FCC TEST REPORT

REPORT NO.: RF901024R05
MODEL NO.: WX-1590
WL-295
RECEIVED: Oct. 24, 2001
TESTED: Nov. 15 ~ Dec. 18. 2001

APPLICANT: GEMTEK TECHNOLOGY CO., LTD.

ADDRESS: No.1, Jen Ai Road, Hsinchu Industrial Park, Hukou, Hsinchu, Taiwan, R.O.C.

ISSUED BY: Advance Data Technology Corporation

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

0528
ILAC MRA

Lab Code: 200102-0

Table of Contents

1 CERTIFICATION

PRODUCT :	11Mbps Wireless LAN Access Point
BRAND NAME :	GemTek
MODEL NO. :	WX-1590
	WL-295
APPLICANT :	GEMTEK TECHNOLOGY CO., LTD.
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 Nov. 15, 2001 to Nov. 19, 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: James Lee, DATE: Dec. 19, 2001
James Lee

CHECKED BY: Demi Chen, DATE: Dec. 19, 2001
Demi Chen

APPROVED BY: Alan Lane, DATE: Dec. 19, 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 –5.11dBuV at 1.674MHz
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)	Radiated Emissions Limit: Table 15.209	PASS	Meet the requirement of limit Minimum passing margin is –4.80dBuV at 4176.0 MHz
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	11Mbps Wireless LAN Access Point
MODEL NO.	WX-1590, WL-295
POWER SUPPLY	5VDC from AC adapter
MODULATION TYPE	BPSK, QPSK, CCK
RADIO TECHNOLOGY	DSSS
TRANSFER RATE	1/2/5.5/11Mbps
FREQUENCY RANGE	2412MHz ~ 2462MHz
NUMBER OF CHANNEL	11
OUTPUT POWER	13.7dBm
ANTENNA TYPE	Dipole antenna
POWER CABLE	NA
I/O PORTS	RJ45 port
ASSOCIATED DEVICES	NA

NOTE:

1. The EUT is operated with the following power adapter.

Brand Name :	Delta
Model No. :	ADP-10SB REV: H
Input Power :	100-240V, 50-60Hz
Output Power :	5V, 2A

2. There are two models provided in this EUT. The difference has been stated on the following table:

Model Name :	WX-1590	WL-295
Outer Appearance :	Please refer to EUT Photos page 1	Please refer to EUT Photos page 8
Antenna Connector :	Reversed SMA antenna connector	No antenna connector

3. For a more detailed features description, please refer to the manufacturer's specifications or the 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. There are two models provided in this EUT. The test result (A) is for model: WX-1590, and the test result (B) is for model: WL-295.

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a 11Mbps Wireless LAN Access Point. 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, Canada RSS 210, New Zealand RFS 29

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 PC	DELL	PPX	99125	FCC DoC APPROVED
2	LAN CARD	D-Link	DU-E100	UR15001767	FCC DoC APPROVED

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA
2	NA

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	Dec. 2, 2002
* ROHDE & SCHWARZ 2-wire ISN	ENY22	837497/016	Dec. 2, 2002
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 equipments are used for the final measurement.

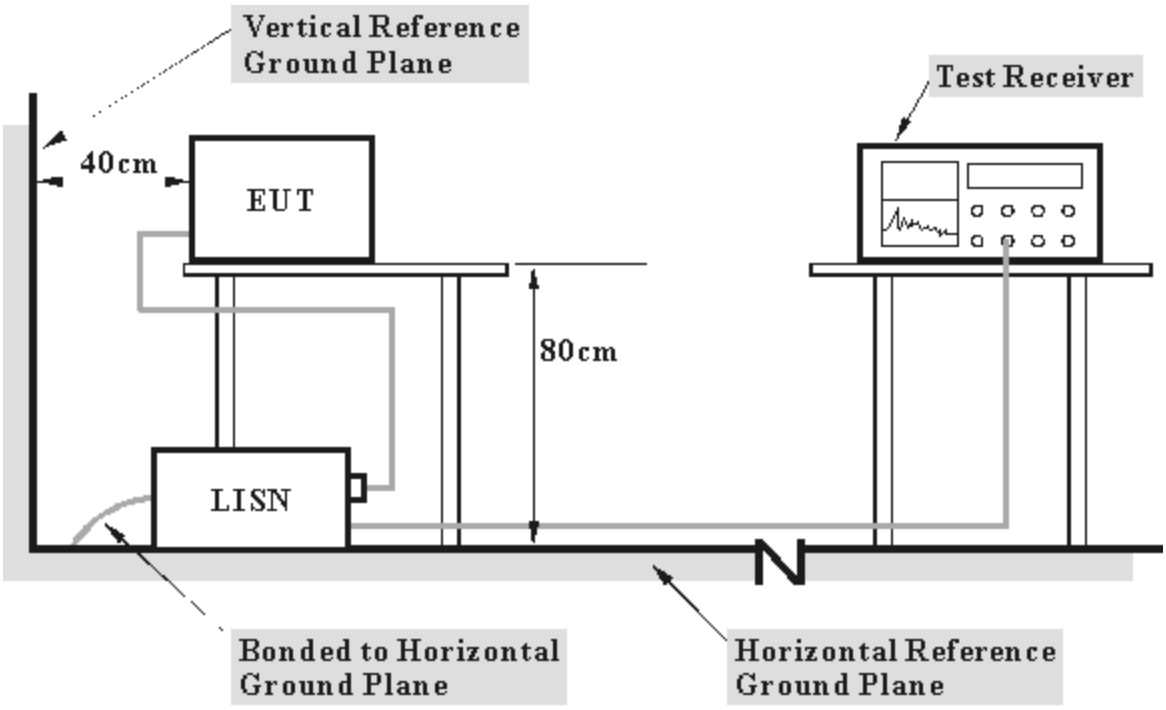
4.1.3 TEST PROCEDURES

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

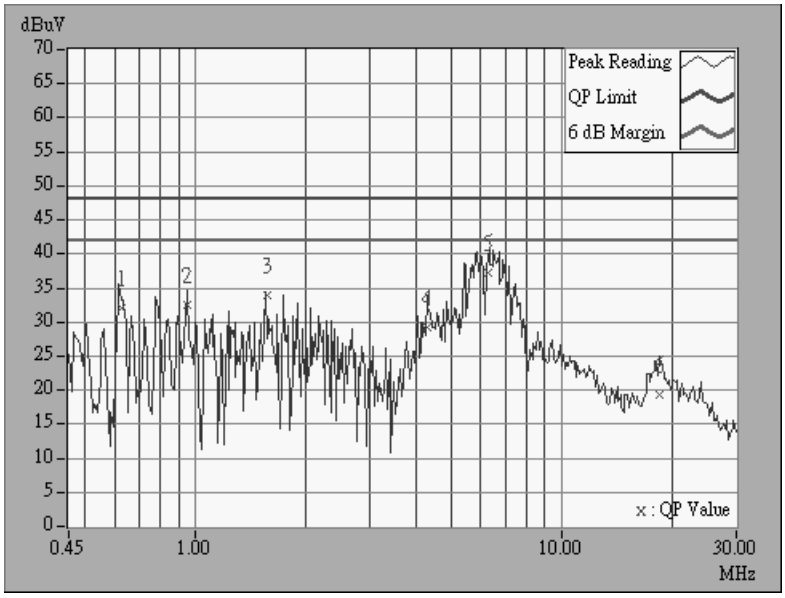
a. Placed the EUT on the testing table.
b. Prepared another computer system to act as a communication partner and placed it outside of testing area.
c. The communication partner run a test program to enable EUT under transmission/receiving condition continuously at specific channel frequency via an RJ 45 cable.
d. The communication partner sent data to EUT by command "PIN".

4.1.6 TEST RESULTS (A)

EUT	11Mbps Wireless LAN Access Point	**MODEL**	WX-1590
MODE	Channel 1	**6dB BANDWIDTH**	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	20 deg. C, 55%RH, 1005 hPa	**TESTED BY**: James Lee	

No	Freq. (MHz)	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			QP.	AV.	QP.	AV.	QP.	AV.	QP.	AV.
1	0.627	0.10	32.14	-	32.24	-	48.00	-	-15.76	-
2	0.949	0.10	32.54	-	32.64	-	48.00	-	-15.36	-
3	1.563	0.10	33.93	-	34.03	-	48.00	-	-13.97	-
4	4.298	0.31	29.20	-	29.51	-	48.00	-	-18.49	-
5	6.319	0.38	37.25	-	37.63	-	48.00	-	-10.37	-
6	18.465	0.94	19.24	-	20.18	-	48.00	-	-27.82	-

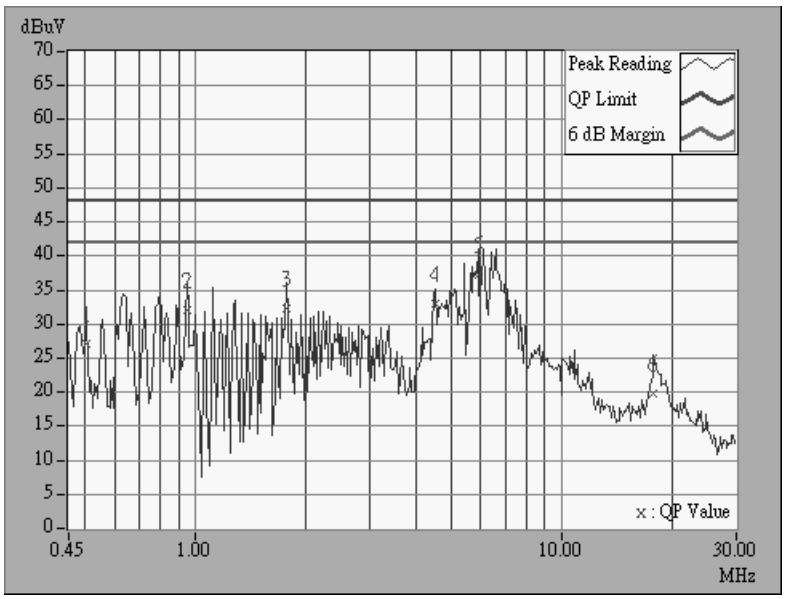
Remarks:
1. "*": Undetectable
2. QP. and AV. are abbreviations of quasi-peak and average individually.
3. "-": NA
4. The emission levels of other frequencies were very low against the limit.
5. Margin value = Emission level - Limit value
6. Emission Level = Correction Factor + Reading Value.



