FCC TEST REPORT

REPORT NO.: RF921111R06
MODEL NO.: WMIA-105AG
RECEIVED: October 20, 2003
TESTED: October 20 ~ December 20, 2003

APPLICANT: GEMTEK TECHNOLOGY CO., LTD.

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

ISSUED BY: Advance Data Technology Corporation

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

0528
ILAC MRA

Lab Code: 200102-0

Table of Contents

1 CERTIFICATION

PRODUCT :	Wireless 11a+g mini-PCI
BRAND NAME :	Gemtek
MODEL NO. :	WMIA-105AG
TEST ITEM:	ENGINEERING SAMPLE
APPLICANT :	GEMTEK TECHNOLOGY CO., LTD.
STANDARDS :	FCC Part 15, Subpart C (Section 15.247), Subpart E (Section 15.247), ANSI C63.4-1992

We, **Advance Data Technology Corporation**, hereby certify that one sample of the designation has been tested in our facility from October 20, 2003 to December 20, 2003. 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:** December 16, 2003
Stacy Hsueh

APPROVED BY: , **DATE:** December 16, 2003
Ellis Wu / Manager

2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: 47 CFR Part 15, Subpart C			
Standard Section	**Test Type and Limit**	**Result**	**REMARK**
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit Minimum passing margin is –11.77dB at 0.170MHz
15.247(a)(2)	Spectrum Bandwidth of a Direct Sequence Spread Spectrum System Limit: min. 500kHz	PASS	Meet the requirement of limit
15.247(b)	Maximum Peak Output Power Limit: max. 30dBm	PASS	Meet the requirement of limit
15.247(c)	Radiated Emissions Limit: Table 15.209	PASS	Meet the requirement of limit Minimum passing margin is –1.76dB at 133.03MHz
15.247(d)	Power Spectral Density Limit: max. 8dBm	PASS	Meet the requirement of limit
15.247(c)	Band Edge Measurement Limit: 20dB less than the peak value of fundamental frequency	PASS	Meet the requirement of limit

APPLIED STANDARD: 47 CFR Part 15, Subpart E			
Standard Section	**Test Type**	**Result**	**REMARK**
15.407(b)(5)	AC Power Conducted Emission	PASS	Meet the requirement of limit Minimum passing margin is –13.66dB at 0.170MHz
15.407(b/1/2/3)(b)(5)	Electric Field Strength Spurious Emissions, 30MHz ~ 40000MHz	PASS	Meet the requirement of limit Minimum passing margin is –0.67dB at 5825.00MHz
15.407(a/1/2/3)	Peak Transmit Power	PASS	Meet the requirement of limit
15.407(a)(6)	Peak Power Excursion	PASS	Meet the requirement of limit
15.407(a/1/2/3)	Peak Power Spectral Density	PASS	Meet the requirement of limit
15.407(g)	Frequency Stability	PASS	Meet the requirement of limit

3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

EUT	Wireless 11a+g mini-PCI
MODEL NO.	WMIA-105AG
POWER SUPPLY	3Vdc from host equipment
MODULATION TYPE	BPSK, QPSK, CCK, 16QAM, 64QAM
MODULATION TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	802.11b:11/5.5/2/1Mbps 802.11g: 54/48/36/24/18/12/9/6Mbps 802.11a: 54/48/36/24/18/12/9/6Mbps (Turbo mode: up to 108Mbps *see note 1)
FREQUENCY RANGE	802.11b and 802.11g: 2412~2462MHz 802.11a: 5.15~5.35GHz and 5.725~5.825GHz
NUMBER OF CHANNEL	802.11b , 802.11g: 11 for Normal mode / 1 for Turbo mode 802.11a: 13 for Normal mode / 5 for Turbo mode
CHANNEL SPACING	802.11b and 802.11g: 5MHz 802.11a: 20MHz for Normal mode / 40MHz for Turbo mode
OUTPUT POWER	802.11b and 802.11g: 15.50dBm 802.11a: 17.61dBm
DATA CABLE	NA
ANTENNA TYPE	*refer to note3
I/O PORTS	NA
ASSOCIATED DEVICES	NA

NOTE:

1. The EUT operates in both the 5GHz and 2.4GHz Bands and compatibility with 802.11a and 802.11b, 802.11g technology.
2. This EUT is capable of providing data rates of up to 108Mbps in Turbo Mode depending upon reception quality.
3. There are eight types of antennas provided to this EUT:

Antenna	Antenna Type	Antenna Gain (dBi)	
		2.4GHz	5GHz
1	Inverted-F	0.15 dBi	1.47 dBi
2	PCB	0.87 dBi	1.32 dBi
3	Inverted-F	0.73 dBi	2.75 dBi

Test Mode	Antenna Type	Antenna Gain (dBi)	
		2.4GHz	5GHz
4	Inverted-F	1.39 dBi	1.14 dBi
5	Dipole	1 dBi	3 dBi
6	Inverted-F	1.63 dBi	2.12 dBi
7	Inverted-F	1.50 dBi	0 dBi
8	Inverted-F	0.87 dBi	2.37 dBi

3.For more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 DESCRIPTION OF TEST MODES

802.11b and 802.11g: 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 of 11Mbps with CCK technique and 6Mbps with OFDM technique, the worst case, was chosen for final test.

One channel is provided to this EUT for Turbo Mode.

Channel	Frequency
6	2437 MHz

NOTE: One turbo mode at frequency 2437MHz.

For 802.11a: Thirteen channels are provided to this EUT for Normal mode.

Channel	Frequency	Channel	Frequency
1	5180 MHz	7	5300 MHz
2	5200 MHz	8	5320 MHz
3	5220 MHz	9	5745 MHz
4	5240 MHz	10	5765 MHz
5	5260 MHz	11	5785 MHz
6	5280 MHz	12	5805 MHz

Five channels are provided to this EUT for Turbo Mode.

Channel	Frequency	Channel	Frequency
1	5210 MHz	4	5760 MHz
2	5250 MHz	5	5800 MHz
3	5290 MHz		

NOTE:

1. The EUT was tested in both normal mode (channel bandwidth of approximately 30MHz) and turbo mode (channel bandwidth of approximately 60MHz).
2. “Normal Mode” allows data rates of up to 54Mbps. The device was, therefore, tested in Normal mode at the data rate that produced the highest output power for normal mode (6Mbps).
3. “Turbo Mode” allows data rates of up to 108Mbps. At data rates higher than 12Mbps the PA gain is reduced to improve signal fidelity. The device was, therefore, tested in turbo mode at the data rate that produced the highest output power for turbo mode (12Mbps).
4. Channel 1, 4, 5, 8, 9 and 12 are the closest frequencies to the band edge, were chosen for

final test of Normal Mode.

5. Channel 1 ~ 5 were chosen for final test of turbo mode.

There are six modes in the report.

Test mode	Antenna Type	Model	Antenna Gain (dBi)		Remark
			2.4GHz	5GHz	
1	Inverted-F	258SA0	0.15 dBi	1.47 dBi	Test for 2.4GHz/5GHz
2	PCB	N766	0.87 dBi	1.32 dBi	Test for 2.4GHz/5GHz
3	Inverted-F	XC00	0.73 dBi	2.75 dBi	Test for 5GHz
4	Dipole	Dipole	1 dBi	3 dBi	Test for 2.4GHz/5GHz
5	Inverted-F	HR60	1.63 dBi	2.12 dBi	Test for 2.4GHz
6	Inverted-F	Skycross	1.50 dBi	0 dBi	Test for 2.4GHz/5GHz

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a Wireless 11a+g 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),
Subpart E (15.247). ANSI C63.4 : 1992

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

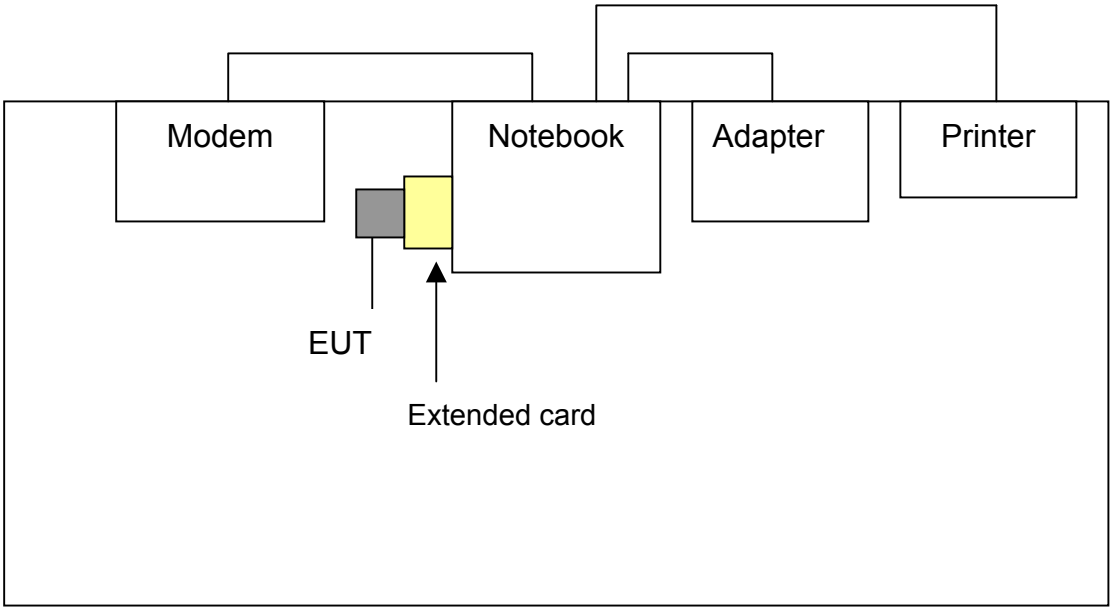
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK	DELL	PP01L	TW-09C748-12800-193-C800	FCC DoC Approved
2	PRINTER	EPSON	LQ-300+	DCGY017096	FCC DoC Approved
3	MODEM	ACEEX	1414	980020503	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 (FOR PART 802.11b & 802.11g)

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

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

NOTE:
1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 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
ROHDE & SCHWARZ Test Receiver	ESCS 30	838251/021	Jan. 20, 2004
ROHDE & SCHWARZ Artificial Mains Network (for EUT)	ESH3-Z5	100218	Dec. 09, 2004
ROHDE & SCHWARZ Artificial Mains Network (for peripherals)	ESH3-Z5	100219	Dec. 09, 2004
ROHDE & SCHWARZ Artificial Mains Network (for peripherals)	ESH3-Z5	100220	Dec. 09, 2004
*ROHDE & SCHWARZ 4-wire ISN	ENY41	837032/016	Nov. 19 2004
*ROHDE & SCHWARZ 2-wire ISN	ENY22	837497/016	Nov. 19 2004
Software	Cond-V2M3	NA	NA
RF cable (JYEBAO)	5D-FB	Cable-C10.01	May 01, 2004
SUHNER Terminator (For ROHDE & SCHWARZ LISN)	65BNC-5001	E1-010770	Mar. 24, 2004
SUHNER Terminator (For ROHDE & SCHWARZ LISN)	65BNC-5001	E1-010773	Apr. 06, 2004

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. "*": These equipment are used for conducted telecom port test only (if tested).

3. The test was performed in ADT Shielded Room No. 10.

4. The VCCI Site Registration No. is C-1312.

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.

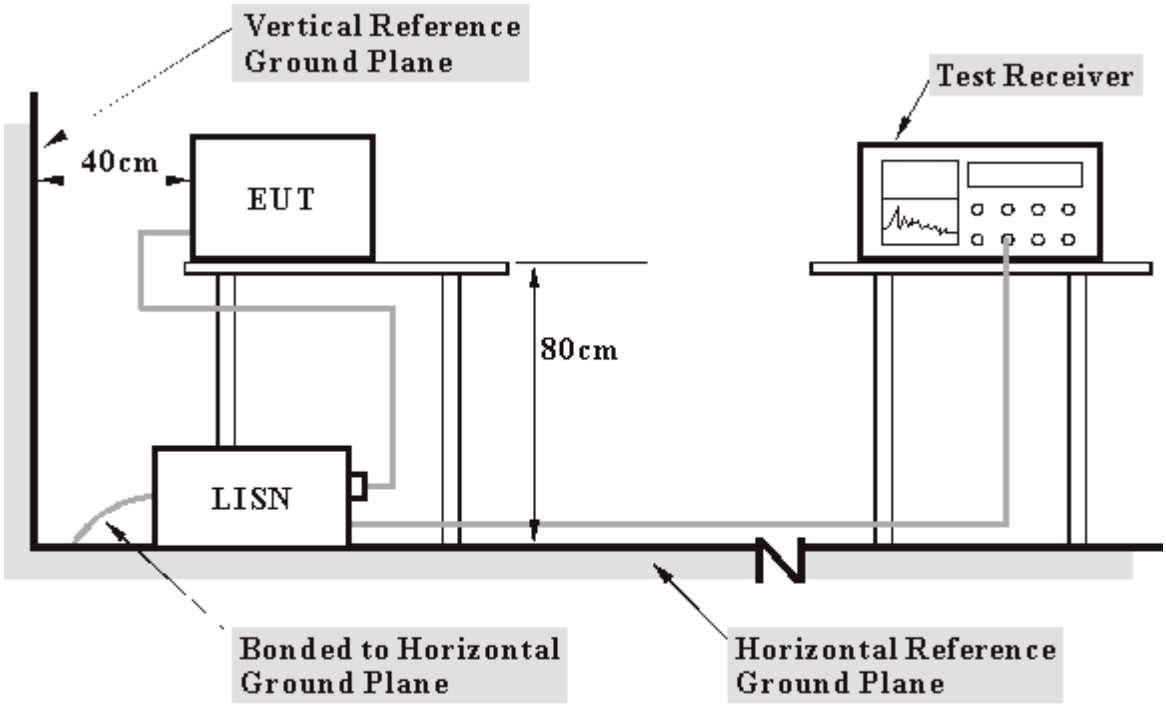
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

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

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 TEST SETUP



Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

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

4.1.6 EUT OPERATING CONDITIONS

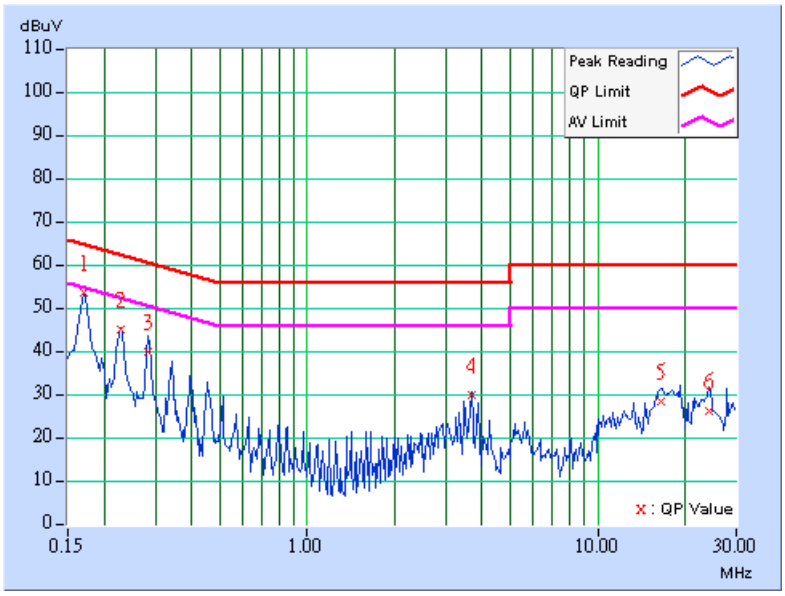
a. Plug the EUT into the notebook system placed on a testing table.
b. The notebook system ran a test program to enable EUT under transmission/receiving condition continuously at specific channel frequency.
c. The computer system sent "H" messages to its screen.
d. The computer system sent “H” messages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

4.1.7 TEST RESULTS

EUT	Wireless 11a+g mini-PCI	MODEL	WMIA-105AG
MODE	Channel 1	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 991hPa	TESTED BY: Steven Lu	

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.170	0.06	52.90	-	52.96	-	64.98	54.98	-12.03	-
2	0.228	0.06	44.44	-	44.50	-	80.52	52.52	-18.02	-
3	0.283	0.06	39.32	-	39.38	-	60.73	50.73	-21.35	-
4	3.695	0.21	29.18	-	29.39	-	56.00	46.00	-26.61	-
5	16.418	0.58	27.59	-	28.17	-	60.00	50.00	-31.83	-
6	24.188	0.85	25.48	-	26.33	-	60.00	50.00	-33.67	-

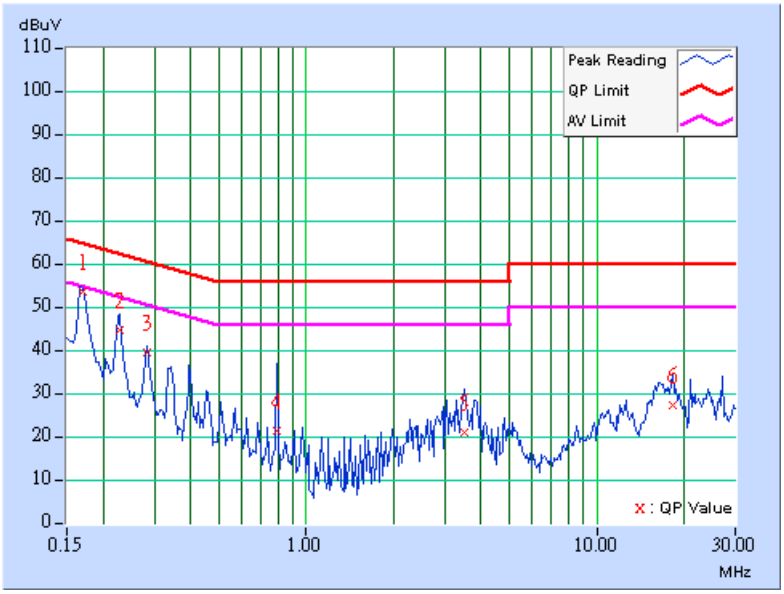
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
MODE	Channel 1	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 991hPa	**TESTED BY**: Steven Lu	

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	**0.170**	**0.05**	**53.16**	**-**	**53.21**	**-**	**64.98**	**54.98**	**-11.77**	**-**
2	0.228	0.05	44.36	-	44.41	-	80.52	52.52	-18.11	-
3	0.283	0.05	39.06	-	39.11	-	60.73	50.73	-21.80	-
4	0.795	0.12	21.16	-	21.28	-	56.00	46.00	-34.72	-
5	3.516	0.20	20.74	-	20.94	-	56.00	46.00	-35.06	-
6	18.203	0.50	26.93	-	27.43	-	60.00	50.00	-32.57	-

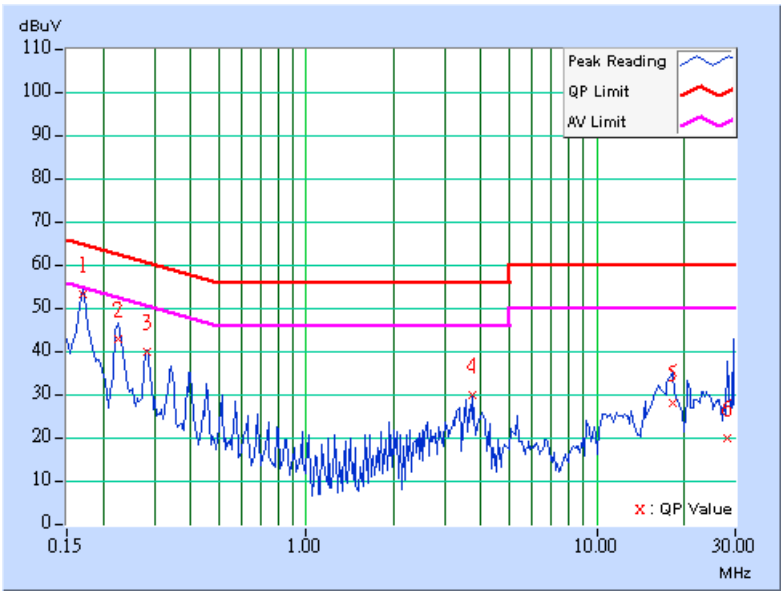
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
MODE	Channel 6	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 991hPa	**TESTED BY**: Steven Lu	

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.170	0.06	52.49	-	52.55	-	64.98	54.98	-12.44	-
2	0.224	0.06	42.13	-	42.19	-	80.66	52.66	-20.47	-
3	0.283	0.06	38.99	-	39.05	-	60.73	50.73	-21.68	-
4	3.754	0.22	29.09	-	29.31	-	56.00	46.00	-26.69	-
5	18.180	0.61	27.08	-	27.69	-	60.00	50.00	-32.31	-
6	28.258	0.89	19.20	-	20.09	-	60.00	50.00	-39.91	-

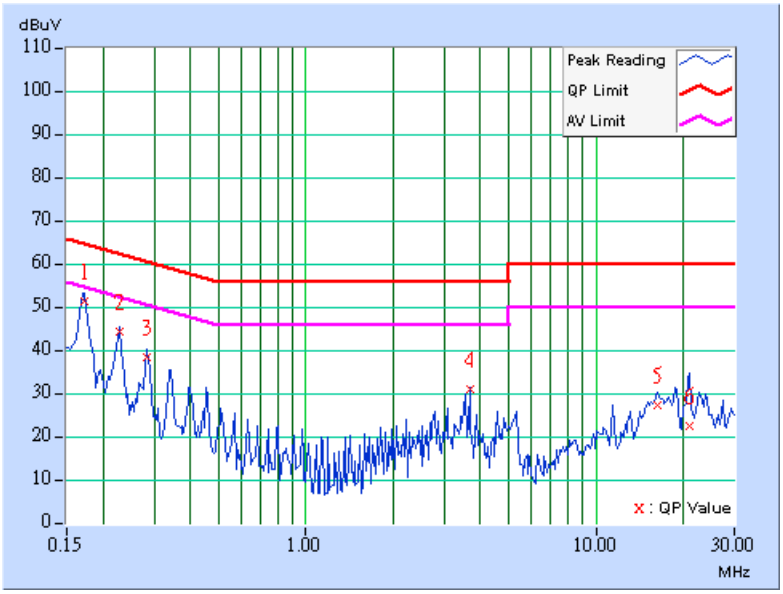
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
MODE	Channel 6	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 991hPa	**TESTED BY**: Steven Lu	

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.173	0.05	50.95	-	51.00	-	64.79	54.79	-13.79	-
2	0.228	0.05	43.79	-	43.84	-	80.52	52.52	-18.68	-
3	0.283	0.05	37.98	-	38.03	-	60.73	50.73	-22.70	-
4	3.699	0.20	30.65	-	30.85	-	56.00	46.00	-25.15	-
5	16.332	0.50	27.00	-	27.50	-	60.00	50.00	-32.50	-
6	21.145	0.56	21.87	-	22.43	-	60.00	50.00	-37.57	-

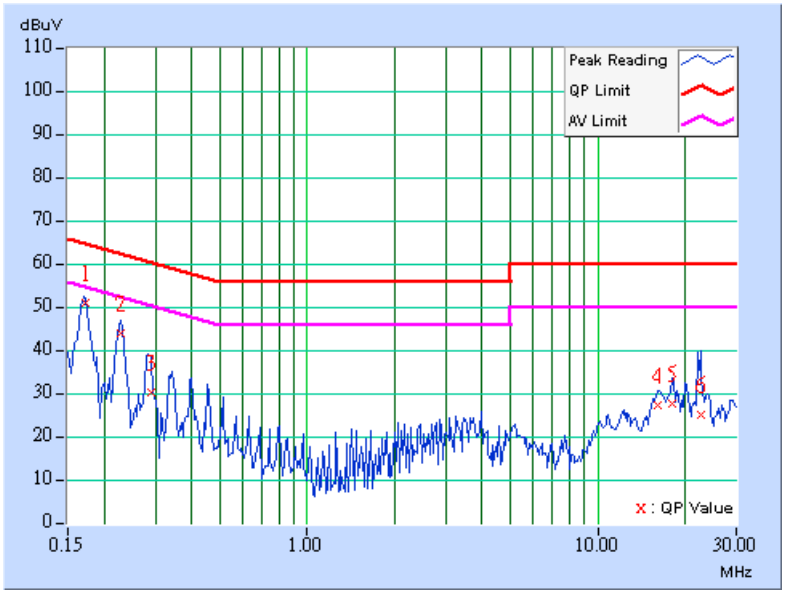
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
MODE	Channel 11	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 991hPa	**TESTED BY**: Steven Lu	

