

FCC TEST REPORT

REPORT NO.: RF910124R06

MODEL NO.: WAP22

(the others please refer P.6)

RECEIVED: Jan. 24, 2002

TESTED: Jan. 24, 2002 ~ Jan. 28, 2002

APPLICANT: GLOBAL SUN TECHNOLOGY INC.

ADDRESS: No. 13, Tung Yuan Rd., Jung Li Industrial Park,
Jung Li City, Tao Yuan Hsien, Taiwan, R.O.C.

ISSUED BY: Advance Data Technology Corporation

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

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0528
ILAC MRA



Lab Code: 200102-0

Table of Contents

1	CERTIFICATION.....	4
2	SUMMARY OF TEST RESULTS	5
3	GENERAL INFORMATION	6
3.1	GENERAL DESCRIPTION OF EUT	6
3.2	DESCRIPTION OF TEST MODES	7
3.3	GENERAL DESCRIPTION OF APPLIED STANDARDS	7
3.4	DESCRIPTION OF SUPPORT UNITS	8
4	TEST TYPES AND RESULTS	9
4.1	CONDUCTED EMISSION MEASUREMENT.....	9
4.1.1	LIMITS OF CONDUCTED EMISSION MEASUREMENT	9
4.1.2	TEST INSTRUMENTS	9
4.1.3	TEST PROCEDURES	10
4.1.4	TEST SETUP	10
4.1.5	EUT OPERATING CONDITIONS.....	11
4.1.6	TEST RESULTS	12
4.2	RADIATED EMISSION MEASUREMENT	18
4.2.1	LIMITS OF RADIATED EMISSION MEASUREMENT	18
4.2.2	TEST INSTRUMENTS	19
4.2.3	TEST PROCEDURES	20
4.2.4	TEST SETUP	21
4.2.5	EUT OPERATING CONDITIONS.....	21
4.2.6	TEST RESULTS (A)	22
4.2.7	TEST RESULTS (B)	27
4.3	6dB BANDWIDTH MEASUREMENT	32
4.3.1	LIMITS OF 6dB BANDWIDTH MEASUREMENT	32
4.3.2	TEST INSTRUMENTS	32
4.3.3	TEST PROCEDURE	33
4.3.4	TEST SETUP	33
4.3.5	EUT OPERATING CONDITIONS.....	33
4.3.6	TEST RESULTS	34
4.4	MAXIMUM PEAK OUTPUT POWER.....	38
4.4.1	LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT	38
4.4.2	INSTRUMENTS.....	38
4.4.3	TEST PROCEDURES	39
4.4.4	TEST SETUP	39
4.4.5	EUT OPERATING CONDITIONS.....	39
4.4.6	TEST RESULTS	40
4.5	POWER SPECTRAL DENSITY MEASUREMENT	41
4.5.1	LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT	41
4.5.2	TEST INSTRUMENTS	41
4.5.3	TEST PROCEDURE	42
4.5.4	TEST SETUP	42
4.5.5	EUT OPERATING CONDITION	42
4.5.6	TEST RESULTS	43



4.6	BAND EDGES MEASUREMENT	47
4.6.1	LIMITS OF BAND EDGES MEASUREMENT	47
4.6.2	TEST INSTRUMENTS	47
4.6.3	TEST PROCEDURE	47
4.6.4	EUT OPERATING CONDITION	48
4.6.5	TEST RESULTS	48
4.7	ANTENNA REQUIREMENT	51
4.7.1	STANDARD APPLICABLE	51
4.7.2	ANTENNA CONNECTED CONSTRUCTION	51
5	PHOTOGRAPHS OF THE TEST CONFIGURATION	52
6	INFORMATION ON THE TESTING LABORATORIES.....	54



1 CERTIFICATION

PRODUCT : Wireless Network Access Point
Wireless 22Mbps Access Point

BRAND NAME : GLOBAL SUN

MODEL NO. : WAP22
WAP11 ver. 2.2
GL2422AP-0T0

APPLICANT : GLOBAL SUN TECHNOLOGY 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 Jan. 24, 2002 ~ Jan. 28, 2002. 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: Gary Chang, DATE: Jan. 29, 2002
Gary Chang

CHECKED BY: Demi Chen, DATE: Jan. 29, 2002
Demi Chen

APPROVED BY: Alan Lane, DATE: Jan. 29, 2002
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
15.207	AC Power Conducted Emission Limit: 48dBuV	PASS	Meet the requirement of limit Minimum passing margin is -5.70dBuV at 0.536MHz
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 -2.2dBuV at 4824.00 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	Wireless Network Access Point
MODEL NO.	WAP22 (the others please see NOTE:2)
POWER SUPPLY	5.0VDC from AC adapter
MODULATION TYPE	BPSK, QPSK, CCK, PBCC
RADIO TECHNOLOGY	DSSS
TRANSFER RATE	1/2/5.5/11/22Mbps
FREQUENCY RANGE	2412MHz ~ 2462MHz
NUMBER OF CHANNEL	11
OUTPUT POWER	15.87dBm
ANTENNA TYPE	Dipole antenna (2dBi) Dipole antenna (5dBi)
POWER CABLE	1.8m (Nonshielded)
I/O PORTS	RJ45 port
ASSOCIATED DEVICES	NA

NOTE:

- The EUT is operated with the following power adapter.

Model No. :	HPW-2005U A1
Input Power :	100V ~ 240V, 2.0A, Max 50-60Hz
Output Power :	5.0VDC, 2.5A

- The combinations for product name and model are shown as following:

Product Name	Model No
Wireless Network Access Point	WAP22
Wireless Network Access Point	WAP11 ver. 2.2
Wireless 22Mbps Access Point	GL2422AP-0T0

- There are two combinations on the antenna connector as following.

Antenna Connector	Set 1	Set 2
Internal	MCX	MCX
External	Reversed TNC	NA

- 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. 22Mbps was chosen for final test.
4. For Radiated Emissions test, the test result (A) is for antenna gain 2dBi. Test result (B) is for antenna gain 5dBi.

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a Wireless Network 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	Dell	PP01L	TW-09C748-12800-190-B220	FCC DoC APPROVED
2	LAN CARD	D-Link	DU-E100	UR15001597	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	ESCS30	847793/022	Feb. 25, 2002
ROHDE & SCHWARZ Artificial Mains Network (for EUT)	ESH2-Z5	828075/003	July 19, 2002
*ROHDE & SCHWARZ 4-wire ISN	ENY41	838119/028	Dec. 2, 2002
*ROHDE & SCHWARZ 2-wire ISN	ENY22	837497/018	Dec. 2, 2002
EMCO-L.I.S.N. (for peripheral)	3825/2	90031627	July 19, 2002
Software	Cond-V2J	NA	NA
RF cable (JYEBAO)	RG-58A/U	Cable-C05.01	July 19, 2002
LYNICS Terminator (For EMCO LISN)	0900510	E1-01-305	Feb. 20, 2002
LYNICS Terminator (For EMCO LISN)	0900510	E1-01-306	Feb. 20, 2002
Shielded Room	Site 5	ADT-C05	NA
VCCI Site Registration No.	Site 5	C-1093	NA

