FCC TEST REPORT

REPORT NO.: RF930921L15

MODEL NO.: WMIB-114G

RECEIVED: Sep. 22, 2004

TESTED: Sep. 22 ~ Oct. 05, 2004

APPLICANT: Gemtek Technology Co., Ltd.

ADDRESS: No.1, Jen Ai Road, Hsinchu Industrial Park, Hukou Hsinchu, Taiwan, R.O.C. 303

ISSUED BY: Advance Data Technology Corporation

LAB ADDRESS: No. 47, 14th Ling, Chia Pau Tsuen, Lin Kou Hsiang 244, Taipei Hsien, Taiwan, R.O.C.

TEST LOCATION: No. 19, Hwa Ya 2nd Rd., Wen Hwa Tsuen, Kwei Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

ACCREDITED
NO. 2177-01

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1 CERTIFICATION

PRODUCT :	Wireless 802.11g mini PCI Card
MODEL NO. :	WMIB-114G
BRAND :	Arima
APPLICANT :	Gemtek Technology Co., Ltd.
TESTED :	Sep. 22 ~ Oct. 05, 2004
TEST SAMPLE :	ENGINEERING SAMPLE
STANDARDS :	FCC Part 15, Subpart C (Section 15.247), ANSI C63.4-2003

The above equipment has been tested by **Advance Data Technology Corporation**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : Windy Chou , **DATE:** Oct. 07, 2004
(Windy Chou)

TECHNICAL ACCEPTANCE : Gary Chang , **DATE:** Oct. 07, 2004
Responsible for RF (Gary Chang)

APPROVED BY : , **DATE:** Oct. 07, 2004
(Cody Chang / Deputy Manager)

2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 15, Subpart C			
Standard Section	**Test Type and Limit**	**Result**	**REMARK**
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is –17.72dB at 0.189MHz.
15.247(a)(2)	Spectrum Bandwidth of a Direct Sequence Spread Spectrum System Limit : min. 500kHz	PASS	Meet the requirement of limit.
15.247(b)	Maximum Peak Output Power Limit: max. 30dBm	PASS	Meet the requirement of limit.
15.247(c)	Transmitter Radiated Emissions Limit: Table 15.209	PASS	Meet the requirement of limit. Minimum passing margin is –3.95dB at 72.66MHz.
15.247(d)	Power Spectral Density Limit: max. 8dBm	PASS	Meet the requirement of limit.
15.247(c)	Band Edge Measurement Limit: 20 dB less than the peak value of fundamental frequency	PASS	Meet the requirement of limit.

2.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4:

Measurement	Frequency	Uncertainty
Conducted emissions	9k~30MHz	2.44 dB
Radiated emissions	30MHz ~ 200MHz	3.63 dB
	200MHz ~1000MHz	3.65 dB
	1GHz ~ 18GHz	2.20 dB
	18GHz ~ 40GHz	1.88 dB

3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Wireless 802.11g mini PCI Card
MODEL NO.	WMIB-114G
POWER SUPPLY	3.3Vdc from host equipment
MODULATION	BPSK, QPSK, CCK,16QAM, 64QAM
RADIO TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	802.11b: 11/5.5/2/1Mbps 802.11g: 54/48/36/24/18/12/9/6Mbps
FREQUENCY RANGE	2412MHz ~ 2462MHz
CHANNEL SPACING	5MHz
NUMBER OF CHANNEL	11
MAXIMUM OUTPUT POWER	51.05mW
ANTENNA TYPE	Refer to NOTE 2
DATA CABLE	NA
I/O PORTS	NA
ASSOCIATED DEVICES	NA

NOTE:

1. The EUT, operates in the 2.4GHz frequency range, lets you connect IEEE 802.11g or IEEE 802.11b devices to the network. With its high-speed data transmissions of up to 54Mbps
2. The EUT have eleven combinations of antenna type. Please refer to following table

Item	Antenna Type	Model No.	Brand	Gain (dBi)
1	Inverted-F	AAFQ5050001	HIGH TEK	2.86
2	Inverted-F	AAFQ5050002	WELL GREEN Tech	0.39
3	Inverted-F	B0185050000014	HIGH TEK	2.24
4	Inverted-F	B0185050000009	WELL GREEN Tech	0.41
5	Inverted-F	AAFJ5050002	HIGH TEK	2.45
6	Inverted-F	AAG95050001	WGT	1.50
7	Inverted-F	AAFJ5050001	WELL GREEN Tech	0.07
8	Inverted-F	AAHQ5050001	WELL GREEN Tech	2.56
9	Inverted-F	AAHQ5050001	High-TEK	2.56
10	Inverted-F	AAFA5050003	WGT	-0.41
11	Inverted-F	AAFA5020004	Wha Yu	2.32
12	Inverted-F	AACR5020001	WELL GREEN Tech	0.89
13	Inverted-F	AAFT5020001	WELL GREEN Tech	1.95

*In this report, we have chose item 1 for the test.

3. The above EUT information was declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 DESCRIPTION OF TEST MODES

Eleven channels are provided to this EUT.

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

NOTE:

1. Below 1 GHz, the channel 1, 6, and 11 were pre-tested in chamber. The channel 11, worst case one, was chosen for final test.
2. Above 1 GHz, the channel 1, 6, and 11 were tested individually.
3. From our experience and technical viewpoint, we have chosen data rates 11Mbps for CCK technique and 6Mbps for OFDM technique, as the worst cases for the test among other data rates.
4. There are two test results presented in the following sections: The test result A is for CCK technique and the test result B is for OFDM technique.

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a Wireless 802.11g mini PCI Card. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC Part 15, Subpart C. (15.247)
ANSI C63.4-2003

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

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

3.4 DESCRIPTION OF SUPPORT UNITS

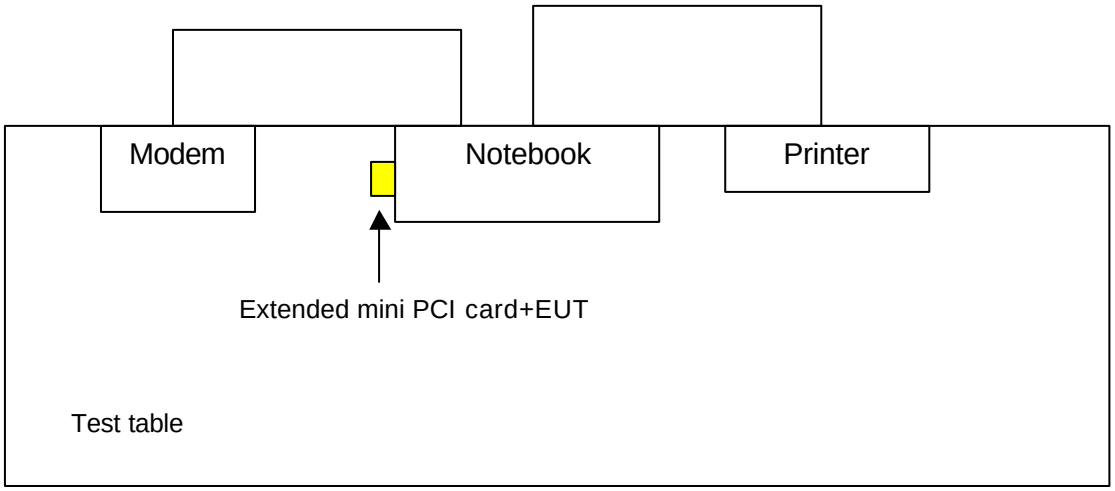
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK COMPUTER	DELL	PP05L	16484462992	E2K24CLNS
2	PRINTER	EPSON	LQ-300+	DCGY054147	FCC DoC Approved
3	MODEM	ACEEX	1414V/3	0401008269	IFAXDM1414

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA
2	1.2 shielded cable without core
3	1.2 shielded cable without core

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

3.5 CONFIGURATION OF SYSTEM UNDER TEST



4 TEST TYPES AND RESULTS

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

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

NOTE:
1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.
3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESCS30	100291	Dec. 12, 2004
RF signal cable Woken	5D-FB	Cable-HYC01-01	Mar. 02, 2005
LISN ROHDE & SCHWARZ	ESH3-Z5	100312	Mar. 03, 2005
LISN ROHDE & SCHWARZ	ESH2-Z5	100104	Mar. 02, 2005
Software ADT	ADT_Cond_V3	NA	NA

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Shielded Room 1.
3. The VCCI Site Registration No. is C-2040.

4.1.3 TEST PROCEDURES

a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.

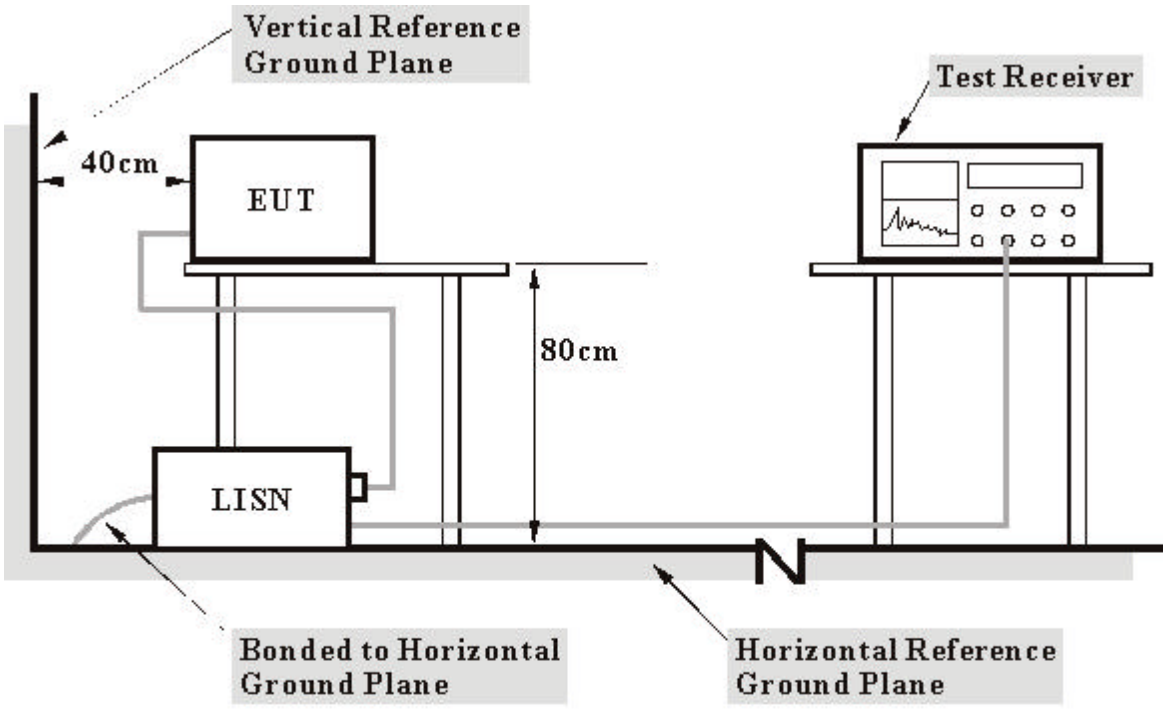
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

c. The frequency range from 150kHz to 30MHz was searched. Emission levels under Limit - 20dB was not recorded.

