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TEST REPORT

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Report No.:FCCA04082404
Page:1 of 22
Date:Nov. 15, 2004

Product Name: 2.4 GHz Wireless Mouse
Model No.: OPM-6324
Applicant: CELLINK CO., LTD.
11F, NO. 102, Sec. 1, Hsin Tai Wu Rd., Hsi-Chih,
Taipei, Taiwan, R.O.C.
Date of Receipt: Aug. 24, 2004
Finished date of Test: Nov. 15, 2004
Applicable Standards: 47 CFR Part 15, Subpart C
ANSI C63.4:2003
DA 00-705

We, **Spectrum Research & Testing Laboratory Inc.**, hereby certify that one sample of the above was tested in our laboratory with positive results according to the above-mentioned standards. The records in the report are an accurate account of the results. Details of the results are given in the subsequent pages of this report.

Checked By : *Sunyou Chen* , Date: 11/15/2004
(Sunyou Chen)

Approved By : *J Johnson* , Date: 11/15/2004
(Johnson Ho, Director)





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1. DOCUMENT POLICY AND TEST STATEMENT

1.1 DOCUMENT POLICY

- The report shall not be reproduced except in full, without the written approval of SRT Lab, Inc.

1.2 TEST STATEMENT

- The test results in the report apply only to the unit tested by SRT Lab.
- There was no deviation from the requirements of test standards during the test.
- AC power source, 120 VAC/60 Hz, was used during the test.

1.3 EUT MODIFICATION

- No modification in SRT Lab.



2. DESCRIPTION OF EUT AND TEST MODE

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT	2.4 GHz Wireless Mouse
MODEL NO.	OPM-6324
POWER SUPPLY	DC 3.0V, 0.03A
FREQUENCY BAND	2402 ~ 2483MHz
NUMBER OF CHANNEL	82
CHANNEL SPACING	1MHz
RATED RF OUTPUT POWER	0dBm
MODULATION TYPE	GFSK
BIT RATE OF TRANSMISSION	800dpi
ANTENNA TYPE	PCB antenna
ANTENNA GAIN	0dBi
DUTY CYCLE	50%

NOTE : For more detailed features, please refer to the manufacturer' s specification or User' s Manual of EUT.

2.2 DESCRIPTION OF EUT INTERNAL DEVICE

DEVICE	BRAND / MAKER	MODEL #	FCC ID/DOC	REMARK
N/A				



2.3 DESCRIPTION OF TEST MODE

The EUT was tested under the following channels during the test:
82 channels are provided by EUT. The 3 channels of lower, medium and higher were chosen for test.

Channel	Frequency
1	2402
41	2442
82	2483

NOTE :

1. Below 1 GHz, the channel 1, 41 and 82 were pre-tested in chamber.
2. Above 1 GHz, the channel 1, 41 and 82 were tested individually.

2.4 DESCRIPTION OF SUPPORT UNIT

The EUT was configured by the requirement of ANSI C63.4:2003 and CISRP22:2003. All interface ports were connected to the appropriate support units via specific cables. The support units and cables are listed below.

NO	DEVICE	BRAND	MODEL #	FCC ID/DOC	CABLE
1	NOTEBOOK	DELL	C510/C610	DOC	1.5m unshielded power cord
2	PRINTER	EPSON	STYLUS C20SX	DOC	1.5m unshielded power cord 1.2m shielded data cable
3	MODEM	ACEEX	DM-1414	DOC	1.5m unshielded DC power cable 1.2m shielded data cable

NOTE : For the actual test configuration, please refer to the photos of testing.

3. DESCRIPTION OF APPLIED STANDARDS

The EUT is a kind of wireless product and to be connected with a notebook system for normal use. According to the specifications provided by the applicant, it must comply with the requirements of the following standards:

47 CFR Part 15, Subpart C
ANSI C63.4:2003
DA 00-705

All tests have been performed and recorded as the above standards.



4 TECHNICAL CHARACTERISTICS TEST

4.1 CONDUCTED EMISSION TEST

4.1.1 LIMIT

Frequency (MHz)	Class A (dB μ V)		Class B (dB μ V)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79	66	66 - 56	56 - 46
0.50 - 5.0	73	60	56	46
5.0 - 30.0	73	60	60	50

NOTE :

1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.

