FCC TEST REPORT

REPORT NO.: RF900906R03
MODEL NO.: LM-WP210
RECEIVED: September 6, 2001
TESTED: Sep. 26~ Oct. 23, 2001

APPLICANT: DELTA NETWORKS, INC.

ADDRESS: 8, Kon Jan West Road, Liutu Industrial Zone Keelung, Taiwan, R.O.C.

ISSUED BY: Advance Data Technology Corporation

LAB LOCATION: 47 14th Lin, Chiapau Tsun, Linko, Taipei, Taiwan, R.O.C.

0528

Lab Code: 200102-0

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1 CERTIFICATION

PRODUCT :	WLAN Detached PCMCIA Card
BRAND NAME :	DELTA NETWORKS
MODEL NO. :	LM-WP210
APPLICANT :	DELTA NETWORKS, INC.
STANDARDS :	47 CFR Part 15, Subpart C (Section 15.247), ANSI C63.4-1992, Canada RSS 210, New Zealand RFS 29

We, **Advance Data Technology Corporation**, hereby certify that one sample of the designation has been tested in our facility from September 26, 2001 to October 23, 2001, The test record, data evaluation and Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions herein specified.

TESTED BY : Steven Lu · DATE: Oct 24, 2001
Steven Lu

CHECKED BY : Emily Lu · DATE: Oct. 24, 2001
Emily Lu

APPROVED BY : Alan Lane · DATE: Oct. 24, 2001
Dr. Alan Lane, Manager

2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: 47 CFR Part 15, Subpart C			
Standard Section	**Test Type and Limit**	**Result**	**REMARK**
15.107	AC Power Conducted Emission Limit: 48dBuV	PASS	Meet the requirement of limit Minimum passing margin is –6.66dBuV at 2.6922MHz
15.247(a)(2)	Spectrum Bandwidth of a Direct Sequence Spread Spectrum System Limit: min. 500kHz	PASS	Meet the requirement of limit
15.247(b)	Maximum Peak Output Power Limit: max. 30dBm	PASS	Meet the requirement of limit
15.247(c)	Transmitter Radiated Emissions Limit: Table 15.209	PASS	Meet the requirement of limit Minimum passing margin is –2.8dBuV at 176.00MHz
15.247(d)	Power Spectral Density Limit: max. 8dBm	PASS	Meet the requirement of limit
15.247(c)	Band Edge Measurement Limit: 20 dB less than the peak value of fundamental frequency	PASS	Meet the requirement of limit

3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	WLAN Detached PCMCIA Card
MODEL NO.	LM-WP210
POWER SUPPLY	5VDC from notebook
MODULATION TYPE	CCK, BPSK, QPSK
RADIO TECHNOLOGY	DSSS
TRANSFER RATE	1/2/5.5/11Mbps
FREQUENCY RANGE	2412MHz ~ 2462MHz
NUMBER OF CHANNEL	11
OUTPUT POWER	17dBm
ANTENNA TYPE	Dipole antenna, Patch antenna
DATA CABLE	NA
I/O PORTS	NA
ASSOCIATED DEVICES	NA

NOTE:

1. The EUT has three sets of antennas. The antenna gain of two dipole are 3dBi and 2dBi. The other one is Patch antenna with antenna gain –1dBi.
2. For a more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 DESCRIPTION OF TEST MODES

Eleven channels are provided in this EUT.

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

NOTE:

1. Below 1 GHz, the channel 1, 6, and 11 were pre-tested in chamber. The channel 11, worst case one, was chosen for final test.
2. Above 1 GHz, the channel 1, 6, and 11 were tested individually.
3. Test result (A) is for Patch antenna with antenna gain -1dBi, test result (B) is for Dipole antenna with antenna gain 3dBi and test result (C) is for Dipole antenna with antenna gain 2dBi.

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a WLAN Detached PCMCIA Card. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC CFR 47 Part 15, Subpart C. (15.247)
ANSI C63.4 : 1992

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

NOTE: The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.

3.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK	IBM	ThinkPad380xD	97-84L54	FCC DoC Approved
2	PRINTER	HP	2225C+	3123S97230	DSI6XU2225
3	MODEM	ACEEX	1414	980020510	IFAXDM1414

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA
2	1.2m braid shielded wire, terminated with DB25 and Centronics connector via metallic frame, w/o core.
3	1.2 m braid shielded wire, terminated with DB25 and DB9 connector via metallic frame, w/o core.

NOTE: All power cords of the above support units are non shielded (1.8m).

4 TEST TYPES AND RESULTS

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY (MHz)	Class B (dBuV)	
	Quasi-peak	Average
0.45 – 30	48	-

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. All emanations from a class B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
ROHDE & SCHWARZ Test Receiver	ESHS30	828109/007	July 4, 2002
ROHDE & SCHWARZ Artificial Mains Network (for EUT)	ESH3-Z5	839135/006	July 3, 2002
* ROHDE & SCHWARZ 4-wire ISN	ENY41	837032/016	Nov. 28, 2001
* ROHDE & SCHWARZ 2-wire ISN	ENY22	837497/016	Dec. 3, 2001
EMCO-L.I.S.N. (for peripheral)	3825/2	9204-1964	July 3, 2002
Software	Cond-V2J	NA	NA
RF cable (JYEBAO)	RG-58A/U	Cable-C02.01	July 5, 2002
HP Terminator (For EMCO LISN)	11593A	E1-01-298	Feb. 20, 2002
HP Terminator (For EMCO LISN)	11593A	E1-01-299	Feb. 20, 2002
Shielded Room	Site 2	ADT-C02	NA
VCCI Site Registration No.	Site 2	C-240	NA

NOTE: 1. The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.

2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

3. "*": These equipment are used for conducted telecom port test only (if tested).

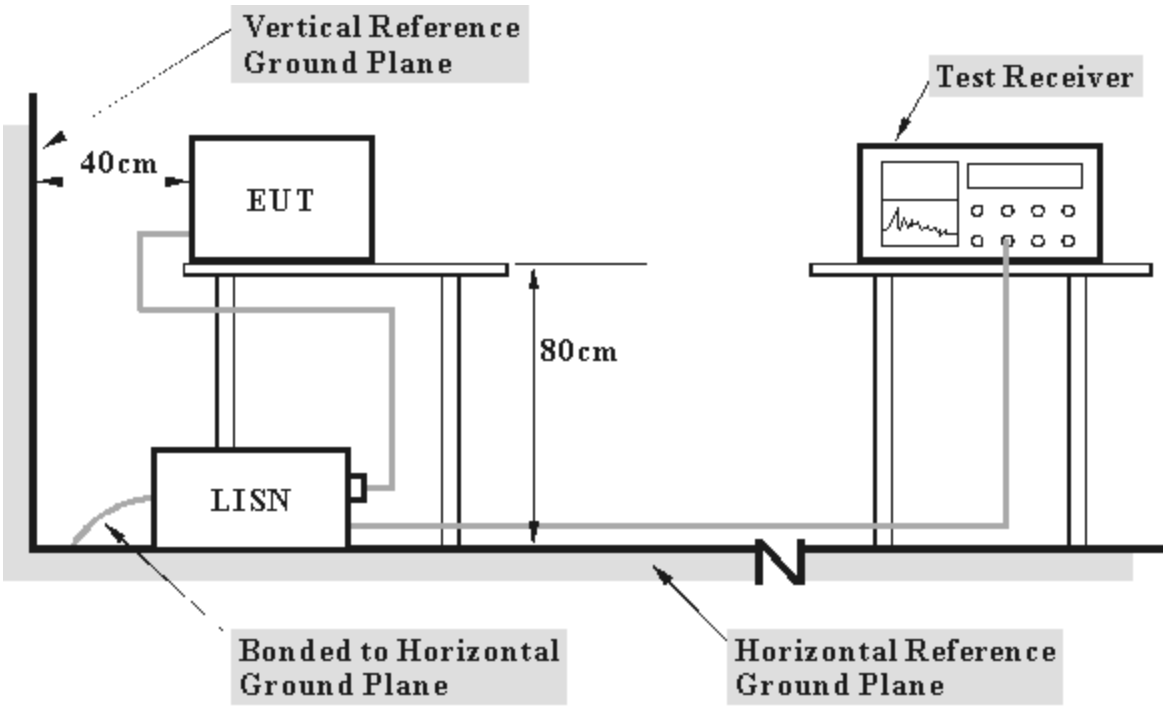
4.1.3 TEST PROCEDURES

a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.

b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

c. The frequency range from 450 kHz to 30 MHz was searched. Emission levels over 10dB under the prescribed limits could not be reported

4.1.4 TEST SETUP



Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

4.1.5 EUT OPERATING CONDITIONS

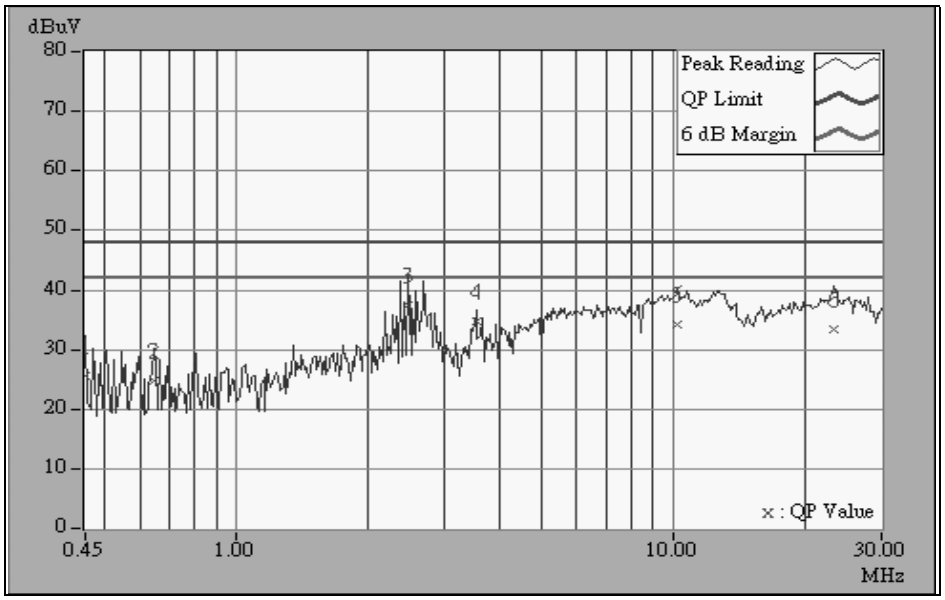
a. Connected the EUT to a computer system placed on a testing table.
b. The computer system ran a test program to enable EUT under transmission/receiving condition continuously at specific channel frequency.
c. The computer system sent "H" messages to its screen.
d. The computer system sent “H” messages to modem.
e. The computer system sent "H" messages to printer, and the printer prints them on paper.

4.1.6 TEST RESULTS (A)

EUT	WLAN Detached PCMCIA Card	**MODEL**	LM-WP210
MODE	Channel 1	**6dB BANDWIDTH**	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	25 deg. C, 68%RH, 1005 hPa	**TESTED BY**: Steven Lu	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.450	0.10	25.51	-	25.61	-	48.00	-	-22.39	-
2	0.648	0.10	24.82	-	24.92	-	48.00	-	-23.08	-
3	2.480	0.15	37.43	-	37.58	-	48.00	-	-10.42	-
4	3.549	0.25	34.67	-	34.92	-	48.00	-	-13.08	-
5	10.247	0.51	34.25	-	34.76	-	48.00	-	-13.24	-
6	23.432	1.07	33.37	-	34.44	-	48.00	-	-13.56	-

NOTE:
1. QP. and AV. are abbreviations of quasi-peak and average individually.
2. "-": NA
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Emission Level = Reading Value + Correction Factor.

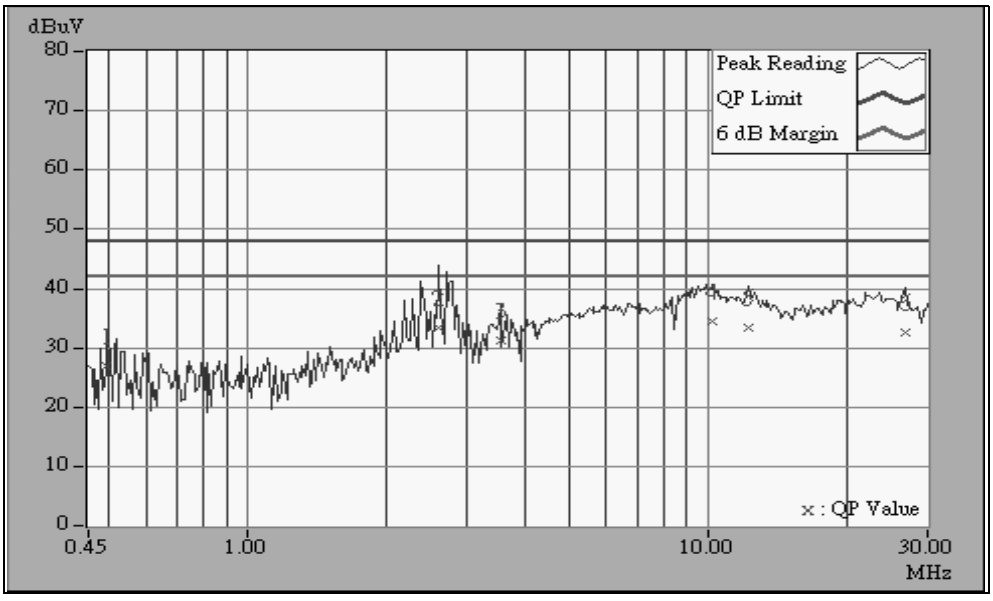


EUT	WLAN Detached PCMCIA Card	**MODEL**	LM-WP210
MODE	Channel 1	**6dB BANDWIDTH**	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	25 deg. C, 68%RH, 1005 hPa	**TESTED BY**: Steven Lu	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.495	0.10	27.04	-	27.14	-	48.00	-	-20.86	-
2	2.601	0.16	33.28	-	33.44	-	48.00	-	-14.56	-
3	3.534	0.25	31.24	-	31.49	-	48.00	-	-16.51	-
4	10.166	0.41	34.54	-	34.95	-	48.00	-	-13.05	-
5	12.209	0.49	33.27	-	33.76	-	48.00	-	-14.24	-
6	26.771	0.94	32.46	-	33.40	-	48.00	-	-14.60	-

NOTE:

1. QP. and AV. are abbreviations of quasi-peak and average individually.
2. "-": NA
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Emission Level = Reading Value + Correction Factor.

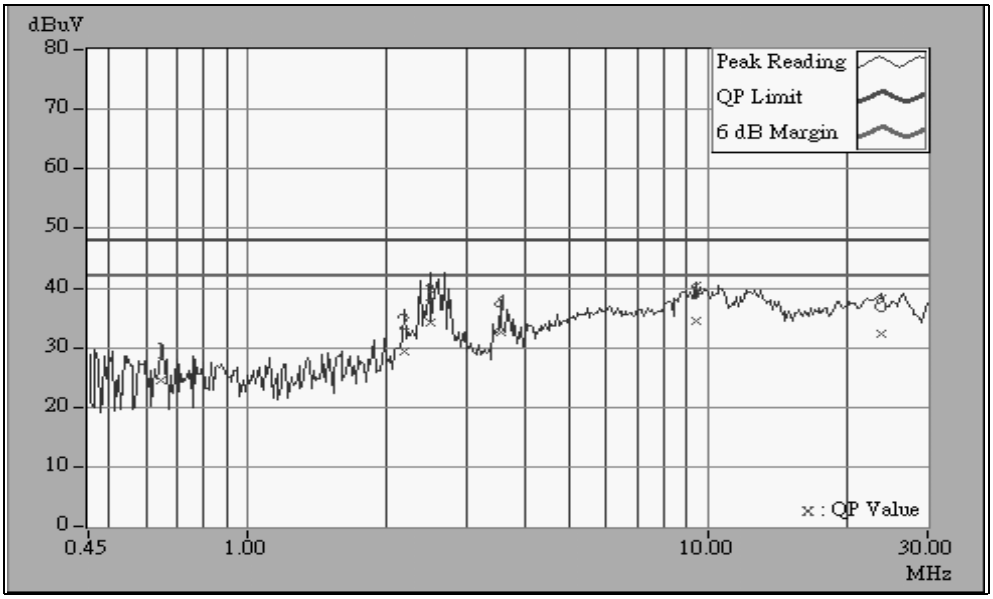


EUT	WLAN Detached PCMCIA Card	**MODEL**	LM-WP210
MODE	Channel 6	**6dB BANDWIDTH**	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	25 deg. C, 68%RH, 1005 hPa	**TESTED BY**: Steven Lu	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.648	0.10	24.49	-	24.59	-	48.00	-	-23.41	-
2	2.187	0.12	29.32	-	29.44	-	48.00	-	-18.56	-
3	2.490	0.15	34.29	-	34.44	-	48.00	-	-13.56	-
4	3.540	0.25	32.62	-	32.87	-	48.00	-	-15.13	-
5	9.434	0.48	34.38	-	34.86	-	48.00	-	-13.14	-
6	23.765	1.08	32.26	-	33.34	-	48.00	-	-14.66	-

NOTE:

1. QP. and AV. are abbreviations of quasi-peak and average individually.
2. "-": NA
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Emission Level = Reading Value + Correction Factor.