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 TEST SETUP



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

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

4.1.6 EUT OPERATING CONDITIONS

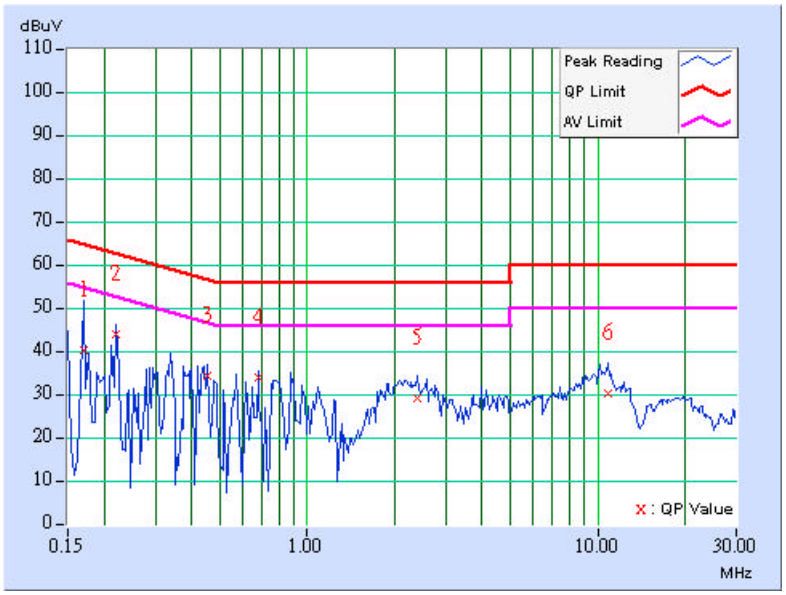
a. Connected the EUT and extended card into a notebook system placed on a testing table.
b. The notebook system ran a test program (provided by manufacturer) to enable EUT under transmission/receiving condition continuously at specific channel frequency.
c. The computer system sent "H" messages to its 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.
f. Item c ~ e were repeated.

4.1.7 TEST RESULTS

EUT	Wireless 802.11g mini PCI Card	MODEL	WMIB-114G
CHANNEL	1	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991 hPa	TESTED BY	Leo Hung

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.170	0.11	39.84	-	39.95	-	64.98	54.98	-25.03	-
2	0.220	0.12	43.60	-	43.72	-	62.81	52.81	-19.09	-
3	0.451	0.13	34.11	-	34.24	-	56.86	46.86	-22.62	-
4	0.677	0.13	33.79	-	33.92	-	56.00	46.00	-22.08	-
5	2.391	0.17	28.95	-	29.12	-	56.00	46.00	-26.88	-
6	10.836	0.38	30.08	-	30.46	-	60.00	50.00	-29.54	-

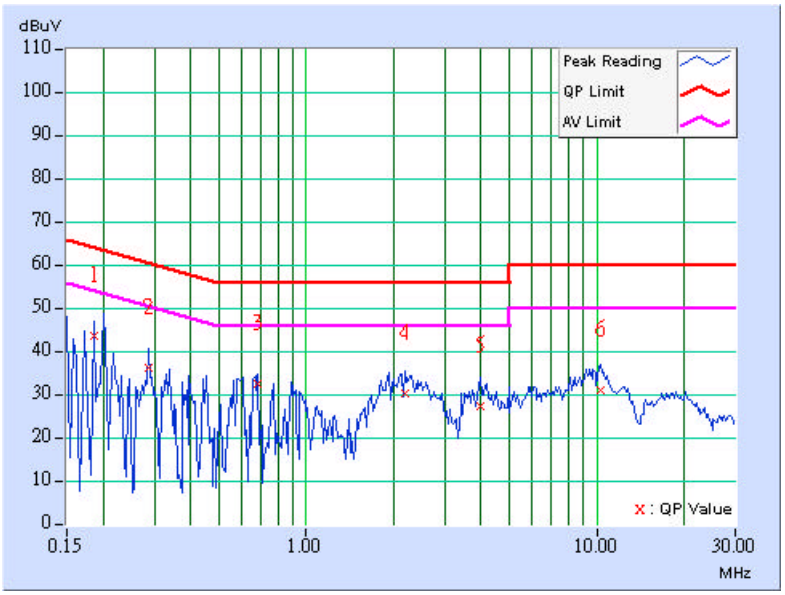
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	Wireless 802.11g mini PCI Card	**MODEL**	WMIB-114G
CHANNEL	1	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991 hPa	**TESTED BY**	Leo Hung

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.185	0.11	43.48	-	43.59	-	64.25	54.25	-20.66	-
2	0.287	0.11	36.16	-	36.27	-	60.62	50.62	-24.35	-
3	0.681	0.12	32.23	-	32.35	-	56.00	46.00	-23.65	-
4	2.188	0.16	30.17	-	30.33	-	56.00	46.00	-25.67	-
5	3.969	0.20	27.19	-	27.39	-	56.00	46.00	-28.61	-
6	10.328	0.30	30.71	-	31.01	-	60.00	50.00	-28.99	-

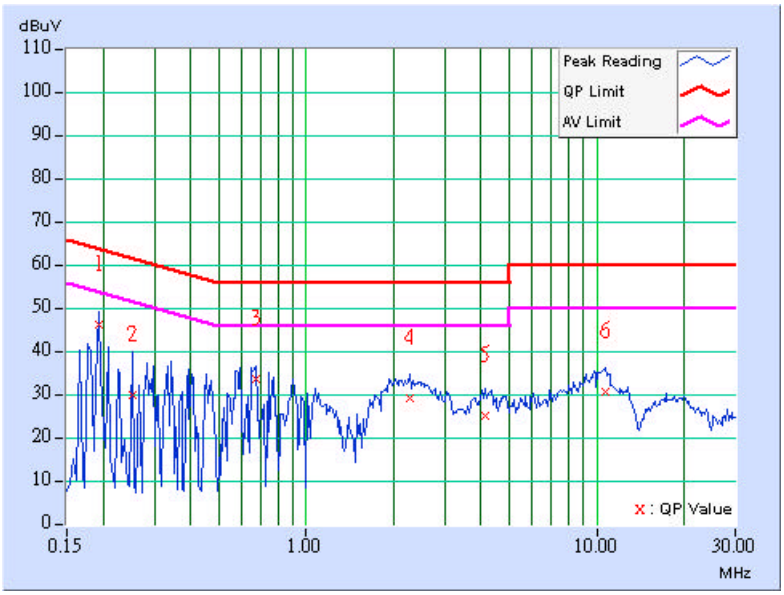
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	Wireless 802.11g mini PCI Card	**MODEL**	WMIB-114G
CHANNEL	6	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991 hPa	**TESTED BY**	Leo Hung

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.193	0.12	45.99	-	46.11	-	63.91	53.91	-17.80	-
2	0.252	0.12	29.63	-	29.75	-	61.71	51.71	-31.95	-
3	0.670	0.13	33.37	-	33.50	-	56.00	46.00	-22.50	-
4	2.281	0.17	28.80	-	28.97	-	56.00	46.00	-27.03	-
5	4.121	0.21	24.66	-	24.87	-	56.00	46.00	-31.13	-
6	10.738	0.37	30.30	-	30.67	-	60.00	50.00	-29.33	-

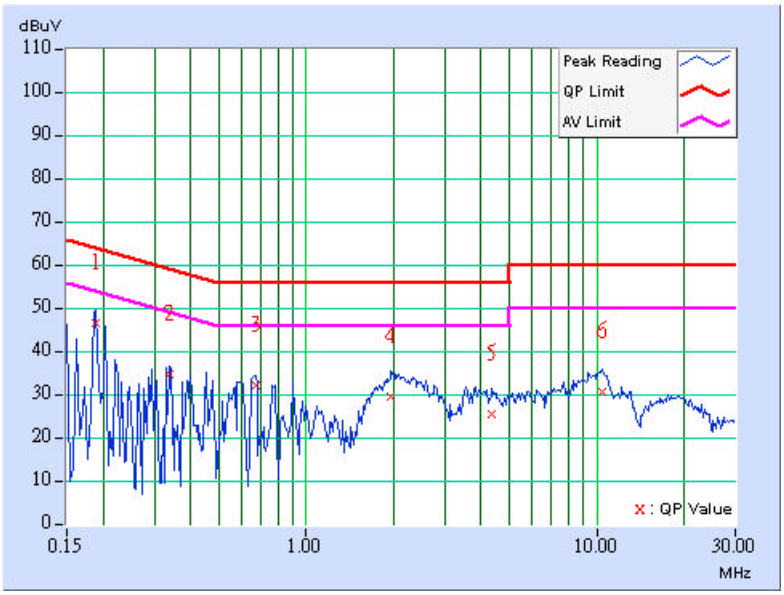
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	Wireless 802.11g mini PCI Card	**MODEL**	WMIB-114G
CHANNEL	6	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991 hPa	**TESTED BY**	Leo Hung

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	**0.189**	**0.11**	**46.25**	**-**	**46.36**	**-**	**64.08**	**54.08**	**-17.72**	**-**
2	0.338	0.11	34.36	-	34.47	-	59.26	49.26	-24.79	-
3	0.670	0.12	31.93	-	32.05	-	56.00	46.00	-23.95	-
4	1.961	0.16	29.20	-	29.36	-	56.00	46.00	-26.64	-
5	4.363	0.21	25.38	-	25.59	-	56.00	46.00	-30.41	-
6	10.480	0.31	30.45	-	30.76	-	60.00	50.00	-29.24	-

