



Test Report

Product Name	Wireless LAN Card
Model No.	MS-6877
FCC ID	I4L-MS6877

Applicant	MICRO-STAR INTL Co., LTD.
Address	No. 69, Li-De St., Jung-He City, Taipei Hsien, Taiwan, R.O.C.

Date of Receipt	June 14, 2006
Issued Date	July 03, 2006
Report No.	063L107-RF-US-P05V01-2

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: July 03, 2006

Report No.: 063L107-RF-US-P05V01-2



Accredited by NIST (NVLAP)

NVLAP Lab Code: 200533-0

Product Name	Wireless LAN Card
Applicant	MICRO-STAR INTL Co., LTD.
Address	No. 69, Li-De St., Jung-He City, Taipei Hsien, Taiwan, R.O.C.
Manufacturer	MICRO-STAR INTL Co., LTD.
Model No.	MS-6877
Rated Voltage	AC 120V/60Hz
Working Voltage	DC 3.3V
Trade Name	MSI
Applicable Standard	FCC CFR Title 47 Part 15 Subpart C: 2005 CISPR 22 Edition 4.1: 2004 ANSI C63.4: 2003
Test Result	Complied



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Documented By : Rita Huang
(Rita Huang)



Tested By : Tim Sung
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Approved By : Gene Chang
(Gene Chang)



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1. GENERAL INFORMATION

1.1. EUT Description

Product Name	Wireless LAN Card
Trade Name	MSI
Model No.	MS-6877
FCC ID	I4L-MS6877
Frequency Range	2412 – 2462MHz
Channel Number	11
Data Speed	IEEE 802.11b – 1, 2, 5.5, 11Mbps IEEE 802.11g – 6, 9, 12, 18, 24, 36 48, 54Mbps
Type of Modulation	DSSS/ OFDM
Antenna Type	Connector
Antenna Gain	Refer to the table “Antenna List”
Channel Control	Auto

Antenna List

No.	Manufacturer	Part No.	Peak Gain
1	FVC	X20 (L) / X20 (R)	0.53dBi for 2.4GHz
2	FVC	X40 (L) / X40 (R)	2.58dBi for 2.4GHz
3	FVC	X72IA6 (L) / X72IA6 (R)	0.78dBi for 2.4GHz
4	FVC	L51 (L) / L51 (R)	0.84dBi for 2.4GHz
5	FVC	L41 (L) / L41 (R)	0.01dBi for 2.4GHz

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 Wireless LAN Card including a 2.4GHz transceiver.
2. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
3. Lowest and highest data rates are tested in each mode. Only worst case is shown in the report. (802.11b is 11Mbps and 802.11g is 54Mbps)
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

The EUT is a Wireless LAN Card 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) or eight kinds of transmitting speed 6, 9, 12, 18, 24, 36, 48 and 54Mbps. The device of RF carrier is OFDM (IEEE 802.11g).

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

This Wireless LAN Card, compliant with IEEE 802.11b and IEEE 802.11g, 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. Operation in 2.4GHz Direst Sequence Spread Spectrum (DSSS) radio transmission, the Wireless LAN Card Wired Equivalent Protection (WEP) algorithm is used. In addition, its standard compliance ensures that it can communicate with any IEEE 802.11b and IEEE 802.11g network.

Test Mode	Mode 1: Transmitter 802.11b(Antenna 2)
	Mode 2: Transmitter 802.11g(Antenna 2)

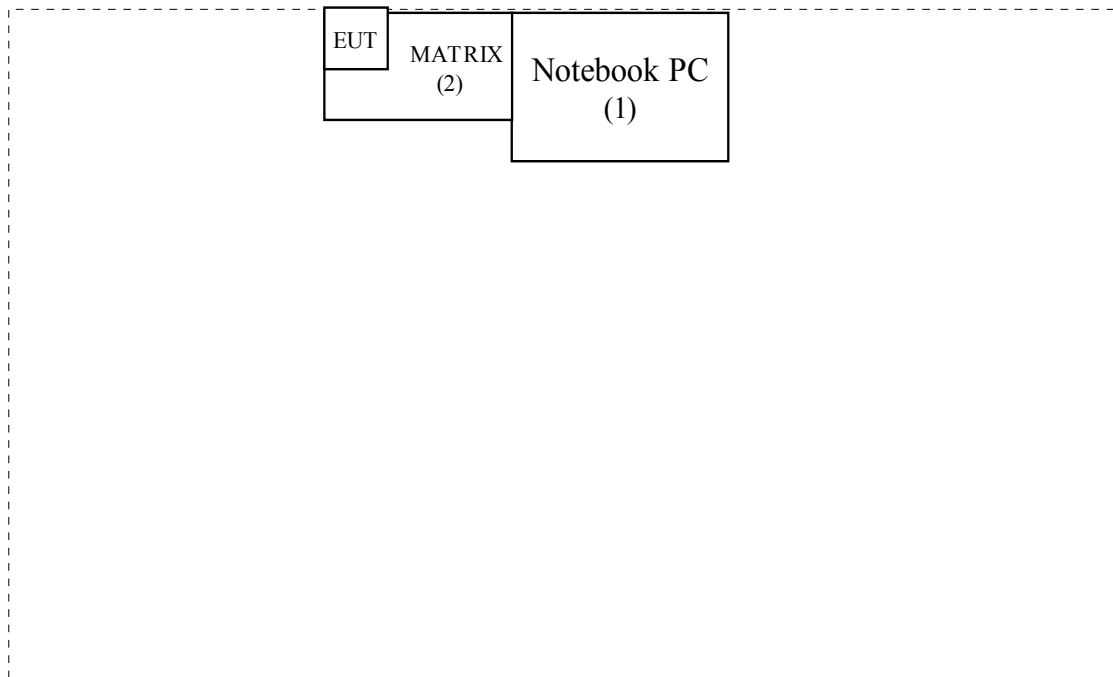
1.3. Tested System Details

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.	FCC ID	Power Cord
1.	Notebook PC	DELL	PPT	N/A	DoC	Non-Shielded, 0.8m
2.	MATRIX	MSI	N/A	N/A	N/A	N/A

Signal Cable Type		Signal cable Description
A.	N/A	N/A

1.4. Configuration of Test System



1.5. EUT Exercise Software

- (1) Setup the EUT as shown in section 1.4
- (2) Execute the CRTU program (the continuous transmission program) on the EUT
- (3) Setup the test mode, the test channel, and the data rate.
- (4) Press OK to start the transmission.
- (5) Verify that the EUT works correctly.

