Test Report

Product Name : MusicGremlin

Model No. : MG-1000

FCC ID : BJM-MG1000

Applicant : TATUNG CO.

Address : 22, Chungshan N. Rd., 3rd Sec. Taipei, Taiwan, 104, R.O.C.

Date of Receipt : Dec. 06, 2005

Issued Date : Dec. 07, 2005

Report No. : 05CL031-RF-US-P05V01

Test Report Certification

Issued Date: Dec. 07, 2005
Report No.: 05CL031-RF-US-P05V01

Accredited by NIST (NVLAP)
NVLAP Lab Code: 200533-0

Product Name	:	MusicGremlin
Applicant	:	TATUNG CO.
Address	:	22, Chungshan N. Rd., 3rd Sec. Taipei, Taiwan, 104, R.O.C.
Manufacturer	:	TATUNG CO.
Model No.	:	MG-1000
Rated Voltage	:	AC 120V/60Hz
Working Voltage	:	N/A
Trade Name	:	MusicGremlin
Applicable Standard	:	FCC CFR Title 47 Part 15 Subpart B: 2005
		CISPR 22 Edition 4.1: 2004
		ANSI C63.4: 2003
Test Result	:	Complied

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

Documented By : (Rebaca CHi)

Tested By : (Tim Sung)

Approved By : (Gene Chang)

CNLA 0914

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1. GENERAL INFORMATION

1.1. EUT Description

Product Name	:	MusicGremlin
Trade Name	:	MusicGremlin
Model No.	:	MG-1000
FCC ID	:	BJM-MG1000
Frequency Range	:	2412 – 2462MHz
Channel Number	:	11
Data Speed	:	IEEE 802.11b – 1, 2, 5.5, 11Mbps
Type of Modulation	:	DSSS
Antenna Type	:	Chip Antenna
Antenna Gain	:	-2.45 dBi
Channel Control	:	Auto
Power Adapter	:	DELTA, ADP-15GH B Cable out: Non-Shielded, 1.8m with one ferrite core bonded.

Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 1:	2412 MHz	Channel 5:	2432 MHz	Channel 9:	2452 MHz
Channel 2:	2417 MHz	Channel 6:	2437 MHz	Channel 10:	2457 MHz
Channel 3:	2422 MHz	Channel 7:	2442 MHz	Channel 11:	2462 MHz
Channel 4:	2427 MHz	Channel 8:	2447 MHz		

Note:

1. The EUT is a MusicGremlin including a 2.4GHz transceiver.
2. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
3. The lowest and highest data rates are tested. Only worst case is shown in the report.
4. These tests are 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.

1.2. Operational Description

EUT is a MusicGremlin with 11 channels. This device provided four kinds of transmitting speed 1, 2, 5.5 and 11Mbps. The device of RF carrier is DBPSK, DQPSK and CCK (IEEE 802.11b) .

The device adapts direct sequence spread spectrum modulation. The antenna was Connector provides diversity function to improve the receiving function.

This MusicGremlin, compliant with IEEE 802.11b, is a high-efficiency Wireless LAN adapter. It allows your computer to connect to a wireless network and to share resources, such as files or printers without being bound to the network wires. In addition, its standard compliance ensures that it can communicate with any IEEE 802.11b network.

Test Mode	Mode 1: Transmitter 802.11b

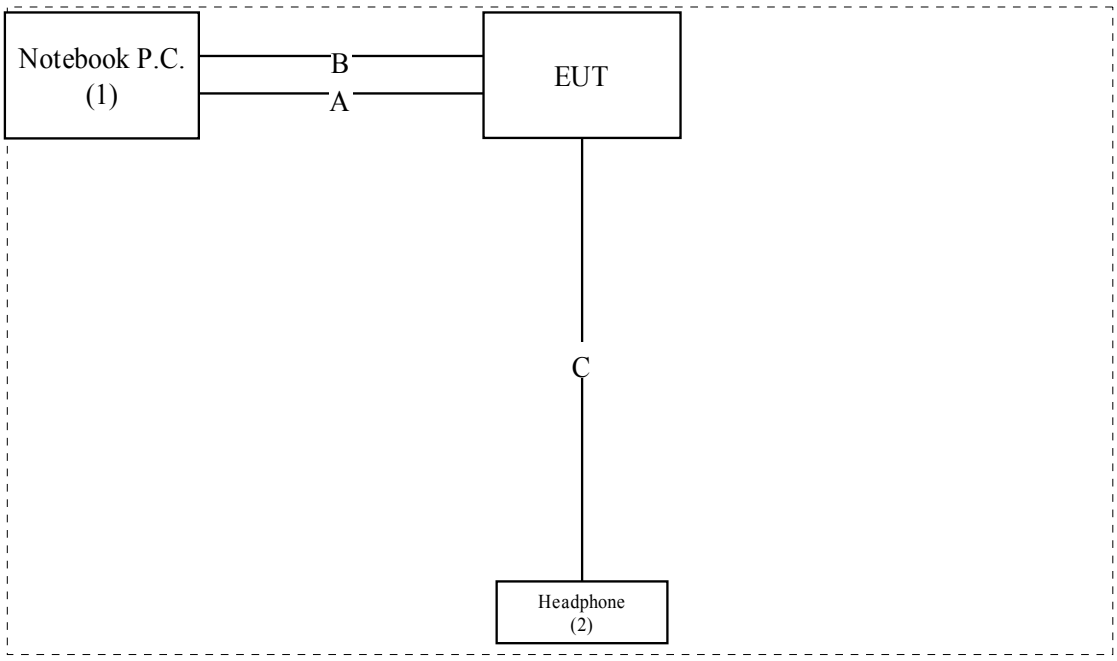
1.3. Tested System Datails

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.	FCC ID	Power Cord
(1)	Notebook PC	DELL	PPT	N/A	DoC	Non-Shielded, 0.8m
(2)	Headphone	TATUNG	N/A	N/A	N/A	N/A

Signal Cable Type		Signal cable Description
A.	USB Cable	Shielded, 1.8m
B.	Audio Cable	Non-Shielded, 1.8m
C.	Headphone Cable	Non-Shielded, 1.6m

1.4. Configuration of tested System



1.5. EUT Exercise Software

(1) Setup the EUT as shown in Section 1.4

(2) Install the special edition driver on the notebook

(3) Execute the continuous transmitting program on the notebook

(4) Use the spectrum analyzer to verify the EUT is continuous transmitting

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	50-65
Barometric pressure (mbar)	860-1060	950-1000

Site Description: June 22, 2001 File on
Federal Communications Commission
FCC Engineering Laboratory
7435 Oakland Mills Road
Columbia, MD 21046
Reference 31040/SIT1300F2

0914

July 03, 2001 Accreditation on NVLAP
NVLAP Lab Code: 200533-0

Site Name: Quietek Corporation

Site Address: No. 5-22, Ruei-Shu Valley, Ruei-Ping Tsuen,
Lin-Kou Shiang, Taipei,
Taiwan, R.O.C.
TEL: 886-2-8601-3788 / FAX : 886-2-8601-3789
E-Mail : service@quietek.com

NVLAP Lab Code: 200533-0

2. Conducted Emission

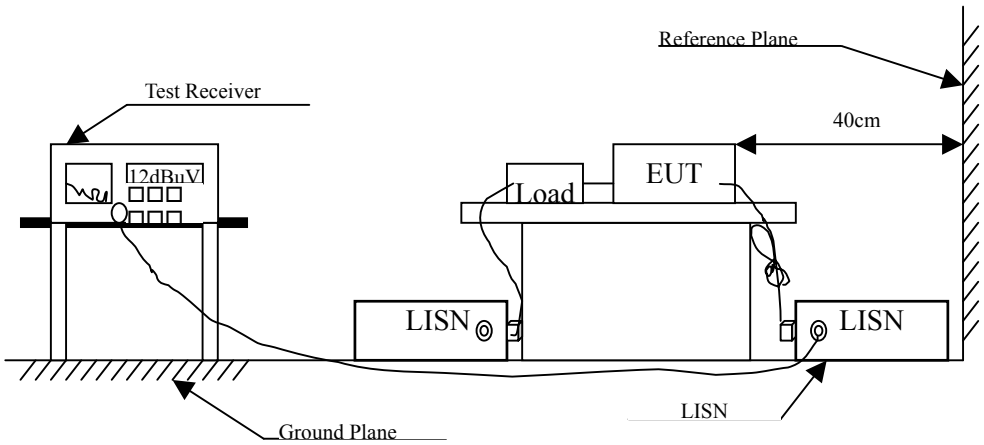
2.1. Test Equipment

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

Item	Instrument	Manufacturer	Type No./Serial No	Last Cal.	Remark
1	Test Receiver	R & S	ESCS 30/825442/17	May, 2005	
2	L.I.S.N.	R & S	ESH3-Z5/825016/6	May, 2005	EUT
3	L.I.S.N.	Kyoritsu	KNW-407/8-1420-3	May, 2005	Peripherals
4	Pulse Limiter	R & S	ESH3-Z2	May, 2005	
5	No.1 Shielded Room			N/A	

Note: All instruments are calibrated every one year.