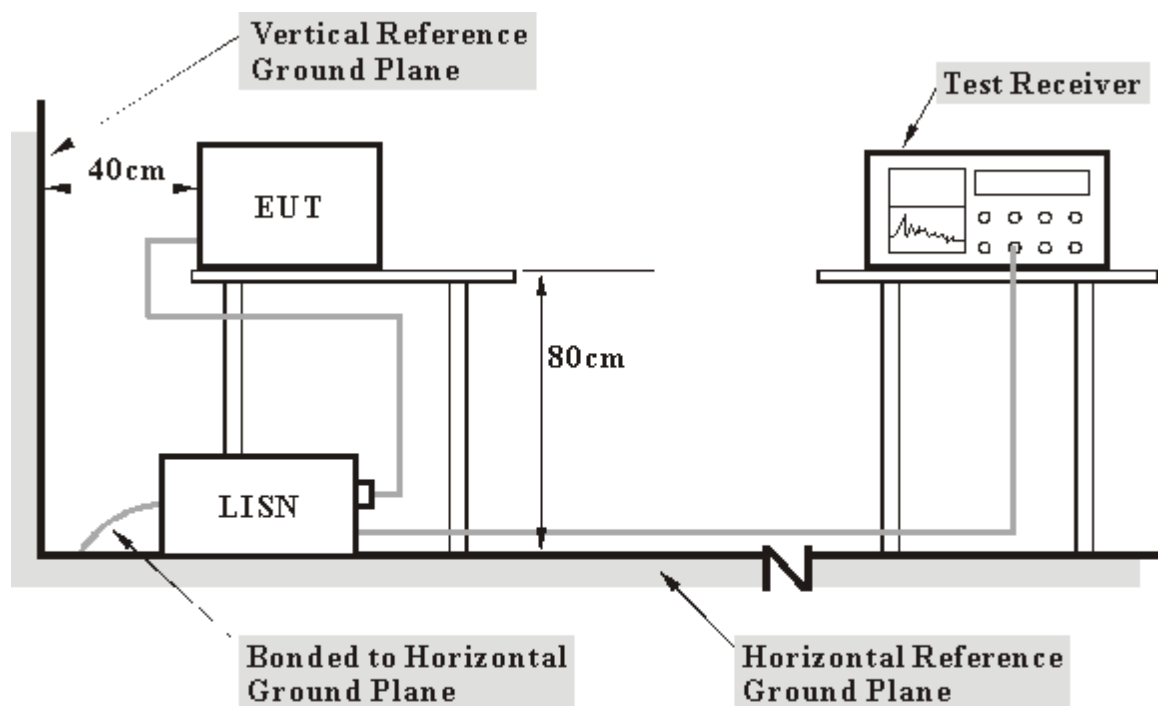
NOTE:

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

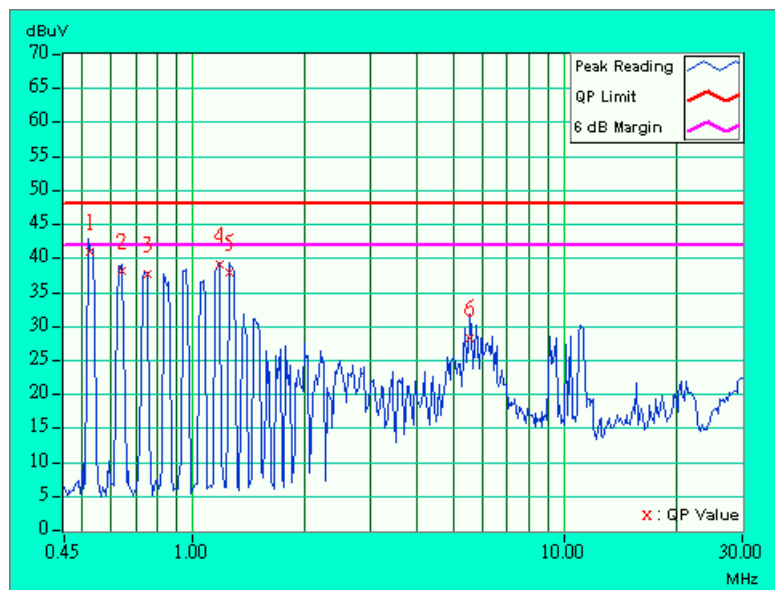
- a. Placed the EUT on the testing table.
- b. Prepared another computer system to act as a communication partner and placed it outside of testing area.
- c. The communication partner run a test program to enable EUT under transmission/receiving condition continuously at specific channel frequency via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

4.1.6 TEST RESULTS

EUT	Wireless Network Access Point	MODEL	WAP22
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: Gary Chang	

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	0.528	0.12	40.64	-	40.76	-	48.00	-	-7.24	-
2	0.641	0.14	37.75	-	37.89	-	48.00	-	-10.11	-
3	0.751	0.16	37.35	-	37.51	-	48.00	-	-10.49	-
4	1.180	0.20	38.57	-	38.77	-	48.00	-	-9.23	-
5	1.254	0.20	37.43	-	37.63	-	48.00	-	-10.37	-
6	5.563	0.45	27.82	-	28.27	-	48.00	-	-19.73	-

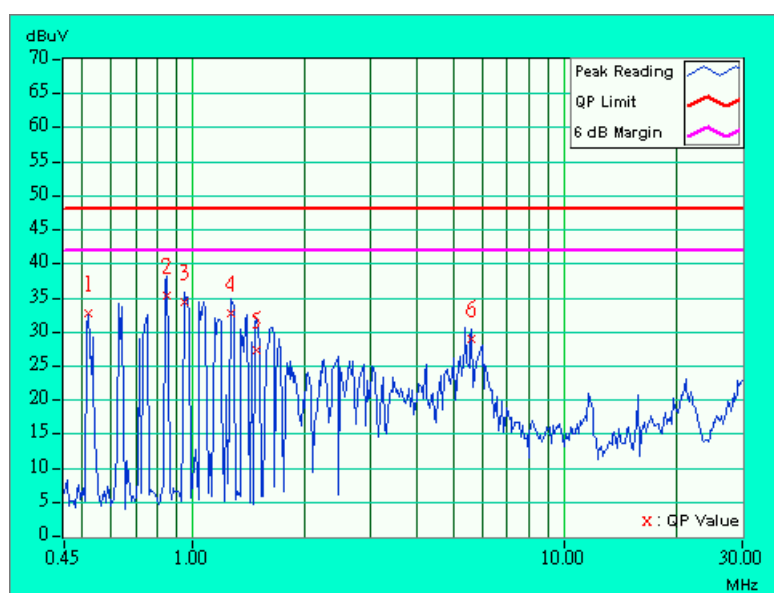
- Remarks:
1. "**": Undetectable
 2. QP. and AV. are abbreviations of quasi-peak and average individually.
 3. "-": NA
 4. The emission levels of other frequencies were very low against the limit.
 5. Margin value = Emission level - Limit value
 6. Emission Level = Correction Factor + Reading Value.



