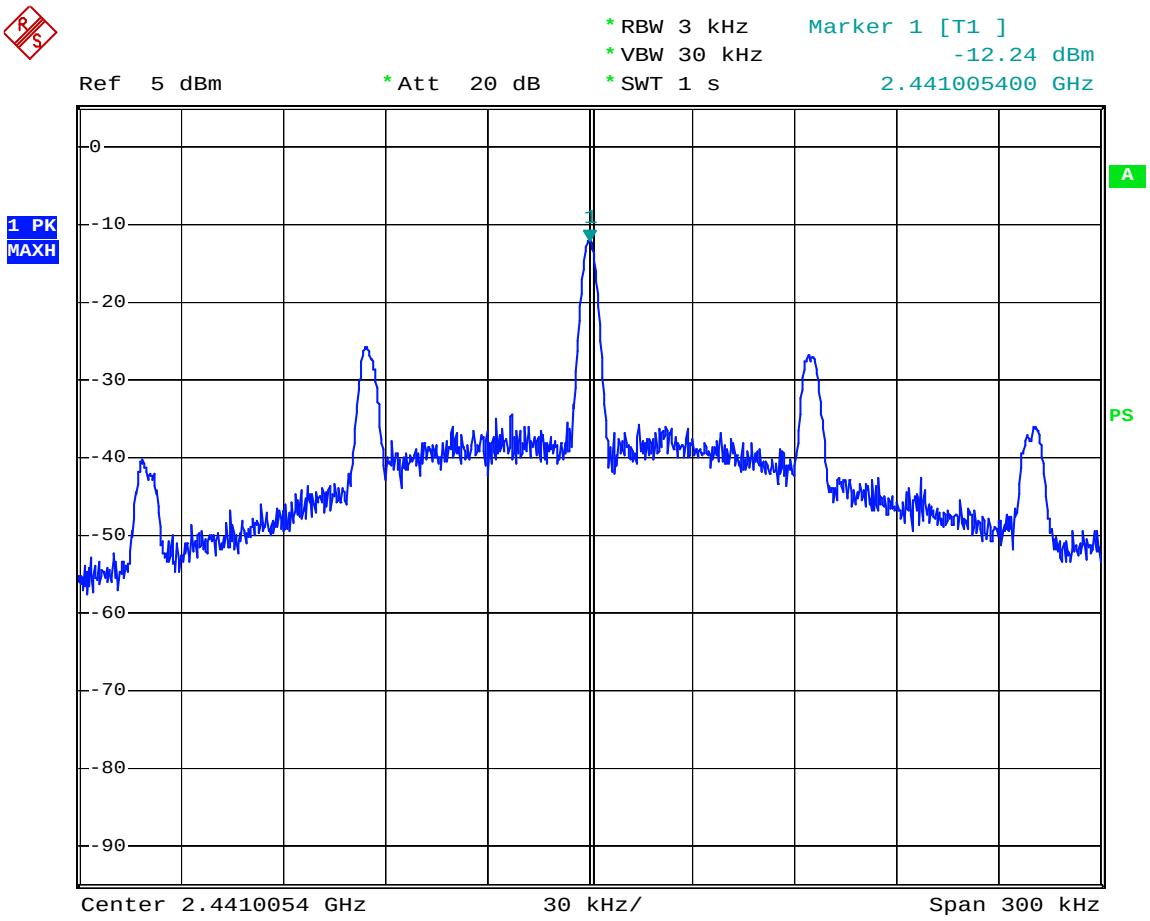
Photo of Power Spectral Density Measurement