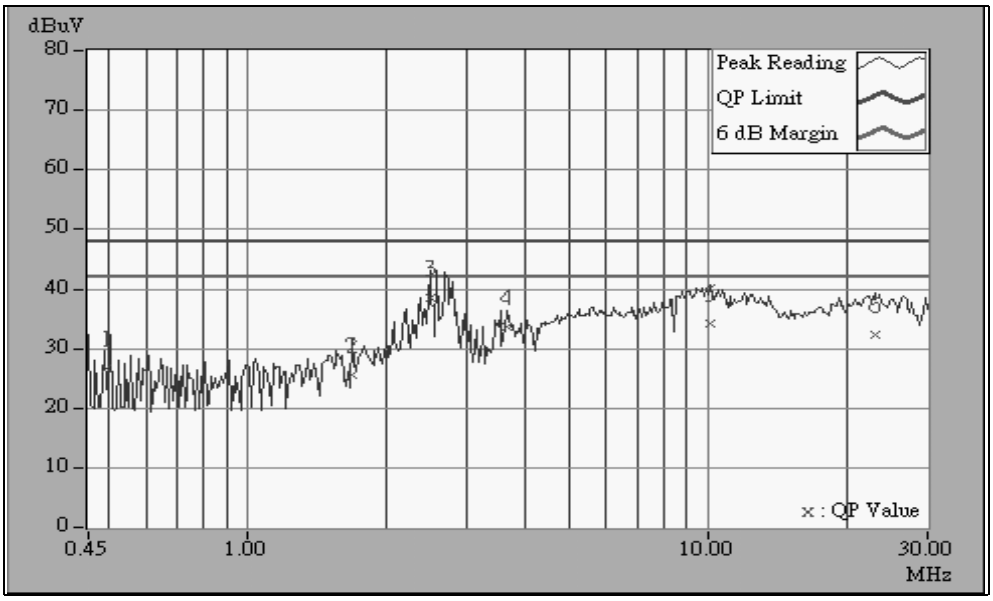


EUT	WLAN Detached PCMCIA Card	**MODEL**	LM-WP210
MODE	Channel 6	**6dB BANDWIDTH**	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	25 deg. C, 68%RH, 1005 hPa	**TESTED BY**: Steven Lu	

No	Freq.	Corr. Factor	Reading Value [dB (Uv)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.495	0.10	26.70	-	26.80	-	48.00	-	-21.20	-
2	1.689	0.10	25.47	-	25.57	-	48.00	-	-22.43	-
3	2.481	0.15	38.49	-	38.64	-	48.00	-	-9.36	-
4	3.651	0.27	33.71	-	33.98	-	48.00	-	-14.02	-
5	10.157	0.41	34.22	-	34.63	-	48.00	-	-13.37	-
6	22.997	0.86	32.28	-	33.14	-	48.00	-	-14.86	-

NOTE:

1. QP. and AV. are abbreviations of quasi-peak and average individually.
2. "-": NA
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Emission Level = Reading Value + Correction Factor.

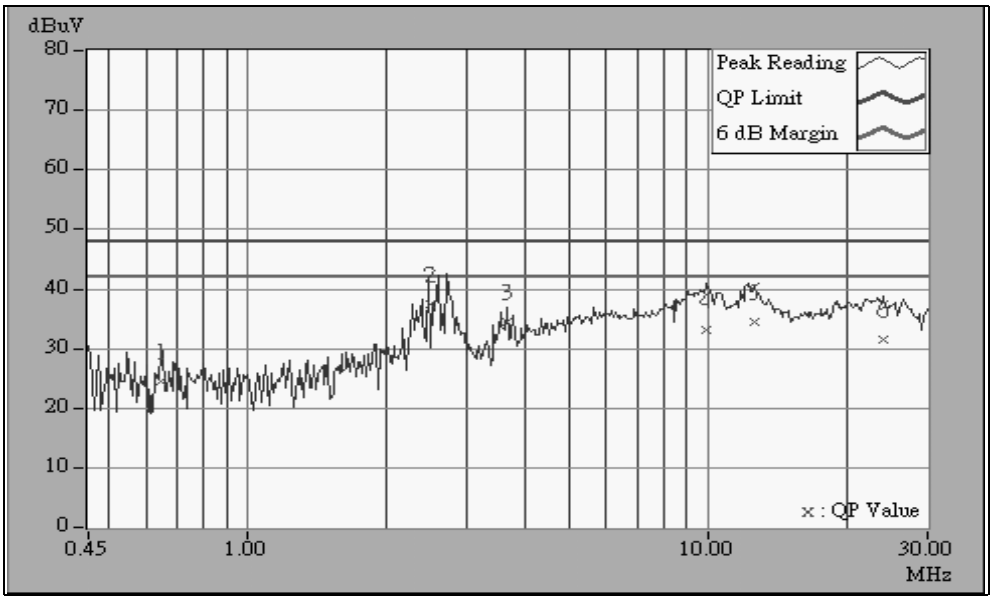


EUT	WLAN Detached PCMCIA Card	**MODEL**	LM-WP210
MODE	Channel 11	**6dB BANDWIDTH**	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	25 deg. C, 68%RH, 1005 hPa	**TESTED BY**: Steven Lu	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.648	0.10	24.47	-	24.57	-	48.00	-	-23.43	-
2	2.485	0.15	37.49	-	37.64	-	48.00	-	-10.36	-
3	3.650	0.27	34.49	-	34.76	-	48.00	-	-13.24	-
4	9.902	0.50	33.02	-	33.52	-	48.00	-	-14.48	-
5	12.590	0.66	34.44	-	35.10	-	48.00	-	-12.90	-
6	23.927	1.08	31.60	-	32.68	-	48.00	-	-15.32	-

NOTE:

1. QP. and AV. are abbreviations of quasi-peak and average individually.
2. "-": NA
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Emission Level = Reading Value + Correction Factor.

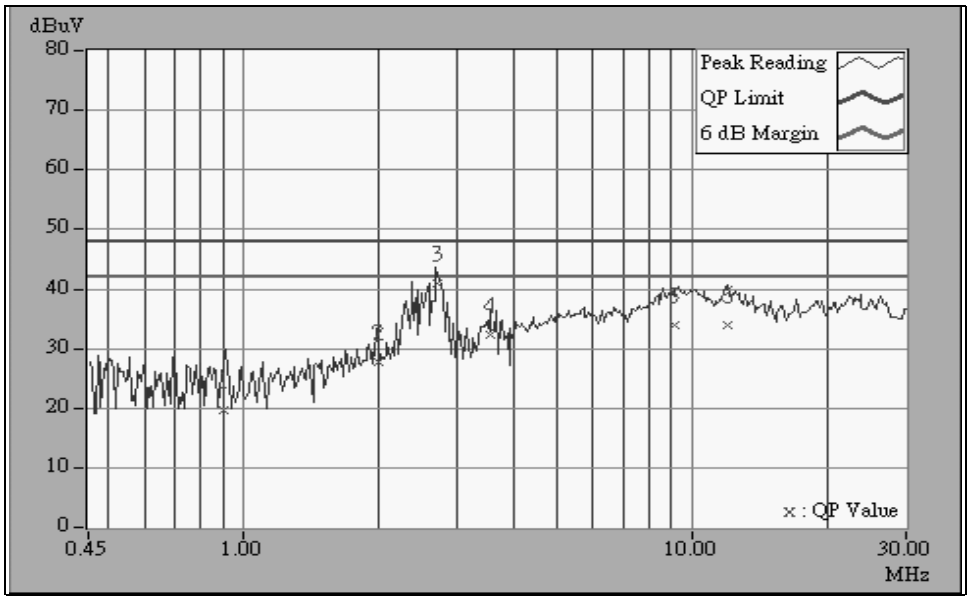


EUT	WLAN Detached PCMCIA Card	**MODEL**	LM-WP210
MODE	Channel 11	**6dB BANDWIDTH**	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Netural (N)
ENVIRONMENTAL CONDITIONS	25 deg. C, 68%RH, 1005 hPa	**TESTED BY**: Steven Lu	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.898	0.10	19.77	-	19.87	-	48.00	-	-28.13	-
2	1.989	0.10	27.67	-	27.77	-	48.00	-	-20.23	-
3	2.691	0.17	41.03	-	41.20	-	48.00	-	-6.80	-
4	3.544	0.25	32.42	-	32.67	-	48.00	-	-15.33	-
5	9.185	0.39	33.96	-	34.35	-	48.00	-	-13.65	-
6	11.999	0.48	33.87	-	34.35	-	48.00	-	-13.65	-

NOTE:

1. QP. and AV. are abbreviations of quasi-peak and average individually.
2. "-": NA
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Emission Level = Reading Value + Correction Factor.



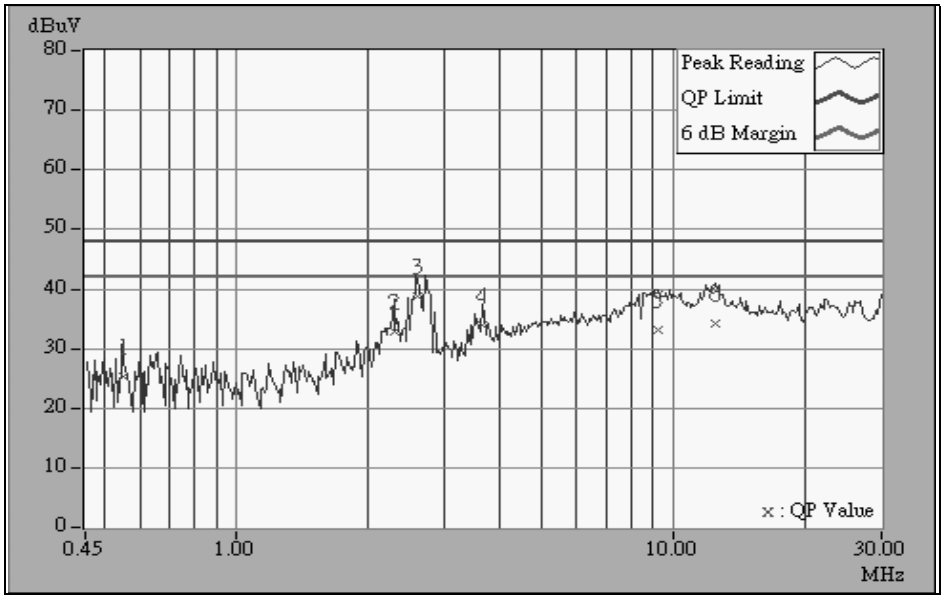
4.1.7 TEST RESULTS (B)

EUT	WLAN Detached PCMCIA Card	**MODEL**	LM-WP210
MODE	Channel 1	**6dB BANDWIDTH**	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	25 deg. C, 68%RH, 1005 hPa	**TESTED BY**: Steven Lu	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.549	0.10	25.31	-	25.41	-	48.00	-	-22.59	-
2	2.289	0.13	32.90	-	33.03	-	48.00	-	-14.97	-
3	2.590	0.16	38.76	-	38.92	-	48.00	-	-9.08	-
4	3.656	0.27	34.05	-	34.32	-	48.00	-	-13.68	-
5	9.221	0.47	33.15	-	33.62	-	48.00	-	-14.38	-
6	12.527	0.65	34.28	-	34.93	-	48.00	-	-13.07	-

NOTE:

6. QP. and AV. are abbreviations of quasi-peak and average individually.
7. "-": NA
8. The emission levels of other frequencies were very low against the limit.
9. Margin value = Emission level - Limit value
10. Emission Level = Reading Value + Correction Factor.

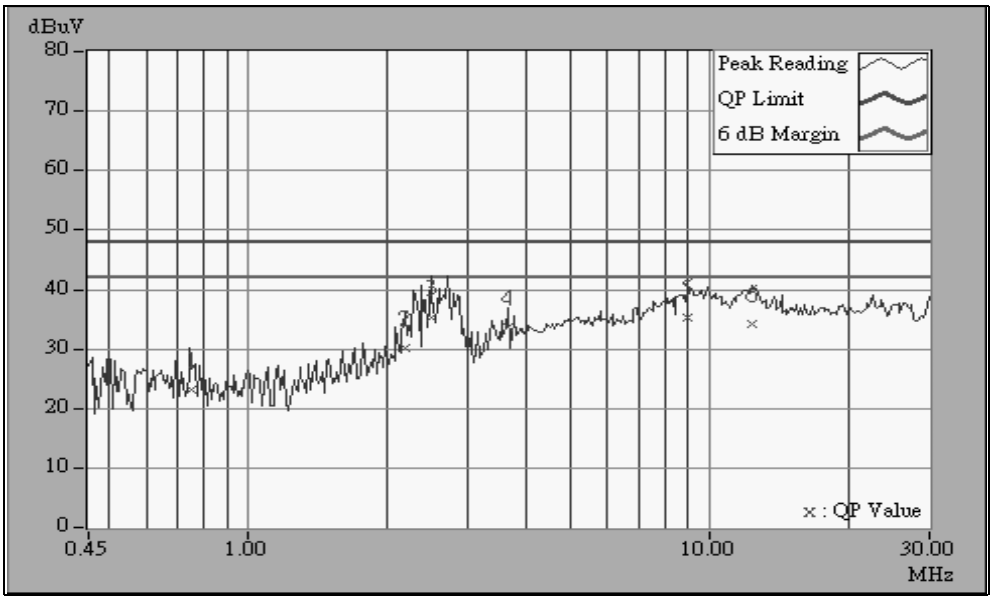


EUT	WLAN Detached PCMCIA Card	**MODEL**	LM-WP210
MODE	Channel 1	**6dB BANDWIDTH**	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	25 deg. C, 68%RH, 1005 hPa	**TESTED BY**: Steven Lu	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.750	0.10	23.28	-	23.38	-	48.00	-	-24.62	-
2	2.191	0.12	30.20	-	30.32	-	48.00	-	-17.68	-
3	2.492	0.15	35.25	-	35.40	-	48.00	-	-12.60	-
4	3.651	0.27	33.64	-	33.91	-	48.00	-	-14.09	-
5	8.948	0.38	35.35	-	35.73	-	48.00	-	-12.27	-
6	12.395	0.50	34.29	-	34.79	-	48.00	-	-13.21	-

NOTE:

6. QP. and AV. are abbreviations of quasi-peak and average individually.
7. "-": NA
8. The emission levels of other frequencies were very low against the limit.
9. Margin value = Emission level - Limit value
10. Emission Level = Reading Value + Correction Factor.

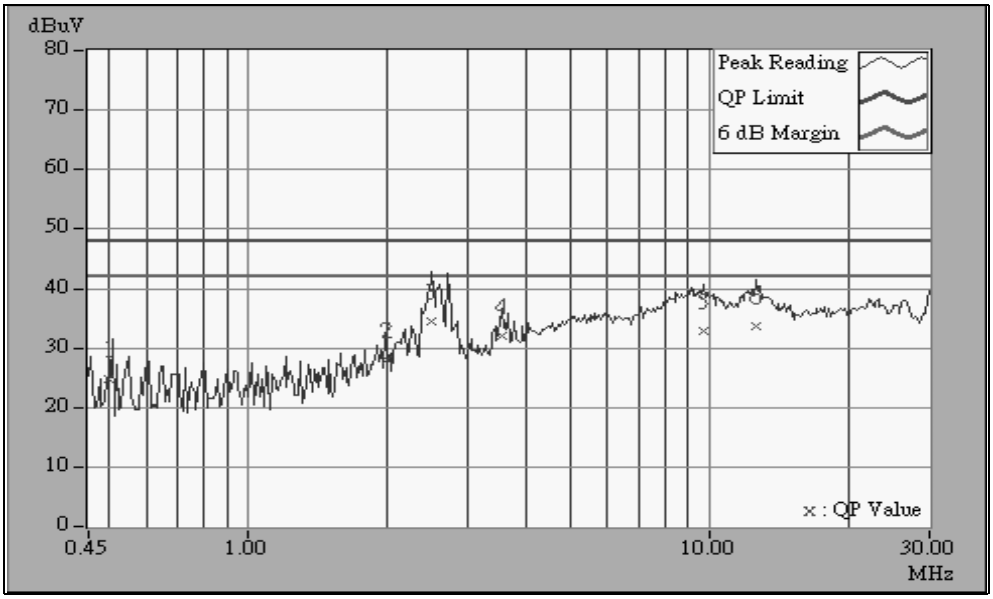


EUT	WLAN Detached PCMCIA Card	**MODEL**	LM-WP210
MODE	Channel 6	**6dB BANDWIDTH**	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	25 deg. C, 68%RH, 1005 hPa	**TESTED BY**: Steven Lu	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.500	0.10	24.88	-	24.98	-	48.00	-	-23.02	-
2	1.991	0.10	28.10	-	28.20	-	48.00	-	-19.80	-
3	2.492	0.15	34.59	-	34.74	-	48.00	-	-13.26	-
4	3.543	0.25	32.12	-	32.37	-	48.00	-	-15.63	-
5	9.710	0.49	32.76	-	33.25	-	48.00	-	-14.75	-
6	12.635	0.66	33.76	-	34.42	-	48.00	-	-13.58	-

NOTE:

6. QP. and AV. are abbreviations of quasi-peak and average individually.
7. "-": NA
8. The emission levels of other frequencies were very low against the limit.
9. Margin value = Emission level - Limit value
10. Emission Level = Reading Value + Correction Factor.

