



FCC TEST REPORT

REPORT NO.: RF930112R02A

MODEL NO.: WMP-G02

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ISSUED: Nov. 29, 2004

APPLICANT: Alpha Networks Inc.

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ILAC MRA



No. 2177-01



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1 CERTIFICATION

PRODUCT : IEEE802.11g WLAN Mini-PCI
MODEL NO.: WMP-G02
BRAND: Non-brand
APPLICANT : Alpha Networks Inc.
TEST ITEM: ENGINEERING SAMPLE
STANDARDS : FCC Part 15, Subpart C (Section 15.247),
ANSI C63.4-2003

The above equipment (Model: WMP-G02) 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 : Carol Liao , **DATE:** Nov. 29, 2004
(Carol Liao)

TECHNICAL
ACCEPTANCE : Hank Chung , **DATE:** Nov. 29, 2004
Responsible for RF (Hank Chung)

APPROVED BY : Eric Lin , **DATE:** Nov. 29, 2004
(Eric Lin, 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
15.247(a)(2)	Spectrum Bandwidth of a Direct Sequence Spread Spectrum System Limit: min. 500kHz	PASS	Meet the requirement of limit
15.247(b)	Maximum Peak Output Power Limit: max. 30dBm	PASS	Meet the requirement of limit
15.247(c)	Radiated Emissions Limit: Table 15.209	PASS	Meet the requirement of limit Minimum passing margin is -1.00dB at 2483.5MHz and 9648MHz
15.247(d)	Power Spectral Density Limit: max. 8dBm	PASS	Meet the requirement of limit
15.247(c)	Band Edge Measurement Limit: 20dB less than the peak value of fundamental frequency	PASS	Meet the requirement of limit

NOTE: This report is prepared for FCC class II permissive change. Only radiated emission, Maximum Peak Output Power, 6dB bandwidth, Power Spectral Density and Band Edge Measurement conducted emission were presented in this test report.

3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	IEEE802.11g WLAN Mini-PCI
MODEL NO.	WMP-G02
POWER SUPPLY	3.3Vdc from host equipment
MODULATION TYPE	BPSK, QPSK, CCK, 16QAM, 64QAM
RADIO TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	802.11b: 11, 5.5, 2, 1 Mbps 802.11g: 54, 48, 36, 24, 18, 12, 9, 6 Mbps (Turbo mode at channel 6: up to 108Mbps)
FREQUENCY RANGE	2412MHz ~ 2462MHz
NUMBER OF CHANNEL	11
MAXIMUM OUTPUT POWER	17.81dBm
ANTENNA TYPE	PIFA antenna with -3dBi antenna gain Dipole antenna with 5dBi antenna gain
DATA CABLE	NA
I/O PORTS	NA
ASSOCIATED DEVICES	NA

NOTE:

- There are two antenna types provided to this EUT. One is PIFA antenna with -3dBi gain, and another is Dipole antenna with 5dBi gain.
- This report is prepared for FCC class II permissive change. The difference compared with the original design is as the following:

- ◆ Add Turbo Mode Channel 6 for OFDM
- ◆ Only changed one of the antennas (dipole antenna) as followings:

Antenna Type	Gain (dBi)	Antenna Connector
Dipole Antenna	5	RP-SMA

- ◆ The EUT changed the brand name and model name as below:

Brand	Model Name
Non-brand	WMP-G02

- The above EUT information was declared by the 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		
6 (Turbo)	2437 MHz		

NOTE:

1. Below 1GHz, the channel 1, 6, and 11 were pre-tested in chamber. The channel 11, worst case one, was chosen for final test.
2. Above 1GHz, the channel 1, 6, and 11 were tested individually.
3. Transfer rate, 11Mbps with CCK technique and 6Mbps with OFDM technique, the worst cases, were chosen for final test.
4. Two test results were presented in the following sections, the test result A was for CCK technique and the test result B was for OFDM technique.
5. In the test report, both PIFA and Dipole antennas were chosen for radiated emission measurement.
6. "Turbo Mode" allows data rates of up to 108Mbps. At data rates higher than 12Mbps the PA gain is reduced to improve signal fidelity. The device was, therefore, tested in turbo mode at the data rate that produced the highest output power for turbo mode (12Mbps).

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is an IEEE802.11g WLAN Mini-PCI. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

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

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

3.4 DESCRIPTION OF SUPPORT UNITS

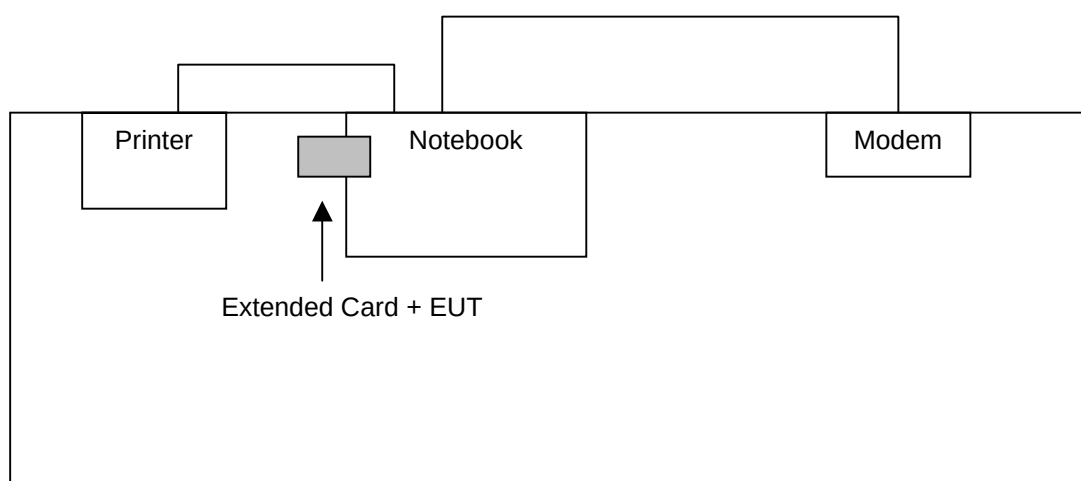
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	Notebook	Dell	PP01L	TW-09c748-12800-165-3171	FCC DoC
2	PRINTER	HP	C2642A	MY79F1C3MZ	B94C2642X
3	MODEM	ACEEX	1414	0206026779	IFAXDM1414

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA
2	1.6 m braid shielded wire, terminated with DB25 and DB9 connector via metallic frame, w/o core.
3	1.1m braid shielded wire, terminated with DB25 and Centronics connector via metallic frame, w/o core

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

3.5 CONFIGURATION OF SYSTEM UNDER TEST





4 TEST TYPES AND RESULTS

4.1 RADIATED EMISSION MEASUREMENT

4.1.1 LIMITS OF RADIATED EMISSION MEASUREMENT

Field strength limits are at the distance of 3 meters, 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.

