FCC TEST REPORT

REPORT NO.: RF920129R01A
MODEL NO.: GL2454MP-0A
RECEIVED: Feb. 6, 2003
TESTED: Feb. 10 ~ Feb. 14, 2003

APPLICANT: D-Link Corporation

ADDRESS: No.8,Li-Hsin VII Road Science Based Industrial Park Hsin-Chu,Taiwan

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

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1 CERTIFICATION

PRODUCT :	IEEE 802.11g WLAN Mini PCI
MODEL NO. :	GL2454MP-0A
BRAND NAME :	D-Link
APPLICANT :	D-Link Corporation
STANDARDS :	47 CFR Part 15, Subpart C (Section 15.247), ANSI C63.4-1992

We, **Advance Data Technology Corporation**, hereby certify that one sample of the designation has been tested in our facility from Feb. 10, 2003 to Feb. 14, 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.

CHECKED BY : Emily Lu , **DATE** : Feb. 14, 2003

Emily Lu

APPROVED BY : for , **DATE** : Feb. 14, 2003

Dr. Alan Lane, Manager

2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: 47 CFR Part 15, Subpart C			
Standard Section	**Test Type and Limit**	**Result**	**REMARK**
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit Minimum passing margin is –14.12dBuV at 0.171MHz
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 –1.2dBuV at 4924.00MHz
15.247(d)	Power Spectral Density Limit: max. 8dBm	PASS	Meet the requirement of limit
15.247(c)	Band Edge Measurement Limit: 20 dB less than the peak value of fundamental frequency	PASS	Meet the requirement of limit

3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	IEEE 802.11g WLAN Mini PCI
MODEL NO.	GL2454MP-0A
POWER SUPPLY	3.3VDC from host equipment
MODULATION	802.11b: CCK, QPSK, DBPSK 802.11g: OFDM
TRANSFER RATE	up to 54Mbps
FREQUENCY RANGE	2412MHz ~ 2462MHz
CHANNEL SPACING	5MHz
NUMBER OF CHANNEL	11
OUTPUT POWER	15.44dBm
ANTENNA TYPE	Dipole Antenna
DATA CABLE	NA
I/O PORTS	NA
ASSOCIATED DEVICES	NA

NOTE:

1. The EUT operates in the 2.4GHz frequency spectrum with throughput of up to 54Mbps.
2. The EUT complies with IEEE 802.11g draft standards, and backwards compatible with IEEE 802.11b products.
3. Eight types of antenna were provided to this EUT. Antennas remark with "*" were chosen for final test, please refer to the following table:

No.	Antenna Type	Gain (dBi)	Antenna Connector
*1	Dipole	3	NA
*2	Dipole	0	Reversed SMA
*3	Inverted-F	-1	NA
4	Dipole	2	Reversed SMA
5	Dipole	2	Reversed TNC
6	Dipole	1	NA
7	Dipole (Gray)	2	MMCX
8	Dipole (for dual band) (Gray)	2	MMCX

4. 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. Transfer rate of 11Mbps with CCK technique and 54Mbps with OFDM technique, the worst case, was chosen for final test.
4. Test result A is for antenna 1, test result B is for antenna 2 and test result C is for antenna 3 which mentioned in note 3 of section 3.1.

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a IEEE 802.11g WLAN Mini PCI. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC 47 CFR Part 15, Subpart C. (15.247)
ANSI C63.4 : 1992

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

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

3.4 DESCRIPTION OF SUPPORT UNITS

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

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK	DELL	PP01L	TW-09C748-12800-19O-B220	FCC DoC APPROVED
2	PRINTER	EPSON	LQ-300+	DCGY017096	FCC DoC APPROVED
3	MODEM	ACEEX	1414	980020569	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).

4 TEST TYPES AND RESULTS

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

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

NOTE:
1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 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	ESHS30	828109/007	July 03, 2003
ROHDE & SCHWARZ Artificial Mains Network (for EUT)	ESH3-Z5	839135/006	July 02. 2003
* ROHDE & SCHWARZ 4-wire ISN	ENY41	838119/028	Nov. 29, 2003
* ROHDE & SCHWARZ 2-wire ISN	ENY22	837497/016	Nov. 29, 2003
EMCO-L.I.S.N. (for peripheral)	3825/2	9204-1964	July 02, 2003
Software	Cond-V2M1	NA	NA
RF cable (JYEBAO)	5D-FB	Cable-C02.01	July 5, 2003
HP Terminator (For EMCO LISN)	11593A	E1-01-298	Feb. 20, 2003
HP Terminator (For EMCO LISN)	11593A	E1-01-299	Feb. 20, 2003

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. 2.
4. The VCCI Site Registration No. is C-240.

4.1.3 TEST PROCEDURES

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

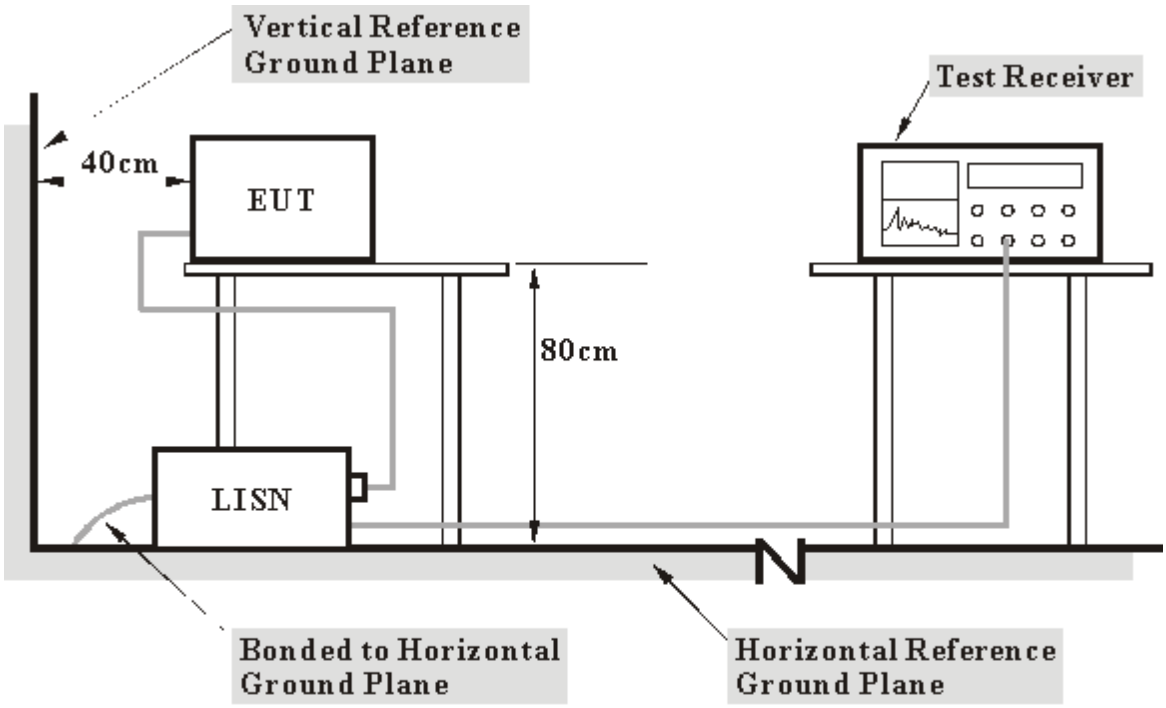
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

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

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 TEST SETUP



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

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

4.1.6 EUT OPERATING CONDITIONS

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

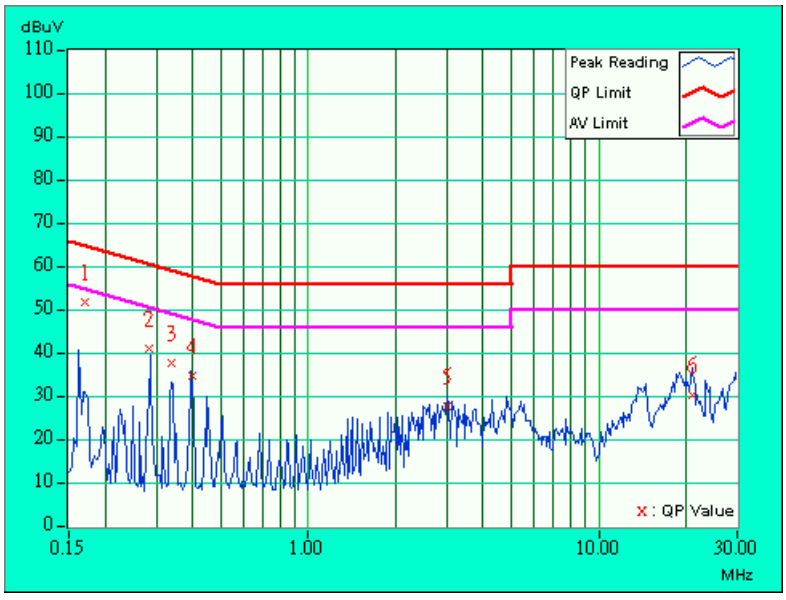
4.1.7 TEST RESULTS

EUT	IEEE 802.11g WLAN Mini PCI	MODEL	GL2454MP-0A
MODE	Channel 1	6dB BANDWIDTH	10kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	21deg. C, 68%RH, 1005 hPa	TESTED BY: Cody Chang	

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	0.171	0.10	50.68	-	50.78	-	64.90	54.90	-14.12	-
2	0.282	0.10	39.89	-	39.99	-	60.76	50.76	-20.77	-
3	0.339	0.10	36.53	-	36.63	-	59.23	49.23	-22.60	-
4	0.399	0.10	33.49	-	33.59	-	57.87	47.87	-24.28	-
5	3.009	0.20	26.58	-	26.78	-	56.00	46.00	-29.22	-
6	20.924	1.22	29.21	-	30.43	-	60.00	50.00	-29.57	-

NOTE:

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

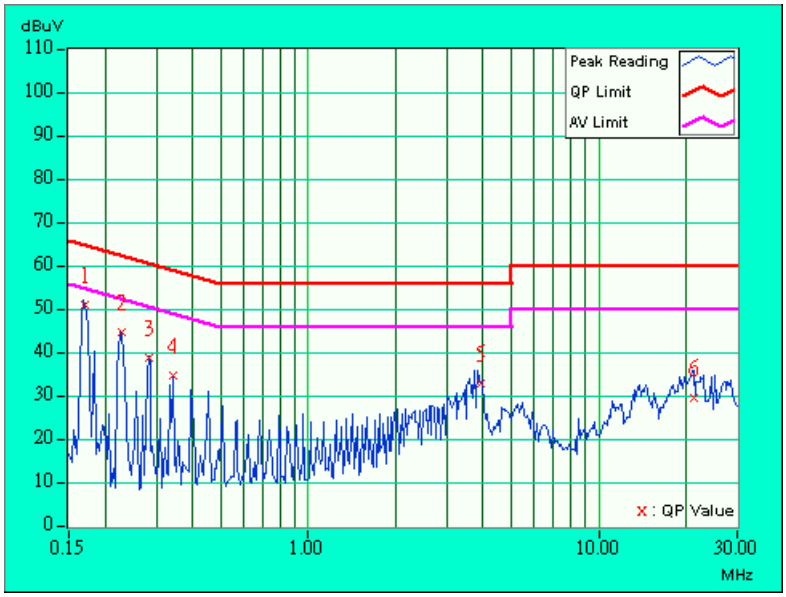


EUT	IEEE 802.11g WLAN Mini PCI	**MODEL**	GL2454MP-0A
MODE	Channel 1	**6dB BANDWIDTH**	10kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	21deg. C, 68%RH, 1005 hPa	**TESTED BY**: Cody Chang	

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	0.169	0.10	50.20	-	50.30	-	65.00	55.00	-14.70	-
2	0.228	0.10	43.63	-	43.73	-	62.54	52.54	-18.81	-
3	0.284	0.10	37.85	-	37.95	-	60.69	50.69	-22.74	-
4	0.342	0.10	33.67	-	33.77	-	59.15	49.15	-25.38	-
5	3.912	0.29	31.79	-	32.08	-	56.00	46.00	-23.92	-
6	21.185	1.05	28.75	-	29.80	-	60.00	50.00	-30.20	-

NOTE:

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

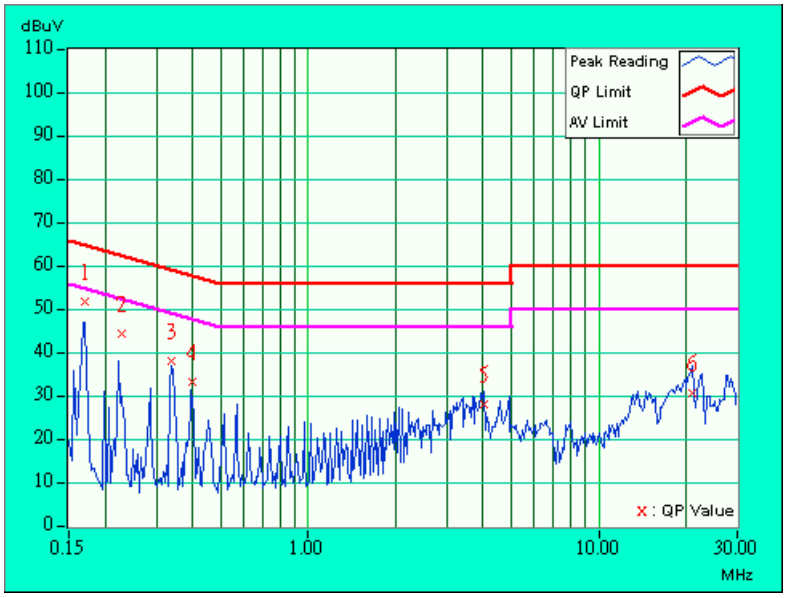


EUT	IEEE 802.11g WLAN Mini PCI	**MODEL**	GL2454MP-0A
MODE	Channel 6	**6dB BANDWIDTH**	10kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	21deg. C, 68%RH, 1005 hPa	**TESTED BY**: Cody Chang	

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	0.169	0.10	50.64	-	50.74	-	65.00	55.00	-14.26	-
2	0.229	0.10	43.24	-	43.34	-	62.49	52.49	-19.15	-
3	0.340	0.10	36.77	-	36.87	-	59.21	49.21	-22.34	-
4	0.401	0.10	32.27	-	32.37	-	57.84	47.84	-25.47	-
5	4.038	0.30	27.03	-	27.33	-	56.00	46.00	-28.67	-
6	20.897	1.22	29.63	-	30.85	-	60.00	50.00	-29.15	-

NOTE:

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

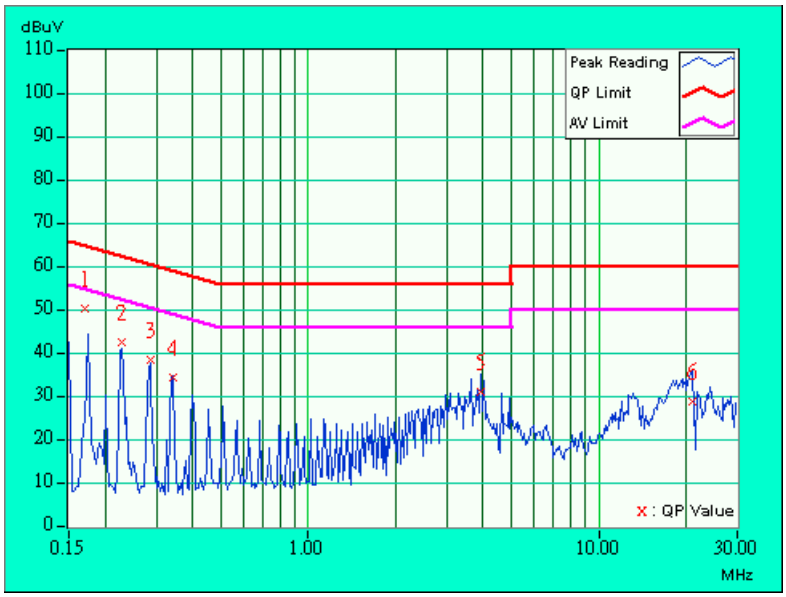


EUT	IEEE 802.11g WLAN Mini PCI	**MODEL**	GL2454MP-0A
MODE	Channel 6	**6dB BANDWIDTH**	10kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	21deg. C, 68%RH, 1005 hPa	**TESTED BY**: Cody Chang	

No	Freq.	Corr. Factor	Reading Value [dB (Uv)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.170	0.10	49.32	-	49.42	-	64.95	54.95	-15.53	-
2	0.229	0.10	41.70	-	41.80	-	62.49	52.49	-20.69	-
3	0.285	0.10	37.45	-	37.55	-	60.67	50.67	-23.12	-
4	0.342	0.10	33.29	-	33.39	-	59.15	49.15	-25.76	-
5	3.924	0.29	30.04	-	30.33	-	56.00	46.00	-25.67	-
6	20.897	1.04	27.76	-	28.80	-	60.00	50.00	-31.20	-

NOTE:

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

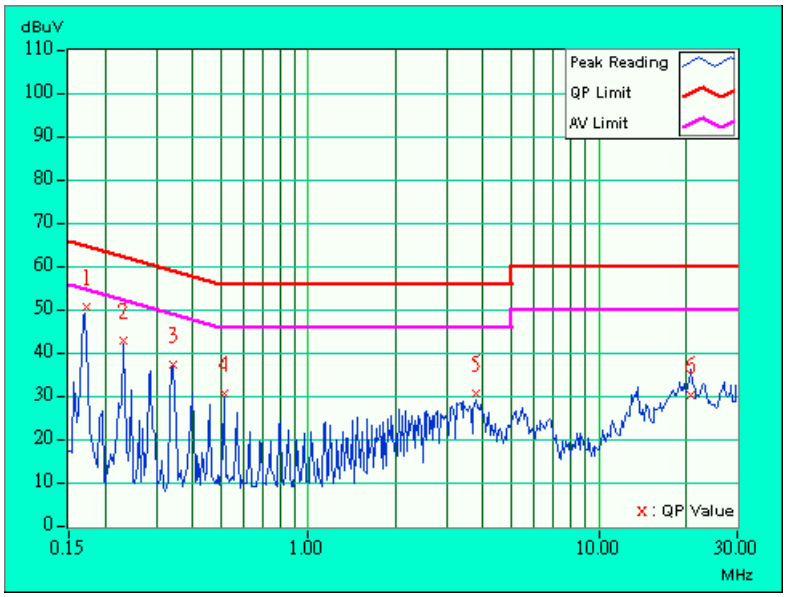


EUT	IEEE 802.11g WLAN Mini PCI	**MODEL**	GL2454MP-0A
MODE	Channel 11	**6dB BANDWIDTH**	10kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	21deg. C, 68%RH, 1005 hPa	**TESTED BY**: Cody Chang	

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	0.172	0.10	49.60	-	49.70	-	64.87	54.87	-15.17	-
2	0.231	0.10	41.74	-	41.84	-	62.41	52.41	-20.57	-
3	0.342	0.10	36.03	-	36.13	-	59.15	49.15	-23.02	-
4	0.513	0.10	29.37	-	29.47	-	56.00	46.00	-26.53	-
5	3.761	0.28	29.43	-	29.71	-	56.00	46.00	-26.29	-
6	20.636	1.21	29.22	-	30.43	-	60.00	50.00	-29.57	-

NOTE:

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

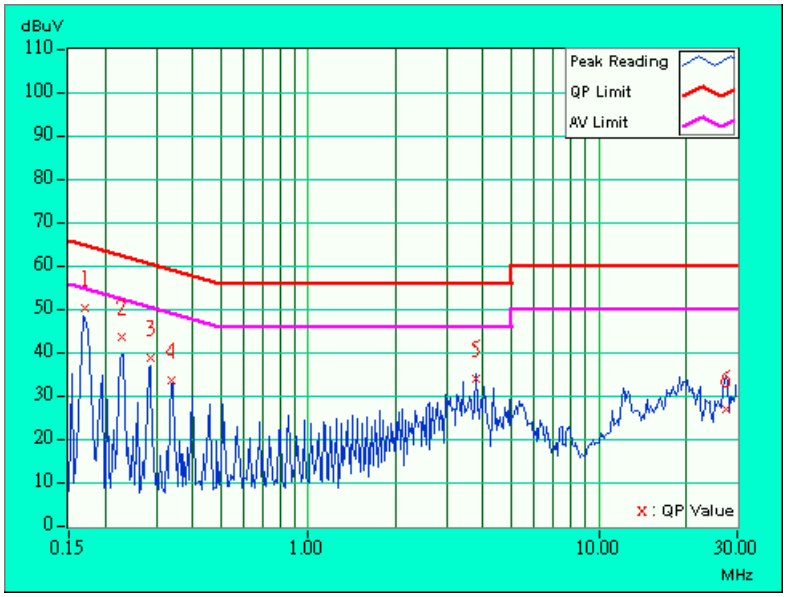


EUT	IEEE 802.11g WLAN Mini PCI	**MODEL**	GL2454MP-0A
MODE	Channel 11	**6dB BANDWIDTH**	10kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	21deg. C, 68%RH, 1005 hPa	**TESTED BY**: Cody Chang	

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	0.171	0.10	49.14	-	49.24	-	64.91	54.91	-15.67	-
2	0.228	0.10	42.32	-	42.42	-	62.52	52.52	-20.10	-
3	0.285	0.10	37.45	-	37.55	-	60.67	50.67	-23.12	-
4	0.339	0.10	32.31	-	32.41	-	59.23	49.23	-26.82	-
5	3.759	0.28	32.65	-	32.93	-	56.00	46.00	-23.07	-
6	27.443	1.30	25.71	-	27.01	-	60.00	50.00	-32.99	-

NOTE:

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



4.2 RADIATED EMISSION MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

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

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

NOTE:

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

4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
* HP Spectrum Analyzer	8590L	3544A01176	May 13, 2003
* HP Preamplifier	8447D	2944A08485	Apr. 29, 2003
* HP Preamplifier	8449B	3008A01201	Dec. 01, 2003
* HP Preamplifier	8449B	3008A01292	Aug. 07, 2003
Spectrum Analyzer	8593E	3926A04191	Mar. 28, 2003
Test Receiver	ESI7	838496/016	Feb. 21, 2003
SCHAFFNER Tunable Dipole Antenna SCHWARZBECK Tunable Dipole Antenna	VHBA 9123 UHA 9105	459 977	Nov. 22, 2003
* CHASE BILOG Antenna	CBL6112A	2221	Aug. 02, 2003
* SCHWARZBECK Horn Antenna	BBHA9120-D1	D130	July 03, 2003
* EMCO Horn Antenna	3115	9312-4192	Apr. 09, 2003
* EMCO Turn Table	1060	1115	NA
* SHOSHIN Tower	AP-4701	A6Y005	NA
* Software	ADT_Radiated_V5.09	NA	NA
* ANRITSU RF Switches	MP59B	M35046	Jul. 11. 2003
* TIMES RF cable	LMR-600	CABLE-ST5-01	Jul. 11. 2003

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 peak, quasi-peak or average method as specified and then reported in a data sheet.

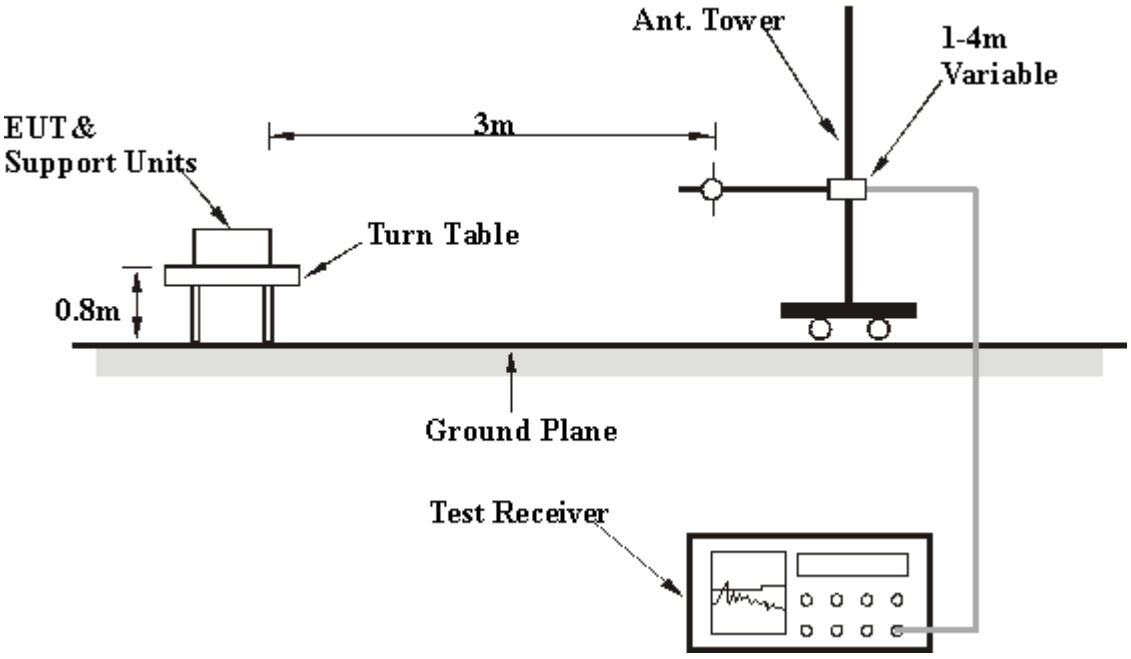
NOTE:

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

4.2.4 DEVIATION FROM TEST STANDARD

No deviation

4.2.5 TEST SETUP



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

4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6

4.2.7 TEST RESULTS (A)

EUT	IEEE 802.11g WLAN Mini PCI	**MODEL**	GL2454MP-0A
MODE	Channel 11	**FREQUENCY RANGE**	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)
1	192.00	31.5 QP	43.50	-12.00	1.60 H	0	20.70	10.80
2	256.00	38.3 QP	46.00	-7.70	1.17 H	13	22.00	16.40
3	288.00	39.4 QP	46.00	-6.60	1.30 H	3	22.80	16.60
4	320.00	35.0 QP	46.00	-11.00	1.06 H	9	17.80	17.10
5	352.00	41.2 QP	46.00	-4.80	1.44 H	354	23.50	17.70
6	384.00	31.1 QP	46.00	-14.90	1.16 H	9	12.40	18.70
7	480.00	29.0 QP	46.00	-17.00	1.26 H	8	8.40	20.60
8	544.03	33.4 QP	46.00	-12.60	1.34 H	217	12.30	21.10
9	640.03	30.7 QP	46.00	-15.30	1.16 H	14	7.90	22.80
10	736.02	37.5 QP	46.00	-8.50	1.22 H	5	13.70	23.80
11	800.02	35.3 QP	46.00	-10.70	1.33 H	152	10.40	24.90

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)
1	192.02	26.1 QP	43.50	-17.40	1.17 V	3	15.30	10.80
2	256.02	28.3 QP	46.00	-17.70	1.29 V	211	12.00	16.40
3	288.02	33.2 QP	46.00	-12.80	1.10 V	184	16.50	16.60
4	352.02	36.3 QP	46.00	-9.70	1.37 V	8	18.60	17.70
5	384.02	28.7 QP	46.00	-17.30	1.24 V	114	10.00	18.70
6	544.02	29.8 QP	46.00	-16.20	1.16 V	21	8.70	21.10
7	640.02	32.9 QP	46.00	-13.10	1.06 V	246	10.10	22.80
8	736.02	32.9 QP	46.00	-13.10	1.27 V	353	9.10	23.80
9	800.02	32.9 QP	46.00	-13.10	1.14 V	66	8.00	24.90

NOTE:

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

EUT	IEEE 802.11g WLAN Mini PCI	**MODEL**	GL2454MP-0A
MODE	CCK	**FREQUENCY RANGE**	Above 1000MHz
CHANNEL	Channel 1		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 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	*2412.00	103.0 PK			1.07 H	317	70.20	32.80
1	*2412.00	97.1 AV			1.07 H	317	64.40	32.80
2	3168.00	43.0 PK	74.00	-31.00	1.17 H	35	9.20	33.80
3	4824.00	60.2 PK	74.00	-13.80	1.36 H	122	23.20	36.90
3	4824.00	48.4 AV	54.00	-5.60	1.36 H	122	11.40	33.80
4	6336.00	55.0 PK	83.00	-28.00	1.24 H	35	15.90	39.10
4	6336.00	51.2 AV	77.10	-25.90	1.24 H	35	12.10	36.90
5	7237.00	51.6 PK	74.00	-22.40	1.24 H	57	10.10	41.40
5	7237.00	42.2 AV	54.00	-11.80	1.24 H	57	0.70	39.10
6	9646.00	52.2 PK	74.00	-21.80	1.34 H	52	8.80	43.40
6	9646.00	43.0 AV	54.00	-11.00	1.34 H	52	-0.40	41.40

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	*2412.00	106.6 PK			1.30 V	85	73.90	32.80
1	*2412.00	101.2 AV			1.30 V	85	68.40	32.80
2	3168.00	44.4 PK	74.00	-29.60	1.38 V	171	10.60	33.80
3	4824.00	64.2 PK	74.00	-9.80	1.01 V	112	27.20	36.90
3	4824.00	51.6 AV	54.00	-2.40	1.01 V	112	14.60	33.80
4	6336.00	56.5 PK	86.60	-30.10	1.00 V	32	17.40	39.10
4	6336.00	52.9 AV	81.20	-28.30	1.00 V	32	13.80	36.90
5	7235.00	52.9 PK	74.00	-21.10	1.52 V	46	11.40	41.40
5	7235.00	44.4 AV	54.00	-9.60	1.52 V	46	2.90	39.10
6	9647.00	54.0 PK	74.00	-20.00	1.28 V	214	10.60	43.40
6	9647.00	45.7 AV	54.00	-8.30	1.28 V	214	2.30	41.40

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

EUT	IEEE 802.11g WLAN Mini PCI	**MODEL**	GL2454MP-0A
MODE	CCK	**FREQUENCY RANGE**	Above 1000MHz
CHANNEL	Channel 6		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 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	102.6 PK			1.69 H	38	69.80	32.80
1	*2437.00	97.1 AV			1.69 H	38	64.30	32.80
2	3168.00	42.8 PK	74.00	-31.20	1.43 H	241	9.00	33.80
3	4874.00	57.1 PK	74.00	-16.90	1.10 H	344	19.90	37.10
3	4874.00	46.1 AV	54.00	-7.90	1.10 H	344	8.90	33.80
4	6336.00	54.2 PK	82.60	-28.40	1.02 H	8	15.10	39.10
4	6336.00	51.3 AV	77.10	-25.80	1.02 H	8	12.20	37.10
5	7308.00	51.6 PK	74.00	-22.40	1.40 H	254	10.00	41.50
5	7308.00	42.5 AV	54.00	-11.50	1.40 H	254	0.90	39.10
6	9748.00	53.6 PK	74.00	-20.40	1.29 H	241	10.30	43.30
6	9748.00	44.9 AV	54.00	-9.10	1.29 H	241	1.60	41.50

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	107.7 PK			1.34 V	38	74.90	32.80
1	*2437.00	101.9 AV			1.34 V	38	69.10	32.80
2	3168.00	44.4 PK	74.00	-29.60	1.41 V	51	10.60	33.80
3	4874.00	64.1 PK	74.00	-9.90	1.52 V	248	27.00	37.10
3	4874.00	52.4 AV	54.00	-1.60	1.52 V	248	15.20	33.80
4	6336.00	58.2 PK	87.70	-29.50	1.35 V	8	19.10	39.10
4	6336.00	54.9 AV	81.90	-27.00	1.35 V	8	15.80	37.10
5	7309.00	53.5 PK	74.00	-20.50	1.35 V	71	11.90	41.50
5	7309.00	43.9 AV	54.00	-10.10	1.35 V	71	2.30	39.10

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. " * " : Fundamental frequency.
6. The other emission levels were very low against the limit.

EUT	IEEE 802.11g WLAN Mini PCI	**MODEL**	GL2454MP-0A
MODE	CCK	**FREQUENCY RANGE**	Above 1000MHz
CHANNEL	Channel 11		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 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	*2463.00	105.9 PK			1.23 H	106	73.10	32.90
1	*2463.00	100.2 AV			1.23 H	106	67.40	32.90
2	3168.00	43.2 PK	74.00	-30.80	1.15 H	351	9.40	33.80
3	4924.00	61.6 PK	74.00	-12.40	1.19 H	247	24.20	37.30
3	4924.00	49.5 AV	54.00	-4.50	1.19 H	247	12.10	33.80
4	6336.00	53.6 PK	85.90	-32.30	1.24 H	77	14.50	39.10
5	7385.00	52.6 PK	74.00	-21.40	1.26 H	118	11.00	41.70
5	7385.00	40.5 AV	54.00	-13.50	1.26 H	118	-1.10	39.10

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	*2463.00	105.4 PK			1.00 V	84	72.60	32.90
1	*2463.00	99.2 AV			1.00 V	84	66.40	32.90
2	3168.00	43.8 PK	74.00	-30.20	1.25 V	54	10.00	33.80
3	4924.00	67.1 PK	74.00	-6.90	1.12 V	84	29.80	37.30
3	4924.00	52.8 AV	54.00	-1.20	1.12 V	84	15.50	33.80
4	6336.00	58.6 PK	85.40	-26.80	1.02 V	74	19.50	39.10
5	7386.00	56.2 PK	74.00	-17.80	1.10 V	36	14.50	41.70
5	7386.00	45.2 AV	54.00	-8.80	1.10 V	36	3.50	39.10
6	9847.00	55.8 PK	74.00	-18.20	1.51 V	46	12.60	43.20
6	9847.00	51.0 AV	54.00	-3.00	1.51 V	46	7.80	41.70

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

EUT	IEEE 802.11g WLAN Mini PCI	**MODEL**	GL2454MP-0A
MODE	OFDM	**FREQUENCY RANGE**	Above 1000MHz
CHANNEL	Channel 1		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 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	*2412.00	95.4 PK			1.02 H	294	62.70	32.80
1	*2412.00	88.1 AV			1.02 H	294	55.30	32.80
2	3168.00	42.7 PK	74.00	-31.30	1.27 H	45	8.90	33.80
3	4824.00	51.7 PK	74.00	-22.30	1.49 H	113	14.70	36.90
3	4824.00	38.1 AV	54.00	-15.90	1.49 H	113	1.10	33.80
4	6336.00	54.0 PK	74.00	-20.00	1.22 H	254	14.90	39.10
4	6336.00	50.2 AV	54.00	-3.80	1.22 H	254	11.10	36.90

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	*2412.00	102.8 PK			1.53 V	345	70.10	32.80
1	*2412.00	94.8 AV			1.53 V	345	62.10	32.80
2	3168.00	44.8 PK	74.00	-29.20	1.19 V	11	11.00	33.80
3	4824.00	56.2 PK	74.00	-17.80	1.51 V	88	19.20	36.90
3	4824.00	41.4 AV	54.00	-12.60	1.51 V	88	4.40	33.80
4	6336.00	56.2 PK	82.80	-26.60	1.43 V	345	17.10	39.10

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. " * " : Fundamental frequency.
6. The other emission levels were very low against the limit.