EUT	Wireless Network Access Point	MODEL	WAP22
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: Gary Chang	

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	0.524	0.12	32.46	-	32.58	-	48.00	-	-15.42	-
2	0.852	0.18	35.10	-	35.28	-	48.00	-	-12.72	-
3	0.946	0.19	34.18	-	34.37	-	48.00	-	-13.63	-
4	1.266	0.20	32.48	-	32.68	-	48.00	-	-15.32	-
5	1.484	0.20	26.98	-	27.18	-	48.00	-	-20.82	-
6	5.594	0.33	28.76	-	29.09	-	48.00	-	-18.91	-

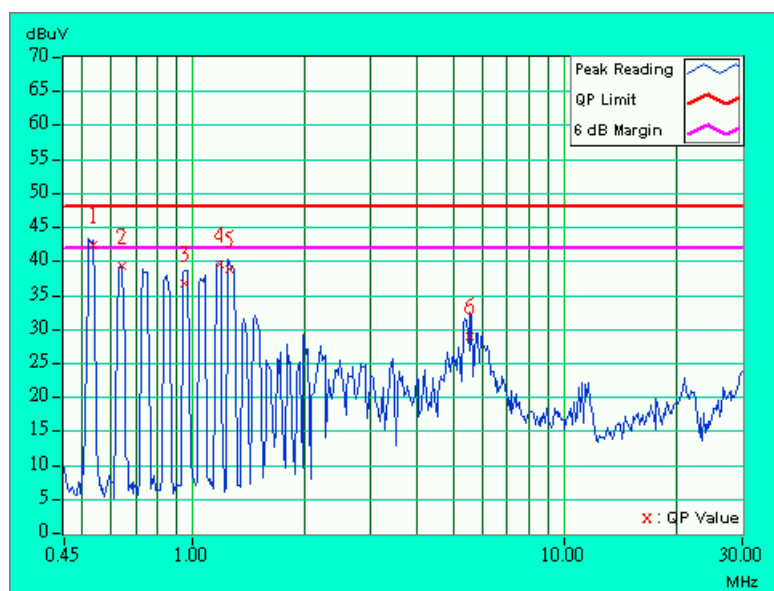
- Remarks:
1. "**": Undetectable
 2. QP. and AV. are abbreviations of quasi-peak and average individually.
 3. "-": NA
 4. The emission levels of other frequencies were very low against the limit.
 5. Margin value = Emission level - Limit value
 6. Emission Level = Correction Factor + Reading Value.



EUT	Wireless Network Access Point	MODEL	WAP22
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: Gary Chang	

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	0.536	0.12	41.94	-	42.06	-	48.00	-	-5.94	-
2	0.645	0.14	38.93	-	39.07	-	48.00	-	-8.93	-
3	0.950	0.19	36.21	-	36.40	-	48.00	-	-11.60	-
4	1.180	0.20	39.11	-	39.31	-	48.00	-	-8.69	-
5	1.255	0.20	38.41	-	38.61	-	48.00	-	-9.39	-
6	5.570	0.45	28.47	-	28.92	-	48.00	-	-19.08	-

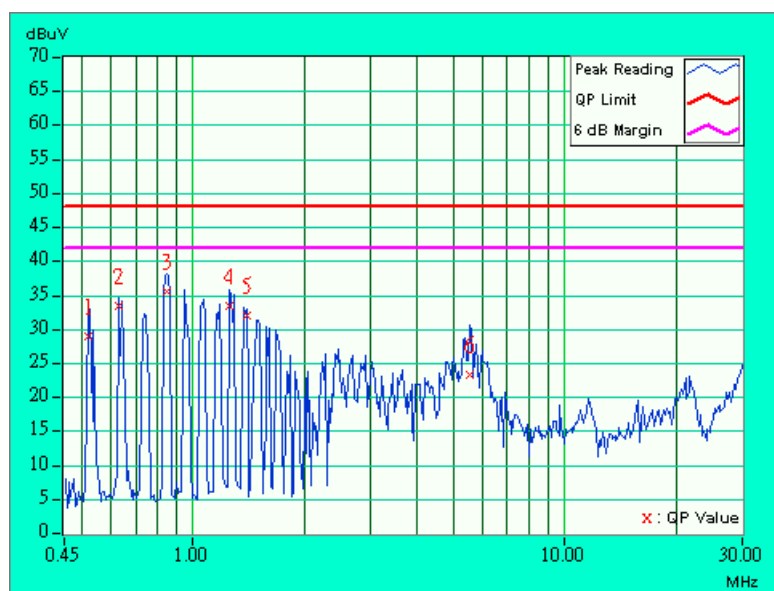
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 3. "-": NA
 4. The emission levels of other frequencies were very low against the limit.
 5. Margin value = Emission level - Limit value
 6. Emission Level = Correction Factor + Reading Value.



EUT	Wireless Network Access Point	MODEL	WAP22
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: Gary Chang	

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	0.520	0.12	28.74	-	28.86	-	48.00	-	-19.14	-
2	0.630	0.14	33.04	-	33.18	-	48.00	-	-14.82	-
3	0.852	0.18	35.30	-	35.48	-	48.00	-	-12.52	-
4	1.254	0.20	33.08	-	33.28	-	48.00	-	-14.72	-
5	1.395	0.20	31.72	-	31.92	-	48.00	-	-16.08	-
6	5.539	0.33	23.09	-	23.42	-	48.00	-	-24.58	-

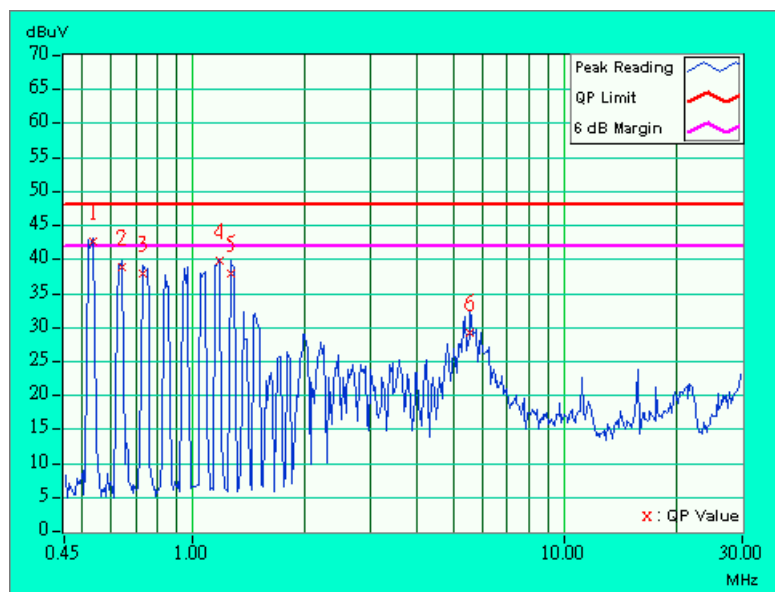
- Remarks:
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 2. QP. and AV. are abbreviations of quasi-peak and average individually.
 3. "-": NA
 4. The emission levels of other frequencies were very low against the limit.
 5. Margin value = Emission level - Limit value
 6. Emission Level = Correction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



EUT	Wireless Network Access Point	MODEL	WAP22
MODE	Channel 11	6dB BANDWIDTH	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	20 deg. C, 50%RH, 1005 hPa	TESTED BY: Gary Chang	

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	0.536	0.12	42.18	-	42.30	-	48.00	-	-5.70	-
2	0.645	0.14	38.51	-	38.65	-	48.00	-	-9.35	-
3	0.731	0.16	37.51	-	37.67	-	48.00	-	-10.33	-
4	1.180	0.20	39.29	-	39.49	-	48.00	-	-8.51	-
5	1.258	0.20	37.39	-	37.59	-	48.00	-	-10.41	-
6	5.551	0.45	28.80	-	29.25	-	48.00	-	-18.75	-