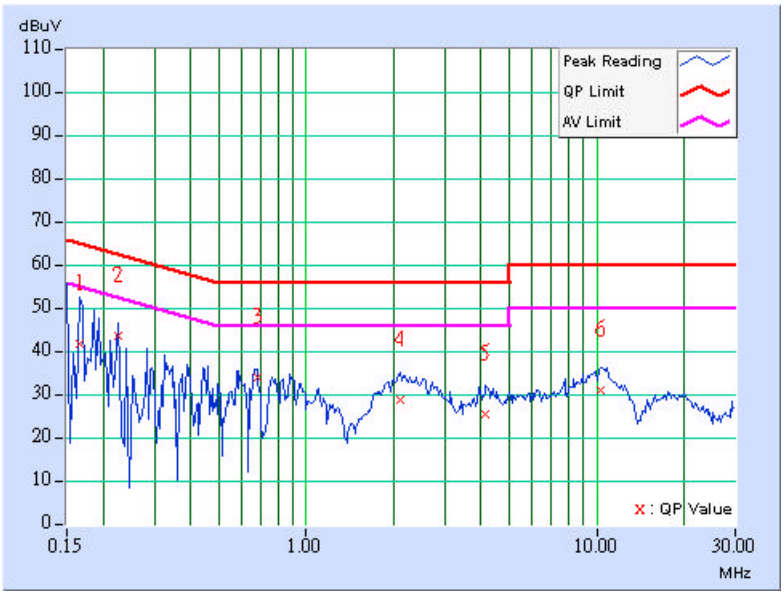
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	Wireless 802.11g mini PCI Card	**MODEL**	WMIB-114G
CHANNEL	11	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991 hPa	**TESTED BY**	Leo Hung

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.166	0.11	41.46	-	41.57	-	65.18	55.18	-23.61	-
2	0.224	0.12	43.28	-	43.40	-	62.66	52.66	-19.26	-
3	0.677	0.13	33.57	-	33.70	-	56.00	46.00	-22.30	-
4	2.113	0.16	28.63	-	28.79	-	56.00	46.00	-27.21	-
5	4.141	0.21	25.29	-	25.50	-	56.00	46.00	-30.50	-
6	10.336	0.33	30.69	-	31.02	-	60.00	50.00	-28.98	-

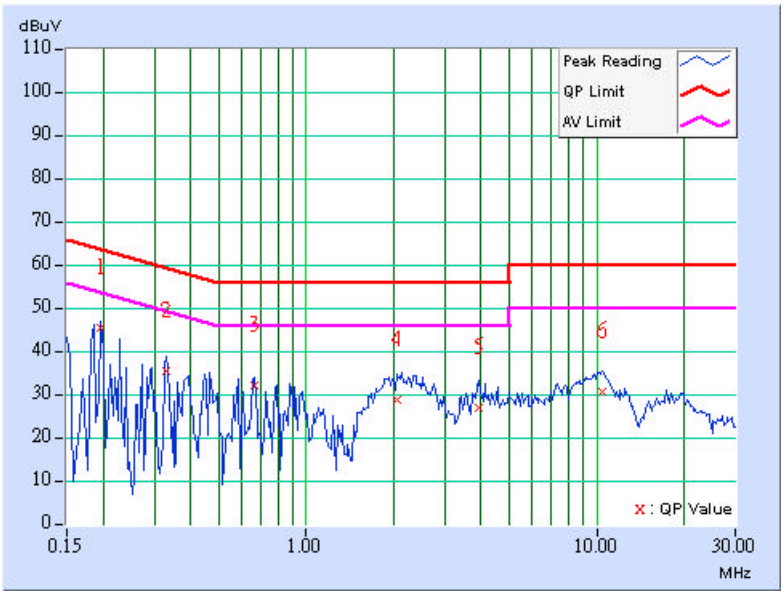
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	Wireless 802.11g mini PCI Card	**MODEL**	WMIB-114G
CHANNEL	11	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991 hPa	**TESTED BY**	Leo Hung

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.197	0.11	45.20	-	45.31	-	63.74	53.74	-18.43	-
2	0.330	0.11	35.12	-	35.23	-	59.46	49.46	-24.22	-
3	0.666	0.12	31.79	-	31.91	-	56.00	46.00	-24.09	-
4	2.063	0.16	28.73	-	28.89	-	56.00	46.00	-27.11	-
5	3.926	0.20	26.59	-	26.79	-	56.00	46.00	-29.21	-
6	10.445	0.31	30.55	-	30.86	-	60.00	50.00	-29.14	-

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



4.2 RADIATED EMISSION MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

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

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

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESI7	838496/016	Feb. 09, 2005
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100041	Dec. 15, 2004
BILOG Antenna SCHWARZBECK	VULB9168	9168-155	Feb. 03, 2005
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-404	Feb. 03, 2005
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA 9170242	Feb. 23, 2005
Preamplifier Agilent	8447D	2944A10631	Jan. 15, 2005
Preamplifier Agilent	8449B	3008A01960	Jan. 22, 2005
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	219272/4	Mar. 04, 2005
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	219275/4	Mar. 04, 2005
Software ADT.	ADT_Radiated_V5.14	NA	NA
Antenna Tower inn-co GmbH	MA 4000	010303	NA
Antenna Tower Controller inn-co GmbH	CO2000	019303	NA
Turn Table ADT.	TT100.	TT93021704	NA
Turn Table Controller ADT.	SC100.	SC93021704	NA

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

2. The test was performed in HwaYa Chamber 3.

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

4. The IC Site Registration No. is IC4924-4.

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 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

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

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

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

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

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

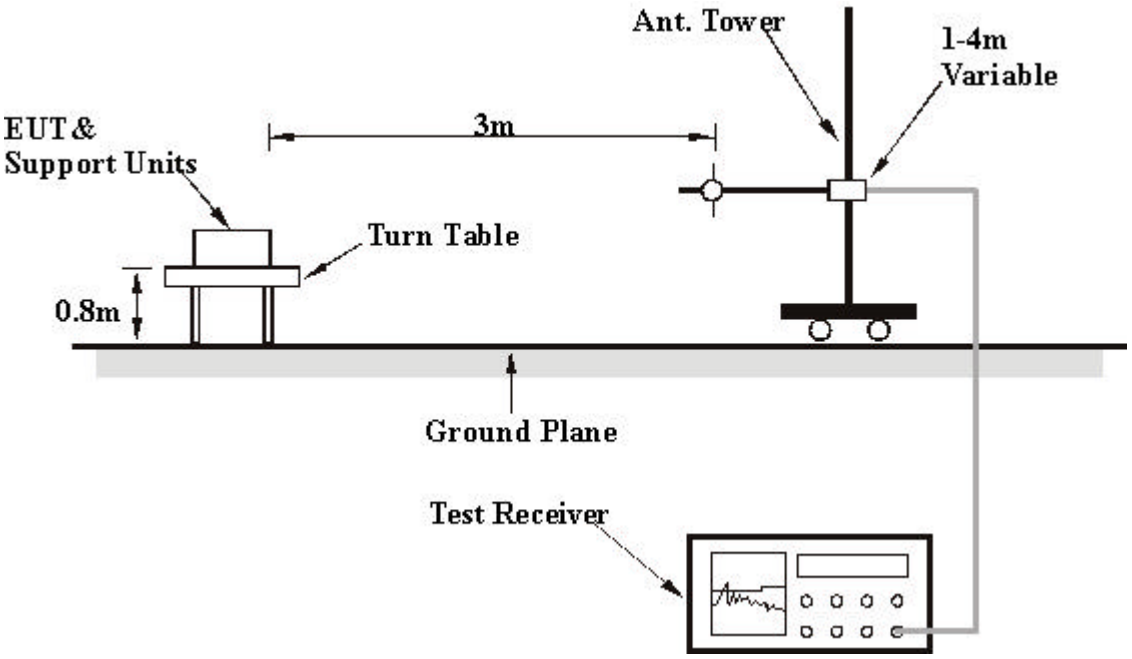
NOTE:

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

EUT	Wireless 802.11g mini PCI Card	**MODEL**	WMIB-114G
CHANNEL	11	**FREQUENCY RANGE**	Below 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25 deg. C, 63 % RH, 991 hPa	**TESTED BY**	Long Chen

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	**92.66**	**39.55 QP**	**43.50**	**-3.95**	**2.31 H**	**176**	**28.86**	**10.69**
2	133.03	35.49 QP	43.50	-8.01	2.00 H	352	21.81	13.68
3	199.12	28.23 QP	43.50	-15.27	1.00 H	154	16.71	11.53
4	265.21	33.45 QP	46.00	-12.55	1.00 H	151	19.62	13.83
5	333.25	34.09 QP	46.00	-11.91	1.00 H	34	18.58	15.51
6	366.29	35.63 QP	46.00	-10.37	1.00 H	13	19.41	16.22
7	407.11	35.13 QP	46.00	-10.87	1.00 H	22	18.00	17.12
8	465.43	33.84 QP	46.00	-12.16	1.00 H	34	15.54	18.30

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	31.94	26.04 QP	40.00	-13.96	1.00 V	235	11.53	14.50
2	64.99	34.25 QP	40.00	-5.75	1.00 V	100	20.79	13.46
3	98.04	32.39 QP	43.50	-11.11	1.00 V	226	21.37	11.02
4	160.24	32.89 QP	43.50	-10.61	1.00 V	286	18.18	14.71
5	199.12	31.39 QP	43.50	-12.11	1.00 V	328	19.86	11.53
6	331.30	33.60 QP	46.00	-12.40	2.00 V	10	18.14	15.47
7	465.43	28.18 QP	46.00	-17.82	1.50 V	313	9.88	18.30
8	597.62	29.79 QP	46.00	-16.21	1.00 V	289	8.61	21.18

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

4.2.8 TEST RESULTS (A)

EUT	Wireless 802.11g mini PCI Card	**MODEL**	WMIB-114G
CHANNEL	1	**FREQUENCY RANGE**	1 ~ 25 GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25 deg. C, 65 % RH, 991 hPa	**TESTED BY**	Leo Hung

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	1608.00	40.67 PK	74.00	-33.33	1.01 H	228	10.54	30.13
1	1608.00	31.86 AV	54.00	-22.14	1.01 H	228	1.73	30.13
2	2390.00	47.15 PK	74.00	-26.85	1.00 H	360	13.32	33.83
2	2390.00	40.39 AV	54.00	-13.61	1.00 H	360	6.56	33.83
3	*2412.00	109.14 PK			1.00 H	360	75.21	33.93
3	*2412.00	102.38 AV			1.00 H	360	68.45	33.93
4	3216.00	39.19 PK	74.00	-34.81	1.20 H	175	2.85	36.33
4	3216.00	48.18 AV	54.00	-5.82	1.20 H	175	11.84	36.33
5	4824.00	52.26 PK	74.00	-21.74	1.00 H	124	11.60	40.66
5	4824.00	41.14 AV	54.00	-12.86	1.00 H	124	0.48	40.66