EUT	IEEE 802.11g WLAN Mini PCI	**MODEL**	GL2454MP-0A
MODE	OFDM	**FREQUENCY RANGE**	Above 1000MHz
CHANNEL	Channel 6		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 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	94.9 PK			1.45 H	124	62.10	32.80
1	*2437.00	87.6 AV			1.45 H	124	54.80	32.80
2	3168.00	44.0 PK	74.00	-30.00	1.37 H	342	10.20	33.80
3	4874.00	51.2 PK	74.00	-22.80	1.27 H	27	14.00	37.10
3	4874.00	39.4 AV	54.00	-14.60	1.27 H	27	2.20	33.80
4	6336.00	54.4 PK	74.90	-20.50	1.27 H	26	15.30	39.10
4	6336.00	51.4 AV	67.60	-16.20	1.27 H	26	12.30	37.10

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	100.8 PK			1.61 V	245	68.00	32.80
1	*2437.00	93.1 AV			1.61 V	245	60.30	32.80
2	3168.00	43.4 PK	74.00	-30.60	1.71 V	11	9.60	33.80
3	4874.00	60.6 PK	74.00	-13.40	1.16 V	70	23.40	37.10
3	4874.00	47.3 AV	54.00	-6.70	1.16 V	70	10.10	33.80
4	6336.00	56.2 PK	80.80	-24.60	1.41 V	214	17.10	39.10

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. " * " : Fundamental frequency.
6. The other emission levels were very low against the limit.

EUT	IEEE 802.11g WLAN Mini PCI	**MODEL**	GL2454MP-0A
MODE	OFDM	**FREQUENCY RANGE**	Above 1000MHz
CHANNEL	Channel 11		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 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	*2463.00	97.3 PK			1.04 H	311	64.40	32.90
1	*2463.00	90.3 AV			1.04 H	311	57.50	32.90
2	3168.00	42.7 PK	74.00	-31.30	1.52 H	74	8.90	33.80
3	4924.00	56.3 PK	74.00	-17.70	1.49 H	49	18.90	37.30
3	4924.00	43.0 AV	54.00	-11.00	1.49 H	49	5.70	33.80
4	6336.00	55.6 PK	77.30	-21.70	1.31 H	58	16.50	39.10
4	6336.00	52.2 AV	70.30	-18.10	1.31 H	58	13.10	37.30

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	*2463.00	104.1 PK			1.47 V	82	71.30	32.90
1	*2463.00	95.4 AV			1.47 V	82	62.50	32.90
2	3168.00	44.1 PK	74.00	-29.90	1.24 V	354	10.30	33.80
3	4924.00	59.6 PK	74.00	-14.40	1.37 V	64	22.20	37.30
3	4924.00	42.6 AV	54.00	-11.40	1.37 V	64	5.20	33.80
4	6336.00	56.8 PK	84.10	-27.30	1.12 V	67	17.70	39.10

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. " * " : Fundamental frequency.
6. The other emission levels were very low against the limit.

4.2.8 TEST RESULTS (B)

EUT	IEEE 802.11g WLAN Mini PCI	**MODEL**	GL2454MP-0A
MODE	Channel 11	**FREQUENCY RANGE**	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)
1	192.00	24.5 QP	43.50	-19.00	1.19 H	62	13.70	10.80
2	256.00	35.2 QP	46.00	-10.80	1.35 H	8	18.80	16.40
3	288.00	35.6 QP	46.00	-10.40	1.12 H	13	19.00	16.60
4	352.00	40.1 QP	46.00	-5.90	1.06 H	234	22.40	17.70
5	365.00	36.5 QP	46.00	-9.50	1.22 H	0	18.40	18.10
6	384.00	30.1 QP	46.00	-15.90	1.41 H	13	11.50	18.70
7	640.01	33.0 QP	46.00	-13.00	1.24 H	168	10.20	22.80
8	736.01	36.0 QP	46.00	-10.00	1.32 H	17	12.20	23.80

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)
1	256.03	27.5 QP	46.00	-18.50	1.42 V	242	11.10	16.40
2	288.03	31.1 QP	46.00	-14.90	1.67 V	253	14.40	16.60
3	352.03	37.4 QP	46.00	-8.60	1.64 V	249	19.70	17.70
4	512.03	28.8 QP	46.00	-17.20	1.04 V	74	7.70	21.20
5	544.02	28.6 QP	46.00	-17.40	1.19 V	159	7.60	21.10
6	736.02	30.9 QP	46.00	-15.10	1.44 V	3	7.10	23.80
7	800.01	33.8 QP	46.00	-12.20	1.17 V	189	8.90	24.90
8	832.01	29.8 QP	46.00	-16.20	1.24 V	217	4.80	25.00

NOTE:

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

EUT	IEEE 802.11g WLAN Mini PCI	**MODEL**	GL2454MP-0A
MODE	CCK	**FREQUENCY RANGE**	Above 1000MHz
CHANNEL	Channel 1		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 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	*2412.00	104.6 PK			1.39 H	290	71.90	32.80
1	*2412.00	98.6 AV			1.39 H	290	65.90	32.80
2	3168.00	42.9 PK	74.00	-31.10	1.14 H	24	9.10	33.80
3	4824.00	58.2 PK	74.00	-15.80	1.57 H	96	21.20	36.90
3	4824.00	41.8 AV	54.00	-12.20	1.57 H	96	4.80	33.80
4	6336.00	57.3 PK	84.60	-27.30	1.28 H	13	18.20	39.10
5	7236.00	52.6 PK	74.00	-21.40	1.14 H	33	11.20	41.40
5	7236.00	43.4 AV	54.00	-10.60	1.14 H	33	1.90	39.10
6	9647.00	54.6 PK	74.00	-19.40	1.19 H	13	11.20	43.40
6	9647.00	48.0 AV	54.00	-6.00	1.19 H	13	4.60	41.40

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	*2412.00	107.6 PK			1.48 V	13	74.90	32.80
1	*2412.00	102.0 AV			1.48 V	13	69.30	32.80
2	3138.00	43.7 PK	74.00	-30.30	1.16 V	35	9.90	33.80
3	4824.00	64.2 PK	74.00	-9.80	1.06 V	111	27.20	36.90
3	4824.00	51.4 AV	54.00	-2.60	1.06 V	111	14.40	33.80
4	6336.00	60.2 PK	87.60	-27.40	1.48 V	13	21.10	39.10
5	7234.00	52.8 PK	74.00	-21.20	1.59 V	124	11.30	41.40
5	7234.00	44.4 AV	54.00	-9.60	1.59 V	124	2.90	39.10
6	9647.00	60.1 PK	74.00	-13.90	1.39 V	10	16.70	43.40

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

EUT	IEEE 802.11g WLAN Mini PCI	**MODEL**	GL2454MP-0A
MODE	CCK	**FREQUENCY RANGE**	Above 1000MHz
CHANNEL	Channel 6		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 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	101.4 PK			1.42 H	69	68.60	32.80
1	*2437.00	95.3 AV			1.42 H	69	62.50	32.80
2	3168.00	42.9 PK	74.00	-31.10	1.26 H	274	9.10	33.80
3	4874.00	62.7 PK	74.00	-11.30	1.11 H	63	25.50	37.10
3	4874.00	49.9 AV	54.00	-4.10	1.11 H	63	12.80	33.80
4	6336.00	58.0 PK	81.40	-23.40	1.13 H	19	18.90	39.10
4	6336.00	54.6 AV	75.30	-20.70	1.13 H	19	15.50	37.10
5	7310.00	52.5 PK	74.00	-21.50	1.28 H	351	10.90	41.50
5	7310.00	43.5 AV	54.00	-10.50	1.28 H	351	1.90	39.10
6	9748.00	54.4 PK	74.00	-19.60	1.19 H	40	11.10	43.30
6	9748.00	47.9 AV	54.00	-6.10	1.19 H	40	4.60	41.50

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	107.7 PK			1.25 V	320	74.90	32.80
1	*2437.00	104.0 AV			1.25 V	320	71.20	32.80
2	3168.00	43.0 PK	74.00	-31.00	1.27 V	321	9.20	33.80
3	4874.00	64.4 PK	74.00	-9.60	1.46 V	94	27.20	37.10
3	4874.00	52.4 AV	54.00	-1.60	1.46 V	94	15.20	33.80
4	6336.00	57.2 PK	87.70	-30.50	1.08 V	81	18.10	39.10
5	7309.00	53.3 PK	74.00	-20.70	1.33 V	349	11.70	41.50
5	7309.00	40.8 AV	54.00	-13.20	1.33 V	349	-0.80	39.10
6	9747.00	56.9 PK	74.00	-17.10	1.00 V	141	13.60	43.30
6	9747.00	48.9 AV	54.00	-5.10	1.00 V	141	5.60	41.50

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

EUT	IEEE 802.11g WLAN Mini PCI	**MODEL**	GL2454MP-0A
MODE	CCK	**FREQUENCY RANGE**	Above 1000MHz
CHANNEL	Channel 11		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 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	104.7 PK			1.36 H	352	71.90	32.90
1	*2462.00	97.6 AV			1.36 H	352	64.80	32.90
2	3168.00	42.4 PK	74.00	-31.60	1.31 H	147	8.60	33.80
3	4924.00	63.5 PK	74.00	-10.50	1.14 H	50	26.20	37.30
3	4924.00	50.8 AV	54.00	-3.20	1.14 H	50	13.40	33.80
4	6336.00	57.2 PK	84.70	-27.50	1.14 H	354	18.10	39.10
4	6336.00	54.2 AV	77.60	-23.40	1.14 H	354	15.10	37.30
5	7385.00	52.4 PK	74.00	-21.60	1.34 H	354	10.80	41.70
5	7385.00	42.5 AV	54.00	-11.50	1.34 H	354	0.90	39.10

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	106.7 PK			1.38 V	9	73.90	32.90
1	*2462.00	102.1 AV			1.38 V	9	69.30	32.90
2	3168.00	44.2 PK	74.00	-29.80	1.29 V	141	10.40	33.80
3	4924.00	65.2 PK	74.00	-8.80	1.02 V	91	27.80	37.30
3	4924.00	51.8 AV	54.00	-2.20	1.02 V	91	14.40	33.80
4	6336.00	59.5 PK	86.70	-27.20	1.56 V	171	20.40	39.10
4	6336.00	55.2 AV	82.10	-26.90	1.56 V	171	16.10	37.30
5	7385.00	54.5 PK	74.00	-19.50	1.42 V	252	12.90	41.70
5	7385.00	43.5 AV	54.00	-10.50	1.42 V	252	1.90	39.10

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. " * " : Fundamental frequency.
6. The other emission levels were very low against the limit.

EUT	IEEE 802.11g WLAN Mini PCI	**MODEL**	GL2454MP-0A
MODE	OFDM	**FREQUENCY RANGE**	Above 1000MHz
CHANNEL	Channel 1		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 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	*2412.00	97.0 PK			1.39 H	12	64.20	32.80
1	*2412.00	89.6 AV			1.39 H	12	56.90	32.80
2	3168.00	42.7 PK	74.00	-31.30	1.10 H	81	8.90	33.80
3	4824.00	48.2 PK	74.00	-25.80	1.28 H	34	11.20	36.90
4	7236.00	49.6 PK	74.00	-24.40	1.51 H	34	8.10	41.40
5	9648.00	52.2 PK	74.00	-21.80	1.19 H	272	8.80	43.40
5	9648.00	43.0 AV	54.00	-11.00	1.19 H	272	-0.40	33.80

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	*2412.00	101.5 PK			1.20 V	323	68.70	32.80
1	*2412.00	94.5 AV			1.20 V	323	61.70	32.80
2	3168.00	42.6 PK	74.00	-31.40	1.28 V	22	8.80	33.80
3	4824.00	54.2 PK	74.00	-19.80	1.00 V	356	17.20	36.90
3	4824.00	42.2 AV	54.00	-11.80	1.00 V	356	5.20	33.80
4	6336.00	58.9 PK	81.50	-22.60	1.01 V	341	19.80	39.10
4	6336.00	55.6 AV	74.50	-18.90	1.01 V	341	16.50	36.90
5	7231.00	49.8 PK	74.00	-24.20	1.31 V	104	8.40	41.40
6	9646.00	52.7 PK	74.00	-21.30	1.52 V	17	9.30	43.40
6	9646.00	44.0 AV	54.00	-10.00	1.52 V	17	0.60	39.10

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. " * " : Fundamental frequency.
6. The other emission levels were very low against the limit.

EUT	IEEE 802.11g WLAN Mini PCI	**MODEL**	GL2454MP-0A
MODE	OFDM	**FREQUENCY RANGE**	Above 1000MHz
CHANNEL	Channel 6		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 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	97.6 PK			1.35 H	341	64.80	32.80
1	*2437.00	90.7 AV			1.35 H	341	57.90	32.80
2	3168.00	42.2 PK	74.00	-31.80	1.13 H	224	8.40	33.80
3	4874.00	51.0 PK	74.00	-23.00	1.44 H	10	13.80	37.10
3	4874.00	39.4 AV	54.00	-14.60	1.44 H	10	2.20	33.80
4	6336.00	58.5 PK	77.60	-19.10	1.41 H	11	19.40	39.10
4	6336.00	54.2 AV	70.70	-16.50	1.41 H	11	15.10	37.10
5	7310.00	50.2 PK	74.00	-23.80	1.20 H	314	8.60	41.50
5	7310.00	41.0 AV	54.00	-13.00	1.20 H	314	-0.60	39.10

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	102.4 PK			1.43 V	2	69.60	32.80
1	*2437.00	95.0 AV			1.43 V	2	62.20	32.80
2	3168.00	42.0 PK	74.00	-32.00	1.36 V	74	8.20	33.80
3	4874.00	60.3 PK	74.00	-13.70	1.14 V	321	23.10	37.10
3	4874.00	45.3 AV	54.00	-8.70	1.14 V	321	8.10	33.80
4	6336.00	58.2 PK	82.40	-24.20	1.27 V	74	19.10	39.10
4	6336.00	54.6 AV	75.00	-20.40	1.27 V	74	15.50	37.10
5	7311.00	50.5 PK	74.00	-23.50	1.24 V	271	8.90	41.50
5	7311.00	42.5 AV	54.00	-11.50	1.24 V	271	0.90	39.10

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. " * " : Fundamental frequency.
6. The other emission levels were very low against the limit.