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.173	0.06	50.48	-	50.54	-	64.79	54.79	-14.26	-
2	0.228	0.06	43.44	-	43.50	-	80.52	52.52	-19.02	-
3	0.291	0.06	29.60	-	29.66	-	60.51	50.51	-30.85	-
4	16.199	0.58	26.74	-	27.32	-	60.00	50.00	-32.68	-
5	18.098	0.61	27.17	-	27.78	-	60.00	50.00	-32.22	-
6	22.691	0.77	24.46	-	25.23	-	60.00	50.00	-34.77	-

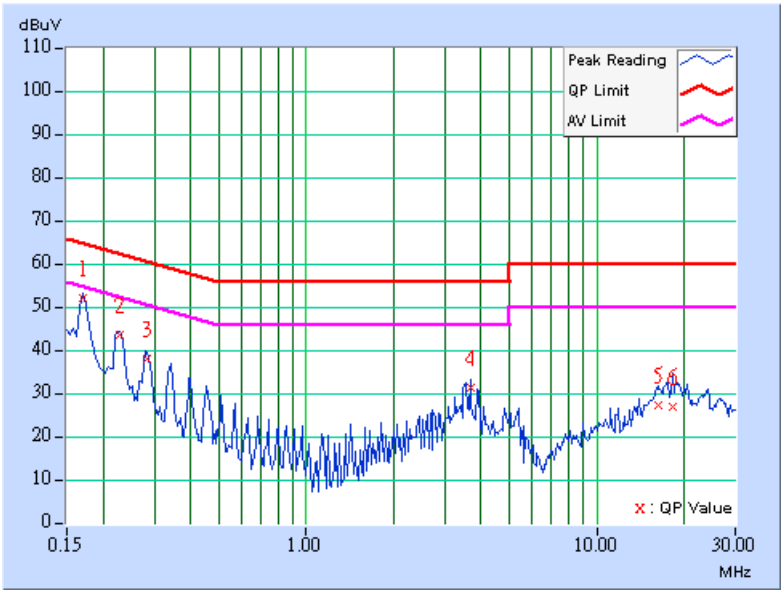
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
MODE	Channel 11	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 991hPa	**TESTED BY**: Steven Lu	

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.170	0.05	51.64	-	51.69	-	64.98	54.98	-13.29	-
2	0.228	0.05	43.20	-	43.25	-	80.52	52.52	-19.27	-
3	0.283	0.05	37.47	-	37.52	-	60.73	50.73	-23.21	-
4	3.699	0.20	30.81	-	31.01	-	56.00	46.00	-24.99	-
5	16.398	0.50	26.77	-	27.27	-	60.00	50.00	-32.73	-
6	18.367	0.50	26.54	-	27.04	-	60.00	50.00	-32.96	-

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
* HP Spectrum Analyzer	8590L	3544A01176	Jun. 10, 2004
* HP Preamplifier	8447D	2944A08485	May 01, 2004
* HP Spectrum Analyzer	8593E	3926A04191	
* HP Preamplifier	8449B	3008A01292	Aug. 13, 2004
ROHDE & SCHWARZ TEST RECEIVER	ESI7	838496/016	Feb. 23, 2004
* ROHDE & SCHWARZ TEST RECEIVER	ESMI	839013/007 839379/002	Feb. 13, 2004
SCHAFFNER Tunable Dipole Antenna SCHWARZBECK Tunable Dipole Antenna	VHBA 9123 UHA 9105	459 977	Jun. 26, 2004
* CHASE BILOG Antenna	CBL6112A	2221	July 26, 2004
* SCHWARZBECK Horn Antenna	BBHA9120-D1	D130	Jun. 30, 2004
* EMCO Turn Table	1060	1115	NA
* CHANCE Tower	CM-AT40	CM-A010	NA
* Software	ADT_Radiated_V5.14	NA	NA
* ANRITSU RF Switches	MP59B	M35046	Jan. 05, 2004
* TIMES RF cable	LMR-600	CABLE-ST5-01	Jan. 05, 2004

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. "*" = These equipment are used for the final measurement.
3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
4. The test was performed in ADT Open Site No. 5.
5. The VCCI Site Registration No. is R-1039.

4.2.3 TEST PROCEDURES

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

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

f. If the emission level of the EUT in peak mode was 10 dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10 dB margin would be re-tested one by one using the quasi-peak method or average method as specified and then reported in Data sheet peak mode and QP mode.

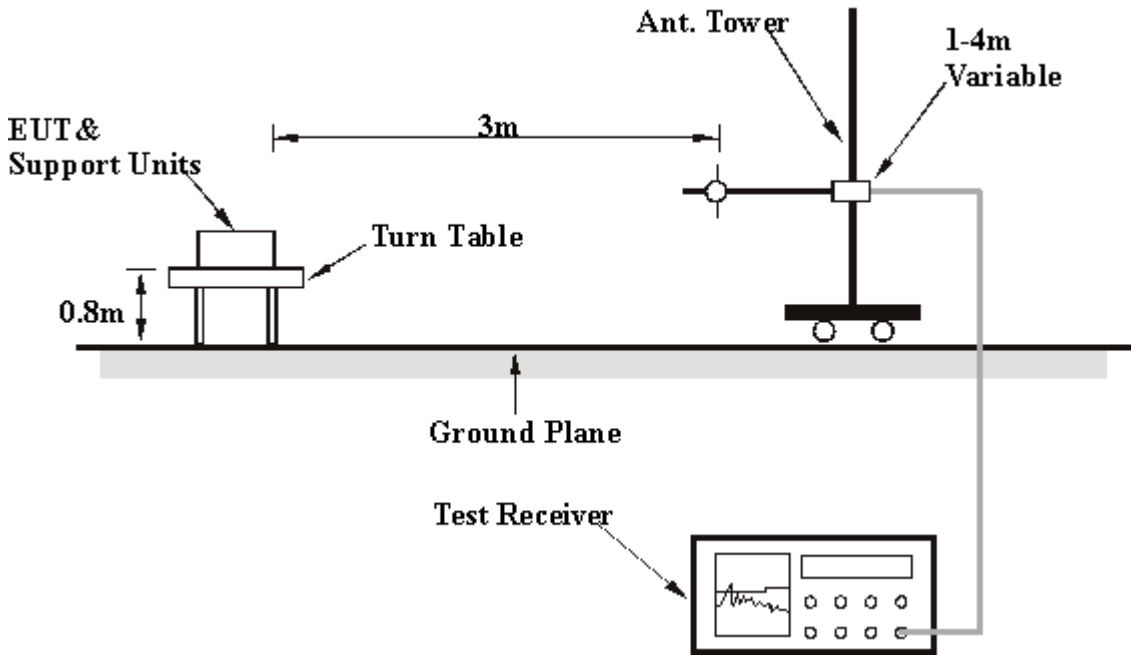
NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 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	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 11	**FREQUENCY RANGE**	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	23deg. C, 80%RH, 991hPa	**TESTED BY**: Hardway Lee	

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	50.11	33.64 QP	40.00	-6.36	1.59 H	107	24.38	9.26
2	67.05	33.32 QP	40.00	-6.68	3.08 H	195	26.04	7.28
3	100.33	39.79 QP	43.50	-3.71	2.91 H	356	28.24	11.56
4	133.07	37.47 QP	43.50	-6.03	2.26 H	192	25.07	12.40
5	166.61	37.83 QP	43.50	-5.67	1.77 H	184	27.21	10.62
6	200.50	40.32 QP	43.50	-3.18	1.59 H	132	29.53	10.79
7	225.45	35.82 QP	46.00	-10.18	1.52 H	23	23.61	12.21
8	266.56	39.20 QP	46.00	-6.80	1.54 H	261	24.05	15.15
9	274.99	31.61 QP	46.00	-14.39	1.52 H	81	16.36	15.25
10	300.76	35.13 QP	46.00	-10.87	1.29 H	207	19.46	15.67
11	325.09	34.21 QP	46.00	-11.79	1.52 H	117	18.18	16.03
12	332.71	38.01 QP	46.00	-7.99	1.09 H	244	21.87	16.14
13	374.94	40.63 QP	46.00	-5.37	2.01 H	314	23.31	17.32
14	398.87	31.76 QP	46.00	-14.24	1.89 H	212	13.56	18.20
15	432.06	36.53 QP	46.00	-9.47	1.00 H	297	17.89	18.64
16	498.42	37.99 QP	46.00	-8.01	1.07 H	356	17.90	20.09
17	501.24	38.68 QP	46.00	-7.32	1.97 H	119	18.53	20.15
18	565.82	35.91 QP	46.00	-10.09	3.04 H	210	14.61	21.30
19	595.72	42.36 QP	46.00	-3.64	1.59 H	192	20.20	22.16

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	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 11	**FREQUENCY RANGE**	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	23deg. C, 80%RH, 991hPa	**TESTED BY**: Hardaway Lee	

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	50.00	32.12 QP	40.00	-7.88	1.19 V	150	22.85	9.27
2	75.00	36.09 QP	40.00	-3.91	1.19 V	157	28.57	7.52
3	125.11	38.17 QP	43.50	-5.33	1.00 V	90	25.36	12.81
4	131.11	31.19 QP	43.50	-12.31	1.67 V	185	18.69	12.50
5	166.93	35.02 QP	43.50	-8.48	3.59 V	236	24.41	10.61
6	175.25	36.52 QP	43.50	-6.98	1.00 V	39	26.00	10.52
7	199.22	40.24 QP	43.50	-3.26	1.00 V	222	29.49	10.75
8	200.00	33.78 QP	43.50	-9.72	1.50 V	78	23.02	10.76
9	225.06	35.35 QP	46.00	-10.65	1.50 V	354	23.16	12.19
10	233.51	38.12 QP	46.00	-7.88	1.00 V	238	25.45	12.67
11	249.98	37.35 QP	46.00	-8.65	1.69 V	254	23.74	13.61
12	300.00	31.25 QP	46.00	-14.75	1.38 V	289	15.59	15.66
13	324.96	35.15 QP	46.00	-10.85	2.36 V	236	19.12	16.03
14	349.96	35.15 QP	46.00	-10.85	2.49 V	325	18.75	16.40
15	375.04	36.89 QP	46.00	-9.11	2.84 V	207	19.57	17.32
16	432.01	39.40 QP	46.00	-6.60	1.39 V	166	20.76	18.64
17	476.78	38.11 QP	46.00	-7.89	1.00 V	0	18.57	19.54
18	501.30	33.66 QP	46.00	-12.34	1.00 V	172	13.51	20.15
19	524.98	31.52 QP	46.00	-14.48	1.22 V	5	11.04	20.48
20	554.48	37.89 QP	46.00	-8.11	1.00 V	152	16.92	20.97
21	576.93	38.08 QP	46.00	-7.92	2.55 V	130	16.46	21.62
22	601.71	38.39 QP	46.00	-7.61	2.02 V	278	16.10	22.29
23	950.14	36.75 QP	46.00	-9.25	1.00 V	185	11.94	24.81

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	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 1	**FREQUENCY RANGE**	Above 1000MHz
MODE	CCK		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 75%RH, 991hPa	**TESTED BY**: Hardaway Lee	

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	2390.00	51.08 PK	74.00	-22.92	1.41 H	196	21.43	29.65
1	2390.00	44.03 AV	54.00	-9.97	1.41 H	196	14.38	29.65
2	*2412.00	105.67 PK			1.41 H	196	75.95	29.72
2	*2412.00	98.62 AV			1.41 H	196	68.90	29.72
3	2496.00	46.33 PK	74.00	-27.67	1.41 H	196	16.39	29.94
4	4824.00	50.72 PK	74.00	-23.28	1.13 H	230	15.27	35.45
5	7236.00	48.88 PK	74.00	-25.12	1.68 H	197	8.25	40.63

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	2390.00	47.64 PK	74.00	-26.36	1.72 V	119	17.99	29.65
2	*2412.00	102.23 PK			1.72 V	119	72.51	29.72
2	*2412.00	94.83 AV			1.72 V	119	65.11	29.72
3	2496.00	42.89 PK	74.00	-31.11	1.72 V	119	12.95	29.94
4	4824.00	49.43 PK	74.00	-24.57	1.42 V	70	13.98	35.45
5	7236.00	50.50 PK	74.00	-23.50	1.19 V	209	9.87	40.63
6	9648.00	54.58 PK	74.00	-19.42	1.14 V	318	10.11	44.46
6	9648.00	34.25 AV	54.00	-19.75	1.14 V	318	-10.21	44.46

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 6	**FREQUENCY RANGE**	Above 1000MHz
MODE	CCK		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 70%RH, 991hPa	**TESTED BY**: Hardaway Lee	

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	*2437.00	102.95 PK			1.08 H	187	73.16	29.79
1	*2437.00	95.28 AV			1.08 H	187	65.49	29.79
2	4874.00	47.51 PK	74.00	-26.49	1.68 H	91	11.72	35.79

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	*2437.00	105.18 PK			1.17 V	98	75.39	29.79
1	*2437.00	97.34 AV			1.17 V	98	67.55	29.79
2	4874.00	52.01 PK	74.00	-21.99	1.69 V	198	16.22	35.79
2	4874.00	36.20 AV	54.00	-17.80	1.69 V	198	0.41	35.79

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 11	**FREQUENCY RANGE**	Above 1000MHz
MODE	CCK		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 70%RH, 991hPa	**TESTED BY**: Hardaway Lee	

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	*2462.00	102.85 PK			1.68 H	197	73.00	29.85
1	*2462.00	95.21 AV			1.68 H	197	65.36	29.85
2	2483.50	45.03 PK	74.00	-28.97	1.68 H	197	15.12	29.91
3	4924.00	47.31 PK	74.00	-26.69	1.18 H	77	11.22	36.09

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	*2462.00	104.27 PK	74.00	30.27	1.69 V	277	74.42	29.85
1	*2462.00	96.84 AV	54.00	42.84	1.69 V	277	66.99	29.85
2	2483.50	46.45 PK	74.00	-27.55	1.69 V	277	16.54	29.91
3	4924.00	47.41 PK	74.00	-26.59	1.18 V	77	11.32	36.09

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 1	**FREQUENCY RANGE**	Above 1000MHz
MODE	OFDM		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 75%RH, 991hPa	**TESTED BY**: Hardaway Lee	

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	2390.00	49.03 PK	74.00	-24.97	1.61 H	221	19.38	29.65
2	*2412.00	98.76 PK			1.61 H	221	69.04	29.72
2	*2412.00	88.39 AV			1.61 H	221	58.67	29.72
3	4824.00	45.06 PK	74.00	-28.94	1.51 H	300	9.61	35.45
4	7236.00	49.85 PK	74.00	-24.15	1.39 H	113	9.22	40.63
5	9648.00	54.41 PK	74.00	-19.59	1.27 H	256	9.94	44.46
5	9648.00	40.61 AV	54.00	-13.39	1.27 H	256	-3.86	44.46
6	12060.00	56.23 PK	74.00	-17.77	2.05 H	172	9.79	46.45
6	12060.00	43.05 AV	54.00	-10.95	2.05 H	172	-3.39	46.45

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	2390.00	44.13 PK	74.00	-29.87	1.58 V	33	14.48	29.65
2	*2412.00	93.86 PK			1.58 V	33	64.14	29.72
2	*2412.00	84.69 AV			1.58 V	33	54.97	29.72
3	4827.00	41.95 PK	74.00	-32.05	1.38 V	133	6.48	35.47

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 6	**FREQUENCY RANGE**	Above 1000MHz
MODE	OFDM		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 75%RH, 991hPa	**TESTED BY**: Hardaway Lee	

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	*2437.00	96.66 PK			1.92 H	110	66.87	29.79
1	*2437.00	86.13 AV			1.92 H	110	56.34	29.79
2	4874.00	45.68 PK	74.00	-28.32	1.27 H	97	9.89	35.79
3	7311.00	49.53 PK	74.00	-24.47	1.08 H	271	8.86	40.67

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	*2437.00	94.78 PK			2.19 V	78	64.99	29.79
1	*2437.00	84.89 AV			2.19 V	78	55.10	29.79
2	4874.00	45.29 PK	74.00	-28.71	1.31 V	110	9.50	35.79
3	7311.00	49.42 PK	74.00	-24.58	1.93 V	8	8.75	40.67

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 11	**FREQUENCY RANGE**	Above 1000MHz
MODE	OFDM		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 75%RH, 991hPa	**TESTED BY**: Hardaway Lee	

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	*2462.00	97.27 PK			1.38 H	77	67.42	29.85
1	*2462.00	87.23 AV			1.38 H	77	57.38	29.85
2	2483.50	50.01 PK	74.00	-23.99	1.38 H	77	20.10	29.91
3	4924.00	46.06 PK	74.00	-27.94	1.65 H	277	9.97	36.09

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	*2462.00	99.70 PK			1.57 V	168	69.85	29.85
1	*2462.00	90.17 AV			1.57 V	168	60.32	29.85
2	2483.50	56.79 PK	74.00	-17.21	1.57 V	168	26.88	29.91
2	2483.50	42.91 AV	54.00	-11.09	1.57 V	168	13.00	29.91
3	4924.00	46.21 PK	74.00	-27.79	1.64 V	33	10.12	36.09

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 6	**FREQUENCY RANGE**	Above 1000MHz
MODE	Turbo Mode		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 70%RH, 991hPa	**TESTED BY**: Hardaway Lee	

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	2390.00	48.07 PK	74.00	-25.93	1.12 H	37	18.42	29.65
2	*2437.00	97.44 PK			1.12 H	37	67.65	29.79
2	*2437.00	90.41 AV			1.12 H	37	60.62	29.79
3	2483.50	45.81 PK	74.00	-28.19	1.12 H	37	15.90	29.91
4	4874.00	45.21 PK	74.00	-28.79	1.16 H	137	9.42	35.79

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	2390.00	50.04 PK	74.00	-23.96	1.18 V	16	20.39	29.65
2	*2437.00	99.41 PK			1.18 V	16	69.62	29.79
2	*2437.00	87.79 AV			1.18 V	16	58.00	29.79
3	2483.50	47.78 PK	74.00	-26.22	1.18 V	16	17.87	29.91
4	4874.00	44.21 PK	74.00	-29.79	1.69 V	216	8.42	35.79

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

4.2.8 TEST RESULTS (MODE 2)

EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 11	**FREQUENCY RANGE**	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 991hPa	**TESTED BY**: Jamison Chan	

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	99.98	41.29 QP	43.50	-2.21	2.50 H	1	31.00	10.29
2	133.30	41.10 QP	43.50	-2.40	1.34 H	62	27.82	13.28
3	166.07	39.64 QP	43.50	-3.86	1.50 H	16	25.90	13.74
4	292.42	39.08 QP	46.00	-6.92	1.00 H	346	24.17	14.92
5	323.53	34.93 QP	46.00	-11.07	1.00 H	190	19.21	15.72
6	401.28	37.49 QP	46.00	-8.51	1.00 H	142	19.74	17.75

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	35.83	30.90 QP	40.00	-9.10	1.25 V	337	17.23	13.66
2	99.98	33.68 QP	43.50	-9.82	4.00 V	280	23.40	10.29
3	133.03	35.22 QP	43.50	-8.28	2.50 V	298	21.96	13.26
4	166.07	29.65 QP	43.50	-13.85	1.75 V	112	15.91	13.74
5	401.28	30.08 QP	46.00	-15.92	1.00 V	7	12.32	17.75
6	902.81	29.21 QP	46.00	-16.79	1.00 V	85	2.03	27.17

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	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 1	**FREQUENCY RANGE**	Above 1000MHz
MODE	CCK		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20deg. C, 65%RH, 991hPa	**TESTED BY**: Hardaway Lee	

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	2390.00	55.26 PK	74.00	-18.74	1.64 H	57	25.61	29.65
1	2390.00	47.17 AV	54.00	-6.83	1.64 H	57	17.52	29.65
2	*2412.00	109.36 PK			1.64 H	57	79.64	29.72
2	*2412.00	101.27 AV			1.64 H	57	71.55	29.72
3	4824.00	61.93 PK	74.00	-12.07	1.00 H	247	26.48	35.45
3	4824.00	47.45 AV	54.00	-6.55	1.00 H	247	12.00	35.45

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	2390.00	56.23 PK	74.00	-17.77	1.12 V	92	26.58	29.65
1	2390.00	48.37 AV	54.00	-5.63	1.12 V	92	18.72	29.65
2	*2412.00	110.33 PK			1.12 V	92	80.61	29.72
2	*2412.00	102.47 AV			1.12 V	92	72.75	29.72
3	4824.00	64.13 PK	74.00	-9.87	1.00 V	156	28.68	35.45
3	4824.00	49.49 AV	54.00	-4.51	1.00 V	156	14.04	35.45

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 6	**FREQUENCY RANGE**	Above 1000MHz
MODE	CCK		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20deg. C, 65%RH, 991hPa	**TESTED BY**: Hardaway Lee	

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	*2437.00	108.20 PK			1.41 H	49	78.41	29.79
1	*2437.00	99.95 AV			1.41 H	49	70.16	29.79
2	4874.00	53.94 PK	74.00	-20.06	1.51 H	182	18.15	35.79
2	4874.00	40.34 AV	54.00	-13.66	1.51 H	182	4.55	35.79

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	*2437.00	109.94 PK			1.07 V	90	80.15	29.79
1	*2437.00	102.13 AV			1.07 V	90	72.34	29.79
2	4874.00	56.48 PK	74.00	-17.52	1.07 V	133	20.69	35.79
2	4874.00	41.39 AV	54.00	-12.61	1.07 V	133	5.60	35.79

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 11	**FREQUENCY RANGE**	Above 1000MHz
MODE	CCK		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20deg. C, 65%RH, 991hPa	**TESTED BY**: Hardaway Lee	

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	*2462.00	107.61 PK			1.00 H	58	77.76	29.85
1	*2462.00	100.05 AV			1.00 H	58	70.20	29.85
2	2483.50	47.32 PK	74.00	-26.68	1.00 H	58	17.41	29.91
3	4924.00	49.29 PK	74.00	-24.71	1.59 H	197	13.20	36.09

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	*2462.00	107.96 PK			1.08 V	92	78.11	29.85
1	*2462.00	100.47 AV			1.08 V	92	70.62	29.85
2	2483.50	53.93 PK	74.00	-20.07	1.08 V	92	24.02	29.91
2	2483.50	46.44 AV	54.00	-7.56	1.08 V	92	16.53	29.91
3	4924.00	53.30 PK	74.00	-20.70	1.07 V	197	17.21	36.09
3	4924.00	39.16 AV	54.00	-14.84	1.07 V	197	3.07	36.09

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 1	**FREQUENCY RANGE**	Above 1000MHz
MODE	OFDM		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 75%RH, 991hPa	**TESTED BY**: Hardaway Lee	

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	2390.00	52.97 PK	74.00	-21.03	1.10 H	144	23.32	29.65
1	2390.00	42.72 AV	54.00	-11.28	1.10 H	144	13.07	29.65
2	*2412.00	102.90 PK			1.10 H	144	73.18	29.72
2	*2412.00	92.65 AV			1.10 H	144	62.93	29.72
3	4824.00	45.33 PK	74.00	-28.67	1.54 H	46	9.88	35.45

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	2390.00	53.87 PK	74.00	-20.13	1.00 V	79	24.22	29.65
1	2390.00	45.45 AV	54.00	-8.55	1.00 V	79	15.80	29.65
2	*2412.00	103.80 PK			1.00 V	79	74.08	29.72
2	*2412.00	95.38 AV			1.00 V	79	65.66	29.72
3	4824.00	50.37 PK	74.00	-23.63	1.00 V	289	14.92	35.45

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 6	**FREQUENCY RANGE**	Above 1000MHz
MODE	OFDM		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 75%RH, 991hPa	**TESTED BY**: Hardaway Lee	

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	*2437.00	102.88 PK			1.18 H	263	73.09	29.79
1	*2437.00	92.97 AV			1.18 H	263	63.18	29.79
2	4874.00	46.87 PK	74.00	-27.13	1.25 H	330	11.08	35.79

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	*2437.00	106.14 PK			1.00 V	81	76.35	29.79
1	*2437.00	92.97 AV			1.00 V	81	63.18	29.79
2	4874.00	48.99 PK	74.00	-25.01	1.00 V	271	13.20	35.79