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
HP Spectrum Analyzer	8594E	3710A04861	Sep. 23, 2005
ADVANTEST Spectrum Analyzer	R3271A	85060311	Jun. 29, 2005
CHASE RF Pre_Amplifier	CPA9232	1057	Aug. 06, 2005
HP Pre_Amplifier	8449B	3008A01922	Oct. 13, 2005
ROHDE & SCHWARZ Test Receiver	ESCS30	100287	Dec. 11, 2004
CHASE Broadband Antenna	VULB9168	138	May 22, 2005
Schwarzbeck Horn_Antenna	BBHA9120	D124	Jun. 16, 2005
Schwarzbeck Horn_Antenna	BBHA 9170	BBHA9170192	Feb. 16, 2005
SCHWARZBECK Tunable Dipole Antenna	UHAP	897	Mar. 07, 2005
SCHWARZBECK Tunable Dipole Antenna	VHAP	880	Mar. 07, 2005
RF Switches (ARNITSU)	CS-201	1565157	Dec. 01, 2004
RF CABLE (Chaintek) 1GHz-20GHz	SF102	22054-2	Feb. 10, 2005
RF Cable(RICHTEC)	9913-30M	STCCAB-30M- 1GHz-021	Dec. 01, 2004
Software	AS60P8	NA	NA
CHANCE MOST Antenna Tower	AT-100	0203	NA
CHANCE MOST Turn Table	TT-100	0203	NA

- Note: 1. The calibration interval of the above test instruments is 12 months (36 months for Tunable Dipole Antenna) and the calibrations are traceable to NML/ROC and NIST/USA.
2. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
3. The test was performed in ADT Open Site No. C.
4. The FCC Site Registration No. is 656396.
5. The VCCI Site Registration No. is R-1626.
6. The CANADA Site Registration No. is IC 4824-3.
7. The measurement uncertainty is 3.56 dB, which is calculated as per the document CISPR 16-4



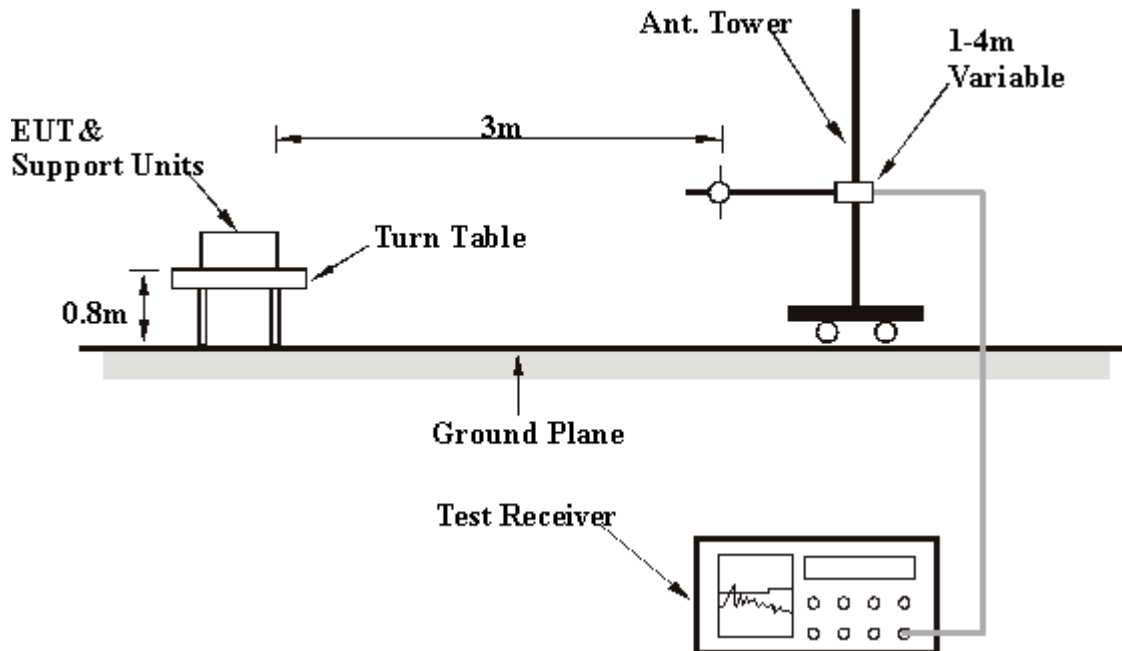
4.1.3 TEST PROCEDURES

- 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.

4.1.4 TEST SETUP



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

4.1.5 EUT OPERATING CONDITIONS

- Plug the EUT into notebook computer system placed on a testing table.
- The computer system ran a test program "ART485" to enable EUT under transmission/ receiving condition continuously at specific channel frequency.
- The computer system sent "H" messages to its screen.
- The computer system sent "H" messages to modem.
- The computer system sent "H" messages to printer, and the printer prints them on paper.
- Steps c-e are repeated.