EUT	IEEE 802.11g WLAN Mini PCI	**MODEL**	GL2454MP-0A
MODE	OFDM	**FREQUENCY RANGE**	Above 1000MHz
CHANNEL	Channel 11		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 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	*2463.00	98.3 PK			1.00 H	129	65.40	32.90
1	*2463.00	86.7 AV			1.00 H	129	53.80	32.90
2	3168.00	43.0 PK	74.00	-31.00	1.32 H	57	9.20	33.80
3	4924.00	54.1 PK	74.00	-19.90	1.41 H	10	16.70	37.30
3	4924.00	41.6 AV	54.00	-12.40	1.41 H	10	4.20	33.80
4	6336.00	52.8 PK	74.00	-21.20	1.21 H	14	13.70	39.10
4	6336.00	48.2 AV	54.00	-5.80	1.21 H	14	9.10	37.30
5	7386.00	49.3 PK	74.00	-24.70	1.17 H	21	7.70	41.70

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	*2463.00	101.7 PK			1.44 V	255	68.90	32.90
1	*2463.00	95.3 AV			1.44 V	255	62.50	32.90
2	3168.00	43.2 PK	74.00	-30.80	1.33 V	85	9.40	33.80
3	4924.00	58.5 PK	74.00	-15.50	1.44 V	111	21.10	37.30
3	4924.00	42.3 AV	54.00	-11.70	1.44 V	111	4.90	33.80
4	6336.00	58.0 PK	81.70	-23.70	1.01 V	174	18.90	39.10
4	6336.00	54.2 AV	75.30	-21.10	1.01 V	174	15.10	37.30
5	7386.00	50.1 PK	74.00	-23.90	1.24 V	42	8.50	41.70

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

4.2.9 TEST RESULT (C)

EUT	IEEE 802.11g WLAN Mini PCI	**MODEL**	GL2454MP-0A
MODE	Channel 11	**FREQUENCY RANGE**	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)
1	192.02	30.6 QP	43.50	-12.90	1.19 H	13	19.70	10.80
2	256.02	39.2 QP	46.00	-6.80	1.24 H	3	22.80	16.40
3	288.02	41.9 QP	46.00	-4.10	1.22 H	65	25.20	16.60
4	352.02	43.5 QP	46.00	-2.50	1.06 H	356	25.70	17.70
5	384.02	32.4 QP	46.00	-13.60	1.20 H	13	13.70	18.70
6	416.02	30.2 QP	46.00	-15.80	1.27 H	252	10.90	19.30
7	576.02	28.0 QP	46.00	-18.00	1.49 H	297	6.10	21.90
8	640.02	30.4 QP	46.00	-15.60	1.24 H	13	7.60	22.80
9	736.00	37.5 QP	46.00	-8.50	1.31 H	8	13.60	23.80
10	800.00	37.9 QP	46.00	-8.10	1.23 H	130	13.00	24.90

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)
1	192.03	28.7 QP	43.50	-14.80	1.38 V	8	17.80	10.80
2	288.03	34.0 QP	46.00	-12.00	1.07 V	9	17.40	16.60
3	352.03	36.9 QP	46.00	-9.10	1.54 V	38	19.20	17.70
4	384.03	29.5 QP	46.00	-16.50	1.18 V	3	10.80	18.70
5	640.03	29.5 QP	46.00	-16.50	1.38 V	13	6.70	22.80
6	736.03	33.8 QP	46.00	-12.20	1.34 V	4	10.00	23.80
7	800.03	34.5 QP	46.00	-11.50	1.25 V	9	9.60	24.90
8	832.03	29.9 QP	46.00	-16.10	1.41 V	271	4.90	25.00

NOTE:

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

EUT	IEEE 802.11g WLAN Mini PCI	**MODEL**	GL2454MP-0A
MODE	CCK	**FREQUENCY RANGE**	Above 1000MHz
CHANNEL	Channel 1		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 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	*2412.00	108.4 PK			1.11 H	167	75.70	32.80
1	*2412.00	101.6 AV			1.11 H	167	68.90	32.80
2	3168.00	43.7 PK	74.00	-30.30	1.42 H	87	9.90	33.80
3	4824.00	48.0 PK	74.00	-26.00	1.21 H	44	11.00	36.90
4	6336.00	58.7 PK	88.40	-29.70	1.10 H	54	19.60	39.10
4	6336.00	56.2 AV	81.60	-25.40	1.10 H	54	17.10	33.80
5	7237.00	50.4 PK	74.00	-23.60	1.19 H	221	8.90	41.40
5	7237.00	40.2 AV	54.00	-13.80	1.19 H	221	-1.30	36.90

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	*2412.00	104.6 PK			1.06 V	25	71.90	32.80
1	*2412.00	97.6 AV			1.06 V	25	64.90	32.80
2	3168.00	43.5 PK	74.00	-30.50	1.05 V	24	9.70	33.80
3	4824.00	46.2 PK	74.00	-27.80	1.17 V	35	9.20	36.90
4	6336.00	60.2 PK	84.60	-24.40	1.20 V	45	21.10	39.10
4	6336.00	55.2 AV	77.60	-22.40	1.20 V	45	16.10	33.80
5	7237.00	50.9 PK	74.00	-23.10	1.24 V	50	9.40	41.40
5	7237.00	40.4 AV	54.00	-13.60	1.24 V	50	-1.10	36.90

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

EUT	IEEE 802.11g WLAN Mini PCI	**MODEL**	GL2454MP-0A
MODE	CCK	**FREQUENCY RANGE**	Above 1000MHz
CHANNEL	Channel 6		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 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	106.7 PK			1.38 H	45	73.90	32.80
1	*2437.00	99.7 AV			1.38 H	45	66.90	32.80
2	3168.00	44.4 PK	74.00	-29.60	1.19 H	47	10.60	33.80
3	4874.00	49.7 PK	74.00	-24.30	1.06 H	1	12.50	37.10
4	6336.00	57.0 PK	86.70	-29.70	1.15 H	74	17.90	39.10
4	6336.00	54.2 AV	79.70	-25.50	1.15 H	74	15.10	33.80
5	7310.00	52.5 PK	74.00	-21.50	1.11 H	57	10.90	41.50
5	7310.00	45.5 AV	54.00	-8.50	1.11 H	57	3.90	37.10

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	102.6 PK			1.40 V	136	69.80	32.80
1	*2437.00	97.3 AV			1.40 V	136	64.50	32.80
2	3168.00	44.4 PK	74.00	-29.60	1.17 V	35	10.60	33.80
3	4874.00	46.4 PK	74.00	-27.60	1.24 V	55	9.20	37.10
4	6336.00	58.9 PK	82.60	-23.70	1.24 V	57	19.80	39.10
4	6336.00	55.6 AV	77.30	-21.70	1.24 V	57	16.50	33.80
5	7310.00	52.5 PK	74.00	-21.50	1.10 V	35	10.90	41.50
5	7310.00	44.5 AV	54.00	-9.50	1.10 V	35	2.90	37.10

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. " * " : Fundamental frequency.
6. The other emission levels were very low against the limit.

EUT	IEEE 802.11g WLAN Mini PCI	**MODEL**	GL2454MP-0A
MODE	CCK	**FREQUENCY RANGE**	Above 1000MHz
CHANNEL	Channel 11		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 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	*2463.00	107.7 PK			1.08 H	140	74.90	32.90
1	*2463.00	102.1 AV			1.08 H	140	69.30	32.90
2	3168.00	43.7 PK	74.00	-30.30	1.52 H	74	9.90	33.80
3	4924.00	52.6 PK	74.00	-21.40	1.24 H	45	15.20	37.30
3	4924.00	43.6 AV	54.00	-10.40	1.24 H	45	6.20	33.80
4	6336.00	58.0 PK	87.70	-29.70	1.05 H	88	18.90	39.10
4	6336.00	54.6 AV	82.10	-27.50	1.05 H	88	15.50	37.30
5	7387.00	52.7 PK	74.00	-21.30	1.26 H	22	11.10	41.70
5	7387.00	44.5 AV	54.00	-9.50	1.26 H	22	2.90	39.10

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	*2463.00	102.7 PK			1.37 V	140	69.90	32.90
1	*2463.00	96.5 AV			1.37 V	140	63.70	32.90
2	3168.00	42.7 PK	74.00	-31.30	1.32 V	54	8.90	33.80
3	4924.00	54.6 PK	74.00	-19.40	1.05 V	35	17.20	37.30
3	4924.00	42.6 AV	54.00	-11.40	1.05 V	35	5.20	33.80
4	6336.00	58.4 PK	82.70	-24.30	1.15 V	32	19.30	39.10
4	6336.00	56.2 AV	76.50	-20.30	1.15 V	32	17.10	37.30
5	7387.00	53.0 PK	74.00	-21.00	1.21 V	255	11.40	41.70
5	7387.00	46.0 AV	54.00	-8.00	1.21 V	255	4.40	39.10

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. " * " : Fundamental frequency.
6. The other emission levels were very low against the limit.

EUT	IEEE 802.11g WLAN Mini PCI	**MODEL**	GL2454MP-0A
MODE	OFDM	**FREQUENCY RANGE**	Above 1000MHz
CHANNEL	Channel 1		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 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	*2412.00	99.0 PK			1.77 H	163	66.20	32.80
1	*2412.00	89.5 AV			1.77 H	163	56.80	32.80
2	3168.00	42.9 PK	74.00	-31.10	1.10 H	17	9.10	33.80
3	4824.00	45.2 PK	74.00	-28.80	1.52 H	97	8.20	36.90
4	6336.00	57.2 PK	79.00	-21.80	1.17 H	35	18.10	39.10
4	6336.00	54.2 AV	69.50	-15.30	1.17 H	35	15.10	33.80
5	7236.00	48.4 PK	74.00	-25.60	1.12 H	77	6.90	41.40

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	*2412.00	98.3 PK			1.18 V	76	65.60	32.80
1	*2412.00	91.2 AV			1.18 V	76	58.50	32.80
2	3168.00	42.7 PK	74.00	-31.30	1.03 V	44	8.90	33.80
3	4824.00	45.0 PK	74.00	-29.00	1.06 V	47	8.00	36.90
4	6336.00	58.4 PK	78.30	-19.90	1.30 V	188	19.30	39.10
4	6336.00	54.9 AV	71.20	-16.30	1.30 V	188	15.80	33.80
5	7236.00	50.1 PK	74.00	-23.90	1.36 V	15	8.60	41.40
5	7236.00	41.4 AV	54.00	-12.60	1.36 V	15	-0.10	36.90

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

EUT	IEEE 802.11g WLAN Mini PCI	**MODEL**	GL2454MP-0A
MODE	OFDM	**FREQUENCY RANGE**	Above 1000MHz
CHANNEL	Channel 6		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 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	101.5 PK			1.38 H	169	68.70	32.80
1	*2437.00	94.0 AV			1.38 H	169	61.20	32.80
2	3168.00	43.1 PK	74.00	-30.90	1.20 H	18	9.30	33.80
3	4874.00	45.6 PK	74.00	-28.40	1.21 H	352	8.50	37.10
4	6336.00	57.4 PK	81.50	-24.10	1.39 H	44	18.30	39.10
4	6336.00	54.2 AV	74.00	-19.80	1.39 H	44	15.10	33.80
5	7310.00	50.0 PK	74.00	-24.00	1.30 H	174	8.40	41.50
5	7310.00	42.2 AV	54.00	-11.80	1.30 H	174	0.60	37.10

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	98.7 PK			1.09 V	47	65.90	32.80
1	*2437.00	89.1 AV			1.09 V	47	56.30	32.80
2	3168.00	43.5 PK	74.00	-30.50	1.14 V	33	9.70	33.80
3	4874.00	46.4 PK	74.00	-27.60	1.26 V	47	9.20	37.10
4	6336.00	58.4 PK	78.70	-20.30	1.07 V	56	19.30	39.10
4	6336.00	55.3 AV	69.10	-13.80	1.07 V	56	16.20	33.80
5	7311.00	50.5 PK	74.00	-23.50	1.04 V	58	8.90	41.50
5	7311.00	41.5 AV	54.00	-12.50	1.04 V	58	-0.10	37.10

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. " * " : Fundamental frequency.
6. The other emission levels were very low against the limit.

EUT	IEEE 802.11g WLAN Mini PCI	**MODEL**	GL2454MP-0A
MODE	OFDM	**FREQUENCY RANGE**	Above 1000MHz
CHANNEL	Channel 11		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 1050 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 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	*2463.00	101.7 PK			1.43 H	169	68.90	32.90
1	*2463.00	95.2 AV			1.43 H	169	62.40	32.90
2	3167.00	43.5 PK	74.00	-30.50	1.17 H	15	9.70	33.80
3	4924.00	52.8 PK	74.00	-21.20	1.38 H	51	15.40	37.30
3	4924.00	44.6 AV	54.00	-9.40	1.38 H	51	7.20	33.80
4	6336.00	57.4 PK	81.70	-24.30	1.04 H	35	18.30	39.10
4	6336.00	54.4 AV	75.20	-20.80	1.04 H	35	15.30	37.30
5	7389.00	56.4 PK	74.00	-17.60	1.23 H	54	14.80	41.70
5	7389.00	46.5 AV	54.00	-7.50	1.23 H	54	4.90	39.10

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	*2463.00	100.2 PK			1.25 V	56	67.30	32.90
1	*2463.00	93.5 AV			1.25 V	56	60.60	32.90
2	3168.00	42.7 PK	74.00	-31.30	1.00 V	74	8.90	33.80
3	4924.00	46.6 PK	74.00	-27.40	1.18 V	33	9.20	37.30
4	6336.00	57.2 PK	80.20	-23.00	1.52 V	74	18.10	39.10
4	6336.00	54.2 AV	73.50	-19.30	1.52 V	74	15.10	33.80
5	7388.00	50.5 PK	74.00	-23.50	1.05 V	47	8.90	41.70
5	7388.00	41.5 AV	54.00	-12.50	1.05 V	47	-0.10	37.30

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

4.3 6dB BANDWIDTH MEASUREMENT

4.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK30	100049	July 24, 2003

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

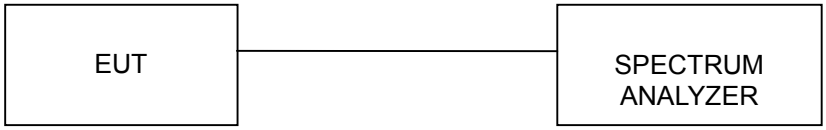
4.3.3 TEST PROCEDURE

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

4.3.4 DEVIATION FROM TEST STANDARD

No deviation

4.3.5 TEST SETUP



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

4.3.6 EUT OPERATING CONDITIONS

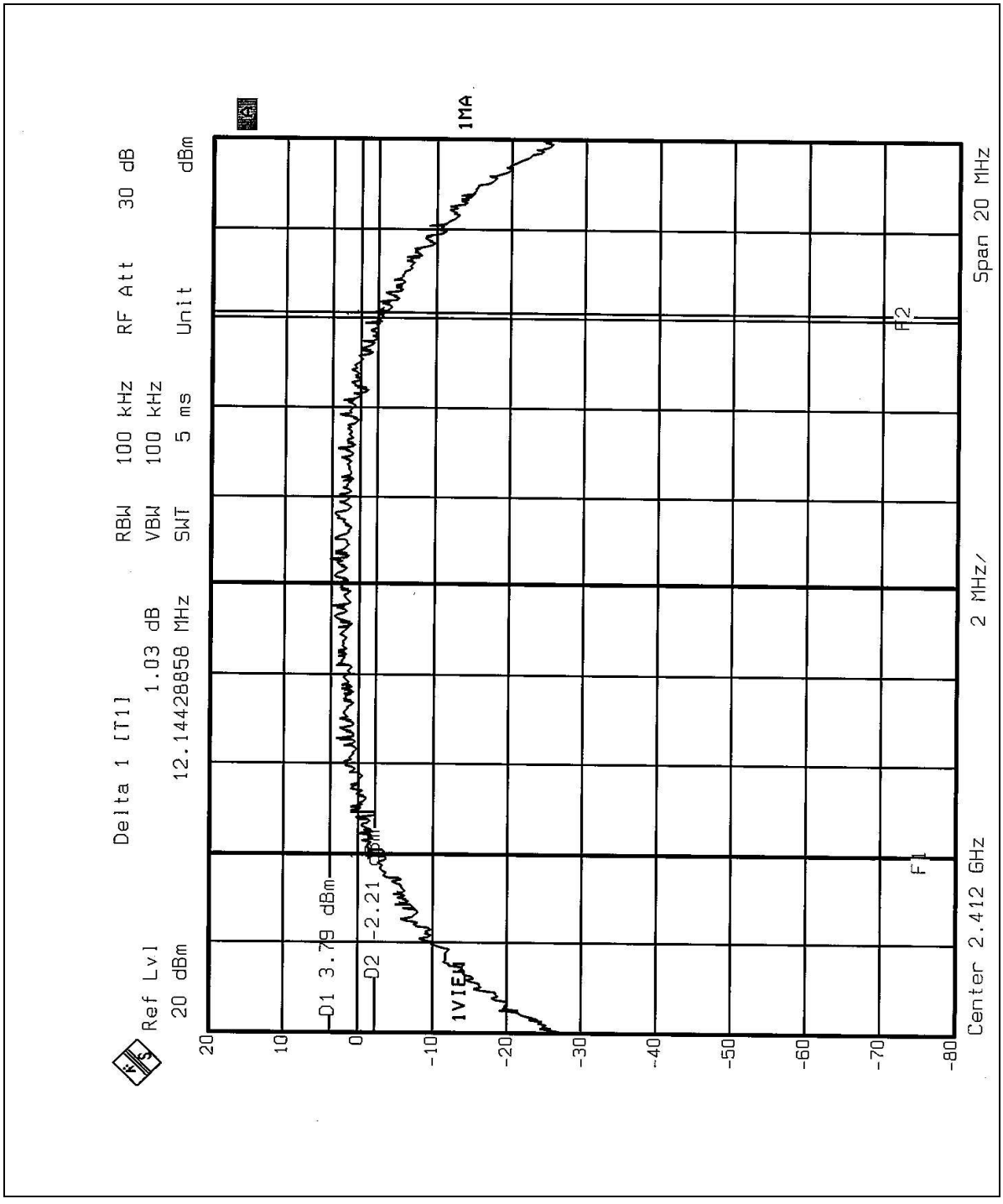
The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.3.7 TEST RESULTS

