



Test Report

Product Name : Bluetooth AV Adapter
Model No. : BTAV101
FCC ID. : TQ6BTAV101

Applicant : Shanghai Flaircomm Technologies

Address : No211 North Urumqi Road, Suite 616, Shanghai 200040 P.R. China

Date of Receipt : April 20, 2006

Issued Date : June 13, 2006

Report No. : 066L049-RF-US-P05V01

The Test Results relate only to the samples tested.

The test report shall not be reproduced except in full without the written approval of Quietek Corporation.

This report must not be used to claim product endorsement by NVLAP any agency of the U.S. Government

Test Report Certification

Issued Date: June 13, 2006

Report No.: 066L049-RF-US-P05V01



Product Name : Bluetooth AV Adapter

Applicant : Shanghai Flaircomm Technologies

Address : No211 North Urumqi Road, Suite 616, Shanghai 200040 P.R.
China

Manufacturer : Shanghai Flaircomm Technologies

Model No. : BTAV101

FCC ID. : TQ6BTAV101

Rated Voltage : AC 120V/60Hz

Working Voltage : DC 3.7V

Trade Name : Flaircomm

Applicable Standard : FCC CFR Title 47 Part 15 Subpart C: 2005
ANSI C63.4: 2003
CISPR 22: 2005

Test Result : Complied

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Documented By : 
(M a n d y L i u)

Tested By : 
(A l e x C h i u)

Approved By : 
(G e n e Z h a n g)

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1. GENERAL INFORMATION

1.1. EUT Description

Product Name	: Bluetooth AV Adapter
Trade Name	: Flaircomm
FCC ID.	: TQ6BTAV101
Model No.	: BTAV101
Frequency Range	: 2402 - 2480MHz
Channel Number	: 79
Type of Modulation	: FHSS
Antenna Type	: Printed
Channel Control	: Auto

Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 00:	2402 MHz	Channel 20:	2422 MHz	Channel 40:	2442 MHz	Channel 60:	2462 MHz
Channel 01:	2403 MHz	Channel 21:	2423 MHz	Channel 41:	2443 MHz	Channel 61:	2463 MHz
Channel 02:	2404 MHz	Channel 22:	2424 MHz	Channel 42:	2444 MHz	Channel 62:	2464 MHz
Channel 03:	2405 MHz	Channel 23:	2425 MHz	Channel 43:	2445 MHz	Channel 63:	2465 MHz
Channel 04:	2406 MHz	Channel 24:	2426 MHz	Channel 44:	2446 MHz	Channel 64:	2466 MHz
Channel 05:	2407 MHz	Channel 25:	2427 MHz	Channel 45:	2447 MHz	Channel 65:	2467 MHz
Channel 06:	2408 MHz	Channel 26:	2428 MHz	Channel 46:	2448 MHz	Channel 66:	2468 MHz
Channel 07:	2409 MHz	Channel 27:	2429 MHz	Channel 47:	2449 MHz	Channel 67:	2469 MHz
Channel 08:	2410 MHz	Channel 28:	2430 MHz	Channel 48:	2450 MHz	Channel 68:	2470 MHz
Channel 09:	2411 MHz	Channel 29:	2431 MHz	Channel 49:	2451 MHz	Channel 69:	2471 MHz
Channel 10:	2412 MHz	Channel 30:	2432 MHz	Channel 50:	2452 MHz	Channel 70:	2472 MHz
Channel 11:	2413 MHz	Channel 31:	2433 MHz	Channel 51:	2453 MHz	Channel 71:	2473 MHz
Channel 12:	2414 MHz	Channel 32:	2434 MHz	Channel 52:	2454 MHz	Channel 72:	2474 MHz
Channel 13:	2415 MHz	Channel 33:	2435 MHz	Channel 53:	2455 MHz	Channel 73:	2475 MHz
Channel 14:	2416 MHz	Channel 34:	2436 MHz	Channel 54:	2456 MHz	Channel 74:	2476 MHz
Channel 15:	2417 MHz	Channel 35:	2437 MHz	Channel 55:	2457 MHz	Channel 75:	2477 MHz
Channel 16:	2418 MHz	Channel 36:	2438 MHz	Channel 56:	2458 MHz	Channel 76:	2478 MHz
Channel 17:	2419 MHz	Channel 37:	2439 MHz	Channel 57:	2459 MHz	Channel 77:	2479 MHz
Channel 18:	2420 MHz	Channel 38:	2440 MHz	Channel 58:	2460 MHz	Channel 78:	2480 MHz
Channel 19:	2421 MHz	Channel 39:	2441 MHz	Channel 59:	2461 MHz		

The system receivers have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shift frequencies in synchronization with the transmitted signals

Frequency hopping spread spectrum systems are not required to employ all available hopping channels during each transmission. The transmitter is presented with a continuous data stream. In addition, a system employing short transmission bursts must comply with the definition of a frequency hopping system and must distribute its 79 channels and over the minimum number of hopping channels (75 channels).

The incorporation of intelligence within a frequency hopping spread spectrum system that permits the system to recognize other users within the spectrum band so that it individually and independently chooses and adapts its hopsets to avoid hopping on occupied channels is permitted. The coordination of frequency hopping systems in any other manner for the express purpose of avoiding the simultaneous occupancy of individual hopping frequencies by multiple transmitters is not permitted.

Note:

1. This device is a Bluetooth AV Adapter including a 2.4GHz transceiver.
2. These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with Part 15 Subpart C Paragraph 15.247 for spread spectrum devices.
3. Regards to the frequency band operation; the lowest 、 middle and highest frequency of channel were selected to perform the test, then shown on this report.
4. This device is a composite device in accordance with Part 15 Subpart B regulations. The function for the receiver was measured and made a test report that the report number is 066L049-IT-US-P01V02, certified under Declaration of Conformity.
5. QuieTek verified among construction and function in typical operation, then shown in this test report.

1.2. Operational Description

The EUT is a Bluetooth AV Adapter with 79 channels.

This device provides wireless technology that revolutionizes personal connectivity. It is the solution for the seamless integration of Bluetooth technology into personal computer enabling short-range wireless connections between desktop/laptop computers, Bluetooth-enabled peripherals, and portable handheld devices.

Test Mode:	Mode 1: Transmitter
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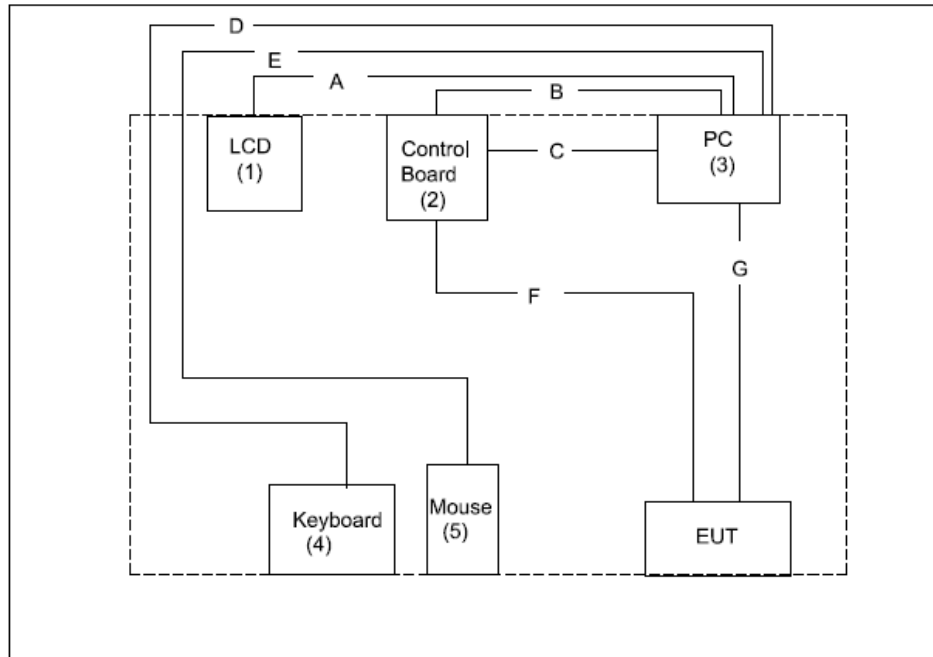
1.3. Tested System Details

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

	Product	Manufacturer	Model No.	Serial No.	Power Cord
(1)	LCD Monitor	CHIMEI	A170E1-03	36C112338M41164	Non-Shielded, 1.8m
(2)	Control Board	Faircomm	N/A	N/A	N/A
(3)	PC	HP	DC 7600 CMT	CNG5460DC6	Non-Shielded, 1.8m
(4)	Keyboard	HP	KB-0316	B94330AUBSD01K	N/A
(5)	Mouse	HP	M-UV96	F93A90AN3SB1XRT	N/A

Signal Cable Type	Signal cable Description
A. VGA Cable	Non-Shielded, 1.5m with two ferrite core bonded
B. RS-232 Control Cable	Non-Shielded, 1.0m
C. USB Cable#1	Shielded, 1.2m
D. P/S Keyboard Cable	Non-Shielded, 1.8m
E. USB Mouse Cable	Shielded, 1.8m
F. USB Cable#2	Shielded, 1.2m
G. USB Cable#3	Shielded, 1.2m

1.4. Configuration of Tested System



1.5. EUT Exercise Software

- (1) Setup the EUT as shown in Section 1.4.
- (2) Connect the EUT to the notebook via a control board and a RS232 cable.
- (3) Execute the BlueTest program on the notebook.
- (4) Setup the test channel and the data mode.
- (5) Press OK to start the continuous transmission.
- (6) Verify the EUT operation properly.

1.6. Test Facility

Ambient conditions in the laboratory:

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	20-35
Humidity (%RH)	25-75	30-65
Barometric pressure (mbar)	860-1060	950-1000

Site Description: December 14, 2005 File on
Federal Communications Commission
FCC Engineering Laboratory
7435 Oakland Mills Road
Columbia, MD 21046

Site Name: Quietek Corporation

Site Address: No.99 Hongye Rd., Suzhou Industrial Park Loufeng
Hi-Tech Development Zone., SuZhou, China
TEL: +86-512-6251-5088 / FAX : 86-512-6251-5098
E-Mail : service@quietek.com

2. Conducted Emission

2.1. Test Equipment

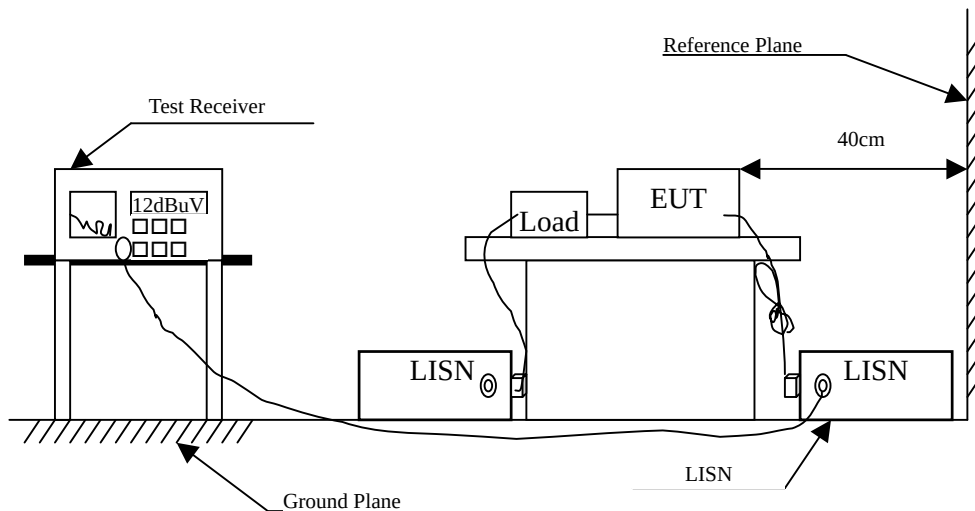
The following test equipment are used during the conducted emission test:

Conducted Emission / SR-1

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
EMI Test Receiver	R&S	ESCI	100175	2005/07/25
Two-Line V-Network	R&S	ENV216	100013	2006/03/31
Two-Line V-Network	R&S	ENV216	100014	2006/04/25
V-Network		ESH3-Z6	100248	2005/07/13
V-Network		ESH3-Z6	100249	2005/07/13
ISN	Schaffner	ISN T400	21648	2005/08/03
50ohm Coaxial Switch	ANRITSU	MP59B	6200447305	2005/11/25
50ohm Impedance	SHX	50ohmI	QT-IM001	2006/03/20
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH004	2006/03/30

Note: All equipment upon which need to calibrated are with calibration period of 1 year.

2.2. Test Setup



2.3. Limits

FCC Part 15 Subpart C Paragraph 15.207 (dBuV) Limit		
Frequency MHz	Limits	
	QP	AV
0.15 - 0.50	66-56	56-46
0.50-5.0	56	46
5.0 - 30	60	50

Remarks: In the above table, the tighter limit applies at the band edges.

2.4. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2003 on conducted measurement.

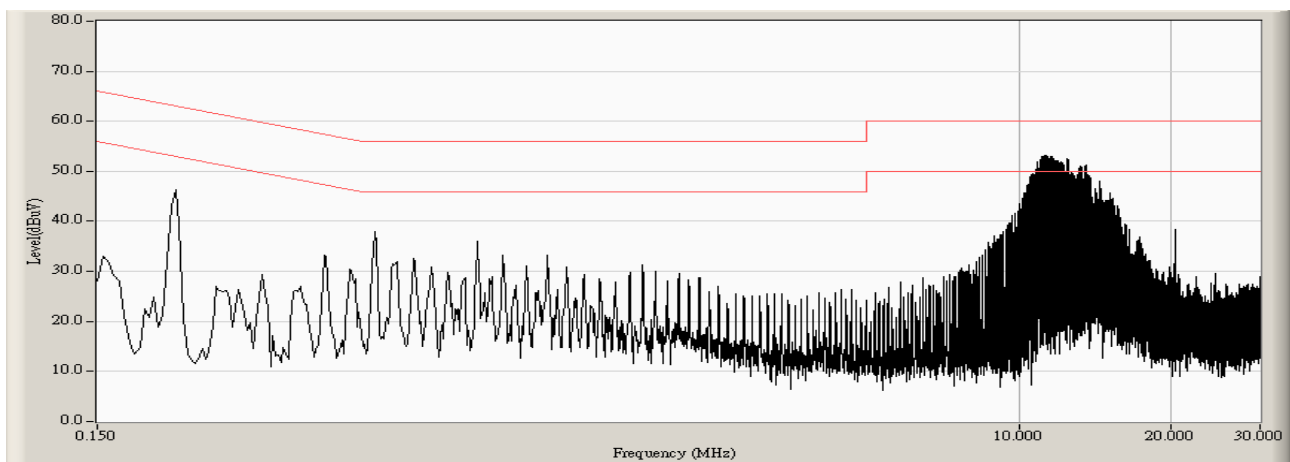
Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

2.5. Uncertainty

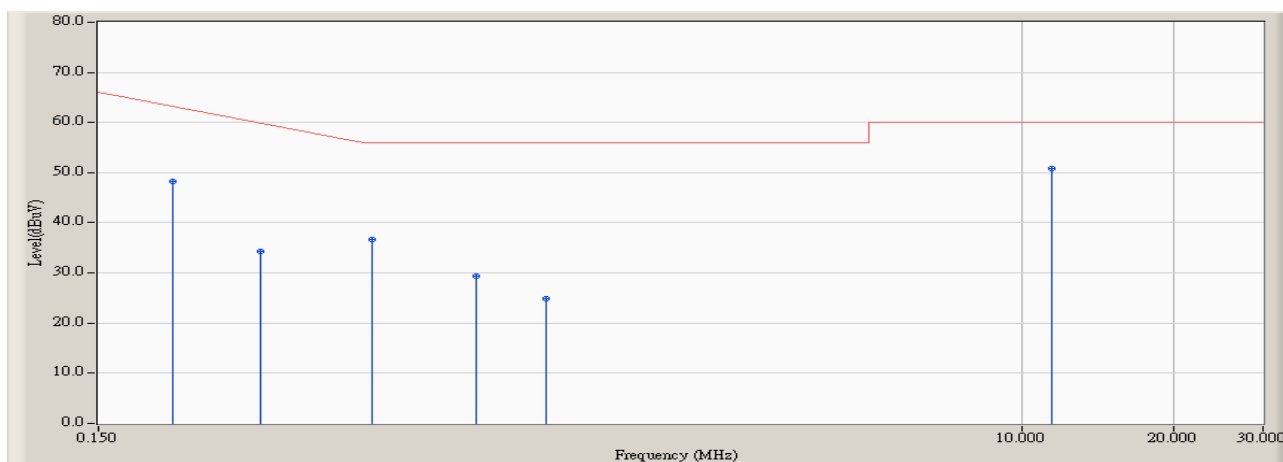
The measurement uncertainty is defined as ± 2.02 dB