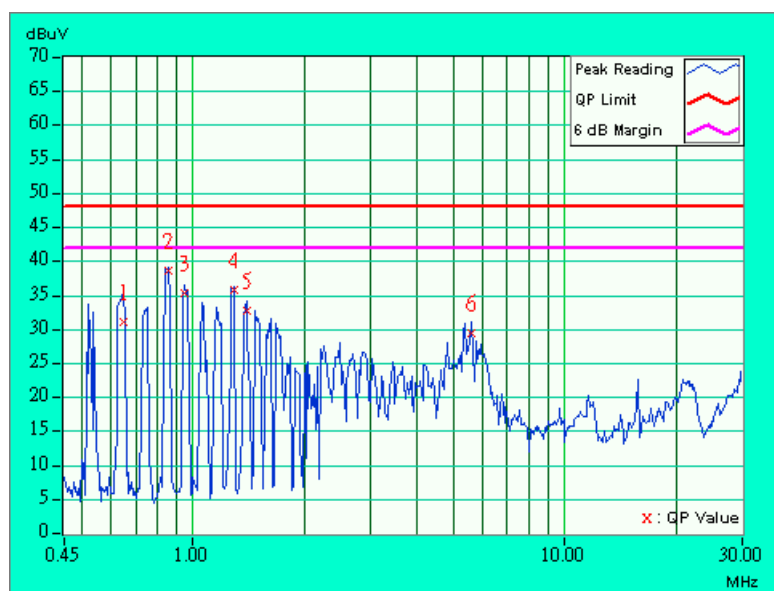
- Remarks:
1. "**": Undetectable
 2. QP. and AV. are abbreviations of quasi-peak and average individually.
 3. "-": NA
 4. The emission levels of other frequencies were very low against the limit.
 5. Margin value = Emission level - Limit value
 6. Emission Level = Correction Factor + Reading Value.



EUT	Wireless Network Access Point	MODEL	WAP22
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: Gary Chang	

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	0.649	0.14	30.78	-	30.92	-	48.00	-	-17.08	-
2	0.860	0.18	38.27	-	38.45	-	48.00	-	-9.55	-
3	0.946	0.19	35.06	-	35.25	-	48.00	-	-12.75	-
4	1.289	0.20	35.58	-	35.78	-	48.00	-	-12.22	-
5	1.398	0.20	32.36	-	32.56	-	48.00	-	-15.44	-
6	5.598	0.33	29.02	-	29.35	-	48.00	-	-18.65	-

- 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.



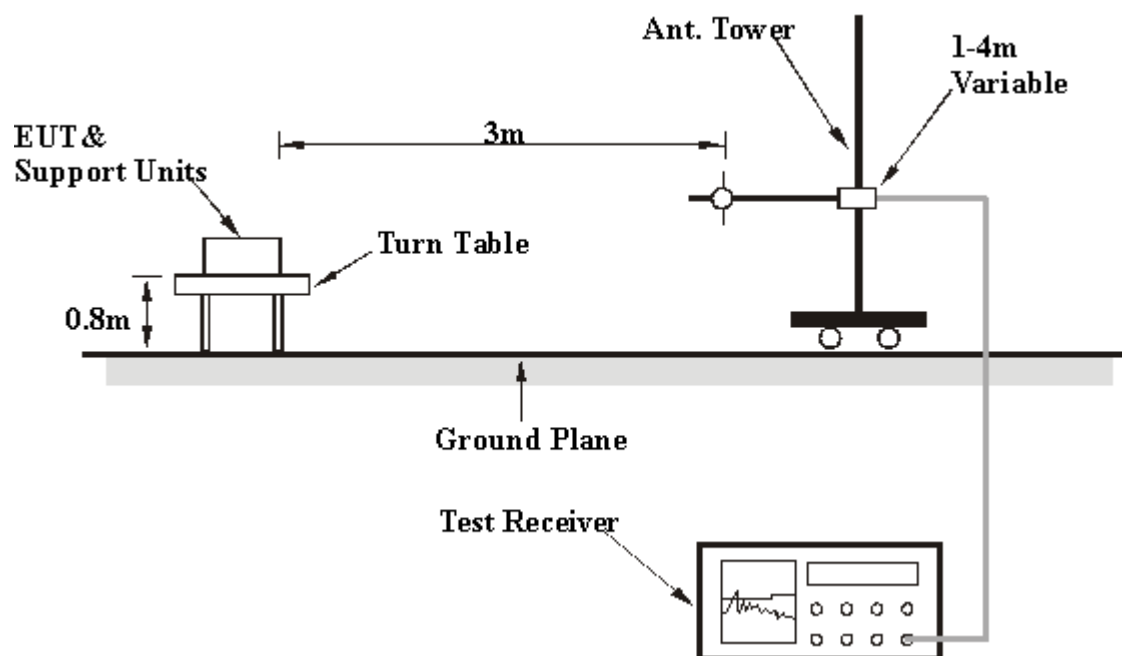
4.2.3 TEST PROCEDURES

- 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	Wireless Network Access Point	MODEL	WAP22
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	150.00	30.5 QP	43.50	-13.00	1.15H	51	19.00	10.30	1.20	0.00	-11.51
2	200.00	30.4 QP	43.50	-13.10	1.05H	61	20.00	8.98	1.42	0.00	-10.40
3	250.00	32.7 QP	46.00	-13.30	1.00H	106	19.00	12.02	1.66	0.00	-13.69
4	300.00	32.1 QP	46.00	-13.90	1.17H	185	17.00	13.18	1.88	0.00	-15.06
5	350.00	31.3 QP	46.00	-14.70	1.12H	230	15.00	14.21	2.04	0.00	-16.25
6	375.00	35.3 QP	46.00	-10.70	1.50H	269	18.00	15.13	2.14	0.00	-17.27
7	400.00	35.3 QP	46.00	-10.70	1.04H	351	17.00	16.11	2.24	0.00	-18.35
8	425.00	34.6 QP	46.00	-11.40	1.15H	256	16.00	16.24	2.33	0.00	-18.56
9	450.00	39.8 QP	46.00	-6.20	1.07H	230	21.00	16.37	2.41	0.00	-18.79
10	500.00	39.8 QP	46.00	-6.20	1.12H	196	20.00	17.26	2.50	0.00	-19.77
11	528.00	36.2 QP	46.00	-9.80	1.07H	140	16.00	17.62	2.60	0.00	-20.23
12	550.00	34.6 QP	46.00	-11.40	1.13H	105	14.00	17.93	2.68	0.00	-20.60
13	572.00	35.2 QP	46.00	-10.80	1.16H	50	14.20	18.25	2.75	0.00	-21.00
14	600.00	36.4 QP	46.00	-9.60	1.08H	52	15.00	18.61	2.83	0.00	-21.44
15	625.00	35.8 QP	46.00	-10.20	1.04H	104	14.00	18.91	2.92	0.00	-21.83
16	650.00	35.3 QP	46.00	-10.70	1.02H	158	13.00	19.23	3.02	0.00	-22.25
17	748.00	36.2 QP	46.00	-9.80	1.11H	214	12.80	20.14	3.26	0.00	-23.41
18	750.00	37.4 QP	46.00	-8.60	1.07H	279	14.00	20.18	3.26	0.00	-23.45
19	875.00	37.2 QP	46.00	-8.80	1.13H	325	13.00	20.63	3.54	0.00	-24.18