Channel Low



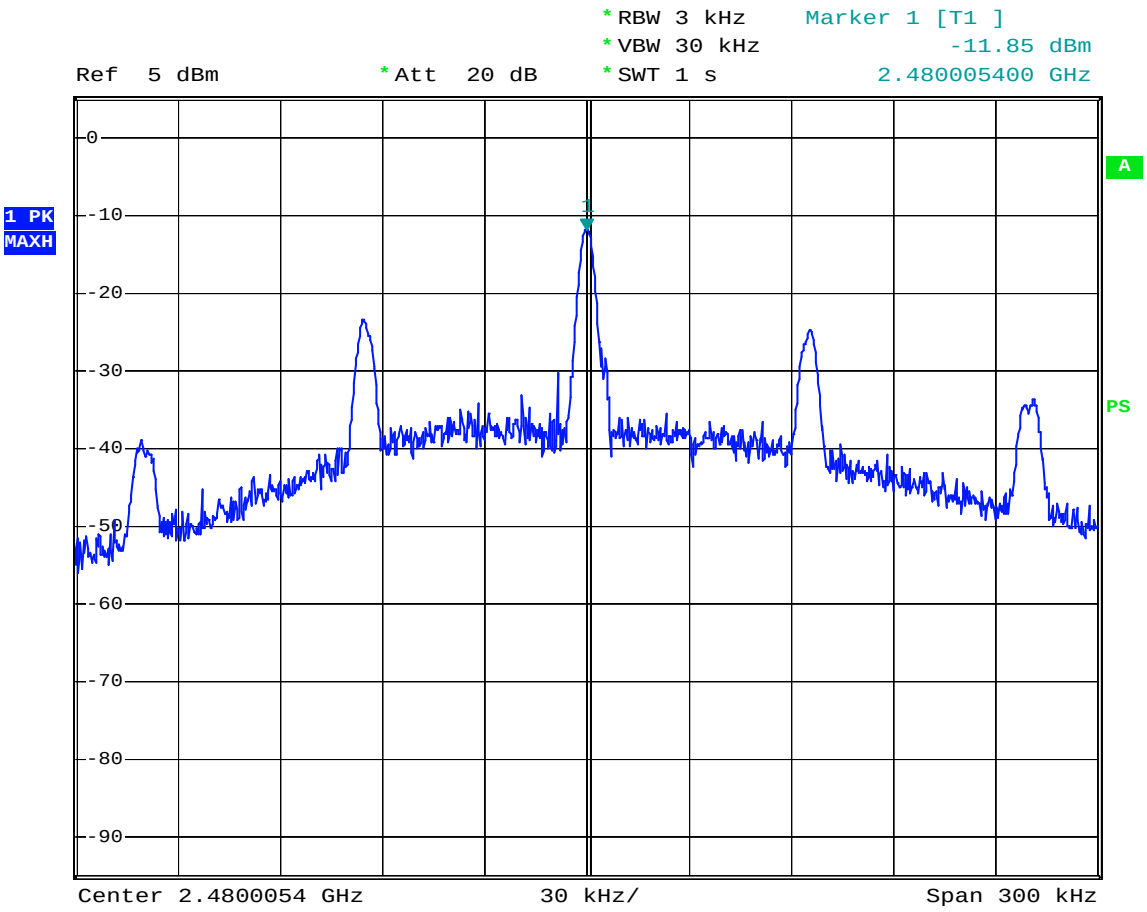
Date: 8.SEP.2006 13:45:57

Channel Mid



Date: 8.SEP.2006 13:47:20

Channel High



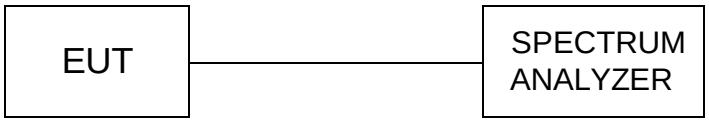
Date: 8.SEP.2006 13:49:15

10. 100 KHz BANDWIDTH OF BAND EDGES MEASUREMENT

10.1 MEASUREMENT PROCEDURE

1. Place the EUT on the table and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set the spectrum analyzer as RBW, VBW=100 KHz. Span=25MHz, Sweep=auto
4. Set center frequency of spectrum analyzer = operating frequency.
5. Repeat above procedures until all frequency measured was complete.

10.2 TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)



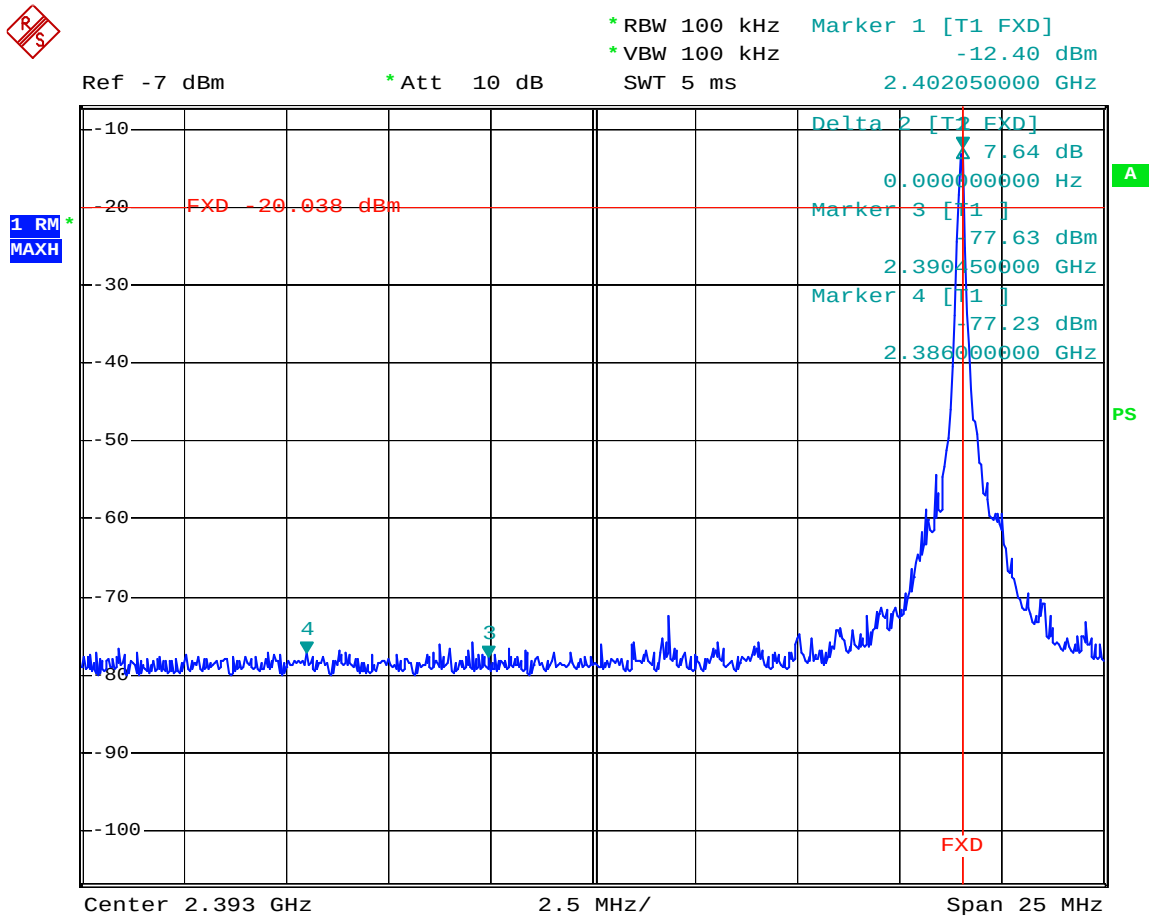
10.3 MEASUREMENT EQUIPMENT USED:

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
EMI TEST RECEIVER	ROHDE & SCHWARZ	ESI 26	100009	2005/11	2006/11

***Note**: Each piece of equipment is scheduled for calibration once a year.*

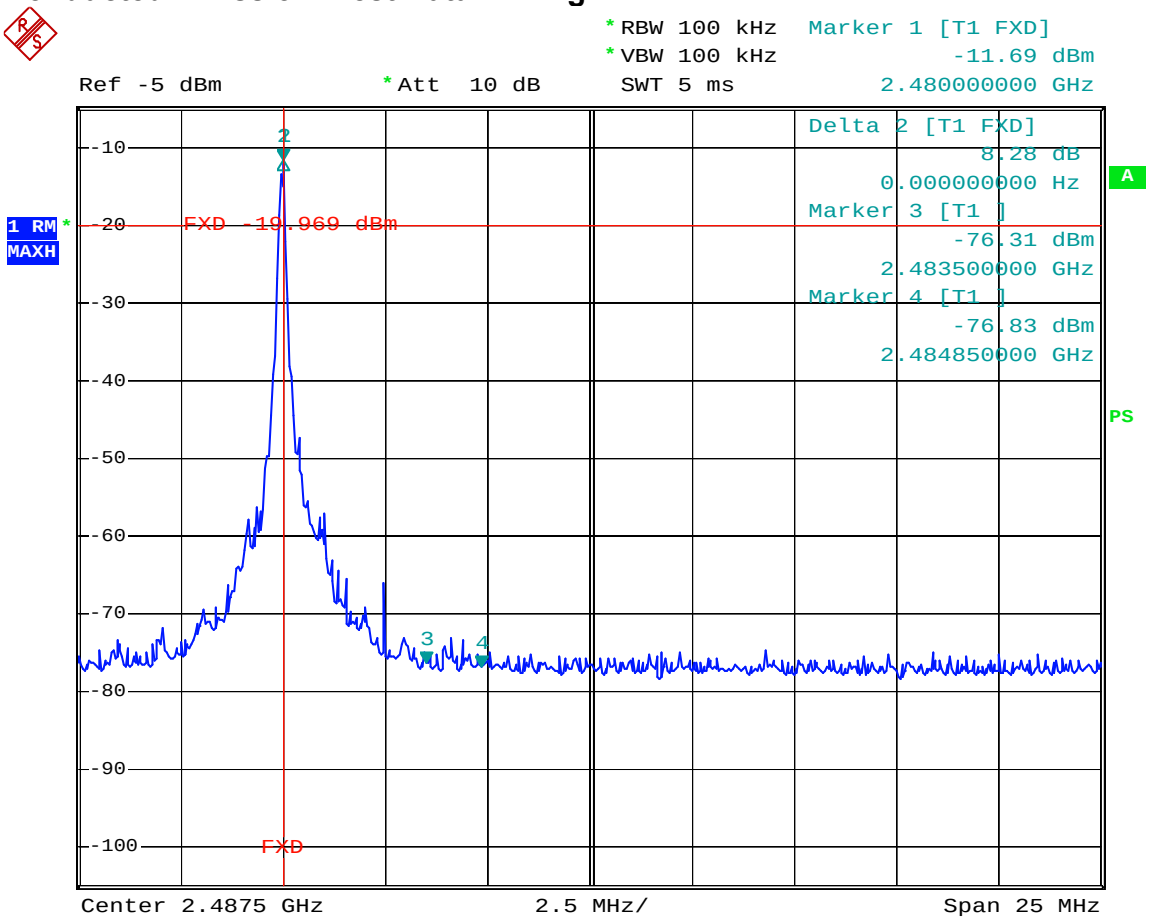
10.4 MEASUREMENT RESULTS:

Conducted Emission: Test Data CH- Low



Date: 8.SEP.2006 13:15:03

Conducted Emission: Test Data CH-High



Date: 8.SEP.2006 13:27:05

Radiated Emission:

Operation Mode : TX CH Low
Fundamental Frequency: 2402 MHz
Temperature: 25 ℃
Humidity: 55%

Test Date: Sep 08, 2006
Test By : Tracy
Pol : Ver.