2.6. Test Result of Conducted Emission

Engineer : John	
Site : SR-1	Time : 2006/06/07 - 10:55
Limit : FCC_Part15_C_00M_QP	Margin : 10
EUT : Bluetooth AV Adapter	Probe : ENV216 - Line1
Power : AC 120V/60Hz	Note : Mode 1: Transmitter (2441MHz)



Engineer : John	
Site : SR-1	Time : 2006/06/07 - 17:38
Limit : FCC_Part15_C_00M_QP	Margin : 0
EUT : Bluetooth AV Adapter	Probe : ENV216 - Line1
Power : AC 120V/60Hz	Note : Mode 1: Transmitter (2441MHz)

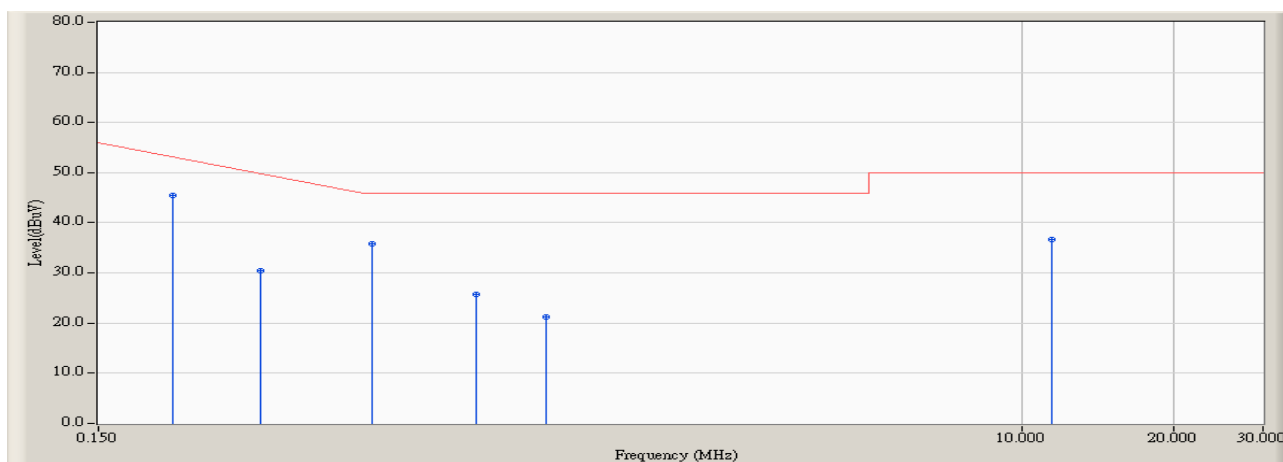


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.210	9.369	38.800	48.169	-16.117	64.286	QUASIPeAK
2		0.314	9.417	24.900	34.317	-26.997	61.314	QUASIPeAK
3		0.522	9.640	27.100	36.740	-19.260	56.000	QUASIPeAK
4		0.834	9.670	19.800	29.470	-26.530	56.000	QUASIPeAK
5		1.150	9.660	15.200	24.860	-31.140	56.000	QUASIPeAK
6	*	11.482	9.940	40.800	50.740	-9.260	60.000	QUASIPeAK

Note:

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

Engineer : John	
Site : SR-1	Time : 2006/06/07 - 17:38
Limit : FCC_Part15_C_00M_AV	Margin : 0
EUT : Bluetooth AV Adapter	Probe : ENV216 - Line1
Power : AC 120V/60Hz	Note : Mode 1: Transmitter (2441MHz)

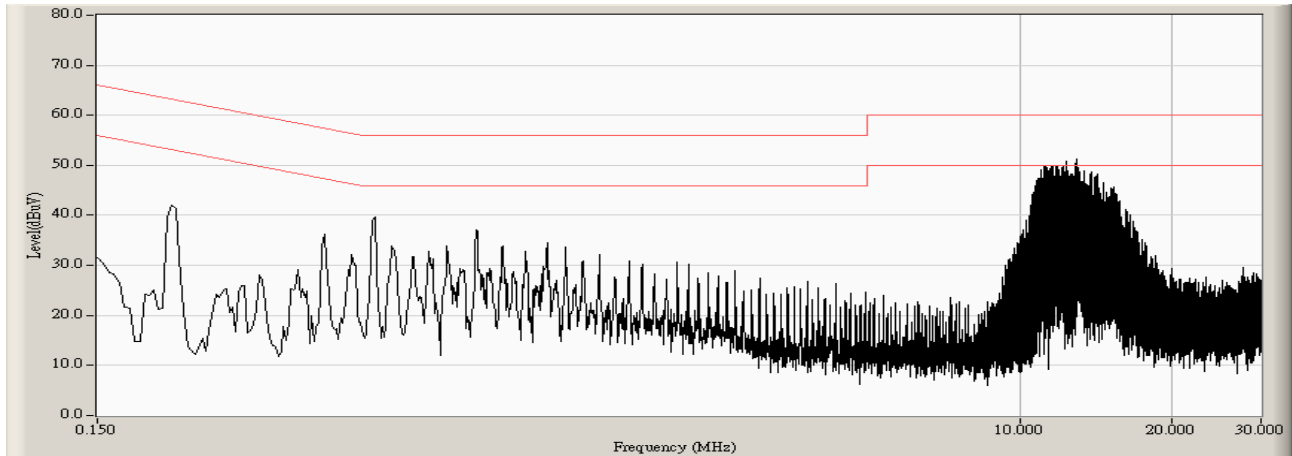


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.210	9.369	36.000	45.369	-8.917	54.286	AVERAGE
2		0.314	9.417	21.000	30.417	-20.897	51.314	AVERAGE
3		0.522	9.640	26.100	35.740	-10.260	46.000	AVERAGE
4		0.834	9.670	16.100	25.770	-20.230	46.000	AVERAGE
5		1.150	9.660	11.500	21.160	-24.840	46.000	AVERAGE
6		11.482	9.940	26.800	36.740	-13.260	50.000	AVERAGE

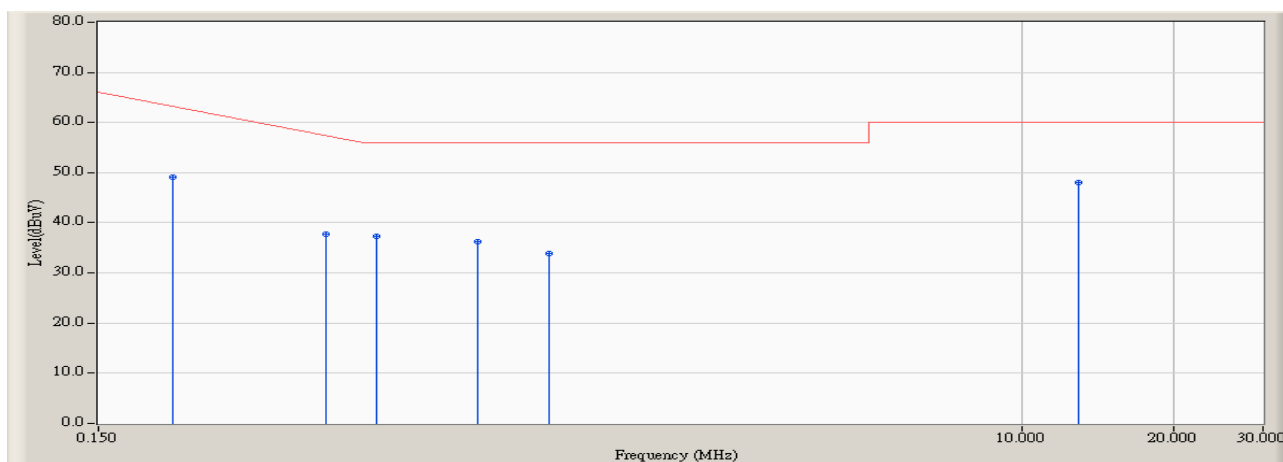
Note:

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

Engineer : John	
Site : SR-1	Time : 2006/06/07 - 17:40
Limit : FCC_Part15_C_00M_QP	Margin : 10
EUT : Bluetooth AV Adapter	Probe : ENV216 - Line2
Power : AC 120V/60Hz	Note : Mode 1: Transmitter (2441MHz)



Engineer : John	
Site : SR-1	Time : 2006/06/07 - 17:44
Limit : FCC_Part15_C_00M_QP	Margin : 0
EUT : Bluetooth AV Adapter	Probe : ENV216 - Line2
Power : AC 120V/60Hz	Note : Mode 1: Transmitter (2441MHz)

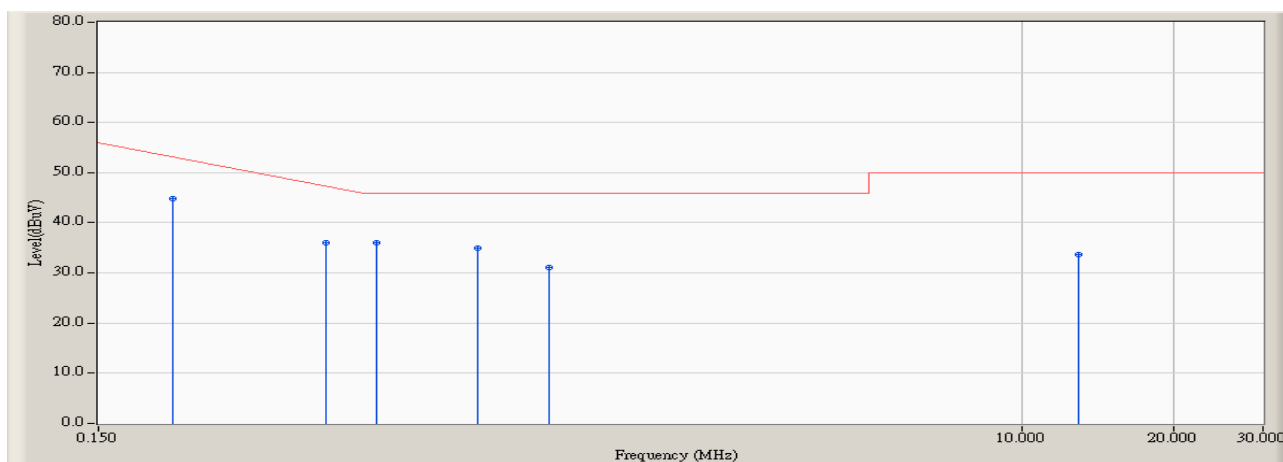


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.210	9.445	39.600	49.045	-15.241	64.286	QUASIPeAK
2		0.422	9.633	28.100	37.733	-20.496	58.229	QUASIPeAK
3		0.530	9.706	27.700	37.406	-18.594	56.000	QUASIPeAK
4		0.842	9.690	26.600	36.290	-19.710	56.000	QUASIPeAK
5		1.162	9.750	24.100	33.850	-22.150	56.000	QUASIPeAK
6	*	12.966	10.083	37.900	47.983	-12.017	60.000	QUASIPeAK

Note:

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

Engineer : John	
Site : SR-1	Time : 2006/06/07 - 17:44
Limit : FCC_Part15_C_00M_AV	Margin : 0
EUT : Bluetooth AV Adapter	Probe : ENV216 - Line2
Power : AC 120V/60Hz	Note : Mode 1: Transmitter (2441MHz)



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.210	9.445	35.400	44.845	-9.441	54.286	AVERAGE
2		0.422	9.633	26.300	35.933	-12.296	48.229	AVERAGE
3		0.530	9.706	26.300	36.006	-9.994	46.000	AVERAGE
4		0.842	9.690	25.200	34.890	-11.110	46.000	AVERAGE
5		1.162	9.750	21.300	31.050	-14.950	46.000	AVERAGE
6		12.966	10.083	23.600	33.683	-16.317	50.000	AVERAGE

Note:

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

3. Peak Power Output

3.1. Test Equipment

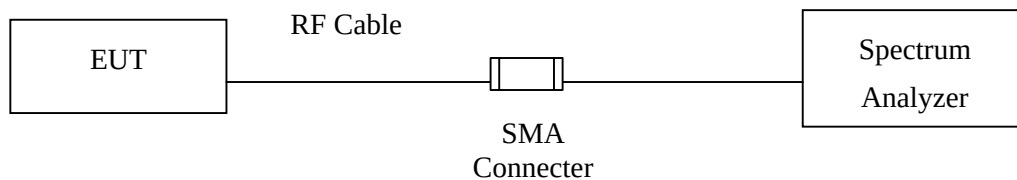
The following test equipments are used during the radiated emission tests:

Radiated Emission / AC-3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2006/03/11

Note: 1. All equipment upon which need to calibrated are with calibration period of 1 year.
2. Mark "X" test instruments are used to measure the final test results.

3.2. Test Setup



3.3. Limit

The maximum peak power shall be less 1Watt.

3.4. Uncertainty

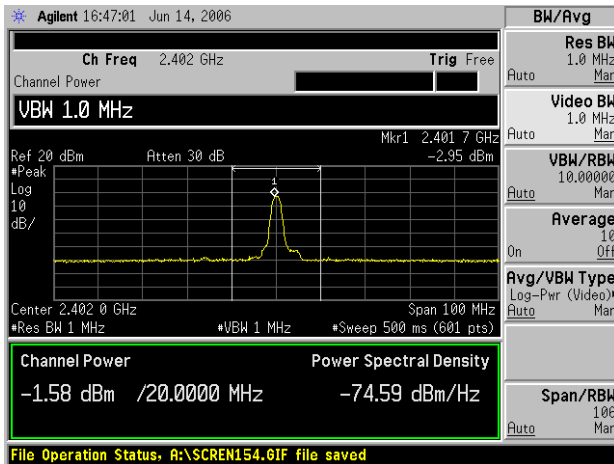
The measurement uncertainty is defined as ± 1.27 dB

3.5. Test Result of Peak Power Output

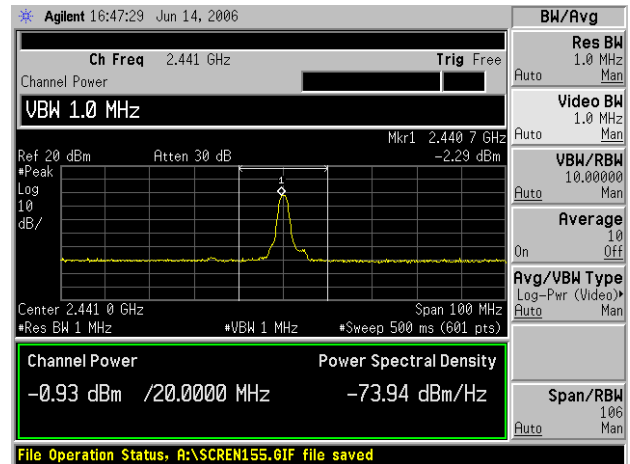
Product : Bluetooth AV Adapter
 Test Item : Peak Power Output
 Test Site : AC-3
 Test Mode : Mode 1: Transmitter

Channel No.	Frequency (MHz)	Measurement	Required Limit	Result
Channel 00	2402.00	-1.58dBm	1 Watt= 30 dBm	Pass
Channel 39	2441.00	-0.93dBm	1 Watt= 30 dBm	Pass
Channel 78	2480.00	-1.06dBm	1 Watt= 30 dBm	Pass

