FCC TEST REPORT

REPORT NO.: RF910118R10A
MODEL NO.: MPCI3A-20/R
RECEIVED: Oct. 15, 2002
TESTED: Oct. 24 ~ Oct. 30, 2002

APPLICANT: QUANTA COMPUTER INC.

ADDRESS: 7F, No. 116, Hou Kang St., Shih Lin, Taipei, 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 :	Wireless module (MiniPCI)
BRAND NAME :	Quanta
MODEL NO. :	MPCI3A-20/R
APPLICANT :	QUANTA COMPUTER INC.
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 Oct. 24, 2002 to Oct. 30, 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 : Oct. 30, 2002
Emily Lu

APPROVED BY : B/S Wu for , DATE : Oct. 30, 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	PASS	Meet the requirement of limit Minimum passing margin is –17.02dBuV at 0.170MHz
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 –2.20dBuV at 396.00MHz
15.247(d)	Power Spectral Density Limit: max. 8dBm	PASS	Meet the requirement of limit
15.247(c)	Band Edge Measurement Limit: 20dB 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 module (MiniPCI)
MODEL NO.	MPCI3A-20/R
POWER SUPPLY	3.3VDC from notebook
MODULATION TYPE	CCK, BPSK, QPSK
RADIO TECHNOLOGY	DSSS
TRANSFER RATE	1/2/5.5/11Mbps
FREQUENCY RANGE	2412MHz ~ 2462MHz
NUMBER OF CHANNEL	11
OUTPUT POWER	14.22dBm
ANTENNA TYPE	Printed Dipole antenna / PIFA antenna
DATA CABLE	NA
I/O PORTS	NA
ASSOCIATED DEVICES	NA

NOTE:

1. This report is prepared for FCC class II permissive change. The differences compared with the original design are six types of antennas were added to the EUT.
2. Please refer to the following table for six types of antennas provided to this EUT. The antennas remark with "*" were chosen for final test of radiated measurement.

No.	*Antenna Type*	*Model No.*	*Gain (dBi)*
*1	PIFA (with core)	YA1A 15.7"	-4
2	PIFA (with core)	YA1A 15"	-2
*3	PIFA (with core)	OA5-14" (Foxconn)	2
4	PIFA (with core)	OA5-15" (Foxconn)	0.5
*5	Printed Dipole (without core)	OA5-15"	2
*6	Printed Dipole (without core)	OA5-14"	3

3. 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 1GHz, the channel 1, 6, and 11 were pre-tested in chamber. The channel 11, worst case one, was chosen for final test.
1. Above 1GHz, the channel 1, 6, and 11 were tested individually.
2. For Radiated Emission Measurement, the test result (A) is for antenna #1, test result (B) is for antenna #3, test result (C) is for antenna #5 and test result (D) is for antenna #4 which mentioned on section 3.1.

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a Wireless module (MiniPCI). 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	PERSONAL COMPUTER	NTI	Piii-500	P201167	FCC DoC APRROVED
2	COLOR MONITOR	ADI	CM100	026058T10200611 A	FCC DoC APRROVED
3	PRINTER	EPSON	LQ-300+	DCGY017096	FCC DoC APRROVED
4	MODEM	ACEEX	1414	980020569	IFAXDM1414
5	PS/2 KEYBOARD	FORWARD	FDA-104GA	FDKB8110111	F4ZDA-104G
6	PS/2 MOUSE	LOGITECH	M-S43	LZE00703207	DZL211106

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA
2	1.8 m braid shielded wire, terminated with VGA connector via metallic frame, w/o core
3	1.2m braid shielded wire, terminated with DB25 and Centronics connector via metallic frame, w/o core
4	1.2 m braid shielded wire, terminated with DB25 and DB9 connector via metallic frame, w/o core.
5	1.5 m foil shielded wire, terminated with PS/2 connector via metallic frame, w/o core.
6	1.8 m foil shielded wire, terminated with PS/2 connector via drain wire, w/o core.

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

4 TEST TYPES AND RESULTS

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dBμV)	
	Quasi-peak	Average
0.15-0.5 0.5-5 5-30	66 to 56 56 60	56 to 46 46 50

NOTE:
1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.
3. All emanations from a class A/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	Mar. 12, 2003
ROHDE & SCHWARZ Artificial Mains Network (for EUT)	ESH2-Z5	828075/003	Jul. 23, 2003
ROHDE & SCHWARZ 200-A Four-line V-Network	ENV4200	830326/018	Oct. 25, 2002
* ROHDE & SCHWARZ 4-wire ISN	ENY41	838119/028	Dec. 02, 2002
* ROHDE & SCHWARZ 2-wire ISN	ENY22	837497/018	Dec. 02, 2002
EMCO-L.I.S.N. (for peripheral)	3825/2	90031627	Jul. 23, 2003
Software	Cond-V2L	NA	NA
RF cable (JYEBAO)	5D-FB	Cable-C05.01	Jul. 23, 2003
LYNICS Terminator (For EMCO LISN)	0900510	E1-01-305	Feb. 20, 2003
LYNICS Terminator (For EMCO LISN)	0900510	E1-01-306	Feb. 20, 2003
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 equipment are used for conducted telecom port test only (if tested).
4. The test was performed in ADT Open Site No. 5.

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.

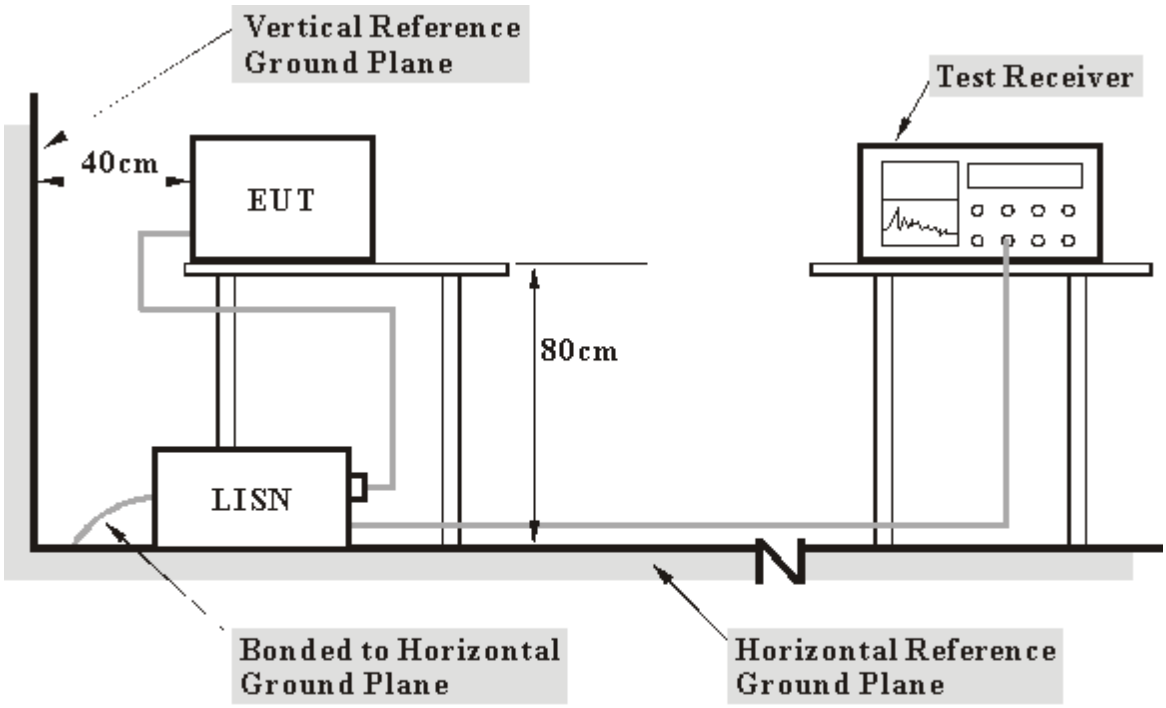
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels over 10dB under the prescribed limits could not be reported

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 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.

4.1.6 EUT OPERATING CONDITIONS

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

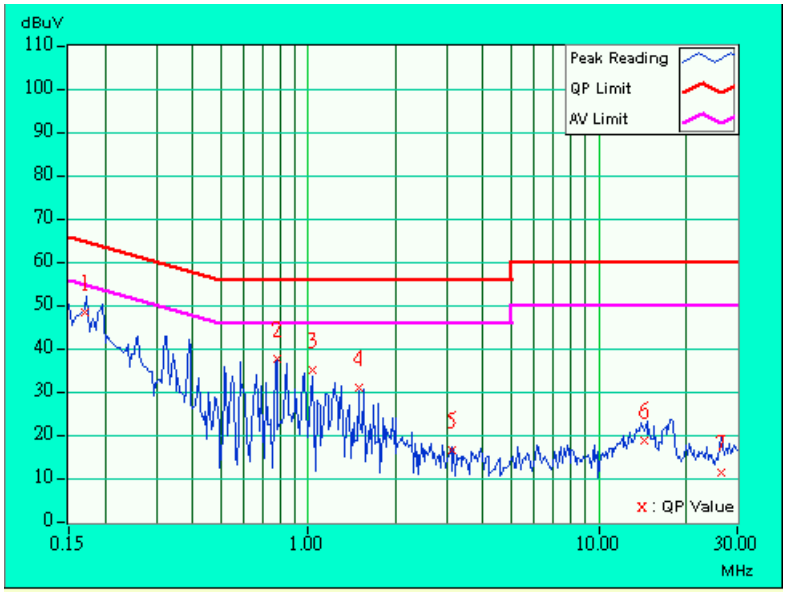
4.1.7 TEST RESULTS

EUT	Wireless module (MiniPCI)	**MODEL**	MPCI3A-20/R
MODE	Channel 1	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1005 hPa	**TESTED BY**: 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	0.170	0.10	47.22	-	47.32	-	64.98	54.98	-17.66	-
2	0.779	0.16	36.70	-	36.86	-	56.00	46.00	-19.14	-
3	1.035	0.20	34.05	-	34.25	-	56.00	46.00	-21.75	-
4	1.492	0.20	29.92	-	30.12	-	56.00	46.00	-25.88	-
5	3.109	0.31	15.57	-	15.88	-	56.00	46.00	-40.12	-
6	14.320	0.77	17.59	-	18.36	-	60.00	50.00	-41.64	-
7	26.324	1.17	10.17	-	11.34	-	60.00	50.00	-48.66	-

NOTE:

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

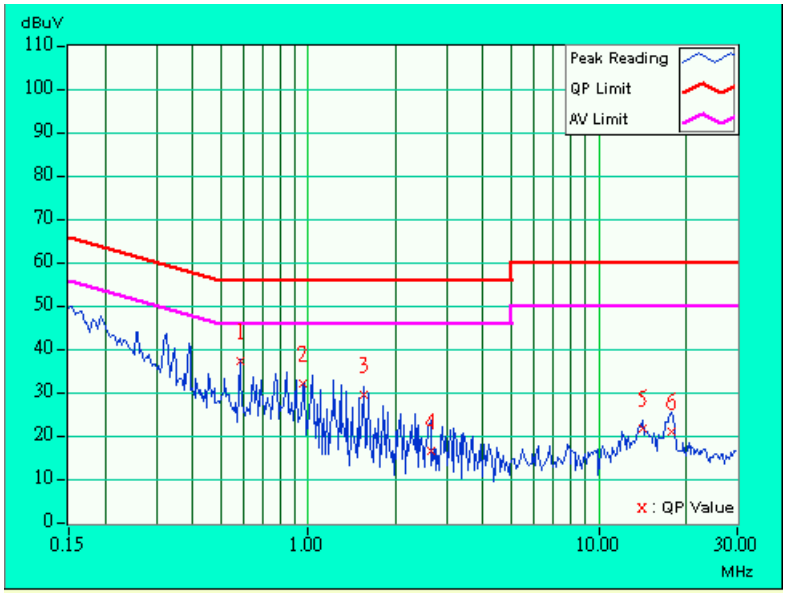


EUT	Wireless module (MiniPCI)	**MODEL**	MPCI3A-20/R
MODE	Channel 1	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1005 hPa	**TESTED BY**: Bunny Yao	

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	0.584	0.13	36.66	-	36.79	-	56.00	46.00	-19.21	-
2	0.955	0.19	31.57	-	31.76	-	56.00	46.00	-24.24	-
3	1.551	0.20	28.80	-	29.00	-	56.00	46.00	-27.00	-
4	2.637	0.23	16.02	-	16.25	-	56.00	46.00	-39.75	-
5	14.180	0.48	21.09	-	21.57	-	60.00	50.00	-38.43	-
6	17.844	0.67	20.40	-	21.07	-	60.00	50.00	-38.93	-

NOTE:

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

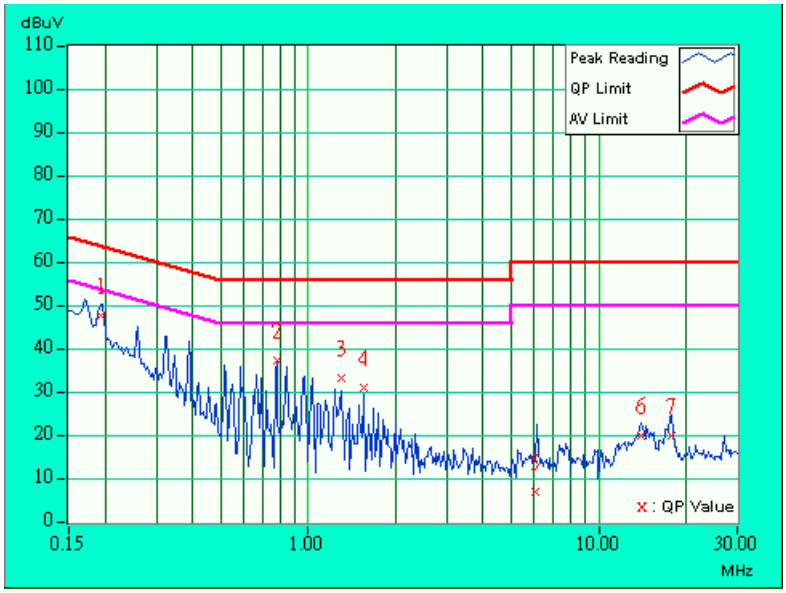


EUT	Wireless module (MiniPCI)	**MODEL**	MPCI3A-20/R
MODE	Channel 6	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1005 hPa	**TESTED BY**: Bunny Yao	