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	1608.00	41.26 PK	74.00	-32.74	1.10 V	67	11.13	30.13
1	1608.00	31.45 AV	54.00	-22.55	1.10 V	67	1.32	30.13
2	2390.00	42.41 PK	74.00	-31.59	1.07 V	331	8.58	33.83
2	2390.00	35.85 AV	54.00	-18.15	1.07 V	331	2.02	33.83
3	*2412.00	104.40 PK			1.07 V	331	70.47	33.93
3	*2412.00	97.84 AV			1.07 V	331	63.91	33.93
4	3216.00	48.94 PK	74.00	-25.06	1.09 V	308	12.60	36.33
4	3216.00	38.94 AV	54.00	-15.06	1.09 V	308	2.60	36.33
5	4824.00	51.37 PK	74.00	-22.63	1.00 V	116	10.71	40.66
5	4824.00	41.85 AV	54.00	-12.15	1.00 V	116	1.19	40.66

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

EUT	Wireless 802.11g mini PCI Card	**MODEL**	WMIB-114G
CHANNEL	6	**FREQUENCY RANGE**	1 ~ 25 GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25 deg. C, 65 % RH, 991 hPa	**TESTED BY**	Leo Hung

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	1624.00	40.15 PK	74.00	-33.85	1.04 H	228	9.99	30.16
1	1624.00	30.78 AV	54.00	-23.22	1.04 H	228	0.62	30.16
2	*2437.00	109.08 PK			1.00 H	14	75.03	34.05
2	*2437.00	102.43 AV			1.00 H	14	68.38	34.05
3	3248.00	49.38 PK	74.00	-24.62	1.20 H	331	13.02	36.36
3	3248.00	40.29 AV	54.00	-13.71	1.20 H	331	3.93	36.36
4	4874.00	51.16 PK	74.00	-22.84	1.20 H	125	10.47	40.69
4	4874.00	40.21 AV	54.00	-13.79	1.20 H	125	-0.48	40.69

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	1624.00	40.86 PK	74.00	-33.14	1.00 V	33	10.70	30.16
1	1624.00	31.03 AV	54.00	-22.97	1.00 V	33	0.87	30.16
2	*2437.00	103.81 PK			1.12 V	334	69.76	34.05
2	*2437.00	97.94 AV			1.12 V	334	63.89	34.05
3	3248.00	47.58 PK	74.00	-26.42	1.05 V	360	11.22	36.36
3	3248.00	36.88 AV	54.00	-17.12	1.05 V	360	0.52	36.36
4	4874.00	50.45 PK	74.00	-23.55	1.00 V	331	9.76	40.69
4	4874.00	41.25 AV	54.00	-12.75	1.00 V	331	0.56	40.69

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

EUT	Wireless 802.11g mini PCI Card	**MODEL**	WMIB-114G
CHANNEL	11	**FREQUENCY RANGE**	1 ~ 25 GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25 deg. C, 65 % RH, 991 hPa	**TESTED BY**	Leo Hung

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	1641.00	40.02 PK	74.00	-33.98	1.11 H	360	9.84	30.18
1	1641.00	30.29 AV	54.00	-23.71	1.11 H	360	0.11	30.18
2	*2462.00	109.85 PK			1.00 H	360	75.69	34.16
2	*2462.00	103.06 AV			1.00 H	360	68.90	34.16
3	2483.50	47.87 PK	74.00	-26.13	1.00 H	360	13.61	34.26
3	2483.50	41.08 AV	54.00	-12.92	1.00 H	360	6.82	34.26
4	3282.00	48.28 PK	74.00	-25.72	1.00 H	286	11.89	36.40
4	3282.00	38.35 AV	54.00	-15.65	1.00 H	286	1.96	36.40
5	4924.00	49.62 PK	74.00	-24.38	1.06 H	115	8.76	40.86
5	4924.00	43.25 AV	54.00	-10.75	1.06 H	115	2.39	40.86

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	1641.00	41.57 PK	74.00	-32.43	1.10 V	244	11.39	30.18
1	1641.00	33.22 AV	54.00	-20.78	1.10 V	244	3.04	30.18
2	*2462.00	104.74 PK			1.00 V	252	70.58	34.16
2	*2462.00	98.35 AV			1.00 V	252	64.19	34.16
3	2483.50	42.76 PK	74.00	-31.24	1.00 V	252	8.50	34.26
3	2483.50	36.37 AV	54.00	-17.63	1.00 V	252	2.11	34.26
4	3282.00	47.71 PK	74.00	-26.29	1.00 V	259	11.32	36.40
4	3282.00	36.11 AV	54.00	-17.89	1.00 V	259	-0.28	36.40
5	4924.00	51.16 PK	74.00	-22.84	1.00 V	111	10.30	40.86
5	4924.00	42.55 AV	54.00	-11.45	1.00 V	111	1.69	40.86

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

4.2.9 TEST RESULTS (B)

EUT	Wireless 802.11g mini PCI Card	**MODEL**	WMIB-114G
CHANNEL	1	**FREQUENCY RANGE**	1 ~ 25 GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25 deg. C, 65 % RH, 991 hPa	**TESTED BY**	Leo Hung

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	1608.00	42.23 PK	74.00	-31.77	1.00 H	246	12.10	30.13
1	1608.00	33.97 AV	54.00	-20.03	1.00 H	246	3.84	30.13
2	2390.00	46.66 PK	74.00	-27.34	1.00 H	343	12.83	33.83
2	2390.00	43.27 AV	54.00	-10.73	1.00 H	343	9.44	33.83
3	*2412.00	106.03 PK			1.00 H	343	72.10	33.93
3	*2412.00	102.64 AV			1.00 H	343	68.71	33.93
4	3216.00	49.34 PK	74.00	-24.66	1.06 H	360	13.00	36.33
4	3216.00	40.36 AV	54.00	-13.64	1.06 H	360	4.02	36.33
5	4824.00	51.63 PK	74.00	-22.37	1.12 H	221	10.97	40.66
5	4824.00	44.00 AV	54.00	-10.00	1.12 H	221	3.34	40.66

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	1608.00	41.33 PK	74.00	-32.67	1.15 V	225	11.20	30.13
1	1608.00	31.93 AV	54.00	-22.07	1.15 V	225	1.80	30.13
2	2390.00	40.20 PK	74.00	-33.80	1.05 V	262	6.37	33.83
2	2390.00	37.26 AV	54.00	-16.74	1.05 V	262	3.43	33.83
3	*2412.00	99.57 PK			1.05 V	262	65.64	33.93
3	*2412.00	96.63 AV			1.05 V	262	62.70	33.93
4	3216.00	48.00 PK	74.00	-26.00	1.00 V	319	11.66	36.33
4	3216.00	37.51 AV	54.00	-16.49	1.00 V	319	1.17	36.33
5	4838.00	51.93 PK	74.00	-22.07	1.08 V	221	11.27	40.67
5	4838.00	41.52 AV	54.00	-12.48	1.08 V	221	0.86	40.67

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

EUT	Wireless 802.11g mini PCI Card	**MODEL**	WMIB-114G
CHANNEL	6	**FREQUENCY RANGE**	1 ~ 25 GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25 deg. C, 65 % RH, 991 hPa	**TESTED BY**	Leo Hung

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	1624.00	41.76 PK	74.00	-32.24	1.00 H	232	11.60	30.16
1	1624.00	32.84 AV	54.00	-21.16	1.00 H	232	2.68	30.16
2	*2437.00	106.59 PK			1.00 H	13	72.54	34.05
2	*2437.00	102.18 AV			1.00 H	13	68.13	34.05
3	3248.00	48.25 PK	74.00	-25.75	1.00 H	153	11.89	36.36
3	3248.00	38.40 AV	54.00	-15.60	1.00 H	153	2.04	36.36
4	4874.00	50.26 PK	74.00	-23.74	1.00 H	235	9.57	40.69
4	4874.00	39.38 AV	54.00	-14.62	1.00 H	235	-1.31	40.69

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	1624.00	40.68 PK	74.00	-33.32	1.01 V	225	10.52	30.16
1	1624.00	33.27 AV	54.00	-20.73	1.01 V	225	3.11	30.16
2	*2437.00	100.25 PK			1.00 V	258	66.20	34.05
2	*2437.00	97.48 AV			1.00 V	258	63.43	34.05
3	3248.00	48.03 PK	74.00	-25.97	1.00 V	274	11.67	36.36
3	3248.00	36.62 AV	54.00	-17.38	1.00 V	274	0.26	36.36
4	4874.00	50.78 PK	74.00	-23.22	1.00 V	112	10.09	40.69
4	4874.00	40.45 AV	54.00	-13.55	1.00 V	112	-0.24	40.69

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

EUT	Wireless 802.11g mini PCI Card	**MODEL**	WMIB-114G
CHANNEL	11	**FREQUENCY RANGE**	1 ~ 25 GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25 deg. C, 65 % RH, 991 hPa	**TESTED BY**	Leo Hung

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	1641.00	43.00 PK	74.00	-31.00	1.00 H	233	12.82	30.18
1	1641.00	34.00 AV	54.00	-20.00	1.00 H	233	3.82	30.18
2	*2462.00	105.19 PK			1.00 H	13	71.03	34.16
2	*2462.00	101.93 AV			1.00 H	13	67.77	34.16
3	2483.50	46.29 PK	74.00	-27.71	1.00 H	13	12.03	34.26
3	2483.50	43.03 AV	54.00	-10.97	1.00 H	13	8.77	34.26
4	3282.00	48.64 PK	74.00	-25.36	1.00 H	328	12.25	36.40
4	3282.00	38.33 AV	54.00	-15.67	1.00 H	328	1.94	36.40
5	4924.00	51.12 PK	74.00	-22.88	1.08 H	112	10.26	40.86
5	4924.00	39.58 AV	54.00	-14.42	1.08 H	112	-1.28	40.86

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	1641.00	40.56 PK	74.00	-33.44	1.02 V	34	10.38	30.18
1	1641.00	31.54 AV	54.00	-22.46	1.02 V	34	1.36	30.18
2	*2462.00	101.51 PK			1.00 V	252	67.35	34.16
2	*2462.00	98.29 AV			1.00 V	252	64.13	34.16
3	2483.50	42.61 PK	74.00	-31.39	1.00 V	252	8.35	34.26
3	2483.50	39.39 AV	54.00	-14.61	1.00 V	252	5.13	34.26
4	3282.00	48.17 PK	74.00	-25.83	1.00 V	276	11.78	36.40
4	3282.00	35.92 AV	54.00	-18.08	1.00 V	276	-.047	36.40
5	4924.00	51.34 PK	74.00	-22.66	1.00 V	156	10.48	40.86
5	4924.00	39.54 AV	54.00	-14.46	1.00 V	156	-1.32	40.86