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 11	**FREQUENCY RANGE**	Above 1000MHz
MODE	OFDM		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 75%RH, 991hPa	**TESTED BY**: Hardaway Lee	

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	*2462.00	101.63 PK			1.19 H	275	71.78	29.85
1	*2462.00	92.82 AV			1.19 H	275	62.97	29.85
2	2483.50	54.00 PK	74.00	-20.00	1.19 H	275	24.09	29.91
2	2483.50	45.19 AV	54.00	-8.81	1.19 H	275	15.28	29.91
3	4924.00	47.48 PK	74.00	-26.52	1.36 H	270	11.39	36.09

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	*2462.00	102.90 PK			1.00 V	81	73.05	29.85
1	*2462.00	96.03 AV			1.00 V	81	66.18	29.85
2	2483.50	55.27 PK	74.00	-18.73	1.00 V	81	25.36	29.91
2	2483.50	48.40 AV	54.00	-5.60	1.00 V	81	18.49	29.91
3	4924.00	49.20 PK	74.00	-24.80	1.05 V	129	13.11	36.09

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 6	**FREQUENCY RANGE**	Above 1000MHz
MODE	Turbo Mode		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20deg. C, 65%RH, 991hPa	**TESTED BY**: Hardaway Lee	

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	2390.00	57.90 PK	74.00	-16.10	1.34 H	49	28.25	29.65
1	2390.00	45.48 AV	54.00	-8.52	1.34 H	49	15.83	29.65
2	*2437.00	105.06 PK			1.34 H	49	75.27	29.79
2	*2437.00	92.64 AV			1.34 H	49	62.85	29.79
3	2483.50	55.78 PK	74.00	-18.22	1.34 H	49	25.87	29.91
3	2483.50	43.36 AV	54.00	-10.64	1.34 H	49	13.45	29.91
4	4874.00	46.67 PK	74.00	-27.33	1.14 H	333	10.88	35.79
5	7311.00	51.84 PK	74.00	-22.16	1.22 H	277	11.17	40.67

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	2390.00	52.88 PK	74.00	-21.12	1.21 V	112	23.23	29.65
1	2390.00	43.73 AV	54.00	-10.27	1.21 V	112	14.08	29.65
2	*2437.00	100.04 PK			1.21 V	112	70.25	29.79
2	*2437.00	90.89 AV			1.21 V	112	61.10	29.79
3	2483.50	51.76 PK	74.00	-22.24	1.21 V	112	21.85	29.91
3	2483.50	41.61 AV	54.00	-12.39	1.21 V	112	11.70	29.91
4	4874.00	49.75 PK	74.00	-24.25	1.04 V	132	13.96	35.79
5	7311.00	53.86 PK	74.00	-20.14	1.00 V	133	13.19	40.67

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

4.2.9 TEST RESULTS (MODE 4)

EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 11	**FREQUENCY RANGE**	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	23deg. C, 80%RH, 991hPa	**TESTED BY**: Hardaway Lee	

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	50.13	35.85 QP	40.00	-4.15	1.22 H	300	26.58	9.26
2	75.00	35.76 QP	40.00	-4.24	1.49 H	80	28.24	7.52
3	100.29	40.69 QP	43.50	-2.81	1.14 H	188	29.14	11.55
4	133.06	36.15 QP	43.50	-7.35	2.14 H	0	23.75	12.40
5	167.42	40.56 QP	43.50	-2.94	2.11 H	164	29.95	10.61
6	175.24	37.30 QP	43.50	-6.20	1.22 H	36	26.77	10.52
7	200.43	40.91 QP	43.50	-2.59	1.49 H	1	30.13	10.78
8	234.21	39.77 QP	46.00	-6.23	1.80 H	189	27.06	12.71
9	250.00	36.48 QP	46.00	-9.52	2.19 H	71	22.87	13.61
10	266.06	40.04 QP	46.00	-5.96	1.77 H	77	24.89	15.15
11	275.00	32.71 QP	46.00	-13.29	2.19 H	72	17.46	15.25
12	299.15	42.17 QP	46.00	-3.83	1.73 H	39	26.52	15.65
13	332.80	41.08 QP	46.00	-4.92	1.00 H	160	24.93	16.15
14	366.49	41.74 QP	46.00	-4.26	1.22 H	30	24.73	17.01
15	375.00	33.82 QP	46.00	-12.18	1.40 H	1	16.50	17.32
16	398.80	37.96 QP	46.00	-8.04	1.00 H	217	19.76	18.20
17	401.18	41.24 QP	46.00	-4.76	1.40 H	146	22.99	18.25
18	432.06	35.78 QP	46.00	-10.22	1.00 H	197	17.14	18.64
19	565.75	35.82 QP	46.00	-10.18	1.00 H	238	14.53	21.29
20	600.01	36.18 QP	46.00	-9.82	1.49 H	43	13.90	22.28
21	601.78	39.41 QP	46.00	-6.59	1.00 H	55	17.12	22.29

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	Wireless 11a+g mini-PCI	MODEL	WMIA-105AG
CHANNEL	Channel 11	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	23deg. C, 80%RH, 991hPa	TESTED BY: Hardaway Lee	

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	50.10	33.58 QP	40.00	-6.42	1.00 V	187	24.32	9.26
2	65.94	30.93 QP	40.00	-9.07	1.14 V	127	23.43	7.50
3	75.03	33.54 QP	40.00	-6.46	1.18 V	44	26.01	7.53
4	125.00	36.64 QP	43.50	-6.86	1.00 V	144	23.82	12.82
5	150.00	29.23 QP	43.50	-14.27	1.00 V	233	17.87	11.36
6	175.01	31.60 QP	43.50	-11.90	1.00 V	7	21.08	10.52
7	199.22	40.64 QP	43.50	-2.86	1.00 V	173	29.89	10.75
8	199.96	36.28 QP	43.50	-7.22	1.00 V	297	25.52	10.76
9	225.03	32.02 QP	46.00	-13.98	1.82 V	0	19.83	12.19
10	250.00	34.26 QP	46.00	-11.74	1.03 V	123	20.65	13.61
11	275.00	32.08 QP	46.00	-13.92	1.60 V	118	16.83	15.25
12	299.15	36.34 QP	46.00	-9.66	1.61 V	106	20.69	15.65
13	349.95	35.19 QP	46.00	-10.81	2.64 V	250	18.79	16.40
14	375.12	41.90 QP	46.00	-4.10	2.64 V	269	24.58	17.32
15	450.00	38.65 QP	46.00	-7.35	1.72 V	142	19.78	18.87
16	525.00	37.44 QP	46.00	-8.56	1.42 V	294	16.95	20.48
17	559.13	36.89 QP	46.00	-9.11	1.37 V	0	15.79	21.10
18	563.24	36.86 QP	46.00	-9.14	1.00 V	225	15.64	21.22
19	595.25	39.17 QP	46.00	-6.83	1.00 V	341	17.03	22.14
20	600.00	40.15 QP	46.00	-5.85	3.32 V	74	17.87	22.28
21	857.96	35.18 QP	46.00	-10.82	1.64 V	36	10.82	24.36

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

EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 1	**FREQUENCY RANGE**	Above 1000MHz
MODE	CCK		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30deg. C, 60%RH, 991hPa	**TESTED BY**: Hardaway Lee	

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	2390.00	46.04 PK	74.00	-27.96	1.28 H	189	16.39	29.65
2	*2412.00	100.46 PK			1.28 H	189	70.74	29.72
2	*2412.00	92.26 AV			1.28 H	189	62.54	29.72
3	4823.00	53.08 PK	74.00	-20.92	1.67 H	242	17.63	35.44
3	4823.00	36.77 AV	54.00	-17.23	1.67 H	242	1.32	35.44
4	7236.00	51.39 PK	74.00	-22.61	1.54 H	60	10.76	40.63
4	7236.00	37.69 AV	54.00	-16.31	1.54 H	60	-2.94	40.63
5	9648.00	55.72 PK	74.00	-18.28	2.12 H	279	11.26	44.46
5	9648.00	42.10 AV	54.00	-11.90	2.12 H	279	-2.36	44.46

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	48.29 PK	74.00	-25.71	1.26 V	226	18.64	29.65
2	*2412.00	102.71 PK			1.26 V	226	72.99	29.72
2	*2412.00	93.90 AV			1.26 V	226	64.18	29.72
3	4824.00	57.60 PK	74.00	-16.40	1.56 V	54	22.15	35.45
3	4824.00	43.57 AV	54.00	-10.43	1.56 V	54	8.12	35.45
4	7235.00	52.31 PK	74.00	-21.69	1.32 V	199	11.68	40.63
4	7235.00	39.59 AV	54.00	-14.41	1.32 V	199	-1.04	40.63

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 6	**FREQUENCY RANGE**	Above 1000MHz
MODE	CCK		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30deg. C, 60%RH, 991hPa	**TESTED BY**: Hardaway Lee	

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	*2437.00	92.77 PK			1.56 H	248	62.98	29.79
1	*2437.00	84.76 AV			1.56 H	248	54.97	29.79
2	4874.00	52.38 PK	74.00	-21.62	1.40 H	225	16.59	35.79
2	4874.00	37.91 AV	54.00	-16.09	1.40 H	225	2.12	35.79

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	*2437.00	102.78 PK			1.37 V	139	72.99	29.79
1	*2437.00	95.32 AV			1.37 V	139	65.53	29.79
2	4874.00	59.38 PK	74.00	-14.62	1.21 V	212	23.59	35.79
2	4874.00	45.37 AV	54.00	-8.63	1.21 V	212	9.58	35.79
3	7312.00	51.16 PK	74.00	-22.84	1.86 V	301	10.49	40.67
3	7312.00	38.02 AV	54.00	-15.98	1.86 V	301	-2.65	40.67

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 11	**FREQUENCY RANGE**	Above 1000MHz
MODE	CCK		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30deg. C, 60%RH, 991hPa	**TESTED BY**: Hardaway Lee	

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	*2462.00	93.89 PK			1.85 H	124	64.04	29.85
1	*2462.00	86.28 AV			1.85 H	124	56.43	29.85
2	2483.00	48.02 PK	74.00	-25.98	1.85 H	124	18.11	29.91
3	4923.00	45.09 PK	74.00	-28.91	2.09 H	164	9.00	36.09

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	*2462.00	101.94 PK			1.97 V	73	72.09	29.85
1	*2462.00	93.45 AV			1.97 V	73	63.60	29.85
2	2483.50	47.63 PK	74.00	-26.37	1.97 V	73	17.72	29.91
3	4923.00	55.87 PK	74.00	-18.13	1.11 V	278	19.78	36.09
3	4923.00	32.79 AV	54.00	-21.21	1.11 V	278	-3.30	36.09
4	7386.00	53.89 PK	74.00	-20.11	1.08 V	131	12.86	41.02
4	7386.00	38.67 AV	54.00	-15.33	1.08 V	131	-2.36	41.02
5	9848.00	59.04 PK	74.00	-14.96	2.17 V	275	14.94	44.10
5	9848.00	41.42 AV	54.00	-12.58	2.17 V	275	-2.68	44.10

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 1	**FREQUENCY RANGE**	Above 1000MHz
MODE	OFDM		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30deg. C, 60%RH, 991hPa	**TESTED BY**: Hardaway Lee	

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	2390.00	37.49 PK	74.00	-36.51	1.26 H	148	7.84	29.65
2	*2412.00	85.49 PK			1.26 H	148	55.77	29.72
2	*2412.00	76.15 AV			1.26 H	148	46.43	29.72
3	4824.00	45.44 PK	74.00	-28.56	1.46 H	103	9.99	35.45
4	7236.00	51.18 PK	74.00	-22.82	1.64 H	57	10.55	40.63
4	7236.00	37.68 AV	54.00	-16.32	1.64 H	57	-2.95	40.63

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	2390.00	44.67 PK	74.00	-29.33	1.31 V	248	15.02	29.65
2	*2412.00	92.67 PK			1.31 V	248	62.95	29.72
2	*2412.00	83.19 AV			1.31 V	248	53.47	29.72
3	4824.00	46.10 PK	74.00	-27.90	1.28 V	83	10.65	35.45
4	7236.00	51.69 PK	74.00	-22.31	1.41 V	128	11.06	40.63
4	7236.00	37.86 AV	54.00	-16.14	1.41 V	128	-2.77	40.63
5	9648.00	56.33 PK	74.00	-17.67	1.69 V	181	11.87	44.46
5	9648.00	42.54 AV	54.00	-11.46	1.69 V	181	-1.92	44.46

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 6	**FREQUENCY RANGE**	Above 1000MHz
MODE	OFDM		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30deg. C, 60%RH, 991hPa	**TESTED BY**: Hardaway Lee	

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	*2437.00	91.35 PK			1.28 H	246	61.56	29.79
1	*2437.00	80.00 AV			1.28 H	246	50.21	29.79
2	4874.00	47.78 PK	74.00	-26.22	1.22 H	229	11.99	35.79

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	*2437.00	97.99 PK			1.00 V	235	68.20	29.79
1	*2437.00	87.13 AV			1.00 V	235	57.34	29.79
2	4874.00	51.64 PK	74.00	-22.36	1.00 V	161	15.85	35.79
2	4874.00	37.81 AV	54.00	-16.19	1.00 V	161	2.02	35.79
3	7311.00	50.99 PK	74.00	-23.01	1.26 V	175	10.33	40.67

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 11	**FREQUENCY RANGE**	Above 1000MHz
MODE	OFDM		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30deg. C, 60%RH, 991hPa	**TESTED BY**: Hardaway Lee	

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	*2462.00	90.69 PK			1.24 H	33	60.84	29.85
1	*2462.00	79.53 AV			1.24 H	33	49.68	29.85
2	2483.50	40.90 PK	74.00	-33.10	1.24 H	33	10.99	29.91
3	4924.00	47.20 PK	74.00	-26.80	1.36 H	214	11.11	36.09

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	*2462.00	98.48 PK			1.65 V	24	68.63	29.85
1	*2462.00	89.28 AV			1.65 V	24	59.43	29.85
2	2483.50	41.46 PK	74.00	-32.54	1.65 V	24	11.55	29.91
3	4924.00	47.31 PK	74.00	-26.69	1.18 V	124	11.22	36.09

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 6	**FREQUENCY RANGE**	Above 1000MHz
MODE	Turbo Mode		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30deg. C, 60%RH, 991hPa	**TESTED BY**: Hardaway Lee	

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	2390.00	40.46 PK	74.00	-33.54	1.29 H	246	10.81	29.65
2	*2437.00	88.38 PK			1.29 H	246	58.59	29.79
2	*2437.00	79.52 AV			1.29 H	246	49.73	29.79
3	2483.50	41.17 PK	74.00	-32.83	1.29 H	246	11.26	29.91
4	4874.00	46.87 PK	74.00	-27.13	1.36 H	249	11.08	35.79

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	2390.00	47.82 PK	74.00	-26.18	1.00 V	17	18.17	29.65
2	*2437.00	95.74 PK			1.00 V	17	65.95	29.79
2	*2437.00	87.36 AV			1.00 V	17	57.57	29.79
3	2483.50	48.53 PK	74.00	-25.47	1.00 V	17	18.62	29.91
4	4874.00	57.09 PK	74.00	-16.91	1.00 V	230	21.30	35.79
4	4874.00	43.81 AV	54.00	-10.19	1.00 V	230	8.02	35.79

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

4.2.10 TEST RESULTS (MODE 5)

EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 11	**FREQUENCY RANGE**	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 991hPa	**TESTED BY**: Jamison Chan	

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	84.20	37.00 QP	40.00	-3.00	1.12 H	34	27.65	9.35
2	**133.03**	**41.74 QP**	**43.50**	**-1.76**	**2.00 H**	**25**	**28.47**	**13.26**
3	166.07	36.12 QP	43.50	-7.38	1.50 H	49	22.38	13.74
4	199.12	36.07 QP	43.50	-7.43	1.50 H	148	24.82	11.25
5	234.11	40.78 QP	46.00	-5.22	1.00 H	46	27.90	12.88
6	704.53	33.72 QP	46.00	-12.28	1.00 H	346	9.62	24.10

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	35.83	30.59 QP	40.00	-9.41	2.50 V	43	16.93	13.66
2	133.03	33.28 QP	43.50	-10.22	2.50 V	97	20.01	13.26
3	199.12	27.14 QP	43.50	-16.36	2.50 V	130	15.90	11.25
4	234.11	32.04 QP	46.00	-13.96	1.50 V	94	19.16	12.88
5	504.31	29.27 QP	46.00	-16.73	1.25 V	76	9.17	20.11

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	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 1	**FREQUENCY RANGE**	Above 1000MHz
MODE	CCK		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20deg. C, 80%RH, 991hPa	**TESTED BY**: Hardaway Lee	

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	2390.00	57.24 PK	74.00	-16.76	1.96 H	269	27.59	29.65
1	2390.00	49.34 AV	54.00	-4.66	1.96 H	269	19.69	29.65
2	*2412.00	111.45 PK			1.96 H	269	81.73	29.72
2	*2412.00	103.55 AV			1.96 H	269	73.83	29.72
3	4824.00	46.87 PK	74.00	-27.13	1.17 H	55	11.42	35.45

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	2390.00	48.05 PK	74.00	-25.95	1.18 V	99	18.40	29.65
2	*2412.00	102.26 PK			1.18 V	99	72.54	29.72
2	*2412.00	94.01 AV			1.18 V	99	64.29	29.72
3	4824.00	54.87 PK	74.00	-19.13	1.69 V	155	19.42	35.45
3	4824.00	39.92 AV	54.00	-14.08	1.69 V	155	4.47	35.45

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 6	**FREQUENCY RANGE**	Above 1000MHz
MODE	CCK		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20deg. C, 80%RH, 991hPa	**TESTED BY**: Hardaway Lee	

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	*2437.00	110.99 PK			1.87 H	125	81.20	29.79
1	*2437.00	102.95 AV			1.87 H	125	73.16	29.79
2	4874.00	46.80 PK	74.00	-27.20	1.68 H	28	11.01	35.79

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	*2437.00	101.26 PK			1.44 V	217	71.47	29.79
1	*2437.00	93.22 AV			1.44 V	217	63.43	29.79
2	4874.00	53.10 PK	74.00	-20.90	1.57 V	25	17.31	35.79
2	4874.00	40.20 AV	54.00	-13.80	1.57 V	25	4.41	35.79

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 11	**FREQUENCY RANGE**	Above 1000MHz
MODE	CCK		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20deg. C, 80%RH, 991hPa	**TESTED BY**: Hardaway Lee	

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	*2462.00	110.09 PK			1.69 H	299	80.24	29.85
1	*2462.00	102.19 AV			1.69 H	299	72.34	29.85
2	2483.50	53.04 PK	74.00	-20.96	1.69 H	299	23.13	29.91
2	2483.50	45.14 AV	54.00	-8.86	1.69 H	299	15.23	29.91
3	4924.00	46.00 PK	74.00	-28.00	1.17 H	189	9.91	36.09

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	*2462.00	100.98 PK			1.96 V	17	71.13	29.85
1	*2462.00	92.80 AV			1.96 V	17	62.95	29.85
2	2483.50	43.93 PK	74.00	-30.07	1.96 V	17	14.02	29.91
3	4924.00	53.80 PK	74.00	-20.20	1.14 V	88	17.71	36.09
3	4924.00	49.00 AV	54.00	-5.00	1.14 V	88	12.91	36.09

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 1	**FREQUENCY RANGE**	Above 1000MHz
MODE	OFDM		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20deg. C, 80%RH, 991hPa	**TESTED BY**: Hardaway Lee	

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	2390.00	47.82 PK	74.00	-26.18	1.00 H	100	18.17	29.65
2	*2412.00	98.19 PK			1.00 H	100	68.47	29.72
2	*2412.00	89.48 AV			1.00 H	100	59.76	29.72
3	4824.00	47.82 PK	74.00	-26.18	1.68 H	33	12.37	35.45

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	2390.00	39.39 PK	74.00	-34.61	1.68 V	33	9.74	29.65
2	*2412.00	89.76 PK			1.68 V	33	60.04	29.72
2	*2412.00	79.45 AV			1.68 V	33	49.73	29.72
3	4824.00	46.67 PK	74.00	-27.33	1.14 V	133	11.22	35.45

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 6	**FREQUENCY RANGE**	Above 1000MHz
MODE	OFDM		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20deg. C, 80%RH, 991hPa	**TESTED BY**: Hardaway Lee	

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	*2437.00	100.58 PK			1.05 H	69	70.79	29.79
1	*2437.00	90.39 AV			1.05 H	69	60.60	29.79
2	4874.00	45.22 PK	74.00	-28.78	1.63 H	188	9.43	35.79

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	*2437.00	93.88 PK			1.88 V	88	64.09	29.79
1	*2437.00	83.27 AV			1.88 V	88	53.48	29.79
2	4874.00	47.20 PK	74.00	-26.80	1.63 V	188	11.41	35.79

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 11	**FREQUENCY RANGE**	Above 1000MHz
MODE	OFDM		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20deg. C, 80%RH, 991hPa	**TESTED BY**: Hardaway Lee	

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	*2462.00	102.08 PK			1.69 H	66	72.23	29.85
1	*2462.00	92.12 AV			1.69 H	66	62.27	29.85
2	2483.50	52.20 PK	74.00	-21.80	1.69 H	66	22.29	29.91
2	2483.50	42.24 AV	54.00	-11.76	1.69 H	66	12.33	29.91
3	4924.00	44.58 PK	74.00	-29.42	1.85 H	166	8.49	36.09

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	*2462.00	96.72 PK			1.75 V	177	66.87	29.85
1	*2462.00	86.18 AV			1.75 V	177	56.33	29.85
2	2483.50	46.84 PK	74.00	-27.16	1.75 V	177	16.93	29.91
3	4924.00	48.31 PK	74.00	-25.69	1.69 V	77	12.22	36.09

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 6	**FREQUENCY RANGE**	Above 1000MHz
MODE	Turbo Mode		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa	**TESTED BY**: Hardaway Lee	

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	2390.00	52.33 PK	74.00	-21.67	1.39 H	50	22.68	29.65
1	2390.00	41.96 AV	54.00	-12.04	1.39 H	50	12.31	29.65
2	*2437.00	102.89 PK			1.39 H	50	73.10	29.79
2	*2437.00	92.52 AV			1.39 H	50	62.73	29.79
3	2483.50	53.01 PK	74.00	-20.99	1.39 H	50	23.10	29.91
3	2483.50	42.64 AV	54.00	-11.36	1.39 H	50	12.73	29.91
4	4874.00	46.90 PK	74.00	-27.10	1.65 H	73	11.11	35.79

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	2390.00	54.24 PK	74.00	-19.76	1.00 V	58	24.59	29.65
1	2390.00	44.06 AV	54.00	-9.94	1.00 V	58	14.41	29.65
2	*2437.00	104.80 PK			1.00 V	58	75.01	29.79
2	*2437.00	94.62 AV			1.00 V	58	64.83	29.79
3	2483.50	54.92 PK	74.00	-19.08	1.00 V	58	25.01	29.91
3	2483.50	44.74 AV	54.00	-9.26	1.00 V	58	14.83	29.91
4	4874.00	47.62 PK	74.00	-26.38	1.46 V	266	11.83	35.79

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

4.2.11 TEST RESULTS (MODE 6)

EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 11	**FREQUENCY RANGE**	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	24deg. C, 60%RH, 991hPa	**TESTED BY**: Martin Lee	

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	67.24	35.23 QP	40.00	-4.77	1.88 H	16	29.09	6.14
2	99.88	25.93 QP	43.50	-17.57	1.47 H	196	15.44	10.49
3	166.61	29.86 QP	43.50	-13.64	1.71 H	165	19.32	10.54
4	186.87	28.11 QP	43.50	-15.39	1.39 H	176	17.90	10.21
5	192.00	28.21 QP	43.50	-15.29	1.78 H	315	17.90	10.31
6	200.50	38.40 QP	43.50	-5.10	1.00 H	25	27.90	10.50
7	220.86	34.27 QP	46.00	-11.73	1.35 H	143	22.36	11.91
8	233.79	31.46 QP	46.00	-14.54	1.63 H	241	18.66	12.80
9	240.04	33.74 QP	46.00	-12.26	1.72 H	330	20.51	13.23
10	300.76	37.43 QP	46.00	-8.57	1.44 H	223	21.13	16.30
11	382.30	37.05 QP	46.00	-8.95	1.00 H	220	18.39	18.66
12	400.94	40.92 QP	46.00	-5.08	1.10 H	291	21.48	19.44
13	503.00	28.89 QP	46.00	-17.11	1.57 H	2	6.90	21.99
14	800.50	31.66 QP	46.00	-14.34	1.60 H	160	4.45	27.21