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
2390.0	---					74.00	54.00		Peak
2386.0	---					74.00	54.00		Peak
2384.0	---					74.00	54.00		Peak

Operation Mode	TX CH Low	Test Date	Apr. 06, 2005
Fundamental Frequency	2402 MHz	Test By	Willis
Temperature	25 ℃	Pol	Hor.
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
2390.0	---					74.00	54.00		Peak
2386.0	---					74.00	54.00		Peak
2384.0	---					74.00	54.00		Peak

Remark :

(1) Datas of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(2) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(3) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(4) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Operation Mode: TX CH High Test Date: Sep 08, 2006
Fundamental Frequency: 2480 MHz Test By : Tracy
Temperature: 25 ℃ Pol : Ver.
Humidity: 55%

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
2483.6	---		---	---		74.00	54.00	---	Peak
2484.0	---		---	---		74.00	54.00	---	Peak
2484.8	---		---	---		74.00	54.00	---	Peak

Operation Mode	TX CH High	Test Date	Apr. 06, 2005
Fundamental Frequency	2480 MHz	Test By	Willis
Temperature	25 ℃	Pol	Hor.
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
2483.6	---		---	---		74.00	54.00	---	Peak
2484.0	---		---	---		74.00	54.00	---	Peak
2484.8	---		---	---		74.00	54.00	---	Peak

Remark：

(1) Datas of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(2) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(3) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(4) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

11. FREQUENCY SEPARATION

11.1 MEASUREMENT PROCEDURE:

1. Place the EUT on the table and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set the spectrum analyzer as RBW, VBW=10 KHz. Span=3MHz, Sweep=auto.
4. Set center frequency of spectrum analyzer = middle of hopping channel.
5. Max hold. Mark 3 Peaks of hopping channel and record the 3 peaks frequency.

11.2 TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

The same as described in Section 10.2.

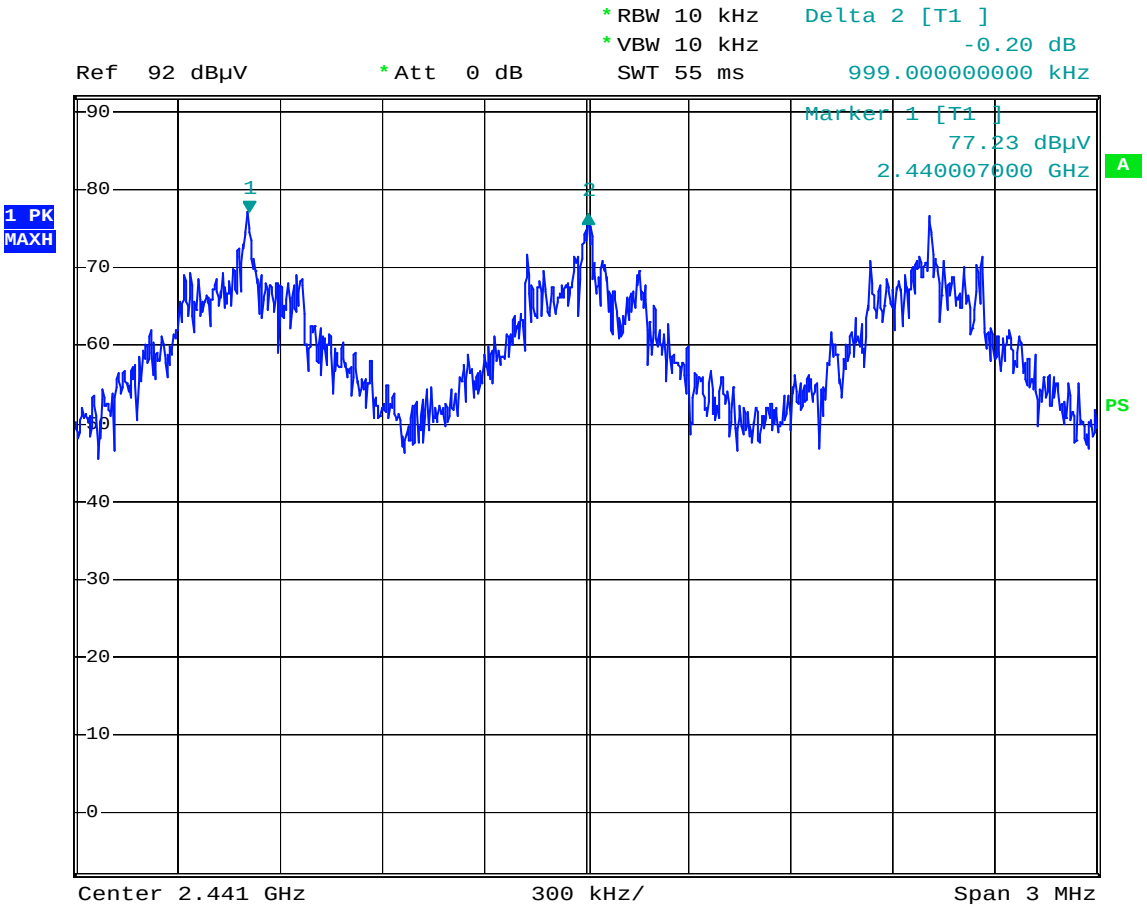
11.3 MEASUREMENT EQUIPMENT USED:

The same as described in Section 10.3

11.4 LIMITS AND MEASUREMENT RESULT:

Limits and Measurement Result Of Channel Separation		
Applicable Limits	Measurement Result	
	Test Data	Criteria
Per 15.247 (a)(1) At least 25 KHz or 20 dB bandwidth of the hopping Channel, whichever is greater	999 KHz	PASS

Frequency Separation Test Data



Date: 8.SEP.2006 15:49:20

12. NUMBER OF HOPPING FREQUENCY

12.1 MEASUREMENT PROCEDURE:

1. Place the EUT on the table and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set the spectrum analyzer Start=2400MHz, Stop=2483.5MHz, Sweep=auto.
4. Set the spectrum analyzer as RBW, VBW=100 KHz.
5. Max hold. view and count how many channel in the band.

12.2 TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

The same as described in Section 10.2.

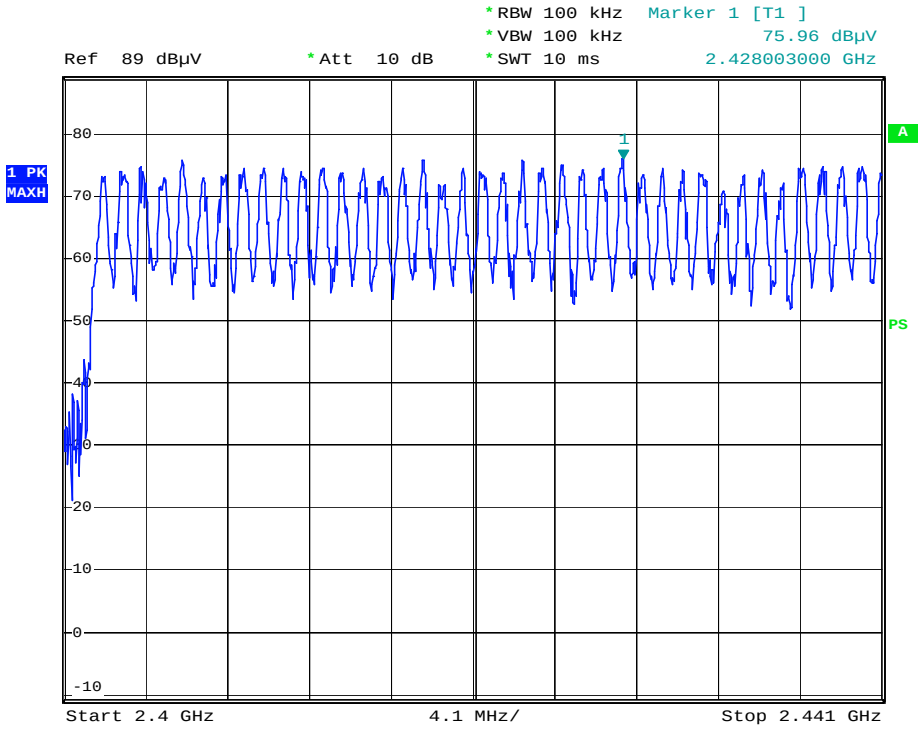
12.3 MEASUREMENT EQUIPMENT USED:

The same as described in Section 10.3

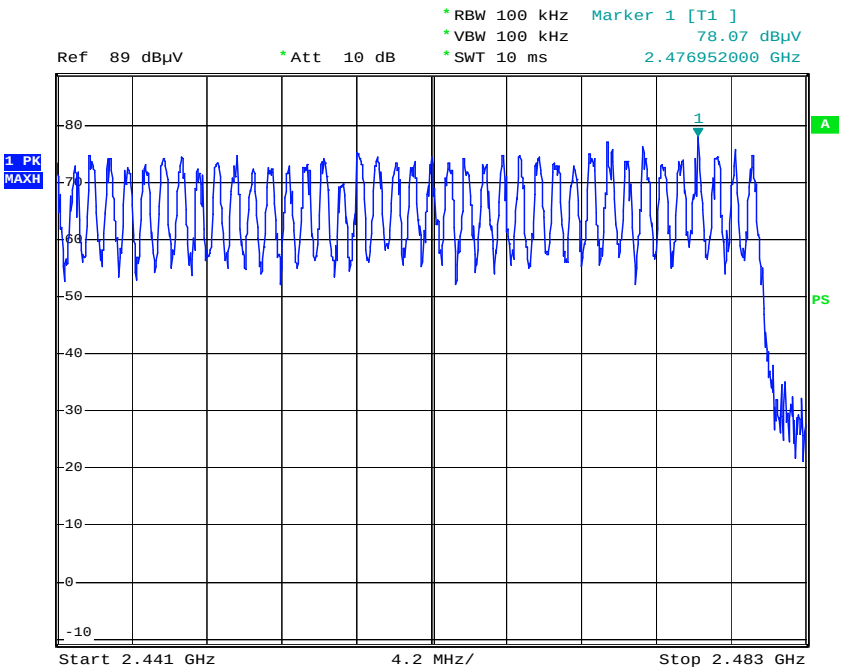
12.4 LIMITS AND MEASUREMENT RESULT:

Limits and Measurement Result Of Hopping Channel		
Applicable Limits	Measurement Result	
	Test Data	Criteria
Per 15.247 (a)(1)(iii) At least 15 hopping Frequencies	Total 79 Channels	PASS

Channel Number



Date: 8.SEP.2006 15:09:20



Date: 8.SEP.2006 15:20:32

13. DWELL TIME

13.1 MEASUREMENT PROCEDURE:

1. Place the EUT on the table and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set the spectrum analyzer as RBW, VBW=100 KHz. Span=0Hz, Sweep=30s.
4. Set center frequency of spectrum analyzer = operating frequency.
5. Repeat above procedures until all frequency measured was complete.

