



FCC TEST REPORT

REPORT NO.: RF930402L04

MODEL NO.: WMIR-103G

RECEIVED: 12 April, 2004

TESTED: 12 April ~ 15 April, 2004

APPLICANT: Gemtek Technology Co., Ltd.

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1 CERTIFICATION

PRODUCT : 54Mbps/11Mbps Wireless Mini PCI
MODEL NO.: WMIR-103G
BRAND: Gemtek
APPLICANT : Gemtek Technology Co., Ltd.
TEST ITEM: ENGINEERING SAMPLE
STANDARDS : FCC Part 15, Subpart C (Section 15.247),
ANSI C63.4-2001

We, **Advance Data Technology Corporation**, hereby certify that one sample of the designation has been tested in our facility from April 12, 2004 to April 15, 2004. 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.

PREPARED BY: Stacy Hsueh , **DATE:** 16 April, 2004
Stacy Hsueh

APPROVED BY: Ellis Wu , **DATE:** 16 April, 2004
Ellis Wu / Manager



2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC 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 -17.39dB at 0.205MHz.
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 -0.29dB at 99.70MHz.
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.

NOTE: The information of measurement uncertainty is available upon the customer's request.



3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	54Mbps/11Mbps Wireless Mini PCI
MODEL NO.	WMIR-103G
POWER SUPPLY	3.3Vdc from host equipment
MODULATION TYPE	BPSK, QPSK, CCK, 16QAM, 64QAM
MODULATION TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	1/2/5.5/6/9/11/12/18/24/36/48/54Mbps
FREQUENCY RANGE	2412MHz ~ 2462MHz
NUMBER OF CHANNEL	11
OUTPUT POWER (FOR CCK)	16.37dBm
OUTPUT POWER (FOR OFDM)	15.28dBm
ANTENNA TYPE	Inverted-F, Printed, Printed dipole (for antenna gain please refer to note 4 of item 3.2)
DATA CABLE	NA
I/O PORTS	NA
ASSOCIATED DEVICES	NA

NOTE:

- 1.The EUT operates in the 2.4GHz frequency spectrum with throughput of up to 54Mbps.
- 2.The EUT complies with IEEE 802.11g draft standards, and backwards compatible with IEEE 802.11b products.
- 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 to 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.
2. Above 1GHz, the channel 1, 6, and 11 were tested individually.
3. Transfer rate, 11Mbps with CCK technique and 6Mbps with OFDM technique, the worst cases, were chosen for final test.
4. There are ten antennas provided for this EUT, but after pre-tested, we only show 4 worst test data in the report. And the antennas and test modes listed as below:

ANTENNA MODEL	ANTENNA TYPE	ANTENNA GAIN	TEST MODE
CP-11	Inverted-F	-0.18	---
M620	Inverted-F	2.57	1
E12B	Inverted-F	1.92	---
FIC	Printed dipole	1.33	2
DH5000	Printed	-1.86	3
DH5100	Inverted-F	1.71	---
DH6000	Inverted-F	-1.89	---
PM2	Inverted-F	0.65	---
EW1B	Inverted-F	-0.64	4
DH7000	Inverted-F	-8.75	---
258KA0	Inverted-F	-1.24(right) 0.13(left)	---



3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a 54Mbps/11Mbps Wireless Mini PCI. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC Part 15, Subpart C. (15.247)
ANSI C63.4: 2001

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

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

3.4 DESCRIPTION OF SUPPORT UNITS

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

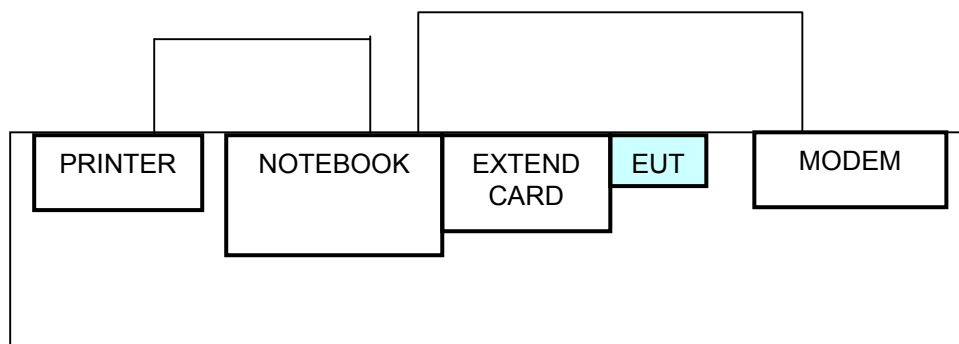
NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK COMPUTER	DELL	PP05L	20838027664	E2K24CLNS
2	PRINTER	EPSON	LQ-300+	DCGY047264	FCC DoC Approved
3	MODEM	ACEEX	1414V/3	0401008242	IFAXDM1414

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

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



3.5 CONFIGURATION OF SYSTEM UNDER TEST





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	66 to 56	56 to 46
0.5-5	56	46
5-30	60	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 0.50 MHz.
 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
Test Receiver ROHDE & SCHWARZ	ESCS30	100288	Dec. 11, 2004
RF signal cable Woken	5D-FB	Cable-HyC02-01	Mar. 07, 2005
LISN ROHDE & SCHWARZ	ESH2-Z5	100100	Mar. 10, 2005
LISN ROHDE & SCHWARZ	ESH3-Z5	100311	Mar. 04, 2005
Software ADT	ADT_Cond_V3	NA	NA

- NOTE:**
1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 2. The test was performed in HwaYa Shielded Room 2.



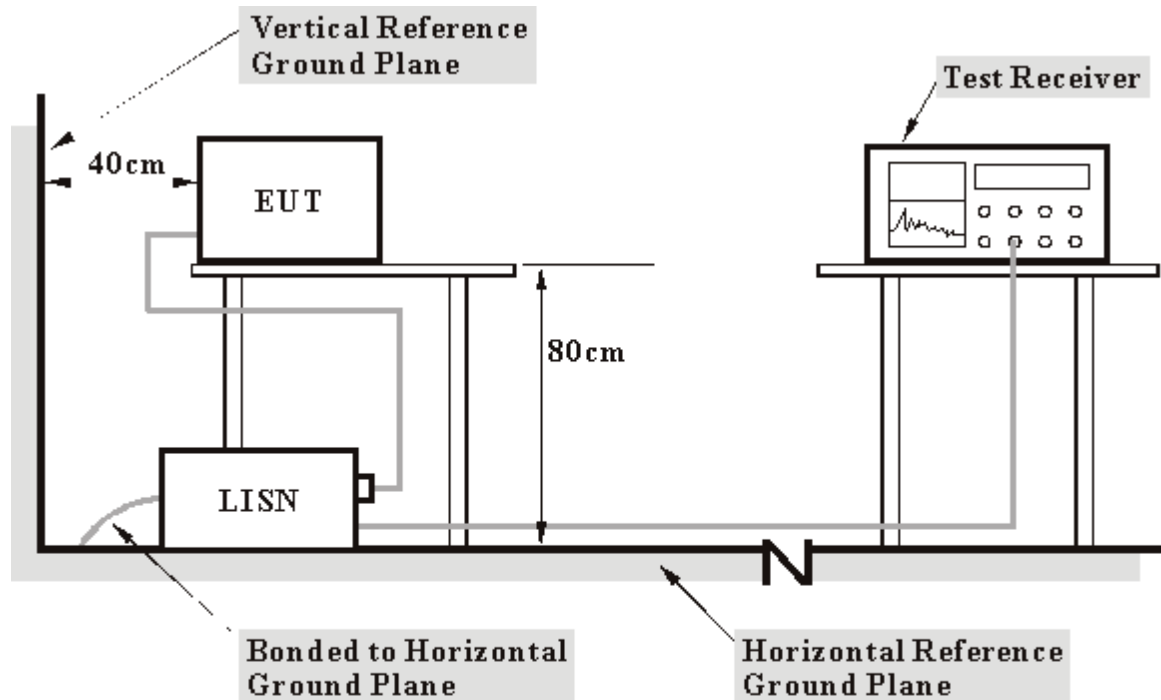
4.1.3 TEST PROCEDURES

- 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 150kHz to 30MHz was searched. Emission levels under limit -20dB was not recorded.

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. Plug the EUT a notebook system placed on a testing table.
- b. The notebook system ran a test program (provided by manufacturer) to enable EUT under transmission/receiving condition continuously at specific channel frequency.
- c. The notebook system sent "H" messages to its screen.
- d. The notebook system sent "H" messages to its modem.
- e. The notebook system sent "H" messages to printer, and the printer prints them on paper.
- f. Repeat c ~ e.

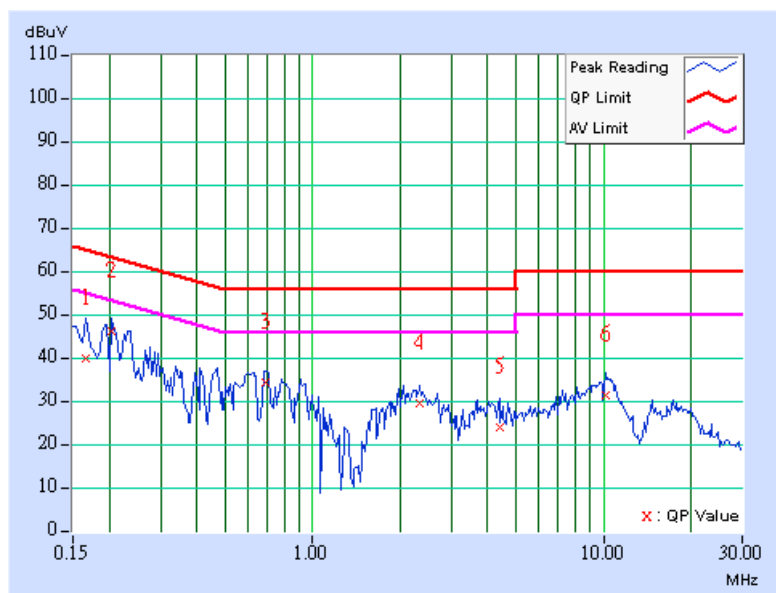


4.1.7 TEST RESULTS

EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
MODE	Channel 1	6dB BANDWIDTH	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	22deg. C, 60%RH, 991hPa	TESTED BY: Allen Chang	

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	0.166	0.10	39.36	-	39.46	-	65.18
2	0.205	0.10	45.93	-	46.03	-	63.42	53.42	-17.39	-
3	0.689	0.18	33.86	-	34.04	-	56.00	46.00	-21.96	-
4	2.340	0.27	29.16	-	29.43	-	56.00	46.00	-26.57	-
5	4.387	0.33	23.70	-	24.03	-	56.00	46.00	-31.97	-
6	10.145	0.53	31.01	-	31.54	-	60.00	50.00	-28.46	-

- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = Emission level - Limit value
 5. Correction factor = Insertion loss + Cable loss
 6. Emission Level = Correction Factor + Reading Value.

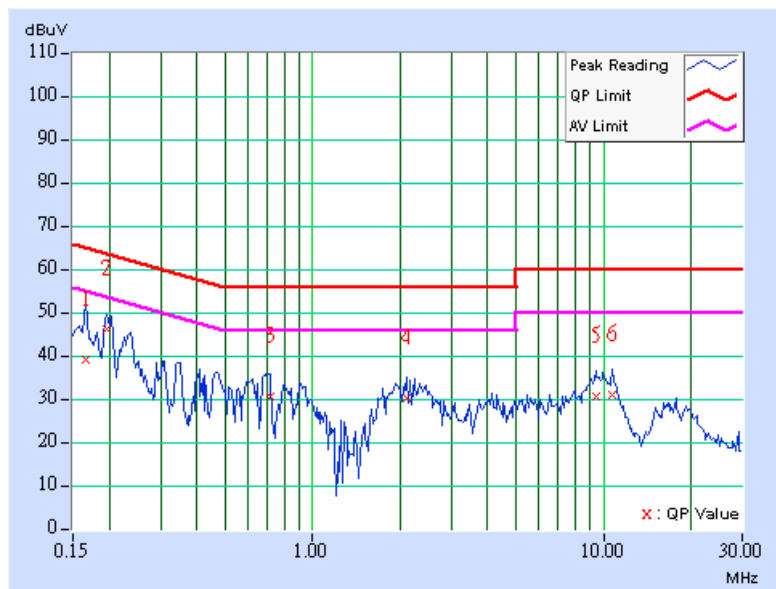




EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
MODE	Channel 1	6dB BANDWIDTH	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	22deg. C, 60%RH, 991hPa	TESTED BY: Allen Chang	

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.166	0.10	38.63	-	38.73	-	65.18	55.18	-26.45	-
2	0.197	0.10	45.87	-	45.97	-	63.74	53.74	-17.77	-
3	0.713	0.17	30.39	-	30.56	-	56.00	46.00	-25.44	-
4	2.117	0.25	29.85	-	30.10	-	56.00	46.00	-25.90	-
5	9.395	0.48	30.31	-	30.79	-	60.00	50.00	-29.21	-
6	10.742	0.50	30.68	-	31.18	-	60.00	50.00	-28.82	-

- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = Emission level - Limit value
 5. Correction factor = Insertion loss + Cable loss
 6. Emission Level = Correction Factor + Reading Value.

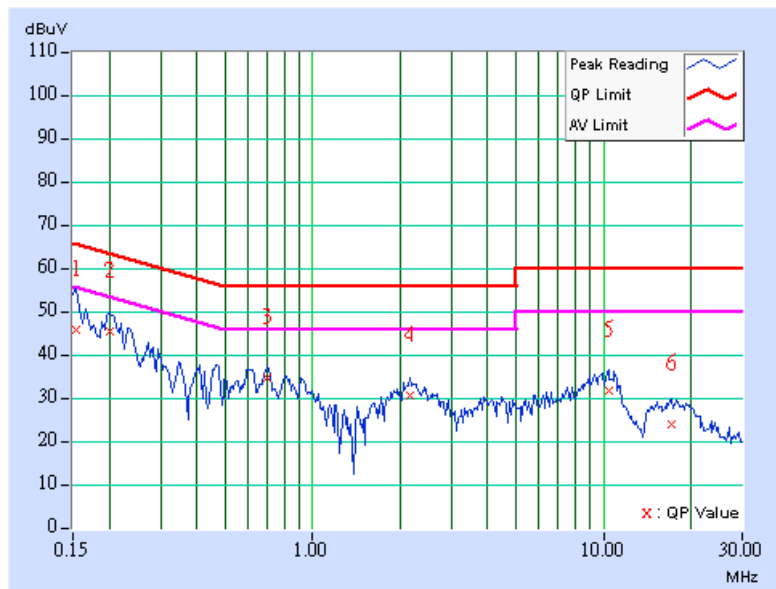




EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
MODE	Channel 6	6dB BANDWIDTH	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	22deg. C, 60%RH, 991hPa	TESTED BY: Allen Chang	

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.154	0.10	45.26	-	45.36	-	65.79	55.79	-20.42	-
2	0.201	0.10	44.90	-	45.00	-	63.58	53.58	-18.58	-
3	0.697	0.18	34.08	-	34.26	-	56.00	46.00	-21.74	-
4	2.164	0.26	29.83	-	30.09	-	56.00	46.00	-25.91	-
5	10.391	0.54	31.09	-	31.63	-	60.00	50.00	-28.37	-
6	17.086	0.79	23.17	-	23.96	-	60.00	50.00	-36.04	-

- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = Emission level - Limit value
 5. Correction factor = Insertion loss + Cable loss
 6. Emission Level = Correction Factor + Reading Value.

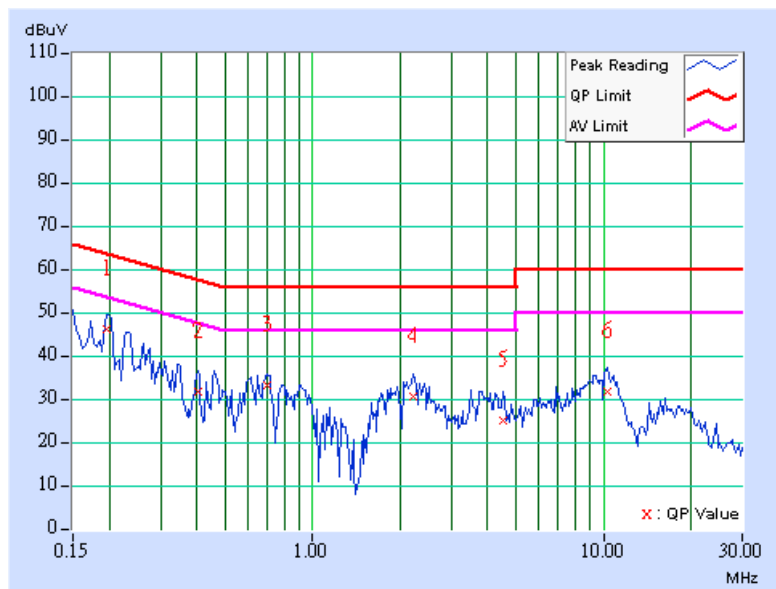




EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
MODE	Channel 6	6dB BANDWIDTH	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	22deg. C, 60%RH, 991hPa	TESTED BY: Allen Chang	

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.197	0.10	45.93	-	46.03	-	63.74	53.74	-17.71	-
2	0.404	0.11	31.49	-	31.60	-	57.77	47.77	-26.17	-
3	0.697	0.17	32.87	-	33.04	-	56.00	46.00	-22.96	-
4	2.227	0.26	30.25	-	30.51	-	56.00	46.00	-25.49	-
5	4.504	0.33	24.57	-	24.90	-	56.00	46.00	-31.10	-
6	10.383	0.50	31.18	-	31.68	-	60.00	50.00	-28.32	-

- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = Emission level - Limit value
 5. Correction factor = Insertion loss + Cable loss
 6. Emission Level = Correction Factor + Reading Value.

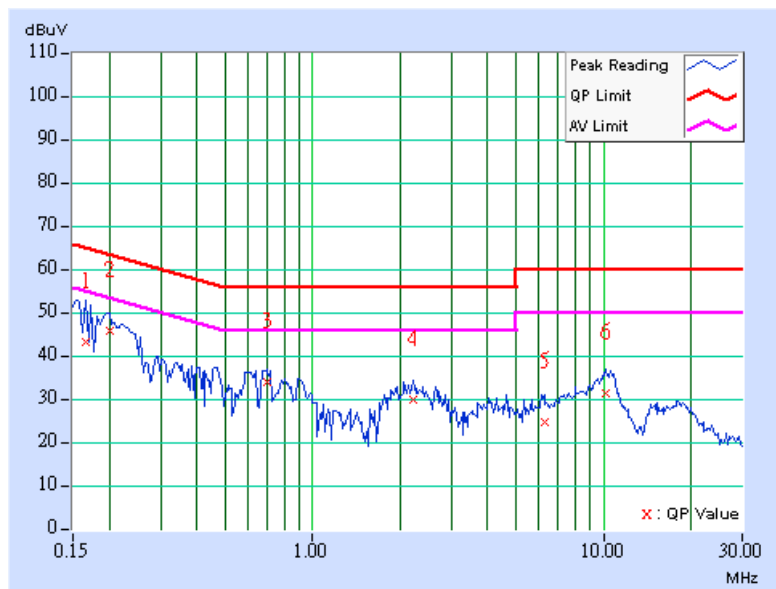




EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
MODE	Channel 11	6dB BANDWIDTH	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	22deg. C, 60%RH, 991hPa	TESTED BY: Allen Chang	

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.166	0.10	42.80	-	42.90	-	65.18	55.18	-22.27	-
2	0.201	0.10	45.34	-	45.44	-	63.58	53.58	-18.14	-
3	0.697	0.18	33.70	-	33.88	-	56.00	46.00	-22.12	-
4	2.219	0.27	29.61	-	29.88	-	56.00	46.00	-26.12	-
5	6.270	0.41	24.29	-	24.70	-	60.00	50.00	-35.30	-
6	10.156	0.54	30.80	-	31.34	-	60.00	50.00	-28.66	-

- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = Emission level - Limit value
 5. Correction factor = Insertion loss + Cable loss
 6. Emission Level = Correction Factor + Reading Value.

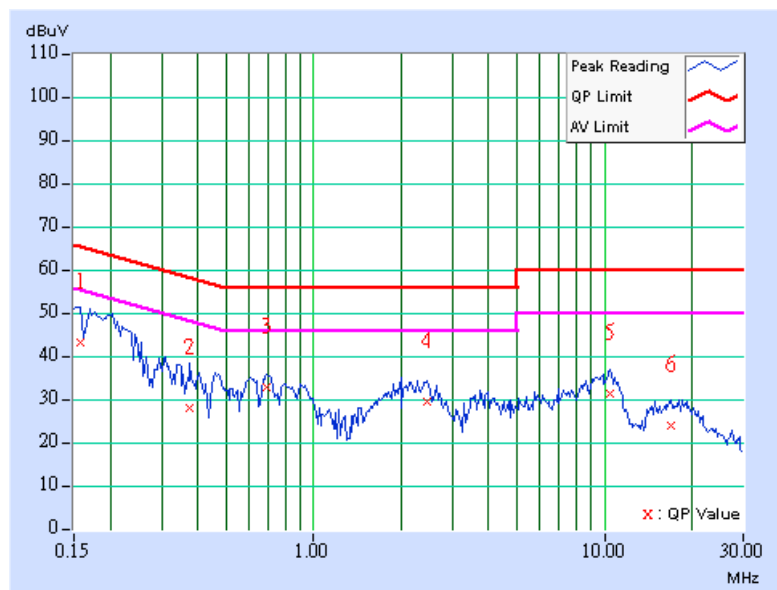




EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
MODE	Channel 11	6dB BANDWIDTH	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	22deg. C, 60%RH, 991hPa	TESTED BY: Allen Chang	

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.158	0.10	42.76	-	42.86	-	65.58	55.58	-22.72	-
2	0.377	0.11	27.59	-	27.70	-	58.35	48.35	-30.65	-
3	0.693	0.17	32.51	-	32.68	-	56.00	46.00	-23.32	-
4	2.465	0.26	29.09	-	29.35	-	56.00	46.00	-26.65	-
5	10.484	0.50	30.99	-	31.49	-	60.00	50.00	-28.51	-
6	16.910	0.59	23.59	-	24.18	-	60.00	50.00	-35.82	-

- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = Emission level - Limit value
 5. Correction factor = Insertion loss + Cable loss
 6. Emission Level = Correction Factor + Reading Value.





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
Test Receiver ROHDE & SCHWARZ	ESIB7	100188	Jan. 13, 2005
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	Dec. 15, 2004
BILOG Antenna SCHWARZBECK	VULB9168	9168-157	Feb. 03, 2005
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-407	Feb. 03, 2005
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA 9170241	Feb. 23, 2005
Preamplifier Agilent	8449B	3008A01961	Jan. 22, 2005
Preamplifier Agilent	8447D	2944A10629	Jan. 14, 2005
RF signal cable HUBER+SUHNER	SUCOFLEX 104	218182/4	Mar. 04, 2005
RF signal cable HUBER+SUHNER	SUCOFLEX 104	218194/4	Mar. 04, 2005
Software ADT.	ADT_Radiated_V5.14	NA	X
Antenna Tower ADT.	AT100	AT93021702	X
Turn Table ADT.	TT100.	TT93021702	X
Controller ADT.	SC100.	SC93021702	X

- NOTE:** 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 2. The test was performed in HwaYa Chamber 2.
 3. The IC Site Registration No. is IC4924-2..



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.