- 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	Wireless Network Access Point	MODEL	WAP22
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	74.00	24.5 QP	40.00	-15.50	1.14V	213	17.00	6.66	0.83	0.00	-7.49
2	125.00	30.6 QP	43.50	-12.90	1.06V	268	18.00	11.47	1.10	0.00	-12.57
3	150.00	29.5 QP	43.50	-14.00	1.01V	336	18.00	10.30	1.20	0.00	-11.51
4	200.00	27.4 QP	43.50	-16.10	1.14V	279	17.00	8.98	1.42	0.00	-10.40
5	250.00	29.7 QP	46.00	-16.30	1.10V	234	16.00	12.02	1.66	0.00	-13.69
6	375.00	31.3 QP	46.00	-14.70	1.07V	185	14.00	15.13	2.14	0.00	-17.27
7	400.00	32.3 QP	46.00	-13.70	1.32V	135	14.00	16.11	2.24	0.00	-18.35
8	440.00	33.7 QP	46.00	-12.30	1.26V	91	15.00	16.32	2.38	0.00	-18.70
9	450.00	34.8 QP	46.00	-11.20	1.20V	38	16.00	16.37	2.41	0.00	-18.79
10	500.00	34.0 QP	46.00	-12.00	1.53V	76	14.20	17.26	2.50	0.00	-19.77
11	528.00	33.2 QP	46.00	-12.80	1.49V	126	13.00	17.62	2.60	0.00	-20.22
12	550.00	34.0 QP	46.00	-12.00	1.43V	202	13.40	17.93	2.68	0.00	-20.60
13	600.00	33.4 QP	46.00	-12.60	1.37V	257	12.00	18.61	2.83	0.00	-21.44
14	650.00	35.7 QP	46.00	-10.30	1.32V	322	13.40	19.23	3.02	0.00	-22.25
15	748.00	35.4 QP	46.00	-10.60	1.32V	285	12.00	20.14	3.26	0.00	-23.40
16	750.00	38.8 QP	46.00	-7.20	1.25V	219	15.40	20.18	3.26	0.00	-23.44
17	850.00	37.0 QP	46.00	-9.00	1.21V	155	13.00	20.48	3.50	0.00	-23.98
18	875.00	37.7 QP	46.00	-8.30	1.18V	95	13.50	20.63	3.54	0.00	-24.18

- 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	Wireless Network Access Point	MODEL	WAP22
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	47.2 PK	74.00	-26.80	1.04H	12	52.00	25.20	4.86	34.90	4.84
2	*2413.5	95.2 PK	-	-	1.79H	351	63.00	27.11	5.10	0.00	-32.21
3	*2413.5	89.2 AV	-	-	1.79H	351	57.00	27.11	5.10	0.00	-32.21
4	4076.0	48.6 PK	74.00	-25.40	1.78H	320	46.20	30.13	6.78	34.52	-2.39
5	4824.0	55.0 PK	74.00	-19.00	1.84H	4	51.00	31.43	7.23	34.63	-4.02
6	4824.0	51.8 AV	54.00	-2.20	1.84H	4	47.80	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	46.2 PK	74.00	-27.80	1.67V	61	51.00	25.20	4.86	34.90	4.84
2	*2413.0	105.2 PK	-	-	1.02V	332	73.00	27.11	5.10	0.00	-32.21
3	*2413.0	100.2 AV	-	-	1.02V	332	68.00	27.11	5.10	0.00	-32.21
4	4076.0	49.1 PK	74.00	-24.90	1.64V	54	46.70	30.13	6.78	34.52	-2.39
5	4824.0	52.8 PK	74.00	-21.20	2.04V	359	48.76	31.43	7.23	34.63	-4.02
6	4824.0	49.8 AV	54.00	-4.20	2.04V	359	45.80	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	Wireless Network Access Point	MODEL	WAP22
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	47.5 PK	74.00	-26.50	1.66H	356	52.00	25.41	4.96	34.90	4.53
2	*2437.0	94.4 PK	-	-	1.79H	24	55.00	27.33	5.08	0.00	-32.40
3	*2437.0	87.4 AV	-	-	1.79H	24	62.00	27.33	5.08	0.00	-32.40
4	4126.0	48.3 PK	74.00	-25.70	1.60H	357	45.80	30.32	6.70	34.56	-2.46
5	4874.0	53.6 PK	74.00	-20.40	1.66H	11	49.50	31.47	7.21	34.63	-4.05
6	4874.0	50.1 AV	54.00	-3.90	1.66H	11	46.00	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/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	2063.0	46.5 PK	74.00	-27.50	1.30V	356	51.00	25.41	4.96	34.90	4.53
2	*2437.0	100.4 PK	-	-	1.91V	10	68.00	27.33	5.08	0.00	-32.41
3	*2437.0	95.4 AV	-	-	1.91V	10	63.00	27.33	5.08	0.00	-32.41
4	4126.0	49.5 PK	74.00	-24.50	1.60V	3	47.00	30.32	6.70	34.56	-2.46
5	4874.0	54.1 PK	74.00	-19.90	1.32V	360	50.00	31.47	7.21	34.63	-4.05
6	4874.0	51.6 AV	54.00	-2.40	1.32V	360	47.50	31.47	7.21	34.63	-4.05

- 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	Wireless Network Access Point	MODEL	WAP22
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	47.7 PK	74.00	-26.30	1.62H	357	52.00	25.62	5.02	34.90	4.26
2	*2462.0	95.0 PK	-	-	1.00H	8	62.80	27.11	5.10	0.00	-32.21
3	*2462.0	88.9 AV	-	-	1.00H	8	56.70	27.11	5.10	0.00	-32.21
4	2492.4	48.8 PK	74.00	-25.20	1.64H	66	51.10	27.54	5.06	34.90	2.31
5	4176.0	49.2 PK	74.00	-24.80	1.60H	1	46.70	30.41	6.68	34.58	-2.51
6	4924.0	53.3 PK	74.00	-20.70	1.42H	357	49.20	31.51	7.21	34.62	-4.10
7	4924.0	49.1 AV	54.00	-4.90	1.42H	357	45.00	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	46.7 PK	74.00	-27.30	1.17V	338	51.00	25.62	5.02	34.90	4.26
2	*2463.0	103.9 PK	-	-	1.00V	299	71.50	27.33	5.08	0.00	-32.41
3	*2463.0	97.4 AV	-	-	1.00V	299	65.00	27.33	5.08	0.00	-32.41
4	2494.0	48.9 PK	74.00	-25.10	1.78V	40	51.20	27.54	5.06	34.90	2.32
5	4176.0	49.3 PK	74.00	-24.70	1.37V	19	46.80	30.41	6.68	34.58	-2.51
6	4924.0	54.3 PK	74.00	-19.70	1.27V	357	50.20	31.51	7.21	34.62	-4.11
7	4924.0	50.9 AV	54.00	-3.10	1.27V	357	46.80	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