4.1.2 TEST EQUIPMENT

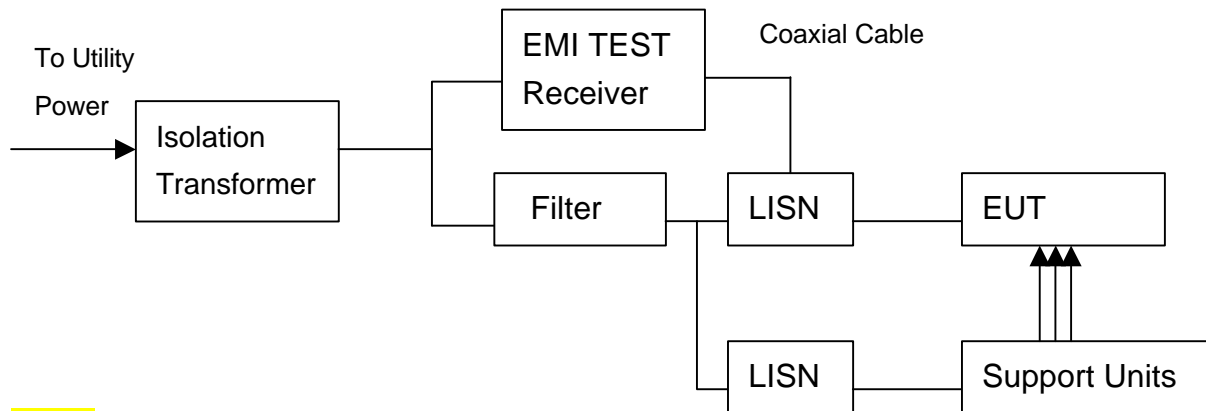
The following test equipment was used for the test:

EQUIPMENT/ FACILITIES	SPECIFICATIONS	MANUFACTURER	MODEL#/ SERIAL#	DUE DATE OF CAL. & CAL. CENTER
EMI TEST RECEIVER	9 kHz TO 30 MHz	ROHDE & SCHWARZ	ESHS30/ 826003/008	AUG. 2005 ETC
LISN (for EUT)	50 μ H, 50 ohm	SOLAR ELECTRONICS	FCC-LISN-50-25-2 / 01018	NOV. 2005 ETC
LISN (for Peripheral)	50 μ H, 50 ohm	SOLAR ELECTRONICS	9252-50-R-24-BNC / 951318	JUN. 2005 ETC
50 ohm TERMINATOR	50 ohm	HP	11593A/ 2	MAR. 2005 ETC
COAXIAL CABLE	3m	SUNCITY	J400/ 3M	JUL. 2005 SRT
ISOLATION TRANSFORMER	N/A	APC	AFC-11015/ F102040016	N/A
FILTER	2 LINE, 30A	FIL.COIL	FC-943/ 771	N/A
GROUND PLANE	2.3M (H) x 2.4M (W)	SRT	N/A	N/A
GROUND PLANE	2.4M (H) x 2.4M (W)	SRT	N/A	N/A

NOTE: The calibration interval of the above test equipment is one year and the calibrations are traceable to NML/ROC and NIST/USA.



4.1.3 TEST SETUP



NOTE:

1. The EUT was put on a wooden table with 0.8m heights above ground plane, and 0.4m away from reference ground plane (> 2mx2m).
2. For the actual test configuration, please refer to the photos of testing.
3. The serial no. of the LISN connected to EUT is 951318.
4. The serial no. of the LISN connected to support units is 924839.

4.1.4 TEST PROCEDURE

The EUT was tested according to the requirement of ANSI C63.4:2003 and CISRP22:2003. The frequency spectrum from 0.15 MHz to 30 MHz was investigated. The LISN used was 50 ohm/50μH as specified. All readings were quasi-peak and average values with 10 kHz resolution bandwidth of the test receiver. The EUT system was operated in all typical methods by users. Both lines of the power mains of EUT were measured and the cables connected to EUT and support units were moved to find the maximum emission levels for each frequency. First, find the margin or higher points at least 6 points by software, then use manual to find the maximum data. The procedure is referred on the test procedure of SRT LAB.

4.1.5 EUT OPERATING CONDITION

1. Under Windows XP ran "EMI TEST" programs, PC sent "H" pattern or accessed the following peripherals:

- RS232 (modem)
- Printer
- FDD
- HDD



4.1.6 TEST RESULT

Temperature:	25 °C	Humidity:	53%RH
Ferquency Range:	0.15 – 30 MHz	Tested Mode:	CH1: 2402MHz
Receiver Detector:	Q.P. and AV.	Tested By:	Hugo Yeh
Tested Result:	Pass	Tested Date:	Nov. 12, 2004

Power Line Measured : Line

Freq. (MHz)	Correct. Factor (dB)	Reading Value (dBmV)		Emission Level (dBmV)		Limit (dBmV)		Margin (dB)	
		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
0.198	0.20	50.2	39.5	50.4	39.7	63.7	53.7	-13.3	-13.9
3.131	0.20	35.2	30.0	35.4	30.2	56.0	46.0	-20.6	-15.8
3.319	0.20	34.9	30.0	35.1	30.2	56.0	46.0	-20.9	-15.8
5.508	0.20	32.0	26.9	32.2	27.1	60.0	50.0	-27.8	-22.9
7.081	0.20	31.2	25.8	31.4	26.0	60.0	50.0	-28.6	-24.0
15.133	0.20	22.7	19.6	22.9	19.8	60.0	50.0	-37.1	-30.2

