A Test Lab Techno Corp.

No.140-1, Chang-an St., Bade City, Tao-Yuan County 334, Taiwan (R.O.C.)
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Part 15 C Measurement Report

Report No.	:	**0807FR11**
Applicant	:	**Perfect Tech Co., Ltd**
Product Model	:	**BT809X (the model No. X=A~Z)**
Product Type	:	**Bluetooth Headset**
FCC ID	:	**TB6-BT809X**
Dates of Test	:	**May. 27, ~ Jun. 24, 2008**
Test Specification	:	**Part 15 Subpart C (15.247)**
Location of Test Lab.	:	**Changan**

1. The test operations have to be performed with cautious behavior, the test results are as attached.
2. The test results are under chamber environment of A Test Lab Techno Corp. A Test Lab Techno Corp. does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens or samples.
3. The measurement report has to be written approval of A Test Lab Techno Corp. It may only be reproduced or published in full.

Country Huang **20080704**
Measurement Center Manager

John Cheng **20080704**
Testing Engineer

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CERTIFICATION

We here by verify that:

The test data, data evaluation, test procedures and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4:2001. All test were conducted by *A Test Lab Techno Corp. No.140-1, Chang-an St., Bade City, Tao-Yuan County 334, Taiwan (R.O.C.)* Also, we attest to the accuracy of each.

We further submit that the energy emitted by the sample EUT tested as described in the report is in compliance with Class B radiated and conducted emission limit of FCC Rules Part 15 Subpart C (15.247).

EUT	:	**Bluetooth Headset**
Applicant	:	**Perfect Tech Co., Ltd**
		3F.,No.9 Lane175,Nankan Rd., Lujhu Township, Taoyuan
		Country338, Taiwan
Trade Mark	:	**PERFECT**
Model No	:	**BT809X (the model No. X=A~Z)**
FCC ID	:	**TB6-BT809X**

Approved by : **Country Huang 2008/07/04**

Prepared by : **John Cheng 2008/07/04**

A Test Lab Techno Corp.

No.140-1, Chang-an St., Bade City,Tao-Yuan County 334, Taiwan (R.O.C.)
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Appendix A

Appendix A - EUT Test SETUP

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1. GENERAL

1.1 Description of Equipment under Test (EUT)

Applicant： **Perfect Tech Co., Ltd**
3F.,No.9 Lane175,Nankan Rd., Lujhu Township, Taoyuan Country338, Taiwan

Trade Mark	:	PERFECT
Product Model	:	BT809X (the model No. X=A~Z)
Product Type	:	Bluetooth Headset
FCC ID	:	TB6-BT809X
Frequency of Channel	:	See Table 1
Type of Modulation	:	Frequency Hopping Spread Spectrum
Type of Antenna	:	Internal Type

During testing the EUT was operated at Tx or Rx mode for each emission measured. This was done in order to ensure that maximum emission levels were attained.

CH No.	Freq.	CH No.	Freq.	CH No.	Freq.	CH No.	Freq.
0	2402.00	20	2422.00	40	2442.00	60	2462.00
1	2403.00	21	2423.00	41	2443.00	61	2463.00
2	2404.00	22	2424.00	42	2444.00	62	2464.00
3	2405.00	23	2425.00	43	2445.00	63	2465.00
4	2406.00	24	2426.00	44	2446.00	64	2466.00
5	2407.00	25	2427.00	45	2447.00	65	2467.00
6	2408.00	26	2428.00	46	2448.00	66	2468.00
7	2409.00	27	2429.00	47	2449.00	67	2469.00
8	2410.00	28	2430.00	48	2450.00	68	2470.00
9	2411.00	29	2431.00	49	2451.00	69	2471.00
10	2412.00	30	2432.00	50	2452.00	70	2472.00
11	2413.00	31	2433.00	51	2453.00	71	2473.00
12	2414.00	32	2434.00	52	2454.00	72	2474.00
13	2415.00	33	2435.00	53	2455.00	73	2475.00
14	2416.00	34	2436.00	54	2456.00	74	2476.00
15	2417.00	35	2437.00	55	2457.00	75	2477.00
16	2418.00	36	2438.00	56	2458.00	76	2478.00
17	2419.00	37	2439.00	57	2459.00	77	2479.00
18	2420.00	38	2440.00	58	2460.00	78	2480.00
19	2421.00	39	2441.00	59	2461.00		

Table 1. Bluetooth Frequency of Each Channel (Working Frequency)

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1.2 Introduction

The following measurement report is submitted on behalf of **Perfect Tech Co., Ltd**. In support of a Class B Digital Device certification in accordance with Part2 Subpart J and Part 15 Subpart A And B&C of the Commission's and Regulations.

1.3 Summary of Tests

47 CFR Part 15 Subpart C			
Reference	**Test**	**Results**	**Note**
15.107	AC Power Conducted Emission	PASS	
15.247(c)	Transmitter Radiated Emissions	PASS	
15.247(b)	Max. Output Power	PASS	
15.247(a)(1)	20dB RF Bandwidth	PASS	
15.247(a)(1)(ii)	Carrier Frequency Separation	PASS	
15.247(a)(1)(i)	Number of Hopping	PASS	
15.247(a)(1)(i)	Time of Occupancy (Dwell Time)	PASS	
15.247(c)	Out of Band Conducted Spurious Emission	PASS	
15.247(c)	Band Edge Measurement	PASS	
15.203	Antenna Requirement	PASS	

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1.4 Description of Support Equipment

Computer	:	DELL
Model No.	:	PP49L
Serial No.	:	UF230 A03
FCC ID	:	E2KWM3945ABC
Keyboard	:	DELL
Model No.	:	SK-8115
Serial No.	:	MY-0DJ325-71619-7113-1366
FCC ID	:	FCC DOC
Monitor	:	DELL
Model No.	:	E177FPc
Serial No.	:	CN-0FJ179-64180-6BT-4LYS
FCC ID	:	FCC DOC
Mouse	:	DELL
Model No.	:	M056U0A
Serial No.	:	F1F026E1
FCC ID	:	FCC DOC
Printer	:	EPSON
Model No.	:	C60
Serial No.	:	DR3K041323
FCC ID	:	FCC DOC

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1.5 Configuration of System under Test

Conducted Emissions - PC USB Link

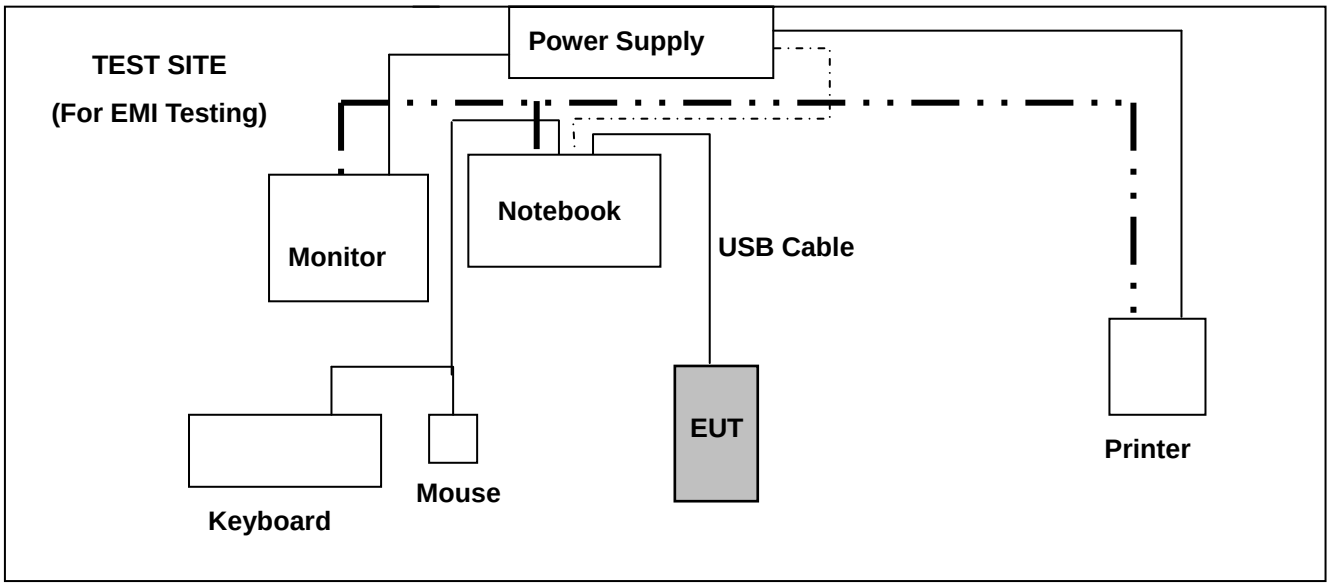

Figure 1. Configuration of System Under Test for PC USB Link

During EMI testing the EUT (Bluetooth Headset)'s USB port connected to the USB port of Notebook. A mouse was connected to the mouse port of Notebook. And a keyboard was connected to the mouse port of Notebook. And a printer was connected to the parallel port.

Conducted Emissions -AC Adapter Link

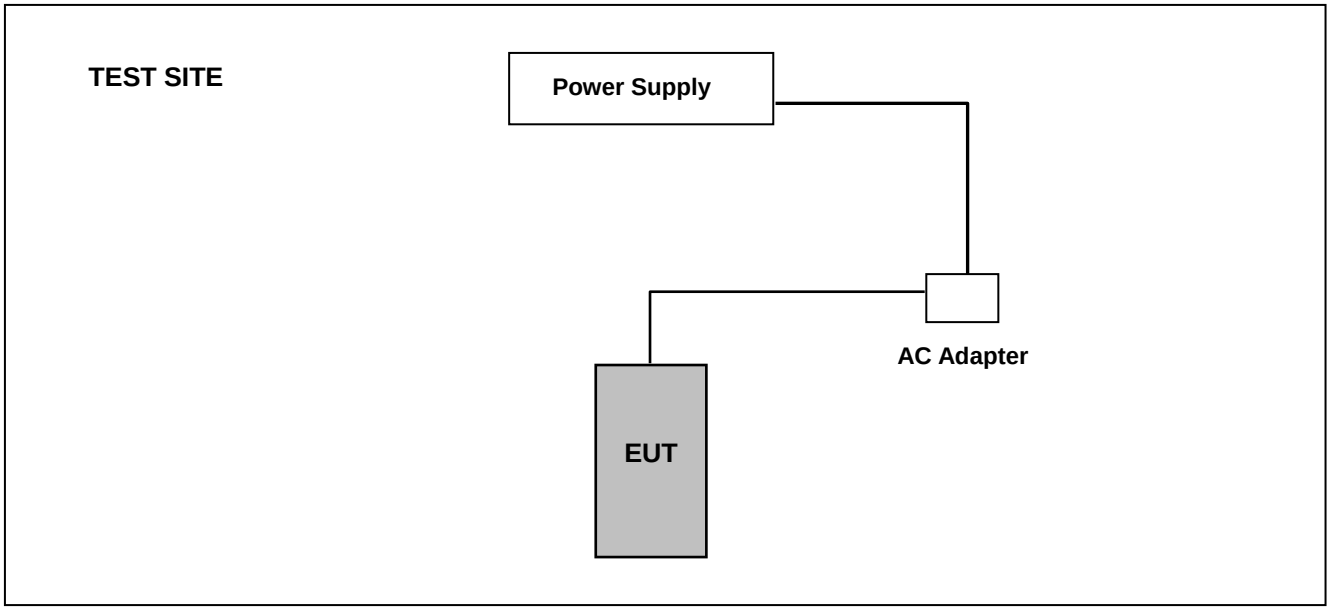

Figure 2. Configuration of System Under Test for PC USB Link

During EMI testing (LINK) the EUT (Bluetooth Headset)'s Power port was connected to AC Adapter.

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Radiated Emissions - PC USB Link

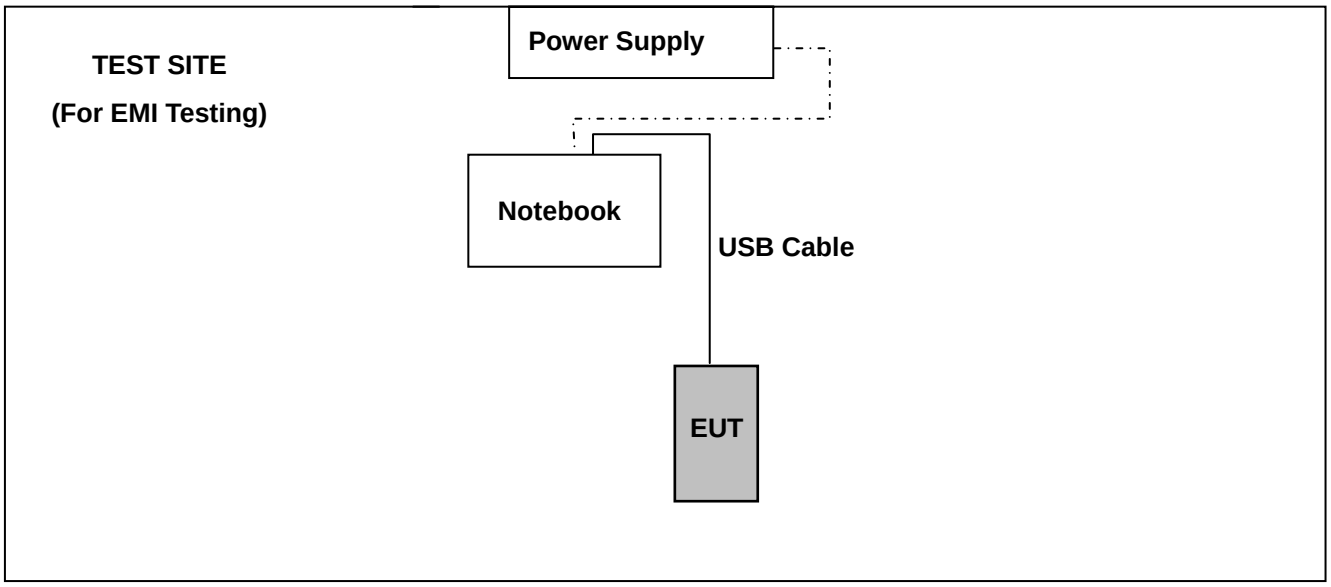

Figure 3. Configuration of System Under Test for PC USB Link

During EMI testing the EUT (Bluetooth Headset)'s USB port connected to the USB port of Notebook.

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1.6 Test Procedure

All measurements contained in this report were performed according to the techniques described in Measurement procedure ANSI C63.4-2003 "Measurement of un-Intentional Radiators."

1.7 General Test Condition

The conditions under which the EUT operates were varied to determine their effect on the equipment's emission characteristics. The final configuration of the test system and the mode of operation used during these tests were chosen as that which produced the highest emission levels. However, only those conditions which the EUT was considered likely to encounter in normal use were investigated. The systems radiated and conducted emissions were investigated while the computer alternately transferred data to the EUT as well as to the monitor and printer. Using a test program which sent a continuous data and transferred data to and from the EUT was proven to worst case emissions. The system's physical layout and cabling was randomly arranged to ensure that maximum emission levels were attained.

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2. Conducted Emissions Requirements

2.1 General & Setup:

The power line conducted emission measurements were performed in a shielded enclosure. The EUT was assembled on a wooden table which is 80 centimeters high, was placed 40 centimeters from the back wall and at least 1 meter from the sidewall.

Power was fed to the EUT from the public utility power grid through a line filter and EMCO Model 3162/2 SH Line Impedance Stabilization Networks (LISN). The LISN housing, measuring instrumentation case, ground plane, etc., were electrically bonded together at the same RF potential. The Spectrum analyzer was connected to the AC line through an isolation transformer. The 50-ohm output of the LISN was connected to the spectrum analyzer directly. Conducted emission levels were in the CISPR quasi-peak detection mode. The analyzer's 6 dB bandwidth was set to 9 KHz. No post-detector video filter was used.

The spectrum was scanned from 150 KHz to 30 MHz. The physical arrangement of the test system and associated cabling was varied (within the scope of arrangements likely to be encountered in actual use) to determine the effect on the unit's emanations in amplitude and frequency. All spurious emission frequencies were observed. The highest emission amplitudes relative to the appropriate limit were measured and have been recorded in paragraph 2.6.

2.2 Test Equipment List:

Describe	Manufacturer	Model	Serial Number	Calibration	
				Cal. Date	Due Date
Spectrum Analyzer	Advantest	R3132	160300103	Mar. 06, 2008	Mar. 06, 2009
Test Receiver	R&S	ESCI	100367	Jun. 05, 2008	Jun. 05, 2009
LISN	EMCO	3816/2 SH	00060110	Jun. 04, 2008	Jun. 04, 2009
LISN	EMCO	3816/2 SH	00060111	Jun. 13, 2008	Jun. 13, 2009
Transient Limiter	ELECTRO-METRICS	EM-7600	777	Jun. 26, 2007	Jun. 26, 2008

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2.3 Test Configuration:

Figure 5. Front View of the Test Configuration

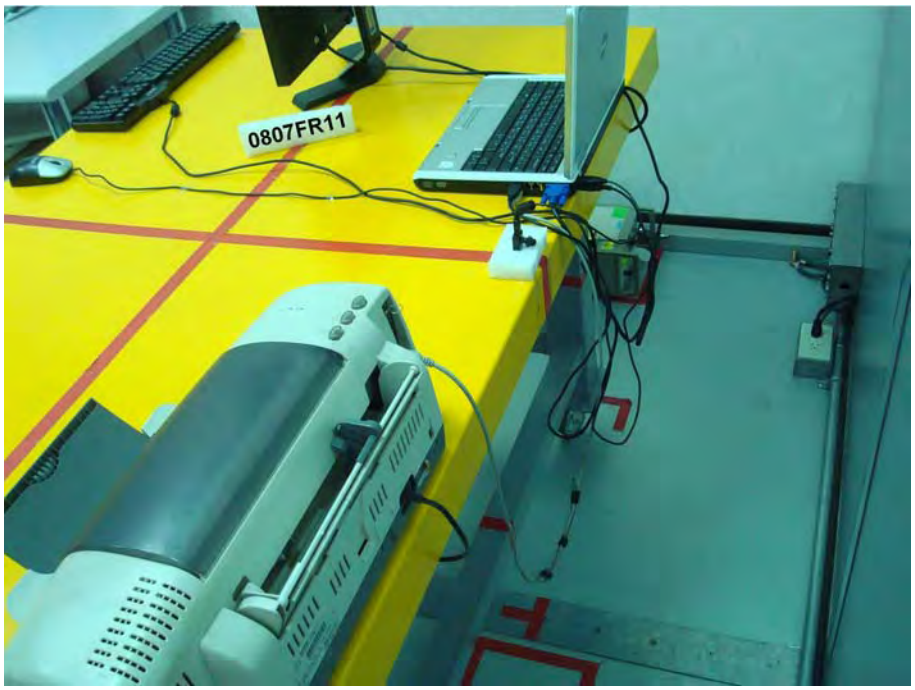

Figure 6. Rear View of the Test Configuration

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Figure 7. Front View of the Test Configuration

Figure 8. Rear View of the Test Configuration

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2.4 Test condition:

EUT tested in accordance with the specifications given by the Manufacturer, and exercised in the most unfavorable manner.

2.5 Conducted Emissions Limits:

Frequency range (MHz)	Limits (dBuV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5.0	56	46
5.0 to 30	60	50

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2.6 Measurement Data of Conducted Emissions:

2.6.1 Conducted Emissions (Subpart C)

The following table show a summary of the highest emissions of power line conducted emissions to the HOT and NATURAL conductor of the EUT power.

Applicant : Perfect Tech Co., Ltd
Model No : BT809X
EUT : Bluetooth Headset
Test Mode : AC Adapter Link _Stand By
Test Date : 06/18/2008
Please refer to next pager of detail testing data.
Notes:

1. L1: One end & Ground L2: The other end & Ground
2. Height of table on which the EUT was placed: 0.8 m.
3. The Quasi-Peak Value have already met the Average Value Limit showed on above limits.
4. The above test results are obtained under the normal condition.

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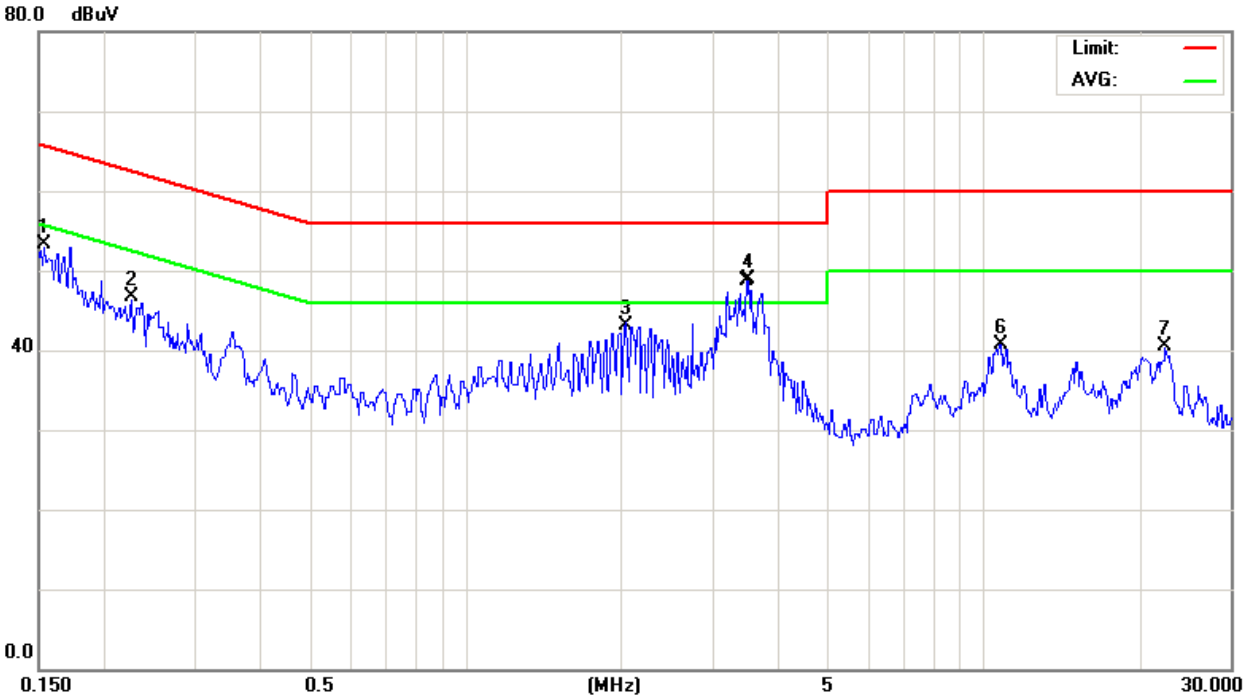
Conducted Emission Measurement

File :809(IDEL) Data :#1 Date: 2008-6-18 Time: 上午 11:38:53



Site site#1 Phase: *L1* Temperature: 26 ℃

Limit: CISPR22 Class B Conduction(QP) Power: AC 110V/60Hz Humidity: 55 %

EUT:

M/N: 809

Mode: PC Mode

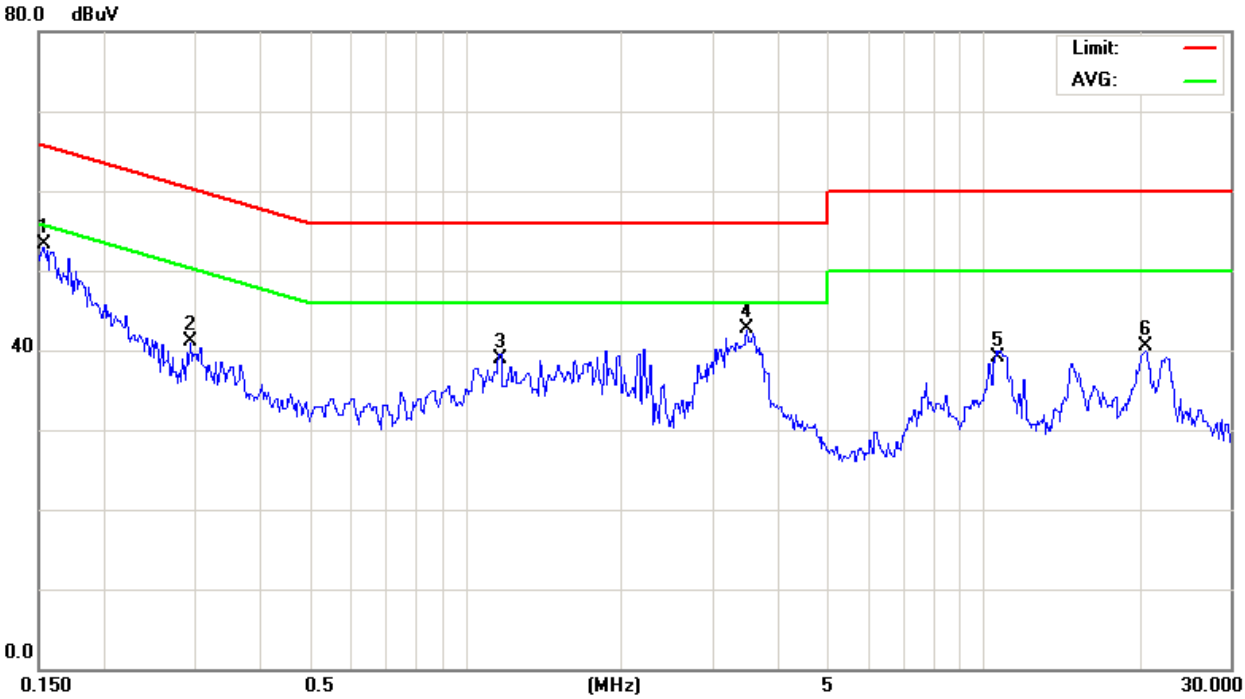
Note: DELL NB#01,右側上方USB Port ,USB Cable夾扣

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1534	43.54	9.73	53.27	65.81	-12.54	peak	
2		0.2263	36.92	9.75	46.67	62.58	-15.91	peak	
3		2.0388	33.27	9.86	43.13	56.00	-12.87	peak	
4	*	3.4970	38.93	9.94	48.87	56.00	-7.13	peak	
5		3.4970	15.27	9.94	25.21	46.00	-20.79	AVG	
6		10.7500	30.69	10.07	40.76	60.00	-19.24	peak	
7		22.4000	30.23	10.32	40.55	60.00	-19.45	peak	

*:Maximum data x:Over limit !:over margin ●Reference Only

Conducted Emission Measurement

File :809(IDEL) Data :#2 Date: 2008-6-18 Time: 上午 11:41:26



Site site#1 Phase: *L2* Temperature: 26 ℃

Limit: CISPR22 Class B Conduction(QP) Power: AC 110V/60Hz Humidity: 55 %

EUT:

M/N: 809

Mode: PC Mode

Note: DELL NB#01,右側上方USB Port ,USB Cable夾扣

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1527	43.57	9.73	53.30	65.85	-12.55	peak	
2		0.2933	31.39	9.76	41.15	60.43	-19.28	peak	
3		1.1656	29.13	9.80	38.93	56.00	-17.07	peak	
4		3.4878	32.82	9.95	42.77	56.00	-13.23	peak	
5		10.6000	29.14	10.05	39.19	60.00	-20.81	peak	
6		20.5000	29.99	10.43	40.42	60.00	-19.58	peak	

*:Maximum data x:Over limit !:over margin ●Reference Only

2.6.2 Conducted Emissions (Subpart C)

The following table show a summary of the highest emissions of power line conducted emissions to the HOT and NATURAL conductor of the EUT power.

Applicant : Perfect Tech Co., Ltd

Model No : BT809X

EUT : Bluetooth Headset

Test Mode : PC USB Link _ Bluetooth 2.0 CH00 (2402MHz)

Test Date : 06/18/2008

Please refer to next pager of detail testing data.

Notes:

1. L1: One end & Ground L2: The other end & Ground
2. Height of table on which the EUT was placed: 0.8 m.
3. The Quasi-Peak Value have already met the Average Value Limit showed on above limits.
4. The above test results are obtained under the normal condition.

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Conducted Emission Measurement

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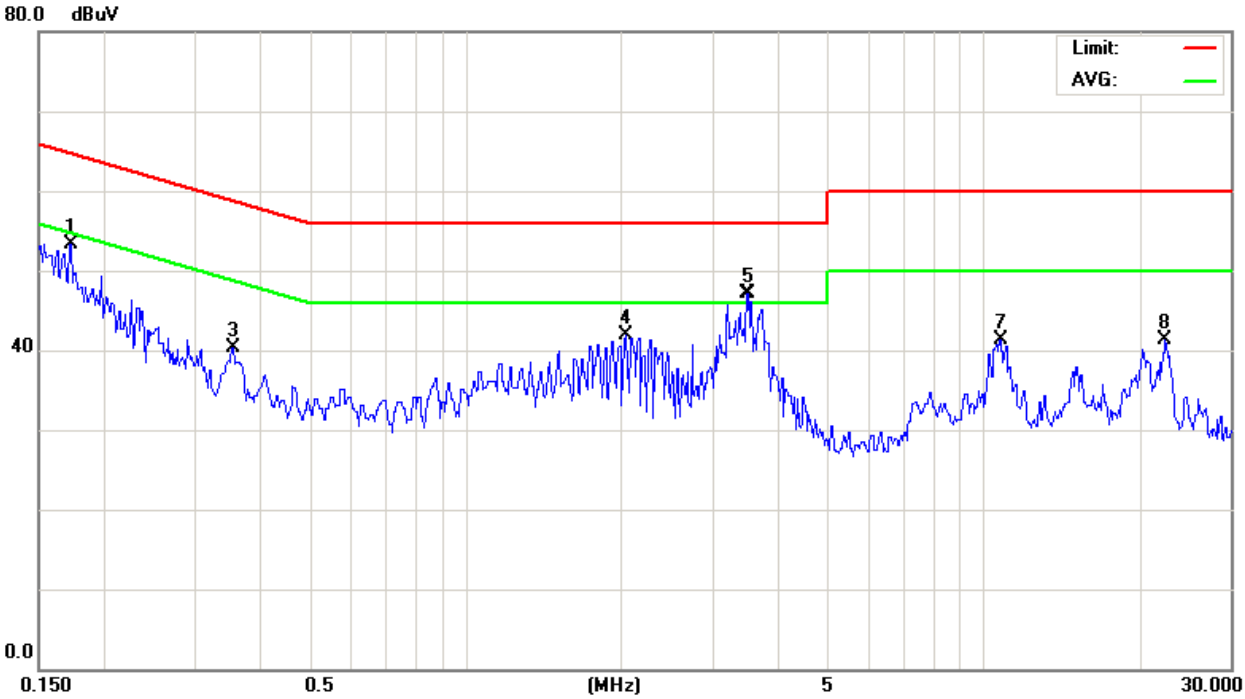

Site site#1 Phase: *L1* Temperature: 26 ℃

Limit: CISPR22 Class B Conduction(QP) Power: AC 110V/60Hz Humidity: 55 %

EUT:

M/N: 809

Mode: PC Mode

Note: DELL NB#01,右側上方USB Port ,USB Cable夾扣

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1724	43.58	9.73	53.31	64.84	-11.53	peak	
2		0.1724	25.47	9.73	35.20	54.84	-19.64	AVG	
3		0.3543	30.51	9.78	40.29	58.86	-18.57	peak	
4		2.0390	32.08	9.86	41.94	56.00	-14.06	peak	
5	*	3.4970	37.17	9.95	47.12	56.00	-8.88	peak	
6		3.4970	15.95	9.95	25.90	46.00	-20.10	AVG	
7		10.7500	31.15	10.07	41.22	60.00	-18.78	peak	
8		22.4000	31.05	10.32	41.37	60.00	-18.63	peak	

*:Maximum data x:Over limit !:over margin ●Reference Only

Conducted Emission Measurement

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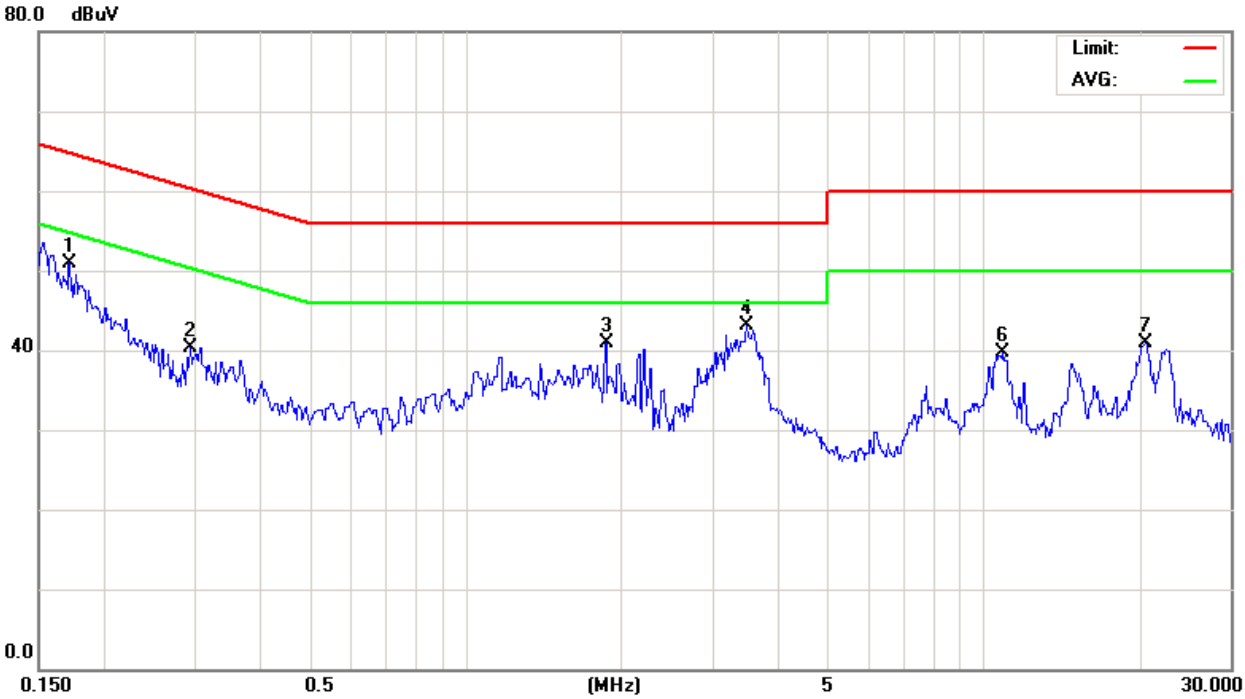

Site site#1 Phase: *L2* Temperature: 26 ℃

Limit: CISPR22 Class B Conduction(QP) Power: AC 110V/60Hz Humidity: 55 %

EUT:

M/N: 809

Mode: PC Mode

Note: DELL NB#01,右側上方USB Port ,USB Cable夾扣

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1717	41.23	9.73	50.96	64.88	-13.92	peak	
2		0.2935	30.59	9.76	40.35	60.42	-20.07	peak	
3		1.8590	31.15	9.82	40.97	56.00	-15.03	peak	
4	*	3.4880	33.09	9.95	43.04	56.00	-12.96	peak	
5		3.4880	20.85	9.95	30.80	46.00	-15.20	AVG	
6		10.9000	29.62	10.09	39.71	60.00	-20.29	peak	
7		20.5000	30.41	10.43	40.84	60.00	-19.16	peak	

*:Maximum data x:Over limit !:over margin ●Reference Only

2.6.3 Conducted Emissions (Subpart C)

The following table show a summary of the highest emissions of power line conducted emissions to the HOT and NATURAL conductor of the EUT power.

Applicant : Perfect Tech Co., Ltd
Model No : BT809X
EUT : Bluetooth Headset
Test Mode : AC Adapter Link _Stand By
Test Date : 06/24/2008

Please refer to next pager of detail testing data.

Notes:

1. L1: One end & Ground L2: The other end & Ground
2. Height of table on which the EUT was placed: 0.8 m.
3. The Quasi-Peak Value have already met the Average Value Limit showed on above limits.
4. The above test results are obtained under the normal condition.

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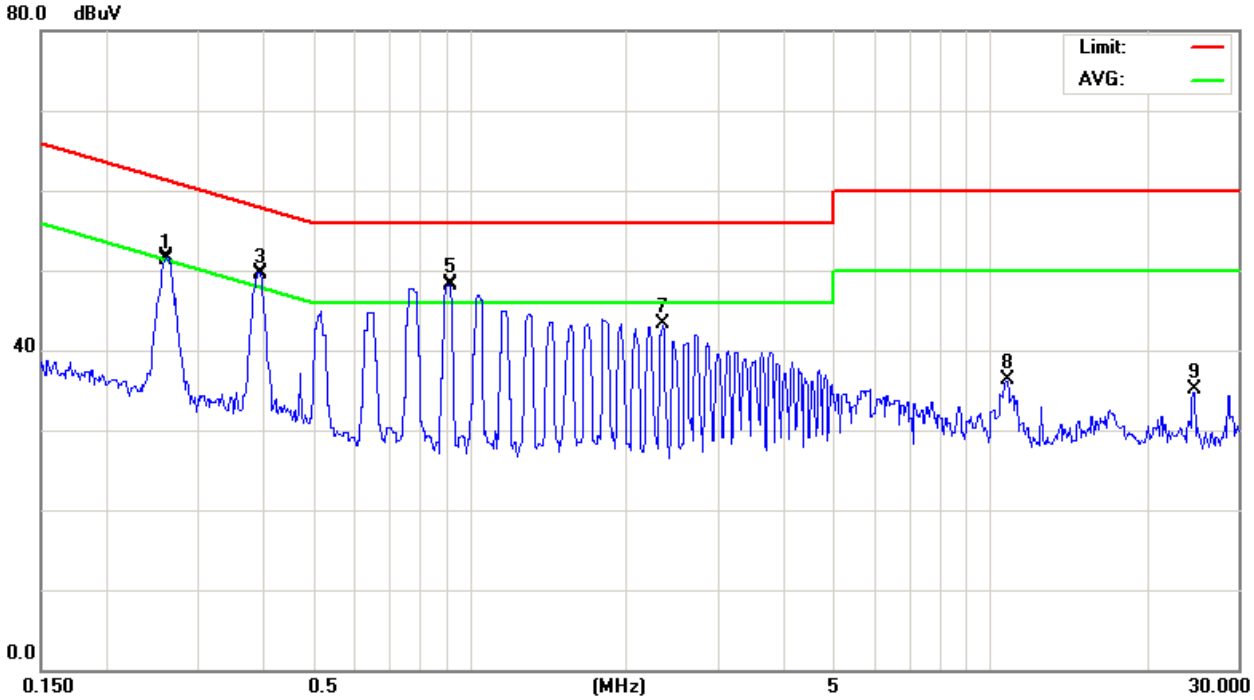
Conducted Emission Measurement

File :809(P-001B-B508)(IDEL) Data :#1 Date: 2008/6/24 Time: 上午 10:23:36



Site site#1 Phase: *L1* Temperature: 26 ℃

Limit: CISPR22 Class B Conduction(QP) Power: AC 110V/60Hz Humidity: 55 %

EUT:

M/N: 809

Mode:

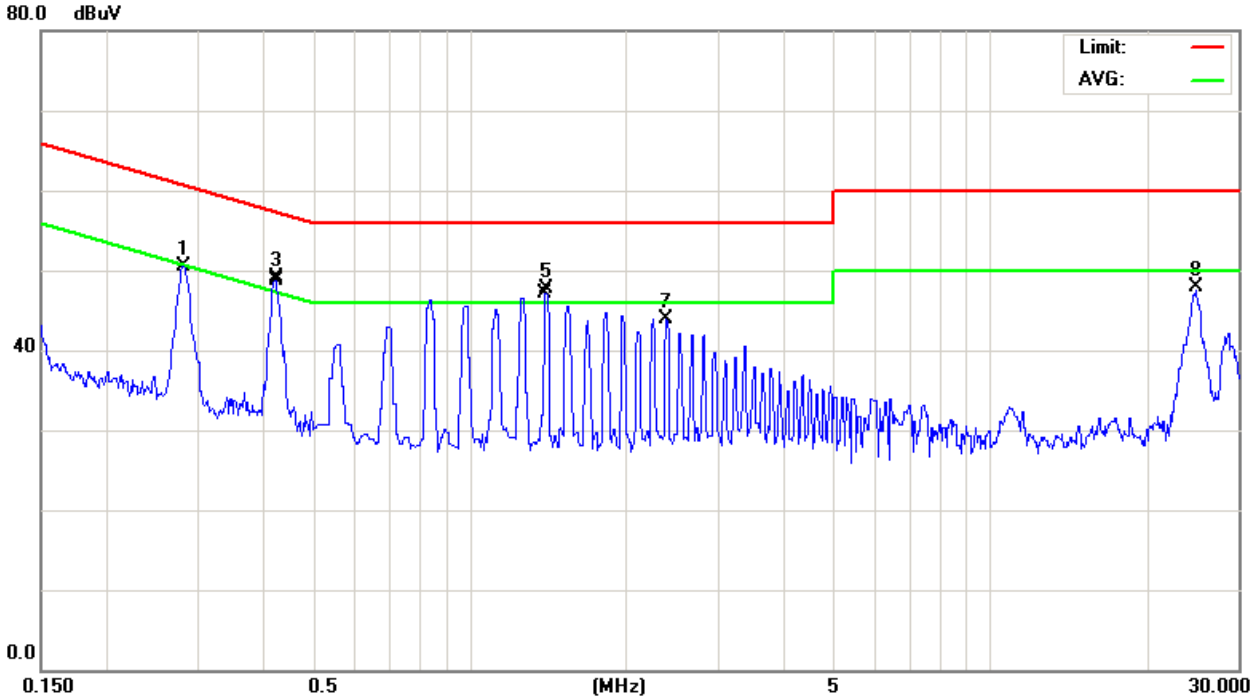
Note: ADAPTER#1:P-001B-B508

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.2610	41.63	9.75	51.38	61.40	-10.02	peak	
2		0.2610	34.25	9.75	44.00	51.40	-7.40	AVG	
3		0.3935	39.69	9.78	49.47	57.99	-8.52	peak	
4	*	0.3935	32.74	9.78	42.52	47.99	-5.47	AVG	
5		0.9140	38.51	9.81	48.32	56.00	-7.68	peak	
6		0.9140	28.94	9.81	38.75	46.00	-7.25	AVG	
7		2.3448	33.53	9.84	43.37	56.00	-12.63	peak	
8		10.7500	26.29	10.07	36.36	60.00	-23.64	peak	
9		24.5500	24.82	10.34	35.16	60.00	-24.84	peak	

*:Maximum data x:Over limit !:over margin ●Reference Only

Conducted Emission Measurement

File :809(P-001B-B508)(IDEL) Data :#2 Date: 2008/6/24 Time: 上午 10:26:53



Site site#1 Phase: *L2* Temperature: 26 ℃

Limit: CISPR22 Class B Conduction(QP) Power: AC 110V/60Hz Humidity: 55 %

EUT:

M/N: 809

Mode:

Note: ADAPTER#1:P-001B-B508

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.2807	40.84	9.76	50.60	60.79	-10.19	peak	
2		0.2807	34.27	9.76	44.03	50.79	-6.76	AVG	
3		0.4228	39.38	9.78	49.16	57.39	-8.23	peak	
4	*	0.4228	32.64	9.78	42.42	47.39	-4.97	AVG	
5		1.4000	37.81	9.81	47.62	56.00	-8.38	peak	
6		1.4000	27.29	9.81	37.10	46.00	-8.90	AVG	
7		2.3809	34.13	9.84	43.97	56.00	-12.03	peak	
8		24.8000	37.56	10.32	47.88	60.00	-12.12	peak	

*:Maximum data x:Over limit !:over margin ●Reference Only

2.6.4 Conducted Emissions (Subpart C)

The following table show a summary of the highest emissions of power line conducted emissions to the HOT and NATURAL conductor of the EUT power.