13.2 TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

The same as described in Section 10.2.

13.3 MEASUREMENT EQUIPMENT USED:

The same as described in Section 10.3

13.4 LIMITS AND MEASUREMENT RESULT:

A period time = 0.4 (ms) * 79 = 31.6 (s)

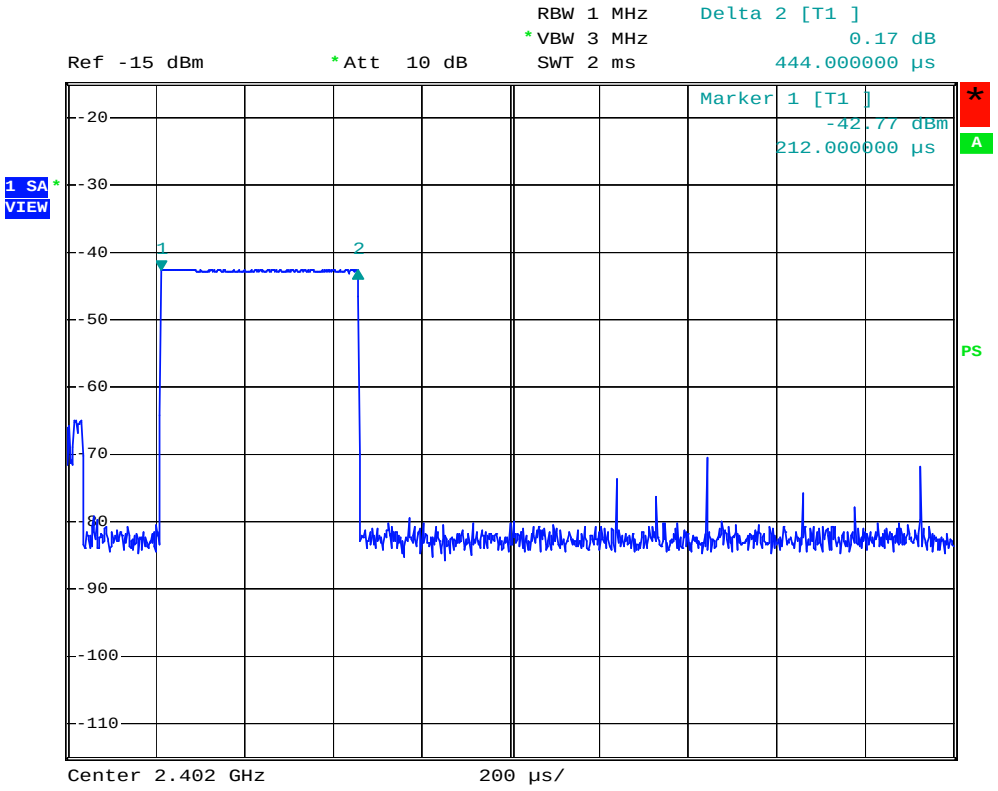
CH Low: Dwell time = 0.444 (ms) * (1600/ (2*79))*31.6 = 142.08 (ms)

CH Mid: Dwell time = 0.444 (ms) * (1600/ (2*79))*31.6 = 142.08 (ms)

CH High: Dwell time = 0.444 (ms) * (1600/ (2*79))*31.6 = 142.08 (ms)