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



Accreditation on NVLAP
NVLAP Lab Code: 200533-0

Site Name: Quietek Corporation



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2. Radiated Emission

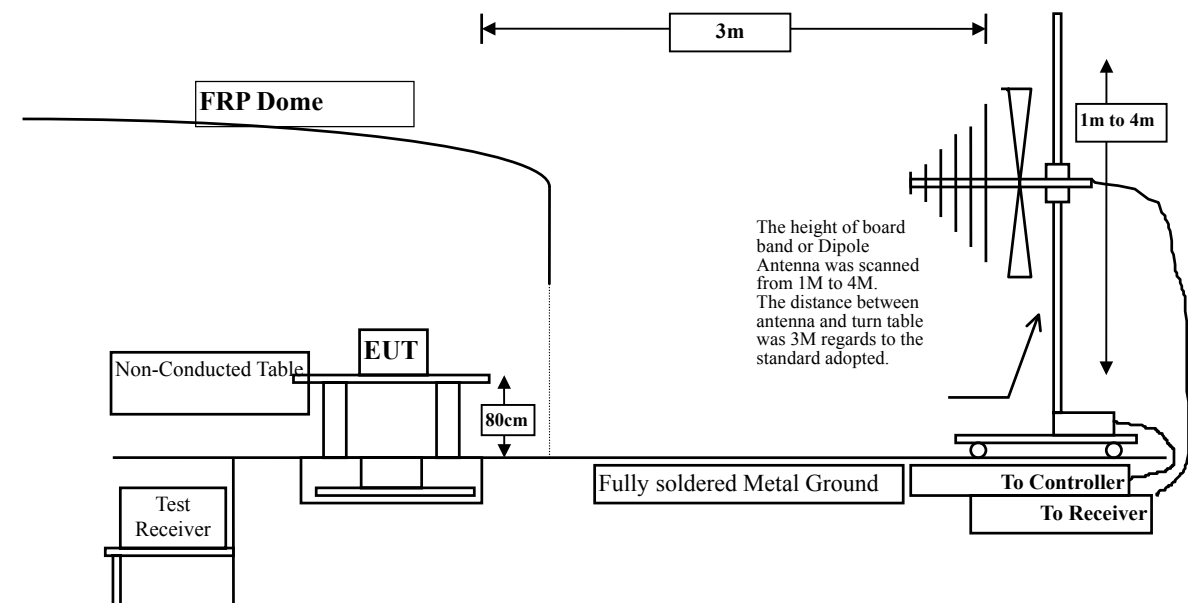
2.1. Test Equipment

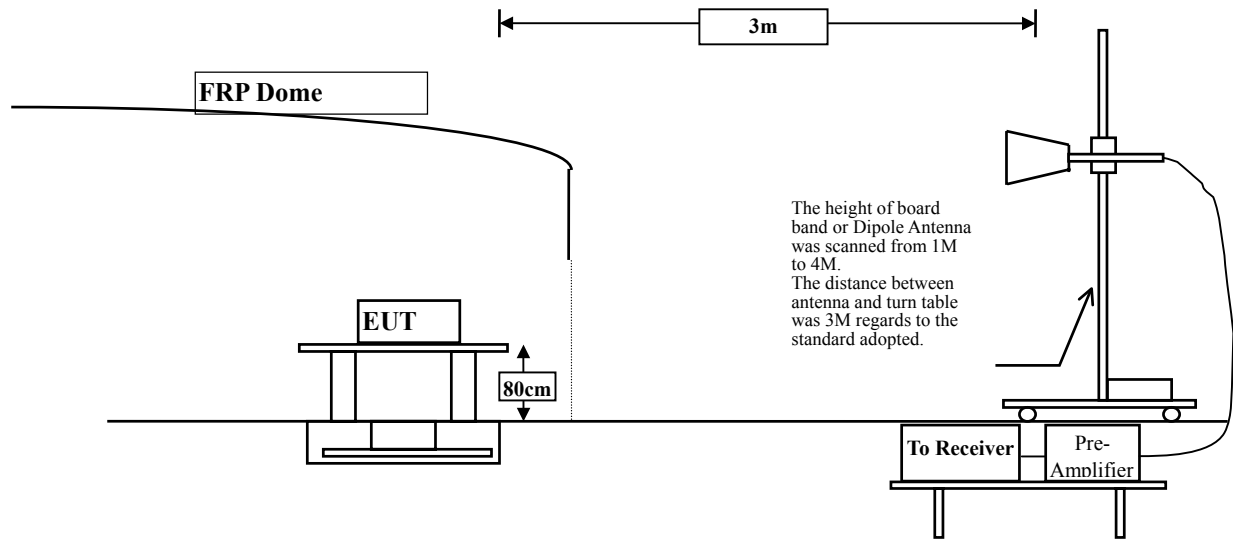
The following test equipment are used during the radiated emission test:

Test Site	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
Site # 1	Test Receiver	R & S	ESCS 30 / 825442/14	May, 2006
	Spectrum Analyzer	Advantest	R3261C / 71720140	May, 2006
	Pre-Amplifier	HP	8447D/3307A01812	May, 2006
	Bilog Antenna	Chase	CBL6112B / 12452	Sep., 2005
	Horn Antenna	EM	EM6917 / 103325	May, 2006
Site # 2	Test Receiver	R & S	ESCS 30 / 825442/17	May, 2006
	Spectrum Analyzer	Advantest	R3261C / 71720609	May, 2006
	Pre-Amplifier	HP	8447D/3307A01814	May, 2006
	Bilog Antenna	Chase	CBL6112B / 2455	Sep., 2005
	Horn Antenna	EM	EM6917 / 103325	May, 2006
Site # 3	X Test Receiver	R & S	ESI 26 / 838786 / 004	May, 2006
	X Spectrum Analyzer	Advantest	R3162 / 100803480	May, 2006
	X Pre-Amplifier	QTK	QTK-AMP-03 / 0003	May, 2006
	X Bilog Antenna	SCHAFFNER	CBL6112B / 2697	May, 2006
	X Horn Antenna	ETS	3115 / 0005-6160	July, 2006
	X Pre-Amplifier	QTK	QTK-AMP-01 / 0001	July, 2006

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

2.2. Test Setup





2.3. 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.

2.4. 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.

2.5. Uncertainty

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

2.6. Test Result of Radiated Emission

Product : Wireless LAN Card
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmitter 802.11b(Antenna 2) (2412MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
4824.000	3.466	34.503	37.969	-36.031	74.000
7236.000	10.913	33.798	44.711	-29.289	74.000
9648.000	13.215	34.421	47.636	-26.364	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4824.000	3.466	38.363	41.829	-32.171	74.000
7236.000	10.913	34.666	45.579	-28.421	74.000
9648.000	13.215	34.574	47.789	-26.211	74.000
Average Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz °
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz °
4. Emission 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 : Wireless LAN Card
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmitter 802.11b(Antenna 2) (2437 MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m

Horizontal

Peak Detector:

4874.000	3.625	34.164	37.789	-36.211	74.000
7311.000	11.222	34.074	45.296	-28.704	74.000
9748.000	13.312	34.090	47.402	-26.598	74.000

Average

Detector:

--

Vertical

Peak Detector:

4874.000	3.625	34.352	37.977	-36.023	74.000
7311.000	11.222	34.276	45.498	-28.502	74.000
9748.000	13.312	33.173	46.485	-27.515	74.000

Average

Detector:

--

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz °
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz °
4. Emission 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 : Wireless LAN Card
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmitter 802.11b(Antenna 2) (2462 MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV/m	dB	dBuV/m

Horizontal

Peak Detector:

4924.000	3.794	34.753	38.547	-35.453	74.000
7386.000	11.552	33.450	45.002	-28.998	74.000
9848.000	13.440	34.514	47.954	-26.046	74.000

Average

Detector:

--

Vertical

Peak Detector:

4924.000	3.794	34.400	38.194	-35.806	74.000
7386.000	11.552	34.075	45.627	-28.373	74.000
9848.000	13.440	34.022	47.462	-26.538	74.000

Average

Detector:

--

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz °
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz °
4. Emission 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 : Wireless LAN Card
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3OATS
 Test Mode : Mode 2: Transmitter 802.11g(Antenna 2) (2412 MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV/m	dB	dBuV/m

Horizontal

Peak Detector:

4824.000	3.466	35.234	38.700	-35.300	74.000
7236.000	10.913	34.907	45.820	-28.180	74.000
9648.000	13.215	34.090	47.305	-26.695	74.000

Average

Detector:

--

Vertical

Peak Detector:

4824.000	3.466	34.845	38.311	-35.689	74.000
7236.000	10.913	34.268	45.181	-28.819	74.000
9648.000	13.215	34.004	47.219	-26.781	74.000

Average

Detector:

--

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz °
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz °
4. Emission 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 : Wireless LAN Card
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmitter 802.11g(Antenna 2) (2437 MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV/m	dB	dBuV/m

Horizontal

Peak Detector:

4874.000	3.625	34.554	38.179	-35.821	74.000
7311.000	11.222	34.500	45.722	-28.278	74.000
9748.000	13.312	34.245	47.557	-26.443	74.000

Average

Detector:

--

Vertical

Peak Detector:

4874.000	3.625	34.567	38.192	-35.808	74.000
7311.000	11.222	34.457	45.679	-28.321	74.000
9748.000	13.312	34.037	47.349	-26.651	74.000

Average

Detector:

--

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz °
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz °
4. Emission 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 : Wireless LAN Card
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmitter 802.11g(Antenna 2) (2462 MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV/m	dB	dBuV/m

Horizontal

Peak Detector:

4924.000	3.794	35.865	39.659	-34.341	74.000
7386.000	11.552	34.773	46.325	-27.675	74.000
9848.000	13.440	34.001	47.441	-26.559	74.000

Average

Detector:

--

Vertical

Peak Detector:

4924.000	3.794	34.940	38.734	-35.266	74.000
7386.000	11.552	35.331	46.883	-27.117	74.000
9848.000	13.440	34.346	47.786	-26.214	74.000

Average

Detector:

--

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz °
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz °
4. Emission 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 : Wireless LAN Card
 Test Item : General Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmitter 802.11b(Antenna 2) (2437 MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
401.020	16.644	7.395	24.039	-21.961	46.000
459.230	18.563	9.085	27.648	-18.352	46.000
563.500	19.112	7.173	26.285	-19.715	46.000
597.450	19.917	10.677	30.594	-15.406	46.000
713.850	20.577	5.753	26.330	-19.670	46.000
901.150	22.041	8.308	30.350	-15.650	46.000
Vertical					
250.680	13.346	11.024	24.370	-21.630	46.000
384.050	16.822	11.141	27.963	-18.037	46.000
612.000	21.748	5.562	27.310	-18.690	46.000
750.220	23.184	7.356	30.540	-15.460	46.000
801.150	21.828	12.382	34.210	-11.790	46.000
876.330	22.617	3.313	25.930	-20.070	46.000

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.
4. The radiated emissions were checked with horizontal and vertical positions of the cords to find the worst emissions.

Product : Wireless LAN Card
 Test Item : General Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmitter 802.11g(Antenna 2) (2437 MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
226.430	10.510	11.166	21.676	-24.324	46.000
401.020	16.644	5.347	21.991	-24.009	46.000
563.500	19.112	7.604	26.716	-19.284	46.000
599.880	20.000	10.444	30.444	-15.556	46.000
675.080	20.789	10.194	30.983	-15.017	46.000
932.100	22.840	7.130	29.970	-16.030	46.000
Vertical					
393.750	17.620	5.790	23.410	-22.590	46.000
488.330	18.566	6.904	25.470	-20.530	46.000
595.030	21.868	3.605	25.473	-20.527	46.000
750.220	23.184	6.990	30.174	-15.826	46.000
876.330	22.617	6.023	28.640	-17.360	46.000
941.800	23.800	6.057	29.857	-16.143	46.000

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.
4. The radiated emissions were checked with horizontal and vertical positions of the cords to find the worst emissions.

3. Band Edge

3.1. Test Equipment

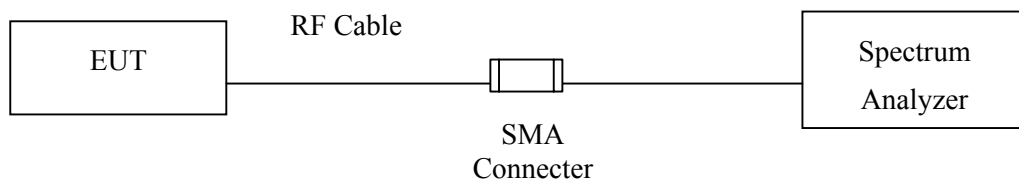
The following test equipments are used during the band edge tests:

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

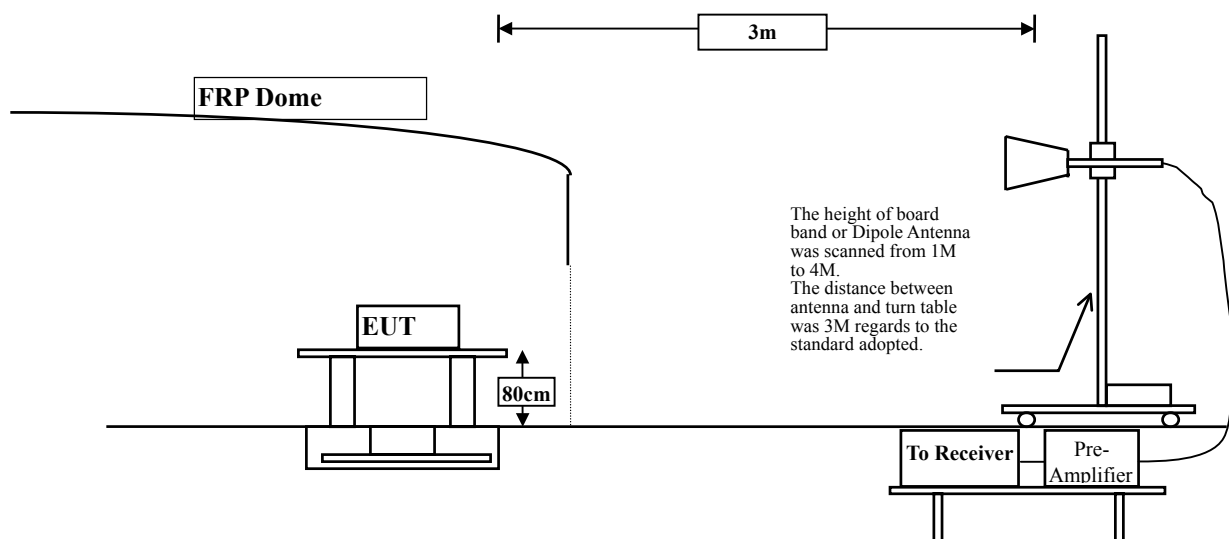
- Note:
1. All instruments are calibrated every one year.
 2. The test instruments marked by "X" are used to measure the final test results.

3.2. Test Setup

RF Conducted Measurement:



RF Radiated Measurement:



3.3. 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)).

3.4. 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.

3.5. Uncertainty

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

3.6. Test Result of Band Edge

Product : Wireless LAN Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmitter 802.11b(Antenna 2)

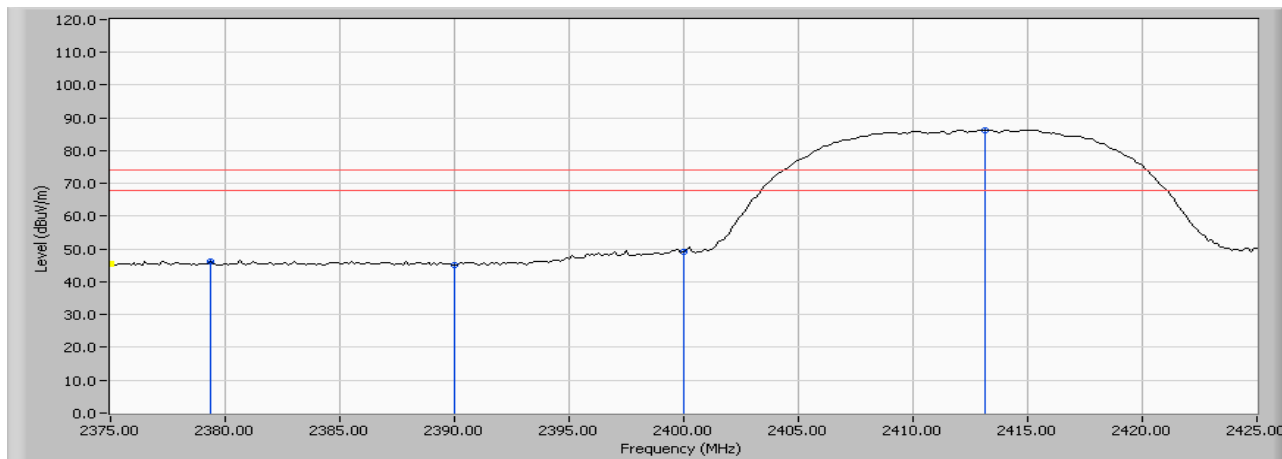
RF Radiated Measurement:

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

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
00(Peak)	2379.380	31.154	15.187	46.340	74.00	54.00	Pass
00(Avg)	--	--	--	--	74.00	54.00	Pass

Figure Channel 1: (Horizontal)



Product : Wireless LAN Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmitter 802.11b(Antenna 2)

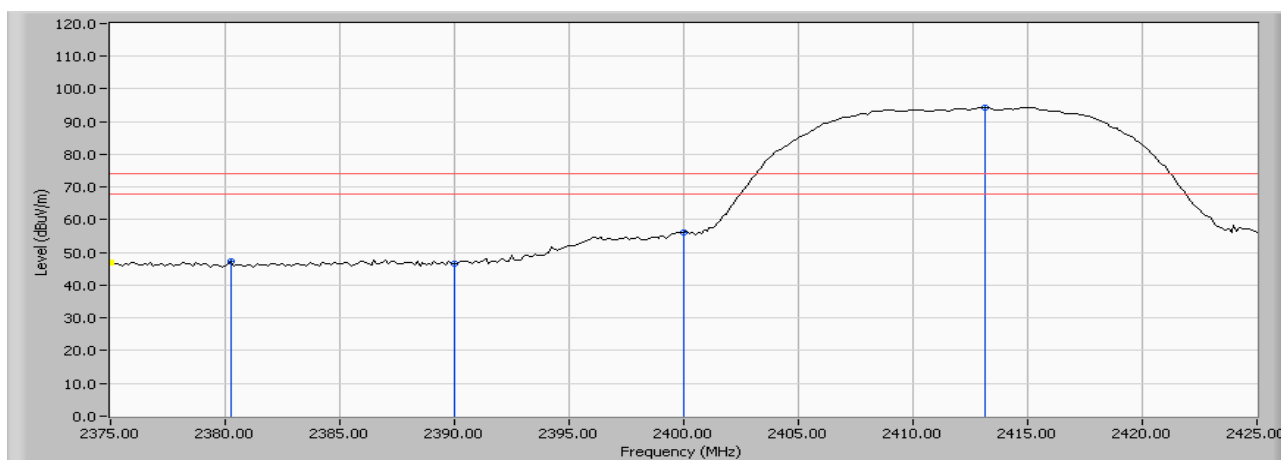
RF Radiated Measurement:

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

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
00(Peak)	2380.250	31.156	16.134	47.290	74.00	54.00	Pass
00(Avg)	--	--	--	--	74.00	54.00	Pass

Figure Channel 1: (Vertical)

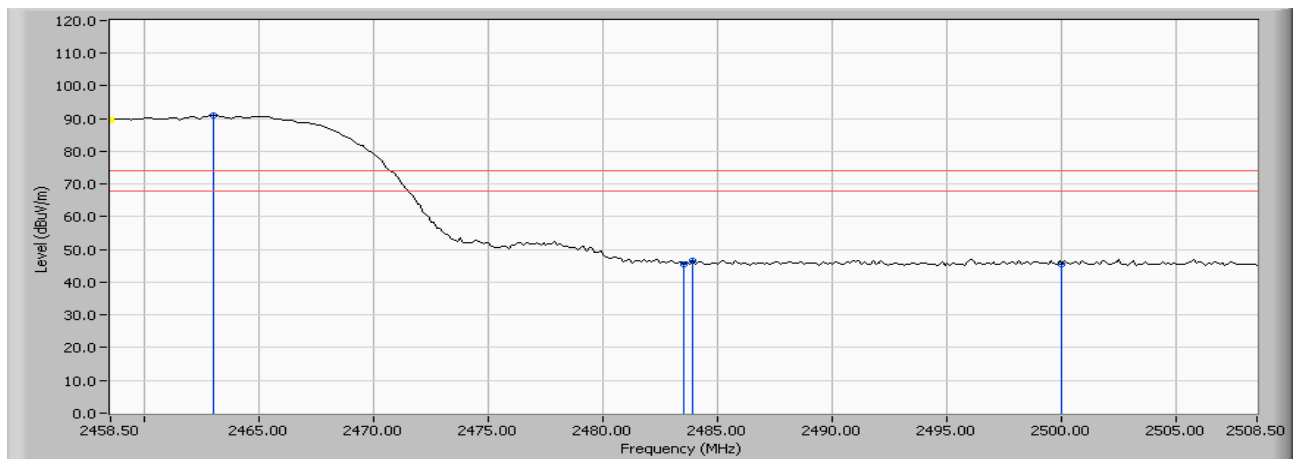


Product : Wireless LAN Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmitter 802.11b(Antenna 2)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
00(Peak)	2483.880	31.460	15.310	46.770	74.00	54.00	Pass
00(Avg)	--		--	--	74.00	54.00	Pass

Figure Channel 11: (Horizontal)

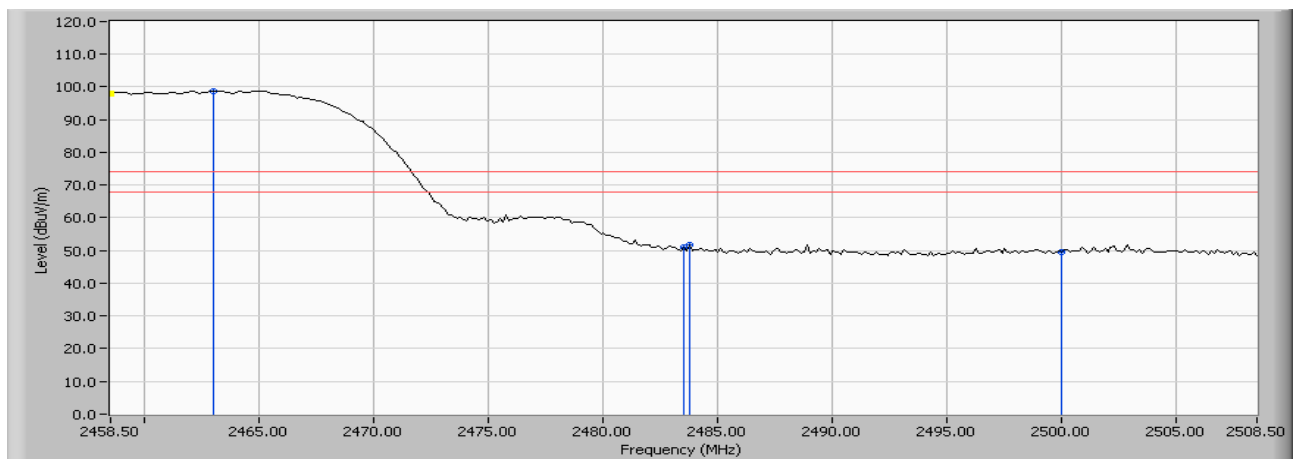


Product : Wireless LAN Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmitter 802.11b(Antenna 2)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
00(Peak)	2483.750	31.460	20.190	51.650	74.00	54.00	Pass
00(Avg)	--	--	--	--	74.00	54.00	Pass

Figure Channel 11: (Vertical)



Product : Wireless LAN Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmitter 802.11g(Antenna 2)