EUT	11Mbps Wireless LAN Access Point	**MODEL**	WX-1590
MODE	Channel 1	**6dB BANDWIDTH**	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	20 deg. C, 55%RH, 1005 hPa	**TESTED BY**: James Lee	

No	Freq. (MHz)	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			QP.	AV.	QP.	AV.	QP.	AV.	QP.	AV.
1	0.501	0.10	27.05	-	27.15	-	48.00	-	-20.85	-
2	0.946	0.10	32.03	-	32.13	-	48.00	-	-15.87	-
3	1.777	0.10	32.19	-	32.29	-	48.00	-	-15.71	-
4	4.500	0.31	33.03	-	33.34	-	48.00	-	-14.66	-
5	5.939	0.33	37.32	-	37.65	-	48.00	-	-10.35	-
6	17.834	0.71	19.71	-	20.42	-	48.00	-	-27.58	-

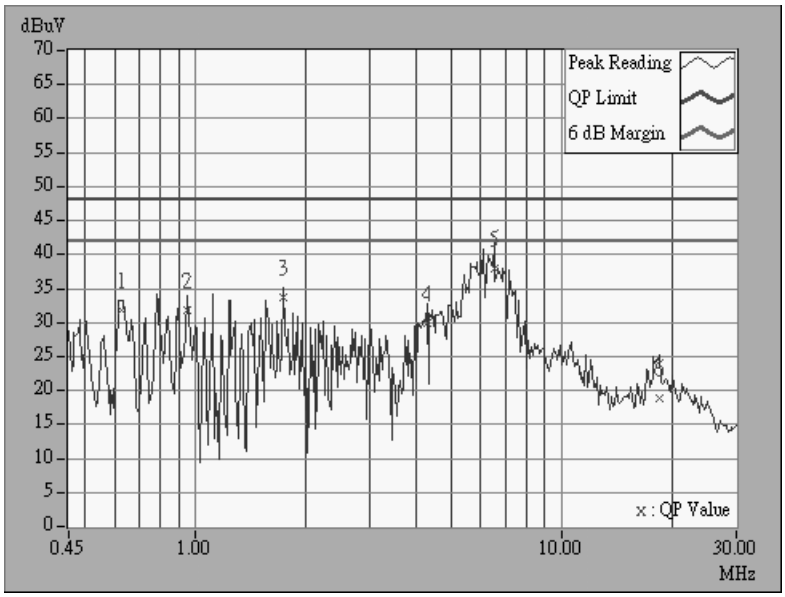
Remarks:
1. "*": Undetectable
2. QP. and AV. are abbreviations of quasi-peak and average individually.
3. "-": NA
4. The emission levels of other frequencies were very low against the limit.
5. Margin value = Emission level - Limit value
6. Emission Level = Correction Factor + Reading Value.



EUT	11Mbps Wireless LAN Access Point	**MODEL**	WX-1590
MODE	Channel 6	**6dB BANDWIDTH**	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	20 deg. C, 55%RH, 1005 hPa	**TESTED BY**: James Lee	

No	Freq. (MHz)	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			QP.	AV.	QP.	AV.	QP.	AV.	QP.	AV.
1	0.627	0.10	31.92	-	32.02	-	48.00	-	-15.98	-
2	0.950	0.10	31.89	-	31.99	-	48.00	-	-16.01	-
3	1.729	0.10	33.67	-	33.77	-	48.00	-	-14.23	-
4	4.295	0.31	30.02	-	30.33	-	48.00	-	-17.67	-
5	6.543	0.38	37.87	-	38.25	-	48.00	-	-9.75	-
6	18.527	0.94	18.97	-	19.91	-	48.00	-	-28.09	-

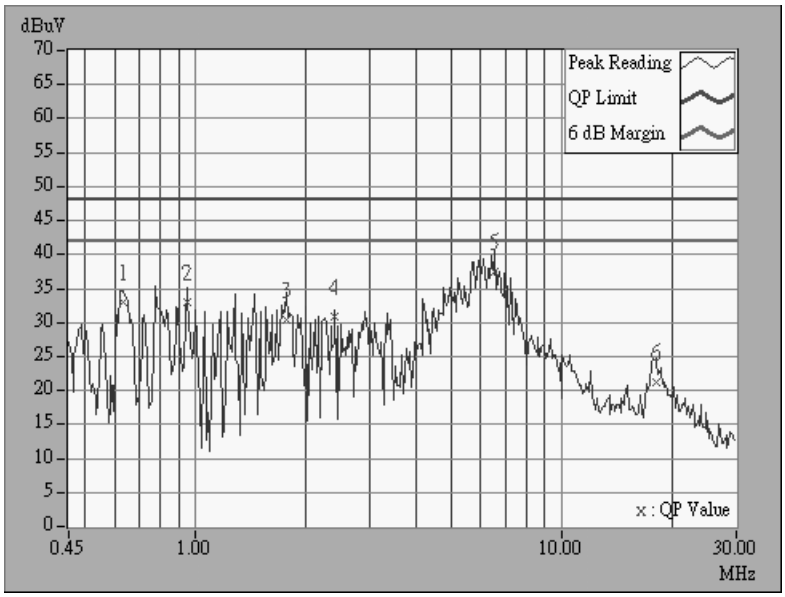
Remarks:
1. "*": Undetectable
2. QP. and AV. are abbreviations of quasi-peak and average individually.
3. "-": NA
4. The emission levels of other frequencies were very low against the limit.
5. Margin value = Emission level - Limit value
6. Emission Level = Correction Factor + Reading Value.



EUT	11Mbps Wireless LAN Access Point	**MODEL**	WX-1590
MODE	Channel 6	**6dB BANDWIDTH**	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	20 deg. C, 55%RH, 1005 hPa	**TESTED BY**: James Lee	

No	Freq. (MHz)	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			QP.	AV.	QP.	AV.	QP.	AV.	QP.	AV.
1	0.634	0.10	33.04	-	33.14	-	48.00	-	-14.86	-
2	0.946	0.10	32.91	-	33.01	-	48.00	-	-14.99	-
3	1.779	0.10	30.30	-	30.40	-	48.00	-	-17.60	-
4	2.391	0.14	30.98	-	31.12	-	48.00	-	-16.88	-
5	6.568	0.34	37.46	-	37.80	-	48.00	-	-10.20	-
6	18.074	0.72	21.27	-	21.99	-	48.00	-	-26.01	-

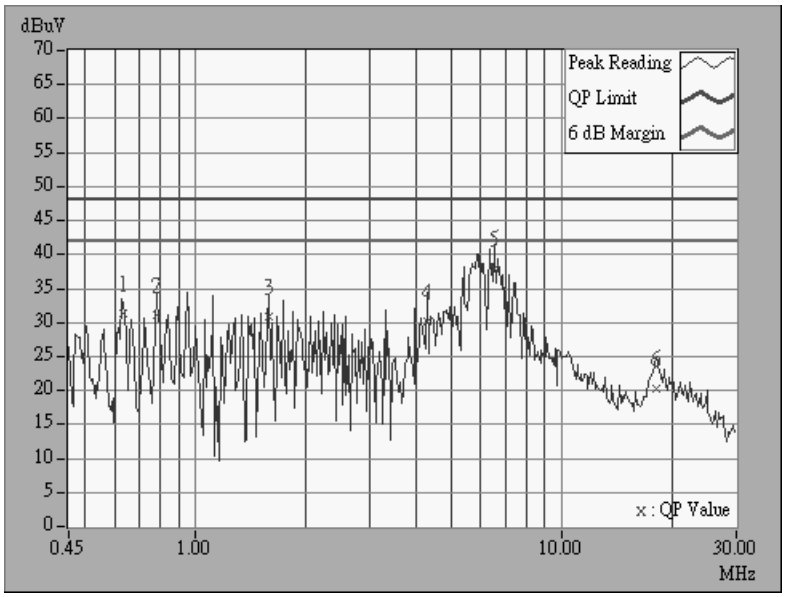
Remarks:
1. "*": Undetectable
2. QP. and AV. are abbreviations of quasi-peak and average individually.
3. "-": NA
4. The emission levels of other frequencies were very low against the limit.
5. Margin value = Emission level - Limit value
6. Emission Level = Correction Factor + Reading Value.