Applicant : Perfect Tech Co., Ltd

Model No : BT809X

EUT : Bluetooth Headset

Test Mode : AC Adapter Link _ Bluetooth 2.0 CH00 (2402MHz)

Test Date : 06/24/2008

Please refer to next pager of detail testing data.

Notes:

1. L1: One end & Ground L2: The other end & Ground
2. Height of table on which the EUT was placed: 0.8 m.
3. The Quasi-Peak Value have already met the Average Value Limit showed on above limits.
4. The above test results are obtained under the normal condition.

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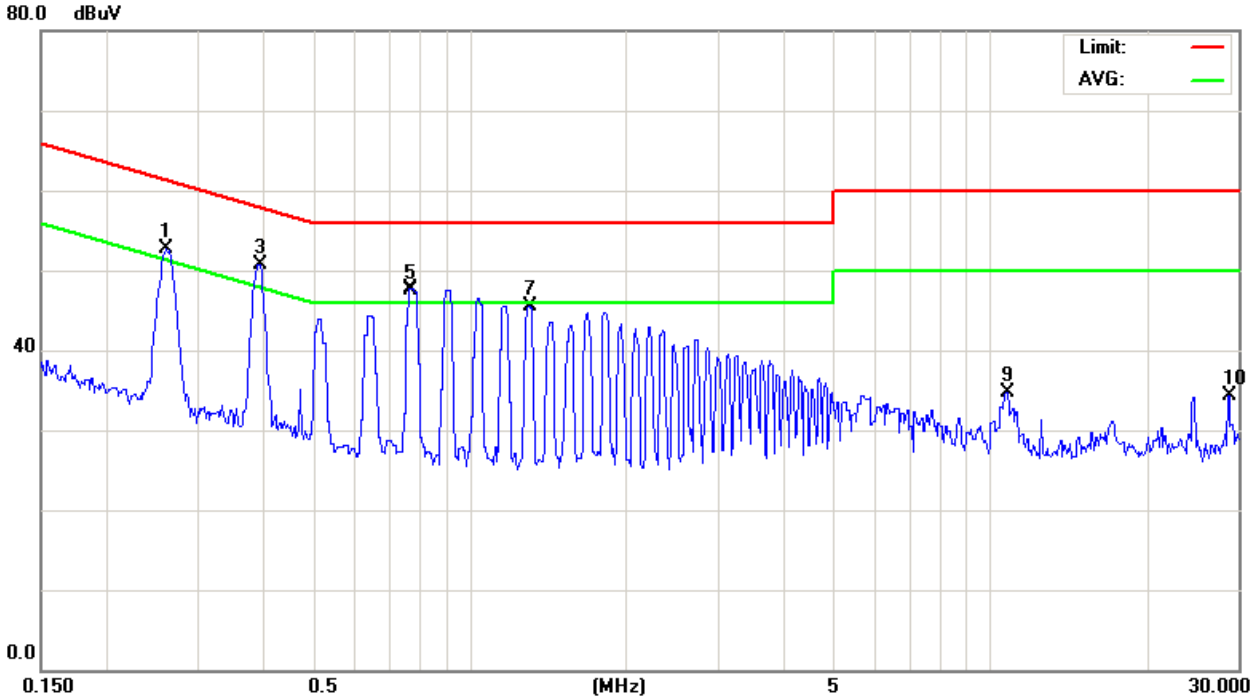
Conducted Emission Measurement

File :809(P-001B-B508) Data :#1 Date: 2008/6/24 Time: 上午 09:41:48



Site site#1 Phase: *L1* Temperature: 26 ℃

Limit: CISPR22 Class B Conduction(QP) Power: AC 110V/60Hz Humidity: 55 %

EUT:

M/N: 809

Mode: BT

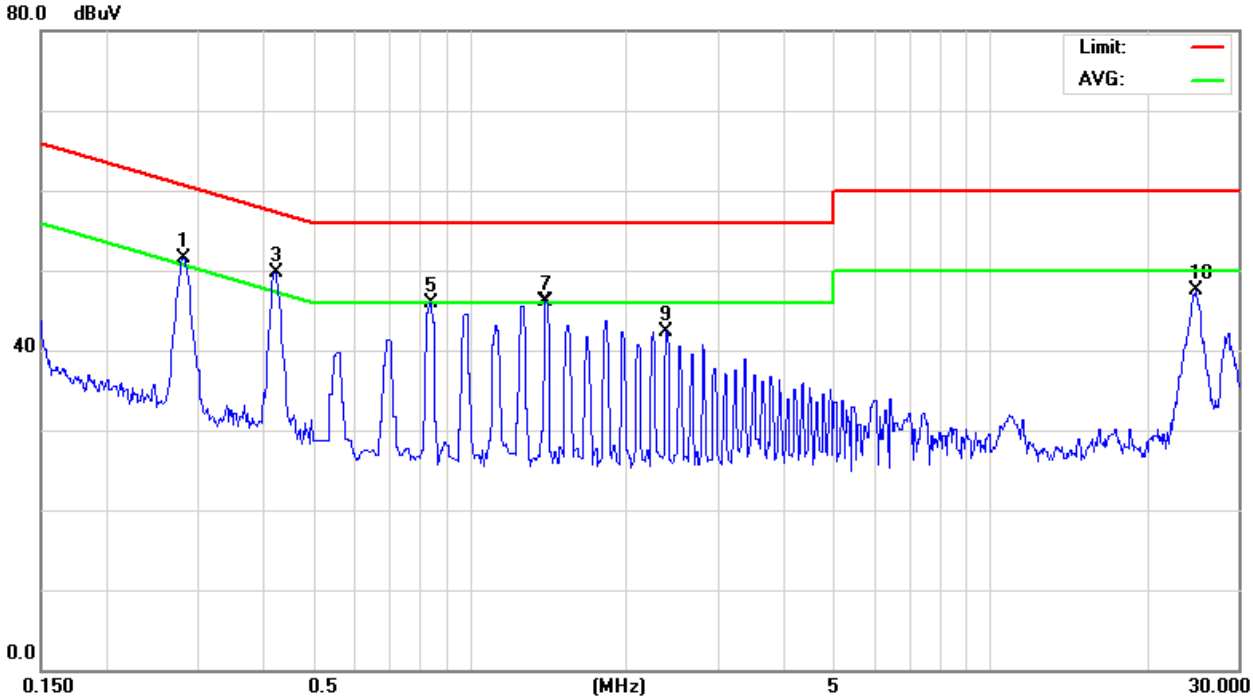
Note: ADAPTER#1:P-001B-B508

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.2613	42.87	9.75	52.62	61.39	-8.77	peak	
2		0.2613	34.40	9.75	44.15	51.39	-7.24	AVG	
3		0.3935	40.88	9.78	50.66	57.99	-7.33	peak	
4	*	0.3935	32.80	9.78	42.58	47.99	-5.41	AVG	
5		0.7700	37.80	9.80	47.60	56.00	-8.40	peak	
6		0.7700	28.00	9.80	37.80	46.00	-8.20	AVG	
7		1.3009	35.67	9.82	45.49	56.00	-10.51	peak	
8		1.3009	27.80	9.82	37.62	46.00	-8.38	AVG	
9		10.7500	24.59	10.07	34.66	60.00	-25.34	peak	
10		28.6500	24.03	10.36	34.39	60.00	-25.61	peak	

*:Maximum data x:Over limit !:over margin ●Reference Only

Conducted Emission Measurement

File :809(P-001B-B508) Data :#2 Date: 2008/6/24 Time: 上午 10:05:33



Site site#1 Phase: *L2* Temperature: 26 ℃

Limit: CISPR22 Class B Conduction(QP) Power: AC 110V/60Hz Humidity: 55 %

EUT:

M/N: 809

Mode: BT

Note: ADAPTER#1:P-001B-B508

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.2808	41.79	9.76	51.55	60.79	-9.24	peak	
2		0.2808	30.70	9.76	40.46	50.79	-10.33	AVG	
3	*	0.4229	39.97	9.78	49.75	57.39	-7.64	peak	
4		0.4229	28.30	9.78	38.08	47.39	-9.31	AVG	
5		0.8420	36.02	9.80	45.82	56.00	-10.18	peak	
6		0.8420	23.00	9.80	32.80	46.00	-13.20	AVG	
7		1.4000	36.37	9.81	46.18	56.00	-9.82	peak	
8		1.4000	22.80	9.81	32.61	46.00	-13.39	AVG	
9		2.3809	32.52	9.84	42.36	56.00	-13.64	peak	
10		24.8000	37.23	10.32	47.55	60.00	-12.45	peak	
11		24.8000	20.50	10.32	30.82	50.00	-19.18	AVG	

*:Maximum data x:Over limit !:over margin ●Reference Only

3. *Radiated Emissions Requirements*

3.1 Final radiation measurements were made on a three-meter:

Final radiation measurements were made on a three-meter, Semi Anechoic Chamber. The EUT system was placed on a nonconductive turntable which is 0.8 meters height, top surface 1.0 x 1.5 meter. The spectrum was examined from 250 MHz to 2.5 GHz in order to cover the whole spectrum below 10th harmonic which could generate from the EUT. During the test, EUT was set to transmit continuously & Measurements spectrum range from 30 MHz to 26.5 GHz is investigated.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak. For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, and then the video bandwidth is set to 1 MHz for peak measurements and 10 Hz for average measurements.

A nonconductive material surrounded the EUT to supporting the EUT for standing on tree orthogonal planes. At each condition, the EUT was rotated 360 degrees, and the antenna was raised and lowered from one to four meters to find the maximum emission levels. Measurements were taken using both horizontal and vertical antenna polarization.

SCHWARZBECK MESS-ELEKTRONIK Biconilog Antenna (mode VULB9163) at 3 Meter and the SCHWARZBECK Double Ridged Guide Antenna (model BBHA9120D&9170) was used in frequencies 1 – 26.5 GHz at a distance of 1 meter. All test results were extrapolated to equivalent signal at 3 meters utilizing an inverse linear distance extrapolation Factor (20dB/decade).

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For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

Appropriate preamplifiers were used for improving sensitivity and precautions were taken to avoid overloading or desensitizing the spectrum analyzer. No post – detector video filters were used in the test.

The spectrum analyzer's 6 dB bandwidth was set to 1 MHz, and the analyzer was operated in the peak detection mode, for frequencies both below and up 1 GHz. The average levels were obtained by subtracting the duty cycle correction factor from the peak readings.

The following procedures were used to convert the emission levels measured in decibels referenced to 1 microvolt (dBuV) into field intensity in micro volts pre meter (uV/m).

The actual field intensity in decibels referenced to 1 microvolt in to field intensity in micro colts per meter (dBuV/m).
The actual field is intensity in referenced to 1 microvolt per meter (dBuV/m) is determined by algebraically adding the measured reading in dBuV, the antenna factor (dB), and cable loss (dB) and Subtracting the gain of preamplifier (dB) is auto calculate in spectrum analyzer.

(1) Amplitude (dBuV/m) = FI (dBuV) +AF (dBuV) +CL (dBuV)-Gain (dB)

FI= Reading of the field intensity.
AF= Antenna factor.
CL= Cable loss.
P.S Amplitude is auto calculate in spectrum analyzer.

(2) Actual Amplitude (dBuV/m) = Amplitude (dBuV)-Dis(dB)

The FCC specified emission limits were calculated according the EUT operating frequency and by following linear interpolation equations:
(a) For fundamental frequency :
Transmitter Output < +30dBm
(b) For spurious frequency :
Spurious emission limits = fundamental emission limit /10

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3.2 Test Equipment List:

Describe	Manufacturer	Model	Serial Number	Calibration	
				Cal. Date	Due Date
Spectrum Analyzer	Agilent	E4408B	MY45107753	Jun. 05, 2008	Jun. 05, 2009
Pre Amplifier	Agilent	8449B	3008A02237	Jun. 03, 2008	Jun. 03, 2009
Pre Amplifier	Agilent	8447D	2944A10961	Jun. 10, 2008	Jun. 10, 2009
Test Receiver	R&S	ESCI	100367	Jun. 05, 2008	Jun. 05, 2009
Biconilog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	9163-270	Jun. 26, 2007	Jun. 26, 2008
Horn Antenna	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	9120D-550	Jun. 26, 2007	Jun. 26, 2008
Horn Antenna	SCHWARZBECK MESS-ELEKTRONIK	BBHA9170	9170-320	Jun. 09, 2008	Jun. 09, 2009
Horn Antenna	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120E	0899	Jun. 26, 2007	Jun. 26, 2008

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3.3 Test Configuration:

Figure 9. Front View of the Test Configuration

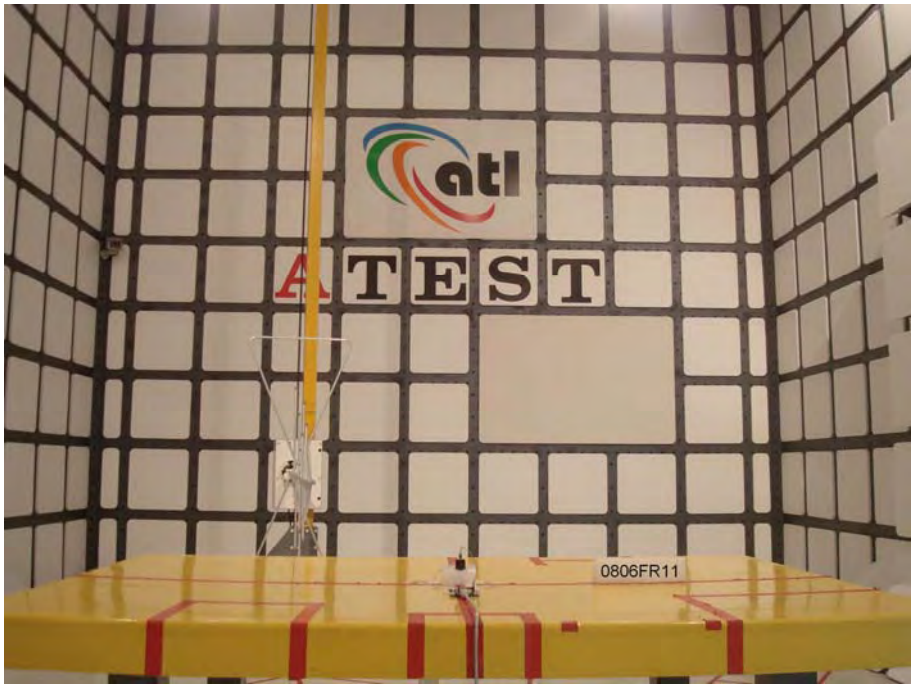

Figure 10. Rear View of the Test Configuration

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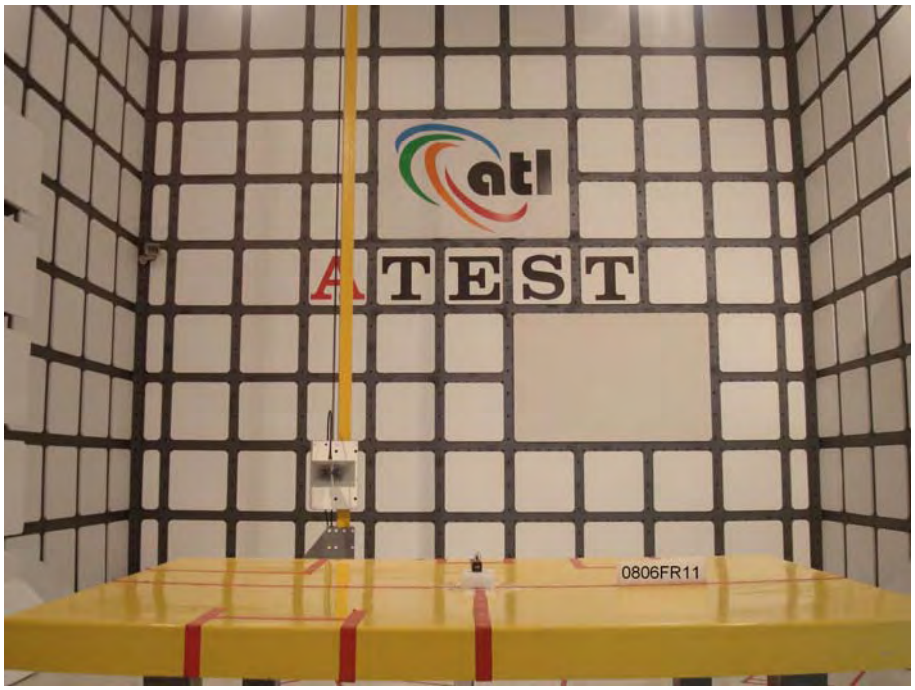

Figure 11. Front View of the Test Configuration

Figure 12. Rear View of the Test Configuration

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3.4 Test condition:

EUT tested in accordance with the specifications given by the manufacturer, and exercised in the most unfavorable manner.

3.5 Radiated Emissions Limits:

Frequency range (MHz)	Peak(dBuV)
30 to 88	40
88 to 216	43.5
216 to 960	46
Above 960	54

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3.6 Measurement Data of Radiated Emissions:

3.6.1 Open Field Radiated Emissions (Subpart C)

The highest peak values of radiated emissions from the EUT at various antenna heights, antenna polarization, EUT orientation, etc. are recorded on the following.

Applicant : Perfect Tech Co., Ltd
Model No : BT809X
EUT : Bluetooth Headset
Test Mode : Stand By
Test Date : 06/17/2008

Please refer to next pager of detail testing data.

Notes:

1. Margin= Amplitude - Limits
2. Distance of Measurement: 3 Meter (30-1000MHz) & (1-10GHz), 1 Meter (10-26.5GHz)
3. Height of table for EUT placed: 0.8 Meter.
4. ANT= Antenna height.
5. Amplitude= Reading Amplitude – Amplifier gain + Cable loss + Antenna factor
   (Auto calculate in spectrum analyzer)
6. The EUT was worst case on X axis after pretest on X & Y & Z axis setting.
7. The testing data only show below 18GHz's data because measure data above 18GHz was only ambit noise.
8. All frequencies from 30MHz to 26.5GHz have been tested

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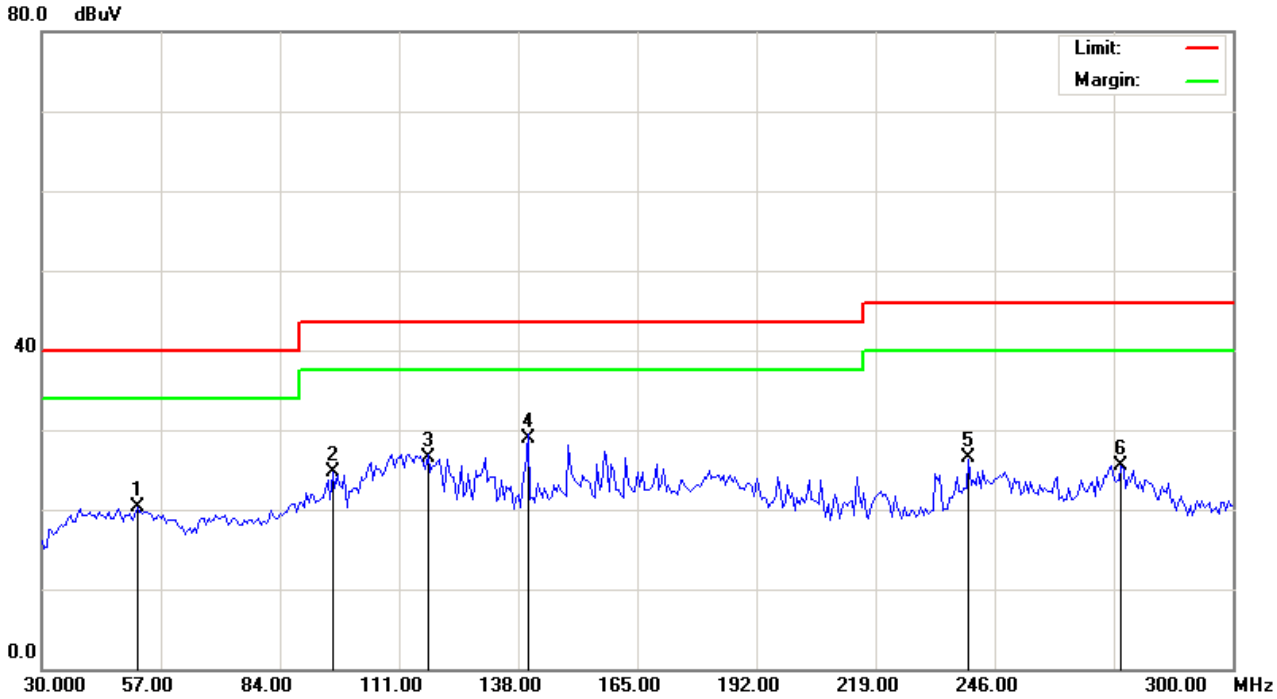
Radiated Emission Measurement

File :809(IDEL) Data :#1 Date: 2008/6/17 Time: 上午 10:53:32



Site site#1 Polarization: ***Vertical*** Temperature: 22 ℃

Limit: FCC Class B 3M Radiation Power: Humidity: 60 %

EUT: Distance: 3m

M/N: 809

Mode: BT

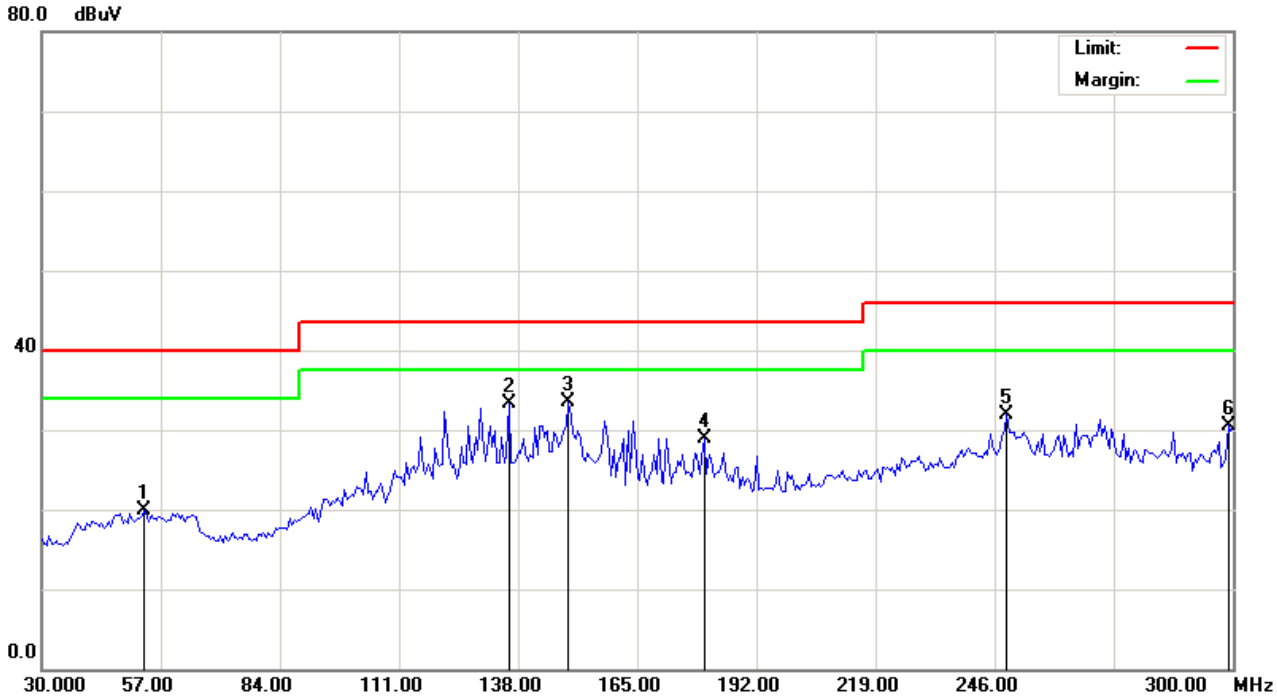
Note: IDEL

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1		51.6000	32.56	-12.17	20.39	40.00	-19.61	peak			
2		95.8800	36.78	-11.99	24.79	43.50	-18.71	peak			
3		117.4800	40.26	-13.77	26.49	43.50	-17.01	peak			
4	*	140.1600	45.34	-16.35	28.99	43.50	-14.51	peak			
5		240.0600	37.91	-11.43	26.48	46.00	-19.52	peak			
6		274.6200	36.25	-10.81	25.44	46.00	-20.56	peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

Radiated Emission Measurement

File :809(IDEL) Data :#3 Date: 2008/6/17 Time: 上午 11:02:38



Site site#1 Polarization: ***Horizontal*** Temperature: 22 ℃

Limit: FCC Class B 3M Radiation Power: Humidity: 60 %

EUT: Distance: 3m

M/N: 809

Mode: BT

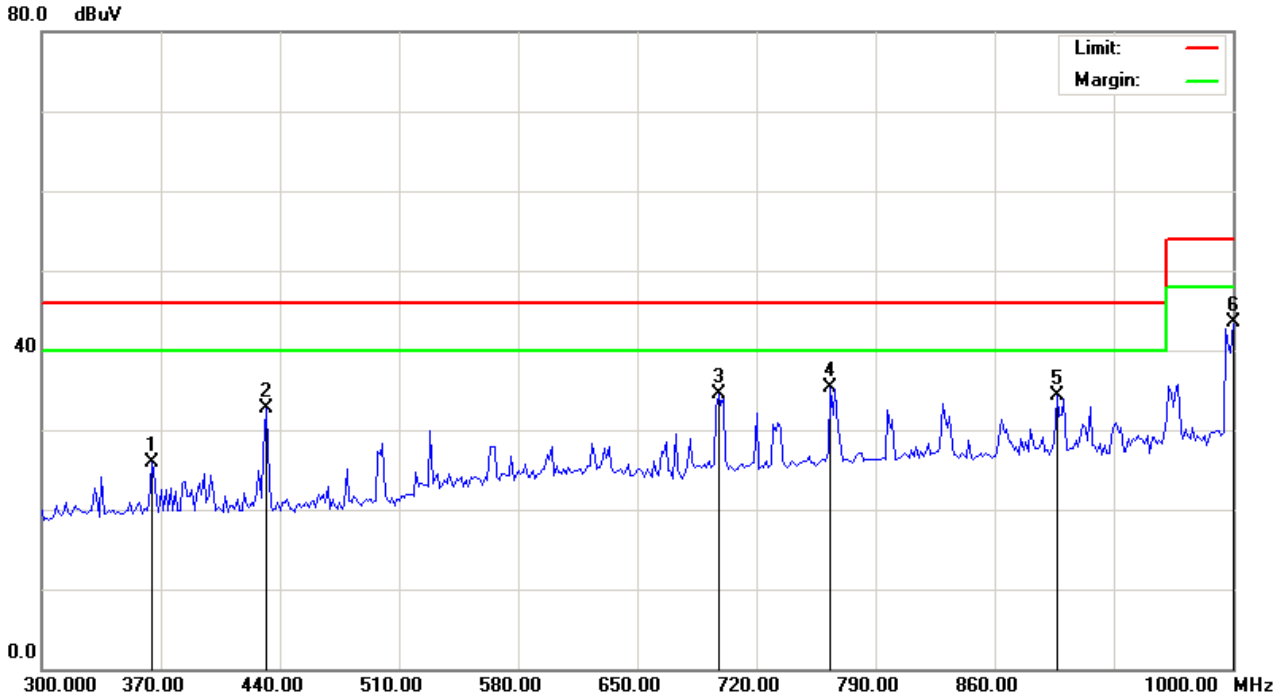
Note: IDEL

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1		53.2200	32.00	-12.19	19.81	40.00	-20.19	peak			
2		135.8400	49.41	-16.03	33.38	43.50	-10.12	peak			
3	*	149.3400	49.58	-16.03	33.55	43.50	-9.95	peak			
4		180.1200	43.20	-14.31	28.89	43.50	-14.61	peak			
5		248.7000	42.81	-10.94	31.87	46.00	-14.13	peak			
6		298.9200	40.63	-10.03	30.60	46.00	-15.40	peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

Radiated Emission Measurement

File :809(IDEL) Data :#2 Date: 2008/6/17 Time: 上午 10:57:17



Site site#1 Polarization: ***Vertical*** Temperature: 22 ℃

Limit: FCC Class B 3M Radiation Power: Humidity: 60 %

EUT: Distance: 3m

M/N: 809

Mode: BT

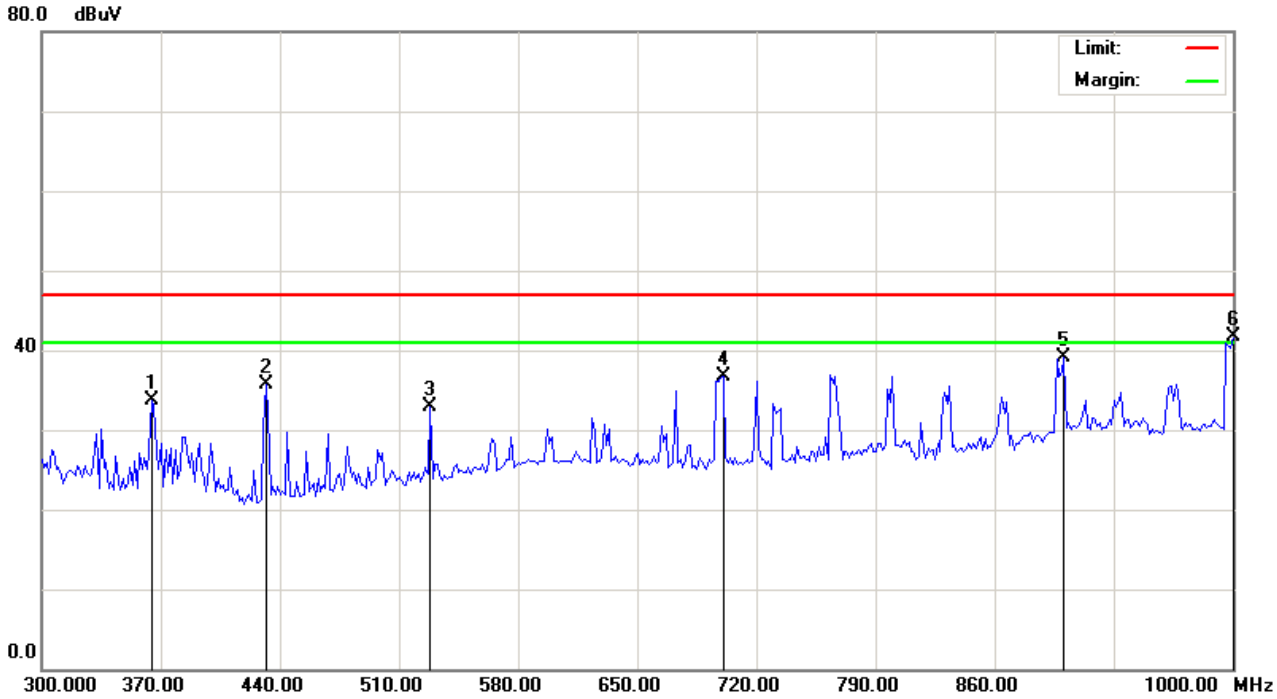
Note: IDEL

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1		364.4000	34.47	-8.65	25.82	46.00	-20.18	peak			
2		431.6000	40.80	-8.03	32.77	46.00	-13.23	peak			
3		697.6000	38.29	-3.86	34.43	46.00	-11.57	peak			
4		763.4000	38.11	-2.87	35.24	46.00	-10.76	peak			
5		896.4000	34.68	-0.47	34.21	46.00	-11.79	peak			
6	*	1000.000	42.81	0.62	43.43	54.00	-10.57	peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

Radiated Emission Measurement

File :809(IDEL) Data :#4 Date: 2008/06/17 Time: 上午 11:06:26



Site site#1 Polarization: ***Horizontal*** Temperature: 22 ℃

Limit: CISPR22 ClassB 3M Radiation Power: Humidity: 60 %

EUT: Distance: 3m

M/N: 809

Mode: BT

Note: IDEL

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1		364.4000	42.29	-8.65	33.64	47.00	-13.36	peak			
2		431.6000	43.83	-8.03	35.80	47.00	-11.20	peak			
3		528.2000	39.22	-6.34	32.88	47.00	-14.12	peak			
4		700.4000	40.49	-3.88	36.61	47.00	-10.39	peak			
5		900.6000	39.47	-0.36	39.11	47.00	-7.89	peak			
6	*	1000.000	41.04	0.62	41.66	47.00	-5.34	peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

3.6.2 Open Field Radiated Emissions (Subpart C)

The highest peak values of radiated emissions from the EUT at various antenna heights, antenna polarization, EUT orientation, etc. are recorded on the following.

Applicant : Perfect Tech Co., Ltd
Model No : BT809X
EUT : Bluetooth Headset
Test Mode : Link Mode_Bluetooth 2.0 CH00 2402.000 (Local Frequency: 2402.000 MHz)
Test Date : 06/04/2008~06/17/2008

Please refer to next pager of detail testing data.

Notes:

1. Margin= Amplitude - Limits
2. Distance of Measurement: 3 Meter (30-1000MHz) & (1-10GHz), 1 Meter (10-26.5GHz)
3. Height of table for EUT placed: 0.8 Meter.
4. ANT= Antenna height.
5. Amplitude= Reading Amplitude – Amplifier gain + Cable loss + Antenna factor
   (Auto calculate in spectrum analyzer)
6. The EUT was worst case on X axis after pretest on X & Y & Z axis setting.
7. The testing data only show below 18GHz's data because measure data above 18GHz was only ambit noise.
8. All frequencies from 30MHz to 26.5GHz have been tested

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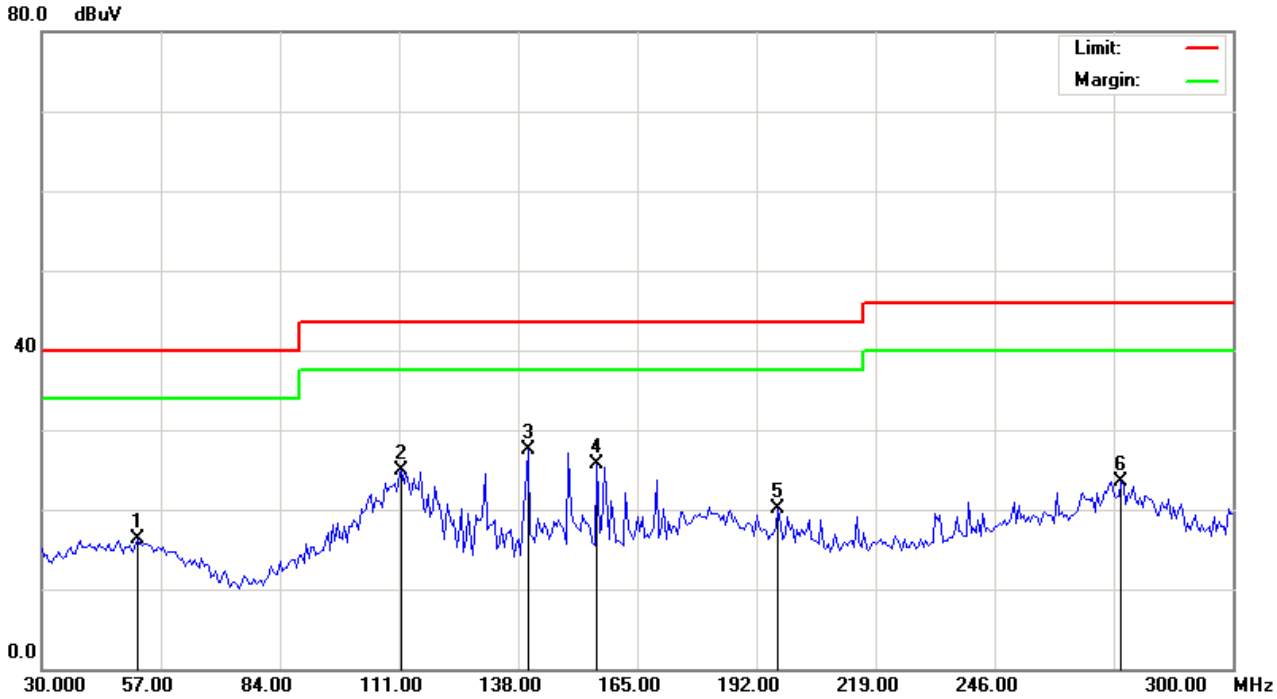
Radiated Emission Measurement

File :809(1G以下-2008-06-17) Data :#1 Date: 2008/6/17 Time: 上午 10:04:10



Site site#1 Polarization: ***Vertical*** Temperature: 22 ℃

Limit: FCC Class B 3M Radiation Power: Humidity: 60 %

EUT: Distance: 3m

M/N: 809

Mode: BT

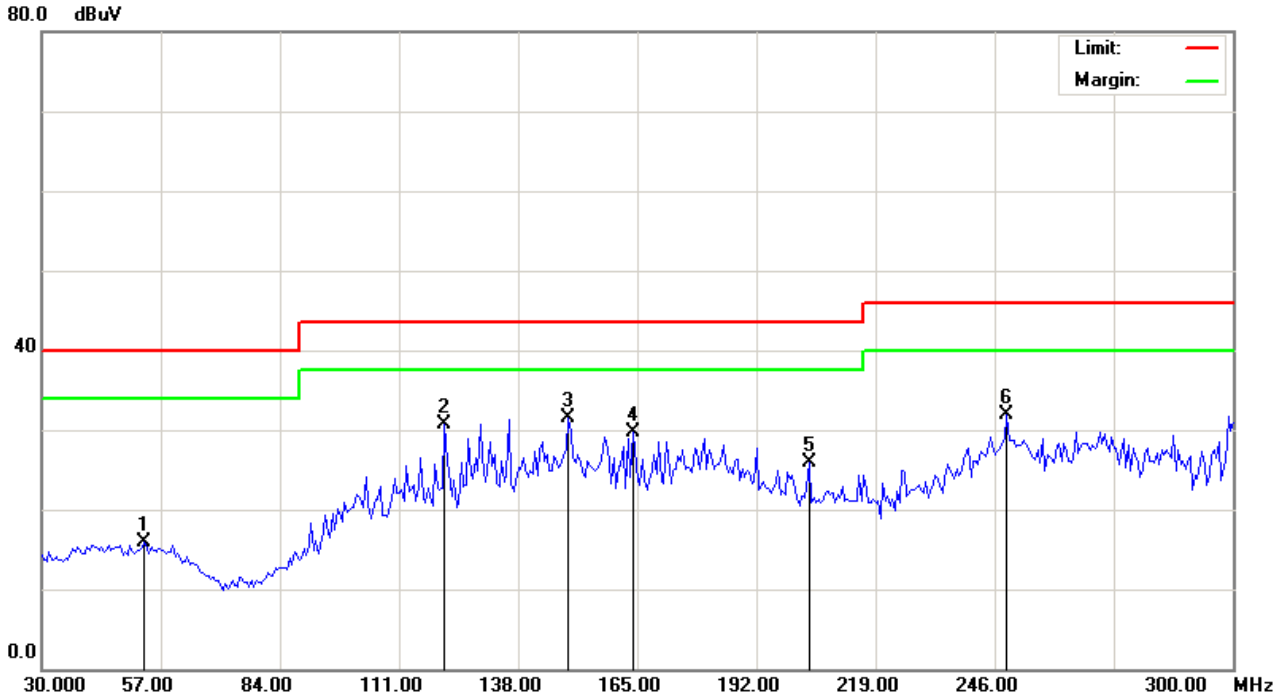
Note: 2402MHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1		51.6000	28.43	-12.17	16.26	40.00	-23.74	peak			
2		111.5400	37.70	-12.76	24.94	43.50	-18.56	peak			
3	*	140.1600	43.92	-16.35	27.57	43.50	-15.93	peak			
4		155.8200	41.48	-15.84	25.64	43.50	-17.86	peak			
5		196.8600	33.20	-13.12	20.08	43.50	-23.42	peak			
6		274.6200	34.26	-10.81	23.45	46.00	-22.55	peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