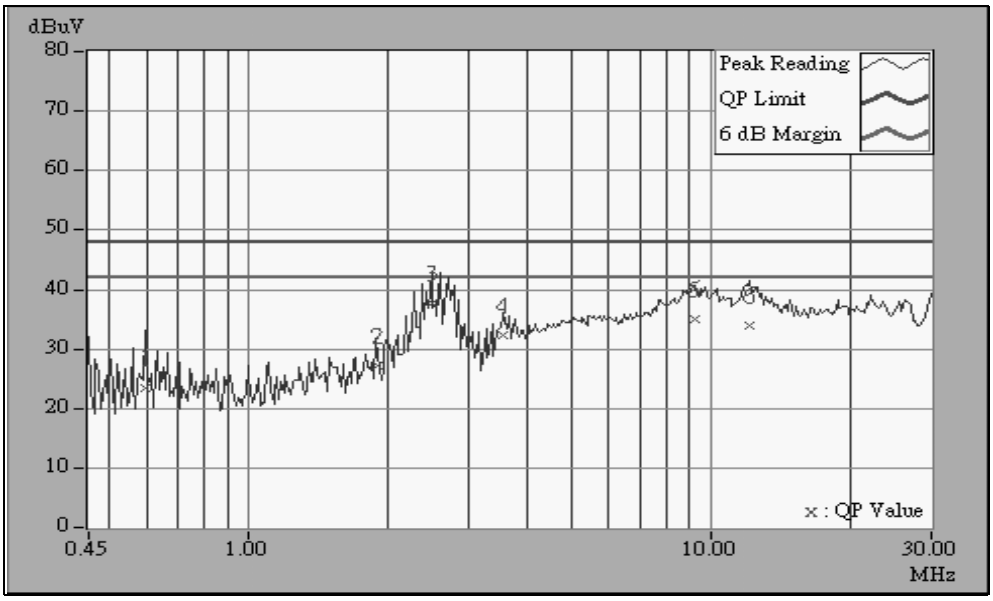


EUT	WLAN Detached PCMCIA Card	**MODEL**	LM-WP210
MODE	Channel 6	**6dB BANDWIDTH**	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	25 deg. C, 68%RH, 1005 hPa	**TESTED BY**: Steven Lu	

No	Freq.	Corr. Factor	Reading Value [dB (Uv)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.597	0.10	23.34	-	23.44	-	48.00	-	-24.56	-
2	1.893	0.10	27.13	-	27.23	-	48.00	-	-20.77	-
3	2.488	0.15	37.75	-	37.90	-	48.00	-	-10.10	-
4	3.556	0.26	32.32	-	32.58	-	48.00	-	-15.42	-
5	9.251	0.39	35.06	-	35.45	-	48.00	-	-12.55	-
6	12.101	0.48	33.92	-	34.40	-	48.00	-	-13.60	-

NOTE:

6. QP. and AV. are abbreviations of quasi-peak and average individually.
7. "-": NA
8. The emission levels of other frequencies were very low against the limit.
9. Margin value = Emission level - Limit value
10. Emission Level = Reading Value + Correction Factor.

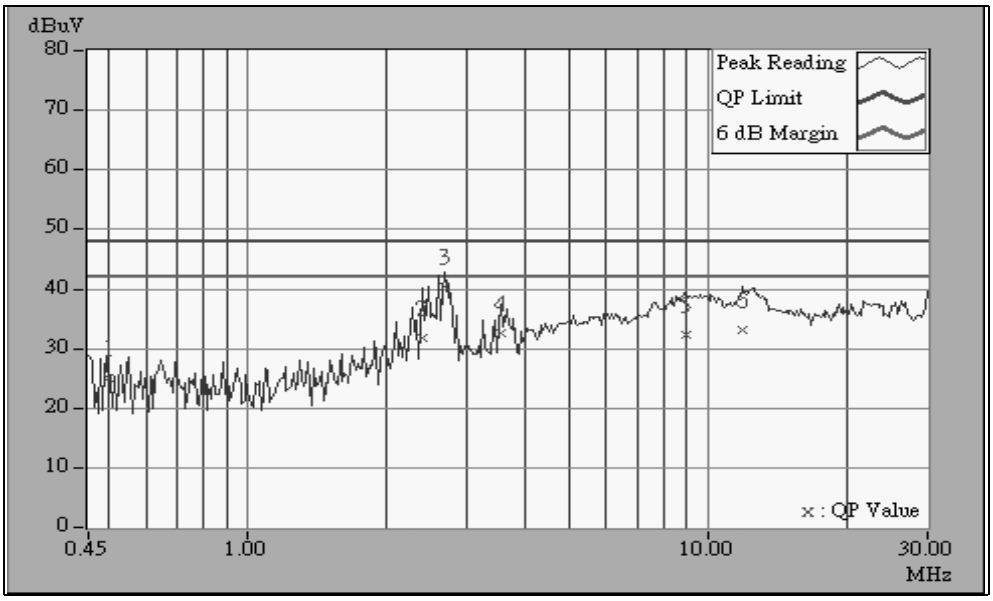


EUT	WLAN Detached PCMCIA Card	**MODEL**	LM-WP210
MODE	Channel 11	**6dB BANDWIDTH**	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	25 deg. C, 68%RH, 1005 hPa	**TESTED BY**: Steven Lu	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.498	0.10	24.98	-	25.08	-	48.00	-	-22.92	-
2	2.395	0.14	31.68	-	31.82	-	48.00	-	-16.18	-
3	2.688	0.17	40.40	-	40.57	-	48.00	-	-7.43	-
4	3.534	0.25	32.58	-	32.83	-	48.00	-	-15.17	-
5	8.930	0.46	32.25	-	32.71	-	48.00	-	-15.29	-
6	11.915	0.61	33.14	-	33.75	-	48.00	-	-14.25	-

NOTE:

6. QP. and AV. are abbreviations of quasi-peak and average individually.
7. "-": NA
8. The emission levels of other frequencies were very low against the limit.
9. Margin value = Emission level - Limit value
10. Emission Level = Reading Value + Correction Factor.

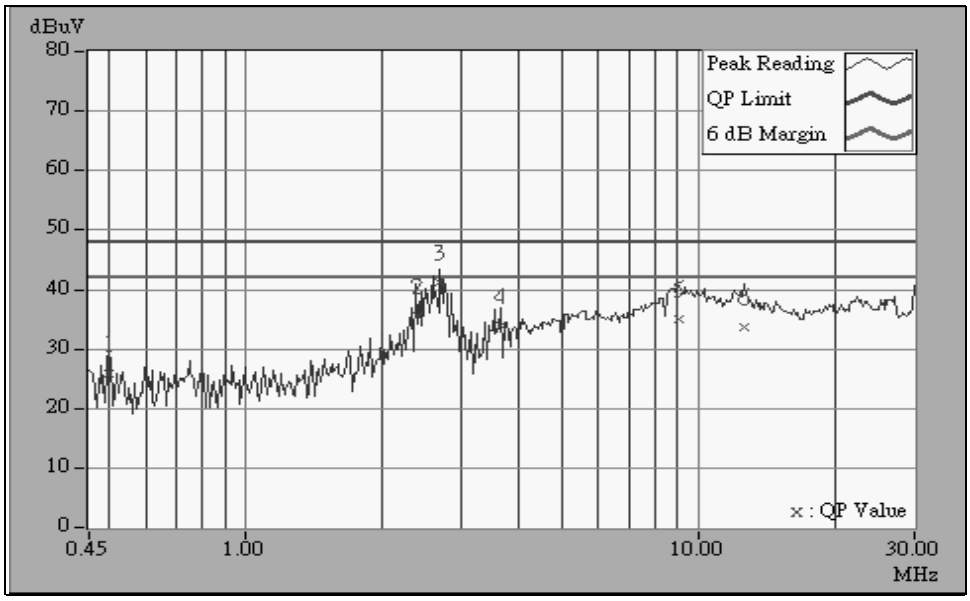


EUT	WLAN Detached PCMCIA Card	**MODEL**	LM-WP210
MODE	Channel 11	**6dB BANDWIDTH**	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Netural (N)
ENVIRONMENTAL CONDITIONS	25 deg. C, 68%RH, 1005 hPa	**TESTED BY**: Steven Lu	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.497	0.10	25.85	-	25.95	-	48.00	-	-22.05	-
2	2.388	0.14	35.54	-	35.68	-	48.00	-	-12.32	-
3	2.688	0.17	41.15	-	41.32	-	48.00	-	-6.68	-
4	3.648	0.26	33.87	-	34.13	-	48.00	-	-13.87	-
5	9.047	0.38	35.08	-	35.46	-	48.00	-	-12.54	-
6	12.599	0.50	33.55	-	34.05	-	48.00	-	-13.95	-

NOTE:

6. QP. and AV. are abbreviations of quasi-peak and average individually.
7. "-": NA
8. The emission levels of other frequencies were very low against the limit.
9. Margin value = Emission level - Limit value
10. Emission Level = Reading Value + Correction Factor.



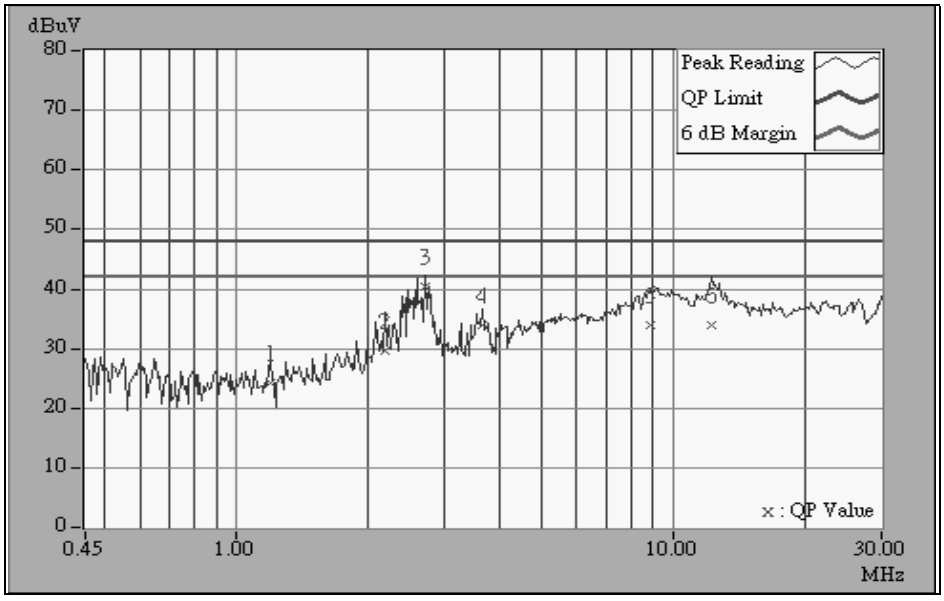
4.1.8 TEST RESULTS (C)

EUT	WLAN Detached PCMCIA Card	**MODEL**	LM-WP210
MODE	Channel 1	**6dB BANDWIDTH**	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	25 deg. C, 68%RH, 1005 hPa	**TESTED BY**: Steven Lu	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	1.197	0.10	24.17	-	24.27	-	48.00	-	-23.73	-
2	2.193	0.12	29.61	-	29.73	-	48.00	-	-18.27	-
3	2.691	0.17	40.30	-	40.47	-	48.00	-	-7.53	-
4	3.657	0.27	34.03	-	34.30	-	48.00	-	-13.70	-
5	8.864	0.46	33.96	-	34.42	-	48.00	-	-13.58	-
6	12.236	0.63	33.82	-	34.45	-	48.00	-	-13.55	-

NOTE:

11. QP. and AV. are abbreviations of quasi-peak and average individually.
12. "-": NA
13. The emission levels of other frequencies were very low against the limit.
14. Margin value = Emission level - Limit value
15. Emission Level = Reading Value + Correction Factor.

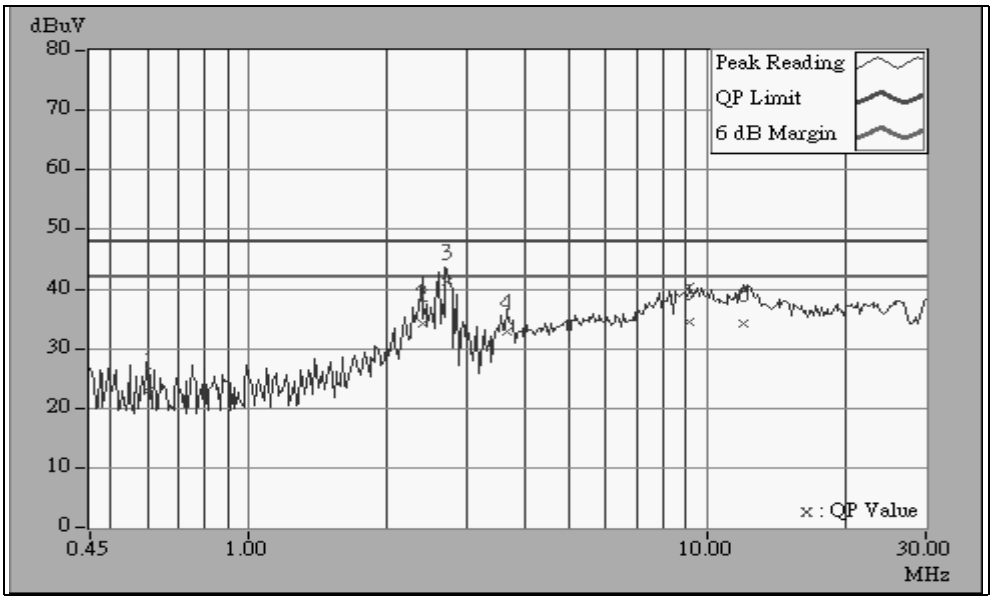


EUT	WLAN Detached PCMCIA Card	**MODEL**	LM-WP210
MODE	Channel 1	**6dB BANDWIDTH**	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	25 deg. C, 68%RH, 1005 hPa	**TESTED BY**: Steven Lu	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.601	0.10	22.83	-	22.93	-	48.00	-	-25.07	-
2	2.389	0.14	34.17	-	34.31	-	48.00	-	-13.69	-
3	2.692	0.17	41.17	-	41.34	-	48.00	-	-6.66	-
4	3.660	0.27	32.74	-	33.01	-	48.00	-	-14.99	-
5	9.182	0.39	34.38	-	34.77	-	48.00	-	-13.23	-
6	12.005	0.48	34.25	-	34.73	-	48.00	-	-13.27	-

NOTE:

11. QP. and AV. are abbreviations of quasi-peak and average individually.
12. "-": NA
13. The emission levels of other frequencies were very low against the limit.
14. Margin value = Emission level - Limit value
15. Emission Level = Reading Value + Correction Factor.