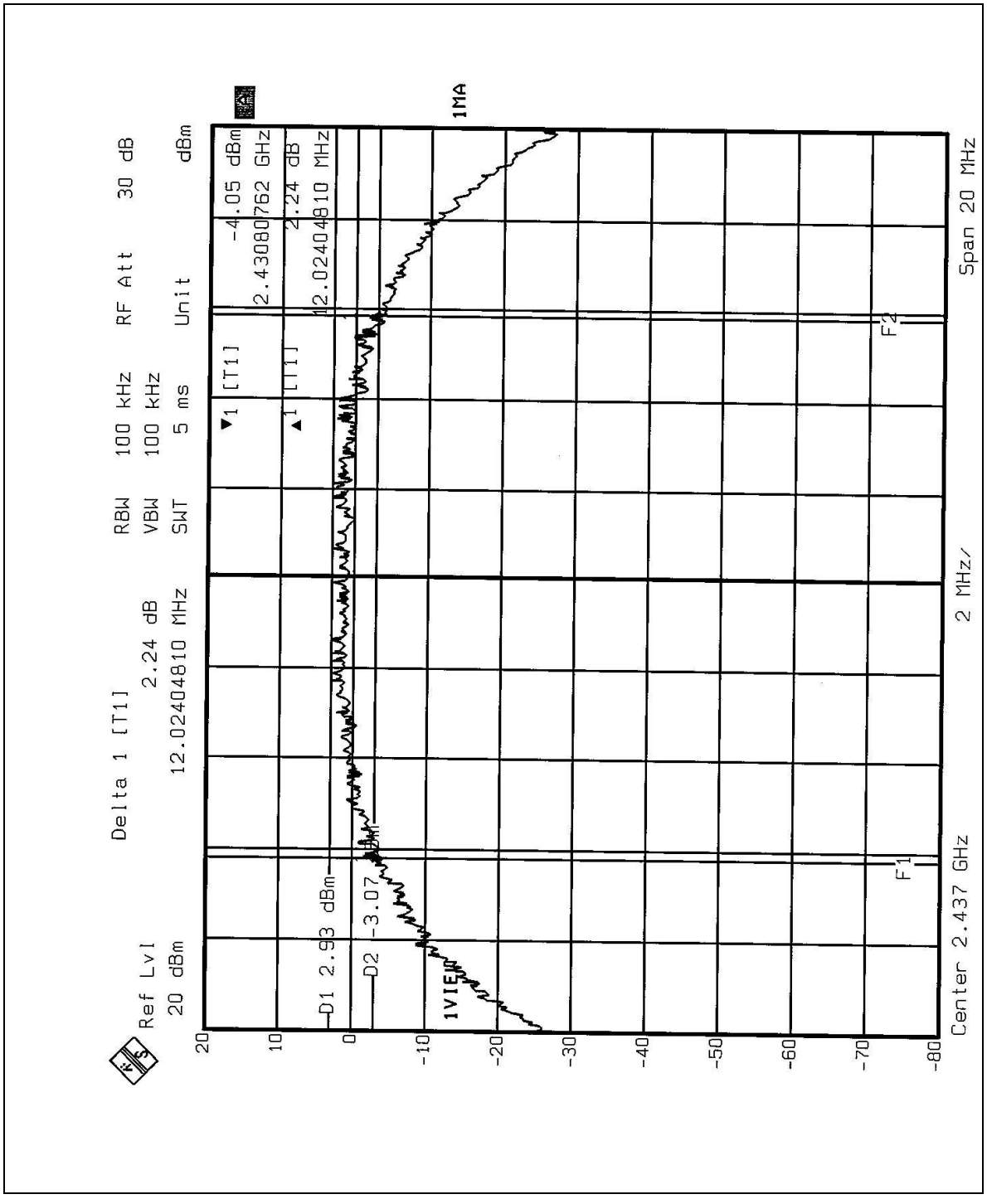
EUT	IEEE 802.11g WLAN Mini PCI	**MODEL**	GL2454MP-0A
		MODE	CCK
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	20deg. C, 62%RH, 1005hPa
TESTED BY: Steven Lu			

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	12.144	0.5	PASS
6	2437	12.024	0.5	PASS
11	2462	12.184	0.5	PASS

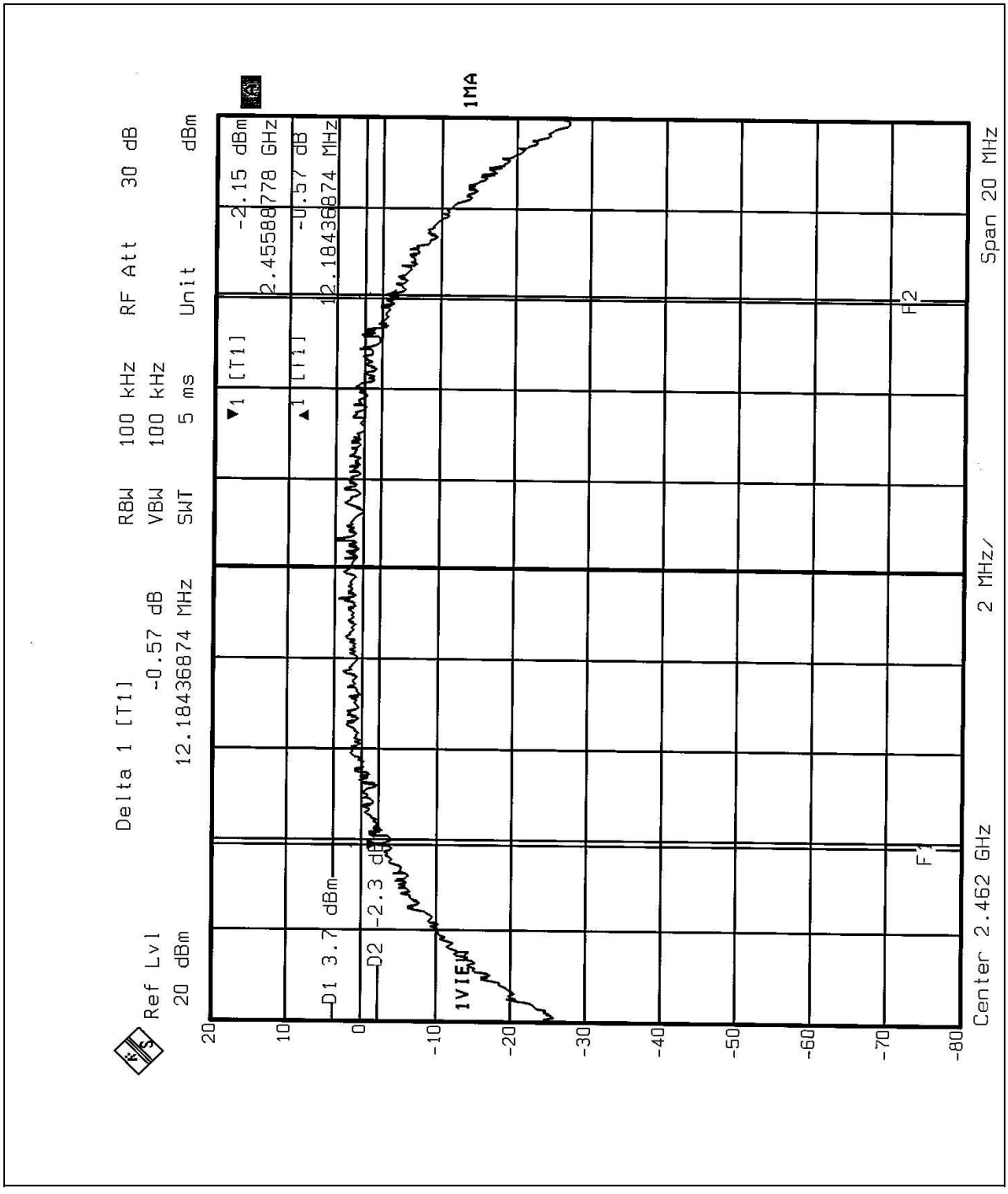
CH1


Delta 1 [T1]
1.03 dB
12.14428858 MHz
RBW 100 kHz
VBW 100 kHz
SWT 5 ms
RF Att 30 dB
Unit dBm
Ref Lvl
20 dBm
D1 3.79 dBm
D2 -2.21 dBm
1MA
1VIEW
A2
F1
Span 20 MHz
2 MHz/
Center 2.412 GHz
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80

CH6


Ref Lvl
20 dBm
Delta 1 [T1]
2.24 dB
12.02404810 MHz
RBW 100 kHz
VBW 100 kHz
SWT 5 ms
RF Att 30 dB
Unit dBm
1 [T1] -4.05 dBm
2.43080762 GHz
1 [T1] 2.24 dB
12.02404810 MHz
1MA
D1 2.93 dBm
D2 -3.07 dBm
1VIEW
F1
F2
Center 2.437 GHz
2 MHz/
Span 20 MHz

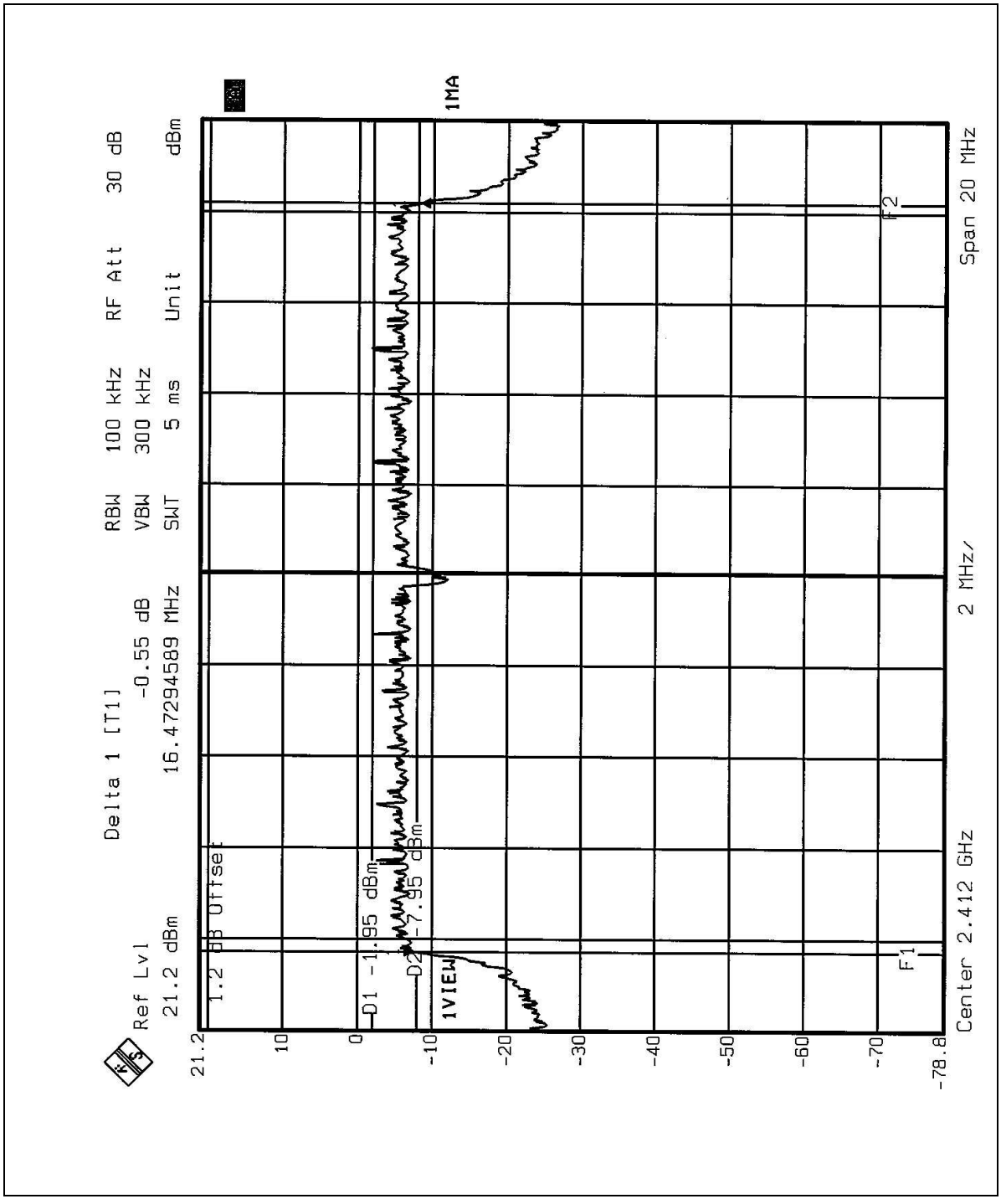
CH11


Ref Lvl
20 dBm
Delta 1 [T1]
-0.57 dB
12.18436874 MHz
RBW 100 kHz
VBW 100 kHz
SWT 5 ms
RF Att 30 dB
Unit dBm
1MA
1VIEW
D1 3.7 dBm
D2 -2.3 dB
Center 2.462 GHz
2 MHz/
Span 20 MHz

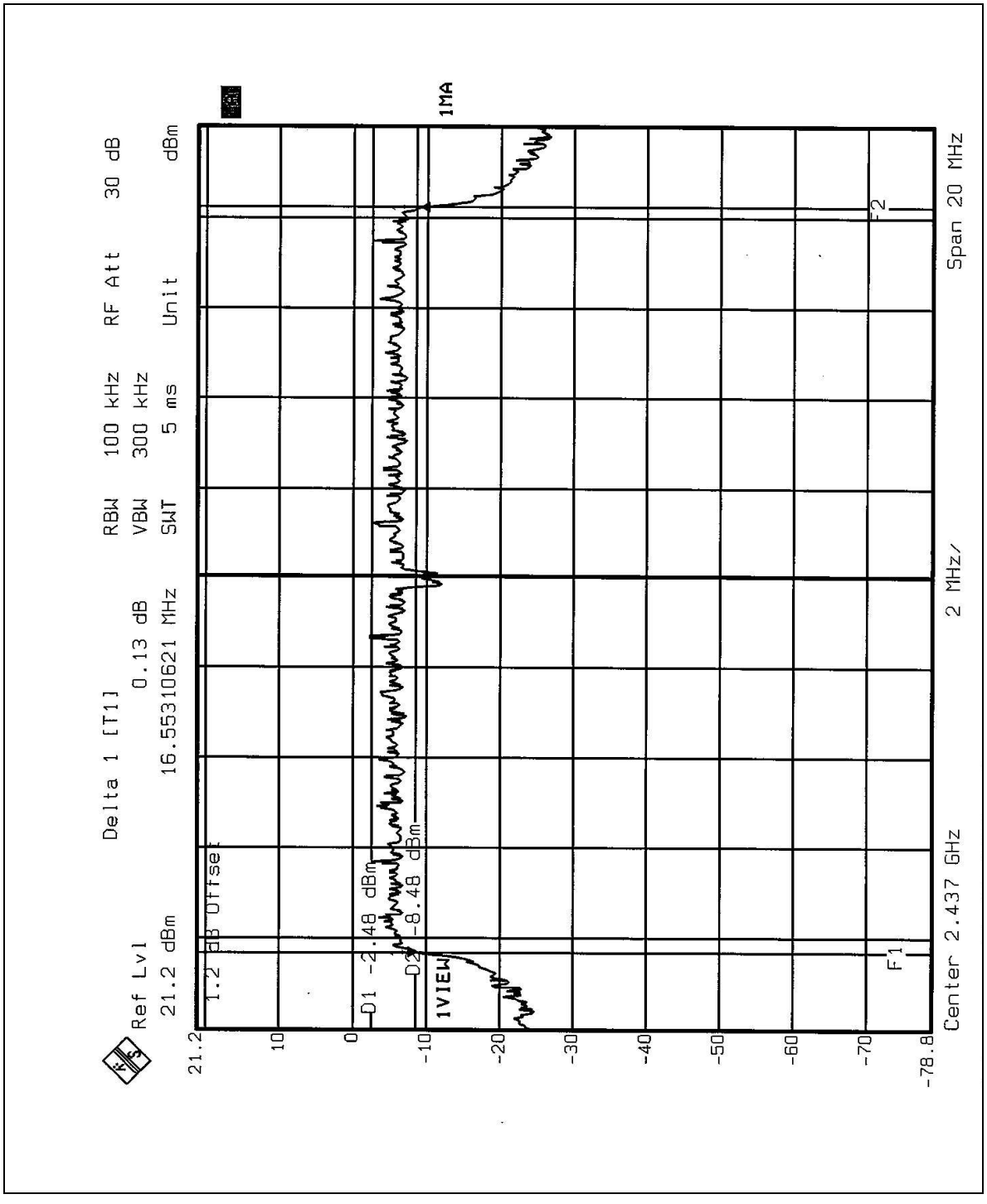
EUT	IEEE 802.11g WLAN Mini PCI	**MODEL**	GL2454MP-0A
		MODE	OFDM
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	17deg. C, 74%RH, 1005hPa
TESTED BY: Steven Lu			

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	16.473	0.5	PASS
6	2437	16.553	0.5	PASS
11	2462	16.513	0.5	PASS