Radiated Emission Measurement

File :809(1G以下-2008-06-17) Data :#3 Date: 2008/6/17 Time: 上午 10:13:36



Site site#1 Polarization: ***Horizontal*** Temperature: 22 ℃

Limit: FCC Class B 3M Radiation Power: Humidity: 60 %

EUT: Distance: 3m

M/N: 809

Mode: BT

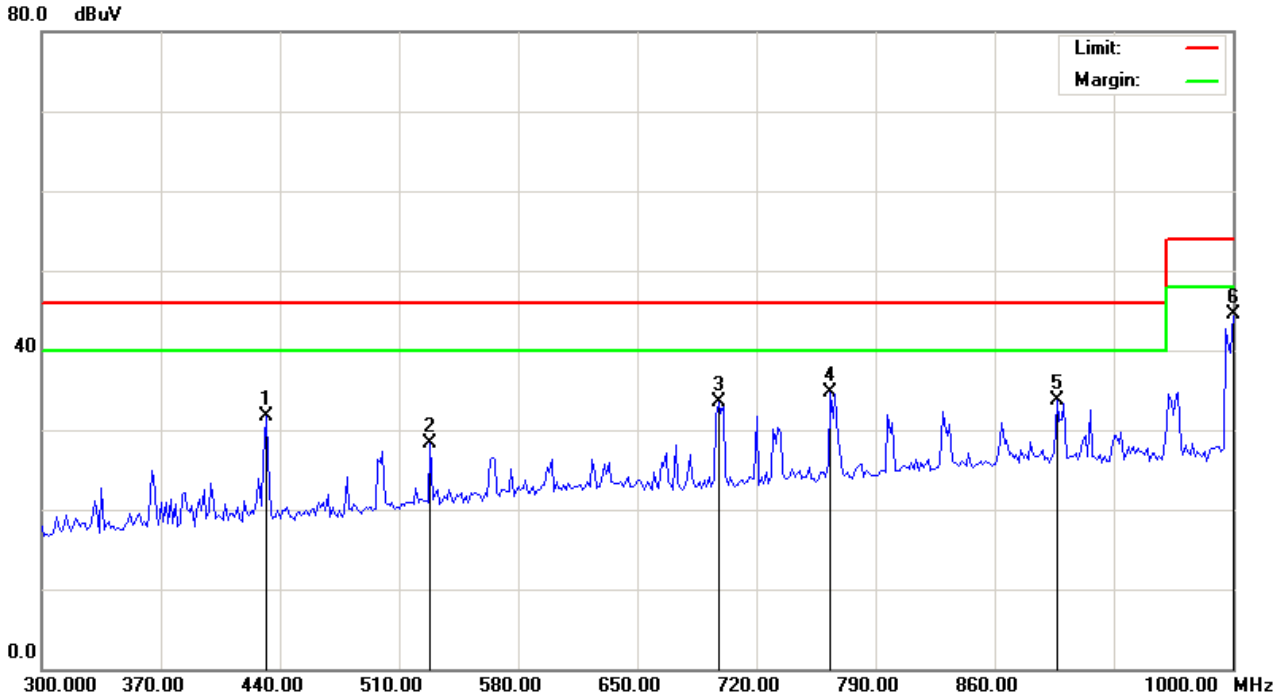
Note: 2402MHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1		53.2200	28.00	-12.19	15.81	40.00	-24.19	peak			
2		121.2600	45.14	-14.41	30.73	43.50	-12.77	peak			
3	*	149.3400	47.58	-16.03	31.55	43.50	-11.95	peak			
4		163.9200	45.01	-15.34	29.67	43.50	-13.83	peak			
5		203.8800	39.03	-13.08	25.95	43.50	-17.55	peak			
6		248.7000	42.81	-10.94	31.87	46.00	-14.13	peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

Radiated Emission Measurement

File :809(1G以下-2008-06-17) Data :#2 Date: 2008/6/17 Time: 上午 10:08:25



Site site#1 Polarization: ***Vertical*** Temperature: 22 ℃

Limit: FCC Class B 3M Radiation Power: Humidity: 60 %

EUT: Distance: 3m

M/N: 809

Mode: BT

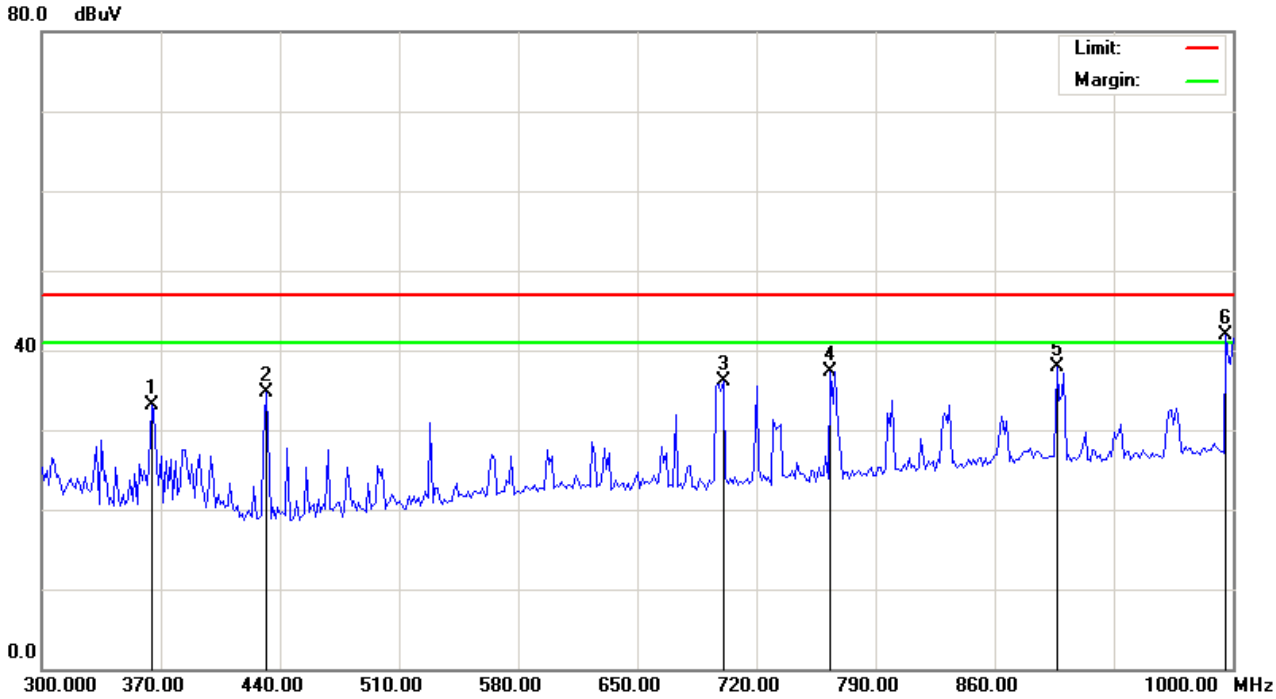
Note: 2402MHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1		431.6000	39.80	-8.03	31.77	46.00	-14.23	peak			
2		528.2000	34.66	-6.34	28.32	46.00	-17.68	peak			
3		697.6000	37.29	-3.86	33.43	46.00	-12.57	peak			
4		763.4000	37.61	-2.87	34.74	46.00	-11.26	peak			
5		896.4000	34.18	-0.47	33.71	46.00	-12.29	peak			
6	*	1000.000	43.81	0.62	44.43	54.00	-9.57	peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

Radiated Emission Measurement

File :809(1G以下-2008-06-17) Data :#4 Date: 2008/06/17 Time: 上午 10:17:45



Site site#1 Polarization: ***Horizontal*** Temperature: 22 ℃

Limit: CISPR22 ClassB 3M Radiation Power: Humidity: 60 %

EUT: Distance: 3m

M/N: 809

Mode: BT

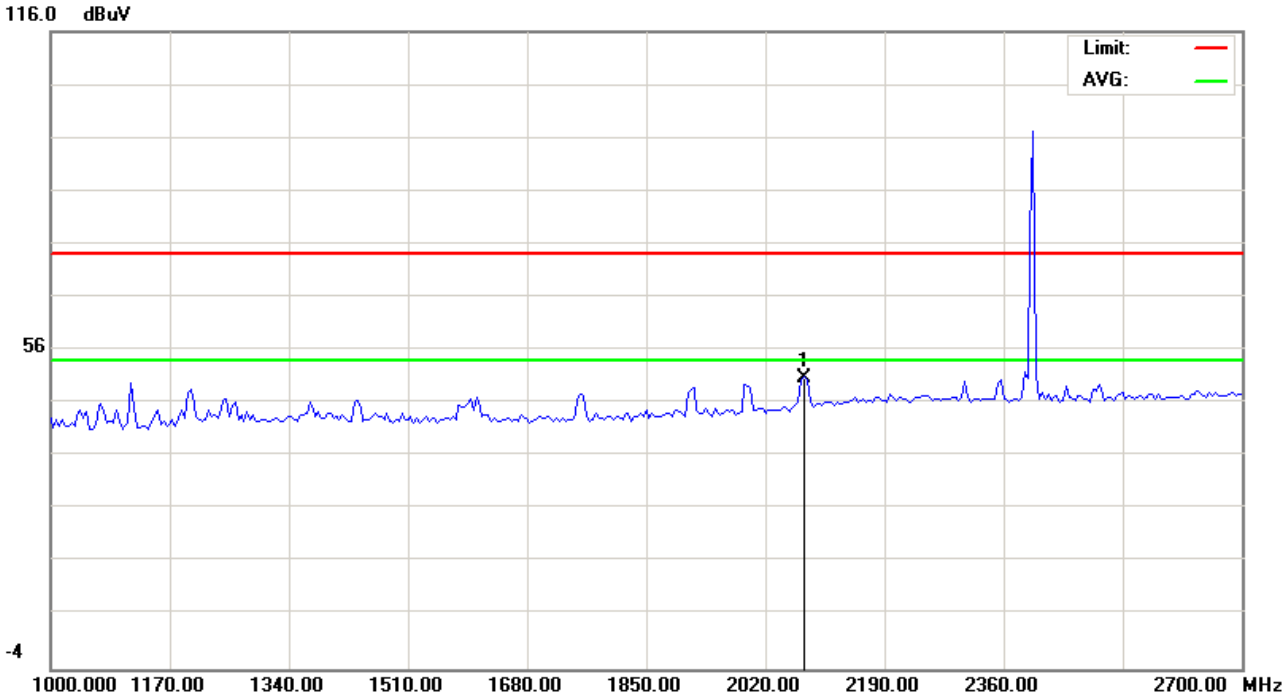
Note: 2402MHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1		364.4000	41.79	-8.65	33.14	47.00	-13.86	peak			
2		431.6000	42.83	-8.03	34.80	47.00	-12.20	peak			
3		700.4000	39.99	-3.88	36.11	47.00	-10.89	peak			
4		763.4000	40.18	-2.87	37.31	47.00	-9.69	peak			
5		896.4000	38.35	-0.47	37.88	47.00	-9.12	peak			
6	*	995.8000	41.14	0.75	41.89	47.00	-5.11	peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

Radiated Emission Measurement

File :809(CH2402) Data :#1 Date: 2008-6-4 Time: 上午 10:16:19



Site site #1 Polarization: ***Vertical*** Temperature: 22 ℃

Limit: FCC part 15 (PK) Power: Humidity: 60 %

EUT: Distance: 3m

M/N: 809

Mode: BT

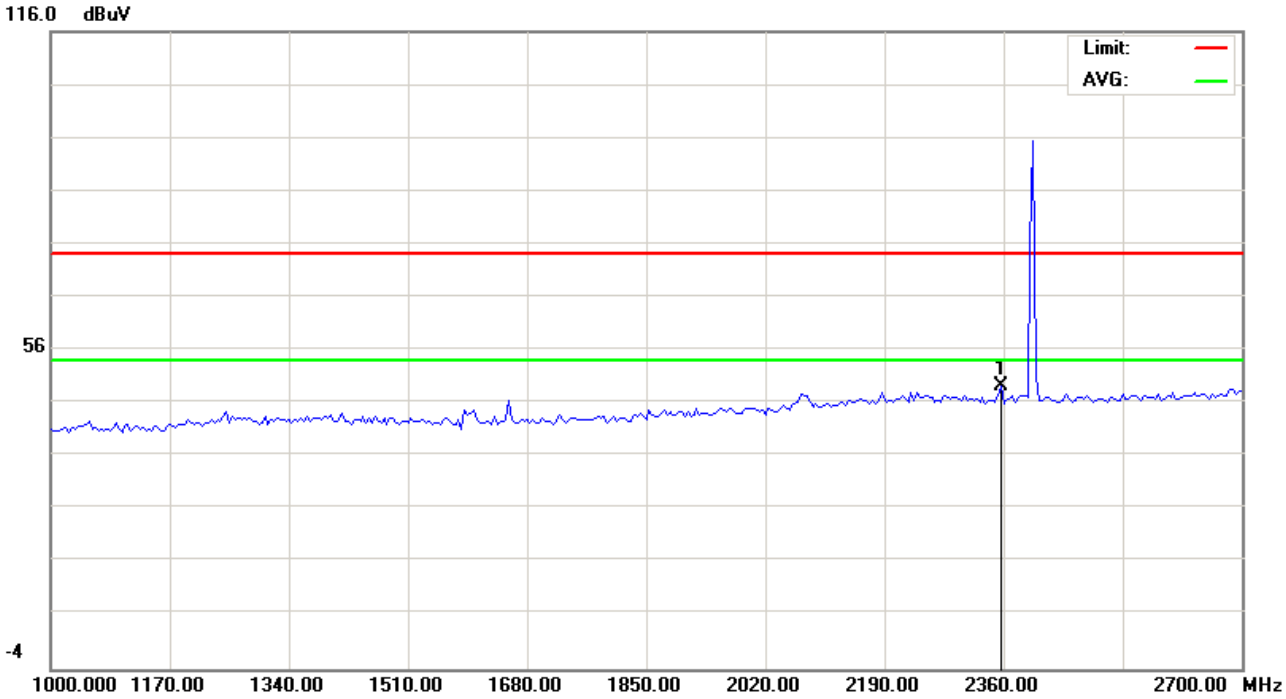
Note: 2402MHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1	*	2075.250	51.82	-0.92	50.90	74.00	-23.10	peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

Radiated Emission Measurement

File :809(CH2402) Data :#3 Date: 2008-6-4 Time: 上午 11:30:48



Site site #1 Polarization: ***Horizontal*** Temperature: 22 ℃

Limit: FCC part 15 (PK) Power: Humidity: 60 %

EUT: Distance: 3m

M/N: 809

Mode: BT

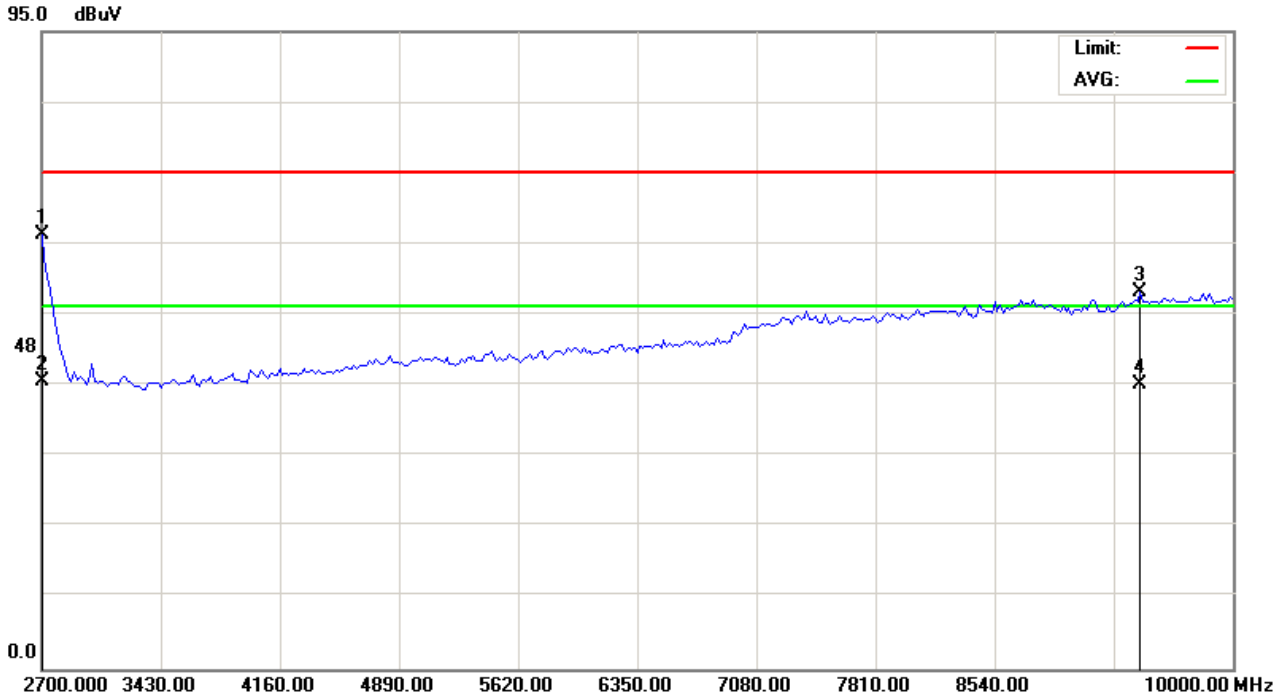
Note: 2402MHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1	*	2355.750	49.10	0.18	49.28	74.00	-24.72	peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

Radiated Emission Measurement

File :809(CH2402) Data :#5 Date: 2008-6-4 Time: 上午 11:43:44



Site site #1 Polarization: ***Vertical*** Temperature: 22 ℃

Limit: FCC part 15 (PK) Power: Humidity: 60 %

EUT: Distance: 3m

M/N: 809

Mode: BT

Note: 2402MHz

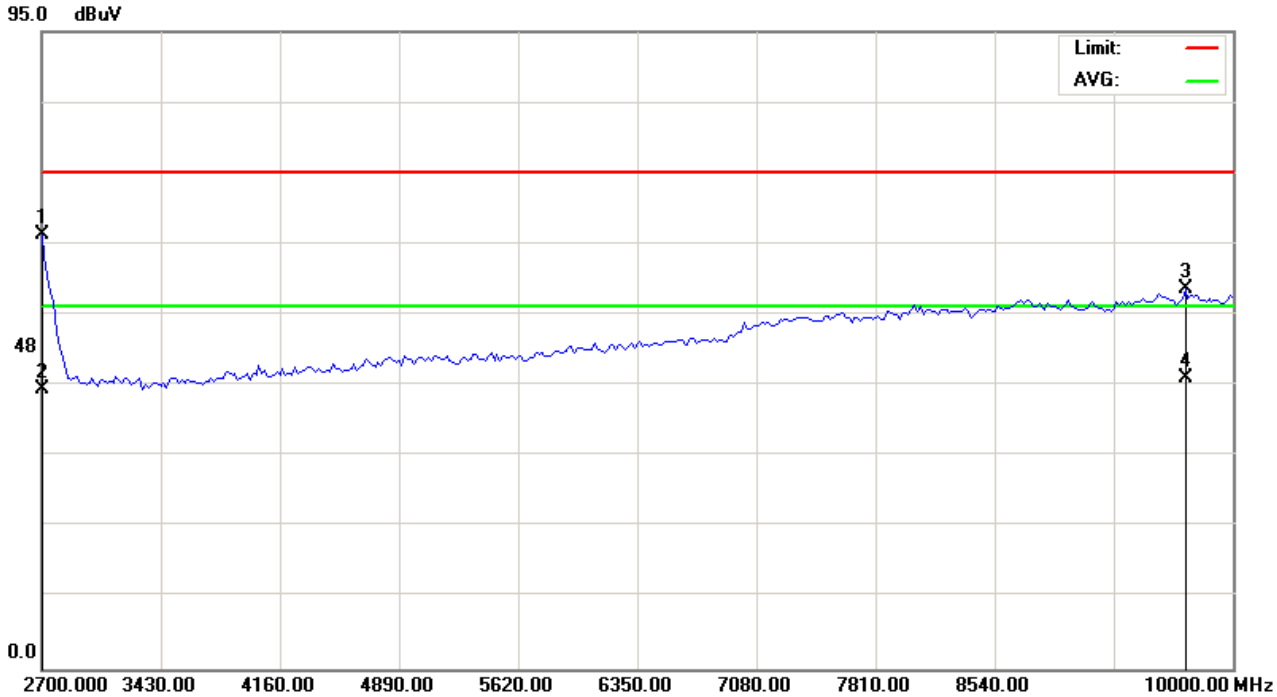
2.7G-10G PK Scan Att:0 ; REF:95 ; Range:95(EUT Power Lever:255)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1	*	2700.000	42.08	22.58	64.66	74.00	-9.34	peak			
2		2700.000	20.20	22.58	42.78	54.00	-11.22	AVG			
3		9434.250	39.13	17.03	56.16	74.00	-17.84	peak			
4		9434.250	25.47	17.03	42.50	54.00	-11.50	AVG			

*:Maximum data x:Over limit !:over margin ●Reference Only

Radiated Emission Measurement

File :809(CH2402) Data :#7 Date: 2008/6/4 Time: 下午 02:18:43



Site site #1 Polarization: ***Horizontal*** Temperature: 22 ℃

Limit: FCC part 15 (PK) Power: Humidity: 60 %

EUT: Distance: 3m

M/N: 809

Mode: BT

Note: 2402MHz

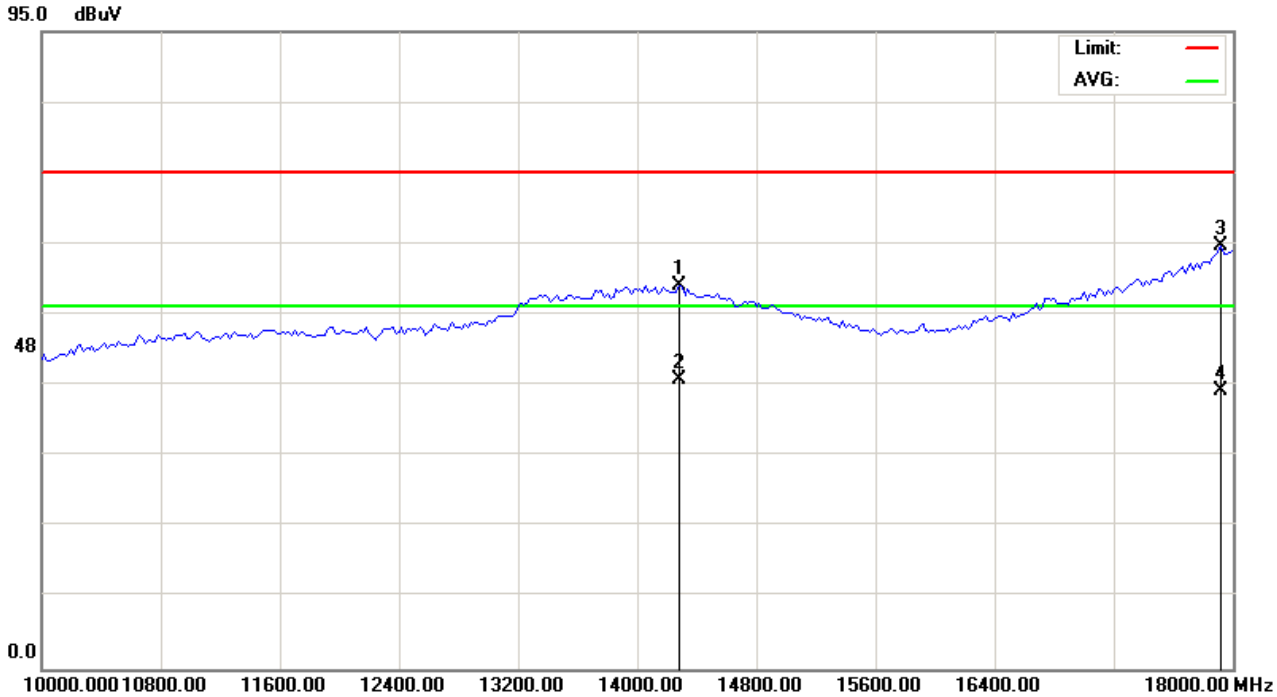
2.7G-10G PK Scan Att:0 ; REF:95 ; Range:95(EUT Power Lever:255)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1	*	2700.000	42.09	22.58	64.67	74.00	-9.33	peak			
2		2700.000	19.21	22.58	41.79	54.00	-12.21	AVG			
3		9708.000	39.04	17.49	56.53	74.00	-17.47	peak			
4		9708.000	25.84	17.49	43.33	54.00	-10.67	AVG			

*:Maximum data x:Over limit !:over margin ●Reference Only

Radiated Emission Measurement

File :809(CH2402) Data :#9 Date: 2008-6-4 Time: 下午 05:14:56



Site site #1 Polarization: ***Vertical*** Temperature: 22 ℃

Limit: FCC part 15 (PK) Power: Humidity: 60 %

EUT: Distance: 1m

M/N: 809

Mode: BT

Note: 2402MHz

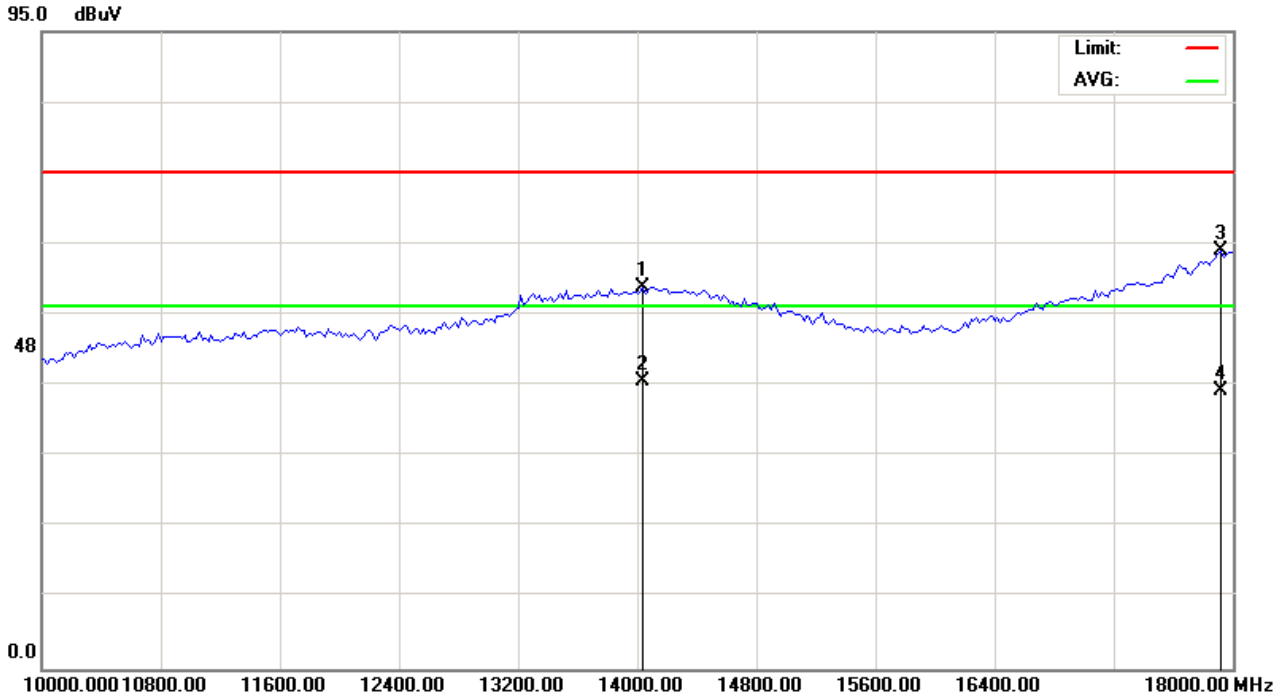
10G - 18G PK Scan Att:0 ; REF:95 ; Range:95(EUT Power Lever:255)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1		14280.00	38.44	18.63	57.07	74.00	-16.93	peak			
2	*	14280.00	24.59	18.63	43.22	54.00	-10.78	AVG			
3		17920.00	38.13	24.84	62.97	74.00	-11.03	peak			
4		17920.00	16.63	24.84	41.47	54.00	-12.53	AVG			

*:Maximum data x:Over limit !:over margin ●Reference Only

Radiated Emission Measurement

File :809(CH2402) Data :#11 Date: 2008-6-4 Time: 下午 05:47:44



Site site #1 Polarization: ***Horizontal*** Temperature: 22 ℃

Limit: FCC part 15 (PK) Power: Humidity: 60 %

EUT: Distance: 1m

M/N: 809

Mode: BT

Note: 2402MHz

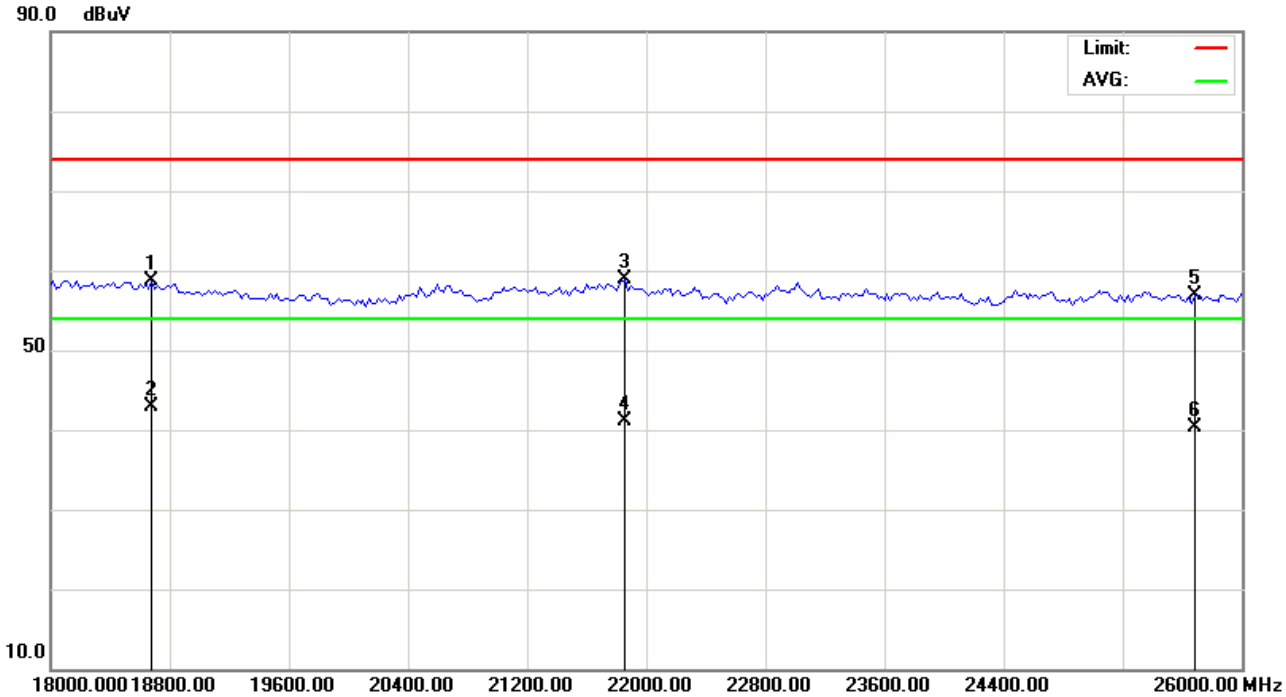
10G - 18G PK Scan Att:0 ; REF:95 ; Range:95(EUT Power Lever:255)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1		14040.00	38.15	18.66	56.81	74.00	-17.19	peak			
2	*	14040.00	24.13	18.66	42.79	54.00	-11.21	AVG			
3		17920.00	37.41	24.84	62.25	74.00	-11.75	peak			
4		17920.00	16.54	24.84	41.38	54.00	-12.62	AVG			

*:Maximum data x:Over limit !:over margin ●Reference Only

Radiated Emission Measurement

File :809(CH2402) Data :#13 Date: 2008-6-4 Time: 下午 05:50:13



Site site #1 Polarization: ***Vertical*** Temperature: 22 ℃

Limit: FCC part 15 (PK) Power: Humidity: 60 %

EUT: Distance: 1m

M/N: 809

Mode: BT

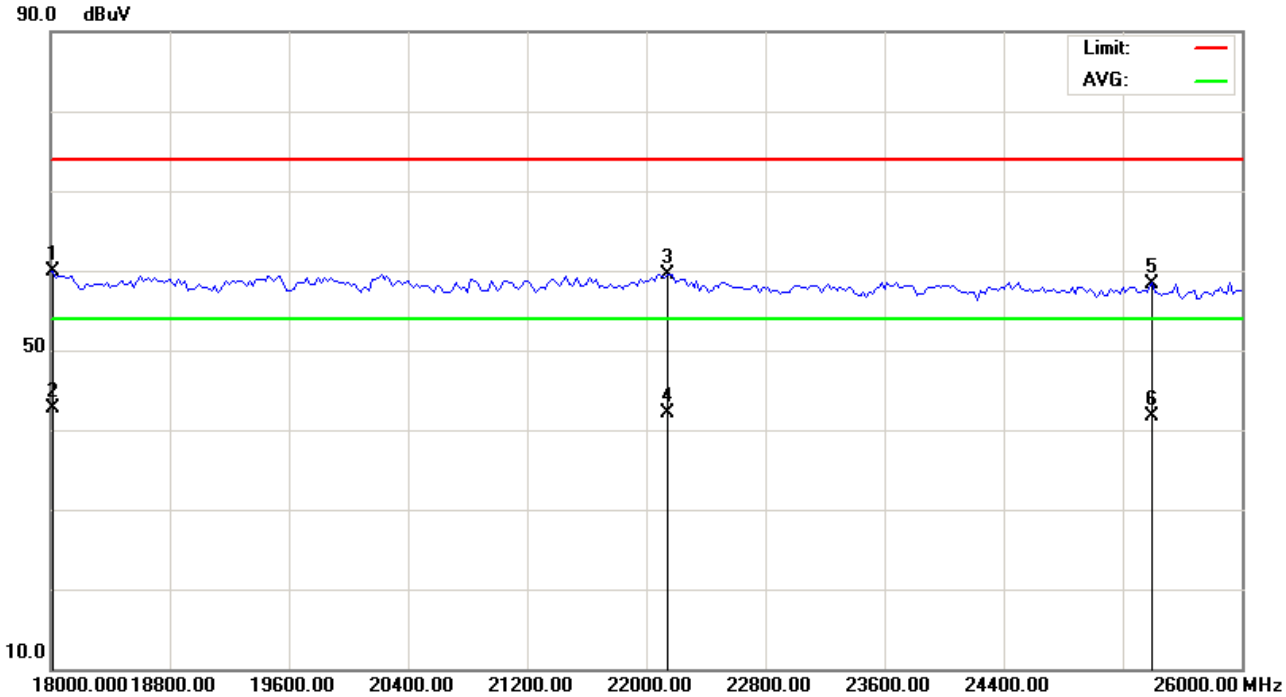
Note: 2402MHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1		18680.00	25.57	33.11	58.68	74.00	-15.32	peak			
2	*	18680.00	9.72	33.11	42.83	54.00	-11.17	AVG			
3		21860.00	28.03	30.94	58.97	74.00	-15.03	peak			
4		21860.00	10.26	30.94	41.20	54.00	-12.80	AVG			
5		25680.00	28.67	28.33	57.00	74.00	-17.00	peak			
6		25680.00	11.93	28.33	40.26	54.00	-13.74	AVG			

*:Maximum data x:Over limit !:over margin ●Reference Only

Radiated Emission Measurement

File :809(CH2402) Data :#14 Date: 2008-6-4 Time: 下午 05:52:47



Site site #1 Polarization: ***Horizontal*** Temperature: 22 ℃

Limit: FCC part 15 (PK) Power: Humidity: 60 %

EUT: Distance: 1m

M/N: 809

Mode: BT

Note: 2402MHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1		18020.00	25.88	33.99	59.87	74.00	-14.13	peak			
2	*	18020.00	8.73	33.99	42.72	54.00	-11.28	AVG			
3		22140.00	28.82	30.76	59.58	74.00	-14.42	peak			
4		22140.00	11.36	30.76	42.12	54.00	-11.88	AVG			
5		25400.00	29.87	28.53	58.40	74.00	-15.60	peak			
6		25400.00	13.19	28.53	41.72	54.00	-12.28	AVG			

*:Maximum data x:Over limit !:over margin ●Reference Only

3.6.3 Open Field Radiated Emissions (Subpart C)

The highest peak values of radiated emissions from the EUT at various antenna heights, antenna polarization, EUT orientation, etc. are recorded on the following

Applicant : Perfect Tech Co., Ltd
Model No : BT809X
EUT : Bluetooth Headset
Test Mode : Link Mode_Bluetooth 2.0 CH39 2441.000 (Local Frequency: 2441.000 MHz)
Test Date : 06/04/2008~06/17/2008

Please refer to next pager of detail testing data.