Power Line Measured : Neutral

Freq. (MHz)	Correct. Factor (dB)	Reading Value (dBmV)		Emission Level (dBmV)		Limit (dBmV)		Margin (dB)	
		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
0.153	0.20	47.5	20.7	47.7	20.9	65.8	55.8	-18.1	-34.9
3.428	0.20	33.7	28.0	33.9	28.2	56.0	46.0	-22.1	-17.8
3.477	0.20	32.6	28.7	32.8	28.9	56.0	46.0	-23.2	-17.1
5.000	0.20	33.2	27.2	33.4	27.4	56.0	46.0	-22.6	-18.6
5.670	0.20	32.9	27.6	33.1	27.8	60.0	50.0	-26.9	-22.2
18.506	0.20	24.5	20.8	24.7	21.0	60.0	50.0	-35.3	-29.0

NOTE :

1. Measurement uncertainty is +/-1.32dB
2. Emission level = Reading valus + Correction factor
3. Correction Factor = Cable loss + Insertion loss of LISN
4. Margin value = Emission level - Limit
5. The emission of other frequencies were very low against the limit.
6. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.



Temperature:	25 °C	Humidity:	53%RH
Ferquency Range:	0.15 – 30 MHz	Tested Mode:	CH41:2442MHz
Receiver Detector:	Q.P. and AV.	Tested By:	Hugo Yeh
Tested Result:	Pass	Tested Date:	Nov. 12, 2004

Power Line Measured : Line

Freq. (MHz)	Correct. Factor (dB)	Reading Value (dBmV)		Emission Level (dBmV)		Limit (dBmV)		Margin (dB)	
		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
0.180	0.20	50.2	41.1	50.4	41.3	64.5	54.5	-14.1	-13.2
3.081	0.20	30.7	26.3	30.9	26.5	56.0	46.0	-25.1	-19.5
3.903	0.20	21.9	12.6	22.1	12.8	56.0	46.0	-33.9	-33.2
5.091	0.20	24.7	19.3	24.9	19.5	60.0	50.0	-35.1	-30.5
5.325	0.20	21.8	14.2	22.0	14.4	60.0	50.0	-38.0	-35.6
25.650	0.21	20.1	18.2	20.3	18.4	60.0	50.0	-39.7	-31.6

Power Line Measured : Neutral

Freq. (MHz)	Correct. Factor (dB)	Reading Value (dBmV)		Emission Level (dBmV)		Limit (dBmV)		Margin (dB)	
		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
0.180	0.20	49.3	40.5	49.5	40.7	64.5	54.5	-15.0	-13.8
3.319	0.20	30.4	25.3	30.6	25.5	56.0	46.0	-25.4	-20.5
3.853	0.20	32.4	22.5	32.6	22.7	56.0	46.0	-23.4	-23.3
5.213	0.20	22.4	16.4	22.6	16.6	60.0	50.0	-37.4	-33.4
5.274	0.20	23.8	19.5	24.0	19.7	60.0	50.0	-36.0	-30.3
27.392	0.25	21.9	13.5	22.1	13.7	60.0	50.0	-37.9	-36.3

NOTE :

1. Measurement uncertainty is +/-1.32dB
2. Emission level = Reading valus + Correction factor
3. Correction Factor = Cable loss + Insertion loss of LISN
4. Margin value = Emission level - Limit
5. The emission of other frequencies were very low against the limit.
6. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.



Temperature:	25 °C	Humidity:	53%RH
Ferquency Range:	0.15 – 30 MHz	Tested Mode:	CH82:2483MHz
Receiver Detector:	Q.P. and AV.	Tested By:	Hugo Yeh
Tested Result:	Pass	Tested Date:	Nov. 12, 2004

Power Line Measured : Line

Freq. (MHz)	Correct. Factor (dB)	Reading Value (dBmV)		Emission Level (dBmV)		Limit (dBmV)		Margin (dB)	
		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
0.153	0.20	47.5	20.9	47.7	21.1	65.8	55.8	-18.1	-34.7
2.982	0.20	35.0	30.4	35.2	30.6	56.0	46.0	-20.8	-15.4
3.309	0.20	36.0	29.4	36.2	29.6	56.0	46.0	-19.8	-16.4
5.782	0.20	33.3	27.5	33.5	27.7	60.0	50.0	-26.5	-22.3
5.812	0.20	32.8	27.4	33.0	27.6	60.0	50.0	-27.0	-22.4
15.021	0.20	27.1	17.8	27.3	18.0	60.0	50.0	-32.7	-32.0

Power Line Measured : Neutral

Freq. (MHz)	Correct. Factor (dB)	Reading Value (dBmV)		Emission Level (dBmV)		Limit (dBmV)		Margin (dB)	
		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
0.192	0.20	45.8	35.8	46.0	36.0	63.9	53.9	-17.9	-17.9
3.091	0.20	35.2	29.7	35.4	29.9	56.0	46.0	-20.6	-16.1
3.400	0.20	35.4	30.1	35.6	30.3	56.0	46.0	-20.4	-15.7
5.670	0.20	33.0	27.7	33.2	27.9	60.0	50.0	-26.8	-22.1
6.929	0.20	32.3	23.6	32.5	23.8	60.0	50.0	-27.5	-26.2
15.215	0.20	26.4	17.1	26.6	17.3	60.0	50.0	-33.4	-32.7

NOTE :

1. Measurement uncertainty is +/-1.32dB
2. Emission level = Reading value + Correction factor
3. Correction Factor = Cable loss + Insertion loss of LISN
4. Margin value = Emission level - Limit
5. The emission of other frequencies were very low against the limit.
6. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.