2.2. Test Setup



2.3. Limits

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

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

Product : MusicGremlin
Test Item : Conducted Emission Test
Power Line : Line 1
Test Mode : Mode 1: Transmitter 802.11b (2437MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
LINE 1					
Quasi-Peak					
*0.252	0.341	37.950	38.291	-24.795	63.086
0.388	0.300	25.050	25.350	-33.850	59.200
0.514	0.300	26.990	27.290	-28.710	56.000
0.630	0.301	27.280	27.581	-28.419	56.000
0.896	0.310	25.010	25.320	-30.680	56.000
1.267	0.320	23.370	23.690	-32.310	56.000
Average					
0.252	0.341	24.840	25.181	-27.905	53.086
0.388	0.300	14.990	15.290	-33.910	49.200
*0.514	0.300	19.260	19.560	-26.440	46.000
0.630	0.301	17.020	17.321	-28.679	46.000
0.896	0.310	13.950	14.260	-31.740	46.000
1.267	0.320	10.580	10.900	-35.100	46.000

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

Product : MusicGremlin
Test Item : Conducted Emission Test
Power Line : Line 2
Test Mode : Mode 1: Transmitter 802.11b (2437MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
LINE 2					
Quasi-Peak					
*0.263	0.300	36.010	36.310	-26.461	62.771
0.400	0.310	23.580	23.890	-34.967	58.857
0.530	0.310	27.870	28.180	-27.820	56.000
0.670	0.310	27.890	28.200	-27.800	56.000
0.820	0.320	23.720	24.040	-31.960	56.000
0.940	0.320	26.090	26.410	-29.590	56.000
Average					
0.263	0.300	25.290	25.590	-27.181	52.771
0.400	0.310	15.450	15.760	-33.097	48.857
*0.530	0.310	19.690	20.000	-26.000	46.000
0.670	0.310	18.390	18.700	-27.300	46.000
0.820	0.320	13.330	13.650	-32.350	46.000
0.940	0.320	15.590	15.910	-30.090	46.000

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:

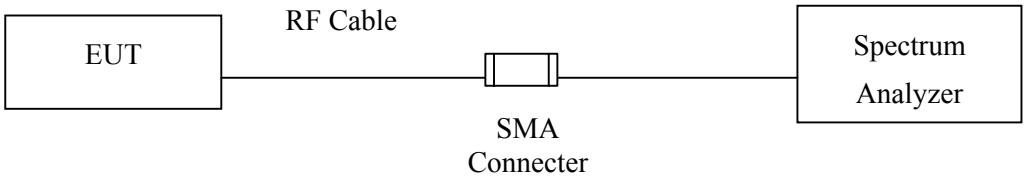
	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Test Receiver	R & S	ESI 26 / 838786 / 004	May, 2005

Note: 1. All instruments are calibrated every one year.

2. The test instruments marked by "X" are used to measure the final test results.

3.2. Test Setup

Conduction Power Measurement



3.3. Limits

The maximum peak power shall be less 1 Watt.

3.4. Uncertainty

The measurement uncertainty is defined as ± 1.27 dB

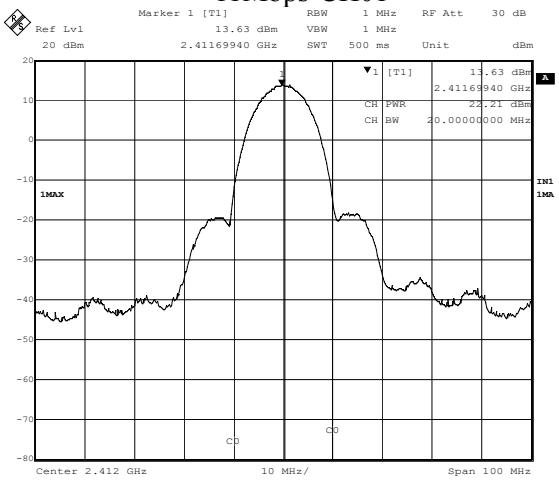
3.5. Test Result of Peak Power Output

Product : MusicGremlin
Test Item : Peak Power Output Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter 802.11b

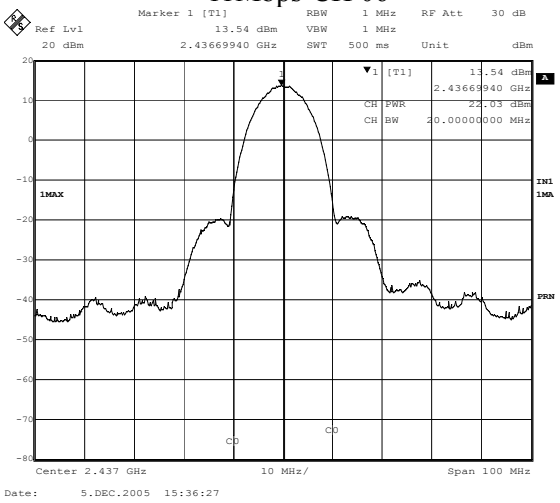
Data Speed: 11Mbps

Channel No.	Frequency (MHz)	Measurement	Required Limit	Result
1	2412.00	22.21dBm	1Watt= 30 dBm	Pass
6	2437.00	22.03dBm	1Watt= 30 dBm	Pass
11	2462.00	21.85dBm	1Watt= 30 dBm	Pass