4.1.6 TEST RESULTS

EUT	IEEE802.11g WLAN Mini-PCI	MODEL	WMP-G02
MODE	Channel 11	FREQUENCY RANGE	30-1000 MHz
ENVIRONMENTAL CONDITIONS	25 deg. C, 55 % RH, 978 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Wen Yu	DETECTOR FUNCTION &	Quasi-Peak, 120kHz

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	192.01	32.80 QP	43.50	-10.70	1.00 H	107	23.10	9.80
2	240.01	32.10 QP	46.00	-13.90	1.17 H	247	19.40	12.80
3	320.00	31.10 QP	46.00	-14.90	1.05 H	116	15.20	15.80
4	336.02	35.00 QP	46.00	-11.00	1.02 H	133	18.70	16.30
5	384.02	31.70 QP	46.00	-14.30	1.04 H	1	13.80	17.90
6	400.00	35.20 QP	46.00	-10.80	1.00 H	218	16.80	18.40
7	480.03	24.70 QP	46.00	-21.30	1.01 H	117	4.50	20.20
8	768.04	29.90 QP	46.00	-16.10	1.10 H	64	3.90	26.00

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	144.01	20.10 QP	43.50	-23.40	1.02 V	226	7.80	12.30
2	240.01	22.30 QP	46.00	-23.70	1.01 V	309	9.50	12.80
3	384.02	29.80 QP	46.00	-16.20	1.19 V	46	12.00	17.90
4	480.03	27.50 QP	46.00	-18.50	1.24 V	62	7.30	20.20
5	528.03	28.90 QP	46.00	-17.10	1.00 V	4	7.00	21.90
6	560.00	26.50 QP	46.00	-19.50	1.00 V	309	3.80	22.70
7	576.03	25.40 QP	46.00	-20.60	1.00 V	260	2.80	22.50
8	624.04	26.70 QP	46.00	-19.30	1.00 V	50	3.80	22.90

- 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.



4.1.7 TEST RESULTS (A)

EUT	IEEE802.11g WLAN Mini-PCI	MODEL	WMP-G02
MODE	Channel 1	FREQUENCY RANGE	1000~25000MHz
ANTENNA TYPE	Dipole antenna	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	25 deg. C, 55 % RH, 978 hPa	DETECTOR FUNCTION & BANDWIDTH	Peak (PK) Average (AV) 1 MHz
TESTED BY: Wen Yu			

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	2387.00	51.20 PK	74.00	-22.80	1.20 H	36	18.30	32.90
1	2387.00	44.40 AV	54.00	-9.60	1.20 H	36	11.50	32.90
2	2390.00	49.10 PK	74.00	-24.90	1.18 H	30	15.30	33.80
2	2390.00	42.30 AV	54.00	-11.70	1.18 H	30	8.50	33.80
3	*2412.00	103.90 PK			1.18 H	30	74.00	29.90
3	*2412.00	97.10 AV			1.18 H	30	67.20	29.90
4	4824.00	51.10 PK	74.00	-22.90	1.15 H	19	14.90	36.20
4	4824.00	39.50 AV	54.00	-14.50	1.15 H	19	3.20	36.20
5	7236.00	51.00 PK	74.00	-23.00	1.66 H	300	9.30	41.70
5	7236.00	39.50 AV	54.00	-14.50	1.66 H	300	-2.20	41.70
6	9648.00	56.30 PK	74.00	-17.70	1.78 H	52	11.40	44.90
6	9648.00	49.00 AV	54.00	-5.00	1.78 H	52	4.10	44.90

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	2387.00	59.00 PK	74.00	-15.00	1.10 V	87	26.10	32.90
1	2387.00	51.70 AV	54.00	-2.30	1.10 V	87	18.80	32.90
2	2390.00	56.90 PK	74.00	-17.10	1.16 V	74	23.10	33.80
2	2390.00	49.60 AV	54.00	-4.40	1.16 V	74	15.80	33.80
*3	2412.00	111.70 PK			1.16 V	74	81.80	29.90
*3	2412.00	104.40 AV			1.16 V	74	74.50	29.90
4	4824.00	53.90 PK	74.00	-20.10	1.33 V	172	17.60	36.20
4	4824.00	42.50 AV	54.00	-11.50	1.33 V	172	6.20	36.20
5	7236.00	51.20 PK	74.00	-22.80	1.40 V	10	9.50	41.70
5	7236.00	40.50 AV	54.00	-13.50	1.40 V	10	-1.20	41.70
6	9648.00	57.80 PK	74.00	-16.20	1.50 V	25	12.90	44.90
6	9648.00	53.00 AV	54.00	-1.00	1.50 V	25	8.10	44.90

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.



EUT	IEEE802.11g WLAN Mini-PCI	MODEL	WMP-G02
MODE	Channel 6	FREQUENCY RANGE	1000~25000MHz
ANTENNA TYPE	Dipole antenna	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	25 deg. C, 55 % RH, 978 hPa	DETECTOR FUNCTION & BANDWIDTH	Peak (PK) Average (AV) 1 MHz
TESTED BY: Wen Yu			

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	*2437.00	104.50 PK			1.17 H	38	74.60	30.00
1	*2437.00	97.70 AV			1.17 H	38	67.70	30.00
2	4874.00	51.00 PK	74.00	-23.00	1.13 H	22	14.60	36.50
2	4874.00	40.60 AV	54.00	-13.40	1.13 H	22	4.10	36.50
3	7311.00	51.60 PK	74.00	-22.40	1.67 H	285	9.80	41.80
3	7311.00	40.00 AV	54.00	-14.00	1.67 H	285	-1.80	41.80
4	9748.00	57.00 PK	74.00	-17.00	1.69 H	43	12.40	44.60
4	9748.00	49.40 AV	54.00	-4.60	1.69 H	43	4.80	44.60

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	*2437.00	111.90 PK			1.15 V	73	81.90	30.00
1	*2437.00	104.80 AV			1.15 V	73	74.80	30.00
2	4874.00	54.00 PK	74.00	-20.00	1.35 V	177	17.60	36.50
2	4874.00	42.60 AV	54.00	-11.40	1.35 V	177	6.10	36.50
3	7311.00	51.60 PK	74.00	-22.40	1.44 V	9	9.80	41.80
3	7311.00	40.70 AV	54.00	-13.30	1.44 V	9	-1.00	41.80
4	9748.00	57.70 PK	74.00	-16.30	1.45 V	28	13.10	44.60
4	9748.00	52.60 AV	54.00	-1.40	1.45 V	28	8.00	44.60