4.2 SPURIOUS RADIATED EMISSION TEST

4.2.1 LIMIT

FCC Part15, Subpart C Section 15.209 limit of radiated emission for frequency below1000MHz. The emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

FREQUENCY (MHz)	DISTANCE (m)	FIELD STRENGTH (dBmV/m)
30 - 88	3	40.0
88 - 216	3	43.5
216 - 960	3	46.0
Above 960	3	54.0

NOTE :

1. In the emission tables above , the tighter limit applies at the band edges.
2. Distance refers to the distance between measuring instrument, antenna, and the closest point of any part of the device or system.

FCC Part 15, Section15.35(b) limit of radiated emission for frequency above 1000 MHz

FREQUENCY (MHz)	Class A (dBuV/m) (at 3m)		Class B (dBuV/m) (at 3m)	
	PEAK	AVERAGE	PEAK	AVERAGE
Above 1000	80.0	60.0	74.0	54.0

FCC Part 15, Subpart C Section 15.249. The field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

FUNDAMENTAL FREQUENCY (MHz)	FIELD STRENGTH OF FUNDAMENTAL (dBuV/m) (at 3m)		FIELD STRENGTH OF HARMONICS (dBuV/m) (at 3m)	
	PEAK	AVERAGE	PEAK	AVERAGE
902 - 928	114	94	74.0	54.0
2400 - 2483.5	114	94	74.0	54.0
5725 - 5875	114	94	74.0	54.0
24000 - 24250	128	108	88.0	68.0



4.2.2 TEST EQUIPMENT

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

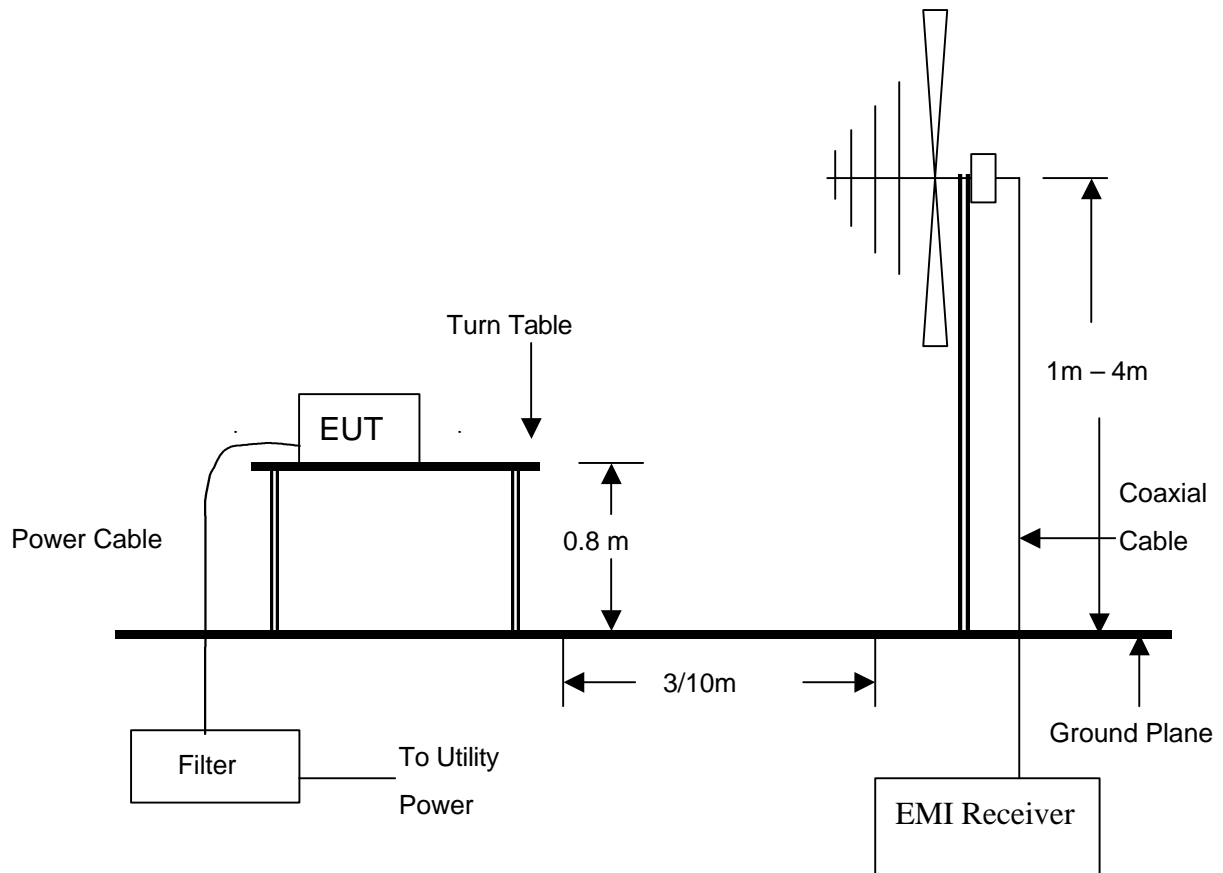
EQUIPMENT/ FACILITIES	SPECIFICATIONS	MANUFACTURER	MODEL#/ SERIAL#	DUE DATE OF CAL. & CAL. CENTER
EMI TEST RECEIVER	20 kHz TO 1 GHz	ROHDE & SCHWARZ	ESVS30/ 841977/003	SEP. 2005 ETC
BI-LOG ANTENNA	25 MHz TO 2 GHz	EMCO	3142/ 9701-1124	APR. 2005 SRT
SPECTRUM ANALYZER	9 KHz TO 26.5 GHz	HP	8593E/ 3710A03220	MAY 2005 ETC
PRE-AMPLIFIER	1 GHz TO 26.5 GHz	HP	8449B/ 3008A01019	DEC. 2004 ETC
HORN ANTENNA	1 GHz TO 18 GHz	EMCO	3115/ 9602-4681	JAN. 2005 ETC
HORN ANTENNA	18GHz TO 40GHz	ETS	3116/ 00032255	OCT. 2005 ETC
OATS	3 – 10 M MEASUREMENT	SRT	SRT-1	APR. 2005 SRT
COAXIAL CABLE	25M	SUNCITY	J400/ 25M	AUG. 2005 SRT
FILTER	2 LINE, 30A	FIL.COIL	FC-943/ 869	N/A
FREQUENCY CONVERTER	N/A	APC	AFC-2KBB/ F100030031	AUG. 2005 SRT