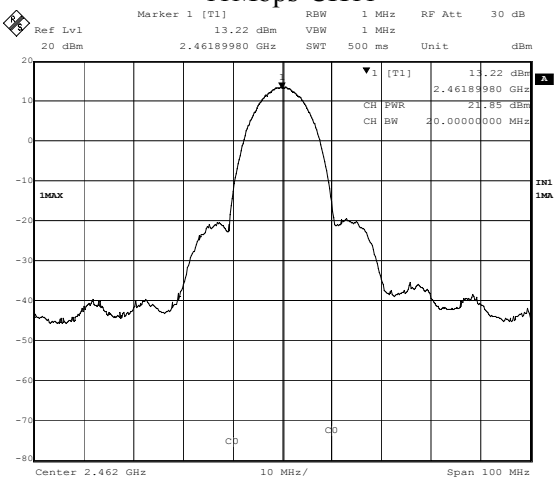
11Mbps-CH01



11Mbps-CH 06



11Mbps-CH11



4. Radiated Emission

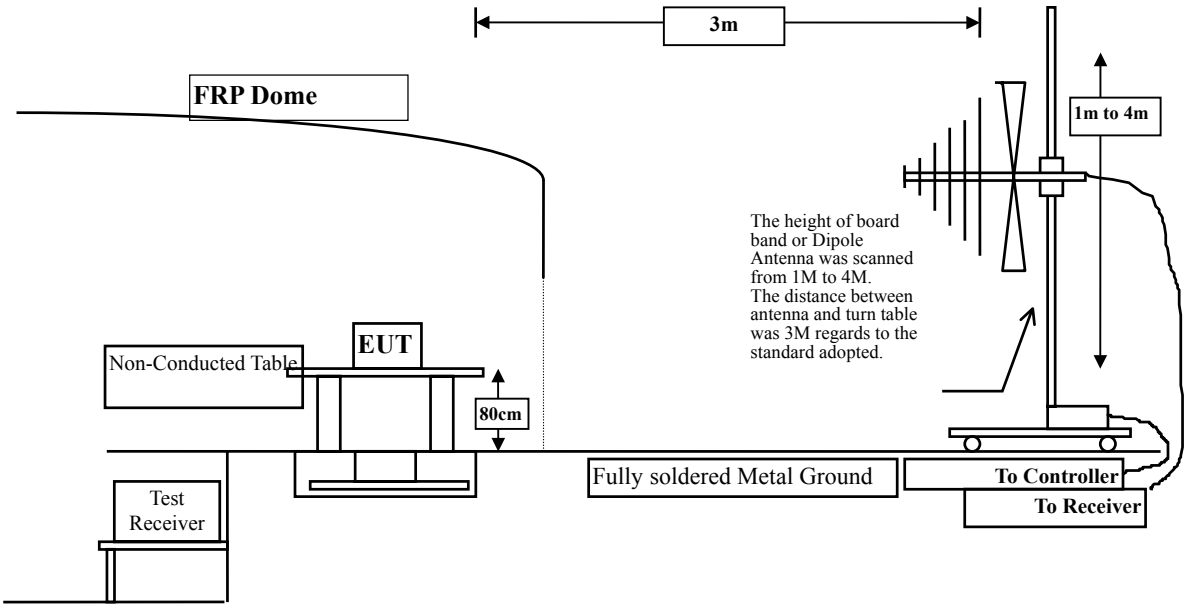
4.1. Test Equipment

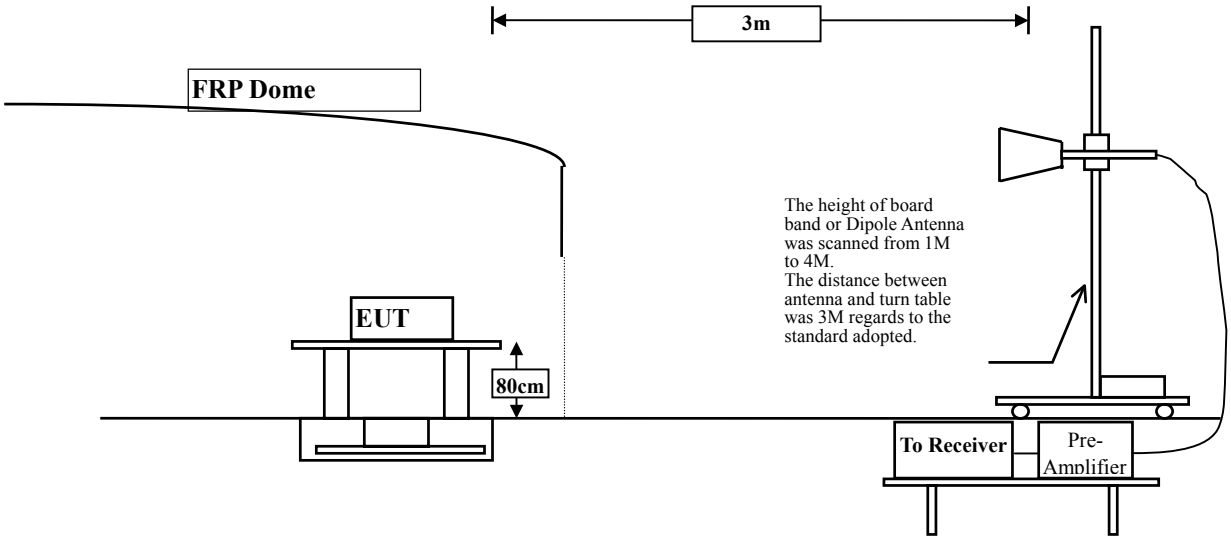
The following test equipment are used during the radiated emission test:

Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
Site # 1		Test Receiver	R & S	ESCS 30 / 825442/14	May, 2005
		Spectrum Analyzer	Advantest	R3261C / 71720140	May, 2005
		Pre-Amplifier	HP	8447D/3307A01812	May, 2005
		Bilog Antenna	Chase	CBL6112B / 12452	Sep., 2005
		Horn Antenna	EM	EM6917 / 103325	May, 2005
Site # 2		Test Receiver	R & S	ESCS 30 / 825442/17	May, 2005
		Spectrum Analyzer	Advantest	R3261C / 71720609	May, 2005
		Pre-Amplifier	HP	8447D/3307A01814	May, 2005
		Bilog Antenna	Chase	CBL6112B / 2455	Sep., 2005
		Horn Antenna	EM	EM6917 / 103325	May, 2005
Site # 3	X	Test Receiver	R & S	ESI 26 / 838786 / 004	May, 2005
	X	Spectrum Analyzer	Advantest	R3162 / 100803480	May, 2005
	X	Pre-Amplifier	QTK	QTK-AMP-03 / 0003	May, 2005
	X	Bilog Antenna	SCHAFFNER	CBL6112B / 2697	May, 2005
	X	Horn Antenna	ETS	3115 / 0005-6160	July, 2005
	X	Pre-Amplifier	QTK	QTK-AMP-01 / 0001	July, 2005

Note: 1. All instruments are calibrated every one year.
2. The test instruments marked by "X" 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(a) 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 dtrength 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 harminics is checked.

4.5. Uncertainty

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

4.6. Test Result of Radiated Emission

Product : MusicGremlin
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter 802.11b (2412MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector					
4824.250	3.724	51.284	55.008	-18.992	74.000
7236.250	9.439	40.030	49.469	-24.531	74.000
9648.250	11.829	38.975	50.804	-23.196	74.000
Average Detector					
4824.250	3.724	37.233	40.957	-13.043	54.000
Vertical					
Peak Detector					
4824.250	3.724	55.284	59.008	-14.992	74.000
7236.250	9.439	39.888	49.327	-24.673	74.000
9648.250	11.829	40.574	52.403	-21.597	74.000
Average Detector					
4824.000	3.723	42.310	46.033	-7.967	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz。
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz。
4. Measurement Level = Reading Level + Correct Factor.
5. 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 : MusicGremlin
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter 802.11b (2437 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector					
4874.000	3.893	50.300	54.192	-19.808	74.000
7311.000	9.624	39.512	49.136	-24.864	74.000
9748.000	11.805	39.646	51.452	-22.548	74.000
Average Detector					
4874.000	3.893	37.250	41.142	-12.858	54.000
Vertical					
Peak Detector					
4874.000	3.893	53.675	57.567	-16.433	74.000
7311.000	9.624	37.824	47.448	-26.552	74.000
9748.000	11.805	38.540	50.346	-23.654	74.000
Average Detector					
4874.000	3.893	40.890	44.782	-9.218	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz。
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz。
4. Measurement Level = Reading Level + Correct Factor.
5. 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 : MusicGremlin
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter 802.11b (2462 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector					
4924.000	4.075	48.506	52.581	-21.419	74.000
7386.000	9.812	37.531	47.343	-26.657	74.000
9848.000	11.819	37.985	49.804	-24.196	74.000
Average Detector					
--					
Vertical					
Peak Detector					
4924.000	4.075	52.466	56.541	-17.459	74.000
7386.000	9.812	39.249	49.061	-24.939	74.000
9848.000	11.819	38.155	49.974	-24.026	74.000
Average Detector					
4924.000	4.075	39.540	43.615	-10.385	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz。
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz。
4. Measurement Level = Reading Level + Correct Factor.
5. 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 : MusicGremlin
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter 802.11b (2412 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
546.530	20.466	12.513	32.979	-13.021	46.000
636.250	20.889	16.877	37.766	-8.234	46.000
*692.000	21.122	17.063	38.185	-7.815	46.000
747.800	21.019	10.806	31.825	-14.175	46.000
796.300	22.034	12.326	34.360	-11.640	46.000
847.220	22.239	13.746	35.985	-10.015	46.000
Vertical:					
*190.050	9.546	24.744	34.290	-9.210	43.500
347.670	14.946	13.244	28.190	-17.810	46.000
362.330	16.263	11.517	27.780	-18.220	46.000
689.600	20.441	7.449	27.890	-18.110	46.000
810.850	21.702	7.478	29.180	-16.820	46.000
963.620	23.019	10.441	33.460	-20.540	54.000

Note:

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

Product : MusicGremlin
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter 802.11b (2437 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
546.530	20.466	13.103	33.569	-12.431	46.000
648.380	20.951	12.822	33.773	-12.227	46.000
696.880	20.882	11.917	32.800	-13.200	46.000
747.800	21.019	12.456	33.475	-12.525	46.000
796.300	22.034	11.776	33.810	-12.190	46.000
*847.220	22.239	13.026	35.265	-10.735	46.000
Vertical:					
*95.470	10.295	24.945	35.240	-8.260	43.500
143.980	11.110	20.179	31.290	-12.210	43.500
347.670	14.946	12.964	27.910	-18.090	46.000
362.230	16.249	10.891	27.140	-18.860	46.000
687.190	20.374	6.216	26.590	-19.410	46.000
946.650	23.534	9.426	32.960	-13.040	46.000

Note:

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

Product : MusicGremlin
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter 802.11b (2462 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
209.450	9.804	21.787	31.591	-11.909	43.500
347.670	14.697	13.754	28.451	-17.549	46.000
546.530	20.466	12.093	32.559	-13.441	46.000
648.380	20.951	12.402	33.353	-12.647	46.000
747.800	21.019	10.746	31.765	-14.235	46.000
*847.220	22.239	14.086	36.325	-9.675	46.000
Vertical:					
*131.850	11.830	23.440	35.270	-8.230	43.500
156.100	10.170	19.720	29.890	-13.610	43.500
347.670	14.946	13.704	28.650	-17.350	46.000
362.230	16.249	10.741	26.990	-19.010	46.000
619.280	21.591	5.279	26.870	-19.130	46.000
827.830	21.428	9.702	31.130	-14.870	46.000

Note:

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

5. Band Edge

5.1. Test Equipment

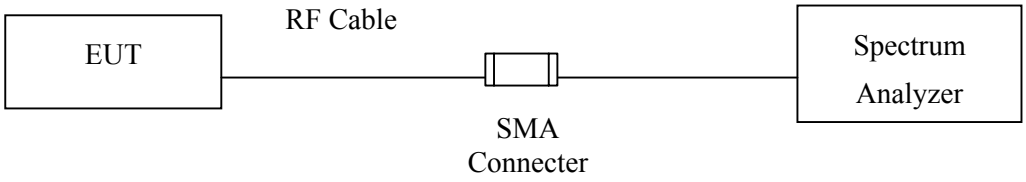
The following test equipments are used during the band edge tests:

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Spectrum Analyzer	HP	E4407B / US39440758	May, 2005
X	Test Receiver	R & S	ESCS 30 / 825442/14	May, 2005
X	Spectrum Analyzer	Advantest	R3261C / 71720140	May, 2005
X	Pre-Amplifier	HP	8447D/3307A01812	May, 2005
X	Bilog Antenna	Chase	CBL6112B / 12452	Sep., 2005
X	Horn Antenna	EM	EM6917 / 103325	May, 2005

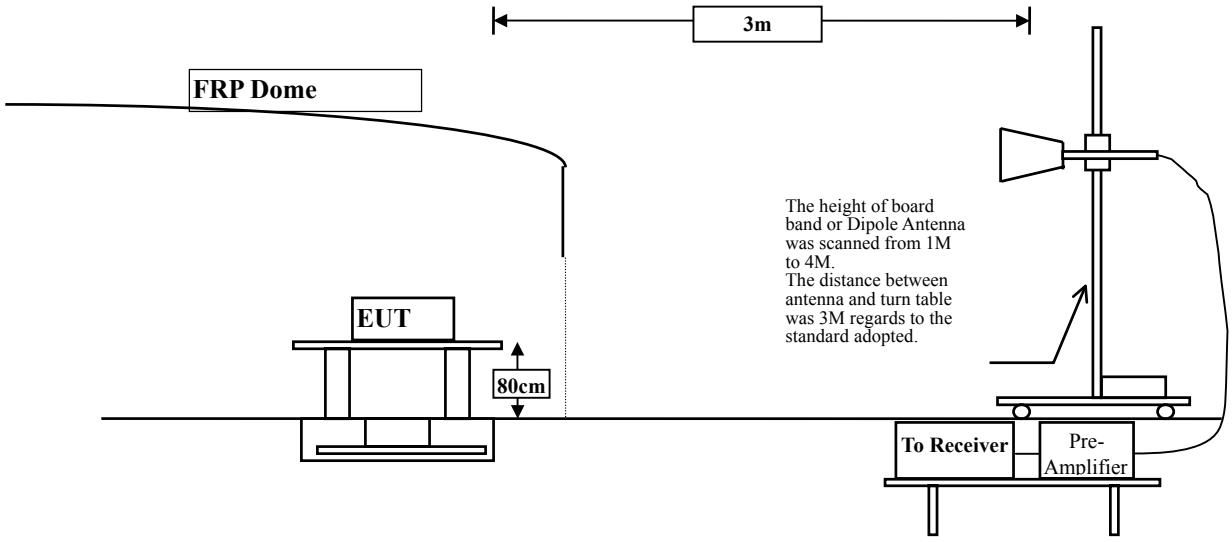
Note: 1. All instruments are calibrated every one year.
2. The test instruments marked by "X" are used to measure the final test results.

5.2. Test Setup

RF Conducted Measurement:



RF Radiated Measurement:



5.3. Limits

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 Conducted is defined as ± 1 MHz and Radiated above 1GHz as ± 3.9 dB.

5.6. Test Result of Band Edge

Product : MusicGremlin
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter 802.11b

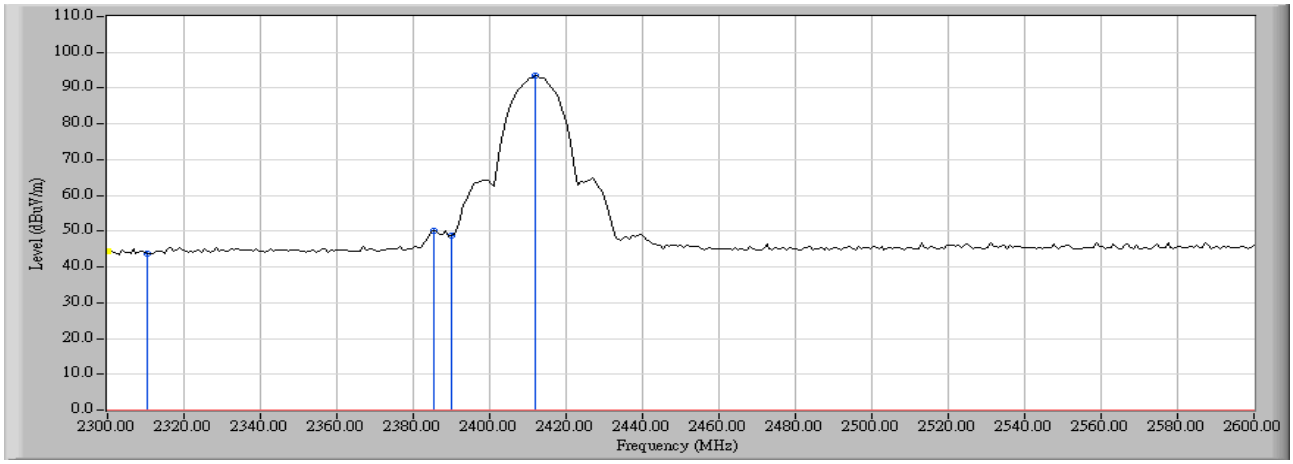
RF Radiated Measurement:

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

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Arerage Limit (dBuV/m)	Result
1 (Peak)	2385.500	52.579	50.180	74.00	54.00	Pass
1 (Average)	--	--	--	74.00	54.00	Pass

Figure Channel 1: (Horizontal)



Product : MusicGremlin
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter 802.11b

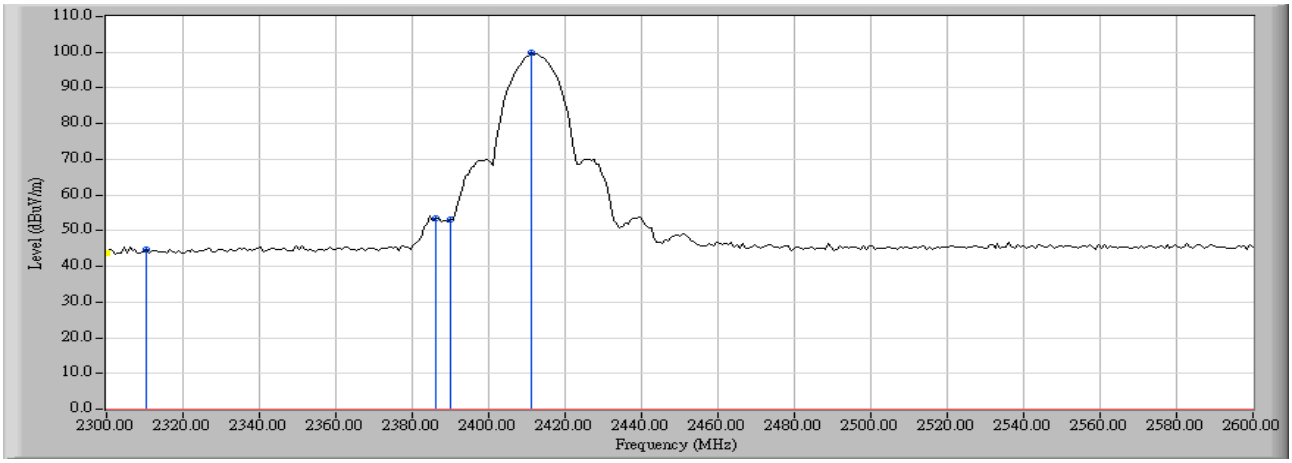
RF Radiated Measurement:

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

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Arerage Limit (dBuV/m)	Result
1 (Peak)	2386.250	55.756	53.360	74.00	54.00	Pass
1 (Average)	--	--	--	74.00	54.00	Pass

Figure Channel 1: (Vertical)

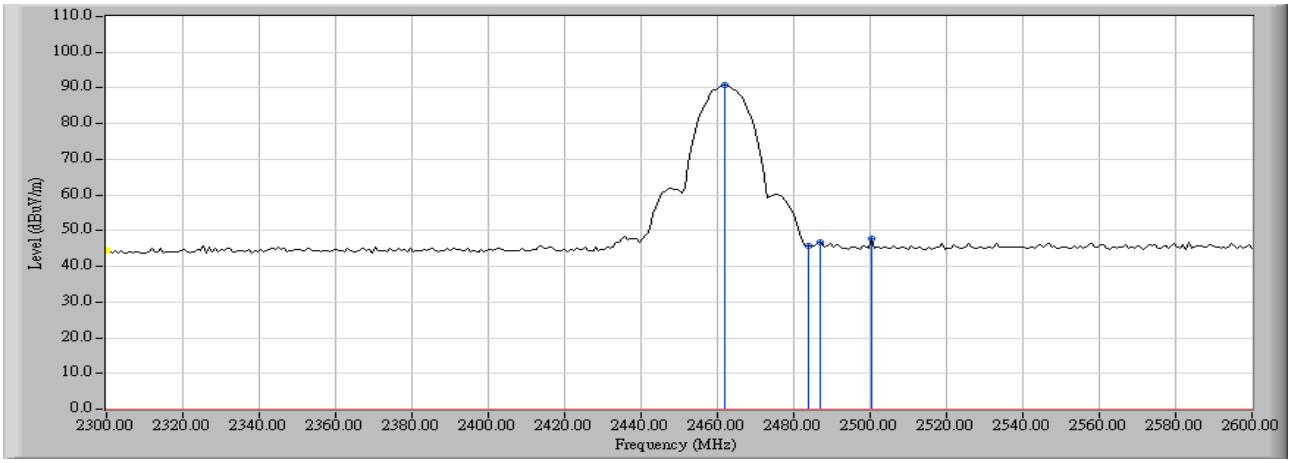


Product : MusicGremlin
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter 802.11b

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Arerage Limit (dBuV/m)	Result
11(Peak)	2486.750	48.707	46.780	74.00	54.00	Pass
11(Average)	--	--	--	74.00	54.00	Pass

Figure Channel 11: (Horizontal)

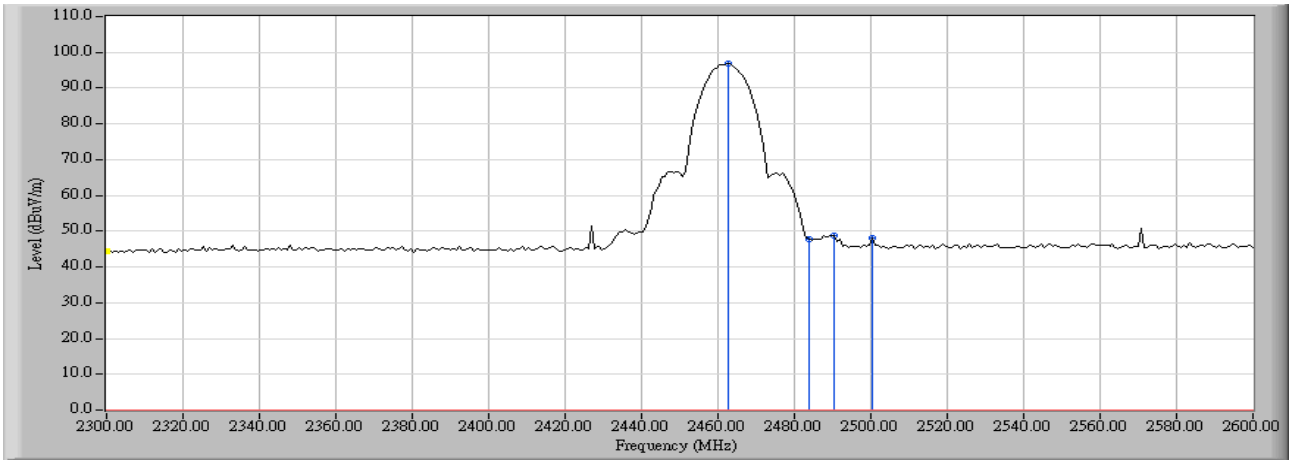


Product : MusicGremlin
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter 802.11b

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Arerage Limit (dBuV/m)	Result
11(Peak)	2490.500	50.835	48.920	74.00	54.00	Pass
11(Average)	--	--	--	74.00	54.00	Pass

Figure Channel 11: (Vertical)



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. Occupied Bandwidth

6.1. Test Equipment

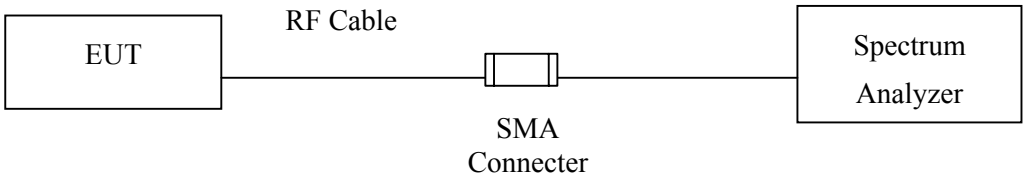
The following test equipments are used during the radiated emission tests:

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Test Receiver	R & S	ESI 26 / 838786 / 004	May, 2005

Note: 1. All instruments are calibrated every one year.

2. The test instruments marked by "X" are used to measure the final test results.

6.2. Test Setup



6.3. Limits

The minimum bandwidth shall be at least 500kHz.

6.4. Uncertainty

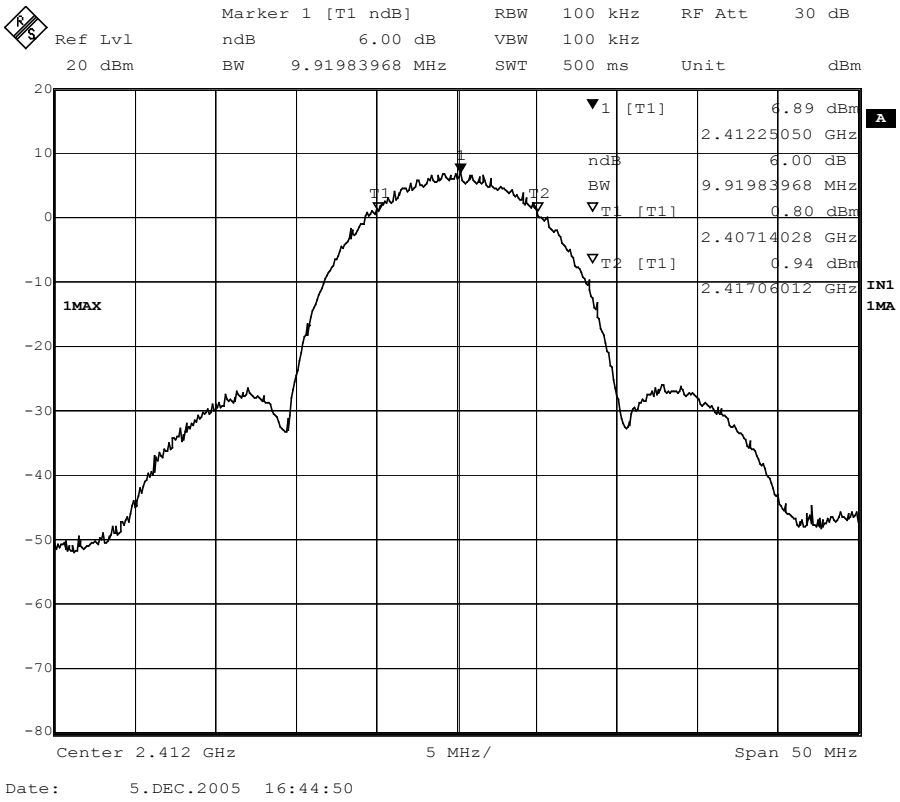
The measurement uncertainty is defined as ± 1.27 dB

6.5. Test Result of Occupied Bandwidth

Product : MusicGremlin
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter 802.11b (2412MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
1 (11Mbps)	2412	9920	>500	Pass