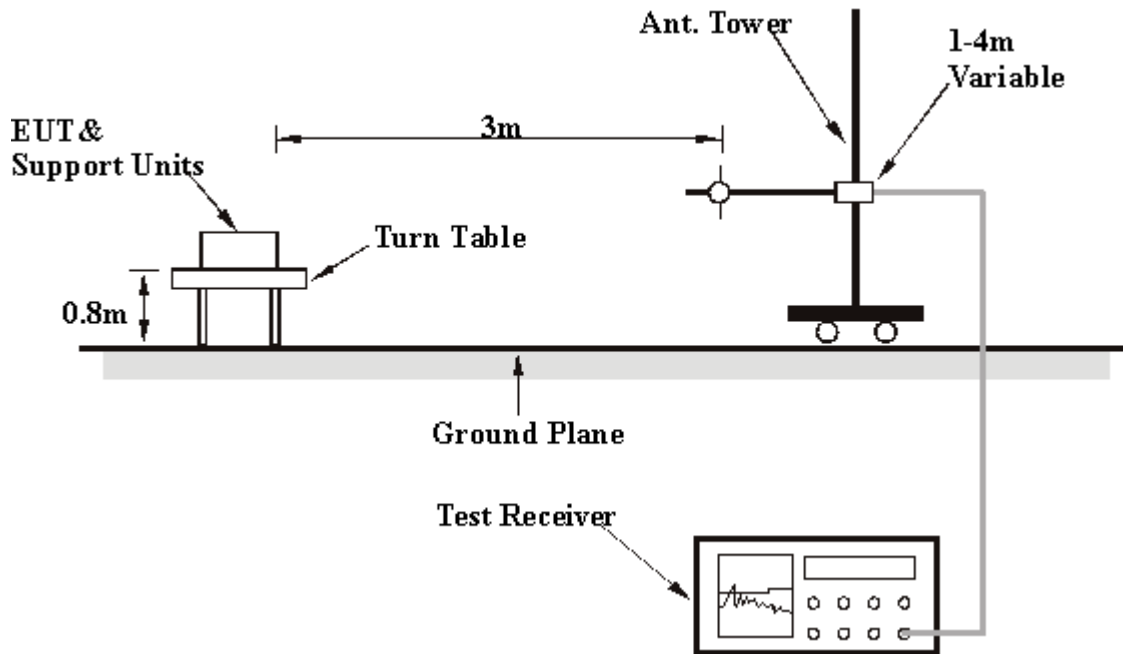
NOTE:

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 10Hz 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 (Mode 1)

EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
MODE	Channel 11	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	22 deg. C, 70 % RH, 991hPa	TESTED BY: Allen 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)	Correction Factor (dB/m)
1	64.99	37.23 QP	40.00	-2.77	4.00 H	118	24.09	13.15
2	99.74	42.02 QP	43.50	-1.48	2.00 H	318	31.06	10.96
3	117.47	39.68 QP	43.50	-3.82	2.50 H	67	26.91	12.77
4	133.03	39.50 QP	43.50	-4.00	1.75 H	118	25.56	13.94
5	166.07	38.68 QP	43.50	-4.82	1.50 H	202	24.37	14.30
6	199.30	34.66 QP	43.50	-8.84	1.75 H	165	23.21	11.44
7	232.16	35.52 QP	46.00	-10.48	1.25 H	205	22.78	12.75
8	249.66	33.68 QP	46.00	-12.32	1.00 H	82	20.47	13.22
9	265.21	29.77 QP	46.00	-16.23	1.00 H	133	16.19	13.58
10	333.25	43.63 QP	46.00	-2.37	1.00 H	151	28.36	15.26
11	399.34	37.77 QP	46.00	-8.23	2.50 H	334	21.03	16.74
12	432.38	35.82 QP	46.00	-10.18	2.00 H	157	18.22	17.60
13	449.88	33.15 QP	46.00	-12.85	1.50 H	91	15.08	18.07

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.



EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
MODE	Channel 11	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	22 deg. C, 70 % RH, 991hPa	TESTED BY: Allen 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)	Correction Factor (dB/m)
1	31.94	36.06 QP	40.00	-3.94	1.00 V	109	22.13	13.93
2	64.99	34.67 QP	40.00	-5.33	1.00 V	28	21.53	13.15
3	98.04	36.55 QP	43.50	-6.95	2.50 V	232	25.72	10.83
4	133.03	33.21 QP	43.50	-10.29	2.00 V	244	19.27	13.94
5	166.07	32.40 QP	43.50	-11.10	1.25 V	46	18.10	14.30
6	199.12	36.02 QP	43.50	-7.48	2.00 V	283	24.56	11.46
7	232.16	28.04 QP	46.00	-17.96	2.00 V	352	15.29	12.75
8	249.66	28.82 QP	46.00	-17.18	1.50 V	94	15.60	13.22
9	331.30	34.54 QP	46.00	-11.46	1.25 V	58	19.32	15.22
10	399.34	34.74 QP	46.00	-11.26	1.75 V	34	18.01	16.74
11	432.38	32.64 QP	46.00	-13.36	1.75 V	358	15.04	17.60
12	465.43	32.50 QP	46.00	-13.50	2.00 V	148	14.23	18.27

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.



4.2.8 TEST RESULTS (FOR CCK)

EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz		
ENVIRONMENTAL CONDITIONS	22deg. C, 60 % RH, 991hPa	DETECTOR FUNCTION	Peak(PK) Average (AV)
TESTED BY	Steven Lu		

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)	Correction Factor (dB/m)
1	2038.00	43.93 PK	74.00	-30.07	1.29 H	175	13.59	30.34
1	2038.00	38.64 AV	54.00	-15.36	1.29 H	175	8.30	30.34
2	2390.00	49.96 PK	74.00	-24.04	1.05 H	184	18.20	31.76
2	2390.00	42.02 AV	54.00	-11.98	1.05 H	184	10.26	31.76
3	*2412.00	110.18 PK			1.30 H	207	78.32	31.86
3	*2412.00	102.24 AV			1.30 H	207	70.38	31.86
4	4076.00	47.08 PK	74.00	-26.92	1.29 H	208	10.13	36.95
4	4076.00	36.77 AV	54.00	-17.23	1.29 H	208	-0.18	36.95
5	4824.00	51.34 PK	74.00	-22.66	1.05 H	184	12.63	38.71
5	4824.00	40.28 AV	54.00	-13.72	1.05 H	184	1.57	38.71
6	8152.00	58.02 PK	74.00	-15.98	1.43 H	157	11.93	46.09
6	8152.00	47.75 AV	54.00	-6.25	1.43 H	157	1.66	46.09

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)	Correction Factor (dB/m)
1	2038.00	41.12 PK	74.00	-32.88	1.00 V	175	10.78	30.34
1	2038.00	31.32 AV	54.00	-22.68	1.00 V	175	0.98	30.34
2	2387.00	43.16 PK	74.00	-30.84	1.72 V	167	11.41	31.75
2	2387.00	35.85 AV	54.00	-18.15	1.72 V	167	4.10	31.75
3	*2412.00	103.38 PK			1.72 V	167	71.52	31.86
3	*2412.00	96.07 AV			1.72 V	167	64.21	31.86
4	4076.00	46.83 PK	74.00	-27.17	1.30 V	68	9.88	36.95
4	4076.00	36.33 AV	54.00	-17.67	1.30 V	68	-0.62	36.95
5	4824.00	52.86 PK	74.00	-21.14	1.12 V	206	14.15	38.71
5	4824.00	38.97 AV	54.00	-15.03	1.12 V	206	0.26	38.71
6	8152.00	57.51 PK	74.00	-16.49	1.43 V	160	11.42	46.09
6	8152.00	47.02 AV	54.00	-6.98	1.43 V	160	0.93	46.09

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “ : Fundamental frequency.



EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz		
ENVIRONMENTAL CONDITIONS	22deg. C, 60 % RH, 991hPa	DETECTOR FUNCTION	Peak(PK) Average (AV)
TESTED BY	Steven Lu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2063.00	46.59 PK	74.00	-27.41	1.30 H	190	16.08	30.51
1	2063.00	42.06 AV	54.00	-11.94	1.30 H	190	11.55	30.51
2	*2437.00	109.26 PK			1.03 H	166	77.24	32.02
2	*2437.00	100.37 AV			1.03 H	166	68.35	32.02
3	4126.00	49.68 PK	74.00	-24.32	1.58 H	304	12.35	37.33
3	4126.00	38.35 AV	54.00	-15.65	1.58 H	304	1.02	37.33
4	4874.00	52.30 PK	74.00	-21.70	1.34 H	360	13.57	38.73
4	4874.00	38.90 AV	54.00	-15.10	1.34 H	360	0.17	38.73
5	8252.00	58.27 PK	74.00	-15.73	1.35 H	304	12.15	46.12
5	8252.00	45.94 AV	54.00	-8.06	1.35 H	304	-0.18	46.12

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2063.00	44.78 PK	74.00	-29.22	1.62 V	180	14.27	30.51
1	2063.00	36.67 AV	54.00	-17.33	1.62 V	180	6.16	30.51
2	*2437.00	102.23 PK			1.30 V	53	70.21	32.02
2	*2437.00	94.37 AV			1.30 V	53	62.35	32.02
3	4126.00	50.18 PK	74.00	-23.82	1.46 V	67	12.85	37.33
3	4126.00	39.35 AV	54.00	-14.65	1.46 V	67	2.02	37.33
4	4874.00	53.70 PK	74.00	-20.30	1.24 V	82	14.97	38.73
4	4874.00	41.03 AV	54.00	-12.97	1.24 V	82	2.30	38.73
5	8252.00	57.34 PK	74.00	-16.66	1.34 V	254	11.22	46.12
5	8252.00	46.04 AV	54.00	-7.96	1.34 V	254	-0.08	46.12

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “ : Fundamental frequency.



EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz		
ENVIRONMENTAL CONDITIONS	22deg. C, 60 % RH, 991hPa	DETECTOR FUNCTION	Peak(PK) Average (AV)
TESTED BY	Steven Lu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2088.00	46.83 PK	74.00	-27.17	1.32 H	192	16.16	30.67
1	2088.00	41.72 AV	54.00	-12.28	1.32 H	192	11.05	30.67
2	*2462.00	110.02 PK			1.00 H	180	77.85	32.17
2	*2462.00	102.02 AV			1.00 H	180	69.85	32.17
3	2487.50	51.13 PK	74.00	-22.87	1.00 H	180	18.80	32.33
3	2487.50	43.13 AV	54.00	-10.87	1.00 H	180	10.80	32.33
4	4176.00	50.08 PK	74.00	-23.92	1.32 H	246	12.36	37.72
4	4176.00	37.85 AV	54.00	-16.15	1.32 H	246	0.13	37.72
5	4924.00	54.64 PK	74.00	-19.36	1.46 H	256	15.92	38.72
5	4924.00	42.02 AV	54.00	-11.98	1.46 H	256	3.30	38.72
6	7386.00	57.99 PK	74.00	-16.01	1.57 H	235	13.04	44.95
6	7386.00	45.49 AV	54.00	-8.51	1.57 H	235	0.54	44.95
7	8352.00	58.32 PK	74.00	-15.68	1.43 H	155	12.37	45.95
7	8352.00	47.96 AV	54.00	-6.04	1.43 H	155	2.01	45.95

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2088.00	44.50 PK	74.00	-29.50	1.27 V	184	13.83	30.67
1	2088.00	37.23 AV	54.00	-16.77	1.27 V	184	6.56	30.67
2	*2462.00	103.72 PK			1.33 V	166	71.55	32.17
2	*2462.00	96.34 AV			1.33 V	166	64.17	32.17
3	2487.50	44.83 PK	74.00	-29.17	1.33 V	166	12.50	32.33
3	2487.50	37.45 AV	54.00	-16.55	1.33 V	166	5.12	32.33
4	4176.00	50.22 PK	74.00	-23.78	1.19 V	272	12.50	37.72
4	4176.00	37.58 AV	54.00	-16.42	1.19 V	272	-0.14	37.72
5	4924.00	53.70 PK	74.00	-20.30	1.55 V	223	14.98	38.72
5	4924.00	40.62 AV	54.00	-13.38	1.55 V	223	1.90	38.72
6	8352.00	58.64 PK	74.00	-15.36	1.17 V	290	12.69	45.95
6	8352.00	49.14 AV	54.00	-4.86	1.17 V	290	3.19	45.95

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “ : Fundamental frequency.



4.2.9 TEST RESULTS (FOR OFDM)

EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz		
ENVIRONMENTAL CONDITIONS	22deg. C, 70 % RH, 991hPa	DETECTOR FUNCTION	Peak(PK) Average (AV)
TESTED BY	Allen Chang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2038.00	45.24 PK	74.00	-28.76	1.28 H	199	14.90	30.34
1	2038.00	38.95 AV	54.00	-15.05	1.28 H	199	8.61	30.34
2	2390.00	42.85 PK	74.00	-31.15	1.28 H	199	11.09	31.76
2	2390.00	36.87 AV	54.00	-17.13	1.28 H	199	5.11	31.76
3	*2412.00	106.62 PK			1.03 H	209	74.76	31.86
3	*2412.00	97.64 AV			1.03 H	209	65.78	31.86
4	4076.00	49.54 PK	74.00	-24.46	1.29 H	207	12.59	36.95
4	4076.00	36.46 AV	54.00	-17.54	1.29 H	207	-0.49	36.95
5	4824.00	52.64 PK	74.00	-21.36	1.32 H	34	13.93	38.71
5	4824.00	38.98 AV	54.00	-15.02	1.32 H	34	0.27	38.71
6	7236.00	56.04 PK	74.00	-17.96	1.36 H	133	11.68	44.36
6	7236.00	42.94 AV	54.00	-11.06	1.36 H	133	-1.42	44.36

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2038.00	44.68 PK	74.00	-29.32	1.19 V	20	14.34	30.34
1	2038.00	37.10 AV	54.00	-16.90	1.19 V	20	6.76	30.34
2	2390.00	38.97 PK	74.00	-35.03	1.31 V	25	7.21	31.76
2	2390.00	28.92 AV	54.00	-25.08	1.31 V	25	-2.84	31.76
3	*2412.00	99.74 PK			1.31 V	25	67.88	31.86
3	*2412.00	89.69 AV			1.31 V	25	57.83	31.86
4	4076.00	49.67 PK	74.00	-24.33	1.35 V	111	12.72	36.95
4	4076.00	38.09 AV	54.00	-15.91	1.35 V	111	1.14	36.95
5	4824.00	51.80 PK	74.00	-22.20	1.51 V	35	13.09	38.71
5	4824.00	39.01 AV	54.00	-14.99	1.51 V	35	0.30	38.71
6	7236.00	57.23 PK	74.00	-16.77	1.36 V	360	12.87	44.36
6	7236.00	43.64 AV	54.00	-10.36	1.36 V	360	-0.72	44.36

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “ : Fundamental frequency.



EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz		
ENVIRONMENTAL CONDITIONS	22deg. C, 70 % RH, 991hPa	DETECTOR FUNCTION	Peak(PK) Average (AV)
TESTED BY	Allen Chang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2063.00	48.02 PK	74.00	-25.98	1.31 H	260	17.51	30.51
1	2063.00	43.84 AV	54.00	-10.16	1.31 H	260	13.33	30.51
2	*2437.00	106.04 PK			1.06 H	289	74.02	32.02
2	*2437.00	98.30 AV			1.06 H	289	66.28	32.02
3	4126.00	49.17 PK	74.00	-24.83	1.31 H	200	11.84	37.33
3	4126.00	36.32 AV	54.00	-17.68	1.31 H	200	-1.01	37.33
4	4874.00	52.90 PK	74.00	-21.10	1.08 H	352	14.17	38.73
4	4874.00	48.52 AV	54.00	-5.48	1.08 H	352	9.79	38.73
5	7311.00	55.21 PK	74.00	-18.79	1.04 H	298	10.61	44.61
5	7311.00	42.84 AV	54.00	-11.16	1.04 H	298	-1.77	44.61

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2063.00	44.71 PK	74.00	-29.29	1.03 V	325	14.20	30.51
1	2063.00	35.96 AV	54.00	-18.04	1.03 V	325	5.45	30.51
2	*2437.00	99.51 PK			1.22 V	354	67.49	32.02
2	*2437.00	89.25 AV			1.22 V	354	57.23	32.02
3	4126.00	49.45 PK	74.00	-24.55	1.17 V	205	12.12	37.33
3	4126.00	37.83 AV	54.00	-16.17	1.17 V	205	0.50	37.33
4	4874.00	52.24 PK	74.00	-21.76	1.15 V	210	13.51	38.73
4	4874.00	39.25 AV	54.00	-14.75	1.15 V	210	0.52	38.73
5	7311.00	55.68 PK	74.00	-18.32	1.08 V	250	11.08	44.61
5	7311.00	42.41 AV	54.00	-11.59	1.08 V	250	-2.19	44.61

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “ : Fundamental frequency.



EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz		
ENVIRONMENTAL CONDITIONS	22deg. C, 70 % RH, 991hPa	DETECTOR FUNCTION	Peak(PK) Average (AV)
TESTED BY	Allen Chang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2088.00	44.78 PK	74.00	-29.22	1.59 H	150	14.11	30.67
1	2088.00	37.42 AV	54.00	-16.58	1.59 H	150	6.75	30.67
2	*2462.00	106.92 PK			1.27 H	315	74.75	32.17
2	*2462.00	96.84 AV			1.27 H	315	64.67	32.17
3	2483.50	45.44 PK	74.00	-28.56	1.27 H	315	13.14	32.30
3	2483.50	35.46 AV	54.00	-18.54	1.27 H	315	3.16	32.30
4	4176.00	49.37 PK	74.00	-24.63	1.06 H	180	11.65	37.72
4	4176.00	36.73 AV	54.00	-17.27	1.06 H	180	-0.99	37.72
5	4924.00	51.21 PK	74.00	-22.79	1.07 H	25	12.49	38.72
5	4924.00	39.05 AV	54.00	-14.95	1.07 H	25	0.33	38.72
6	7386.00	55.44 PK	74.00	-18.56	1.05 H	285	10.49	44.95
6	7386.00	43.29 AV	54.00	-10.71	1.05 H	285	-1.66	44.95

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2088.00	43.28 PK	74.00	-30.72	1.28 V	12	12.61	30.67
1	2088.00	34.19 AV	54.00	-19.81	1.28 V	12	3.52	30.67
2	*2462.00	98.23 PK			1.60 V	195	66.06	32.17
2	*2462.00	91.13 AV			1.60 V	195	58.96	32.17
3	2483.50	36.81 PK	74.00	-37.19	1.60 V	195	4.51	32.30
3	2483.50	24.72 AV	54.00	-29.28	1.60 V	195	-7.58	32.30
4	4176.00	49.52 PK	74.00	-24.48	1.15 V	58	11.80	37.72
4	4176.00	39.11 AV	54.00	-14.89	1.15 V	58	1.39	37.72
5	4924.00	50.56 PK	74.00	-23.44	1.35 V	258	11.84	38.72
5	4924.00	38.21 AV	54.00	-15.79	1.35 V	258	-0.51	38.72
6	7386.00	56.02 PK	74.00	-17.98	1.25 V	259	11.07	44.95
6	7386.00	42.99 AV	54.00	-11.01	1.25 V	259	-1.96	44.95

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “ : Fundamental frequency.



4.2.10 TEST RESULTS (Mode 2)

EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
MODE	Channel 11	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	22 deg. C, 70 % RH, 991hPa	TESTED BY: Allen 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)	Correction Factor (dB/m)
1	64.99	36.17 QP	40.00	-3.83	4.00 H	124	23.02	13.15
2	99.71	41.62 QP	43.50	-1.88	2.50 H	123	30.67	10.96
3	133.03	39.81 QP	43.50	-3.69	1.75 H	109	25.88	13.94
4	166.07	39.06 QP	43.50	-4.44	1.75 H	112	24.76	14.30
5	199.41	41.97 QP	43.50	-1.53	1.25 H	37	30.53	11.44
6	232.16	35.48 QP	46.00	-10.52	1.00 H	85	22.73	12.75
7	249.66	33.75 QP	46.00	-12.25	1.00 H	91	20.53	13.22
8	333.25	41.55 QP	46.00	-4.45	1.00 H	160	26.28	15.26
9	399.34	36.42 QP	46.00	-9.58	1.75 H	43	19.68	16.74
10	432.38	35.05 QP	46.00	-10.95	2.00 H	121	17.45	17.60
11	455.71	35.23 QP	46.00	-10.77	1.50 H	88	17.09	18.15

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.



EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
MODE	Channel 11	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	22 deg. C, 70 % RH, 991hPa	TESTED BY: Allen 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)	Correction Factor (dB/m)
1	31.94	36.55 QP	40.00	-3.45	1.00 V	37	22.62	13.93
2	64.99	34.06 QP	40.00	-5.94	1.75 V	217	20.91	13.15
3	99.98	36.46 QP	43.50	-7.04	3.00 V	232	25.48	10.98
4	133.03	33.77 QP	43.50	-9.73	2.00 V	202	19.84	13.94
5	166.07	32.60 QP	43.50	-10.90	1.75 V	250	18.29	14.30
6	199.12	35.38 QP	43.50	-8.12	2.00 V	271	23.92	11.46
7	249.66	28.75 QP	46.00	-17.25	1.75 V	91	15.53	13.22
8	331.30	31.62 QP	46.00	-14.38	1.25 V	109	16.40	15.22
9	399.34	35.73 QP	46.00	-10.27	1.75 V	91	19.00	16.74
10	432.38	32.38 QP	46.00	-13.62	1.00 V	67	14.78	17.60
11	465.43	31.03 QP	46.00	-14.97	1.00 V	73	12.75	18.27

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.



4.2.11 TEST RESULTS (FOR CCK)

EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz		
ENVIRONMENTAL CONDITIONS	24deg. C, 70 % RH, 991hPa	DETECTOR FUNCTION	Peak(PK) Average (AV)
TESTED BY	Allen 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)	Correction Factor (dB/m)
1	2038.00	43.85 PK	74.00	-30.15	1.22 H	211	13.51	30.34
1	2038.00	35.64 AV	54.00	-18.36	1.22 H	211	5.30	30.34
2	2387.40	48.72 PK	74.00	-25.28	1.10 H	5	16.96	31.76
2	2387.40	41.03 AV	54.00	-12.97	1.10 H	5	9.27	31.76
3	*2412.00	109.94 PK			1.10 H	5	78.08	31.86
3	*2412.00	102.25 AV			1.10 H	5	70.39	31.86
4	4824.00	57.73 PK	74.00	-16.27	1.52 H	110	19.02	38.71
4	4824.00	43.72 AV	54.00	-10.28	1.52 H	110	5.01	38.71
5	7236.00	58.19 PK	74.00	-15.81	1.38 H	89	13.83	44.36
5	7236.00	47.71 AV	54.00	-6.29	1.38 H	89	3.35	44.36
6	8152.00	58.28 PK	74.00	-15.72	1.30 H	106	12.19	46.09
6	8152.00	48.54 AV	54.00	-5.46	1.30 H	106	2.45	46.09

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)	Correction Factor (dB/m)
1	2038.00	43.31 PK	74.00	-30.69	1.81 V	274	12.97	30.34
1	2038.00	33.19 AV	54.00	-20.81	1.81 V	274	2.85	30.34
2	2387.40	37.22 PK	74.00	-36.78	1.72 V	222	5.46	31.76
2	2387.40	29.65 AV	54.00	-24.35	1.72 V	222	-2.11	31.76
3	*2412.00	98.44 PK			1.72 V	222	66.58	31.86
3	*2412.00	90.87 AV			1.72 V	222	59.01	31.86
4	4824.00	56.83 PK	74.00	-17.17	1.45 V	116	18.12	38.71
4	4824.00	44.03 AV	54.00	-9.97	1.45 V	116	5.32	38.71
5	7236.00	57.30 PK	74.00	-16.70	1.38 V	89	12.94	44.36
5	7236.00	45.18 AV	54.00	-8.82	1.38 V	89	0.82	44.36
6	8152.00	58.10 PK	74.00	-15.90	1.96 V	45	12.01	46.09
6	8152.00	46.32 AV	54.00	-7.68	1.96 V	45	0.23	46.09

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “ : Fundamental frequency.



EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz		
ENVIRONMENTAL CONDITIONS	24deg. C, 70 % RH, 991hPa	DETECTOR FUNCTION	Peak(PK) Average (AV)
TESTED BY	Allen Chang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2063.00	45.80 PK	74.00	-28.20	1.33 H	178	15.29	30.51
1	2063.00	38.33 AV	54.00	-15.67	1.33 H	178	7.82	30.51
2	*2437.00	109.50 PK			1.10 H	203	77.48	32.02
2	*2437.00	99.10 AV			1.10 H	203	67.08	32.02
3	4874.00	54.46 PK	74.00	-19.54	1.03 H	214	15.73	38.73
3	4874.00	41.49 AV	54.00	-12.51	1.03 H	214	2.76	38.73
4	7311.00	57.36 PK	74.00	-16.64	1.36 H	90	12.76	44.61
4	7311.00	45.37 AV	54.00	-8.63	1.36 H	90	0.77	44.61
5	8252.00	57.90 PK	74.00	-16.10	1.27 H	215	11.78	46.12
5	8252.00	45.20 AV	54.00	-8.80	1.27 H	215	-0.92	46.12

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2063.00	44.46 PK	74.00	-29.54	1.32 V	352	13.95	30.51
1	2063.00	33.86 AV	54.00	-20.14	1.32 V	352	3.35	30.51
2	*2437.00	99.90 PK			1.67 V	218	67.88	32.02
2	*2437.00	92.52 AV			1.67 V	218	60.50	32.02
3	4874.00	54.86 PK	74.00	-19.14	1.18 V	107	16.13	38.73
3	4874.00	41.80 AV	54.00	-12.20	1.18 V	107	3.07	38.73
4	7311.00	55.48 PK	74.00	-18.52	1.10 V	107	10.88	44.61
4	7311.00	43.34 AV	54.00	-10.66	1.10 V	107	-1.26	44.61
5	8252.00	57.81 PK	74.00	-16.19	1.98 V	105	11.69	46.12
5	8252.00	44.65 AV	54.00	-9.35	1.98 V	105	-1.47	46.12

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “ : Fundamental frequency.



EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz		
ENVIRONMENTAL CONDITIONS	24deg. C, 70 % RH, 991hPa	DETECTOR FUNCTION	Peak(PK) Average (AV)
TESTED BY	Allen Chang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2088.00	46.15 PK	74.00	-27.85	1.61 H	340	15.48	30.67
1	2088.00	40.22 AV	54.00	-13.78	1.61 H	340	9.55	30.67
2	*2462.00	108.74 PK			1.26 H	125	76.57	32.17
2	*2462.00	100.44 AV			1.26 H	125	68.27	32.17
3	2487.50	49.80 PK	74.00	-24.20	1.26 H	125	17.47	32.33
3	2487.50	42.50 AV	54.00	-11.50	1.26 H	125	10.17	32.33
4	4924.00	56.57 PK	74.00	-17.43	1.40 H	222	17.85	38.72
4	4924.00	43.50 AV	54.00	-10.50	1.40 H	222	4.78	38.72
5	7386.00	56.64 PK	74.00	-17.36	1.49 H	135	11.69	44.95
5	7386.00	45.01 AV	54.00	-8.99	1.49 H	135	0.06	44.95
6	8352.00	57.11 PK	74.00	-16.89	1.70 H	151	11.16	45.95
6	8352.00	43.72 AV	54.00	-10.28	1.70 H	151	-2.23	45.95

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2088.00	44.62 PK	74.00	-29.38	1.00 V	218	13.95	30.67
1	2088.00	36.21 AV	54.00	-17.79	1.00 V	218	5.54	30.67
2	*2462.00	99.72 PK			1.02 V	256	67.55	32.17
2	*2462.00	92.27 AV			1.02 V	256	60.10	32.17
3	2487.50	41.78 PK	74.00	-32.22	1.02 V	256	9.45	32.33
3	2487.50	34.33 AV	54.00	-19.67	1.02 V	256	2.00	32.33
4	4924.00	58.48 PK	74.00	-15.52	1.35 V	258	19.76	38.72
4	4924.00	45.86 AV	54.00	-8.14	1.35 V	258	7.14	38.72
5	7386.00	58.92 PK	74.00	-15.08	1.38 V	258	13.97	44.95
5	7386.00	47.92 AV	54.00	-6.08	1.38 V	258	2.97	44.95
6	8352.00	56.66 PK	74.00	-17.34	1.32 V	56	10.71	45.95
6	8352.00	43.62 AV	54.00	-10.38	1.32 V	56	-2.33	45.95

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “ : Fundamental frequency.



4.2.12 TEST RESULTS (FOR OFDM)

EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz		
ENVIRONMENTAL CONDITIONS	24deg. C, 70 % RH, 991hPa	DETECTOR FUNCTION	Peak(PK) Average (AV)
TESTED BY	Allen Chang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2038.00	38.28 PK	74.00	-35.72	1.00 H	196	7.94	30.34
1	2038.00	45.28 AV	54.00	-8.72	1.00 H	196	14.94	30.34
2	2390.00	42.44 PK	74.00	-31.56	1.37 H	144	10.68	31.76
2	2390.00	33.62 AV	54.00	-20.38	1.37 H	144	1.86	31.76
3	*2412.00	103.21 PK			1.37 H	144	71.35	31.86
3	*2412.00	94.39 AV			1.37 H	144	62.53	31.86
4	4824.00	52.32 PK	74.00	-21.68	1.00 H	142	13.61	38.71
4	4824.00	38.80 AV	54.00	-15.20	1.00 H	142	0.09	38.71
5	7236.00	55.30 PK	74.00	-18.70	1.22 H	89	10.94	44.36
5	7236.00	42.53 AV	54.00	-11.47	1.22 H	89	-1.83	44.36
6	8152.00	59.28 PK	74.00	-14.72	1.42 H	136	13.19	46.09
6	8152.00	48.03 AV	54.00	-5.97	1.42 H	136	1.94	46.09

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2038.00	42.71 PK	74.00	-31.29	1.23 V	166	12.37	30.34
1	2038.00	23.50 AV	54.00	-30.50	1.23 V	166	-6.84	30.34
2	2390.00	34.12 PK	74.00	-39.88	1.04 V	220	2.36	31.76
2	2390.00	25.32 AV	54.00	-28.68	1.04 V	220	-6.44	31.76
3	*2412.00	94.89 PK			1.04 V	220	63.03	31.86
3	*2412.00	86.09 AV			1.04 V	220	54.23	31.86
4	4824.00	53.90 PK	74.00	-20.10	1.37 V	273	15.19	38.71
4	4824.00	39.80 AV	54.00	-14.20	1.37 V	273	1.09	38.71
5	7236.00	57.01 PK	74.00	-16.99	1.03 V	168	12.65	44.36
5	7236.00	42.88 AV	54.00	-11.12	1.03 V	168	-1.48	44.36
6	8152.00	58.09 PK	74.00	-15.91	1.18 V	167	12.00	46.09
6	8152.00	46.11 AV	54.00	-7.89	1.18 V	167	0.02	46.09

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “ : Fundamental frequency.



EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz		
ENVIRONMENTAL CONDITIONS	24deg. C, 70 % RH, 991hPa	DETECTOR FUNCTION	Peak(PK) Average (AV)
TESTED BY	Allen Chang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2063.00	44.09 PK	74.00	-29.91	1.25 H	314	13.58	30.51
1	2063.00	35.84 AV	54.00	-18.16	1.25 H	314	5.33	30.51
2	*2437.00	103.49 PK			1.11 H	2	71.47	32.02
2	*2437.00	94.32 AV			1.11 H	2	62.30	32.02
3	4874.00	51.77 PK	74.00	-22.23	1.50 H	113	13.04	38.73
3	4874.00	38.51 AV	54.00	-15.49	1.50 H	113	-0.22	38.73
4	7311.00	54.50 PK	74.00	-19.50	1.32 H	236	9.90	44.61
4	7311.00	42.12 AV	54.00	-11.88	1.32 H	236	-2.48	44.61
5	8252.00	57.07 PK	74.00	-16.93	1.41 H	342	10.95	46.12
5	8252.00	45.19 AV	54.00	-8.81	1.41 H	342	-0.93	46.12

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2063.00	43.78 PK	74.00	-30.22	1.36 V	285	13.27	30.51
1	2063.00	33.91 AV	54.00	-20.09	1.36 V	285	3.40	30.51
2	*2437.00	95.70 PK			1.67 V	215	63.68	32.02
2	*2437.00	86.78 AV			1.67 V	215	54.76	32.02
3	4874.00	50.38 PK	74.00	-23.62	1.31 V	122	11.65	38.73
3	4874.00	37.74 AV	54.00	-16.26	1.31 V	122	-0.99	38.73
4	7311.00	55.39 PK	74.00	-18.61	1.43 V	266	10.79	44.61
4	7311.00	42.33 AV	54.00	-11.67	1.43 V	266	-2.27	44.61
5	8252.00	57.73 PK	74.00	-16.27	1.34 V	116	11.61	46.12
5	8252.00	45.56 AV	54.00	-8.44	1.34 V	116	-0.56	46.12

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “ : Fundamental frequency.



EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz		
ENVIRONMENTAL CONDITIONS	24deg. C, 70 % RH, 991hPa	DETECTOR FUNCTION	Peak(PK) Average (AV)
TESTED BY	Allen Chang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2088.00	46.06 PK	74.00	-27.94	1.29 H	339	15.39	30.67
1	2088.00	39.54 AV	54.00	-14.46	1.29 H	339	8.87	30.67
2	*2462.00	101.75 PK			1.07 H	13	69.58	32.17
2	*2462.00	92.89 AV			1.07 H	13	60.72	32.17
3	2483.50	40.37 PK	74.00	-33.63	1.07 H	13	8.07	32.30
3	2483.50	31.51 AV	54.00	-22.49	1.07 H	13	-0.79	32.30
4	4924.00	54.78 PK	74.00	-19.22	1.50 H	110	16.06	38.72
4	4924.00	40.87 AV	54.00	-13.13	1.50 H	110	2.15	38.72
5	7386.00	54.78 PK	74.00	-19.22	1.84 H	334	9.83	44.95
5	7386.00	42.03 AV	54.00	-11.97	1.84 H	334	-2.92	44.95
6	8352.00	56.36 PK	74.00	-17.64	1.19 H	199	10.41	45.95
6	8352.00	43.64 AV	54.00	-10.36	1.19 H	199	-2.31	45.95

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2088.00	44.31 PK	74.00	-29.69	1.00 V	216	13.64	30.67
1	2088.00	36.56 AV	54.00	-17.44	1.00 V	216	5.89	30.67
2	*2462.00	95.88 PK			1.65 V	244	63.71	32.17
2	*2462.00	87.26 AV			1.65 V	244	55.09	32.17
3	2483.50	34.50 PK	74.00	-39.50	1.65 V	244	2.20	32.30
3	2483.50	25.88 AV	54.00	-28.12	1.65 V	244	-6.42	32.30
4	4924.00	53.33 PK	74.00	-20.67	1.57 V	280	14.61	38.72
4	4924.00	40.13 AV	54.00	-13.87	1.57 V	280	1.41	38.72
5	7386.00	58.14 PK	74.00	-15.86	1.49 V	255	13.19	44.95
5	7386.00	43.40 AV	54.00	-10.60	1.49 V	255	-1.55	44.95
6	8352.00	56.66 PK	74.00	-17.34	1.32 V	115	10.71	45.95
6	8352.00	43.69 AV	54.00	-10.31	1.32 V	115	-2.26	45.95

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “ : Fundamental frequency.



4.2.13 TEST RESULTS (Mode 3)

EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
MODE	Channel 11	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	22 deg. C, 70 % RH, 991hPa	TESTED BY: Allen 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)	Correction Factor (dB/m)
1	66.75	35.51 QP	40.00	-4.49	3.00 H	96	22.56	12.95
2	99.70	37.92 QP	43.50	-5.58	2.50 H	174	26.97	10.96
3	117.47	39.28 QP	43.50	-4.22	3.00 H	328	26.51	12.77
4	133.03	36.88 QP	43.50	-6.62	1.50 H	106	22.95	13.94
5	166.87	28.99 QP	43.50	-14.51	1.49 H	168	14.76	14.23
6	199.39	39.94 QP	43.50	-3.56	1.74 H	222	28.50	11.44
7	232.16	39.19 QP	46.00	-6.81	1.00 H	346	26.45	12.75
8	265.21	32.63 QP	46.00	-13.37	1.25 H	151	19.05	13.58
9	332.92	42.04 QP	46.00	-3.96	1.00 H	105	26.78	15.26
10	399.34	36.96 QP	46.00	-9.04	1.00 H	124	20.22	16.74
11	432.38	35.81 QP	46.00	-10.19	2.00 H	277	18.20	17.60
12	455.71	34.43 QP	46.00	-11.57	1.50 H	25	16.28	18.15
13	467.37	32.22 QP	46.00	-13.78	1.50 H	34	13.92	18.30

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.



EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
MODE	Channel 11	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	22 deg. C, 70 % RH, 991hPa	TESTED BY: Allen 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)	Correction Factor (dB/m)
1	33.20	32.90 QP	40.00	-7.10	1.00 V	105	18.77	14.14
2	64.99	35.17 QP	40.00	-4.83	1.00 V	79	22.03	13.15
3	98.04	33.68 QP	43.50	-9.82	3.00 V	271	22.85	10.83
4	117.47	30.32 QP	43.50	-13.18	1.00 V	259	17.55	12.77
5	199.12	31.34 QP	43.50	-12.16	1.75 V	259	19.88	11.46
6	234.11	28.72 QP	46.00	-17.28	1.00 V	331	15.89	12.83
7	249.66	29.22 QP	46.00	-16.78	1.50 V	124	16.00	13.22
8	333.25	32.90 QP	46.00	-13.10	3.00 V	214	17.64	15.26
9	401.28	32.59 QP	46.00	-13.41	2.00 V	10	15.80	16.78
10	432.38	31.45 QP	46.00	-14.55	1.00 V	118	13.85	17.60
11	465.43	31.02 QP	46.00	-14.98	1.00 V	130	12.75	18.27

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.



4.2.14 TEST RESULTS (FOR CCK)

EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz		
ENVIRONMENTAL CONDITIONS	22deg. C, 70 % RH, 991hPa	DETECTOR FUNCTION	Peak(PK) Average (AV)
TESTED BY	Allen 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)	Correction Factor (dB/m)
1	2038.00	45.14 PK	74.00	-28.86	1.00 H	211	14.80	30.34
1	2038.00	36.27 AV	54.00	-17.73	1.00 H	211	5.93	30.34
2	2387.00	48.09 PK	74.00	-25.91	1.28 H	252	16.34	31.75
2	2387.00	40.54 AV	54.00	-13.46	1.28 H	252	8.79	31.75
3	*2412.00	108.04 PK			1.28 H	252	76.18	31.86
3	*2412.00	100.49 AV			1.28 H	252	68.63	31.86
4	4824.00	55.28 PK	74.00	-18.72	1.42 H	146	16.57	38.71
4	4824.00	42.00 AV	54.00	-12.00	1.42 H	146	3.29	38.71
5	7236.00	57.45 PK	74.00	-16.55	1.35 H	262	13.09	44.36
5	7236.00	45.35 AV	54.00	-8.65	1.35 H	262	0.99	44.36
6	8152.00	59.62 PK	74.00	-14.38	1.24 H	263	13.53	46.09
6	8152.00	50.61 AV	54.00	-3.39	1.24 H	263	4.52	46.09

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)	Correction Factor (dB/m)
1	2038.00	44.45 PK	74.00	-29.55	1.26 V	349	14.11	30.34
1	2038.00	34.99 AV	54.00	-19.01	1.26 V	349	4.65	30.34
2	2387.00	41.28 PK	74.00	-32.72	1.72 V	110	9.53	31.75
2	2387.00	33.88 AV	54.00	-20.12	1.72 V	110	2.13	31.75
3	*2412.00	101.23 PK			1.72 V	110	69.37	31.86
3	*2412.00	93.83 AV			1.72 V	110	61.97	31.86
4	4824.00	49.72 PK	74.00	-24.28	1.00 V	176	11.01	38.71
4	4824.00	37.01 AV	54.00	-16.99	1.00 V	176	-1.78	38.71
5	7236.00	55.47 PK	74.00	-18.53	1.39 V	208	11.11	44.36
5	7236.00	42.58 AV	54.00	-11.42	1.39 V	208	-1.78	44.36
6	8152.00	59.09 PK	74.00	-14.91	1.68 V	281	13.00	46.09
6	8152.00	48.20 AV	54.00	-5.80	1.68 V	281	2.11	46.09

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “ : Fundamental frequency.



EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz		
ENVIRONMENTAL CONDITIONS	22deg. C, 70 % RH, 991hPa	DETECTOR FUNCTION	Peak(PK) Average (AV)
TESTED BY	Allen Chang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2063.00	45.69 PK	74.00	-28.31	1.57 H	219	15.18	30.51
1	2063.00	37.64 AV	54.00	-16.36	1.57 H	219	7.13	30.51
2	*2437.00	107.61 PK			1.32 H	253	75.59	32.02
2	*2437.00	100.03 AV			1.32 H	253	68.01	32.02
3	4874.00	54.37 PK	74.00	-19.63	1.34 H	5	15.64	38.73
3	4874.00	41.15 AV	54.00	-12.85	1.34 H	5	2.42	38.73
4	7311.00	58.41 PK	74.00	-15.59	1.60 H	256	13.81	44.61
4	7311.00	45.84 AV	54.00	-8.16	1.60 H	256	1.24	44.61
5	8252.00	58.59 PK	74.00	-15.41	1.44 H	262	12.47	46.12
5	8252.00	46.73 AV	54.00	-7.27	1.44 H	262	0.61	46.12

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2063.00	43.51 PK	74.00	-30.49	1.50 V	314	13.00	30.51
1	2063.00	33.11 AV	54.00	-20.89	1.50 V	314	2.60	30.51
2	*2437.00	99.69 PK			1.05 V	329	67.67	32.02
2	*2437.00	92.19 AV			1.05 V	329	60.17	32.02
3	4874.00	54.49 PK	74.00	-19.51	1.05 V	187	15.76	38.73
3	4874.00	41.49 AV	54.00	-12.51	1.05 V	187	2.76	38.73
4	7311.00	57.58 PK	74.00	-16.42	1.80 V	289	12.98	44.61
4	7311.00	44.78 AV	54.00	-9.22	1.80 V	289	0.18	44.61
5	8252.00	57.91 PK	74.00	-16.09	1.51 V	268	11.79	46.12
5	8252.00	45.99 AV	54.00	-8.01	1.51 V	268	-0.13	46.12

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “ : Fundamental frequency.



EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz		
ENVIRONMENTAL CONDITIONS	22deg. C, 70 % RH, 991hPa	DETECTOR FUNCTION	Peak(PK) Average (AV)
TESTED BY	Allen Chang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2088.00	47.95 PK	74.00	-26.05	1.00 H	223	17.28	30.67
1	2088.00	43.25 AV	54.00	-10.75	1.00 H	223	12.58	30.67
2	*2462.00	109.41 PK			1.30 H	93	77.24	32.17
2	*2462.00	101.96 AV			1.30 H	93	69.79	32.17
3	2487.50	51.47 PK	74.00	-22.53	1.30 H	93	19.14	32.33
3	2487.50	44.02 AV	54.00	-9.98	1.30 H	93	11.69	32.33
4	4924.00	56.27 PK	74.00	-17.73	1.06 H	356	17.55	38.72
4	4924.00	42.88 AV	54.00	-11.12	1.06 H	356	4.16	38.72
5	7386.00	58.82 PK	74.00	-15.18	1.31 H	210	13.87	44.95
5	7386.00	46.87 AV	54.00	-7.13	1.31 H	210	1.92	44.95
6	8352.00	57.56 PK	74.00	-16.44	1.21 H	257	11.61	45.95
6	8352.00	44.57 AV	54.00	-9.43	1.21 H	257	-1.38	45.95

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2088.00	45.13 PK	74.00	-28.87	1.68 V	330	14.46	30.67
1	2088.00	35.61 AV	54.00	-18.39	1.68 V	330	4.94	30.67
2	*2462.00	103.28 PK			1.30 V	107	71.11	32.17
2	*2462.00	95.78 AV			1.30 V	107	63.61	32.17
3	2487.50	45.34 PK	74.00	-28.66	1.30 V	107	13.01	32.33
3	2487.50	37.84 AV	54.00	-16.16	1.30 V	107	5.51	32.33
4	4924.00	56.39 PK	74.00	-17.61	1.19 V	219	17.67	38.72
4	4924.00	43.17 AV	54.00	-10.83	1.19 V	219	4.45	38.72
5	7386.00	59.07 PK	74.00	-14.93	1.49 V	280	14.12	44.95
5	7386.00	47.26 AV	54.00	-6.74	1.49 V	280	2.31	44.95
6	8352.00	56.87 PK	74.00	-17.13	1.12 V	129	10.92	45.95
6	8352.00	43.93 AV	54.00	-10.07	1.12 V	129	-2.02	45.95

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “ : Fundamental frequency.



4.2.15 TEST RESULTS (FOR OFDM)

EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz		
ENVIRONMENTAL CONDITIONS	22deg. C, 70 % RH, 991hPa	DETECTOR FUNCTION	Peak(PK) Average (AV)
TESTED BY	Allen Chang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2038.00	44.20 PK	74.00	-29.80	1.66 H	210	13.86	30.34
1	2038.00	35.73 AV	54.00	-18.27	1.66 H	210	5.39	30.34
2	2390.00	44.22 PK	74.00	-29.78	1.33 H	218	12.46	31.76
2	2390.00	34.51 AV	54.00	-19.49	1.33 H	218	2.75	31.76
3	*2412.00	104.99 PK			1.33 H	218	73.13	31.86
3	*2412.00	95.28 AV			1.33 H	218	63.42	31.86
4	4824.00	51.36 PK	74.00	-22.64	1.19 H	195	12.65	38.71
4	4824.00	38.79 AV	54.00	-15.21	1.19 H	195	0.08	38.71
5	7236.00	57.76 PK	74.00	-16.24	1.37 H	258	13.40	44.36
5	7236.00	43.89 AV	54.00	-10.11	1.37 H	258	-0.47	44.36
6	8152.00	59.58 PK	74.00	-14.42	1.25 H	263	13.49	46.09
6	8152.00	50.41 AV	54.00	-3.59	1.25 H	263	4.32	46.09

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2038.00	44.10 PK	74.00	-29.90	1.00 V	347	13.76	30.34
1	2038.00	34.16 AV	54.00	-19.84	1.00 V	347	3.82	30.34
2	2390.00	36.20 PK	74.00	-37.80	1.71 V	108	4.44	31.76
2	2390.00	27.16 AV	54.00	-26.84	1.71 V	108	-4.60	31.76
3	*2412.00	96.97 PK			1.71 V	108	65.11	31.86
3	*2412.00	87.93 AV			1.71 V	108	56.07	31.86
4	4824.00	53.23 PK	74.00	-20.77	1.16 V	200	14.52	38.71
4	4824.00	39.62 AV	54.00	-14.38	1.16 V	200	0.91	38.71
5	7236.00	57.51 PK	74.00	-16.49	1.40 V	281	13.15	44.36
5	7236.00	43.90 AV	54.00	-10.10	1.40 V	281	-0.46	44.36
6	8152.00	59.44 PK	74.00	-14.56	1.03 V	145	13.35	46.09
6	8152.00	48.91 AV	54.00	-5.09	1.03 V	145	2.82	46.09

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “ : Fundamental frequency.



EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz		
ENVIRONMENTAL CONDITIONS	22deg. C, 70 % RH, 991hPa	DETECTOR FUNCTION	Peak(PK) Average (AV)
TESTED BY	Allen Chang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2063.00	45.81 PK	74.00	-28.19	1.00 H	214	15.30	30.51
1	2063.00	38.56 AV	54.00	-15.44	1.00 H	214	8.05	30.51
2	*2437.00	103.91 PK			1.30 H	95	71.89	32.02
2	*2437.00	94.67 AV			1.30 H	95	62.65	32.02
3	4874.00	51.99 PK	74.00	-22.01	1.09 H	7	13.26	38.73
3	4874.00	38.72 AV	54.00	-15.28	1.09 H	7	-0.01	38.73
4	7311.00	56.21 PK	74.00	-17.79	1.33 H	209	11.61	44.61
4	7311.00	43.44 AV	54.00	-10.56	1.33 H	209	-1.16	44.61
5	8252.00	58.82 PK	74.00	-15.18	1.23 H	268	12.70	46.12
5	8252.00	46.57 AV	54.00	-7.43	1.23 H	268	0.45	46.12

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2063.00	44.85 PK	74.00	-29.15	1.29 V	4	14.34	30.51
1	2063.00	36.05 AV	54.00	-17.95	1.29 V	4	5.54	30.51
2	*2437.00	97.14 PK			1.61 V	105	65.12	32.02
2	*2437.00	87.90 AV			1.61 V	105	55.88	32.02
3	4874.00	52.05 PK	74.00	-21.95	1.13 V	192	13.32	38.73
3	4874.00	38.97 AV	54.00	-15.03	1.13 V	192	0.24	38.73
4	7311.00	57.05 PK	74.00	-16.95	1.48 V	286	12.45	44.61
4	7311.00	43.37 AV	54.00	-10.63	1.48 V	286	-1.23	44.61
5	8252.00	58.25 PK	74.00	-15.75	1.64 V	146	12.13	46.12
5	8252.00	45.61 AV	54.00	-8.39	1.64 V	146	-0.51	46.12

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “ : Fundamental frequency.



EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz		
ENVIRONMENTAL CONDITIONS	22deg. C, 70 % RH, 991hPa	DETECTOR FUNCTION	Peak(PK) Average (AV)
TESTED BY	Allen Chang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2088.00	48.20 PK	74.00	-25.80	1.00 H	223	17.53	30.67
1	2088.00	43.64 AV	54.00	-10.36	1.00 H	223	12.97	30.67
2	*2462.00	104.03 PK			1.36 H	234	71.86	32.17
2	*2462.00	94.87 AV			1.36 H	234	62.70	32.17
3	2483.50	42.65 PK	74.00	-31.35	1.36 H	234	10.35	32.30
4	4924.00	52.01 PK	74.00	-21.99	1.43 H	194	13.29	38.72
4	4924.00	38.91 AV	54.00	-15.09	1.43 H	194	0.19	38.72
5	7386.00	56.21 PK	74.00	-17.79	1.23 H	40	11.26	44.95
5	7386.00	43.16 AV	54.00	-10.84	1.23 H	40	-1.79	44.95
6	8352.00	57.21 PK	74.00	-16.79	1.40 H	267	11.26	45.95
6	8352.00	44.75 AV	54.00	-9.25	1.40 H	267	-1.20	45.95

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2088.00	45.17 PK	74.00	-28.83	1.28 V	117	14.50	30.67
1	2088.00	37.22 AV	54.00	-16.78	1.28 V	117	6.55	30.67
2	*2462.00	99.24 PK			1.94 V	109	67.07	32.17
2	*2462.00	90.12 AV			1.94 V	109	57.95	32.17
3	2483.50	37.86 PK	74.00	-36.14	1.94 V	109	5.56	32.30
3	2483.50	28.74 AV	54.00	-25.26	1.94 V	109	-3.56	32.30
4	4924.00	53.50 PK	74.00	-20.50	1.09 V	190	14.78	38.72
4	4924.00	39.49 AV	54.00	-14.51	1.09 V	190	0.77	38.72
5	7386.00	58.84 PK	74.00	-15.16	1.30 V	23	13.89	44.95
5	7386.00	44.79 AV	54.00	-9.21	1.30 V	23	-0.16	44.95
6	8352.00	57.27 PK	74.00	-16.73	1.58 V	273	11.32	45.95
6	8352.00	44.77 AV	54.00	-9.23	1.58 V	273	-1.18	45.95

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “ : Fundamental frequency.