NOTE:

1. The calibration interval of the above test equipment is one year and the calibrations are traceable to NML/ROC and NIST/USA.
2. The Open Area Test Site (SRT-1) is registered by FCC with No. 90957 and VCCI with No. R-1081.
3. The Open Area Test Site (SRT-2) is registered by FCC with No. 98458 and VCCI with No. R-1168.



4.2.3 TEST SET-UP



NOTE :

1. The EUT system was put on a wooden table with 0.8m heights above a ground plane.
2. For the actual test configuration, please refer to the photos of testing.



4.2.4 TEST PROCEDURE

The EUT was tested according to the requirement of ANSI C63.4:2003 and CISPR 22:2003. The measurements were made at an open area test site with 10 meter measurement distance under 1 GHz and with 3m distance above 1GHz. The frequency spectrum measured started from 30 MHz. Under 1 GHz, all readings were quasi-peak values with 120 kHz resolution bandwidth of the test receiver. Above 1 GHz, the measurements were made at an open area test site with 3 meter measurement distance and all readings were peak or average values with 1 MHz resolution bandwidth of the test receiver. The EUT system was operated in all typical methods by users. The cables connected to EUT and support units were moved to find the maximum emission levels for each frequency.

First, find the margin or higher points at least 6 points by software, then use manual to find the maximum data. The procedure is referred on the test procedure of SRT LAB.

4.2.5 EUT OPERATING CONDITION

Same as section 4.1.5 of this report.



4.2.6 TEST RESULT

Temperature:	25 °C	Humidity:	55 %RH
Ferquency Range:	30 – 1000 MHz	Measured Distance:	3m
Receiver Detector:	Q.P.	Tested Mode:	RX
Tested By:	Hugo Yeh	Tested Date:	Nov. 04, 2004

Antenna Polarization:Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Reading Data (dBµV)	Emission Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	AZ(°)	EL(m)
90.0400	1.01	6.60	15.8	23.4	43.5	-20.1	10.4	1.40
132.3400	1.20	7.38	15.2	23.8	43.5	-19.7	17.4	1.65
199.4600	1.51	9.86	16.1	27.5	43.5	-16.0	187.4	1.00
332.5400	2.05	15.29	15.4	32.7	46.0	-13.3	199.4	1.00
621.6400	2.98	20.87	11.6	35.4	46.0	-10.6	345.3	1.20
663.3500	3.11	21.23	12.5	36.8	46.0	-9.2	319.2	1.00

Antenna Polarization:Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Reading Data (dBµV)	Emission Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	AZ(°)	EL(m)
90.1400	1.01	6.60	15.7	23.3	43.5	-20.2	114.6	1.00
132.0600	1.20	7.38	16.6	25.2	43.5	-18.3	127.5	1.13
189.6400	1.49	10.38	16.4	28.3	43.5	-15.2	190.5	1.00
286.6700	1.88	13.78	16.5	32.2	46.0	-13.8	329.6	1.00
397.3100	2.28	15.81	12.4	30.5	46.0	-15.5	188.5	1.00
451.7200	2.51	16.79	15.8	35.1	46.0	-10.9	165.4	1.00

NOTE :

1. Measurement uncertainty is +/-2dB.
2. "**": Measurement does not apply for this frequency.
3. Emission Level = Reading Value + Ant. Factor + Cable Loss.
4. The field strength of other emission frequencies were very low against the limit.