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



EUT	IEEE802.11g WLAN Mini-PCI	MODEL	WMP-G02
MODE	Channel 11	FREQUENCY RANGE	1000~25000MHz
ANTENNA TYPE	Dipole antenna	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	25 deg. C, 55 % RH, 978 hPa	DETECTOR FUNCTION & BANDWIDTH	Peak (PK) Average (AV) 1 MHz
TESTED BY: Wen Yu			

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	*2462.00	103.90 PK			1.14 H	34	73.80	30.10
1	*2462.00	97.10 AV			1.14 H	34	67.00	30.10
2	2483.50	46.40 PK	74.00	-27.60	1.14 H	34	16.30	30.10
2	2483.50	39.60 AV	54.00	-14.40	1.14 H	34	9.40	30.10
3	2487.00	49.10 PK	74.00	-24.90	1.10 H	39	19.00	30.10
3	2487.00	42.30 AV	54.00	-11.70	1.10 H	39	12.10	30.10
4	4924.00	51.00 PK	74.00	-23.00	1.14 H	28	14.30	36.70
4	4924.00	39.00 AV	54.00	-15.00	1.14 H	28	2.30	36.70
5	7386.00	50.20 PK	74.00	-23.80	1.68 H	290	8.40	41.80
5	7386.00	39.40 AV	54.00	-14.60	1.68 H	290	-2.40	41.80
6	9848.00	55.30 PK	74.00	-18.70	1.69 H	49	11.00	44.40
6	9848.00	48.00 AV	54.00	-6.00	1.69 H	49	3.60	44.40

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	*2462.00	111.00 PK			1.10 V	74	80.90	30.10
1	*2462.00	104.60 AV			1.10 V	74	74.50	30.10
2	2483.50	53.50 PK	74.00	-20.50	1.10 V	74	23.40	30.10
2	2483.50	47.10 AV	54.00	-6.90	1.10 V	74	17.00	30.10
3	2487.00	56.20 PK	74.00	-17.80	1.12 V	71	26.10	30.10
3	2487.00	49.80 AV	54.00	-4.20	1.12 V	71	19.60	30.10
4	4924.00	53.20 PK	74.00	-20.80	1.36 V	162	16.50	36.70
4	4924.00	42.00 AV	54.00	-12.00	1.36 V	162	5.30	36.70
5	7386.00	50.70 PK	74.00	-23.30	1.42 V	8	8.90	41.80
5	7386.00	40.10 AV	54.00	-13.90	1.42 V	8	-1.70	41.80
6	9848.00	56.20 PK	74.00	-17.80	1.54 V	31	11.80	44.40
6	9848.00	50.90 AV	54.00	-3.10	1.54 V	31	6.50	44.40

- 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.



EUT	IEEE802.11g WLAN Mini-PCI	MODEL	WMP-G02
MODE	Channel 1	FREQUENCY RANGE	1000~25000MHz
ANTENNA TYPE	PIFA antenna	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	27 deg. C, 67 % RH, 978 hPa	DETECTOR FUNCTION & BANDWIDTH	Peak (PK) Average (AV) 1 MHz
TESTED BY: Sky Liao			

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	2387.00	51.20 PK	74.00	-22.80	1.02 H	254	18.40	32.90
1	2387.00	44.30 AV	54.00	-9.70	1.02 H	254	11.40	32.90
2	2390.00	52.50 PK	74.00	-21.50	1.28 H	92	18.70	33.80
2	2390.00	45.10 AV	54.00	-8.90	1.28 H	92	11.30	33.80
3	*2412.00	106.10 PK			1.28 H	92	76.20	29.90
3	*2412.00	99.80 AV			1.28 H	92	69.90	29.90
4	4824.00	57.00 PK	74.00	-17.00	1.40 H	236	20.70	36.20
4	4824.00	46.20 AV	54.00	-7.80	1.40 H	236	10.00	36.20
5	7236.00	49.30 PK	74.00	-24.70	1.63 H	263	7.70	41.70
5	7236.00	38.20 AV	54.00	-15.80	1.63 H	263	-3.50	41.70
6	9648.00	56.00 PK	74.00	-18.00	1.05 H	62	11.10	44.90
6	9648.00	47.40 AV	54.00	-6.60	1.05 H	62	2.50	44.90

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	2387.00	49.30 PK	74.00	-24.70	1.04 V	8	16.50	32.90
1	2387.00	42.00 AV	54.00	-12.00	1.04 V	8	9.10	32.90
2	2390.00	51.90 PK	74.00	-22.10	1.00 V	159	18.10	33.80
2	2390.00	43.80 AV	54.00	-10.20	1.00 V	159	10.00	33.80
3	*2412.00	105.40 PK			1.00 V	159	75.50	29.90
3	*2412.00	98.60 AV			1.00 V	159	68.70	29.90
4	4824.00	57.10 PK	74.00	-16.90	1.47 V	47	20.90	36.20
4	4824.00	47.10 AV	54.00	-6.90	1.47 V	47	10.90	36.20
5	7236.00	52.00 PK	74.00	-22.00	1.19 V	111	10.30	41.70
5	7236.00	39.30 AV	54.00	-14.70	1.19 V	111	-2.40	41.70
6	9648.00	59.70 PK	74.00	-14.30	1.43 V	314	14.80	44.90
6	9648.00	50.20 AV	54.00	-3.80	1.43 V	314	5.30	44.90

- 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.