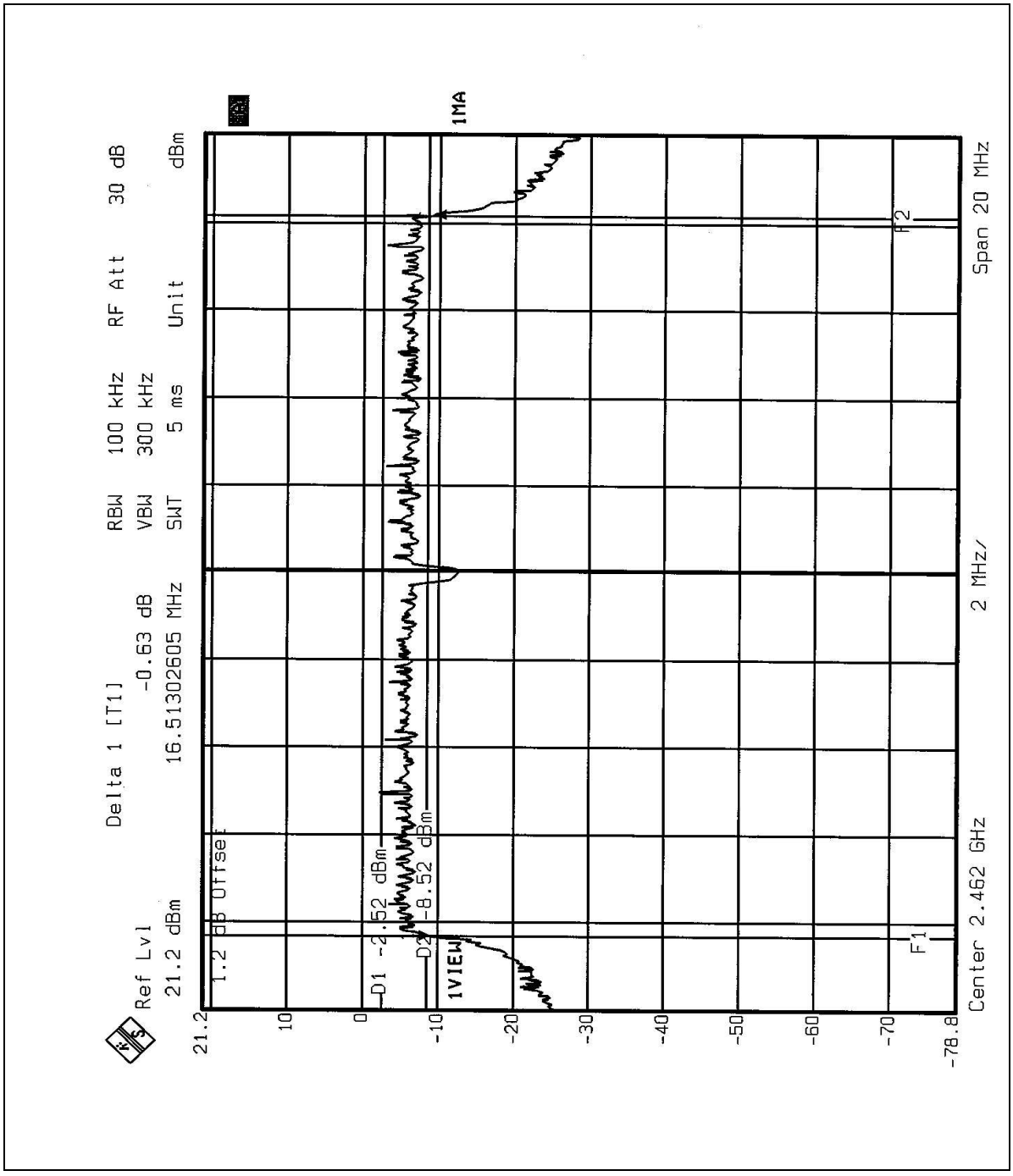
CH1


Delta 1 [T1]
-0.55 dB
16.47294589 MHz
RBW 100 kHz
VBW 300 kHz
SWT 5 ms
RF Att 30 dB
Unit dBm
Ref Lvl
21.2 dBm
1.2 dB Offset
D1 -1.95 dBm
D2 -7.95 dBm
1VIEW
1MA
F1
F2
Center 2.412 GHz
2 MHz/
Span 20 MHz
21.2
10
0
-10
-20
-30
-40
-50
-60
-70
-78.8

CH6


Delta 1 [T1]
0.13 dB
16.55310621 MHz
RBW 100 kHz
VBW 300 kHz
SWT 5 ms
RF Att 30 dB
Unit dBm
Ref Lvl
21.2 dBm
1.2 dB Offset
D1 -2.48 dBm
D2 -8.48 dBm
1VIEW
1MA
Center 2.437 GHz
2 MHz/
Span 20 MHz
F1
F2
21.2
10
0
-10
-20
-30
-40
-50
-60
-70
-78.8

CH11


Delta 1 [T1]
-0.63 dB
16.51302605 MHz
RBW 100 kHz
VBW 300 kHz
SWT 5 ms
RF Att 30 dB
Unit dBm
Ref Lvl
21.2 dBm
1.2 dB Offset
D1 -2.52 dBm
D2 -8.52 dBm
1VIEW
1MA
F1
F2
Center 2.462 GHz
2 MHz/
Span 20 MHz
21.2
10
0
-10
-20
-30
-40
-50
-60
-70
-78.8

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
POWER METER	E4416A	GB41291118	July 30, 2003
PEAK POWER SENSOR	E9327A	US40440722	July 30, 2003

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

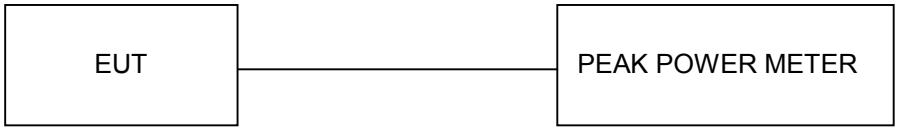
4.4.3 TEST PROCEDURES

The transmitter output was connected to the peak power meter.

4.4.4 DEVIATION FROM TEST STANDARD

No deviation

4.4.5 TEST SETUP



4.4.6 EUT OPERATING CONDITIONS

Same as Item 4.3.6

4.4.7 TEST RESULTS

EUT	IEEE 802.11g WLAN Mini PCI	**MODEL**	GL2454MP-0A
		MODE	CCK
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	20deg. C, 62%RH, 1005hPa
TESTED BY: Steven Lu			

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	15.37	30	PASS
6	2437	15.44	30	PASS
11	2462	15.38	30	PASS

EUT	IEEE 802.11g WLAN Mini PCI	**MODEL**	GL2454MP-0A
		MODE	OFDM
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	20deg. C, 62%RH, 1005hPa
TESTED BY: Steven Lu			

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	15.10	30	PASS
6	2437	14.83	30	PASS
11	2462	15.07	30	PASS

4.5 POWER SPECTRAL DENSITY MEASUREMENT

4.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

4.5.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK30	100049	July 24, 2003

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

4.5.3 TEST PROCEDURE

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

4.5.4 DEVIATION FROM TEST STANDARD

No deviation

4.5.5 TEST SETUP

4.5.6 EUT OPERATING CONDITIONS

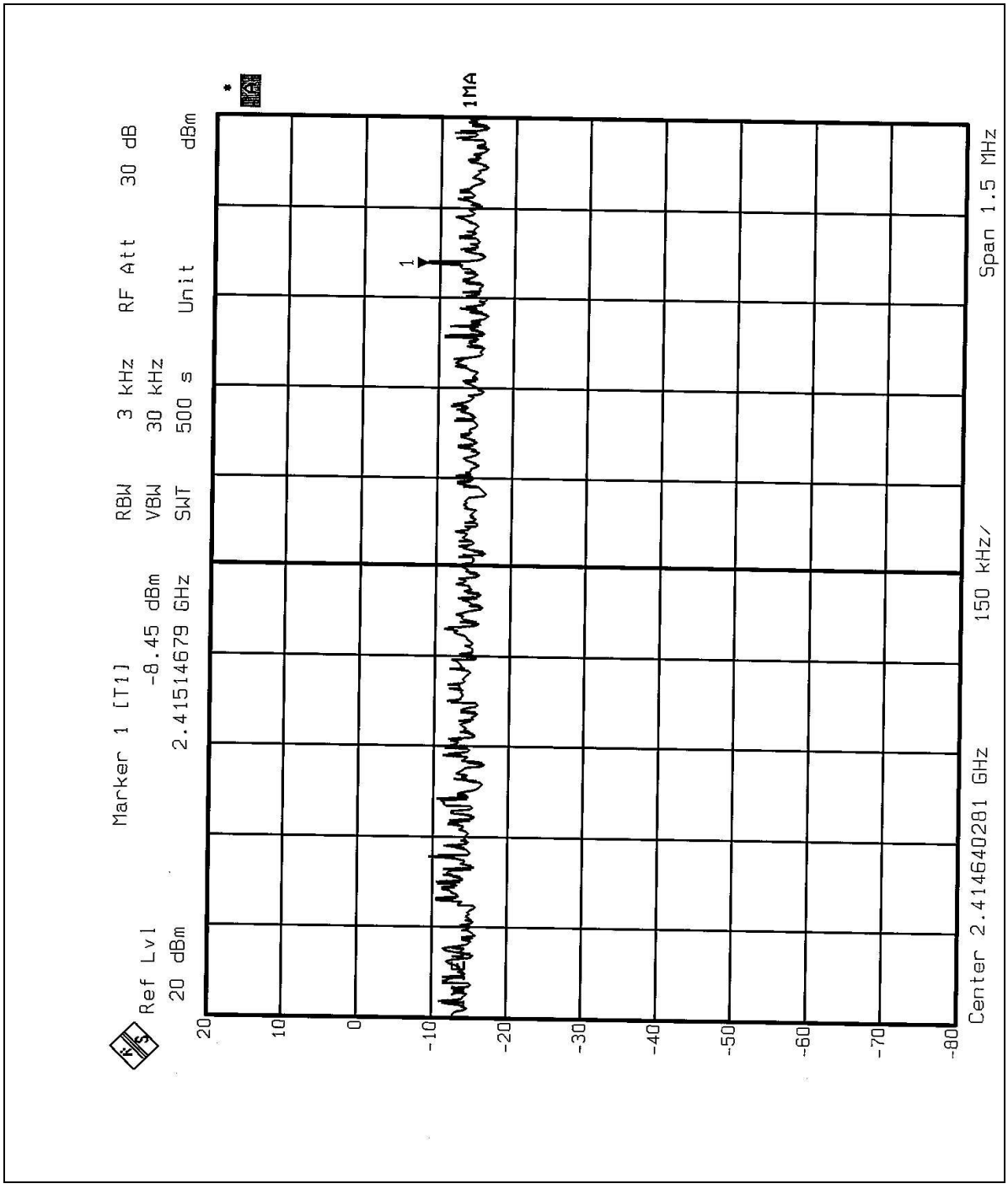
Same as 4.3.6

4.5.7 TEST RESULTS

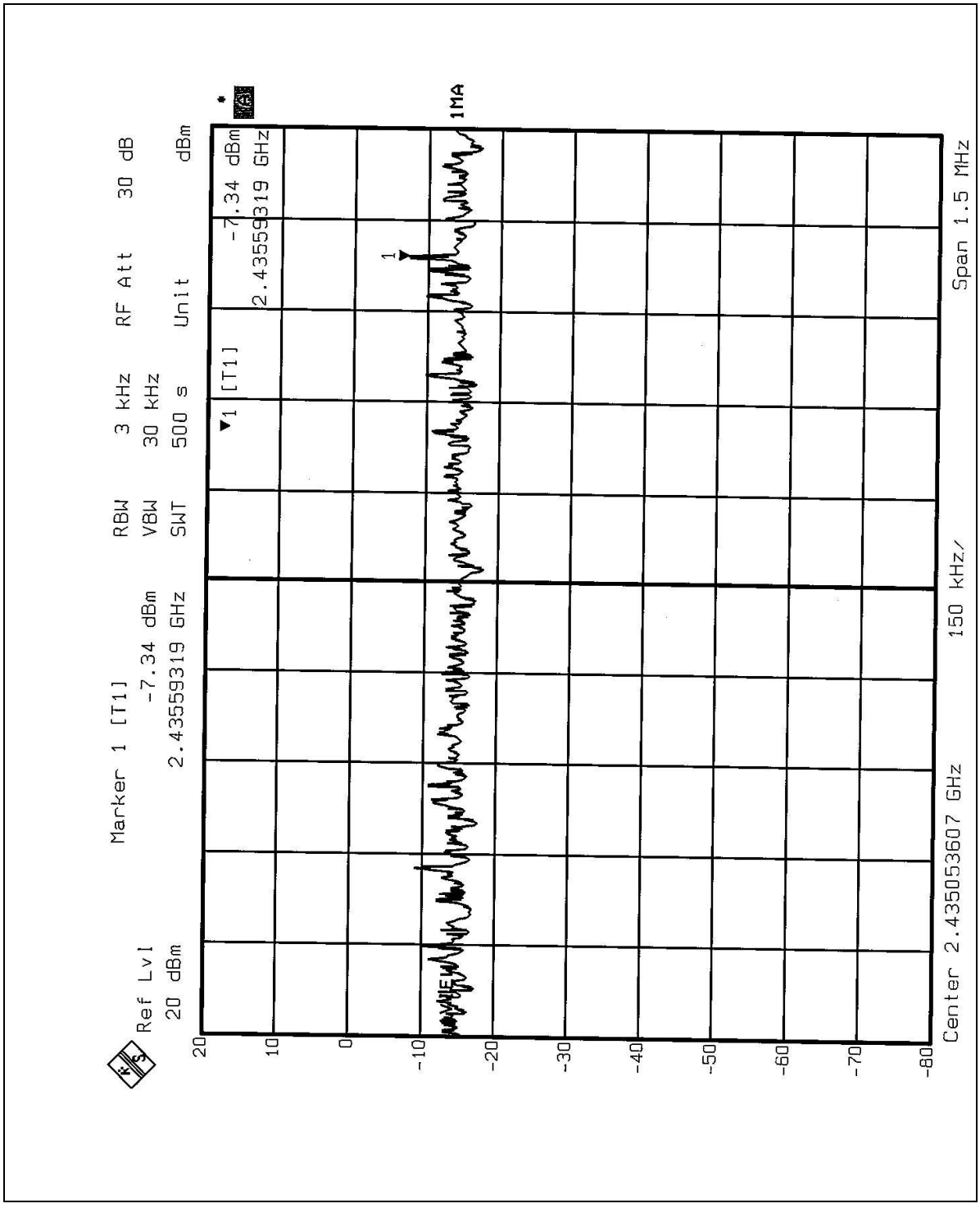
EUT	IEEE 802.11g WLAN Mini PCI	**MODEL**	GL2454MP-0A
		MODE	CCK
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	20deg. C, 62%RH, 1005hPa
TESTED BY: Steven Lu			

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 KHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-8.45	8	PASS
6	2437	-7.34	8	PASS
11	2462	-8.92	8	PASS

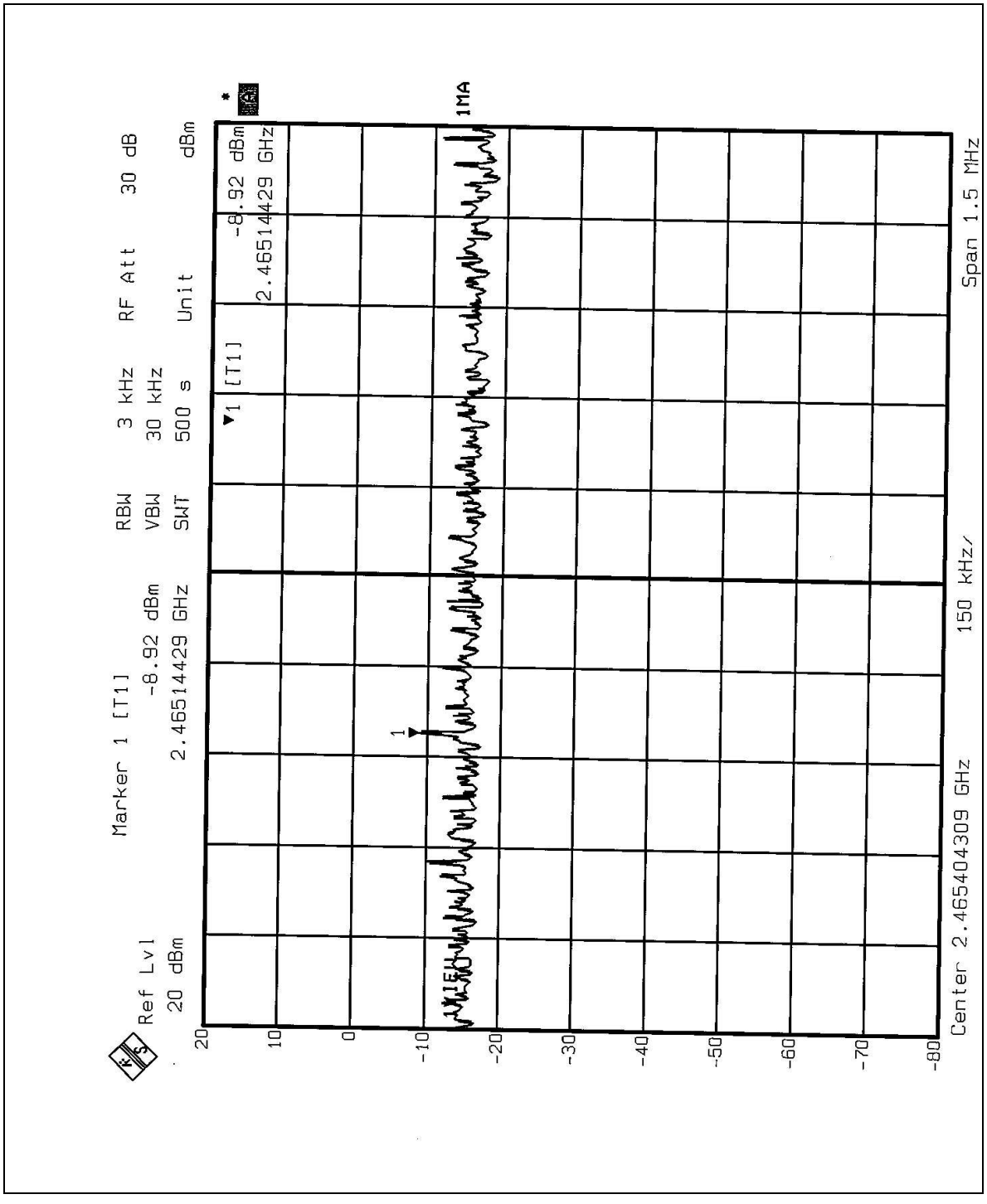
CH1


Ref Lvl
20 dBm
Marker 1 [T1]
-8.45 dBm
2.41514679 GHz
RBW 3 kHz
VBW 30 kHz
SWT 500 s
RF Att 30 dB
Unit dBm
1MA
Center 2.414640281 GHz
150 kHz/
Span 1.5 MHz
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80