Temperature:	27 °C	Humidity:	54 %RH
Ferquency Range:	1 – 25 GHz	Measured Distance:	3m
Receiver Detector:	PK. or AV.	Tested Mode:	CH1: 2402MHz
Tested By:	Hugo Yeh	Tested Date:	Nov. 15, 2004

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB μ V)		Emission Level (dB μ V/m)		Limit (dB μ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2402.00(F)	-32.16	28.00	79.6	70.5	75.5	66.3	114.0	94.0	-38.5	-27.7	273.40	1.04
2400.00	-32.16	28.00	52.8	39.4	48.6	35.2	74.0	54.0	-25.4	-18.8	268.10	1.03
2397.30	-32.17	27.99	50.4	39.2	46.2	35.0	74.0	54.0	-27.8	-19.0	197.40	1.04
2428.30	-32.20	28.06	51.6	37.4	47.5	33.3	74.0	54.0	-26.5	-20.7	340.00	1.05
4804.00	-30.47	33.64	42.1	*	45.3	*	74.0	54.0	-28.7	*	216.20	1.00
7206.00	-28.90	36.26	41.3	*	48.7	*	74.0	54.0	-25.3	*	273.40	1.10

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB μ V)		Emission Level (dB μ V/m)		Limit (dB μ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2402.00(F)	-32.16	28.54	80.6	73.5	77.0	69.8	114.0	94.0	-37.0	-24.2	333.00	1.02
2400.00	-32.16	28.00	54.9	42.5	50.7	38.3	74.0	54.0	-23.3	-15.7	354.80	1.02
2396.63	-32.18	27.99	52.3	43.4	48.1	39.2	74.0	54.0	-25.9	-14.8	328.10	1.00
2438.50	-32.22	28.08	49.2	26.8	45.1	22.7	74.0	54.0	-28.9	-31.3	284.70	1.02
4804.00	-30.47	33.64	51.5	*	54.7	*	74.0	54.0	-19.3	*	232.10	1.23
7206.00	-28.90	36.26	42.1	*	49.5	*	74.0	54.0	-24.5	*	122.10	1.18

NOTE :

1. Measurement uncertainty is +/-2dB.
2. "*": The Peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
4. The field strength of other emission frequencies were very low against the limit.
5. (F):The field strength of fundamental frequency.



Temperature:	27 °C	Humidity:	54 %RH
Ferquency Range:	1 – 25 GHz	Measured Distance:	3m
Receiver Detector:	PK. or AV.	Tested Mode:	CH41: 2442MHz
Tested By:	Hugo Yeh	Tested Date:	Nov. 15, 2004

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dBµV)		Emission Level (dBµV/m)		Limit (dBµV/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2441.00(F)	-32.23	28.08	76.5	65.6	72.4	61.5	114.0	94.0	-41.6	-32.5	302.50	1.49
2421.80	-32.19	28.04	62.7	36.3	58.5	32.1	74.0	54.0	-15.5	-21.9	286.50	1.50
2453.00	-32.24	28.11	58.6	35.8	54.5	31.7	74.0	54.0	-19.5	-22.3	273.90	1.49
2425.80	-32.20	28.05	61.9	34.6	57.7	30.4	74.0	54.0	-16.3	-23.6	37.90	1.48
4882.00	-30.26	33.71	43.1	*	46.5	*	74.0	54.0	-27.5	*	320.80	1.27
7323.00	-29.04	36.36	42.6	*	49.9	*	74.0	54.0	-24.1	*	262.50	1.62

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dBµV)		Emission Level (dBµV/m)		Limit (dBµV/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2441.00(F)	-32.23	28.62	79.3	68.4	75.7	64.8	114.0	94.0	-38.3	-29.2	311.80	1.20
2422.00	-32.20	28.04	60.4	43.2	56.2	39.0	74.0	54.0	-17.8	-15.0	348.20	1.20
2419.50	-32.19	28.04	53.6	40.7	49.4	36.5	74.0	54.0	-24.6	-17.5	293.10	1.21
2453.00	-32.24	28.11	54.8	43.6	50.7	39.5	74.0	54.0	-23.3	-14.5	299.70	1.19
4882.00	-30.26	33.71	44.6	*	48.0	*	74.0	54.0	-26.0	*	112.60	1.31
7323.00	-29.04	36.36	43.5	*	50.8	*	74.0	54.0	-23.2	*	277.40	1.26

NOTE :

1. Measurement uncertainty is +/-2dB.
2. "**": The Peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
4. The field strength of other emission frequencies were very low against the limit.
5. (F):The field strength of fundamental frequency.