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	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 11	**FREQUENCY RANGE**	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	24deg. C, 60%RH, 991hPa	**TESTED BY**: Martin Lee	

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	67.03	37.24 QP	40.00	-2.76	1.00 V	299	31.11	6.13
2	79.33	28.94 QP	40.00	-11.06	1.00 V	104	21.21	7.73
3	125.00	33.11 QP	43.50	-10.39	1.38 V	207	20.64	12.46
4	167.45	27.68 QP	43.50	-15.82	1.58 V	276	17.17	10.51
5	200.76	32.45 QP	43.50	-11.05	1.78 V	94	21.93	10.52
6	234.04	28.13 QP	46.00	-17.87	1.34 V	238	15.31	12.82
7	300.64	28.60 QP	46.00	-17.40	1.78 V	93	12.30	16.30
8	382.30	31.86 QP	46.00	-14.14	1.34 V	187	13.20	18.66
9	400.94	33.33 QP	46.00	-12.67	1.74 V	119	13.89	19.44
10	534.50	26.46 QP	46.00	-19.54	1.32 V	69	3.57	22.89

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	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 1	**FREQUENCY RANGE**	Above 1000MHz
MODE	CCK		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 991hPa	**TESTED BY**: Martin Lee	

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	2390.00	48.94 PK	74.00	-25.06	1.25 H	213	16.27	32.67
2	*2412.00	102.94 PK			1.25 H	213	70.17	32.77
2	*2412.00	94.27 AV			1.25 H	213	61.50	32.77
3	4824.00	47.20 PK	74.00	-26.80	1.00 H	36	8.17	39.04

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	*2412.00	104.81 PK			1.00 V	154	72.04	32.77
1	*2412.00	95.97 AV			1.00 V	154	63.20	32.77
2	2412.00	50.81 PK	74.00	-23.19	1.00 V	154	18.04	32.77
3	4824.00	48.90 PK	74.00	-25.10	1.45 V	58	9.87	39.04

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 6	**FREQUENCY RANGE**	Above 1000MHz
MODE	CCK		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 991hPa	**TESTED BY**: Martin Lee	

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	*2437.00	105.07 PK			1.19 H	213	72.17	32.90
1	*2437.00	96.07 AV			1.19 H	213	63.17	32.90
2	4874.00	45.92 PK	74.00	-28.08	1.00 H	298	6.86	39.05

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	*2437.00	103.40 PK			1.03 V	254	70.50	32.90
1	*2437.00	94.40 AV			1.03 V	254	61.50	32.90
2	4874.00	47.42 PK	74.00	-26.58	1.20 V	98	8.36	39.05

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 11	**FREQUENCY RANGE**	Above 1000MHz
MODE	CCK		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 991hPa	**TESTED BY**: Martin Lee	

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	*2462.00	105.20 PK			1.16 H	214	72.17	33.03
1	*2462.00	96.20 AV			1.16 H	214	63.17	33.03
2	2483.50	50.20 PK	74.00	-23.80	1.16 H	214	17.06	33.14
3	4924.00	46.90 PK	74.00	-27.10	1.25 H	54	7.79	39.11

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	*2462.00	105.03 PK			1.18 V	291	72.00	33.03
1	*2462.00	95.03 AV			1.18 V	291	62.00	33.03
2	2483.50	50.03 PK	74.00	-23.97	1.18 V	291	16.89	33.14
3	4924.00	44.97 PK	74.00	-29.03	1.00 V	281	5.86	39.11

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 1	**FREQUENCY RANGE**	Above 1000MHz
MODE	OFDM		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 991hPa	**TESTED BY**: Martin Lee	

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	2390.00	46.94 PK	74.00	-27.06	1.20 H	36	14.27	32.67
2	*2412.00	97.94 PK			1.20 H	36	65.17	32.77
2	*2412.00	86.77 AV			1.20 H	36	54.00	32.77
3	4824.00	46.93 PK	74.00	-27.07	1.00 H	112	7.90	39.04

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	2390.00	48.44 PK	74.00	-25.56	1.15 V	237	15.77	32.67
2	*2412.00	99.44 PK			1.15 V	237	66.67	32.77
2	*2412.00	88.27 AV			1.15 V	237	55.50	32.77
3	4874.00	47.29 PK	74.00	-26.71	1.25 V	36	8.23	39.05

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 6	**FREQUENCY RANGE**	Above 1000MHz
MODE	OFDM		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 991hPa	**TESTED BY**: Martin Lee	

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	*2437.00	98.40 PK			1.25 H	36	65.50	32.90
1	*2437.00	87.57 AV			1.25 H	36	54.67	32.90
2	4874.00	47.12 PK	74.00	-26.88	1.00 H	246	8.06	39.05

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	*2437.00	99.90 PK			1.00 V	230	67.00	32.90
1	*2437.00	88.90 AV			1.00 V	230	56.00	32.90
2	4874.00	47.62 PK	74.00	-26.38	1.25 V	9	8.56	39.05

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 11	**FREQUENCY RANGE**	Above 1000MHz
MODE	OFDM		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 991hPa	**TESTED BY**: Martin Lee	

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	*2462.00	98.70 PK			1.20 H	36	65.67	33.03
1	*2462.00	87.70 AV			1.20 H	36	54.67	33.03
2	2483.50	49.70 PK	74.00	-24.30	1.20 H	36	16.56	33.14
3	4924.00	46.47 PK	74.00	-27.53	1.00 H	157	7.36	39.11

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	*2462.00	101.03 PK			1.19 V	284	68.00	33.03
1	*2462.00	89.70 AV			1.19 V	284	56.67	33.03
2	2483.50	52.03 PK	74.00	-21.97	1.20 V	36	18.89	33.14
2	2483.50	40.70 AV	54.00	-13.30	1.20 V	36	7.56	33.14
3	4924.00	45.47 PK	74.00	-28.53	1.35 V	57	6.36	39.11

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
CHANNEL	Channel 6	**FREQUENCY RANGE**	Above 1000MHz
MODE	Turbo Mode		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 991hPa	**TESTED BY**: Martin Lee	

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	2390.00	47.73 PK	74.00	-26.27	1.18 H	213	15.06	32.67
2	*2437.00	97.73 PK			1.18 H	213	64.83	32.90
2	*2437.00	87.40 AV			1.18 H	213	54.50	32.90
3	2483.50	50.23 PK	74.00	-23.77	1.18 H	213	17.09	33.14
4	4874.00	46.52 PK	74.00	-27.48	1.32 H	85	7.46	39.05

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	2390.00	50.07 PK	74.00	-23.93	1.24 V	125	17.40	32.67
2	*2437.00	100.07 PK			1.24 V	125	67.17	32.90
2	*2437.00	86.58 AV			1.24 V	125	53.68	32.90
3	2483.50	52.57 PK	74.00	-21.43	1.24 V	125	19.43	33.14
3	2483.50	39.08 AV	54.00	-14.92	1.24 V	125	5.94	33.14
4	4874.00	48.92 PK	74.00	-25.08	1.00 V	96	9.86	39.05

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

4.3 6dB BANDWIDTH MEASUREMENT

4.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK 30	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.

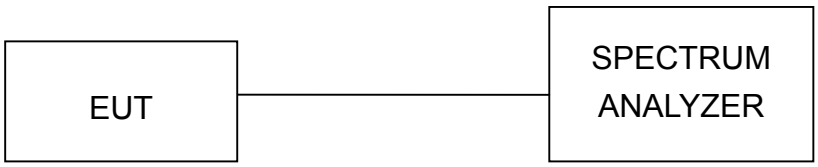
4.3.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100kHz 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



4.3.6 EUT OPERATING CONDITIONS

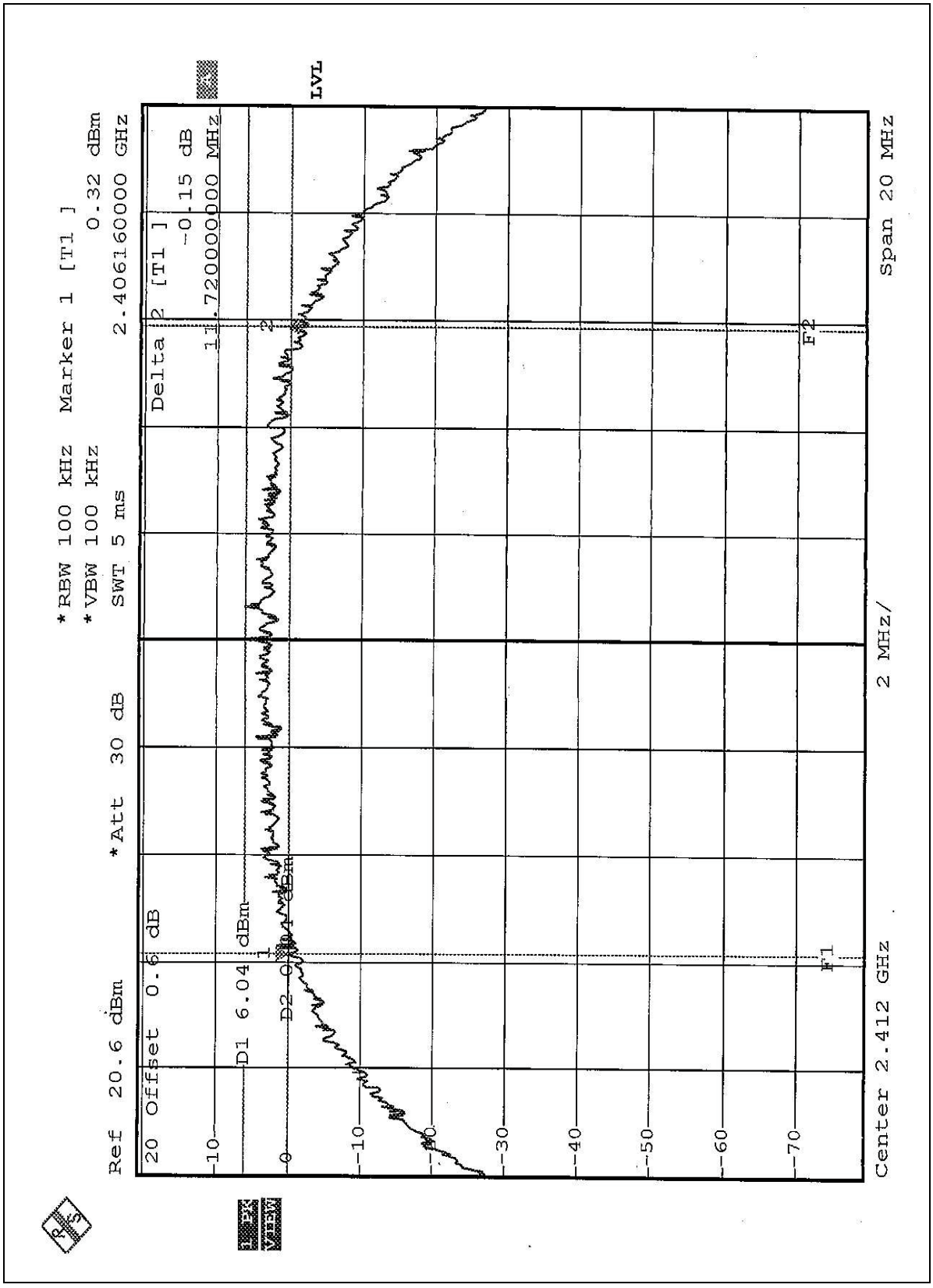
The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.3.7 TEST RESULTS

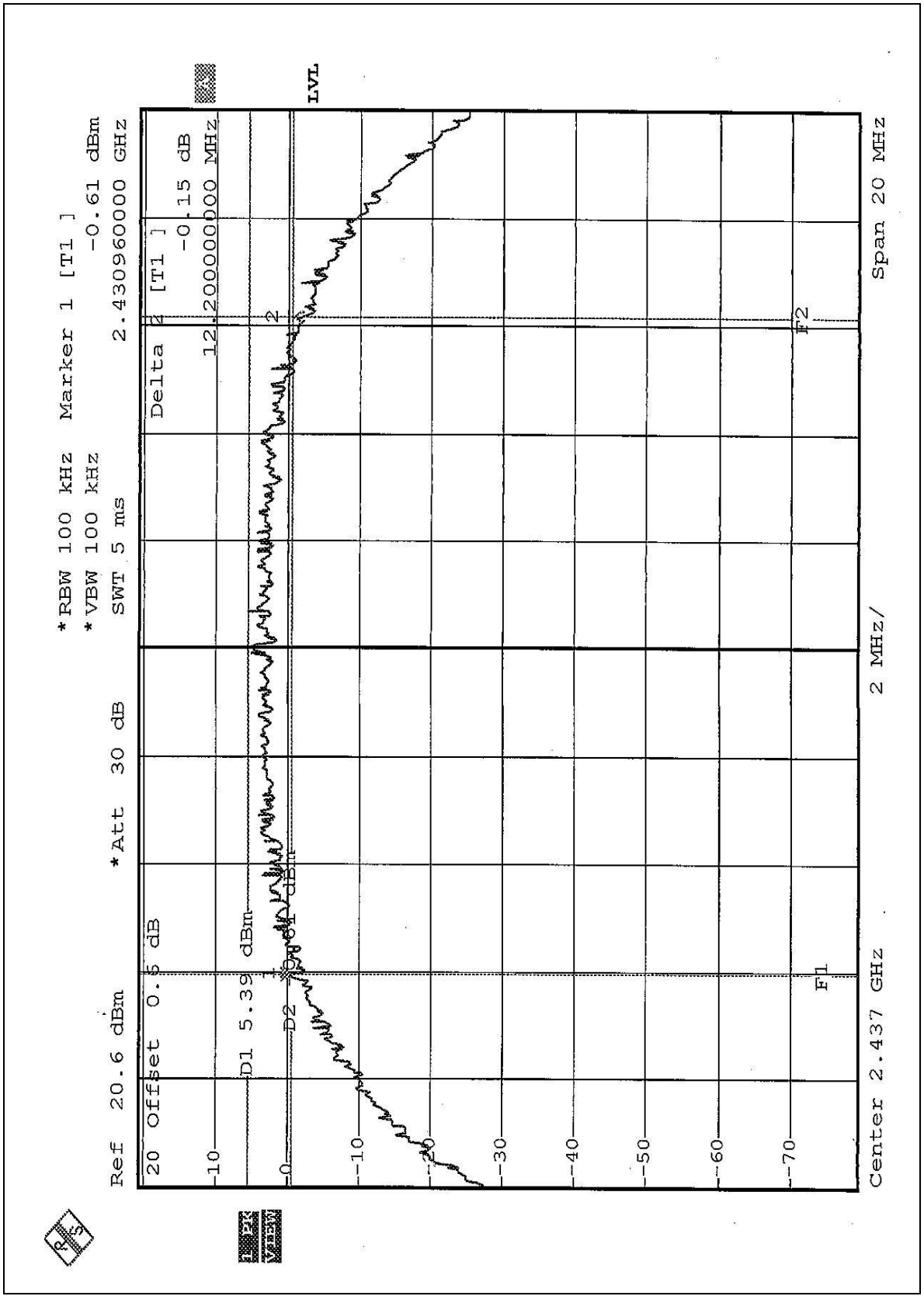
EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
MODE	CCK	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	22deg. C, 57%RH, 991hPa	**TESTED BY**	Ansen Lei

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	11.72	0.5	PASS
6	2437	12.20	0.5	PASS
11	2462	11.72	0.5	PASS

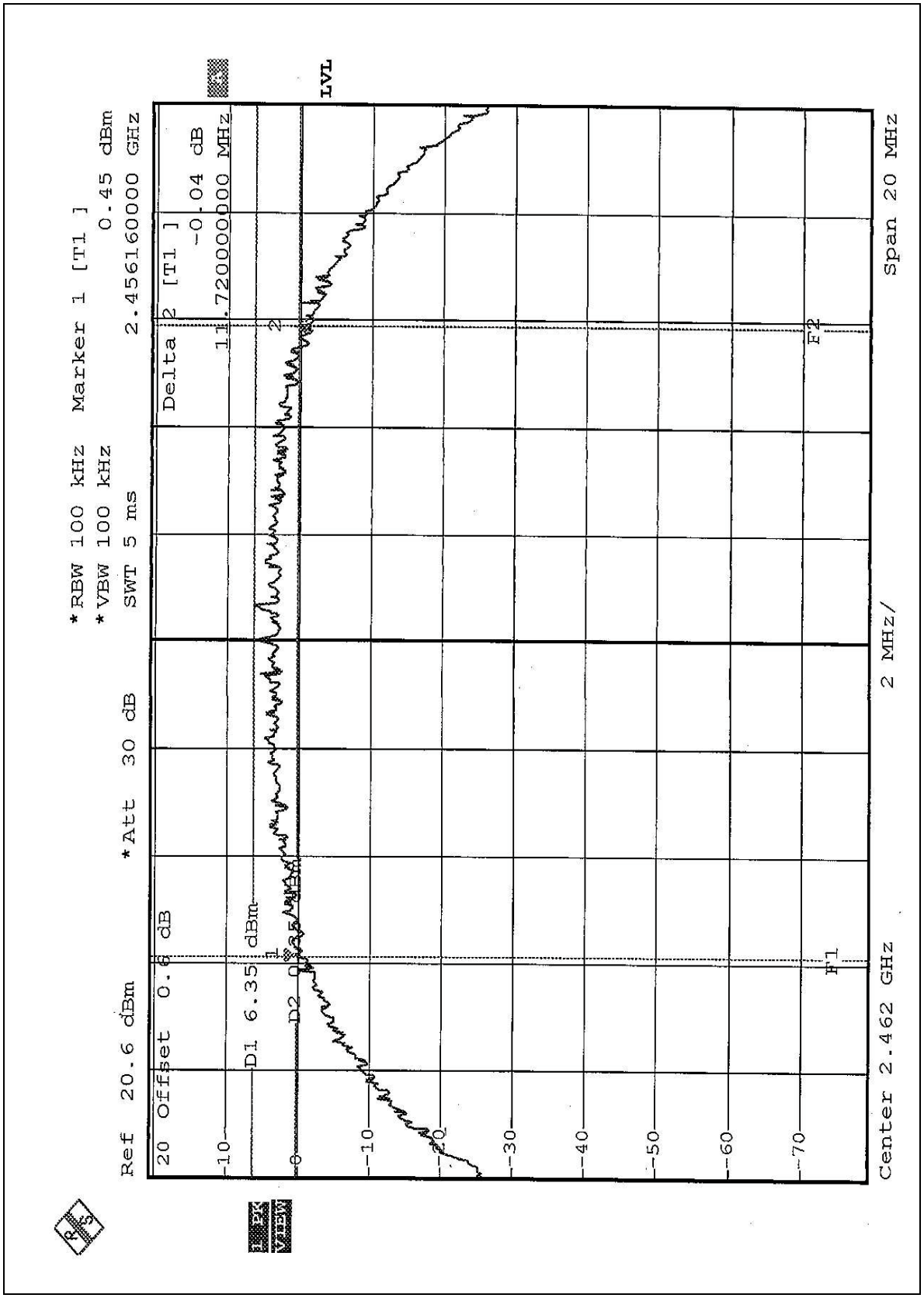
CH1


RBW 100 kHz
VBW 100 kHz
SWT 5 ms
Marker 1 [T1]
0.32 dBm
2.406160000 GHz
Delta 2 [T1]
-0.15 dB
11.720000000 MHz
Ref 20.6 dBm
Offset 0.6 dB
Att 30 dB
D1 6.04 dBm
D2 0 dB
Center 2.412 GHz
2 MHz/
Span 20 MHz
F1
F2
LVL

CH6


RBW 100 kHz
VBW 100 kHz
SWT 5 ms
Marker 1 [T1]
-0.61 dBm
2.430960000 GHz
Delta 2 [T1]
-0.15 dB
12.200000000 MHz
Ref 20.6 dBm
Offset 0.5 dB
Att 30 dB
D1 5.39 dBm
D2 -0.61 dBm
Center 2.437 GHz
2 MHz/
Span 20 MHz
F1
F2
LVL

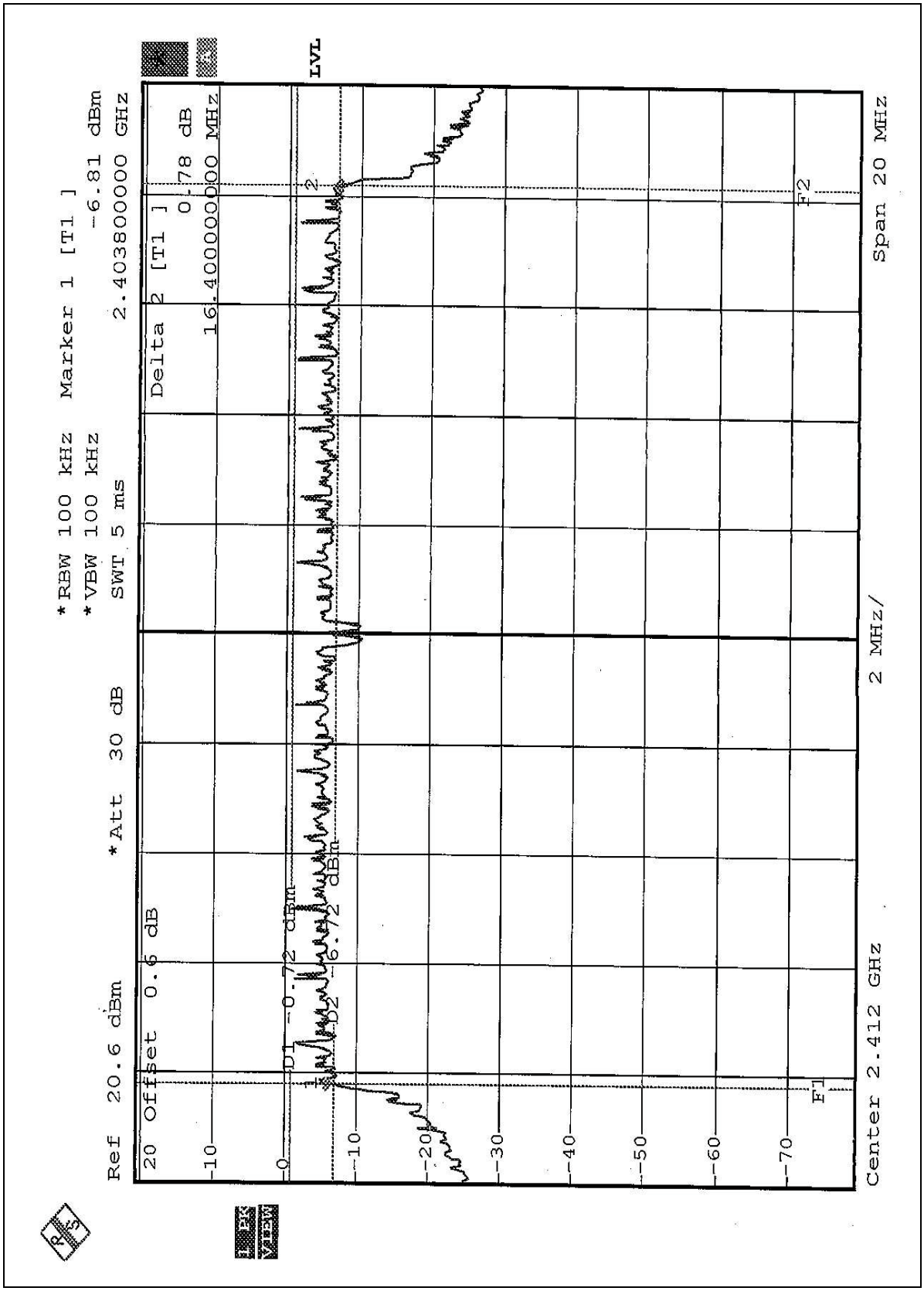
CH11


Ref 20.6 dBm
20 Offset 0.6 dB
*Att 30 dB
*RBW 100 kHz
*VBW 100 kHz
SWT 5 ms
Marker 1 [T1]
0.45 dBm
2.45616000 GHz
Delta 2 [T1]
-0.04 dB
11.72000000 MHz
D1 6.35 dBm
D2 0 dB
Center 2.462 GHz
2 MHz/
Span 20 MHz
F1
F2
LVL