CH6


Ref Lvl
20 dBm
Marker 1 [T1]
-7.34 dBm
2.43559319 GHz
RBW 3 kHz
VBW 30 kHz
SWT 500 s
RF Att 30 dB
Unit dBm
1MA
Center 2.435053607 GHz
150 kHz/
Span 1.5 MHz

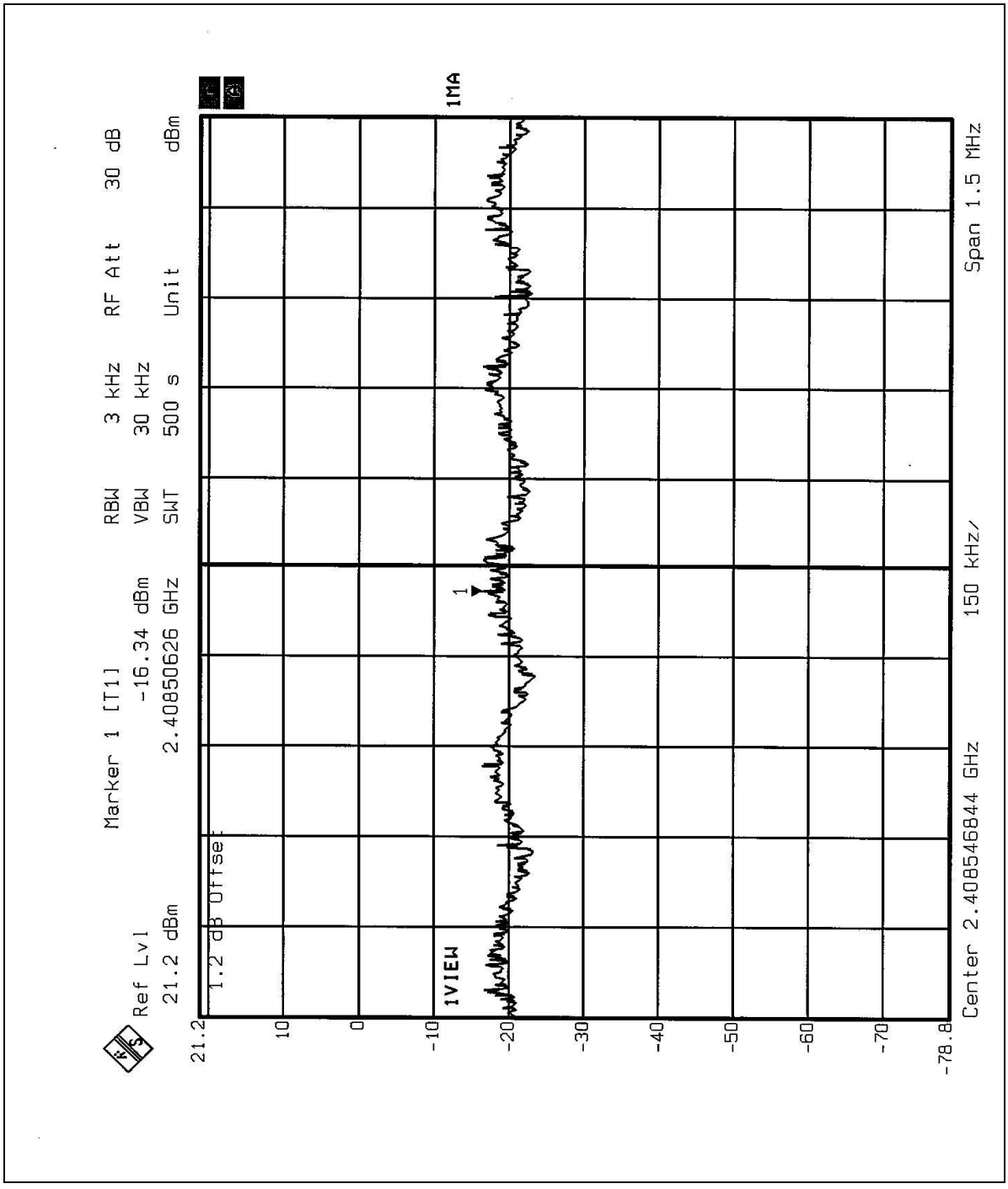
CH11


Ref Lvl
20 dBm
Marker 1 [T1]
-8.92 dBm
2.46514429 GHz
RBW 3 kHz
VBW 30 kHz
SWT 500 s
RF Att 30 dB
Unit dBm
1 [T1]
-8.92 dBm
2.46514429 GHz
1MA
Center 2.46540309 GHz
150 kHz/
Span 1.5 MHz
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80

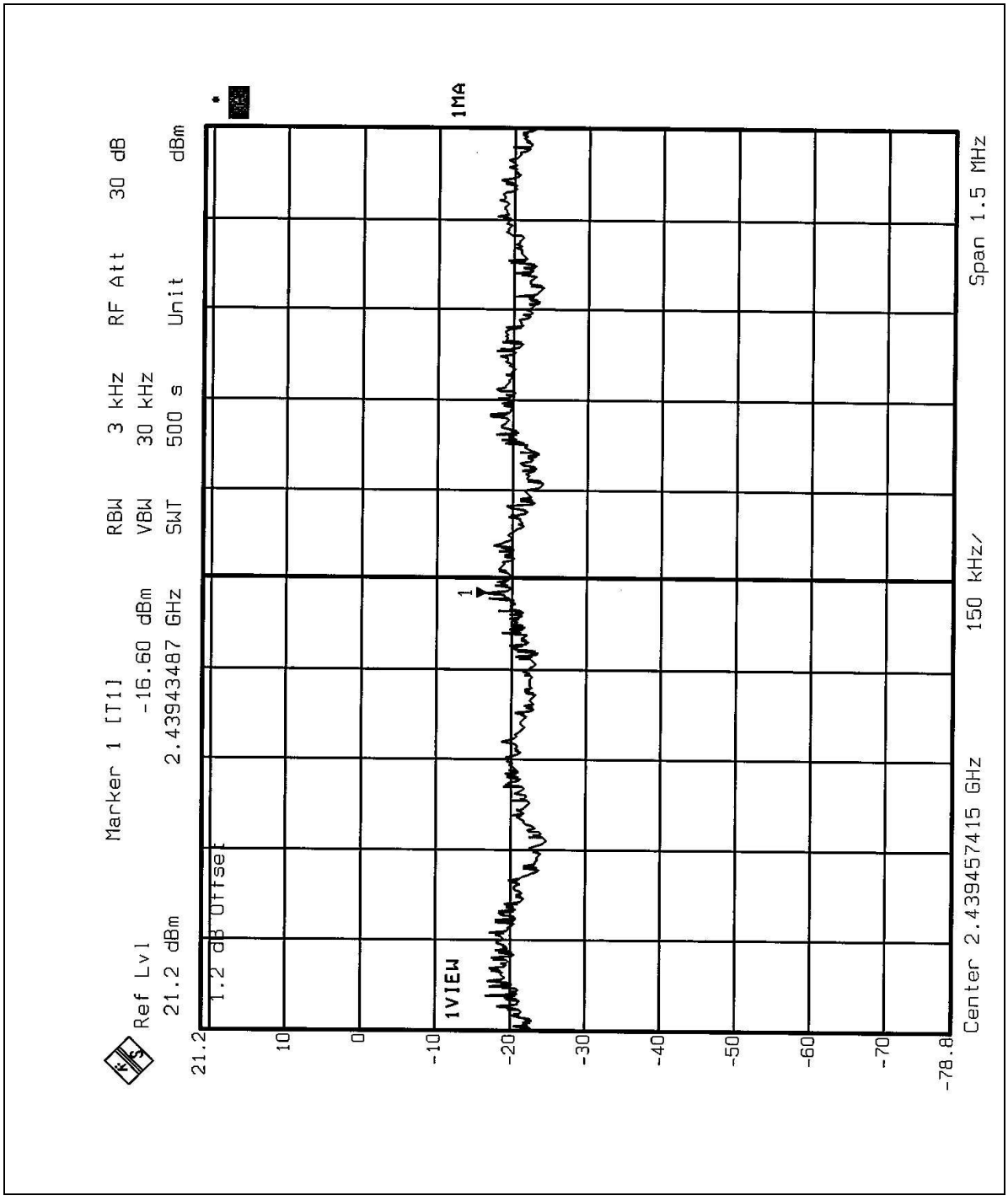
EUT	IEEE 802.11g WLAN Mini PCI	**MODEL**	GL2454MP-0A
		MODE	CCK
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	17deg. C, 74%RH, 1005hPa
TESTED BY: Steven Lu			

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 KHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-16.34	8	PASS
6	2437	-16.60	8	PASS
11	2462	-16.95	8	PASS

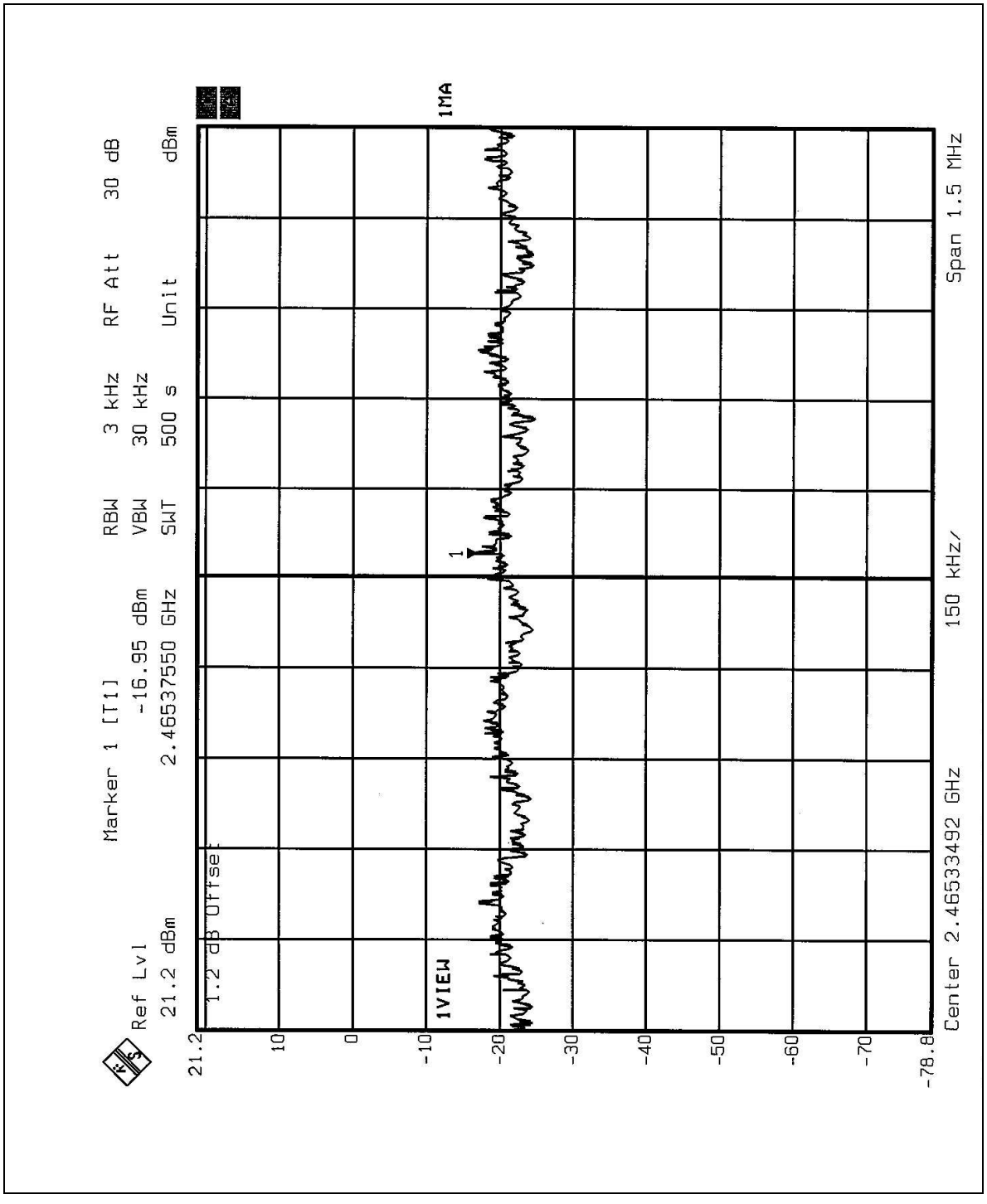
CH1


Agilent
Ref Lvl
21.2 dBm
1.2 dB Offset
Marker 1 [T1]
-16.34 dBm
2.40850626 GHz
RBW 3 kHz
VBW 30 kHz
SWT 500 s
RF Att 30 dB
Unit dBm
1MA
1VIEW
Center 2.408546844 GHz
150 kHz/
Span 1.5 MHz
21.2
10
0
-10
-20
-30
-40
-50
-60
-70
-78.8

CH6


Marker 1 [T1]
-16.60 dBm
2.43943487 GHz
RBW 3 kHz
VBW 30 kHz
SWT 500 s
RF Att 30 dB
Unit dBm
Ref Lvl
21.2 dBm
1.2 dB Offset
1VIEW
1MA
Center 2.43957415 GHz
150 kHz/
Span 1.5 MHz
21.2
10
0
-10
-20
-30
-40
-50
-60
-70
-78.8

CH11


Marker 1 [T1]
-16.95 dBm
2.46537550 GHz
Ref Lvl
21.2 dBm
1.2 dB Offset
RBW 3 kHz
VBW 30 kHz
SWT 500 s
RF Att 30 dB
Unit dBm
1MA
1VIEW
Center 2.46533492 GHz
150 kHz/
Span 1.5 MHz
21.2
10
0
-10
-20
-30
-40
-50
-60
-70
-78.8

4.6 BAND EDGES MEASUREMENT

4.6.1 LIMITS OF BAND EDGES MEASUREMENT

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

4.6.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK30	100049	July 24, 2003