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

4.3 6dB BANDWIDTH MEASUREMENT

4.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2005

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

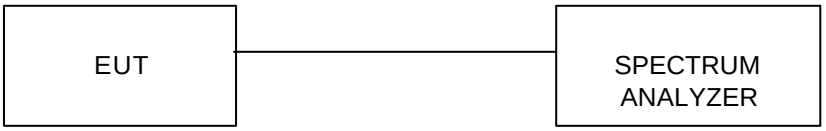
4.3.3 TEST PROCEDURE

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

4.3.4 DEVIATION FROM TEST STANDARD

No deviation

4.3.5 TEST SETUP



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

4.3.6 EUT OPERATING CONDITIONS

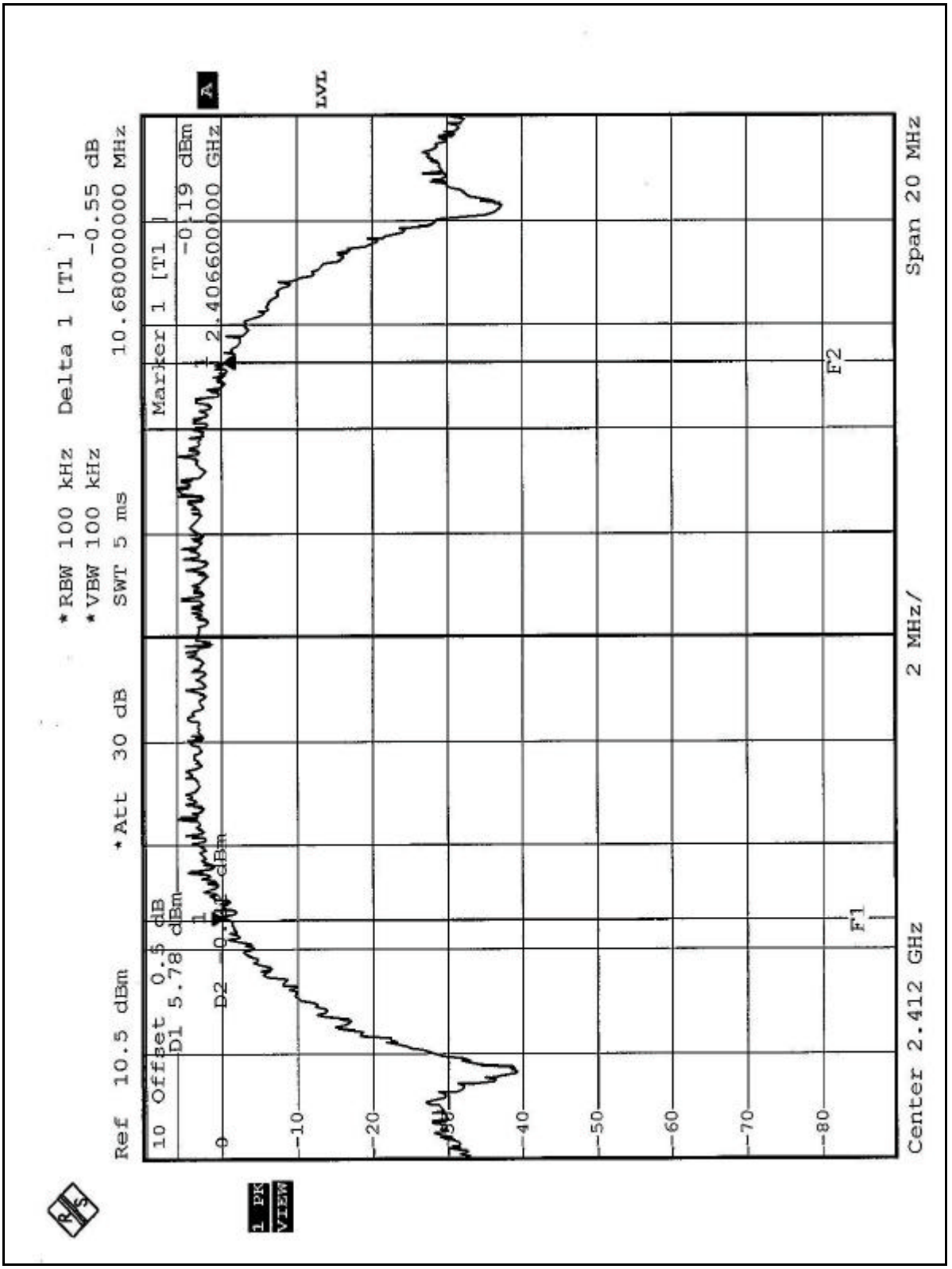
The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.3.7 TEST RESULTS (A)

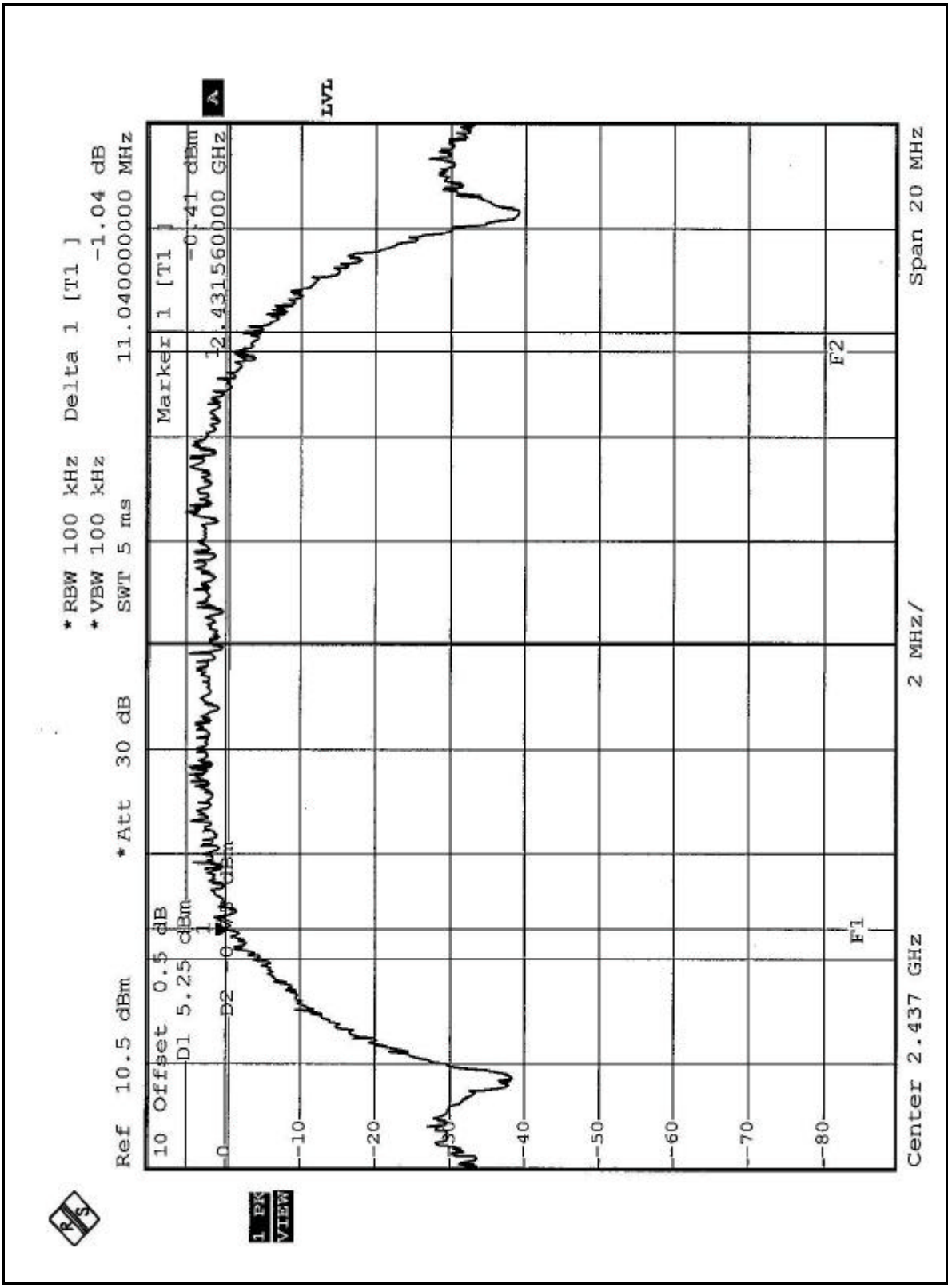
EUT	Wireless 802.11g mini PCI Card	**MODEL**	WMIB-114G
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	24deg. C, 64%RH, 991 hPa
TESTED BY	Leo Hung		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	10.68	0.5	PASS
6	2437	11.04	0.5	PASS
11	2462	11.36	0.5	PASS