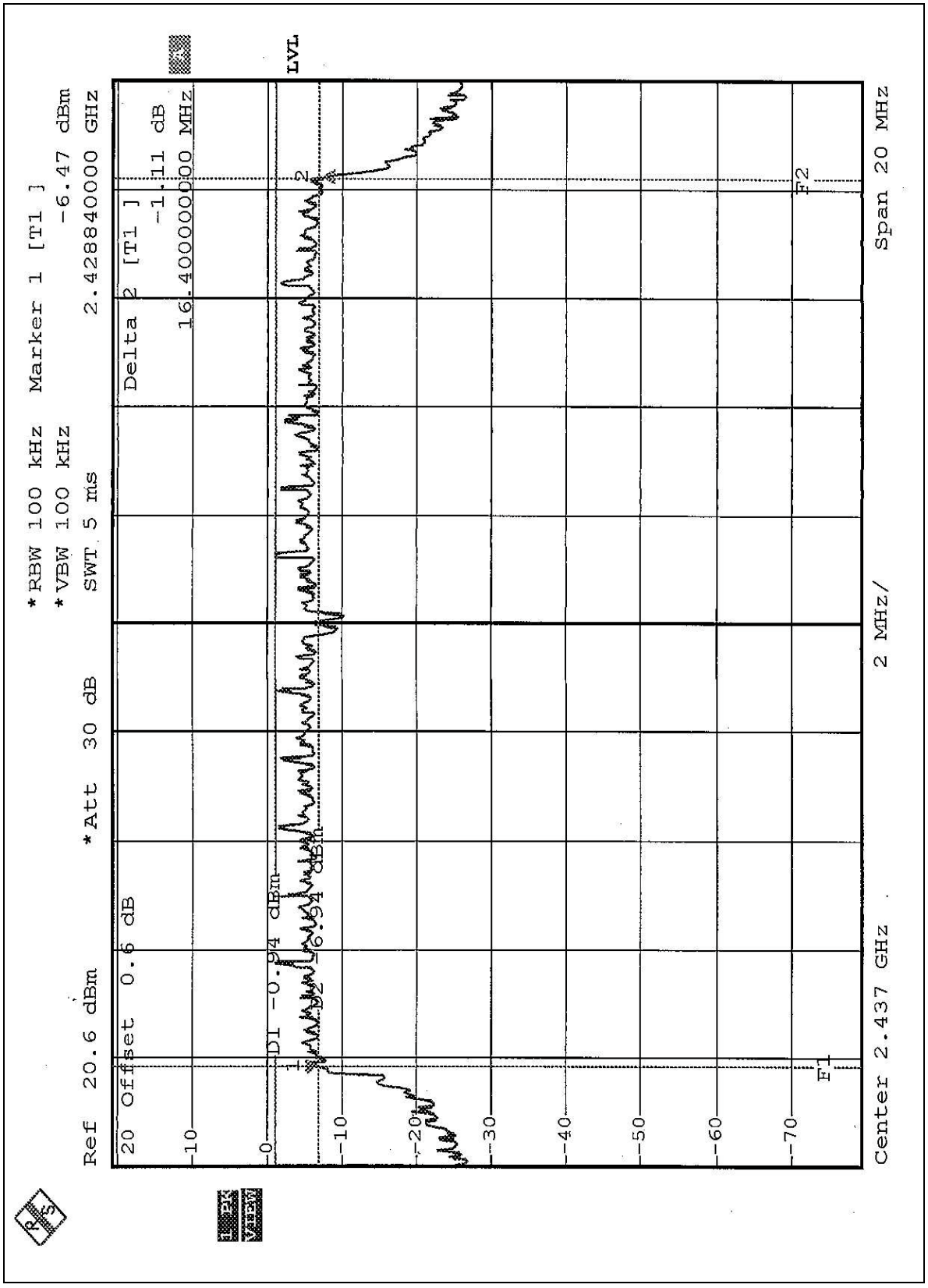
EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
MODE	OFDM	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	22deg. C, 57%RH, 991hPa	**TESTED BY**	Ansen Lei

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	16.40	0.5	PASS
6	2437	16.40	0.5	PASS
11	2462	16.36	0.5	PASS

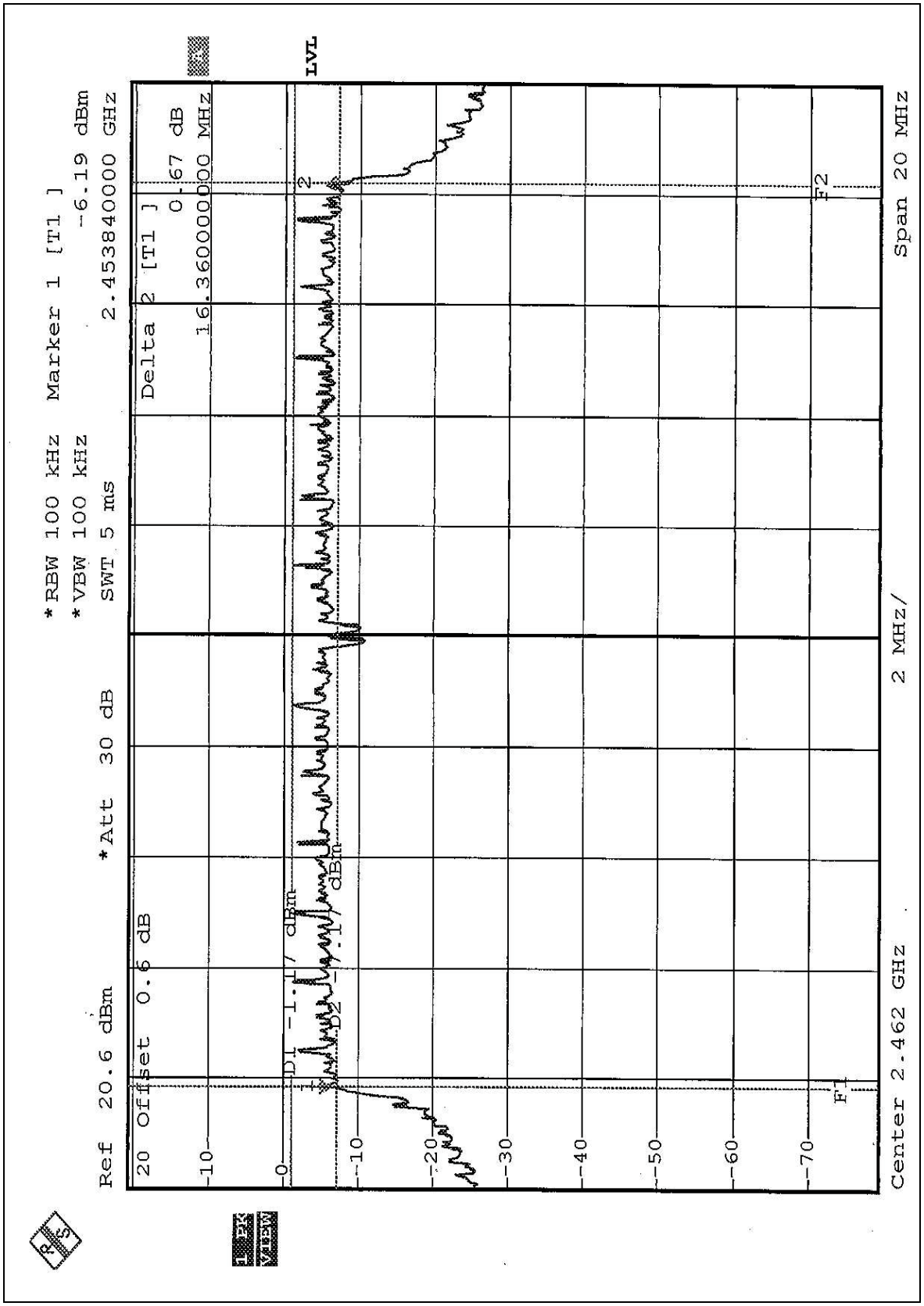
CH1


Ref 20.6 dBm
20 Offset 0.6 dB
*Att 30 dB
*RBW 100 kHz
*VBW 100 kHz
SWT 5 ms
Marker 1 [T1]
-6.81 dBm
2.40380000 GHz
Delta 2 [T1]
0.78 dB
16.40000000 MHz
D1 -0.72 dBm
D2 -6.2 dBm
Center 2.412 GHz
2 MHz/
Span 20 MHz
F1
F2
LVL

CH6


Ref 20.6 dBm
20 Offset 0.6 dB
*RBW 100 kHz
*VBW 100 kHz
*Att 30 dB
SWT 5 ms
Marker 1 [T1]
-6.47 dBm
2.428840000 GHz
Delta 2 [T1]
-1.11 dB
16.400000000 MHz
D1 -0.94 dBm
Center 2.437 GHz
2 MHz/
Span 20 MHz
F1
F2
LVL

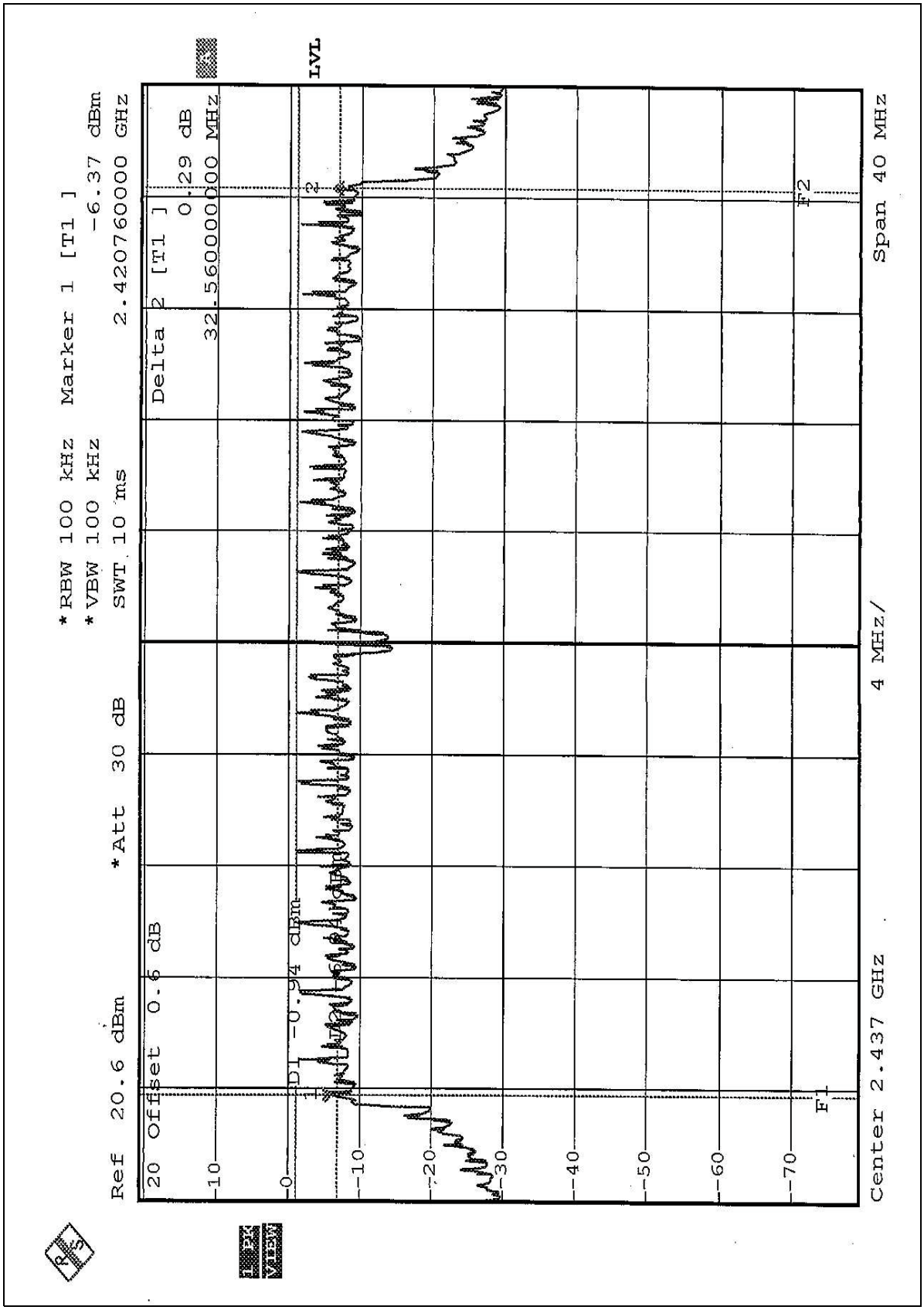
CH11


Ref 20.6 dBm
20 Offset 0.6 dB
*Att 30 dB
*RBW 100 kHz
*VBW 100 kHz
SWT 5 ms
Marker 1 [T1]
-6.19 dBm
2.453840000 GHz
Delta 2 [T1]
0.67 dB
16.36000000 MHz
LVL
Center 2.462 GHz
2 MHz/
Span 20 MHz
F1
F2
dBm
PK
VBW

EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
MODE	Turbo Mode	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	22deg. C, 57%RH, 991hPa	**TESTED BY**	Ansen Lei

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
6	2437	32.56	0.5	PASS

CH 6


Ref 20.6 dBm
Offset 0.6 dB
*Att 30 dB
*RBW 100 kHz
*VBW 100 kHz
SWT 10 ms
Marker 1 [T1]
-6.37 dBm
2.420760000 GHz
Delta 2 [T1]
0.29 dB
32.560000000 MHz
D1 -0.94 dBm
Center 2.437 GHz
4 MHz/
Span 40 MHz
F1
F2
LVL
PK
VIEW

4.4 MAXIMUM PEAK OUTPUT POWER

4.4.1 LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm.

4.4.2 INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2004
R&S SIGNAL GENERATOR	SMP04	100011	May 28, 2004
TEKTRONIX OSCILLOSCOPE	TDS 220	B048470	Mar. 05, 2004
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

EUT	Wireless 11a+g mini-PCI	MODEL	WMIA-105AG
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	22deg.C, 57%RH, 991hPa
MODE	CCK	TESTED BY	Ansen Lei

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	15.40	30	PASS
6	2437	15.50	30	PASS
11	2480	15.40	30	PASS

EUT	Wireless 11a+g mini-PCI	MODEL	WMIA-105AG
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	22deg.C, 57%RH, 991hPa
MODE	OFDM	TESTED BY	Ansen Lei

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	14.30	30	PASS
6	2437	14.50	30	PASS
11	2480	14.40	30	PASS

EUT	Wireless 11a+g mini-PCI	MODEL	WMIA-105AG
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	22deg.C, 57%RH, 991hPa
MODE	Turbo Mode	TESTED BY	Ansen Lei

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
6	2437	14.30	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.

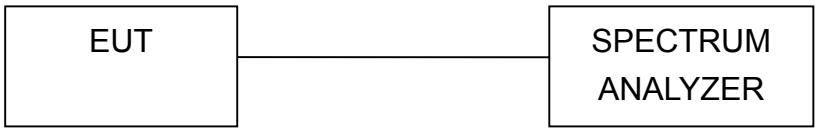
4.5.3 TEST PROCEDURE

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 CONDITION

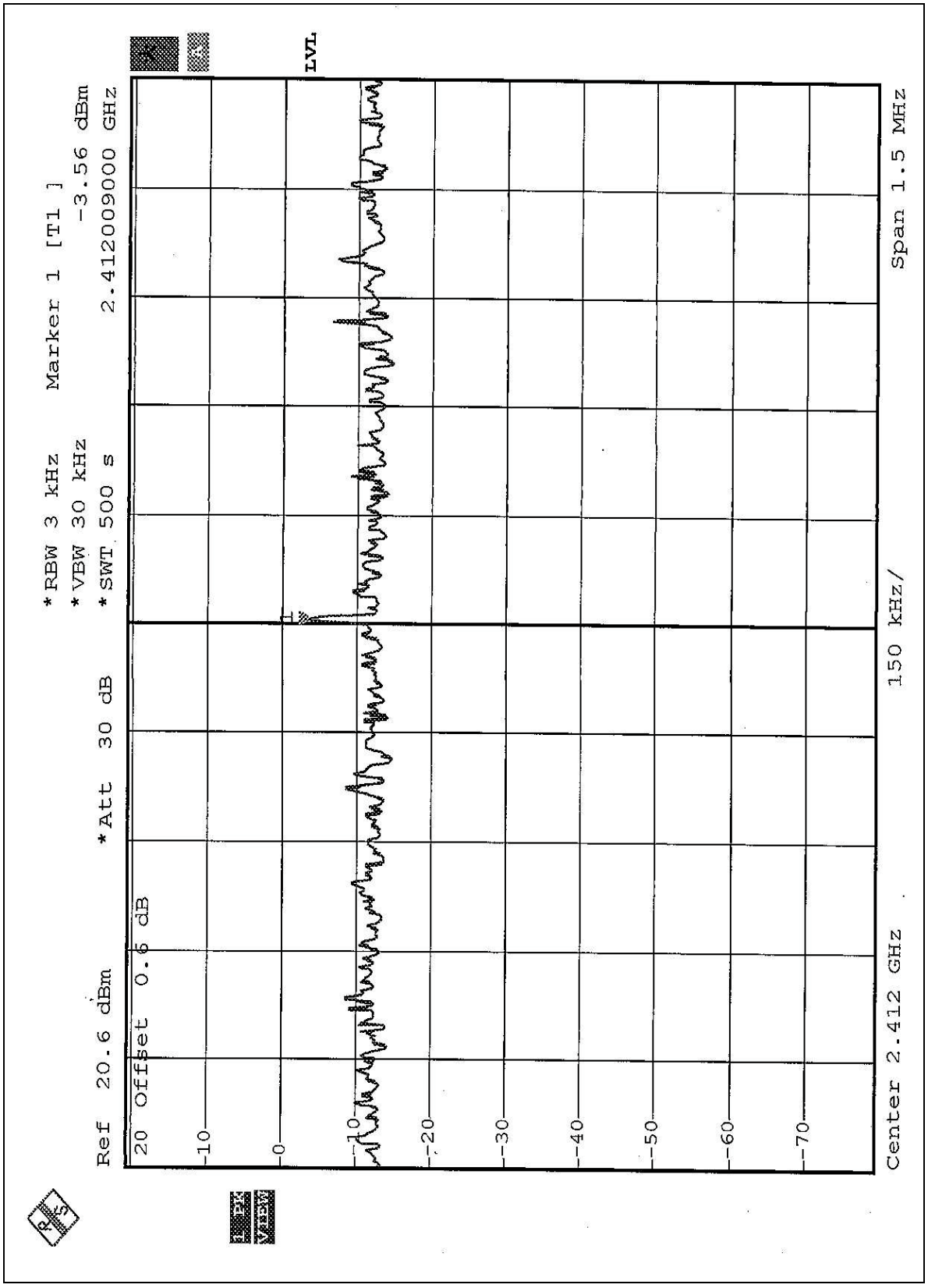
Same as Item 4.3.6

4.5.7 TEST RESULTS

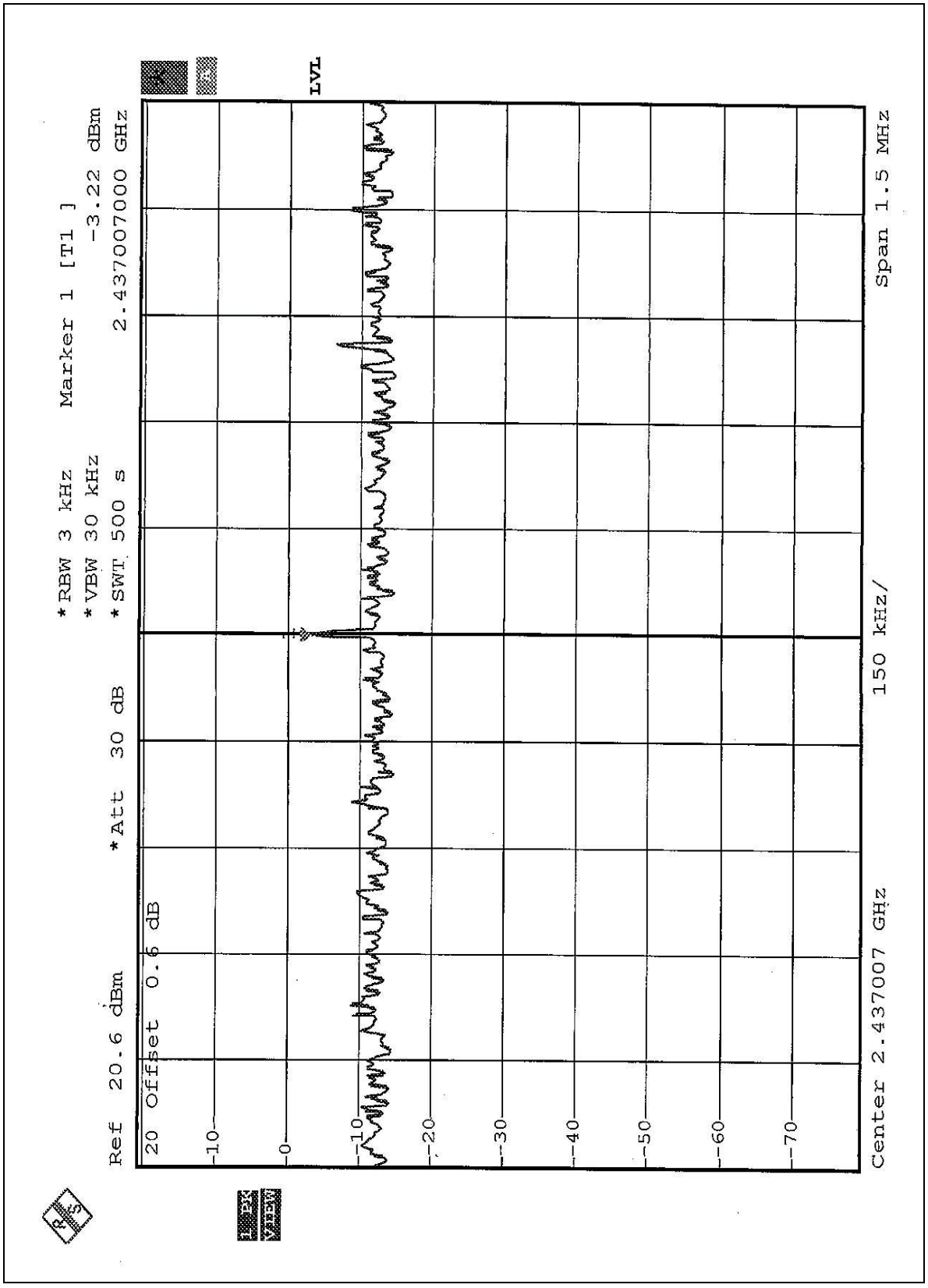
EUT	Wireless 11a+g mini-PCI	MODEL	WMIA-105AG
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	22deg.C, 57%RH, 991hPa
MODE	CCK	TESTED BY	Ansen Lei

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-3.56	8	PASS
6	2437	-3.22	8	PASS
11	2480	-5.69	8	PASS