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	0.193	0.10	46.70	-	46.80	-	63.91	53.91	-17.11	-
2	0.779	0.16	36.31	-	36.47	-	56.00	46.00	-19.53	-
3	1.297	0.20	32.41	-	32.61	-	56.00	46.00	-23.39	-
4	1.555	0.20	30.24	-	30.44	-	56.00	46.00	-25.56	-
5	6.016	0.47	6.14	0.34	6.61	0.81	60.00	50.00	-53.39	-49.19
6	14.000	0.76	19.03	-	19.79	-	60.00	50.00	-40.21	-
7	17.734	0.96	19.20	-	20.16	-	60.00	50.00	-39.84	-

NOTE:

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

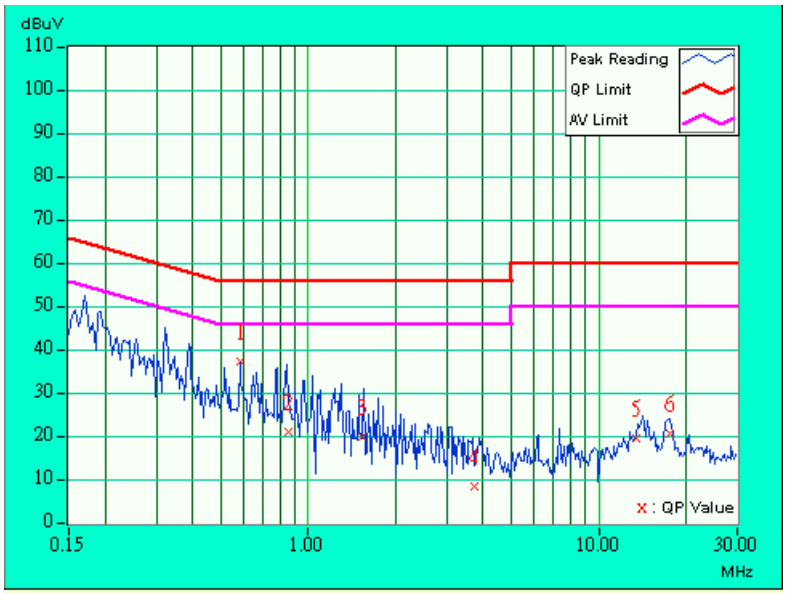


EUT	Wireless module (MiniPCI)	**MODEL**	MPCI3A-20/R
MODE	Channel 6	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1005 hPa	**TESTED BY**: Bunny Yao	

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	0.582	0.13	36.88	-	37.01	-	56.00	46.00	-18.99	-
2	0.853	0.18	20.40	-	20.58	-	56.00	46.00	-35.42	-
3	1.543	0.20	19.31	-	19.51	-	56.00	46.00	-36.49	-
4	3.746	0.29	8.02	3.29	8.31	3.58	56.00	46.00	-47.69	-42.42
5	13.543	0.47	19.09	-	19.56	-	60.00	50.00	-40.44	-
6	17.605	0.66	20.23	-	20.89	-	60.00	50.00	-39.11	-

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.

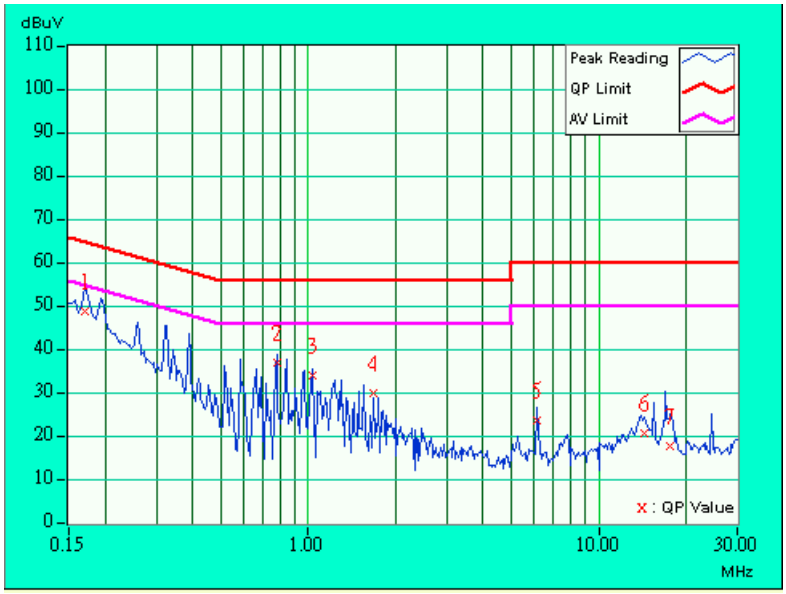


EUT	Wireless module (MiniPCI)	**MODEL**	MPCI3A-20/R
MODE	Channel 11	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1005 hPa	**TESTED BY**: Bunny Yao	

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	0.170	0.10	47.86	-	47.96	-	64.98	54.98	-17.02	-
2	0.779	0.16	36.06	-	36.22	-	56.00	46.00	-19.78	-
3	1.035	0.20	32.96	-	33.16	-	56.00	46.00	-22.84	-
4	1.684	0.20	28.87	-	29.07	-	56.00	46.00	-26.93	-
5	6.113	0.47	22.64	-	23.11	-	60.00	50.00	-36.89	-
6	14.324	0.77	19.82	-	20.59	-	60.00	50.00	-39.41	-
7	17.605	0.96	16.93	-	17.89	-	60.00	50.00	-42.11	-

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.

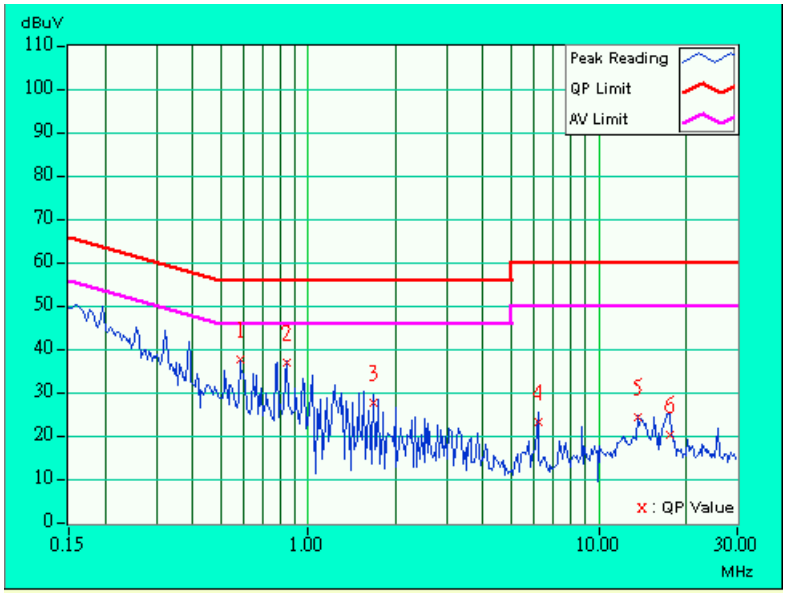


EUT	Wireless module (MiniPCI)	**MODEL**	MPCI3A-20/R
MODE	Channel 11	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1005 hPa	**TESTED BY**: Bunny Yao	

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	0.584	0.13	37.12	-	37.25	-	56.00	46.00	-18.75	-
2	0.841	0.17	36.47	-	36.64	-	56.00	46.00	-19.36	-
3	1.684	0.20	27.29	-	27.49	-	56.00	46.00	-28.51	-
4	6.184	0.34	22.74	-	23.08	-	60.00	50.00	-36.92	-
5	13.609	0.47	23.65	-	24.12	-	60.00	50.00	-35.88	-
6	17.496	0.65	19.65	-	20.30	-	60.00	50.00	-39.70	-

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

Emissions radiated outside of the specified bands, shall be according to the general radiated limits in 15.209 as following:

Frequencies (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

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. 07, 2003
* 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
ANTENNA (Large Biconical)	VHBA9123	449	Dec. 10, 2002
* CHASE BILOG Antenna	CBL6112A	2221	Aug. 02, 2003
* SCHWARZBECK Horn Antenna	BBHA9120-D1	D130	Jul. 03, 2003
* EMCO Horn Antenna	3115	9312-4192	Apr. 09, 2003
* EMCO Turn Table	1060	1115	NA
* SHOSHIN Tower	AP-4701	A6Y005	NA
* Software	AS61D4	NA	NA
* ANRITSU RF Switches	MP59B	M35046	Jan. 25, 2003
* TIMES RF cable	LMR-600	CABLE-ST5-01	Jul. 12, 2003
Open Field Test Site	Site 5	ADT-R05	Jul. 19, 2003
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.

5. The test was performed in ADT Open Site No. 5.

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.

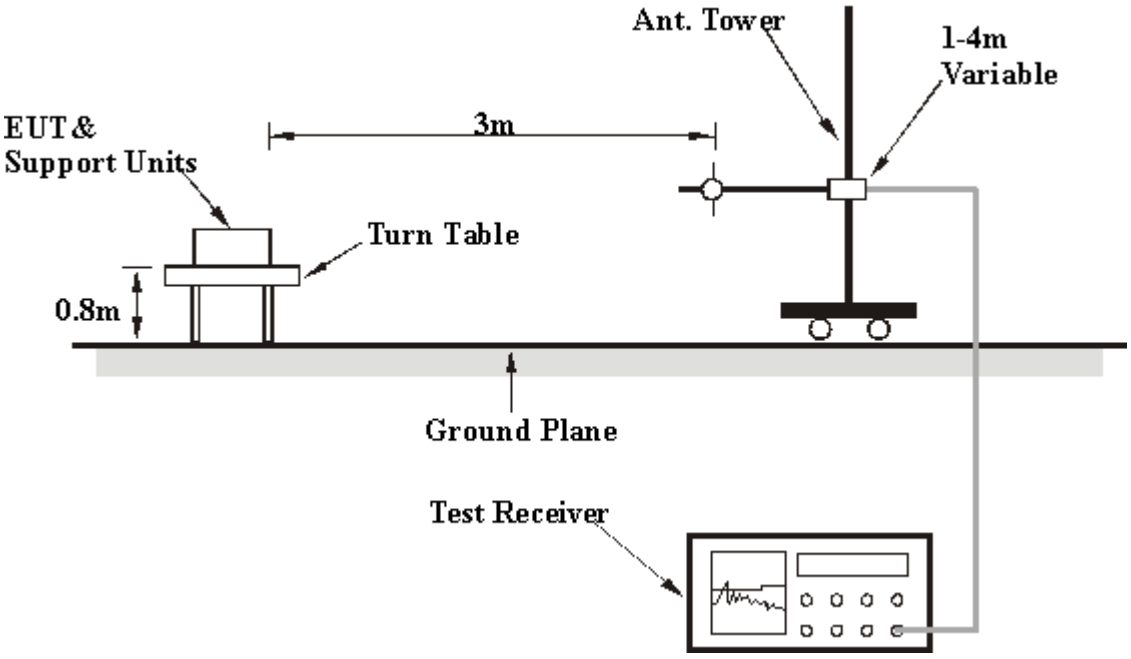
NOTE:

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 DEVIATION FROM TEST STANDARD

No deviation

4.2.5 TEST SETUP



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

4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6.

4.2.7 TEST RESULTS (A)

EUT	Wireless module (MiniPCI)	**MODEL**	MPCI3A-20/R
MODE	Channel 11	**FREQUENCY RANGE**	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 60% RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	132.00	31.0 QP	43.50	-12.50	1.80H	113	16.47	11.16	3.37	0.00	-14.53
2	176.00	25.8 QP	43.50	-17.70	1.07H	230	12.92	9.08	3.80	0.00	-12.88
3	220.00	38.2 QP	46.00	-7.80	1.60H	40	23.78	10.12	4.30	0.00	-14.43
4	264.00	37.5 QP	46.00	-8.50	1.00H	344	19.71	12.89	4.91	0.00	-17.79
5	396.00	39.5 QP	46.00	-6.50	1.05H	55	17.41	15.96	6.13	0.00	-22.10
6	440.00	32.2 QP	46.00	-13.80	1.02H	138	9.40	16.32	6.49	0.00	-22.80
7	528.00	34.0 QP	46.00	-12.00	1.49H	228	9.37	17.62	7.00	0.00	-24.63
8	660.00	34.0 QP	46.00	-12.00	1.52H	3	6.56	19.25	8.19	0.00	-27.44
9	704.00	35.2 QP	46.00	-10.80	1.29H	16	7.36	19.38	8.46	0.00	-27.84
10	748.00	36.0 QP	46.00	-10.00	1.26H	7	7.11	20.14	8.75	0.00	-28.89
11	792.00	36.4 QP	46.00	-9.60	1.57H	70	6.61	20.60	9.18	0.00	-29.80
12	836.00	35.4 QP	46.00	-10.60	1.55H	3	5.43	20.54	9.43	0.00	-29.97
13	880.00	36.2 QP	46.00	-9.80	1.48H	124	5.82	20.68	9.70	0.00	-30.39
14	924.00	33.5 QP	46.00	-12.50	1.00H	8	2.47	21.00	10.03	0.00	-31.04

NOTE:

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

EUT	Wireless module (MiniPCI)	**MODEL**	MPCI3A-20/R
MODE	Channel 11	**FREQUENCY RANGE**	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 60% RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	132.00	34.0 QP	43.50	-9.50	1.15V	5	19.47	11.16	3.37	0.00	-14.53
2	220.00	33.2 QP	46.00	-12.80	1.31V	7	18.78	10.12	4.30	0.00	-14.42
3	264.00	30.4 QP	46.00	-15.60	1.47V	119	12.61	12.89	4.91	0.00	-17.79
4	396.00	41.0 QP	46.00	-5.00	1.50V	2	18.91	15.96	6.13	0.00	-22.10
5	440.00	36.5 QP	46.00	-9.50	1.55V	237	13.70	16.32	6.49	0.00	-22.81
6	528.00	35.0 QP	46.00	-11.00	1.02V	6	10.37	17.62	7.00	0.00	-24.63
7	572.00	31.0 QP	46.00	-15.00	1.09V	3	5.10	18.25	7.65	0.00	-25.91
8	616.00	32.0 QP	46.00	-14.00	1.13V	8	5.21	18.82	7.97	0.00	-26.80
9	660.00	34.0 QP	46.00	-12.00	1.17V	213	6.56	19.25	8.19	0.00	-27.45
10	704.00	36.2 QP	46.00	-9.80	1.07V	21	8.36	19.38	8.46	0.00	-27.84
11	748.00	35.2 QP	46.00	-10.80	1.11V	356	6.28	20.14	8.75	0.00	-28.90
12	792.00	33.4 QP	46.00	-12.60	1.54V	63	3.61	20.60	9.18	0.00	-29.80
13	836.00	37.0 QP	46.00	-9.00	1.16V	330	7.03	20.54	9.43	0.00	-29.98
14	880.00	37.0 QP	46.00	-9.00	1.21V	12	6.62	20.68	9.70	0.00	-30.39
15	924.00	35.2 QP	46.00	-10.80	1.60V	204	4.17	21.00	10.03	0.00	-31.03

