



# FCC TEST REPORT

**REPORT NO.:** RF910602R01

**MODEL NO.:** DW-250

**RECEIVED:** May 13, 2002

**TESTED:** May 14 ~ June 12, 2002

**APPLICANT:** D-LINK CORPORATION

**ADDRESS:** No. 8, Li Hsing Rd VII, Science-Based  
Industrial Park, Hsinchu, 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



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## 1 CERTIFICATION

**PRODUCT :** IEEE802.11b WLAN Mini PCI  
**BRAND NAME :** D-Link  
**MODEL NO. :** DW-250  
**APPLICANT :** D-LINK CORPORATION  
**STANDARDS :** 47 CFR Part 15, Subpart C (Section 15.247),  
ANSI C63.4-1992

We, **Advance Data Technology Corporation**, hereby certify that one sample of the designation has been tested in our facility from May 14, 2002 to June 12, 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.

CHECKED BY : Emily Lu , DATE : June 17, 2002  
Emily Lu

APPROVED BY : Alan Lane , DATE : June 17, 2002  
Dr. Alan Lane, Manager



## 2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

<b>APPLIED STANDARD: 47 CFR Part 15, Subpart C</b>			
<b>Standard Section</b>	<b>Test Type and Limit</b>	<b>Result</b>	<b>REMARK</b>
15.207	AC Power Conducted Emission Limit: 48dBuV	PASS	Meet the requirement of limit Minimum passing margin is -3.40dBuV at 11.6289MHz
15.247(a)(2)	Spectrum Bandwidth of a Direct Sequence Spread Spectrum System Limit: min. 500kHz	PASS	Meet the requirement of limit
15.247(b)	Maximum Peak Output Power Limit: max. 30dBm	PASS	Meet the requirement of limit
15.247(c)	Transmitter Radiated Emissions Limit: Table 15.209	PASS	Meet the requirement of limit Minimum passing margin is -2.2dBuV at 396.00 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

<b>PRODUCT</b>	IEEE802.11b WLAN Mini PCI
<b>MODEL NO.</b>	DW-250
<b>POWER SUPPLY</b>	3.3VDC from host equipment
<b>MODULATION TYPE</b>	CCK, BPSK, QPSK
<b>RADIO TECHNOLOGY</b>	DSSS
<b>TRANSFER RATE</b>	1/2/5.5/11Mbps
<b>FREQUENCY RANGE</b>	2412MHz ~ 2462MHz
<b>NUMBER OF CHANNEL</b>	11
<b>OUTPUT POWER</b>	14.8dBm
<b>ANTENNA TYPE</b>	Dipole antenna
<b>DATA CABLE</b>	NA
<b>I/O PORTS</b>	NA
<b>ASSOCIATED DEVICES</b>	NA

**NOTE:**

1. There are three Dipole antennas with antenna gain 5dBi, 2dBi and 1.7dBi provided to this EUT. Antennas with antenna gain 5dBi and 1.7dBi were chosen for final test.
2. For a more detailed features description, please refer to the manufacturer's specifications or User's Manual.



### 3.2 DESCRIPTION OF TEST MODES

Eleven channels are provided in this EUT.

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

**NOTE:**

1. Below 1 GHz, the channel 1, 6, and 11 were pre-tested in chamber. The channel 11, worst case one, was chosen for final test.
2. Above 1 GHz, the channel 1, 6, and 11 were tested individually.
3. Test result (A) is for antenna with antenna gain 5dBi and test result (B) is for antenna with antenna gain 1.7dBi.

### 3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is an IEEE802.11b WLAN Mini PCI. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

**FCC CFR 47 Part 15, Subpart C. (15.247)**

**ANSI C63.4 : 1992**

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

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



### 3.4 DESCRIPTION OF SUPPORT UNITS

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

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	COLOR MONITOR	ADI	CM100	026058T10200611 A	FCC DoC APPROVED
2	PS/2 MOUSE	Logitech	M-S43	LZE00703207	DZL211106
3	PS/2 KEYBOARD	BTC	5121W	A00801156	E5XKB5121WTH0110
4	PC	W-Link	WEN-LAB01	NA	NA

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	1.8 m braid shielded wire, terminated with VGA connector via metallic frame, w/o core
2	1.8 m foil shielded wire, terminated with PS/2 connector via drain wire, w/o core.
3	1.6 m foil shielded wire, terminated with PS/2 connector via metallic frame, w/o core.
4	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

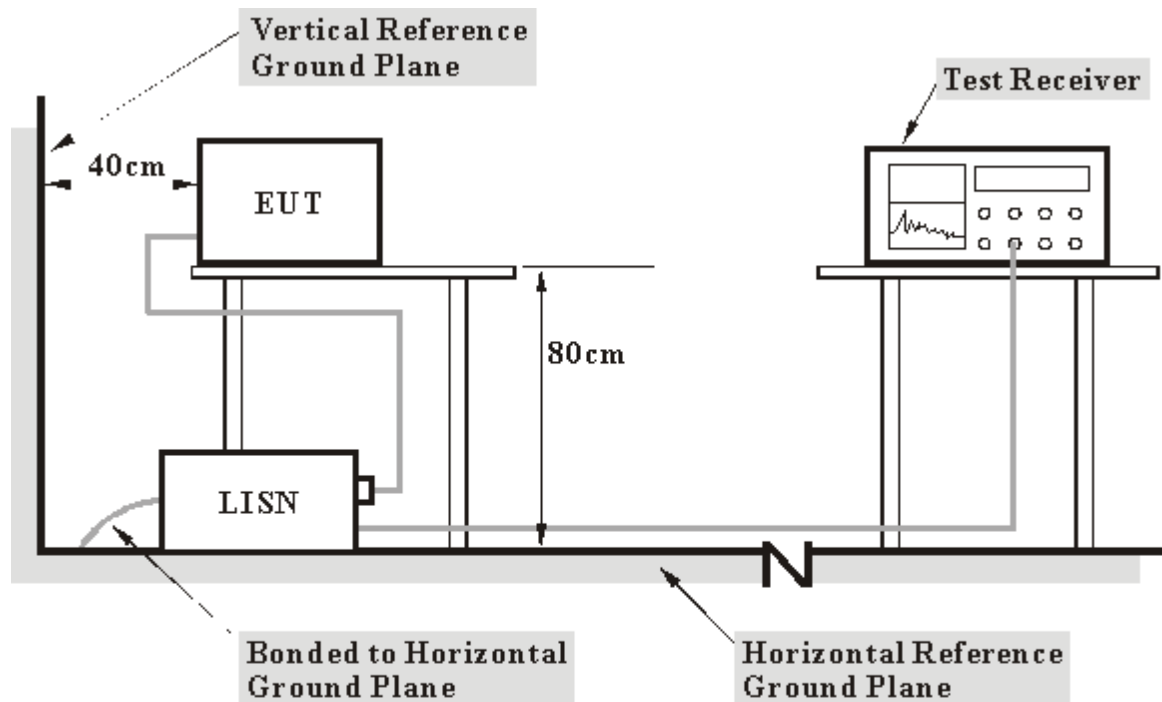
DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
ROHDE & SCHWARZ Test Receiver	ESCS30	834115/016	Mar. 3, 2003
ROHDE & SCHWARZ Artificial Mains Network (For EUT)	ESH3-Z5	847265/023	Jan. 10, 2003
* ROHDE & SCHWARZ 4-wire ISN	ENY41	838119/028	Dec. 10, 2002
* ROHDE & SCHWARZ 2-wire ISN	ENY22	837497/018	Dec. 10, 2002
EMCO L.I.S.N. (For peripherals)	3825/2	9504-2359	July 10, 2002
Software	Cond-V2L	NA	NA
RF cable (JYEBAO)	5D-FB	Cable-C03.01	July 11, 2002
Terminator (For EMCO LISN)	NA	E1-01-300	Feb. 20, 2003
Terminator (For EMCO LISN)	NA	E1-01-301	Feb. 20, 2003
Shielded Room	Site 3	ADT-C03	NA
VCCI Site Registration No.	Site 3	C-274	NA

- NOTE: 1. The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. “\*”: These equipment are used for conducted telecom port test only (if tested).

#### 4.1.3 TEST PROCEDURES

- 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.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- 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:**
- Support units were connected to second LISN.
  - 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. Plug the EUT into the PCI extender which connected to a computer system placed on a testing table.
- b. The computer system ran a test program to enable EUT under transmission/receiving condition continuously at specific channel frequency.
- c. The computer system sent "H" messages to its screen.
- d. The computer system sent "H" messages to modem.
- e. The computer system sent "H" messages to printer, and the printer prints them on paper.



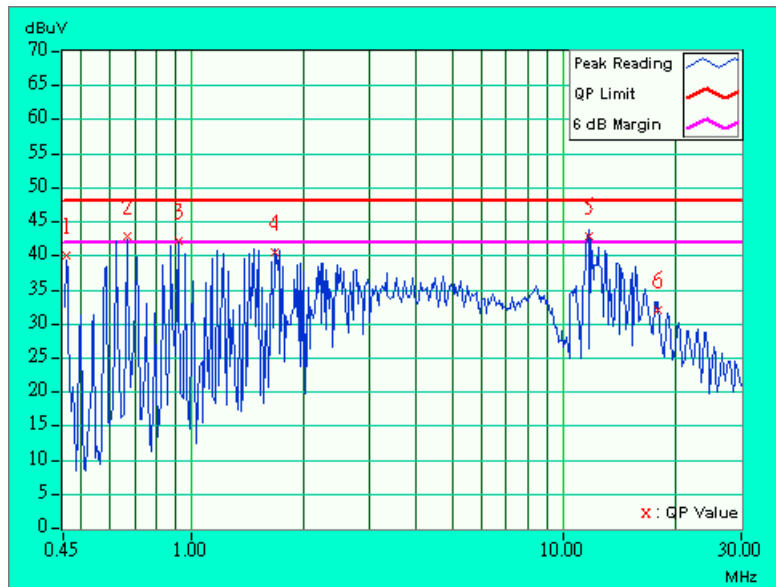
4.1.6 TEST RESULTS (A)

<b>EUT</b>	IEEE802.11b WLAN Mini PCI	<b>MODEL</b>	DW-250
<b>MODE</b>	Channel 1	<b>6dB BANDWIDTH</b>	9 kHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>PHASE</b>	Line (L)
<b>ENVIRONMENTAL CONDITIONS</b>	30 deg. C, 70%RH, 1005 hPa	<b>TESTED BY:</b> Bunny Yao	

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.458	0.11	39.45	-	39.56	-	48.00	-	-8.44	-
2	0.669	0.14	42.29	-	42.43	-	48.00	-	-5.57	-
3	0.919	0.19	41.64	-	41.83	-	48.00	-	-6.17	-
4	1.668	0.20	39.92	-	40.12	-	48.00	-	-7.88	-
5	11.625	0.43	42.36	-	42.79	-	48.00	-	-5.21	-
6	17.949	0.56	31.49	-	32.05	-	48.00	-	-15.95	-

**NOTE:**

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



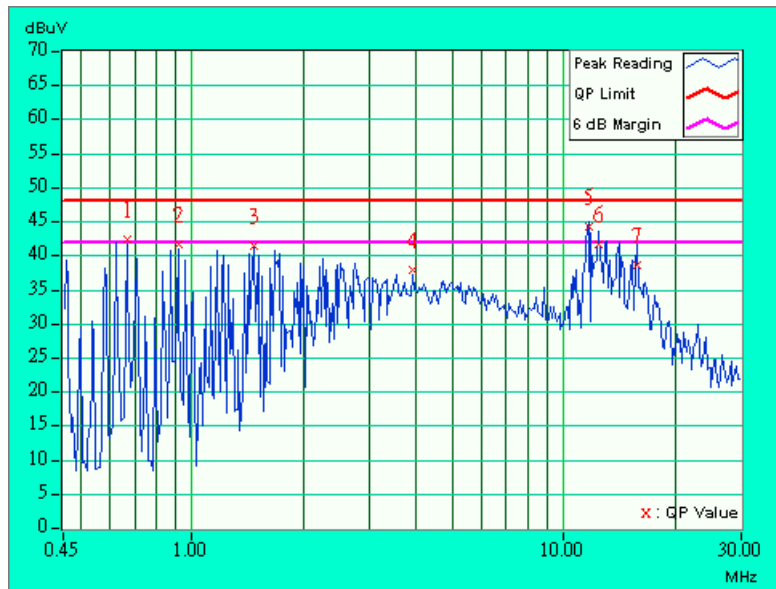


<b>EUT</b>	IEEE802.11b WLAN Mini PCI	<b>MODEL</b>	DW-250
<b>MODE</b>	Channel 1	<b>6dB BANDWIDTH</b>	9 kHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>PHASE</b>	Neutral (N)
<b>ENVIRONMENTAL CONDITIONS</b>	30 deg. C, 70%RH, 1005 hPa	<b>TESTED BY:</b> Bunny Yao	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.669	0.14	41.82	-	41.96	-	48.00	-	-6.04	-
2	0.919	0.19	41.01	-	41.20	-	48.00	-	-6.80	-
3	1.461	0.20	40.91	-	41.11	-	48.00	-	-6.89	-
4	3.922	0.30	37.25	-	37.55	-	48.00	-	-10.45	-
5	11.629	0.47	43.76	-	44.23	-	48.00	-	-3.77	-
6	12.379	0.50	41.12	-	41.62	-	48.00	-	-6.38	-
7	15.707	0.64	37.92	-	38.56	-	48.00	-	-9.44	-