EUT	11Mbps Wireless LAN Access Point	**MODEL**	WX-1590
MODE	Channel 11	**6dB BANDWIDTH**	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	20 deg. C, 55%RH, 1005 hPa	**TESTED BY**: James Lee	

No	Freq. (MHz)	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			QP.	AV.	QP.	AV.	QP.	AV.	QP.	AV.
1	0.631	0.10	31.23	-	31.33	-	48.00	-	-16.67	-
2	0.783	0.10	31.04	-	31.14	-	48.00	-	-16.86	-
3	1.577	0.10	30.87	-	30.97	-	48.00	-	-17.03	-
4	4.294	0.31	30.16	-	30.47	-	48.00	-	-17.53	-
5	6.536	0.38	37.89	-	38.27	-	48.00	-	-9.73	-
6	18.121	0.92	20.38	-	21.30	-	48.00	-	-26.70	-

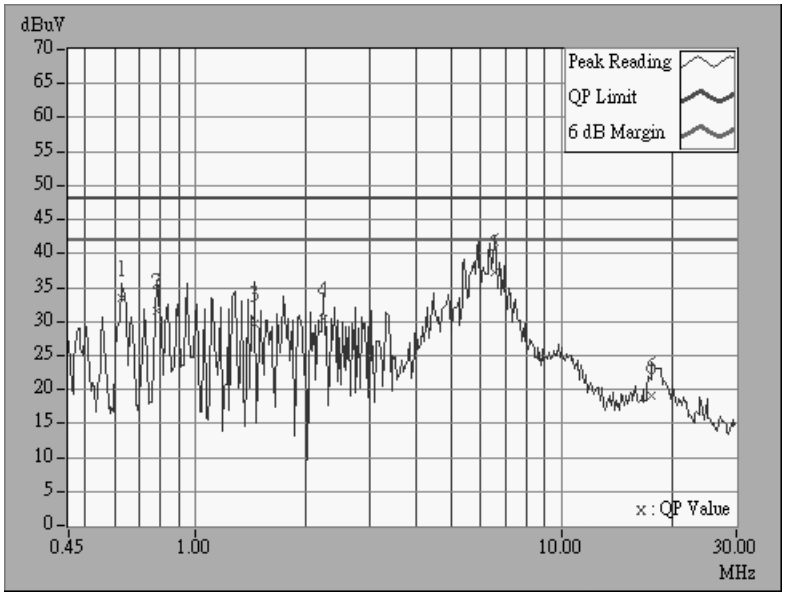
Remarks:
1. "*": Undetectable
2. QP. and AV. are abbreviations of quasi-peak and average individually.
3. "-": NA
4. The emission levels of other frequencies were very low against the limit.
5. Margin value = Emission level - Limit value
6. Emission Level = Correction Factor + Reading Value.



EUT	11Mbps Wireless LAN Access Point	**MODEL**	WX-1590
MODE	Channel 11	**6dB BANDWIDTH**	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	20 deg. C, 55%RH, 1005 hPa	**TESTED BY**: James Lee	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	QP.	AV.	QP.	AV.	QP.	AV.	QP.	AV.
1	0.630	0.10	33.57	-	33.67	-	48.00	-	-14.33	-
2	0.786	0.10	31.67	-	31.77	-	48.00	-	-16.23	-
3	1.448	0.10	29.58	-	29.68	-	48.00	-	-18.32	-
4	2.230	0.12	30.40	-	30.52	-	48.00	-	-17.48	-
5	6.569	0.34	37.28	-	37.62	-	48.00	-	-10.38	-
6	17.668	0.71	19.19	-	19.90	-	48.00	-	-28.10	-

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

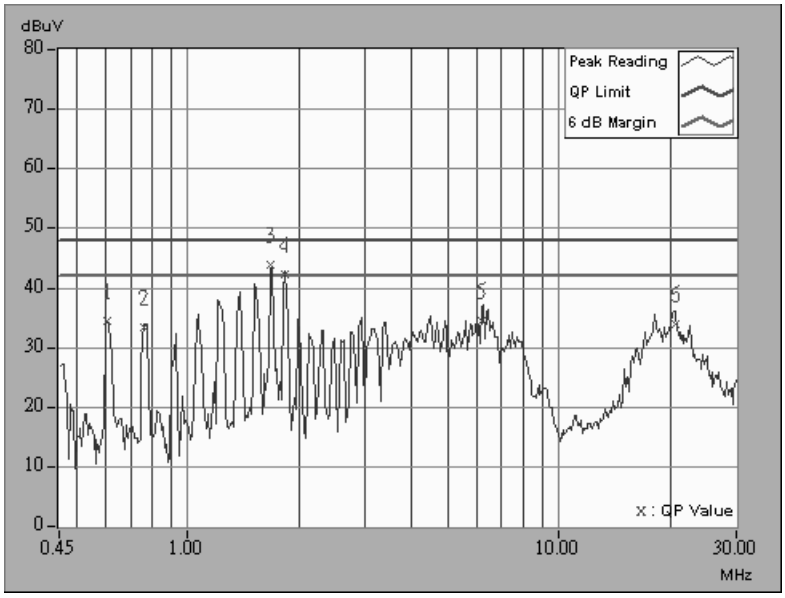


4.1.7 TEST RESULTS (B)

EUT	11Mbps Wireless LAN Access Point	**MODEL**	WL-295
MODE	Channel 1	**6dB BANDWIDTH**	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1005 hPa	**TESTED BY**: James Lee	

No	Freq. (MHz)	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			QP.	AV.	QP.	AV.	QP.	AV.	QP.	AV.
1	0.609	0.10	33.57	-	33.67	-	48.00	-	-14.33	-
2	0.759	0.10	32.34	-	32.44	-	48.00	-	-15.56	-
3	1.674	0.10	42.79	-	42.89	-	48.00	-	-5.11	-
4	1.829	0.10	41.39	-	41.49	-	48.00	-	-6.51	-
5	6.218	0.37	33.45	-	33.82	-	48.00	-	-14.18	-
6	20.528	1.01	32.91	-	33.92	-	48.00	-	-14.08	-

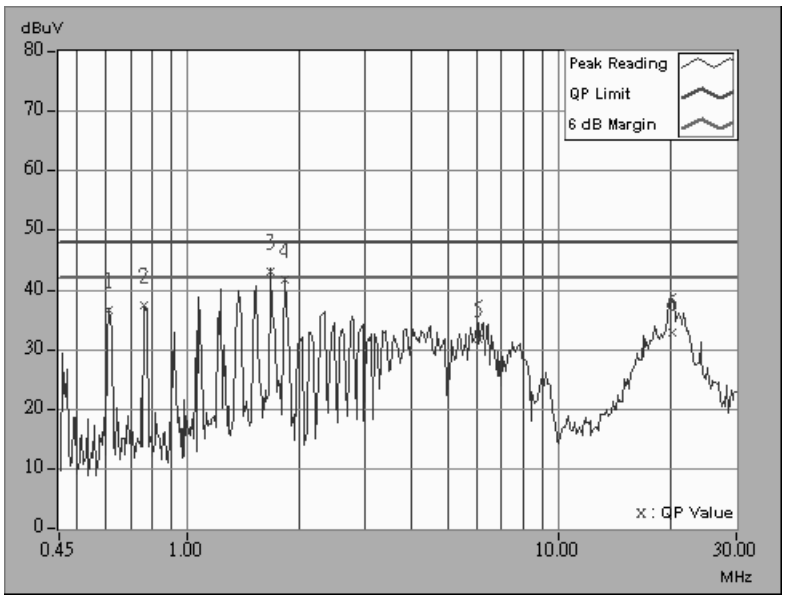
Remarks:
1. "*": Undetectable
2. QP. and AV. are abbreviations of quasi-peak and average individually.
3. "-": NA
4. The emission levels of other frequencies were very low against the limit.
5. Margin value = Emission level - Limit value
6. Emission Level = Correction Factor + Reading Value.



EUT	11Mbps Wireless LAN Access Point	**MODEL**	WL-295
MODE	Channel 1	**6dB BANDWIDTH**	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1005 hPa	**TESTED BY**: James Lee	

No	Freq. (MHz)	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			QP.	AV.	QP.	AV.	QP.	AV.	QP.	AV.
1	0.609	0.10	35.96	-	36.06	-	48.00	-	-11.94	-
2	0.762	0.10	36.63	-	36.73	-	48.00	-	-11.27	-
3	1.674	0.10	42.29	-	42.39	-	48.00	-	-5.61	-
4	1.827	0.10	40.99	-	41.09	-	48.00	-	-6.91	-
5	6.062	0.33	30.87	-	31.20	-	48.00	-	-16.80	-
6	20.182	0.80	32.06	-	32.86	-	48.00	-	-15.14	-

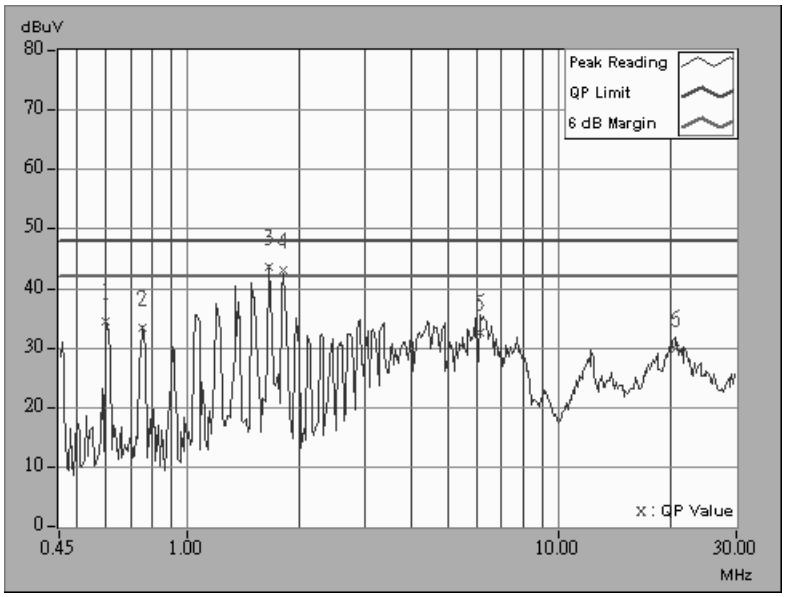
Remarks:
1. "*": Undetectable
2. QP. and AV. are abbreviations of quasi-peak and average individually.
3. "-": NA
4. The emission levels of other frequencies were very low against the limit.
5. Margin value = Emission level - Limit value
6. Emission Level = Correction Factor + Reading Value.