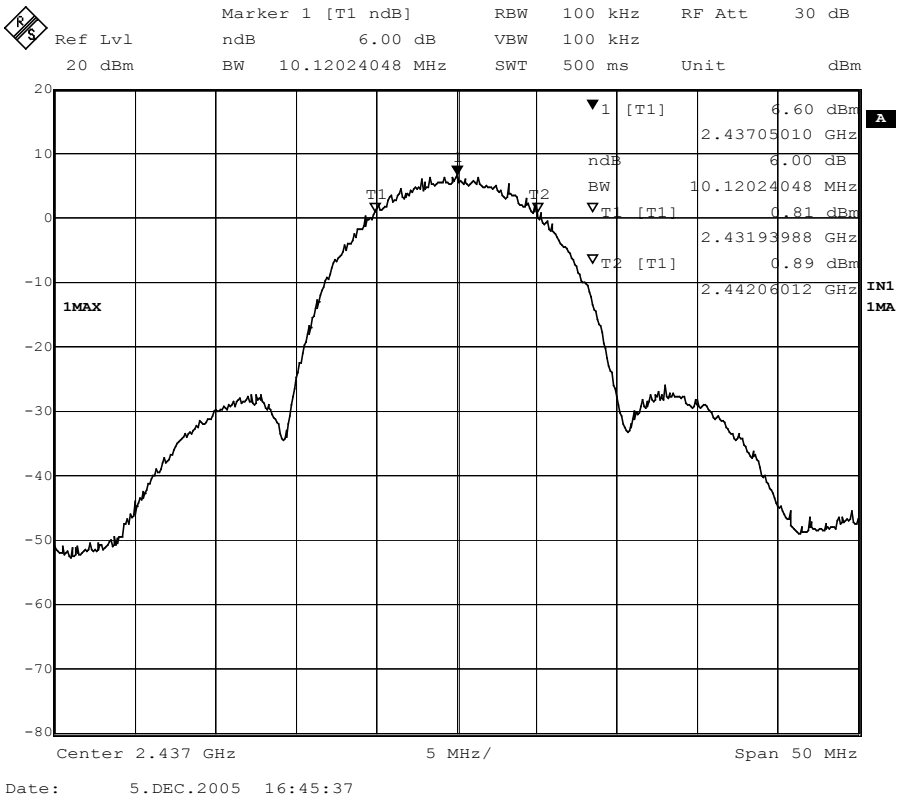
Figure Channel 1: 11Mbps



Product : MusicGremlin
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter 802.11b (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6 (11Mbps)	2437	10120	>500	Pass

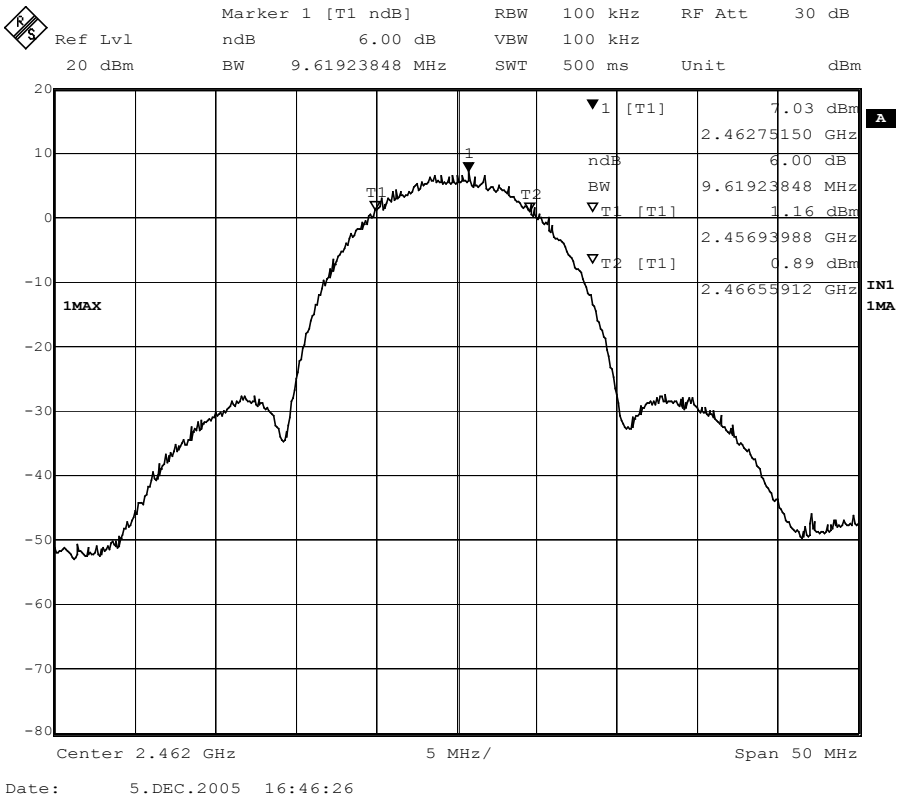
Figure Channel 6: 11Mbps



Product : MusicGremlin
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter 802.11b (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
11 (11Mbps)	2462	9620	>500	Pass

Figure Channel 11: 11Mbps



7. Power Density

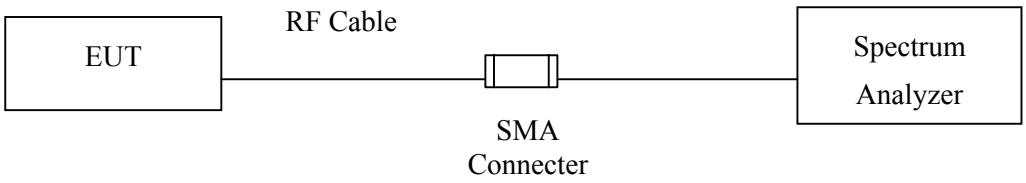
7.1. Test Equipment

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

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Test Receiver	R & S	ESI 26 / 838786 / 004	May, 2005

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. Limits

The transmitted power density averaged over any 1 second interval shall not be greater +8dBm in any 3kHz bandwidth.

7.4. Uncertainty

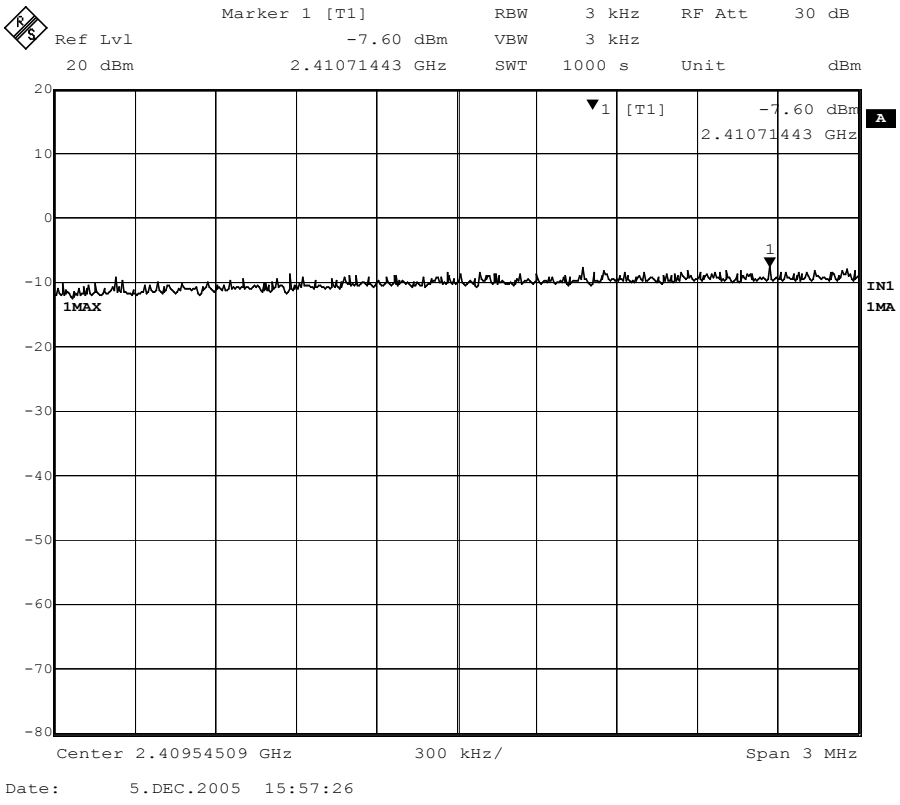
The measurement uncertainty is defined as ± 1.27 dB

7.5. Test Result of Power Density

Product : MusicGremlin
Test Item : Power Density Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter 802.11b (2412MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1 (11Mbps)	2412	-7.60	< 8dBm	Pass