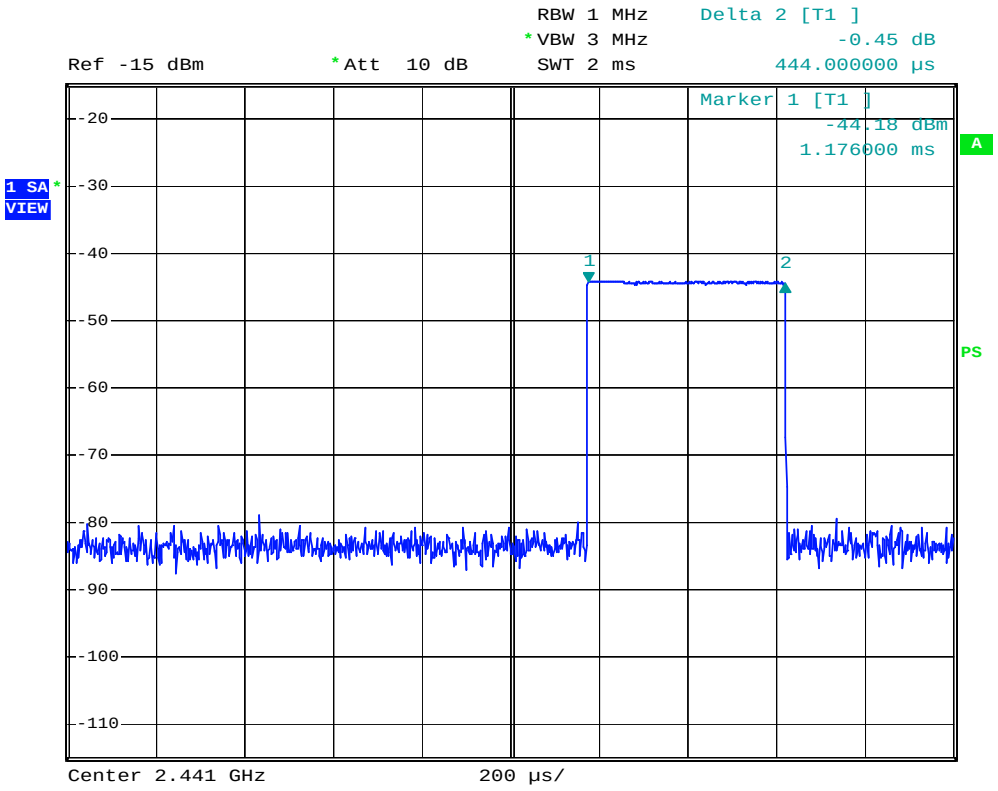
Dwell Time Test Data

CH-Low



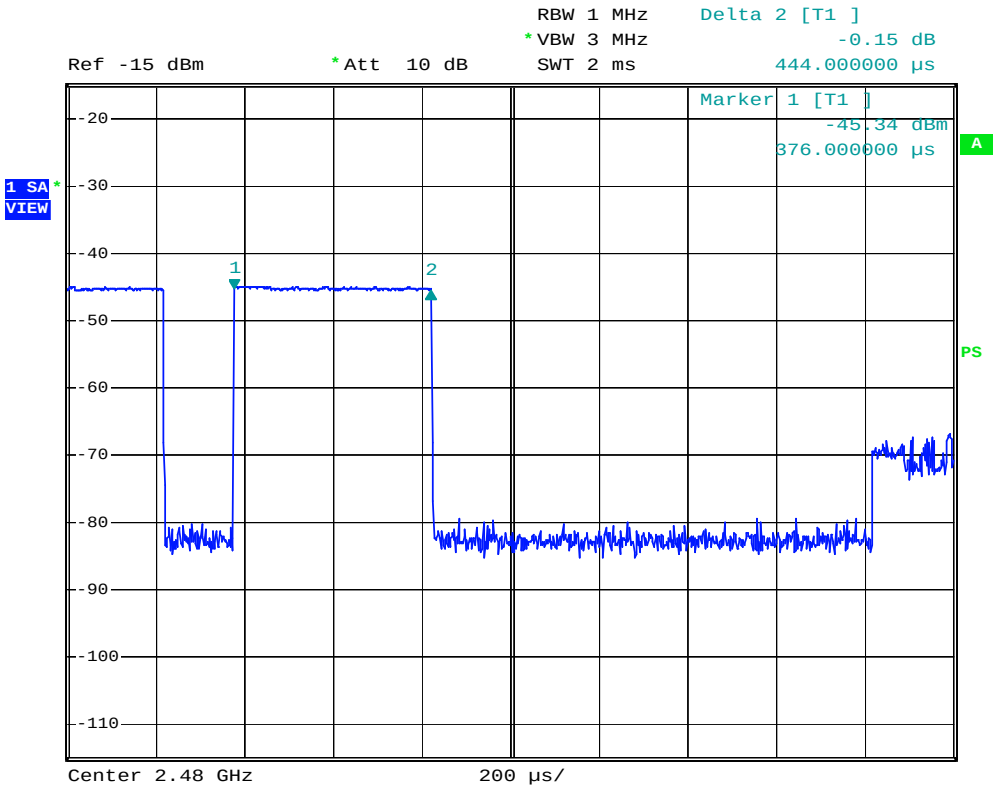
Date: 8.SEP.2006 16:30:35

CH-Mid



Date: 8.SEP.2006 16:21:08

CH-High



Date: 8.SEP.2006 16:23:31

14. ANTENNA REQUIREMENT

14.1 Standard Applicable

For intentional device, according to §15.203, an intentional radiator shall be designed to ensure that no antenna other than furnished by the responsible party shall be used with the device.

And according to § 15247 (4)(1), system operation in the 2400-2483.5 MHz bands 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 3 dB that the directional gain of the antenna exceeds 6 dBi.

14.2 Antenna Connected Construction

The directional gains of antenna used for transmitting is -1.12 dBi, and the antenna connector is designed with permanent attachment and no consideration of replacement. Please see EUT photo for details.

15. RF EXPOSURE

15.1 Standard Applicable

According to §1.1307 (b)(1), system operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

This is a Portable device.