EUT	11Mbps Wireless LAN Access Point	**MODEL**	WL-295
MODE	Channel 6	**6dB BANDWIDTH**	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1005 hPa	**TESTED BY**: James Lee	

No	Freq. (MHz)	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			QP.	AV.	QP.	AV.	QP.	AV.	QP.	AV.
1	0.600	0.10	33.44	-	33.54	-	48.00	-	-14.46	-
2	0.755	0.10	32.48	-	32.58	-	48.00	-	-15.42	-
3	1.653	0.10	42.69	-	42.79	-	48.00	-	-5.21	-
4	1.806	0.10	41.96	-	42.06	-	48.00	-	-5.94	-
5	6.137	0.37	31.47	-	31.84	-	48.00	-	-16.16	-
6	20.498	1.01	28.96	-	29.97	-	48.00	-	-18.03	-

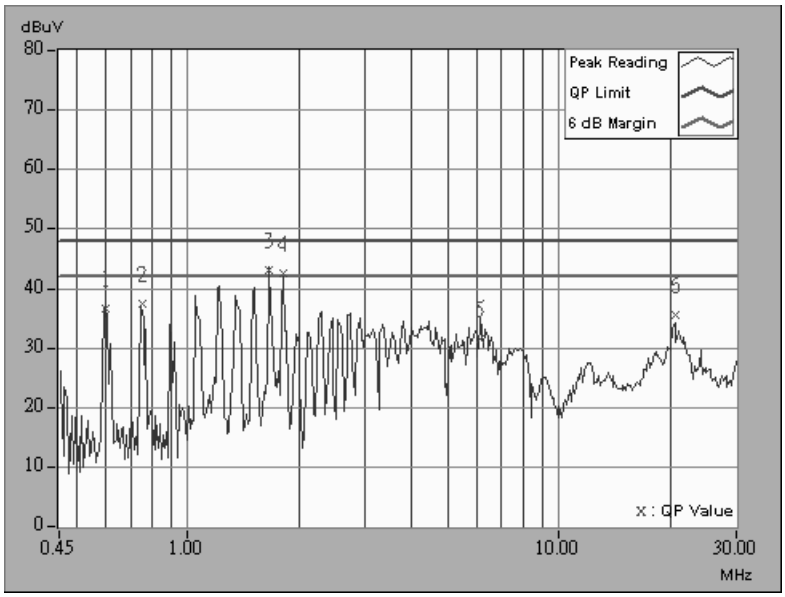
Remarks:
1. "*": Undetectable
2. QP. and AV. are abbreviations of quasi-peak and average individually.
3. "-": NA
4. The emission levels of other frequencies were very low against the limit.
5. Margin value = Emission level - Limit value
6. Emission Level = Correction Factor + Reading Value.



EUT	11Mbps Wireless LAN Access Point	**MODEL**	WL-295
MODE	Channel 6	**6dB BANDWIDTH**	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1005 hPa	**TESTED BY**: James Lee	

No	Freq. (MHz)	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			QP.	AV.	QP.	AV.	QP.	AV.	QP.	AV.
1	0.598	0.10	35.91	-	36.01	-	48.00	-	-11.99	-
2	0.752	0.10	36.63	-	36.73	-	48.00	-	-11.27	-
3	1.650	0.10	42.35	-	42.45	-	48.00	-	-5.55	-
4	1.803	0.10	41.62	-	41.72	-	48.00	-	-6.28	-
5	6.149	0.34	30.63	-	30.97	-	48.00	-	-17.03	-
6	20.498	0.81	34.75	-	35.56	-	48.00	-	-12.44	-

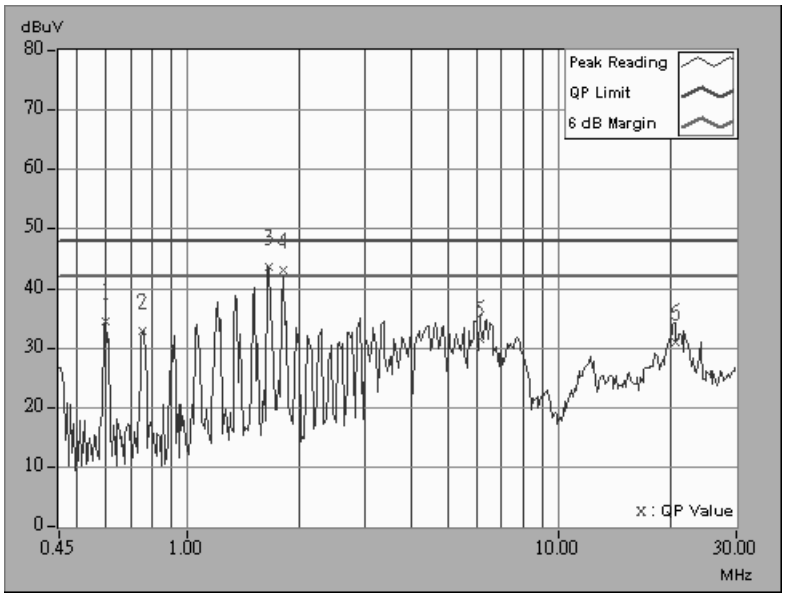
Remarks:
1. "*": Undetectable
2. QP. and AV. are abbreviations of quasi-peak and average individually.
3. "-": NA
4. The emission levels of other frequencies were very low against the limit.
5. Margin value = Emission level - Limit value
6. Emission Level = Correction Factor + Reading Value.



EUT	11Mbps Wireless LAN Access Point	**MODEL**	WL-295
MODE	Channel 11	**6dB BANDWIDTH**	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1005 hPa	**TESTED BY**: James Lee	

No	Freq. (MHz)	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			QP.	AV.	QP.	AV.	QP.	AV.	QP.	AV.
1	0.600	0.10	33.53	-	33.63	-	48.00	-	-14.37	-
2	0.756	0.10	31.90	-	32.00	-	48.00	-	-16.00	-
3	1.653	0.10	42.69	-	42.79	-	48.00	-	-5.21	-
4	1.806	0.10	41.96	-	42.06	-	48.00	-	-5.94	-
5	6.120	0.37	30.45	-	30.82	-	48.00	-	-17.18	-
6	20.498	1.01	30.02	-	31.03	-	48.00	-	-16.97	-

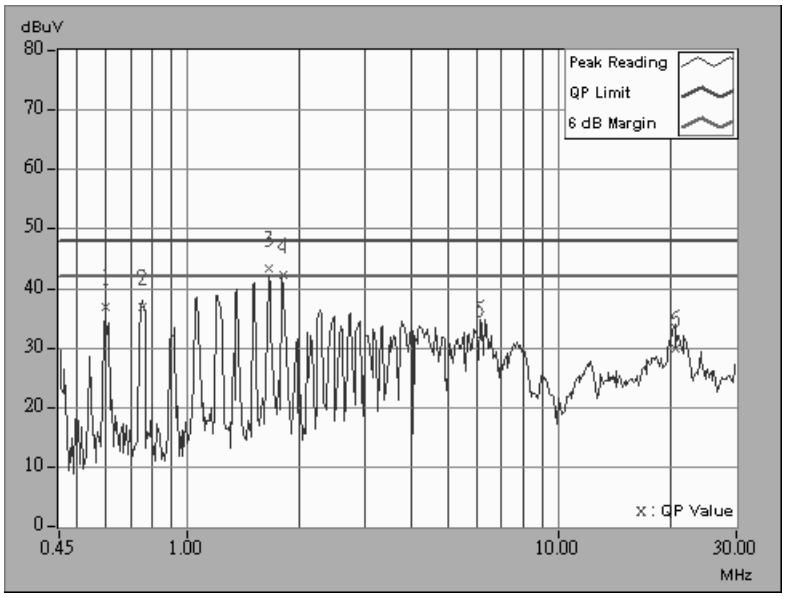
Remarks:
1. "*": Undetectable
2. QP. and AV. are abbreviations of quasi-peak and average individually.
3. "-": NA
4. The emission levels of other frequencies were very low against the limit.
5. Margin value = Emission level - Limit value
6. Emission Level = Correction Factor + Reading Value.