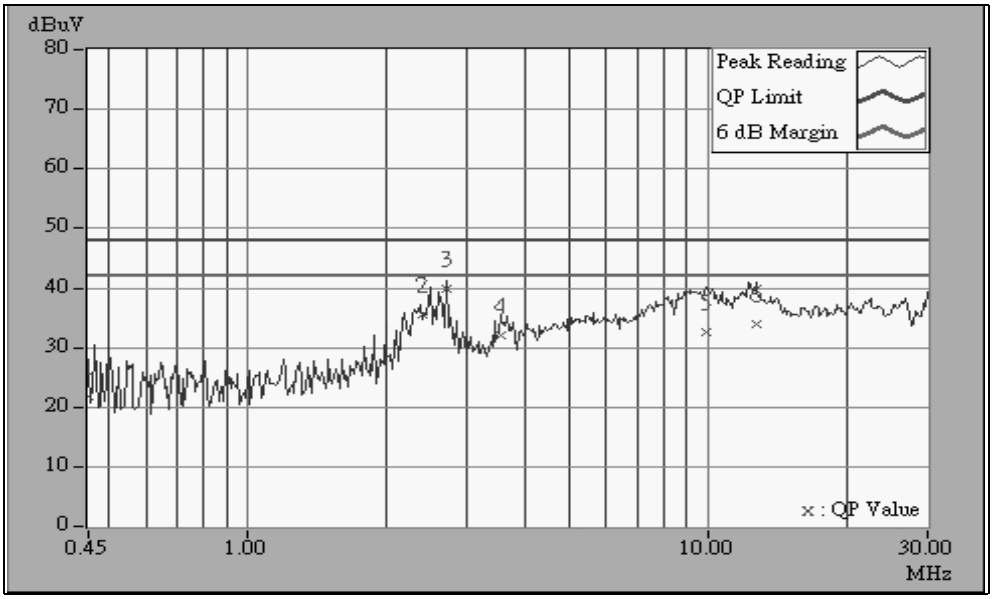


EUT	WLAN Detached PCMCIA Card	**MODEL**	LM-WP210
MODE	Channel 6	**6dB BANDWIDTH**	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	25 deg. C, 68%RH, 1005 hPa	**TESTED BY**: Steven Lu	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.451	0.10	21.81	-	21.91	-	48.00	-	-26.09	-
2	2.390	0.14	35.45	-	35.59	-	48.00	-	-12.41	-
3	2.693	0.17	39.82	-	39.99	-	48.00	-	-8.01	-
4	3.546	0.25	32.08	-	32.33	-	48.00	-	-15.67	-
5	9.911	0.50	32.72	-	33.22	-	48.00	-	-14.78	-
6	12.716	0.66	34.07	-	34.73	-	48.00	-	-13.27	-

NOTE:

11. QP. and AV. are abbreviations of quasi-peak and average individually.
12. "-": NA
13. The emission levels of other frequencies were very low against the limit.
14. Margin value = Emission level - Limit value
15. Emission Level = Reading Value + Correction Factor.

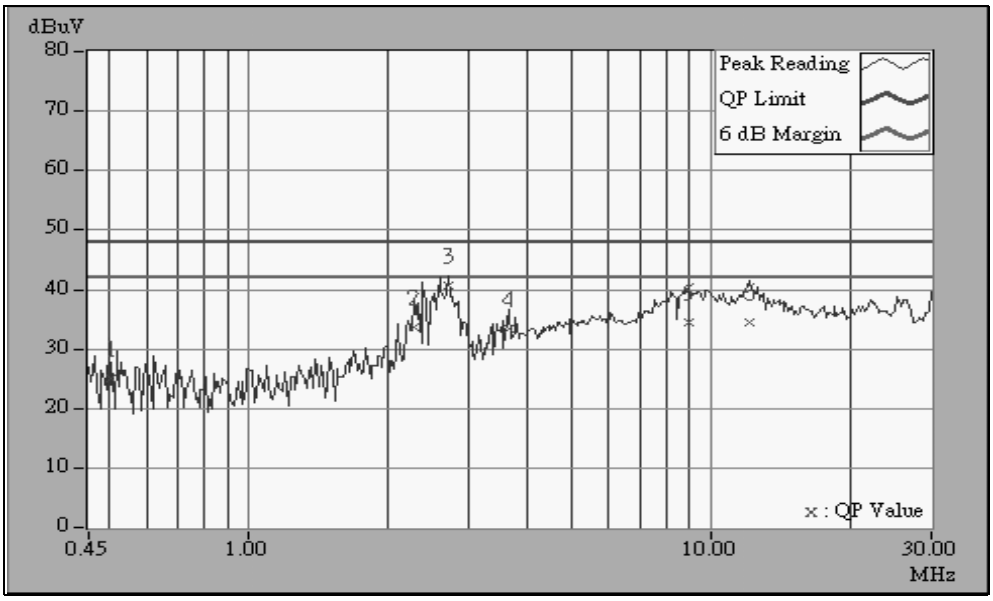


EUT	WLAN Detached PCMCIA Card	**MODEL**	LM-WP210
MODE	Channel 6	**6dB BANDWIDTH**	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	25 deg. C, 68%RH, 1005 hPa	**TESTED BY**: Steven Lu	

No	Freq.	Corr. Factor	Reading Value [dB (Uv)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.501	0.10	25.18	-	25.28	-	48.00	-	-22.72	-
2	2.287	0.13	33.79	-	33.92	-	48.00	-	-14.08	-
3	2.693	0.17	40.79	-	40.96	-	48.00	-	-7.04	-
4	3.648	0.26	33.52	-	33.78	-	48.00	-	-14.22	-
5	8.963	0.38	34.50	-	34.88	-	48.00	-	-13.12	-
6	12.119	0.48	34.44	-	34.92	-	48.00	-	-13.08	-

NOTE:

11. QP. and AV. are abbreviations of quasi-peak and average individually.
12. "-": NA
13. The emission levels of other frequencies were very low against the limit.
14. Margin value = Emission level - Limit value
15. Emission Level = Reading Value + Correction Factor.

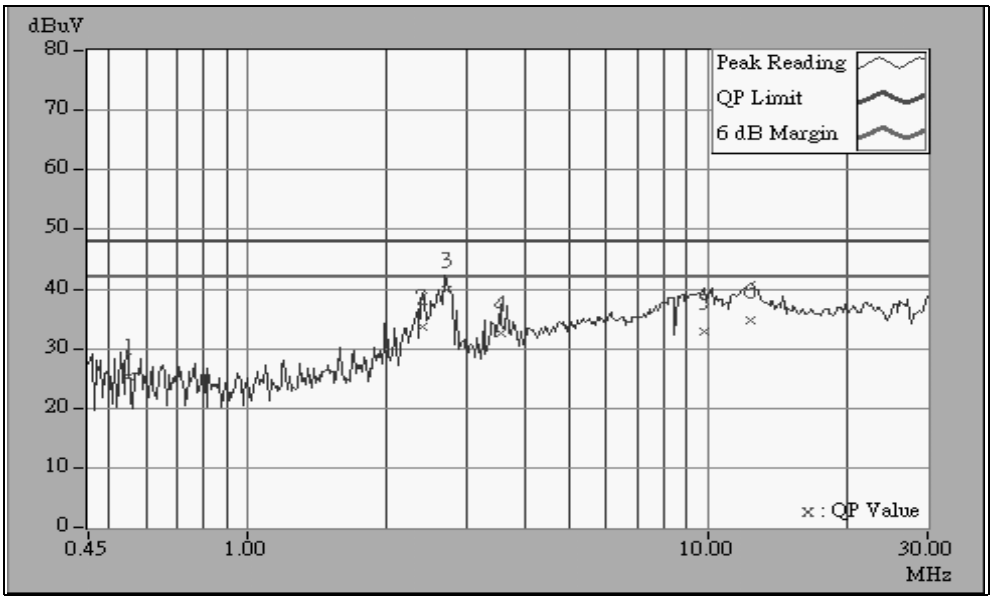


EUT	WLAN Detached PCMCIA Card	**MODEL**	LM-WP210
MODE	Channel 11	**6dB BANDWIDTH**	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	25 deg. C, 68%RH, 1005 hPa	**TESTED BY**: Steven Lu	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.549	0.10	25.31	-	25.41	-	48.00	-	-22.59	-
2	2.391	0.14	33.69	-	33.83	-	48.00	-	-14.17	-
3	2.691	0.17	40.00	-	40.17	-	48.00	-	-7.83	-
4	3.537	0.25	32.70	-	32.95	-	48.00	-	-15.05	-
5	9.836	0.49	32.76	-	33.25	-	48.00	-	-14.75	-
6	12.305	0.64	34.75	-	35.39	-	48.00	-	-12.61	-

NOTE:

11. QP. and AV. are abbreviations of quasi-peak and average individually.
12. "-": NA
13. The emission levels of other frequencies were very low against the limit.
14. Margin value = Emission level - Limit value
15. Emission Level = Reading Value + Correction Factor.

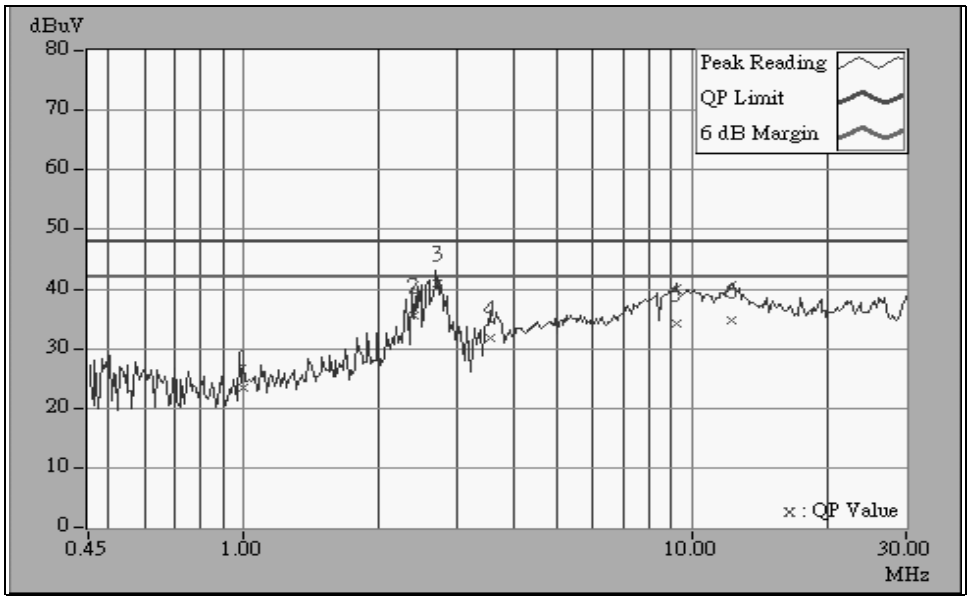


EUT	WLAN Detached PCMCIA Card	MODEL	LM-WP210
MODE	Channel 11	6dB BANDWIDTH	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Netural (N)
ENVIRONMENTAL CONDITIONS	25 deg. C, 68%RH, 1005 hPa	TESTED BY: Steven Lu	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.996	0.10	23.45	-	23.55	-	48.00	-	-24.45	-
2	2.386	0.14	35.54	-	35.68	-	48.00	-	-12.32	-
3	2.690	0.17	40.97	-	41.14	-	48.00	-	-6.86	-
4	3.552	0.26	31.88	-	32.14	-	48.00	-	-15.86	-
5	9.245	0.39	34.08	-	34.47	-	48.00	-	-13.53	-
6	12.182	0.49	34.76	-	35.25	-	48.00	-	-12.75	-

NOTE:

11. QP. and AV. are abbreviations of quasi-peak and average individually.
12. "-": NA
13. The emission levels of other frequencies were very low against the limit.
14. Margin value = Emission level - Limit value
15. Emission Level = Reading Value + Correction Factor.



4.2 RADIATED EMISSION MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

Field strength limits are at the distance of 3 meters, emissions radiated outside of the specified bands, shall be according to the general radiated limits in 15.209 as following:

Frequencies (MHz)	Field Strength of Fundamental	
	uV/m	dBuV/m
30-88	100	40.0
88-216	150	43.5
216-960	200	46.0
Above 960	500	54.0

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
*HP Spectrum Analyzer	8590L	3544A01176	May 7, 2002
*HP Preamplifier	8447D	2944A08485	Nov. 3, 2001
* HP Preamplifier	8449B	3008A01201	Dec. 13, 2001
* HP Preamplifier	8449B	3008A01292	Aug. 21, 2002
* ROHDE & SCHWARZ TEST RECEIVER	ESMI	839013/007 839379/002	Jan. 25, 2002
SCHWARZBECK Tunable Dipole Antenna	VHA 9103 UHA 9105	E101051 E101055	Nov. 23, 2001
* CHASE BILOG Antenna	CBL6112A	2221	Aug. 2, 2002
* SCHWARZBECK Horn Antenna	BBHA9120-D1	D130	July 6, 2002
* EMCO Horn Antenna	3115	9312-4192	April 15, 2002
* EMCO Turn Table	1060	1115	NA
* SHOSHIN Tower	AP-4701	A6Y005	NA
* Software	AS61D4	NA	NA
* ANRITSU RF Switches	MP59B	M35046	Aug. 2, 2002
* TIMES RF cable	LMR-600	CABLE-ST5-01	Aug. 2, 2002
Open Field Test Site	Site 5	ADT-R05	July 28, 2002
Site Registration No.	FCC: 90422 Canada IC: IC 3789 VCCI : R-1039		

NOTE: 1. The measurement uncertainty is less than +/- 3.0dB, which is calculated as per the NAMAS document NIS81.

2. The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to NML/ROC and NIST/USA.

3. "*" = These equipment are used for the final measurement.

4. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz.

4.2.3 TEST PROCEDURES

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

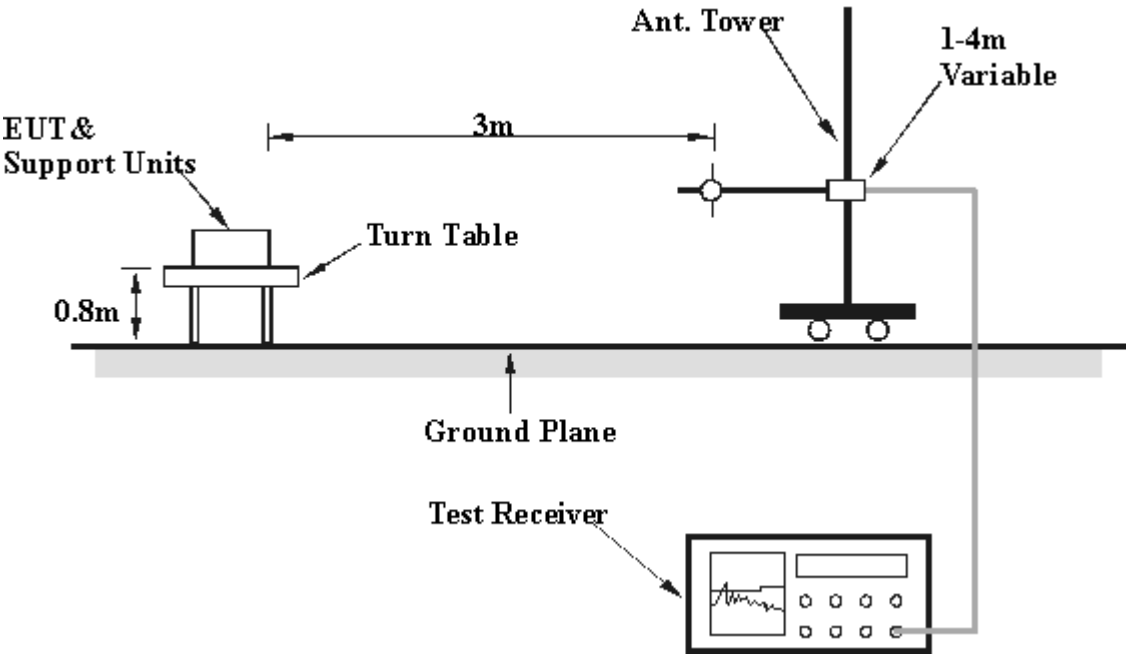
e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 10 dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10 dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 300 Hz for Average detection (AV) at frequency above 1GHz.

4.2.4 TEST SETUP



For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

4.2.5 EUT OPERATING CONDITIONS

Same as 4.1.5.