Temperature:	27 °C	Humidity:	54 %RH
Ferquency Range:	1 – 25 GHz	Measured Distance:	3m
Receiver Detector:	PK. or AV.	Tested Mode:	CH82: 2483MHz
Tested By:	Hugo Yeh	Tested Date:	Nov. 15, 2004

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dBµV)		Emission Level (dBµV/m)		Limit (dBµV/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2483.00(F)	-32.19	28.17	78.5	69.3	74.5	65.3	114.0	94.0	-39.5	-28.7	131.70	1.48
2483.50	-32.19	28.17	59.6	47.1	55.6	43.1	74.0	54.0	-18.4	-10.9	130.10	1.49
2495.64	-32.17	28.19	47.5	36.5	43.5	32.5	74.0	54.0	-30.5	-21.5	130.10	1.48
2446.80	-32.23	28.09	52.3	38.1	48.2	34.0	74.0	54.0	-25.8	-20.0	269.70	1.48
4966.00	-30.26	33.77	42.1	*	45.6	*	74.0	54.0	-28.4	*	134.20	1.49
7449.00	-28.95	36.46	40.6	*	48.1	*	74.0	54.0	-25.9	*	12.30	1.34

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dBµV)		Emission Level (dBµV/m)		Limit (dBµV/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2483.00(F)	-32.19	28.74	77.9	66.5	74.4	63.0	114.0	94.0	-39.6	-31.0	2.70	1.50
2483.50	-32.19	28.17	58.4	46.2	54.4	42.2	74.0	54.0	-19.6	-11.8	132.40	1.51
2496.35	-32.17	28.19	53.1	38.6	49.1	34.6	74.0	54.0	-24.9	-19.4	243.44	1.50
2447.00	-32.24	28.09	48.6	43.6	44.5	39.5	74.0	54.0	-29.5	-14.5	264.80	1.50
4966.00	-30.26	33.77	45.2	*	48.7	*	74.0	54.0	-25.3	*	269.70	1.52
7449.00	-28.95	36.46	43.7	*	51.2	*	74.0	54.0	-22.8	*	188.80	1.21

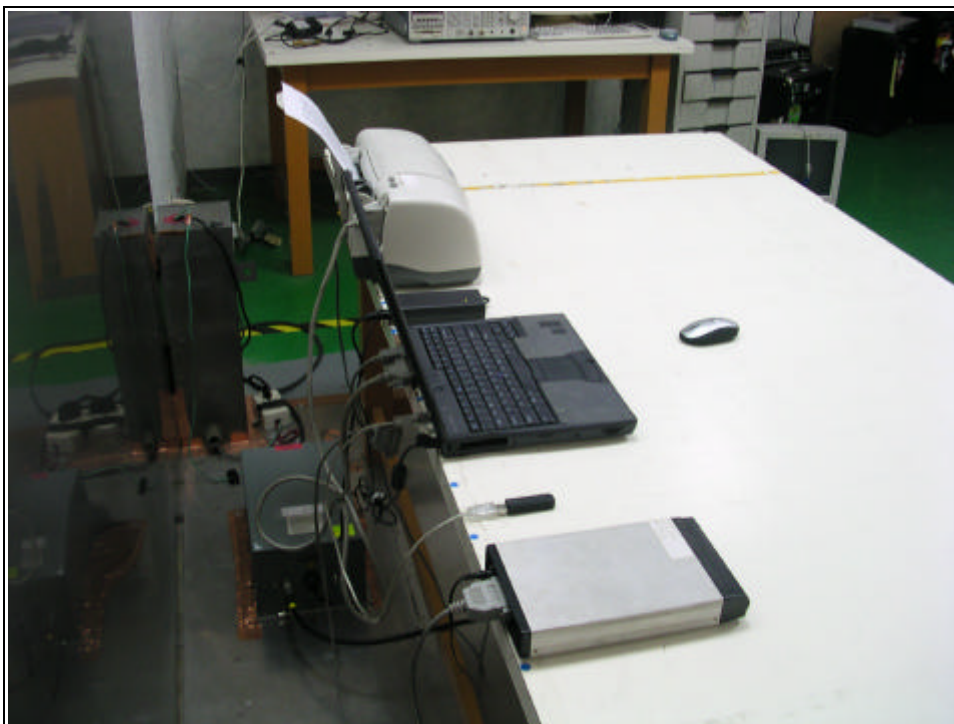
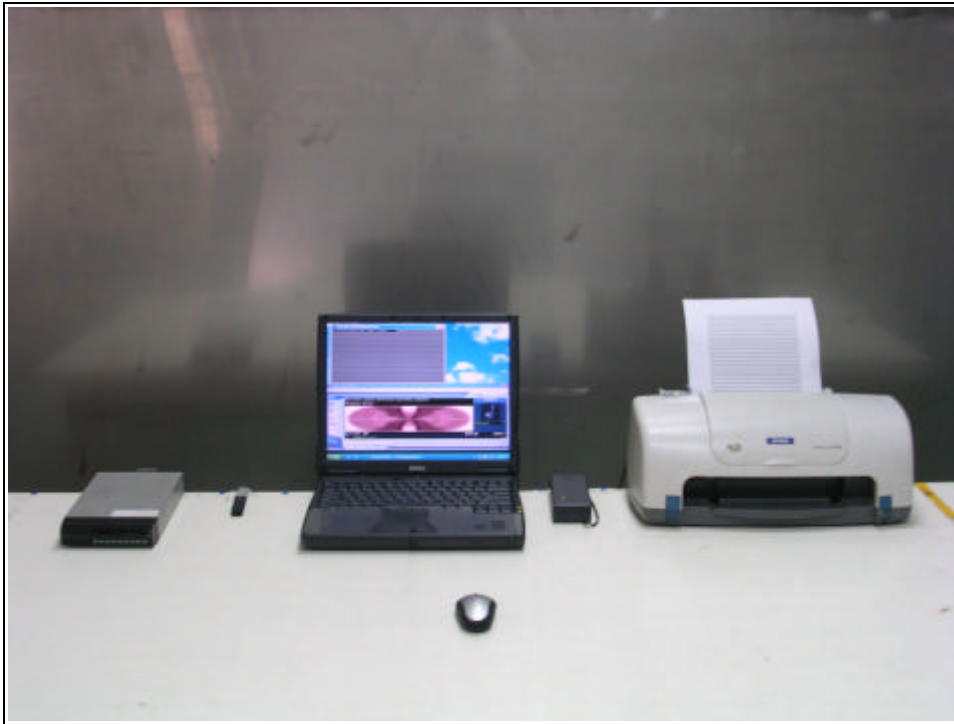
NOTE :