EUT	11Mbps Wireless LAN Access Point	**MODEL**	WL-295
MODE	Channel 11	**6dB BANDWIDTH**	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1005 hPa	**TESTED BY**: James Lee	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	QP.	AV.	QP.	AV.	QP.	AV.	QP.	AV.
1	0.601	0.10	36.02	-	36.12	-	48.00	-	-11.88	-
2	0.756	0.10	36.12	-	36.22	-	48.00	-	-11.78	-
3	1.649	0.10	42.43	-	42.53	-	48.00	-	-5.47	-
4	1.806	0.10	41.58	-	41.68	-	48.00	-	-6.32	-
5	6.143	0.34	30.67	-	31.01	-	48.00	-	-16.99	-
6	20.498	0.81	29.21	-	30.02	-	48.00	-	-17.98	-

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



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	May 7, 2002
* HP Preamplifier	8449B	3008A01201	Dec. 06, 2002
* 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, 2002
* 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
* Antenna (Horn)	BBHA9120-D	D130	July 10, 2002
Open Field Test Site	Site 5	ADT-R05	July 28, 2002
VCCI Site Registration No.	Site 5	R-1039	NA
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 equipments are used for the final measurement.

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.

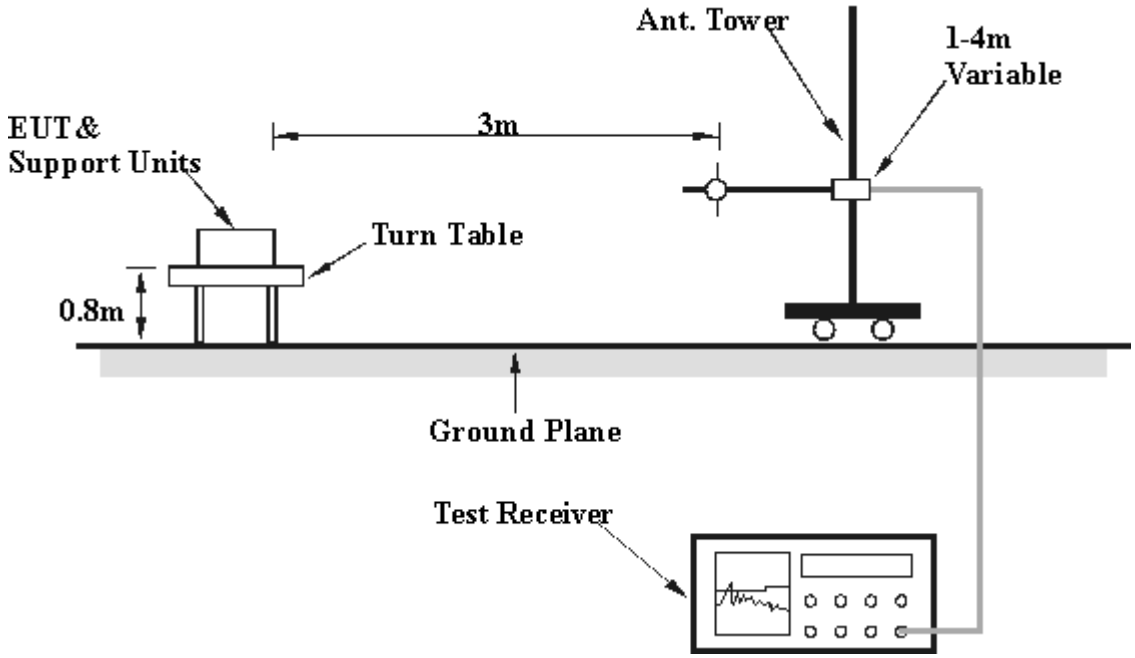
e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

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 the quasi-peak method or average method as specified and then reported in Data sheet peak mode and QP mode.

NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection (PK) 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	11Mbps Wireless LAN Access Point	**MODEL**	WX-1590
MODE	Channel 11	**FREQUENCY RANGE**	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	20deg. C, 70%RH, 1005 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/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	132.00	28.5 QP	43.50	-15.00	1.12H	68	16.20	11.16	1.13	0.00	-12.29
2	176.00	27.4 QP	43.50	-16.10	1.23H	345	17.00	9.08	1.33	0.00	-10.41
3	220.00	28.4 QP	46.00	-17.60	1.39H	60	16.80	10.12	1.51	0.00	-11.63
4	250.00	30.4 QP	46.00	-15.60	1.55H	314	16.70	12.02	1.66	0.00	-13.69
5	308.00	29.3 QP	46.00	-16.70	1.37H	174	14.00	13.38	1.91	0.00	-15.29
6	352.00	32.1 QP	46.00	-13.90	1.12H	177	15.70	14.31	2.05	0.00	-16.36
7	396.00	34.9 QP	46.00	-11.10	2.01H	44	16.70	15.96	2.22	0.00	-18.19
8	450.00	32.8 QP	46.00	-13.20	1.43H	205	14.00	16.37	2.41	0.00	-18.78
9	500.00	32.8 QP	46.00	-13.20	1.01H	334	13.00	17.26	2.50	0.00	-19.76
10	660.00	36.3 QP	46.00	-9.70	1.00H	335	14.00	19.25	3.05	0.00	-22.30
11	748.00	35.4 QP	46.00	-10.60	1.96H	356	12.00	20.14	3.26	0.00	-23.40
12	880.00	35.2 QP	46.00	-10.80	1.82H	338	11.00	20.68	3.55	0.00	-24.23
13	924.00	33.9 QP	46.00	-12.10	1.69H	56	9.20	21.00	3.68	0.00	-24.69

NOTE: 1 Emission level = Raw Value - Correction Factor

2 Correction Factor = External Preamp. Gain - Ant. Factor - Cable loss
(External Preamp. Gain = 0, when the test receiver is used for the test.)

3 The other emission levels were very low against the limit.

4 Margin value = Emission level - Limit value

EUT	11Mbps Wireless LAN Access Point	**MODEL**	WX-1590
MODE	Channel 11	**FREQUENCY RANGE**	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	20deg. C, 70%RH, 1005 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/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	132.00	29.1 QP	43.50	-14.40	1.28V	179	16.80	11.16	1.13	0.00	-12.29
2	176.00	27.4 QP	43.50	-16.10	1.28V	244	17.00	9.08	1.33	0.00	-10.42
3	200.00	27.6 QP	43.50	-15.90	1.00V	96	17.20	8.98	1.42	0.00	-10.40
4	308.00	34.3 QP	46.00	-11.70	2.16V	302	19.00	13.38	1.91	0.00	-15.29
5	350.00	28.3 QP	46.00	-17.70	1.23V	38	12.00	14.21	2.04	0.00	-16.26
6	396.00	32.2 QP	46.00	-13.80	2.11V	53	14.00	15.96	2.22	0.00	-18.19
7	500.00	34.5 QP	46.00	-11.50	1.15V	111	14.70	17.26	2.50	0.00	-19.76
8	616.00	33.7 QP	46.00	-12.30	1.10V	323	12.00	18.82	2.89	0.00	-21.71
9	650.00	37.3 QP	46.00	-8.70	1.09V	170	15.00	19.23	3.02	0.00	-22.25
10	704.00	33.5 QP	46.00	-12.50	1.01V	49	11.00	19.38	3.16	0.00	-22.54
11	748.00	34.9 QP	46.00	-11.10	1.66V	301	11.50	20.14	3.26	0.00	-23.40

NOTE: 1 Emission level = Raw Value - Correction Factor

2 Correction Factor = External Preamp. Gain - Ant. Factor - Cable loss
(External Preamp. Gain = 0, when the test receiver is used for the test.)

3 The other emission levels were very low against the limit.

4 Margin value = Emission level - Limit value

EUT	11Mbps Wireless LAN Access Point	**MODEL**	WX-1590
MODE	Channel 1	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1005 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/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	2038.0	46.4 PK	74.00	-27.60	1.10H	2	51.20	25.20	4.86	34.90	4.84
2	*2413.4	99.0 PK	-	-	2.29H	356	66.80	27.11	5.10	0.00	-32.21
3	*2413.4	91.2 AV	-	-	2.29H	356	59.00	27.11	5.10	0.00	-32.21
4	4076.0	52.1 PK	74.00	-21.90	1.89H	6	49.70	30.13	6.78	34.52	-2.39
5	4824.0	51.2 PK	74.00	-22.80	1.89H	309	47.20	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/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	2038.0	45.9 PK	74.00	-28.10	1.79V	347	50.70	25.20	4.86	34.90	4.84
2	*2413.4	109.6 PK	-	-	1.33V	157	77.40	27.11	5.10	0.00	-32.21
3	*2413.4	100.9 AV	-	-	1.33V	157	68.70	27.11	5.10	0.00	-32.21
4	4076.0	50.2 PK	74.00	-23.80	1.11V	18	47.80	30.13	6.78	34.52	-2.39
5	4824.0	52.7 PK	74.00	-21.30	1.32V	315	48.70	31.43	7.23	34.63	-4.02