NOTE:

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

EUT	Wireless module (MiniPCI)	**MODEL**	MPCI3A-20/R
MODE	Channel 1	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60% RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	2386.00	40.0 PK	74.00	-34.00	1.58H	308	46.50	27.67	2.53	36.72	6.52
2	*2412.00	102.9 PK			1.42H	23	109.40	27.67	2.53	36.72	6.52.
3	*2412.00	94.5 AV			1.42H	23	101.00	27.67	2.53	36.72	6.52.
4	4824.00	49.6 PK	74.00	-24.40	1.37H	12	50.80	31.52	4.01	36.70	1.19
5	7236.00	47.8 PK	74.00	-26.20	1.42H	4	43.00	36.20	5.58	37.00	-4.78
6	9648.00	52.6 PK	74.00	-21.40	1.00H	2	46.00	38.45	5.76	37.63	-6.59

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	2386.00	42.0 PK	74.00	-32.00	1.07V	63	48.50	27.67	2.53	36.72	6.52
2	*2412.00	105.5 PK			1.01V	271	112.00	27.67	2.53	36.72	6.52
3	*2412.00	99.5 AV			1.01V	271	106.00	27.67	2.53	36.72	6.52
4	4824.00	50.5 PK	74.00	-23.50	1.16V	2	51.70	31.52	4.01	36.70	1.18
5	7240.00	50.0 PK	74.00	-24.00	1.02V	6	45.20	36.20	5.58	37.00	-4.79
6	9648.00	51.6 PK	74.00	-22.40	1.41V	4	45.00	38.45	5.76	37.63	-6.58

NOTE:

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

EUT	Wireless module (MiniPCI)	**MODEL**	MPCI3A-20/R
MODE	Channel 6	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60% RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	*2437.00	99.6 AV			1.04H	330	105.80	27.81	2.66	36.71	6.24
2	*2437.00	105.8 PK			1.04H	330	112.00	27.81	2.66	36.71	6.24
3	4874.00	51.1 PK	74.00	-22.90	1.00H	18	52.20	31.59	4.03	36.70	1.08
4	7310.00	50.6 PK	74.00	-23.40	1.60H	294	45.70	36.26	5.65	37.02	-4.90
5	9748.00	53.5 AV	79.60	-26.10	1.00H	74	47.00	38.50	5.66	37.65	-6.51
6	9748.00	59.5 PK	85.80	-26.30	1.00H	74	53.00	38.50	5.66	37.65	-6.51.

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	*2437.00	97.5 AV			1.00V	106	103.70	27.81	2.66	36.71	6.24
2	*2437.00	103.6 PK			1.00V	106	109.80	27.81	2.66	36.71	6.24
3	4874.00	51.1 PK	74.00	-22.90	1.53V	355	52.20	31.59	4.03	36.70	1.08
4	7310.00	51.4 PK	74.00	-22.60	1.10V	357	46.50	36.26	5.65	37.02	-4.90
5	9748.00	55.5 PK	83.60	-28.10	1.33V	4	49.00	38.50	5.66	37.65	-6.52
6	9748.00	50.5 AV	77.50	-27.00	1.33V	4	44.00	38.50	5.66	37.65	-6.51

NOTE:

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

EUT	Wireless module (MiniPCI)	**MODEL**	MPCI3A-20/R
MODE	Channel 11	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60% RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	*2463.00	97.8 AV			1.12H	321	104.00	27.81	2.66	36.71	6.24
2	*2463.00	103.5 PK			1.12H	321	109.70	27.81	2.66	36.71	6.24
3	2486.00	44.0 PK	74.00	-30.00	1.09H	306	50.00	27.96	2.78	36.70	5.96
4	4924.00	52.0 PK	74.00	-22.00	1.03H	352	53.00	31.66	4.06	36.70	1.00
5	7390.00	54.1 PK	74.00	-19.90	1.35H	49	49.00	36.40	5.79	37.05	-5.14.
6	7390.00	46.1 AV	54.00	-7.90	1.35H	49	41.00	36.40	5.79	37.05	-5.15
7	9840.00	59.1 AV	77.80	-18.70	1.00H	3	52.60	38.54	5.59	37.67	-6.46
8	9840.00	65.5 PK	83.50	-18.00	1.00H	3	59.00	38.54	5.59	37.67	-6.46

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	*2463.00	99.0 AV			1.00V	278	105.29	27.81	2.66	36.71	6.24
2	*2463.00	104.8 PK			1.00V	278	111.00	27.81	2.66	36.71	6.24
3	2490.00	42.9 PK	74.00	-31.10	1.03V	44	48.90	27.96	2.78	36.70	5.96
4	4924.00	48.0 PK	74.00	-26.00	1.31V	4	49.00	31.66	4.06	36.70	0.99
5	7387.00	48.1 PK	74.00	-25.90	1.75V	33	43.00	36.40	5.79	37.05	-5.14
6	9848.00	53.5 PK	84.80	-31.30	1.02V	188	47.00	38.54	5.59	37.67	-6.46
7	9848.00	47.5 AV	79.00	-31.50	1.02V	188	41.00	38.54	5.59	37.67	-6.46

NOTE:

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

4.2.8 TEST RESULTS (B)

EUT	Wireless module (MiniPCI)	**MODEL**	MPCI3A-20/R
MODE	Channel 11	**FREQUENCY RANGE**	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 60% RH, 1050 hPa	**TESTED BY**: 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	132.00	28.9 QP	43.50	-14.60	1.12H	299	14.37	11.16	3.37	0.00	-14.53
2	220.00	28.0 QP	46.00	-18.00	1.08H	108	13.58	10.12	4.30	0.00	-14.42
3	264.00	33.0 QP	46.00	-13.00	1.12H	248	15.21	12.89	4.91	0.00	-17.79
4	308.00	33.8 QP	46.00	-12.20	1.22H	171	15.23	13.38	5.19	0.00	-18.57
5	352.00	34.8 QP	46.00	-11.20	1.19H	28	14.76	14.31	5.73	0.00	-20.05
6	396.00	42.4 QP	46.00	-3.60	1.19H	43	20.31	15.96	6.13	0.00	-22.09
7	440.00	37.8 QP	46.00	-8.20	1.30H	134	15.00	16.32	6.49	0.00	-22.81
8	528.00	35.0 QP	46.00	-11.00	1.12H	210	10.37	17.62	7.00	0.00	-24.63
9	572.00	34.9 QP	46.00	-11.10	1.42H	305	9.00	18.25	7.65	0.00	-25.90
10	616.00	30.0 QP	46.00	-16.00	1.30H	311	3.21	18.82	7.97	0.00	-26.79
11	660.00	30.8 QP	46.00	-15.20	1.41H	244	3.36	19.25	8.19	0.00	-27.44
12	704.00	35.9 QP	46.00	-10.10	1.53H	176	8.06	19.38	8.46	0.00	-27.84
13	748.00	33.0 QP	46.00	-13.00	1.21H	104	4.11	20.14	8.75	0.00	-28.89
14	836.00	33.0 QP	46.00	-13.00	1.24H	44	3.03	20.54	9.43	0.00	-29.98
15	880.00	35.5 QP	46.00	-10.50	1.00H	27	5.12	20.68	9.70	0.00	-30.39
16	924.00	33.9 QP	46.00	-12.10	1.11H	81	2.87	21.00	10.03	0.00	-31.03

NOTE:

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

EUT	Wireless module (MiniPCI)	**MODEL**	MPCI3A-20/R
MODE	Channel 11	**FREQUENCY RANGE**	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 60% RH, 1050 hPa	**TESTED BY**: 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	32.0 QP	43.50	-11.50	1.10V	180	17.47	11.16	3.37	0.00	-14.53
2	176.00	24.0 QP	43.50	-19.50	1.21V	127	11.12	9.08	3.80	0.00	-12.88
3	220.00	30.9 QP	46.00	-15.10	1.31V	51	16.48	10.12	4.30	0.00	-14.42
4	264.00	34.4 QP	46.00	-11.60	1.57V	36	16.61	12.89	4.91	0.00	-17.79
5	308.00	26.5 QP	46.00	-19.50	1.42V	133	7.93	13.38	5.19	0.00	-18.57
6	352.00	40.9 QP	46.00	-5.10	1.11V	225	20.86	14.31	5.73	0.00	-20.04
7	396.00	42.8 QP	46.00	-3.20	1.11V	150	20.71	15.96	6.13	0.00	-22.09
8	440.00	41.8 QP	46.00	-4.20	1.10V	314	19.00	16.32	6.49	0.00	-22.80
9	528.00	33.5 QP	46.00	-12.50	1.23V	209	8.87	17.62	7.00	0.00	-24.63
10	572.00	30.0 QP	46.00	-16.00	1.23V	161	4.10	18.25	7.65	0.00	-25.90
11	660.00	33.5 QP	46.00	-12.50	1.20V	1	6.06	19.25	8.19	0.00	-27.44
12	704.00	30.5 QP	46.00	-15.50	1.00V	37	2.66	19.38	8.46	0.00	-27.84
13	748.00	35.0 QP	46.00	-11.00	1.09V	151	6.11	20.14	8.75	0.00	-28.89
14	836.00	30.0 QP	46.00	-16.00	1.28V	205	0.03	20.54	9.43	0.00	-29.97
15	924.00	30.0 QP	46.00	-16.00	1.49V	323	-1.03	21.00	10.03	0.00	-31.03

NOTE:

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

EUT	Wireless module (MiniPCI)	**MODEL**	MPCI3A-20/R
MODE	Channel 1	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60% RH, 1050 hPa	**TESTED BY**: 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	2387.00	43.2 PK	74.00	-30.80	1.53H	235	13.00	27.67	2.53	0.00	-30.20
2	2387.00	36.8 AV	54.00	-17.20	1.53H	235	6.60	27.67	2.53	0.00	-30.20
3	*2412.00	104.2 PK			1.43H	147	74.00	27.67	2.53	0.00	-30.20
4	*2412.00	99.0 AV			1.43H	147	68.80	27.67	2.53	0.00	-30.20
5	4824.00	45.2 PK	74.00	-28.80	1.37H	308	9.67	31.52	4.01	0.00	-35.53
6	4824.00	38.4 AV	54.00	-15.60	1.37H	308	2.87	31.52	4.01	0.00	-35.53
7	7236.00	48.0 PK	74.00	-26.00	1.10H	278	6.22	36.20	5.58	0.00	-41.78
8	7236.00	40.0 AV	54.00	-14.00	1.10H	278	-1.78	36.20	5.58	0.00	-41.78
9	9648.00	55.0 PK	74.00	-19.00	1.66H	319	10.79	38.45	5.76	0.00	-44.21
10	9648.00	46.6 AV	54.00	-7.40	1.66H	319	2.39	38.45	5.76	0.00	-44.22

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	2387.00	45.0 PK	74.00	-29.00	1.41V	5	14.80	27.67	2.53	0.00	-30.20
2	2387.00	37.5 AV	54.00	-16.50	1.41V	5	7.30	27.67	2.53	0.00	-30.20
3	*2412.00	103.8 PK			1.60V	108	73.60	27.67	2.53	0.00	-30.20
4	*2412.00	98.0 AV			1.60V	108	67.80	27.67	2.53	0.00	-30.20
5	4824.00	51.0 PK	74.00	-23.00	1.74V	184	15.47	31.52	4.01	0.00	-35.53
6	4824.00	42.9 AV	54.00	-11.10	1.74V	184	7.37	31.52	4.01	0.00	-35.53
7	7236.00	47.5 PK	74.00	-26.50	1.04V	92	5.72	36.20	5.58	0.00	-41.78
8	7236.00	41.0 AV	54.00	-13.00	1.04V	92	-0.78	36.20	5.58	0.00	-41.78
9	9648.00	52.2 PK	74.00	-21.80	1.20V	57	7.99	38.45	5.76	0.00	-44.22
10	9648.00	44.0 AV	54.00	-10.00	1.20V	57	-0.21	38.45	5.76	0.00	-44.21

NOTE:

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

EUT	Wireless module (MiniPCI)	**MODEL**	MPCI3A-20/R
MODE	Channel 6	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60% RH, 1050 hPa	**TESTED BY**: 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	*2437.00	107.4 PK	-	-	1.50H	64	75.00	27.33	5.08	0.00	-32.40
2	*2437.00	100.4 AV	-	-	1.50H	64	68.00	27.33	5.08	0.00	-32.40
3	4874.00	49.1 PK	74.00	-24.90	1.48H	69	45.00	31.47	7.21	34.63	-4.05

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	*2437.00	103.8 PK			1.46H	288	73.33	27.81	2.66	0.00	-30.47
2	*2437.00	98.2 AV			1.46H	288	67.73	27.81	2.66	0.00	-30.47
3	4874.00	37.8 AV	54.00	-16.20	1.10H	246	2.18	31.59	4.03	0.00	-35.62
4	4874.00	47.0 PK	74.00	-27.00	1.10H	246	11.38	31.59	4.03	0.00	-35.62
5	7310.00	53.0 PK	74.00	-21.00	1.40H	134	11.08	36.26	5.65	0.00	-41.92
6	7310.00	43.9 AV	54.00	-10.10	1.40H	134	1.98	36.26	5.65	0.00	-41.92
7	9748.00	56.6 PK	74.00	-17.40	1.19H	65	12.44	38.50	5.66	0.00	-44.16
8	9748.00	46.0 AV	54.00	-8.00	1.19H	65	1.84	38.50	5.66	0.00	-44.17

NOTE:

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

EUT	Wireless module (MiniPCI)	**MODEL**	MPCI3A-20/R
MODE	Channel 11	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60% RH, 1050 hPa	**TESTED BY**: 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	*2462.00	104.0 PK			1.46H	155	73.53	27.81	2.66	0.00	-30.47
2	*2462.00	99.6 AV			1.46H	155	69.13	27.81	2.66	0.00	-30.47
3	2486.00	48.0 PK	74.00	-26.00	1.44H	150	17.26	27.96	2.78	0.00	-30.74
4	2486.00	40.0 AV	54.00	-14.00	1.44H	150	9.26	27.96	2.78	0.00	-30.74
5	4924.00	53.0 PK	74.00	-21.00	1.30H	129	17.29	31.66	4.06	0.00	-35.71
6	4924.00	42.3 AV	54.00	-11.70	1.30H	129	6.59	31.66	4.06	0.00	-35.71
7	7390.00	50.0 PK	74.00	-24.00	1.09H	175	7.81	36.40	5.79	0.00	-42.19
8	7390.00	40.1 AV	54.00	-13.90	1.09H	175	-2.09	36.40	5.79	0.00	-42.19
9	9840.00	56.6 PK	74.00	-17.40	1.47H	63	12.48	38.54	5.59	0.00	-44.12
10	9840.00	47.0 AV	54.00	-7.00	1.47H	63	2.88	38.54	5.59	0.00	-44.12.