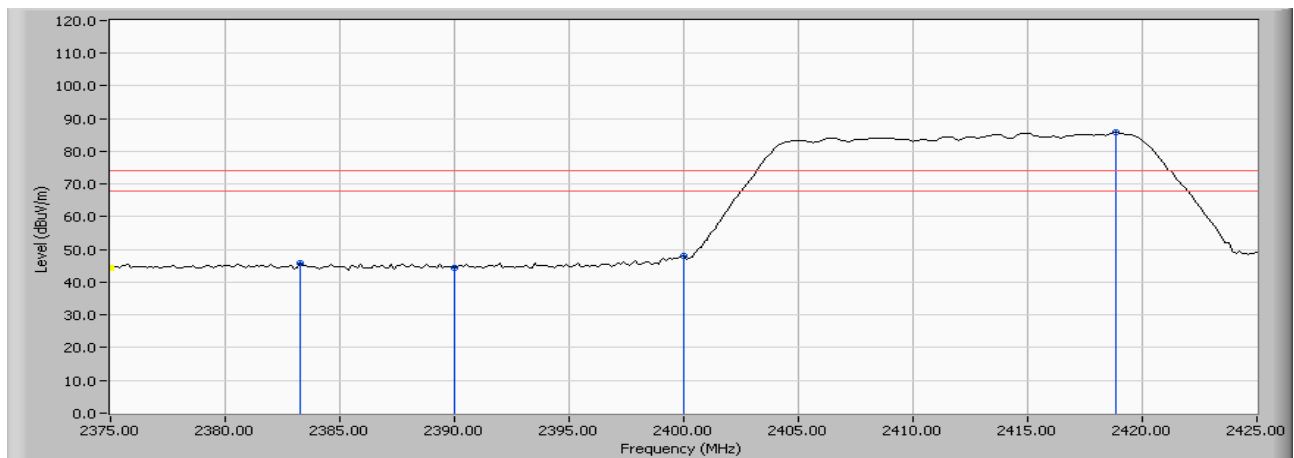
RF Radiated Measurement:

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

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
00(Peak)	2383.250	31.165	14.705	45.870	74.00	54.00	Pass
00(Avg)	--	--	--	--	74.00	54.00	Pass

Figure Channel 1: (Horizontal)



Product : Wireless LAN Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmitter 802.11g(Antenna 2)

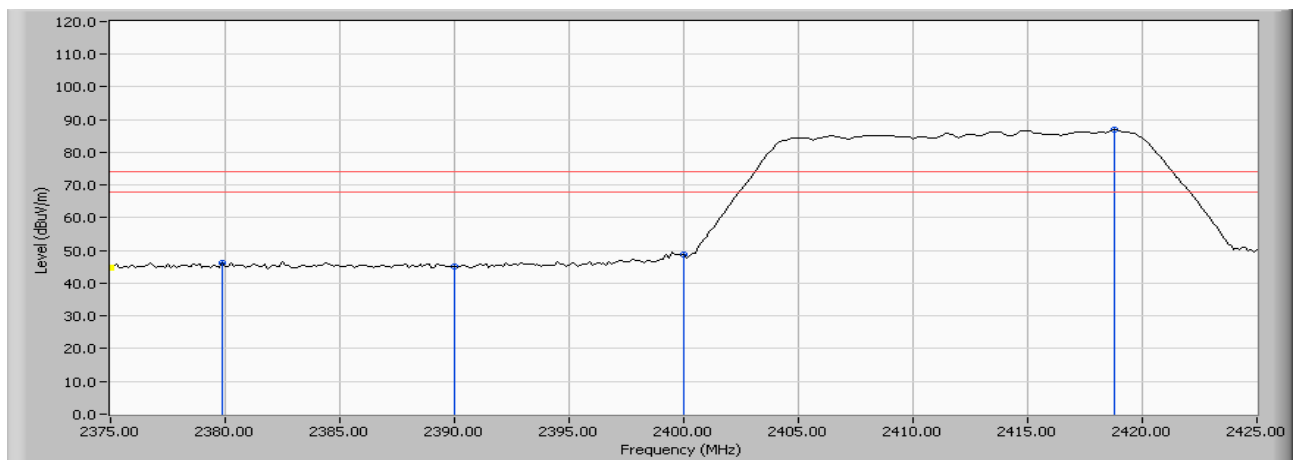
RF Radiated Measurement:

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

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
00(Peak)	2379.880	31.155	15.095	45.250	74.00	54.00	Pass
00(Avg)	--	--	--	--	74.00	54.00	Pass

Figure Channel 1: (Vertical)

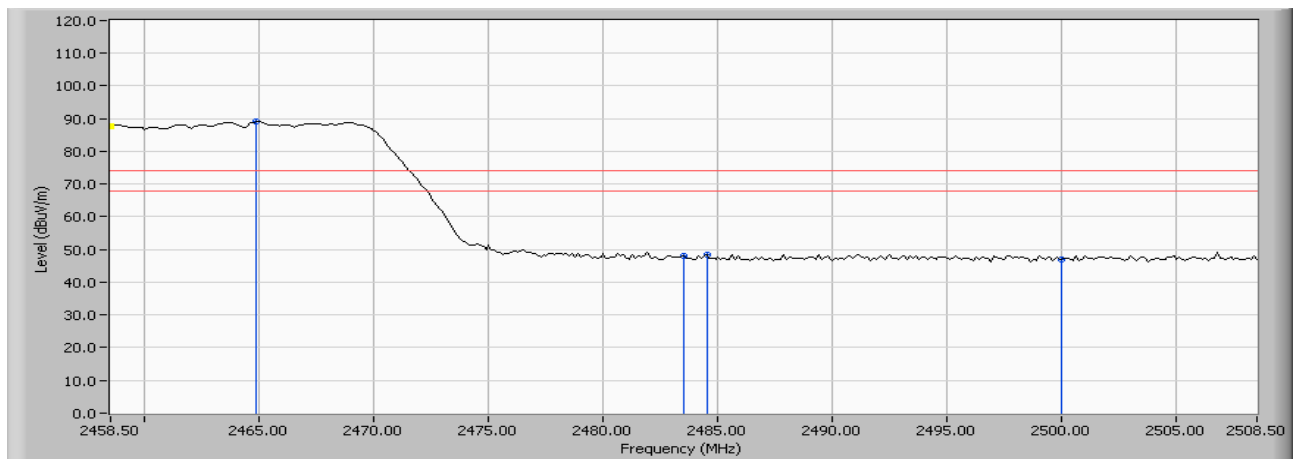


Product : Wireless LAN Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmitter 802.11g(Antenna 2)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
00(Peak)	2487.750	31.468	18.652	50.120	74.00	54.00	Pass
00(Avg)	--	--	--	--	74.00	54.00	Pass

Figure Channel 11: (Horizontal)

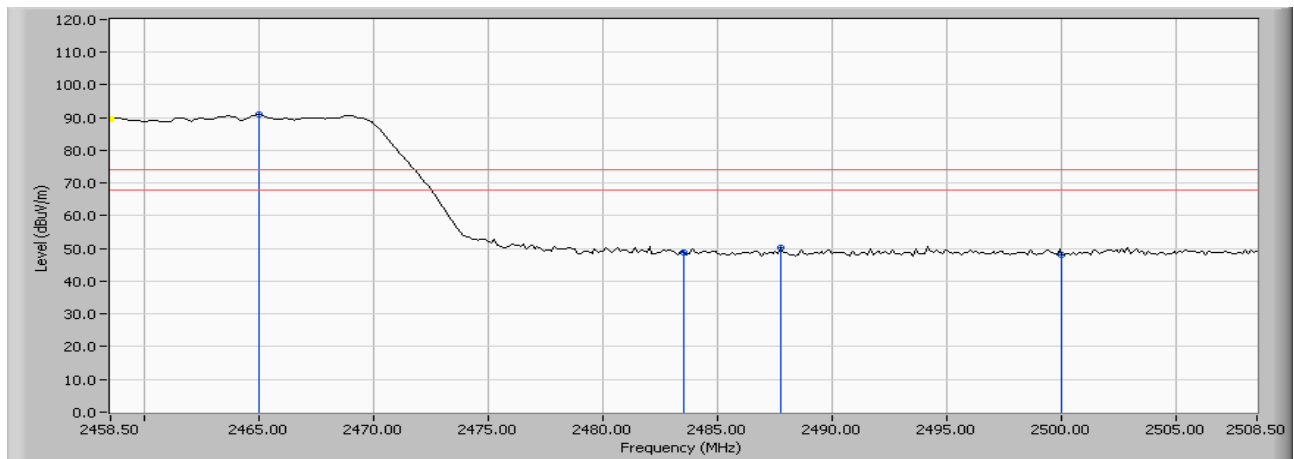


Product : Wireless LAN Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmitter 802.11g(Antenna 2)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBUV)	Emission Level (dBUV/m)	Peak Limit (dBUV/m)	Average Limit (dBUV/m)	Result
00(Peak)	2487.750	31.468	18.652	50.120	74.00	54.00	Pass
00(Avg)	--	--	--	--	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.