NOTE: 1. Emission level = Raw Value - Correction Factor
2. Correction Factor = External Preamp. Gain - Ant. Factor - Cable loss
(External Preamp. Gain = 0, when the test receiver is used for the test.)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level - Limit value
5. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	11Mbps Wireless LAN Access Point	**MODEL**	WX-1590
MODE	Channel 6	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1005 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/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	2063.0	46.9 PK	74.00	-27.10	1.07H	359	51.45	25.41	4.96	34.90	4.53
2	*2437.0	97.7 PK	-	-	1.73H	10	65.30	27.33	5.08	0.00	-32.41
3	*2437.0	91.1 AV	-	-	1.73H	10	58.70	27.33	5.08	0.00	-32.41
4	4126.0	53.5 PK	74.00	-20.50	2.00H	39	51.00	30.32	6.70	34.56	-2.46
5	4126.0	48.3 AV	54.00	-5.70	2.00H	39	45.80	30.32	6.70	34.56	-2.46
6	4874.0	50.6 PK	74.00	-23.40	1.40H	303	46.50	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/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	2063.0	47.3 PK	74.00	-26.70	1.00V	3	51.83	25.41	4.96	34.90	4.53
2	*2438.5	108.7 PK	-	-	1.98V	218	76.30	27.33	5.08	0.00	-32.40
3	*2438.5	100.8 AV	-	-	1.98V	218	68.40	27.33	5.08	0.00	-32.40
4	4126.0	50.8 PK	74.00	-23.20	1.14V	78	48.30	30.32	6.70	34.56	-2.46
5	4874.0	50.9 PK	74.00	-23.10	1.36V	263	46.80	31.47	7.21	34.63	-4.05
6	8252.0	56.9 PK	74.00	-17.10	1.37V	2	45.00	36.71	10.00	34.85	-11.86.
7	8252.0	47.1 AV	54.00	-6.90	1.37V	2	35.20	36.71	10.00	34.85	-11.86

NOTE: 1. Emission level = Raw Value - Correction Factor
2. Correction Factor = External Preamp. Gain - Ant. Factor - Cable loss
(External Preamp. Gain = 0, when the test receiver is used for the test.)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level - Limit value
5. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	11Mbps Wireless LAN Access Point	**MODEL**	WX-1590
MODE	Channel 11	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1005 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/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	2088.0	46.7 PK	74.00	-27.30	1.09H	127	51.00	25.62	5.02	34.90	4.26
2	*2463.0	100.2 PK	-	-	1.23H	20	67.80	27.33	5.08	0.00	-32.40
3	*2463.0	93.4 AV	-	-	1.23H	20	61.00	27.33	5.08	0.00	-32.40
4	2485.4	50.7 PK	74.00	-23.30	1.35H	286	53.00	27.54	5.06	34.90	2.31
5	4176.0	52.6 PK	74.00	-21.40	2.46H	6	50.10	30.41	6.68	34.58	-2.51
6	4924.0	52.1 PK	74.00	-21.90	1.06H	90	48.00	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/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	2088.0	45.7 PK	74.00	-28.30	1.93H	24	50.00	25.62	5.02	34.90	4.26
2	*2463.0	107.4 PK	-	-	1.82V	298	75.00	27.33	5.08	0.00	-32.40
3	*2463.0	99.4 AV	-	-	1.82V	298	67.00	27.33	5.08	0.00	-32.40
4	2499.6	51.5 PK	74.00	-22.50	1.72V	3	53.80	27.54	5.06	34.90	2.31
5	4176.0	51.5 PK	74.00	-22.50	1.63V	360	49.00	30.41	6.68	34.58	-2.51
6	4924.0	51.3 PK	74.00	-22.70	1.71V	277	47.20	31.51	7.21	34.62	-4.10
7	8352.0	59.1 PK	74.00	-14.90	1.92V	227	47.00	36.74	10.20	34.83	-12.11
8	8352.0	48.1 AV	54.00	-5.90	1.92V	227	36.00	36.74	10.20	34.83	-12.11

NOTE: 1. Emission level= Raw Value - Correction Factor
2. Correction Factor = External Preamp. Gain - Ant. Factor - Cable loss
(External Preamp. Gain = 0, when the test receiver is used for the test.)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level - Limit value
5. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

4.2.7 TEST RESULTS (B)

EUT	11Mbps Wireless LAN Access Point	**MODEL**	WL-295
MODE	Channel 11	**FREQUENCY RANGE**	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 70%RH, 1005 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/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	132.00	30.3 QP	43.50	-13.20	1.13H	95	18.00	11.16	1.13	0.00	-12.29
2	176.00	29.6 QP	43.50	-13.90	1.86H	288	19.20	9.08	1.33	0.00	-10.41
3	250.00	31.7 QP	46.00	-14.30	1.02H	64	18.00	12.02	1.66	0.00	-13.69
4	352.00	31.4 QP	46.00	-14.60	1.04H	337	15.00	14.31	2.05	0.00	-16.36
5	375.00	32.0 QP	46.00	-14.00	1.41H	217	14.70	15.13	2.14	0.00	-17.27
6	396.00	32.2 QP	46.00	-13.80	1.86H	117	14.00	15.96	2.22	0.00	-18.18
7	500.00	32.8 QP	46.00	-13.20	1.17H	152	13.00	17.26	2.50	0.00	-19.76
8	528.00	34.4 QP	46.00	-11.60	1.65H	41	14.20	17.62	2.60	0.00	-20.23
9	572.00	34.7 QP	46.00	-11.30	1.46H	295	13.70	18.25	2.75	0.00	-21.00
10	616.00	31.1 QP	46.00	-14.90	1.03H	356	9.40	18.82	2.89	0.00	-21.71
11	625.00	32.8 QP	46.00	-13.20	1.46H	146	11.00	18.91	2.92	0.00	-21.83
12	748.00	33.8 QP	46.00	-12.20	2.02H	360	10.40	20.14	3.26	0.00	-23.40

NOTE: 1 Emission level = Raw Value - Correction Factor

2 Correction Factor = External Preamp. Gain - Ant. Factor - Cable loss
(External Preamp. Gain = 0, when the test receiver is used for the test.)

3 The other emission levels were very low against the limit.

4 Margin value = Emission level - Limit value

EUT	11Mbps Wireless LAN Access Point	**MODEL**	WL-295
MODE	Channel 11	**FREQUENCY RANGE**	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 70%RH, 1005 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/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	132.00	30.3 QP	43.50	-13.20	1.20V	4	18.00	11.16	1.13	0.00	-12.29
2	220.00	29.4 QP	46.00	-16.60	1.09V	6	17.80	10.12	1.51	0.00	-11.63
3	250.00	32.7 QP	46.00	-13.30	1.13V	357	19.00	12.02	1.66	0.00	-13.69
4	300.00	31.1 QP	46.00	-14.90	1.09V	324	16.00	13.18	1.88	0.00	-15.06
5	450.00	33.8 QP	46.00	-12.20	1.19V	267	15.00	16.37	2.41	0.00	-18.78
6	500.00	33.8 QP	46.00	-12.20	1.33V	218	14.00	17.26	2.50	0.00	-19.76
7	572.00	32.4 QP	46.00	-13.60	1.34V	239	11.40	18.25	2.75	0.00	-21.00
8	600.00	31.6 QP	46.00	-14.40	1.44V	221	10.20	18.61	2.83	0.00	-21.44
9	616.00	32.4 QP	46.00	-13.60	1.19V	4	10.70	18.82	2.89	0.00	-21.71
10	625.00	32.8 QP	46.00	-13.20	1.25V	292	11.00	18.91	2.92	0.00	-21.83
11	704.00	33.3 QP	46.00	-12.70	1.09V	319	10.80	19.38	3.16	0.00	-22.54
12	748.00	35.4 QP	46.00	-10.60	1.13V	357	12.00	20.14	3.26	0.00	-23.40
13	750.00	33.8 QP	46.00	-12.20	1.18V	155	10.40	20.18	3.26	0.00	-23.44
14	792.00	34.9 QP	46.00	-11.10	1.09V	36	11.00	20.60	3.31	0.00	-23.91

NOTE: 1 Emission level = Raw Value - Correction Factor
2 Correction Factor = External Preamp. Gain - Ant. Factor - Cable loss
(External Preamp. Gain = 0, when the test receiver is used for the test.)
3 The other emission levels were very low against the limit.
4 Margin value = Emission level - Limit value

EUT	11Mbps Wireless LAN Access Point	**MODEL**	WL-295
MODE	Channel 1	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25 deg. C, 70%RH, 1005 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/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	2038.1	48.3 PK	74.00	-25.70	1.28H	10	53.10	25.20	4.86	34.90	4.84
2	*2413.5	96.4 PK	-	-	1.21H	347	64.20	27.11	5.10	0.00	-32.21
3	*2413.5	90.4 AV	-	-	1.21H	347	58.20	27.11	5.10	0.00	-32.21
4	4076.0	48.4 PK	74.00	-25.60	1.14H	249	46.00	30.13	6.78	34.52	-2.39
5	4824.0	51.5 PK	74.00	-22.50	1.21H	59	47.50	31.43	7.23	34.63	-4.03

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/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	2038.0	47.2 PK	74.00	-26.80	1.29V	358	52.00	25.20	4.86	34.90	4.84
2	*2412.0	109.2 PK	-	-	1.29V	242	77.00	27.11	5.10	0.00	-32.21
3	*2412.0	102.2 AV	-	-	1.29V	242	70.00	27.11	5.10	0.00	-32.21
4	4076.0	49.4 PK	74.00	-24.60	1.36V	6	47.00	30.13	6.78	34.52	-2.39
5	4824.0	51.4 PK	74.00	-22.60	1.13V	138	47.40	31.43	7.23	34.63	-4.02