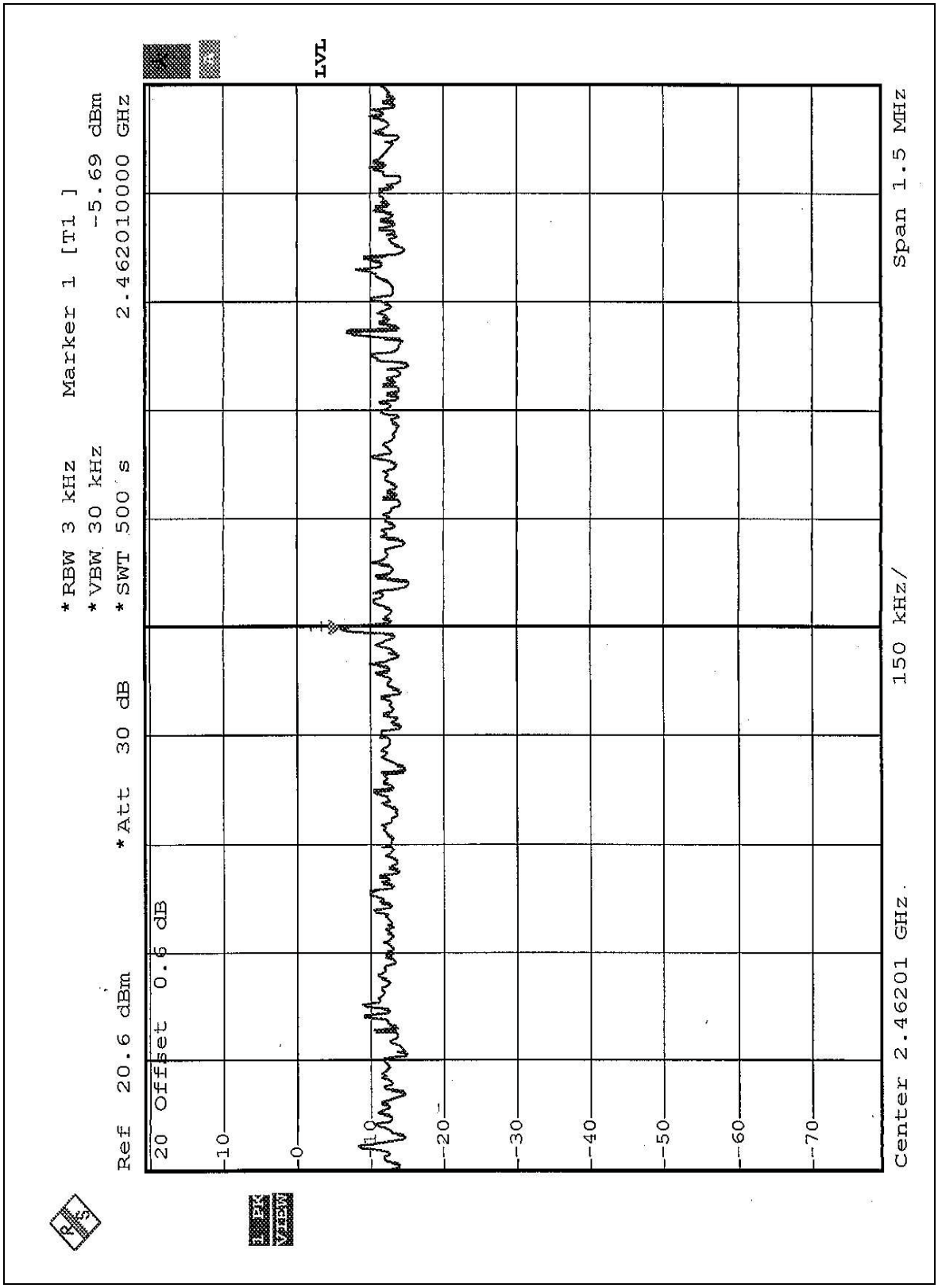
CH1


*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-3.56 dBm
2.412009000 GHz
Ref 20.6 dBm
20 Offset 0.6 dB
*Att 30 dB
Center 2.412 GHz
150 kHz/
Span 1.5 MHz
VIEW
PK
MAXH

CH6


Ref 20.6 dBm
20 Offset 0.6 dB
*Att 30 dB
*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-3.22 dBm
2.437007000 GHz
LVL
Center 2.437007 GHz
150 kHz/
Span 1.5 MHz
RBW
VBW

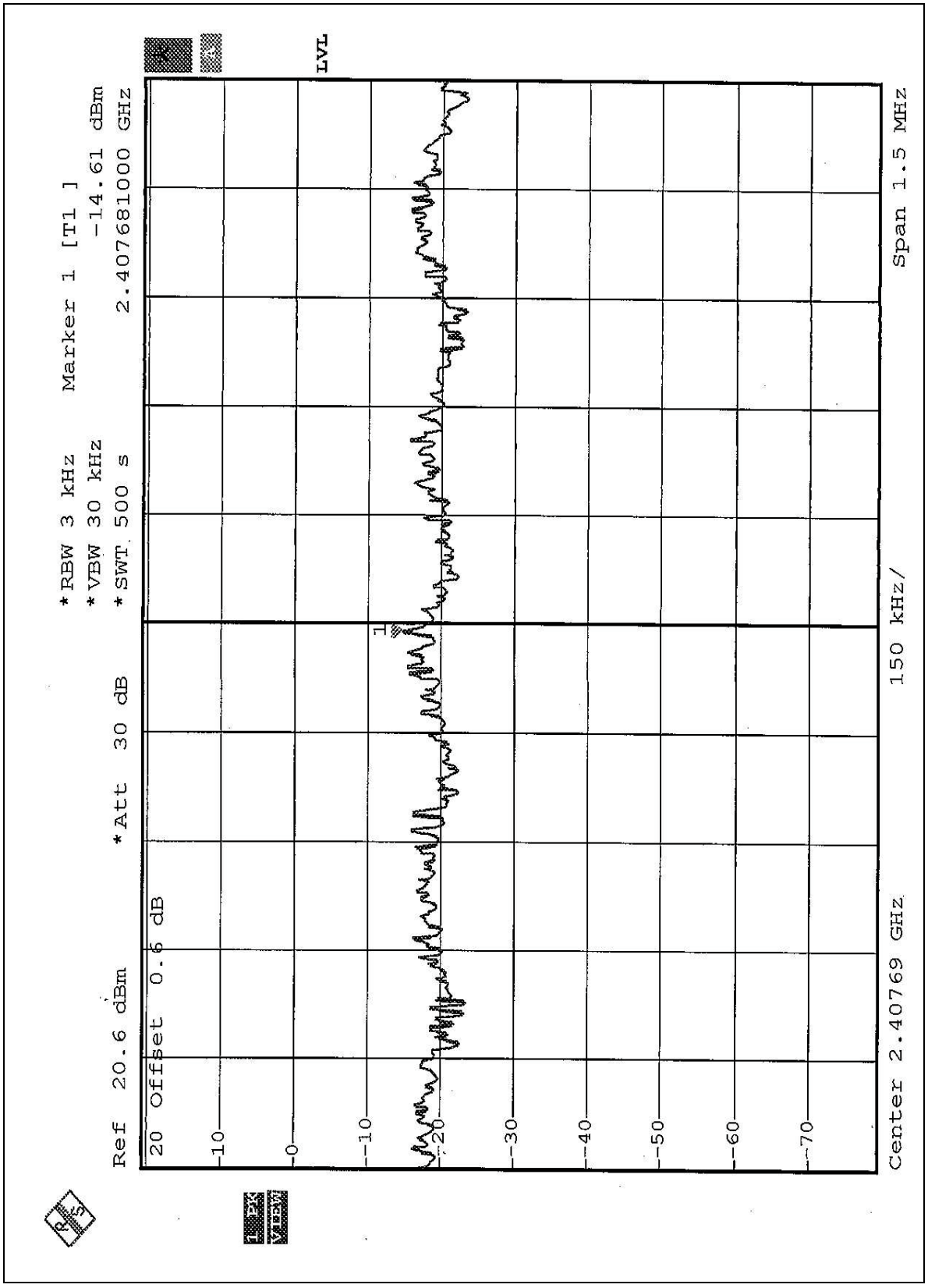
CH11


Ref 20.6 dBm
20 Offset 0.6 dB
*Att 30 dB
*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-5.69 dBm
2.462010000 GHz
LVL
Center 2.46201 GHz
150 kHz/
Span 1.5 MHz

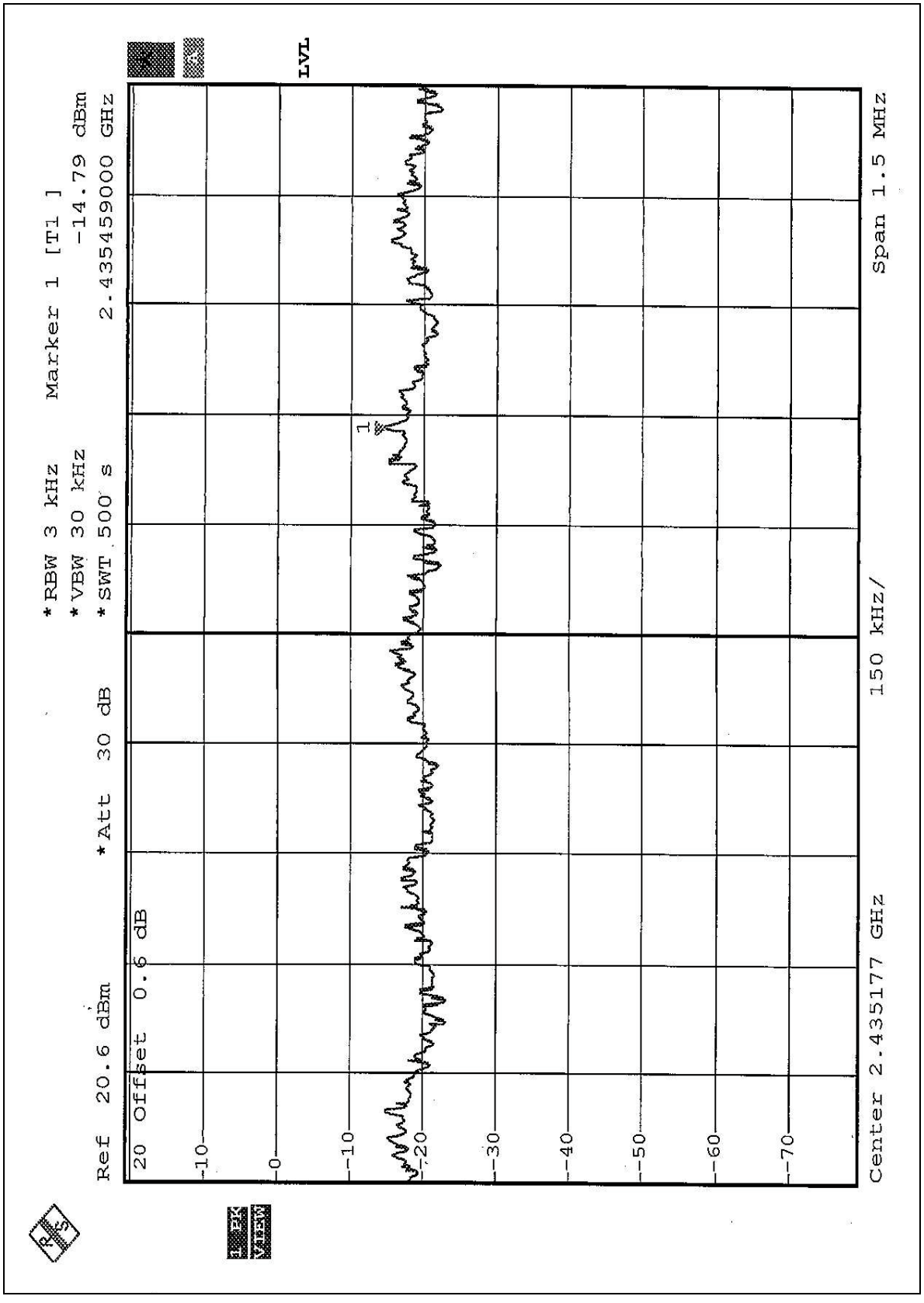
EUT	Wireless 11a+g mini-PCI	MODEL	WMIA-105AG
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	22deg. C, 57%RH, 991hPa
MODE	OFDM	TESTED BY	Ansen Lei

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-14.61	8	PASS
6	2437	-14.79	8	PASS
11	2480	-14.51	8	PASS

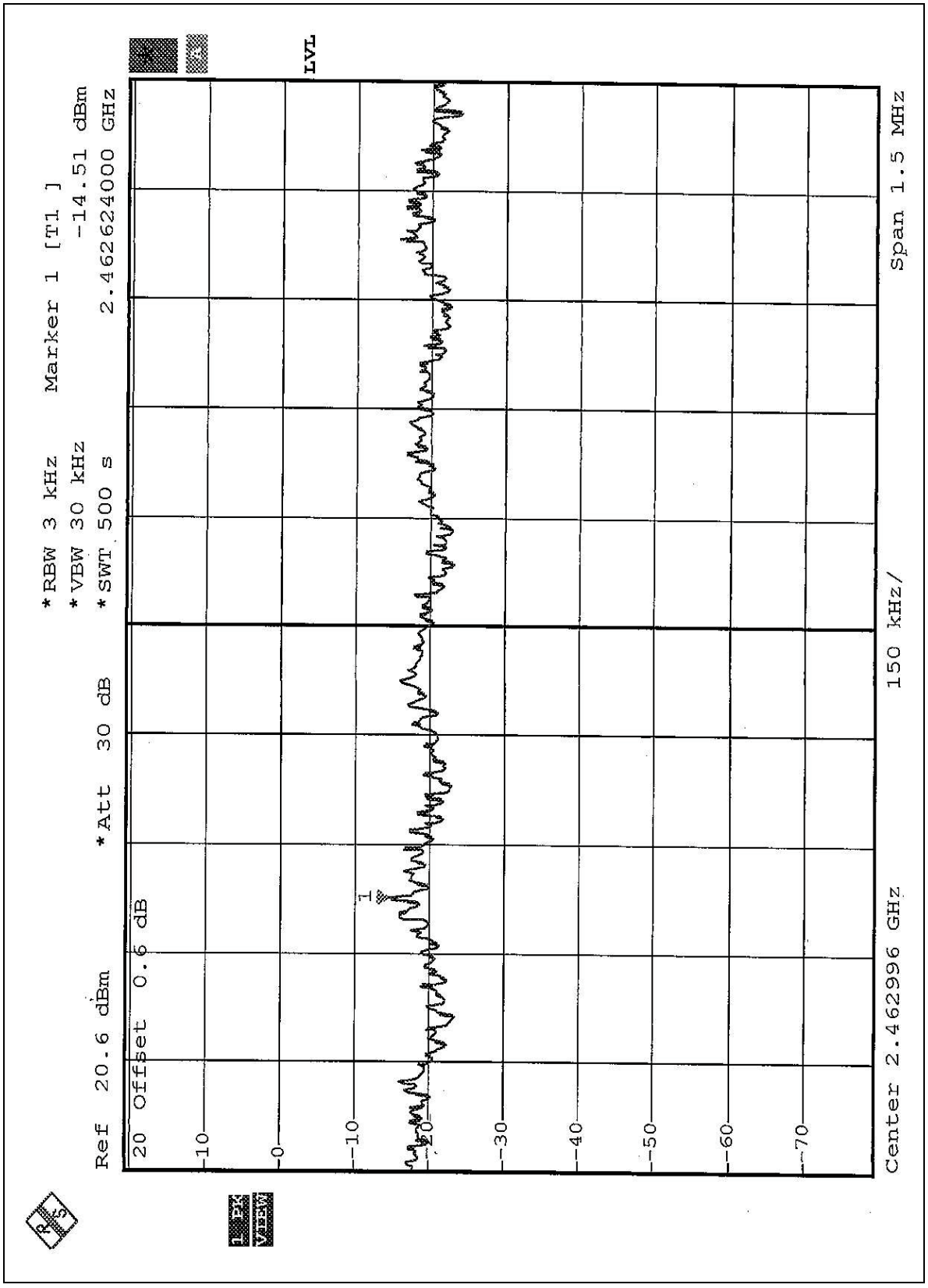
CH1


Ref 20.6 dBm
20 Offset 0.6 dB
*Att 30 dB
*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-14.61 dBm
2.407681000 GHz
Center 2.40769 GHz
150 kHz/
Span 1.5 MHz
1VI
10
0
-10
-20
-30
-40
-50
-60
-70

CH6


Ref 20.6 dBm
20 Offset 0.6 dB
*Att 30 dB
*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-14.79 dBm
2.435459000 GHz
LVL
Center 2.435177 GHz
150 kHz/
Span 1.5 MHz
-10
0
-10
-20
-30
-40
-50
-60
-70
1
1 PK
VIEW

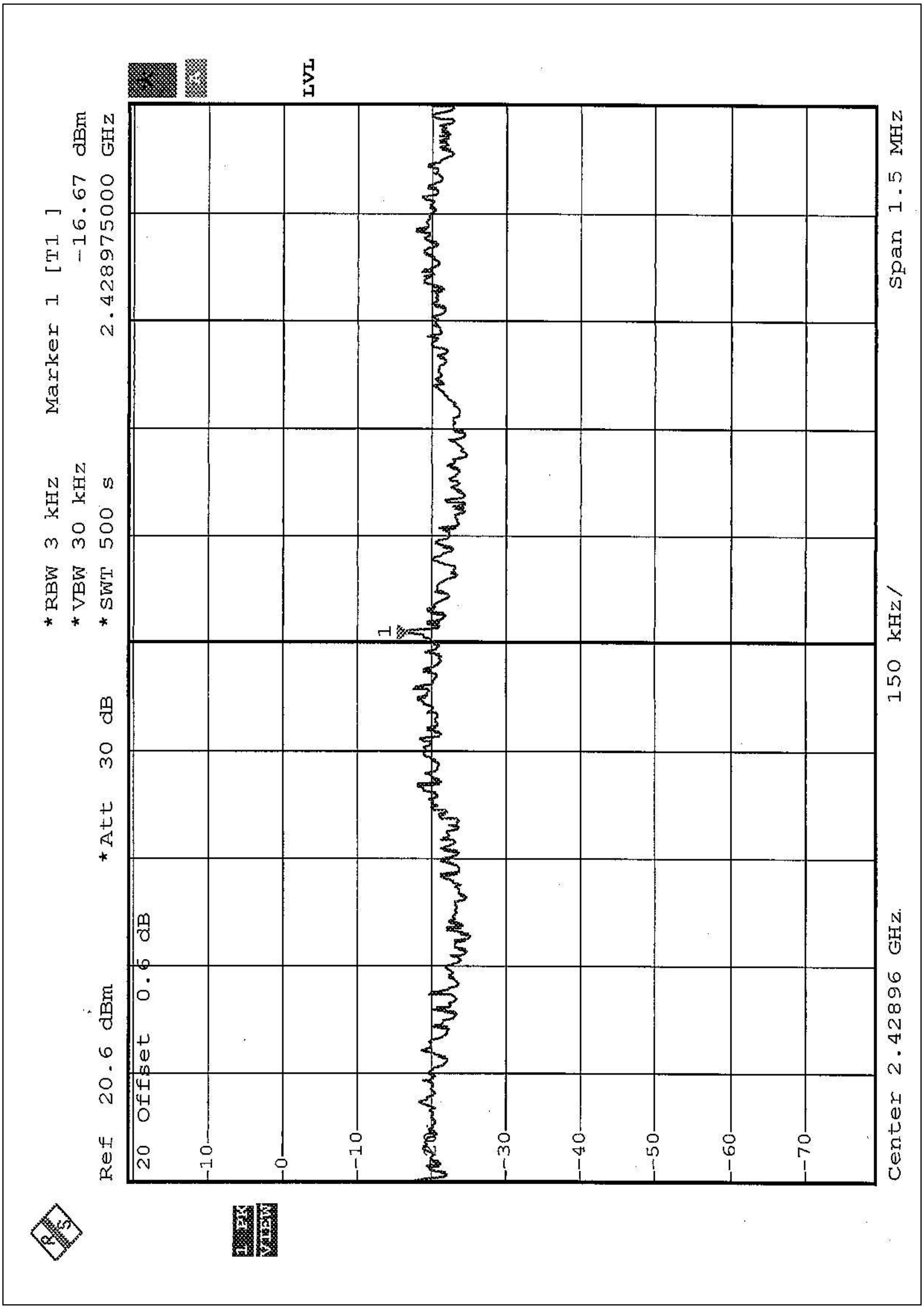
CH11


Ref 20.6 dBm
20 Offset 0.6 dB
*Att 30 dB
*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-14.51 dBm
2.46262400 GHz
LVL
Center 2.462996 GHz
150 kHz/
Span 1.5 MHz

EUT	Wireless 11a+g mini-PCI	MODEL	WMIA-105AG
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	22deg. C, 57%RH, 991hPa
MODE	Turbo Mode	TESTED BY	Ansen Lei

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
6	2437	-16.67	8	PASS

CH6



Ref 20.6 dBm
*Att 30 dB
*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-16.67 dBm
2.428975000 GHz
LVL
20 Offset 0.6 dB
10
0
-10
-20
-30
-40
-50
-60
-70
1
Center 2.42896 GHz
150 kHz/
Span 1.5 MHz

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	8564EC	4208A00660	August 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 1MHz and 300Hz 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 (MODE 1)

The spectrum plots are attached on the following 4 pages (Page 112 –117). D2 line indicates the highest level, and D1 line indicates the 20dB offset below D2. It shows compliance with the requirement in part 15.247(C).

NOTE 1: The band edge emission plot of CCK technique on the following pages show 54.02dB delta between carrier maximum power and local maximum emission in restrict band (2.3872GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 98.62dBuV/m, so the maximum field strength in restrict band is 98.62-54.02=44.60dBuV/m which is under 54dBuV/m limit.

NOTE 2: The band edge emission plot of CCK technique on the following pages show 54.54dB delta between carrier maximum power and local maximum emission in restrict band (2.4878GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 96.84dBuV/m, so the maximum field strength in restrict band is 96.84-54.54=42.30dBuV/m which is under 54dBuV/m limit.

NOTE 3: The band edge emission plot of OFDM technique on the following pages show 49.67dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 88.39dBuV/m, so the maximum field strength in restrict band is 88.39-49.67=38.72dBuV/m which is under 54dBuV/m limit.

NOTE 4: The band edge emission plot of OFDM technique on the following pages show 50.09dB 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 4.2.7 is 90.17dBuV/m, so the maximum field strength in restrict band is 90.17-50.09=40.08dBuV/m which is under 54dBuV/m limit.

NOTE 5: The band edge emission plot of OFDM technique with Turbo mode on the following pages shows 47.93dB delta between carrier maximum power and local maximum emission in restrict band (2.3560GHz). The emission of carrier strength list in the test result of channel 6 at the item 4.2.7 is 90.41dBuV/m, so the maximum field strength in restrict band is 90.41-47.93=42.48dBuV/m which is under 54dBuV/m limit.

NOTE 6: The band edge emission plot of OFDM technique with Turbo mode on the following pages shows 50.45dB 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 6 at the item 4.2.7 is 90.41dBuV/m, so the maximum field strength in restrict band is 90.41-50.45=39.96dBuV/m which is under 54dBuV/m limit.

4.6.7 TEST RESULTS (MODE 2)

The spectrum plots are attached on the following 4 pages (Page 112 –117). D2 line indicates the highest level, and D1 line indicates the 20dB offset below D2. It shows compliance with the requirement in part 15.247(C).

NOTE 1: The band edge emission plot of CCK technique on the following pages show 54.02dB delta between carrier maximum power and local maximum emission in restrict band (2.3872GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.8 is 102.47dBuV/m, so the maximum field strength in restrict band is 102.47-54.02=48.45dBuV/m which is under 54dBuV/m limit.

NOTE 2: The band edge emission plot of CCK technique on the following pages show 54.54dB delta between carrier maximum power and local maximum emission in restrict band (2.4878GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.8 is 100.47dBuV/m, so the maximum field strength in restrict band is100.47-54.54=45.93dBuV/m which is under 54dBuV/m limit.

NOTE 3: The band edge emission plot of OFDM technique on the following pages show 49.67dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.8 is 95.38dBuV/m, so the maximum field strength in restrict band is 95.38-49.67=45.71dBuV/m which is under 54dBuV/m limit.

NOTE 4: The band edge emission plot of OFDM technique on the following pages show 50.09dB 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 96.03dBuV/m, so the maximum field strength in restrict band is 96.03-50.09=45.94dBuV/m which is under 54dBuV/m limit.

NOTE 5: The band edge emission plot of OFDM technique with Turbo mode on the following pages shows 47.93dB delta between carrier maximum power and local maximum emission in restrict band (2.3560GHz). The emission of carrier strength list in the test result of channel 6 at the item 4.2.8 is 92.64dBuV/m, so the maximum field strength in restrict band is 92.64-47.93=44.71dBuV/m which is under 54dBuV/m limit.

NOTE 6: The band edge emission plot of OFDM technique with Turbo mode on the following pages shows 50.45dB 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 6 at the item 4.2.8 is 92.64dBuV/m, so the maximum field strength in restrict band is 92.64-50.45=42.19dBuV/m which is under 54dBuV/m limit.

4.6.8 TEST RESULTS (MODE 4)

The spectrum plots are attached on the following 4 pages (Page 112 –117). D2 line indicates the highest level, and D1 line indicates the 20dB offset below D2. It shows compliance with the requirement in part 15.247(C).