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	*2462.00	99.2 PK			1.73V	271	68.73	27.81	2.66	0.00	-30.47
2	*2462.00	95.0 AV			1.73V	271	64.53	27.81	2.66	0.00	-30.47
3	2486.00	33.9 AV	54.00	-20.10	1.71V	258	3.16	27.96	2.78	0.00	-30.74
4	2486.00	44.0 PK	74.00	-30.00	1.71V	258	13.26	27.96	2.78	0.00	-30.74
5	4924.00	47.8 PK	74.00	-26.20	1.43V	228	12.09	31.66	4.06	0.00	-35.71
6	4924.00	39.0 AV	54.00	-15.00	1.43V	228	3.29	31.66	4.06	0.00	-35.71
7	7390.00	47.7 PK	74.00	-26.30	1.17V	152	5.51	36.40	5.79	0.00	-42.19
8	7390.00	38.5 AV	54.00	-15.50	1.17V	152	-3.69	36.40	5.79	0.00	-42.19
9	9840.00	53.9 PK	74.00	-20.10	1.61V	255	9.78	38.54	5.59	0.00	-44.12
10	9840.00	43.2 AV	54.00	-10.80	1.61V	255	-0.92	38.54	5.59	0.00	-44.12

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.

4.2.9 TEST RESULTS (C)

EUT	Wireless module (MiniPCI)	**MODEL**	MPCI3A-20/R
MODE	Channel 11	**FREQUENCY RANGE**	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 60% RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	132.00	29.0 QP	43.50	-14.50	1.64H	41	14.47	11.16	3.37	0.00	-14.53
2	176.00	28.0 QP	43.50	-15.50	1.23H	346	15.12	9.08	3.80	0.00	-12.88
3	220.00	34.0 QP	46.00	-12.00	1.78H	1	19.58	10.12	4.30	0.00	-14.43
4	264.00	36.2 QP	46.00	-9.80	1.62H	3	18.41	12.89	4.91	0.00	-17.79
5	308.00	31.4 QP	46.00	-14.60	1.65H	17	12.83	13.38	5.19	0.00	-18.57
6	352.00	30.4 QP	46.00	-15.60	1.65H	3	10.36	14.31	5.73	0.00	-20.04
7	396.00	43.8 QP	46.00	-2.20	1.28H	42	21.70	15.96	6.13	0.00	-22.09
8	528.00	32.0 QP	46.00	-14.00	1.42H	347	7.37	17.62	7.00	0.00	-24.63
9	572.00	28.0 QP	46.00	-18.00	1.55H	1	2.10	18.25	7.65	0.00	-25.91
10	660.00	33.0 QP	46.00	-13.00	1.15H	4	5.56	19.25	8.19	0.00	-27.44
11	704.00	35.0 QP	46.00	-11.00	1.00H	3	7.16	19.38	8.46	0.00	-27.84
12	748.00	34.0 QP	46.00	-12.00	1.33H	270	5.11	20.14	8.75	0.00	-28.89
13	792.00	37.0 QP	46.00	-9.00	1.28H	43	7.21	20.60	9.18	0.00	-29.80
14	836.00	34.0 QP	46.00	-12.00	1.41H	4	4.03	20.54	9.43	0.00	-29.97
15	880.00	38.0 QP	46.00	-8.00	1.08H	9	7.62	20.68	9.70	0.00	-30.38.
16	924.00	35.0 QP	46.00	-11.00	1.46H	4	3.97	21.00	10.03	0.00	-31.03

NOTE:

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

EUT	Wireless module (MiniPCI)	**MODEL**	MPCI3A-20/R
MODE	Channel 11	**FREQUENCY RANGE**	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 60% RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	132.00	32.4 QP	43.50	-11.10	1.03V	18	17.87	11.16	3.37	0.00	-14.53
2	264.00	31.4 QP	46.00	-14.60	1.49V	4	13.61	12.89	4.91	0.00	-17.79
3	308.00	28.5 QP	46.00	-17.50	1.51V	253	9.93	13.38	5.19	0.00	-18.58
4	352.00	33.0 QP	46.00	-13.00	1.49V	296	12.96	14.31	5.73	0.00	-20.04
5	396.00	43.8 QP	46.00	-2.20	1.86V	186	21.70	15.96	6.13	0.00	-22.09
6	440.00	31.0 QP	46.00	-15.00	1.46V	4	8.20	16.32	6.49	0.00	-22.80
7	528.00	37.2 QP	46.00	-8.80	1.13V	146	12.57	17.62	7.00	0.00	-24.63
8	572.00	31.0 QP	46.00	-15.00	1.03V	3	5.10	18.25	7.65	0.00	-25.90
9	616.00	31.4 QP	46.00	-14.60	1.41V	36	4.61	18.82	7.97	0.00	-26.79
10	660.00	35.4 QP	46.00	-10.60	1.01V	308	7.96	19.25	8.19	0.00	-27.44
11	704.00	41.0 QP	46.00	-5.00	1.00V	32	13.16	19.38	8.46	0.00	-27.84
12	748.00	34.1 QP	46.00	-11.90	1.48V	278	5.21	20.14	8.75	0.00	-28.89
13	792.00	37.0 QP	46.00	-9.00	1.44V	2	7.21	20.60	9.18	0.00	-29.79.
14	836.00	36.7 QP	46.00	-9.30	1.04V	262	6.73	20.54	9.43	0.00	-29.98
15	880.00	35.0 QP	46.00	-11.00	1.34V	75	4.62	20.68	9.70	0.00	-30.39
16	924.00	34.4 QP	46.00	-11.60	1.63V	86	3.37	21.00	10.03	0.00	-31.03

NOTE:

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

EUT	Wireless module (MiniPCI)	**MODEL**	MPCI3A-20/R
MODE	Channel 1	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60% RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	2387.00	42.2 PK	74.00	-31.80	1.15H	119	12.00	27.67	2.53	0.00	-30.20
2	2387.00	36.0 AV	54.00	-18.00	1.15H	119	5.80	27.67	2.53	0.00	-30.20
3	*2412.00	102.0 PK			1.38H	174	71.80	27.67	2.53	0.00	-30.20
4	*2412.00	97.1 AV			1.38H	174	66.90	27.67	2.53	0.00	-30.20
5	4824.00	44.5 AV	54.00	-9.50	1.13H	216	8.97	31.52	4.01	0.00	-35.53
6	4824.00	52.0 PK	74.00	-22.00	1.13H	216	16.47	31.52	4.01	0.00	-35.53
7	7236.00	44.0 PK	74.00	-30.00	1.55H	154	2.22	36.20	5.58	0.00	-41.78
8	7236.00	37.9 AV	54.00	-16.10	1.55H	154	-3.88	36.20	5.58	0.00	-41.78
9	9648.00	43.0 AV	54.00	-11.00	1.76H	106	-1.21	38.45	5.76	0.00	-44.21
10	9648.00	41.5 PK	74.00	-32.50	1.76H	106	-2.71	38.45	5.76	0.00	-44.21

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	2387.00	41.5 PK	74.00	-32.50	1.57V	63	11.30	27.67	2.53	0.00	-30.20
2	2387.00	35.5 AV	54.00	-18.50	1.57V	63	5.30	27.67	2.53	0.00	-30.20
3	*2412.00	98.8 AV			1.40V	93	68.60	27.67	2.53	0.00	-30.20
4	*2412.00	104.9 PK			1.40V	93	74.70	27.67	2.53	0.00	-30.20
5	4824.00	44.0 AV	54.00	-10.00	1.13V	130	8.47	31.52	4.01	0.00	-35.53
6	4824.00	53.6 PK	74.00	-20.40	1.13V	130	18.07	31.52	4.01	0.00	-35.53
7	7236.00	47.0 PK	74.00	-27.00	1.43V	208	5.22	36.20	5.58	0.00	-41.78
8	7236.00	41.3 AV	54.00	-12.70	1.43V	208	-0.48	36.20	5.58	0.00	-41.78
9	9648.00	50.8 PK	74.00	-23.20	1.24V	115	6.59	38.45	5.76	0.00	-44.22
10	9648.00	42.7 AV	54.00	-11.30	1.24V	115	-1.51	38.45	5.76	0.00	-44.21

NOTE:

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

EUT	Wireless module (MiniPCI)	**MODEL**	MPCI3A-20/R
MODE	Channel 6	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60% RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	*2437.00	104.0 PK			1.50H	195	73.53	27.81	2.66	0.00	-30.47
2	*2437.00	98.3 AV			1.50H	195	67.83	27.81	2.66	0.00	-30.47
3	4874.00	47.9 PK	74.00	-26.10	1.72H	277	12.28	31.59	4.03	0.00	-35.62
4	4874.00	39.0 AV	54.00	-15.00	1.72H	277	3.38	31.59	4.03	0.00	-35.62
5	7310.00	50.0 PK	74.00	-24.00	1.51H	244	8.08	36.26	5.65	0.00	-41.92
6	7310.00	40.3 AV	54.00	-13.70	1.51H	244	-1.62	36.26	5.65	0.00	-41.92
7	9748.00	42.2 AV	54.00	-11.80	1.22H	298	-1.96	38.50	5.66	0.00	-44.16
8	9748.00	53.9 PK	74.00	-20.10	1.22H	298	9.74	38.50	5.66	0.00	-44.16

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	*2437.00	102.9 PK			1.47V	85	72.43	27.81	2.66	0.00	-30.47
2	*2437.00	96.8 AV			1.47V	85	66.33	27.81	2.66	0.00	-30.47
3	4874.00	52.2 PK	74.00	-21.80	1.19V	176	16.58	31.59	4.03	0.00	-35.62
4	4874.00	44.3 AV	54.00	-9.70	1.19V	176	8.68	31.59	4.03	0.00	-35.62
5	7310.00	50.0 PK	74.00	-24.00	1.50V	252	8.08	36.26	5.65	0.00	-41.92
6	7310.00	41.8 AV	54.00	-12.20	1.50V	252	-0.12	36.26	5.65	0.00	-41.92
7	9748.00	53.0 PK	74.00	-21.00	1.26V	227	8.84	38.50	5.66	0.00	-44.17
8	9748.00	42.8 AV	54.00	-11.20	1.26V	227	-1.36	38.50	5.66	0.00	-44.16

NOTE:

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

EUT	Wireless module (MiniPCI)	**MODEL**	MPCI3A-20/R
MODE	Channel 11	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60% RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	*2462.00	103.9 PK			1.52H	207	73.43	27.81	2.66	0.00	-30.47
2	*2462.00	99.0 AV			1.52H	207	68.53	27.81	2.66	0.00	-30.47
3	2489.00	39.7 AV	54.00	-14.30	1.56H	190	8.96	27.96	2.78	0.00	-30.74
4	2489.00	45.8 PK	74.00	-28.20	1.56H	190	15.06	27.96	2.78	0.00	-30.74
5	4924.00	47.2 PK	74.00	-26.80	1.11H	155	11.49	31.66	4.06	0.00	-35.71
6	4924.00	37.9 AV	54.00	-16.10	1.11H	155	2.19	31.66	4.06	0.00	-35.71
7	7387.00	42.0 AV	54.00	-12.00	1.36H	188	-0.19	36.40	5.79	0.00	-42.19
8	7387.00	51.5 PK	74.00	-22.50	1.36H	188	9.31	36.40	5.79	0.00	-42.19
9	9840.00	55.5 PK	74.00	-18.50	1.19H	92	11.38	38.54	5.59	0.00	-44.12.
10	9840.00	46.9 AV	54.00	-7.10	1.19H	92	2.78	38.54	5.59	0.00	-44.13

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	*2462.00	102.8 PK			1.02V	239	72.33	27.81	2.66	0.00	-30.47
2	*2462.00	98.8 AV			1.02V	239	68.33	27.81	2.66	0.00	-30.47
3	2486.00	37.2 AV	54.00	-16.80	1.34V	318	6.46	27.96	2.78	0.00	-30.74
4	2486.00	44.5 PK	74.00	-29.50	1.34V	318	13.76	27.96	2.78	0.00	-30.74
5	4924.00	50.9 PK	74.00	-23.10	1.10V	360	15.19	31.66	4.06	0.00	-35.71
6	4924.00	43.3 AV	54.00	-10.70	1.10V	360	7.59	31.66	4.06	0.00	-35.71
7	7390.00	55.0 PK	74.00	-19.00	1.39V	293	12.81	36.40	5.79	0.00	-42.19.
8	7390.00	47.2 AV	54.00	-6.80	1.39V	293	5.01	36.40	5.79	0.00	-42.19
9	9840.00	56.0 PK	74.00	-18.00	1.68V	179	11.88	38.54	5.59	0.00	-44.12
10	9840.00	48.9 AV	54.00	-5.10	1.68V	179	4.78	38.54	5.59	0.00	-44.12

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.