NOTE: 1. Emission level = Raw Value - Correction Factor
2. Correction Factor = External Preamp. Gain - Ant. Factor - Cable loss
(External Preamp. Gain = 0, when the test receiver is used for the test.)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level - Limit value
5. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	11Mbps Wireless LAN Access Point	**MODEL**	WL-295
MODE	Channel 6	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25 deg. C, 70%RH, 1005 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/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	2063.0	45.5 PK	74.00	-28.50	1.50H	335	50.00	25.41	4.96	34.90	4.53
2	*2438.0	97.1 PK	-	-	1.12H	0	64.70	27.33	5.08	0.00	-32.40.
3	*2438.0	90.4 AV	-	-	1.12H	0	58.00	27.33	5.08	0.00	-32.40.
4	4126.0	49.3 PK	74.00	-24.70	1.29H	41	46.80	30.32	6.70	34.56	-2.46
5	4874.0	51.3 PK	74.00	-22.70	1.27H	354	47.20	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/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	2063.0	48.3 PK	74.00	-25.70	1.01V	261	52.80	25.41	4.96	34.90	4.53
2	*2438.5	107.3 PK	-	-	1.33V	152	74.90	27.33	5.08	0.00	-32.40
3	*2438.5	100.6 AV	-	-	1.33V	152	68.20	27.33	5.08	0.00	-32.40
4	4126.0	53.5 PK	74.00	-20.50	1.70V	344	51.00	30.32	6.70	34.56	-2.46
5	4126.0	47.3 AV	54.00	-6.70	1.70V	344	44.80	30.32	6.70	34.56	-2.46
6	4874.0	50.6 PK	74.00	-23.40	1.09V	26	46.50	31.47	7.21	34.63	-4.06

NOTE: 1. Emission level = Raw Value - Correction Factor
2. Correction Factor = External Preamp. Gain - Ant. Factor - Cable loss
(External Preamp. Gain = 0, when the test receiver is used for the test.)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level - Limit value
5. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	11Mbps Wireless LAN Access Point	**MODEL**	WL-295
MODE	Channel 11	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25 deg. C, 70%RH, 1005 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/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	2088.0	48.4 PK	74.00	-25.60	1.20H	358	52.70	25.62	5.02	34.90	4.26
2	*2462.7	96.2 PK	-	-	1.29H	312	63.80	27.33	5.08	0.00	-32.41
3	*2462.7	89.4 AV	-	-	1.29H	312	57.00	27.33	5.08	0.00	-32.41
4	2486.2	48.7 PK	74.00	-25.30	1.20H	358	51.00	27.54	5.06	34.90	2.31
5	4176.0	50.5 PK	74.00	-23.50	1.49H	25	48.00	30.41	6.68	34.58	-2.51
6	4924.0	51.3 PK	74.00	-22.70	1.52H	86	47.20	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/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	2088.0	48.7 PK	74.00	-25.30	1.26V	359	53.00	25.62	5.02	34.90	4.26
2	*2463.7	106.4 PK	-	-	1.06V	4	74.00	27.33	5.08	0.00	-32.40.
3	*2463.7	99.3 AV	-	-	1.06V	4	66.88	27.33	5.08	0.00	-32.40.
4	2488.0	50.7 PK	74.00	-23.30	1.06V	9	53.00	27.54	5.06	34.90	2.31
5	4176.0	54.5 PK	74.00	-19.50	1.05V	353	52.00	30.41	6.68	34.58	-2.51
6	4176.0	49.2 AV	54.00	-4.80	1.05V	353	46.67	30.41	6.68	34.58	-2.51
7	4924.0	52.1 PK	74.00	-21.90	1.15V	42	48.00	31.51	7.21	34.62	-4.10

NOTE: 1. Emission level= Raw Value - Correction Factor
2. Correction Factor = External Preamp. Gain - Ant. Factor - Cable loss
(External Preamp. Gain = 0, when the test receiver is used for the test.)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level - Limit value
5. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

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
ROHDE & SCHWARZ TEST RECEIVER	ESMI	839379/002	Dec. 28, 2001
HP ATTENUATOR	8496B	3247A18505	Cal. on use
HP PLOTTER	7475A	2641V27755	N/A

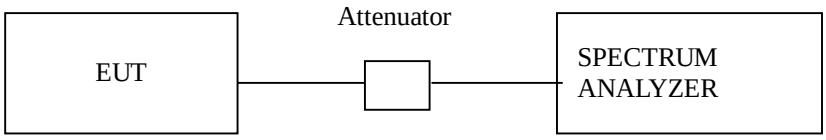
NOTES:

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



4.3.5 EUT OPERATING CONDITIONS

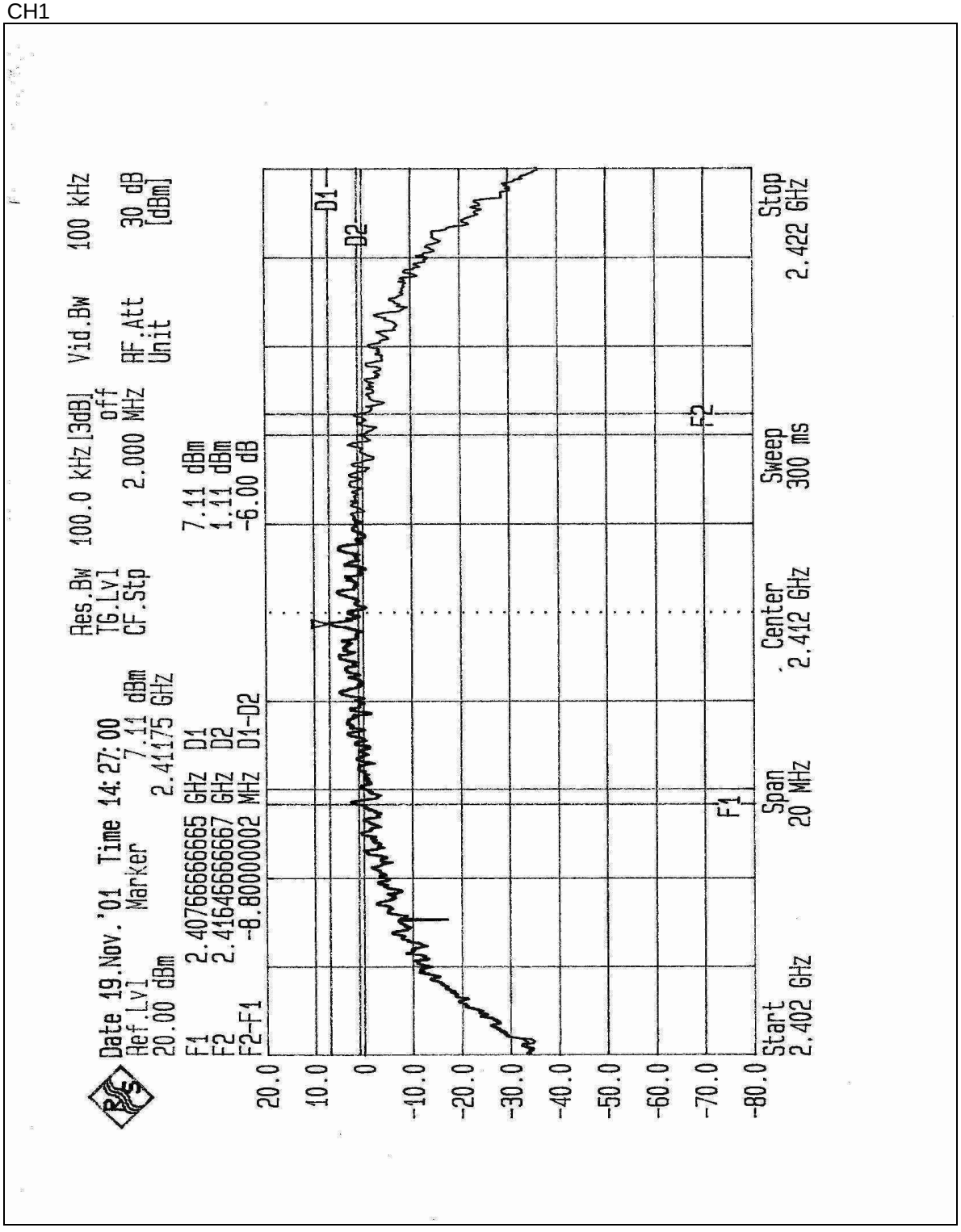
The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.3.6 TEST RESULTS

EUT	11Mbps Wireless LAN Access Point	**MODEL**	WX-1590
INPUT POWER (SYSTEM)	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	20 deg. C, 63%RH, 1005 hPa
TESTED BY: James Lee			

CHANNEL	CHANNEL FREQUENCY (MHz)	6 dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	8.80	0.5	PASS
6	2437	9.44	0.5	PASS
11	2462	8.93	0.5	PASS