4.2.6 TEST RESULTS (A)

EUT	WLAN Detached PCMCIA Card	**MODEL**	LM-WP210
MODE	Channel 11	**FREQUENCY RANGE**	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	30 deg. C, 70 % RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	132.70	31.4 QP	43.50	-12.10	1.78H	210	19.10	11.16	1.13	0.00	-12.29
2	176.27	28.6 QP	43.50	-14.90	1.90H	84	18.20	9.08	1.33	0.00	-10.41
3	220.40	29.6 QP	46.00	-16.40	1.82H	97	17.80	10.26	1.52	0.00	-11.80
4	264.31	33.5 QP	46.00	-12.50	1.62H	284	19.10	12.75	1.70	0.00	-14.45
5	440.71	31.7 QP	46.00	-14.30	1.65H	180	13.00	16.32	2.38	0.00	-18.69
6	528.17	32.2 QP	46.00	-13.80	2.46H	346	12.00	17.62	2.60	0.00	-20.22
7	572.07	32.4 QP	46.00	-13.60	2.16H	211	11.40	18.25	2.75	0.00	-21.00
8	748.00	33.8 QP	46.00	-12.20	1.55H	98	10.40	20.14	3.26	0.00	-23.40
9	792.40	33.6 QP	46.00	-12.40	1.55H	57	9.70	20.60	3.31	0.00	-23.91

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	44.00	29.1 QP	40.00	-10.90	1.35V	183	19.00	9.40	0.67	0.00	-10.07
2	264.04	32.8 QP	46.00	-13.20	2.16V	253	18.40	12.75	1.70	0.00	-14.45
3	396.40	32.0 QP	46.00	-14.00	1.72V	180	13.80	15.96	2.22	0.00	-18.18
4	483.94	31.2 QP	46.00	-14.80	1.41V	278	11.80	16.96	2.47	0.00	-19.43
5	528.00	33.2 QP	46.00	-12.80	1.10V	7	13.00	17.62	2.60	0.00	-20.22
6	748.10	33.2 QP	46.00	-12.80	1.51V	94	9.80	20.14	3.26	0.00	-23.40
7	792.47	34.3 QP	46.00	-11.70	1.87V	142	10.40	20.60	3.31	0.00	-23.91
8	880.10	32.6 QP	46.00	-13.40	2.04V	127	8.40	20.68	3.55	0.00	-24.23

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
   (Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.

EUT	WLAN Detached PCMCIA Card	**MODEL**	LM-WP210
MODE	Channel 1	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70 % RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	2037.80	50.5 PK	74.00	-23.50	1.00H	258	55.33	25.20	4.86	34.90	4.84
2	*2413.00	103.2 PK	-	-	1.68H	354	71.00	27.11	5.10	0.00	-32.21
3	*2413.00	95.2 AV	-	-	1.68H	354	63.00	27.11	5.10	0.00	-32.21
4	4075.40	54.4 PK	74.00	-19.60	2.58H	53	52.00	30.13	6.78	34.52	-2.39.
5	4075.40	46.5 AV	54.00	-7.50	2.58H	53	44.10	30.13	6.78	34.52	-2.39
6	4824.00	50.2 PK	74.00	-23.80	1.35H	329	46.20	31.43	7.23	34.63	-4.02

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	2038.00	49.1 PK	74.00	-24.90	1.79V	331	53.97	25.20	4.86	34.90	4.84
2	*2413.00	100.4 PK	-	-	1.14V	109	68.21	27.11	5.10	0.00	-32.21
3	*2413.00	93.6 AV	-	-	1.14V	109	61.40	27.11	5.10	0.00	-32.21
4	4075.40	54.4 PK	74.00	-19.60	1.67V	330	52.00	30.13	6.78	34.52	-2.39
5	4075.40	46.4 AV	54.00	-7.60	1.67V	330	44.00	30.13	6.78	34.52	-2.39
6	4824.50	50.0 PK	74.00	-24.00	1.36V	80	46.00	31.43	7.23	34.63	-4.03

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
   (Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. " * " : Fundamental frequency
5. The other emission levels were very low against the limit.

EUT	WLAN Detached PCMCIA Card	**MODEL**	LM-WP210
MODE	Channel 6	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70 % RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	2062.80	49.5 PK	74.00	-24.50	2.42H	61	54.00	25.41	4.96	34.90	4.53
2	*2437.90	105.4 PK	-	-	1.58H	360	73.00	27.33	5.08	0.00	-32.40
3	*2437.90	98.1 AV	-	-	1.58H	360	65.70	27.33	5.08	0.00	-32.40
4	4126.00	51.5 PK	74.00	-22.50	1.42H	100	49.00	30.32	6.70	34.56	-2.46
5	4874.20	51.7 PK	74.00	-22.30	1.31H	315	47.60	31.47	7.21	34.63	-4.05

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	2062.70	48.9 PK	74.00	-25.10	1.16V	11	53.48	25.41	4.96	34.90	4.53
2	*2438.10	99.6 PK	-	-	2.23V	308	67.20	27.33	5.08	0.00	-32.40
3	*2438.10	91.4 AV	-	-	2.23V	308	59.00	27.33	5.08	0.00	-32.40
4	4126.00	54.9 PK	74.00	-19.10	1.96V	342	52.40	30.32	6.70	34.56	-2.46.
5	4126.00	44.9 AV	54.00	-9.10	1.96V	342	42.40	30.32	6.70	34.56	-2.46
6	4874.30	50.3 PK	74.00	-23.70	1.52V	59	46.20	31.47	7.21	34.63	-4.06

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
   (Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. " * " : Fundamental frequency
5. The other emission levels were very low against the limit.

EUT	WLAN Detached PCMCIA Card	**MODEL**	LM-WP210
MODE	Channel 11	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70 % RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M											
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	2087.60	47.5 PK	74.00	-26.50	1.98H	278	51.78	25.62	5.02	34.90	4.26
2	*2463.00	104.8 PK	-	-	1.76H	62	72.35	27.33	5.08	0.00	-32.40
3	*2463.00	95.5 AV	-	-	1.76H	62	63.10	27.33	5.08	0.00	-32.40
4	2483.50	56.4 PK	74.00	-17.60	1.45H	8	58.71	27.54	5.06	34.90	2.31.
5	2483.50	45.9 AV	54.00	-8.10	1.45H	8	48.20	27.54	5.06	34.90	2.31
6	4175.40	54.6 PK	74.00	-19.40	1.49H	324	52.10	30.41	6.68	34.58	-2.51
7	4175.40	49.5 AV	54.00	-4.50	1.49H	324	47.00	30.41	6.68	34.58	-2.51
8	4924.10	49.9 PK	74.00	-24.10	1.35H	327	45.80	31.51	7.21	34.62	-4.10

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M											
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	2088.00	48.5 PK	74.00	-25.50	2.13V	13	52.75	25.62	5.02	34.90	4.26
2	*2463.00	101.0 PK	-	-	1.12V	42	68.61	27.33	5.08	0.00	-32.41
3	*2463.00	92.8 AV	-	-	1.12V	42	60.40	27.33	5.08	0.00	-32.41
4	2483.70	52.7 PK	74.00	-21.30	1.12V	352	55.03	27.54	5.06	34.90	2.31
5	4175.00	55.2 PK	74.00	-18.80	1.98V	1	52.70	30.41	6.68	34.58	-2.51
6	4175.00	48.5 AV	54.00	-5.50	1.98V	1	46.00	30.41	6.68	34.58	-2.51
7	4924.70	49.9 PK	74.00	-24.10	1.41V	61	45.80	31.51	7.21	34.62	-4.10

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
   (Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. " * " : Fundamental frequency
5. The other emission levels were very low against the limit.

4.2.7 TEST RESULTS (B)

EUT	WLAN Detached PCMCIA Card	**MODEL**	LM-WP210
MODE	Channel 11	**FREQUENCY RANGE**	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	30 deg. C, 70 % RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	132.00	31.3 QP	43.50	-12.20	2.55H	300	19.00	11.16	1.13	0.00	-12.29
2	176.00	32.4 QP	43.50	-11.10	2.29H	266	22.00	9.08	1.33	0.00	-10.42
3	220.00	31.6 QP	46.00	-14.40	1.74H	46	20.00	10.12	1.51	0.00	-11.64
4	264.00	36.4 QP	46.00	-9.60	1.00H	302	21.80	12.89	1.70	0.00	-14.59
5	308.00	32.7 QP	46.00	-13.30	1.16H	296	17.40	13.38	1.91	0.00	-15.29
6	396.40	34.6 QP	46.00	-11.40	1.20H	56	16.40	15.96	2.22	0.00	-18.19
7	528.00	35.9 QP	46.00	-10.10	2.52H	95	15.70	17.62	2.60	0.00	-20.23
8	747.90	34.5 QP	46.00	-11.50	1.85H	332	11.10	20.14	3.26	0.00	-23.40
9	792.40	34.4 QP	46.00	-11.60	1.35H	315	10.50	20.60	3.31	0.00	-23.91

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	132.40	31.3 QP	43.50	-12.20	2.04V	66	19.00	11.16	1.13	0.00	-12.29
2	264.70	32.8 QP	46.00	-13.20	1.97V	358	18.40	12.75	1.70	0.00	-14.45
3	308.00	31.0 QP	46.00	-15.00	2.36V	299	15.70	13.38	1.91	0.00	-15.29
4	396.00	34.4 QP	46.00	-11.60	1.47V	54	16.20	15.96	2.22	0.00	-18.19
5	484.06	35.1 QP	46.00	-10.90	1.39V	286	15.70	16.96	2.47	0.00	-19.43
6	528.02	35.0 QP	46.00	-11.00	1.59V	78	14.80	17.62	2.60	0.00	-20.22
7	748.10	33.5 QP	46.00	-12.50	1.51V	330	10.10	20.14	3.26	0.00	-23.40
8	792.40	33.3 QP	46.00	-12.70	1.37V	274	9.40	20.60	3.31	0.00	-23.91

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
   (Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.

EUT	WLAN Detached PCMCIA Card	**MODEL**	LM-WP210
MODE	Channel 1	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70 % RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	2037.90	49.0 PK	74.00	-25.00	1.32H	357	53.84	25.20	4.86	34.90	4.84
2	*2412.90	99.9 PK	-	-	1.65H	33	67.70	27.11	5.10	0.00	-32.22
3	*2412.90	91.4 AV	-	-	1.65H	33	59.20	27.11	5.10	0.00	-32.22
4	4074.70	52.4 PK	74.00	-21.60	1.37H	269	50.00	30.13	6.78	34.52	-2.39
5	4824.60	50.0 PK	74.00	-24.00	1.55H	263	46.00	31.43	7.23	34.63	-4.02

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	2037.80	49.6 PK	74.00	-24.40	1.01V	5	54.39	25.20	4.86	34.90	4.84
2	*2412.50	108.1 PK	-	-	1.86V	313	75.88	27.11	5.10	0.00	-32.21
3	*2412.50	98.3 AV	-	-	1.86V	313	66.10	27.11	5.10	0.00	-32.21
4	4075.50	55.3 PK	74.00	-19.70	1.57V	351	52.92	30.13	6.78	34.52	-2.39
5	4075.50	47.0 AV	54.00	-7.00	1.57V	351	44.60	30.13	6.78	34.52	-2.39
6	4824.20	50.0 PK	74.00	-24.00	1.32V	292	46.00	31.43	7.23	34.63	-4.02

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
   (Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. " * " : Fundamental frequency
5. The other emission levels were very low against the limit.

EUT	WLAN Detached PCMCIA Card	**MODEL**	LM-WP210
MODE	Channel 6	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70 % RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	2062.70	50.2 PK	74.00	-23.80	1.00H	356	54.70	25.41	4.96	34.90	4.53
2	*2438.00	102.1 PK	-	-	1.45H	37	69.67	27.33	5.08	0.00	-32.41
3	*2438.00	92.6 AV	-	-	1.45H	37	60.20	27.33	5.08	0.00	-32.41
4	4125.00	54.5 PK	74.00	-19.50	1.49H	305	52.00	30.32	6.70	34.56	-2.46
5	4125.00	45.5 AV	54.00	-8.50	1.49H	305	43.00	30.32	6.70	34.56	-2.46
6	4874.30	51.1 PK	74.00	-22.90	1.56H	305	47.00	31.47	7.21	34.63	-4.05

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	2063.00	49.1 PK	74.00	-24.90	1.48V	39	53.61	25.41	4.96	34.90	4.53
2	*2437.50	107.4 PK	-	-	1.83V	178	75.00	27.33	5.08	0.00	-32.40
3	*2437.50	100.5 AV	-	-	1.83V	178	68.10	27.33	5.08	0.00	-32.40
4	4125.10	54.5 PK	74.00	-19.50	1.58V	312	52.03	30.32	6.70	34.56	-2.46.
5	4125.10	47.5 AV	54.00	-6.50	1.58V	312	45.00	30.32	6.70	34.56	-2.46
6	4874.30	50.1 PK	74.00	-23.90	1.46V	81	46.00	31.47	7.21	34.63	-4.06

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
   (Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. " * " : Fundamental frequency
5. The other emission levels were very low against the limit.

EUT	WLAN Detached PCMCIA Card	**MODEL**	LM-WP210
MODE	Channel 11	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70 % RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M											
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	2087.80	49.3 PK	74.00	-24.70	1.20H	4	53.56	25.62	5.02	34.90	4.26
2	*2463.00	100.9 PK	-	-	1.16H	353	68.46	27.33	5.08	0.00	-32.40
3	*2463.00	93.4 AV	-	-	1.16H	353	61.00	27.33	5.08	0.00	-32.40
4	2483.50	51.3 PK	74.00	-22.70	1.47H	322	53.56	27.54	5.06	34.90	2.31
5	4175.10	54.5 PK	74.00	-19.50	1.91H	5	52.00	30.41	6.68	34.58	-2.51.
6	4175.10	46.5 AV	54.00	-7.50	1.91H	5	44.00	30.41	6.68	34.58	-2.51
7	4924.30	50.8 PK	74.00	-23.20	1.40H	57	46.70	31.51	7.21	34.62	-4.10

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M											
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	2087.80	50.1 PK	74.00	-23.90	1.60V	322	54.34	25.62	5.02	34.90	4.26
2	*2463.10	107.4 PK	-	-	1.65V	260	75.00	27.33	5.08	0.00	-32.41
3	*2463.10	98.6 AV	-	-	1.65V	260	66.20	27.33	5.08	0.00	-32.41
4	2483.70	55.7 PK	74.00	-18.30	1.75V	320	58.00	27.54	5.06	34.90	2.31.
5	2483.70	46.0 AV	54.00	-8.00	1.75V	320	48.30	27.54	5.06	34.90	2.31
6	4176.00	53.4 PK	74.00	-20.60	1.57V	342	50.89	30.41	6.68	34.58	-2.51
7	4924.00	50.3 PK	74.00	-23.70	1.39V	159	46.20	31.51	7.21	34.62	-4.10

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
   (Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. " * " : Fundamental frequency
5. The other emission levels were very low against the limit.

4.2.8 TEST RESULTS (C)

EUT	WLAN Detached PCMCIA Card	**MODEL**	LM-WP210
MODE	Channel 11	**FREQUENCY RANGE**	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	30 deg. C, 70 % RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M											
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	132.01	34.3 QP	43.50	-9.20	2.13H	284	22.00	11.16	1.13	0.00	-12.29
2	176.00	40.7 QP	43.50	-2.80	2.42H	202	30.32	9.08	1.33	0.00	-10.42
3	220.00	30.6 QP	46.00	-15.40	2.15H	327	19.00	10.12	1.51	0.00	-11.63
4	264.00	39.6 QP	46.00	-6.40	1.43H	357	25.00	12.89	1.70	0.00	-14.58
5	308.00	33.3 QP	46.00	-12.70	1.16H	304	18.00	13.38	1.91	0.00	-15.29
6	352.00	33.4 QP	46.00	-12.60	1.20H	28	17.00	14.31	2.05	0.00	-16.37
7	396.40	36.4 QP	46.00	-9.60	1.17H	344	18.20	15.96	2.22	0.00	-18.19
8	528.40	34.3 QP	46.00	-11.70	1.58H	9	14.00	17.66	2.61	0.00	-20.27
9	748.10	35.4 QP	46.00	-10.60	1.44H	36	12.00	20.14	3.26	0.00	-23.41
10	792.40	34.9 QP	46.00	-11.10	1.29H	84	11.00	20.60	3.31	0.00	-23.92

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
   (Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.

EUT	WLAN Detached PCMCIA Card	**MODEL**	LM-WP210
MODE	Channel 11	**FREQUENCY RANGE**	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	30 deg. C, 70 % RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M											
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	132.40	32.3 QP	43.50	-11.20	1.25V	308	20.00	11.16	1.13	0.00	-12.29
2	176.40	32.4 QP	43.50	-11.10	1.12V	246	22.00	9.08	1.33	0.00	-10.42
3	220.00	34.6 QP	46.00	-11.40	1.37V	125	23.00	10.12	1.51	0.00	-11.63
4	264.00	35.6 QP	46.00	-10.40	1.78V	55	21.00	12.89	1.70	0.00	-14.58
5	308.00	34.3 QP	46.00	-11.70	1.06V	321	19.00	13.38	1.91	0.00	-15.29
6	396.00	34.9 QP	46.00	-11.10	1.39V	239	16.70	15.96	2.22	0.00	-18.18
7	528.00	36.2 QP	46.00	-9.80	1.10V	19	16.00	17.62	2.60	0.00	-20.22
8	748.10	34.4 QP	46.00	-11.60	1.06V	47	11.00	20.14	3.26	0.00	-23.41
9	792.40	34.4 QP	46.00	-11.60	1.02V	260	10.50	20.60	3.31	0.00	-23.91

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
   (Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.