4. 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 Radiated Test



Back View of Radiated Test



Front View of Radiated Test (Horn)



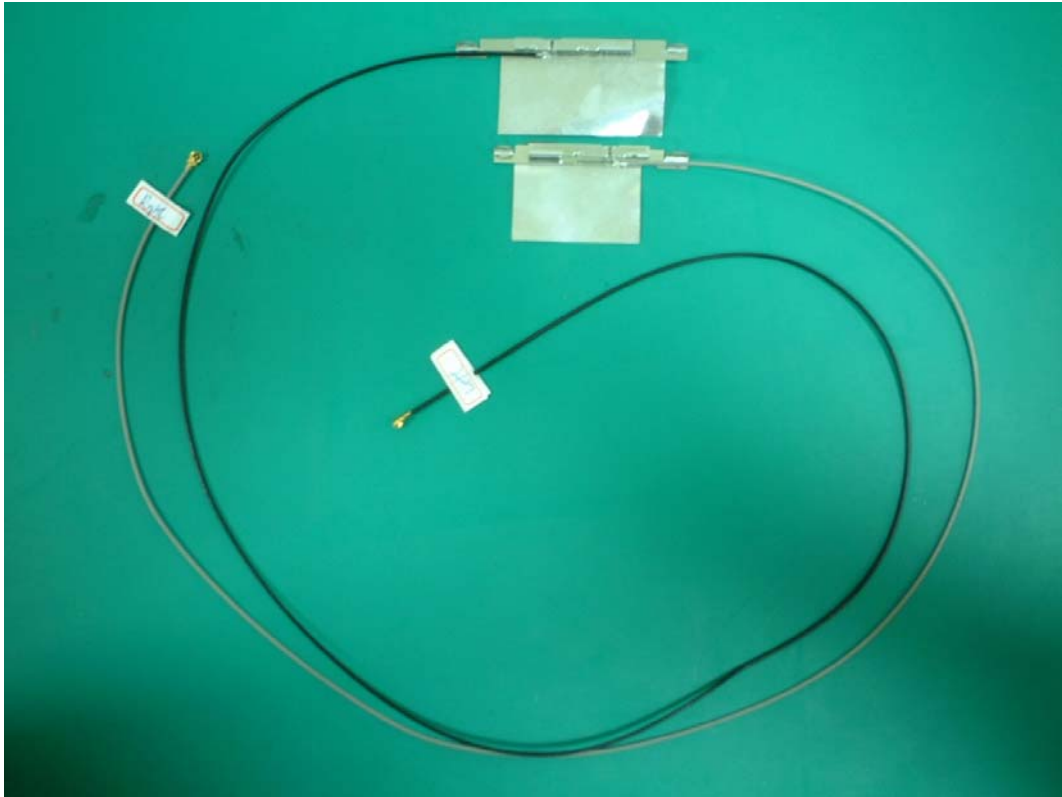
Back View of Radiated Test (Horn)