CH1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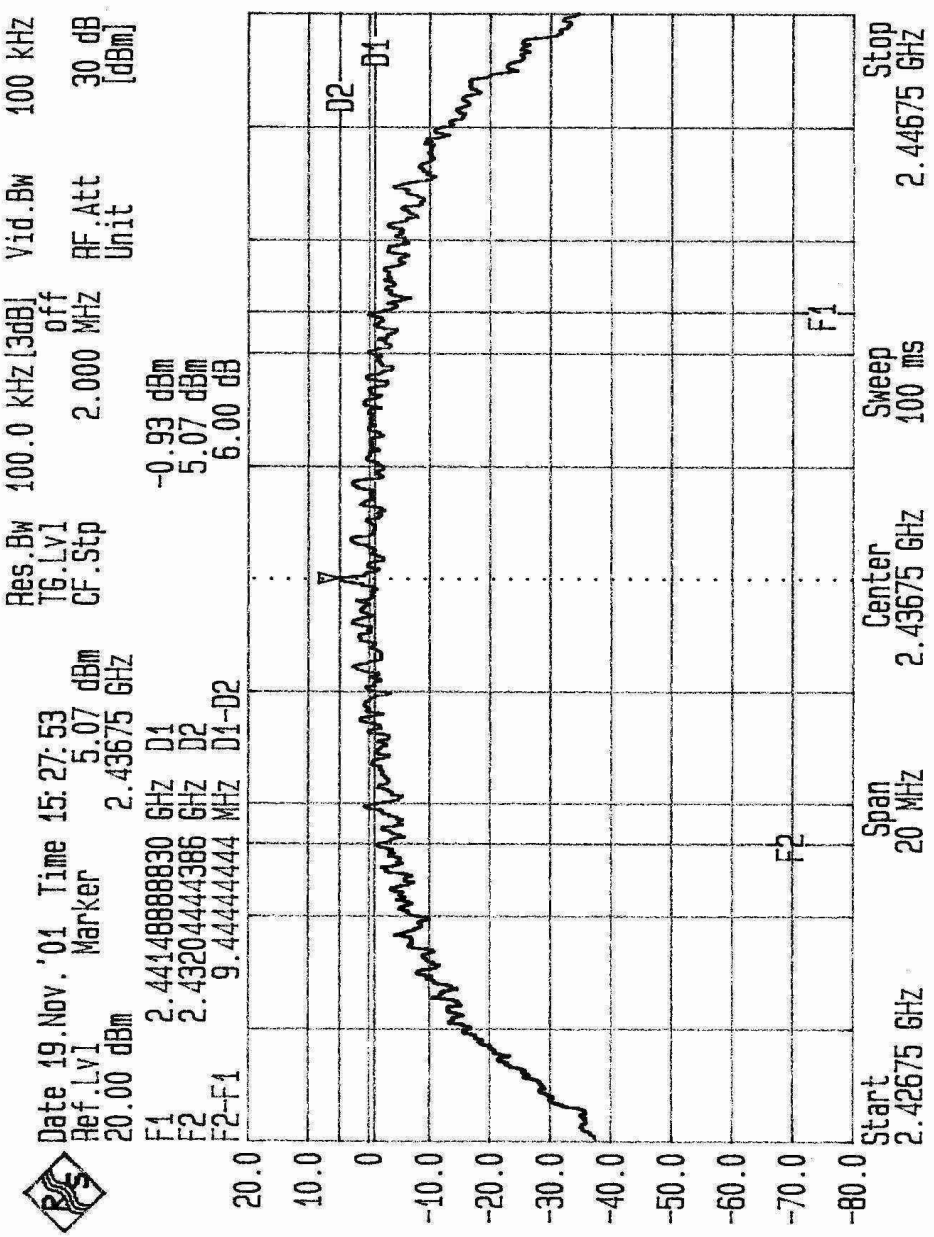
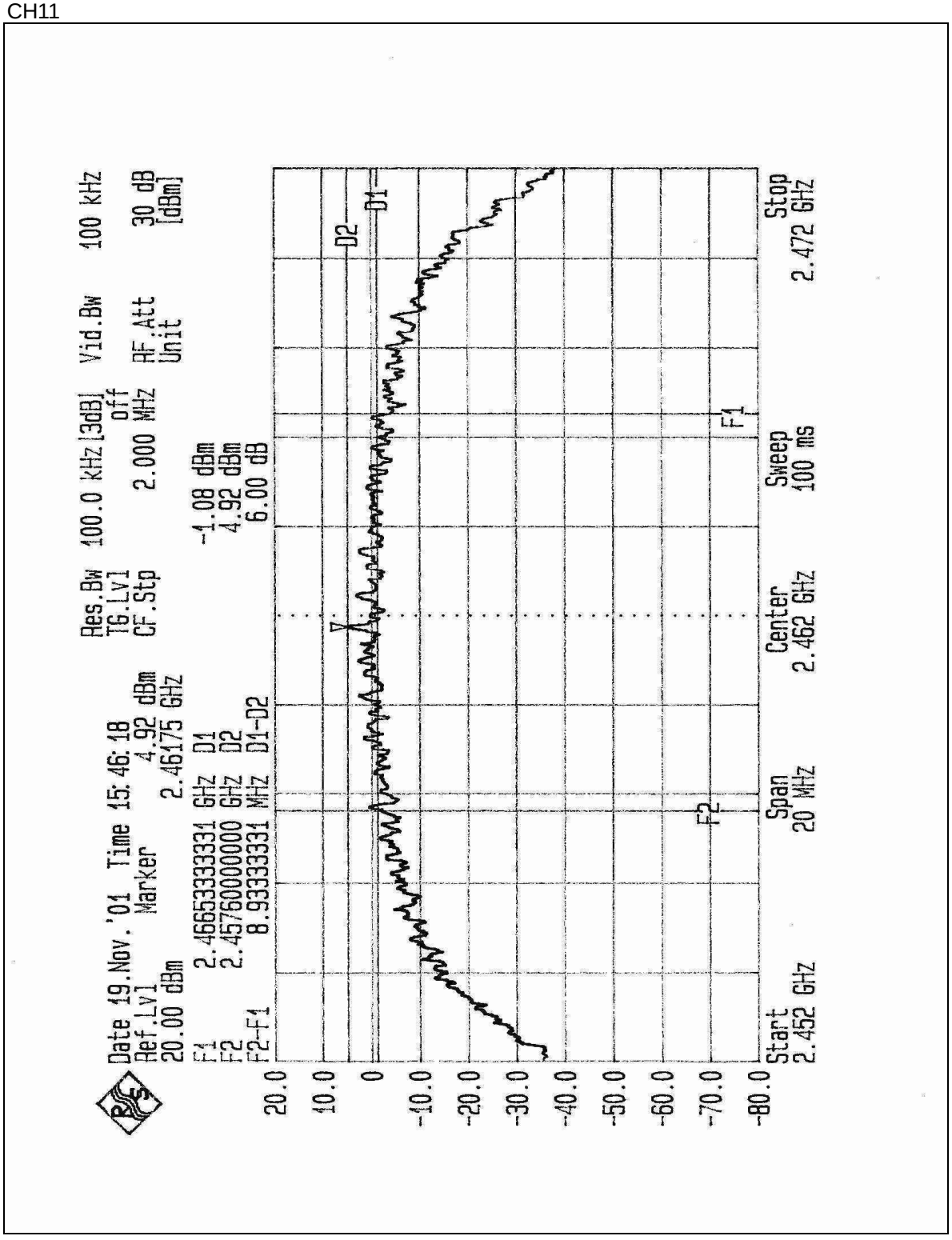
Ref.Lvl 7.11 dBm
20.00 dBm Marker 2.41175 GHz
F1 2.407666666665 GHz D1
F2 2.416466666667 GHz D2
F2-F1 -8.80000002 MHz D1-D2
Res.Bw 100.0 kHz [3dB] Vid.Bw 100 kHz
TG.Lvl off 30 dB
CF.Stp 2.000 MHz RF.Att [dBm]
Unit
7.11 dBm
1.11 dBm
-6.00 dB
Start 2.402 GHz
Span 20 MHz
Center 2.412 GHz
Sweep 300 ms
Stop 2.422 GHz
D1
D2
F1
F2
20.0
10.0
0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0

CH6


Date 19.Nov. '01 Time 15:27:53
Ref.Lvl 5.07 dBm
20.00 dBm
Marker 2.43675 GHz
F1 2.441488888830 GHz D1 -0.93 dBm
F2 2.432044443886 GHz D2 5.07 dBm
F2-F1 9.444444444 MHz D1-D2 6.00 dB
Res.Bw 100.0 kHz[3dB] Vid.Bw 100 kHz
T6.Lvl off
CF.Stp 2.000 MHz RF.Att 30 dB
Unit [dBm]
Start 2.42675 GHz
Span 20 MHz
Center 2.43675 GHz
Sweep 100 ms
Stop 2.44675 GHz
D1
D2
F1
F2
20.0
10.0
0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0

CH11


Date 19.Nov. '01 Time 15:46:18
Ref.Lvl
20.00 dBm
Marker
4.92 dBm
2.46175 GHz
F1 2.4665333331 GHz D1
F2 2.4576000000 GHz D2
F2-F1 8.9333331 MHz D1-D2
Res.Bw 100.0 kHz [3dB]
TG.Lvl
CF.Stp
2.000 MHz
-1.08 dBm
4.92 dBm
6.00 dB
Vid.Bw 100 kHz
RF.Att 30 dB
Unit [dBm]
D1
D2
F1
F2
20.0
10.0
0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
Start 2.452 GHz
Span 20 MHz
Center 2.462 GHz
Sweep 100 ms
Stop 2.472 GHz