**NOTE:**

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



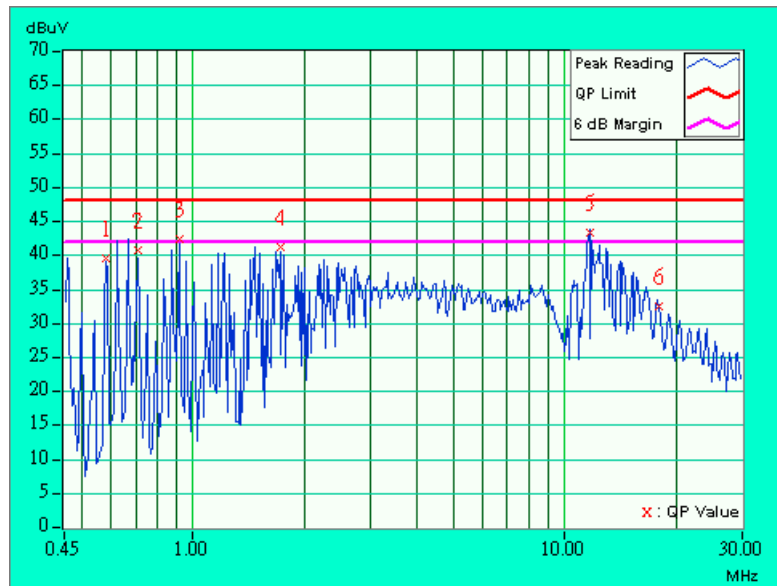


<b>EUT</b>	IEEE802.11b WLAN Mini PCI	<b>MODEL</b>	DW-250
<b>MODE</b>	Channel 6	<b>6dB BANDWIDTH</b>	9 kHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>PHASE</b>	Line (L)
<b>ENVIRONMENTAL CONDITIONS</b>	30 deg. C, 70%RH, 1005 hPa	<b>TESTED BY:</b> Bunny Yao	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.583	0.13	39.04	-	39.17	-	48.00	-	-8.83	-
2	0.708	0.15	40.14	-	40.29	-	48.00	-	-7.71	-
3	0.919	0.19	41.76	-	41.95	-	48.00	-	-6.05	-
4	1.711	0.20	40.68	-	40.88	-	48.00	-	-7.12	-
5	11.629	0.43	42.77	-	43.20	-	48.00	-	-4.80	-
6	17.949	0.56	32.08	-	32.64	-	48.00	-	-15.36	-

**NOTE:**

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



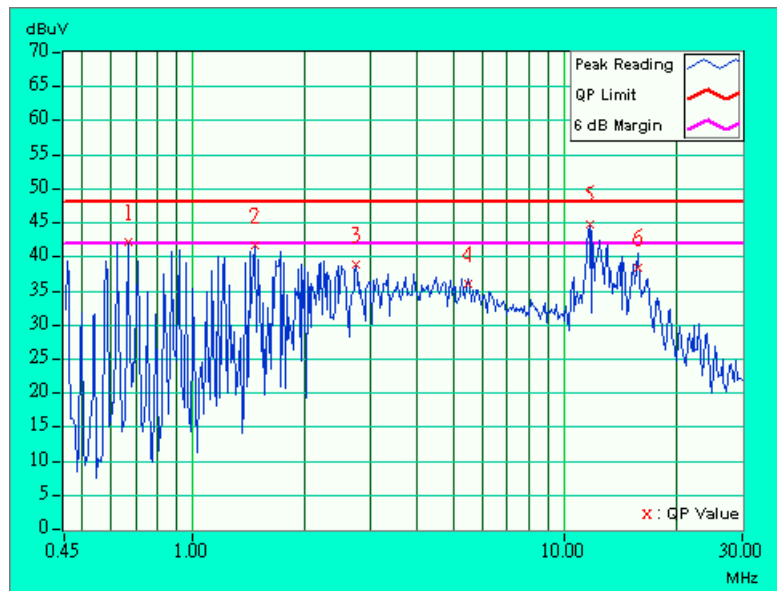


<b>EUT</b>	IEEE802.11b WLAN Mini PCI	<b>MODEL</b>	DW-250
<b>MODE</b>	Channel 6	<b>6dB BANDWIDTH</b>	9 kHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>PHASE</b>	Neutral (N)
<b>ENVIRONMENTAL CONDITIONS</b>	30 deg. C, 70%RH, 1005 hPa	<b>TESTED BY:</b> Bunny Yao	

No	Freq.	Corr. Factor	Reading Value [dB (Uv)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.669	0.14	41.60	-	41.74	-	48.00	-	-6.26	-
2	1.461	0.20	41.06	-	41.26	-	48.00	-	-6.74	-
3	2.754	0.24	38.30	-	38.54	-	48.00	-	-9.46	-
4	5.508	0.33	35.41	-	35.74	-	48.00	-	-12.26	-
5	11.629	0.47	44.13	-	44.60	-	48.00	-	-3.40	-
6	15.711	0.64	37.81	-	38.45	-	48.00	-	-9.55	-

**NOTE:**

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



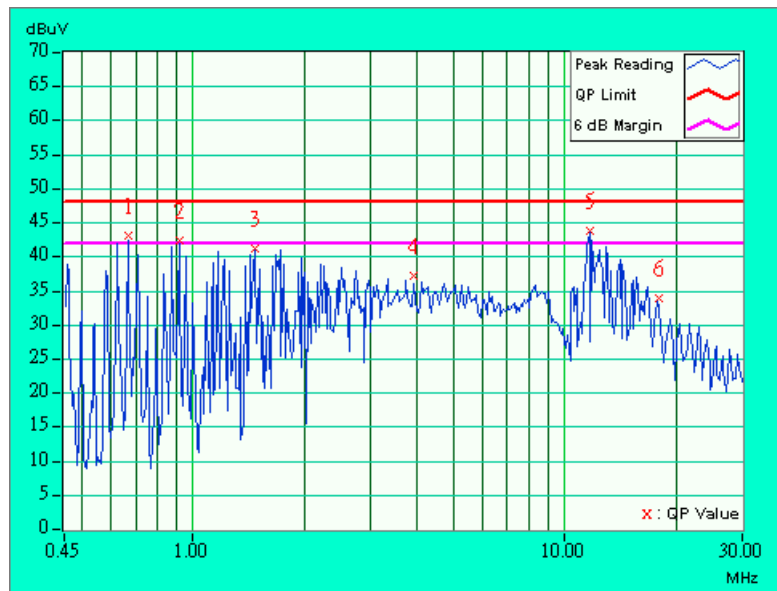


<b>EUT</b>	IEEE802.11b WLAN Mini PCI	<b>MODEL</b>	DW-250
<b>MODE</b>	Channel 11	<b>6dB BANDWIDTH</b>	9 kHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>PHASE</b>	Line (L)
<b>ENVIRONMENTAL CONDITIONS</b>	30 deg. C, 70%RH, 1005 hPa	<b>TESTED BY:</b> Bunny Yao	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.669	0.14	42.48	-	42.62	-	48.00	-	-5.38	-
2	0.919	0.19	41.76	-	41.95	-	48.00	-	-6.05	-
3	1.461	0.20	40.77	-	40.97	-	48.00	-	-7.03	-
4	3.922	0.30	36.71	-	37.01	-	48.00	-	-10.99	-
5	11.629	0.43	43.24	-	43.67	-	48.00	-	-4.33	-
6	17.953	0.56	33.33	-	33.89	-	48.00	-	-14.11	-

**NOTE:**

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





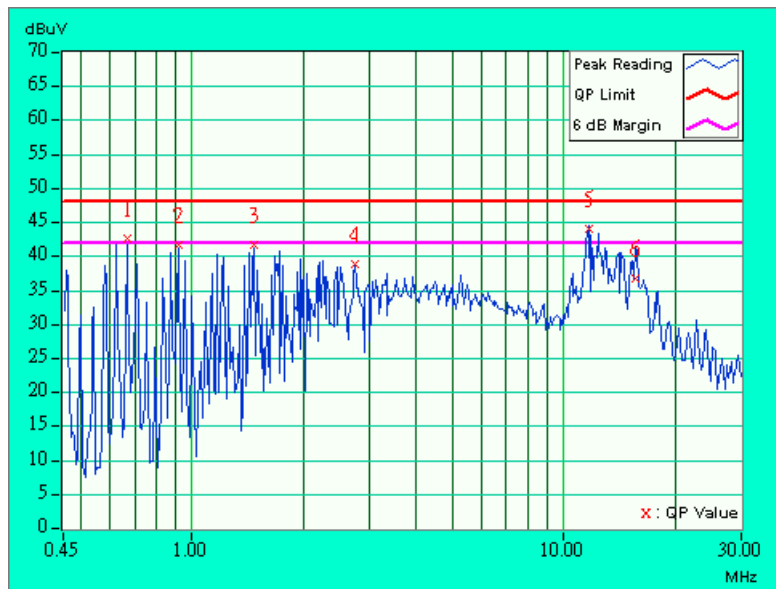


<b>EUT</b>	IEEE802.11b WLAN Mini PCI	<b>MODEL</b>	DW-250
<b>MODE</b>	Channel 11	<b>6dB BANDWIDTH</b>	9 kHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>PHASE</b>	Neutral (N)
<b>ENVIRONMENTAL CONDITIONS</b>	30 deg. C, 70%RH, 1005 hPa	<b>TESTED BY:</b> Bunny Yao	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.669	0.14	41.92	-	42.06	-	48.00	-	-5.94	-
2	0.919	0.19	41.09	-	41.28	-	48.00	-	-6.72	-
3	1.461	0.20	40.97	-	41.17	-	48.00	-	-6.83	-
4	2.754	0.24	38.35	-	38.59	-	48.00	-	-9.41	-
5	11.629	0.47	43.52	-	43.99	-	48.00	-	-4.01	-
6	15.508	0.63	36.09	-	36.72	-	48.00	-	-11.28	-

**NOTE:**

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





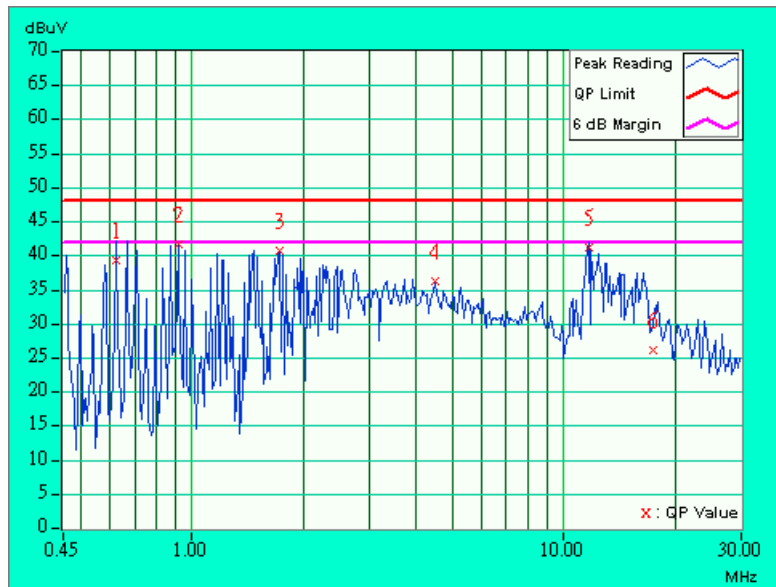
4.1.7 TEST RESULTS (B)

<b>EUT</b>	IEEE802.11b WLAN Mini PCI	<b>MODEL</b>	DW-250
<b>MODE</b>	Channel 1	<b>6dB BANDWIDTH</b>	9 kHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>PHASE</b>	Line (L)
<b>ENVIRONMENTAL CONDITIONS</b>	30 deg. C, 70%RH, 1005 hPa	<b>TESTED BY:</b> Bunny Yao	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.622	0.14	38.82	-	38.96	-	48.00	-	-9.04	-
2	0.919	0.19	41.11	-	41.30	-	48.00	-	-6.70	-
3	1.711	0.20	40.30	-	40.50	-	48.00	-	-7.50	-
4	4.504	0.31	35.73	-	36.04	-	48.00	-	-11.96	-
5	11.625	0.43	40.60	-	41.03	-	48.00	-	-6.97	-
6	17.336	0.55	25.71	-	26.26	-	48.00	-	-21.74	-

**NOTE:**

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



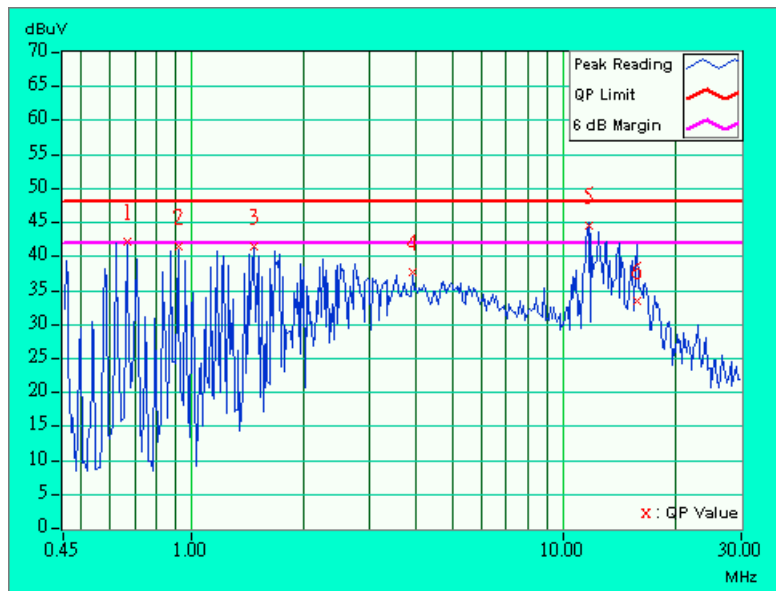


<b>EUT</b>	IEEE802.11b WLAN Mini PCI	<b>MODEL</b>	DW-250
<b>MODE</b>	Channel 1	<b>6dB BANDWIDTH</b>	9 kHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>PHASE</b>	Neutral (N)
<b>ENVIRONMENTAL CONDITIONS</b>	30 deg. C, 70%RH, 1005 hPa	<b>TESTED BY:</b> Bunny Yao	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.669	0.14	41.55	-	41.69	-	48.00	-	-6.31	-
2	0.919	0.19	40.89	-	41.08	-	48.00	-	-6.92	-
3	1.461	0.20	40.79	-	40.99	-	48.00	-	-7.01	-
4	3.922	0.30	37.03	-	37.33	-	48.00	-	-10.67	-
5	11.629	0.47	43.80	-	44.27	-	48.00	-	-3.73	-
6	15.707	0.64	32.72	-	33.36	-	48.00	-	-14.64	-