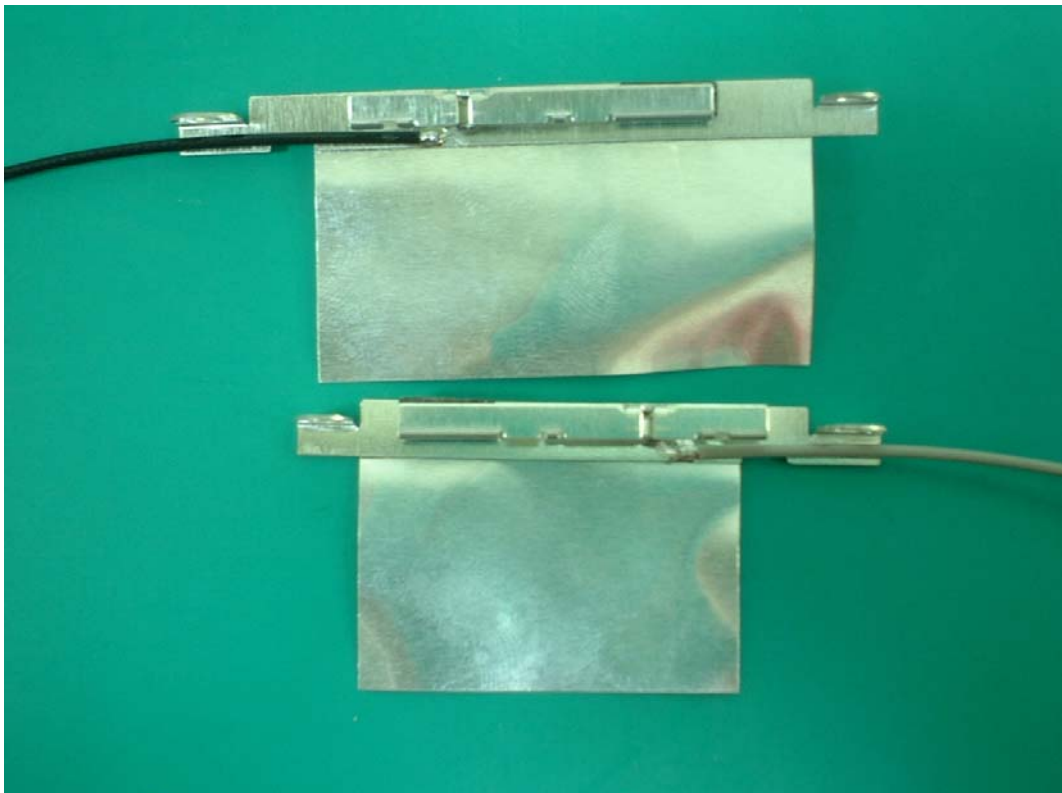
Attachment 2: EUT Detailed Photographs

Attachment 2 : EUT Detailed Photographs

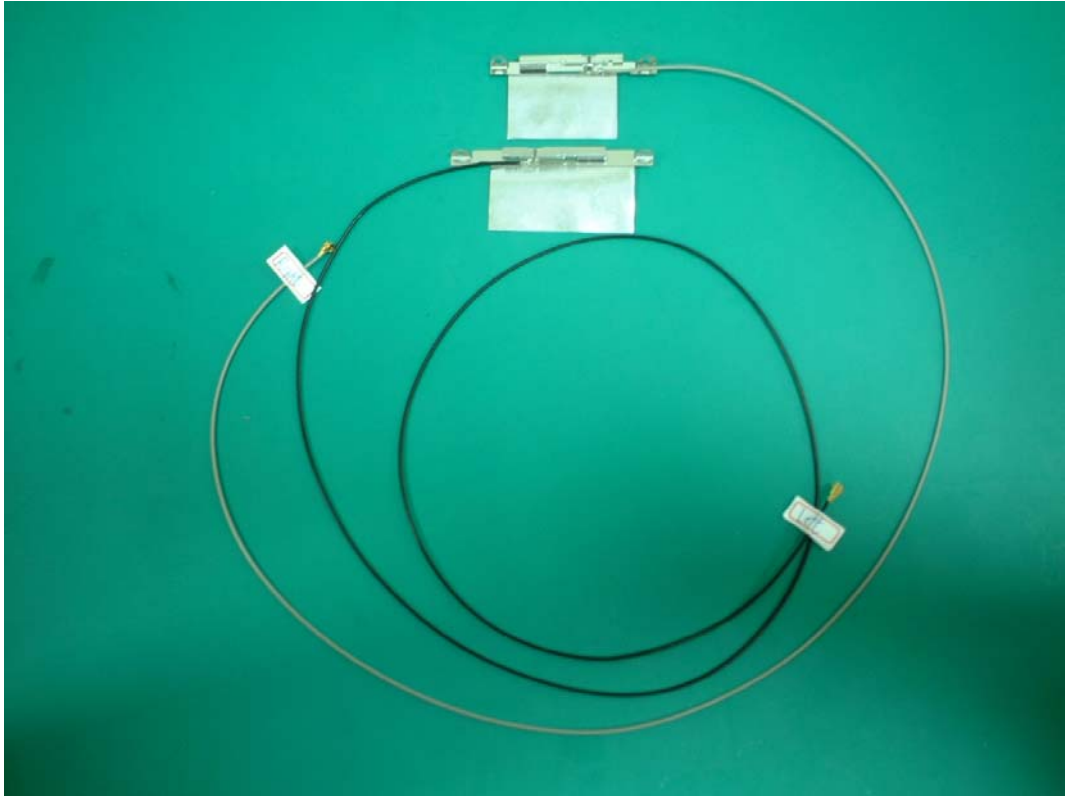
(1) Antenna Photo



(2) Antenna Photo



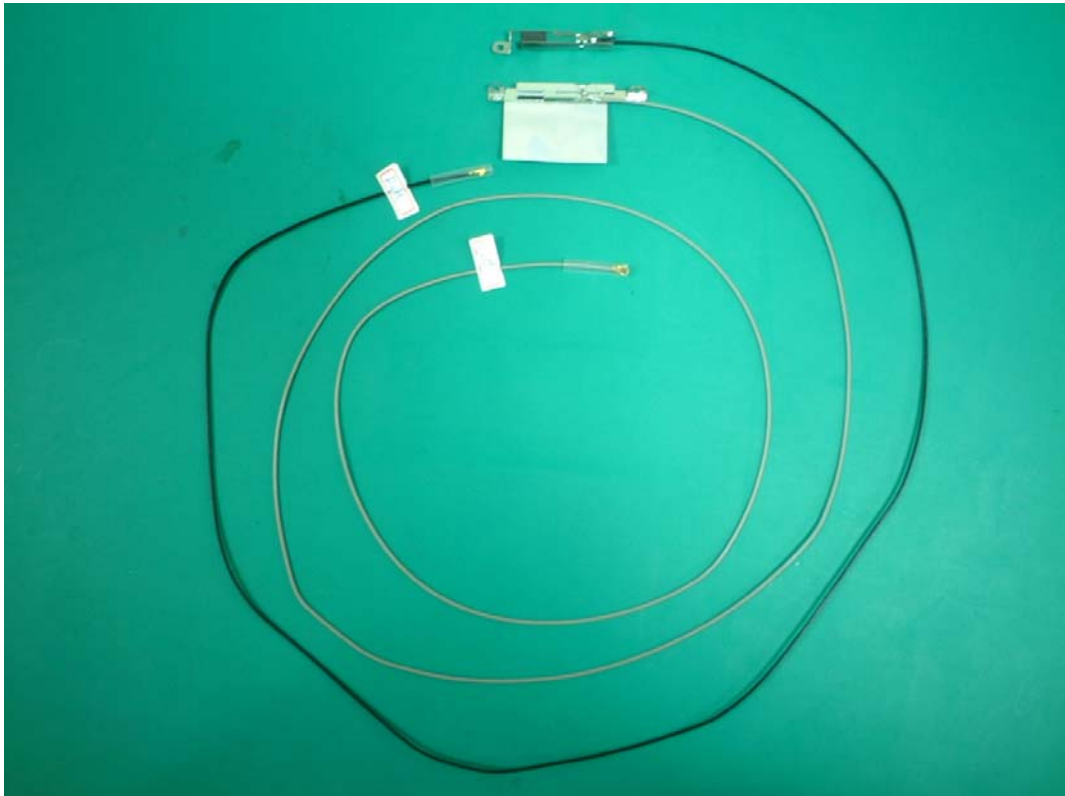
(3) Antenna Photo