EUT	WLAN Detached PCMCIA Card	**MODEL**	LM-WP210
MODE	Channel 1	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70 % RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	2038.00	47.2 PK	74.00	-26.80	1.44H	57	52.00	25.20	4.86	34.90	4.84
2	*2413.10	103.4 PK	-	-	1.02H	355	71.23	27.11	5.10	0.00	-32.21
3	*2413.10	97.0 AV	-	-	1.02H	355	64.80	27.11	5.10	0.00	-32.21
4	4075.80	51.4 PK	74.00	-22.60	1.63H	278	49.00	30.13	6.78	34.52	-2.39
5	4824.40	51.0 PK	74.00	-23.00	1.32H	305	47.00	31.43	7.23	34.63	-4.02

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	2037.70	47.3 PK	74.00	-26.70	1.92V	124	52.13	25.20	4.86	34.90	4.84
2	*2412.90	104.8 PK	-	-	2.29V	358	72.60	27.11	5.10	0.00	-32.21
3	*2412.90	97.1 AV	-	-	2.29V	358	64.93	27.11	5.10	0.00	-32.21
4	4075.50	53.6 PK	74.00	-20.40	1.66V	15	51.19	30.13	6.78	34.52	-2.39
5	4075.50	45.1 AV	54.00	-8.90	1.66V	15	42.70	30.13	6.78	34.52	-2.39
6	4824.70	50.5 PK	74.00	-23.50	1.36V	52	46.50	31.43	7.23	34.63	-4.02

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
   (Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. " * " : Fundamental frequency
5. The other emission levels were very low against the limit.

EUT	WLAN Detached PCMCIA Card	**MODEL**	LM-WP210
MODE	Channel 6	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70 % RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	2062.70	46.8 PK	74.00	-27.20	1.00H	288	51.30	25.41	4.96	34.90	4.53
2	*2438.10	100.1 PK	-	-	1.86H	65	67.70	27.33	5.08	0.00	-32.41
3	*2438.10	92.4 AV	-	-	1.86H	65	60.00	27.33	5.08	0.00	-32.41
4	4125.60	51.5 PK	74.00	-22.50	2.02H	310	49.00	30.32	6.70	34.56	-2.46
5	4874.30	51.1 PK	74.00	-22.90	1.51H	299	47.00	31.47	7.21	34.63	-4.05

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	2062.90	47.5 PK	74.00	-26.50	1.00V	18	52.00	25.41	4.96	34.90	4.53
2	*2437.60	108.2 PK	-	-	1.93V	354	75.80	27.33	5.08	0.00	-32.40
3	*2437.60	99.4 AV	-	-	1.93V	354	67.00	27.33	5.08	0.00	-32.40
4	4126.00	54.4 PK	74.00	-19.60	1.77V	13	51.93	30.32	6.70	34.56	-2.46
5	4126.00	46.0 AV	54.00	-8.00	1.77V	13	43.50	30.32	6.70	34.56	-2.46
6	4874.10	51.1 PK	74.00	-22.90	1.56V	77	47.00	31.47	7.21	34.63	-4.05

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
   (Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. " * " : Fundamental frequency
5. The other emission levels were very low against the limit.

EUT	WLAN Detached PCMCIA Card	**MODEL**	LM-WP210
MODE	Channel 11	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70 % RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	2087.70	46.7 PK	74.00	-27.30	1.00H	352	50.99	25.62	5.02	34.90	4.26
2	*2463.00	99.2 PK	-	-	1.88H	28	66.80	27.33	5.08	0.00	-32.40
3	*2463.00	90.8 AV	-	-	1.88H	28	58.38	27.33	5.08	0.00	-32.40
4	2483.70	49.3 PK	74.00	-24.70	1.44H	45	51.65	27.54	5.06	34.90	2.32
5	4175.40	52.2 PK	74.00	-21.80	1.60H	295	49.72	30.41	6.68	34.58	-2.51
6	4924.30	50.1 PK	74.00	-23.90	1.27H	155	46.00	31.51	7.21	34.62	-4.10

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	2087.80	47.6 PK	74.00	-26.40	1.22V	9	51.84	25.62	5.02	34.90	4.26
2	*2463.00	106.2 PK	-	-	1.89V	84	73.80	27.33	5.08	0.00	-32.40
3	*2463.00	98.9 AV	-	-	1.89V	84	66.48	27.33	5.08	0.00	-32.40
4	2483.50	57.2 PK	74.00	-16.80	1.22V	3	59.54	27.54	5.06	34.90	2.31.
5	2483.50	45.1 AV	54.00	-8.90	1.22V	3	47.36	27.54	5.06	34.90	2.31
6	4175.50	52.7 PK	74.00	-21.30	2.38V	357	50.15	30.41	6.68	34.58	-2.51
7	4924.70	50.8 PK	74.00	-23.20	1.67V	283	46.70	31.51	7.21	34.62	-4.10

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
   (Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. " * " : Fundamental frequency
5. The other emission levels were very low against the limit.

4.3 6DB BANDWIDTH MEASUREMENT

4.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK30	100049	July 17, 2002

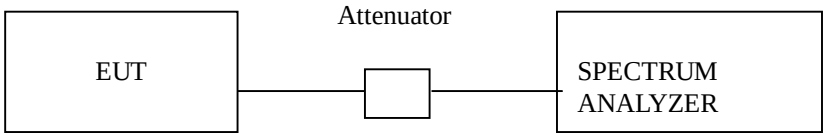
NOTE:

1. The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.3.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100 kHz RBW and 100 kHz VBW. The 6 dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6 dB.

4.3.4 TEST SETUP



For the actual test configuration, please refer to the related Item – Photographs of the Test Configuration.

4.3.5 EUT OPERATING CONDITIONS

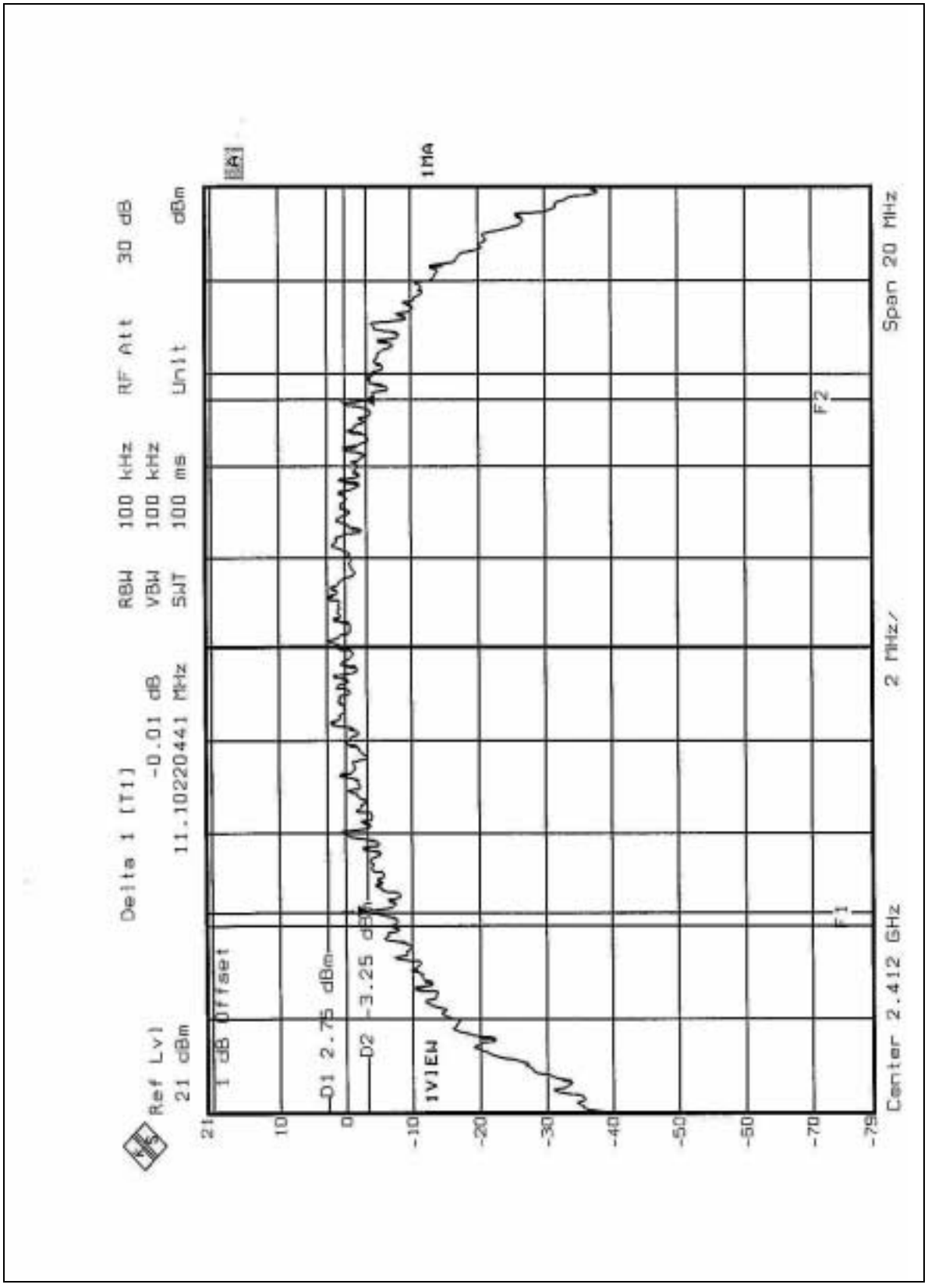
The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.3.6 TEST RESULTS

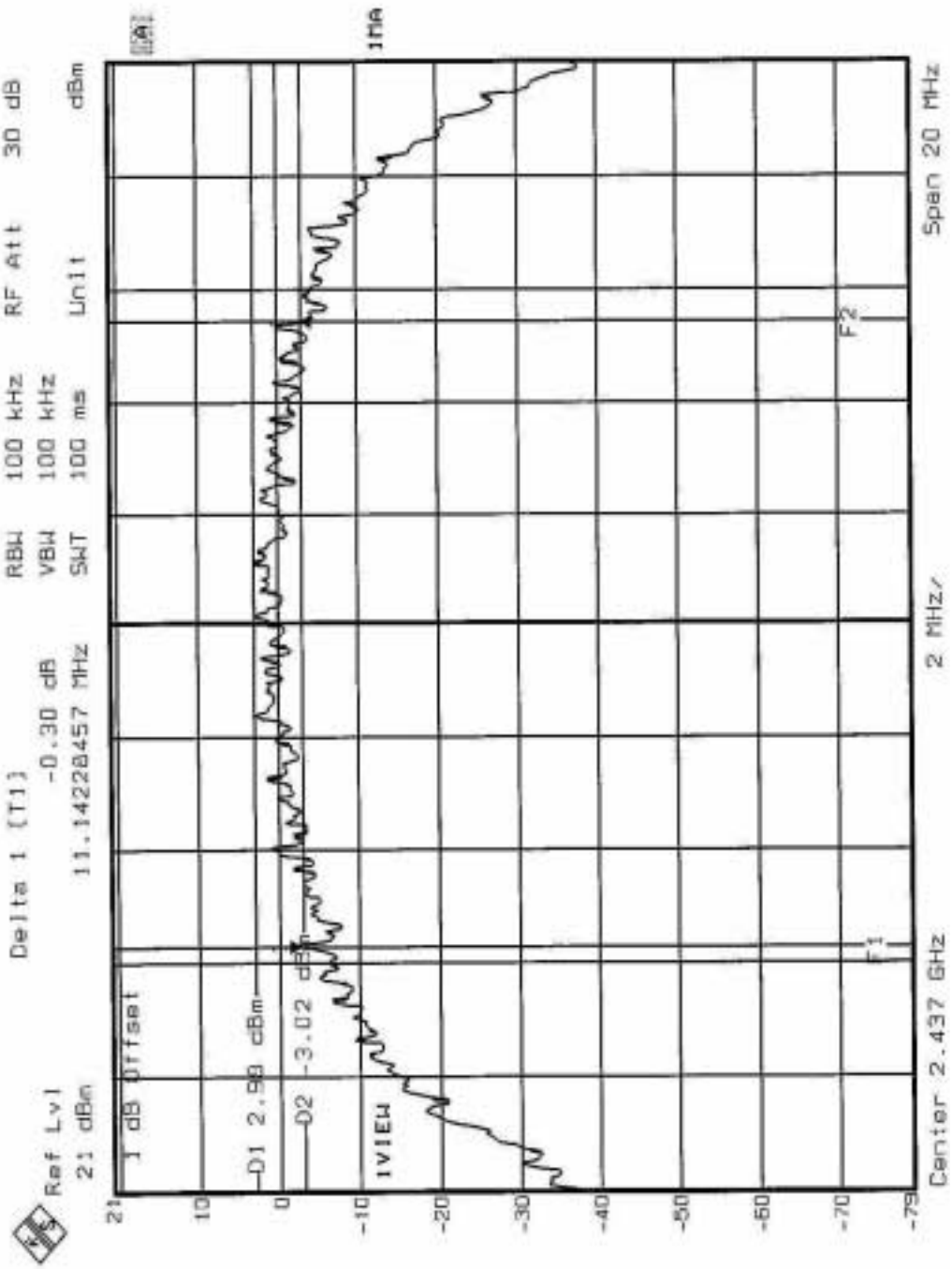
EUT	WLAN Detached PCMCIA Card	**MODEL**	LM-WP210
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	25 deg. C, 70%RH, 1005 hPa
TESTED BY: James Lee			

CHANNEL	CHANNEL FREQUENCY (MHz)	6 dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	11.10	0.5	PASS
6	2437	11.14	0.5	PASS
11	2462	11.10	0.5	PASS

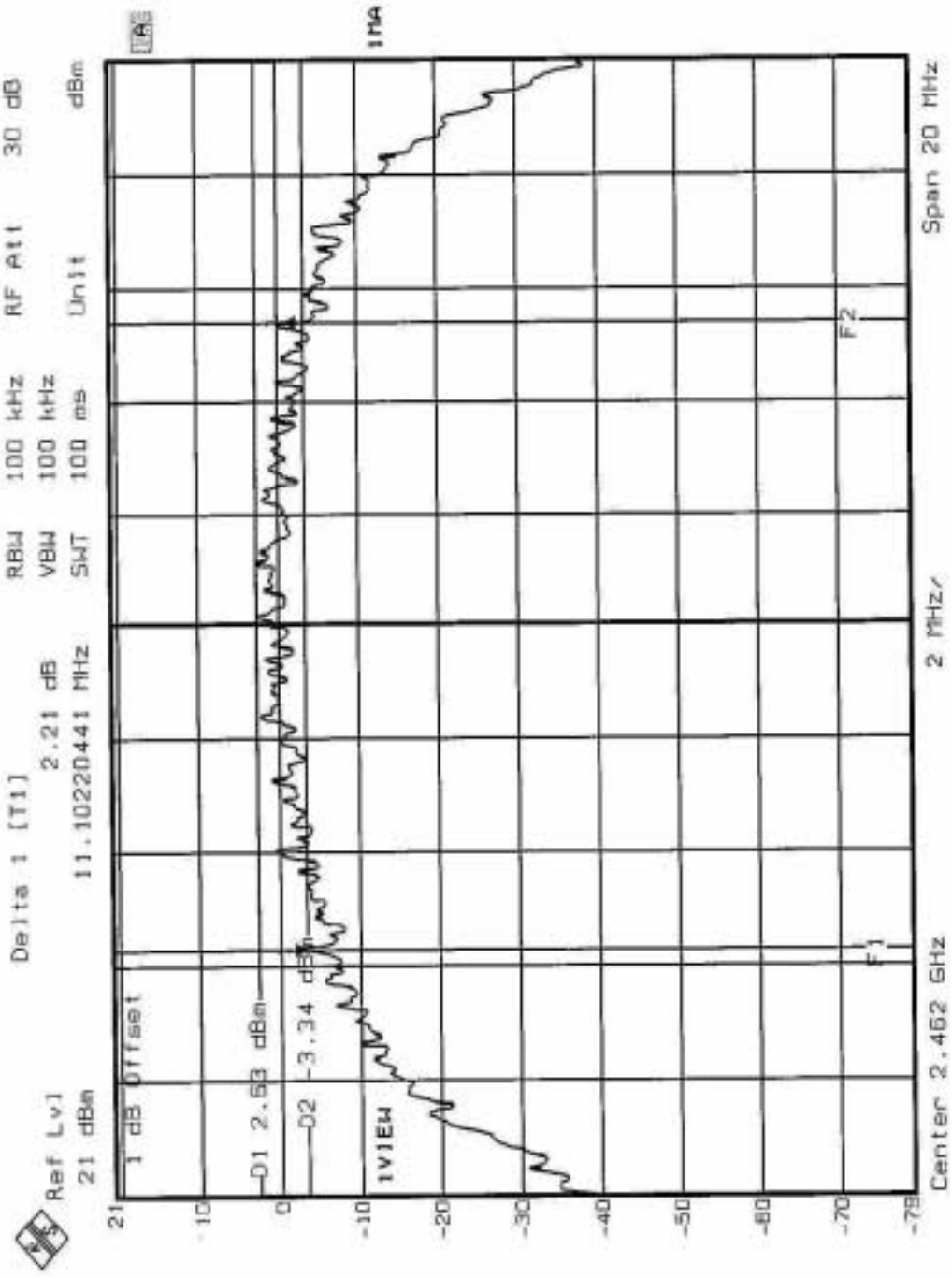
CH1


Ref Lvl
21 dBm
1 dB Offset
Delta 1 [T1]
-0.01 dB
11.10220441 MHz
RBW 100 kHz
VBW 100 kHz
SWT 100 ms
RF Att 30 dB
Unit dBm
D1 2.75 dBm
D2 -3.25 dB
1VIEW
1MA
A1
F1
F2
Center 2.412 GHz
2 MHz/
Span 20 MHz
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79