**NOTE:**

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



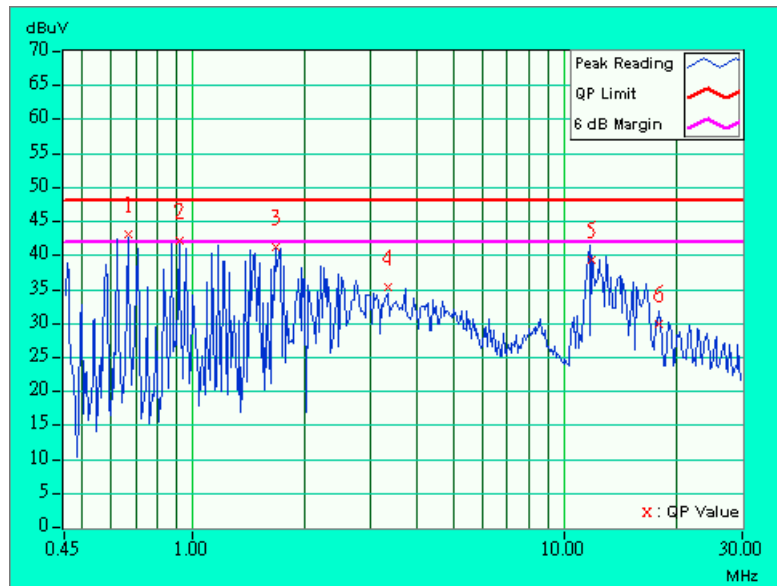


<b>EUT</b>	IEEE802.11b WLAN Mini PCI	<b>MODEL</b>	DW-250
<b>MODE</b>	Channel 6	<b>6dB BANDWIDTH</b>	9 kHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>PHASE</b>	Line (L)
<b>ENVIRONMENTAL CONDITIONS</b>	30 deg. C, 70%RH, 1005 hPa	<b>TESTED BY:</b> Bunny Yao	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.669	0.14	42.51	-	42.65	-	48.00	-	-5.35	-
2	0.919	0.19	41.64	-	41.83	-	48.00	-	-6.17	-
3	1.668	0.20	40.65	-	40.85	-	48.00	-	-7.15	-
4	3.336	0.27	34.85	-	35.12	-	48.00	-	-12.88	-
5	11.832	0.44	38.73	-	39.17	-	48.00	-	-8.83	-
6	17.957	0.56	29.45	-	30.01	-	48.00	-	-17.99	-

**NOTE:**

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



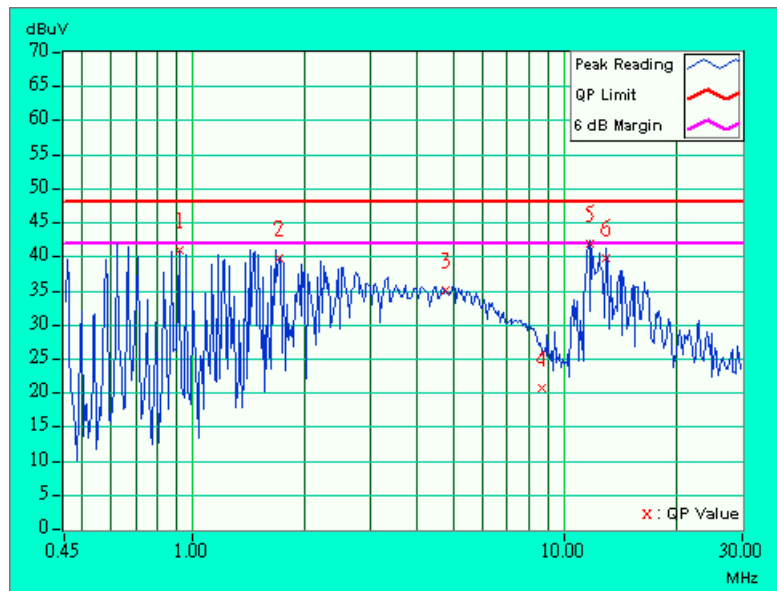


<b>EUT</b>	IEEE802.11b WLAN Mini PCI	<b>MODEL</b>	DW-250
<b>MODE</b>	Channel 6	<b>6dB BANDWIDTH</b>	9 kHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>PHASE</b>	Neutral (N)
<b>ENVIRONMENTAL CONDITIONS</b>	30 deg. C, 70%RH, 1005 hPa	<b>TESTED BY:</b> Bunny Yao	

No	Freq.	Corr. Factor	Reading Value [dB (Uv)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.919	0.19	40.40	-	40.59	-	48.00	-	-7.41	-
2	1.707	0.20	39.31	-	39.51	-	48.00	-	-8.49	-
3	4.793	0.31	34.49	-	34.80	-	48.00	-	-13.20	-
4	8.656	0.38	20.25	-	20.63	-	48.00	-	-27.37	-
5	11.629	0.47	41.34	-	41.81	-	48.00	-	-6.19	-
6	12.852	0.51	39.37	-	39.88	-	48.00	-	-8.12	-

**NOTE:**

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



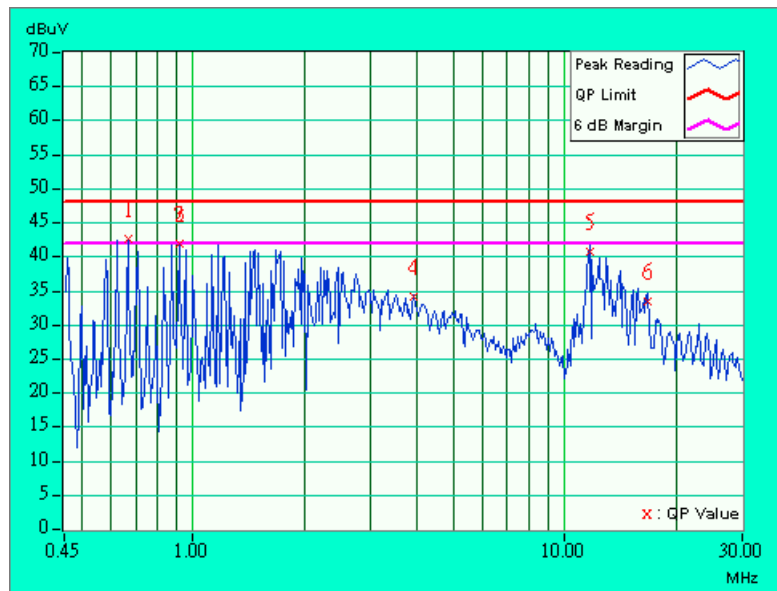


<b>EUT</b>	IEEE802.11b WLAN Mini PCI	<b>MODEL</b>	DW-250
<b>MODE</b>	Channel 11	<b>6dB BANDWIDTH</b>	9 kHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>PHASE</b>	Line (L)
<b>ENVIRONMENTAL CONDITIONS</b>	30 deg. C, 70%RH, 1005 hPa	<b>TESTED BY:</b> Bunny Yao	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.
1	0.669	0.14	42.21	-	42.35	-	48.00	-	-5.65	-
2	0.919	0.19	41.51	-	41.70	-	48.00	-	-6.30	-
3	0.919	0.19	41.51	-	41.70	-	48.00	-	-6.30	-
4	3.922	0.30	33.70	-	34.00	-	48.00	-	-14.00	-
5	11.629	0.43	40.18	-	40.61	-	48.00	-	-7.39	-
6	16.727	0.53	33.01	-	33.54	-	48.00	-	-14.46	-

**NOTE:**

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



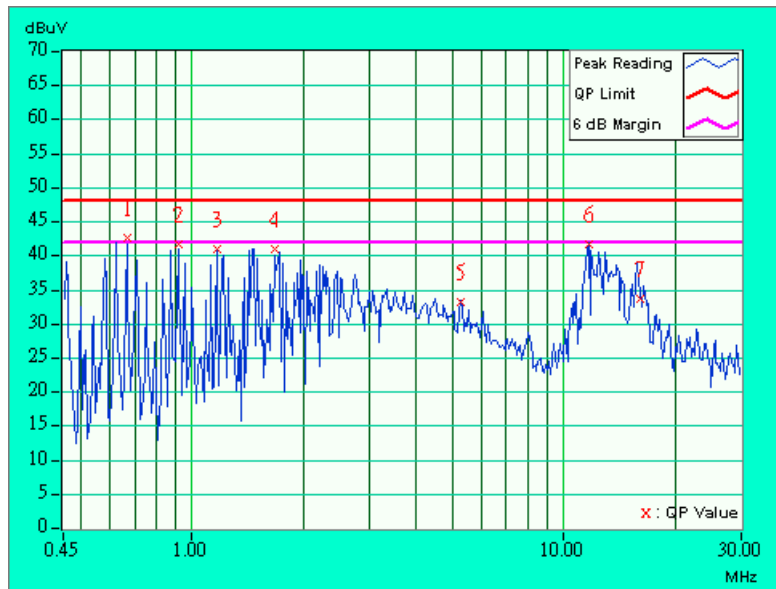


<b>EUT</b>	IEEE802.11b WLAN Mini PCI	<b>MODEL</b>	DW-250
<b>MODE</b>	Channel 11	<b>6dB BANDWIDTH</b>	9 kHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>PHASE</b>	Neutral (N)
<b>ENVIRONMENTAL CONDITIONS</b>	30 deg. C, 70%RH, 1005 hPa	<b>TESTED BY:</b> Bunny Yao	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.669	0.14	41.96	-	42.10	-	48.00	-	-5.90	-
2	0.919	0.19	41.01	-	41.20	-	48.00	-	-6.80	-
3	1.168	0.20	40.29	-	40.49	-	48.00	-	-7.51	-
4	1.668	0.20	40.43	-	40.63	-	48.00	-	-7.37	-
5	5.297	0.32	32.47	-	32.79	-	48.00	-	-15.21	-
6	11.629	0.47	40.96	-	41.43	-	48.00	-	-6.57	-
7	15.988	0.66	33.00	-	33.66	-	48.00	-	-14.34	-

**NOTE:**

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





## 4.2 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 13, 2003
* HP Preamplifier	8447D	2944A08485	Oct. 30, 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. 27, 2003
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 9, 2003
* EMCO Turn Table	1060	1115	NA
* SHOSHIN Tower	AP-4701	A6Y005	NA
* Software	AS61D4	NA	NA
* ANRITSU RF Switches	MP59B	M35046	Aug. 2, 2002
* TIMES RF cable	LMR-600	CABLE-ST5-01	Aug. 2, 2002
Open Field Test Site	Site 5	ADT-R05	July 28, 2002
VCCI Site Registration No.	Site 5	R-1039	NA

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

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

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

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



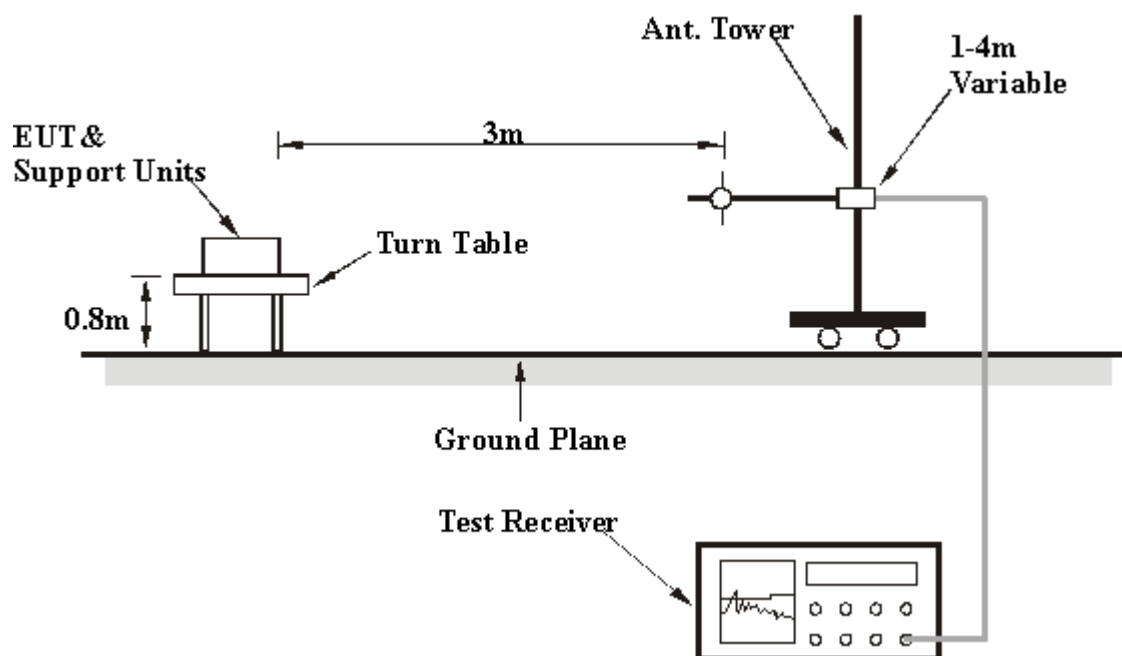
#### 4.2.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10 dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10 dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

**NOTE:**

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

#### 4.2.4 TEST SETUP



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

#### 4.2.5 EUT OPERATING CONDITIONS

Same as 4.1.5.