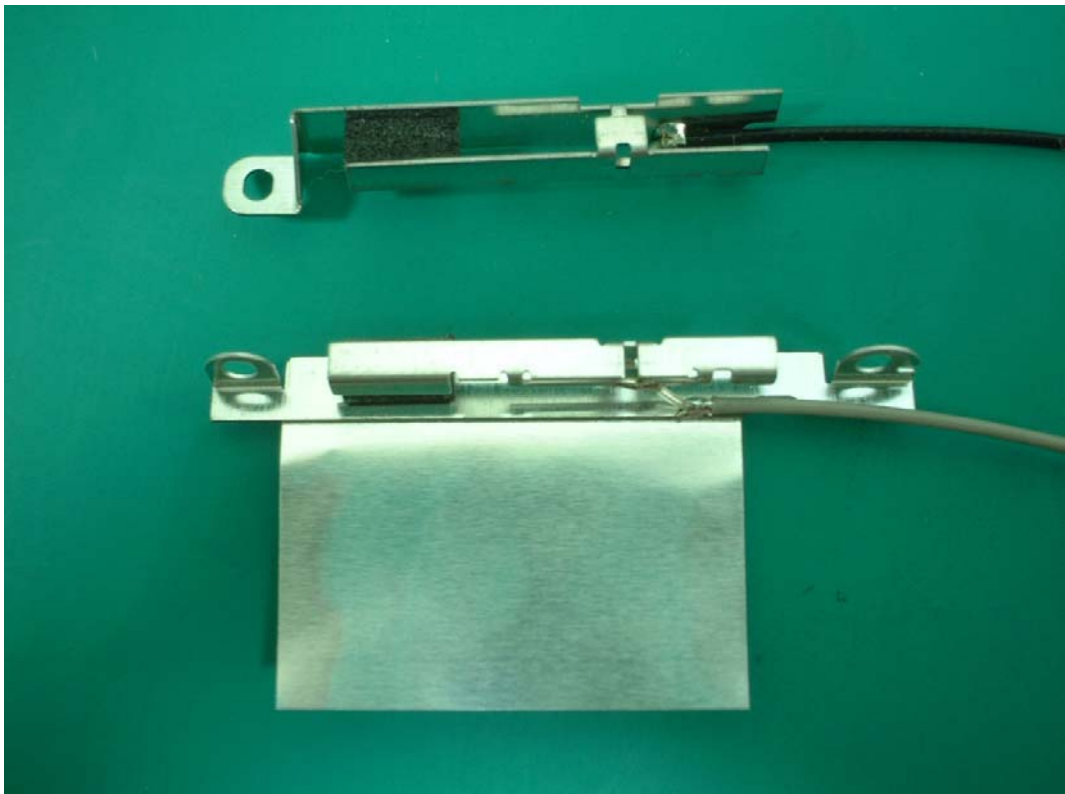
(4) EUT Photo



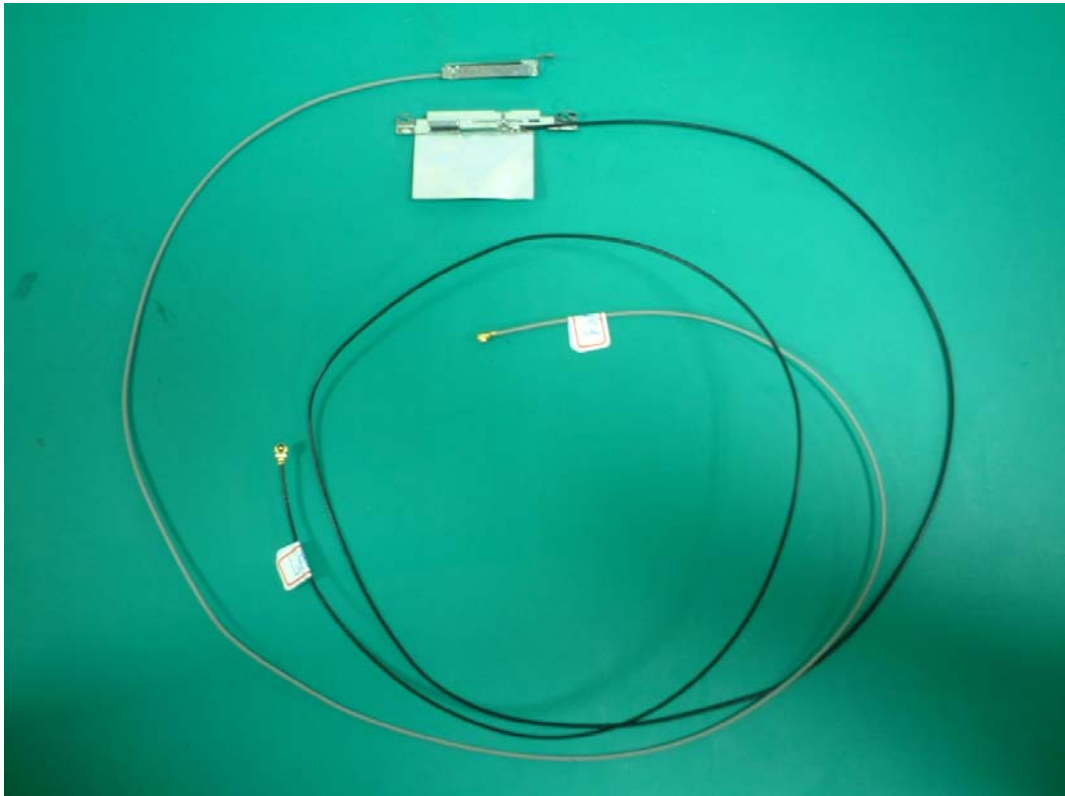
(5) Antenna Photo



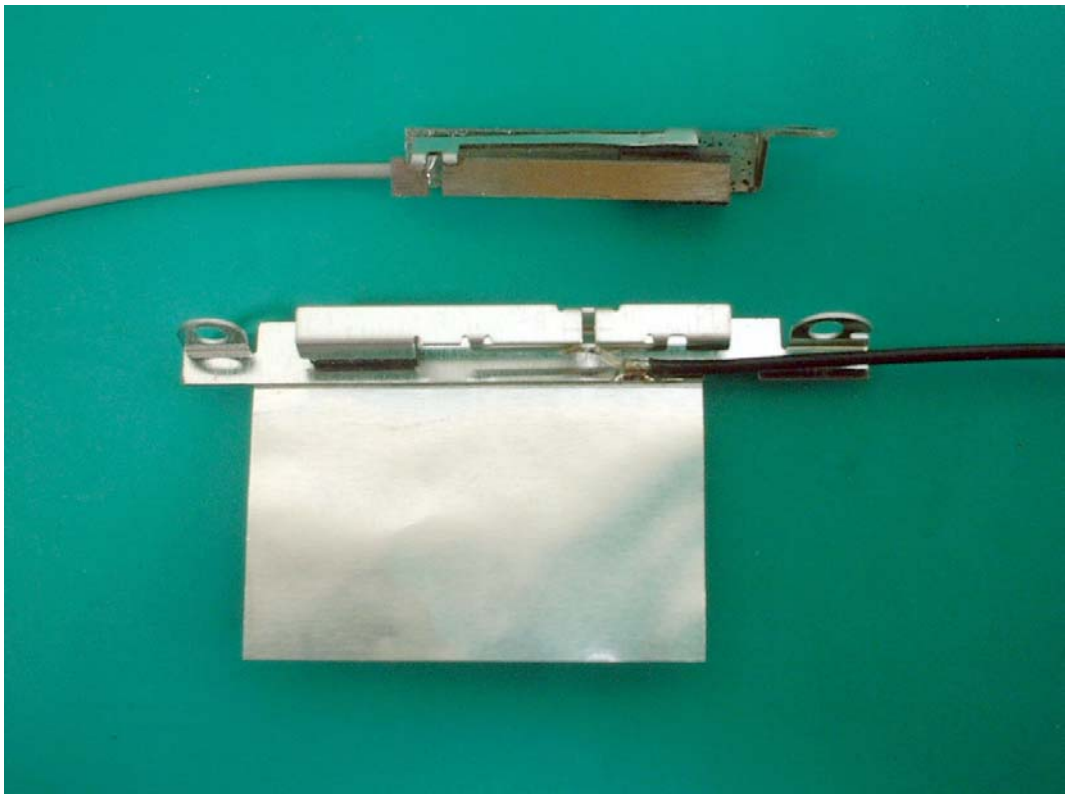
(6) EUT Photo



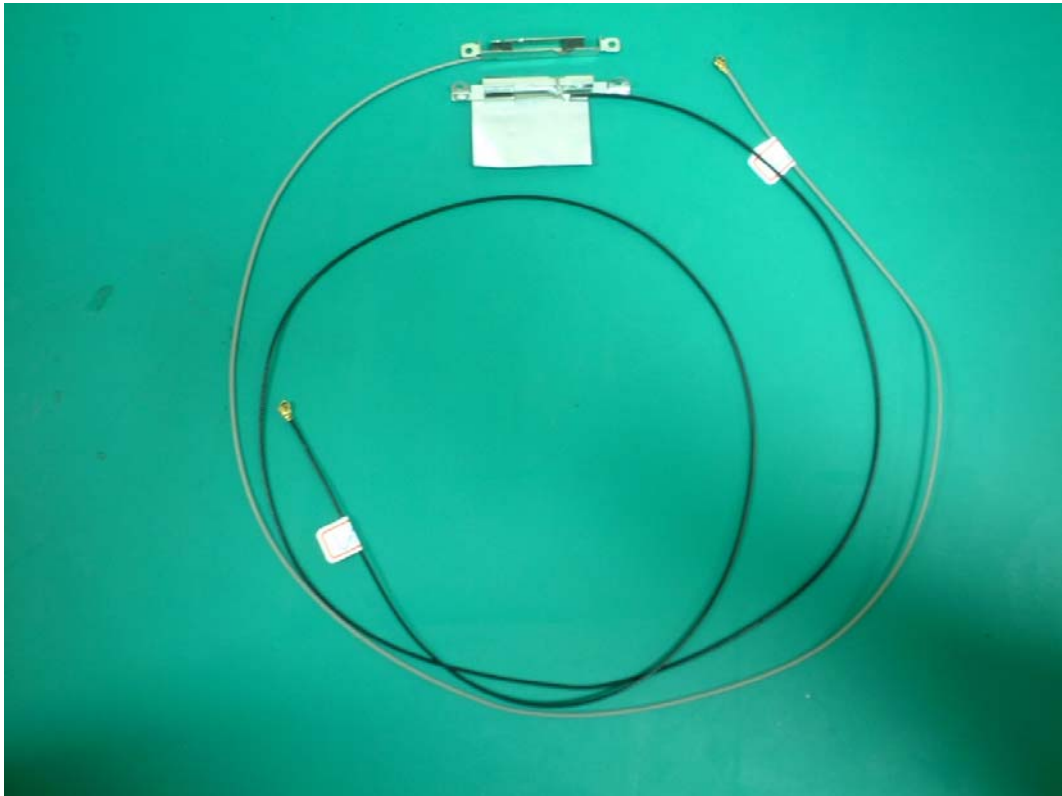
(7) EUT Photo



(8) Antenna Photo



(9) EUT Photo



(10) EUT Photo