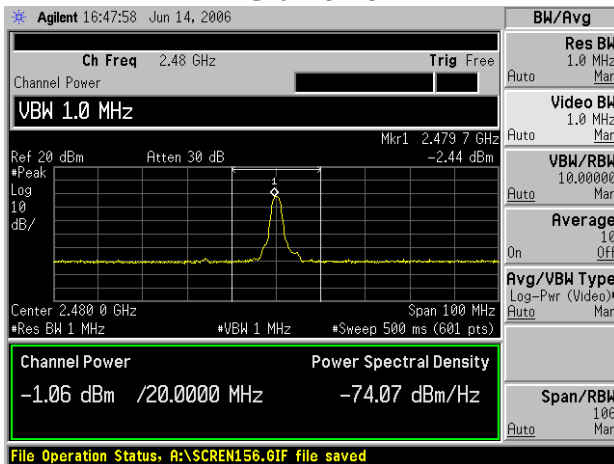
Channel 00



Channel 39



Channel 78



4. Radiated Emission

4.1. Test Equipment

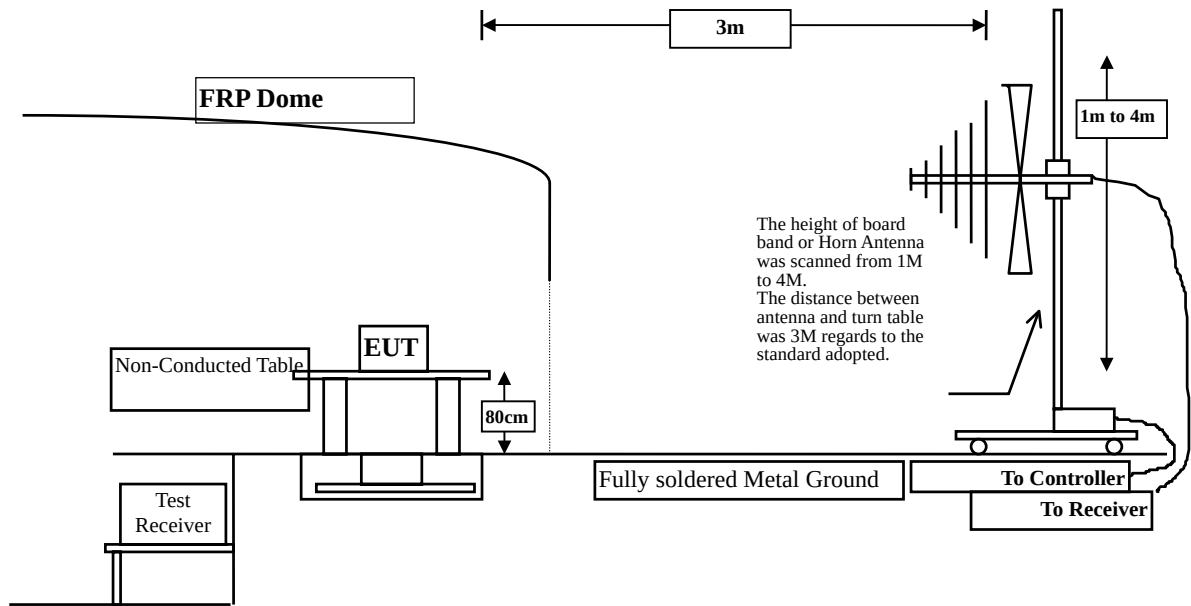
The following test equipment are used during the radiated emission test:

Radiated Emission / AC-2

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	E4408B	MY45102679	2005/07/07
EMI Test Receiver	R&S	ESCI	100175	2005/07/25
Preamplifier	Quietek	AP-025C	QT-AP003	2005/11/25
Preamplifier	Quietek	AP-180C	CHM-0602013	2006/03/20
Bilog Type Antenna	Schaffner	CBL6112B	2932	2005/10/26
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	496	2005/09/30
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH002	2006/03/30

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.
2. Mark "X" test instruments are used to measure the final test results.

4.2. Test Setup



4.3. Limits

➤ General Radiated Emission Limits

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

FCC Part 15 Subpart C Paragraph 15.209 Limits		
Frequency MHz	uV/m @3m	dBuV/m@3m
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

- Remarks:
1. RF Voltage (dBuV) = 20 log RF Voltage (uV)
 2. In the Above Table, the tighter limit applies at the band edges.
 3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

4.4. Test Procedure

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

The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4: 2003 on radiated measurement.

The additional latch filter below 1GHz was used to measure the level of harmonics radiated emission during field strength of harmonics measurement.

The bandwidth below 1GHz setting on the field strength meter (R&S Test Receiver ESCS 30)is 120 kHz, above 1GHz are 1 MHz.

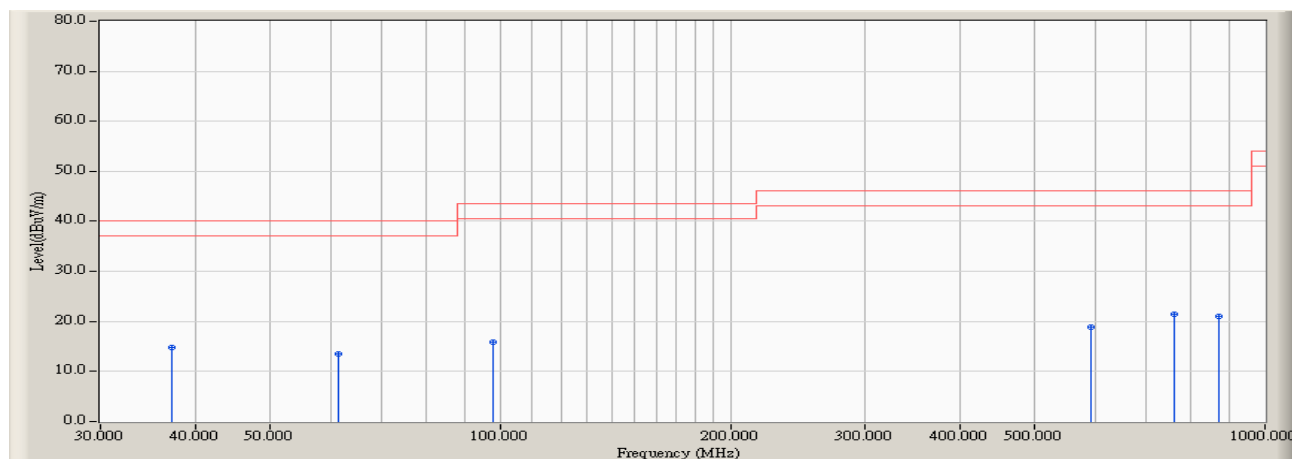
The frequency range from 30MHz to 10th harmonics is checked.

4.5. Uncertainty

The measurement uncertainty above 1G is defined as ± 3.9 dB
under 1G is defined as ± 3.8 dB

4.6. Test Result of Radiated Emission

Engineer : John	
Site : AC-2	Time : 2006/06/12 - 15:24
Limit : FCC_SpartC_15.209_03M_QP	Margin : 3
EUT : Bluetooth AV Adapter	Probe : CBL6112B_2932 - HORIZONTAL
Power : AC 120V/60Hz	Note : Mode 1: Transmitter (2402MHz)

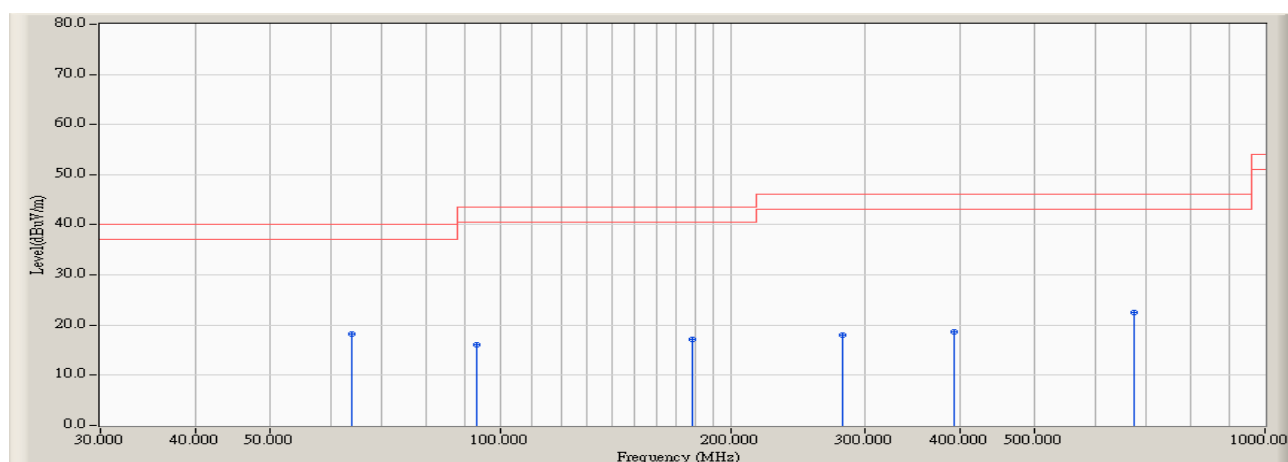


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		37.275	-8.593	23.409	14.816	-25.184	40.000	QUASIPeAK
2		61.525	-17.140	30.694	13.554	-26.446	40.000	QUASIPeAK
3		97.900	-11.861	27.797	15.936	-27.584	43.520	QUASIPeAK
4		592.600	-1.094	19.947	18.853	-27.167	46.020	QUASIPeAK
5		762.350	0.610	20.903	21.513	-24.507	46.020	QUASIPeAK
6	*	869.050	1.309	19.743	21.052	-24.968	46.020	QUASIPeAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : John	
Site : AC-2	Time : 2006/06/12 - 15:26
Limit : FCC_SpartC_15.209_03M_QP	Margin : 3
EUT : Bluetooth AV Adapter	Probe : CBL6112B_2932 - VERTICAL
Power : AC 120V/60Hz	Note : Mode 1: Transmitter (2402MHz)

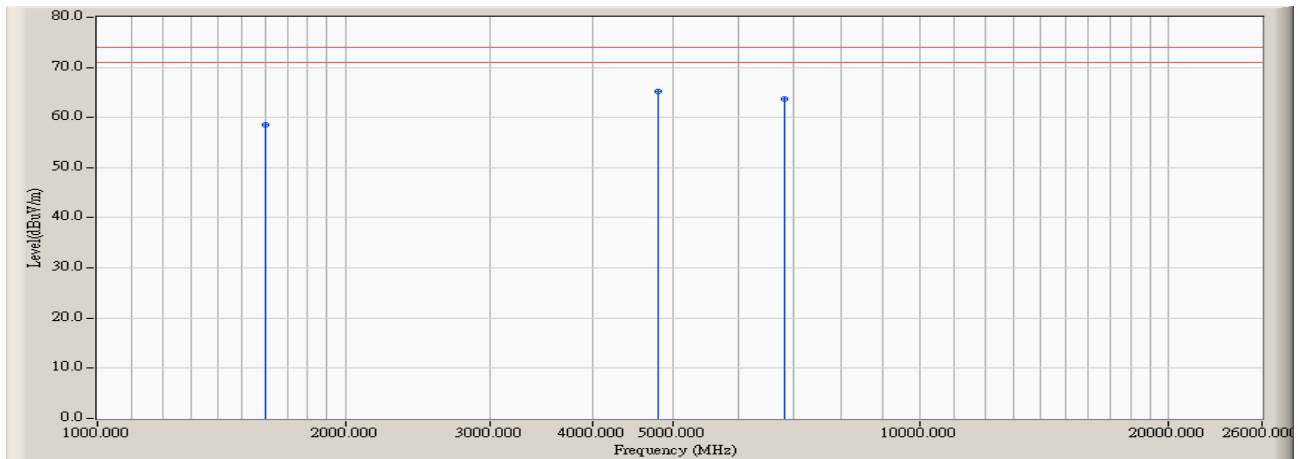


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		63.950	-17.171	35.352	18.181	-21.819	40.000	QUASIPeAK
2		93.050	-12.658	28.839	16.181	-27.339	43.520	QUASIPeAK
3		177.925	-13.181	30.273	17.092	-26.428	43.520	QUASIPeAK
4		279.775	-8.499	26.509	18.010	-28.010	46.020	QUASIPeAK
5		391.325	-5.007	23.579	18.572	-27.448	46.020	QUASIPeAK
6	*	675.050	-0.621	23.138	22.517	-23.503	46.020	QUASIPeAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : John	
Site : AC-2	Time : 2006/06/11 - 14:34
Limit : FCC_SpartC_15.209_03M_PK	Margin : 3
EUT : Bluetooth AV Adapter	Probe : BBHA9120D_499 - HORIZONTAL
Power : AC 120V/60Hz	Note : Mode 1: Transmitter (2402MHz)

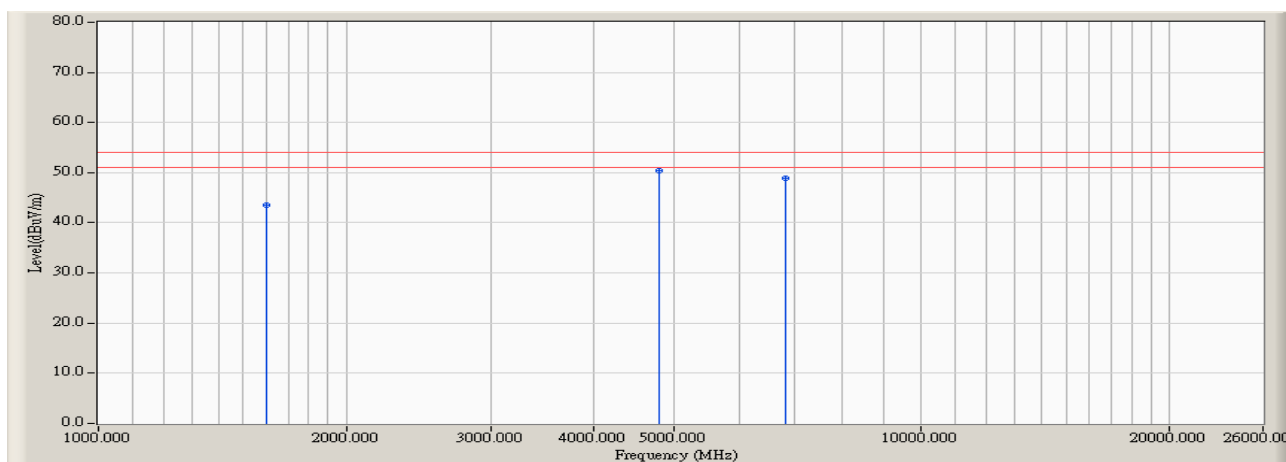


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		1601.330	3.300	55.200	58.500	-15.470	73.970	PEAK
2	*	4804.256	13.191	52.110	65.300	-8.670	73.970	PEAK
3		6823.751	21.608	42.010	63.618	-10.352	73.970	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : John	
Site : AC-2	Time : 2006/06/11 - 14:34
Limit : FCC_SpartC_15.209_03M_AV	Margin : 3
EUT : Bluetooth AV Adapter	Probe : BBHA9120D_499 - HORIZONTAL
Power : AC 120V/60Hz	Note : Mode 1: Transmitter (2402MHz)

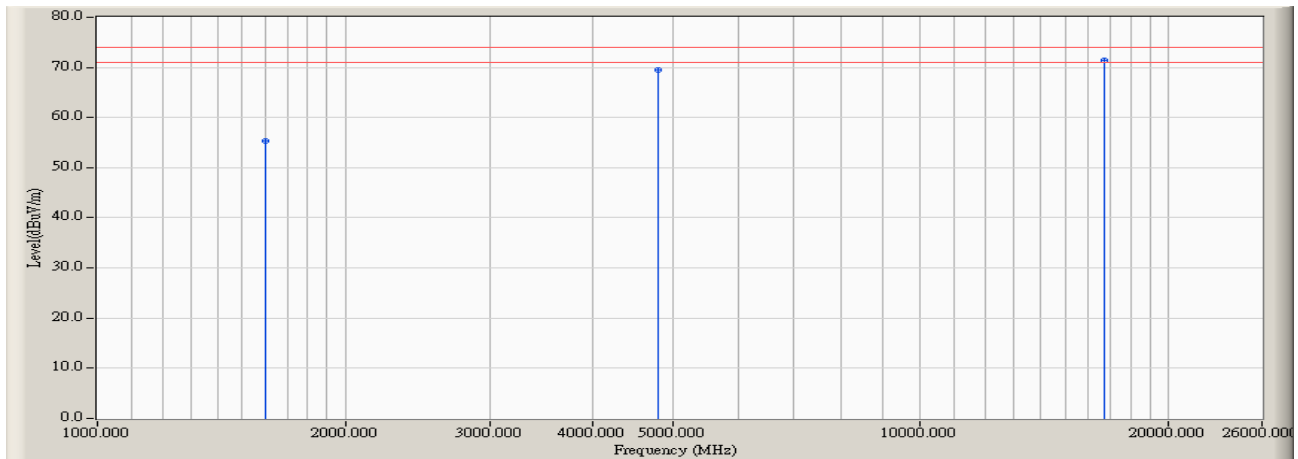


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		1601.330	3.300	40.250	43.550	-10.420	53.970	AVERAGE
2	*	4804.256	13.191	37.260	50.450	-3.520	53.970	AVERAGE
3		6823.751	21.608	27.240	48.848	-5.122	53.970	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : John	
Site : AC-2	Time : 2006/06/11 - 14:45
Limit : FCC_SpartC_15.209_03M_PK	Margin : 3
EUT : Bluetooth AV Adapter	Probe : BBHA9120D_499 - VERTICAL
Power : AC 120V/60Hz	Note : Mode 1: Transmitter (2402MHz)