## 4.2.6 TEST RESULTS (A)

<b>EUT</b>	IEEE802.11b WLAN Mini PCI	<b>MODEL</b>	DW-250
<b>MODE</b>	Channel 11	<b>FREQUENCY RANGE</b>	30-1000 MHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION</b>	Quasi-Peak
<b>ENVIRONMENTAL CONDITIONS</b>	35 deg. C, 55 % RH, 1050 hPa	<b>TESTED BY:</b> Bunny Yao	

<b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b>											
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	132.00	18.3 QP	43.50	-25.20	1.01H	52	34.61	11.16	1.24	28.71	16.31
2	176.00	23.3 QP	43.50	-20.20	1.18H	104	41.56	9.08	1.37	28.71	18.26
3	220.00	36.7 QP	46.00	-9.30	1.26H	186	53.77	10.12	1.53	28.71	17.07
4	264.00	27.8 QP	46.00	-18.20	1.23H	50	41.89	12.89	1.73	28.71	14.09
5	308.00	29.0 QP	46.00	-17.00	1.01H	208	42.40	13.38	1.92	28.71	13.41
6	352.00	30.9 QP	46.00	-15.10	1.11H	107	43.18	14.31	2.12	28.71	12.28
7	396.00	43.2 QP	46.00	-2.80	1.03H	268	53.79	15.96	2.17	28.71	10.60
8	440.00	32.6 QP	46.00	-13.40	2.06H	128	42.69	16.32	2.31	28.71	10.09
9	484.00	33.0 QP	46.00	-13.00	2.33H	172	42.30	16.96	2.44	28.71	9.32
10	528.00	40.1 QP	46.00	-5.90	1.42H	101	48.57	17.62	2.62	28.71	8.47
11	572.00	28.3 QP	46.00	-17.70	1.43H	5	35.97	18.25	2.79	28.71	7.68
12	572.00	24.6 QP	46.00	-21.40	1.34H	96	32.27	18.25	2.79	28.71	7.67
13	704.00	31.0 QP	46.00	-15.00	1.27H	100	37.07	19.38	3.25	28.71	6.09
14	748.00	26.5 QP	46.00	-19.50	1.01H	164	31.73	20.14	3.34	28.71	5.24
15	792.00	24.3 QP	46.00	-21.70	1.02H	247	29.04	20.60	3.36	28.71	4.75

**NOTE:**

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



<b>EUT</b>	IEEE802.11b WLAN Mini PCI	<b>MODEL</b>	DW-250
<b>MODE</b>	Channel 11	<b>FREQUENCY RANGE</b>	30-1000 MHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION</b>	Quasi-Peak
<b>ENVIRONMENTAL CONDITIONS</b>	35 deg. C, 55 % RH, 1050 hPa	<b>TESTED BY:</b> Bunny Yao	

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	132.00	22.0 QP	43.50	-21.50	1.00V	3	38.31	11.16	1.24	28.71	16.31
2	176.00	23.5 QP	43.50	-20.00	1.29V	274	41.76	9.08	1.37	28.71	18.26
3	220.00	34.3 QP	46.00	-11.70	1.80V	21	51.37	10.12	1.53	28.71	17.07
4	264.00	27.6 QP	46.00	-18.40	1.16V	3	41.69	12.89	1.73	28.71	14.09
5	308.00	29.3 QP	46.00	-16.70	1.55V	208	42.71	13.38	1.92	28.71	13.41
6	352.00	36.3 QP	46.00	-9.70	1.26V	95	48.58	14.31	2.12	28.71	12.28
7	396.00	43.8 QP	46.00	-2.20	1.16V	71	54.39	15.96	2.17	28.71	10.59
8	440.00	41.2 QP	46.00	-4.80	1.26V	52	51.29	16.32	2.31	28.71	10.09
9	484.00	40.9 QP	46.00	-5.10	1.02V	130	50.21	16.96	2.44	28.71	9.31
10	528.00	38.6 QP	46.00	-7.40	1.55V	55	47.07	17.62	2.62	28.71	8.47
11	572.00	32.5 QP	46.00	-13.50	1.21V	3	40.17	18.25	2.79	28.71	7.67
12	660.00	25.6 QP	46.00	-20.40	1.67V	292	31.99	19.25	3.07	28.71	6.39
13	748.00	27.2 QP	46.00	-18.80	1.19V	68	32.43	20.14	3.34	28.71	5.24
14	924.00	29.3 QP	46.00	-16.70	1.00V	170	33.29	21.00	3.71	28.71	3.99

**NOTE:**

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



<b>EUT</b>	IEEE802.11b WLAN Mini PCI	<b>MODEL</b>	DW-250
<b>MODE</b>	Channel 1	<b>FREQUENCY RANGE</b>	Above 1000 MHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION</b>	Peak(PK) Average (AV)
<b>ENVIRONMENTAL CONDITIONS</b>	35 deg. C, 55 % RH, 1050 hPa	<b>TESTED BY:</b> Bunny Yao	

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	2037.7	47.5 PK	74.0	-26.5	1.10H	169	52.36	25.20	4.86	34.90	4.84
2	*2413.4	97.9 PK			1.16H	132	65.68	27.11	5.10	0.00	-32.21
3	*2413.4	90.5 AV			1.16H	132	58.25	27.11	5.10	0.00	-32.21
4	4075.4	49.7 PK	74.0	-24.3	1.01H	62	47.36	30.13	6.78	34.52	-2.39
5	6113.6	50.7 PK	74.0	-23.3	1.06H	264	44.25	32.80	8.23	34.60	-6.43

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (DbuV/m)	Limit (DbuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	2037.7	46.8 PK	74.0	-27.2	1.05V	242	51.65	25.20	4.86	34.90	4.84
2	*2412.6	102.7 PK			1.04V	120	70.52	27.11	5.10	0.00	-32.21
3	*2412.6	96.4 AV			1.04V	120	64.20	27.11	5.10	0.00	-32.21
4	4075.4	47.8 PK	74.0	-26.2	1.00V	27	45.40	30.13	6.78	34.52	-2.39
5	6113.5	52.1 PK	74.0	-21.9	1.07V	75	45.68	32.80	8.23	34.60	-6.43
6	6113.5	46.0 AV	54.0	-8.0	1.07V	75	39.57	32.80	8.23	34.60	-6.43

#### NOTE:

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



<b>EUT</b>	IEEE802.11b WLAN Mini PCI	<b>MODEL</b>	DW-250
<b>MODE</b>	Channel 6	<b>FREQUENCY RANGE</b>	Above 1000 MHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION</b>	Peak(PK) Average (AV)
<b>ENVIRONMENTAL CONDITIONS</b>	35 deg. C, 55 % RH, 1050 hPa	<b>TESTED BY:</b> Bunny Yao	

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	2062.7	50.2 PK	74.0	-23.8	1.05H	166	54.69	25.41	4.96	34.90	4.53
2	*2436.6	89.8 AV			1.00H	69	57.35	27.33	5.08	0.00	-32.40
3	*2436.6	97.6 PK			1.00H	69	65.20	27.33	5.08	0.00	-32.40
4	4125.4	49.8 PK	74.0	-24.2	1.00H	159	47.36	30.32	6.70	34.56	-2.46
5	6188.3	45.5 AV	54.0	-8.5	1.00H	57	39.00	33.14	8.01	34.60	-6.55
6	6188.3	52.2 PK	74.0	-21.8	1.00H	57	45.68	33.14	8.01	34.60	-6.55

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (DbuV/m)	Limit (DbuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	2062.7	48.1 AV	54.0	-5.9	1.18V	78	52.60	25.41	4.96	34.90	4.53
2	2062.7	50.8 PK	74.0	-23.2	1.18V	78	55.30	25.41	4.96	34.90	4.53
3	*2438.4	96.9 AV			1.50V	69	64.54	27.33	5.08	0.00	-32.40
4	*2438.4	103.5 PK			1.50V	69	71.14	27.33	5.08	0.00	-32.40
5	4125.4	50.0 PK	74.0	-24.0	1.06V	67	47.50	30.32	6.70	34.56	-2.46
6	6188.4	51.3 PK	74.0	-22.7	1.00V	162	44.78	33.14	8.01	34.60	-6.55

#### NOTE:

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



<b>EUT</b>	IEEE802.11b WLAN Mini PCI	<b>MODEL</b>	DW-250
<b>MODE</b>	Channel 11	<b>FREQUENCY RANGE</b>	Above 1000 MHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION</b>	Peak(PK) Average (AV)
<b>ENVIRONMENTAL CONDITIONS</b>	35 deg. C, 55 % RH, 1050 hPa	<b>TESTED BY:</b> Bunny Yao	

<b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b>											
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	2087.0	50.4 PK	74.0	-23.6	1.02H	17.	54.63	25.62	5.02	34.90	4.26
2	2087.7	45.0 AV	54.0	-9.0	1.02H	171	49.28	25.62	5.02	34.90	4.26
3	*2462.5	91.4 AV			1.13H	212	59.03	27.33	5.08	0.00	-32.40
4	*2462.5	98.3 PK			1.13H	212	65.90	27.33	5.08	0.00	-32.40
5	2483.7	53.6 PK	74.0	-20.4	1.05H	215	55.90	27.54	5.06	34.90	2.31
6	2483.7	45.3 AV	54.0	-8.7	1.05H	215	47.63	27.54	5.06	34.90	2.31
7	4175.4	45.0 AV	54.0	-9.0	1.02H	223	42.50	30.41	6.68	34.58	-2.51
8	4175.4	49.5 PK	74.0	-24.5	1.02H	223	46.98	30.41	6.68	34.58	-2.51
9	6263.2	52.3 PK	74.0	-21.7	1.02H	160	45.32	33.48	8.13	34.60	-7.01

<b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b>											
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (DbuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	2087.7	47.6 AV	54.0	-6.4	1.10V	109	51.83	25.62	5.02	34.90	4.26
2	2087.7	51.1 PK	74.0	-22.9	1.10V	109	55.32	25.62	5.02	34.90	4.26
3	*2463.5	103.7 PK			1.17V	272	71.32	27.33	5.08	0.00	-32.40
4	*2463.5	96.1 AV			1.17V	272	63.69	27.33	5.08	0.00	-32.40
5	4175.5	49.8 PK	74.0	-24.2	1.01V	46	47.32	30.41	6.68	34.58	-2.51
6	4175.5	42.8 AV	54.0	-11.2	1.01V	46	40.32	30.41	6.68	34.58	-2.51
7	6263.2	52.3 PK	74.0	-21.7	1.26V	145	45.28	33.48	8.13	34.60	-7.01

**NOTE:**

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



## 4.2.7 TEST RESULTS (B)

<b>EUT</b>	IEEE802.11b WLAN Mini PCI	<b>MODEL</b>	DW-250
<b>MODE</b>	Channel 11	<b>FREQUENCY RANGE</b>	30-1000 MHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION</b>	Quasi-Peak
<b>ENVIRONMENTAL CONDITIONS</b>	35 deg. C, 55 % RH, 1050 hPa	<b>TESTED BY:</b> Bunny Yao	

<b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b>											
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	132.00	16.8 QP	43.50	-26.70	1.36H	176	33.11	11.16	1.24	28.71	16.31
2	176.00	20.1 QP	43.50	-23.40	1.28H	67	38.36	9.08	1.37	28.71	18.26
3	220.00	30.5 QP	46.00	-15.50	1.47H	153	47.57	10.12	1.53	28.71	17.07
4	264.00	31.0 QP	46.00	-15.00	1.10H	30	45.09	12.89	1.73	28.71	14.10
5	308.00	27.6 QP	46.00	-18.40	1.50H	137	41.01	13.38	1.92	28.71	13.41
6	352.00	30.6 QP	46.00	-15.40	1.39H	201	42.88	14.31	2.12	28.71	12.28
7	396.00	35.6 QP	46.00	-10.40	1.01H	35	46.19	15.96	2.17	28.71	10.60
8	440.00	42.2 QP	46.00	-3.80	1.17H	243	52.29	16.32	2.31	28.71	10.10
9	484.00	41.6 QP	46.00	-4.40	2.08H	71	50.91	16.96	2.44	28.71	9.31
10	528.00	33.5 QP	46.00	-12.50	1.69H	15	41.97	17.62	2.62	28.71	8.48
11	572.00	28.0 QP	46.00	-18.00	1.96H	1	35.67	18.25	2.79	28.71	7.68
12	660.00	25.6 QP	46.00	-20.40	1.27H	142	31.99	19.25	3.07	28.71	6.40
13	748.00	25.6 QP	46.00	-20.40	1.39H	323	30.83	20.14	3.34	28.71	5.24
14	924.00	26.1 QP	46.00	-19.90	1.09H	229	30.09	21.00	3.71	28.71	4.00

**NOTE:**

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



<b>EUT</b>	IEEE802.11b WLAN Mini PCI	<b>MODEL</b>	DW-250
<b>MODE</b>	Channel 11	<b>FREQUENCY RANGE</b>	30-1000 MHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION</b>	Quasi-Peak
<b>ENVIRONMENTAL CONDITIONS</b>	35 deg. C, 55 % RH, 1050 hPa	<b>TESTED BY:</b> Bunny Yao	

<b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b>											
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	132.00	17.9 QP	43.50	-25.60	1.12V	209	34.21	11.16	1.24	28.71	16.31
2	176.00	23.4 QP	43.50	-20.10	1.71V	85	41.66	9.08	1.37	28.71	18.26
3	208.00	13.0 QP	43.50	-30.50	1.67V	45	30.87	9.40	1.45	28.71	17.87
4	220.00	23.6 QP	46.00	-22.40	1.73V	203	40.67	10.12	1.53	28.71	17.07
5	264.00	35.6 QP	46.00	-10.40	1.57V	23	49.69	12.89	1.73	28.71	14.10
6	308.00	35.0 QP	46.00	-11.00	1.73V	25	48.41	13.38	1.92	28.71	13.42
7	352.00	33.4 QP	46.00	-12.60	1.67V	152	45.68	14.31	2.12	28.71	12.28
8	396.00	38.6 QP	46.00	-7.40	1.12V	25	49.19	15.96	2.17	28.71	10.59
9	440.00	35.9 QP	46.00	-10.10	2.10V	108	45.99	16.32	2.31	28.71	10.09
10	484.00	42.2 QP	46.00	-3.80	1.94V	26	51.51	16.96	2.44	28.71	9.31.
11	527.00	40.3 QP	46.00	-5.70	1.94V	3	48.77	17.62	2.62	28.71	8.47
12	660.00	27.7 QP	46.00	-18.30	1.40V	185	34.09	19.25	3.07	28.71	6.40
13	704.00	38.1 QP	46.00	-7.90	1.31V	243	44.18	19.38	3.25	28.71	6.09
14	748.00	28.4 QP	46.00	-17.60	1.84V	154	33.59	20.14	3.34	28.71	5.24
15	792.00	26.4 QP	46.00	-19.60	1.15V	62	31.14	20.60	3.36	28.71	4.74
16	924.00	27.0 QP	46.00	-19.00	1.06V	114	30.99	21.00	3.71	28.71	4.00

**NOTE:**

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



<b>EUT</b>	IEEE802.11b WLAN Mini PCI	<b>MODEL</b>	DW-250
<b>MODE</b>	Channel 1	<b>FREQUENCY RANGE</b>	Above 1000 MHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION</b>	Peak(PK) Average (AV)
<b>ENVIRONMENTAL CONDITIONS</b>	35 deg. C, 55 % RH, 1050 hPa	<b>TESTED BY:</b> Bunny Yao	