4.2.10 TEST RESULTS (D)

EUT	Wireless module (MiniPCI)	**MODEL**	MPCI3A-20/R
MODE	Channel 11	**FREQUENCY RANGE**	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 60% RH, 1050 hPa	**TESTED BY**: 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	132.00	28.9 QP	43.50	-14.60	1.41H	337	14.37	11.16	3.37	0.00	-14.53
2	176.00	33.0 QP	43.50	-10.50	1.44H	199	20.12	9.08	3.80	0.00	-12.88
3	220.00	36.8 QP	46.00	-9.20	1.50H	276	22.38	10.12	4.30	0.00	-14.42
4	264.00	40.0 QP	46.00	-6.00	1.33H	122	22.21	12.89	4.91	0.00	-17.79
5	352.00	35.0 QP	46.00	-11.00	1.45H	67	14.96	14.31	5.73	0.00	-20.04
6	396.00	40.2 QP	46.00	-5.80	1.34H	217	18.11	15.96	6.13	0.00	-22.09
7	440.00	34.0 QP	46.00	-12.00	1.59H	134	11.20	16.32	6.49	0.00	-22.80
8	528.00	36.0 QP	46.00	-10.00	1.44H	321	11.37	17.62	7.00	0.00	-24.63
9	660.00	33.0 QP	46.00	-13.00	1.30H	337	5.56	19.25	8.19	0.00	-27.44
10	704.00	33.0 QP	46.00	-13.00	1.30H	252	5.16	19.38	8.46	0.00	-27.84
11	748.00	35.8 QP	46.00	-10.20	1.21H	183	6.91	20.14	8.75	0.00	-28.89
12	836.00	38.0 QP	46.00	-8.00	1.10H	107	8.03	20.54	9.43	0.00	-29.98
13	880.00	38.0 QP	46.00	-8.00	1.16H	39	7.62	20.68	9.70	0.00	-30.39
14	924.00	30.0 QP	46.00	-16.00	1.33H	101	-1.03	21.00	10.03	0.00	-31.03

NOTE:

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

EUT	Wireless module (MiniPCI)	**MODEL**	MPCI3A-20/R
MODE	Channel 11	**FREQUENCY RANGE**	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 60% RH, 1050 hPa	**TESTED BY**: 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	32.5 QP	43.50	-11.00	1.42V	105	17.97	11.16	3.37	0.00	-14.53
2	220.00	35.6 QP	46.00	-10.40	1.50V	32	21.18	10.12	4.30	0.00	-14.42
3	264.00	27.6 QP	46.00	-18.40	1.37V	108	9.81	12.89	4.91	0.00	-17.79
4	352.00	38.0 QP	46.00	-8.00	1.49V	169	17.96	14.31	5.73	0.00	-20.04
5	396.00	37.5 QP	46.00	-8.50	1.33V	234	15.41	15.96	6.13	0.00	-22.09
6	440.00	38.0 QP	46.00	-8.00	1.41V	313	15.20	16.32	6.49	0.00	-22.80
7	528.00	35.0 QP	46.00	-11.00	1.18V	337	10.37	17.62	7.00	0.00	-24.63
8	572.00	37.0 QP	46.00	-9.00	1.25V	255	11.10	18.25	7.65	0.00	-25.90
9	660.00	35.4 QP	46.00	-10.60	1.43V	182	7.96	19.25	8.19	0.00	-27.44
10	704.00	34.0 QP	46.00	-12.00	1.49V	123	6.16	19.38	8.46	0.00	-27.84
11	748.00	32.5 QP	46.00	-13.50	1.02V	50	3.61	20.14	8.75	0.00	-28.89
12	836.00	32.1 QP	46.00	-13.90	1.20V	137	2.13	20.54	9.43	0.00	-29.97
13	924.00	33.0 QP	46.00	-13.00	1.38V	198	1.97	21.00	10.03	0.00	-31.03

NOTE:

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

EUT	Wireless module (MiniPCI)	**MODEL**	MPCI3A-20/R
MODE	Channel 1	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60% RH, 1050 hPa	**TESTED BY**: 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	2386.00	44.0 PK	74.00	-30.00	1.60H	175	13.80	27.67	2.53	0.00	-30.20
2	2386.00	36.5 AV	54.00	-17.50	1.60H	175	6.30	27.67	2.53	0.00	-30.20
3	*2412.00	103.0 PK			1.55H	167	72.80	27.67	2.53	0.00	-30.20
4	*2412.00	97.6 AV			1.55H	167	67.40	27.67	2.53	0.00	-30.20
5	4824.00	49.0 PK	74.00	-25.00	1.10H	209	13.47	31.52	4.01	0.00	-35.53
6	4824.00	41.0 AV	54.00	-13.00	1.10H	209	5.47	31.52	4.01	0.00	-35.53
7	7236.00	48.0 PK	74.00	-26.00	1.07H	241	6.22	36.20	5.58	0.00	-41.78
8	7236.00	39.5 AV	54.00	-14.50	1.07H	241	-2.28	36.20	5.58	0.00	-41.78
9	9648.00	52.2 PK	74.00	-21.80	1.53H	195	7.99	38.45	5.76	0.00	-44.22
10	9648.00	43.9 AV	54.00	-10.10	1.53H	195	-0.31	38.45	5.76	0.00	-44.21

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	2387.00	46.0 PK	74.00	-28.00	1.18V	39	15.80	27.67	2.53	0.00	-30.20
2	2387.00	37.0 AV	54.00	-17.00	1.18V	39	6.80	27.67	2.53	0.00	-30.20
3	*2412.00	105.2 PK			1.27V	57	75.00	27.67	2.53	0.00	-30.20
4	*2412.00	99.5 AV			1.27V	57	69.30	27.67	2.53	0.00	-30.20
5	4824.00	50.0 PK	74.00	-24.00	1.41V	80	14.47	31.52	4.01	0.00	-35.53
6	4824.00	40.2 AV	54.00	-13.80	1.41V	80	4.67	31.52	4.01	0.00	-35.53
7	7236.00	50.0 PK	74.00	-24.00	1.64V	136	8.22	36.20	5.58	0.00	-41.78
8	7236.00	42.5 AV	54.00	-11.50	1.64V	136	0.72	36.20	5.58	0.00	-41.78
9	9648.00	55.0 PK	74.00	-19.00	1.53V	155	10.79	38.45	5.76	0.00	-44.21.
10	9648.00	43.0 AV	54.00	-11.00	1.53V	155	-1.21	38.45	5.76	0.00	-44.21

NOTE:

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

EUT	Wireless module (MiniPCI)	**MODEL**	MPCI3A-20/R
MODE	Channel 6	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60% RH, 1050 hPa	**TESTED BY**: 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	*2437.00	106.0 PK			1.06H	315	75.53	27.81	2.66	0.00	-30.47
2	*2437.00	100.0 AV			1.06H	315	69.53	27.81	2.66	0.00	-30.47
3	4874.00	51.1 PK	74.00	-22.90	1.37H	259	15.48	31.59	4.03	0.00	-35.62
4	4874.00	44.0 AV	54.00	-10.00	1.37H	259	8.38	31.59	4.03	0.00	-35.62
5	7310.00	50.0 PK	74.00	-24.00	1.53H	212	8.08	36.26	5.65	0.00	-41.92
6	7310.00	42.6 AV	54.00	-11.40	1.53H	212	0.68	36.26	5.65	0.00	-41.92
7	9748.00	57.7 PK	86.00	-28.30	1.31H	162	13.54	38.50	5.66	0.00	-44.16.
8	9748.00	52.0 AV	80.00	-28.00	1.31H	162	7.84	38.50	5.66	0.00	-44.16

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	*2437.00	103.9 PK			1.44V	176	73.43	27.81	2.66	0.00	-30.47
2	*2437.00	98.0 AV			1.44V	176	67.53	27.81	2.66	0.00	-30.47
3	4874.00	50.6 PK	74.00	-23.40	1.21V	200	14.98	31.59	4.03	0.00	-35.62
4	4874.00	43.1 AV	54.00	-10.90	1.21V	200	7.48	31.59	4.03	0.00	-35.62
5	7310.00	51.8 PK	74.00	-22.20	1.33V	246	9.88	36.26	5.65	0.00	-41.92
6	7310.00	43.3 AV	54.00	-10.70	1.33V	246	1.38	36.26	5.65	0.00	-41.92
7	9748.00	57.0 PK	83.90	-26.90	1.19V	275	12.84	38.50	5.66	0.00	-44.16.
8	9748.00	48.0 AV	78.00	-30.00	1.19V	275	3.84	38.50	5.66	0.00	-44.16

NOTE:

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

EUT	Wireless module (MiniPCI)	**MODEL**	MPCI3A-20/R
MODE	Channel 11	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60% RH, 1050 hPa	**TESTED BY**: 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	*2462.00	104.0 PK			1.25H	137	73.53	27.81	2.66	0.00	-30.47
2	*2462.00	97.4 AV			1.25H	137	66.93	27.81	2.66	0.00	-30.47
3	2490.00	42.9 PK	74.00	-31.10	1.29H	131	12.16	27.96	2.78	0.00	-30.74
4	2490.00	36.0 AV	54.00	-18.00	1.29H	131	5.26	27.96	2.78	0.00	-30.74
5	4924.00	52.2 PK	74.00	-21.80	1.44H	182	16.49	31.66	4.06	0.00	-35.71
6	4924.00	45.9 AV	54.00	-8.10	1.44H	182	10.19	31.66	4.06	0.00	-35.71
7	7390.00	50.8 PK	74.00	-23.20	1.66H	213	8.61	36.40	5.79	0.00	-42.19
8	7390.00	43.7 AV	54.00	-10.30	1.66H	213	1.51	36.40	5.79	0.00	-42.19
9	9840.00	59.2 PK	84.00	-24.80	1.26H	254	15.08	38.54	5.59	0.00	-44.12.
10	9840.00	55.2 AV	77.40	-22.20	1.26H	254	11.08	38.54	5.59	0.00	-44.12.

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	*2462.00	104.0 PK			1.41V	142	73.53	27.81	2.66	0.00	-30.47
2	*2462.00	98.3 AV			1.41V	142	67.83	27.81	2.66	0.00	-30.47
3	2490.00	42.0 PK	74.00	-32.00	1.27V	167	11.26	27.96	2.78	0.00	-30.74
4	2490.00	35.0 AV	54.00	-19.00	1.27V	167	4.26	27.96	2.78	0.00	-30.74
5	4924.00	48.9 PK	74.00	-25.10	1.17V	138	13.19	31.66	4.06	0.00	-35.71
6	4924.00	40.0 AV	54.00	-14.00	1.17V	138	4.29	31.66	4.06	0.00	-35.71
7	7390.00	48.0 PK	74.00	-26.00	1.07V	87	5.81	36.40	5.79	0.00	-42.20
8	7390.00	39.9 AV	54.00	-14.10	1.07V	87	-2.29	36.40	5.79	0.00	-42.19
9	9840.00	54.7 PK	84.00	-29.30	1.10V	204	10.58	38.54	5.59	0.00	-44.12.
10	9840.00	49.6 AV	77.40	-27.80	1.10V	204	5.48	38.54	5.59	0.00	-44.13

NOTE:

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

4.3 6dB BANDWIDTH MEASUREMENT

4.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK30	100049	July 24, 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.

4.3.3 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 DEVIATION FROM TEST STANDARD

No deviation

4.3.5 TEST SETUP

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

4.3.6 EUT OPERATING CONDITIONS

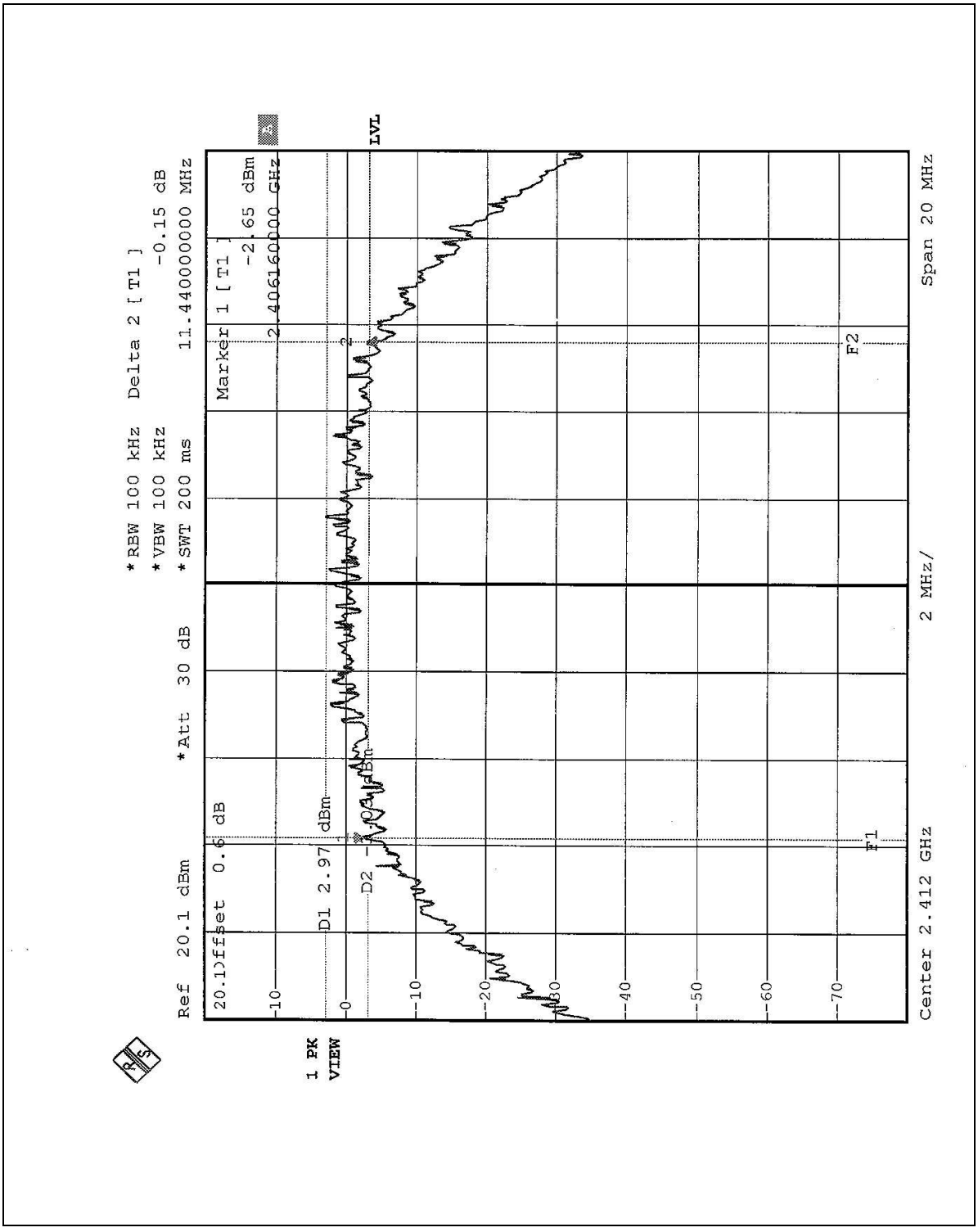
The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.3.7 TEST RESULTS