Notes:

1. Margin= Amplitude - Limits
2. Distance of Measurement: 3 Meter (30-1000MHz) & (1-10GHz), 1 Meter (10-26.5GHz)
3. Height of table for EUT placed: 0.8 Meter.
4. ANT= Antenna height.
5. Amplitude= Reading Amplitude – Amplifier gain + Cable loss + Antenna factor
   (Auto calculate in spectrum analyzer)
6. The EUT was worst case on X axis after pretest on X & Y & Z axis setting.
7. The testing data only show below 18GHz's data because measure data above 18GHz was only ambit noise.
8. All frequencies from 30MHz to 26.5GHz have been tested

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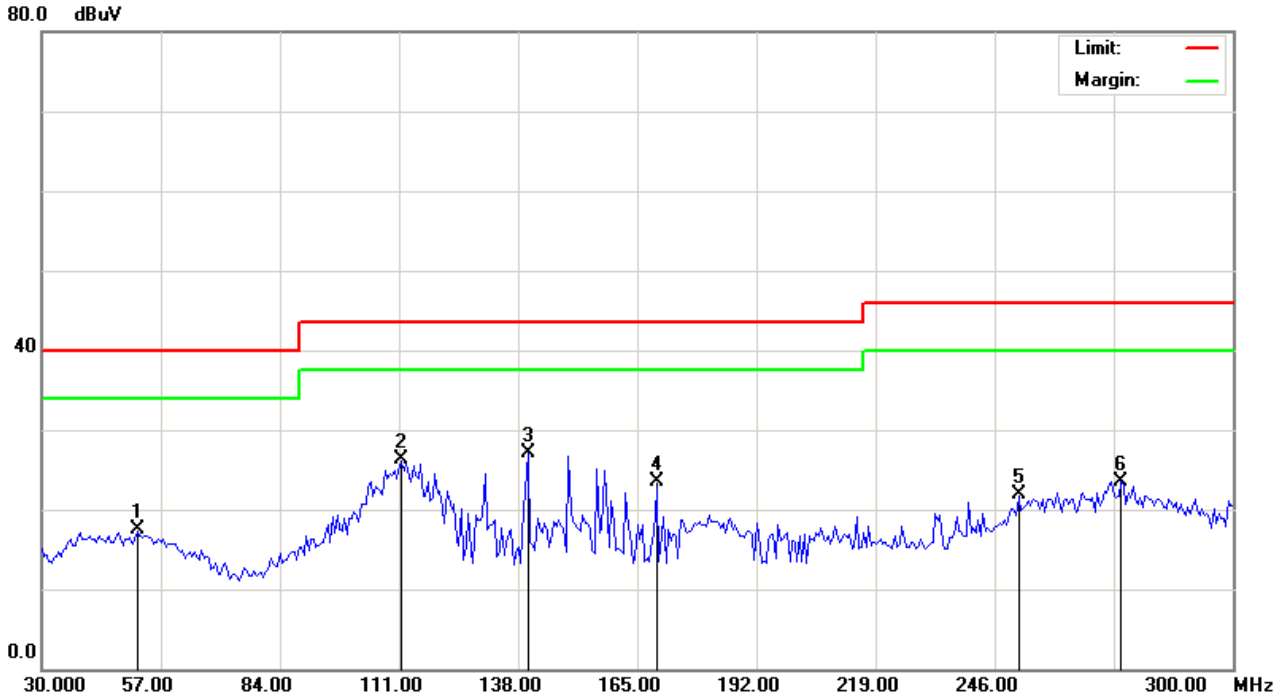
Radiated Emission Measurement

File :809(1G以下-2008-06-17) Data :#5 Date: 2008/6/17 Time: 上午 10:21:18



Site site#1 Polarization: ***Vertical*** Temperature: 22 ℃

Limit: FCC Class B 3M Radiation Power: Humidity: 60 %

EUT: Distance: 3m

M/N: 809

Mode: BT

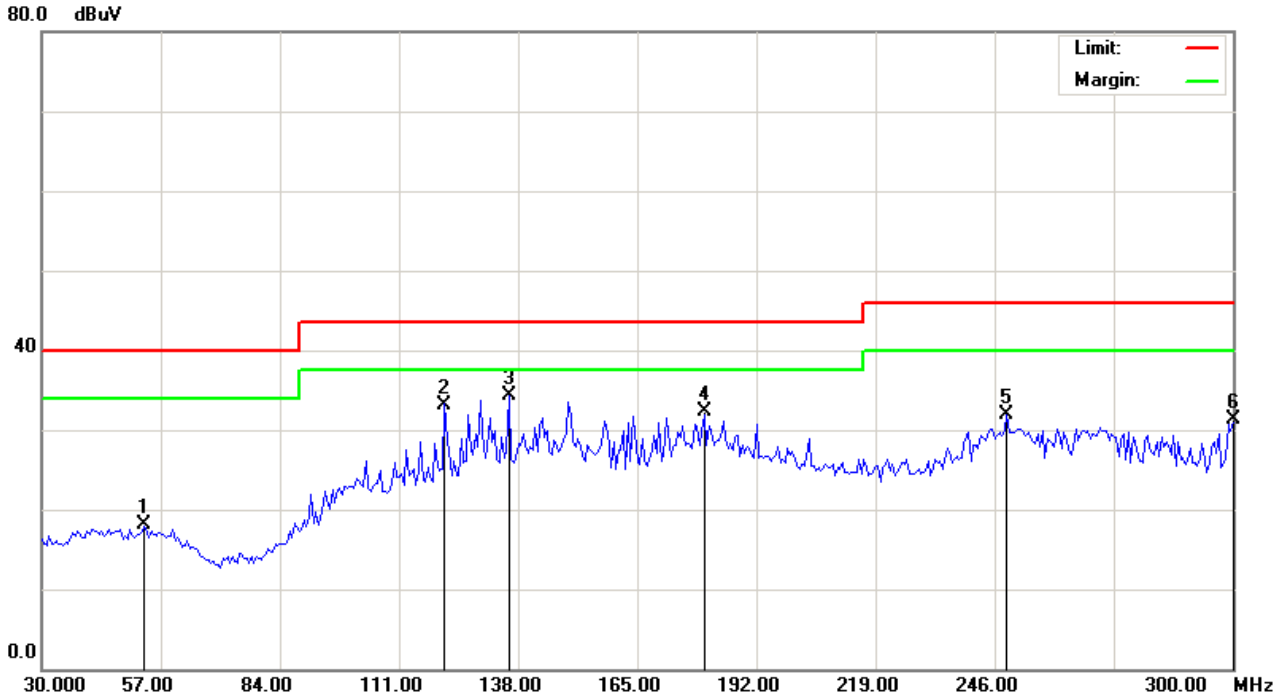
Note: 2441MHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1		51.6000	29.62	-12.17	17.45	40.00	-22.55	peak			
2		111.5400	38.98	-12.76	26.22	43.50	-17.28	peak			
3	*	140.1600	43.54	-16.35	27.19	43.50	-16.31	peak			
4		169.3200	38.96	-15.40	23.56	43.50	-19.94	peak			
5		251.4000	32.79	-10.91	21.88	46.00	-24.12	peak			
6		274.6200	34.31	-10.81	23.50	46.00	-22.50	peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

Radiated Emission Measurement

File :809(1G以下-2008-06-17) Data :#7 Date: 2008/6/17 Time: 上午 10:30:53



Site site#1 Polarization: ***Horizontal*** Temperature: 22 ℃

Limit: FCC Class B 3M Radiation Power: Humidity: 60 %

EUT: Distance: 3m

M/N: 809

Mode: BT

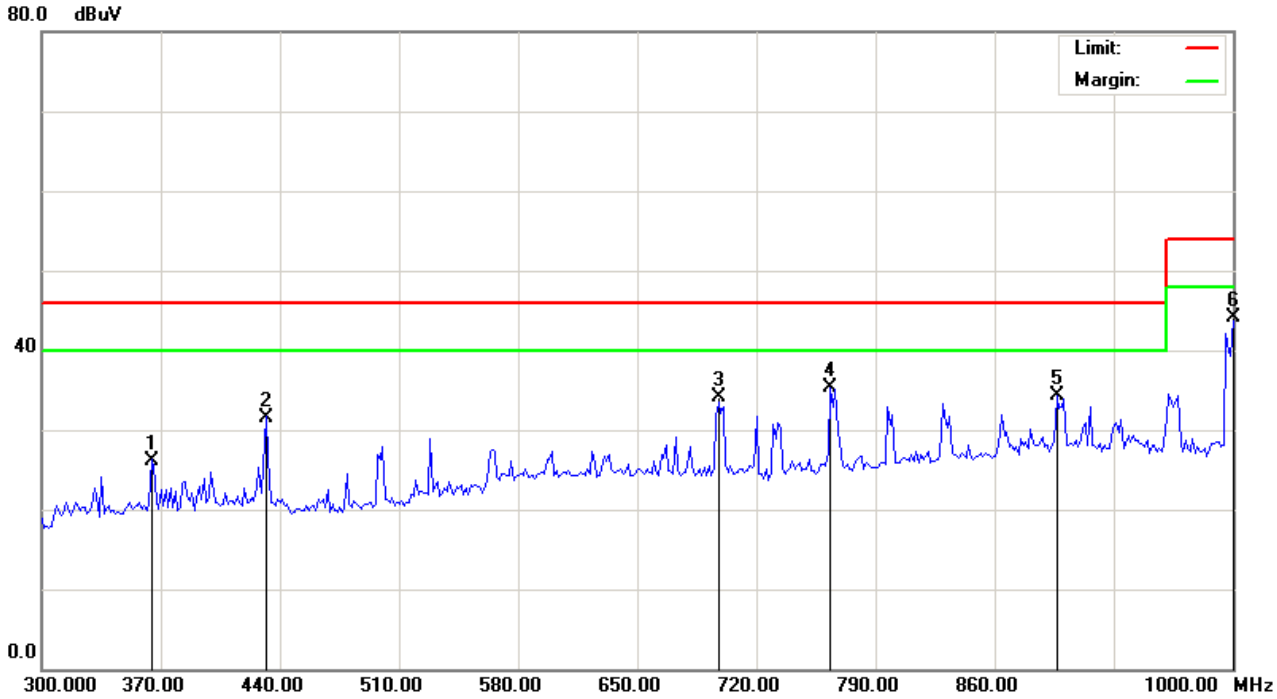
Note: 2441MHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1		53.2200	30.24	-12.19	18.05	40.00	-21.95	peak			
2		121.2600	47.51	-14.41	33.10	43.50	-10.40	peak			
3	*	135.8400	50.38	-16.03	34.35	43.50	-9.15	peak			
4		180.1200	46.56	-14.31	32.25	43.50	-11.25	peak			
5		248.7000	42.93	-10.94	31.99	46.00	-14.01	peak			
6		300.0000	41.25	-9.98	31.27	46.00	-14.73	peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

Radiated Emission Measurement

File :809(1G以下-2008-06-17) Data :#6 Date: 2008/6/17 Time: 上午 10:25:31



Site site#1 Polarization: ***Vertical*** Temperature: 22 ℃

Limit: FCC Class B 3M Radiation Power: Humidity: 60 %

EUT: Distance: 3m

M/N: 809

Mode: BT

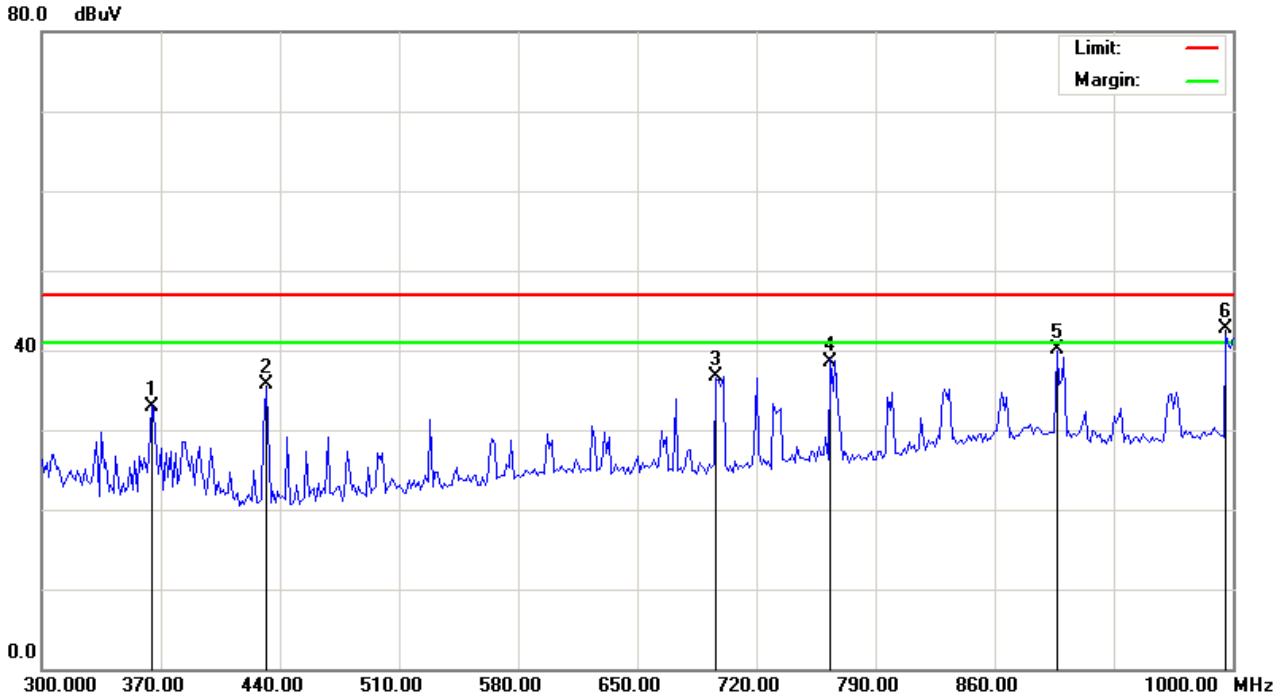
Note: 2441MHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1		364.4000	34.73	-8.65	26.08	46.00	-19.92	peak			
2		431.6000	39.54	-8.03	31.51	46.00	-14.49	peak			
3		697.6000	37.91	-3.86	34.05	46.00	-11.95	peak			
4		763.4000	38.23	-2.87	35.36	46.00	-10.64	peak			
5		896.4000	34.68	-0.47	34.21	46.00	-11.79	peak			
6	*	1000.000	43.56	0.62	44.18	54.00	-9.82	peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

Radiated Emission Measurement

File :809(1G以下-2008-06-17) Data :#8 Date: 2008/06/17 Time: 上午 10:34:23



Site site#1 Polarization: ***Horizontal*** Temperature: 22 ℃

Limit: CISPR22 ClassB 3M Radiation Power: Humidity: 60 %

EUT: Distance: 3m

M/N: 809

Mode: BT

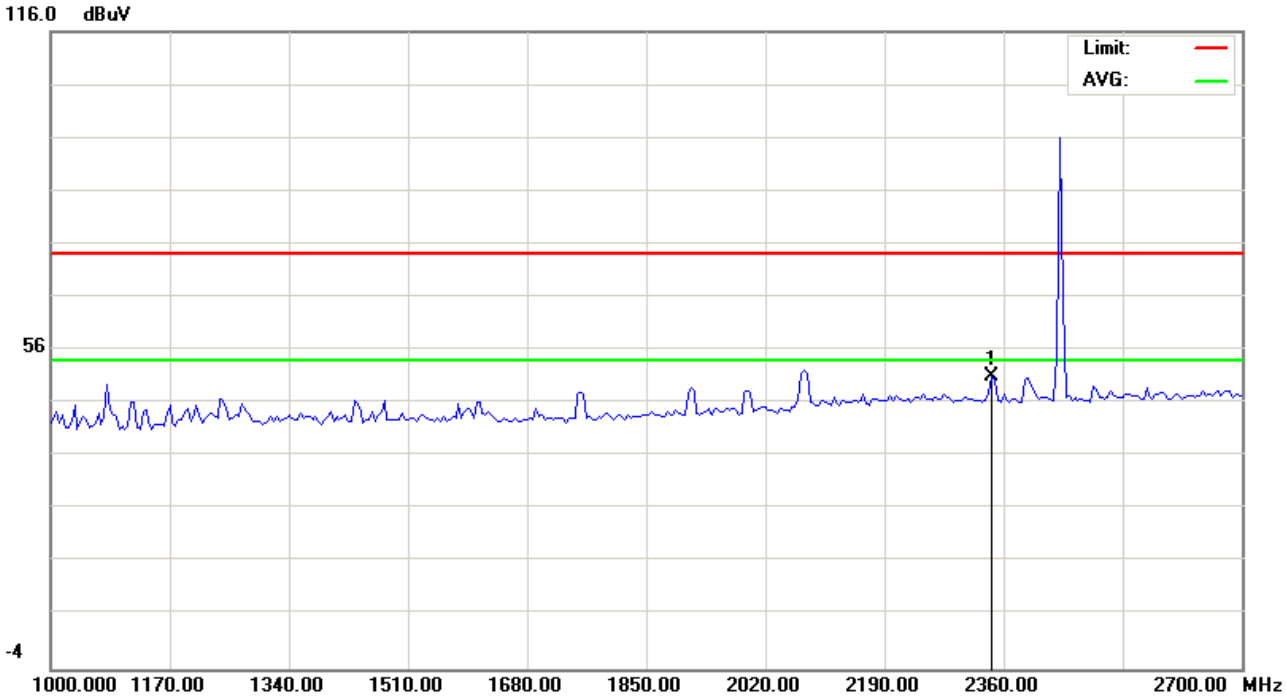
Note: 2441MHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1		364.4000	41.56	-8.65	32.91	47.00	-14.09	peak			
2		431.6000	43.82	-8.03	35.79	47.00	-11.21	peak			
3		696.2000	40.57	-3.85	36.72	47.00	-10.28	peak			
4		763.4000	41.36	-2.87	38.49	47.00	-8.51	peak			
5		896.4000	40.49	-0.47	40.02	47.00	-6.98	peak			
6	*	995.8000	41.93	0.75	42.68	47.00	-4.32	peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

Radiated Emission Measurement

File :809(CH2441) Data :#1 Date: 2008-6-4 Time: 上午 10:38:50



Site site #1 Polarization: ***Vertical*** Temperature: 22 ℃

Limit: FCC part 15 (PK) Power: Humidity: 60 %

EUT: Distance: 3m

M/N: 809

Mode: BT

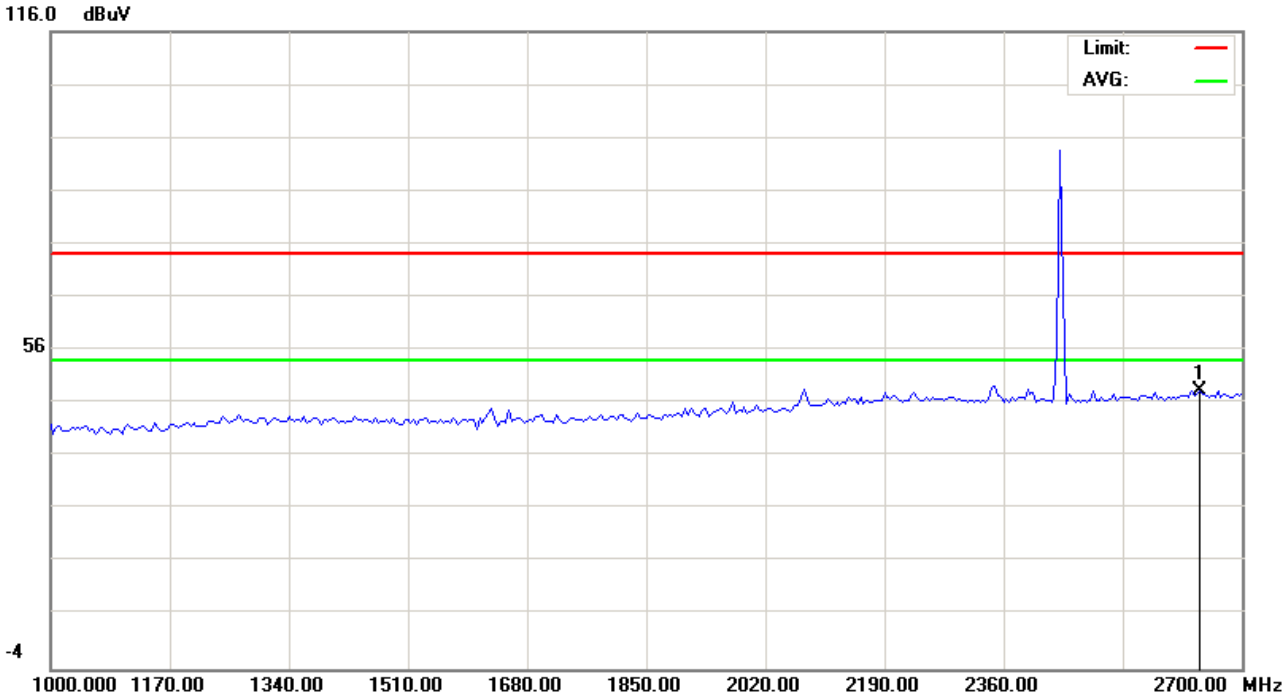
Note: 2441MHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1	*	2343.000	50.97	0.22	51.19	74.00	-22.81	peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

Radiated Emission Measurement

File :809(CH2441) Data :#3 Date: 2008-6-4 Time: 上午 11:22:22



Site site #1 Polarization: ***Horizontal*** Temperature: 22 ℃

Limit: FCC part 15 (PK) Power: Humidity: 60 %

EUT: Distance: 3m

M/N: 809

Mode: BT

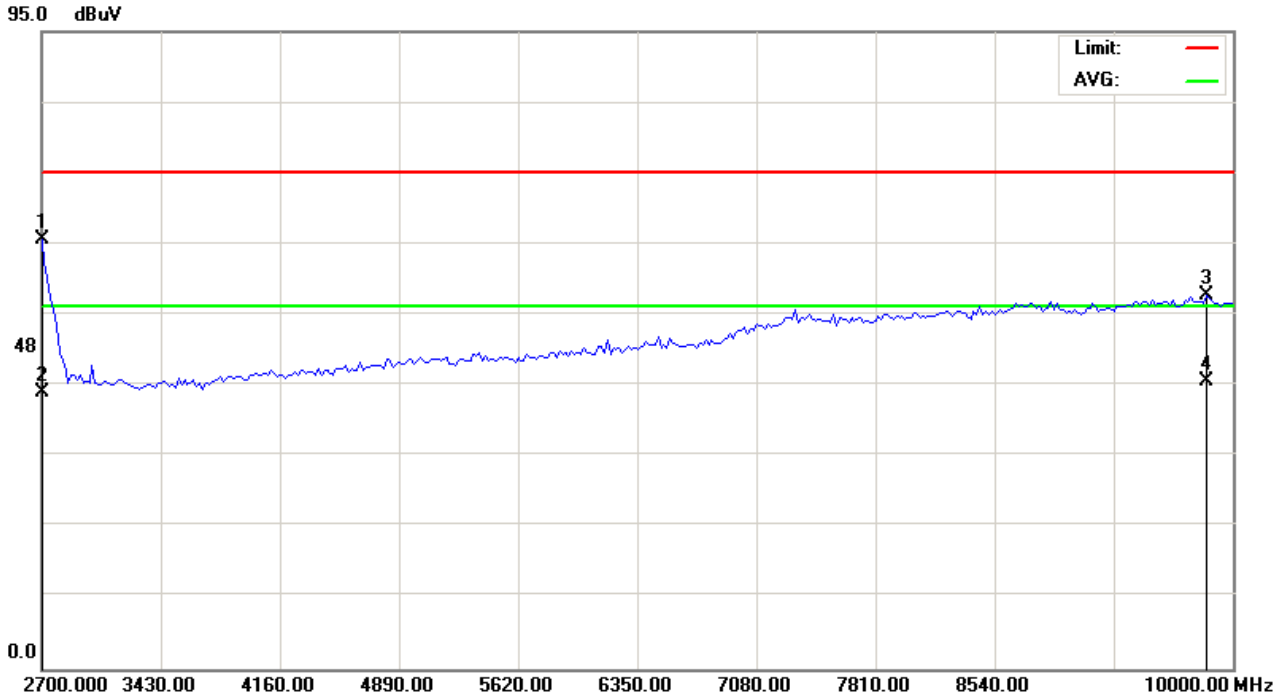
Note: 2441MHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1	*	2640.500	47.39	0.97	48.36	74.00	-25.64	peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

Radiated Emission Measurement

File :809(CH2441) Data :#5 Date: 2008-6-4 Time: 上午 11:56:30



Site site #1 Polarization: ***Vertical*** Temperature: 22 ℃

Limit: FCC part 15 (PK) Power: Humidity: 60 %

EUT: Distance: 3m

M/N: 809

Mode: BT

Note: 2441MHz

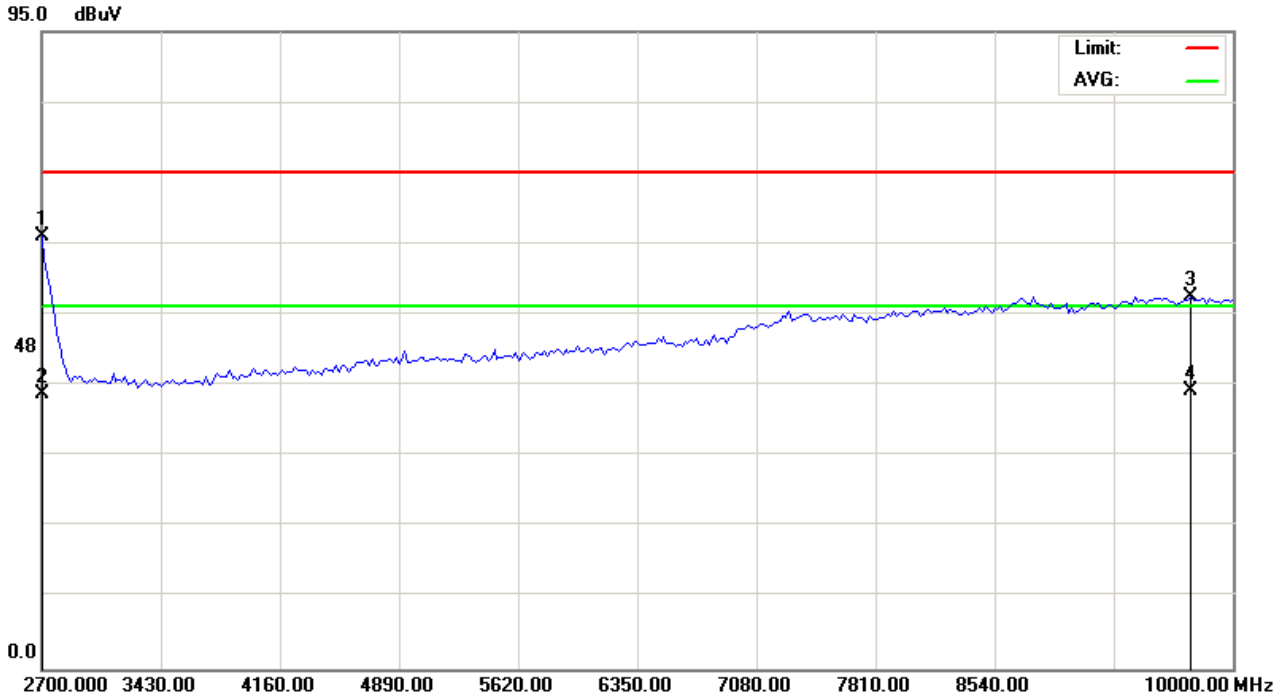
2.7G-10G PK Scan Att:0 ; REF:95 ; Range:95(EUT Power Lever:255)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1	*	2700.000	41.44	22.58	64.02	74.00	-9.98	peak			
2		2700.000	18.58	22.58	41.16	54.00	-12.84	AVG			
3		9835.750	37.75	17.83	55.58	74.00	-18.42	peak			
4		9835.750	25.07	17.83	42.90	54.00	-11.10	AVG			

*:Maximum data x:Over limit !:over margin ●Reference Only

Radiated Emission Measurement

File :809(CH2441) Data :#7 Date: 2008/6/4 Time: 下午 02:02:52



Site site #1 Polarization: ***Horizontal*** Temperature: 22 ℃

Limit: FCC part 15 (PK) Power: Humidity: 60 %

EUT: Distance: 3m

M/N: 809

Mode: BT

Note: 2441MHz

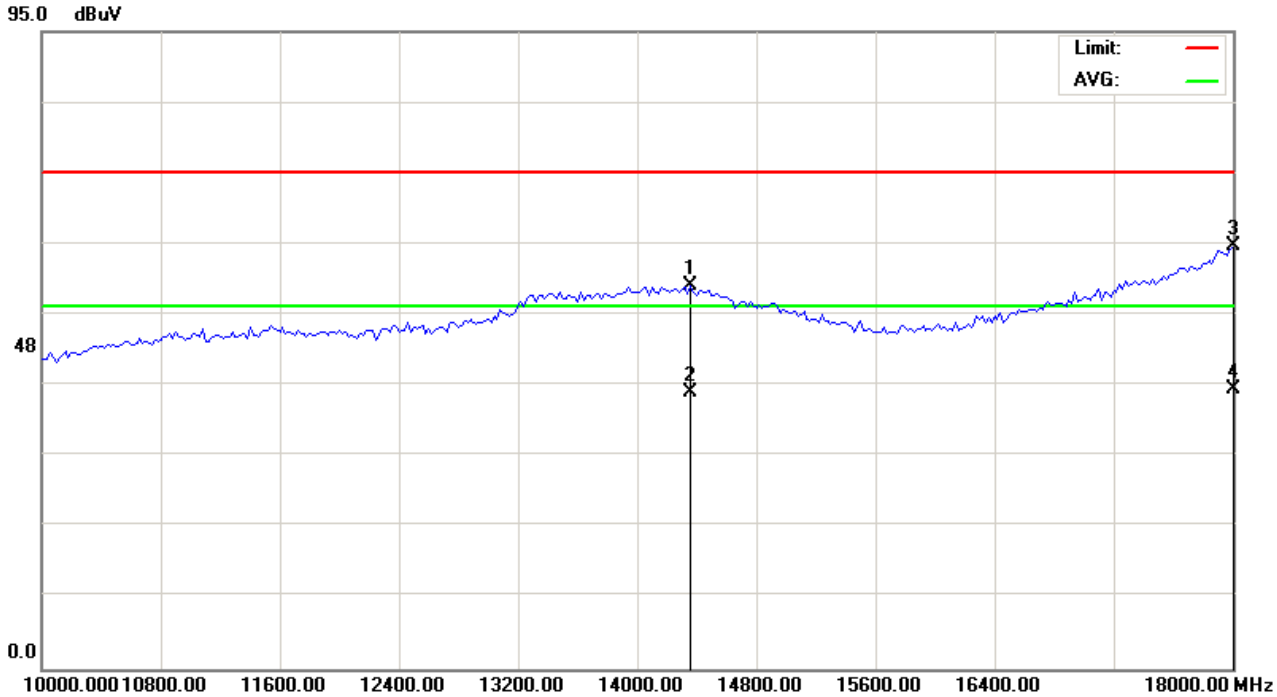
2.7G-10G PK Scan Att:0 ; REF:95 ; Range:95(EUT Power Lever:255)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1	*	2700.000	41.94	22.58	64.52	74.00	-9.48	peak			
2		2700.000	18.30	22.58	40.88	54.00	-13.12	AVG			
3		9744.500	37.84	17.69	55.53	74.00	-18.47	peak			
4		9744.500	23.84	17.69	41.53	54.00	-12.47	AVG			

*:Maximum data x:Over limit !:over margin ●Reference Only

Radiated Emission Measurement

File :809(CH2441) Data :#9 Date: 2008-6-4 Time: 下午 05:24:21



Site site #1 Polarization: ***Vertical*** Temperature: 22 ℃

Limit: FCC part 15 (PK) Power: Humidity: 60 %

EUT: Distance: 1m

M/N: 809

Mode: BT

Note: 2441MHz

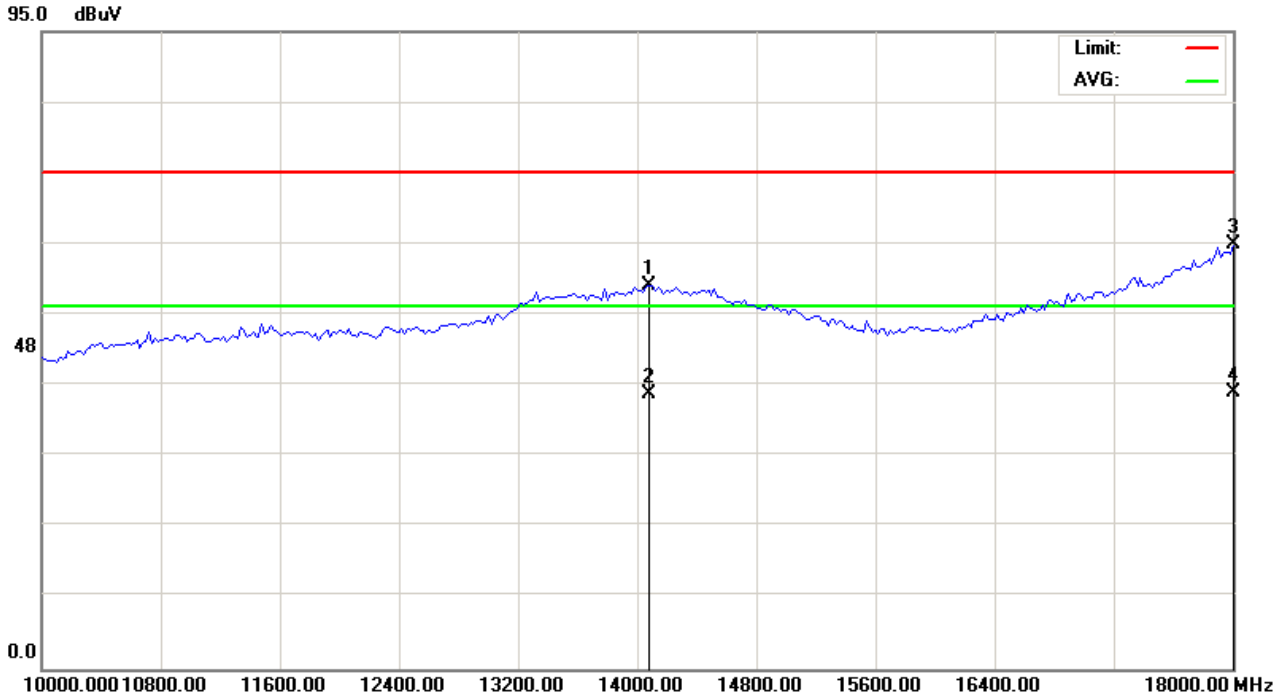
10G - 18G PK Scan Att:0 ; REF:95 ; Range:95(EUT Power Lever:255)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1		14360.00	38.76	18.41	57.17	74.00	-16.83	peak			
2		14360.00	22.88	18.41	41.29	54.00	-12.71	AVG			
3	*	18000.00	37.46	25.57	63.03	74.00	-10.97	peak			
4		18000.00	16.21	25.57	41.78	54.00	-12.22	AVG			

*:Maximum data x:Over limit !:over margin ●Reference Only

Radiated Emission Measurement

File :809(CH2441) Data :#11 Date: 2008-6-4 Time: 下午 05:42:27



Site site #1 Polarization: ***Horizontal*** Temperature: 22 ℃

Limit: FCC part 15 (PK) Power: Humidity: 60 %

EUT: Distance: 1m

M/N: 809

Mode: BT

Note: 2441MHz

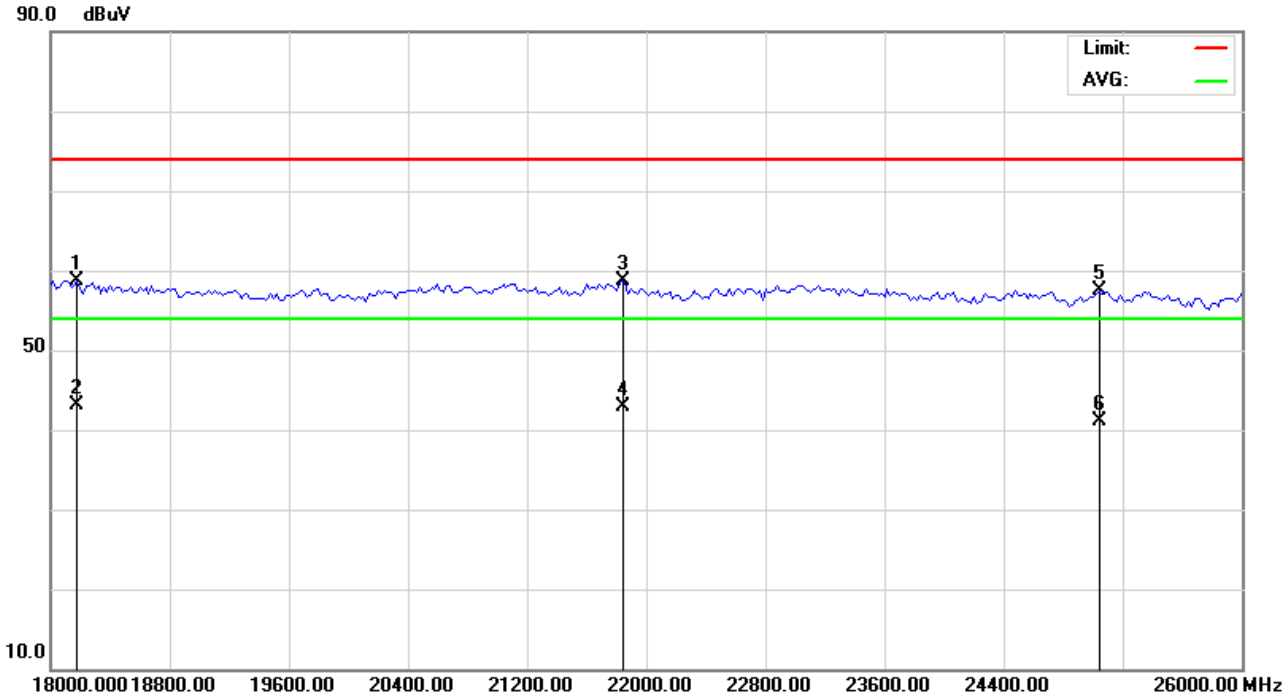
10G - 18G PK Scan Att:0 ; REF:95 ; Range:95(EUT Power Lever:255)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1		14080.00	38.37	18.81	57.18	74.00	-16.82	peak			
2		14080.00	22.08	18.81	40.89	54.00	-13.11	AVG			
3	*	18000.00	37.70	25.57	63.27	74.00	-10.73	peak			
4		18000.00	15.65	25.57	41.22	54.00	-12.78	AVG			

*:Maximum data x:Over limit !:over margin ●Reference Only

Radiated Emission Measurement

File :809(CH2441) Data :#13 Date: 2008-6-4 Time: 下午 05:53:39



Site site #1 Polarization: ***Vertical*** Temperature: 22 ℃

Limit: FCC part 15 (PK) Power: Humidity: 60 %

EUT: Distance: 1m

M/N: 809

Mode: BT

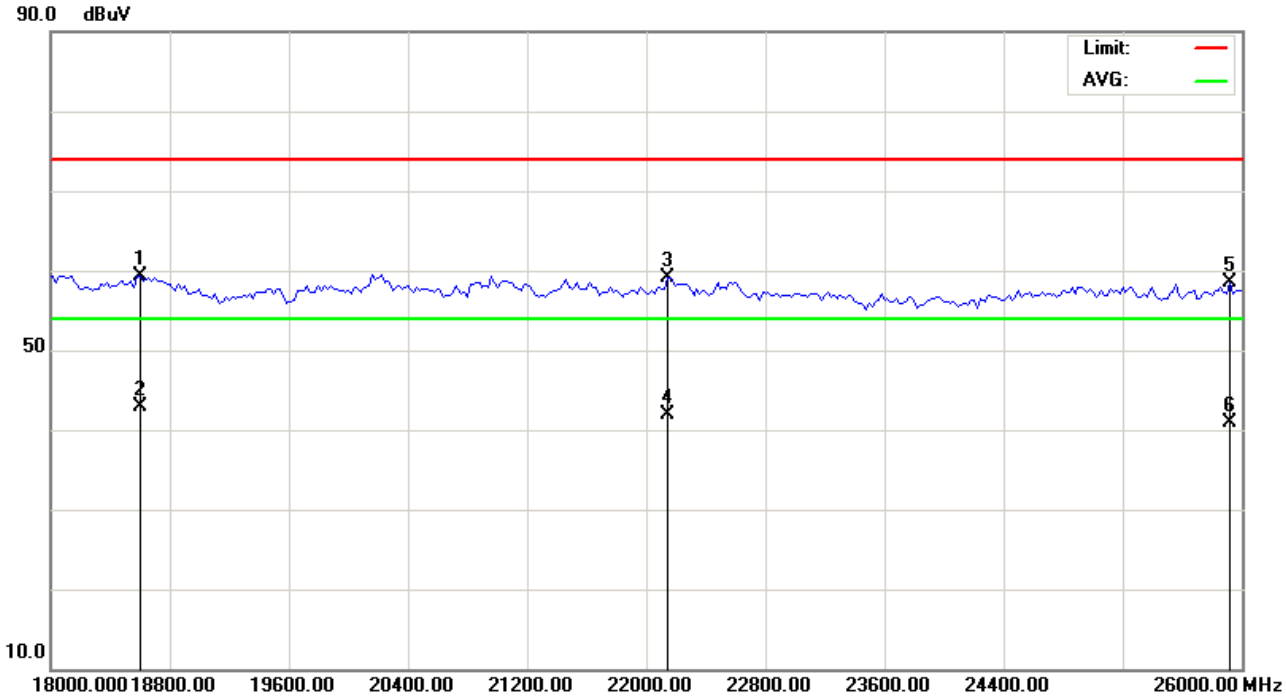
Note: 2441MHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1		18180.00	24.31	34.34	58.65	74.00	-15.35	peak			
2	*	18180.00	8.74	34.34	43.08	54.00	-10.92	AVG			
3		21840.00	27.75	30.96	58.71	74.00	-15.29	peak			
4		21840.00	11.96	30.96	42.92	54.00	-11.08	AVG			
5		25040.00	28.79	28.77	57.56	74.00	-16.44	peak			
6		25040.00	12.42	28.77	41.19	54.00	-12.81	AVG			

*:Maximum data x:Over limit !:over margin ●Reference Only

Radiated Emission Measurement

File :809(CH2441) Data :#14 Date: 2008-6-4 Time: 下午 05:54:17



Site site #1 Polarization: ***Horizontal*** Temperature: 22 ℃

Limit: FCC part 15 (PK) Power: Humidity: 60 %

EUT: Distance: 1m

M/N: 809

Mode: BT

Note: 2441MHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1		18600.00	26.12	33.17	59.29	74.00	-14.71	peak			
2	*	18600.00	9.72	33.17	42.89	54.00	-11.11	AVG			
3		22140.00	28.32	30.76	59.08	74.00	-14.92	peak			
4		22140.00	11.19	30.76	41.95	54.00	-12.05	AVG			
5		25920.00	30.32	28.17	58.49	74.00	-15.51	peak			
6		25920.00	12.78	28.17	40.95	54.00	-13.05	AVG			

*:Maximum data x:Over limit !:over margin ●Reference Only

3.6.4 Open Field Radiated Emissions (Subpart C)

The highest peak values of radiated emissions from the EUT at various antenna heights, antenna polarization, EUT orientation, etc. are recorded on the following.

Applicant : Perfect Tech Co., Ltd
Model No : BT809X
EUT : Bluetooth Headset
Test Mode : Link Mode_Bluetooth 2.0 CH78 2480.000 (Local Frequency: 2480.000 MHz)
Test Date : 06/04/2008~06/17/2008

Please refer to next pager of detail testing data.