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	2038.00	46.5 AV	54.00	-7.50	1.25H	35	51.30	25.20	4.86	34.90	4.84
2	2038.00	46.5 PK	74.00	-27.50	1.25H	35	51.30	25.20	4.86	34.90	4.84
3	2038.00	49.3 PK	74.00	-24.70	1.25H	35	54.10	25.20	4.86	34.90	4.84
4	*2412.00	93.2 PK			1.17H	71	60.98	27.11	5.10	0.00	-32.21
5	*2412.00	87.8 AV			1.17H	71	55.60	27.11	5.10	0.00	-32.21
6	4076.00	46.8 AV	54.00	-7.20	1.03H	22	44.40	30.13	6.78	34.52	-2.39
7	4076.00	51.3 PK	74.00	-22.70	1.03H	22	48.90	30.13	6.78	34.52	-2.39
8	6114.00	39.2 AV	54.00	-14.80	1.00H	61	32.75	32.80	8.23	34.60	-6.43
9	6114.00	49.7 PK	74.00	-24.30	1.00H	61	43.30	32.80	8.23	34.60	-6.43

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (DbuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	2038.00	50.4 AV	54.00	-3.60	1.21V	44	55.20	25.20	4.86	34.90	4.84
2	2038.00	51.6 PK	74.00	-22.40	1.21V	44	56.40	25.20	4.86	34.90	4.84
3	*2412.00	96.5 AV			1.12V	62	64.30	27.11	5.10	0.00	-32.21
4	*2412.00	103.2 PK			1.12V	62	71.00	27.11	5.10	0.00	-32.21
5	4076.00	44.7 AV	54.00	-9.30	1.11V	47	42.30	30.13	6.78	34.52	-2.39
6	4076.00	50.4 PK	74.00	-23.60	1.11V	47	47.97	30.13	6.78	34.52	-2.39
7	6114.00	39.8 AV	54.00	-14.20	1.26V	49	33.40	32.80	8.23	34.60	-6.43
8	6114.00	50.6 PK	74.00	-23.40	1.26V	49	44.20	32.80	8.23	34.60	-6.43

#### NOTE:

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



<b>EUT</b>	IEEE802.11b WLAN Mini PCI	<b>MODEL</b>	DW-250
<b>MODE</b>	Channel 6	<b>FREQUENCY RANGE</b>	Above 1000 MHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION</b>	Peak(PK) Average (AV)
<b>ENVIRONMENTAL CONDITIONS</b>	35 deg. C, 55 % RH, 1050 hPa	<b>TESTED BY:</b> Bunny Yao	

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	2063.00	49.4 AV	54.00	-4.60	1.54H	58	53.90	25.41	4.96	34.90	4.53
2	2063.00	51.5 PK	74.00	-22.50	1.54H	58	55.99	25.41	4.96	34.90	4.53
3	*2437.00	88.4 AV			1.19H	56	56.00	27.33	5.08	0.00	-32.40
4	*2437.00	94.2 PK			1.19H	56	61.80	27.33	5.08	0.00	-32.40
5	4126.00	45.0 AV	54.00	-9.00	1.35H	26	42.50	30.32	6.70	34.56	-2.46
6	4126.00	50.2 PK	74.00	-23.80	1.35H	26	47.70	30.32	6.70	34.56	-2.46
7	6189.00	40.7 AV	54.00	-13.30	1.00H	42	34.20	33.14	8.01	34.60	-6.55
8	6189.00	50.4 PK	74.00	-23.60	1.00H	42	43.90	33.14	8.01	34.60	-6.55

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (DbuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	2063.00	50.6 AV	54.00	-3.40	1.38V	44	55.10	25.41	4.96	34.90	4.53
2	2063.00	51.9 PK	74.00	-22.10	1.38V	44	56.40	25.41	4.96	34.90	4.53
3	*2437.00	97.5 AV			1.84V	54	65.10	27.33	5.08	0.00	-32.40
4	*2437.00	103.6 PK			1.84V	54	71.20	27.33	5.08	0.00	-32.40
5	4126.00	42.9 AV	54.00	-11.10	1.10V	45	40.47	30.32	6.70	34.56	-2.46
6	4126.00	49.6 PK	74.00	-24.40	1.10V	45	47.10	30.32	6.70	34.56	-2.47
7	6189.00	40.7 AV	54.00	-13.30	1.27V	49	34.20	33.14	8.01	34.60	-6.55
8	6189.00	50.5 PK	74.00	-23.50	1.27V	49	44.00	33.14	8.01	34.60	-6.55

#### NOTE:

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



<b>EUT</b>	IEEE802.11b WLAN Mini PCI	<b>MODEL</b>	DW-250
<b>MODE</b>	Channel 11	<b>FREQUENCY RANGE</b>	Above 1000 MHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION</b>	Peak(PK) Average (AV)
<b>ENVIRONMENTAL CONDITIONS</b>	35 deg. C, 55 % RH, 1050 hPa	<b>TESTED BY:</b> Bunny Yao	

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	2088.00	47.9 AV	54.00	-6.10	1.23H	55	52.20	25.62	5.02	34.90	4.26
2	2088.00	49.3 PK	74.00	-24.70	1.23H	55	53.60	25.62	5.02	34.90	4.26
3	*2462.00	87.8 AV			1.34H	55	55.40	27.33	5.08	0.00	-32.41
4	*2462.00	94.4 PK			1.34H	55	62.00	27.33	5.08	0.00	-32.41
5	4176.00	48.1 AV	54.00	-5.90	1.15H	50	45.60	30.41	6.68	34.58	-2.51
6	4176.00	52.1 PK	74.00	-21.90	1.15H	50	49.60	30.41	6.68	34.58	-2.51
7	6264.00	42.9 AV	54.00	-11.10	1.73H	43	35.90	33.48	8.13	34.60	-7.01
8	6264.00	51.3 PK	74.00	-22.70	1.73H	43	44.30	33.48	8.13	34.60	-7.01

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (DbuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	2088.00	48.0 AV	54.00	-6.00	1.42V	47	52.30	25.62	5.02	34.90	4.26
2	2088.00	49.6 PK	74.00	-24.40	1.42V	47	53.90	25.62	5.02	34.90	4.26
3	*2462.00	97.6 AV			1.03V	41	65.20	27.33	5.08	0.00	-32.41
4	*2462.00	103.5 PK			1.03V	41	71.10	27.33	5.08	0.00	-32.41
5	4176.00	42.5 AV	54.00	-11.50	1.09V	50	40.00	30.41	6.68	34.58	-2.51
6	4176.00	49.0 PK	74.00	-25.00	1.09V	50	46.50	30.41	6.68	34.58	-2.51
7	6264.00	41.2 AV	54.00	-12.80	1.57V	51	34.20	33.48	8.13	34.60	-7.01
8	6264.00	51.5 PK	74.00	-22.50	1.57V	51	44.50	33.48	8.13	34.60	-7.01

#### NOTE:

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



### 4.3 6dB BANDWIDTH MEASUREMENT

#### 4.3.1. LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

#### 4.3.2. TEST INSTRUMENTS

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

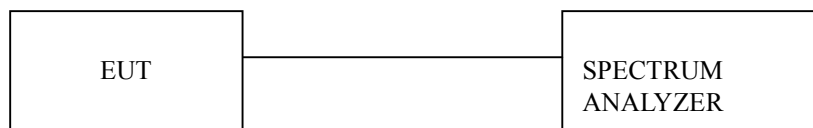
**NOTE:**

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

#### 4.3.3. TEST PROCEDURE

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

#### 4.3.4. TEST SETUP



#### 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

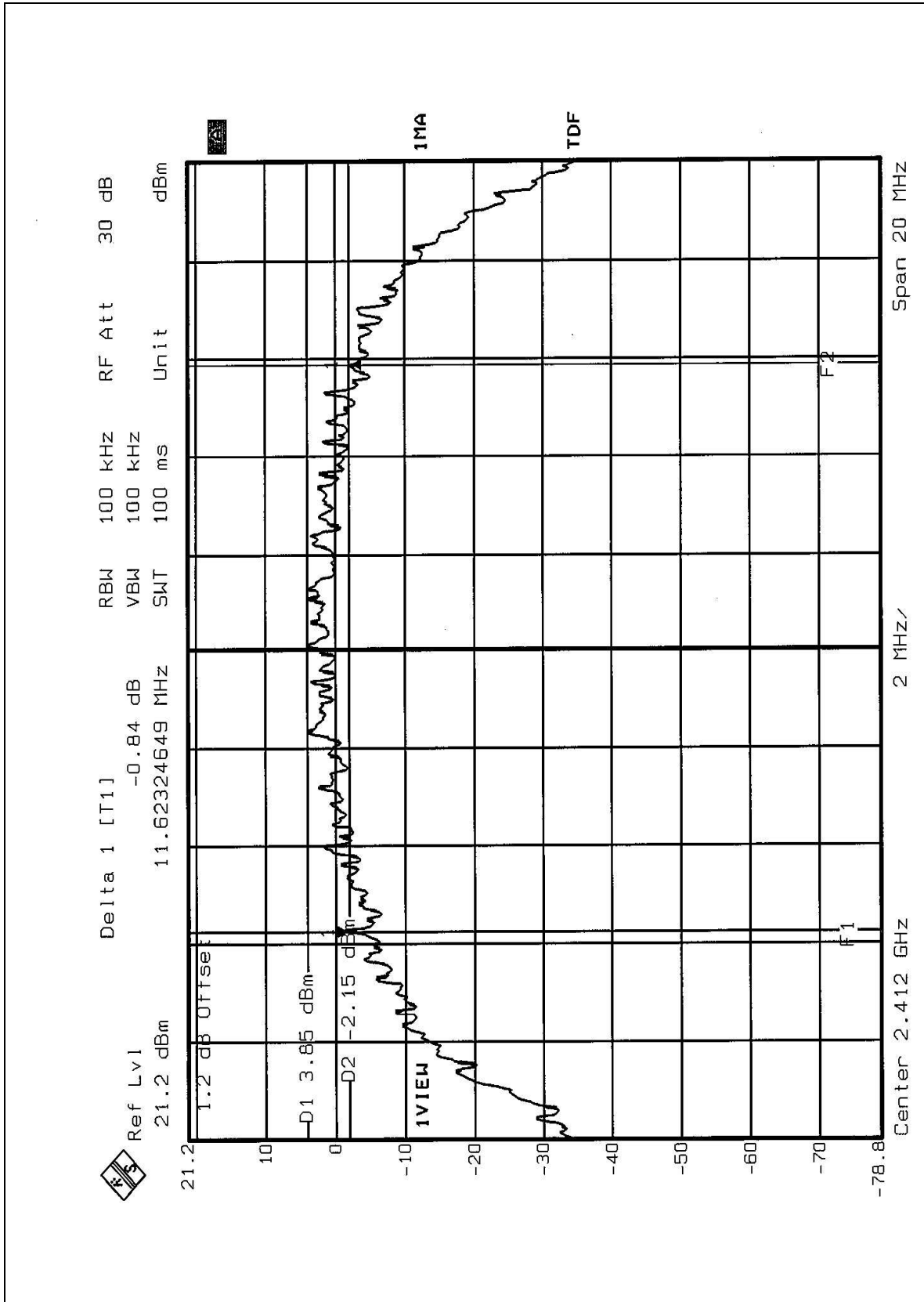
<b>EUT</b>	IEEE802.11b WLAN Mini PCI	<b>MODEL</b>	DW-250
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>ENVIRONMENTAL CONDITIONS</b>	27 deg. C, 70%RH, 1005 hPa
<b>TESTED BY:</b> Steven Lu			

<b>CHANNEL</b>	<b>CHANNEL FREQUENCY (MHz)</b>	<b>6 dB BANDWIDTH (MHz)</b>	<b>MINIMUM LIMIT (MHz)</b>	<b>PASS/FAIL</b>
1	2412	11.62	0.5	PASS
6	2437	11.58	0.5	PASS
11	2462	11.58	0.5	PASS