4.2.7 TEST RESULTS (B)

EUT	Wireless Network Access Point	MODEL	WAP22
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	150.00	28.5 QP	43.50	-15.00	1.09H	293	17.00	10.30	1.20	0.00	-11.51
2	200.00	28.6 QP	43.50	-14.90	2.06H	84	18.20	8.98	1.42	0.00	-10.40
3	250.00	31.2 QP	46.00	-14.80	2.06H	353	17.50	12.02	1.66	0.00	-13.69
4	300.00	33.1 QP	46.00	-12.90	1.23H	5	18.00	13.18	1.88	0.00	-15.07
5	375.00	34.3 QP	46.00	-11.70	1.44H	314	17.00	15.13	2.14	0.00	-17.27
6	400.00	33.3 QP	46.00	-12.70	1.21H	6	15.00	16.11	2.24	0.00	-18.35
7	440.00	33.7 QP	46.00	-12.30	1.18H	24	15.00	16.32	2.38	0.00	-18.70
8	450.00	33.0 QP	46.00	-13.00	1.19H	295	14.20	16.37	2.41	0.00	-18.78
9	500.00	35.8 QP	46.00	-10.20	1.02H	3	16.00	17.26	2.50	0.00	-19.77
10	550.00	34.6 QP	46.00	-11.40	1.05H	27	14.00	17.93	2.68	0.00	-20.61
11	600.00	36.4 QP	46.00	-9.60	1.87H	339	15.00	18.61	2.83	0.00	-21.45
12	650.00	36.3 QP	46.00	-9.70	1.64H	5	14.00	19.23	3.02	0.00	-22.25
13	700.00	34.5 QP	46.00	-11.50	1.52H	359	12.00	19.31	3.15	0.00	-22.46
14	748.02	37.4 QP	46.00	-8.60	1.71H	167	14.00	20.14	3.26	0.00	-23.41
15	750.00	42.4 QP	46.00	-3.60	1.41H	347	19.00	20.18	3.26	0.00	-23.45
16	792.00	34.9 QP	46.00	-11.10	1.43H	148	11.00	20.60	3.31	0.00	-23.91
17	800.00	35.0 QP	46.00	-11.00	1.52H	61	11.00	20.69	3.32	0.00	-24.01
18	850.00	34.4 QP	46.00	-11.60	1.45H	29	10.40	20.48	3.50	0.00	-23.98
19	900.00	33.8 QP	46.00	-12.20	1.22H	333	9.40	20.80	3.58	0.00	-24.39
20	950.00	33.5 QP	46.00	-12.50	1.24H	123	8.54	21.20	3.79	0.00	-24.99

- 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	Wireless Network Access Point	MODEL	WAP22
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	125.00	31.0 QP	43.50	-12.50	1.14V	353	18.40	11.47	1.10	0.00	-12.57
2	150.00	30.0 QP	43.50	-13.50	1.14V	57	18.50	10.30	1.20	0.00	-11.52
3	176.00	28.4 QP	43.50	-15.10	1.07V	165	18.00	9.08	1.33	0.00	-10.42
4	200.00	29.4 QP	43.50	-14.10	1.11V	358	19.00	8.98	1.42	0.00	-10.41
5	250.00	31.7 QP	46.00	-14.30	1.08V	9	18.00	12.02	1.66	0.00	-13.69
6	375.00	33.8 QP	46.00	-12.20	1.10V	82	16.50	15.13	2.14	0.00	-17.28
7	400.00	35.3 QP	46.00	-10.70	1.26V	357	17.00	16.11	2.24	0.00	-18.35
8	450.00	34.0 QP	46.00	-12.00	1.32V	224	15.22	16.37	2.41	0.00	-18.78
9	500.00	37.0 QP	46.00	-9.00	1.03V	239	17.20	17.26	2.50	0.00	-19.77
10	550.00	36.6 QP	46.00	-9.40	1.38V	326	16.00	17.93	2.68	0.00	-20.61
11	600.00	36.4 QP	46.00	-9.60	2.33V	317	15.00	18.61	2.83	0.00	-21.45
12	625.00	36.0 QP	46.00	-10.00	1.22V	46	14.20	18.91	2.92	0.00	-21.84
13	650.00	38.3 QP	46.00	-7.70	1.01V	272	16.00	19.23	3.02	0.00	-22.26
14	660.00	36.5 QP	46.00	-9.50	1.10V	194	14.20	19.25	3.05	0.00	-22.30
15	700.00	36.5 QP	46.00	-9.50	1.10V	20	14.00	19.31	3.15	0.00	-22.47
16	704.00	34.9 QP	46.00	-11.10	1.05V	55	12.40	19.38	3.16	0.00	-22.55
17	748.00	40.4 QP	46.00	-5.60	1.04V	285	17.00	20.14	3.26	0.00	-23.41
18	750.00	42.9 QP	46.00	-3.10	1.04V	280	19.50	20.18	3.26	0.00	-23.45
19	792.00	36.9 QP	46.00	-9.10	1.12V	6	13.00	20.60	3.31	0.00	-23.91
20	800.00	35.0 QP	46.00	-11.00	1.75V	103	11.00	20.69	3.32	0.00	-24.01
21	850.00	36.0 QP	46.00	-10.00	1.52V	35	12.00	20.48	3.50	0.00	-23.98
22	875.00	36.0 QP	46.00	-10.00	1.43V	297	11.80	20.63	3.54	0.00	-24.17
23	950.00	33.4 QP	46.00	-12.60	1.34V	264	8.40	21.20	3.79	0.00	-25.00

- 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	Wireless Network Access Point	MODEL	WAP22
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	2038.0	45.2 PK	74.00	-28.80	1.07H	26	50.00	25.20	4.86	34.90	4.84
2	*2413.0	94.2 PK	-	-	1.55H	358	62.00	27.11	5.10	0.00	-32.21
3	*2413.0	87.2 AV	-	-	1.55H	358	55.00	27.11	5.10	0.00	-32.21
4	4076.0	48.6 PK	74.00	-25.40	1.24H	288	46.20	30.13	6.78	34.52	-2.39
5	4824.0	49.0 PK	74.00	-25.00	1.25H	251	45.00	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/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	2038.0	49.4 PK	74.00	-24.60	1.24V	306	54.20	25.20	4.86	34.90	4.84
2	*2413.0	105.4 PK	-	-	1.10V	54	73.21	27.11	5.10	0.00	-32.22
3	*2413.0	99.2 AV	-	-	1.10V	54	67.00	27.11	5.10	0.00	-32.22
4	4076.0	48.8 PK	74.00	-25.20	1.24V	59	46.40	30.13	6.78	34.52	-2.39
5	4824.0	51.2 PK	74.00	-22.80	1.45V	239	47.20	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	Wireless Network Access Point	MODEL	WAP22
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	47.5 PK	74.00	-26.50	1.18H	112	52.00	25.41	4.96	34.90	4.53
2	*2437.0	95.4 PK	-	-	1.19H	294	63.00	27.33	5.08	0.00	-32.40
3	*2437.0	90.4 AV	-	-	1.19H	294	58.00	27.33	5.08	0.00	-32.40
4	4126.0	48.7 PK	74.00	-25.30	1.16H	275	46.20	30.32	6.70	34.56	-2.46
5	4874.0	50.1 PK	74.00	-23.90	1.27H	356	46.00	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/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	2063.0	50.5 PK	74.00	-23.50	1.38V	166	55.00	25.41	4.96	34.90	4.53
2	*2437.0	103.4 PK	-	-	1.01V	4	71.00	27.33	5.08	0.00	-32.40.
3	*2437.0	97.4 AV	-	-	1.01V	4	65.00	27.33	5.08	0.00	-32.40.
4	4126.0	48.5 PK	74.00	-25.50	1.29V	340	46.00	30.32	6.70	34.56	-2.46
5	4874.0	51.3 AV	54.00	-2.70	1.51V	359	47.20	31.47	7.21	34.63	-4.05
6	4874.0	55.1 PK	74.00	-18.90	1.51V	359	51.00	31.47	7.21	34.63	-4.05.