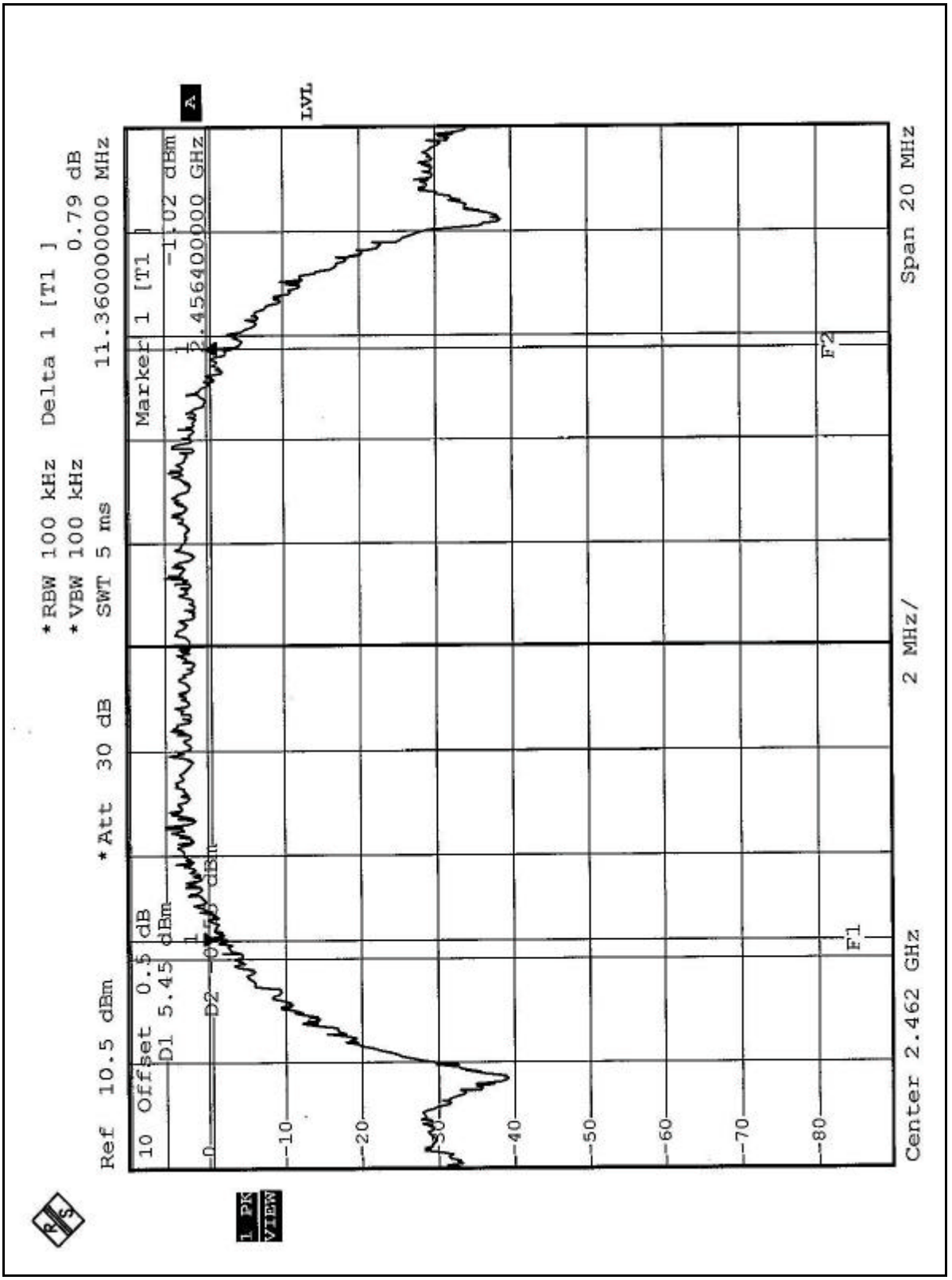
CH1


Ref 10.5 dBm
*Att 30 dB
*RBW 100 kHz
*VBW 100 kHz
SWT 5 ms
Delta 1 [T1]
-0.55 dB
10.680000000 MHz
Marker 1 [T1]
-0.19 dBm
2.406600000 GHz
Offset 0.5 dB
D1 5.78 dBm
D2 -0.78 dBm
Center 2.412 GHz
2 MHz/
Span 20 MHz
F1
F2
LVL
1 PK VIEW

CH6


Ref 10.5 dBm
10 Offset 0.5 dB
D1 5.25 dBm
D2 0 dBm
*Att 30 dB
*RBW 100 kHz
*VBW 100 kHz
SWT 5 ms
Delta 1 [T1]
-1.04 dB
11.040000000 MHz
Marker 1 [T1]
-0.41 dBm
12.431560000 GHz
A
LVL
F1
F2
Center 2.437 GHz
2 MHz/
Span 20 MHz
1 PK
VIEW

CH11

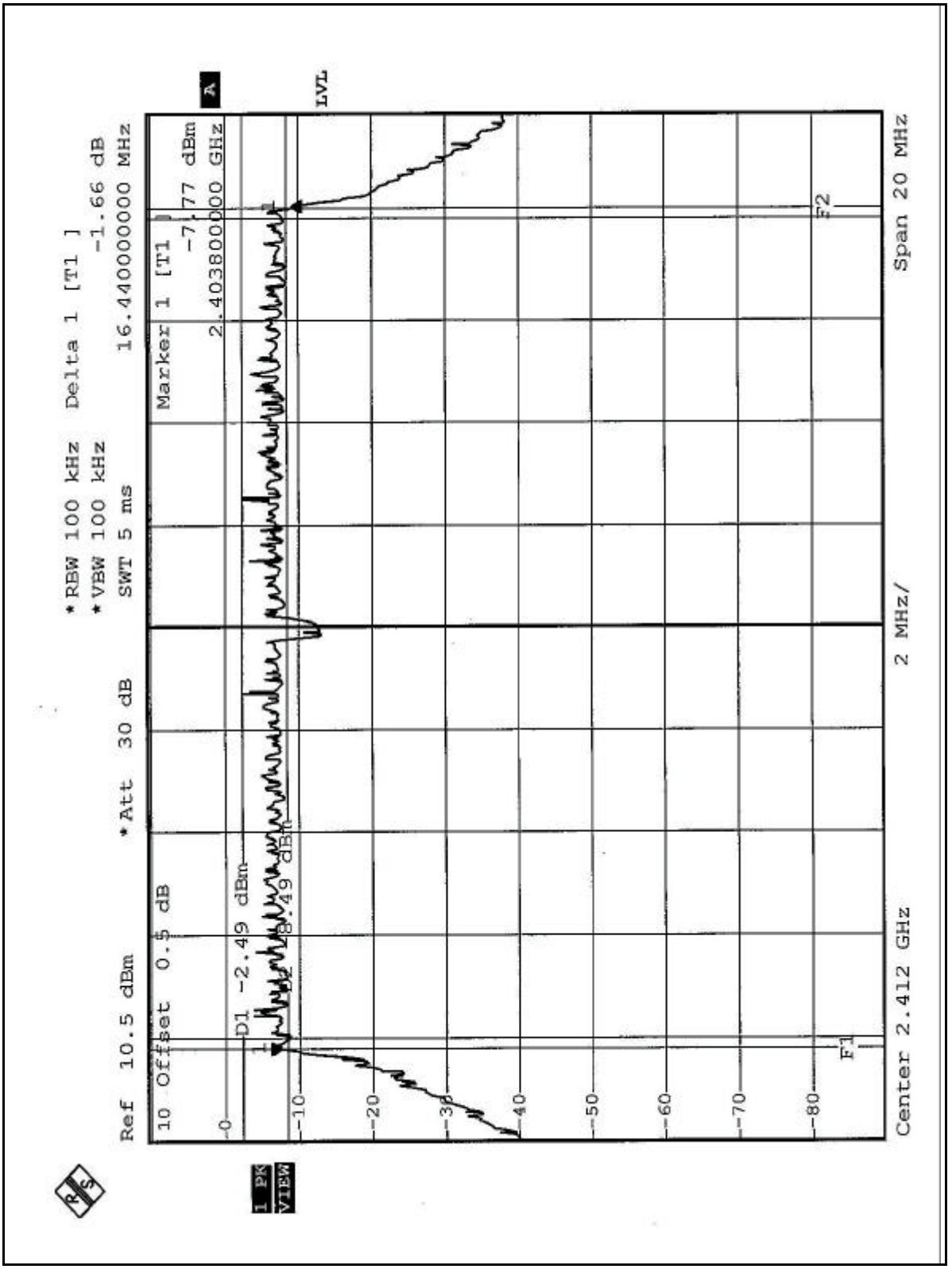

Ref 10.5 dBm
10 Offset 0.5 dB
D1 5.45 dBm
D2 dBm
*Att 30 dB
*RBW 100 kHz
*VBW 100 kHz
SWT 5 ms
Delta 1 [T1]
0.79 dB
11.360000000 MHz
Marker 1 [T1]
-1.02 dBm
2.456400000 GHz
LVL
A
F1
F2
Center 2.462 GHz
2 MHz/
Span 20 MHz
1 PK VIEW

4.3.8 TEST RESULTS (B)

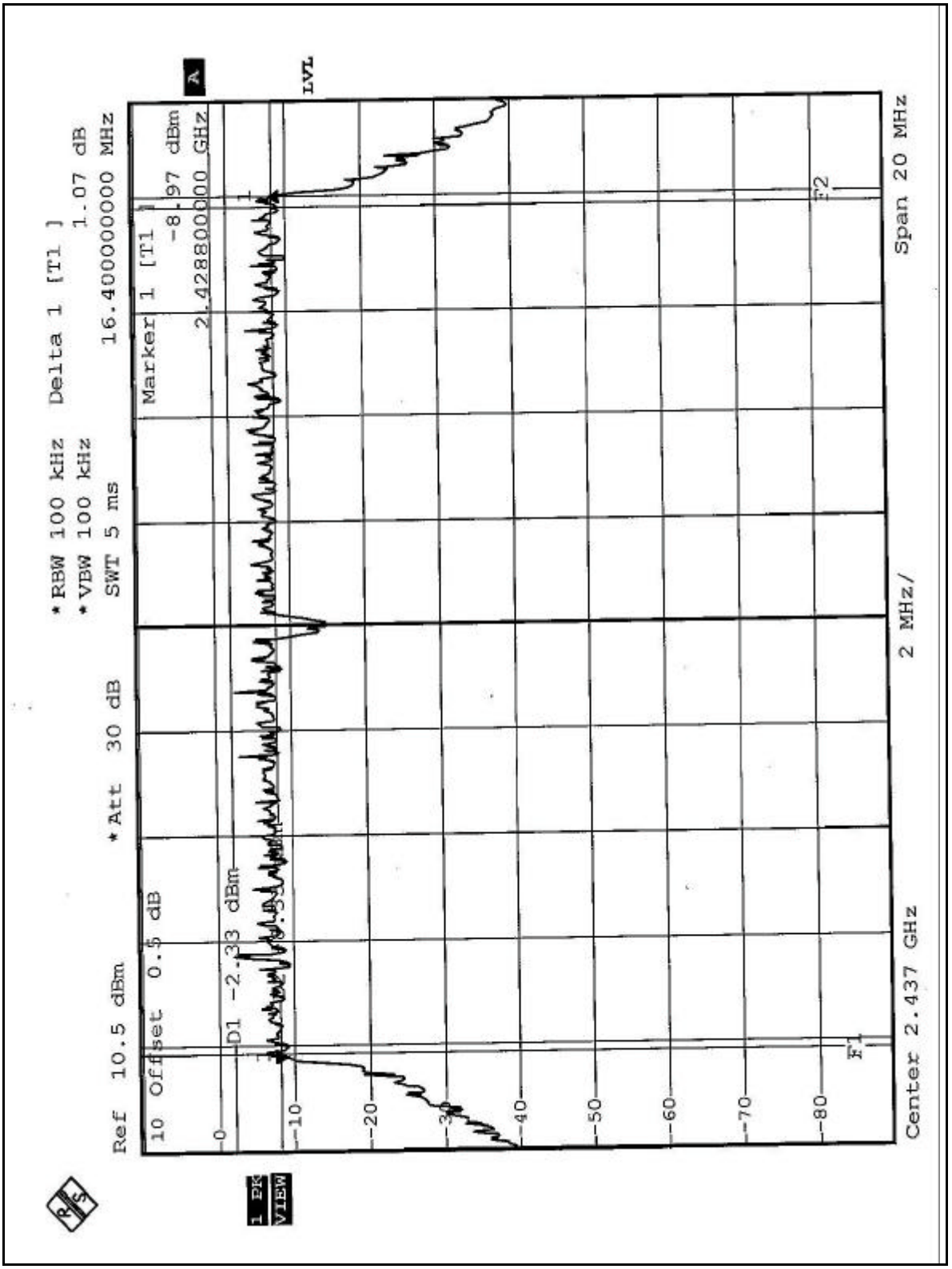
EUT	Wireless 802.11g mini PCI Card	**MODEL**	WMIB-114G
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	24deg. C, 64%RH, 991 hPa
TESTED BY	Leo Hung		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	16.44	0.5	PASS
6	2437	16.40	0.5	PASS
11	2462	16.40	0.5	PASS