4.2.16 TEST RESULTS (Mode 4)

EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
MODE	Channel 11	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	22 deg. C, 70 % RH, 991hPa	TESTED BY: Allen 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)	Correction Factor (dB/m)
1	64.99	30.77 QP	40.00	-9.23	4.00 H	169	17.62	13.15
2	99.70	43.21 QP	43.50	-0.29	2.49 H	333	32.26	10.96
3	133.03	42.17 QP	43.50	-1.33	2.00 H	280	28.24	13.94
4	166.07	37.87 QP	43.50	-5.63	1.75 H	328	23.57	14.30
5	199.12	34.69 QP	43.50	-8.81	1.50 H	259	23.23	11.46
6	265.21	30.90 QP	46.00	-15.10	1.00 H	82	17.32	13.58
7	333.70	41.70 QP	46.00	-4.30	1.00 H	288	26.42	15.28
8	364.35	32.51 QP	46.00	-13.49	1.00 H	286	16.55	15.97
9	399.34	35.50 QP	46.00	-10.50	1.00 H	97	18.77	16.74
10	432.38	37.74 QP	46.00	-8.26	2.00 H	85	20.14	17.60
11	465.43	35.27 QP	46.00	-10.73	2.00 H	94	16.99	18.27

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.



EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
MODE	Channel 11	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	22 deg. C, 70 % RH, 991hPa	TESTED BY: Allen 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)	Correction Factor (dB/m)
1	31.94	34.74 QP	40.00	-5.26	1.00 V	49	20.82	13.93
2	99.98	37.29 QP	43.50	-6.21	3.00 V	268	26.31	10.98
3	133.03	34.98 QP	43.50	-8.52	2.00 V	253	21.04	13.94
4	166.07	33.90 QP	43.50	-9.60	1.00 V	94	19.60	14.30
5	199.12	35.67 QP	43.50	-7.83	1.00 V	307	24.21	11.46
6	232.16	29.57 QP	46.00	-16.43	1.00 V	289	16.82	12.75
7	333.25	39.41 QP	46.00	-6.59	2.50 V	28	24.14	15.26
8	401.28	31.78 QP	46.00	-14.22	1.00 V	31	14.99	16.78
9	432.38	30.28 QP	46.00	-15.72	1.00 V	115	12.68	17.60
10	465.43	35.47 QP	46.00	-10.53	1.00 V	28	17.19	18.27
11	601.50	29.33 QP	46.00	-16.67	1.00 V	97	8.30	21.03

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.



4.2.17 TEST RESULTS (FOR CCK)

EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz		
ENVIRONMENTAL CONDITIONS	22deg. C, 70 % RH, 991hPa	DETECTOR FUNCTION	Peak(PK) Average (AV)
TESTED BY	Allen 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)	Correction Factor (dB/m)
1	2038.00	44.76 PK	74.00	-29.24	1.32 H	319	14.42	30.34
1	2038.00	38.05 AV	54.00	-15.95	1.32 H	319	7.71	30.34
2	2387.00	47.44 PK	74.00	-26.56	1.31 H	266	15.69	31.75
2	2387.00	40.07 AV	54.00	-13.93	1.31 H	266	8.32	31.75
3	*2412.00	109.44 PK			1.31 H	266	77.58	31.86
3	*2412.00	102.07 AV			1.31 H	266	70.21	31.86
4	4824.00	53.53 PK	74.00	-20.47	1.31 H	353	14.82	38.71
4	4824.00	40.34 AV	54.00	-13.66	1.31 H	353	1.63	38.71
5	7236.00	57.87 PK	74.00	-16.13	1.28 H	179	13.51	44.36
5	7236.00	45.55 AV	54.00	-8.45	1.28 H	179	1.19	44.36
6	8152.00	58.17 PK	74.00	-15.83	1.22 H	204	12.08	46.09
6	8152.00	49.27 AV	54.00	-4.73	1.22 H	204	3.18	46.09

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)	Correction Factor (dB/m)
1	2038.00	42.44 PK	74.00	-31.56	1.18 V	171	12.10	30.34
1	2038.00	32.72 AV	54.00	-21.28	1.18 V	171	2.38	30.34
2	2387.00	46.91 PK	74.00	-27.09	1.07 V	223	15.16	31.75
2	2387.00	39.56 AV	54.00	-14.44	1.07 V	223	7.81	31.75
3	*2412.00	106.86 PK			1.07 V	223	75.00	31.86
3	*2412.00	99.51 AV			1.07 V	223	67.65	31.86
4	4823.00	53.70 PK	74.00	-20.30	1.16 V	360	14.99	38.71
4	4823.00	41.37 AV	54.00	-12.63	1.16 V	360	2.66	38.71
5	7236.00	56.99 PK	74.00	-17.01	1.27 V	230	12.63	44.36
5	7236.00	45.47 AV	54.00	-8.53	1.27 V	230	1.11	44.36
6	8152.00	58.01 PK	74.00	-15.99	1.34 V	229	11.92	46.09
6	8152.00	49.22 AV	54.00	-4.78	1.34 V	229	3.13	46.09

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “ : Fundamental frequency.



EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz		
ENVIRONMENTAL CONDITIONS	22deg. C, 70 % RH, 991hPa	DETECTOR FUNCTION	Peak(PK) Average (AV)
TESTED BY	Allen Chang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2063.00	44.50 PK	74.00	-29.50	1.22 H	340	13.99	30.51
1	2063.00	35.43 AV	54.00	-18.57	1.22 H	340	4.92	30.51
2	*2437.00	109.67 PK			1.33 H	271	77.65	32.02
2	*2437.00	101.59 AV			1.33 H	271	69.57	32.02
3	4874.00	52.53 PK	74.00	-21.47	1.19 H	345	13.80	38.73
3	4874.00	39.48 AV	54.00	-14.52	1.19 H	345	0.75	38.73
4	7311.00	55.34 PK	74.00	-18.66	1.22 H	314	10.74	44.61
4	7311.00	42.64 AV	54.00	-11.36	1.22 H	314	-1.96	44.61
5	8252.00	57.91 PK	74.00	-16.09	1.42 H	216	11.79	46.12
5	8252.00	47.27 AV	54.00	-6.73	1.42 H	216	1.15	46.12

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2063.00	44.66 PK	74.00	-29.34	1.18 V	311	14.15	30.51
1	2063.00	34.27 AV	54.00	-19.73	1.18 V	311	3.76	30.51
2	*2437.00	107.49 PK			1.04 V	222	75.47	32.02
2	*2437.00	100.05 AV			1.04 V	222	68.03	32.02
3	4874.00	56.00 PK	74.00	-18.00	1.13 V	49	17.27	38.73
3	4874.00	42.38 AV	54.00	-11.62	1.13 V	49	3.65	38.73
4	7311.00	56.75 PK	74.00	-17.25	1.08 V	316	12.15	44.61
4	7311.00	43.59 AV	54.00	-10.41	1.08 V	316	-1.01	44.61
5	8252.00	57.84 PK	74.00	-16.16	1.95 V	177	11.72	46.12
5	8252.00	42.14 AV	54.00	-11.86	1.95 V	177	-3.98	46.12

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “ : Fundamental frequency.



EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz		
ENVIRONMENTAL CONDITIONS	22deg. C, 70 % RH, 991hPa	DETECTOR FUNCTION	Peak(PK) Average (AV)
TESTED BY	Allen Chang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2088.00	44.28 PK	74.00	-29.72	1.54 H	281	13.61	30.67
1	2088.00	34.44 AV	54.00	-19.56	1.54 H	281	3.77	30.67
2	*2462.00	109.68 PK			1.32 H	272	77.51	32.17
2	*2462.00	102.23 AV			1.32 H	272	70.06	32.17
3	2487.50	51.74 PK	74.00	-22.26	1.32 H	272	19.41	32.33
3	2487.50	44.29 AV	54.00	-9.71	1.32 H	272	11.96	32.33
4	4924.00	59.17 PK	74.00	-14.83	1.25 H	48	20.45	38.72
4	4924.00	46.16 AV	54.00	-7.84	1.25 H	48	7.44	38.72
5	7386.00	57.44 PK	74.00	-16.56	1.15 H	236	12.49	44.95
5	7386.00	45.16 AV	54.00	-8.84	1.15 H	236	0.21	44.95
6	8352.00	56.87 PK	74.00	-17.13	1.43 H	190	10.92	45.95
6	8352.00	44.27 AV	54.00	-9.73	1.43 H	190	-1.68	45.95

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2088.00	44.71 PK	74.00	-29.29	1.00 V	20	14.04	30.67
1	2088.00	34.67 AV	54.00	-19.33	1.00 V	20	4.00	30.67
2	*2462.00	107.23 PK			1.03 V	224	75.06	32.17
2	*2462.00	99.82 AV			1.03 V	224	67.65	32.17
3	2487.50	49.29 PK	74.00	-24.71	1.03 V	224	16.96	32.33
4	4924.00	57.77 PK	74.00	-16.23	1.14 V	57	19.05	38.72
4	4924.00	44.92 AV	54.00	-9.08	1.14 V	57	6.20	38.72
5	7386.00	58.39 PK	74.00	-15.61	1.19 V	24	13.44	44.95
5	7386.00	46.62 AV	54.00	-7.38	1.19 V	24	1.67	44.95
6	8352.00	57.75 PK	74.00	-16.25	1.00 V	20	11.80	45.95
6	8352.00	44.61 AV	54.00	-9.39	1.00 V	20	-1.34	45.95

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “ : Fundamental frequency.



4.2.18 TEST RESULTS (FOR OFDM)

EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz		
ENVIRONMENTAL CONDITIONS	22deg. C, 70 % RH, 991hPa	DETECTOR FUNCTION	Peak(PK) Average (AV)
TESTED BY	Allen Chang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2038.00	45.04 PK	74.00	-28.96	1.00 H	266	14.70	30.34
1	2038.00	35.74 AV	54.00	-18.26	1.00 H	266	5.40	30.34
2	2390.00	47.11 PK	74.00	-26.89	1.28 H	277	15.35	31.76
2	2390.00	37.71 AV	54.00	-16.29	1.28 H	277	5.95	31.76
3	*2412.00	107.88 PK			1.28 H	277	76.02	31.86
3	*2412.00	98.48 AV			1.28 H	277	66.62	31.86
4	4824.00	53.02 PK	74.00	-20.98	1.40 H	279	14.31	38.71
4	4824.00	40.06 AV	54.00	-13.94	1.40 H	279	1.35	38.71
5	7236.00	59.23 PK	74.00	-14.77	1.35 H	224	14.87	44.36
5	7236.00	44.57 AV	54.00	-9.43	1.35 H	224	0.21	44.36
6	8152.00	60.02 PK	74.00	-13.98	1.37 H	260	13.93	46.09
6	8152.00	50.76 AV	54.00	-3.24	1.37 H	260	4.67	46.09

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2038.00	43.66 PK	74.00	-30.34	1.11 V	317	13.32	30.34
1	2038.00	34.11 AV	54.00	-19.89	1.11 V	317	3.77	30.34
2	2390.00	43.59 PK	74.00	-30.41	1.06 V	233	11.83	31.76
2	2390.00	34.17 AV	54.00	-19.83	1.06 V	233	2.41	31.76
3	*2412.00	104.36 PK			1.06 V	233	72.50	31.86
3	*2412.00	94.94 AV			1.06 V	233	63.08	31.86
4	4824.00	52.68 PK	74.00	-21.32	1.42 V	24	13.97	38.71
4	4824.00	38.88 AV	54.00	-15.12	1.42 V	24	0.17	38.71
5	7236.00	57.72 PK	74.00	-16.28	1.12 V	319	13.36	44.36
5	7236.00	44.04 AV	54.00	-9.96	1.12 V	319	-0.32	44.36
6	8152.00	59.65 PK	74.00	-14.35	1.02 V	226	13.56	46.09
6	8152.00	49.45 AV	54.00	-4.55	1.02 V	226	3.36	46.09

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “ : Fundamental frequency.



EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz		
ENVIRONMENTAL CONDITIONS	22deg. C, 70 % RH, 991hPa	DETECTOR FUNCTION	Peak(PK) Average (AV)
TESTED BY	Allen Chang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2063.00	45.07 PK	74.00	-28.93	1.25 H	313	14.56	30.51
1	2063.00	36.76 AV	54.00	-17.24	1.25 H	313	6.25	30.51
2	*2437.00	107.57 PK			1.28 H	278	75.55	32.02
2	*2437.00	98.38 AV			1.28 H	278	66.36	32.02
3	4874.00	50.79 PK	74.00	-23.21	1.37 H	268	12.06	38.73
3	4874.00	37.99 AV	54.00	-16.01	1.37 H	268	-0.74	38.73
4	7311.00	57.79 PK	74.00	-16.21	1.33 H	223	13.19	44.61
4	7311.00	43.86 AV	54.00	-10.14	1.33 H	223	-0.74	44.61
5	8252.00	57.90 PK	74.00	-16.10	1.43 H	227	11.78	46.12
5	8252.00	46.95 AV	54.00	-7.05	1.43 H	227	0.83	46.12

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2063.00	44.50 PK	74.00	-29.50	1.26 V	253	13.99	30.51
1	2063.00	34.13 AV	54.00	-19.87	1.26 V	253	3.62	30.51
2	*2437.00	104.29 PK			1.04 V	231	72.27	32.02
2	*2437.00	95.11 AV			1.04 V	231	63.09	32.02
3	4874.00	51.02 PK	74.00	-22.98	1.26 V	26	12.29	38.73
3	4874.00	37.83 AV	54.00	-16.17	1.26 V	26	-0.90	38.73
4	7311.00	57.83 PK	74.00	-16.17	1.50 V	289	13.23	44.61
4	7311.00	43.82 AV	54.00	-10.18	1.50 V	289	-0.78	44.61
5	8252.00	58.74 PK	74.00	-15.26	1.16 V	228	12.62	46.12
5	8252.00	46.20 AV	54.00	-7.80	1.16 V	228	0.08	46.12

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “ : Fundamental frequency.



EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz		
ENVIRONMENTAL CONDITIONS	22deg. C, 70 % RH, 991hPa	DETECTOR FUNCTION	Peak(PK) Average (AV)
TESTED BY	Allen Chang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2088.00	45.14 PK	74.00	-28.86	1.00 H	212	14.47	30.67
1	2088.00	37.75 AV	54.00	-16.25	1.00 H	212	7.08	30.67
2	*2462.00	105.35 PK			1.24 H	278	73.18	32.17
2	*2462.00	96.58 AV			1.24 H	278	64.41	32.17
3	2483.50	43.97 PK	74.00	-30.03	1.24 H	278	11.67	32.30
4	4924.00	52.83 PK	74.00	-21.17	1.08 H	18	14.11	38.72
4	4924.00	39.78 AV	54.00	-14.22	1.08 H	18	1.06	38.72
5	7386.00	56.22 PK	74.00	-17.78	1.43 H	127	11.27	44.95
5	7386.00	43.03 AV	54.00	-10.97	1.43 H	127	-1.92	44.95
6	8352.00	58.03 PK	74.00	-15.97	1.21 H	227	12.08	45.95
6	8352.00	46.09 AV	54.00	-7.91	1.21 H	227	0.14	45.95

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2088.00	44.67 PK	74.00	-29.33	1.00 V	334	14.00	30.67
1	2088.00	35.94 AV	54.00	-18.06	1.00 V	334	5.27	30.67
2	*2462.00	102.29 PK			1.05 V	229	70.12	32.17
2	*2462.00	93.53 AV			1.05 V	229	61.36	32.17
3	2483.50	40.91 PK	74.00	-33.09	1.05 V	229	8.61	32.30
3	2483.50	32.15 AV	54.00	-21.85	1.05 V	229	-0.15	32.30
4	4924.00	52.80 PK	74.00	-21.20	1.36 V	189	14.08	38.72
4	4924.00	40.05 AV	54.00	-13.95	1.36 V	189	1.33	38.72
5	7386.00	55.21 PK	74.00	-18.79	1.17 V	82	10.26	44.95
5	7386.00	42.65 AV	54.00	-11.35	1.17 V	82	-2.30	44.95
6	8352.00	57.57 PK	74.00	-16.43	1.82 V	203	11.62	45.95
6	8352.00	44.95 AV	54.00	-9.05	1.82 V	203	-1.00	45.95

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “ : Fundamental frequency.



4.3 6dB BANDWIDTH MEASUREMENT

4.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2004

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

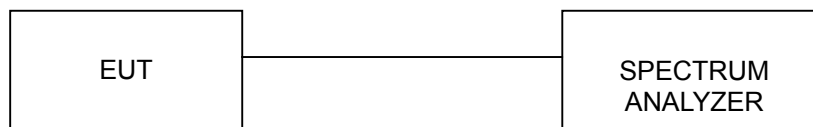
4.3.3 TEST PROCEDURE

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 100kHz VBW. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

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.



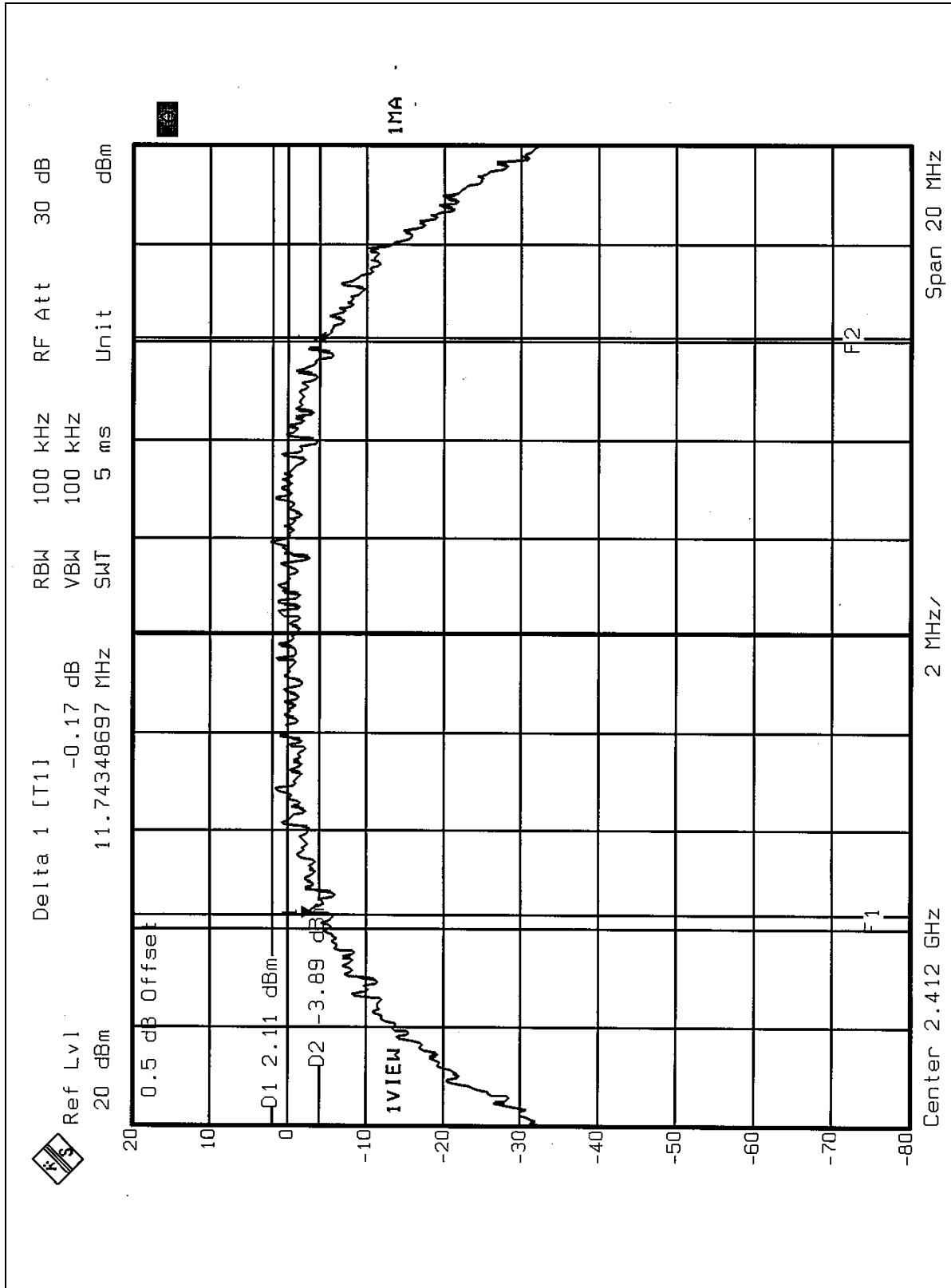
4.3.7 TEST RESULTS(FOR CCK)

EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa
TESTED BY: Allen Chang			

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	11.74	0.5	PASS
6	2437	12.14	0.5	PASS
11	2462	12.10	0.5	PASS