Notes:

1. Margin= Amplitude - Limits
2. Distance of Measurement: 3 Meter (30-1000MHz) & (1-10GHz), 1 Meter (10-26.5GHz)
3. Height of table for EUT placed: 0.8 Meter.
4. ANT= Antenna height.
5. Amplitude= Reading Amplitude – Amplifier gain + Cable loss + Antenna factor
   (Auto calculate in spectrum analyzer)
6. The EUT was worst case on X axis after pretest on X & Y & Z axis setting.
7. The testing data only show below 18GHz's data because measure data above 18GHz was only ambit noise.
8. All frequencies from 30MHz to 26.5GHz have been tested

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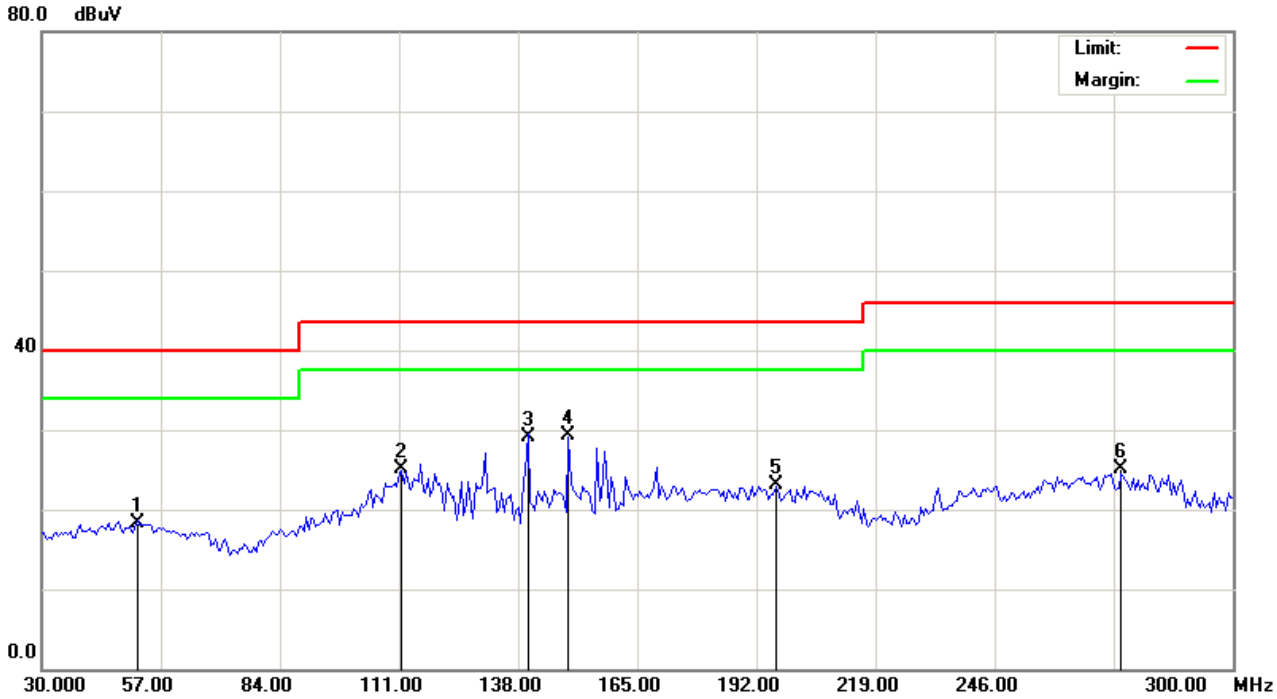
Radiated Emission Measurement

File :809(1G以下-2008-06-17) Data :#9 Date: 2008/6/17 Time: 上午 10:37:45



Site site#1 Polarization: ***Vertical*** Temperature: 22 ℃

Limit: FCC Class B 3M Radiation Power: Humidity: 60 %

EUT: Distance: 3m

M/N: 809

Mode: BT

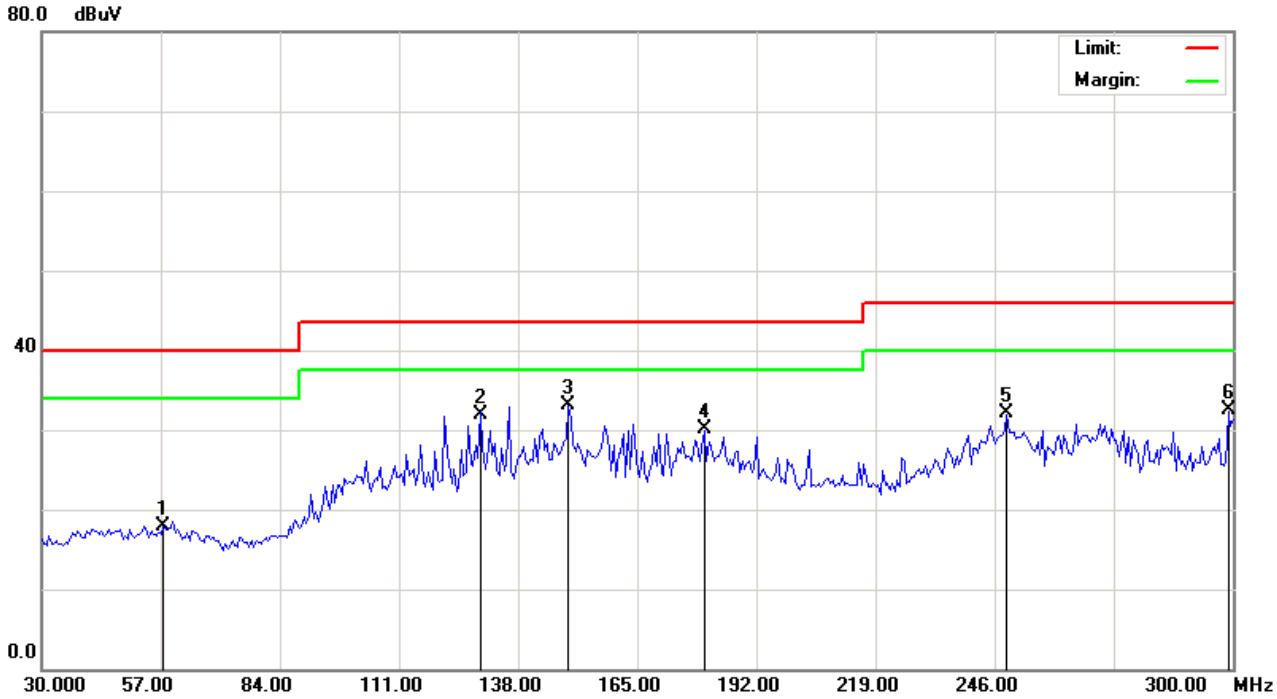
Note: 2480MHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1		51.6000	30.57	-12.17	18.40	40.00	-21.60	peak			
2		111.5400	37.93	-12.76	25.17	43.50	-18.33	peak			
3		140.1600	45.47	-16.35	29.12	43.50	-14.38	peak			
4	*	149.3400	45.26	-16.03	29.23	43.50	-14.27	peak			
5		196.3200	36.13	-13.11	23.02	43.50	-20.48	peak			
6		274.6200	35.89	-10.81	25.08	46.00	-20.92	peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

Radiated Emission Measurement

File :809(1G以下-2008-06-17) Data :#11 Date: 2008/6/17 Time: 上午 10:45:35



Site site#1 Polarization: ***Horizontal*** Temperature: 22 ℃

Limit: FCC Class B 3M Radiation Power: Humidity: 60 %

EUT: Distance: 3m

M/N: 809

Mode: BT

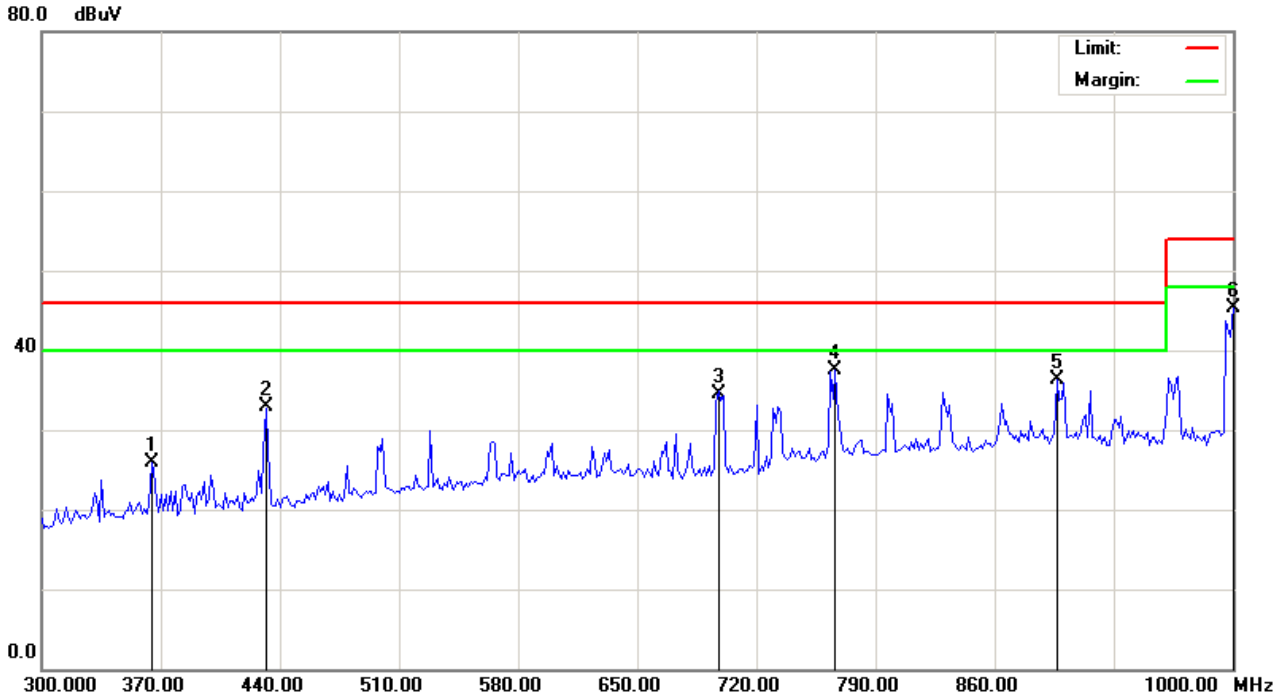
Note: 2480MHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1		57.5400	30.31	-12.38	17.93	40.00	-22.07	peak			
2		129.3600	47.56	-15.56	32.00	43.50	-11.50	peak			
3	*	149.3400	49.14	-16.03	33.11	43.50	-10.39	peak			
4		180.1200	44.36	-14.31	30.05	43.50	-13.45	peak			
5		248.7000	42.95	-10.94	32.01	46.00	-13.99	peak			
6		298.9200	42.52	-10.03	32.49	46.00	-13.51	peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

Radiated Emission Measurement

File :809(1G以下-2008-06-17) Data :#10 Date: 2008/6/17 Time: 上午 10:41:16



Site site#1 Polarization: ***Vertical*** Temperature: 22 ℃

Limit: FCC Class B 3M Radiation Power: Humidity: 60 %

EUT: Distance: 3m

M/N: 809

Mode: BT

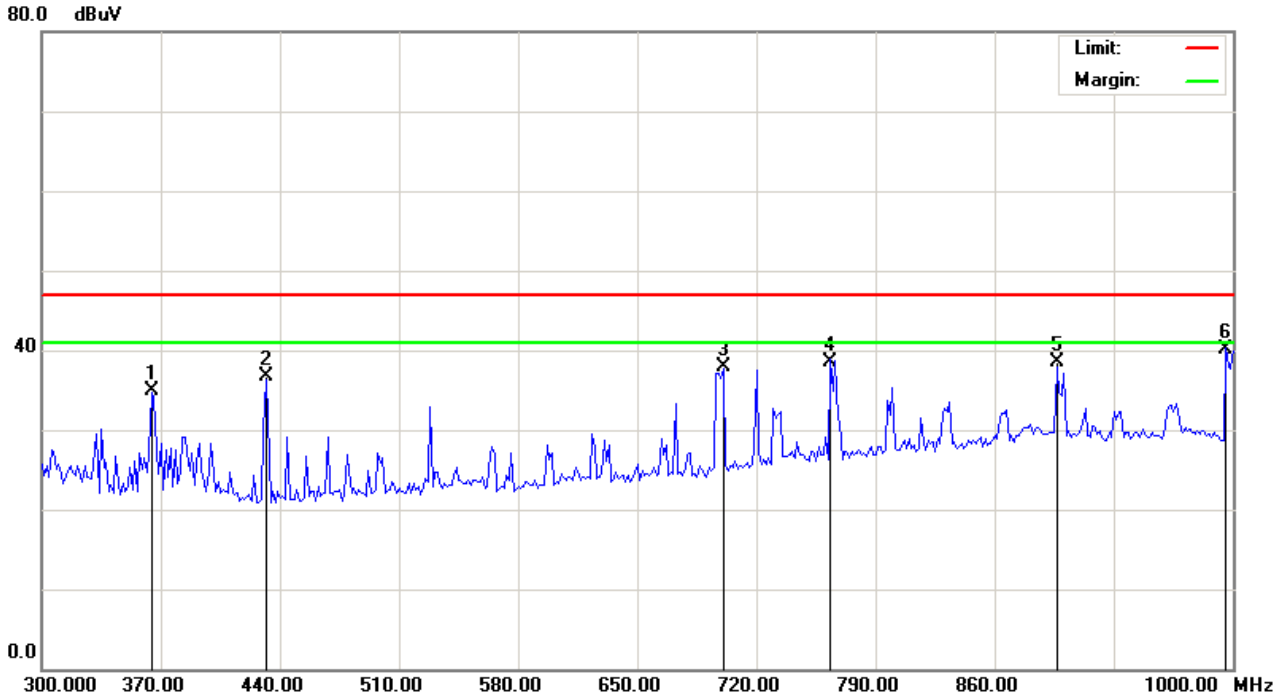
Note: 2480MHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1		364.4000	34.63	-8.65	25.98	46.00	-20.02	peak			
2		431.6000	40.94	-8.03	32.91	46.00	-13.09	peak			
3		697.6000	38.31	-3.86	34.45	46.00	-11.55	peak			
4	*	766.2000	40.27	-2.78	37.49	46.00	-8.51	peak			
5		896.4000	36.78	-0.47	36.31	46.00	-9.69	peak			
6		1000.000	44.62	0.62	45.24	54.00	-8.76	peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

Radiated Emission Measurement

File :809(1G以下-2008-06-17) Data :#12 Date: 2008/06/17 Time: 上午 10:48:13



Site site#1 Polarization: ***Horizontal*** Temperature: 22 ℃

Limit: CISPR22 ClassB 3M Radiation Power: Humidity: 60 %

EUT: Distance: 3m

M/N: 809

Mode: BT

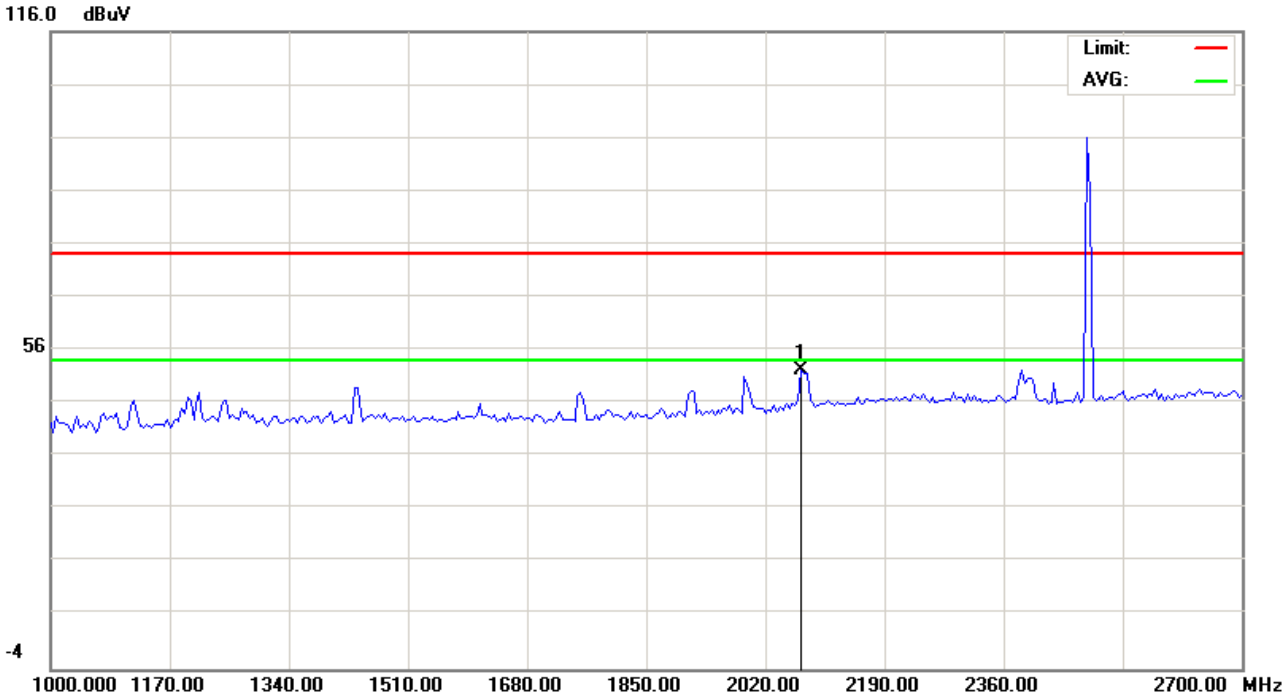
Note: 2480MHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1		364.4000	43.51	-8.65	34.86	47.00	-12.14	peak			
2		431.6000	44.64	-8.03	36.61	47.00	-10.39	peak			
3		700.4000	41.72	-3.88	37.84	47.00	-9.16	peak			
4		763.4000	41.46	-2.87	38.59	47.00	-8.41	peak			
5		896.4000	38.93	-0.47	38.46	47.00	-8.54	peak			
6	*	995.8000	39.38	0.75	40.13	47.00	-6.87	peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

Radiated Emission Measurement

File :809(CH2480) Data :#1 Date: 2008-6-4 Time: 上午 10:49:58



Site site #1 Polarization: ***Vertical*** Temperature: 22 ℃

Limit: FCC part 15 (PK) Power: Humidity: 60 %

EUT: Distance: 3m

M/N: 809

Mode: BT

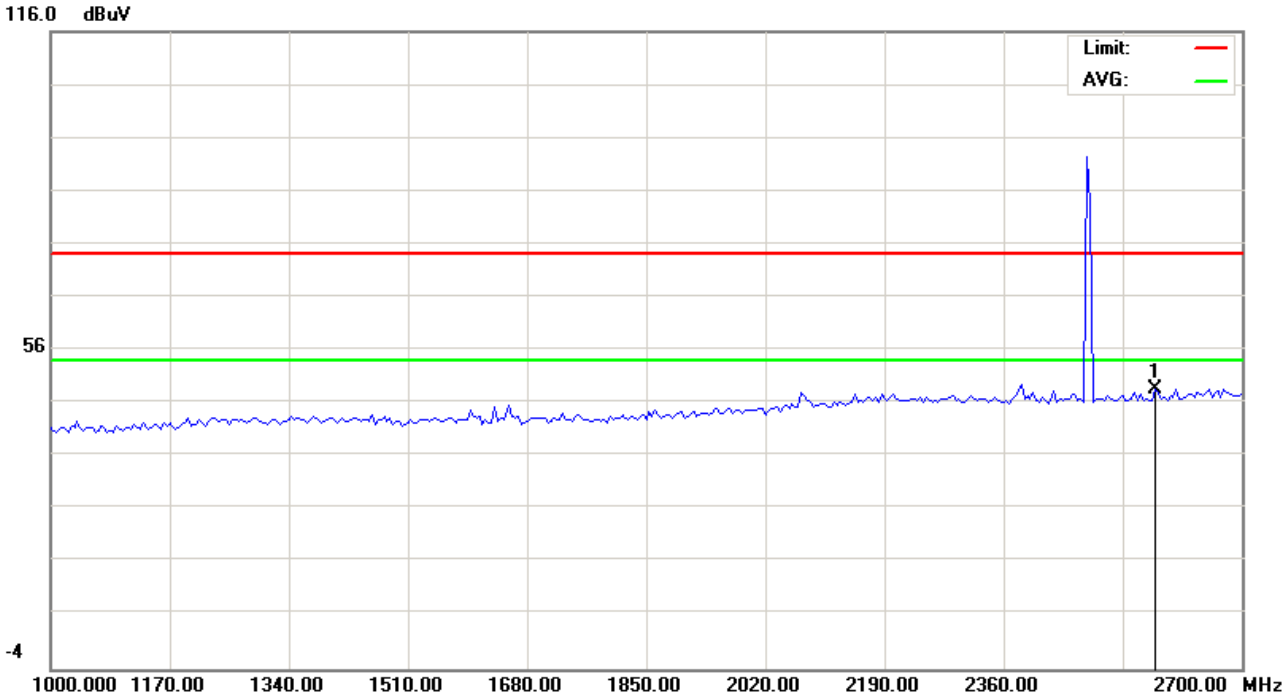
Note: 2480MHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1	*	2071.000	53.21	-0.89	52.32	74.00	-21.68	peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

Radiated Emission Measurement

File :809(CH2480) Data :#3 Date: 2008-6-4 Time: 上午 11:14:13



Site site #1 Polarization: ***Horizontal*** Temperature: 22 ℃

Limit: FCC part 15 (PK) Power: Humidity: 60 %

EUT: Distance: 3m

M/N: 809

Mode: BT

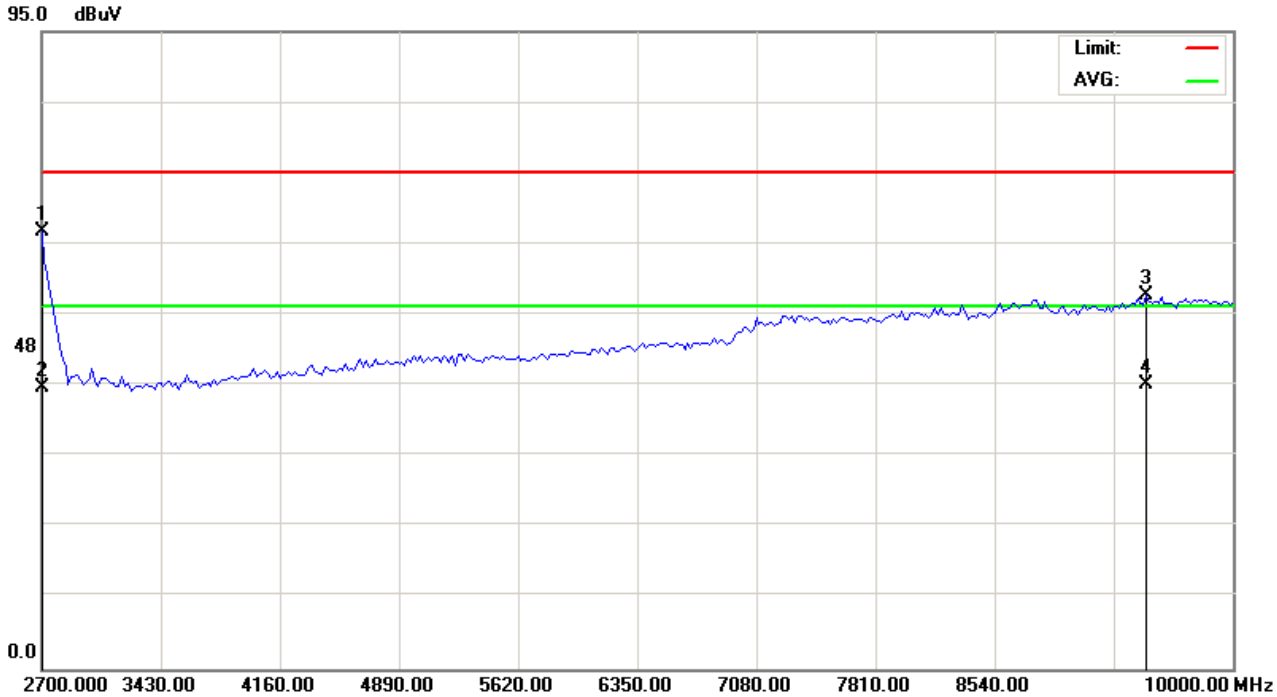
Note: 2480MHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1	*	2576.750	48.19	0.59	48.78	74.00	-25.22	peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

Radiated Emission Measurement

File :809(CH2480) Data :#5 Date: 2008-6-4 Time: 下午 12:07:09



Site site #1 Polarization: ***Vertical*** Temperature: 22 ℃

Limit: FCC part 15 (PK) Power: Humidity: 60 %

EUT: Distance: 3m

M/N: 809

Mode: BT

Note: 2480MHz

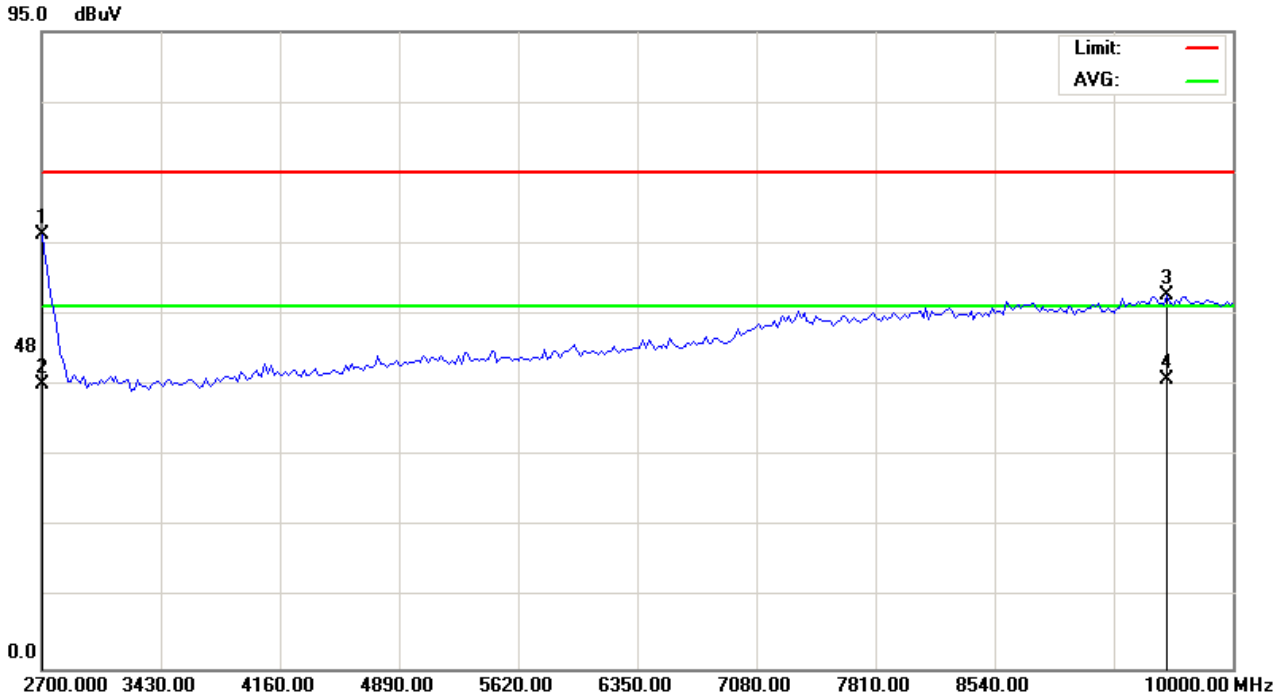
2.7G-10G PK Scan Att:0 ; REF:95 ; Range:95(EUT Power Lever:255)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1	*	2700.000	42.63	22.58	65.21	74.00	-8.79	peak			
2		2700.000	19.30	22.58	41.88	54.00	-12.12	AVG			
3		9470.750	38.67	16.91	55.58	74.00	-18.42	peak			
4		9470.750	25.45	16.91	42.36	54.00	-11.64	AVG			

*:Maximum data x:Over limit !:over margin ●Reference Only

Radiated Emission Measurement

File :809(CH2480) Data :#7 Date: 2008-6-4 Time: 下午 12:16:44



Site site #1 Polarization: ***Horizontal*** Temperature: 22 ℃

Limit: FCC part 15 (PK) Power: Humidity: 60 %

EUT: Distance: 3m

M/N: 809

Mode: BT

Note: 2480MHz

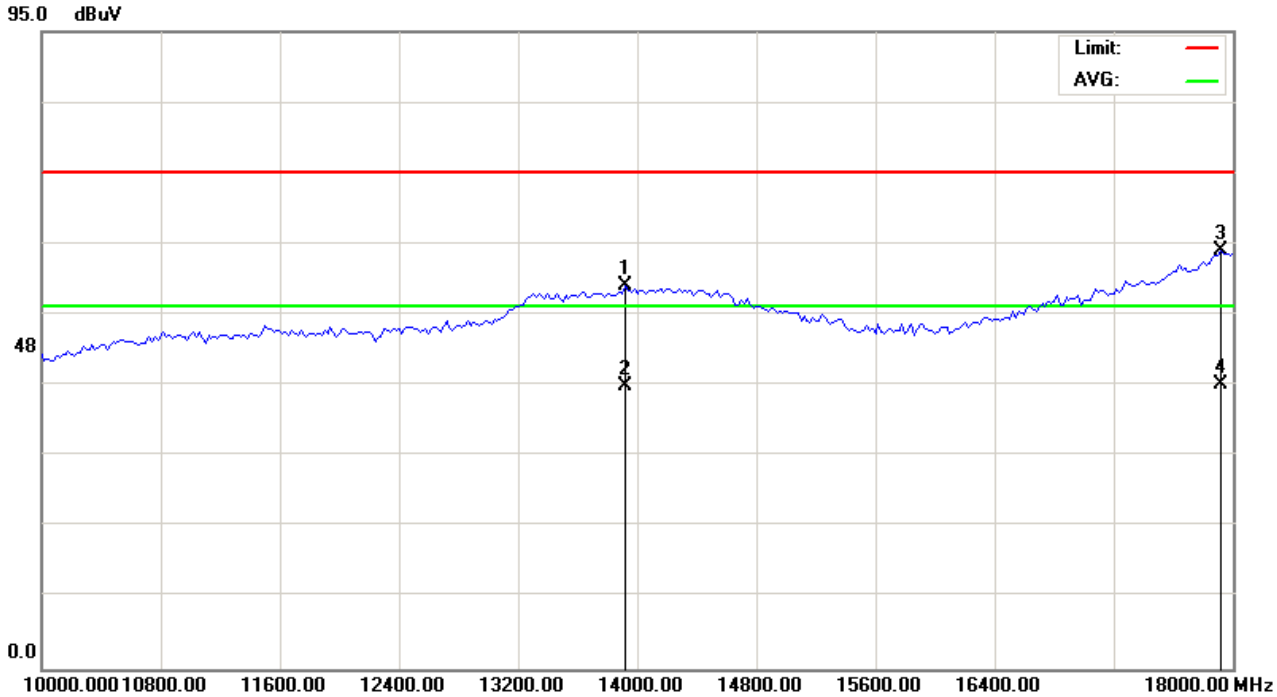
2.7G-10G PK Scan Att:0 ; REF:95 ; Range:95(EUT Power Lever:255)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1	*	2700.000	42.15	22.58	64.73	74.00	-9.27	peak			
2		2700.000	19.75	22.58	42.33	54.00	-11.67	AVG			
3		9598.500	38.36	17.41	55.77	74.00	-18.23	peak			
4		9598.500	25.58	17.41	42.99	54.00	-11.01	AVG			

*:Maximum data x:Over limit !:over margin ●Reference Only

Radiated Emission Measurement

File :809(CH2480) Data :#9 Date: 2008-6-4 Time: 下午 05:31:37



Site site #1 Polarization: ***Vertical*** Temperature: 22 ℃

Limit: FCC part 15 (PK) Power: Humidity: 60 %

EUT: Distance: 1m

M/N: 809

Mode: BT

Note: 2480MHz

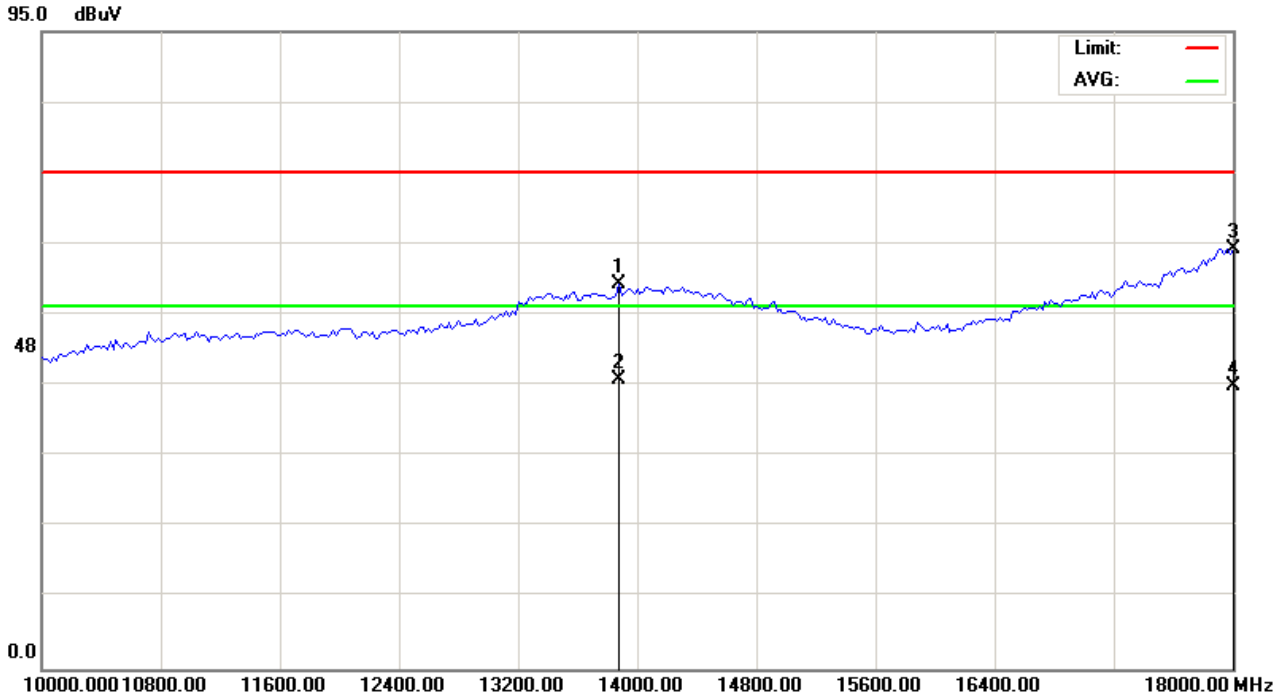
10G - 18G PK Scan Att:0 ; REF:95 ; Range:95(EUT Power Lever:255)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1		13920.00	38.69	18.54	57.23	74.00	-16.77	peak			
2		13920.00	23.60	18.54	42.14	54.00	-11.86	AVG			
3		17920.00	37.47	24.84	62.31	74.00	-11.69	peak			
4	*	17920.00	17.59	24.84	42.43	54.00	-11.57	AVG			

*:Maximum data x:Over limit !:over margin ●Reference Only

Radiated Emission Measurement

File :809(CH2480) Data :#11 Date: 2008-6-4 Time: 下午 05:37:14



Site site #1 Polarization: ***Horizontal*** Temperature: 22 ℃

Limit: FCC part 15 (PK) Power: Humidity: 60 %

EUT: Distance: 1m

M/N: 809

Mode: BT

Note: 2480MHz

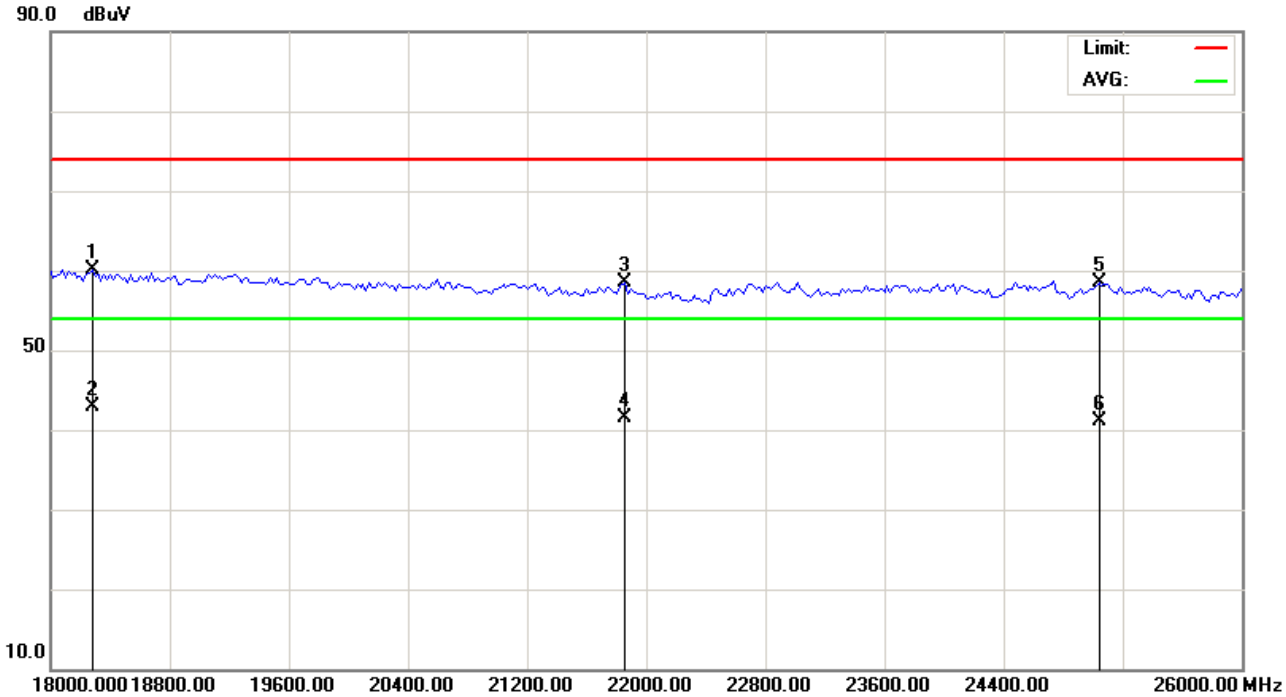
10G - 18G PK Scan Att:0 ; REF:95 ; Range:95(EUT Power Lever:255)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1		13880.00	38.92	18.38	57.30	74.00	-16.70	peak			
2	*	13880.00	24.64	18.38	43.02	54.00	-10.98	AVG			
3		18000.00	37.05	25.57	62.62	74.00	-11.38	peak			
4		18000.00	16.50	25.57	42.07	54.00	-11.93	AVG			

*:Maximum data x:Over limit !:over margin ●Reference Only

Radiated Emission Measurement

File :809(CH2480) Data :#13 Date: 2008-6-4 Time: 下午 05:57:36



Site site #1 Polarization: ***Vertical*** Temperature: 22 ℃

Limit: FCC part 15 (PK) Power: Humidity: 60 %

EUT: Distance: 1m

M/N: 809

Mode: BT

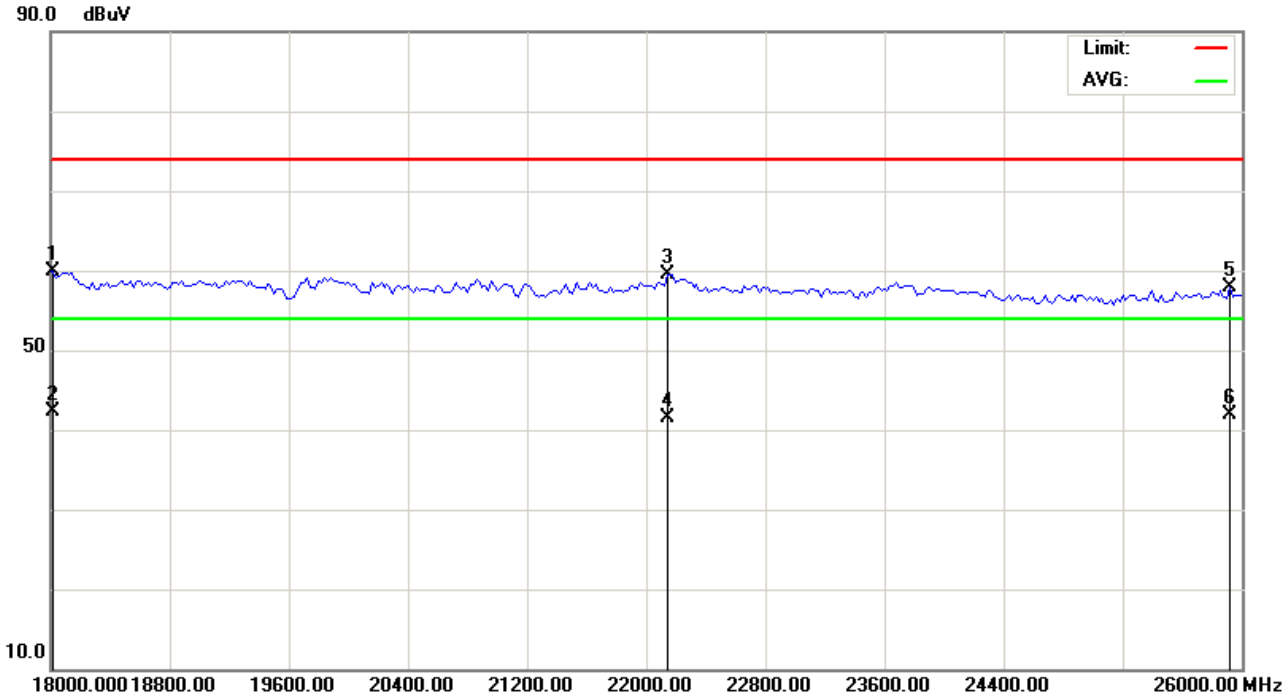
Note: 2480MHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1		18280.00	25.87	34.18	60.05	74.00	-13.95	peak			
2	*	18280.00	8.74	34.18	42.92	54.00	-11.08	AVG			
3		21860.00	27.53	30.94	58.47	74.00	-15.53	peak			
4		21860.00	10.52	30.94	41.46	54.00	-12.54	AVG			
5		25040.00	29.79	28.77	58.56	74.00	-15.44	peak			
6		25040.00	12.42	28.77	41.19	54.00	-12.81	AVG			

*:Maximum data x:Over limit !:over margin ●Reference Only

Radiated Emission Measurement

File :809(CH2480) Data :#14 Date: 2008-6-4 Time: 下午 05:59:27



Site site #1 Polarization: ***Horizontal*** Temperature: 22 ℃

Limit: FCC part 15 (PK) Power: Humidity: 60 %

EUT: Distance: 1m

M/N: 809

Mode: BT

Note: 2480MHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1		18020.00	25.88	33.99	59.87	74.00	-14.13	peak			
2	*	18020.00	8.34	33.99	42.33	54.00	-11.67	AVG			
3		22140.00	28.82	30.76	59.58	74.00	-14.42	peak			
4		22140.00	10.73	30.76	41.49	54.00	-12.51	AVG			
5		25920.00	29.82	28.17	57.99	74.00	-16.01	peak			
6		25920.00	13.69	28.17	41.86	54.00	-12.14	AVG			

*:Maximum data x:Over limit !:over margin ●Reference Only

4. Maximum Conducted Output Power Requirements

4.1 Test Condition & Setup:

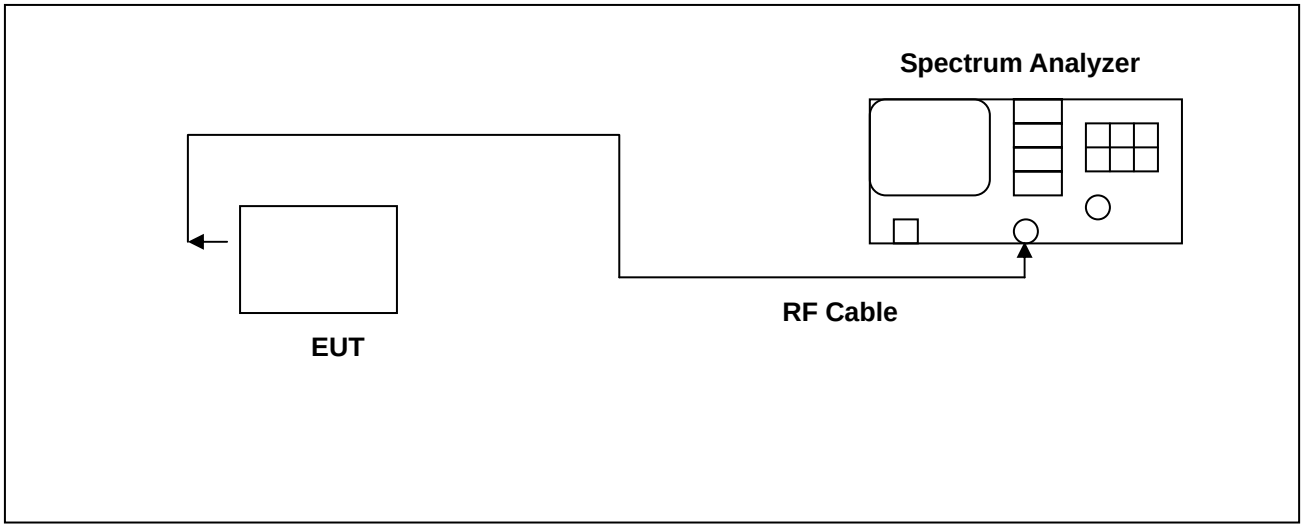
The tests below are run with the EUT's transmitter set at high power in TX mode. The EUT is needed to force selection of output power level and channel number. While testing, EUT was set to transmit continuously. Remove the Subjective device's antenna and connect the RF output port to spectrum analyzer. The maximum peak output power shall not exceed 1 watt.