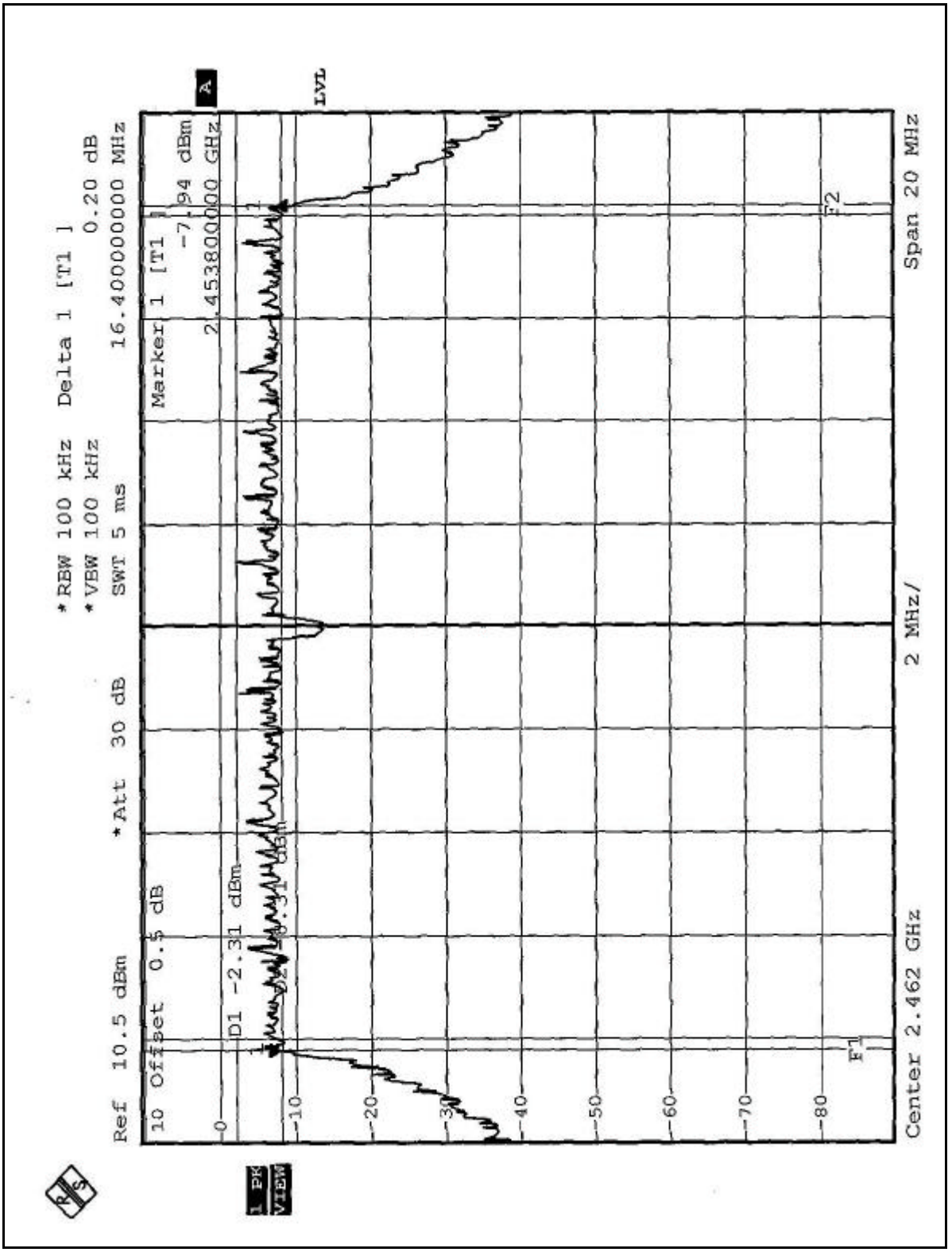
CH1


Ref 10.5 dBm
10 Offset 0.5 dB
* Att 30 dB
* RBW 100 kHz
* VBW 100 kHz
SWT 5 ms
Delta 1 [T1]
-1.66 dB
16.440000000 MHz
Marker 1 [T1]
-7.77 dBm
2.40380000 GHz
D1 -2.49 dBm
8.49 dBm
Center 2.412 GHz
2 MHz/
Span 20 MHz
F1
F2
1 PK
VIEW

CH6


Ref 10.5 dBm
10 Offset 0.5 dB
* Att 30 dB
* RBW 100 kHz
* VBW 100 kHz
SWT 5 ms
Delta 1 [T1]
1.07 dB
16.400000000 MHz
Marker 1 [T1]
-8.97 dBm
2.428800000 GHz
D1 -2.33 dBm
Center 2.437 GHz
2 MHz/
Span 20 MHz
F1
F2
1 PK VIEW

CH11


Ref 10.5 dBm
10 Offset 0.5 dB
*Att 30 dB
*RBW 100 kHz
*VBW 100 kHz
SWT 5 ms
Delta 1 [T1]
0.20 dB
16.400000000 MHz
Marker 1 [T1]
-7.94 dBm
2.453800000 GHz
D1 -2.31 dBm
Center 2.462 GHz
2 MHz/
Span 20 MHz
F1
F2
A
LVL
1 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 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2005
AGILENT SIGNAL GENERATOR	E8257C	MY43320668	Dec. 31, 2004
TEKTRONIX OSCILLOSCOPE	TDS 220	C019167	Feb. 01, 2005
NARDA DETECTOR	4503A	FSCM99899	NA

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

4.4.3 TEST PROCEDURES

1. A detector was used on the output port of the EUT. An oscilloscope was used to peak 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 peak 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 (A)

EUT	Wireless 802.11g mini PCI Card	**MODEL**	WMIB-114G
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	24deg. C, 64%RH, 991 hPa
TESTED BY	Leo Hung		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	50.699	17.05	30	PASS
6	2437	51.050	17.08	30	PASS
11	2462	50.119	17.00	30	PASS

4.4.8 TEST RESULTS (B)

EUT	Wireless 802.11g mini PCI Card	**MODEL**	WMIB-114G
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	24deg. C, 64%RH, 991 hPa
TESTED BY	Leo Hung		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	19.999	13.01	30	PASS
6	2437	19.999	13.01	30	PASS
11	2462	20.091	13.03	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, 2005

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

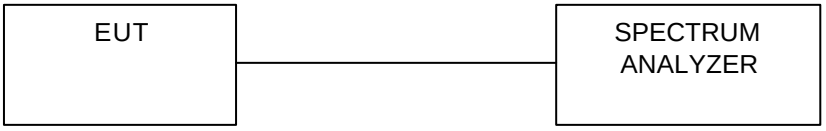
4.5.3 TEST PROCEDURE

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 3 kHz RBW and 30 kHz VBW, set sweep time=span/3kHz. The power spectral density was measured and recorded.
The sweep time is allowed to be longer than span/3KHz for a full response of the mixer in the spectrum analyzer.