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

4.6.3 TEST PROCEDURE

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

4.6.4 DEVIATION FROM TEST STANDARD

No deviation

4.6.5 EUT OPERATING CONDITION

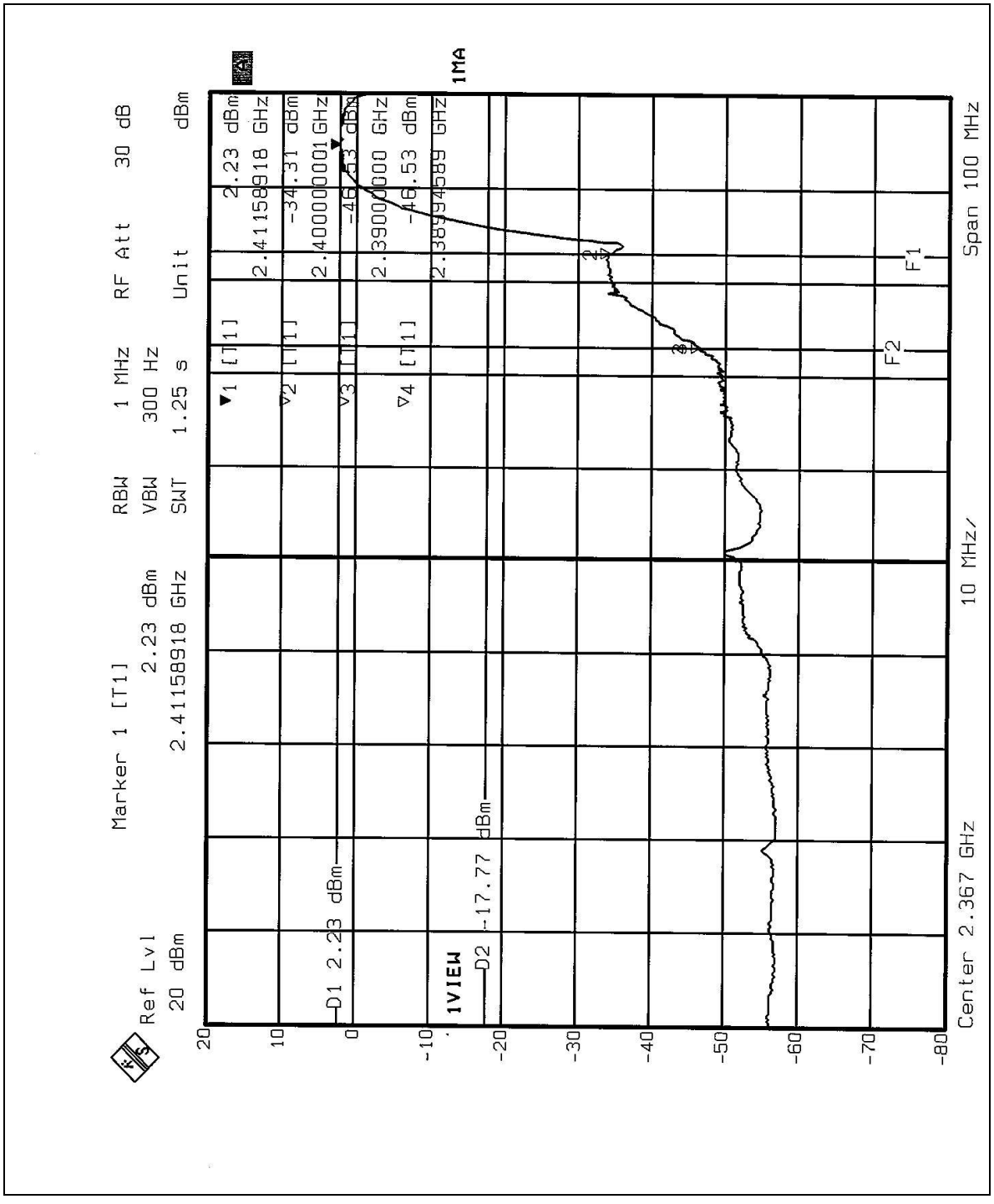
Same as Item 4.3.6

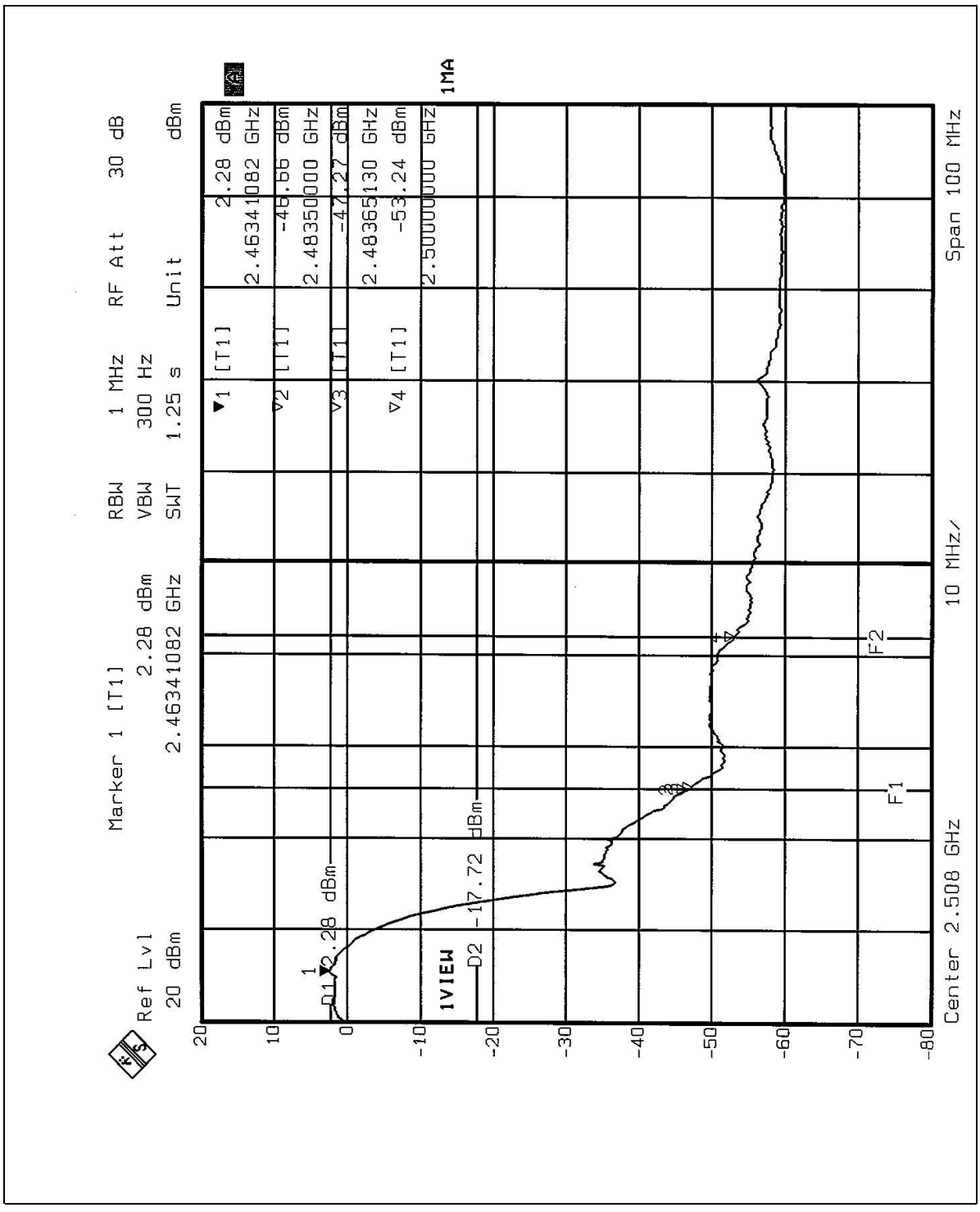
4.6.6 TEST RESULTS

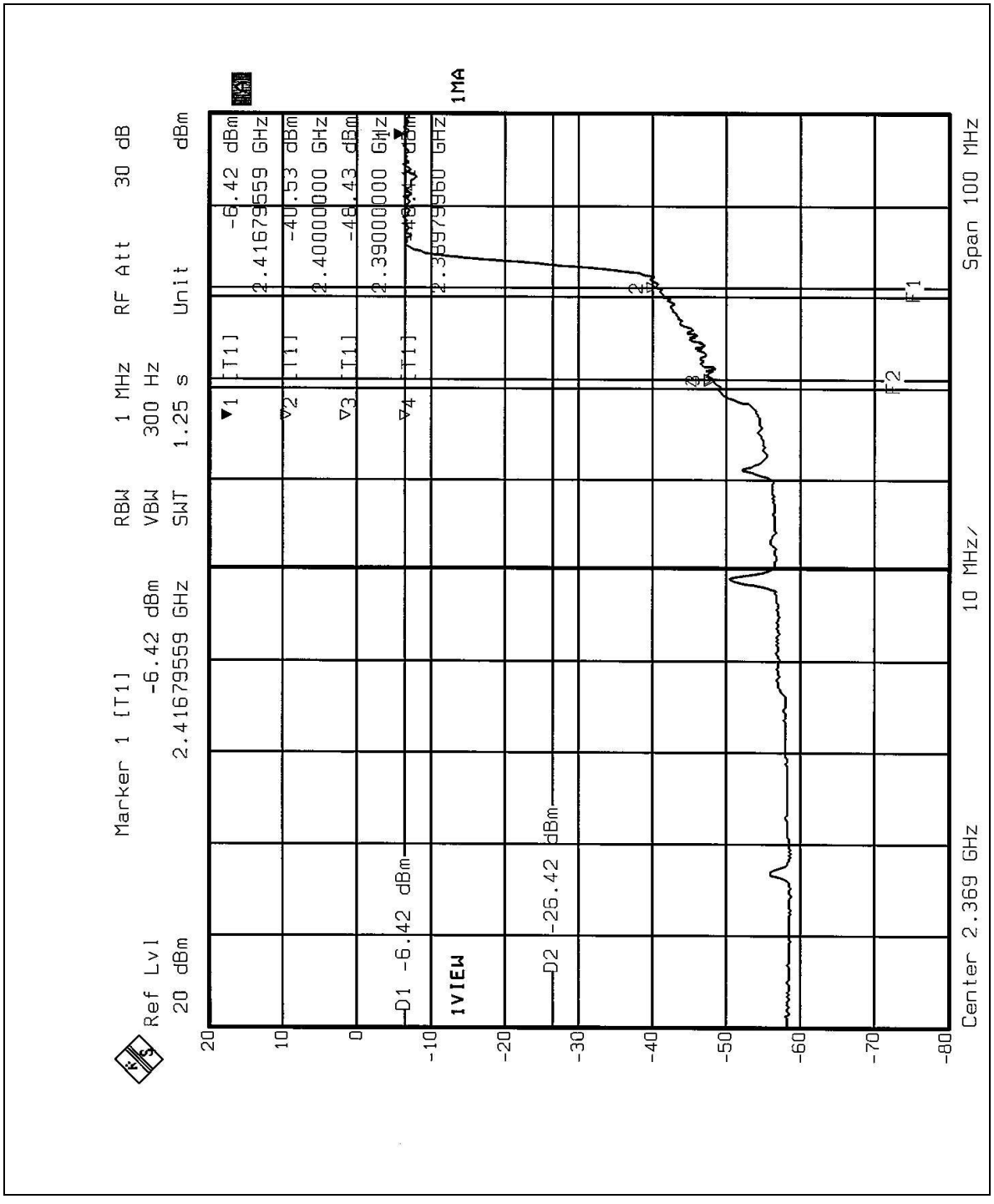
The spectrum plots are attached on the following 2 pages. D2 line indicates the highest level, D1 line indicates the 20dB offset below D2. It shows compliance with the requirement in part 15.247(C).

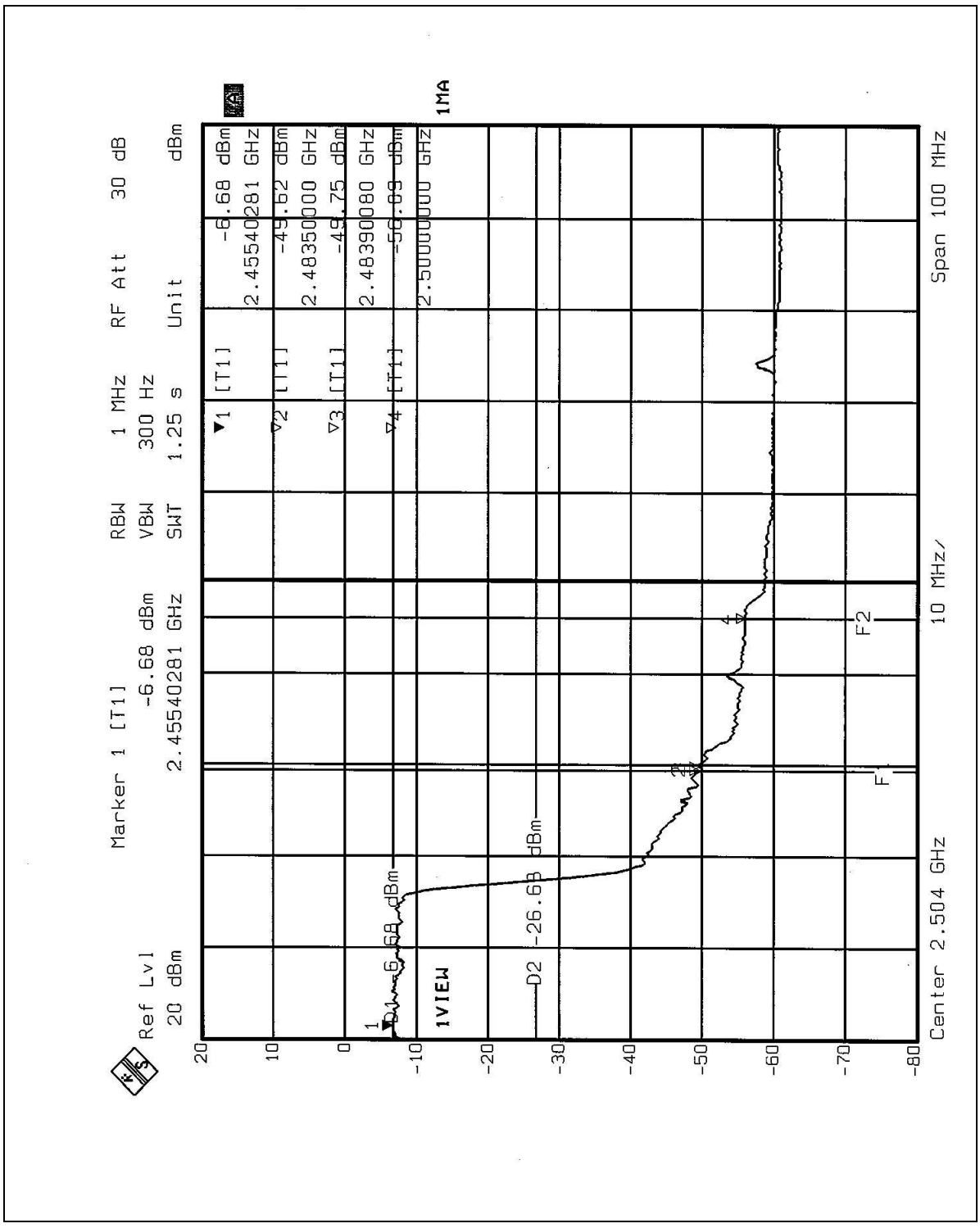
NOTE 1: The band edge emission plot on the following 1-2 pages shows 48.76dB / 48.94dB delta between carrier maximum power and local maximum emission in restrict band (2.3899GHz / 2.4835GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.8 is 102.0dBuV/m, so the maximum field strength in restrict band is 102.0-48.76=53.24dBuV/m which is under 54dBuV/m limit.

NOTE 2: The band edge emission plot on the following 3-4 pages shows 41.99dB / 42.94dB delta between carrier maximum power and local maximum emission in restrict band (2.3898GHz / 2.4835GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 94.8dBuV/m, so the maximum field strength in restrict band is 94.8-41.99=52.81dBuV/m which is under 54 dBuV/m limit.


Marker 1 [T1]
2.23 dBm
2.41158918 GHz
RBW 1 MHz
VBW 300 Hz
SWT 1.25 s
RF Att 30 dB
Unit dBm
Ref Lvl
20 dBm
1MA
1VIEW
D1 2.23 dBm
D2 -17.77 dBm
F1
F2
Center 2.367 GHz
10 MHz/
Span 100 MHz


Marker 1 [T1]
2.28 dBm
2.46341082 GHz
RBW 1 MHz
VBW 300 Hz
SWT 1.25 s
RF Att 30 dB
Unit dBm
Ref Lvl
20 dBm
1 [T1] 2.28 dBm 2.46341082 GHz
2 [T1] -46.66 dBm 2.48350000 GHz
3 [T1] -47.27 dBm 2.48365130 GHz
4 [T1] -53.24 dBm 2.50000000 GHz
1MA
1VIEW
D2 -17.72 dBm
D1 2.28 dBm
F1
F2
Center 2.508 GHz
10 MHz/
Span 100 MHz


Marker 1 [T1]
-6.42 dBm
2.41679559 GHz
Ref Lvl
20 dBm
RBW 1 MHz
VBW 300 Hz
SWT 1.25 s
RF Att 30 dB
Unit dBm
1MA
1VIEW
D1 -6.42 dBm
D2 -26.42 dBm
Center 2.369 GHz
10 MHz/
Span 100 MHz


Marker 1 [T1]
-6.68 dBm
2.45540281 GHz
Ref Lvl
20 dBm
RBW 1 MHz
VBW 300 Hz
SWT 1.25 s
RF Att 30 dB
Unit dBm
1MA
1VIEW
D1 -6.68 dBm
D2 -26.6B dBm
F1
F2
Center 2.504 GHz
10 MHz/
Span 100 MHz

4.7 ANTENNA REQUIREMENT

4.7.1 STANDARD APPLICABLE

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

4.7.2 ANTENNA CONNECTED CONSTRUCTION

The antenna types used in this product are Dipole and Inverted-F antennas. The antenna connector types are Reversed SMA or Reversed TNC. Please refer to note 3 in section 3.1 about antenna connectors' combinations. The maximum Gain of these antennas is 3dBi.

5 PHOTOGRAPHS OF THE TEST CONFIGURATION

CONDUCTED EMISSION TEST


920129R01

RADIATED EMISSION TEST


920129R01

6 INFORMATION ON THE TESTING LABORATORIES

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

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

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

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