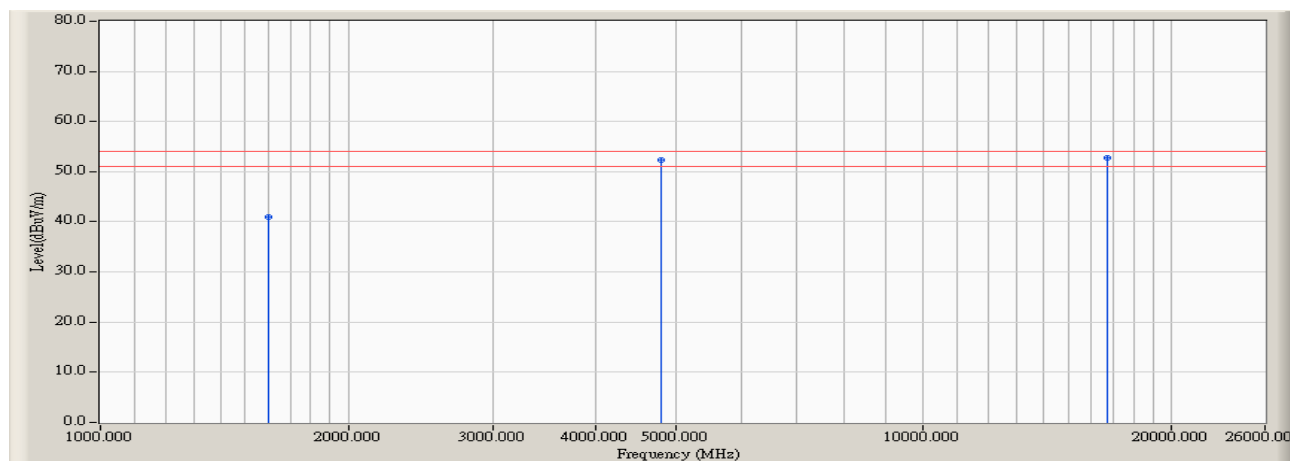


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		1601.332	3.300	52.120	55.420	-18.550	73.970	PEAK
2		4804.100	13.189	56.240	69.429	-4.541	73.970	PEAK
3	*	16720.400	30.382	41.020	71.403	-2.567	73.970	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : John	
Site : AC-2	Time : 2006/06/11 - 14:45
Limit : FCC_SpartC_15.209_03M_AV	Margin : 3
EUT : Bluetooth AV Adapter	Probe : BBHA9120D_499 - VERTICAL
Power : AC 120V/60Hz	Note : Mode 1: Transmitter (2402MHz)

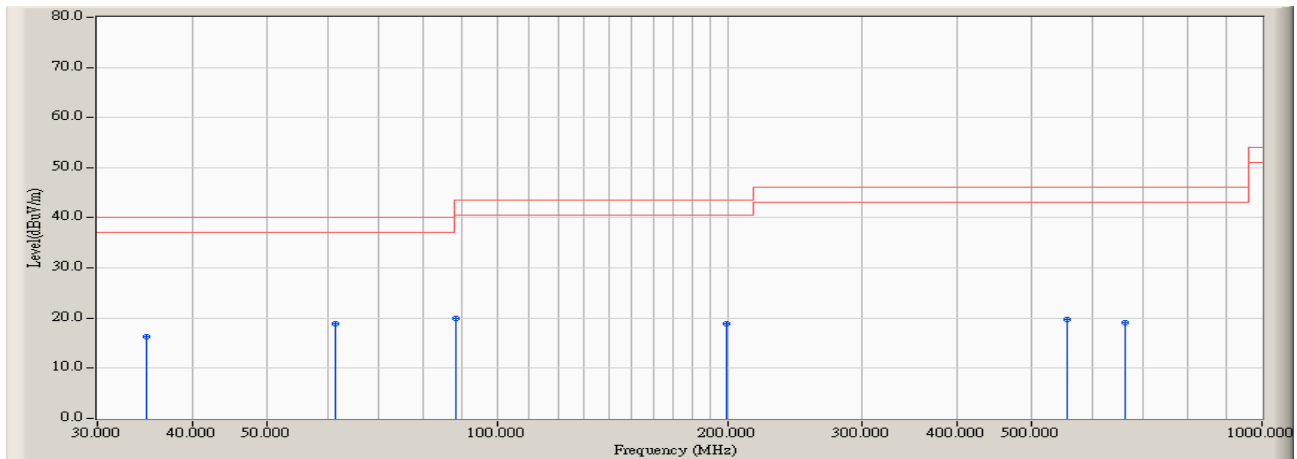


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		1601.332	3.300	37.580	40.880	-13.090	53.970	AVERAGE
2		4804.100	13.189	39.220	52.409	-1.561	53.970	AVERAGE
3	*	16720.400	30.382	22.320	52.703	-1.267	53.970	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : John	
Site : AC-2	Time : 2006/06/12 - 15:28
Limit : FCC_SpartC_15.209_03M_QP	Margin : 3
EUT : Bluetooth AV Adapter	Probe : CBL6112B_2932 - HORIZONTAL
Power : AC 120V/60Hz	Note : Mode 1: Transmitter (2441MHz)

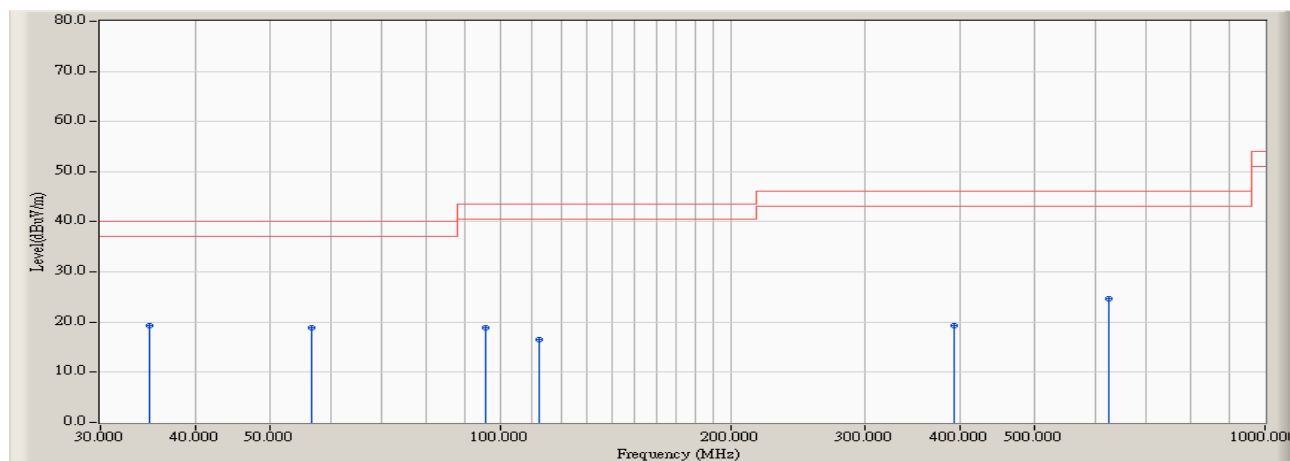


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		34.850	-7.224	23.605	16.381	-23.619	40.000	QUASIPeAK
2	*	61.525	-17.140	36.007	18.867	-21.133	40.000	QUASIPeAK
3		88.200	-13.628	33.508	19.880	-23.640	43.520	QUASIPeAK
4		199.750	-12.805	31.679	18.874	-24.646	43.520	QUASIPeAK
5		556.225	-1.264	20.908	19.644	-26.376	46.020	QUASIPeAK
6		662.925	-0.842	19.859	19.017	-27.003	46.020	QUASIPeAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : John	
Site : AC-2	Time : 2006/06/12 - 15:30
Limit : FCC_SpartC_15.209_03M_QP	Margin : 3
EUT : Bluetooth AV Adapter	Probe : CBL6112B_2932 - VERTICAL
Power : AC 120V/60Hz	Note : Mode 1: Transmitter (2441MHz)

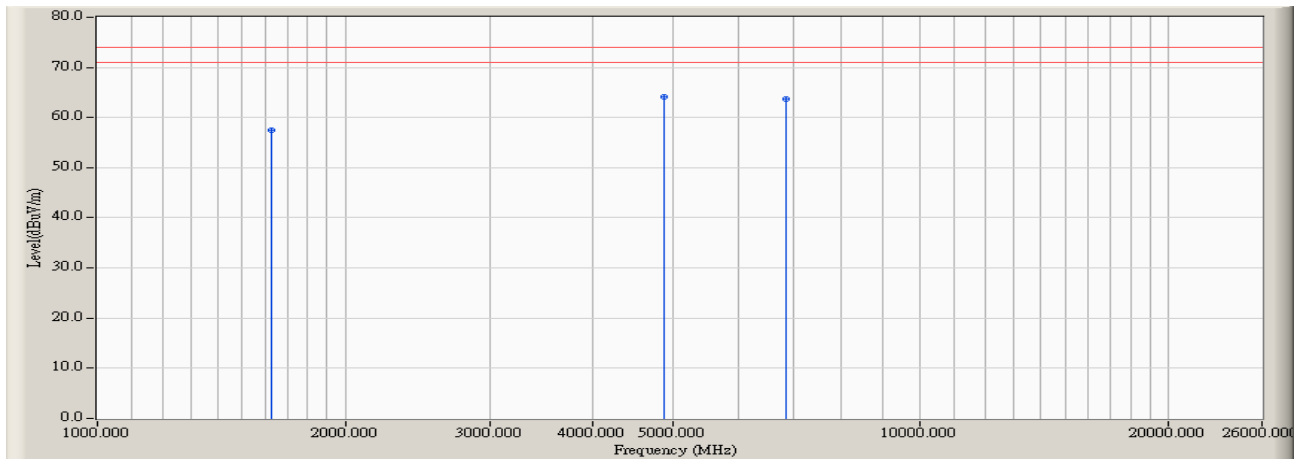


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	34.850	-7.224	26.436	19.212	-20.788	40.000	QUASIPeAK
2		56.675	-16.533	35.339	18.806	-21.194	40.000	QUASIPeAK
3		95.475	-12.229	31.057	18.828	-24.692	43.520	QUASIPeAK
4		112.450	-10.514	26.944	16.430	-27.090	43.520	QUASIPeAK
5		391.325	-5.007	24.230	19.223	-26.797	46.020	QUASIPeAK
6		624.125	-0.847	25.415	24.568	-21.452	46.020	QUASIPeAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : John	
Site : AC-2	Time : 2006/06/11 - 14:52
Limit : FCC_SpartC_15.209_03M_PK	Margin : 3
EUT : Bluetooth AV Adapter	Probe : BBHA9120D_499 - HORIZONTAL
Power : AC 120V/60Hz	Note : Mode 1: Transmitter (2441MHz)

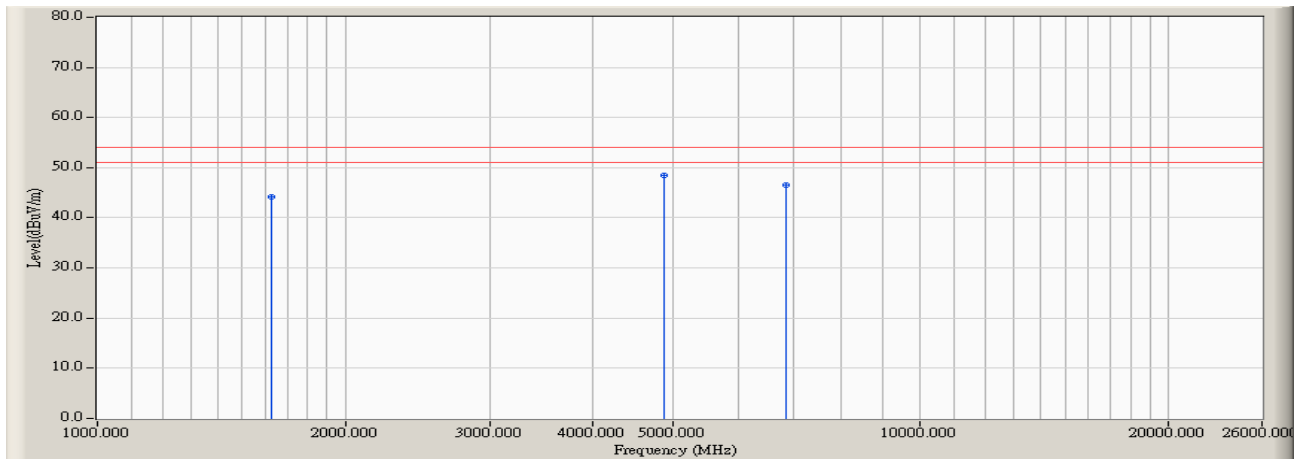


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		1627.200	3.273	54.220	57.493	-16.477	73.970	PEAK
2	*	4882.150	13.723	50.330	64.053	-9.917	73.970	PEAK
3		6864.200	21.423	42.360	63.783	-10.187	73.970	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : John	
Site : AC-2	Time : 2006/06/11 - 14:52
Limit : FCC_SpartC_15.209_03M_AV	Margin : 3
EUT : Bluetooth AV Adapter	Probe : BBHA9120D_499 - HORIZONTAL
Power : AC 120V/60Hz	Note : Mode 1: Transmitter (2441MHz)

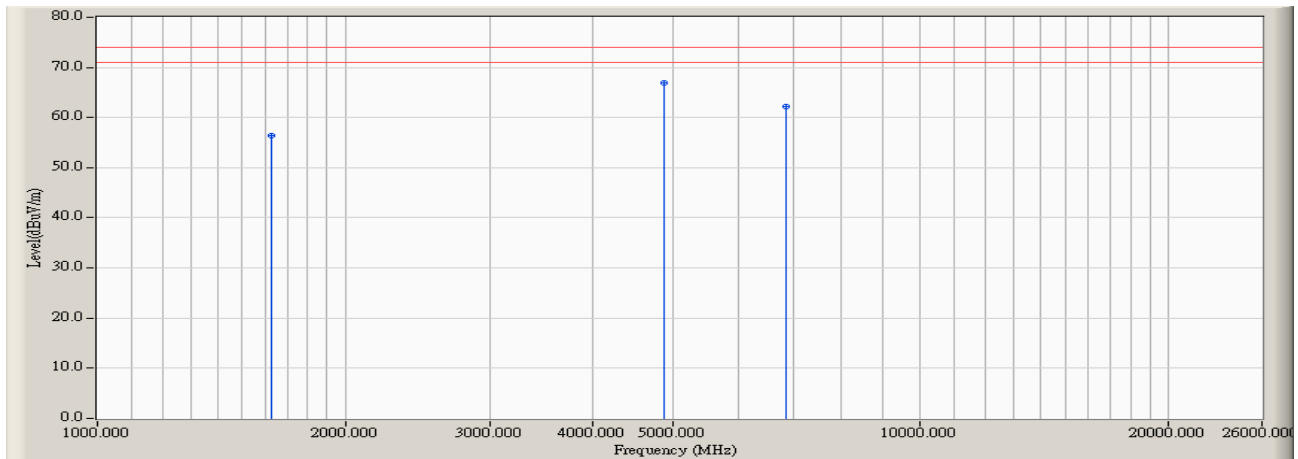


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		1627.200	3.273	40.880	44.153	-9.817	53.970	AVERAGE
2	*	4882.150	13.723	34.750	48.473	-5.497	53.970	AVERAGE
3		6864.200	21.423	25.120	46.543	-7.427	53.970	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : John	
Site : AC-2	Time : 2006/06/11 - 14:58
Limit : FCC_SpartC_15.209_03M_PK	Margin : 3
EUT : Bluetooth AV Adapter	Probe : BBHA9120D_499 - VERTICAL
Power : AC 120V/60Hz	Note : Mode 1: Transmitter (2441MHz)