- 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	Wireless Network Access Point	MODEL	WAP22
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	48.1 PK	74.00	-25.90	1.40H	271	52.40	25.62	5.02	34.90	4.26
2	*2463.0	93.4 PK	-	-	1.22H	63	61.00	27.33	5.08	0.00	-32.40
3	*2463.0	88.9 AV	-	-	1.22H	63	56.50	27.33	5.08	0.00	-32.40
4	2487.4	47.1 PK	74.00	-26.90	1.19H	39	49.40	27.54	5.06	34.90	2.32
5	4176.0	48.7 PK	74.00	-25.30	1.20H	259	46.20	30.41	6.68	34.58	-2.51
6	4924.0	50.5 PK	74.00	-23.50	1.20H	107	46.40	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	52.7 PK	74.00	-21.30	1.07V	183	57.00	25.62	5.02	34.90	4.26
2	2088.0	50.9 AV	54.00	-3.10	1.07V	183	55.20	25.62	5.02	34.90	4.26
3	*2463.0	98.2 AV	-	-	1.65V	354	65.80	27.33	5.08	0.00	-32.41
4	*2463.0	103.8 PK	-	-	1.65V	354	71.40	27.33	5.08	0.00	-32.41
5	2491.0	48.7 PK	74.00	-25.30	1.24V	3	51.00	27.54	5.06	34.90	2.31
6	4176.0	48.5 PK	74.00	-25.50	1.21V	232	46.00	30.41	6.68	34.58	-2.51
7	4924.0	50.6 PK	74.00	-23.40	1.44V	301	46.50	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
SPECTRUM ANALYZER	FSEK30	100049	July 17, 2002

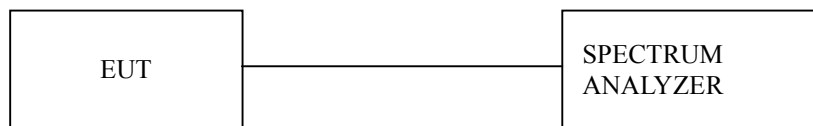
NOTES:

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

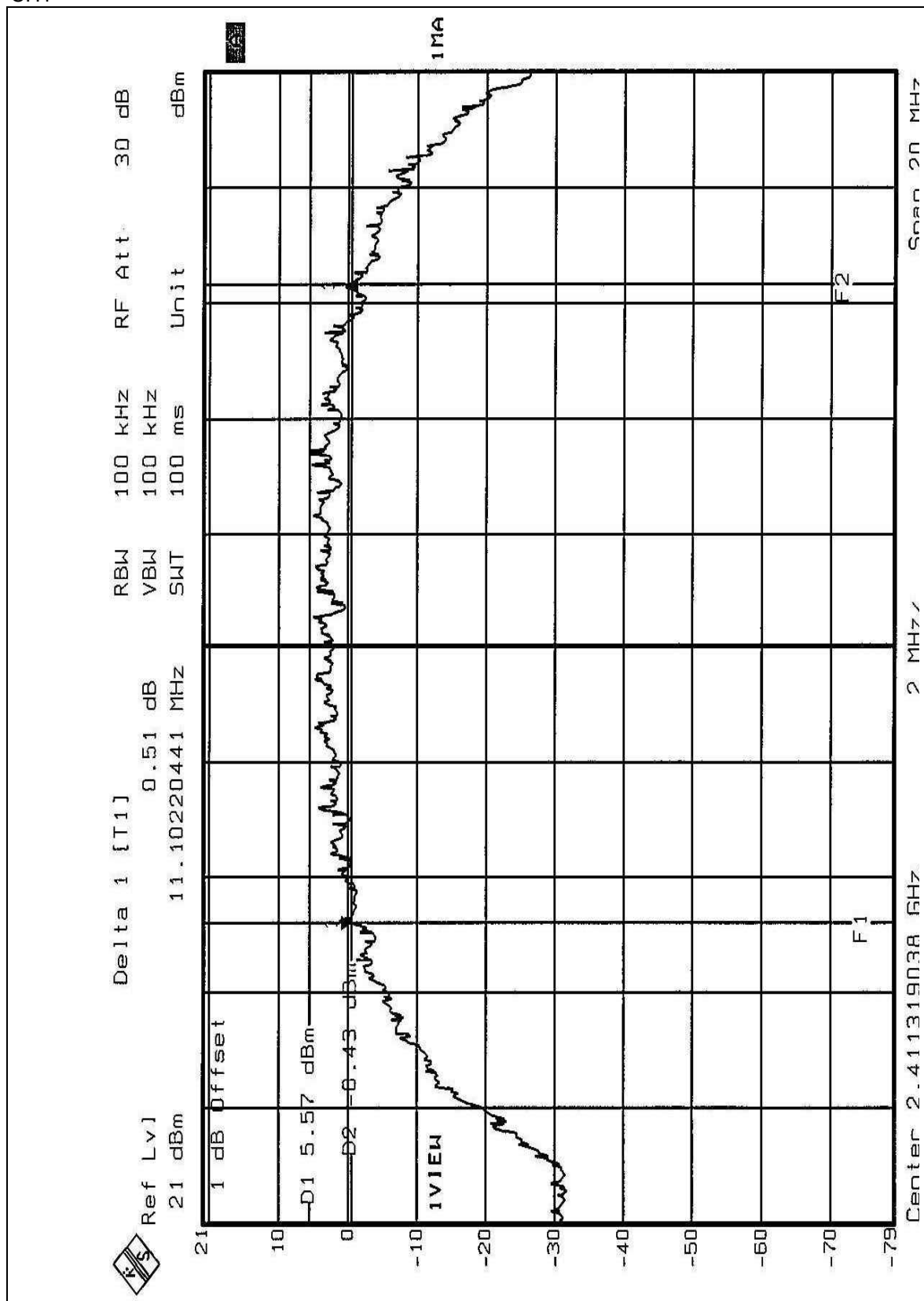
The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.3.6 TEST RESULTS