1. Measurement uncertainty is +/-2dB.
2. "**": The Peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
4. The field strength of other emission frequencies were very low against the limit.
5. (F):The field strength of fundamental frequency.



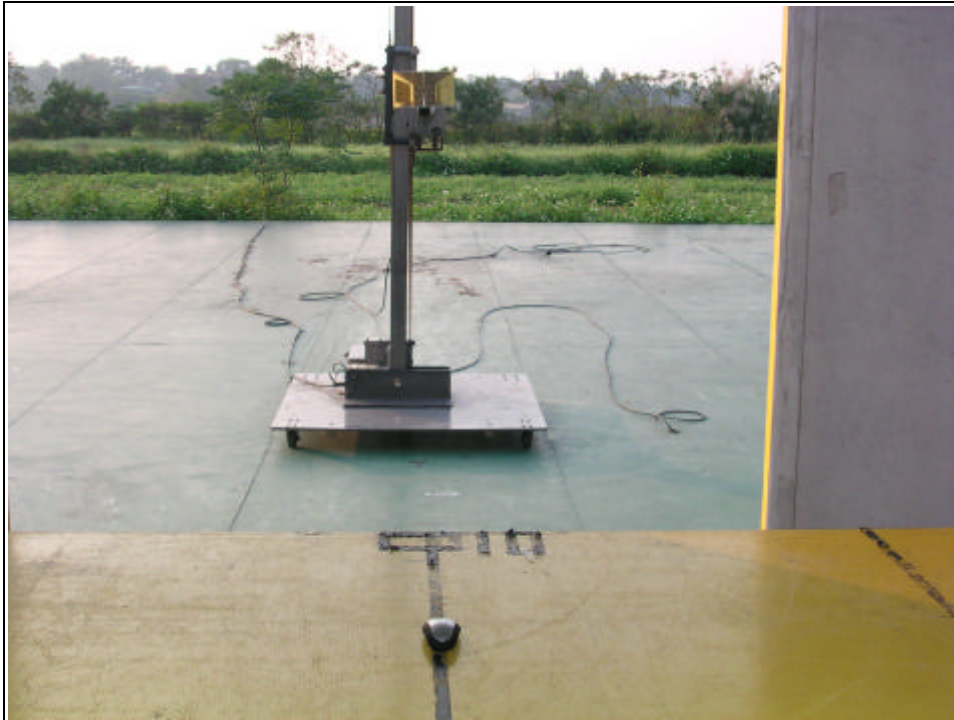
5. PHOTOS OF TESTING

- Conducted test





- Radiated test (TX mode)





- Radiated test (RX mode)





6. TERMS OF ABRIVATION

AV.	Average detection
AZ(°)	Turn table azimuth
Correct.	Correction
EL(m)	Antenna height (meter)
EUT	Equipment Under Test
Horiz.	Horizontal direction
LISN	Line Impedance Stabilization Network
NSA	Normalized Site Attenuation
Q.P.	Quasi-peak detection
SRT Lab	Spectrum Research & Testing Laboratory, Inc.
Vert.	Vertical direction