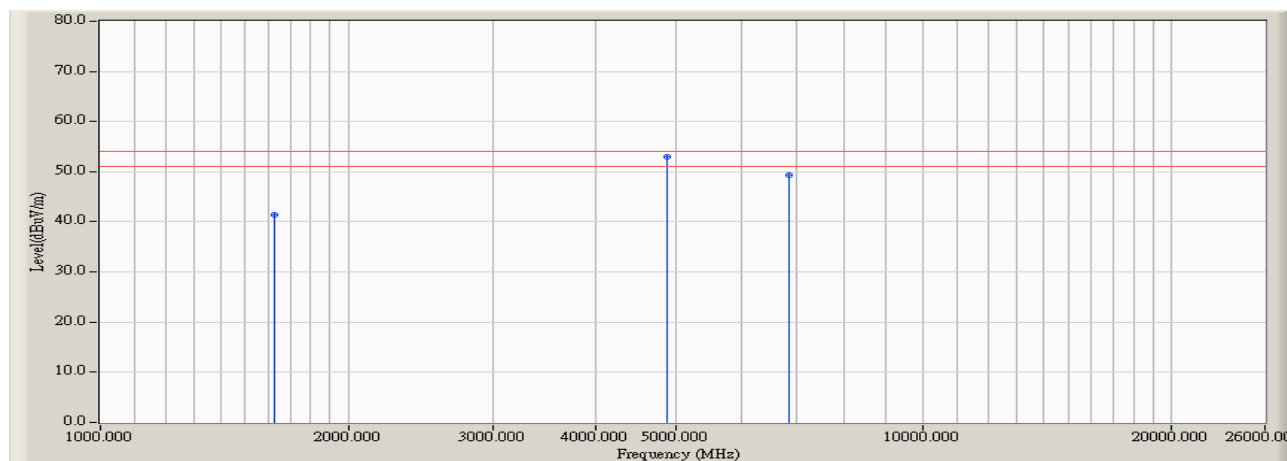


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		1627.300	3.273	53.240	56.513	-17.457	73.970	PEAK
2	*	4882.650	13.727	53.200	66.927	-7.043	73.970	PEAK
3		6864.320	21.423	40.780	62.203	-11.767	73.970	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : John	
Site : AC-2	Time : 2006/06/11 - 14:58
Limit : FCC_SpartC_15.209_03M_AV	Margin : 3
EUT : Bluetooth AV Adapter	Probe : BBHA9120D_499 - VERTICAL
Power : AC 120V/60Hz	Note : Mode 1: Transmitter (2441MHz)

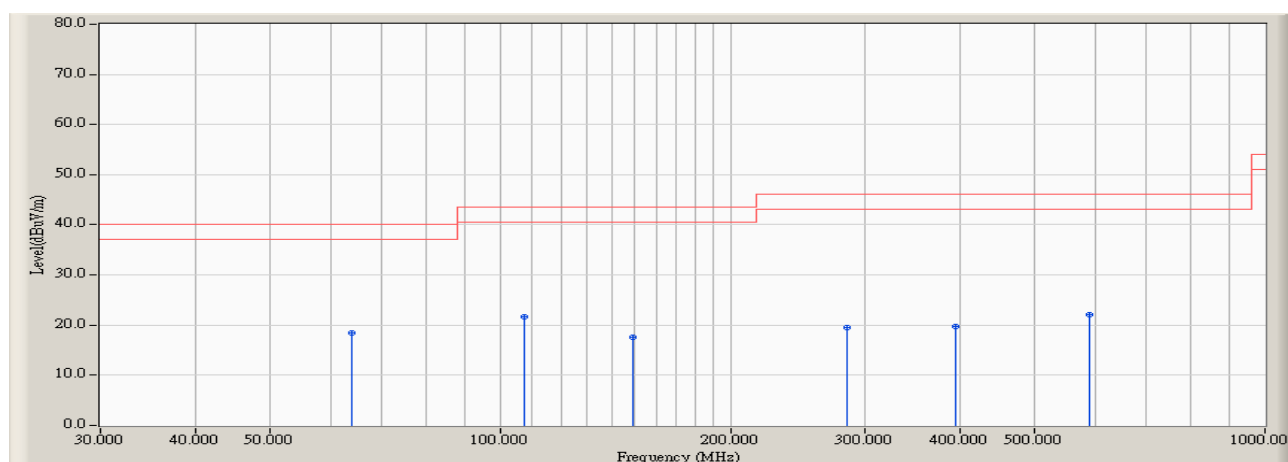


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		1627.300	3.273	38.200	41.473	-12.497	53.970	AVERAGE
2	*	4882.650	13.727	39.210	52.937	-1.033	53.970	AVERAGE
3		6864.320	21.423	27.960	49.383	-4.587	53.970	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : John	
Site : AC-2	Time : 2006/06/12 - 15:32
Limit : FCC_SpartC_15.209_03M_QP	Margin : 3
EUT : Bluetooth AV Adapter	Probe : CBL6112B_2932 - HORIZONTAL
Power : AC 120V/60Hz	Note : Mode 1: Transmitter (2480MHz)

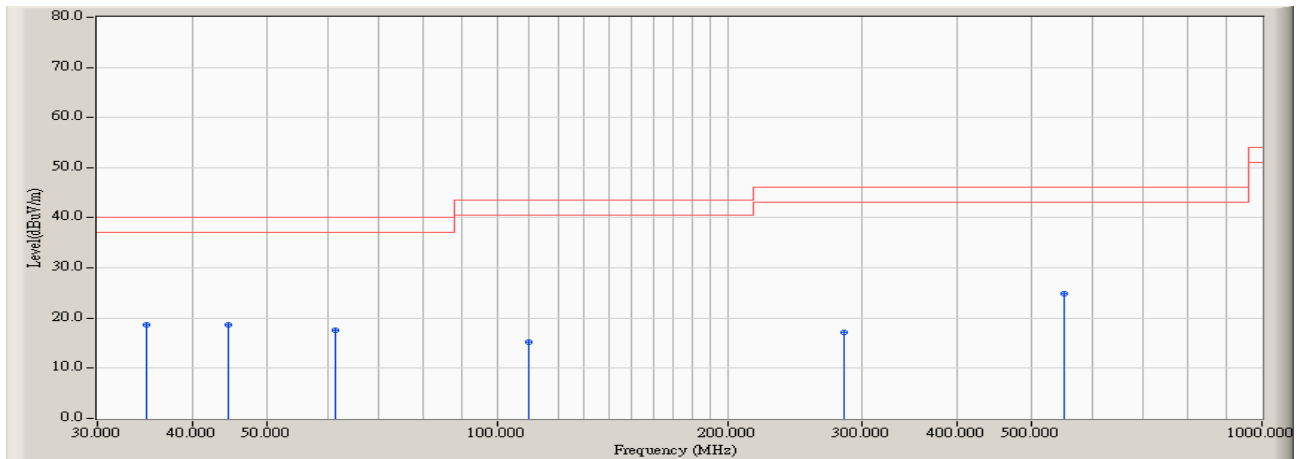


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	63.950	-17.171	35.513	18.342	-21.658	40.000	QUASIPeAK
2		107.600	-10.691	32.423	21.732	-21.788	43.520	QUASIPeAK
3		148.825	-11.545	29.085	17.540	-25.980	43.520	QUASIPeAK
4		284.625	-8.365	27.789	19.424	-26.596	46.020	QUASIPeAK
5		393.750	-4.926	24.716	19.790	-26.230	46.020	QUASIPeAK
6		590.175	-1.066	23.253	22.187	-23.833	46.020	QUASIPeAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : John	
Site : AC-2	Time : 2006/06/12 - 15:32
Limit : FCC_SpartC_15.209_03M_QP	Margin : 3
EUT : Bluetooth AV Adapter	Probe : CBL6112B_2932 - VERTICAL
Power : AC 120V/60Hz	Note : Mode 1: Transmitter (2480MHz)

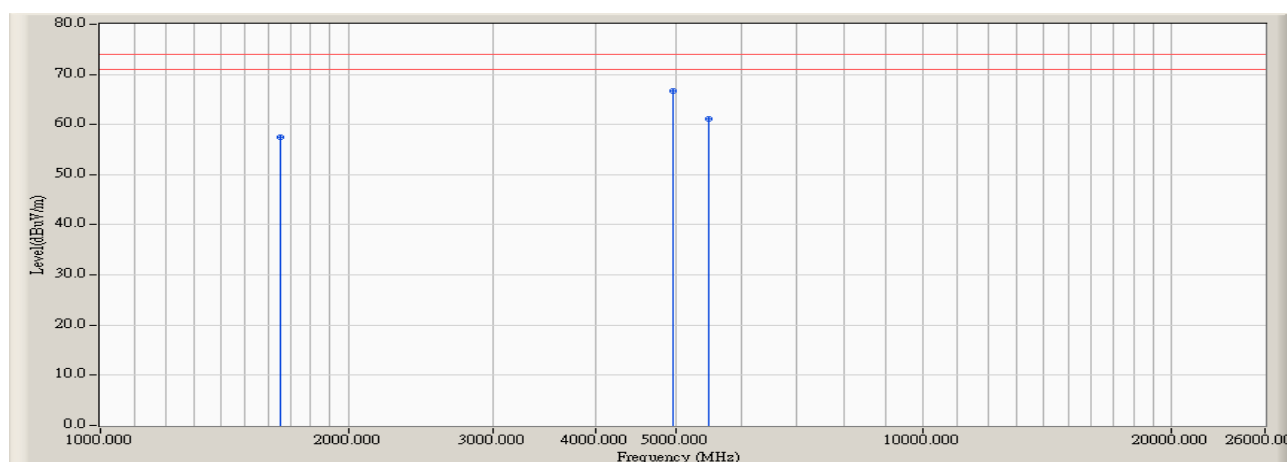


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		34.850	-7.224	25.974	18.750	-21.250	40.000	QUASIPeAK
2		44.550	-12.343	30.975	18.632	-21.368	40.000	QUASIPeAK
3		61.525	-17.140	34.756	17.616	-22.384	40.000	QUASIPeAK
4		110.025	-10.580	25.829	15.249	-28.271	43.520	QUASIPeAK
5		284.625	-8.365	25.481	17.116	-28.904	46.020	QUASIPeAK
6	*	551.375	-1.157	26.013	24.856	-21.164	46.020	QUASIPeAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : John	
Site : AC-2	Time : 2006/06/11 - 15:01
Limit : FCC_SpartC_15.209_03M_PK	Margin : 3
EUT : Bluetooth AV Adapter	Probe : BBHA9120D_499 - HORIZONTAL
Power : AC 120V/60Hz	Note : Mode 1: Transmitter (2480MHz)

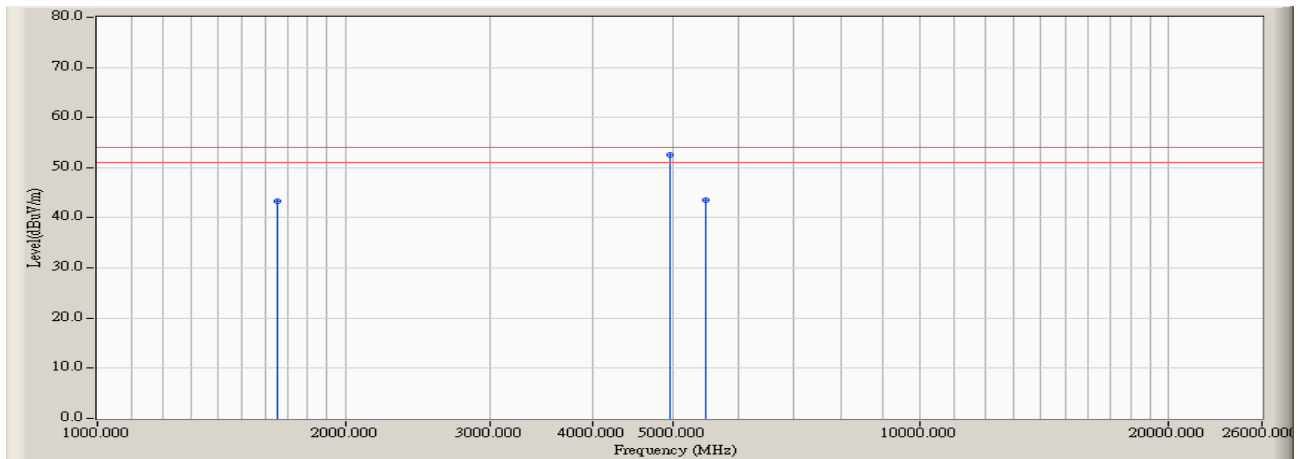


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		1653.280	3.237	54.220	57.457	-16.513	73.970	PEAK
2	*	4960.731	14.279	52.360	66.638	-7.332	73.970	PEAK
3		5494.630	15.204	45.840	61.043	-12.927	73.970	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : John	
Site : AC-2	Time : 2006/06/11 - 15:01
Limit : FCC_SpartC_15.209_03M_AV	Margin : 3
EUT : Bluetooth AV Adapter	Probe : BBHA9120D_499 - HORIZONTAL
Power : AC 120V/60Hz	Note : Mode 1: Transmitter (2480MHz)

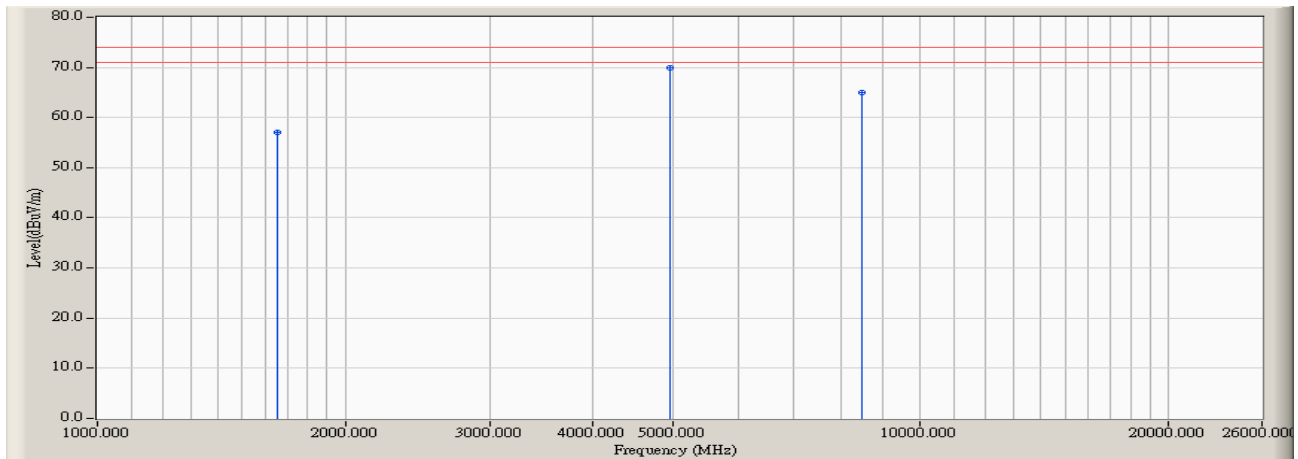


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		1653.280	3.237	40.100	43.337	-10.633	53.970	AVERAGE
2	*	4960.730	14.279	38.250	52.528	-1.442	53.970	AVERAGE
3		5494.630	15.204	28.360	43.563	-10.407	53.970	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : John	
Site : AC-2	Time : 2006/06/11 - 15:05
Limit : FCC_SpartC_15.209_03M_PK	Margin : 3
EUT : Bluetooth AV Adapter	Probe : BBHA9120D_499 - VERTICAL
Power : AC 120V/60Hz	Note : Mode 1: Transmitter (2480MHz)