4.5.4 DEVIATION FROM TEST STANDARD

No deviation

4.5.5 TEST SETUP



4.5.6 EUT OPERATING CONDITIONS

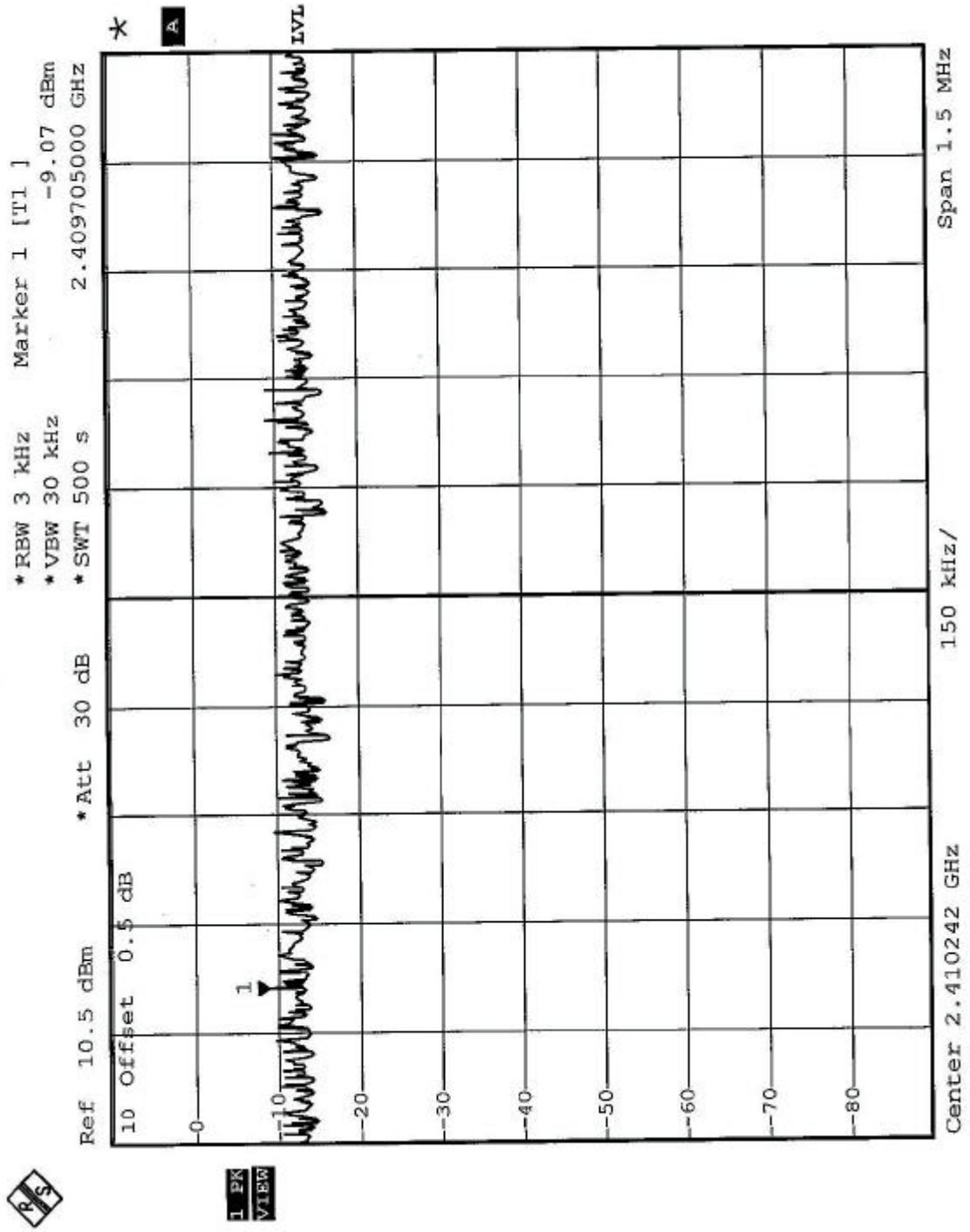
Same as 4.3.6

4.5.7 TEST RESULTS (A)

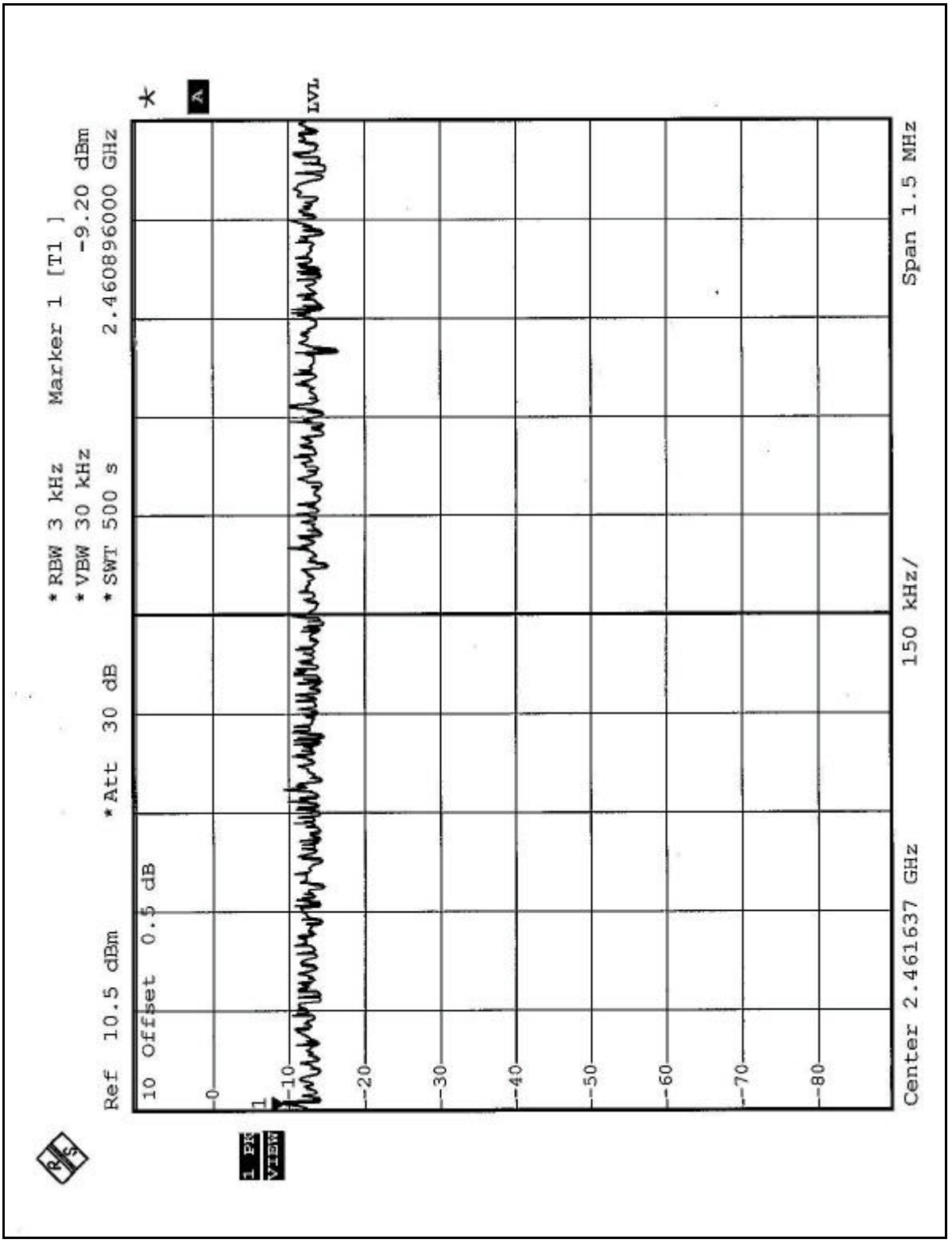
EUT	Wireless 802.11g mini PCI Card	**MODEL**	WMIB-114G
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	24deg. C, 64%RH, 991 hPa
TESTED BY	Leo Hung		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 KHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-9.07	8	PASS
6	2437	-9.20	8	PASS
11	2462	-9.37	8	PASS

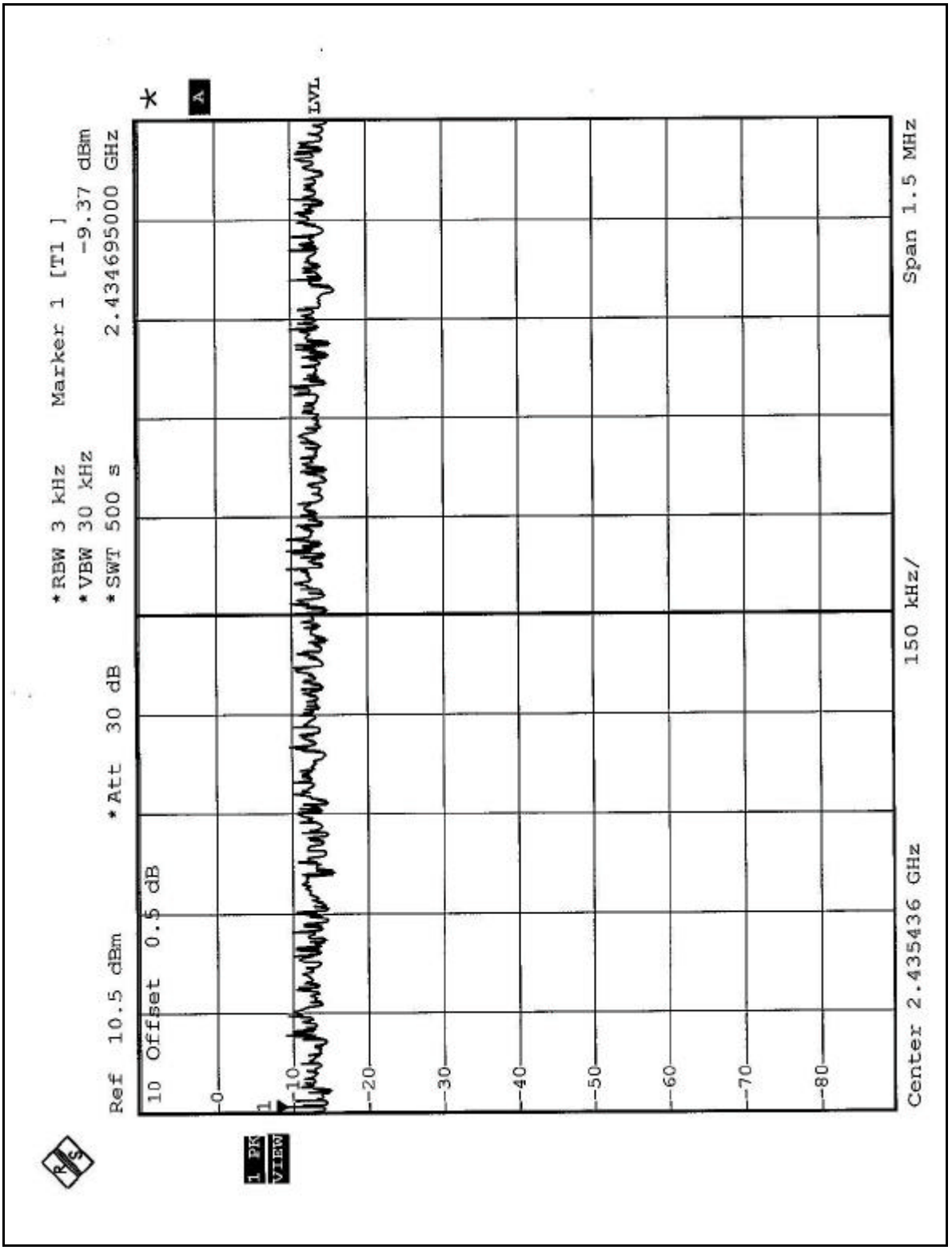
CH1


Ref 10.5 dBm
10 Offset 0.5 dB
*Att 30 dB
*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-9.07 dBm
2.409705000 GHz
Center 2.410242 GHz
150 kHz/
Span 1.5 MHz
1 PK
VIEW
A
MAXIMUM

CH6


Ref 10.5 dBm
10 Offset 0.5 dB
*Att 30 dB
*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-9.20 dBm
2.460896000 GHz
Center 2.461637 GHz
150 kHz/
Span 1.5 MHz
1 PK
VIEW

CH11


Ref 10.5 dBm
10 Offset 0.5 dB
*Att 30 dB
*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-9.37 dBm
2.434695000 GHz
1 PK VIEW
Center 2.435436 GHz
150 kHz/
Span 1.5 MHz

4.5.8 TEST RESULTS (B)

EUT	Wireless 802.11g mini PCI Card	**MODEL**	WMIB-114G
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	24deg. C, 64%RH, 991 hPa
TESTED BY	Leo Hung		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 KHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-13.83	8	PASS
6	2437	-13.99	8	PASS
11	2462	-13.38	8	PASS