EUT	IEEE802.11g WLAN Mini-PCI	MODEL	WMP-G02
MODE	Channel 6	FREQUENCY RANGE	1000~25000MHz
ANTENNA TYPE	PIFA antenna	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	27 deg. C, 67 % RH, 978 hPa	DETECTOR FUNCTION & BANDWIDTH	Peak (PK) Average (AV) 1 MHz

TESTED BY: Sky Liao

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	*2437.00	105.00 PK			1.28 H	94	75.00	30.00
1	*2437.00	98.80 AV			1.28 H	94	68.80	30.00
2	4874.00	49.30 PK	74.00	-24.70	1.08 H	245	12.80	36.50
2	4874.00	38.00 AV	54.00	-16.00	1.08 H	245	1.50	36.50
3	7311.00	49.60 PK	74.00	-24.40	1.32 H	256	7.90	41.80
3	7311.00	40.00 AV	54.00	-14.00	1.32 H	256	-1.80	41.80
4	9748.00	54.20 PK	74.00	-19.80	1.08 H	247	9.60	44.60
4	9748.00	46.40 AV	54.00	-7.60	1.08 H	247	1.80	44.60

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	*2437.00	103.80 PK			1.04 V	317	73.90	30.00
1	*2437.00	97.10 AV			1.04 V	317	67.10	30.00
2	4874.00	53.20 PK	74.00	-20.80	1.20 V	325	16.80	36.50
2	4874.00	51.10 AV	54.00	-2.90	1.20 V	325	14.60	36.50
3	7311.00	49.30 PK	74.00	-24.70	1.35 V	240	7.60	41.80
3	7311.00	39.70 AV	54.00	-14.30	1.35 V	240	-2.10	41.80
4	9748.00	56.00 PK	74.00	-18.00	1.67 V	320	11.40	44.60
4	9748.00	50.30 AV	54.00	-3.70	1.67 V	320	5.70	44.60

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



EUT	IEEE802.11g WLAN Mini-PCI	MODEL	WMP-G02
MODE	Channel 11	FREQUENCY RANGE	1000~25000MHz
ANTENNA TYPE	PIFA antenna	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	27 deg. C, 67 % RH, 978 hPa	DETECTOR FUNCTION & BANDWIDTH	Peak (PK) Average (AV) 1 MHz
TESTED BY: Sky Liao			

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	*2462.00	104.20 PK			1.29 H	110	74.10	30.10
1	*2462.00	98.90 AV			1.29 H	110	68.80	30.10
2	2483.50	47.90 PK	74.00	-26.10	1.29 H	110	17.70	30.10
2	2483.50	38.60 AV	54.00	-15.40	1.29 H	110	8.50	30.10
3	2487.00	47.30 PK	74.00	-26.70	1.23 H	85	17.20	30.10
3	2487.00	40.20 AV	54.00	-13.80	1.23 H	85	10.00	30.10
4	4924.00	48.30 PK	74.00	-25.70	1.05 H	3	11.60	36.70
4	4924.00	37.00 AV	54.00	-17.00	1.05 H	3	0.30	36.70
5	7386.00	48.60 PK	74.00	-25.40	1.86 H	111	6.80	41.80
5	7386.00	39.00 AV	54.00	-15.00	1.86 H	111	-2.80	41.80
6	9848.00	53.20 PK	74.00	-20.80	1.47 H	54	8.90	44.40
6	9848.00	46.20 AV	54.00	-7.80	1.47 H	54	1.90	44.40

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	*2462.00	103.10 PK			1.07 V	174	73.00	30.10
1	*2462.00	97.80 AV			1.07 V	174	67.70	30.10
2	2483.50	46.30 PK	74.00	-27.70	1.07 V	174	16.20	30.10
2	2483.50	38.30 AV	54.00	-15.70	1.07 V	174	8.20	30.10
3	2487.00	57.20 PK	74.00	-16.80	1.05 V	24	27.10	30.10
3	2487.00	50.40 AV	54.00	-3.60	1.05 V	24	20.20	30.10
4	4924.00	50.40 PK	74.00	-23.60	1.49 V	245	13.70	36.70
4	4924.00	38.70 AV	54.00	-15.30	1.49 V	245	2.00	36.70
5	7386.00	48.20 PK	74.00	-25.80	1.47 V	214	6.40	41.80
5	7386.00	39.60 AV	54.00	-14.40	1.47 V	214	-2.20	41.80
6	9848.00	54.20 PK	74.00	-19.80	1.35 V	64	9.80	44.40
6	9848.00	48.20 AV	54.00	-5.80	1.35 V	64	3.80	44.40

- 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.



4.1.8 TEST RESULTS (B)

EUT	IEEE802.11g WLAN Mini-PCI	MODEL	WMP-G02
MODE	Channel 1	FREQUENCY RANGE	1000~25000MHz
ANTENNA TYPE	Dipole antenna	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	25 deg. C, 55 % RH, 978 hPa	DETECTOR FUNCTION & BANDWIDTH	Peak (PK) Average (AV) 1 MHz
TESTED BY: Wen Yu			

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	2360.00	39.60 PK	74.00	-34.40	1.02 H	287	9.00	30.60
1	2360.00	30.50 AV	54.00	-23.50	1.02 H	287	-0.10	30.60
2	2390.00	50.60 PK	74.00	-23.40	1.00 H	266	16.80	33.80
2	2390.00	41.50 AV	54.00	-12.50	1.00 H	266	7.70	33.80
3	*2412.00	97.00 PK			1.00 H	266	67.10	29.90
3	*2412.00	87.90 AV			1.00 H	266	58.00	29.90
4	4824.00	48.50 PK	74.00	-25.50	1.32 H	36	12.20	36.20
4	4824.00	36.70 AV	54.00	-17.30	1.32 H	36	0.40	36.20
5	7236.00	48.80 PK	74.00	-25.20	1.00 H	284	7.10	41.70
5	7236.00	37.40 AV	54.00	-16.60	1.00 H	284	-4.30	41.70
6	9648.00	50.80 PK	74.00	-23.20	1.08 H	16	5.90	44.90
6	9648.00	39.70 AV	54.00	-14.30	1.08 H	16	-5.20	44.90

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	2360.00	51.10 PK	74.00	-22.90	1.00 V	356	20.50	30.60
1	2360.00	41.50 AV	54.00	-12.50	1.00 V	356	10.90	30.60
2	2390.00	62.10 PK	74.00	-11.90	1.00 V	350	28.30	33.80
2	2390.00	52.50 AV	54.00	-1.50	1.00 V	350	18.70	33.80
3	*2412.00	108.50 PK			1.00 V	350	78.60	29.90
3	*2412.00	98.90 AV			1.00 V	350	69.00	29.90
4	4824.00	47.00 PK	74.00	-27.00	1.00 V	341	10.80	36.20
4	4824.00	36.40 AV	54.00	-17.60	1.00 V	341	0.20	36.20
5	7236.00	48.60 PK	74.00	-25.40	1.02 V	36	6.90	41.70
5	7236.00	37.70 AV	54.00	-16.30	1.02 V	36	-4.00	41.70
6	9648.00	51.40 PK	74.00	-22.60	1.02 V	338	6.50	44.90
6	9648.00	39.60 AV	54.00	-14.40	1.02 V	338	-5.30	44.90

- 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.