CH6


Ref Lvl
21 dBm
1 dB Offset
Delta 1 [T1]
-0.30 dB
11.14228457 MHz
RBW 100 kHz
VBW 100 kHz
SWT 100 ms
RF Att 30 dB
Unit dBm
D1 2.98 dBm
D2 -3.02 dB
1MA
VIEW
F1
F2
Center 2.437 GHz
2 MHz/
Span 20 MHz

CH11


Ref Lvl
21 dBm
1 dB Offset
Delta 1 [T1]
2.21 dB
11.10220441 MHz
RBW 100 kHz
VBW 100 kHz
SWT 100 ms
RF Att 30 dB
Unit dBm
D1 2.63 dBm
D2 -3.34 dB
1VIEW
1MA
F1
F2
Center 2.462 GHz
2 MHz/
Span 20 MHz
21
11
0
-10
-20
-30
-40
-50
-60
-70
-79

4.4 MAXIMUM PEAK OUTPUT POWER

4.4.1 LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm.

4.4.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK30	100049	July 17, 2002

NOTE:

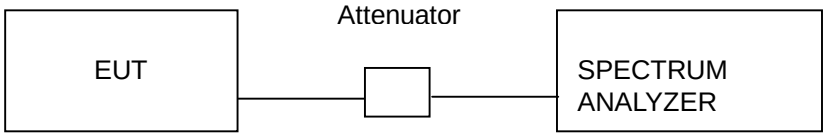
1. The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.4.3 TEST PROCEDURES

a. The transmitter output was connected to the spectrum analyzer through an attenuator.
b. The center frequency of the spectrum analyzer was set to the fundamental frequency and using 3 MHz RBW and 3 MHz VBW.
c. The span of the spectrum analyzer should be larger than 6dB BandWidth plus 10MHz.
d. Used Peak Search to read the peak power after Maximum Hold function was activated.
e. Shifted the marker to +/- 3MHz and +/-6MHz, and recorded the reading.
f. The Maximum Peak Output Power was the linear summation of the 5 readings in (4) and (5).

NOTE: This measurement is the total power of 15MHz bandwidth which is far more wider than 6dB bandwidth.

4.4.4 TEST SETUP



4.4.5 EUT OPERATING CONDITIONS

Same as Item 4.3.5

4.4.6 TEST RESULTS

EUT	WLAN Detached PCMCIA Card	**MODEL**	LM-WP210
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	25 deg. C, 70%RH, 1005 hPa
TESTED BY: James Lee			

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	16.10	30	PASS
6	2437	16.77	30	PASS
11	2462	16.45	30	PASS

4.5 POWER SPECTRAL DENSITY MEASUREMENT

4.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

4.5.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK30	100049	July 17, 2002

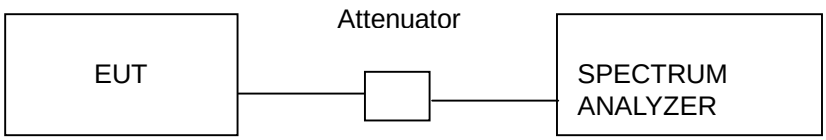
NOTE:

1. The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.5.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3 kHz RBW and 30 kHz VBW, set sweep time=span/3kHz. The power spectral density was measured and recorded.
The sweep time is allowed to be longer than span/3KHz for a full response of the mixer in the spectrum analyzer.

4.5.4 TEST SETUP



4.5.5 EUT OPERATING CONDITIONS

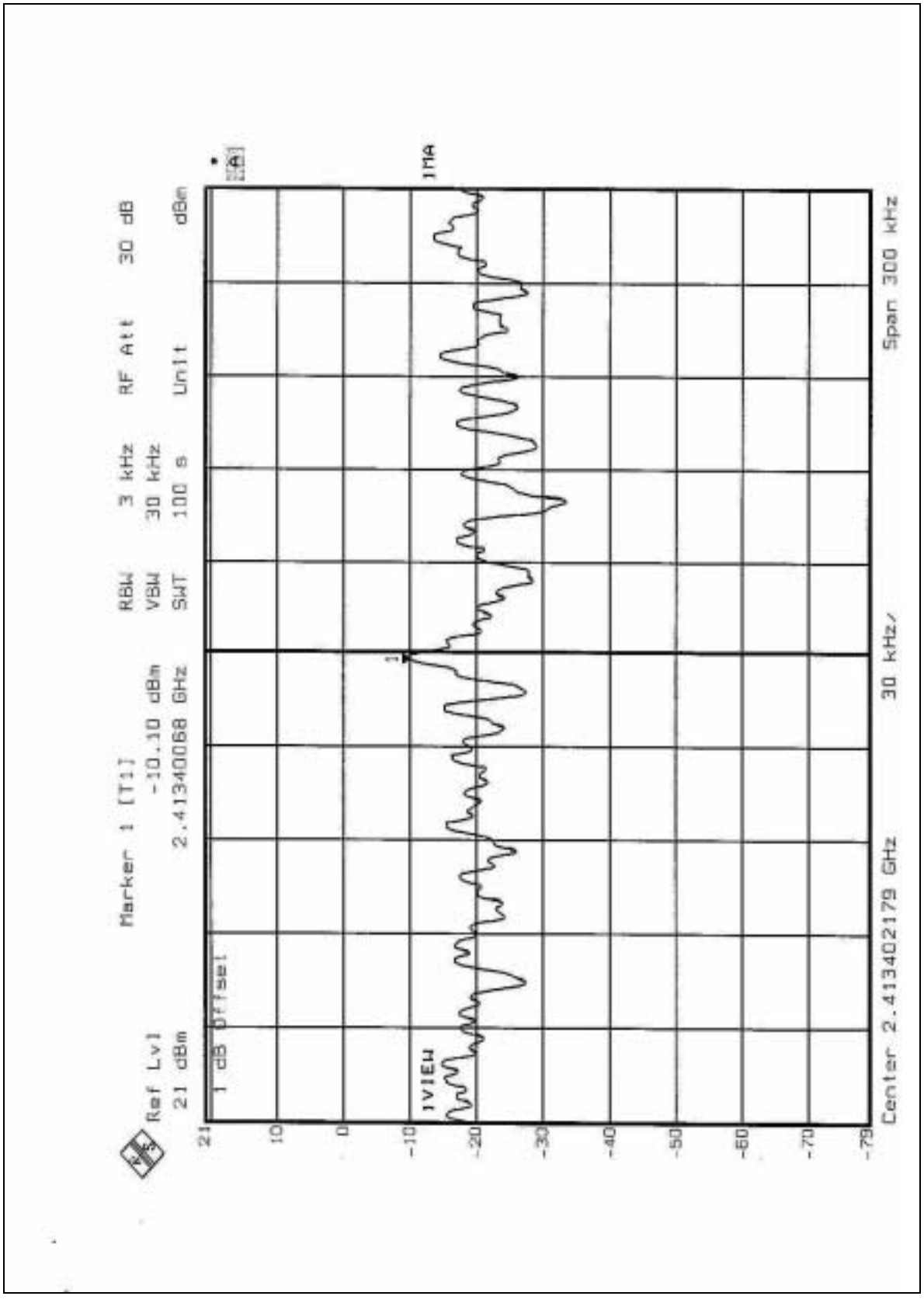
Same as 4.3.5

4.5.6 TEST RESULTS

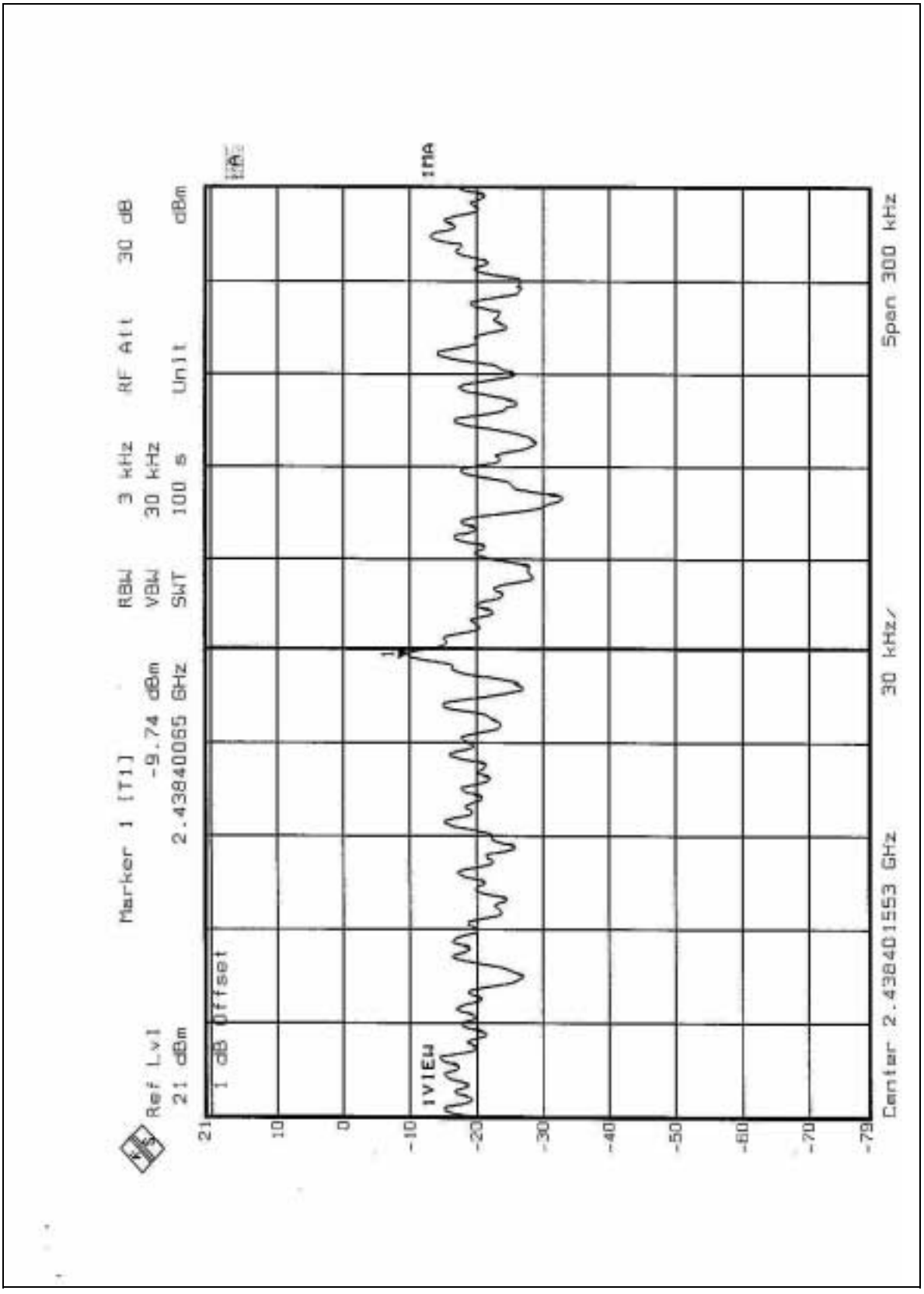
EUT	WLAN Detached PCMCIA Card	**MODEL**	LM-WP210
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	25 deg. C, 70%RH, 1005 hPa
TESTED BY: James Lee			

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 KHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-10.10	8	PASS
6	2437	-9.74	8	PASS
11	2462	-10.39	8	PASS

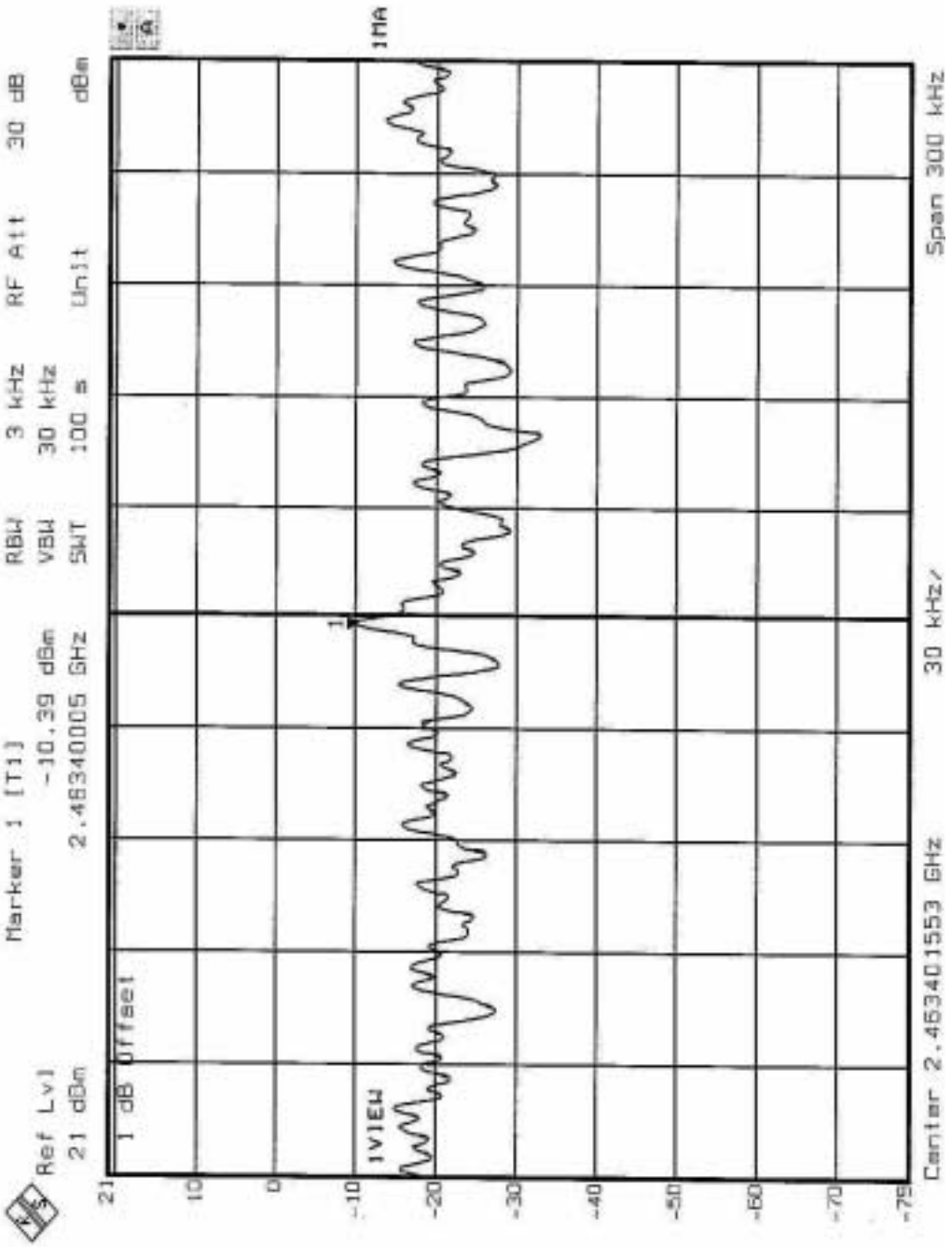
CH1


Ref Lvl
21 dBm
1 dB Offset
Marker 1 [T1]
-10.10 dBm
2.41340068 GHz
RBW 3 kHz
VBW 30 kHz
SWT 100 s
RF Att 30 dB
Unit dBm
1MA
1VIEW
Center 2.413402179 GHz
30 kHz/
Span 300 kHz

CH6


Ref Lvl
21 dBm
1 dB Offset
Marker 1 [T1]
-9.74 dBm
2.43840065 GHz
RBW 3 kHz
VBW 30 kHz
SWT 100 s
RF Att 30 dB
Unit dBm
1VIEW
Center 2.438401553 GHz
30 kHz/
Span 300 kHz
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79

CH11


Ref Lvl
21 dBm
1 dB Offset
Marker 1 [T1]
-10.39 dBm
2.46340005 GHz
RBW 3 kHz
VBW 30 kHz
SWT 100 s
RF Att 30 dB
Unit dBm
1MA
1VIEW
Center 2.46340155 GHz
30 kHz/
Span 300 kHz

4.6 BAND EDGES MEASUREMENT

4.6.1 LIMITS OF BAND EDGES MEASUREMENT

Below –20dB of the highest emission level of operating band (in 100KHz Resolution Bandwidth).