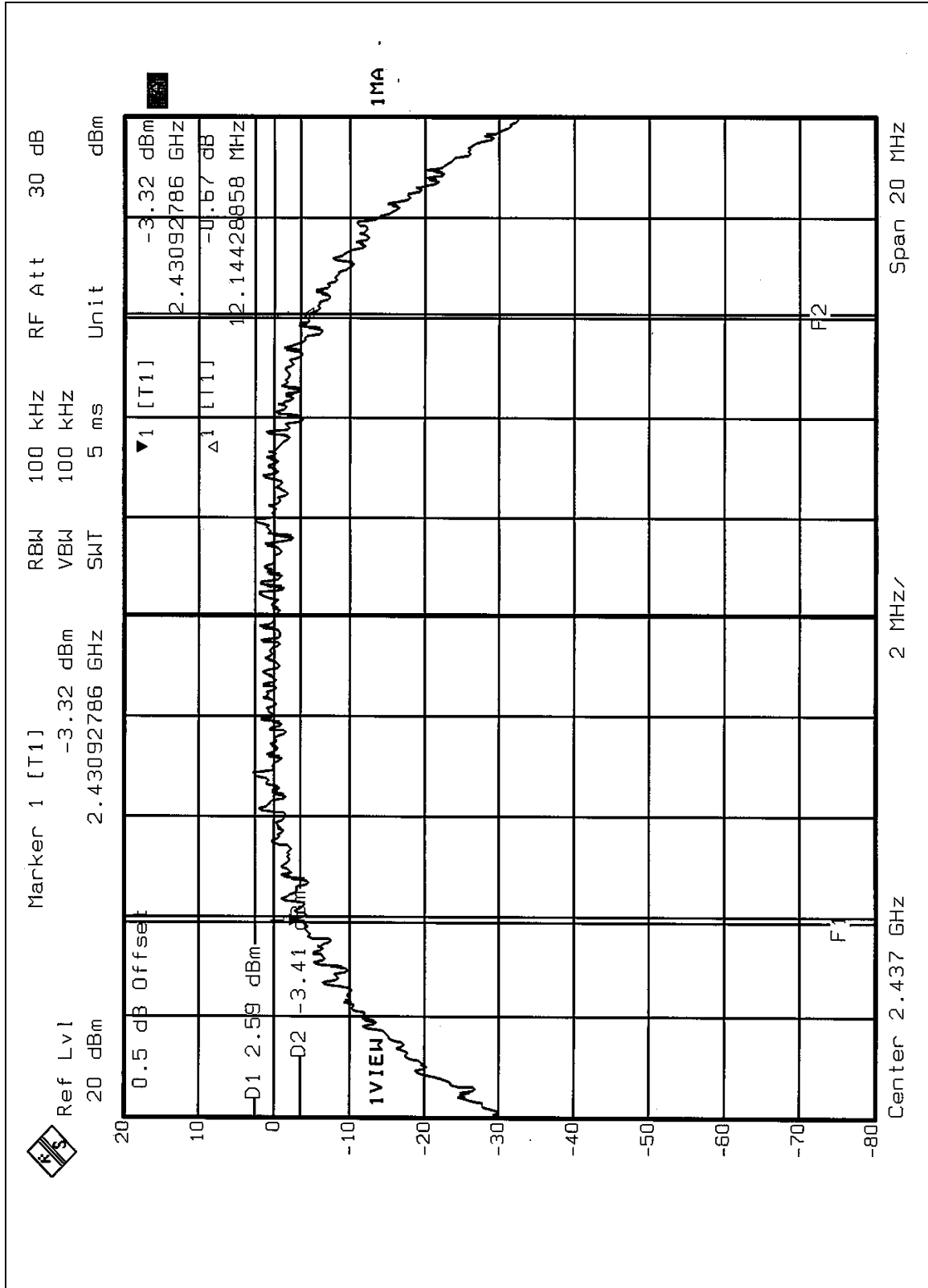


CH1



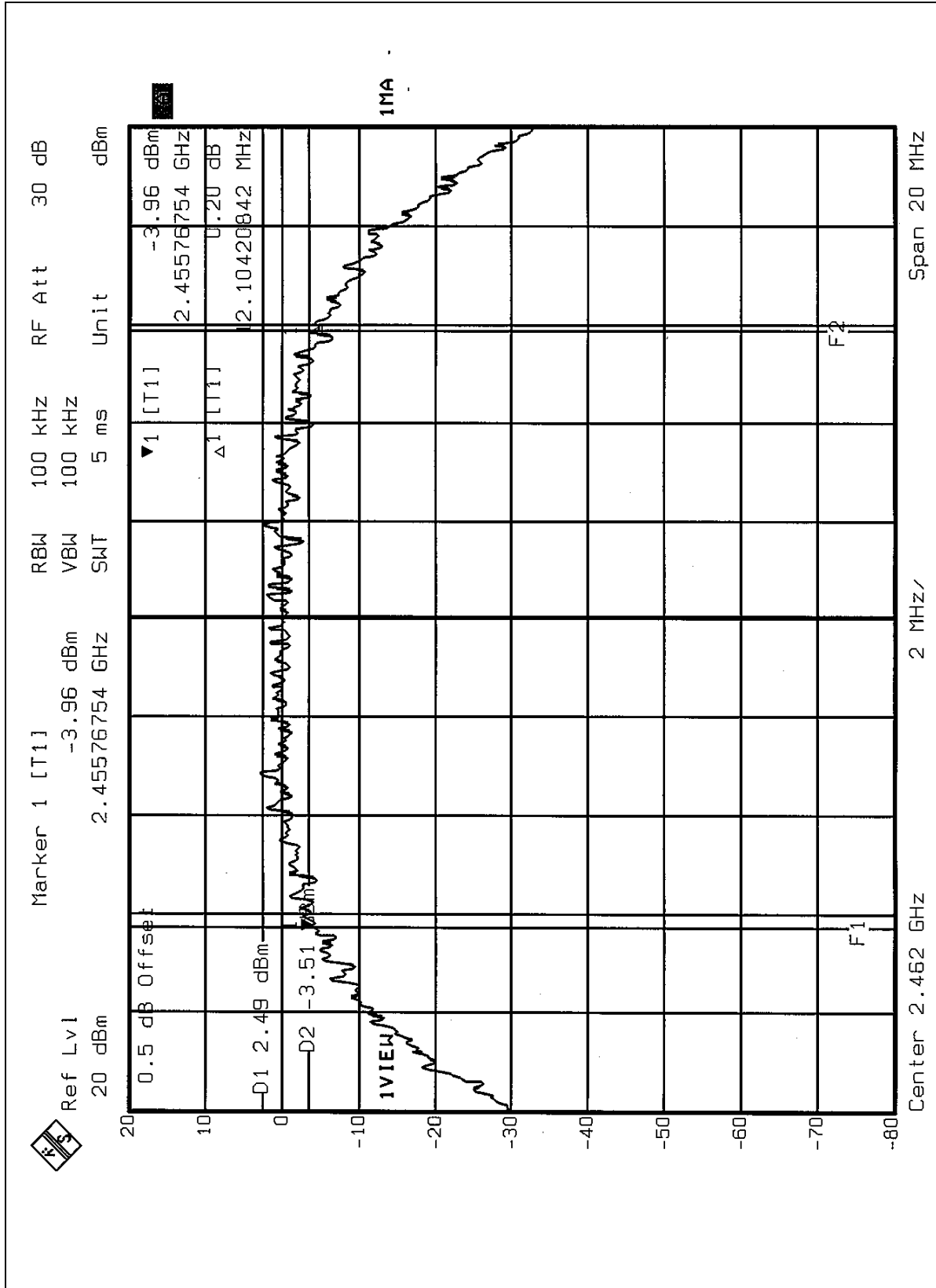


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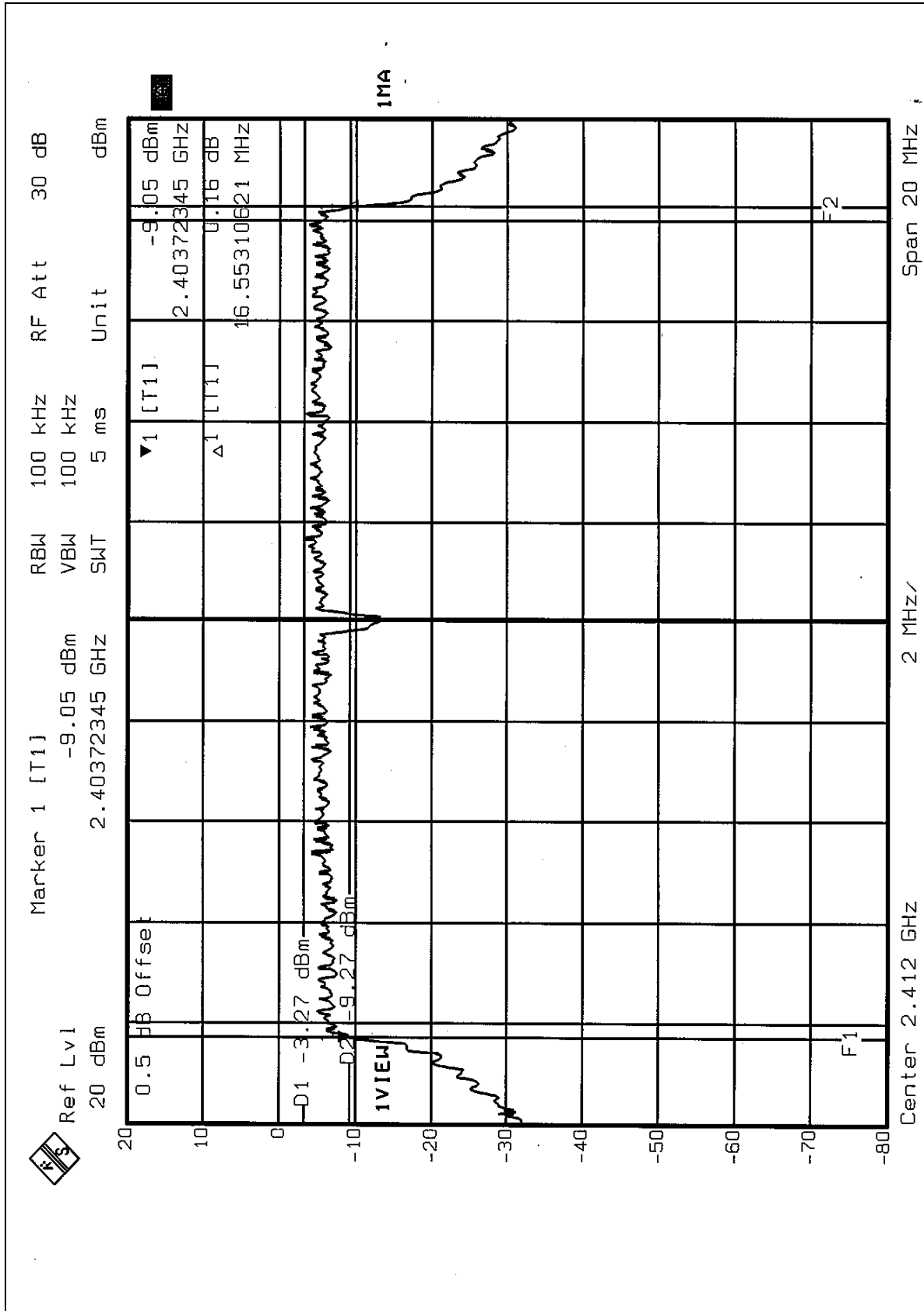
4.3.8 TEST RESULTS(FOR OFDM)

EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa
TESTED BY: Allen Chang			

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	16.55	0.5	PASS
6	2437	16.59	0.5	PASS
11	2462	16.55	0.5	PASS

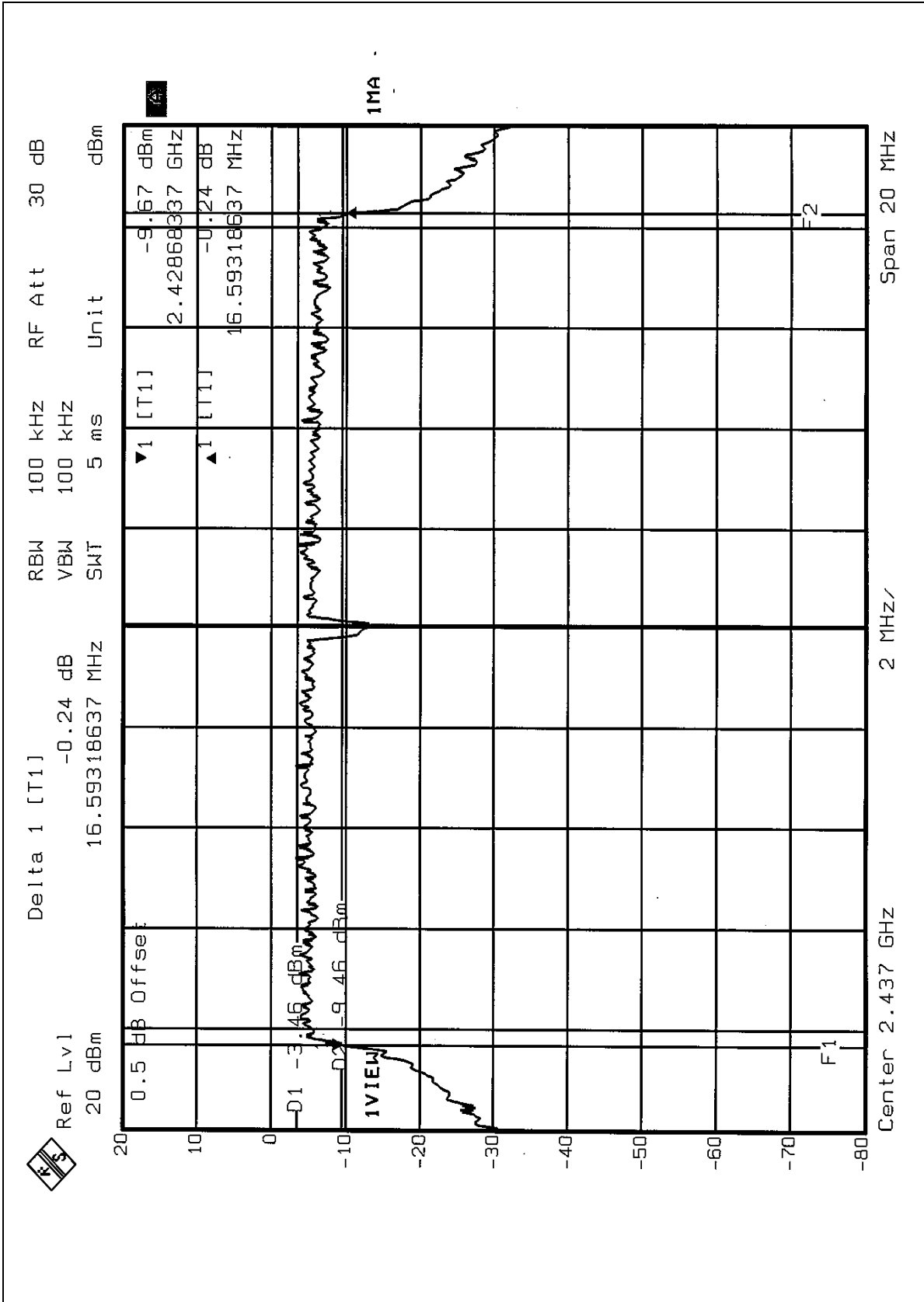


CH1



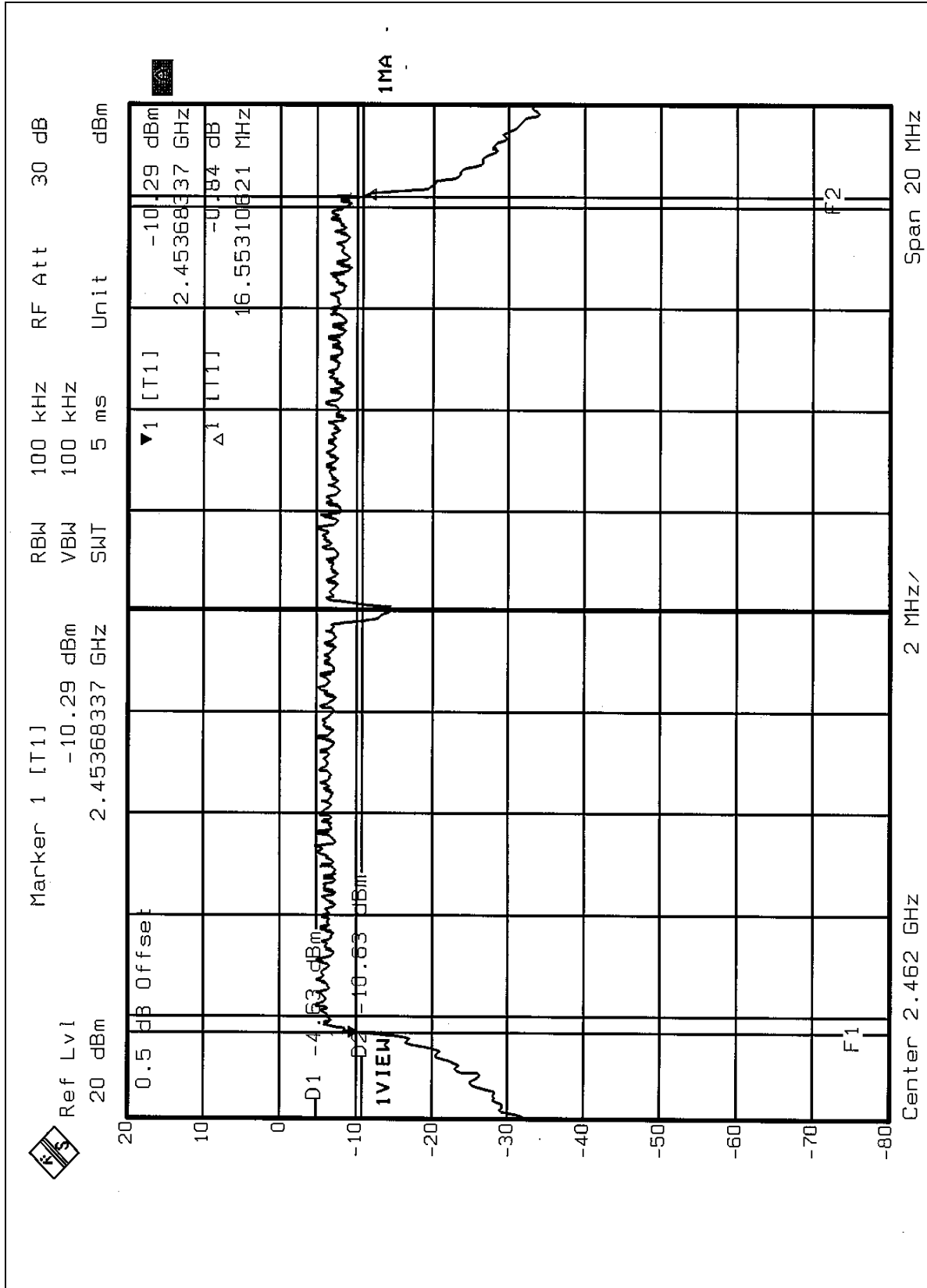


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4.4 MAXIMUM PEAK OUTPUT POWER

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
R&S SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2004
R&S SIGNAL GENERATOR	SMP04	100011	May 28, 2004
TEKTRONIX OSCILLOSCOPE	TDS 220	C019167	Feb. 01, 2005
NARDA DETECTOR	4503A	FSCM99899	NA

NOTE:

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



4.4.3 TEST PROCEDURES

1. A detector was used on the output port of the EUT. An oscilloscope was used to read the response of the detector.
2. Replaced the EUT by the signal generator . The center frequency of the S.G was adjusted to the center frequency of the measured channel.
3. Adjusted the power to have the same reading on oscilloscope. Record the power level.

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(FOR CCK)

EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa
TESTED BY: Allen Chang			

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	16.37	30	PASS
6	2437	16.33	30	PASS
11	2462	16.27	30	PASS

4.4.8 TEST RESULTS(FOR OFDM)

EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa
TESTED BY: Allen Chang			

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	15.21	30	PASS
6	2437	15.28	30	PASS
11	2462	15.14	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	Aug. 12, 2004

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

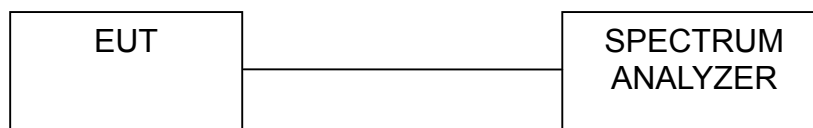
4.5.3 TEST PROCEDURE

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 3kHz RBW and 30kHz 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(FOR CCK)

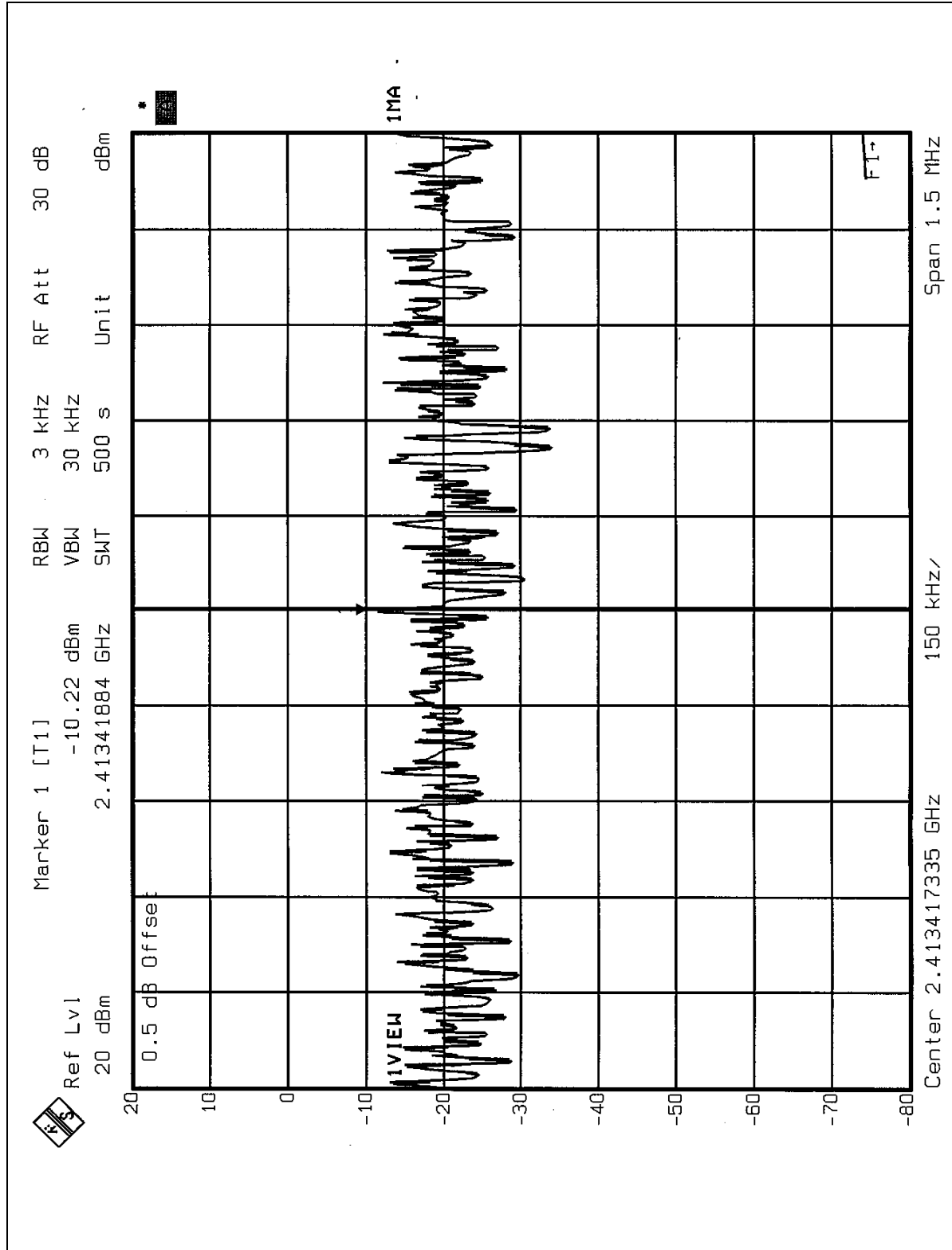
EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa

TESTED BY: Allen Chang

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-10.22	8	PASS
6	2437	-10.32	8	PASS
11	2462	-10.79	8	PASS