EUT	IEEE802.11g WLAN Mini-PCI	MODEL	WMP-G02
MODE	Channel 6	FREQUENCY RANGE	1000~25000MHz
ANTENNA TYPE	Dipole antenna	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	27 deg. C, 58% RH, 978 hPa	DETECTOR FUNCTION	Peak (PK) Average (AV)
TESTED BY: Wen Yu			

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	*2437.00	97.00 PK			1.00 H	266	67.00	30.00
1	*2437.00	88.10 AV			1.00 H	266	58.10	30.00
2	4874.00	44.90 PK	74.00	-29.10	1.20 H	45	8.50	36.50
2	4874.00	35.60 AV	54.00	-18.40	1.20 H	45	-0.90	36.50
3	7311.00	48.70 PK	74.00	-25.30	1.00 H	263	7.00	41.80
3	7311.00	37.60 AV	54.00	-16.40	1.00 H	263	-4.10	41.80
4	9748.00	50.90 PK	74.00	-23.10	1.04 H	12	6.30	44.60
4	9748.00	39.60 AV	54.00	-14.40	1.04 H	12	-5.00	44.60

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	*2437.00	108.50 PK			1.00 V	3	78.60	30.00
1	*2437.00	100.20 AV			1.00 V	3	70.20	30.00
2	4874.00	45.00 PK	74.00	-29.00	1.00 V	340	8.60	36.50
2	4874.00	35.60 AV	54.00	-18.40	1.00 V	340	-0.80	36.50
3	7311.00	49.00 PK	74.00	-25.00	1.00 V	41	7.20	41.80
3	7311.00	37.70 AV	54.00	-16.30	1.00 V	41	-4.10	41.80
4	9748.00	50.90 PK	74.00	-23.10	1.00 V	335	6.30	44.60
4	9748.00	39.70 AV	54.00	-14.30	1.00 V	335	-5.00	44.60

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



EUT	IEEE802.11g WLAN Mini-PCI	MODEL	WMP-G02
MODE	Channel 11	FREQUENCY RANGE	1000~25000MHz
ANTENNA TYPE	Dipole antenna	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	25 deg. C, 55 % RH, 978 hPa	DETECTOR FUNCTION & BANDWIDTH	Peak (PK) Average (AV) 1 MHz
TESTED BY: Wen Yu			

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	*2462.00	97.40 PK			1.00 H	263	67.30	30.10
1	*2462.00	89.00 AV			1.00 H	263	58.90	30.10
2	2483.50	49.30 PK	74.00	-24.70	1.00 H	263	19.20	30.10
2	2483.50	40.90 AV	54.00	-13.10	1.00 H	263	10.80	30.10
3	4924.00	44.70 PK	74.00	-29.30	1.20 H	40	8.00	36.70
3	4924.00	32.80 AV	54.00	-21.20	1.20 H	40	-3.90	36.70
4	7386.00	49.00 PK	74.00	-25.00	1.00 H	288	7.20	41.80
4	7386.00	37.90 AV	54.00	-16.10	1.00 H	288	-3.90	41.80
5	9848.00	50.40 PK	74.00	-23.60	1.05 H	20	6.10	44.40
5	9848.00	39.50 AV	54.00	-14.50	1.05 H	20	-4.90	44.40

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	*2462.00	110.10 PK			1.00 V	4	80.10	30.10
1	*2462.00	101.00 AV			1.00 V	4	71.00	30.10
2	2483.50	62.10 PK	74.00	-11.90	1.00 V	4	31.90	30.10
2	2483.50	53.00 AV	54.00	-1.00	1.00 V	4	22.80	30.10
3	4924.00	46.30 PK	74.00	-27.70	1.36 V	163	9.60	36.70
3	4924.00	35.00 AV	54.00	-19.00	1.36 V	163	-1.70	36.70
4	7386.00	48.90 PK	74.00	-25.10	1.01 V	40	7.10	41.80
4	7386.00	38.00 AV	54.00	-16.00	1.01 V	40	-3.90	41.80
5	9848.00	51.40 PK	74.00	-22.60	1.00 V	335	7.00	44.40
5	9848.00	39.30 AV	54.00	-14.70	1.00 V	335	-5.00	44.40

- 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.



EUT	IEEE802.11g WLAN Mini-PCI	MODEL	WMP-G02
MODE	Turbo Channel 6	FREQUENCY RANGE	1000~25000MHz
ANTENNA TYPE	Dipole antenna	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	25 deg. C, 55 % RH, 978 hPa	DETECTOR FUNCTION & BANDWIDTH	Peak (PK) Average (AV) 1 MHz

TESTED BY: Wen Yu

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	2360.00	41.90 PK	74.00	-32.10	1.00 H	211	11.30	30.60
1	2360.00	33.90 AV	54.00	-20.10	1.00 H	211	3.30	30.60
2	2390.00	45.00 PK	74.00	-29.00	1.00 H	266	11.20	33.80
2	2390.00	37.00 AV	54.00	-17.00	1.00 H	266	3.20	33.80
3	*2437.00	94.90 PK			1.00 H	266	64.90	30.00
3	*2437.00	86.90 AV			1.00 H	266	56.90	30.00
4	2483.50	46.00 PK	74.00	-28.00	1.00 H	266	15.80	30.10
4	2483.50	38.00 AV	54.00	-16.00	1.00 H	266	7.80	30.10
5	4874.00	45.50 PK	74.00	-28.50	1.28 H	33	9.00	36.50
5	4874.00	35.90 AV	54.00	-18.10	1.28 H	33	-0.60	36.50
6	7311.00	49.10 PK	74.00	-24.90	1.00 H	289	7.30	41.80
6	7311.00	37.70 AV	54.00	-16.30	1.00 H	289	-4.10	41.80
7	9748.00	50.60 PK	74.00	-23.40	1.05 H	11	6.00	44.60
7	9748.00	39.20 AV	54.00	-14.80	1.05 H	11	-5.40	44.60