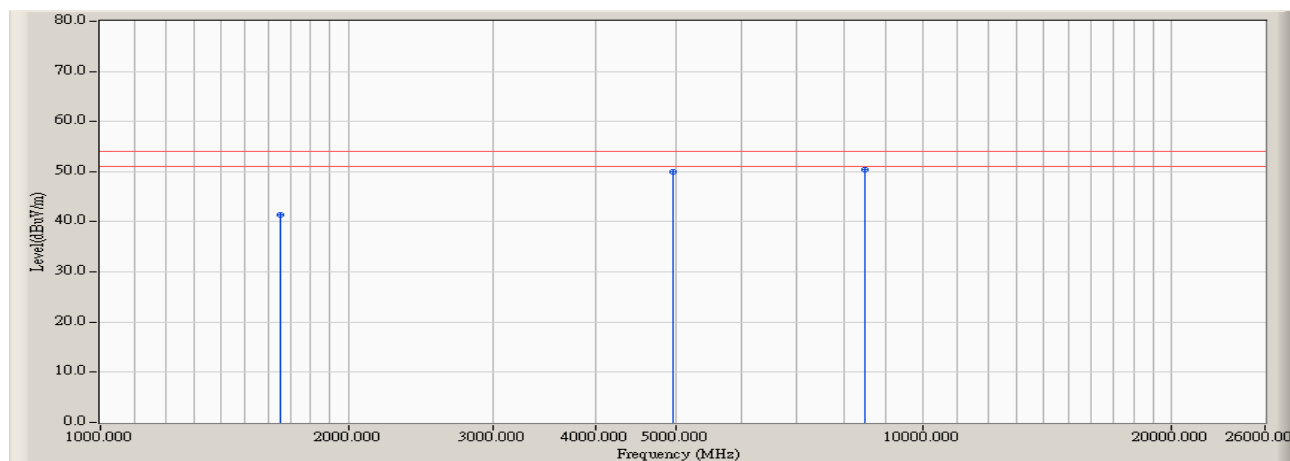


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		1653.480	3.237	53.880	57.117	-16.853	73.970	PEAK
2	*	4960.250	14.275	55.620	69.895	-4.075	73.970	PEAK
3		8494.550	21.722	43.210	64.931	-9.039	73.970	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : John	
Site : AC-2	Time : 2006/06/11 - 15:05
Limit : FCC_SpartC_15.209_03M_AV	Margin : 3
EUT : Bluetooth AV Adapter	Probe : BBHA9120D_499 - VERTICAL
Power : AC 120V/60Hz	Note : Mode 1: Transmitter (2480MHz)



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		1653.480	3.237	38.200	41.437	-12.533	53.970	AVERAGE
2		4960.250	14.275	35.620	49.895	-4.075	53.970	AVERAGE
3	*	8494.550	21.722	28.770	50.491	-3.479	53.970	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

5. Band Edge

5.1. Test Equipment

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

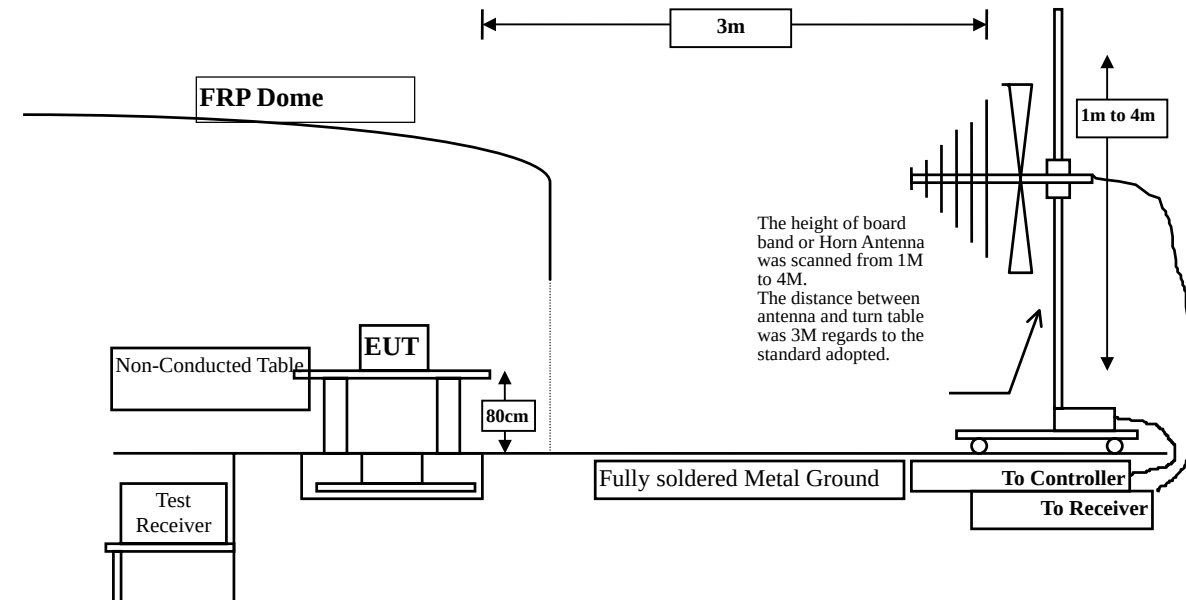
Radiated Emission / AC-2

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	E4408B	MY45102679	2005/07/07
EMI Test Receiver	R&S	ESCI	100175	2005/07/25
Preamplifier	Quietek	AP-025C	QT-AP003	2005/11/25
Preamplifier	Quietek	AP-180C	CHM-0602013	2006/03/20
Bilog Type Antenna	Schaffner	CBL6112B	2932	2005/10/26
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	496	2005/09/30
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH002	2006/03/30

- Note:
1. All equipments that need to calibrate are with calibration period of 1 year.
 2. Mark "X" test instruments are used to measure the final test results.

5.2. Test Setup

RF Radiated Measurement:



5.3. Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

5.4. Test Procedure

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

The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4:2003 on radiated measurement.

The bandwidth below 1GHz setting on the field strength meter (R&S Test Receiver ESCS 30)is 120 kHz, above 1GHz are 1 MHz.

5.5. Uncertainty

The measurement uncertainty above 1G is defined as ± 3.9 dB
under 1G is defined as ± 3.8 dB

5.6. Test Result of Band Edge

Product : Bluetooth AV Adapter
 Test Item : Band Edge
 Test Site : AC-2
 Test Mode : Mode 1: Transmitter (2402MHz)

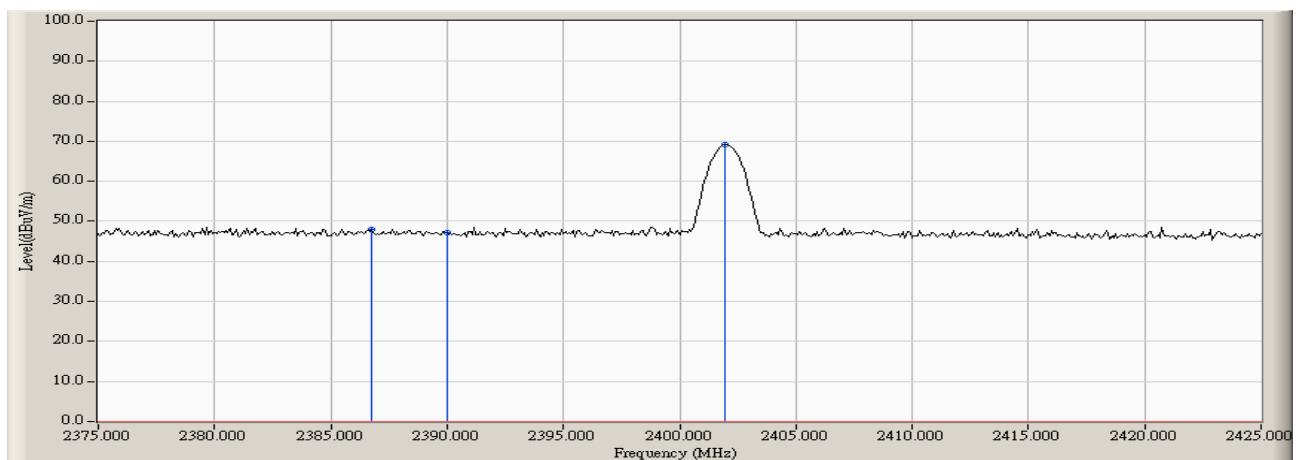
RF Radiated Measurement:

Channel No.	Frequency (MHz)	Required Limit (dBc)	Result
00	<2400	>20	Pass

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
00 (Peak)	2386.750	39.010	48.049	74.00	54.00	Pass
00 (Average)	--	--	--	74.00	54.00	Pass

Figure Channel 00: (Horizontal)



Note:

RBW=1MHz, VBW=1MHz, Sweep Time=500ms.

Note: The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product : Bluetooth AV Adapter
 Test Item : Band Edge
 Test Site : AC-2
 Test Mode : Mode 1: Transmitter (2402MHz)

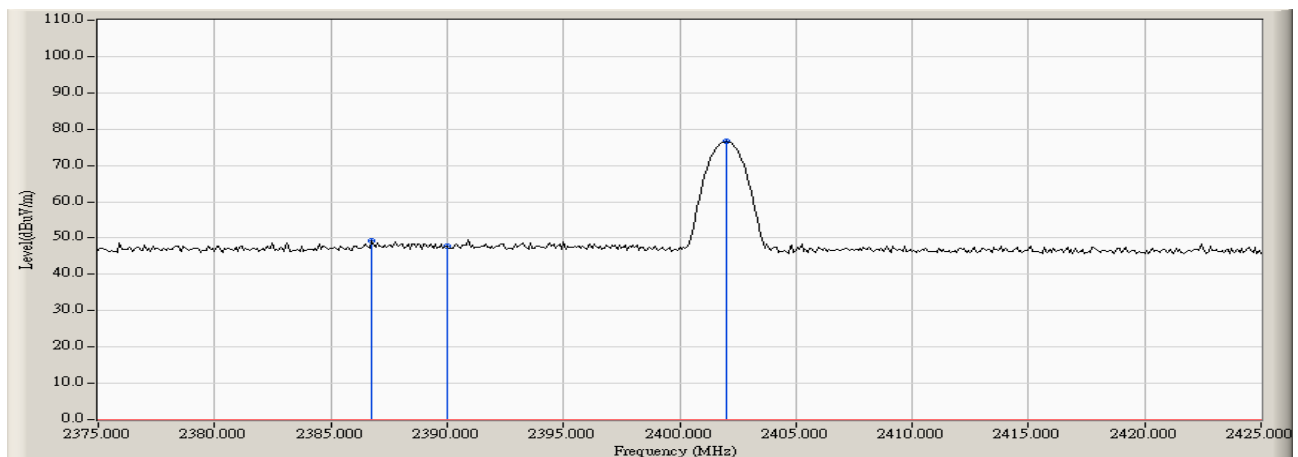
RF Radiated Measurement:

Channel No.	Frequency (MHz)	Required Limit (dBc)	Result
00	<2400	>20	Pass

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
00 (Peak)	2386.750	40.231	49.270	74.00	54.00	Pass
00(Average)	--	--	--	74.00	54.00	Pass

Figure Channel 00: (Vertical)



Note:

RBW=1MHz, VBW=1MHz, Sweep Time=500ms.

Note: The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product : Bluetooth AV Adapter
 Test Item : Band Edge
 Test Site : AC-2
 Test Mode : Mode 1: Transmitter (2480MHz)

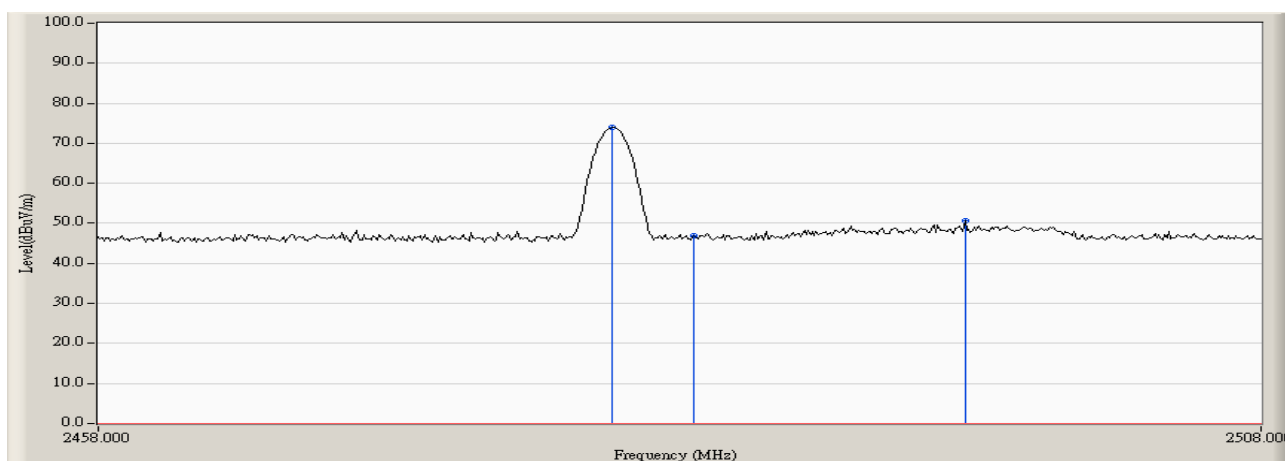
RF Radiated Measurement:

Channel No.	Frequency (MHz)	Required Limit (dBc)	Result
78	>2483.5	>20	Pass

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
78(Peak)	2495.167	42.168	50.782	74.00	54.00	Pass
78(Average)	--	--	--	74.00	54.00	Pass

Figure Channel 78: (Horizontal)



Note:

RBW=1MHz, VBW=1MHz, Sweep Time=500ms.

Note: The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product : Bluetooth AV Adapter
 Test Item : Band Edge
 Test Site : AC-2
 Test Mode : Mode 1: Transmitter (2480MHz)

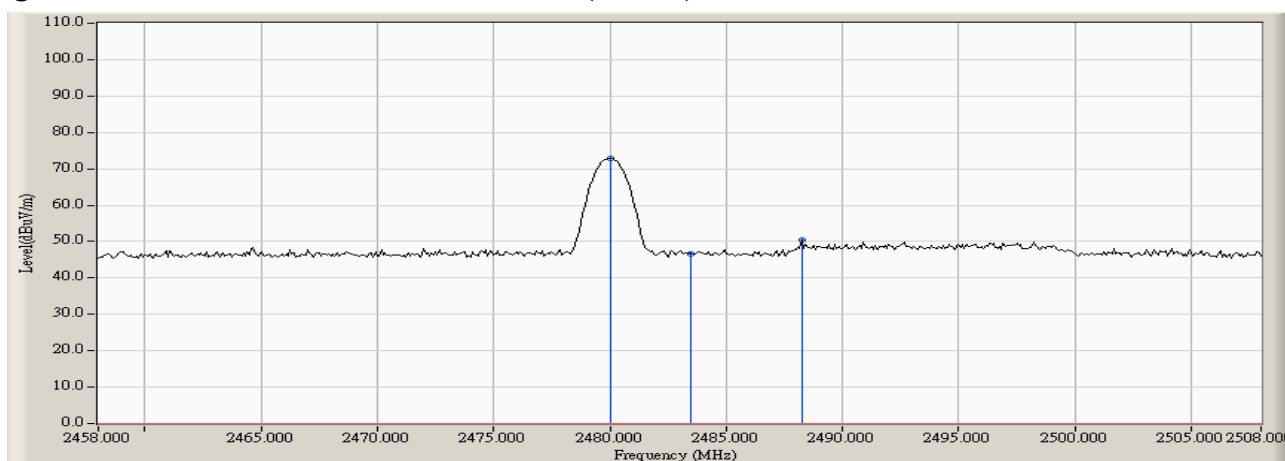
RF Radiated Measurement:

Channel No.	Frequency (MHz)	Required Limit (dBc)	Result
78	>2483.5	>20	Pass

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
78(Peak)	2488.250	41.632	50.482	74.00	54.00	Pass
78(Average)	--	--	--	74.00	54.00	Pass

Figure Channel 78: (Vertical)



Note:

RBW=1MHz, VBW=1MHz, Sweep Time=500ms.