Use a direct connection between the antenna port of transmitter and the spectrum Analyzer, for prevent the spectrum analyzer input attenuation 40-50 dB. Set the RBW Bandwidth of the emission or use a channel power meter mode.

For antennas with gains of 6 dBi or less, maximum allowed transmitter output is 1 watt (+30 dBm). For antennas with gains greater than 6 dBi, transmitter output level must be decreased by an amount equal to (GAIN - 6)/3 dBm.

The antenna port of the EUT was connected to the input of a power meter. Power was read directly and cable loss correction was added to the reading to obtain power at the EUT antenna terminals.

4.2 Test Instruments Configuration:



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4.3 Test Equipment List:

Describe	Manufacturer	Model	Serial Number	Calibration	
				Cal. Date	Due Date
Spectrum Analyzer	Agilent	E4445A	MY45300744	Nov. 29, 2008	Nov. 29, 2009

4.4 Test Result

Bluetooth 2.0

Frequency (MHz)	Output (dBm)	Required Limit
2402	0.211	<30dBm
2441	0.148	<30dBm
2480	-0.171	<30dBm

Note: Test Graphs See next page.

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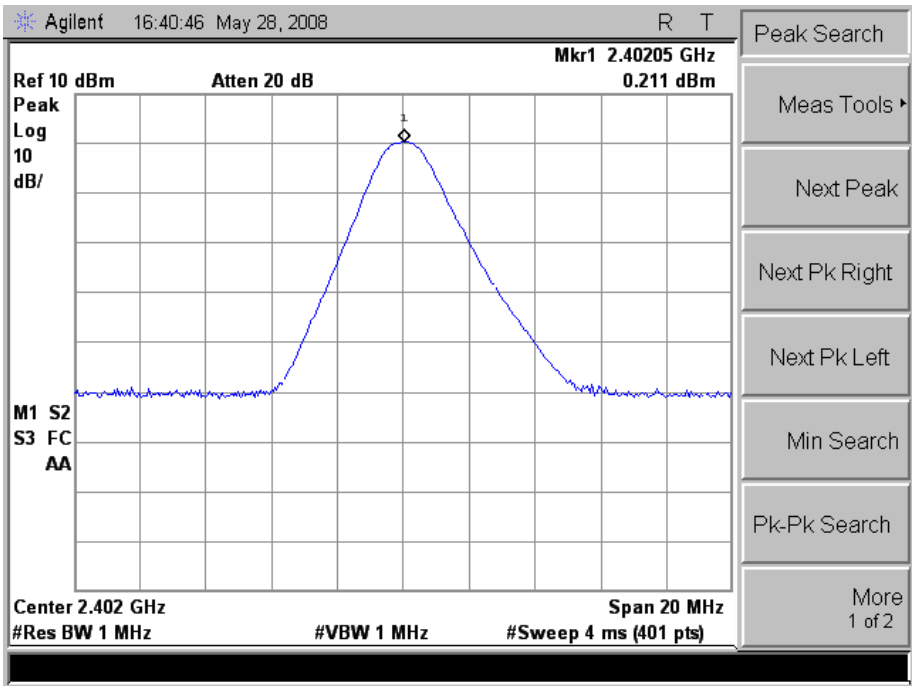
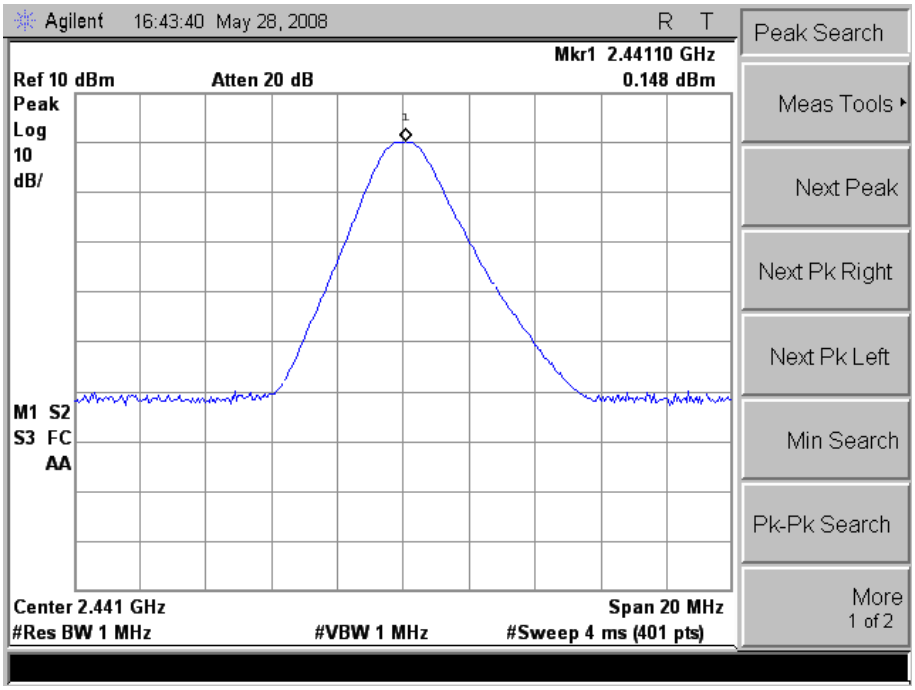
4.5 Test Graphs

Bluetooth 2.0 CH00 (2402MHz)



Bluetooth 2.0 CH39 (2441MHz)



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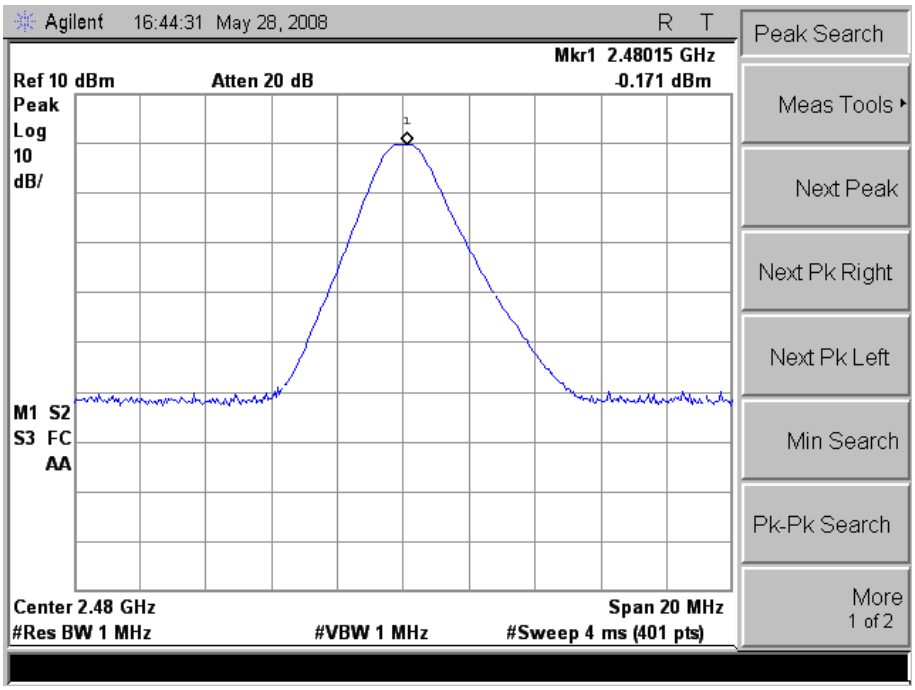
Bluetooth 2.0 CH78 (2480MHz)



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5. *Minimum 20dB RF Bandwidth Requirements*

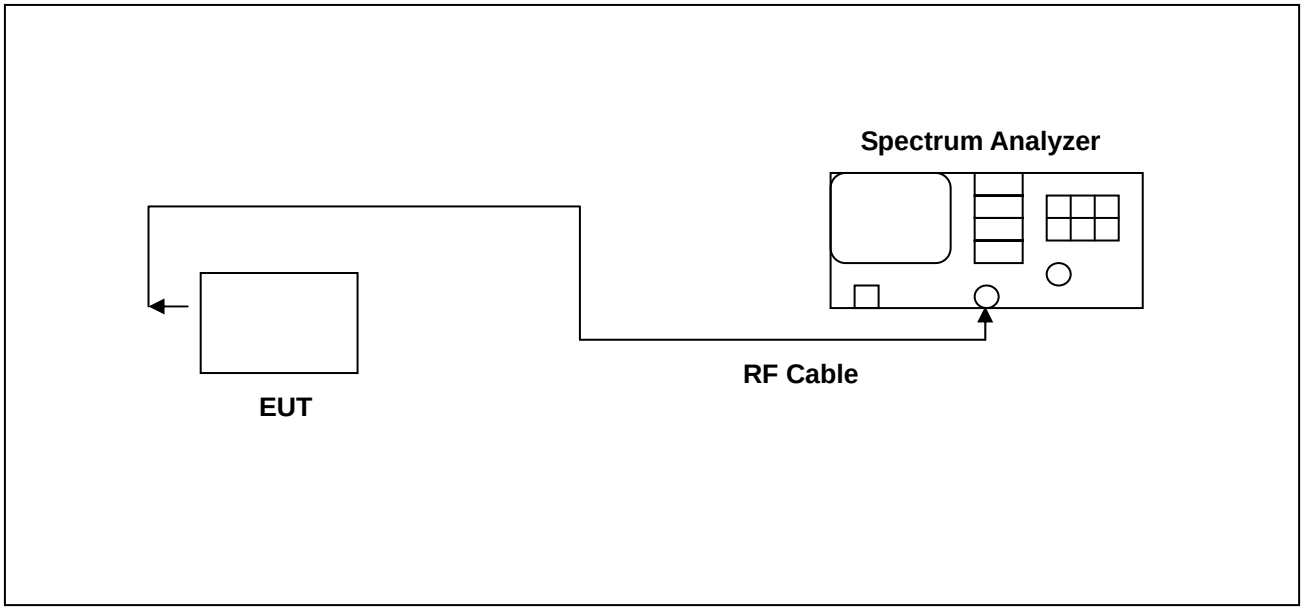
5.1 Test Condition & Setup:

The RF output port of the Equipment-Under-Test is directly coupled to the input of the EMC analyzer through a specialized RF connector and a 10dB passive attenuator. A fully charged battery was used for the supply voltage. The Bluetooth frequency hopping function of the EUT was enabled. The spectrum analyzer used the following settings:

1. Span = approx. 2 to 3 times the 20dB bandwidth, centered on a hopping frequency
2. RBW ≥ 1% of the 20dB span
3. VBW ≥ RBW
4. Sweep = auto
5. Detector function = peak
6. Trace = max hold

The trace was allowed to stabilize. The EUT was transmitting at its maximum data rate. The marker-to-peak function was used to set the marker to the peak of the emission. The marker-delta function was used to measure 20dB down one side of the emission. The marker-delta function and marker was moved to the other side of the emission until it was even with the reference marker. The marker-delta reading at this point was the 20dB bandwidth of the emission.

5.2 Test Instruments Configuration:



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5.3 Test Equipment List:

Describe	Manufacturer	Model	Serial Number	Calibration	
				Cal. Date	Due Date
Spectrum Analyzer	Agilent	E4445A	MY45300744	Nov. 29, 2008	Nov. 29, 2009

5.4 Test Result

Bluetooth 2.0

Frequency (MHz)	Max 20dB Bandwidth (KHz)	Required Limit
2402	845	<1MHz
2441	863	<1MHz
2480	824	<1MHz

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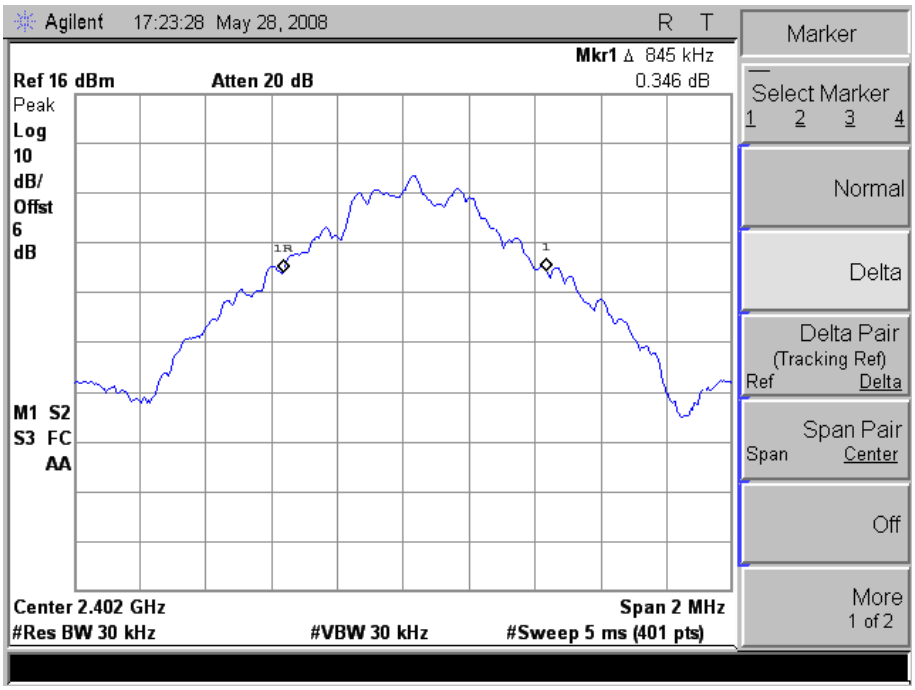
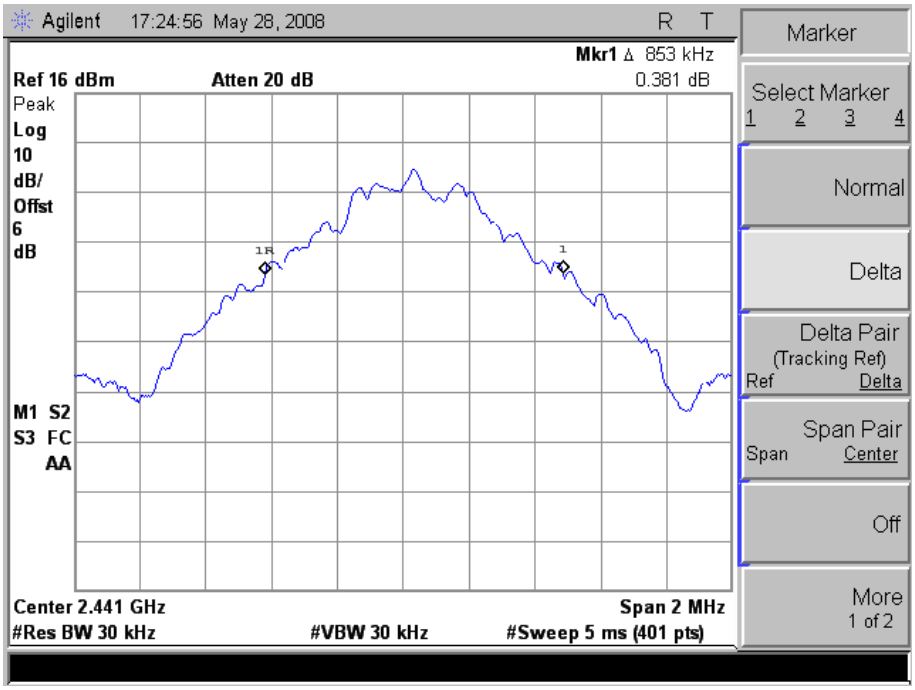
5.5 Test Graphs

Bluetooth 2.0 CH00 (2412MHz)



Bluetooth 2.0 CH39 (2441MHz)



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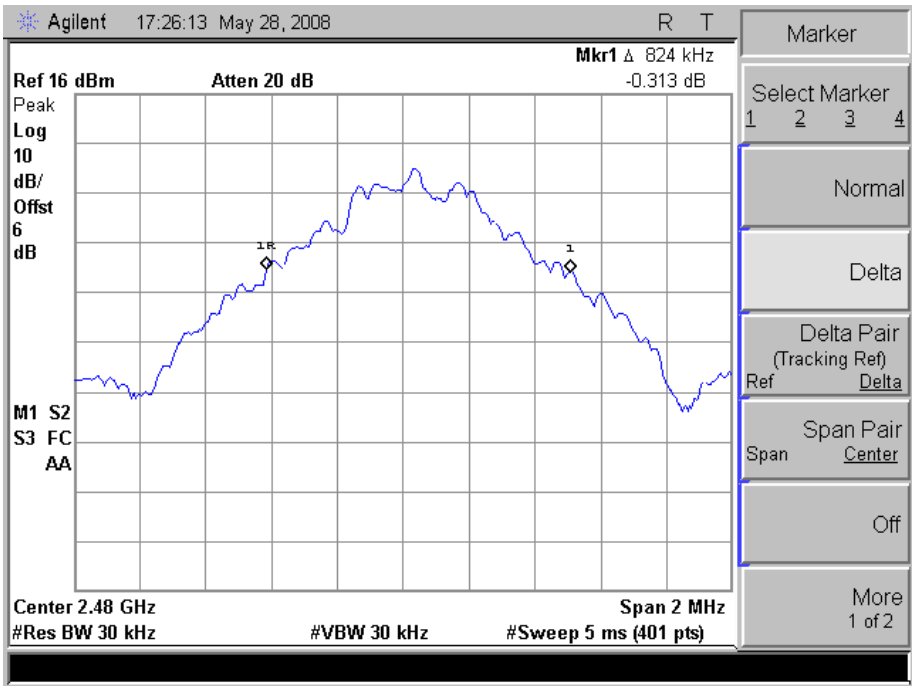
Bluetooth 2.0 CH78 (2480MHz)



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6. *Carrier Frequency Separation Requirements*

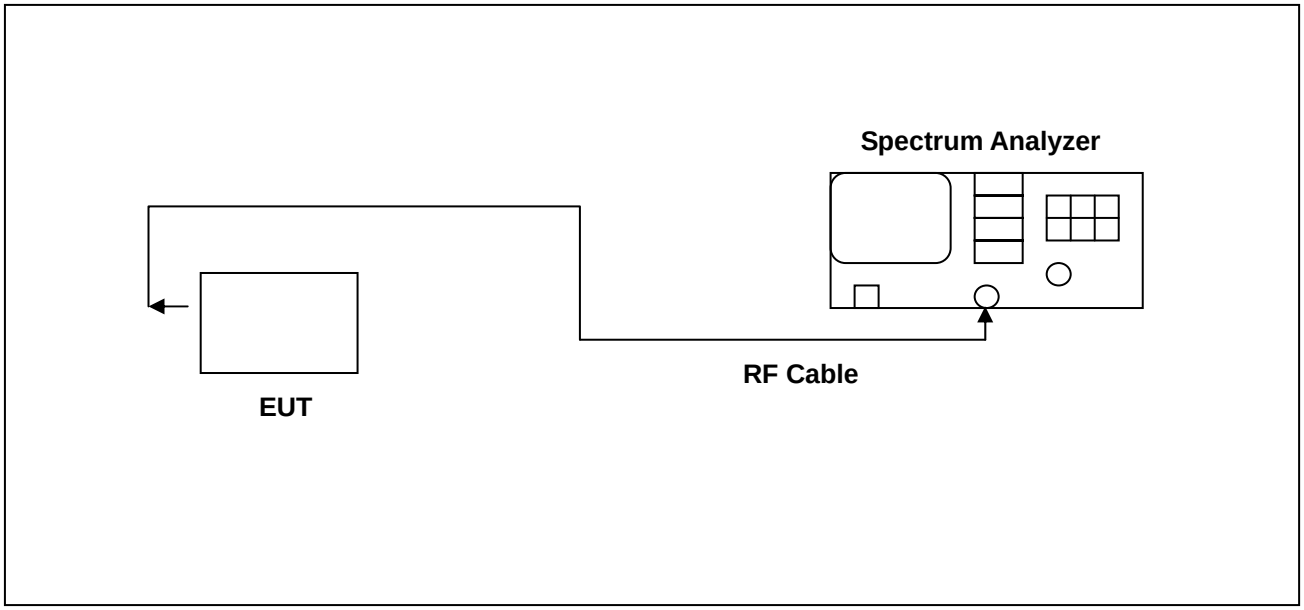
6.1 Test Condition & Setup:

The RF output port of the Equipment-Under-Test is directly coupled to the input of the EMC analyzer through a specialized RF connector and a 10dB passive attenuator. A fully charged battery was used for the supply voltage. The Bluetooth transmitter of the V6 had its hopping function enabled. The following spectrum analyzer settings were used:

1. Span = wide enough to capture the peaks of two adjacent channels
2. Resolution (or IF) Bandwidth (RBW) ≥ 1% of the span
3. Video (or Average) Bandwidth (VBW) ≥ RBW
4. Sweep = auto
5. Detector function = peak
6. Trace = max hold

The trace was allowed to stabilize. The marker-delta function was used to determine the separation between the peaks of the adjacent channels.

6.2 Test Instruments Configuration:



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6.3 Test Equipment List:

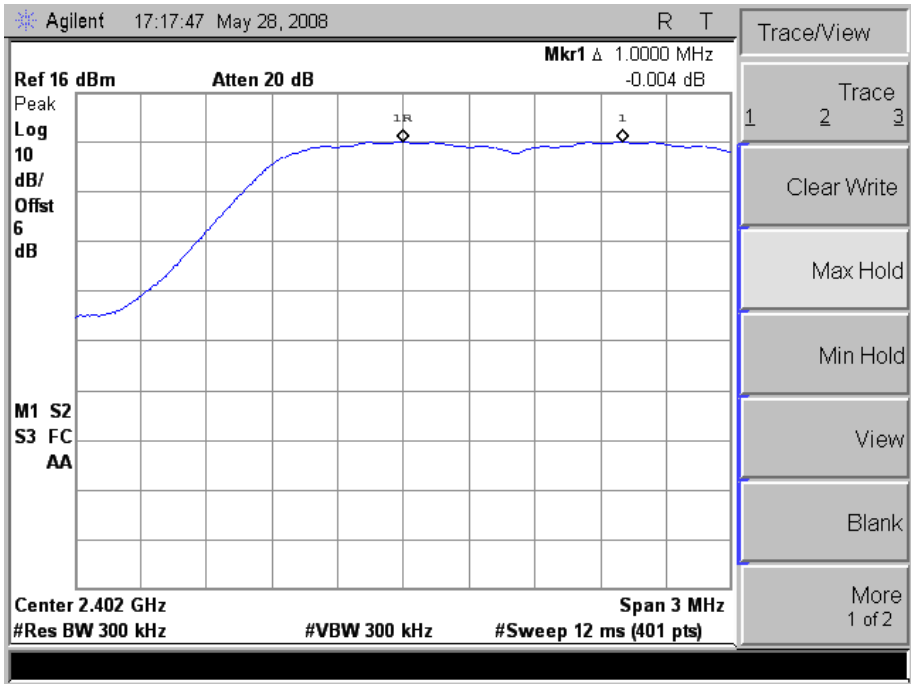
Describe	Manufacturer	Model	Serial Number	Calibration	
				Cal. Date	Due Date
Spectrum Analyzer	Agilent	E4445A	MY45300744	Nov. 29, 2008	Nov. 29, 2009
Attenuator	RADIALL	R41572000	0603033073	NA	NA

6.4 Test Result:

Carrier Frequency Separation Measure:	1MHz

6.5 Test Graphs

Bluetooth 2.0 CH00 (2412MHz)



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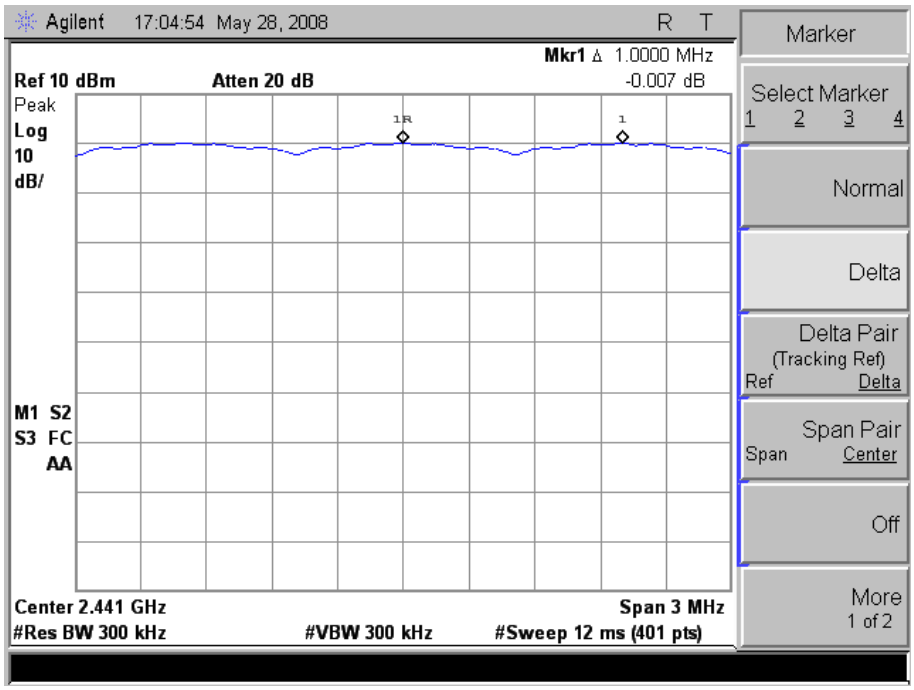
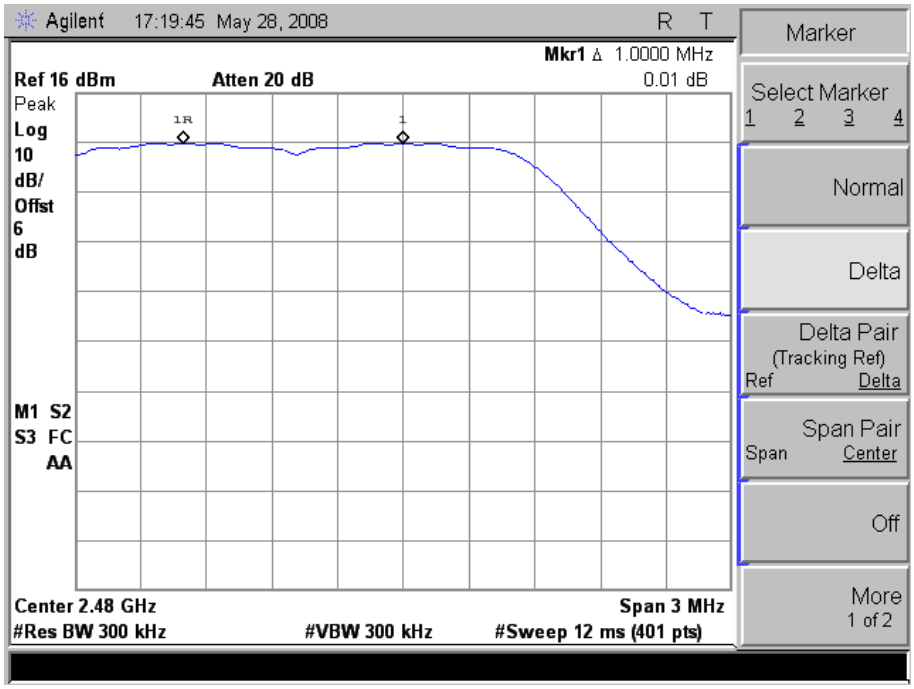
Bluetooth 2.0 CH39 (2441MHz)



Bluetooth 2.0 CH78 (2480MHz)



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7. Number of Hopping Requirements

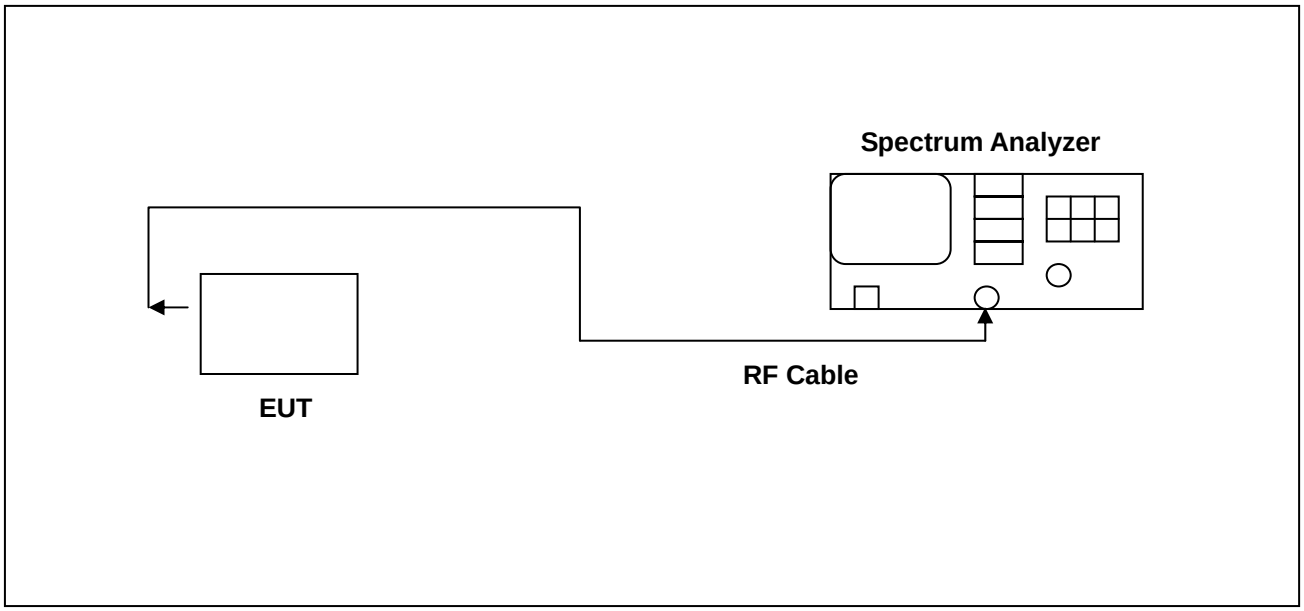
7.1 Test Condition & Setup:

The RF output port of the Equipment-Under-Test is directly coupled to the input of the EMC analyzer through a specialized RF connector and a 10dB passive attenuator. A fully charged battery was used for the supply voltage. The Bluetooth frequency hopping function of the EUT was enabled. The spectrum analyzer used the following settings:

1. Span = the frequency band of operation
2. RBW ≥ 1% of the span
3. VBW ≥ RBW
4. Sweep = auto
5. Detector function = peak
6. Trace = max hold

The trace was allowed to stabilize.

7.2 Test Instruments Configuration:



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7.3 Test Equipment List:

Describe	Manufacturer	Model	Serial Number	Calibration	
				Cal. Date	Due Date
Spectrum Analyzer	Agilent	E4445A	MY45300744	Nov. 29, 2008	Nov. 29, 2009
Attenuator	RADIALL	R41572000	0603033073	NA	NA

7.4 Test Result:

Number of Hopping Measure:	79CH

Note: Test Graphs See next page.

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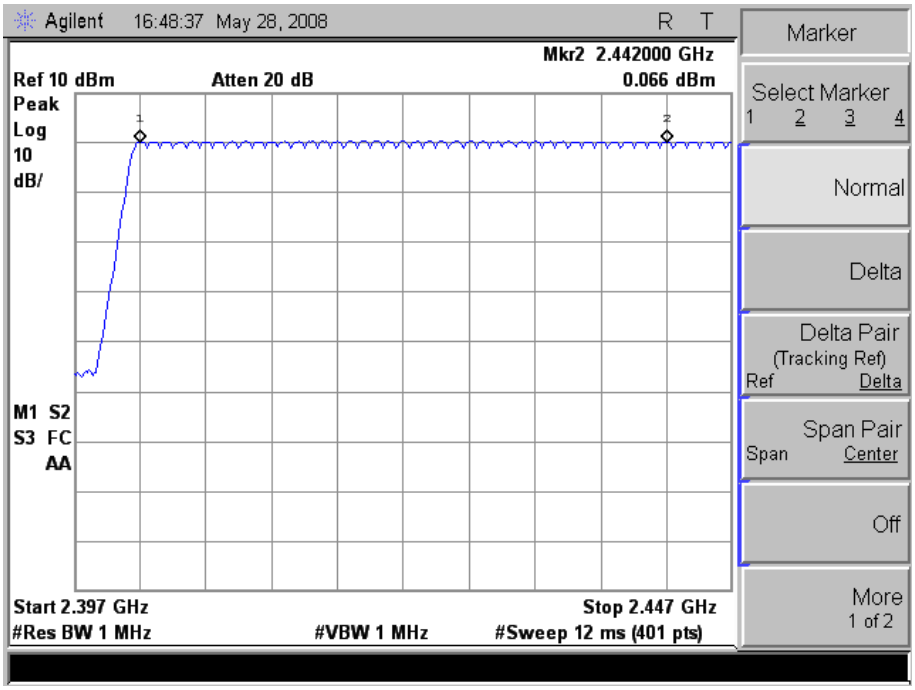
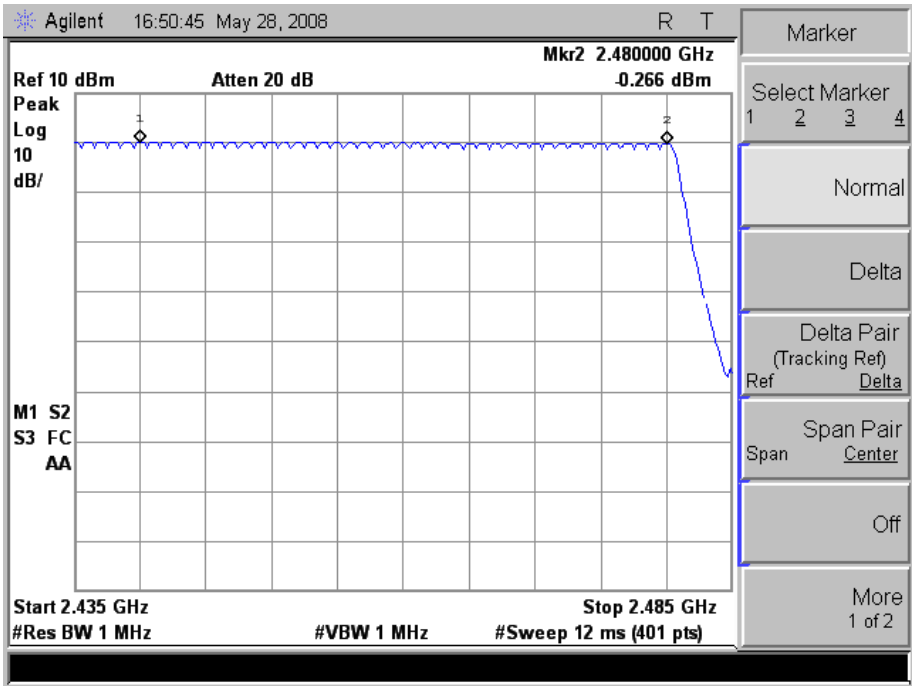
7.5 Test Graphs

Bluetooth 2.0 Mode CH0~CH39



Bluetooth 2.0 Mode CH40~CH78



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8. *Time of Occupancy (Dwell Time) Requirements*

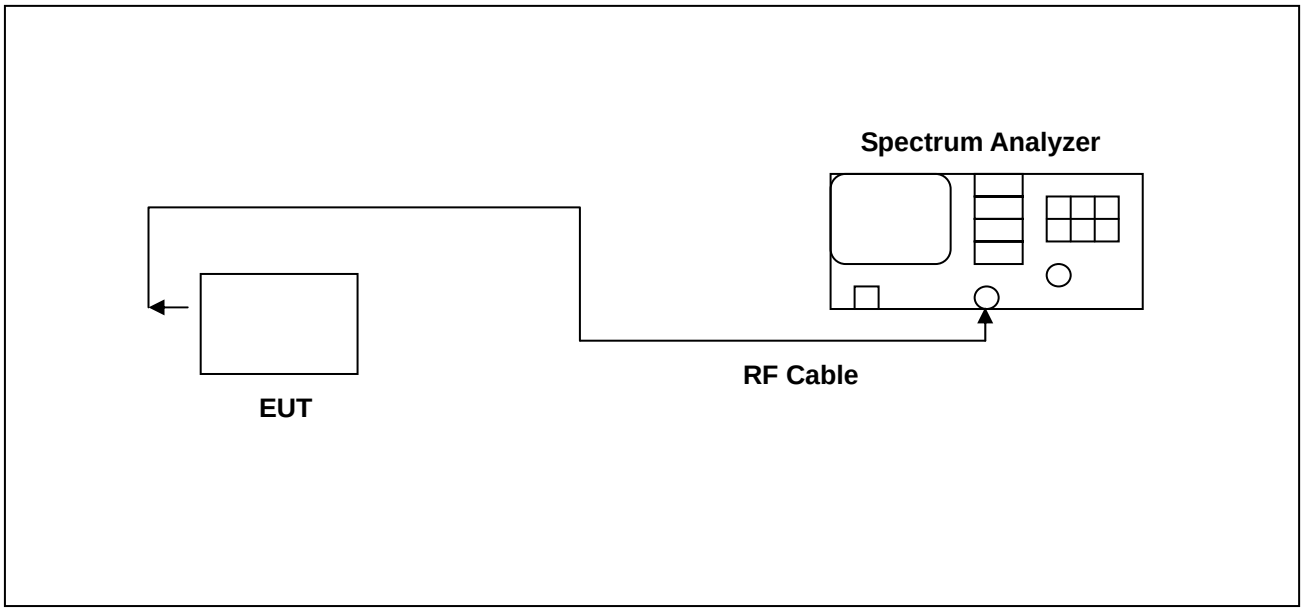
8.1 Test Condition & Setup:

The RF output port of the Equipment-Under-Test is directly coupled to the input of the EMC analyzer through a specialized RF connector and a 10dB passive attenuator. A fully charged battery was used for the supply voltage. The Bluetooth hopping function of the EUT was enabled. The following spectrum analyzer settings were used:

1. Span = zero span, centered on a hopping channel
2. RBW = 1 MHz
3. VBW ≥ RBW
4. Sweep = as necessary to capture the entire dwell time per hopping channel
5. Detector function = peak
6. Trace = max hold

The marker-delta function was used to determine the dwell time.