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	2360.00	53.50 PK	74.00	-20.50	1.02 V	12	22.90	30.60
1	2360.00	45.80 AV	54.00	-8.20	1.02 V	12	15.20	30.60
2	2390.00	56.60 PK	74.00	-17.40	1.00 V	2	22.80	33.80
2	2390.00	48.90 AV	54.00	-5.10	1.00 V	2	15.10	33.80
3	*2437.00	106.50 PK			1.00 V	2	76.50	30.00
3	*2437.00	98.80 AV			1.00 V	2	68.80	30.00
4	2483.50	57.60 PK	74.00	-16.40	1.00 V	2	27.40	30.10
4	2483.50	49.90 AV	54.00	-4.10	1.00 V	2	19.70	30.10
5	4874.00	46.20 PK	74.00	-27.80	1.00 V	344	9.80	36.50
5	4874.00	36.60 AV	54.00	-17.40	1.00 V	344	0.10	36.50
6	7311.00	48.80 PK	74.00	-25.20	1.00 V	38	7.10	41.80
6	7311.00	37.60 AV	54.00	-16.40	1.00 V	38	-4.20	41.80
7	9748.00	50.70 PK	74.00	-23.30	1.00 V	331	6.10	44.60
7	9748.00	39.30 AV	54.00	-14.70	1.00 V	331	-5.30	44.60

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



EUT	IEEE802.11g WLAN Mini-PCI	MODEL	WMP-G02
MODE	Channel 1	FREQUENCY RANGE	1000~25000MHz
ANTENNA TYPE	PIFA antenna	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	27 deg. C, 67 % RH, 978 hPa	DETECTOR FUNCTION & BANDWIDTH	Peak (PK) Average (AV) 1 MHz
TESTED BY: Sky Liao			

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	2360.00	43.30 PK	74.00	-30.70	1.23 H	65	12.60	30.60
1	2360.00	34.00 AV	54.00	-20.00	1.23 H	65	3.40	30.60
2	2390.00	55.70 PK	74.00	-18.30	1.27 H	93	21.90	33.80
2	2390.00	45.50 AV	54.00	-8.50	1.27 H	93	11.70	33.80
3	*2412.00	100.20 PK			1.27 H	93	70.30	29.90
3	*2412.00	91.80 AV			1.27 H	93	61.90	29.90
4	4824.00	52.30 PK	74.00	-21.70	1.08 H	58	16.10	36.20
4	4824.00	41.70 AV	54.00	-12.30	1.08 H	58	5.40	36.20
5	7236.00	47.40 PK	74.00	-26.60	1.52 H	249	5.70	41.70
5	7236.00	36.50 AV	54.00	-17.50	1.52 H	249	-5.20	41.70
6	9648.00	49.00 PK	74.00	-25.00	1.08 H	57	4.10	44.90
6	9648.00	38.10 AV	54.00	-15.90	1.08 H	57	-6.80	44.90

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	2360.00	49.00 PK	74.00	-25.00	1.79 V	1	18.40	30.60
1	2360.00	38.70 AV	54.00	-15.30	1.79 V	1	8.00	30.60
2	2390.00	54.10 PK	74.00	-19.90	1.14 V	170	20.30	33.80
2	2390.00	44.80 AV	54.00	-9.20	1.14 V	170	11.00	33.80
3	*2412.00	99.70 PK			1.14 V	170	69.80	29.90
3	*2412.00	91.20 AV			1.14 V	170	61.30	29.90
4	4824.00	54.90 PK	74.00	-19.10	1.34 V	6	18.70	36.20
4	4824.00	42.70 AV	54.00	-11.30	1.34 V	6	6.50	36.20
5	7236.00	47.20 PK	74.00	-26.80	1.42 V	354	5.60	41.70
5	7236.00	36.20 AV	54.00	-17.80	1.42 V	354	-5.40	41.70
6	9648.00	49.60 PK	74.00	-24.40	1.11 V	65	4.70	44.90
6	9648.00	38.30 AV	54.00	-15.70	1.11 V	65	-6.60	44.90

- 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.



EUT	IEEE802.11g WLAN Mini-PCI	MODEL	WMP-G02
MODE	Channel 6	FREQUENCY RANGE	1000~25000MHz
ANTENNA TYPE	PIFA antenna	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	27 deg. C, 67 % RH, 978 hPa	DETECTOR FUNCTION & BANDWIDTH	Peak (PK) Average (AV) 1 MHz

TESTED BY: Sky Liao

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	*2437.00	100.00 PK			1.28 H	94	70.00	30.00
1	*2437.00	91.70 AV			1.28 H	94	61.70	30.00
2	4874.00	47.70 PK	74.00	-26.30	1.63 H	326	11.20	36.50
2	4874.00	37.30 AV	54.00	-16.70	1.63 H	326	0.80	36.50
3	7311.00	47.20 PK	74.00	-26.80	1.32 H	235	5.40	41.80
3	7311.00	37.00 AV	54.00	-17.00	1.32 H	235	-4.80	41.80
4	9748.00	47.90 PK	74.00	-26.10	1.08 H	250	3.30	44.60
4	9748.00	38.60 AV	54.00	-15.40	1.08 H	250	-6.00	44.60