15.2 Measurement Result

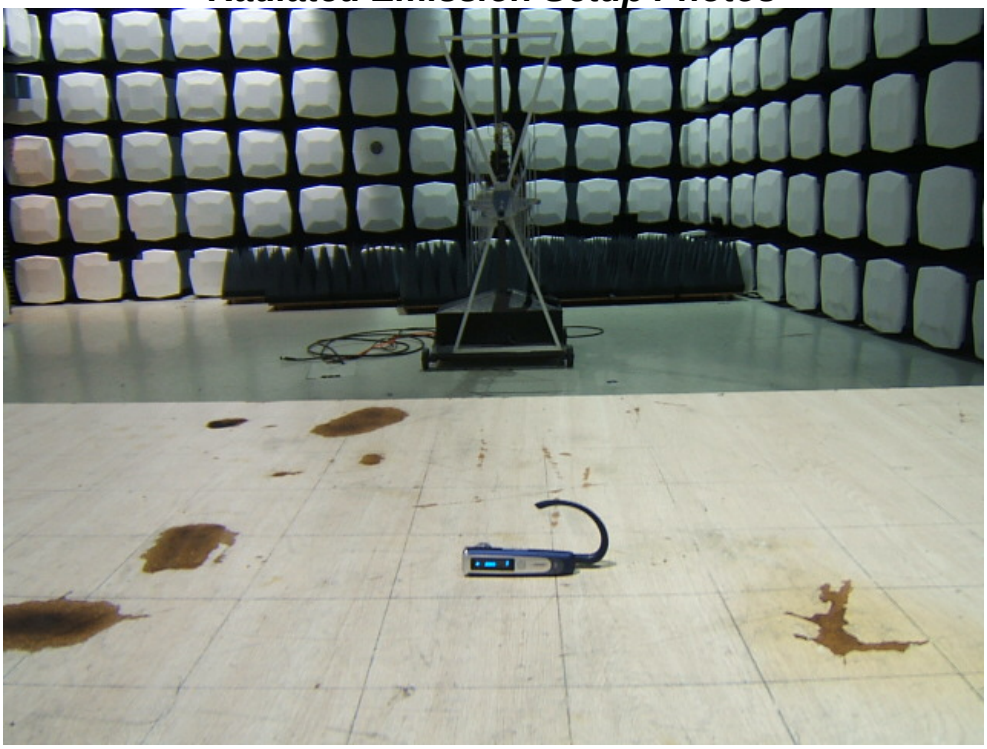
This is a portable device and the Max peak output power is -10.72dBm (0.0846 mW) lower than low threshold 60/fGHz mW (24.48 mW), d＜2.5cm in general population category.

The SAR measurement is not necessary.

APPENDIX 1

PHOTOGRAPHS OF SET UP

Radiated Emission Setup Photos



Conducted Emission Setup Photo

APPENDIX 2

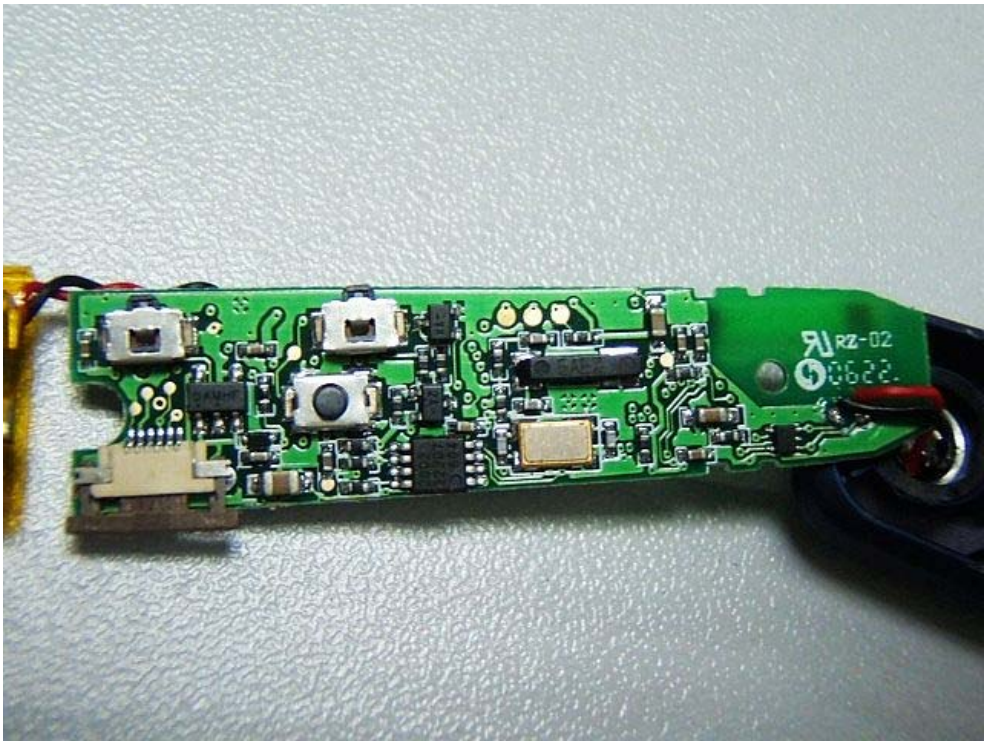
PHOTOGRAPHS OF EUT

Top View of EUT

Bottom View of EUT

Internal of EUT– 1

Internal of EUT–2



Internal of EUT–3