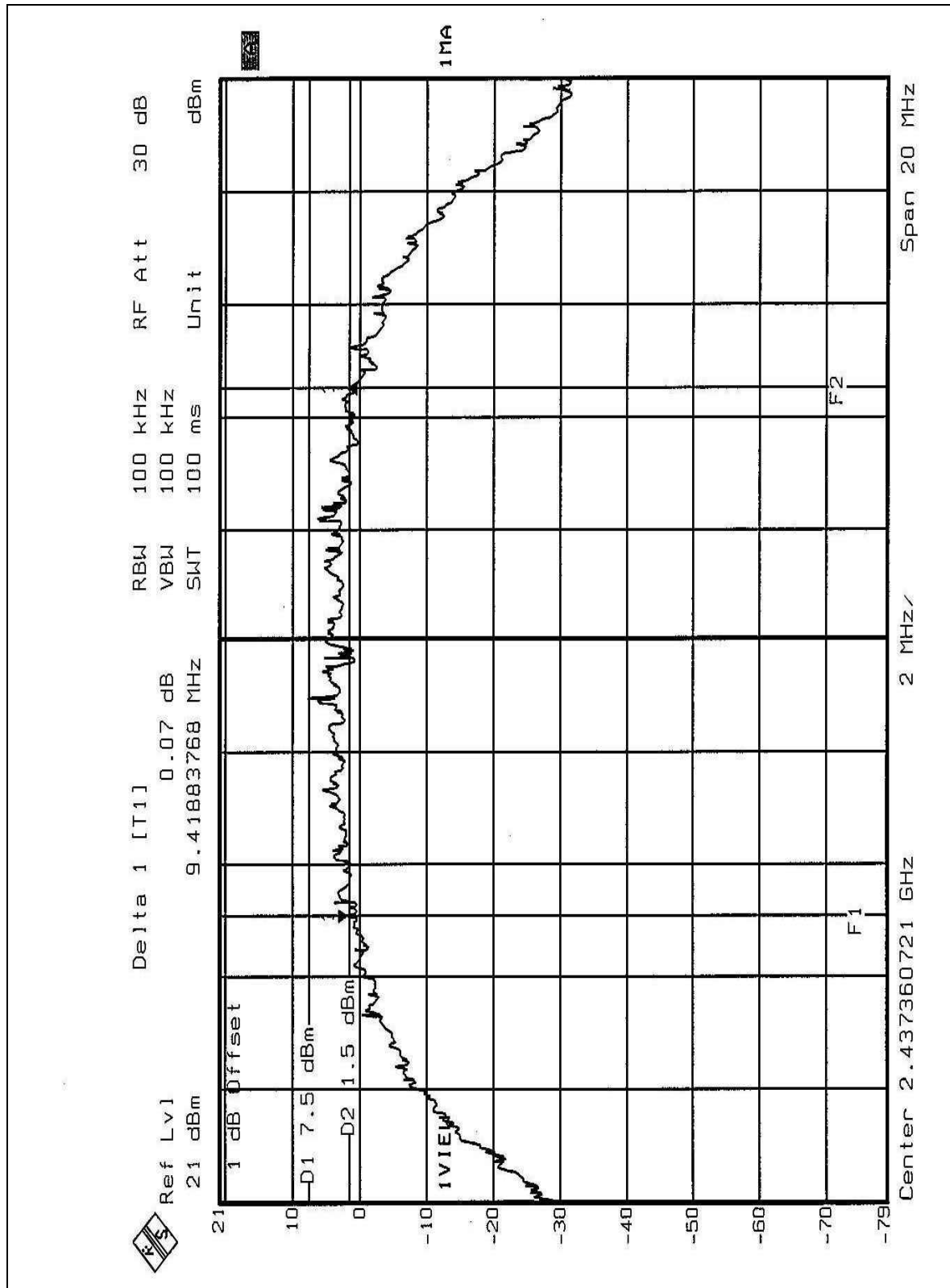
EUT	Wireless Network Access Point	MODEL	WAP22
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	14 deg. C, 70%RH, 1005 hPa
TESTED BY: Bruce Shiau			

CHANNEL	CHANNEL FREQUENCY (MHz)	6 dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	11.10	0.5	PASS
6	2437	9.42	0.5	PASS
11	2462	10.58	0.5	PASS

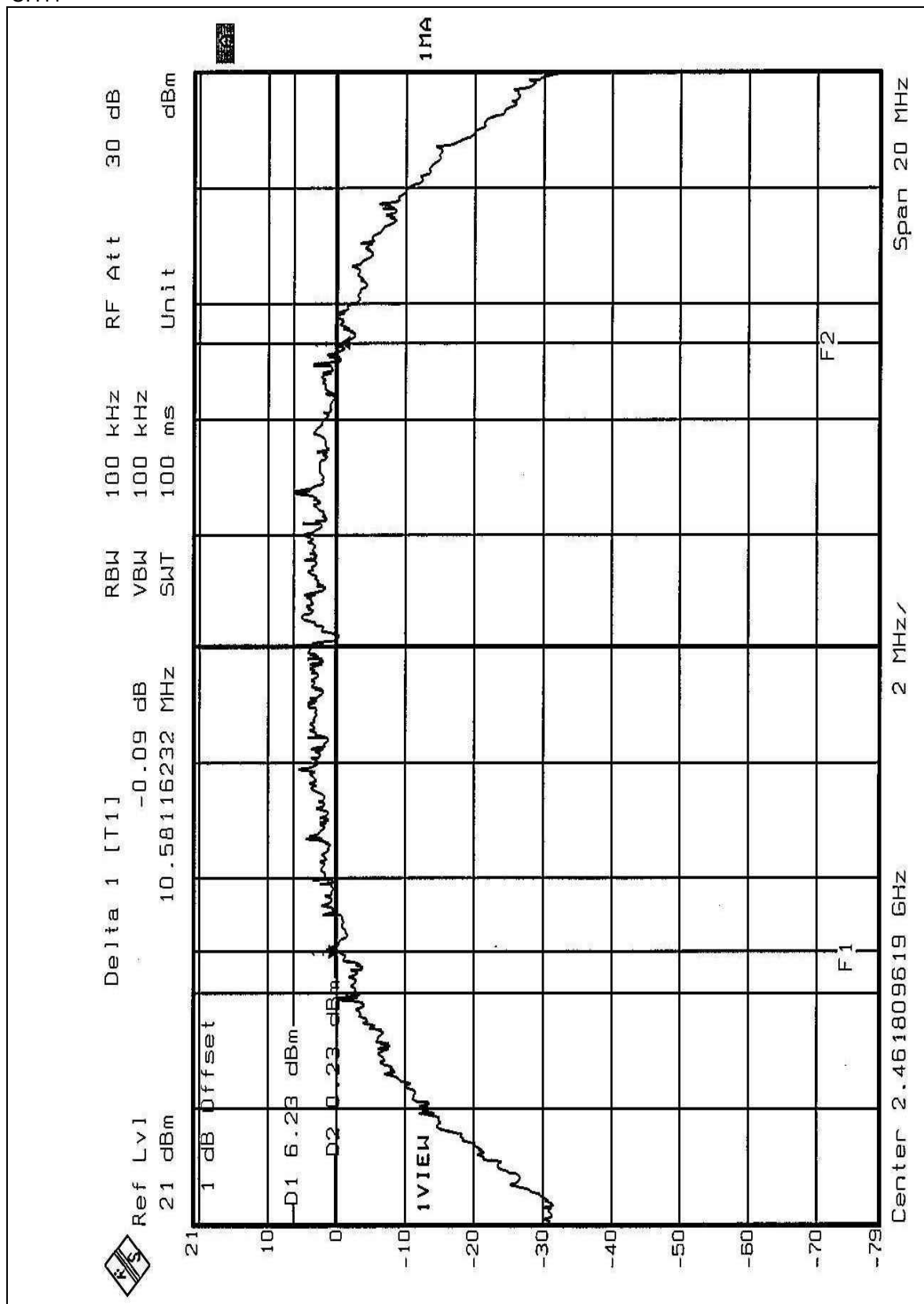
CH1



CH6



CH11



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 INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SINGLE CHANNEL POWER METER	NRVS	100026	Feb. 21, 2002
PEAK POWER SENSOR	NRV-Z32	100013	May 23, 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

1. The transmitter output was connected to the peak power meter.

4.4.4 TEST SETUP



4.4.5 EUT OPERATING CONDITIONS

Same as Item 3.4.5

4.4.6 TEST RESULTS

EUT	Wireless Network Access Point	MODEL	WAP22
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	14 deg. C, 70%RH, 1005 hPa
TESTED BY: Bruce Shiau			

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	15.45	30	PASS
6	2437	15.87	30	PASS
11	2462	15.74	30	PASS