NOTE 1: The band edge emission plot of CCK technique on the following pages show 54.02dB delta between carrier maximum power and local maximum emission in restrict band (2.3872GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.9 is 93.90dBuV/m, so the maximum field strength in restrict band is 93.90-54.02=39.88dBuV/m which is under 54dBuV/m limit.

NOTE 2: The band edge emission plot of CCK technique on the following pages show 54.54dB delta between carrier maximum power and local maximum emission in restrict band (2.4878GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.9 is 93.45dBuV/m, so the maximum field strength in restrict band is 93.45-54.54=38.91dBuV/m which is under 54dBuV/m limit.

NOTE 3: The band edge emission plot of OFDM technique on the following pages show 49.67dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.9 is 83.19dBuV/m, so the maximum field strength in restrict band is 83.19-49.67=33.52dBuV/m which is under 54dBuV/m limit.

NOTE 4: The band edge emission plot of OFDM technique on the following pages show 50.09dB 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 4.2.9 is 89.28dBuV/m, so the maximum field strength in restrict band is 89.28-50.09=39.19dBuV/m which is under 54dBuV/m limit.

NOTE 5: The band edge emission plot of OFDM technique with Turbo mode on the following pages shows 47.93dB delta between carrier maximum power and local maximum emission in restrict band (2.3560GHz). The emission of carrier strength list in the test result of channel 6 at the item 4.2.9 is 87.36dBuV/m, so the maximum field strength in restrict band is 87.36-47.93=39.43dBuV/m which is under 54dBuV/m limit.

NOTE 6: The band edge emission plot of OFDM technique with Turbo mode on the following pages shows 50.45dB 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 6 at the item 4.2.9 is 87.36dBuV/m, so the maximum field strength in restrict band is 87.36-50.45=36.91dBuV/m which is under 54dBuV/m limit.

4.6.9 TEST RESULTS (MODE 5)

The spectrum plots are attached on the following 4 pages (Page 112 –117). D2 line indicates the highest level, and D1 line indicates the 20dB offset below D2. It shows compliance with the requirement in part 15.247(C).

NOTE 1: The band edge emission plot of CCK technique on the following pages shows 54.02dB delta between carrier maximum power and local maximum emission in restrict band (2.3872GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.10 is 103.55dBuV/m, so the maximum field strength in restrict band is 103.55-54.02=49.53dBuV/m which is under 54dBuV/m limit.

NOTE 2: The band edge emission plot of CCK technique on the following pages show 54.54dB delta between carrier maximum power and local maximum emission in restrict band (2.4878GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.10 is 102.19dBuV/m, so the maximum field strength in restrict band is 102.19-54.54=47.65dBuV/m which is under 54dBuV/m limit.

NOTE 3: The band edge emission plot of OFDM technique on the following pages show 49.67dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.10 is 89.48dBuV/m, so the maximum field strength in restrict band is 89.48-49.67=39.81dBuV/m which is under 54dBuV/m limit.

NOTE 4: The band edge emission plot of OFDM technique on the following pages show 50.09dB 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 4.2.10 is 92.12dBuV/m, so the maximum field strength in restrict band is 92.12-50.09=42.03dBuV/m which is under 54dBuV/m limit.

NOTE 5: The band edge emission plot of OFDM technique with Turbo mode on the following pages shows 47.93dB delta between carrier maximum power and local maximum emission in restrict band (2.3560GHz). The emission of carrier strength list in the test result of channel 6 at the item 4.2.10 is 94.62dBuV/m, so the maximum field strength in restrict band is 94.62-47.93=46.69dBuV/m which is under 54dBuV/m limit.

NOTE 6: The band edge emission plot of OFDM technique with Turbo mode on the following pages shows 50.45dB 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 6 at the item 4.2.10 is 94.62dBuV/m, so the maximum field strength in restrict band is 94.62-50.45=44.17dBuV/m which is under 54dBuV/m limit.

4.6.10 TEST RESULTS (MODE 6)

The spectrum plots are attached on the following 4 pages (Page 112 –117). D2 line indicates the highest level, and D1 line indicates the 20dB offset below D2. It shows compliance with the requirement in part 15.247(C).

NOTE 1: The band edge emission plot of CCK technique on the following pages shows 54.02dB delta between carrier maximum power and local maximum emission in restrict band (2.3872GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.11 is 95.97dBuV/m, so the maximum field strength in restrict band is 95.97-54.02=41.95dBuV/m which is under 54dBuV/m limit.

NOTE 2: The band edge emission plot of CCK technique on the following pages shows 54.54dB delta between carrier maximum power and local maximum emission in restrict band (2.4878GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.11 is 96.20dBuV/m, so the maximum field strength in restrict band is 96.20-54.54=41.66dBuV/m which is under 54dBuV/m limit.

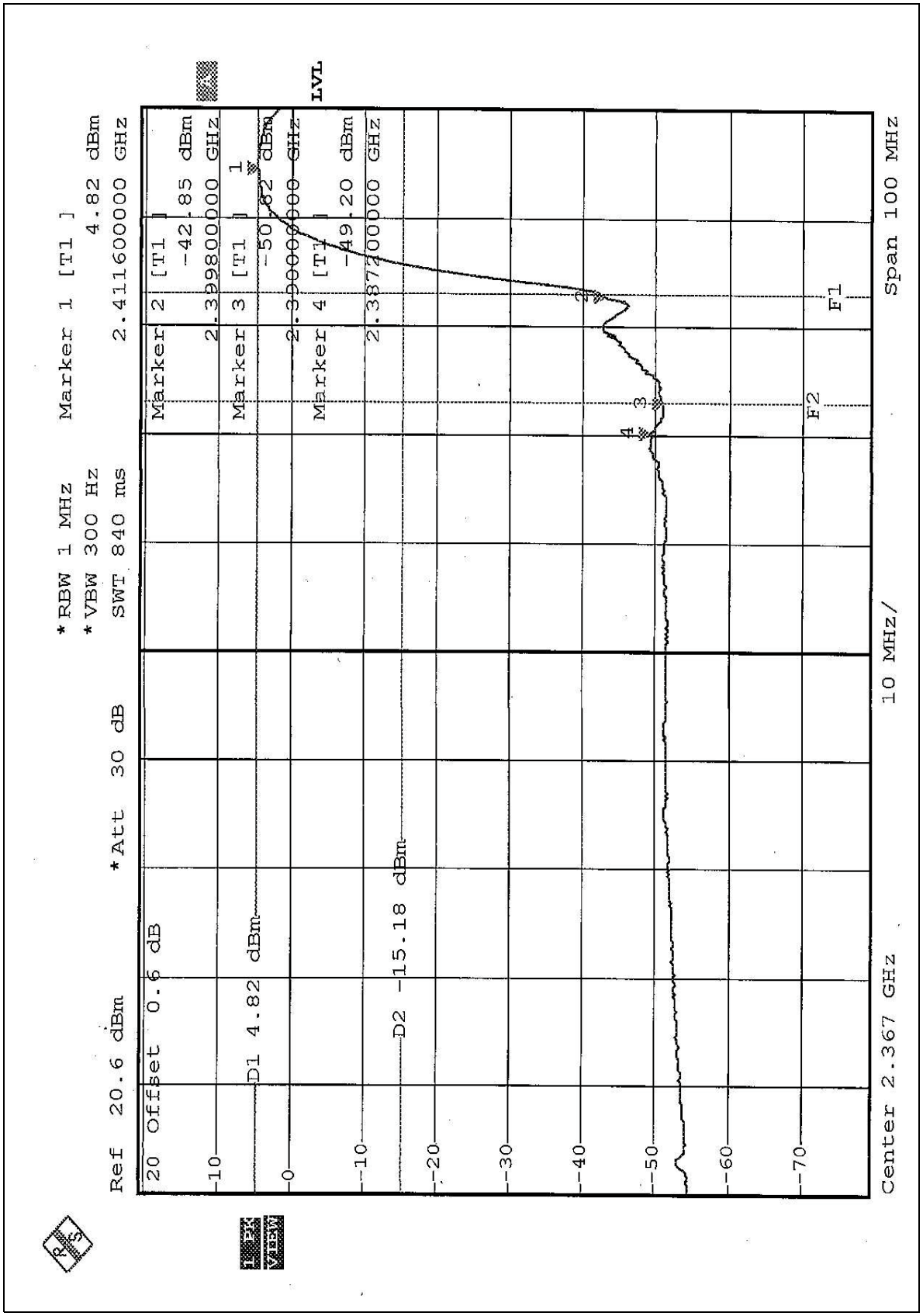
NOTE 3: The band edge emission plot of OFDM technique on the following pages show 49.67dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.11 is 88.27dBuV/m, so the maximum field strength in restrict band is 88.27-49.67=38.60dBuV/m which is under 54dBuV/m limit.

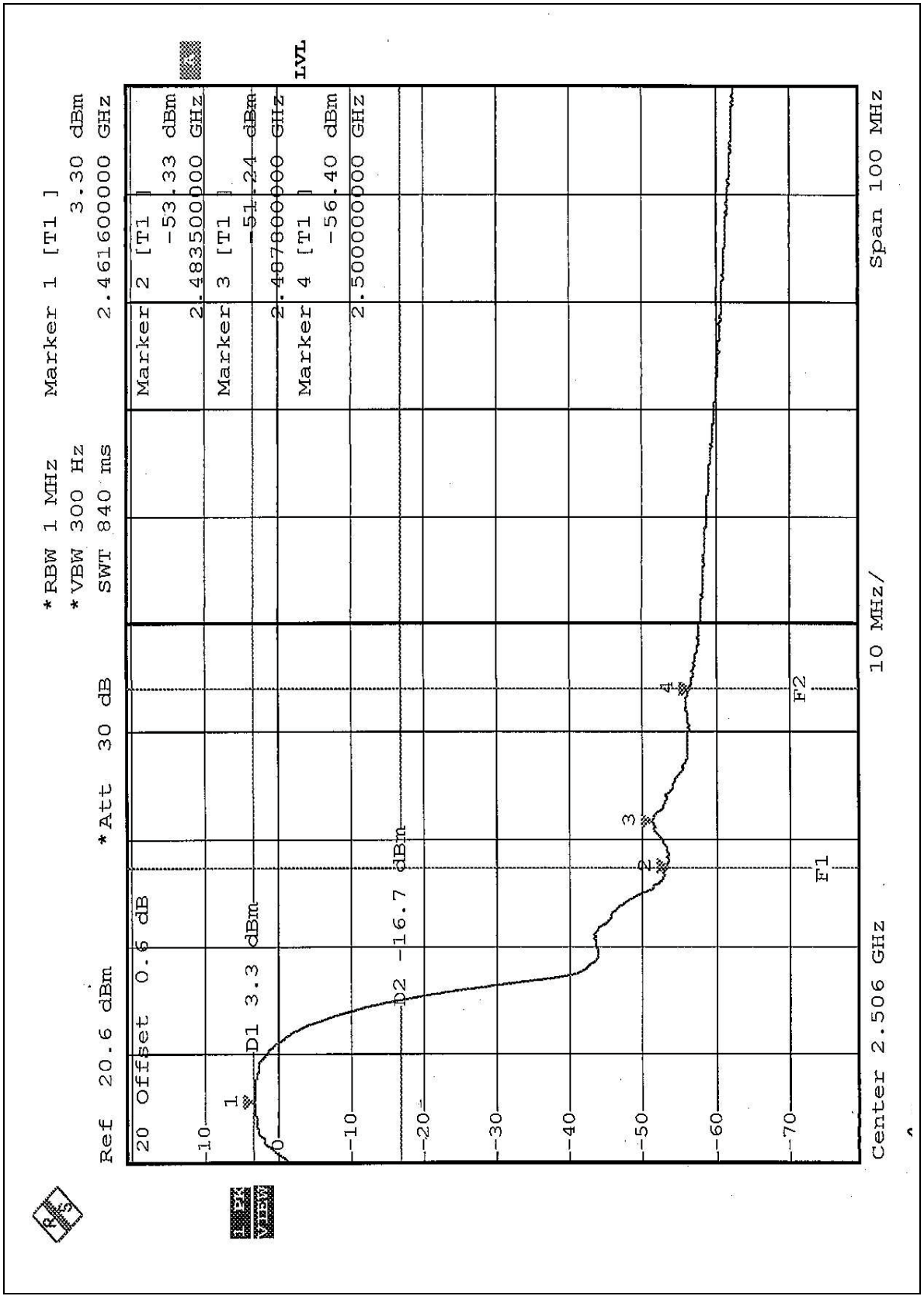
NOTE 4: The band edge emission plot of OFDM technique on the following pages show 50.09dB delta between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.11 is 89.70dBuV/m, so the maximum field strength in restrict band is 89.70-50.09=39.61dBuV/m which is under 54dBuV/m limit.

NOTE 5: The band edge emission plot of OFDM technique with Turbo mode on the following pages shows 47.93dB delta between carrier maximum power and local maximum emission in restrict band (2.3560GHz). The emission of carrier strength list in the test result of channel 6 at the item 4.2.11 is 87.40dBuV/m, so the maximum field strength in restrict band is 87.40-47.93=39.47dBuV/m which is under 54dBuV/m limit.

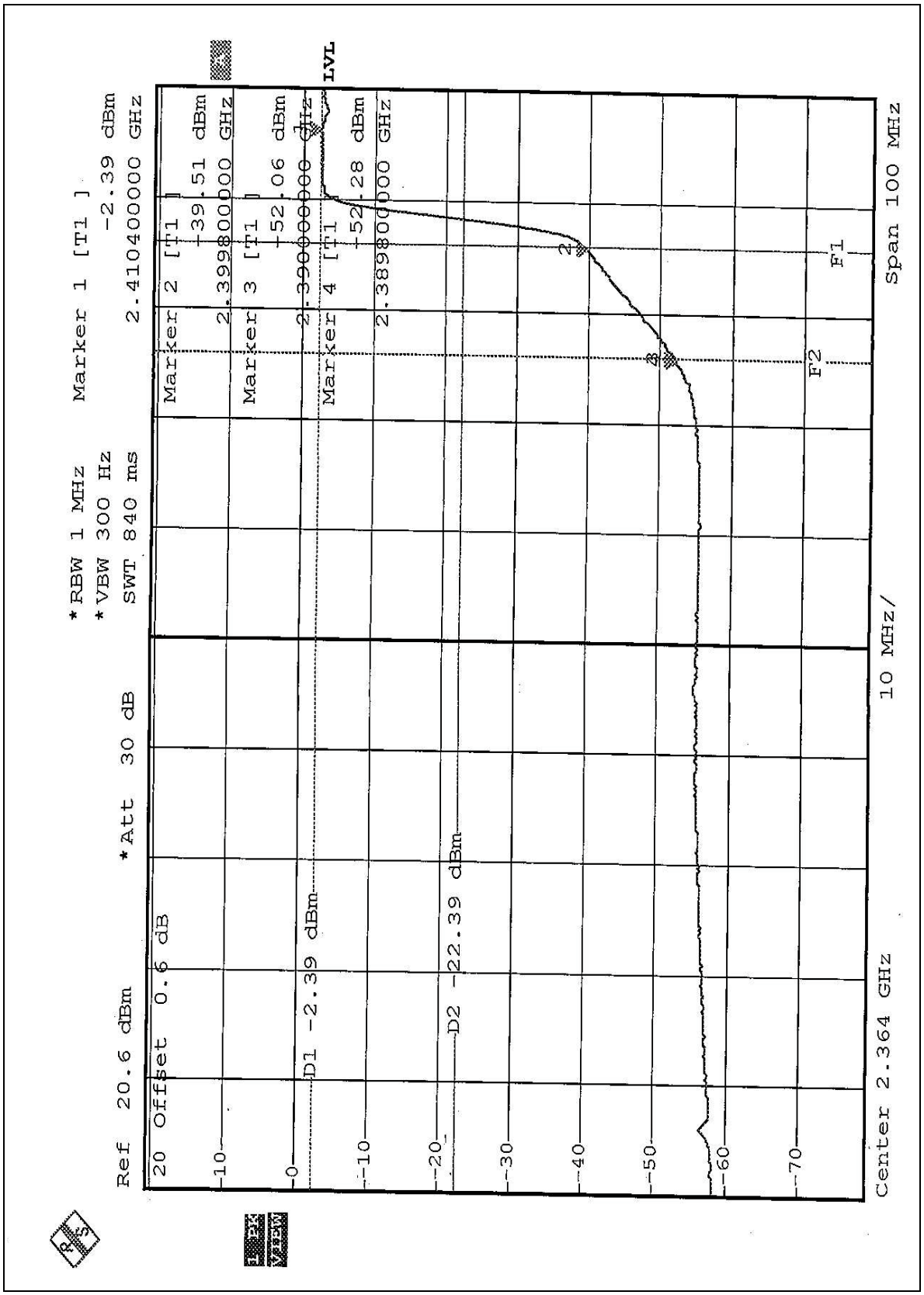
NOTE 6: The band edge emission plot of OFDM technique with Turbo mode on the following pages shows 50.45dB delta between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 6 at the item 4.2.11 is 87.40dBuV/m, so the maximum field strength in restrict band is 87.40-50.45=36.95dBuV/m which is under 54dBuV/m limit.

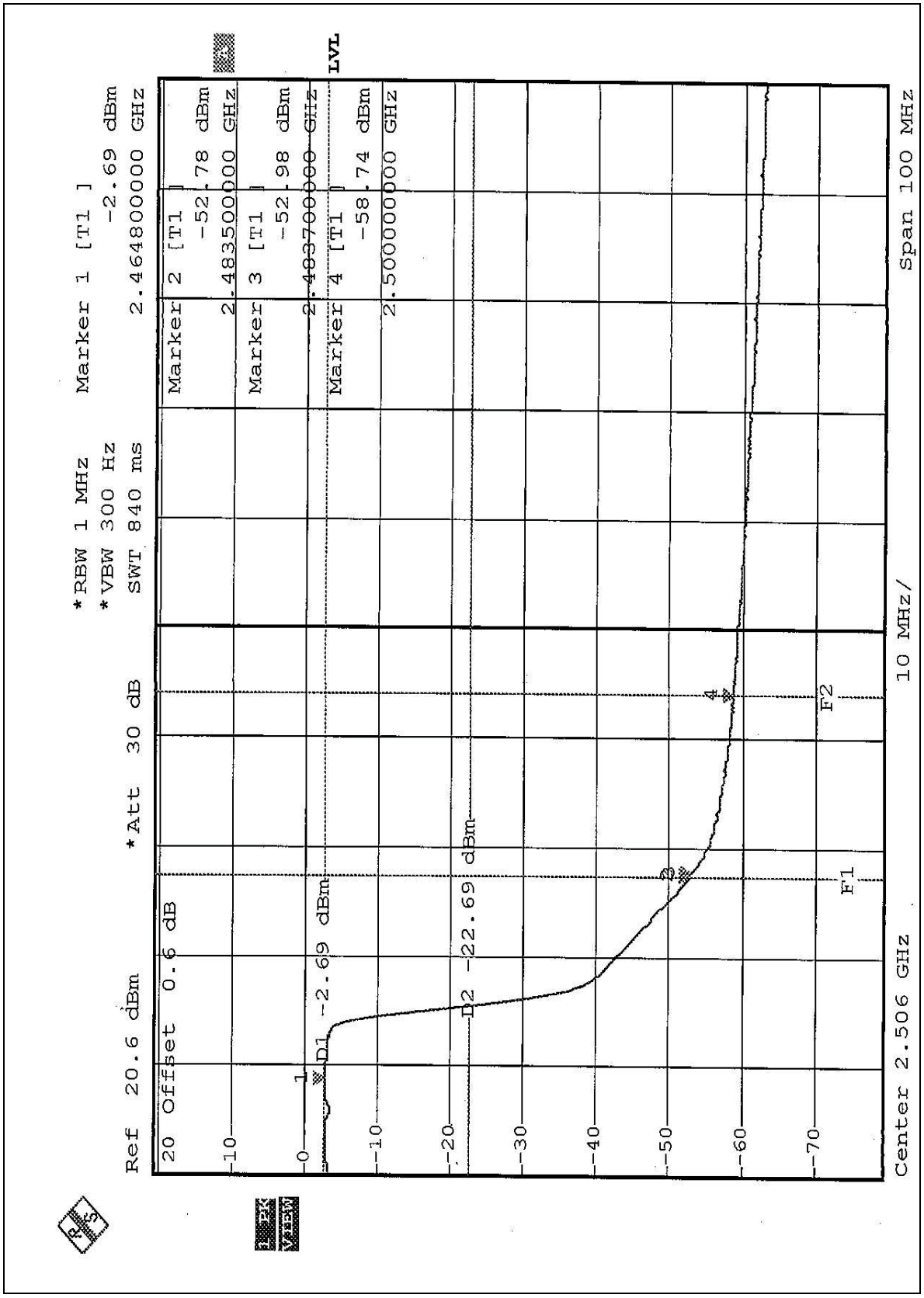
CCK


Ref 20.6 dBm
*Att 30 dB
*RBW 1 MHz
*VBW 300 Hz
SWT 840 ms
Marker 1 [T1]
4.82 dBm
2.411600000 GHz
Offset 0.6 dB
D1 4.82 dBm
D2 -15.18 dBm
Marker 2 [T1]
-42.85 dBm
2.399800000 GHz
Marker 3 [T1]
-50.82 dBm
2.390000000 GHz
Marker 4 [T1]
-49.20 dBm
2.387400000 GHz
Center 2.367 GHz
10 MHz/
Span 100 MHz
F1
F2

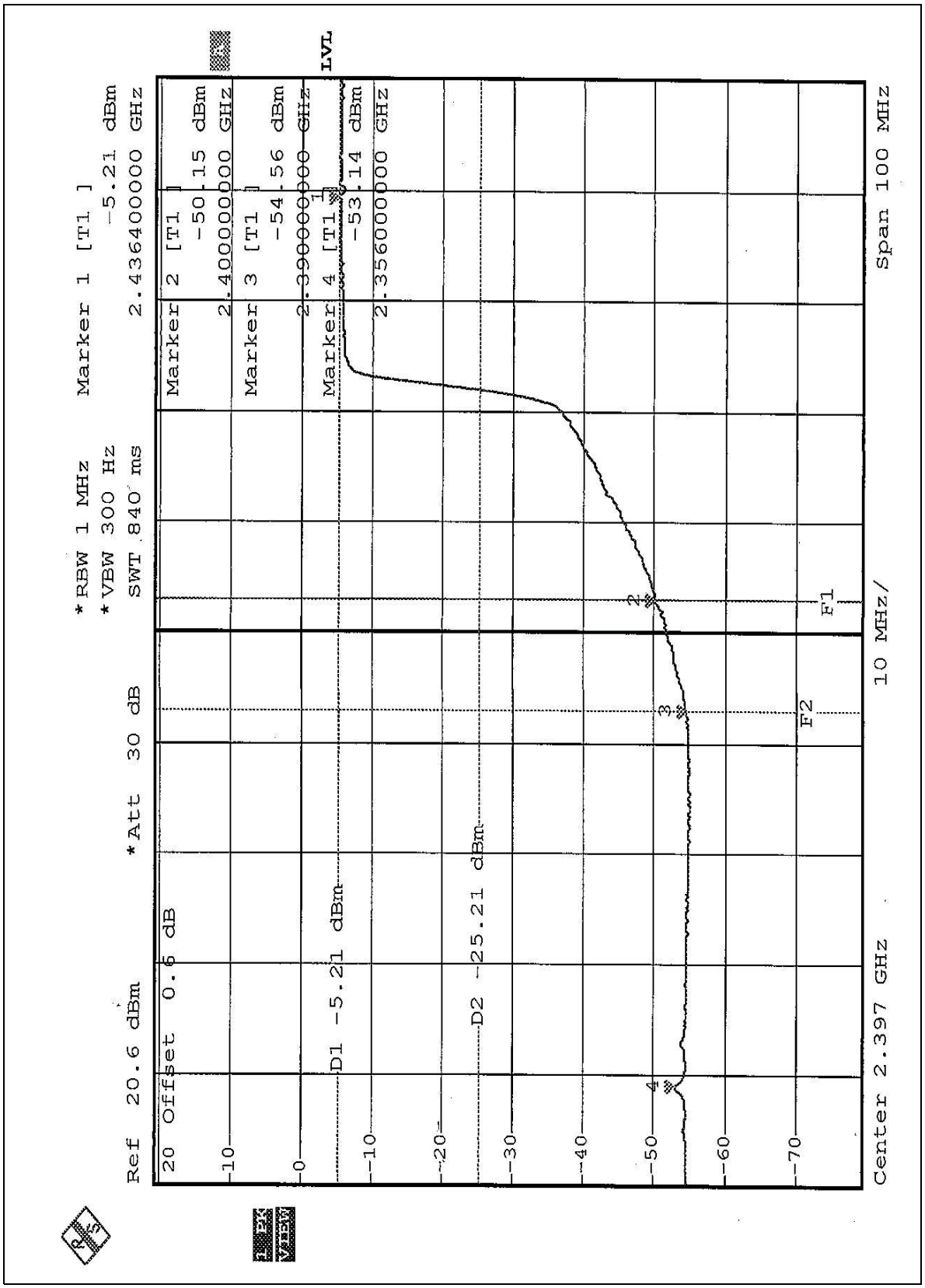

*RBW 1 MHz
*VBW 300 Hz
SWT 840 ms
Marker 1 [T1]
3.30 dBm
2.46160000 GHz
Marker 2 [T1]
-53.33 dBm
2.48350000 GHz
Marker 3 [T1]
-51.24 dBm
2.48780000 GHz
Marker 4 [T1]
-56.40 dBm
2.50000000 GHz
LVL
Ref 20.6 dBm
20 Offset 0.6 dB
*Att 30 dB
D1 3.3 dBm
D2 -16.7 dBm
F1
F2
Center 2.506 GHz
Span 100 MHz
10 MHz/