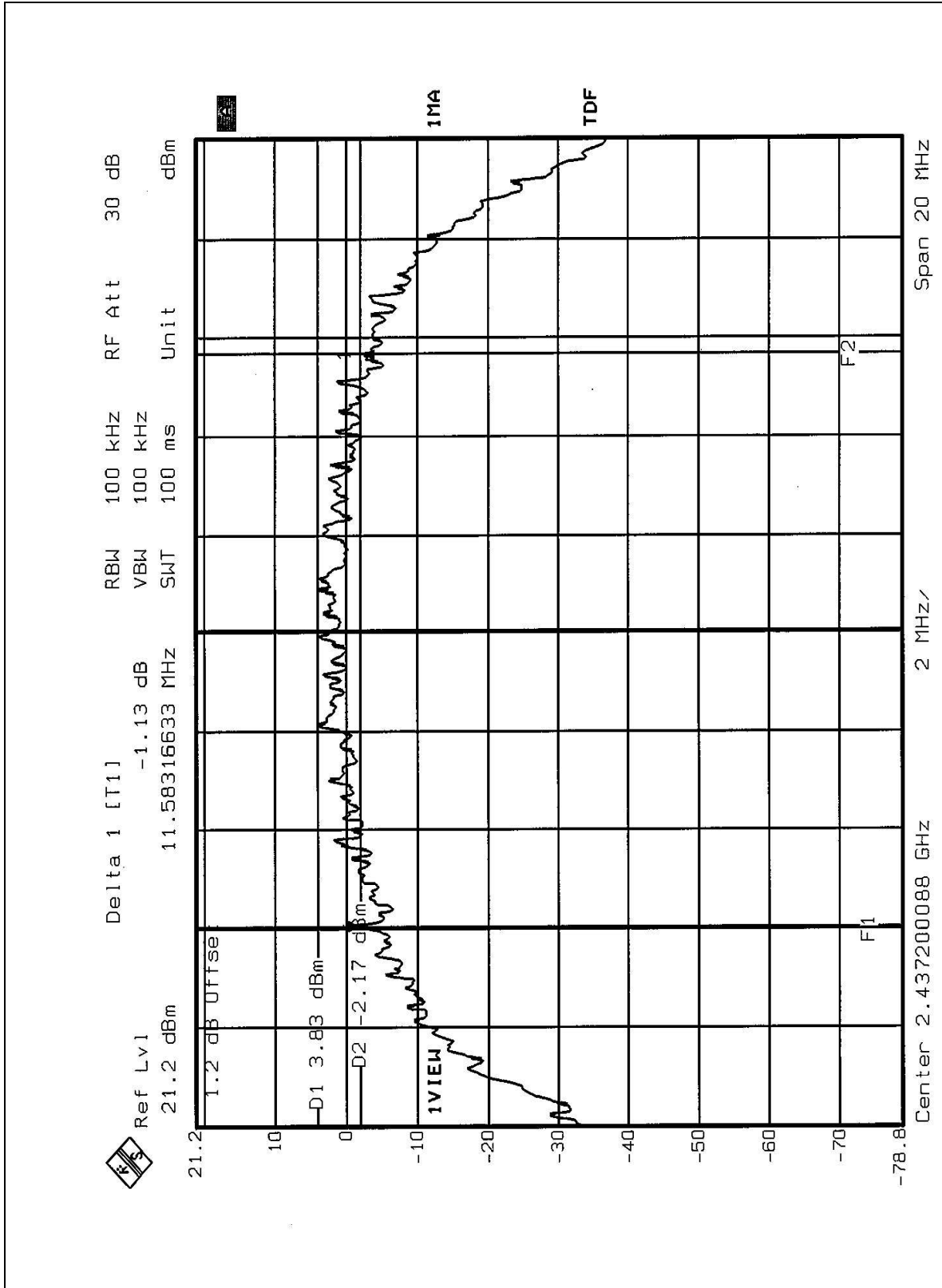


CH1



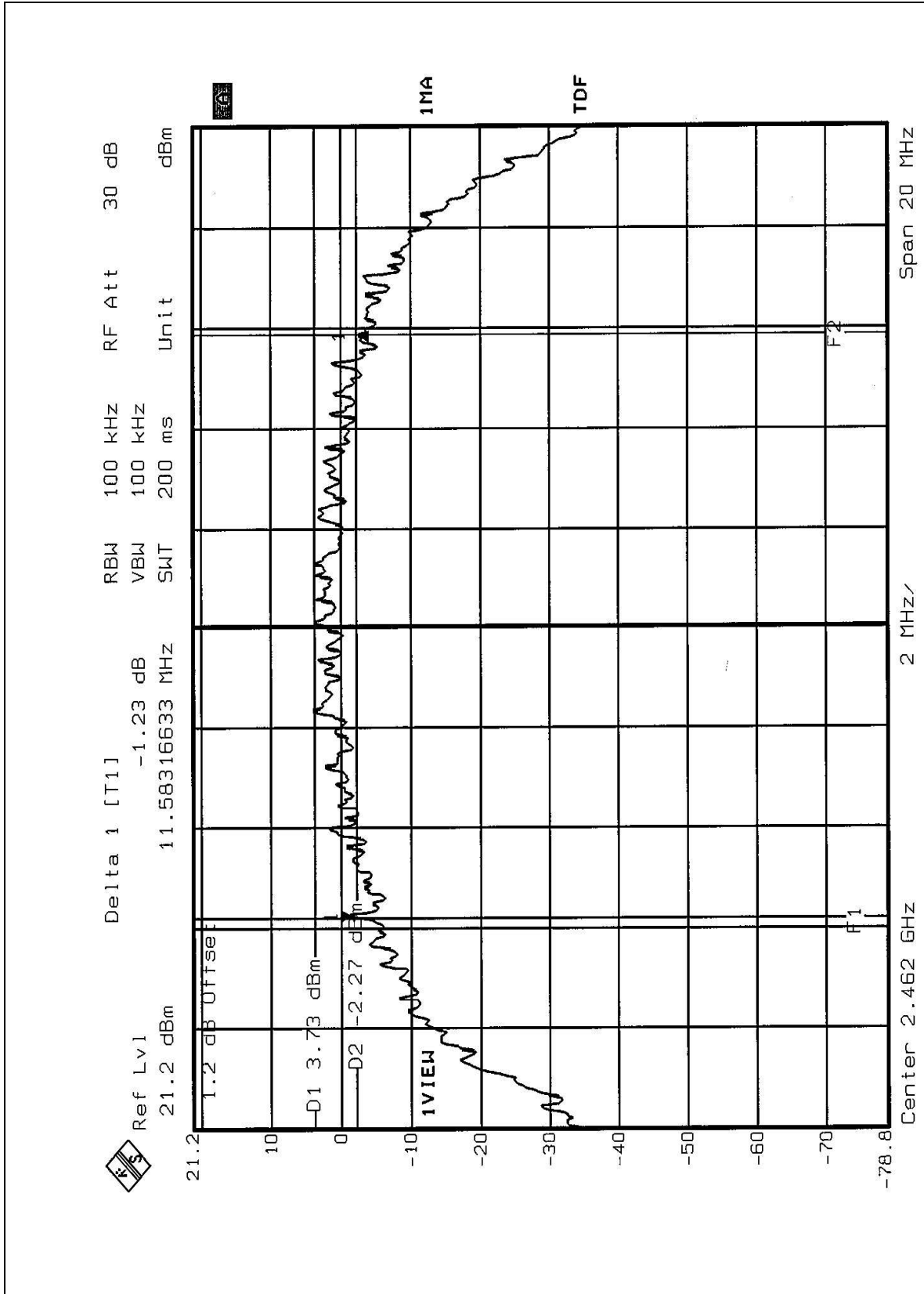


CH6





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. TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
PEAK POWER SENSOR	NRV-Z32	100013	Feb. 21, 2003
POWER METER	NRVS	100026	Feb. 21, 2003

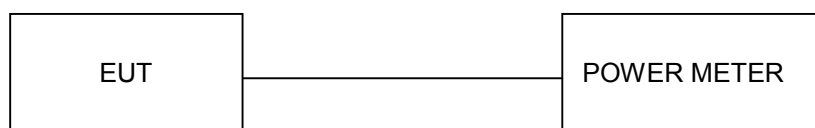
**NOTE:**

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

The transmitter output was connected to the power meter.

#### 4.4.4. TEST SETUP



#### 4.4.5. EUT OPERATING CONDITIONS

Same as Item 4.3.5



## 4.4.6. TEST RESULTS

<b>EUT</b>	IEEE802.11b WLAN Mini PCI	<b>MODEL</b>	DW-250
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>ENVIRONMENTAL CONDITIONS</b>	27 deg. C, 70%RH, 1005 hPa
<b>TESTED BY:</b> Steven Lu			

<b>CHANNEL</b>	<b>CHANNEL FREQUENCY (MHz)</b>	<b>PEAK POWER OUTPUT (dBm)</b>	<b>PEAK POWER LIMIT (dBm)</b>	<b>PASS/FAIL</b>
1	2412	14.68	30	PASS
6	2437	14.82	30	PASS
11	2462	14.83	30	PASS



#### 4.5. POWER SPECTRAL DENSITY MEASUREMENT

##### 4.5.1. LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

##### 4.5.2. TEST INSTRUMENTS

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

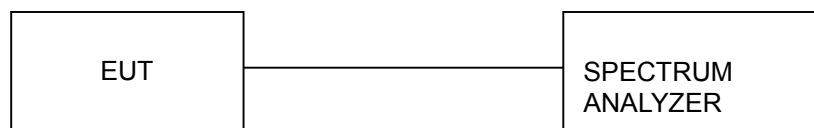
**NOTE:**

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

#### 4.5.3. TEST PROCEDURE

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

#### 4.5.4. TEST SETUP



#### 4.5.5. EUT OPERATING CONDITIONS

Same as 4.3.5





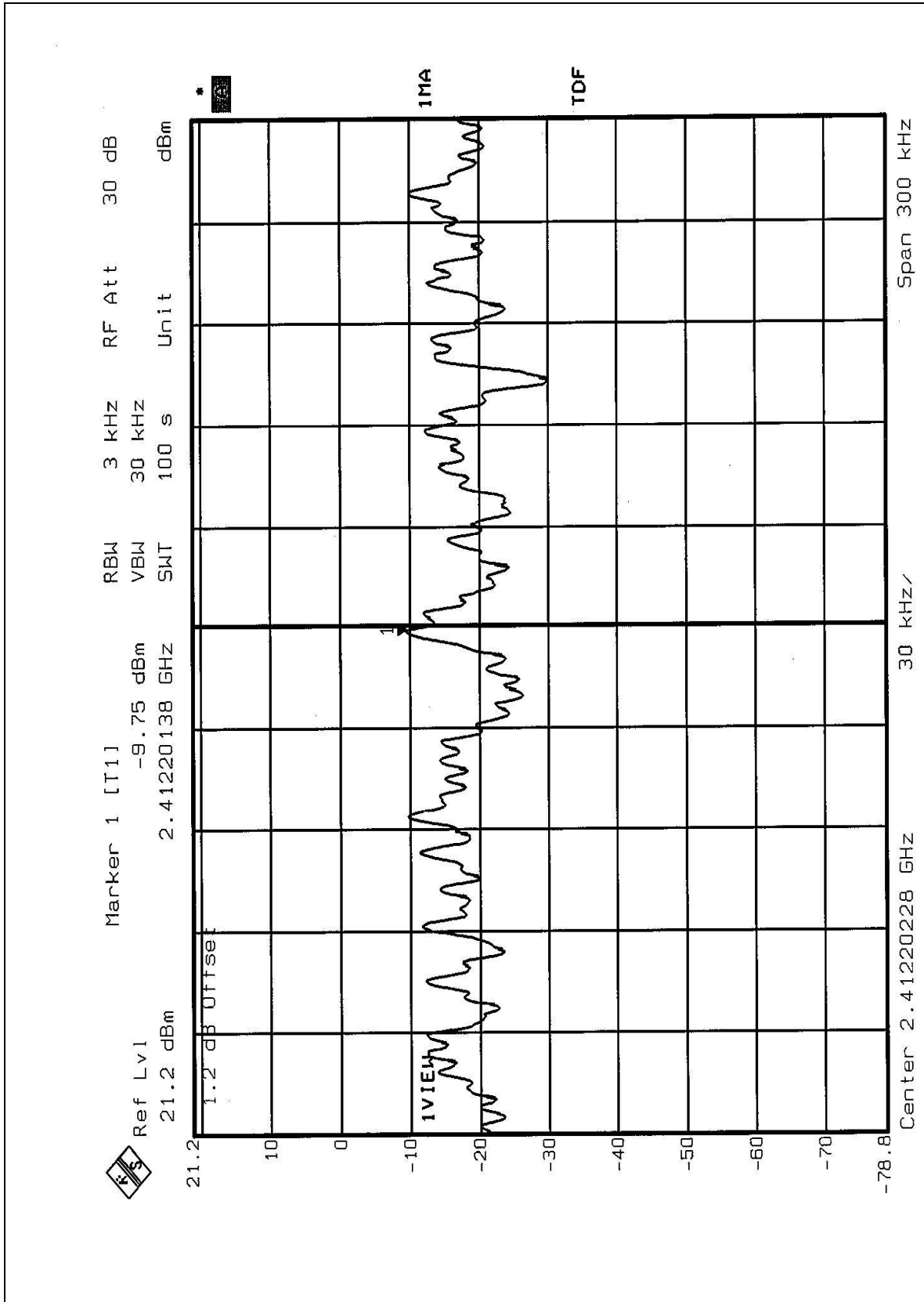
## 4.5.6. TEST RESULTS

<b>EUT</b>	IEEE802.11b WLAN Mini PCI	<b>MODEL</b>	DW-250
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>ENVIRONMENTAL CONDITIONS</b>	27 deg. C, 70%RH, 1005 hPa
<b>TESTED BY:</b> Steven Lu			

<b>CHANNEL NUMBER</b>	<b>CHANNEL FREQUENCY (MHz)</b>	<b>RF POWER LEVEL IN 3 KHz BW (dBm)</b>	<b>MAXIMUM LIMIT (dBm)</b>	<b>PASS/FAIL</b>
1	2412	-9.75	8	PASS
6	2437	-9.75	8	PASS
11	2462	-8.58	8	PASS