8.2 Test Instruments Configuration:



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8.3 Test Equipment List:

Describe	Manufacturer	Model	Serial Number	Calibration	
				Cal. Date	Due Date
Spectrum Analyzer	Agilent	E4445A	MY45300744	Nov. 29, 2008	Nov. 29, 2009
Attenuator	RADIALL	R41572000	0603033073	NA	NA

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8.4 Test Result

Bluetooth 2.0 DH1 Mode

Cycle Calculate	79CH * 0.4 = 31.6 (sec)
The EUT Hopping Number per Sec	1600 times/sec
Each Channel Dwell Times per Sec	800/79CH = 10.13(times/sec)
Each Channel Dwell Times (1)	**0.39** ms (sec)
Each Channel Dwell Times on Cycle(2)	31.6 * 10.13 = 320.108(times)
Dwell Times on Cycle (1) * (2)	**124.84212** ms (sec)
LIMIT(msec)	< = 400

Bluetooth 2.0 DH3 Mode

Cycle Calculate	79CH * 0.4 = 31.6 (sec)
The EUT Hopping Number per Sec	1600 times/sec
Each Channel Dwell Times per Sec	400/79CH=5.1(times/sec)
Each Channel Dwell Times (1)	**1.62** ms (sec)
Each Channel Dwell Times on Cycle(2)	31.6*5.1=161.16(times)
Dwell Times on Cycle (1) * (2)	**261.07920** ms (sec)
LIMIT(msec)	< = 400

Bluetooth 2.0 DH5 Mode

Cycle Calculate	79CH * 0.4 = 31.6 (sec)
The EUT Hopping Number per Sec	1600 times/sec
Each Channel Dwell Times per Sec	266.7/79CH=3.37 (times/sec)
Each Channel Dwell Times (1)	**2.88** ms (sec)
Each Channel Dwell Times on Cycle(2)	31.6*2.82=106.492 (times)
Dwell Times on Cycle (1) * (2)	**306.69696** ms (sec)
LIMIT(msec)	< = 400

Note: RB=1MHz; VB=1MHz; SPAN=0MHz; Sweep Time=20msec

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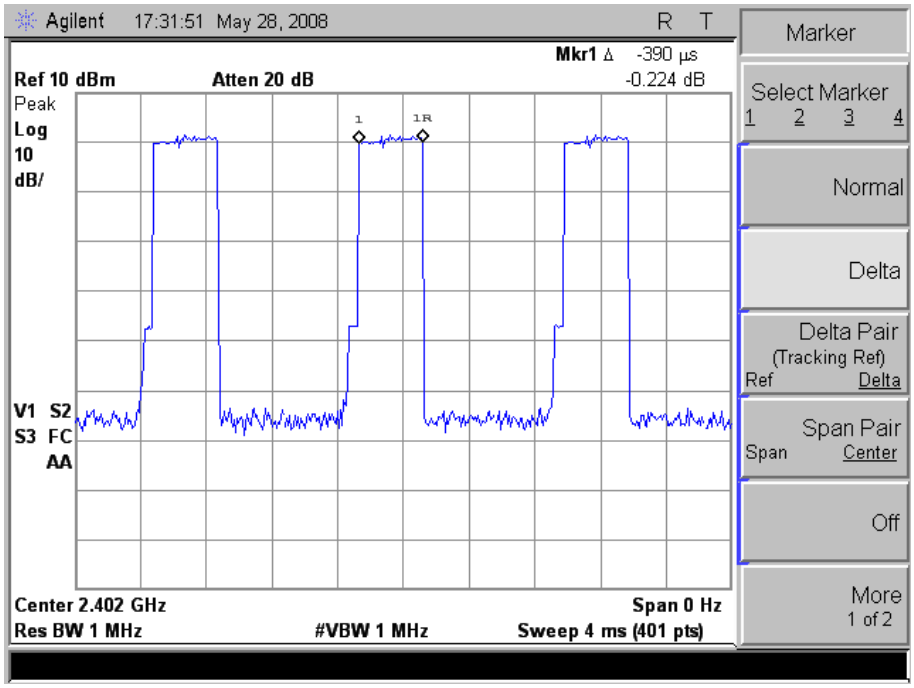
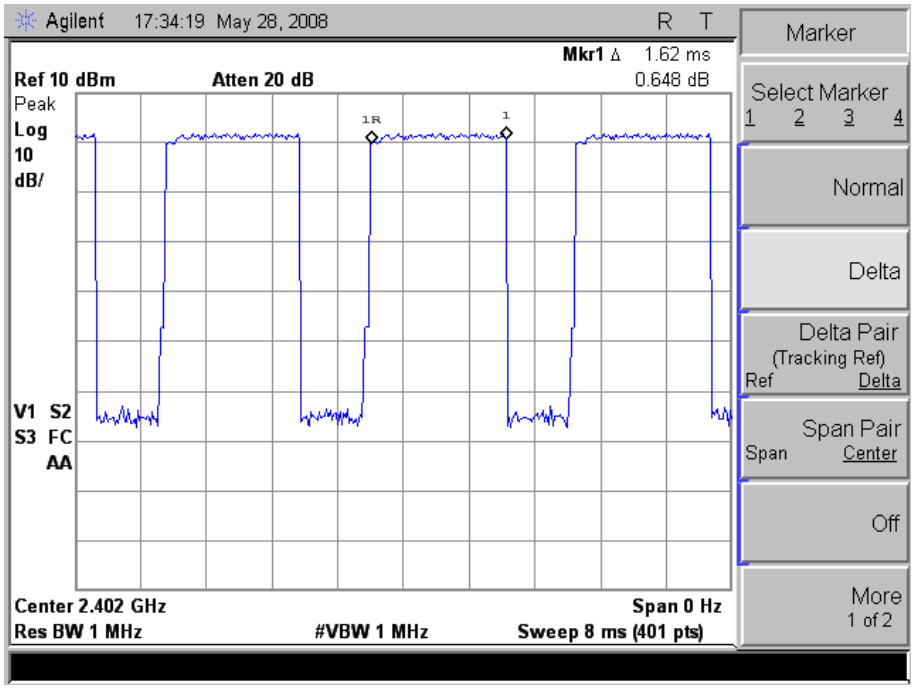
8.5 Test Graphs

Bluetooth 2.0 DH1



Bluetooth 2.0 DH3



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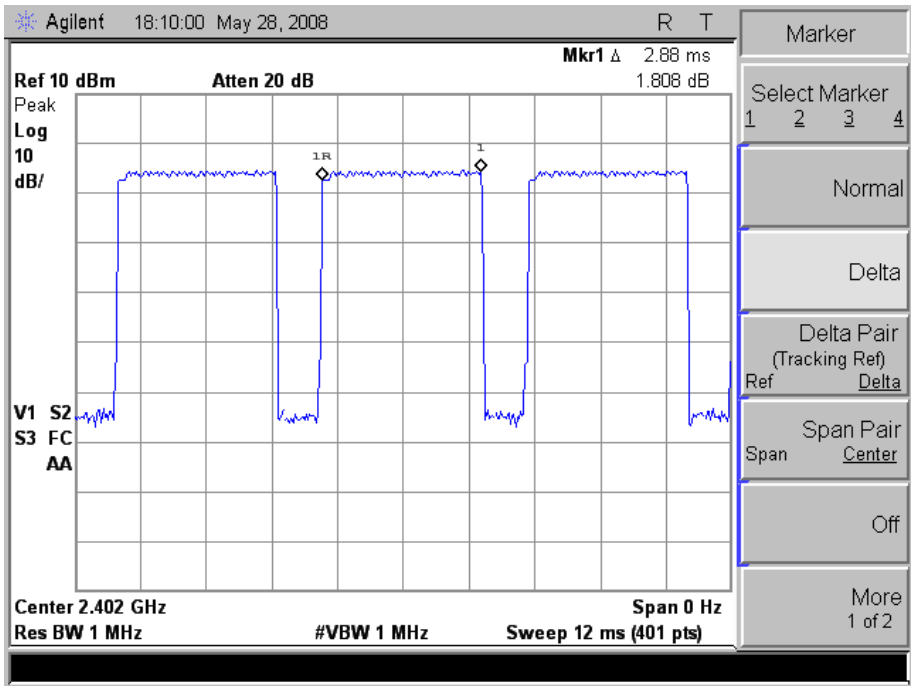
Bluetooth 2.0 DH5



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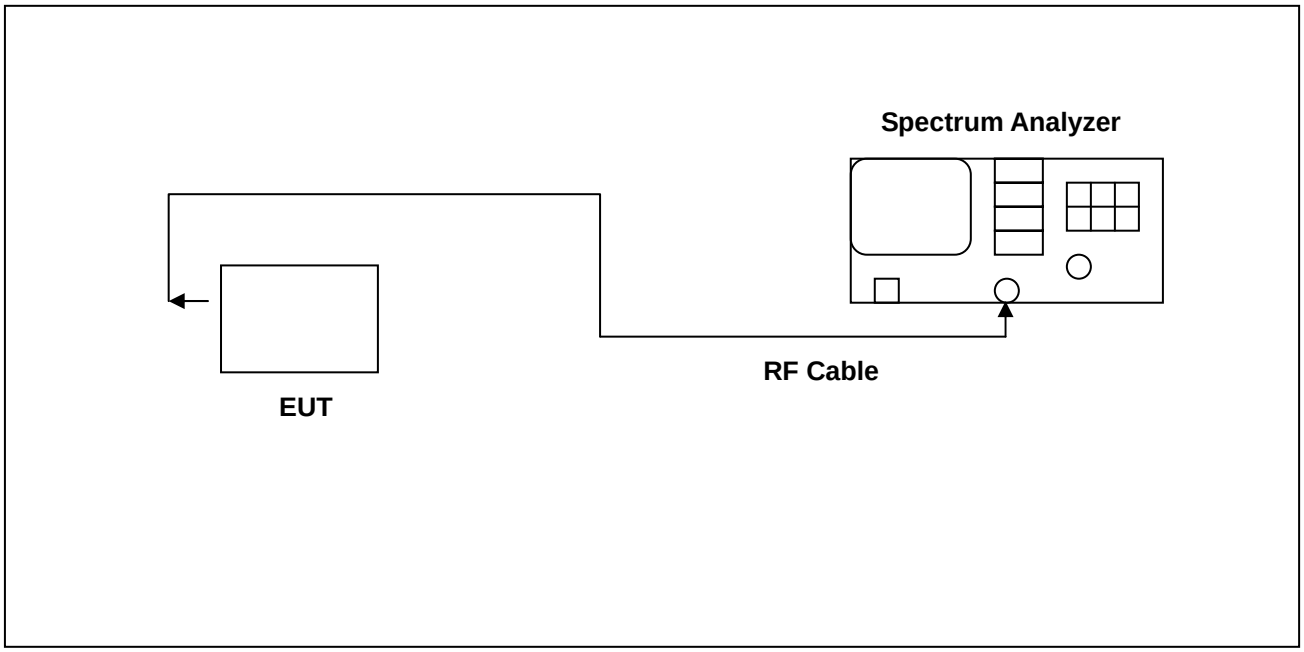
9. *Out of Band Conducted Emissions Requirements*

9.1 Test Condition & Setup:

In any 100 kHz bandwidth outside the EUT pass band, the RF power produced by the modulation products of the spreading sequence, the information sequence, and the carrier frequency shall be at least 20 dB below that of the maximum in-band 100 kHz emission, antenna output of the EUT was coupled directly to spectrum analyzer; if an external attenuator and/or cable was used, these losses are compensated for with the analyzer OFFSET function.

All other types of emissions from the EUT shall meet the general limits for radiated frequencies outside the pass band. The test was performed at 3 channels (Channel 1, 6, 11)

9.2 Test Instruments Configuration:



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9.3 Test Equipment List:

Describe	Manufacturer	Model	Serial Number	Calibration	
				Cal. Date	Due Date
Spectrum Analyzer	Agilent	E4445A	MY45300744	Nov. 29, 2008	Nov. 29, 2009

9.4 Test Result:

Refer to attached data sheets. Data shows out of band emissions are suppressed well below the -20 dBc minimum required by the Rules.

Note: Test Graphs See next page.

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9.5 Test Graphs

9.5.1 Bluetooth 2.0 Mode:

Applicant	: Perfect Tech Co., Ltd
Model No	: BT809X
EUT	: Bluetooth Headset
Test Mode	: Bluetooth 2.0
Test Date	: 05/29/2008

Please refer to next pager of detail testing data.

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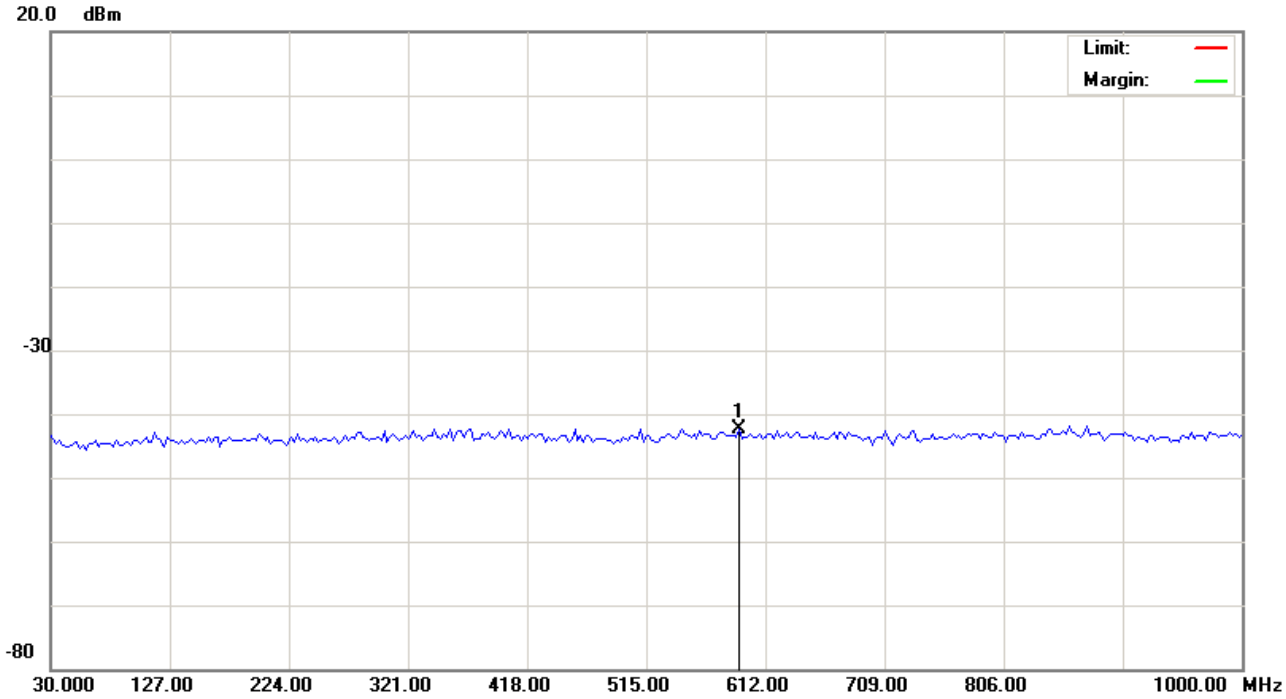
File :809(BT) Data :#1 Date: 2008/05/29 Time: 下午 01:34:12



Site site #1 Polarization: Temperature: 22 ℃

Limit: Power: AC 110V/60Hz Humidity: 60 %

EUT: Distance: 3m

M/N: 809

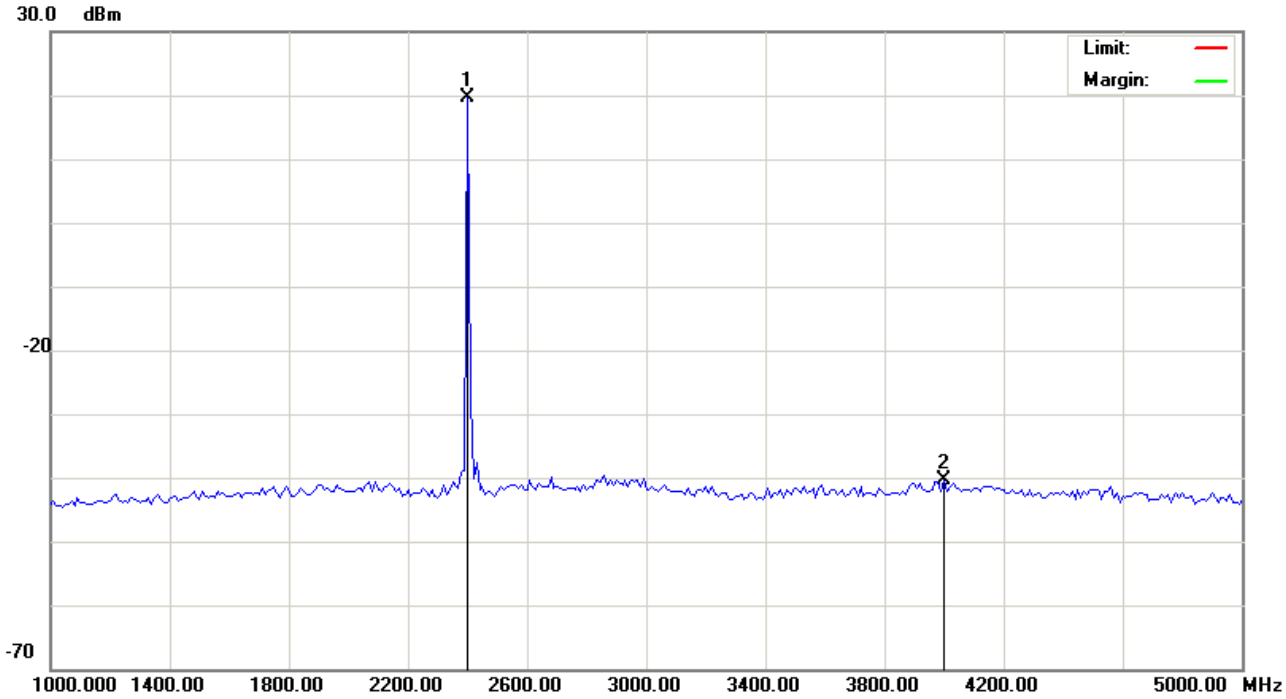
Mode: BT

Note: CH2402

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	590.1750	-48.36	6.02	-42.34			peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

File :809(BT) Data :#2 Date: 2008/05/29 Time: 下午 01:35:27



Site site #1 Polarization: Temperature: 22 ℃

Limit: Power: AC 110V/60Hz Humidity: 60 %

EUT: Distance: 3m

M/N: 809

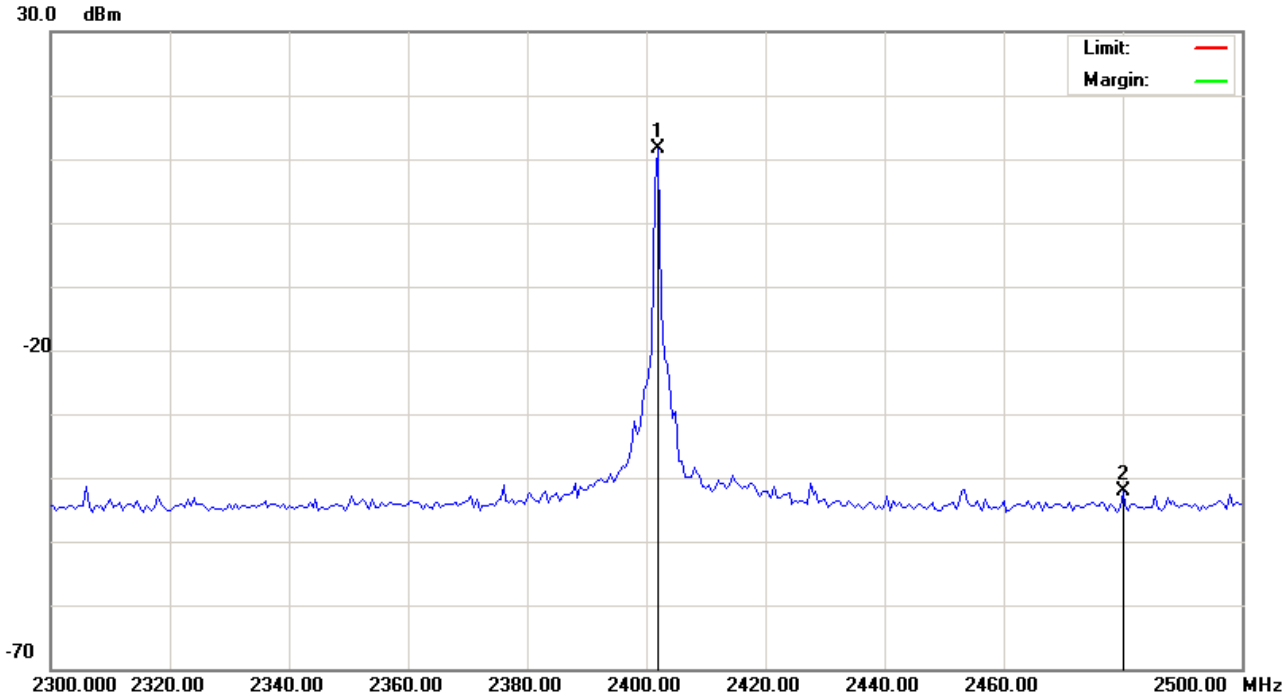
Mode: BT

Note: CH2402

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	2400.000	13.60	6.09	19.69			peak			
2		4000.000	-46.54	6.15	-40.39			peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

File :809(BT) Data :#3 Date: 2008/05/29 Time: 下午 01:36:19



Site site #1 Polarization: Temperature: 22 ℃

Limit: Power: AC 110V/60Hz Humidity: 60 %

EUT: Distance: 3m

M/N: 809

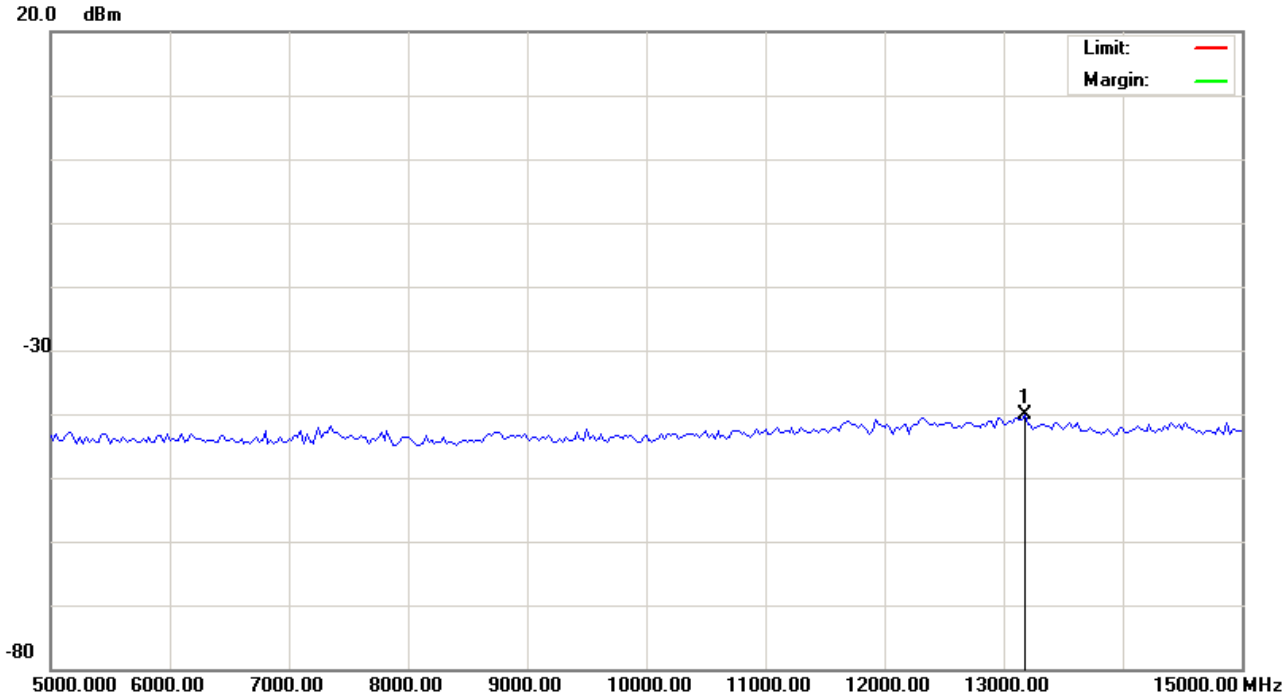
Mode: BT

Note: CH2402

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	2402.000	5.53	6.09	11.62			peak			
2		2480.000	-48.26	6.09	-42.17			peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

File :809(BT) Data :#4 Date: 2008/05/29 Time: 下午 01:36:56



Site site #1 Polarization: Temperature: 22 ℃

Limit: Power: AC 110V/60Hz Humidity: 60 %

EUT: Distance: 3m

M/N: 809

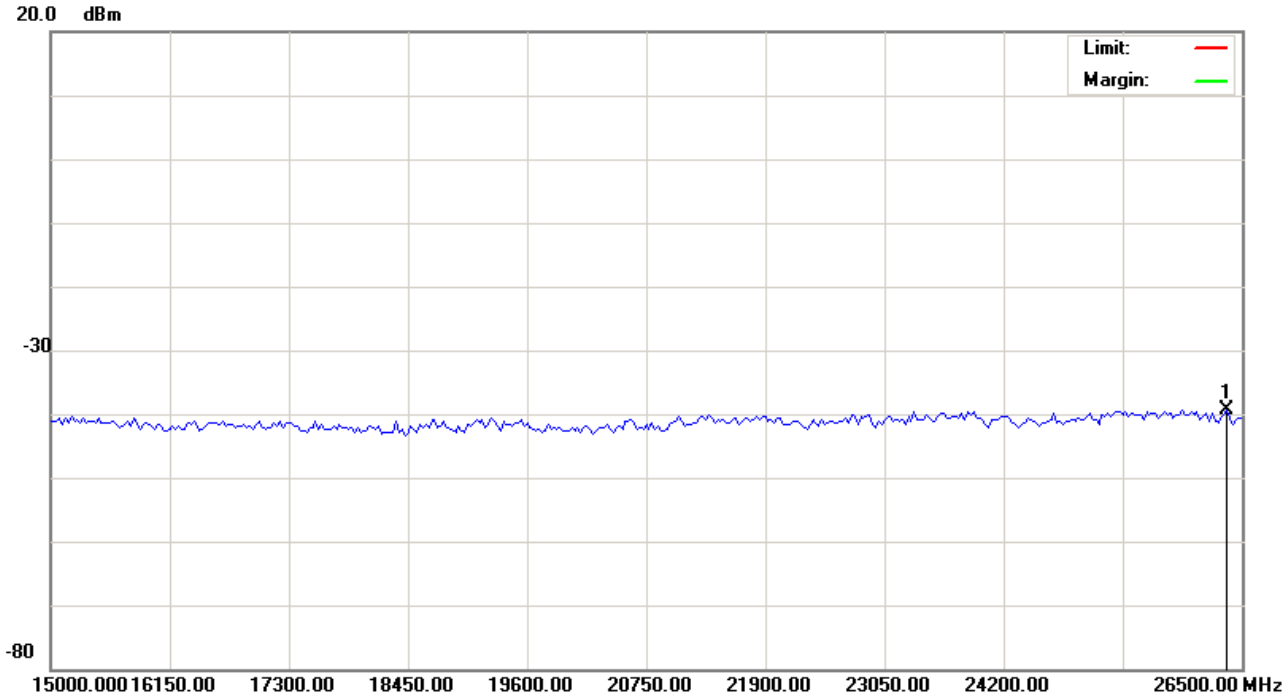
Mode: BT

Note: CH2402

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	13175.00	-46.70	6.50	-40.20			peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

File :809(BT) Data :#5 Date: 2008/05/29 Time: 下午 01:37:41



Site site #1 Polarization: Temperature: 22 ℃

Limit: Power: AC 110V/60Hz Humidity: 60 %

EUT: Distance: 3m

M/N: 809

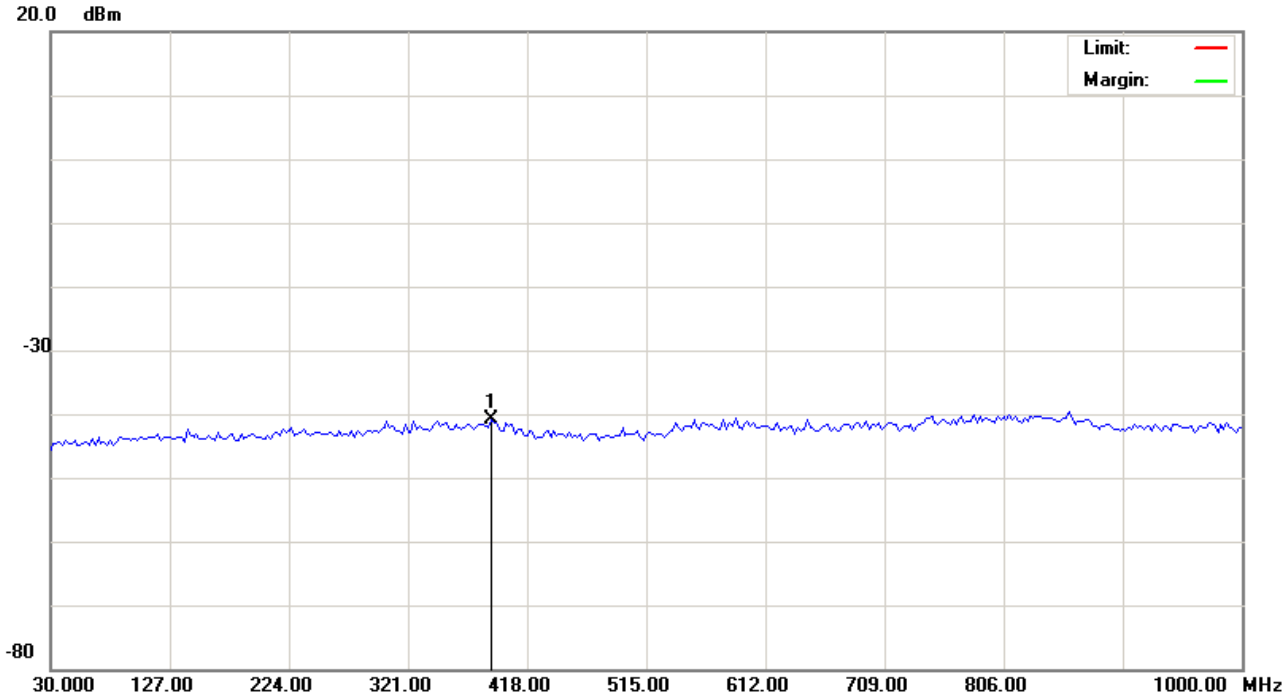
Mode: BT

Note: CH2402

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	26356.25	-46.26	6.99	-39.27			peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

File :809(BT) Data :#6 Date: 2008/05/29 Time: 下午 01:38:26



Site site #1 Polarization: Temperature: 22 ℃

Limit: Power: AC 110V/60Hz Humidity: 60 %

EUT: Distance: 3m

M/N: 809

Mode: BT

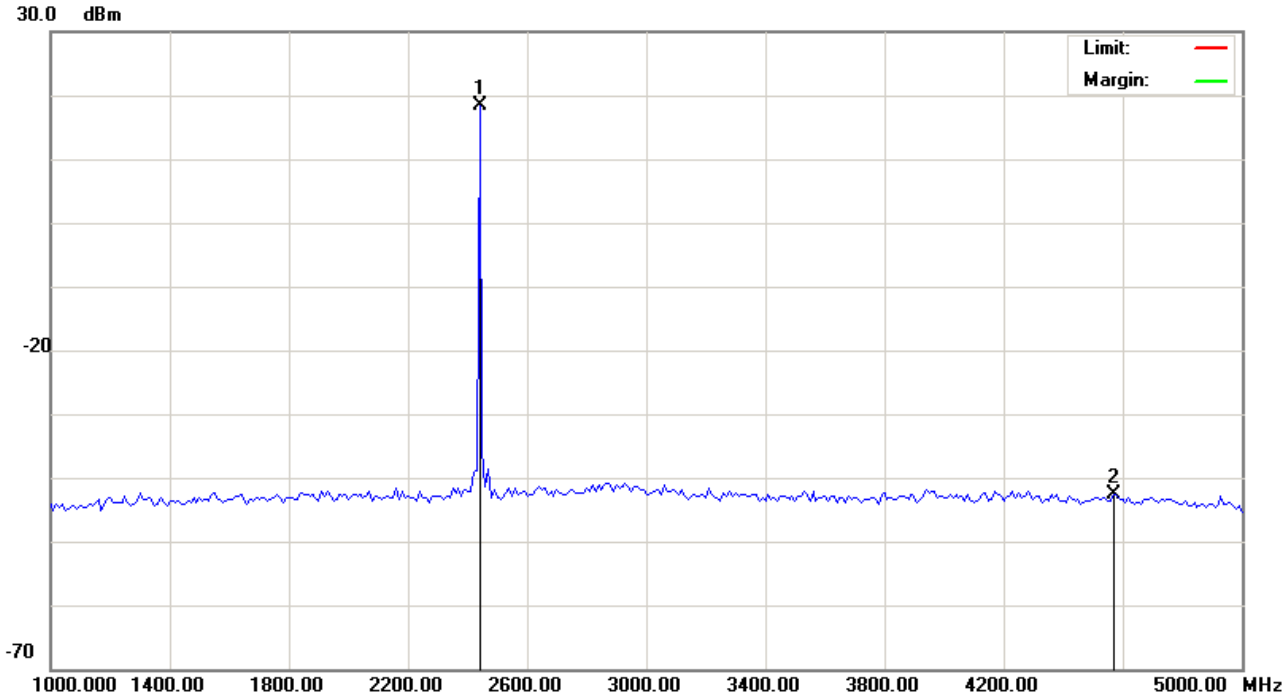
Note: CH2441

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	388.9000	-46.91	6.01	-40.90			peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

用 FinePrint 列印 - 可在 www.ahasoft.com.tw/FinePrint/ 訂購

File :809(BT) Data :#7 Date: 2008/05/29 Time: 下午 01:39:04



Site site #1 Polarization: Temperature: 22 ℃

Limit: Power: AC 110V/60Hz Humidity: 60 %

EUT: Distance: 3m

M/N: 809

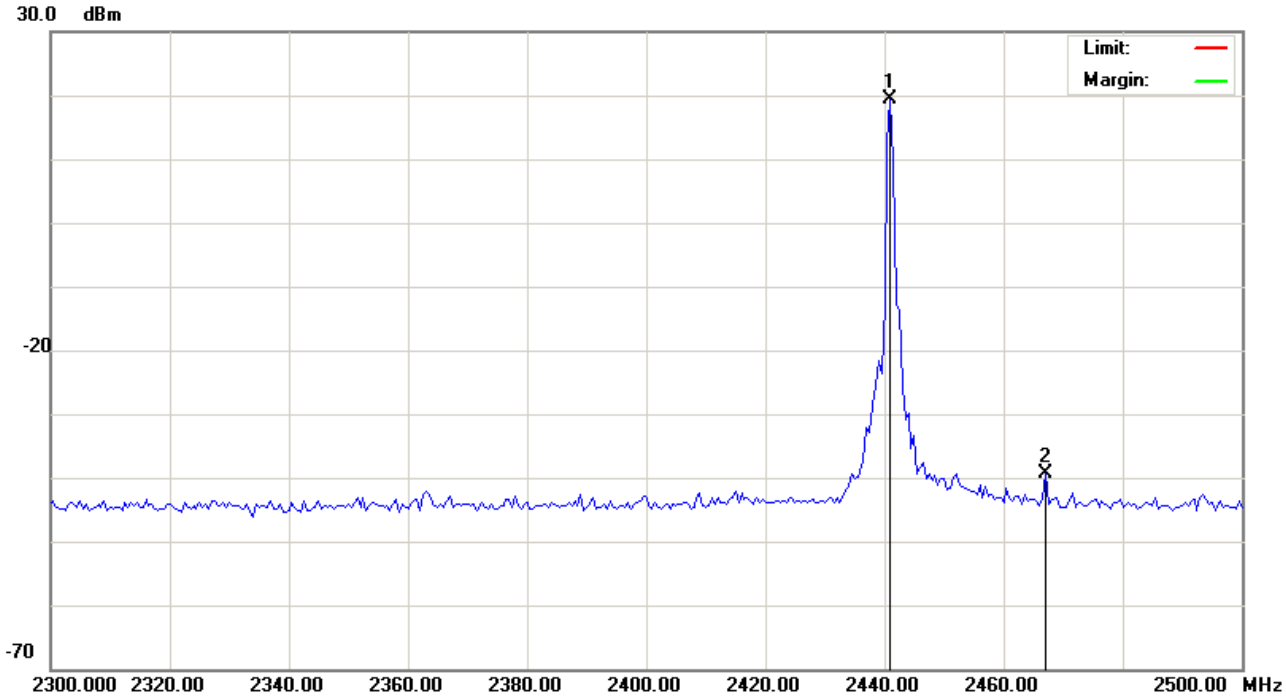
Mode: BT

Note: CH2441

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	2440.000	12.30	6.09	18.39			peak			
2		4570.000	-48.72	6.17	-42.55			peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

File :809(BT) Data :#8 Date: 2008/05/29 Time: 下午 01:40:13



Site site #1 Polarization: Temperature: 22 ℃

Limit: Power: AC 110V/60Hz Humidity: 60 %

EUT: Distance: 3m

M/N: 809

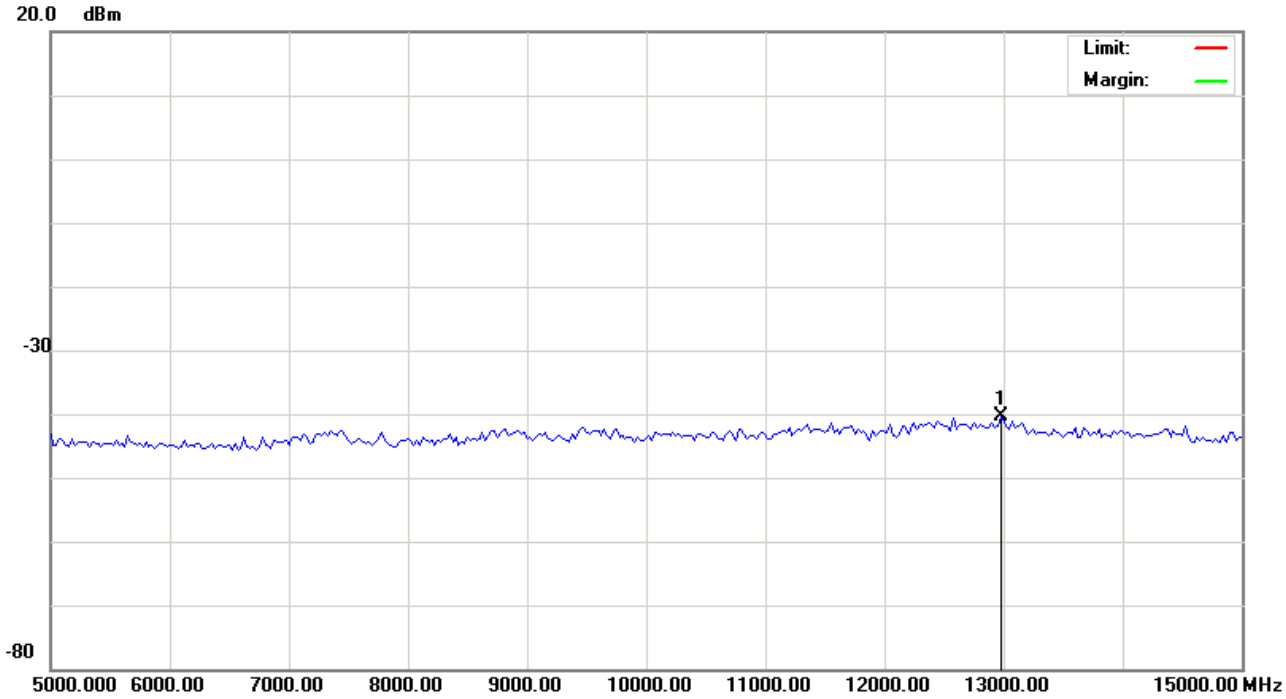
Mode: BT

Note: CH2441

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	2441.000	13.32	6.09	19.41			peak			
2		2467.000	-45.46	6.09	-39.37			peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

File :809(BT) Data :#9 Date: 2008/05/29 Time: 下午 01:41:36



Site site #1 Polarization: Temperature: 22 ℃

Limit: Power: AC 110V/60Hz Humidity: 60 %

EUT: Distance: 3m

M/N: 809

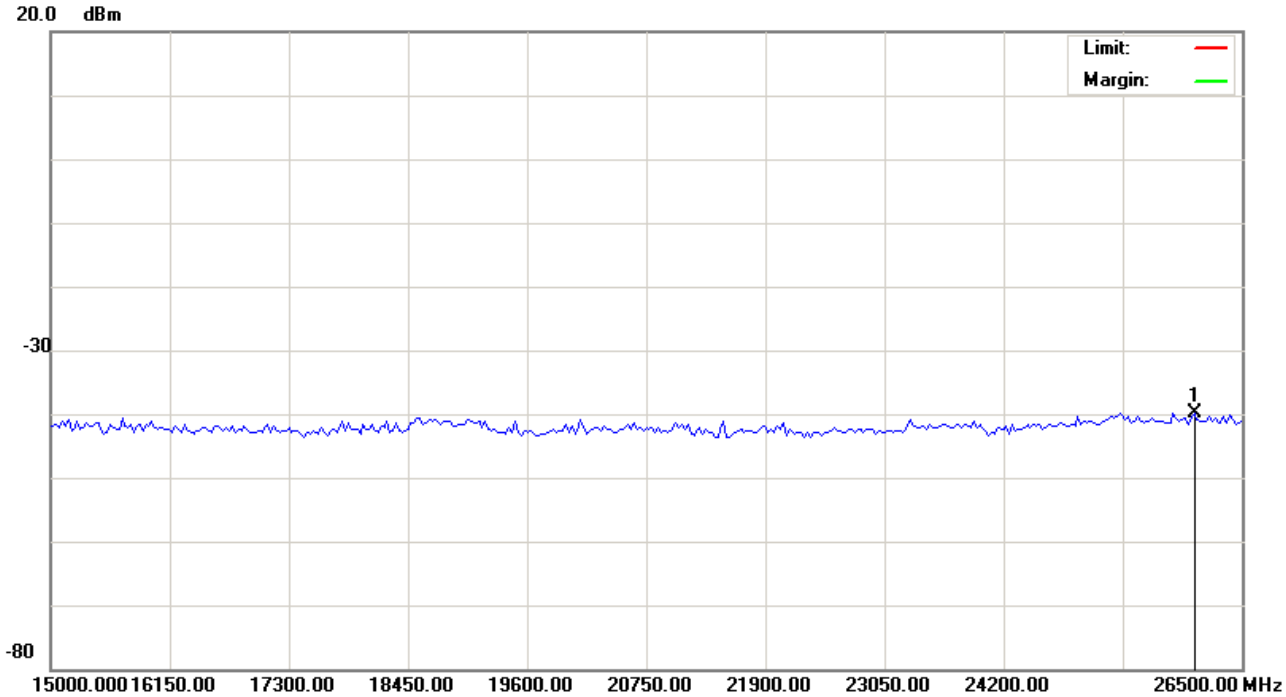
Mode: BT

Note: CH2441

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	12975.00	-46.78	6.49	-40.29			peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