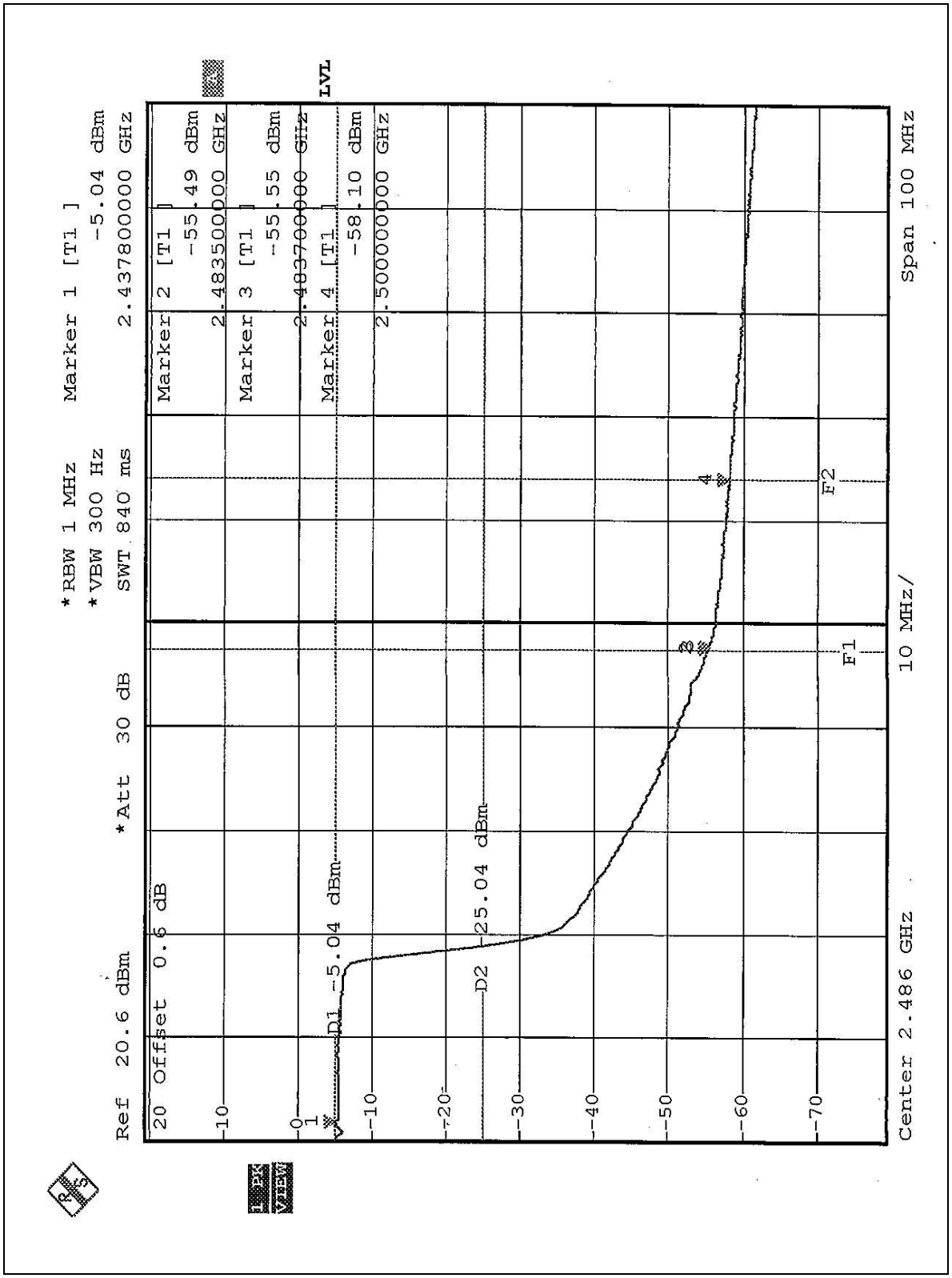
OFDM


Ref 20.6 dBm
20 Offset 0.6 dB
*RBW 1 MHz
*VBW 300 Hz
*Att 30 dB
SWT 840 ms
Marker 1 [T1]
-2.39 dBm
2.410400000 GHz
Marker 2 [T1]
+39.51 dBm
2.399800000 GHz
Marker 3 [T1]
+52.06 dBm
2.390000000 GHz
Marker 4 [T1]
+52.28 dBm
2.389800000 GHz
LVL
D1 -2.39 dBm
D2 -22.39 dBm
F1
F2
Center 2.364 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 300 Hz
SWT 840 ms
Marker 1 [T1]
-2.69 dBm
2.464800000 GHz
Marker 2 [T1]
-52.78 dBm
2.483500000 GHz
Marker 3 [T1]
-52.98 dBm
2.483700000 GHz
Marker 4 [T1]
-58.74 dBm
2.500000000 GHz
Ref 20.6 dBm
20 Offset 0.6 dB
Att 30 dB
D1 -2.69 dBm
D2 -22.69 dBm
F1
F2
Center 2.506 GHz
10 MHz/
Span 100 MHz
PK
VBW

Turbo


Ref 20.6 dBm
20 Offset 0.6 dB
*RBW 1 MHz
*VBW 300 Hz
*Att 30 dB
SWT 840 ms
Marker 1 [T1]
-5.21 dBm
2.436400000 GHz
Marker 2 [T1]
-50.15 dBm
2.400000000 GHz
Marker 3 [T1]
-54.56 dBm
2.390000000 GHz
Marker 4 [T1]
-53.14 dBm
2.356000000 GHz
D1 -5.21 dBm
D2 -25.21 dBm
F1
F2
Center 2.397 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 300 Hz
SWT 840 ms
Marker 1 [T1]
-5.04 dBm
2.437800000 GHz
Marker 2 [T1]
-55.49 dBm
2.483500000 GHz
Marker 3 [T1]
-55.55 dBm
2.403700000 GHz
Marker 4 [T1]
-58.10 dBm
2.500000000 GHz
Ref 20.6 dBm
Offset 0.6 dB
Att 30 dB
D1 -5.04 dBm
D2 -25.04 dBm
F1
F2
Center 2.486 GHz
10 MHz/
Span 100 MHz

4.7 ANTENNA REQUIREMENT

4.7.1 STANDARD APPLICABLE

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

4.7.2 ANTENNA CONNECTED CONSTRUCTION

The antenna used in this product is Dipole antenna, Inverted-F antenna, and PCB antenna with UFL antenna connector. The maximum Gain of the antenna is 1.63dBi.

5 TEST TYPES AND RESULTS (FOR PART 802.11a)

5.1 CONDUCTED EMISSION MEASUREMENT

5.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

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

NOTE:
1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 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.

5.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
ROHDE & SCHWARZ Test Receiver	ESCS 30	838251/021	Jan. 20, 2004
ROHDE & SCHWARZ Artificial Mains Network (for EUT)	ESH3-Z5	100218	Dec. 09, 2004
ROHDE & SCHWARZ Artificial Mains Network (for peripherals)	ESH3-Z5	100219	Dec. 09, 2004
ROHDE & SCHWARZ Artificial Mains Network (for peripherals)	ESH3-Z5	100220	Dec. 09, 2004
*ROHDE & SCHWARZ 4-wire ISN	ENY41	837032/016	Nov. 19 2004
*ROHDE & SCHWARZ 2-wire ISN	ENY22	837497/016	Nov. 19 2004
Software	Cond-V2M3	NA	NA
RF cable (JYEBAO)	5D-FB	Cable-C10.01	May 01, 2004
SUHNER Terminator (For ROHDE & SCHWARZ LISN)	65BNC-5001	E1-010770	Mar. 24, 2004
SUHNER Terminator (For ROHDE & SCHWARZ LISN)	65BNC-5001	E1-010773	Apr. 06, 2004

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. "*": These equipment are used for conducted telecom port test only (if tested).
3. The test was performed in ADT Shielded Room No. 10.
4. The VCCI Site Registration No. is C-1312.

5.1.3 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.

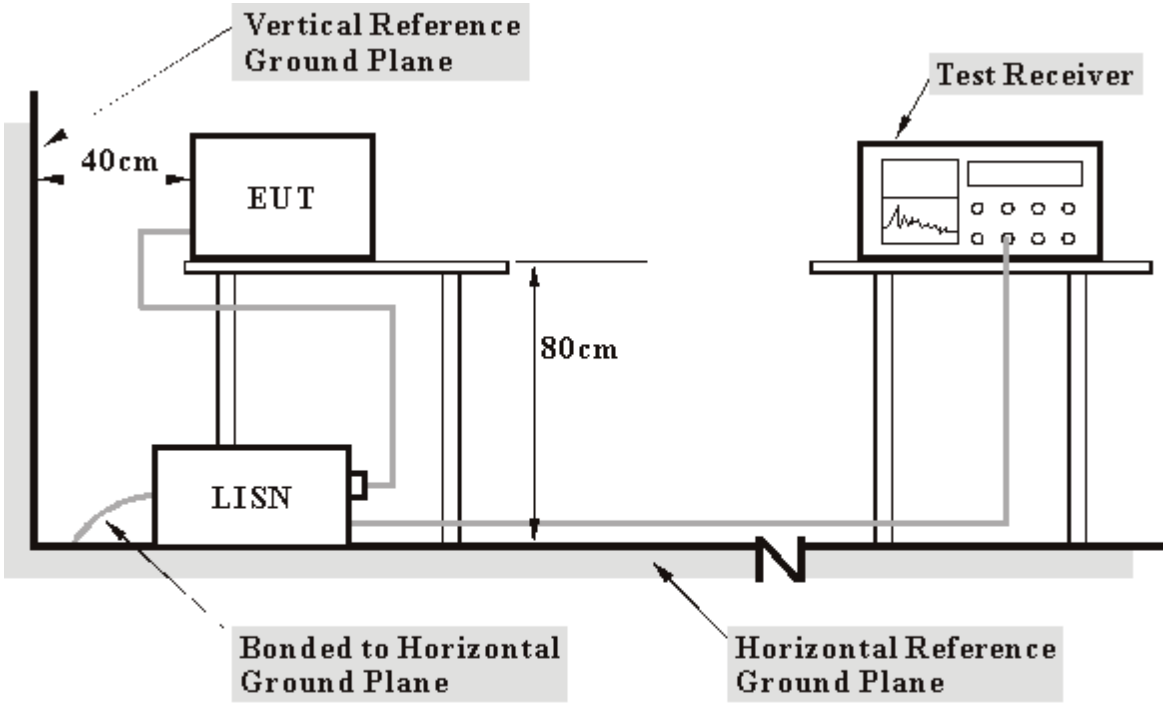
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

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

5.1.4 DEVIATION FROM TEST STANDARD

No deviation

5.1.5 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.

5.1.6 EUT OPERATING CONDITIONS

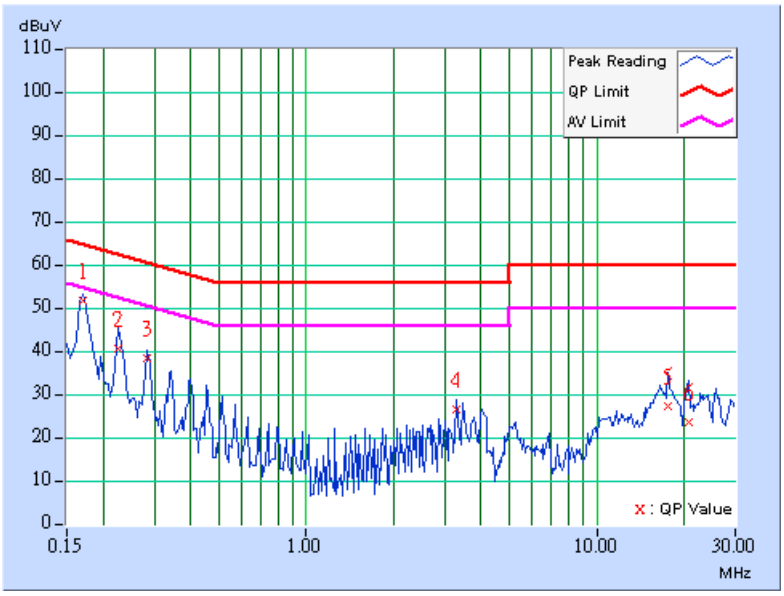
Same as 4.1.6.

5.1.7 TEST RESULTS

EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
		6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 991hPa	**TESTED BY**: Steven Lu	

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	**0.170**	**0.06**	**51.27**	**-**	**51.33**	**-**	**64.98**	**54.98**	**-13.66**	**-**
2	0.224	0.06	40.24	-	40.30	-	62.66	52.66	-22.36	-
3	0.283	0.06	37.82	-	37.88	-	60.73	50.73	-22.85	-
4	3.305	0.21	26.15	-	26.36	-	56.00	46.00	-29.64	-
5	17.609	0.60	26.84	-	27.44	-	60.00	50.00	-32.56	-
6	20.832	0.68	23.04	-	23.72	-	60.00	50.00	-36.28	-

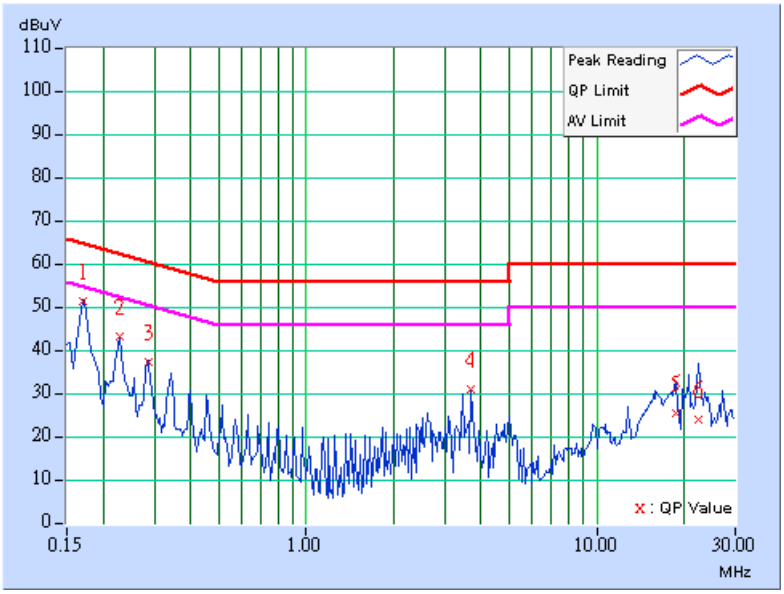
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
		6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 991hPa	**TESTED BY**: Steven Lu	

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.170	0.05	50.95	-	51.00	-	64.98	54.98	-13.98	-
2	0.228	0.05	42.61	-	42.66	-	62.52	52.52	-19.86	-
3	0.287	0.05	36.72	-	36.77	-	60.62	50.62	-23.85	-
4	3.707	0.20	30.58	-	30.78	-	56.00	46.00	-25.22	-
5	18.664	0.50	24.80	-	25.30	-	60.00	50.00	-34.70	-
6	22.270	0.61	23.62	-	24.23	-	60.00	50.00	-35.77	-

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.



5.2 RADIATED EMISSION MEASUREMENT

5.2.1 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.

5.2.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

MODE 1

Frequencies (MHz)	**EIRP Limit (dBm)**	**Equivalent Field Strength at 3m (dBμV/m)** *note 3
5150~5250	-27	69.77
5250~5350	-27	69.77
5725~5825	-27 *note 1	69.77
	-17 *note 2	79.77

MODE 2

Frequencies (MHz)	**EIRP Limit (dBm)**	**Equivalent Field Strength at 3m (dBμV/m)** *note 3
5150~5250	-27	69.62
5250~5350	-27	69.62
5725~5825	-27 *note 1	69.62
	-17 *note 2	79.62

MODE 3

Frequencies (MHz)	**EIRP Limit (dBm)**	**Equivalent Field Strength at 3m (dBμV/m)** *note 3
5150~5250	-27	71.05
5250~5350	-27	71.05
5725~5825	-27 *note 1	71.05
	-17 *note 2	81.05

MODE 4

Frequencies (MHz)	**EIRP Limit (dBm)**	**Equivalent Field Strength at 3m (dBμV/m)** *note 3
5150~5250	-27	71.30
5250~5350	-27	71.30
5725~5825	-27 *note 1	71.30
	-17 *note 2	81.30

MODE 6

Frequencies (MHz)	EIRP Limit (dBm)	Equivalent Field Strength at 3m (dBμV/m) *note 3
5150~5250	-27	68.30
5250~5350	-27	68.30
5725~5825	-27 *note 1	68.30
	-17 *note 2	78.30

NOTE:

1. For frequencies 10MHz or greater above or below the band edge.
2. All emissions within the frequency range from the band edge to 10MHz above or below the band edge.
3. The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength

$$E=\frac{1000000\sqrt{30P}}{3}\quad \mu V/m, \text{ where P is the eirp (Watts)}$$

5.2.3 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
* HP Spectrum Analyzer	8590L	3544A01176	Jun. 10, 2004
* HP Preamplifier	8447D	2944A08485	May 01, 2004
* HP Spectrum Analyzer	8593E	3926A04191	
* HP Preamplifier	8449B	3008A01292	Aug. 13, 2004
ROHDE & SCHWARZ TEST RECEIVER	ESI7	838496/016	Feb. 23, 2004
* ROHDE & SCHWARZ TEST RECEIVER	ESMI	839013/007 839379/002	Feb. 13, 2004
SCHAFFNER Tunable Dipole Antenna SCHWARZBECK Tunable Dipole Antenna	VHBA 9123 UHA 9105	459 977	Jun. 26, 2004
* CHASE BILOG Antenna	CBL6112A	2221	July 26, 2004
* SCHWARZBECK Horn Antenna	BBHA9120-D1	D130	Jun. 30, 2004
* EMCO Turn Table	1060	1115	NA
* CHANCE Tower	CM-AT40	CM-A010	NA
* Software	ADT_Radiated_V5.14	NA	NA
* ANRITSU RF Switches	MP59B	M35046	Jan. 05, 2004
* TIMES RF cable	LMR-600	CABLE-ST5-01	Jan. 05, 2004

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. "*" = These equipment are used for the final measurement.
3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
4. The test was performed in ADT Open Site No. 5.
5. The VCCI Site Registration No. is R-1039.

5.2.4 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 10dB 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 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

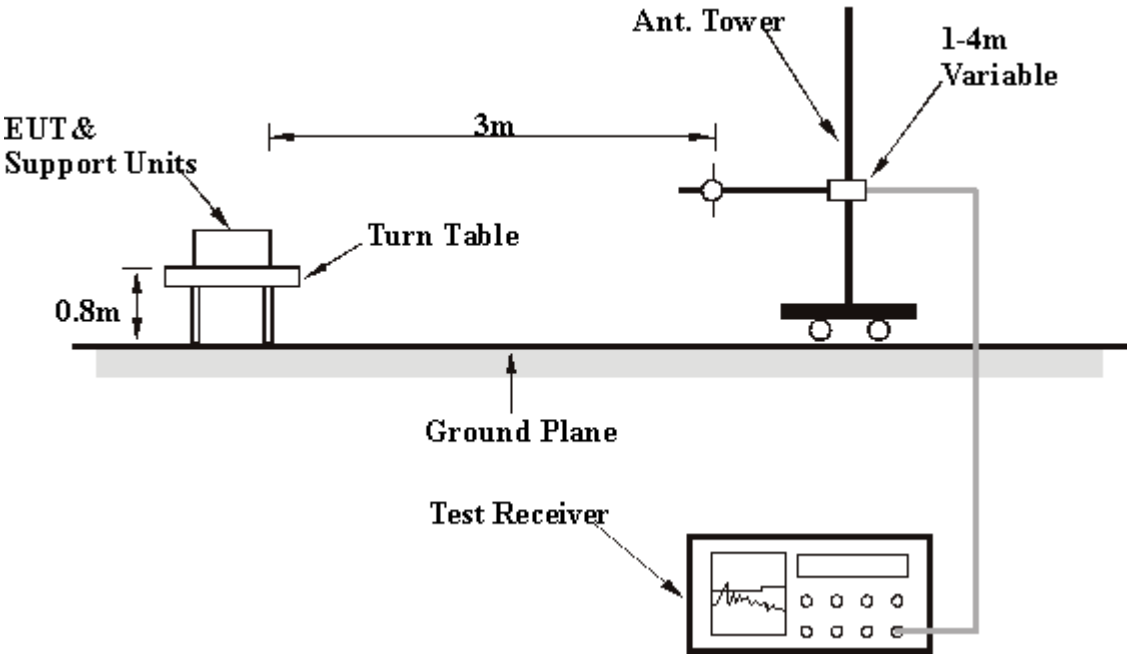
NOTE:

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 10 Hz for Average detection (AV) at frequency above 1GHz.

5.2.5 DEVIATION FROM TEST STANDARD

No deviation

5.2.6 TEST SETUP



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

5.2.7 EUT OPERATING CONDITIONS

Same as 4.1.6.

5.2.8 TEST RESULTS (MODE 1)

EUT	Wireless 11a+g mini-PCI	**MODEL**	WMIA-105AG
FREQUENCY RANGE	Below 1000MHz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	23deg. C, 80%RH, 991hPa	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY	Hardaway Lee		

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	50.11	33.64 QP	40.00	-6.36	1.59 H	107	24.38	9.26
2	67.05	33.32 QP	40.00	-6.68	3.08 H	195	26.04	7.28
3	100.33	39.79 QP	43.50	-3.71	2.91 H	356	28.24	11.56
4	133.07	37.47 QP	43.50	-6.03	2.26 H	192	25.07	12.40
5	166.61	37.83 QP	43.50	-5.67	1.77 H	184	27.21	10.62
6	200.50	40.32 QP	43.50	-3.18	1.59 H	132	29.53	10.79
7	225.45	35.82 QP	46.00	-10.18	1.52 H	23	23.61	12.21
8	266.56	39.20 QP	46.00	-6.80	1.54 H	261	24.05	15.15
9	274.99	31.61 QP	46.00	-14.39	1.52 H	81	16.36	15.25
10	300.76	35.13 QP	46.00	-10.87	1.29 H	207	19.46	15.67
11	325.09	34.21 QP	46.00	-11.79	1.52 H	117	18.18	16.03
12	332.71	38.01 QP	46.00	-7.99	1.09 H	244	21.87	16.14
13	374.94	40.63 QP	46.00	-5.37	2.01 H	314	23.31	17.32
14	398.87	31.76 QP	46.00	-14.24	1.89 H	212	13.56	18.20
15	432.06	36.53 QP	46.00	-9.47	1.00 H	297	17.89	18.64
16	498.42	37.99 QP	46.00	-8.01	1.07 H	356	17.90	20.09
17	501.24	38.68 QP	46.00	-7.32	1.97 H	119	18.53	20.15
18	565.82	35.91 QP	46.00	-10.09	3.04 H	210	14.61	21.30
19	595.72	42.36 QP	46.00	-3.64	1.59 H	192	20.20	22.16

NOTE:

1. Emission level = Raw value + Correction Factor
2. Correction Factor = Ant. Factor + Cable loss
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.