Note: The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

6. Channel Number

6.1. Test Equipment

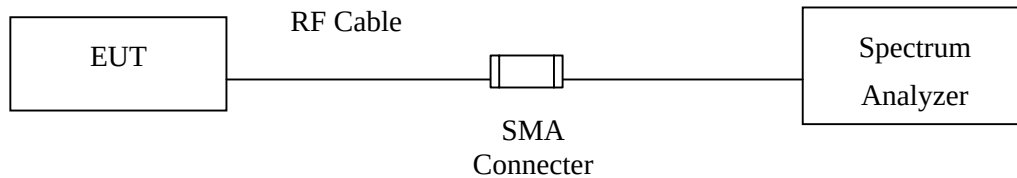
The following test equipments are used during the radiated emission tests:

Radiated Emission / AC-3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2006/03/11

Note: 1. All equipment upon which need to calibrated are with calibration period of 1 year.
2. Mark "X" test instruments are used to measure the final test results.

6.2. Test Setup



6.3. Limit

Frequency hopping systems operating in the 2400-2483.5 MHz bands shall use at least 75 hopping frequencies.

6.4. Uncertainty

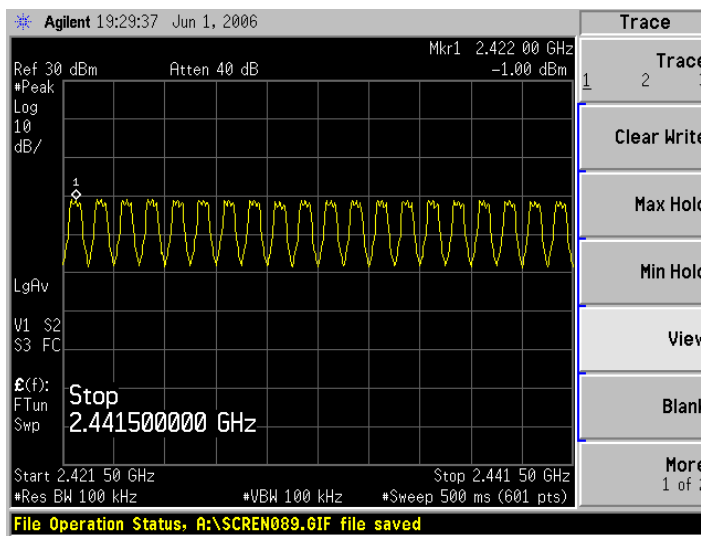
The measurement uncertainty is defined as $\pm 200\text{kHz}$

6.5. Test Result of Channel Number

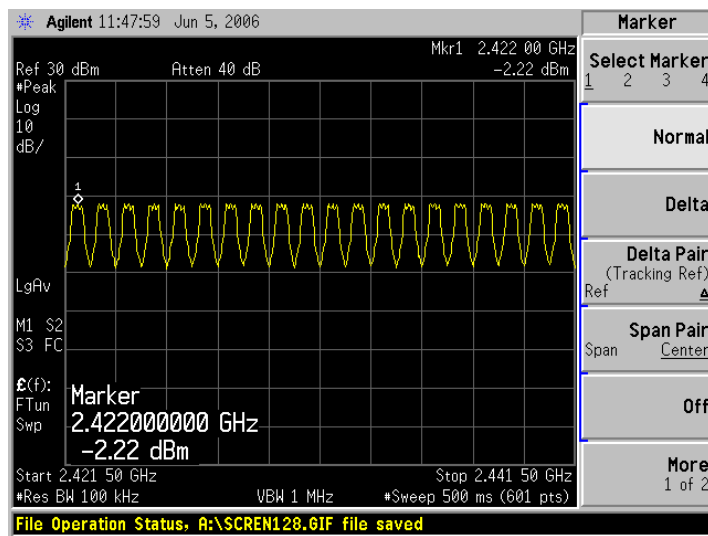
Product : Bluetooth AV Adapter
 Test Item : Channel Number
 Test Site : AC-3
 Test Mode : Mode 1: Transmitter

Frequency Range (MHz)	Measurement (Hopping Channel)	Required Limit (Hopping Channel)	Result
2402 ~ 2480	79	>75	Pass

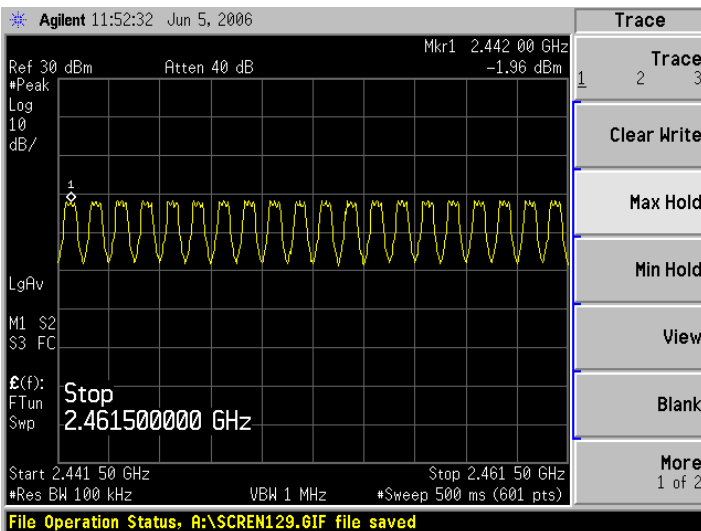
2402-2421MHz



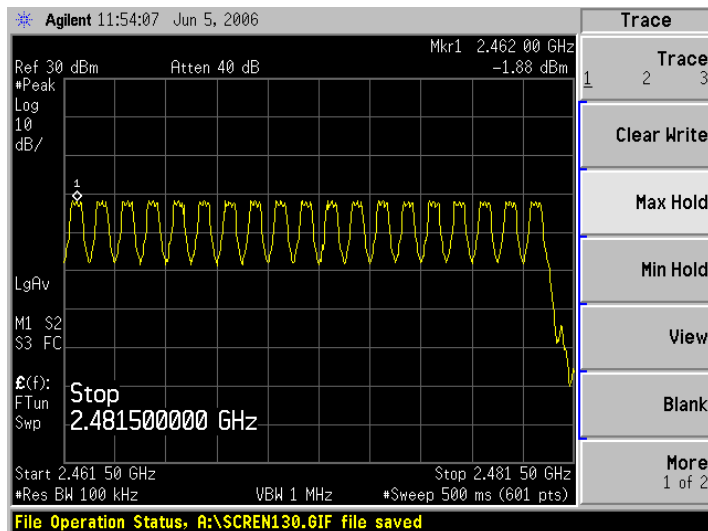
2422-2441MHz



2442-2471MHz



2472-2480MHz



7. Channel Separation

7.1. Test Equipment

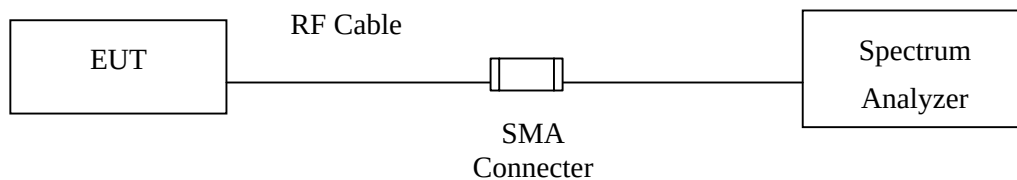
The following test equipments are used during the radiated emission tests:

Radiated Emission / AC-3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2006/03/11

Note: 1. All equipment upon which need to calibrated are with calibration period of 1 year.
2. Mark "X" test instruments are used to measure the final test results.

7.2. Test Setup



7.3. Limit

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

7.4. Uncertainty

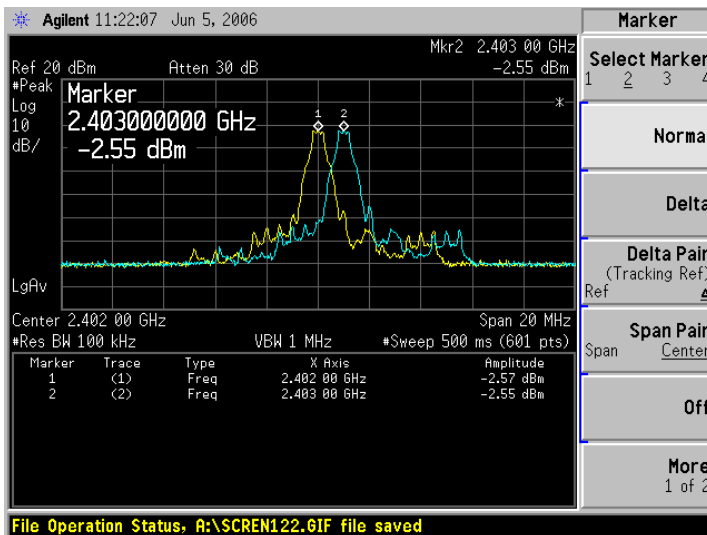
The measurement uncertainty is defined as $\pm 150\text{Hz}$

7.5. Test Result of Channel Separation

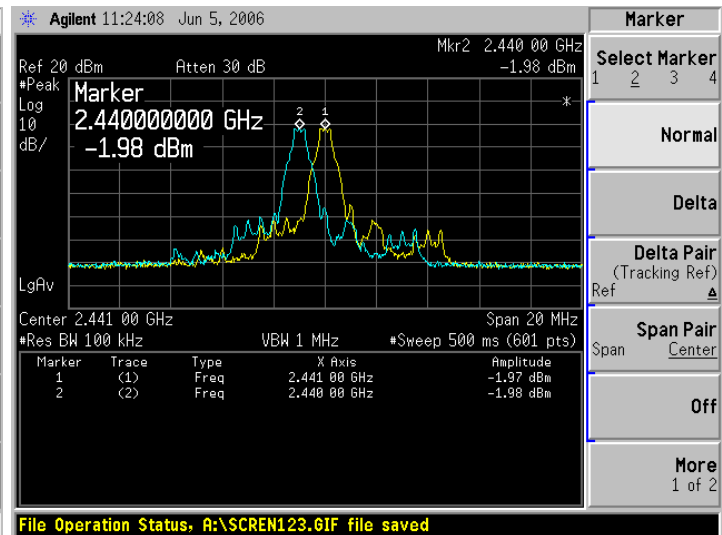
Product : Bluetooth AV Adapter
 Test Item : Channel Separation
 Test Site : AC-3
 Test Mode : Mode 1: Transmitter

Frequency (MHz)	Measurement Level (MHz)	Required Limit	Result
2402	1.00	>25 kHz or 2/3 * 20 dB BW	Pass
2441	1.00	>25 kHz or 2/3 * 20 dB BW	Pass
2480	1.00	>25 kHz or 2/3 * 20 dB BW	Pass

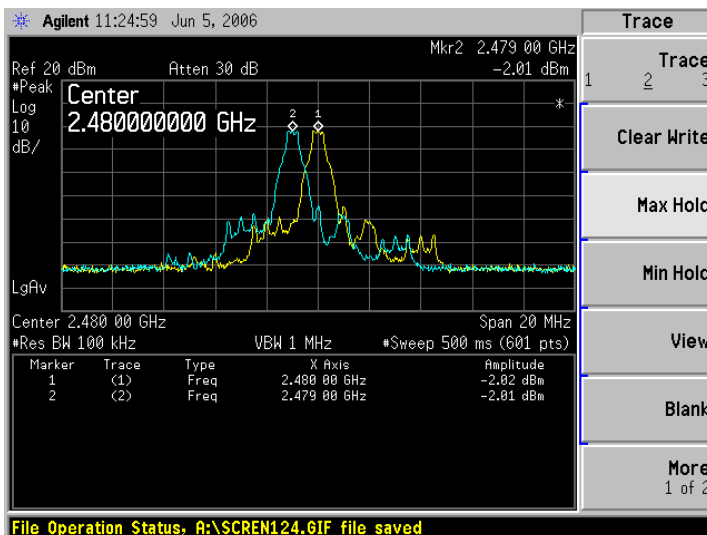
Channel 00 2402MHz



Channel 39 2441MHz



Channel 78 2480 MHz



8. Dwell Time

8.1. Test Equipment

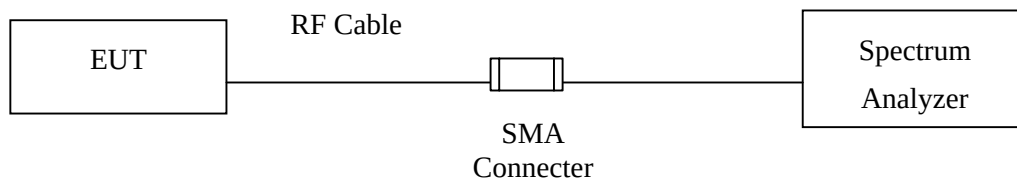
The following test equipments are used during the radiated emission tests:

Radiated Emission / AC-3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2006/03/11

Note: 1. All equipment upon which need to calibrated are with calibration period of 1 year.
2. Mark "X" test instruments are used to measure the final test results.

8.2. Test Setup



8.3. Limit

The dwell time shall be the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

8.4. Uncertainty

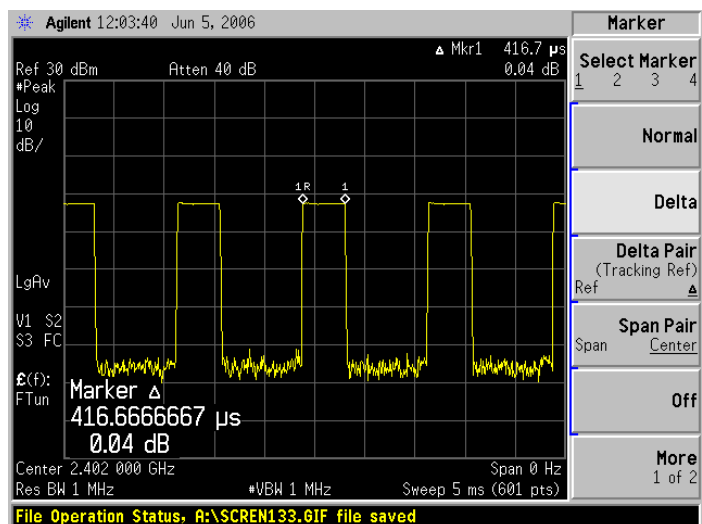
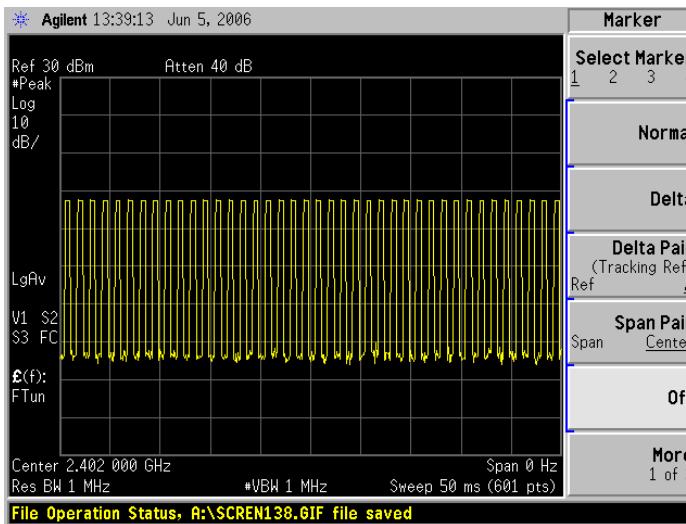
The measurement uncertainty is defined as $\pm 25\text{msec}$