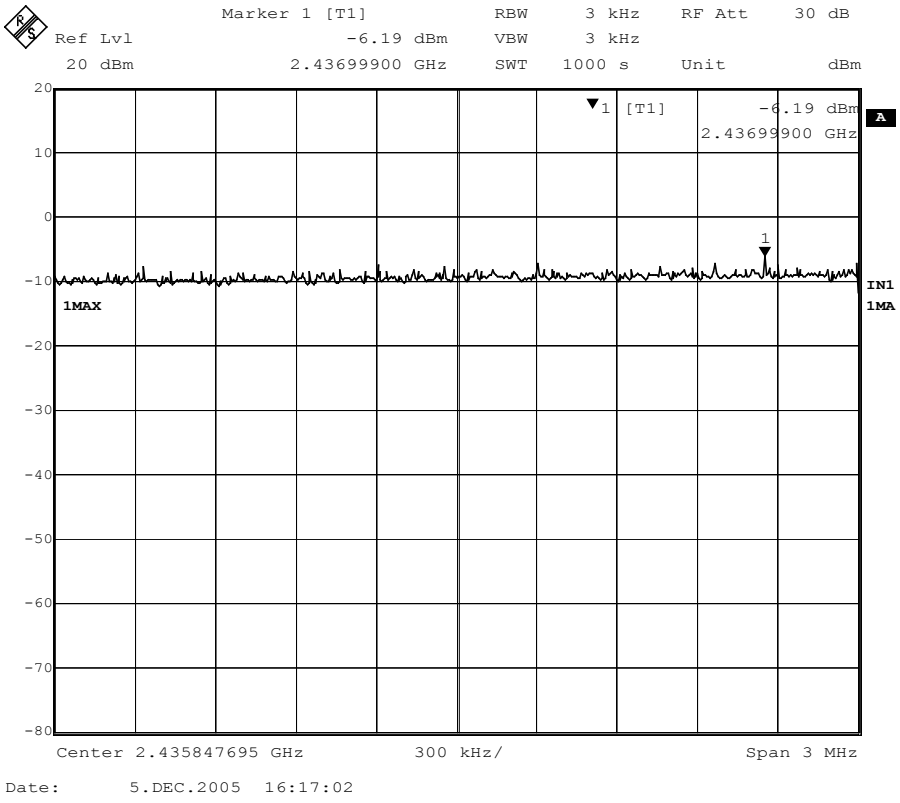
Figure Channel 1: 11Mbps



Product : MusicGremlin
Test Item : Power Density Data
Test Site : No.3OATS
Test Mode : Mode 1: Transmitter 802.11b (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
6 (11Mbps)	2437	-6.19	< 8dBm	Pass

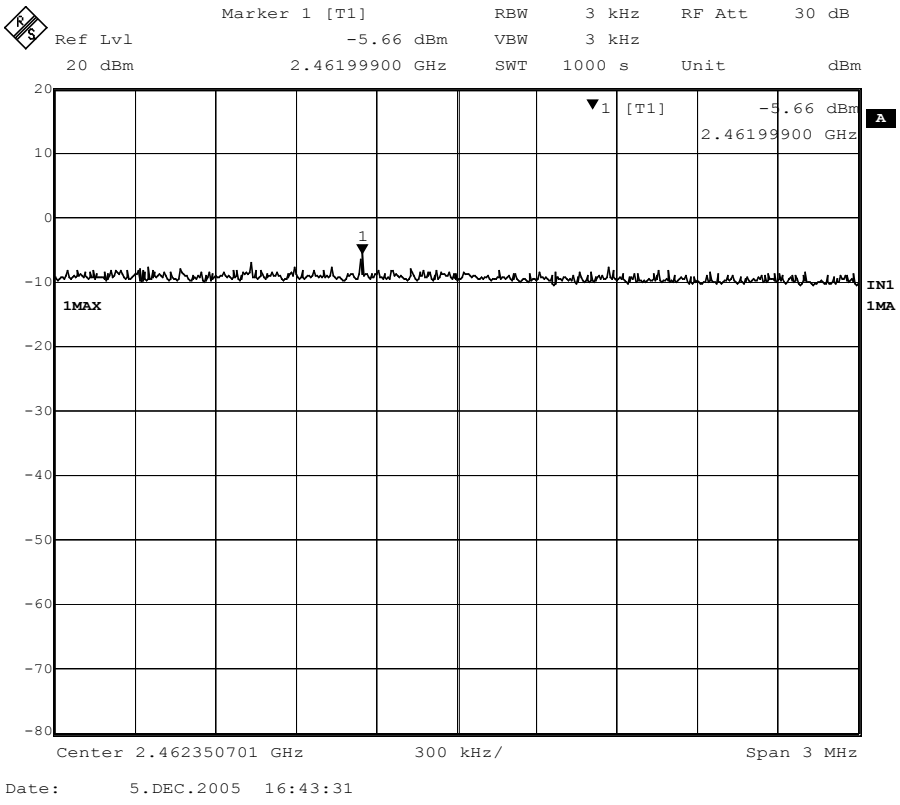
Figure Channel 6: 11Mbps



Product : MusicGremlin
Test Item : Density Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter 802.11b (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
11 (11Mbps)	2462	-5.66	< 8dBm	Pass

Figure Channel 11: 11Mbps



8. EMI Reduction Method During Compliance Testing

No modification was made during testing.