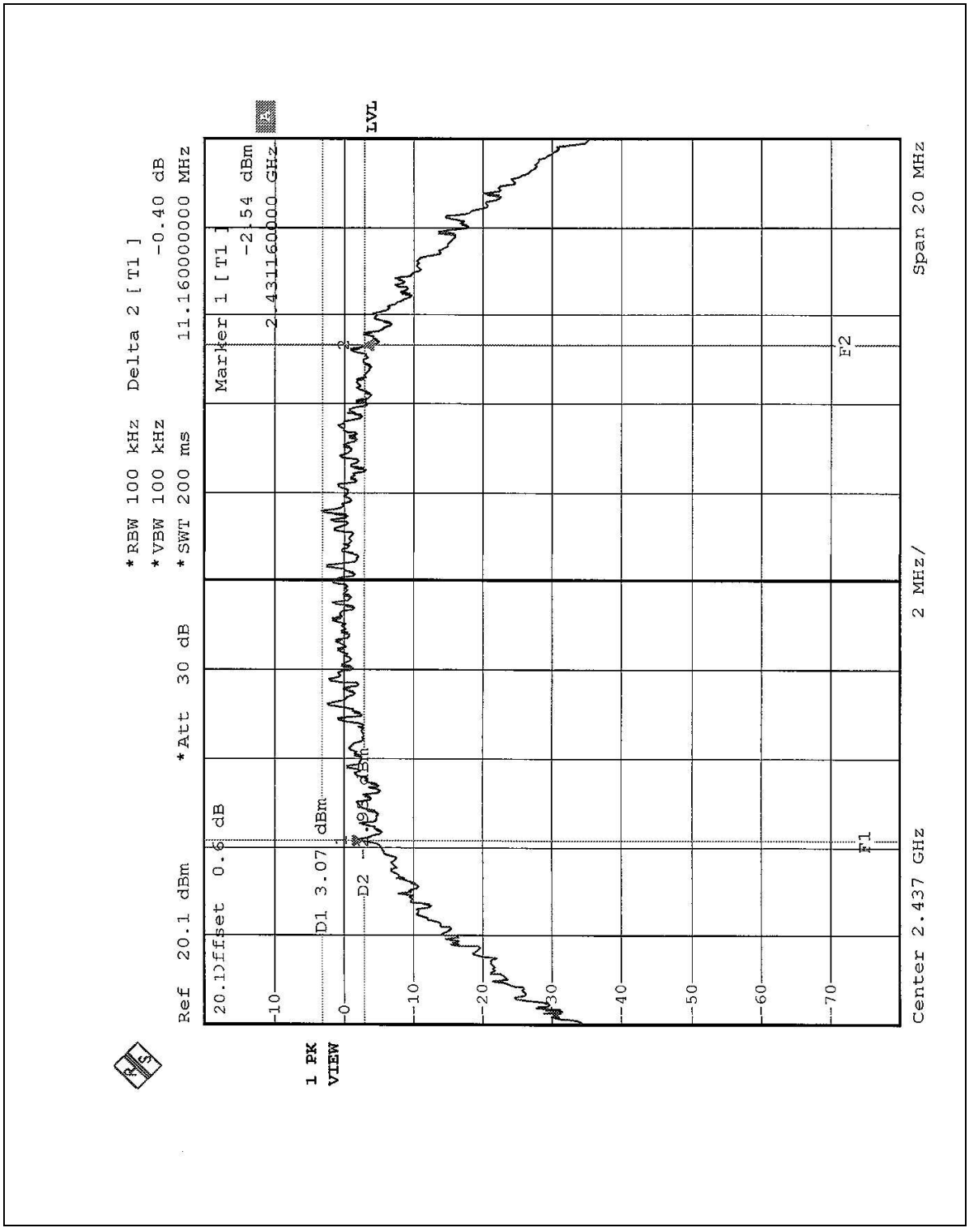
EUT	Wireless module (MiniPCI)	**MODEL**	MPCI3A-20/R
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	29deg. C, 58%RH, 1005 hPa
TESTED BY: Ansen Lei			

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	11.44	0.5	PASS
6	2437	11.16	0.5	PASS
11	2462	11.16	0.5	PASS

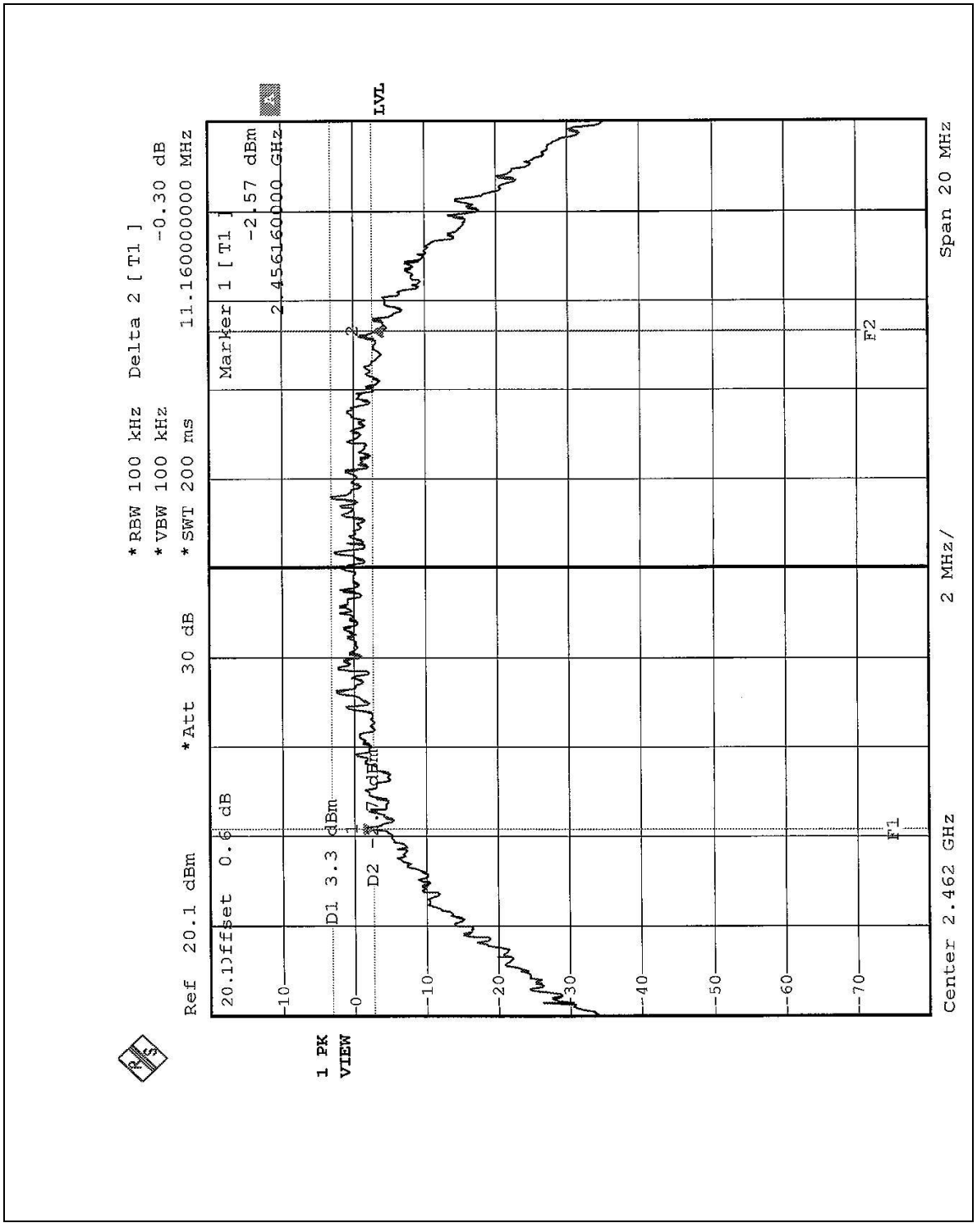
CH1


RBW 100 kHz
VBW 100 kHz
SWT 200 ms
Delta 2 [T1]
-0.15 dB
11.440000000 MHz
Marker 1 [T1]
-2.65 dBm
2.406160000 GHz
Ref 20.1 dBm
Offset 0.6 dB
Att 30 dB
D1 2.97 dBm
D2 -8.03 dBm
LVL
1 PK VIEW
Center 2.412 GHz
2 MHz/
Span 20 MHz
F1
F2

CH6


RBW 100 kHz
VBW 100 kHz
SWT 200 ms
Delta 2 [T1]
-0.40 dB
11.160000000 MHz
Marker 1 [T1]
-2.54 dBm
2.431160000 GHz
Att 30 dB
Ref 20.1 dBm
Offset 0.6 dB
D1 3.07 dBm
D2 -2.93 dBm
LVL
F1
F2
Center 2.437 GHz
2 MHz/
Span 20 MHz
1 PK
VIEW

CH11


Ref 20.1 dBm
Offset 0.6 dB
*Att 30 dB
*SWT 200 ms
*VBW 100 kHz
*RBW 100 kHz
Delta 2 [T1]
-0.30 dB
11.160000000 MHz
Marker 1 [T1]
-2.57 dBm
2.456160000 GHz
D1 3.3 dBm
D2 -6.7 dBm
LVL
1 PK VIEW
Center 2.462 GHz
2 MHz/
Span 20 MHz
F1
F2

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
SINGLE CHANNEL POWER METER	NRVS	100026	Feb. 21, 2003
PEAK POWER SENSOR	NRV-Z32	100013	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.

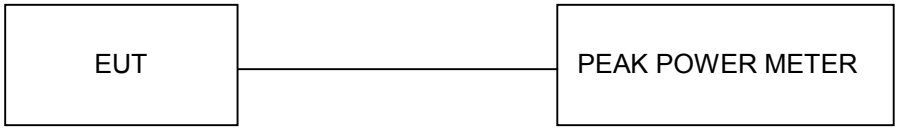
4.4.3 TEST PROCEDURES

The transmitter output was connected to the peak power meter.

4.4.4 DEVIATION FROM TEST STANDARD

No deviation

4.4.5 TEST SETUP



4.4.6 EUT OPERATING CONDITIONS

Same as Item 4.3.6

4.4.7 TEST RESULTS

EUT	Wireless module (MiniPCI)	**MODEL**	MPCI3A-20/R
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	29deg. C, 58%RH, 1005 hPa
TESTED BY: Ansen Lei			

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	14.20	30	PASS
6	2437	14.22	30	PASS
11	2462	14.36	30	PASS

4.5 POWER SPECTRAL DENSITY MEASUREMENT

4.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

4.5.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK30	100049	July 24, 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.

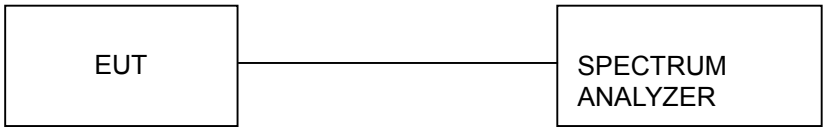
4.5.3 TEST PROCEDURE

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 DEVIATION FROM TEST STANDARD