4.6.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK30	100049	July 17, 2002

NOTE:

1. The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.6.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer via a low lose cable. Set both RBW and VBW of spectrum analyzer to 100 kHz with suitable frequency span including 100 kHz bandwidth from band edge. The band edges was measured and recorded.

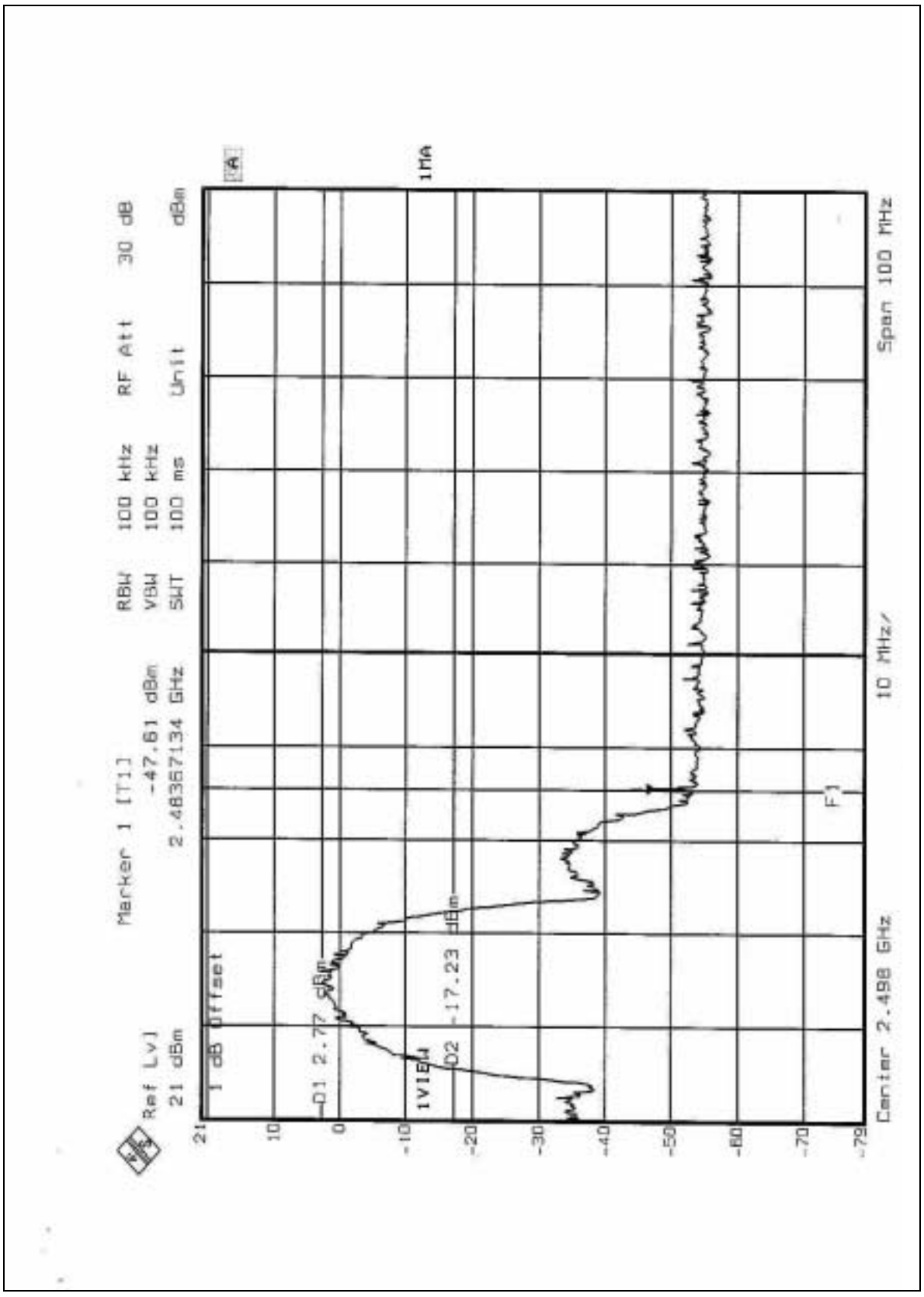
4.6.4 EUT OPERATING CONDITION

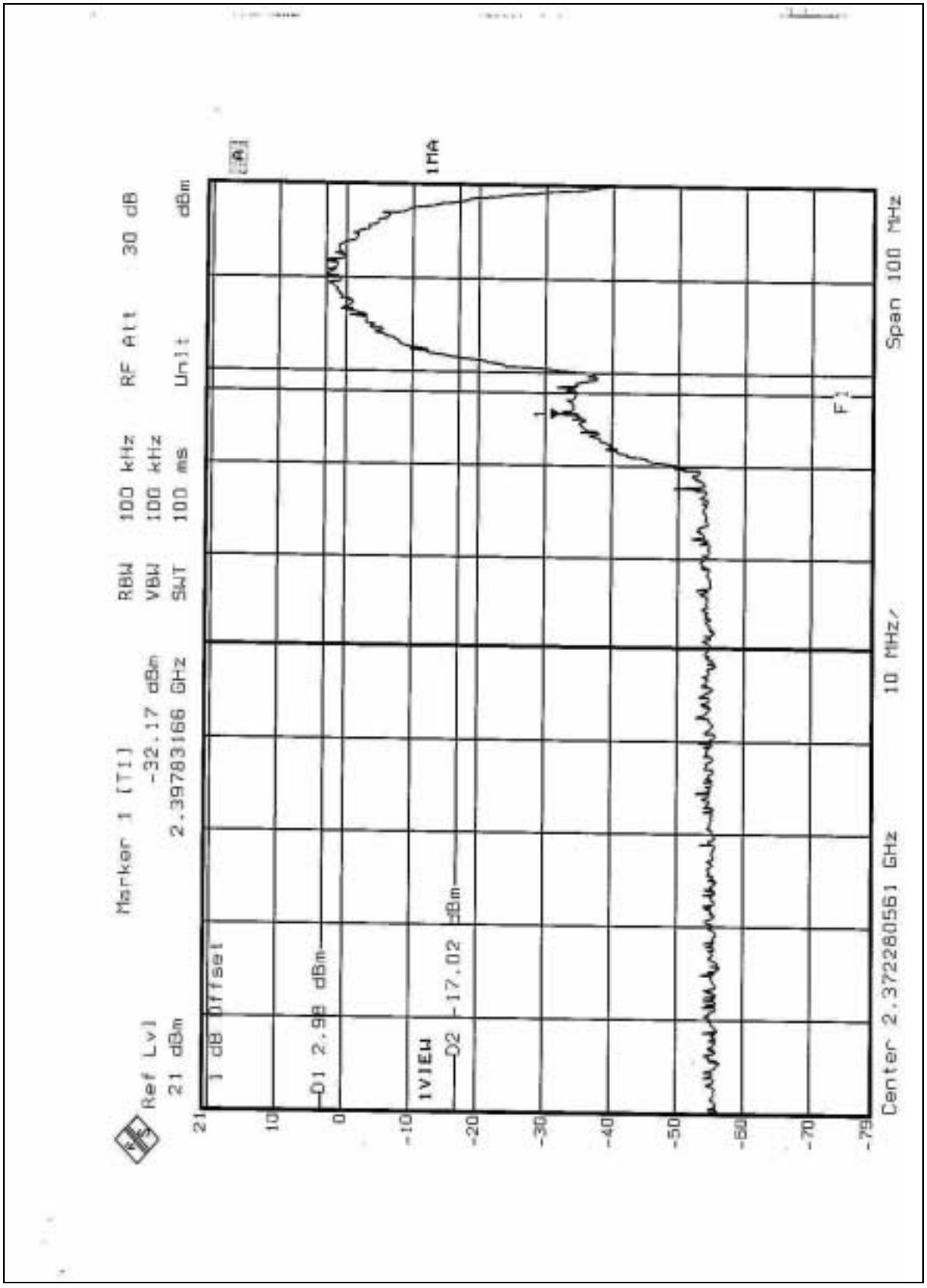
Same as Item 4.3.5

4.6.5 TEST RESULTS

The spectrum plots are attached on the following 2 pages. D2 line indicates the highest level, D1 line indicates the 20dB offset below D2. It shows compliance with the requirement in part 15.247(C).

NOTE: The band edge emission plot on the following 2 pages shows 50.38dB delta between carrier maximum power and local maximum emission in restrict band (2.4837GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.8 (Page 46) is 98.9dBuV/m, so the maximum field strength in restrict band is 98.9-50.38=48.52dBuV/m which is under 54 dBuV/m limit.


Ref Lvl
21 dBm
1 dB Offset
Marker 1 [T1]
-47.61 dBm
2.4836713 4 GHz
RBW 100 kHz
VBW 100 kHz
SWT 100 ms
RF Att 30 dB
Unit dBm
1MA
D1 2.77 dBm
D2 -17.23 dBm
F1
Center 2.498 GHz
10 MHz/
Span 100 MHz


Ref Lvl
21 dBm
1 dB Offset
Marker 1 [T1]
-32.17 dBm
2.39783166 GHz
RBW 100 kHz
VBW 100 kHz
SWT 100 ms
RF Att 30 dB
Unit dBm
1MA
D1 2.98 dBm
1VIEW
D2 -17.02 dBm
F1
Center 2.372280561 GHz
10 MHz/
Span 100 MHz

4.7 ANTENNA REQUIREMENT

4.7.1 STANDARD APPLICABLE

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.
And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

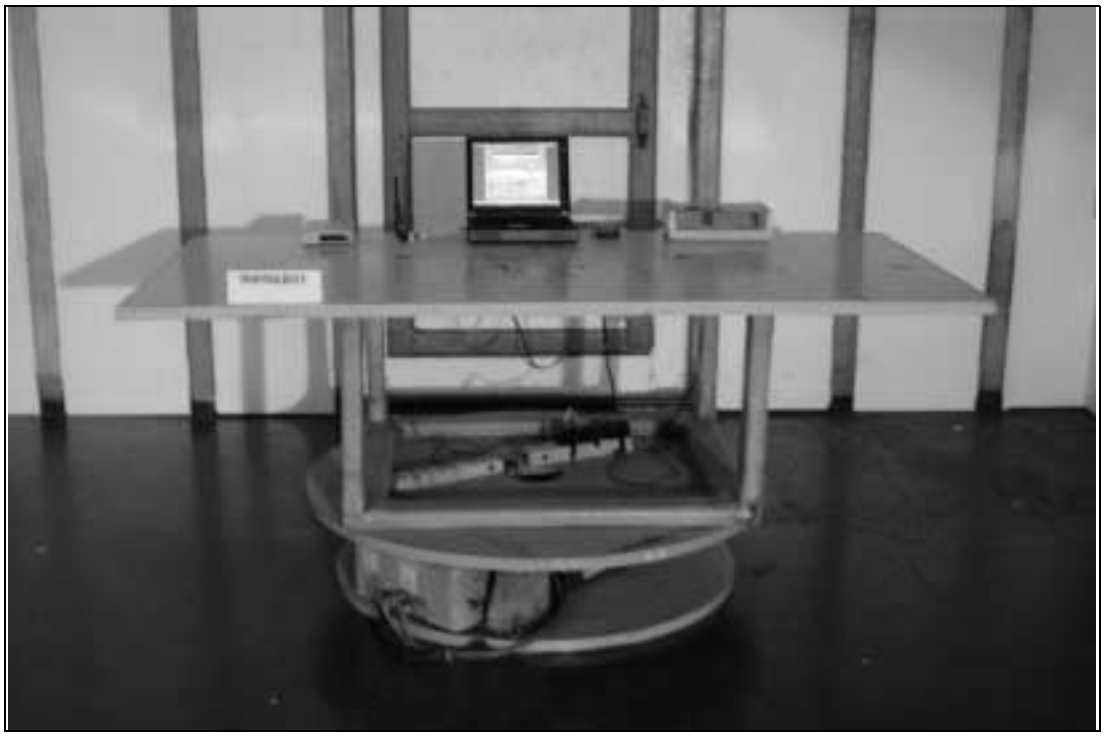
4.7.2 ANTENNA CONNECTED CONSTRUCTION

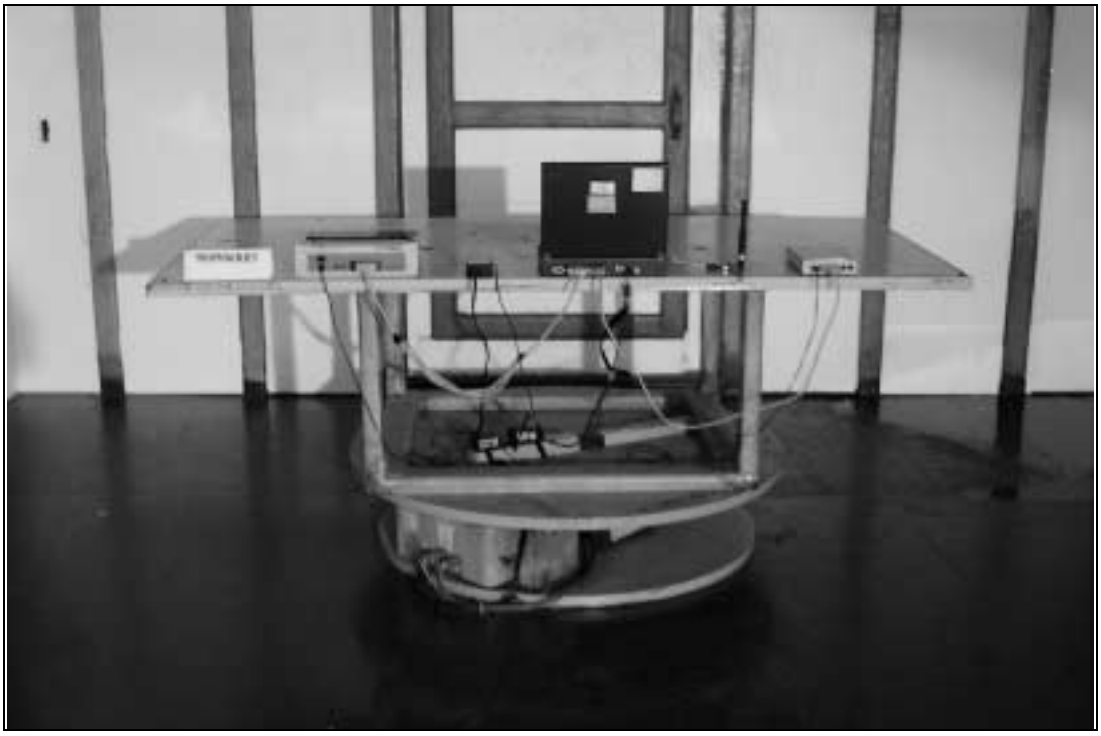
The antenna used in this product are dipole antenna and patch antenna. The antenna connector is MMCX. And the maximum Gain of these antennas is only 3dBi.

5 PHOTOGRAPHS OF THE TEST CONFIGURATION

CONDUCTED EMISSION TEST

RADIATED EMISSION TEST





6 INFORMATION ON THE TESTING LABORATORIES

We, ADT Corp., were founded in 1988 to provide our best service in EMC and Safety consultation. Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025, Guide 25 or EN 45001:

USA	FCC, NVLAP
Germany	TUV Rheinland
Japan	VCCI
New Zealand	MoC
Norway	NEMKO
R.O.C.	BSMI, DGT, CNLA

Copies of accreditation certificates of our laboratories obtained from approval agencies can be downloaded from our web site: www.adt.com.tw/index.5/phtml.

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The address and road map of all our labs can be found in our web site also.