8.5. Test Result of Dwell Time

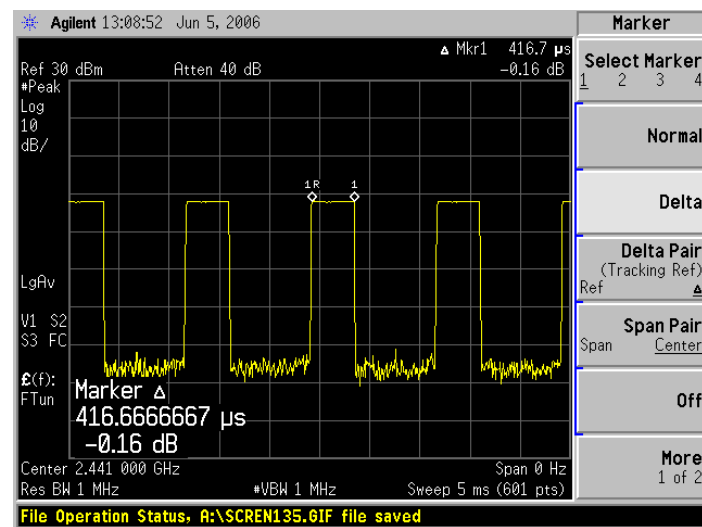
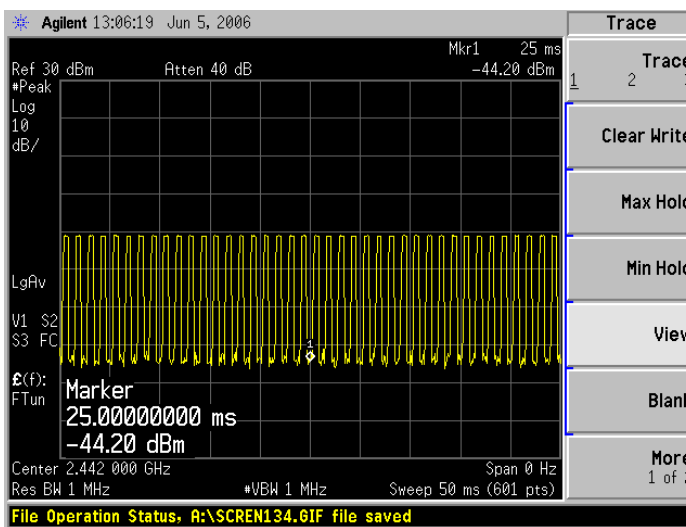
Product : Bluetooth AV Adapter
Test Item : Dwell Time
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter

Channel (MHz)	Measurement Level (ms)	Required Limit (sec.)	Result
CH 00 2402	133.344	< 0.4	Pass
CH 39 2441	133.344	< 0.4	Pass
CH 78 2480	133.344	< 0.4	Pass

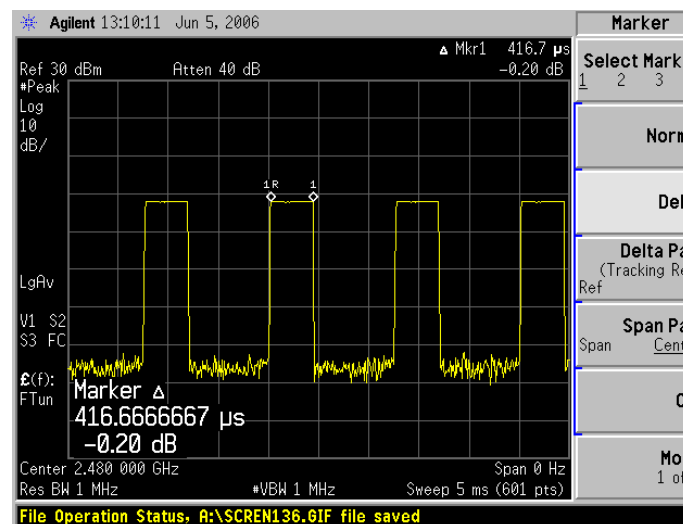
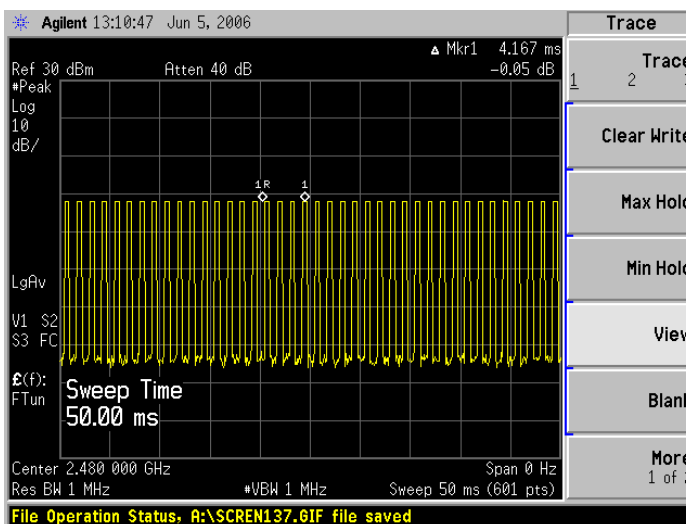
CH 00 2402MHz



CH 39 2441MHz



CH 78 2480MHz



Note: Dwell time = time slot length * hop rate / number of hopping channels * period

Occupancy Time of Frequency Hopping System

Test Time Period: $0.4 \times 79 = 31.6\text{sec}$, Hopping Times Within 1sec: $40/50\text{msec} = 800\text{ hops/sec}$.

A) 2402MHz The Maximum Occupancy Time Within 31.6sec: $(416.7 \mu\text{s} \times 800) / (79 \times 31.6) = 133.344\text{msec}$ °

B) 2441MHz The Maximum Occupancy Time Within 31.6sec: $(416.7 \mu\text{s} \times 800) / (79 \times 31.6) = 133.344\text{msec}$ °

C) 2480MHz The Maximum Occupancy Time Within 31.6sec: $(416.7 \mu\text{s} \times 800) / (79 \times 31.6) = 133.344\text{msec}$ °

Test Result: The Average Occupancy Time of Each Highest , Middle and Lowest Channel Is Less Than 0.4sec , And Corresponds to The Standard °

PS: (1) From Bluetooth Specification , It Hops 1640 Times in 1sec ° The Average Occupancy Time of Each 79 Channels is $1640/79$ Times , Therefore , We Calculate The Maximum Occupancy Time (worse cars) As Below:

A) 2402Mhz The Occupancy Time of Each Pulse is 0.4msec , The Maximum Occupancy Time within 31.6sec is $0.4\text{msec} \times 1640 / 79 \times 31.6 = 289.056\text{msec}$

B) 2441MHz The Occupancy Time of Each Pulse is 0.4msec , The Maximum Occupancy Time within 31.6sec is $0.4\text{msec} \times 1640 / 79 \times 31.6 = 289.056\text{msec}$

C) 2480MHz The Occupancy Time of Each Pulse is 0.4msec , The Maximum Occupancy Time within 31.6sec is $0.4\text{msec} \times 1640 / 79 \times 31.6 = 289.056\text{msec}$

Test Result: The Maximum Occupancy Time of Each Highest , Middle and Lowest Channel Is Less Than 0.4sec , And Corresponds to The Standard °

9. Occupied Bandwidth

9.1. Test Equipment

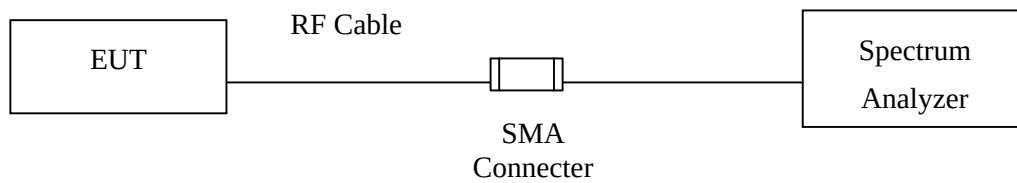
The following test equipments are used during the radiated emission tests:

Radiated Emission / AC-3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2006/03/11

Note: 1. All equipment upon which need to calibrated are with calibration period of 1 year.
2. Mark "X" test instruments are used to measure the final test results.

9.2. Test Setup



9.3. Limits

The minimum bandwidth shall be at least 500kHz.

9.4. Uncertainty

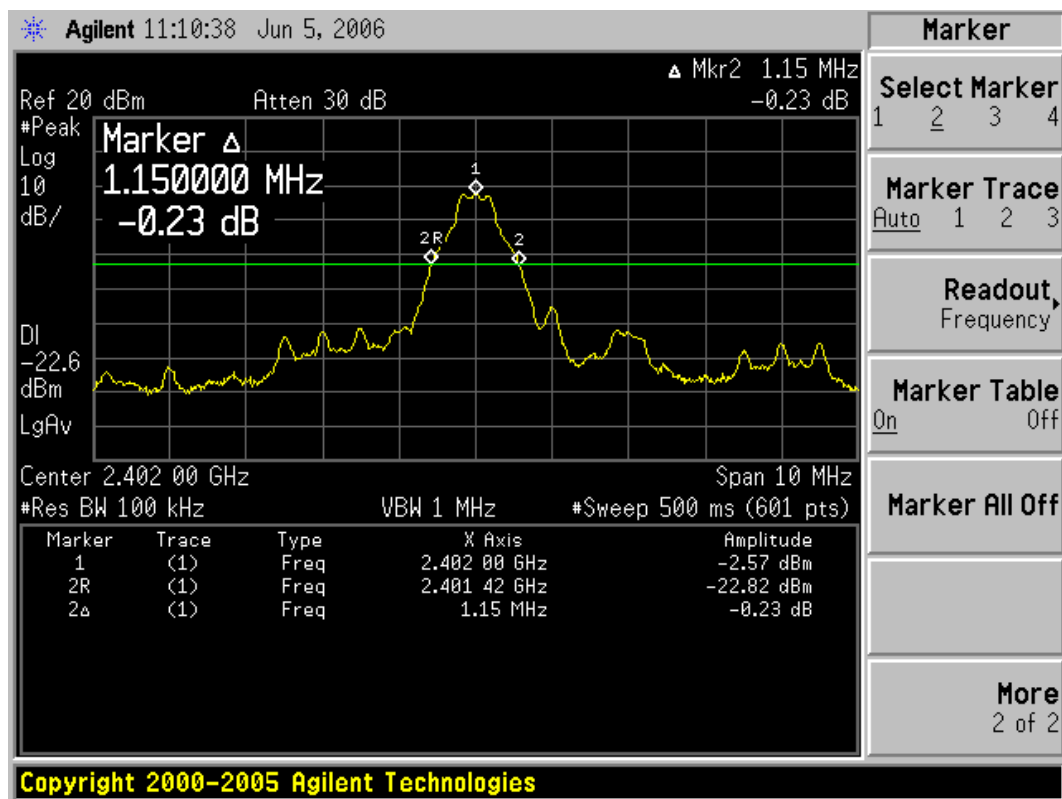
The measurement uncertainty is defined as ± 1.27 dB

9.5. Test Result of Occupied Bandwidth

Product : Bluetooth AV Adapter
 Test Item : Occupied Bandwidth Data
 Test Site : AC-3
 Test Mode : Mode 1: Transmitter (2402MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
00	2402	1150	--	Pass

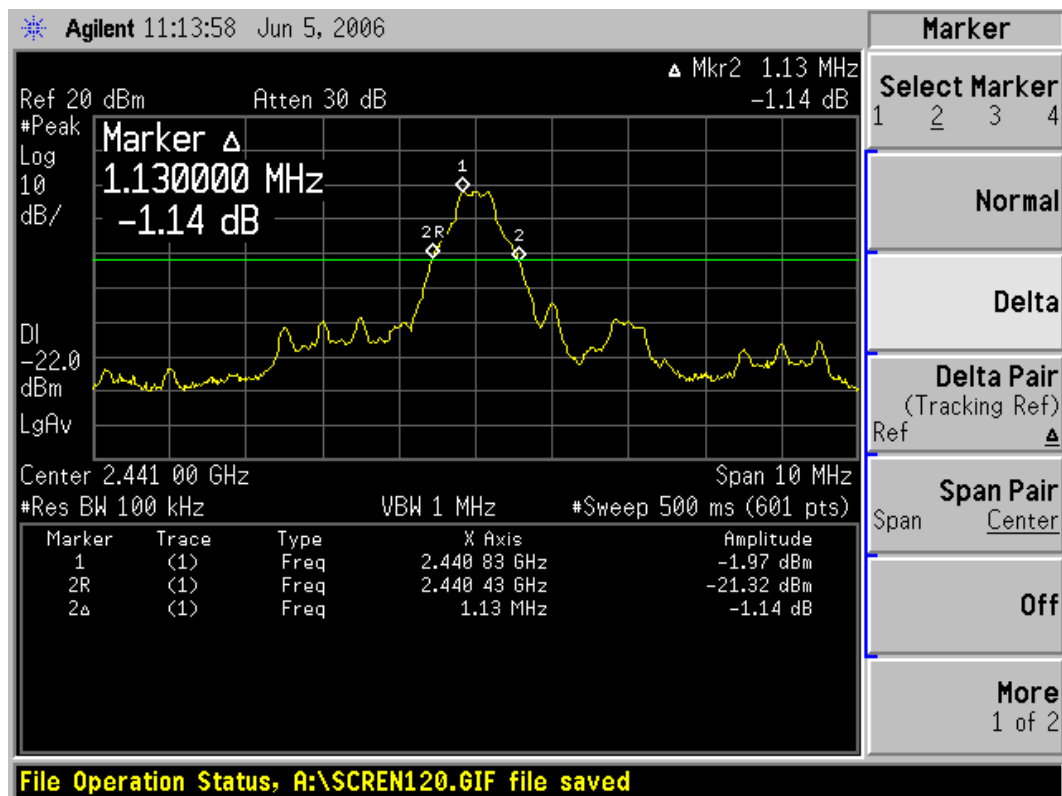
Figure Channel 00 (2402MHz)



Product : Bluetooth AV Adapter
 Test Item : Occupied Bandwidth Data
 Test Site : AC-3
 Test Mode : Mode 1: Transmitter (2441MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
39	2441	1130	--	Pass

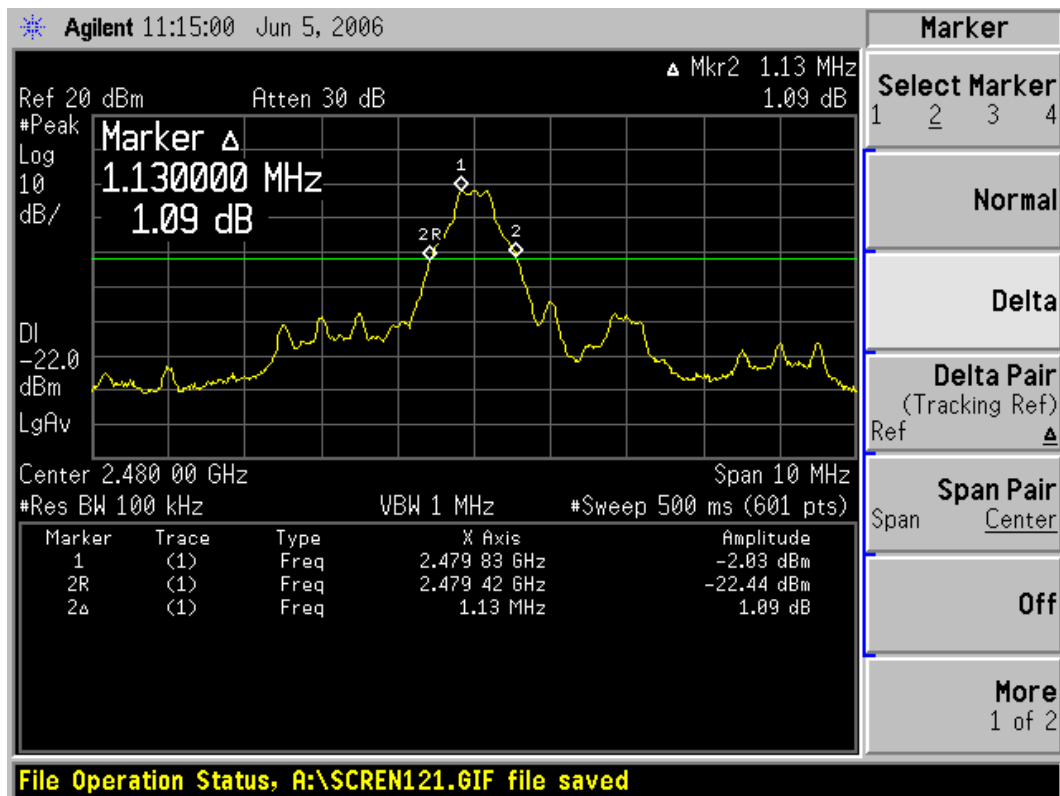
Figure Channel 39 (2402MHz)



Product : Bluetooth AV Adapter
 Test Item : Occupied Bandwidth Data
 Test Site : AC-3
 Test Mode : Mode 1: Transmitter (2480MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
78	2480	1170	--	Pass

Figure Channel 78 (2480MHz)



10. EMI Reduction Method During Compliance Testing

No modification was made during testing.