File :809(BT) Data :#10 Date: 2008/05/29 Time: 下午 01:42:28



Site site #1 Polarization: Temperature: 22 ℃

Limit: Power: AC 110V/60Hz Humidity: 60 %

EUT: Distance: 3m

M/N: 809

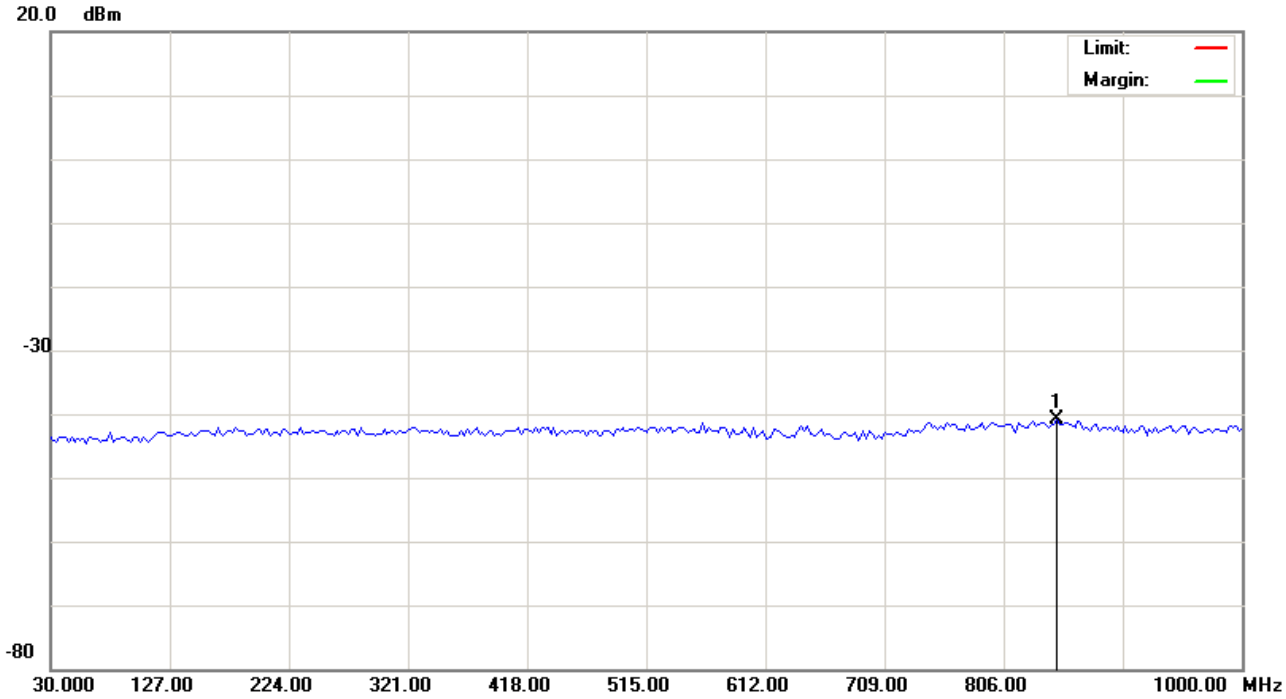
Mode: BT

Note: CH2441

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	26040.00	-46.77	6.98	-39.79			peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

File :809(BT) Data :#11 Date: 2008/05/29 Time: 下午 01:43:57



Site site #1 Polarization: Temperature: 22 ℃

Limit: Power: AC 110V/60Hz Humidity: 60 %

EUT: Distance: 3m

M/N: 809

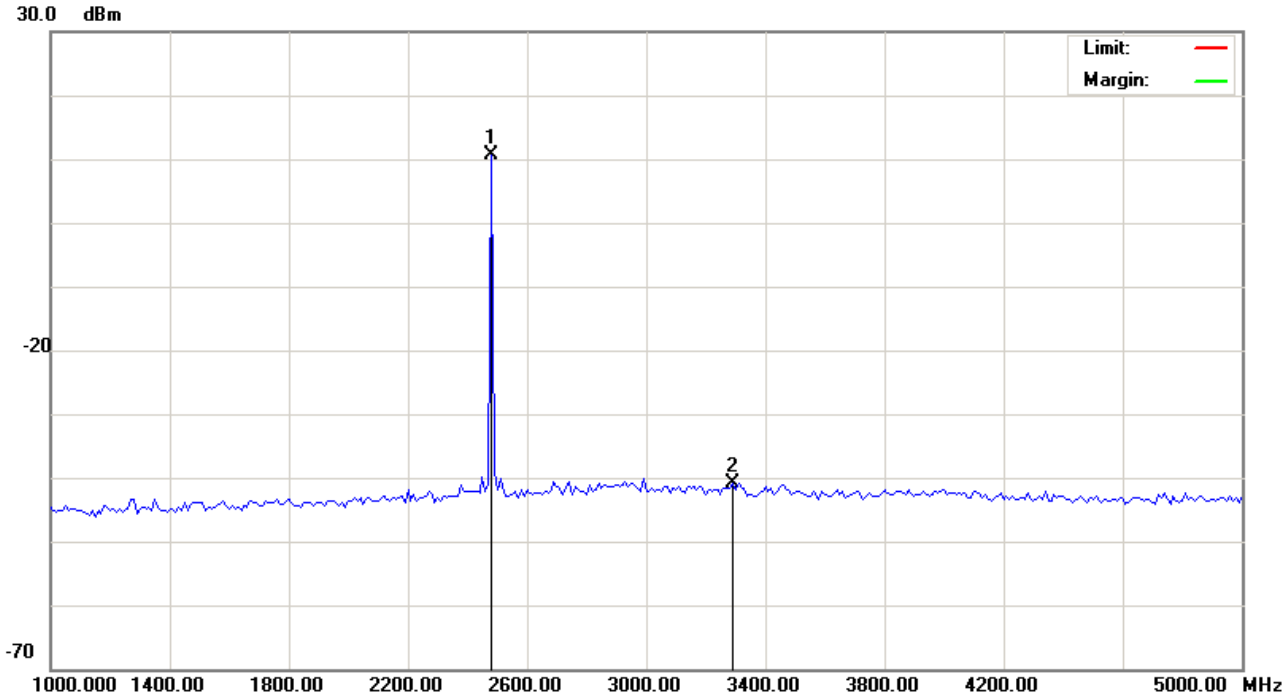
Mode: BT

Note: CH2480

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	849.6500	-46.96	6.03	-40.93			peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

File :809(BT) Data :#12 Date: 2008/05/29 Time: 下午 01:44:39



Site site #1 Polarization: Temperature: 22 ℃

Limit: Power: AC 110V/60Hz Humidity: 60 %

EUT: Distance: 3m

M/N: 809

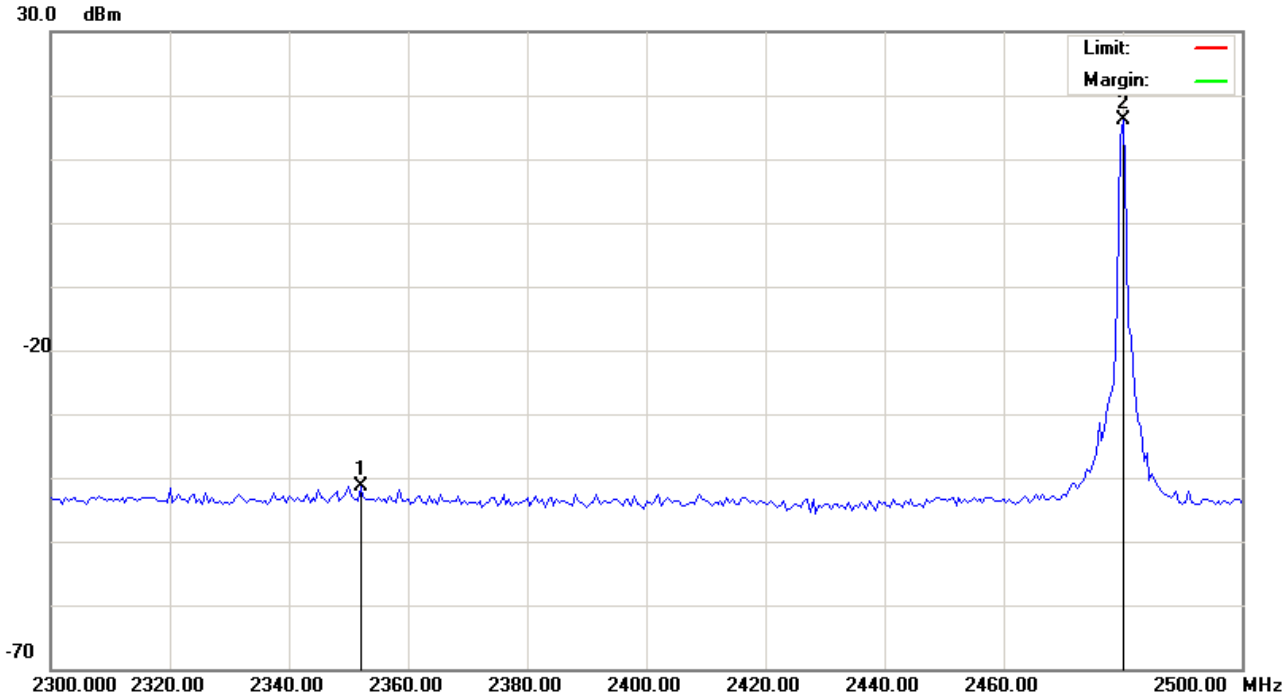
Mode: BT

Note: CH2480

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	2480.000	4.54	6.09	10.63			peak			
2		3290.000	-46.95	6.12	-40.83			peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

File :809(BT) Data :#13 Date: 2008/05/29 Time: 下午 01:45:12



Site site #1 Polarization: Temperature: 22 ℃

Limit: Power: AC 110V/60Hz Humidity: 60 %

EUT: Distance: 3m

M/N: 809

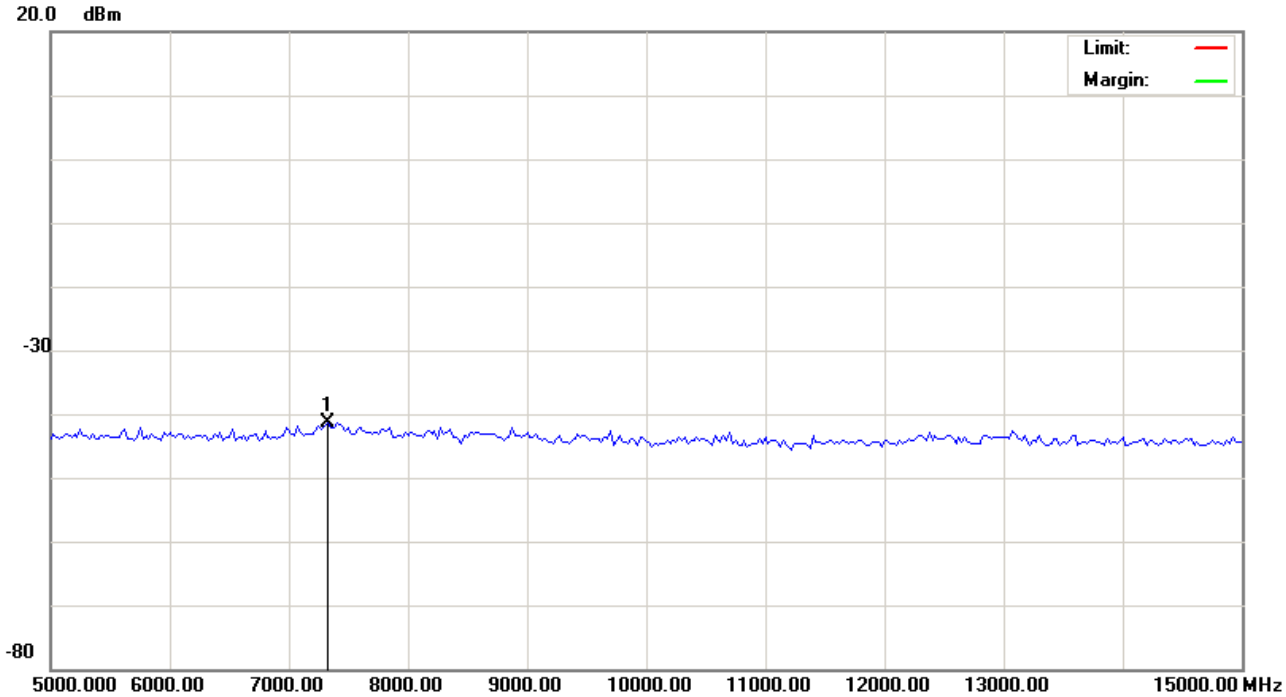
Mode: BT

Note: CH2480

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1		2352.000	-47.48	6.09	-41.39			peak			
2	*	2480.000	10.11	6.09	16.20			peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

File :809(BT) Data :#14 Date: 2008/05/29 Time: 下午 01:45:56



Site site #1 Polarization: Temperature: 22 ℃

Limit: Power: AC 110V/60Hz Humidity: 60 %

EUT: Distance: 3m

M/N: 809

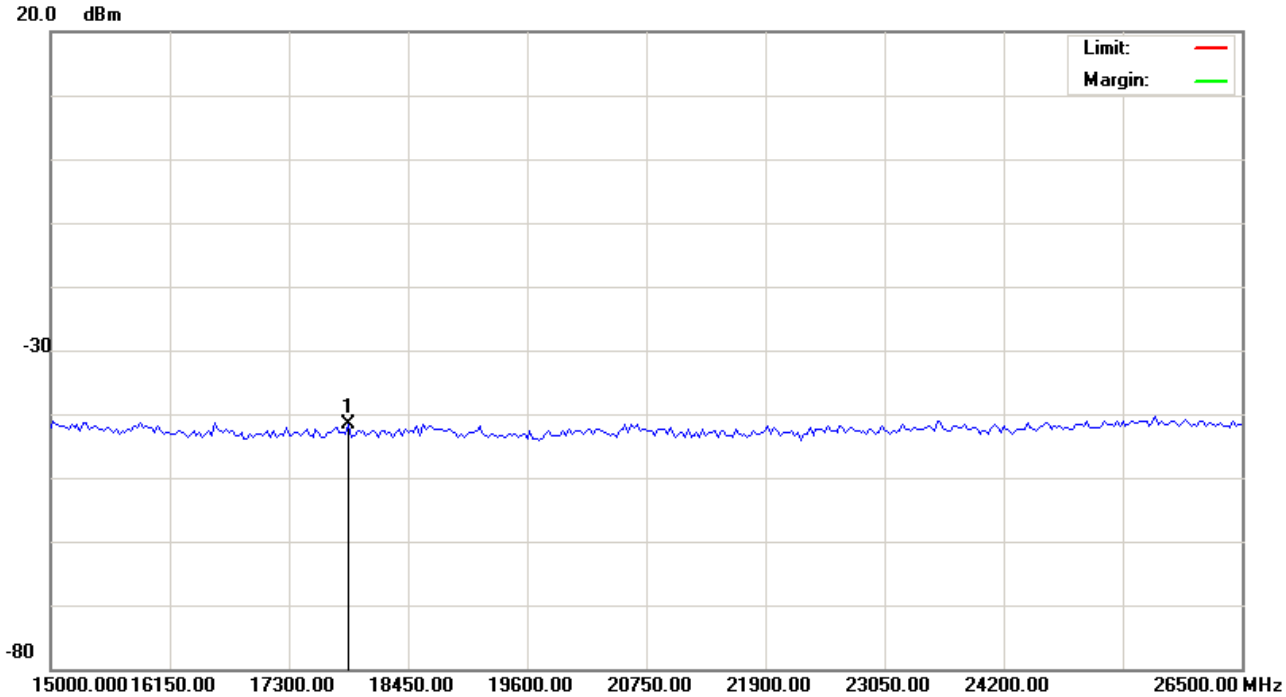
Mode: BT

Note: CH2480

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	7325.000	-47.57	6.28	-41.29			peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

File :809(BT) Data :#15 Date: 2008/05/29 Time: 下午 01:46:34



Site site #1 Polarization: Temperature: 22 ℃

Limit: Power: AC 110V/60Hz Humidity: 60 %

EUT: Distance: 3m

M/N: 809

Mode: BT

Note: CH2480

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	17875.00	-48.17	6.67	-41.50			peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

10. Band Edges Requirements

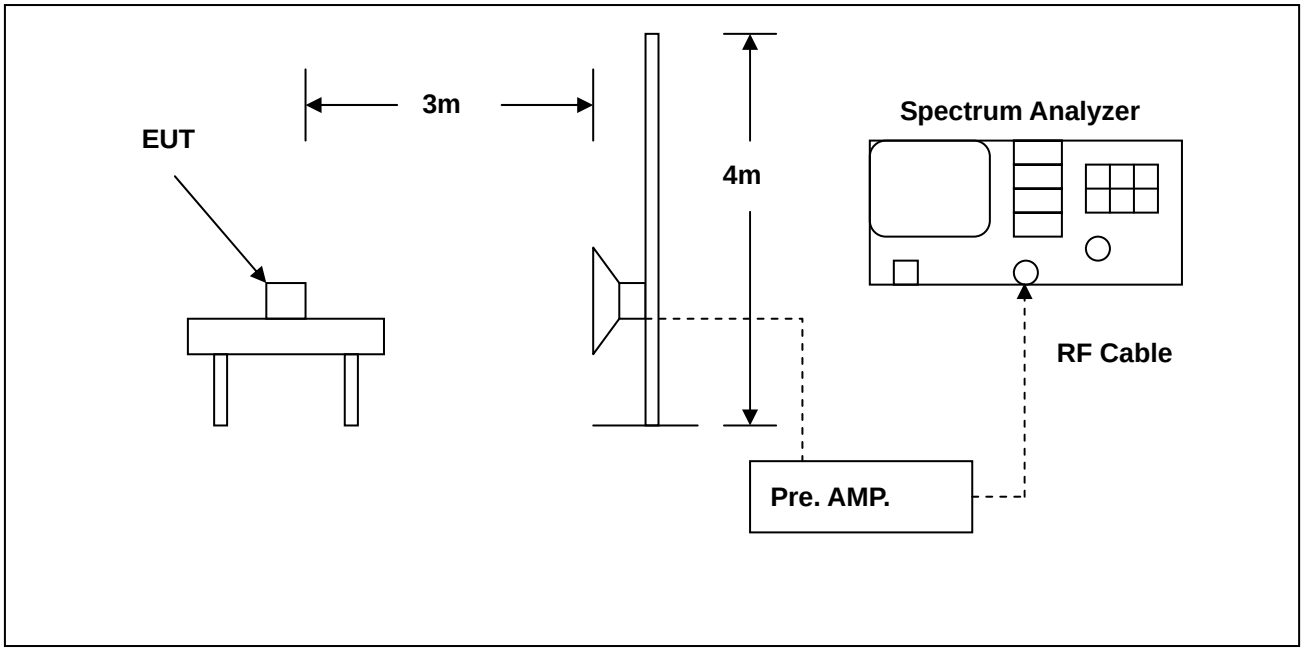
10.1 Test Condition & Setup:

The emissions on the harmonics frequencies, the limits, and the margin of compliance are presented. These tests were made when the transmitter was in full radiated power. The additional test was performed to show compliance with the requirement at the band-edge frequency 2483.5 MHz and up to 2500 MHz and at 2390.0 MHz.

The transmitter was configured with the worst case antenna and setup to transmit at the highest channel. Then the field strength was measured at 2483.5 MHz.

The transmitter was then configured with the worst case antenna and setup to transmit at the lowest channel. Then the field strength was measured at 2390.0 MHz. These tests were performed at 4 different bit rates.

10.2 Test Instruments Configuration:



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10.3 Test Equipment List:

Describe	Manufacturer	Model	Serial Number	Calibration	
				Cal. Date	Due Date
Spectrum Analyzer	Agilent	E4408B	MY45107753	Jun. 05, 2008	Jun. 05, 2009
Pre Amplifier	Agilent	8449B	3008A02237	Jun. 03, 2008	Jun. 03, 2009
Horn Antenna	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	9120D-550	Jun. 26, 2007	Jun. 26, 2008

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10.4 Test Result

10.4.1 Bluetooth 2.0 Mode:

Applicant	: Perfect Tech Co., Ltd
Model No	: BT809X
EUT	: Bluetooth Headset
Test Mode	: Low CH & High CH
Test Date	: 05/27/2008

Test Graphs See next page.

Notes:

1. Margin= Amplitude - Limits
2. Height of table for EUT placed: 0.8 Meter.
3. ANT= Antenna height.
4. Duty= Duty cycle correction factor.
5. Dis= Distance extrapolation factor.
6. Amplitude= Reading Amplitude – Amplifier gain + Cable loss + Antenna factor
   (Auto calculate in spectrum analyzer)
7. Actual Amp= Amplitude – Duty – Dis.

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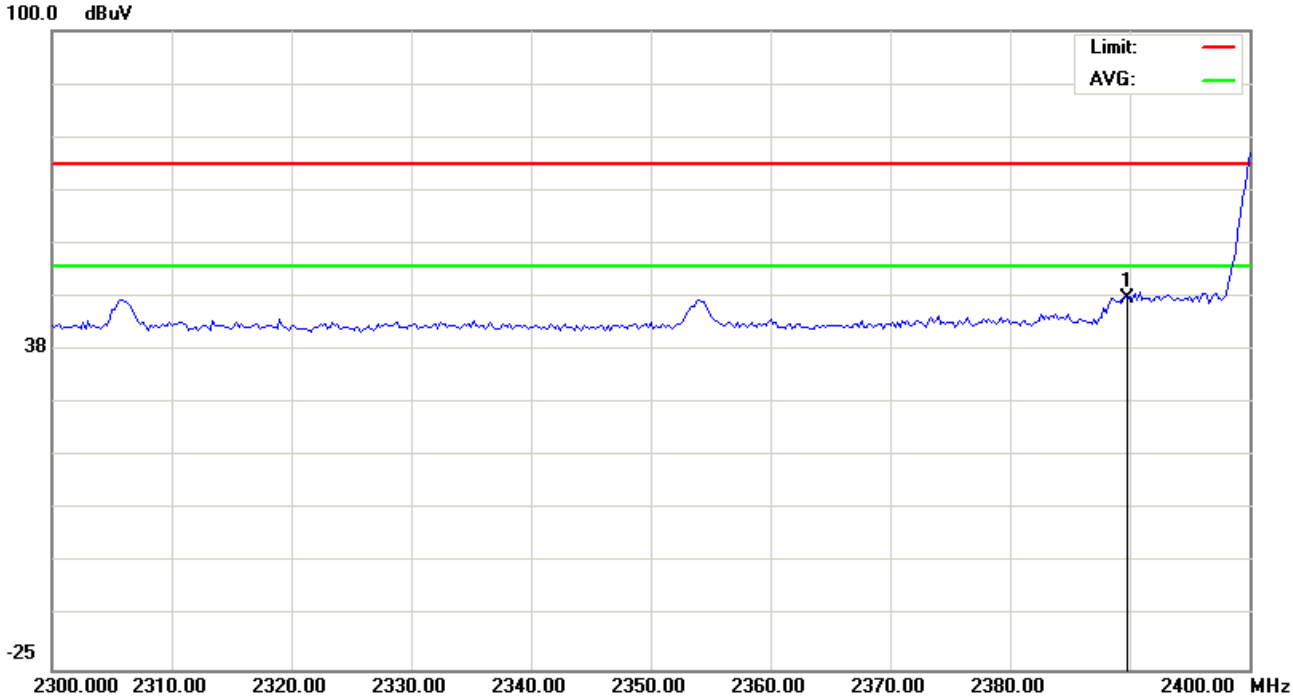
File :809(bandedge) Data :#1 Date: 2008-5-27 Time: 下午 03:42:36



Site site#1 Polarization: ***Vertical*** Temperature: 22 ℃

Limit: FCC part 15 (PK) Power: Humidity: 60 %

EUT: Distance: 3m

M/N: 809

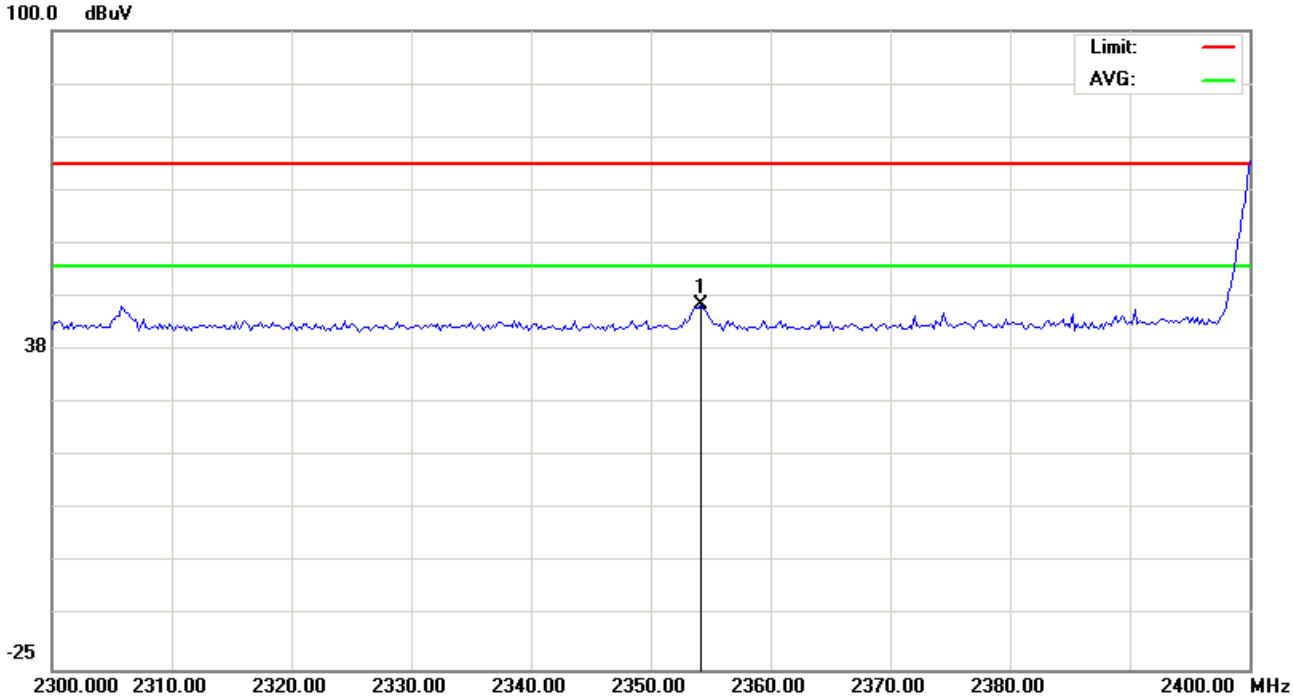
Mode: BT

Note: 2402MHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1	*	2389.800	47.42	0.19	47.61	74.00	-26.39	peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

File :809(bandedge) Data :#5 Date: 2008-5-27 Time: 下午 04:08:35



Site site#1 Polarization: ***Horizontal*** Temperature: 22 ℃

Limit: FCC part 15 (PK) Power: Humidity: 60 %

EUT: Distance: 3m

M/N: 809

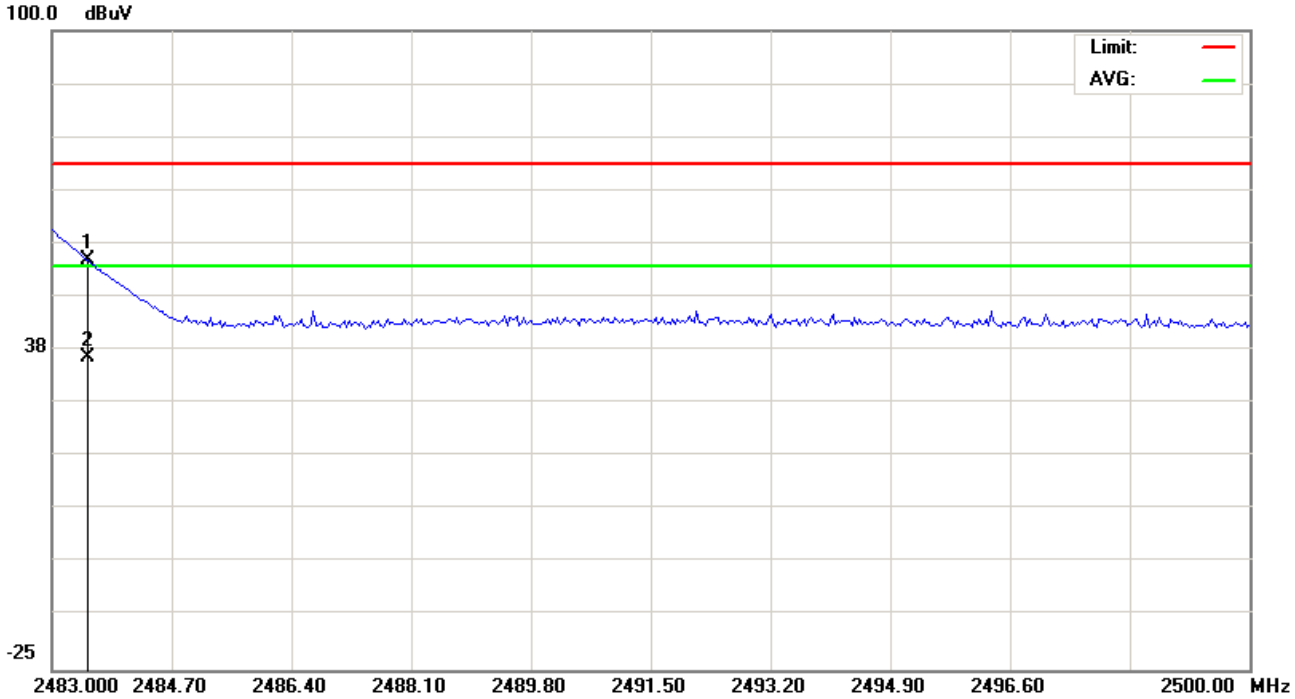
Mode: BT

Note: 2402MHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1	*	2354.200	46.22	0.16	46.38	74.00	-27.62	peak			

*:Maximum data x:Over limit !:over margin ●Reference Only

File :809(bandedge) Data :#3 Date: 2008-5-27 Time: 下午 03:54:00



Site site#1 Polarization: ***Vertical*** Temperature: 22 ℃

Limit: FCC part 15 (PK) Power: Humidity: 60 %

EUT: Distance: 3m

M/N: 809

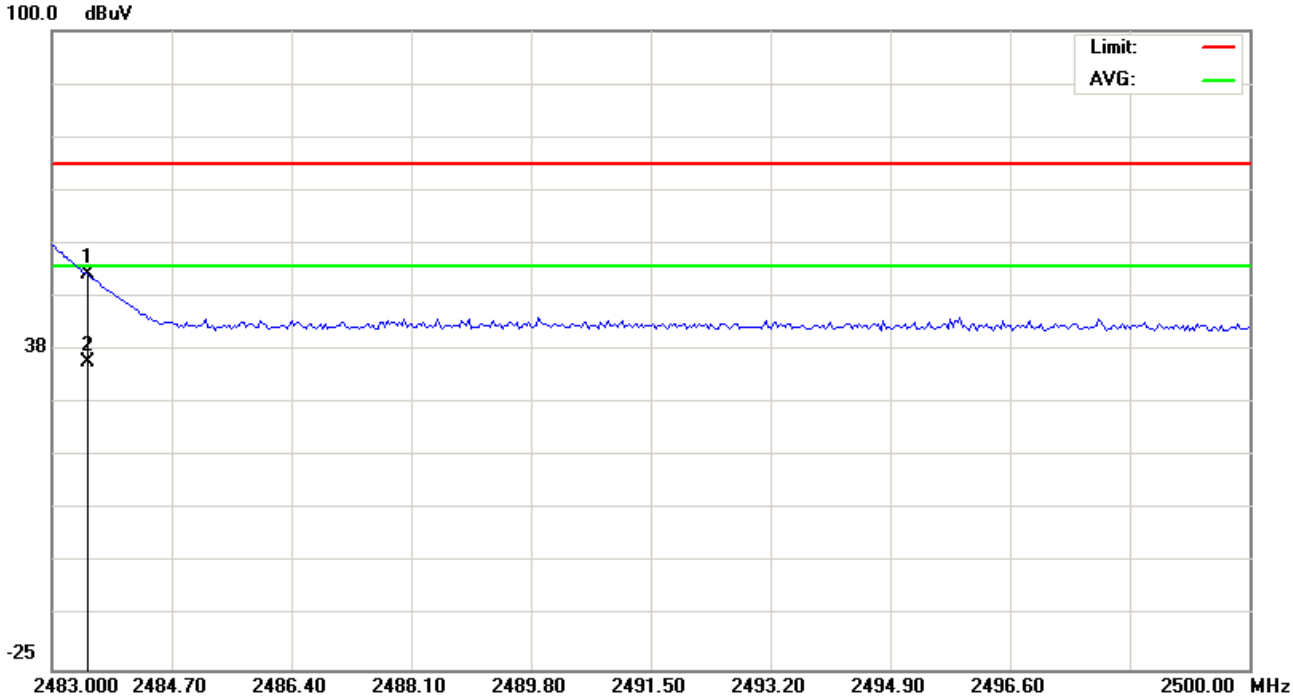
Mode: BT

Note: 2480MHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1		2483.510	54.78	0.25	55.03	74.00	-18.97	peak			
2	*	2483.510	35.89	0.25	36.14	54.00	-17.86	AVG			

*:Maximum data x:Over limit !:over margin ●Reference Only

File :809(bandedge) Data :#7 Date: 2008-5-27 Time: 下午 04:19:21



Site site#1 Polarization: ***Horizontal*** Temperature: 22 ℃

Limit: FCC part 15 (PK) Power: Humidity: 60 %

EUT: Distance: 3m

M/N: 809

Mode: BT

Note: 2480MHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree	Comment
1		2483.510	52.02	0.25	52.27	74.00	-21.73	peak			
2	*	2483.510	35.01	0.25	35.26	54.00	-18.74	AVG			

*:Maximum data x:Over limit !:over margin ●Reference Only

11. Antenna Requirements

11.1 Standard Applicable:

For intentional device, according to 15.203, 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.

And According to 15.247 (b), if transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

11.2 Antenna Connector Construction

The antenna used in this product is internal antenna. And the maximum Gain of this antenna is only **-4** dBi.

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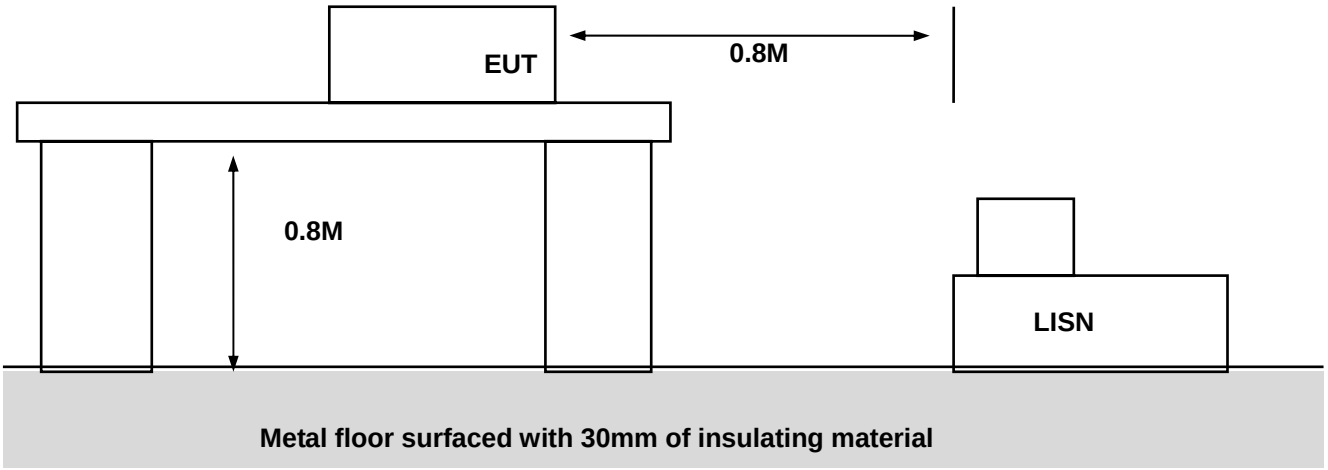
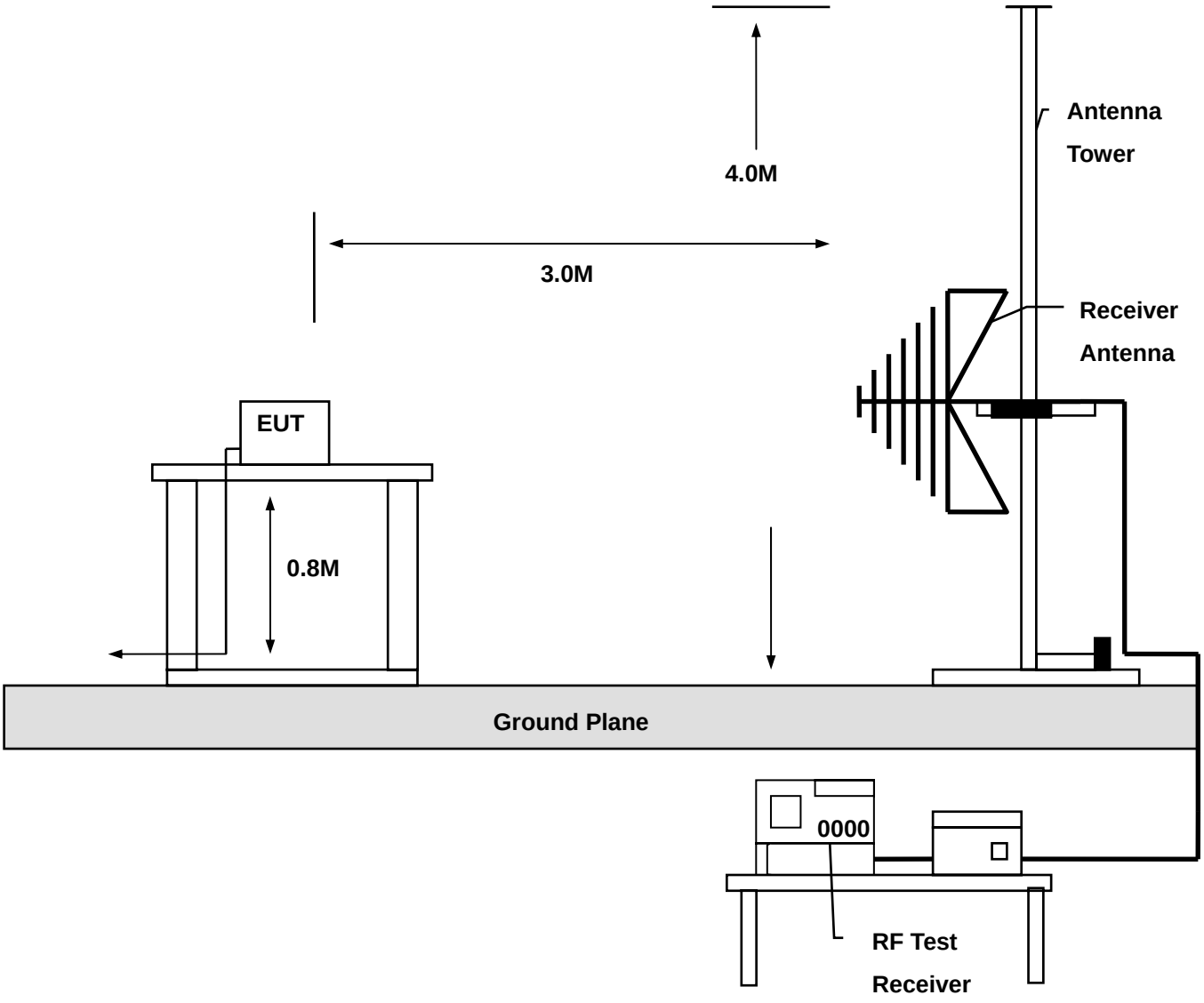
Appendix A - EUT Test SETUP

MEASUREMENT OF POWER LINE CONDUCTED RFI VOLTAGE



MEASUREMENT OF RADIATED EMISSION