No deviation

4.5.5 TEST SETUP



4.5.6 EUT OPERATING CONDITIONS

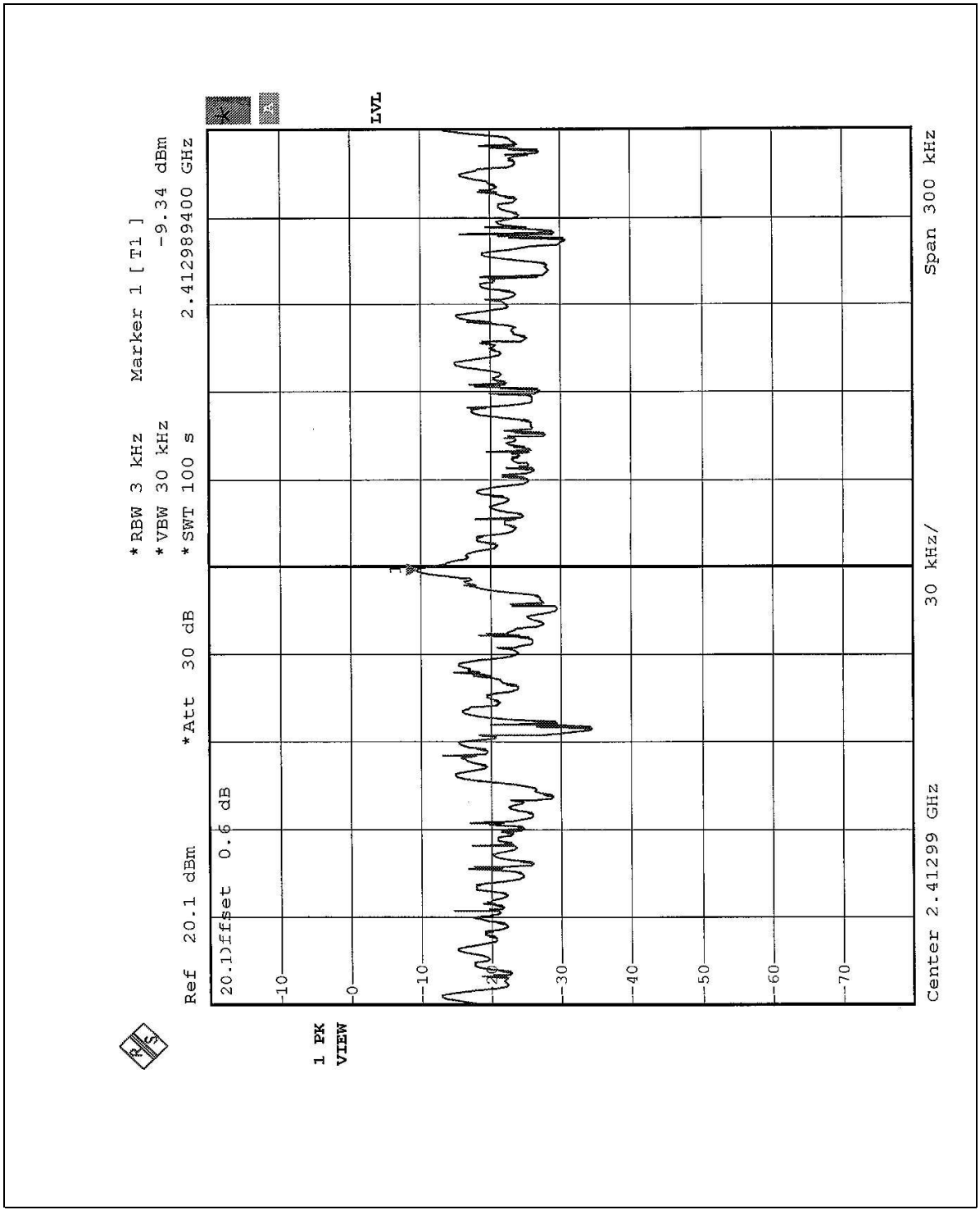
Same as 4.3.6

4.5.7 TEST RESULTS

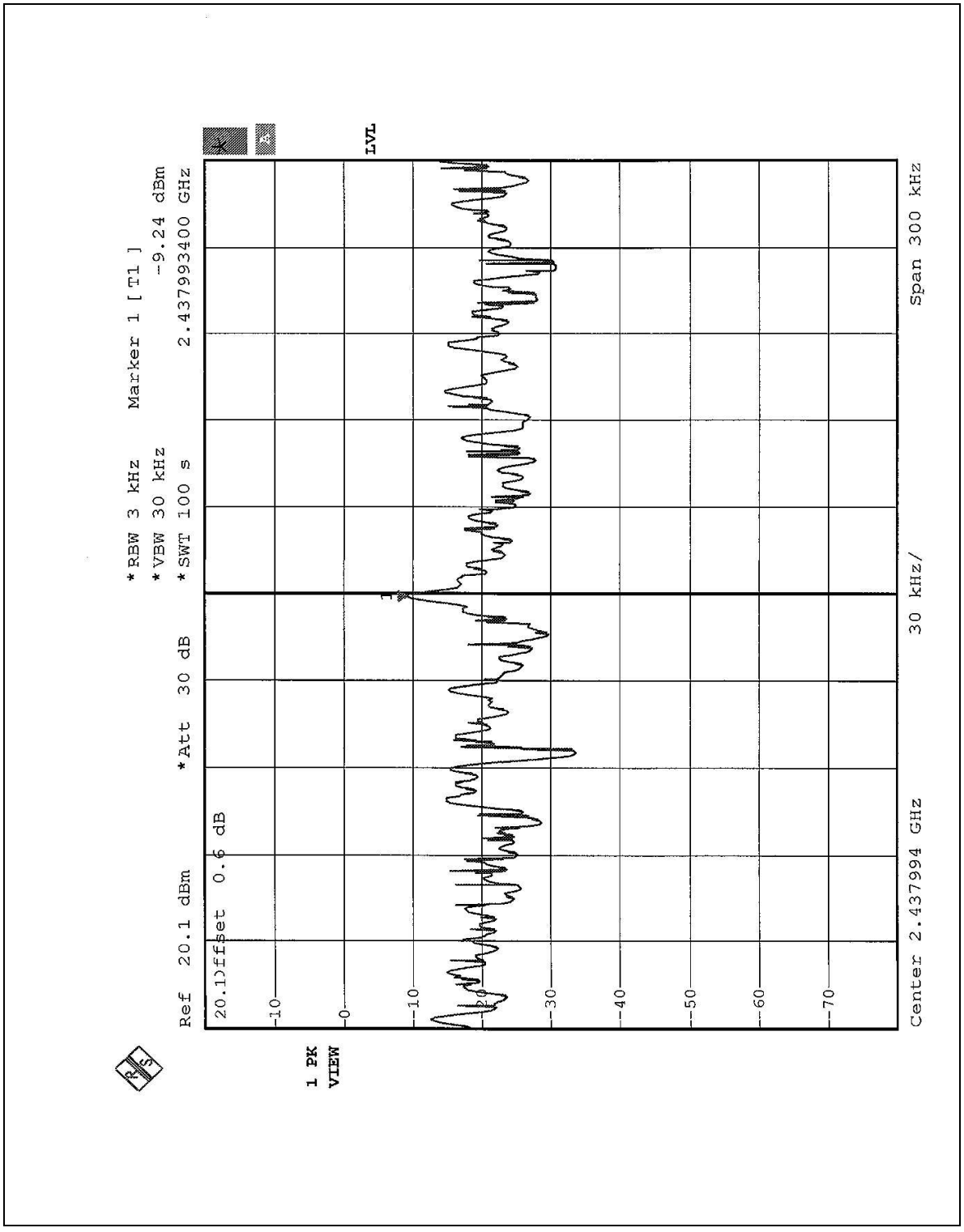
EUT	Wireless module (MiniPCI)	**MODEL**	MPCI3A-20/R
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	29deg. C, 58%RH, 1005 hPa
TESTED BY: Ansen Lei			

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 KHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-9.34	8	PASS
6	2437	-9.24	8	PASS
11	2462	-8.99	8	PASS

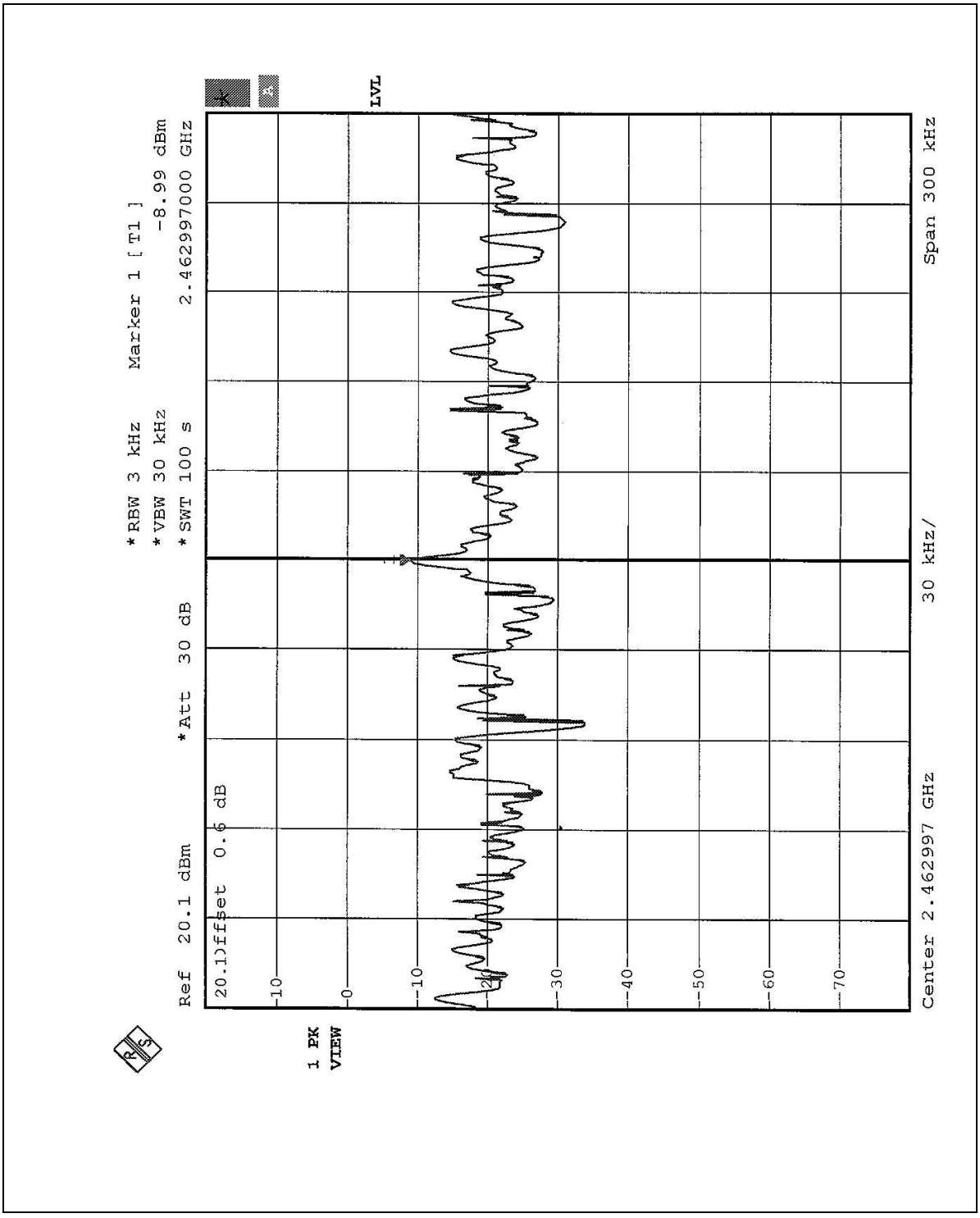
CH1


Ref 20.1 dBm
*Att 30 dB
*RBW 3 kHz
*VBW 30 kHz
*SWT 100 s
Marker 1 [T1]
-9.34 dBm
2.41298400 GHz
Offset 0.6 dB
20.1
LVL
1 PK
VIEW
Center 2.41299 GHz
30 kHz/
Span 300 kHz

CH6


Ref 20.1 dBm
Offset 0.6 dB
*Att 30 dB
*RBW 3 kHz
*VBW 30 kHz
*SWT 100 s
Marker 1 [T1]
-9.24 dBm
2.437993400 GHz
LVL
1 PK
VIEW
Center 2.437994 GHz
30 kHz/
Span 300 kHz

CH11


Ref 20.1 dBm
Offset 0.6 dB
*Att 30 dB
*RBW 3 kHz
*VBW 30 kHz
*SWT 100 s
Marker 1 [T1]
-8.99 dBm
2.462997000 GHz
LVL
1 PK
VIEW
Center 2.462997 GHz
30 kHz/
Span 300 kHz

4.6 BAND EDGES MEASUREMENT

4.6.1 LIMITS OF BAND EDGES MEASUREMENT

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

4.6.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK30	100049	July 24, 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.

4.6.3 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 DEVIATION FROM TEST STANDARD