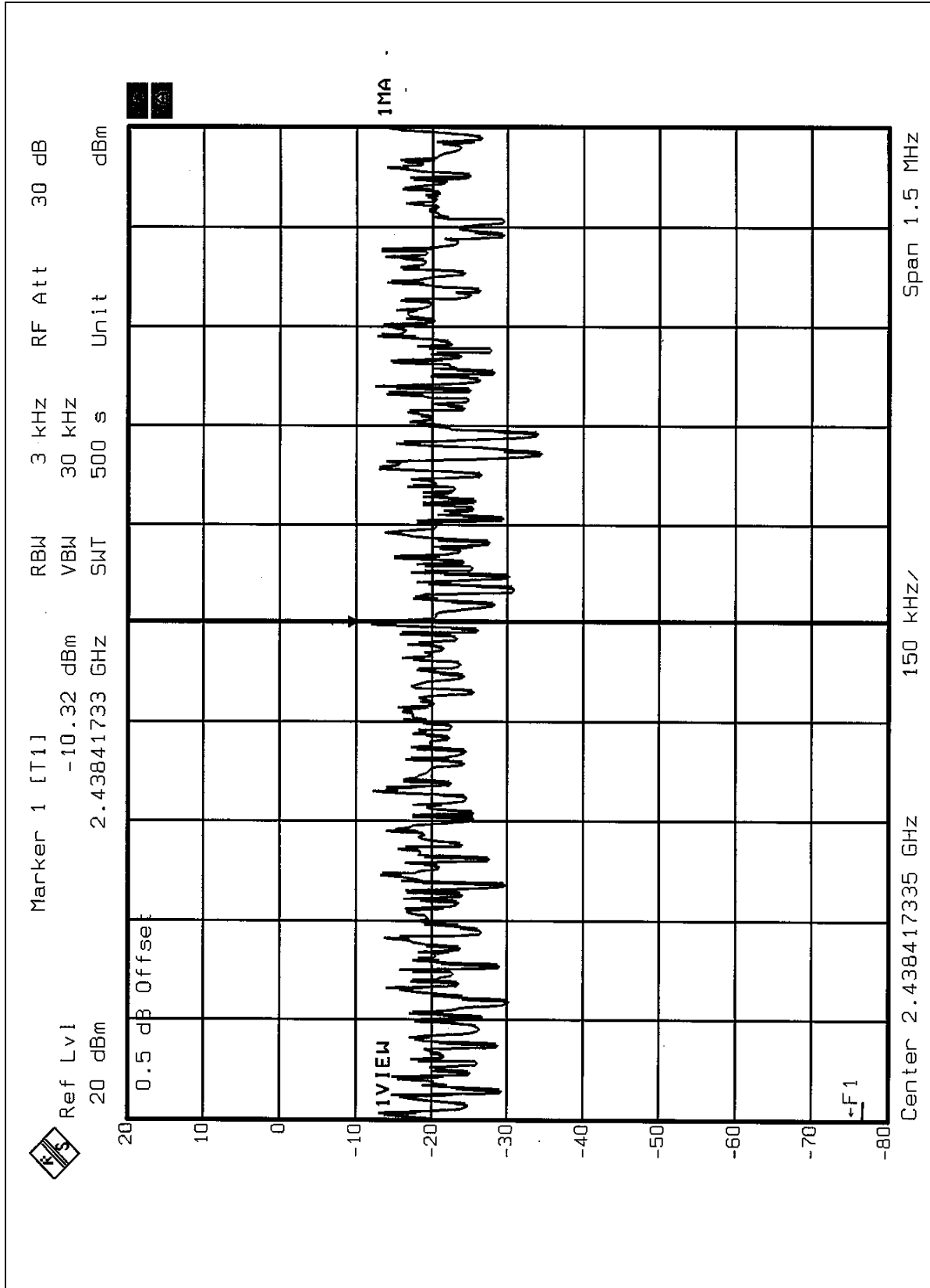


CH1



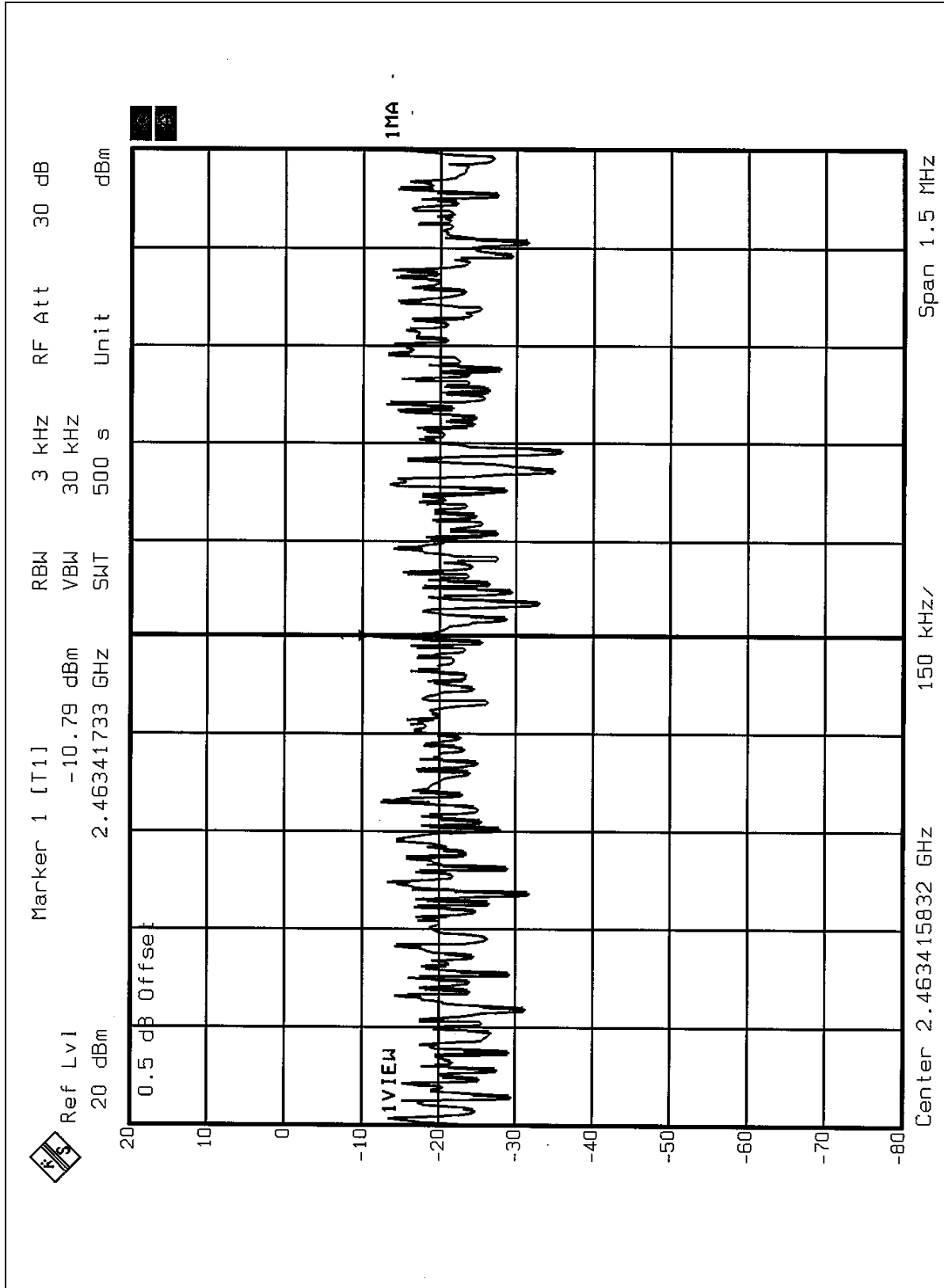


CH6





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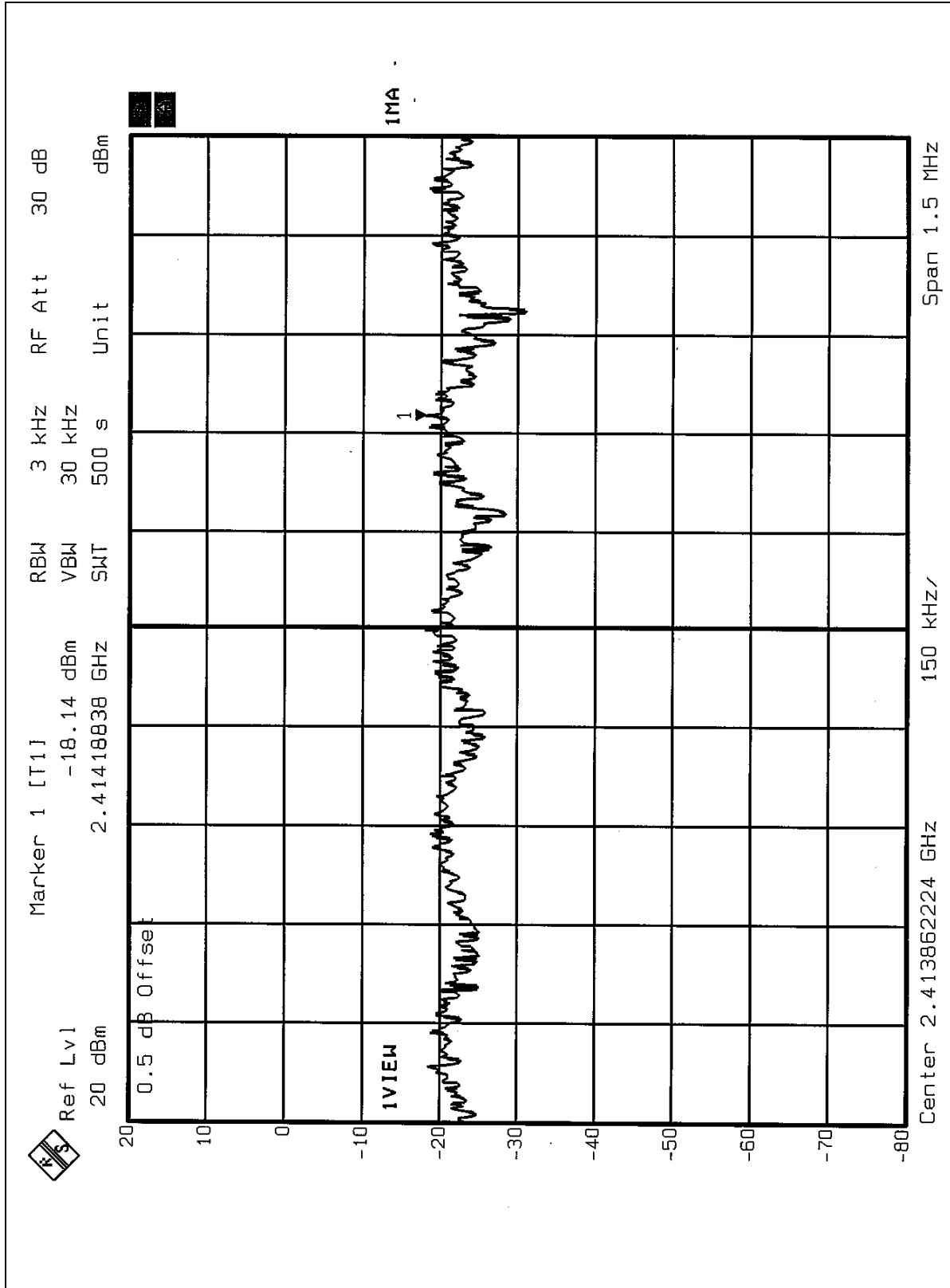
4.5.8 TEST RESULTS(FOR OFDM)

EUT	54Mbps/11Mbps Wireless Mini PCI	MODEL	WMIR-103G
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa
TESTED BY: Allen Chang			

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-18.14	8	PASS
6	2437	-17.78	8	PASS
11	2462	-18.35	8	PASS

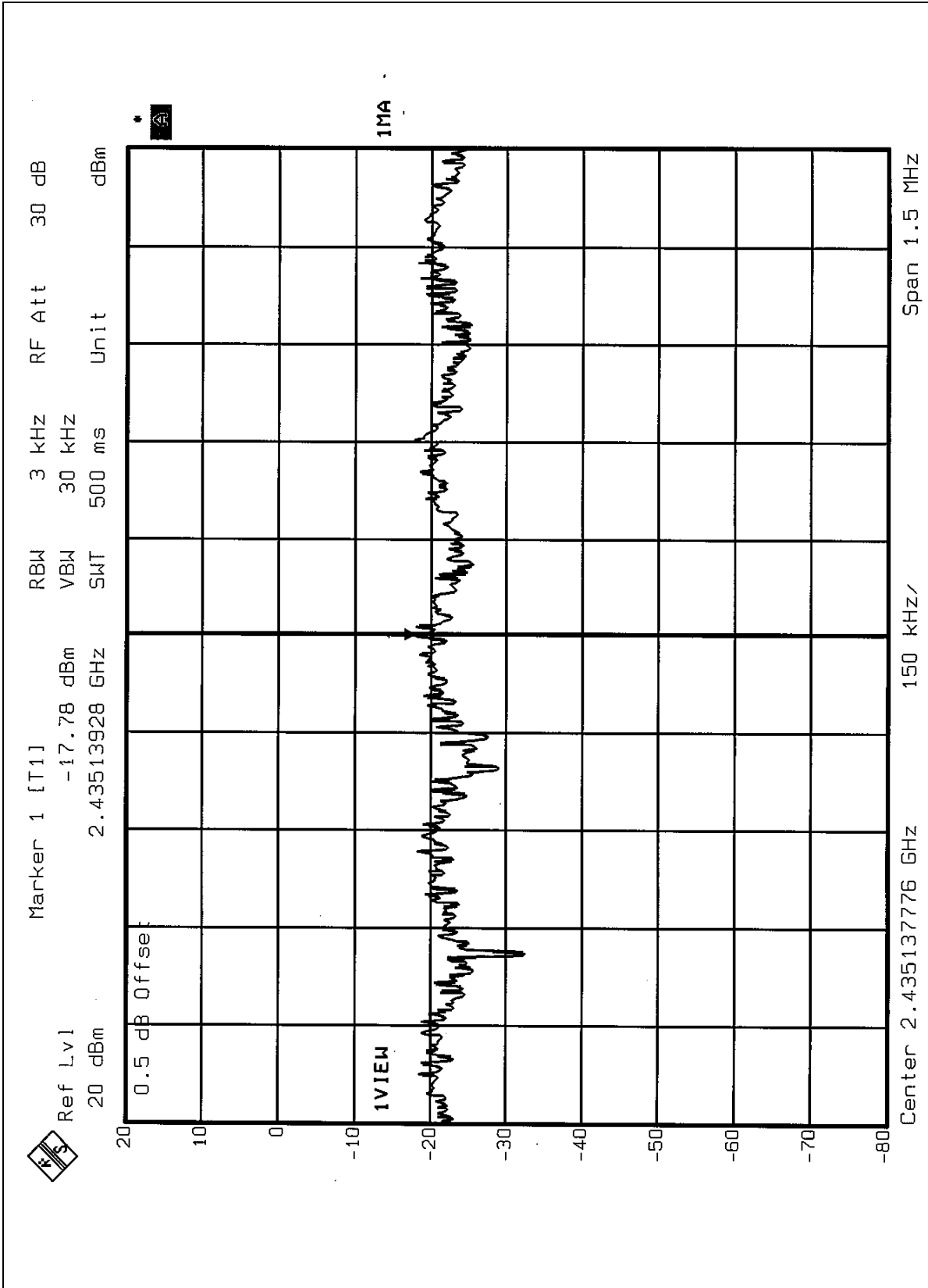


CH1



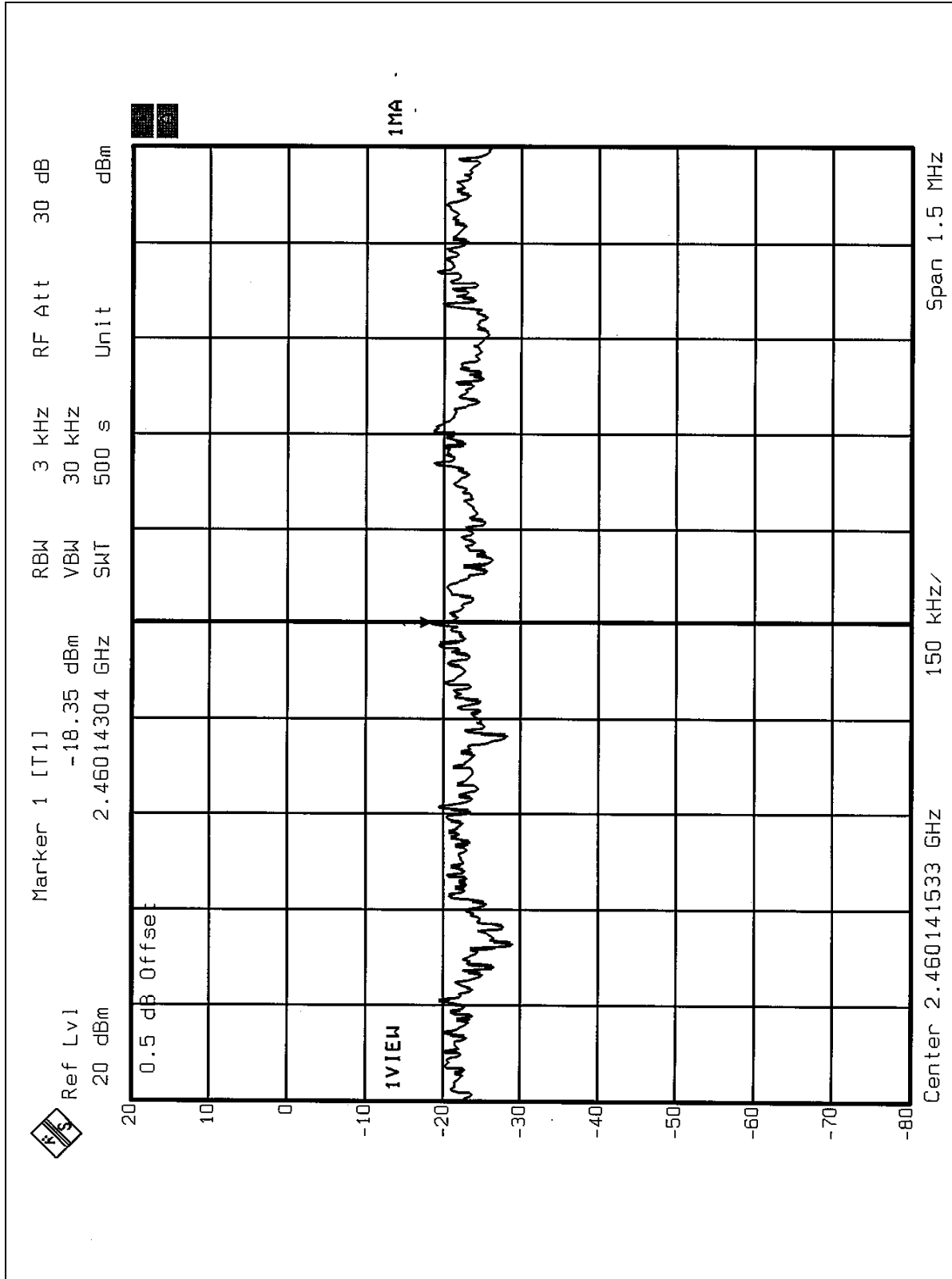


CH6





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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	Aug. 12, 2004

NOTE: 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 100kHz with suitable frequency span including 100MHz 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 (FOR CCK)

The spectrum plots are attached on the following 4 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).

Mode 1:

NOTE 1:

The band edge emission plot of CCK technique on the following 2 ~ 3 pages shows 54.49dB delta between carrier maximum power and local maximum emission in restrict band (2.3860GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.8 is 102.24dBuV/m, so the maximum field strength in restrict band is $102.24 - 54.49 = 47.75$ dBuV/m which is under 54dBuV/m limit.

NOTE 2:

The band edge emission plot of CCK technique on the following 4 ~ 5 pages shows 54.61dB delta between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.8 is 102.62dBuV/m, so the maximum field strength in restrict band is $102.62 - 54.61 = 48.01$ dBuV/m which is under 54dBuV/m limit.

Mode 2:

NOTE 1:

The band edge emission plot of CCK technique on the following 2 ~ 3 pages shows 54.49dB delta between carrier maximum power and local maximum emission in restrict band (2.3860GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.11 is 102.25dBuV/m, so the maximum field strength in restrict band is $102.25 - 54.49 = 47.76$ dBuV/m which is under 54dBuV/m limit.

NOTE 2:

The band edge emission plot of CCK technique on the following 4 ~ 5 pages shows 54.61dB delta between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.11 is 100.44dBuV/m, so the maximum field strength in restrict band is $100.44 - 54.61 = 45.83$ dBuV/m which is under 54dBuV/m limit.



Mode 3

NOTE 1:

The band edge emission plot of CCK technique on the following 1 ~ 2 pages shows 54.49dB delta between carrier maximum power and local maximum emission in restrict band (2.3860GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.14 is 100.49dBuV/m, so the maximum field strength in restrict band is $100.49-54.49=46.00$ dBuV/m which is under 54dBuV/m limit.

NOTE 2:

The band edge emission plot of CCK technique on the following 3 ~ 4 pages shows 54.61dB delta between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.14 is 101.96dBuV/m, so the maximum field strength in restrict band is $101.96-54.61=47.35$ dBuV/m which is under 54dBuV/m limit.

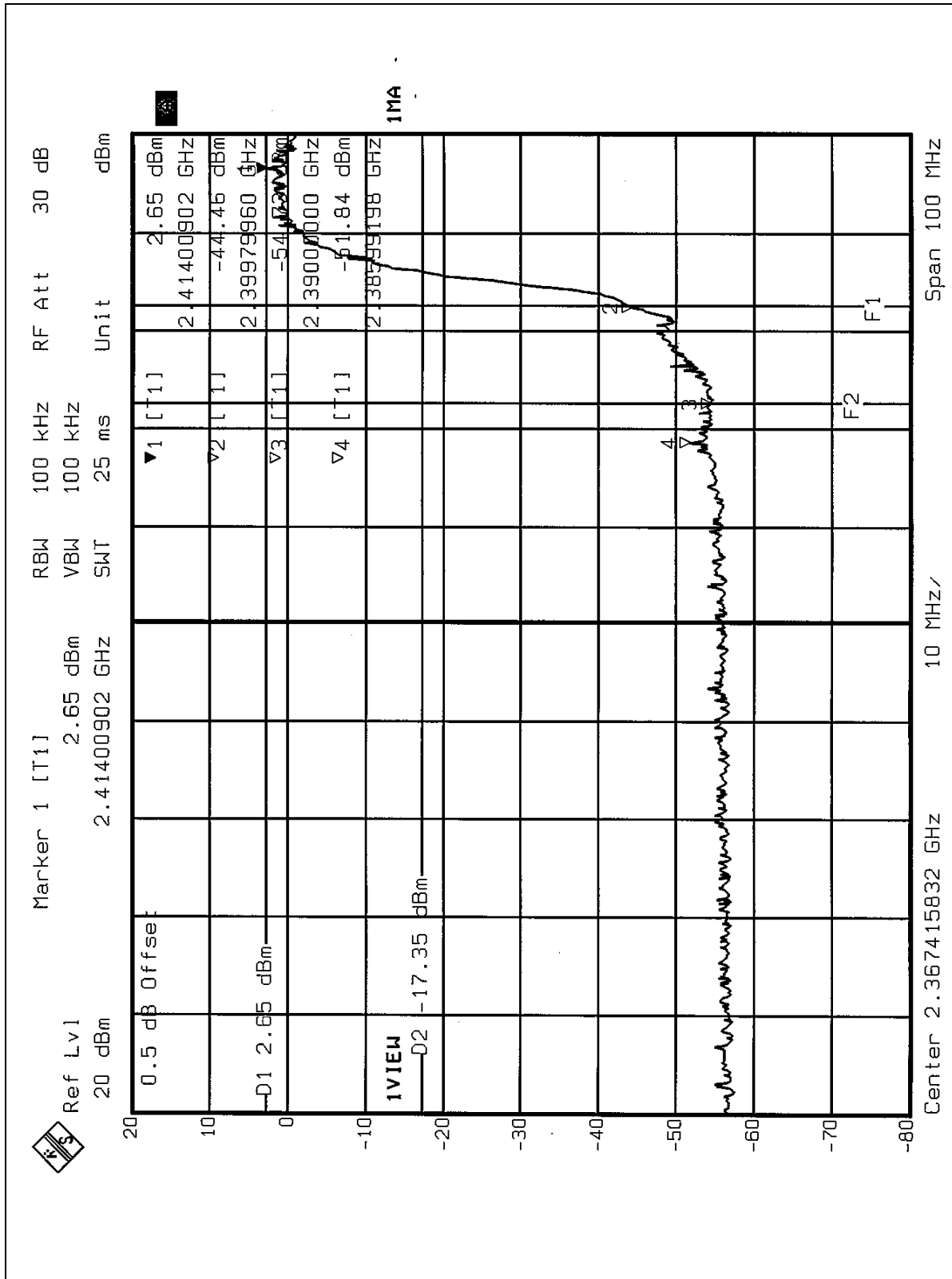
Mode 4:

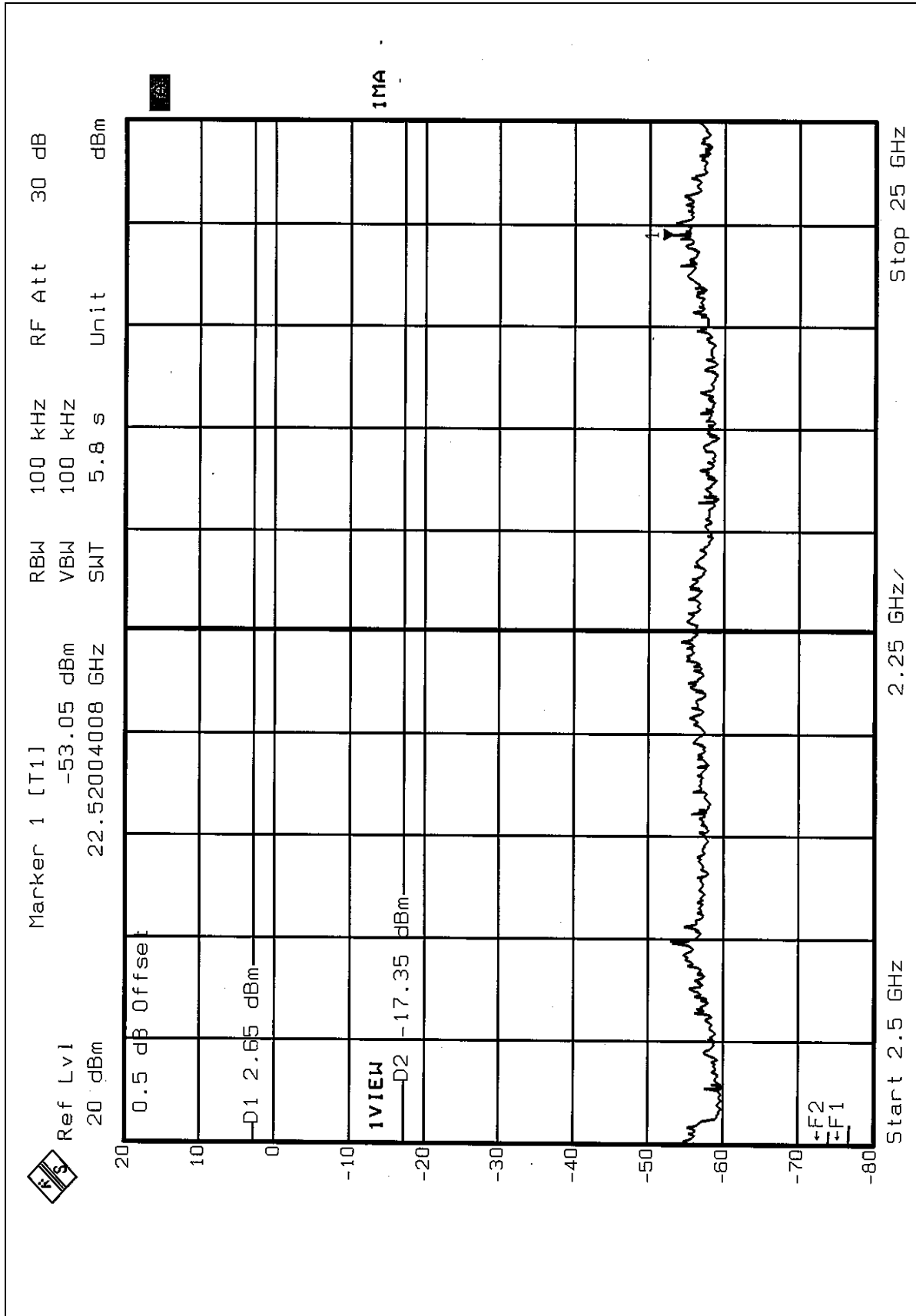
NOTE 1:

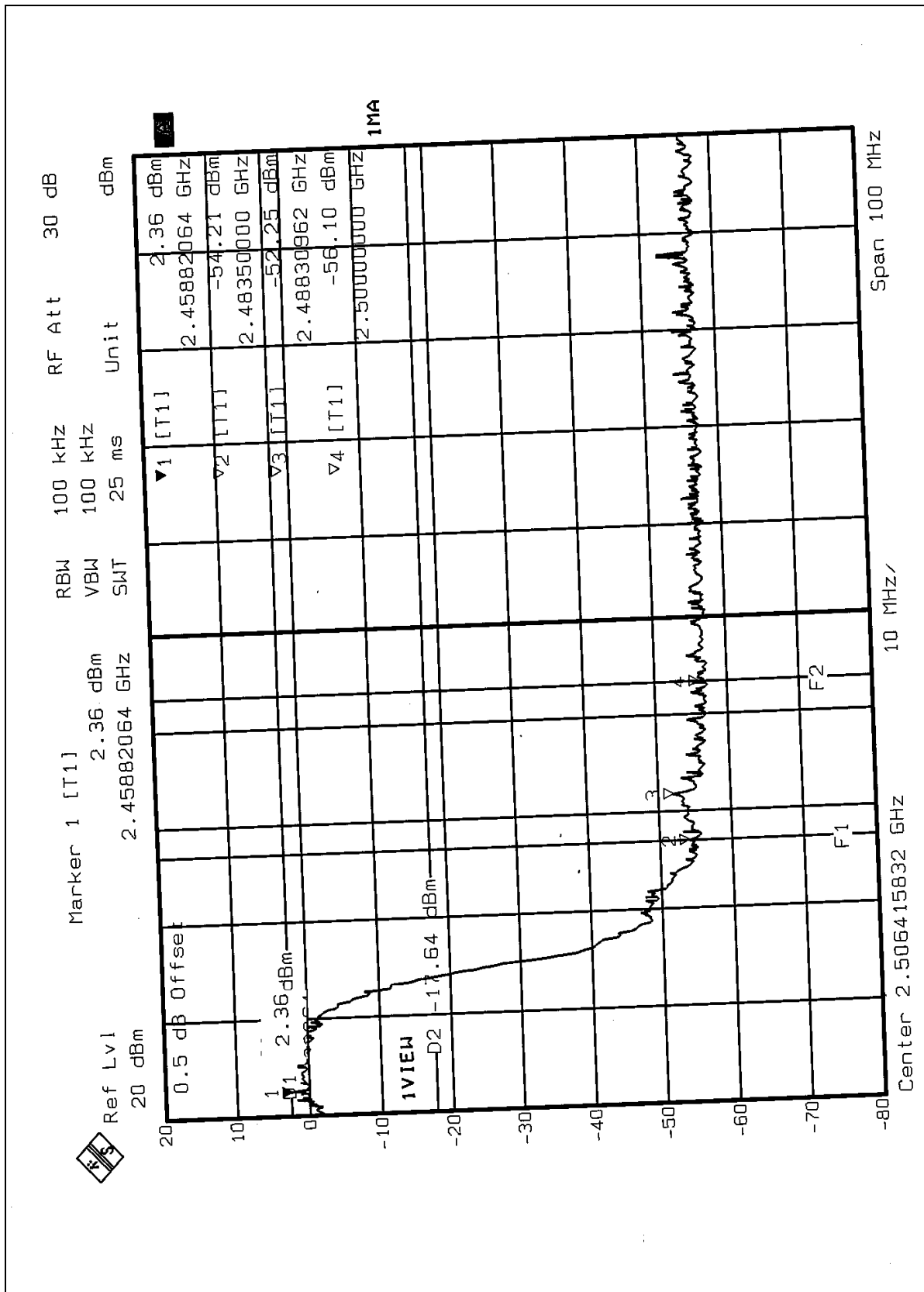
The band edge emission plot of CCK technique on the following 1 ~ 2 pages shows 54.49dB delta between carrier maximum power and local maximum emission in restrict band (2.3860GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.17 is 102.24dBuV/m, so the maximum field strength in restrict band is $102.24-54.49=47.75$ dBuV/m which is under 54dBuV/m limit.

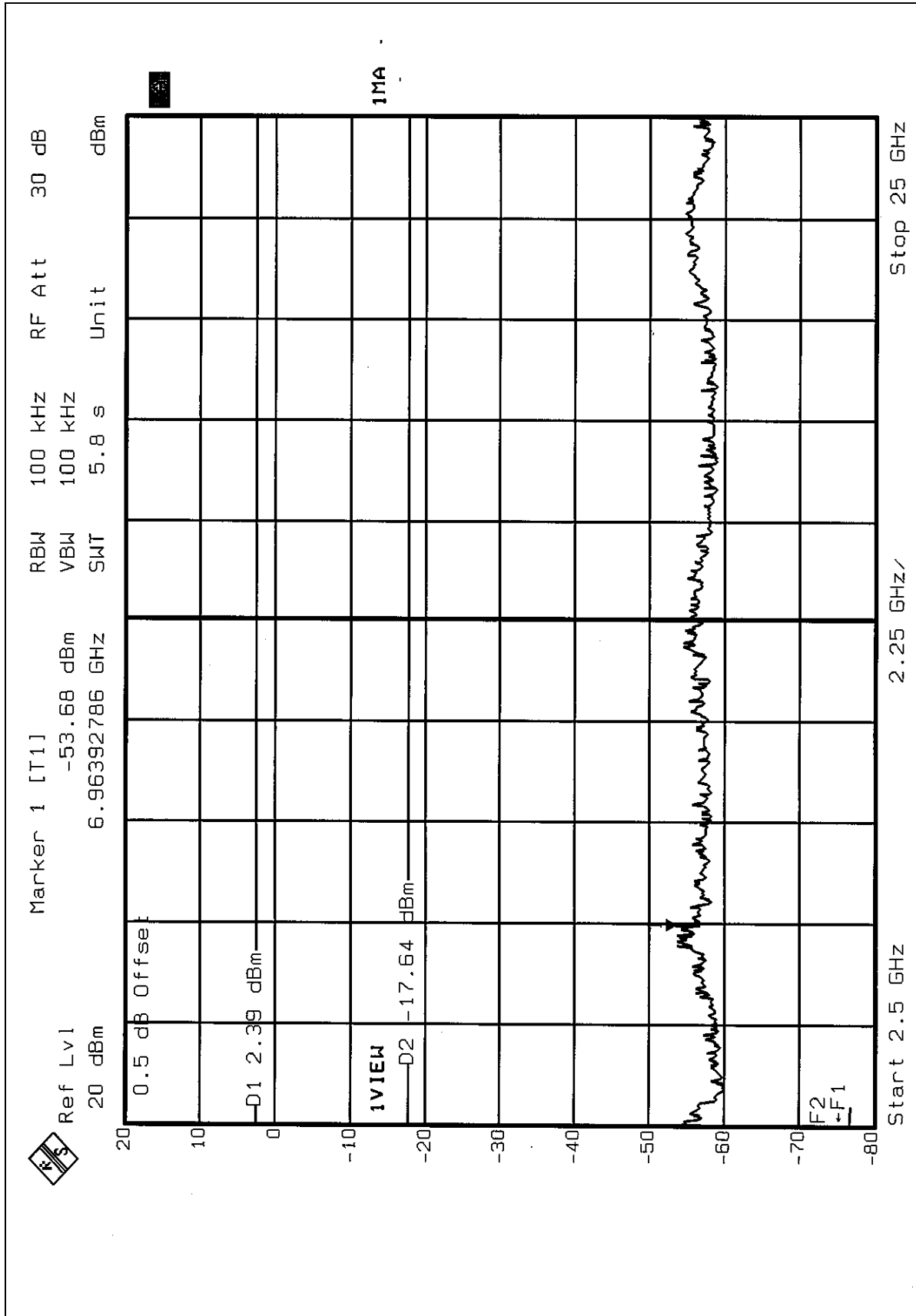
NOTE 2:

The band edge emission plot of CCK technique on the following 3 ~ 4 pages shows 54.61dB delta between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.17 is 102.62dBuV/m, so the maximum field strength in restrict band is $102.62-54.61=48.01$ dBuV/m which is under 54dBuV/m limit.









4.6.7 TEST RESULTS (FOR OFDM)

The spectrum plots are attached on the following 4 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).

Mode 1:

NOTE 1:

The band edge emission plot of OFDM technique on the following 2 ~ 3 pages shows 49.00dB delta between carrier maximum power and local maximum emission in restrict band (2.3892GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.9 is 93.64dBuV/m, so the maximum field strength in restrict band is $93.64 - 49.00 = 44.64$ dBuV/m which is under 54dBuV/m limit.

NOTE 2:

The band edge emission plot OFDM technique on the following 4 ~ 5 pages shows 48.43dB delta between carrier maximum power and local maximum emission in restrict band (2.4857GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.9 is 96.84dBuV/m, so the maximum field strength in restrict band is $96.84 - 48.43 = 48.41$ dBuV/m which is under 54dBuV/m limit.

Mode 2:

NOTE 1:

The band edge emission plot of OFDM technique on the following 2 ~ 3 pages shows 49.00dB delta between carrier maximum power and local maximum emission in restrict band (2.3892GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.12 is 94.39dBuV/m, so the maximum field strength in restrict band is $94.39 - 49.00 = 45.39$ dBuV/m which is under 54dBuV/m limit.

NOTE 2:

The band edge emission plot OFDM technique on the following 4 ~ 5 pages shows 48.43dB delta between carrier maximum power and local maximum emission in restrict band (2.4857GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.12 is 92.89dBuV/m, so the maximum field strength in restrict band is $92.89 - 48.43 = 44.46$ dBuV/m which is under 54dBuV/m limit.

**Mode 3:****NOTE 1:**

The band edge emission plot of OFDM technique on the following 1 ~ 2 pages shows 49.00dB delta between carrier maximum power and local maximum emission in restrict band (2.3892GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.15 is 95.28dBuV/m, so the maximum field strength in restrict band is $95.28 - 49.00 = 46.28$ dBuV/m which is under 54dBuV/m limit.

NOTE 2:

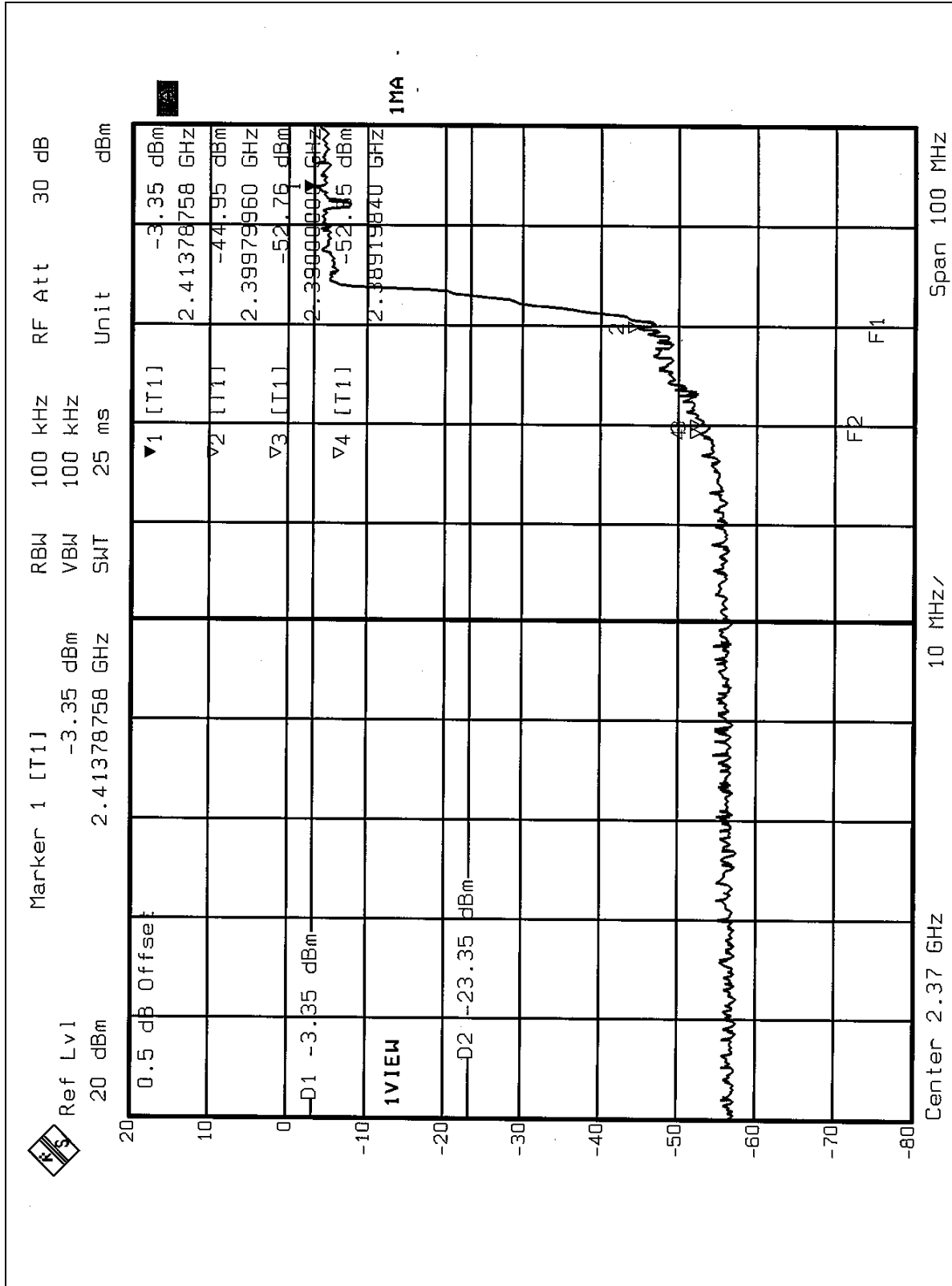
The band edge emission plot OFDM technique on the following 3 ~ 4 pages shows 48.43dB delta between carrier maximum power and local maximum emission in restrict band (2.4857GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.15 is 94.87dBuV/m, so the maximum field strength in restrict band is $94.87 - 48.43 = 46.46$ dBuV/m which is under 54dBuV/m limit.

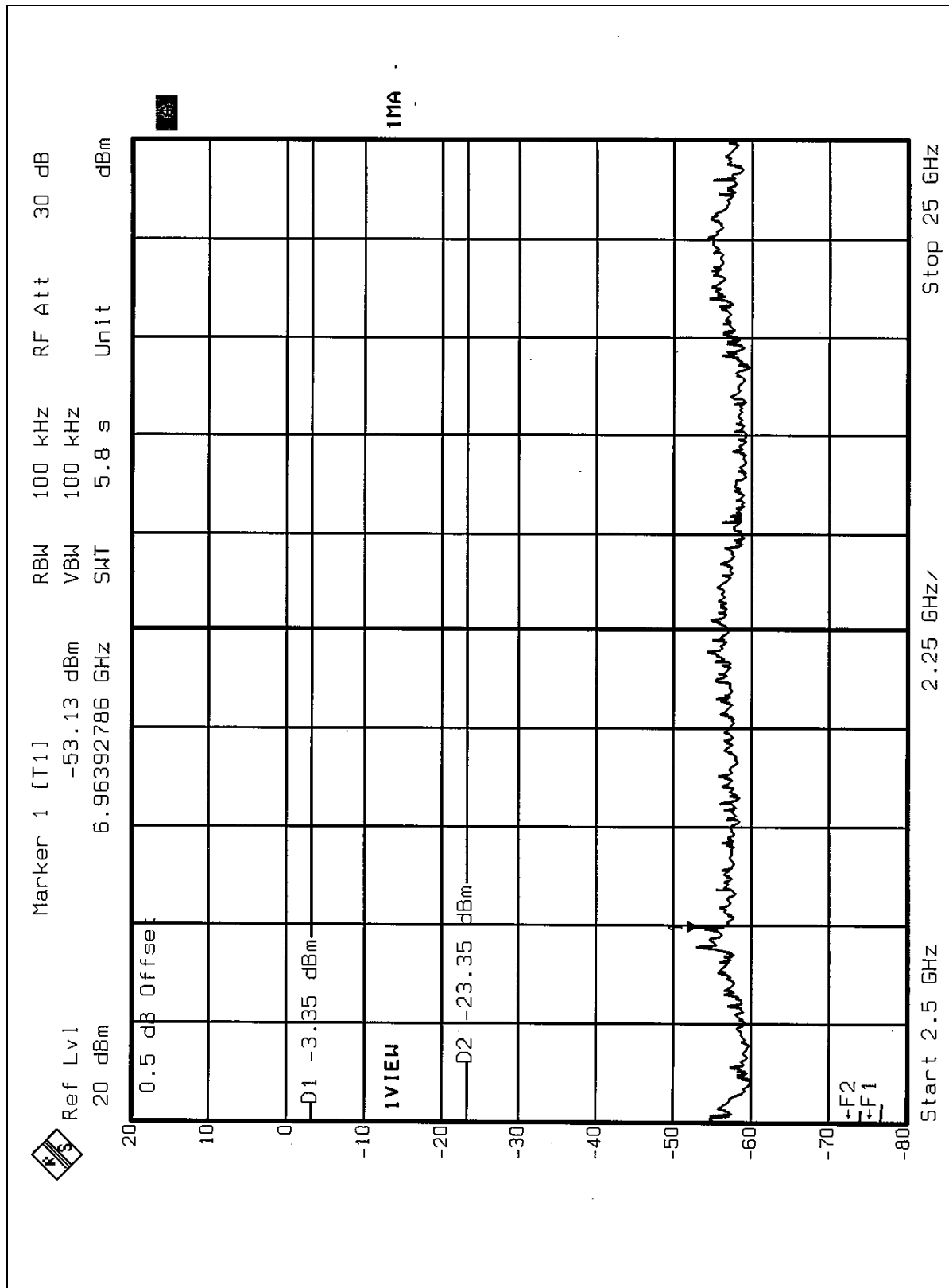
Mode 4:**NOTE 1:**

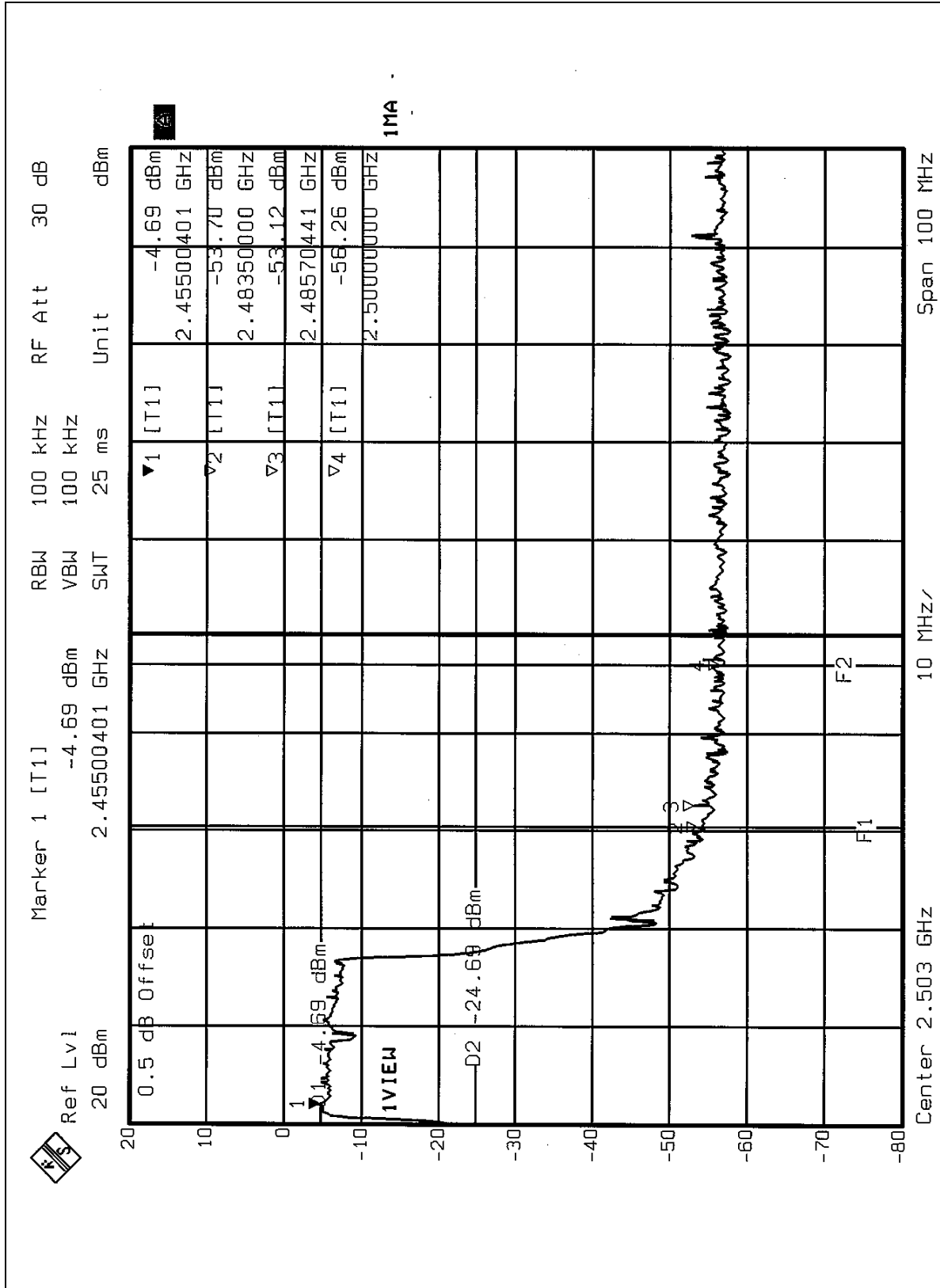
The band edge emission plot of OFDM technique on the following 1 ~ 2 pages shows 49.00dB delta between carrier maximum power and local maximum emission in restrict band (2.3892GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.18 is 98.48dBuV/m, so the maximum field strength in restrict band is $98.48 - 49.00 = 49.48$ dBuV/m which is under 54dBuV/m limit.