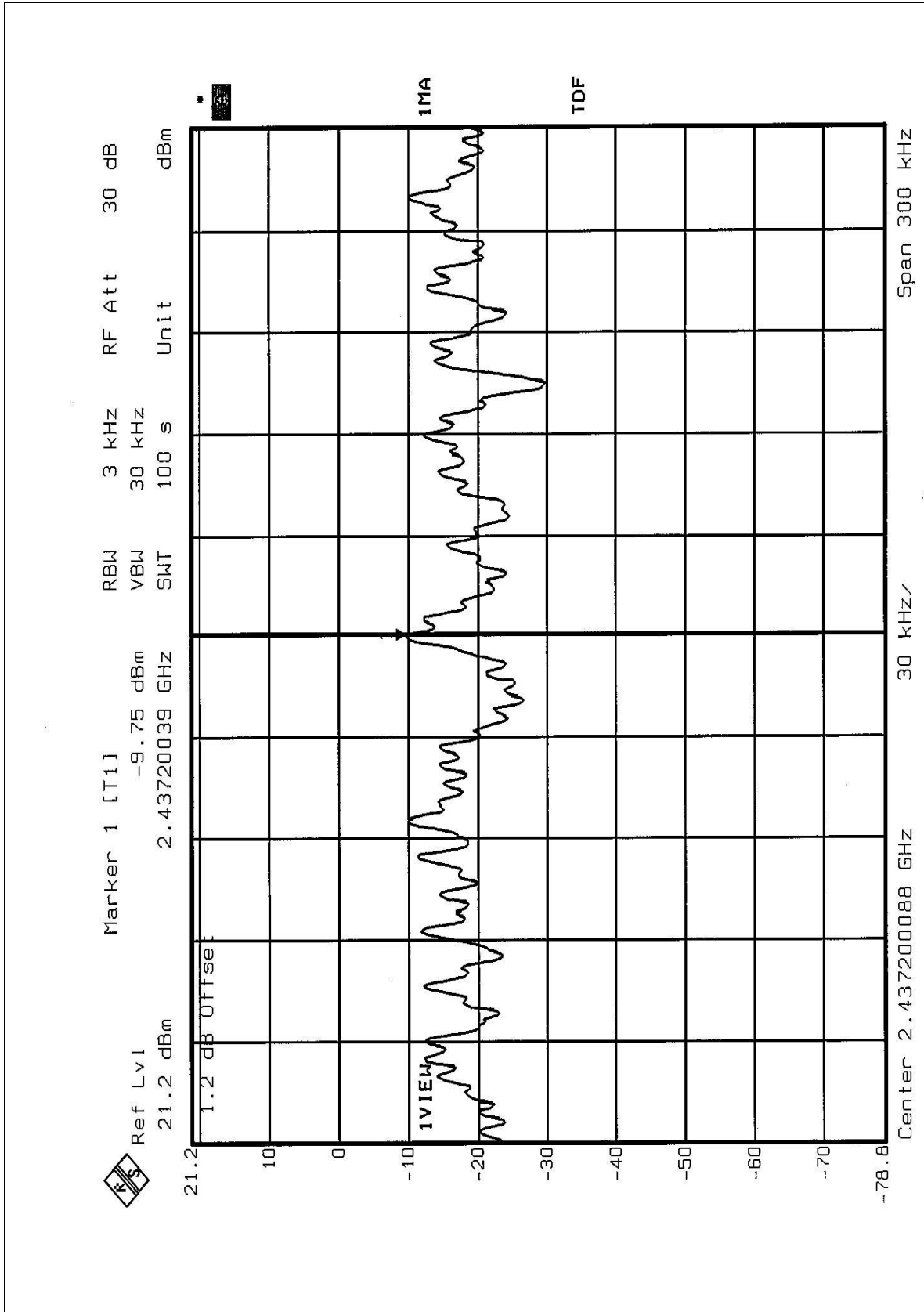


CH1



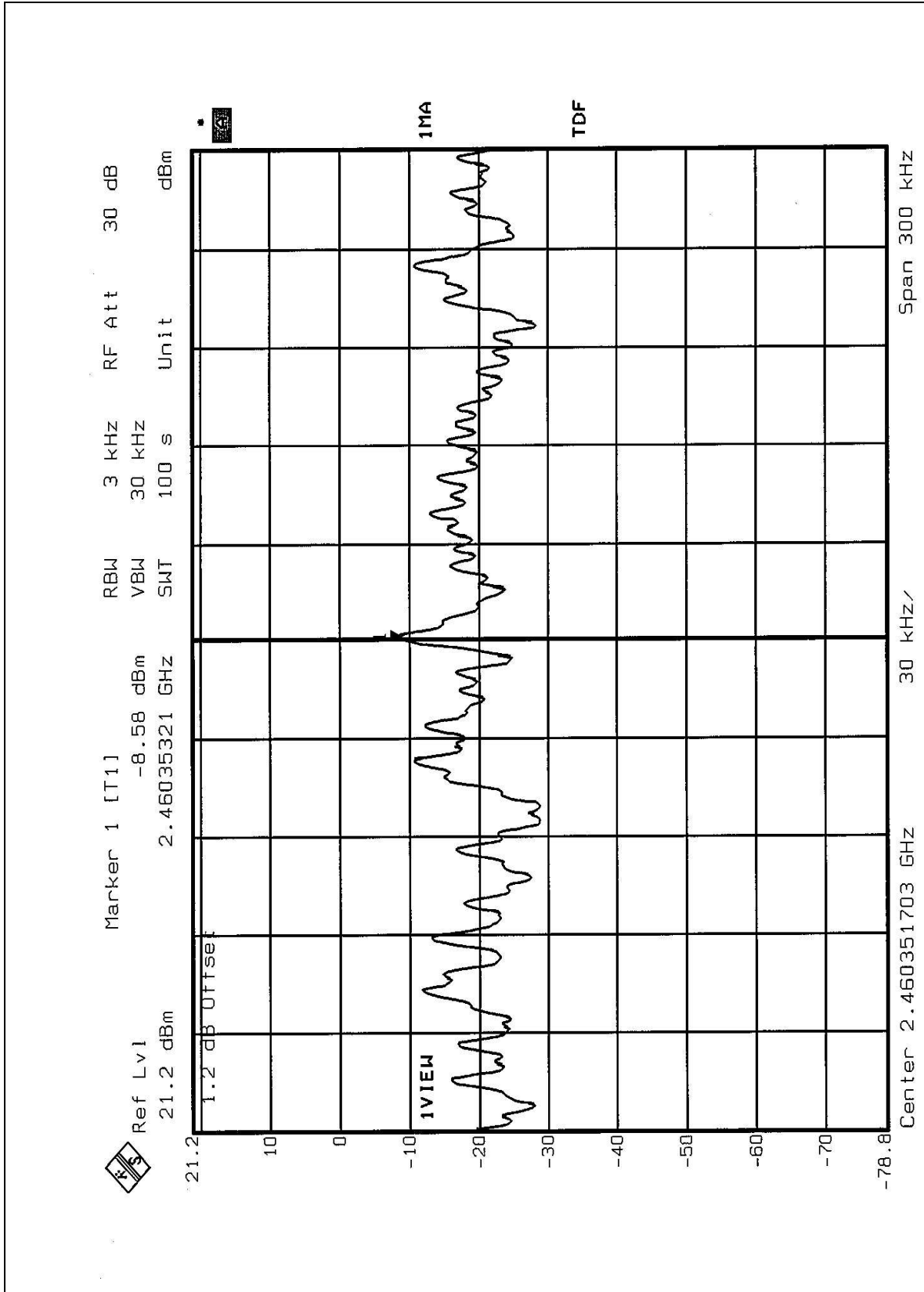


CH6





CH11





## 4.6. BAND EDGES MEASUREMENT

### 4.6.1. LIMITS OF BAND EDGES MEASUREMENT

Below  $-20\text{dB}$  of the highest emission level of operating band (in 100KHz Resolution Bandwidth).

### 4.6.2. TEST INSTRUMENTS

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

**NOTE:**

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

### 4.6.3. TEST PROCEDURE

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



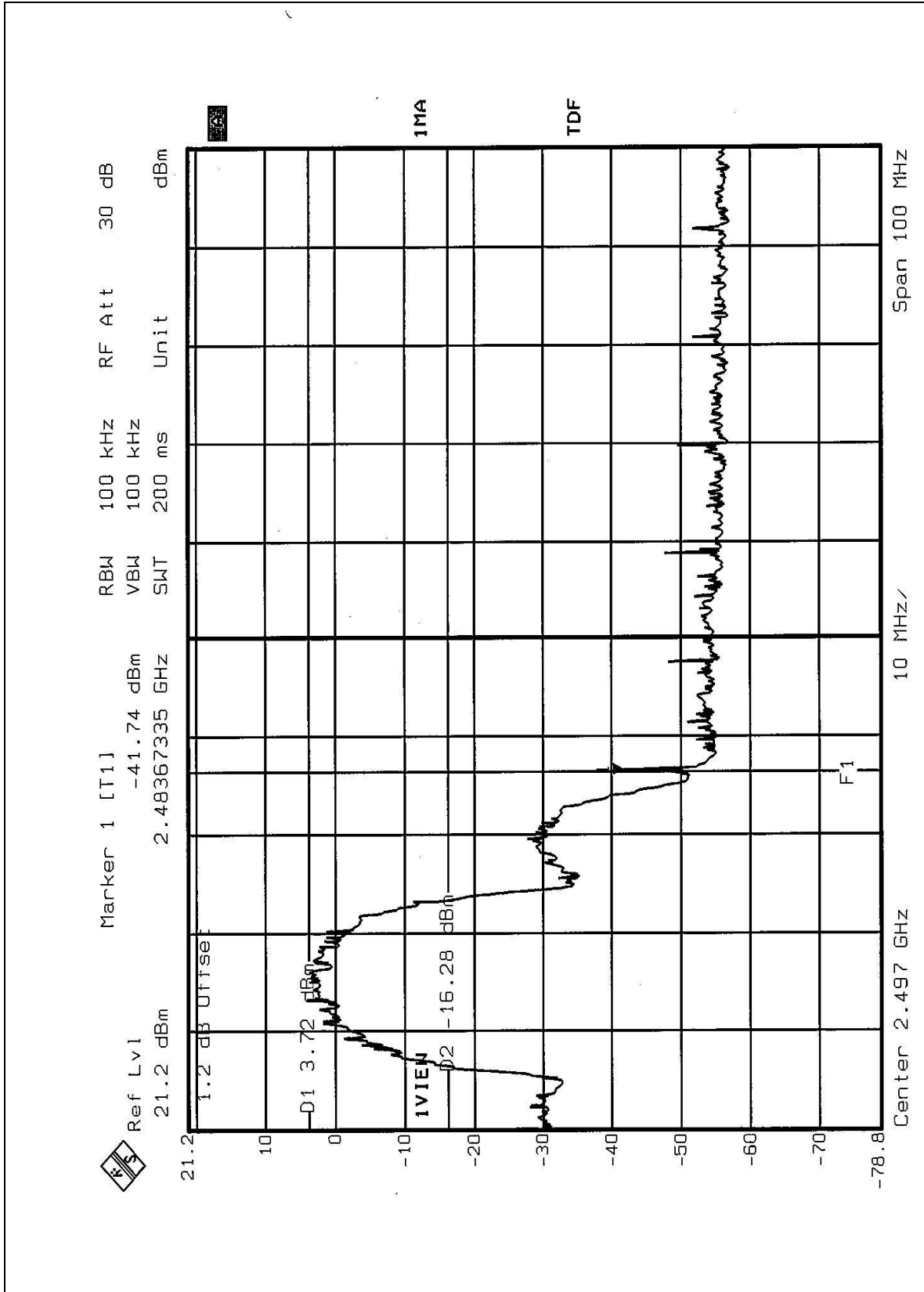
#### 4.6.4. EUT OPERATING CONDITION

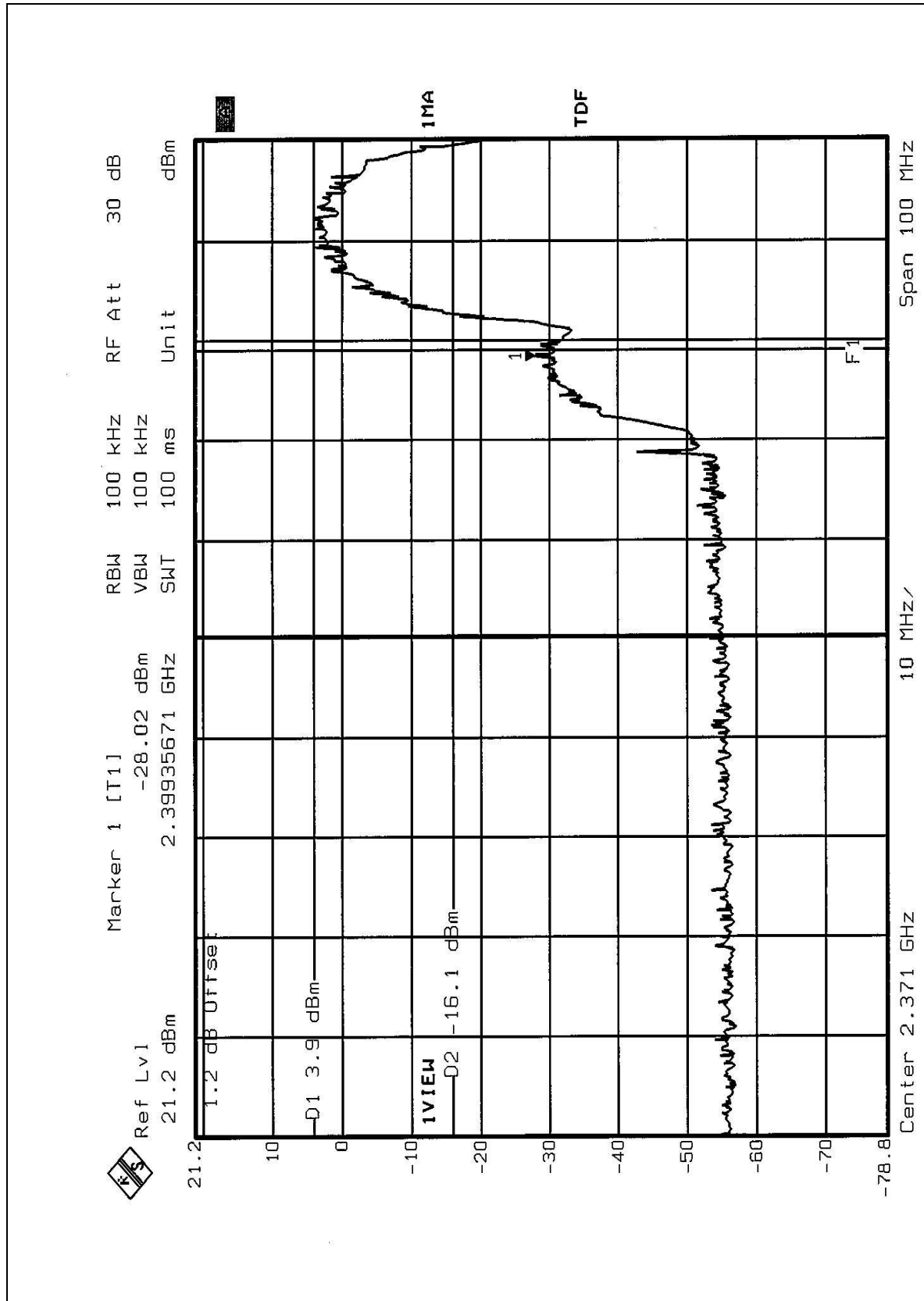
Same as Item 4.3.5

#### 4.6.5. TEST RESULTS

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

**NOTE:** The band edge emission plot on the following 2 pages shows 45.46dB delta between carrier maximum power and local maximum emission in restrict band (2.4837GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 (Page 37) is 97.6dBuV/m, so the maximum field strength in restrict band is  $97.6 - 45.46 = 52.14$  dBuV/m which is under 54 dBuV/m limit.