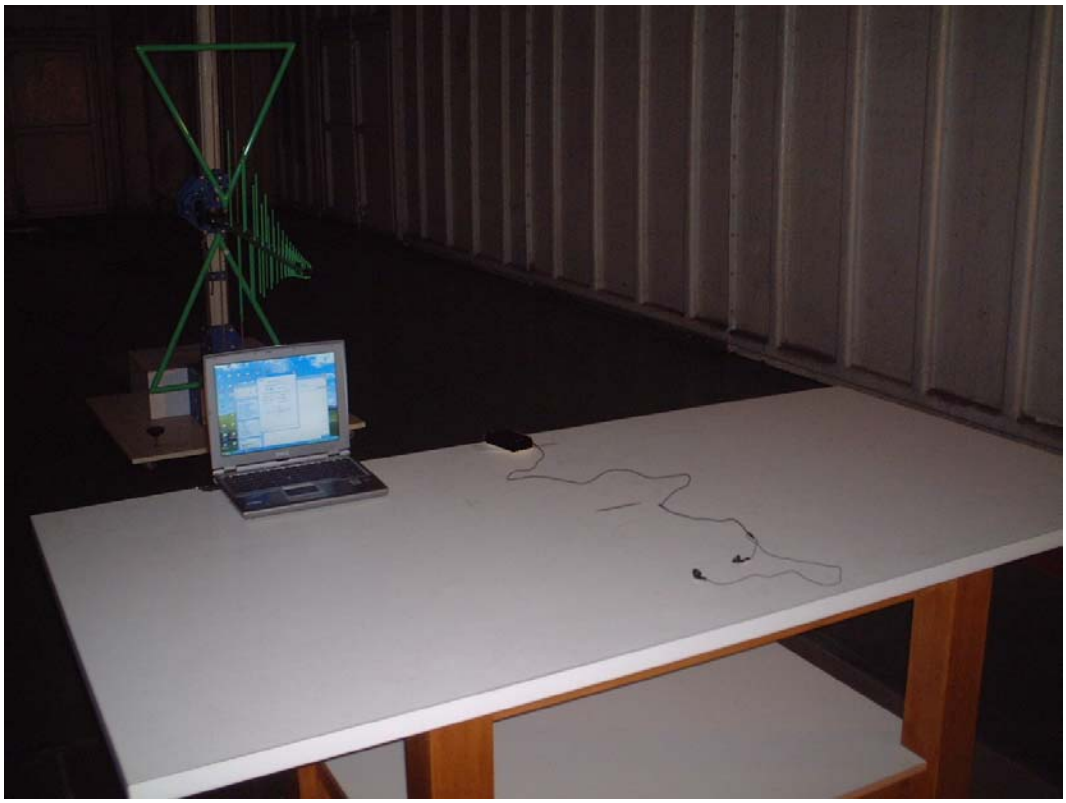
Attachment 1: EUT Test Photographs

Attachment 1: EUT Test Setup Photographs

Front View of Conducted Test

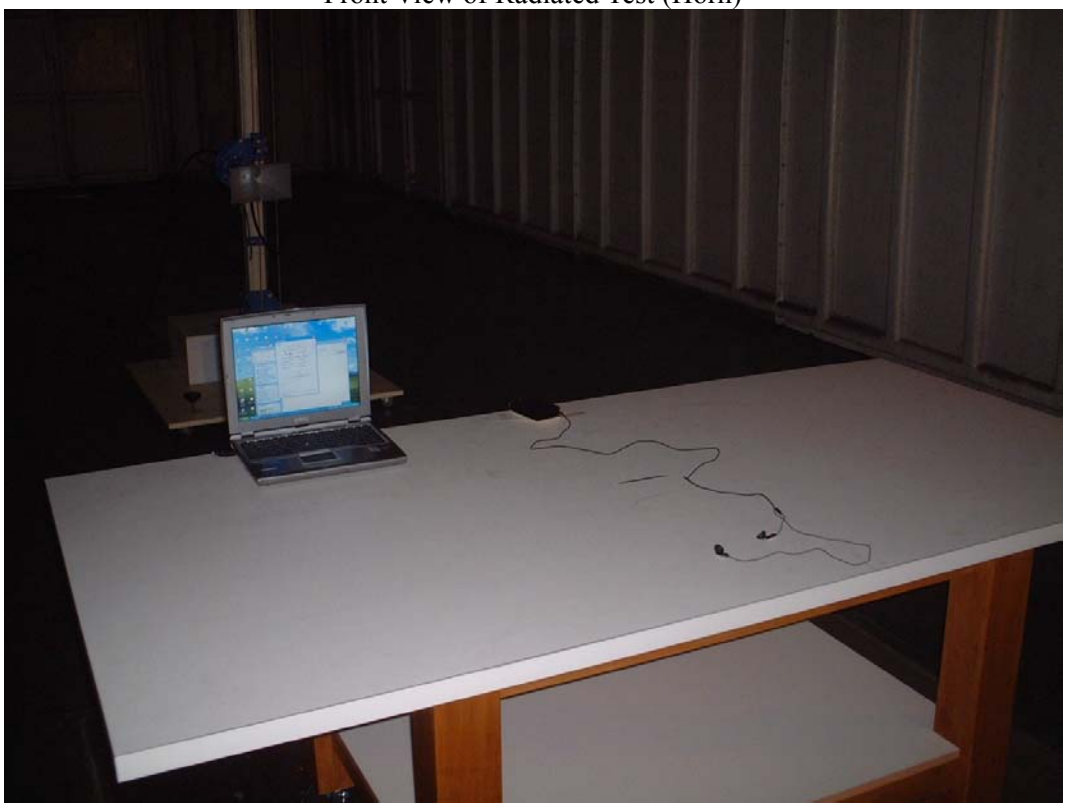
Back View of Conducted Test

Front View of Radiated Test



Back View of Radiated Test

Front View of Radiated Test (Horn)



Back View of Radiated Test (Horn)

Attachment 2: EUT Detailed Photographs

附件 2: 待测物内部相片

(1) EUT Photo

(2) EUT Photo

(3) EUT Photo

(4) EUT Photo

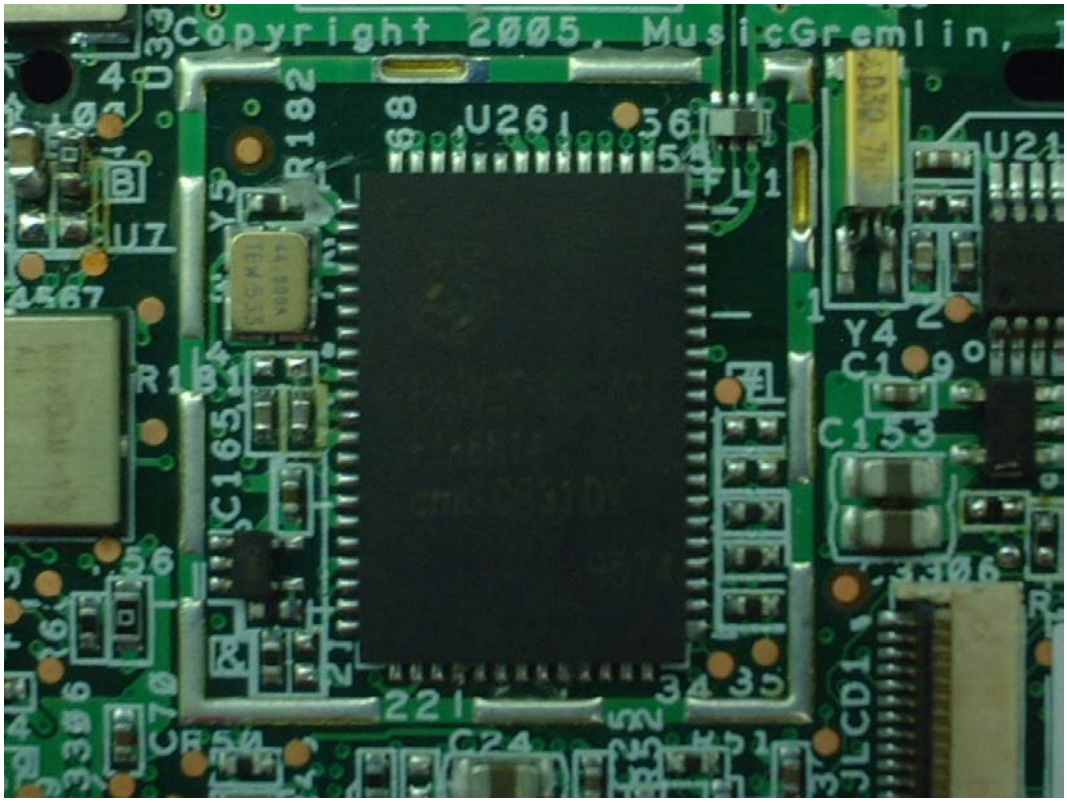
(5) EUT Photo

(6) EUT Photo

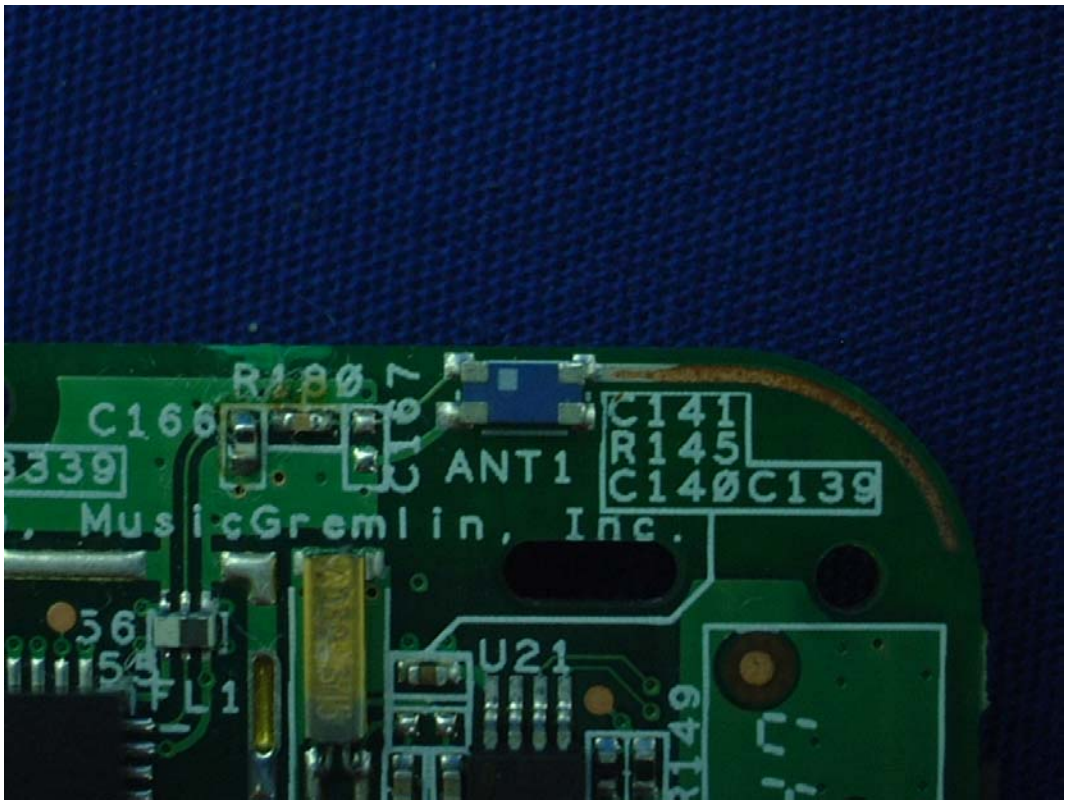
(7) EUT Photo

(8) EUT Photo

(9) EUT Photo



(10) EUT Photo



(11) EUT Photo

(12) EUT Photo

(13) EUT Photo

(14) EUT Photo