No deviation

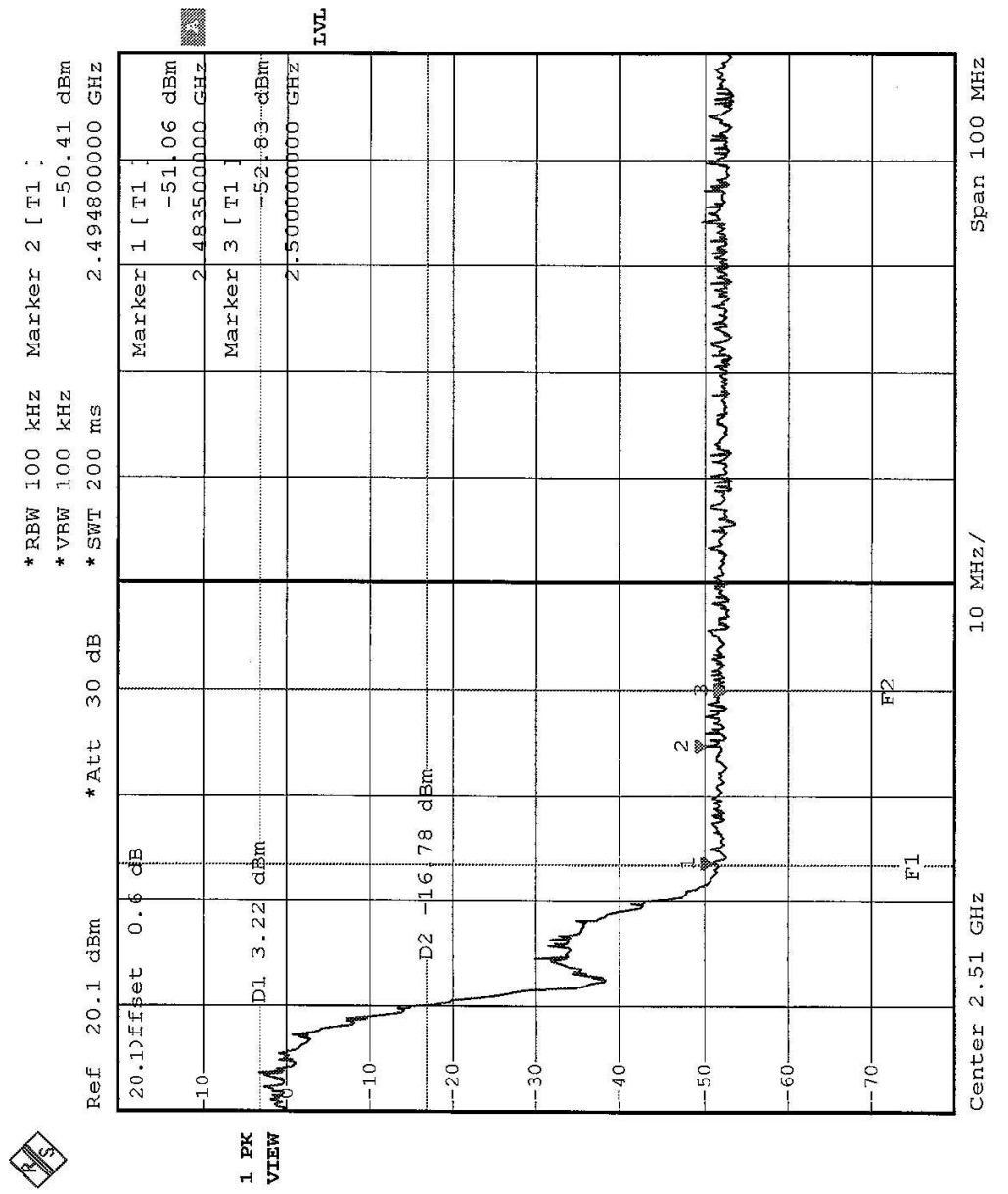
4.6.5 EUT OPERATING CONDITION

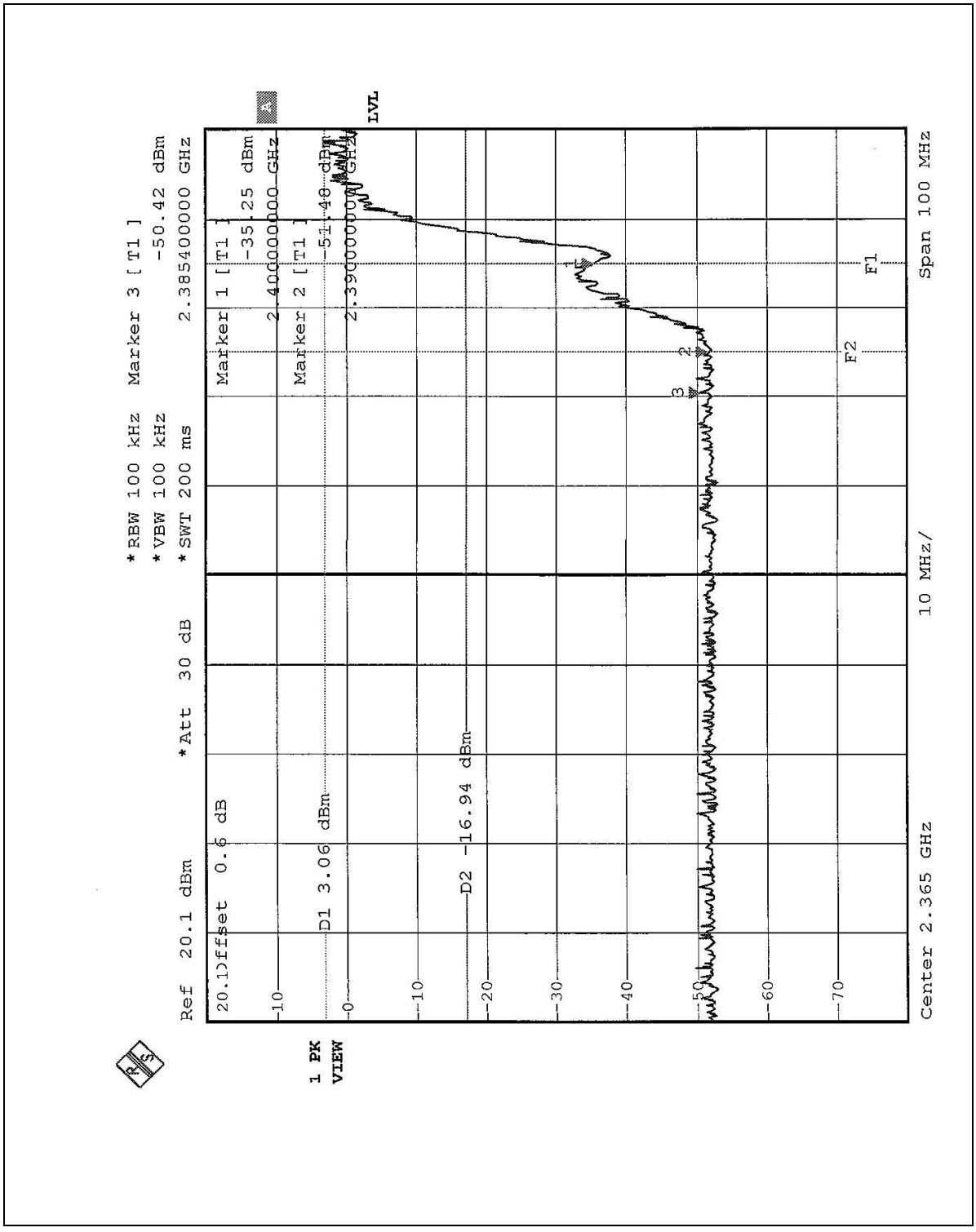
Same as Item 4.3.6

4.6.6 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 53.63dB / 53.48dB delta between carrier maximum power and local maximum emission in restrict band (2.4948GHz / 2.3854GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 (Page 25) is 99.5dBuV/m, so the maximum field strength in restrict band is 99.5-53.48=46.02dBuV/m which is under 54dBuV/m limit.


*RBW 100 kHz
*VBW 100 kHz
*SWT 200 ms
Marker 2 [T1]
-50.41 dBm
2.494800000 GHz
*Att 30 dB
Marker 1 [T1]
-51.06 dBm
2.483500000 GHz
Marker 3 [T1]
-52.83 dBm
2.500000000 GHz
Ref 20.1 dBm
Offset 0.6 dB
D1 3.22 dBm
D2 -16.78 dBm
1 PK VIEW
LVL
Center 2.51 GHz
10 MHz/
Span 100 MHz
F1
F2


*RBW 100 kHz
*VBW 100 kHz
*SWT 200 ms
Marker 3 [T1]
-50.42 dBm
2.385400000 GHz
*Att 30 dB
Marker 1 [T1]
-35.25 dBm
2.400000000 GHz
Marker 2 [T1]
-51.40 dBm
2.390000000 GHz
Ref 20.1 dBm
Offset 0.6 dB
D1 3.06 dBm
D2 -16.94 dBm
1 PK
VIEW
LVL
F1
F2
Center 2.365 GHz
10 MHz/
Span 100 MHz

4.7 ANTENNA REQUIREMENT

4.7.1 STANDARD APPLICABLE

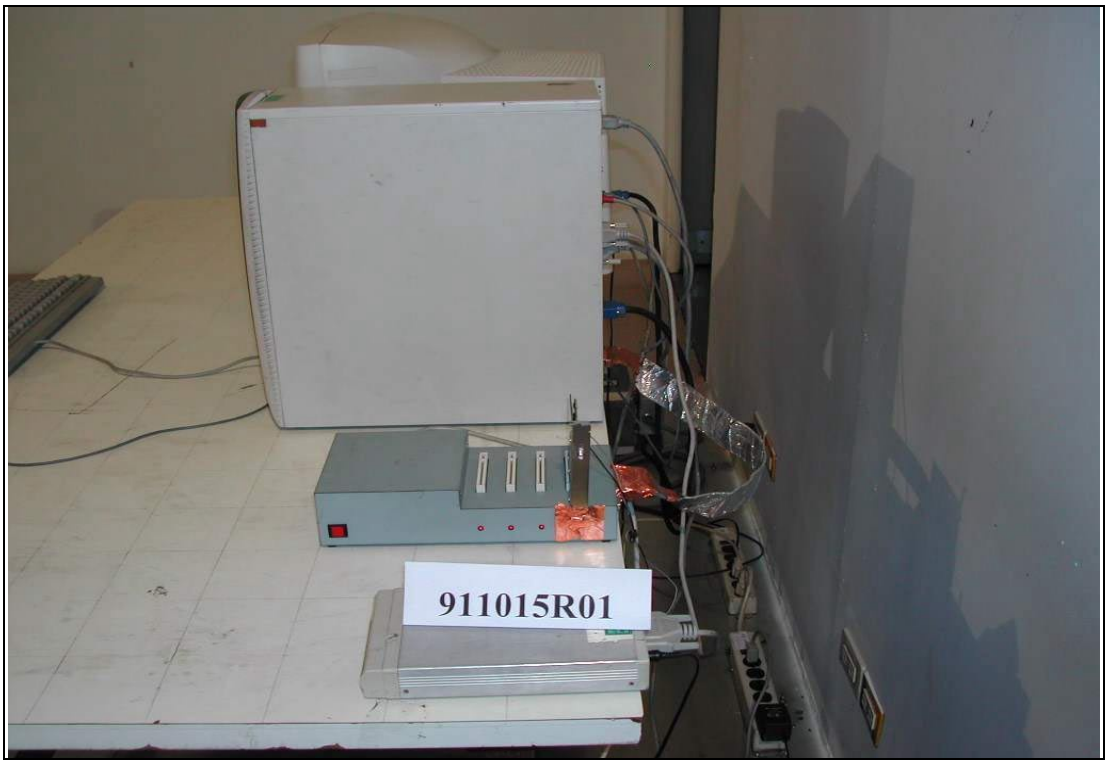
For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.
And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional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

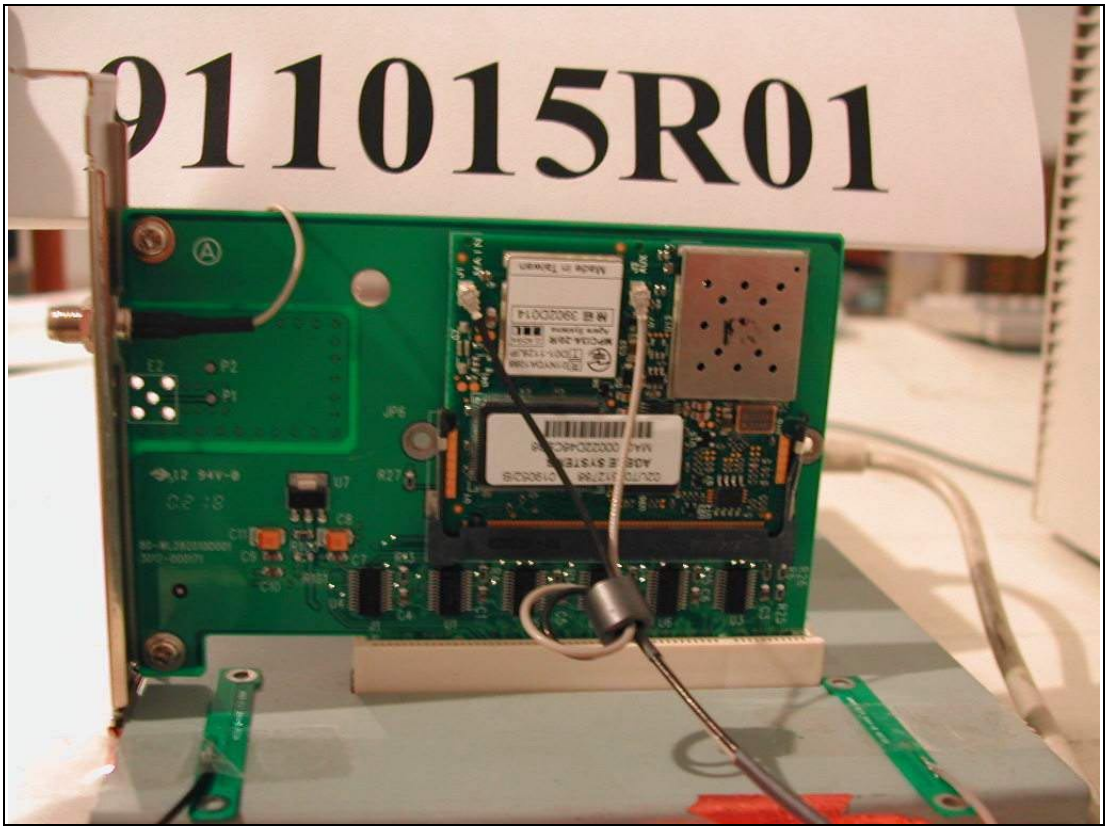
4.7.2 ANTENNA CONNECTED CONSTRUCTION

The antenna types used in this product are Printed Dipole Antenna and PIFA antenna. The antenna connector type is UFL. The maximum Gain of the antenna is 3dBi only.

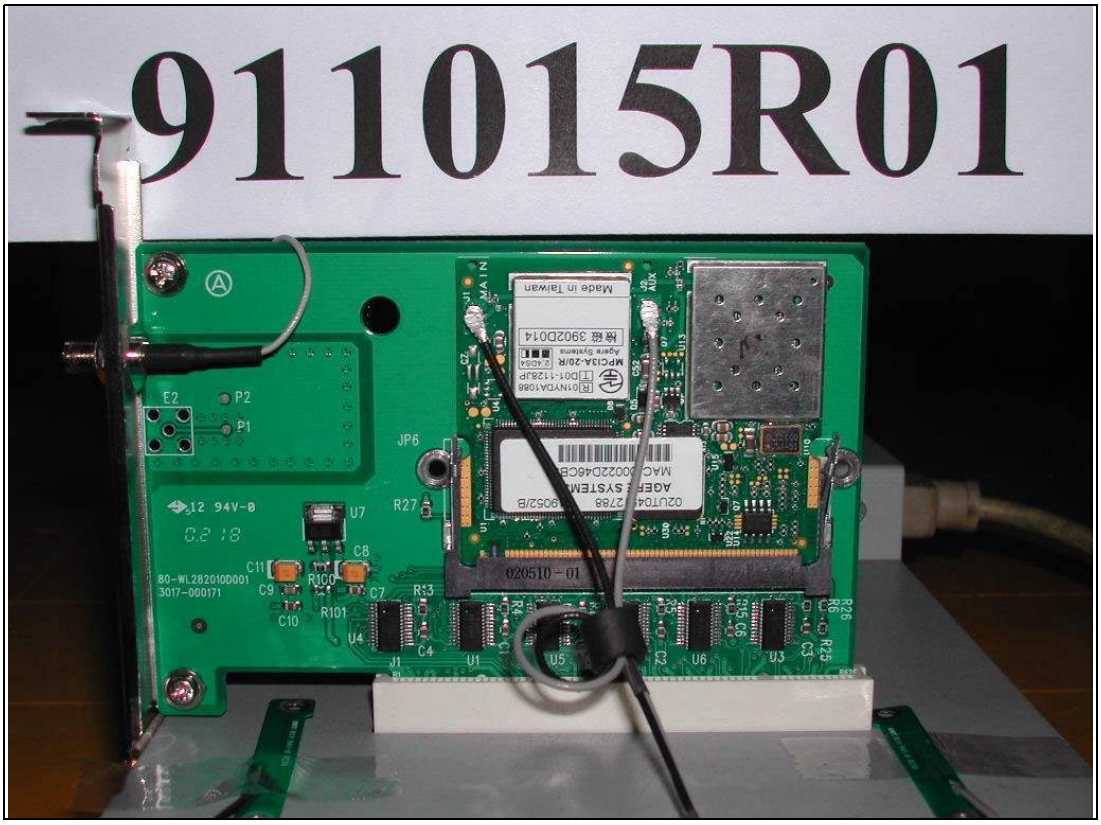
5 PHOTOGRAPHS OF THE TEST CONFIGURATION

CONDUCTED EMISSION TEST




911015R01

RADIATED EMISSION TEST


911015R01
Made in Taiwan
020510 - 01
U7
R27
C8
C11
C9
C10
R100
R101
C7
R3
U4
U1
U5
U6
U3
C4
J1
JP6
E2
P2
P1

6 INFORMATION ON THE TESTING LABORATORIES

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

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

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

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

Lin Kou EMC Lab:
Tel: 886-2-26052180
Fax: 886-2-26052943

Hsin Chu EMC Lab:
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Tel: 886-3-3270910
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Email: service@mail.adt.com.tw
Web Site: www.adt.com.tw

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