## **4.7. ANTENNA REQUIREMENT**

### **4.7.1. STANDARD APPLICABLE**

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

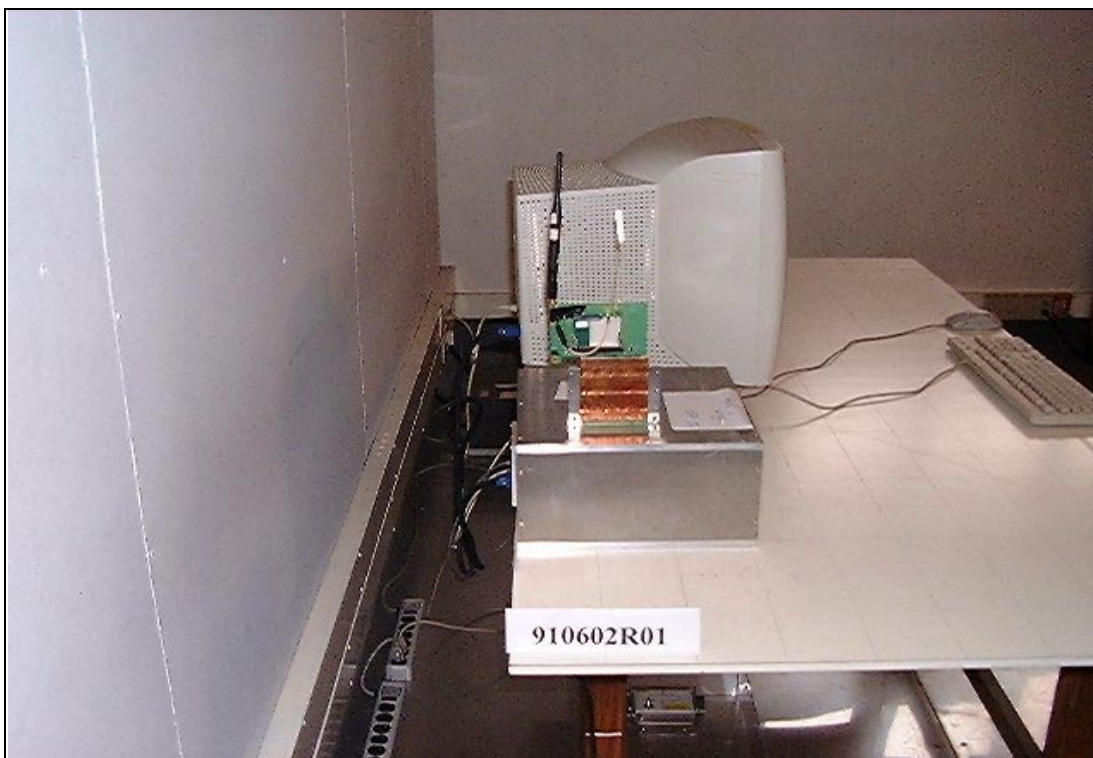
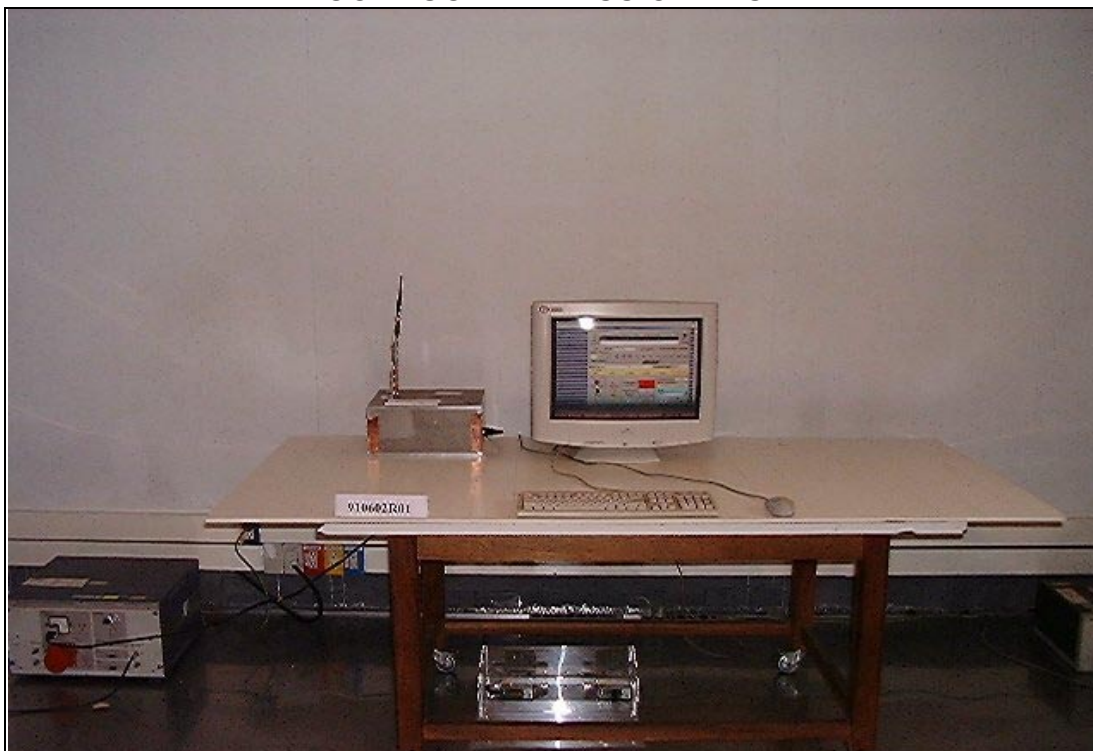
And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

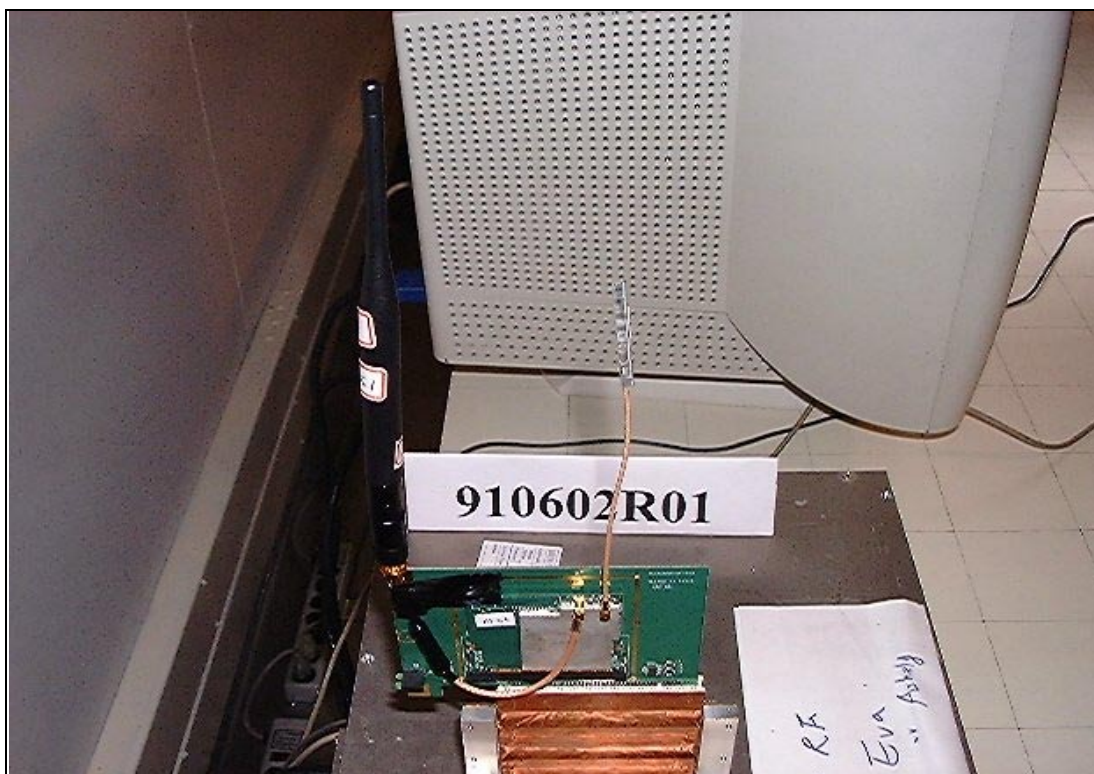
### **4.7.2. ANTENNA CONNECTED CONSTRUCTION**

The maximum Gain antenna used in this product is dipole antenna. All the antenna connector type is MMCX. And the maximum Gain of these antennas is 5dBi.

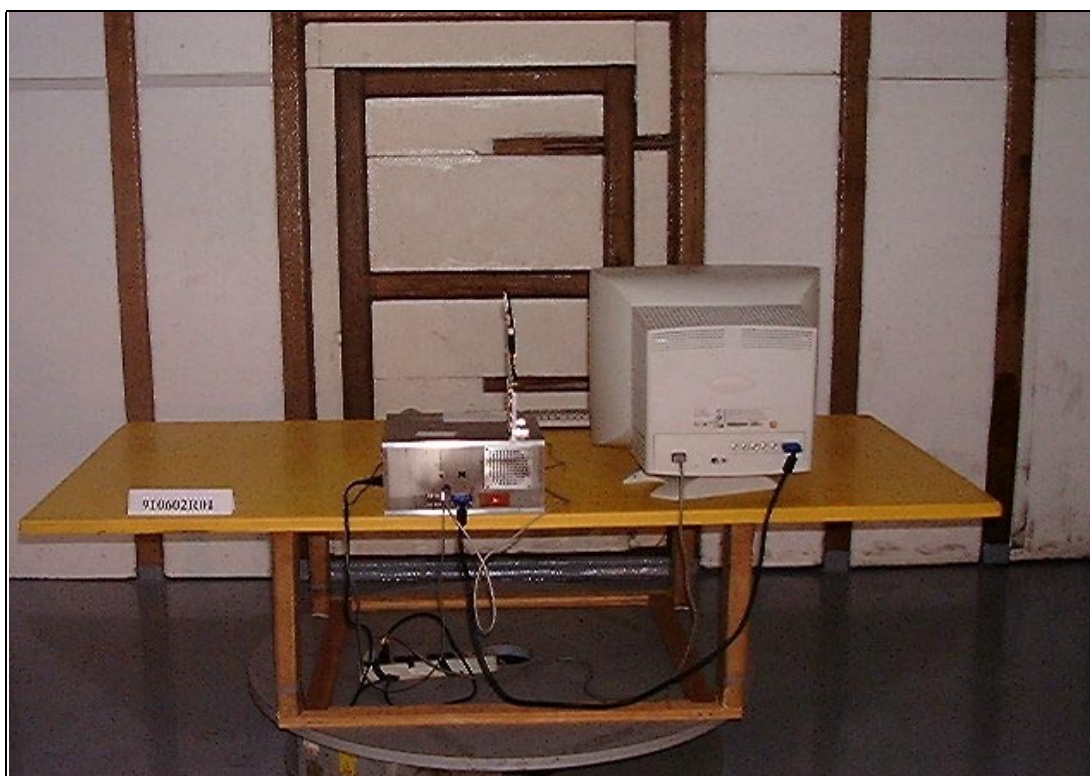
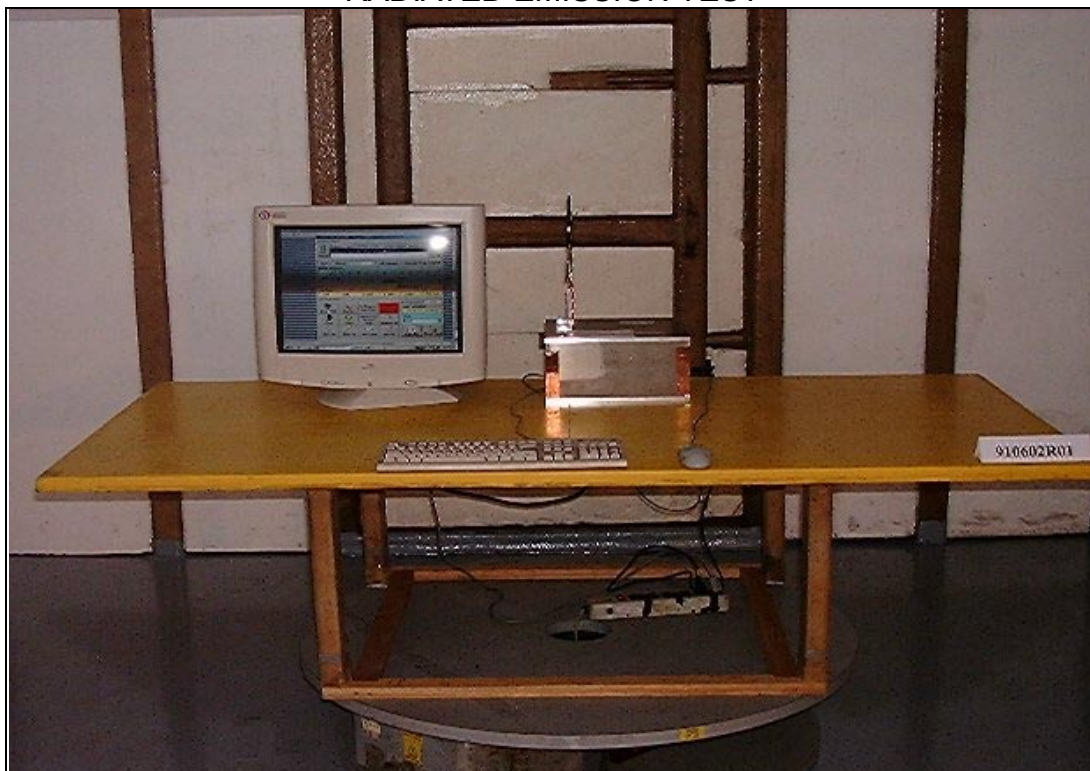
## 5 PHOTOGRAPHS OF THE TEST CONFIGURATION

### CONDUCTED EMISSION TEST





### RADIATED EMISSION TEST







## 6 INFORMATION ON THE TESTING LABORATORIES

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

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

Copies of accreditation certificates of our laboratories obtained from approval agencies can be downloaded from our web site:

[www.adt.com.tw/index.5/phtml](http://www.adt.com.tw/index.5/phtml).

If you have any comments, please feel free to contact us at the following:

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**Hsin Chu EMC Lab:**

Tel: 886-35-935343

Fax: 886-35-935342

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Fax: 886-3-3270892

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**Web Site:** [www.adt.com.tw](http://www.adt.com.tw)

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