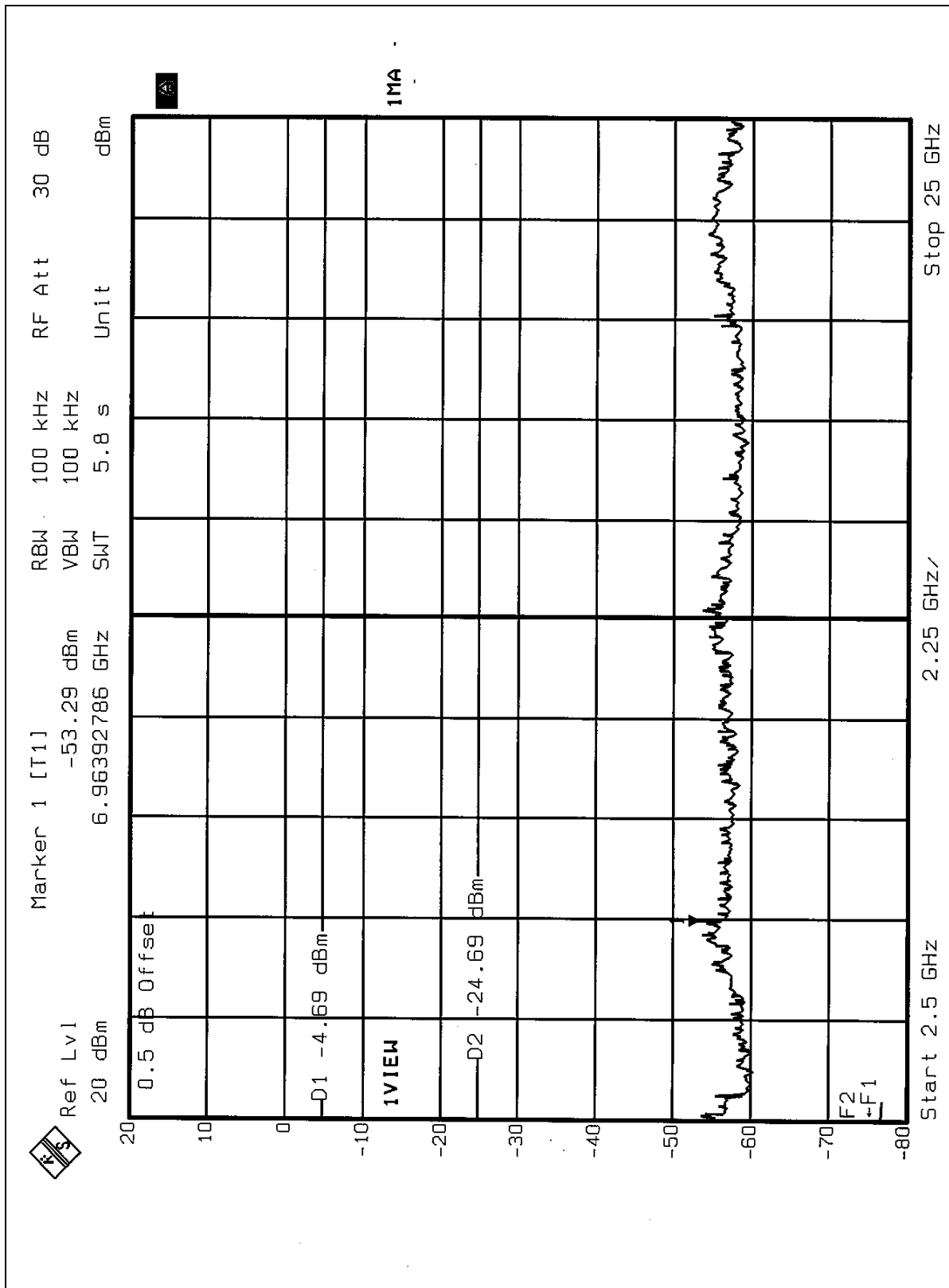
NOTE 2:

The band edge emission plot OFDM technique on the following 3 ~ 4 pages shows 48.43dB delta between carrier maximum power and local maximum emission in restrict band (2.4857GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.18 is 96.58dBuV/m, so the maximum field strength in restrict band is $96.58 - 48.43 = 48.15$ dBuV/m which is under 54dBuV/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.

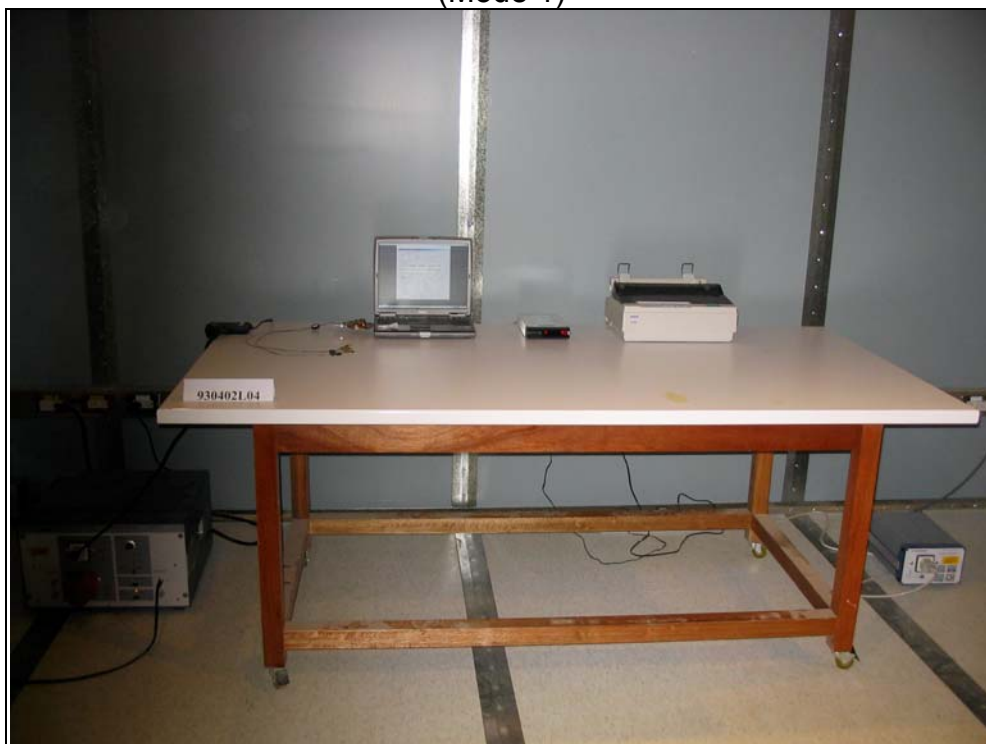
And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

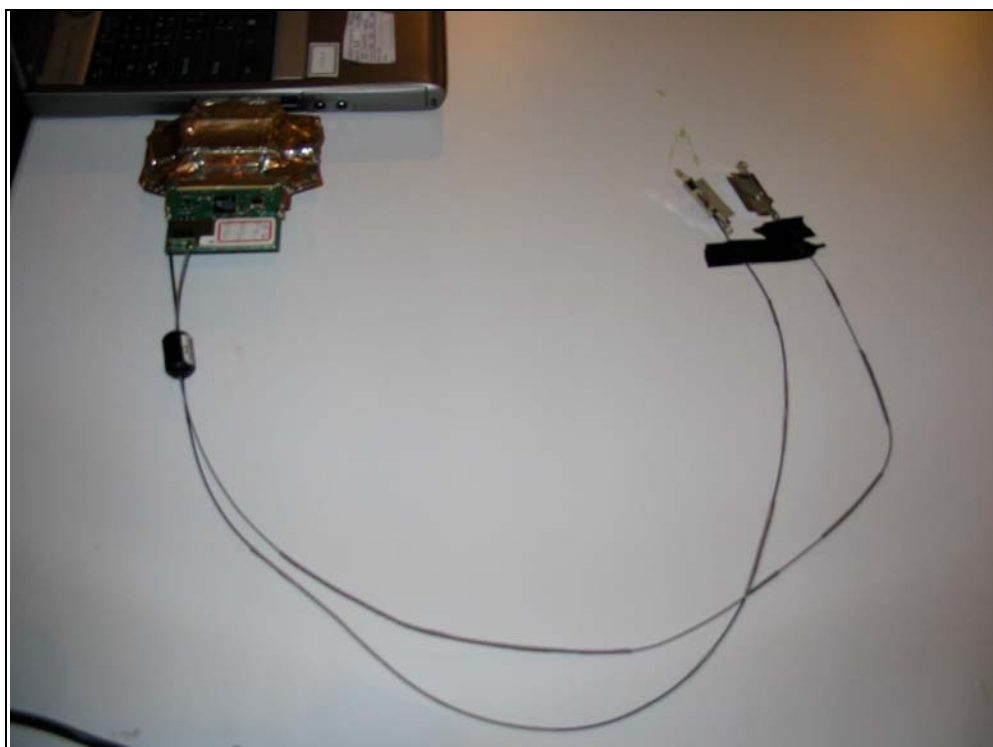
4.7.2 ANTENNA CONNECTED CONSTRUCTION

The antenna type used in this product are Inverted-F, Printed Dipole, and Printed Antenna with UFL antenna connector. The maximum Gain of this antenna is only 2.57dBi.

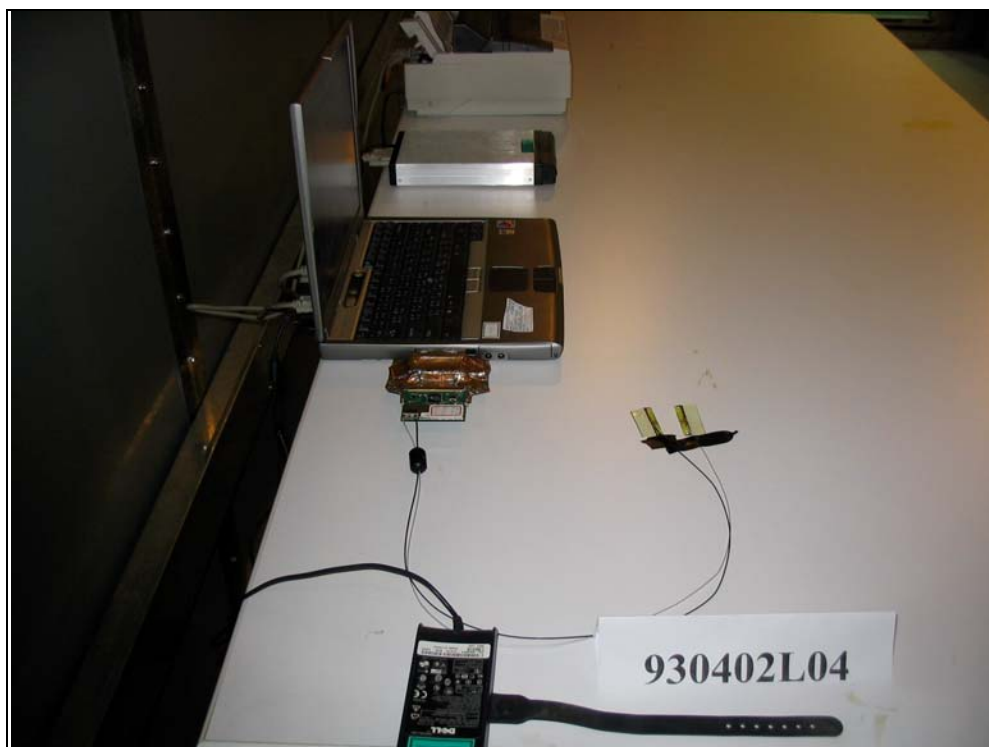
5 PHOTOGRAPHS OF THE TEST CONFIGURATION

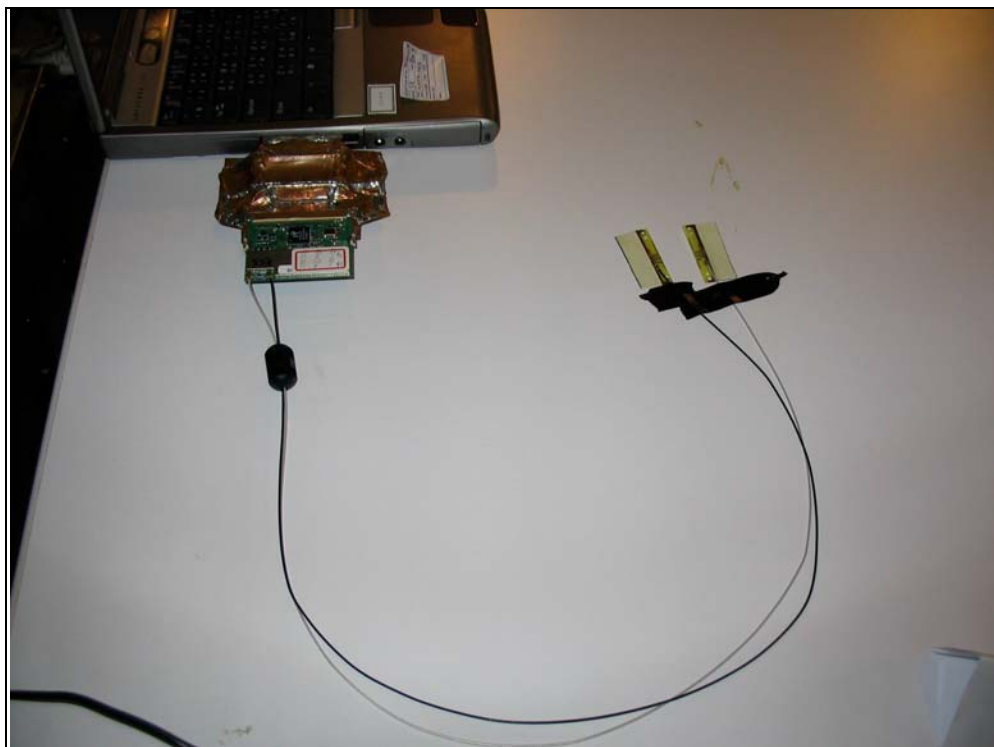
CONDUCTED EMISSION TEST (Mode 1)





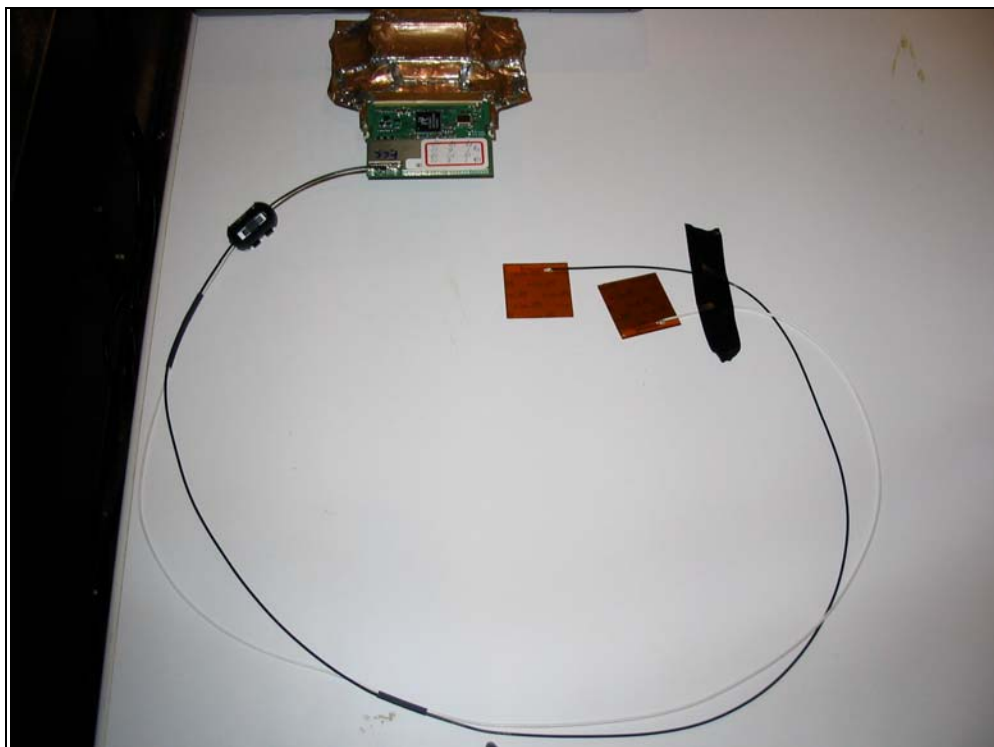
(Mode 2)





(Mode 3)



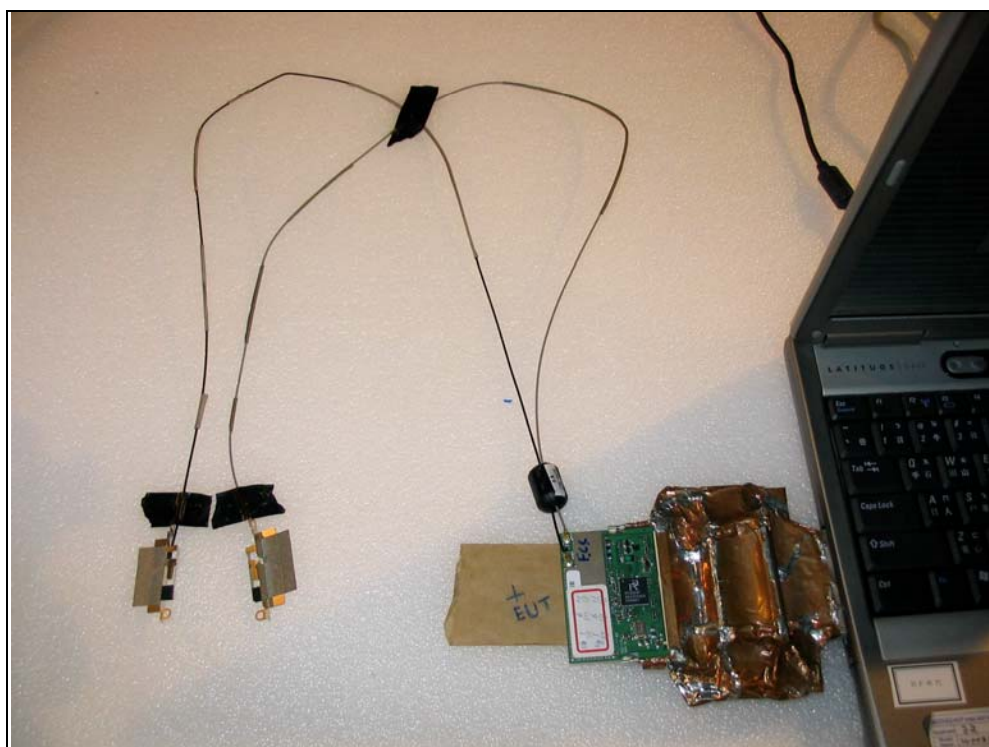


(Mode 4)



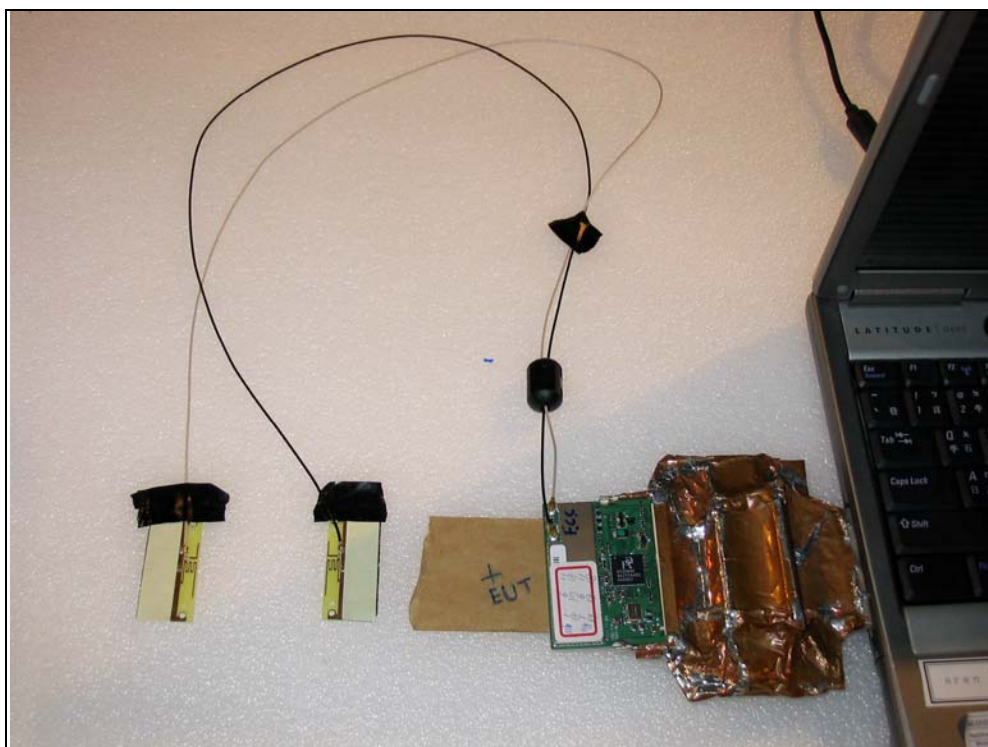


RADIATED EMISSION TEST (Mode 1)



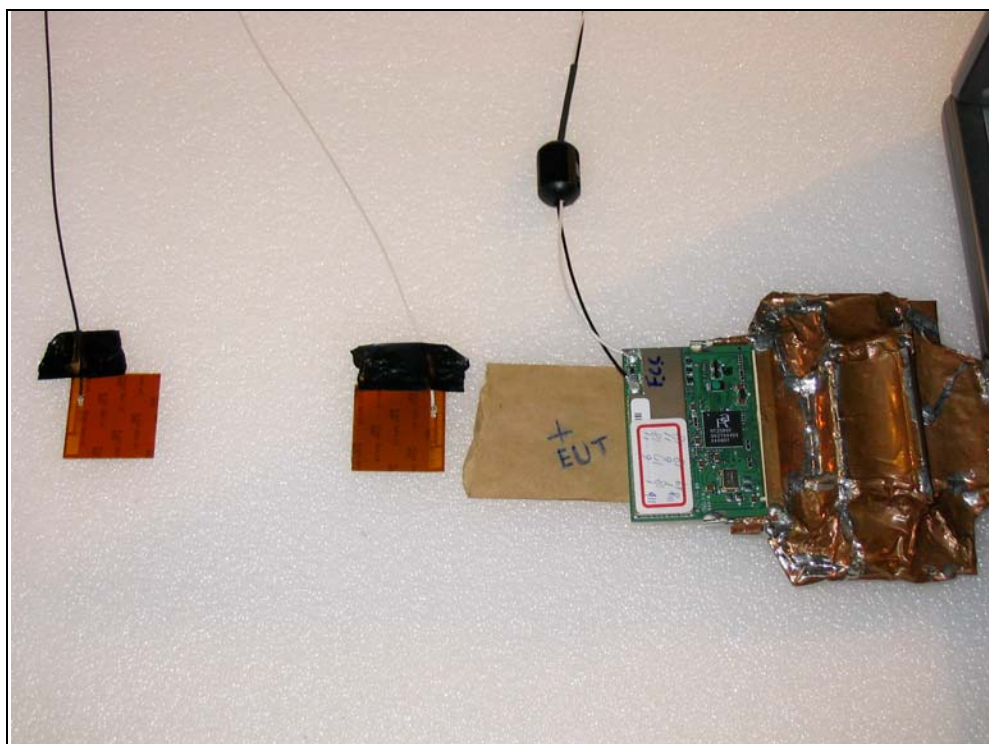


(Mode 2)



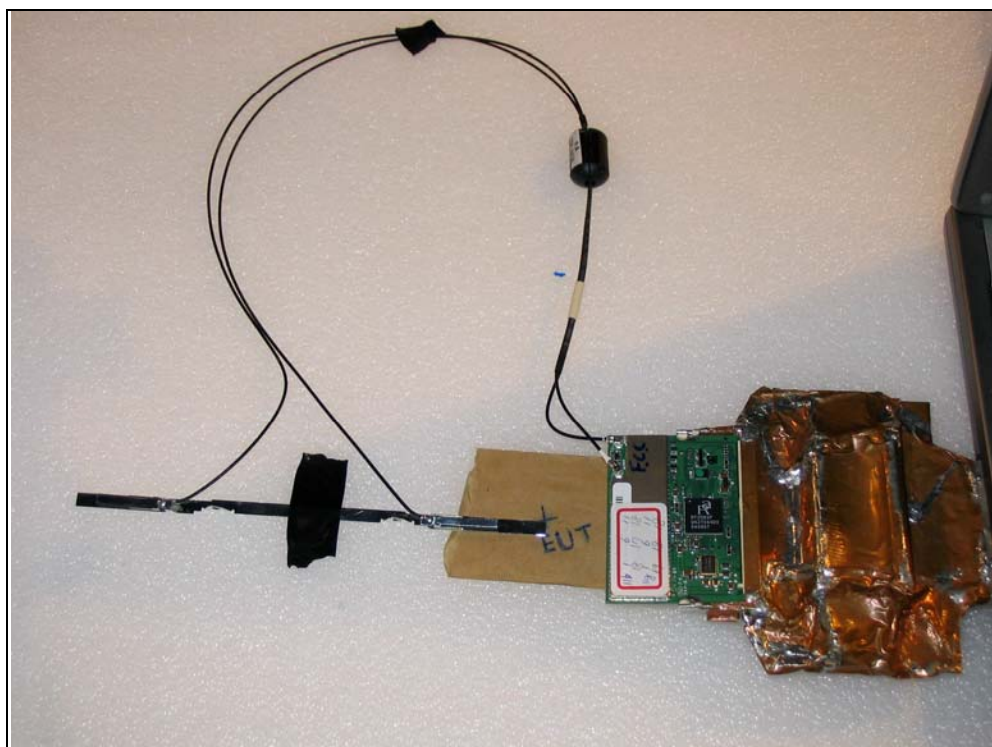


(Mode 3)





(Mode 4)







6 INFORMATION ON THE TESTING LABORATORIES

We, ADT Corp., were founded in 1988 to provide our best service in EMC, Radio, Telecom 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, UL
Germany	TUV Rheinland
Japan	VCCI
Norway	NEMKO
Canada	INDUSTRY CANADA , CSA
R.O.C.	CNLA, BSMI, DGT
Netherlands	Telefication
Singapore	PSB , GOST-ASIA(MOU)
Russia	CERTIS(MOU)

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:

Linko EMC/RF Lab:

Tel: 886-2-26052180

Fax: 886-2-26052943

Hsin Chu EMC/RF Lab:

Tel: 886-3-5935343

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Linko RF & Telecom Lab.

Tel: 886-3-3270910

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