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	*2437.00	98.10 PK			1.08 V	172	68.10	30.00
1	*2437.00	90.10 AV			1.08 V	172	60.20	30.00
2	4874.00	50.20 PK	74.00	-23.80	1.11 V	349	13.80	36.50
2	4874.00	38.70 AV	54.00	-15.30	1.11 V	349	2.20	36.50
3	7311.00	48.20 PK	74.00	-25.80	1.02 V	325	6.50	41.80
3	7311.00	36.60 AV	54.00	-17.40	1.02 V	325	-5.20	41.80
4	9748.00	49.70 PK	74.00	-24.30	1.08 V	6	5.00	44.60
4	9748.00	38.20 AV	54.00	-15.80	1.08 V	6	-6.40	44.60

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



EUT	IEEE802.11g WLAN Mini-PCI	MODEL	WMP-G02
MODE	Channel 11	FREQUENCY RANGE	1000~25000MHz
ANTENNA TYPE	PIFA antenna	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	27 deg. C, 67 % RH, 978 hPa	DETECTOR FUNCTION & BANDWIDTH	Peak (PK) Average (AV) 1 MHz
TESTED BY: Sky Liao			

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	*2462.00	96.20 PK			1.28 H	109	66.10	30.10
1	*2462.00	90.70 AV			1.28 H	109	60.60	30.10
2	2483.50	51.50 PK	74.00	-22.50	1.28 H	109	21.30	30.10
2	2483.50	42.60 AV	54.00	-11.40	1.28 H	109	12.50	30.10
3	4924.00	44.20 PK	74.00	-29.80	1.54 H	243	7.60	36.70
3	4924.00	34.30 AV	54.00	-19.70	1.54 H	243	-2.40	36.70
4	7386.00	48.20 PK	74.00	-25.80	1.05 H	24	6.40	41.80
4	7386.00	36.20 AV	54.00	-17.80	1.05 H	24	-5.60	41.80
5	9848.00	49.20 PK	74.00	-24.80	1.67 H	98	4.90	44.40
5	9848.00	38.30 AV	54.00	-15.70	1.67 H	98	-6.00	44.40

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	*2462.00	98.80 PK			1.06 V	173	68.80	30.10
1	*2462.00	90.20 AV			1.06 V	173	60.10	30.10
2	2483.50	50.40 PK	74.00	-23.60	1.06 V	173	20.30	30.10
2	2483.50	42.10 AV	54.00	-11.90	1.06 V	173	12.00	30.10
3	4924.00	45.30 PK	74.00	-28.70	1.68 V	329	8.60	36.70
3	4924.00	35.00 AV	54.00	-19.00	1.68 V	329	-1.70	36.70
4	7386.00	47.20 PK	74.00	-26.80	1.68 V	9	5.40	41.80
4	7386.00	36.50 AV	54.00	-17.50	1.68 V	9	-5.30	41.80
5	9848.00	47.70 PK	74.00	-26.30	1.32 V	69	3.30	44.40
5	9848.00	37.10 AV	54.00	-16.90	1.32 V	69	-7.30	44.40

- 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.



EUT	IEEE802.11g WLAN Mini-PCI	MODEL	WMP-G02
MODE	Turbo Channel 6	FREQUENCY RANGE	1000~25000MHz
ANTENNA TYPE	PIFA antenna	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	27 deg. C, 67 % RH, 978 hPa	DETECTOR FUNCTION & BANDWIDTH	Peak (PK) Average (AV) 1 MHz
TESTED BY: Sky Liao			

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	2360.00	45.30 PK	74.00	-28.70	1.11 H	49	14.70	30.60
1	2360.00	39.00 AV	54.00	-15.00	1.11 H	49	8.40	30.60
2	2390.00	48.20 PK	74.00	-25.80	1.27 H	97	14.40	33.80
2	2390.00	39.30 AV	54.00	-14.70	1.27 H	97	5.50	33.80
3	*2437.00	97.40 PK			1.27 H	97	67.40	30.00
3	*2437.00	89.20 AV			1.27 H	97	59.20	30.00
4	2483.50	49.10 PK	74.00	-24.90	1.27 H	97	19.00	30.10
4	2483.50	40.30 AV	54.00	-13.70	1.27 H	97	10.20	30.10
5	4874.00	48.60 PK	74.00	-25.40	1.58 H	97	12.20	36.50
5	4874.00	35.30 AV	54.00	-18.70	1.58 H	97	-1.20	36.50
6	7311.00	48.20 PK	74.00	-25.80	1.36 H	69	6.50	41.80
6	7311.00	36.20 AV	54.00	-17.80	1.36 H	69	-5.50	41.80
7	9748.00	48.60 PK	74.00	-25.40	1.10 H	2	4.00	44.60
7	9748.00	38.10 AV	54.00	-15.90	1.10 H	2	-6.50	44.60

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	2360.00	52.50 PK	74.00	-21.50	1.69 V	356	21.80	30.60
1	2360.00	43.30 AV	54.00	-10.70	1.69 V	356	12.60	30.60
2	2390.00	46.40 PK	74.00	-27.60	1.12 V	163	12.50	33.80
2	2390.00	38.20 AV	54.00	-15.80	1.12 V	163	4.40	33.80
3	*2437.00	96.40 PK			1.12 V	163	66.40	30.00
3	*2437.00	88.10 AV			1.12 V	163	58.10	30.00
4	2483.50	47.40 PK	74.00	-26.60	1.12 V	163	17.20	30.10
4	2483.50	39.20 AV	54.00	-14.80	1.12 V	163	9.10	30.10
5	4874.00	48.60 PK	74.00	-25.40	1.02 V	201	12.20	36.50
5	4874.00	35.10 AV	54.00	-18.90	1.02 V	201	-1.40	36.50
6	7311.00	46.30 PK	74.00	-27.70	1.52 V	306	4.60	41.80
6	7311.00	34.60 AV	54.00	-19.40	1.52 V	306	-7.10	41.80
7	9748.00	48.70 PK	74.00	-25.30	1.52 V	208	4.00	44.60
7	9748.00	37.90 AV	54.00	-16.10	1.52 V	208	-6.80	44.60

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

4.2 6dB BANDWIDTH MEASUREMENT

4.2.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.2.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSP40	100037	May. 06, 2005

Note:

1. The measurement uncertainty is 226Hz, which is calculated as per the document ETSI TR 100 028.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.2.3 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.

4.2.4 TEST SETUP



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

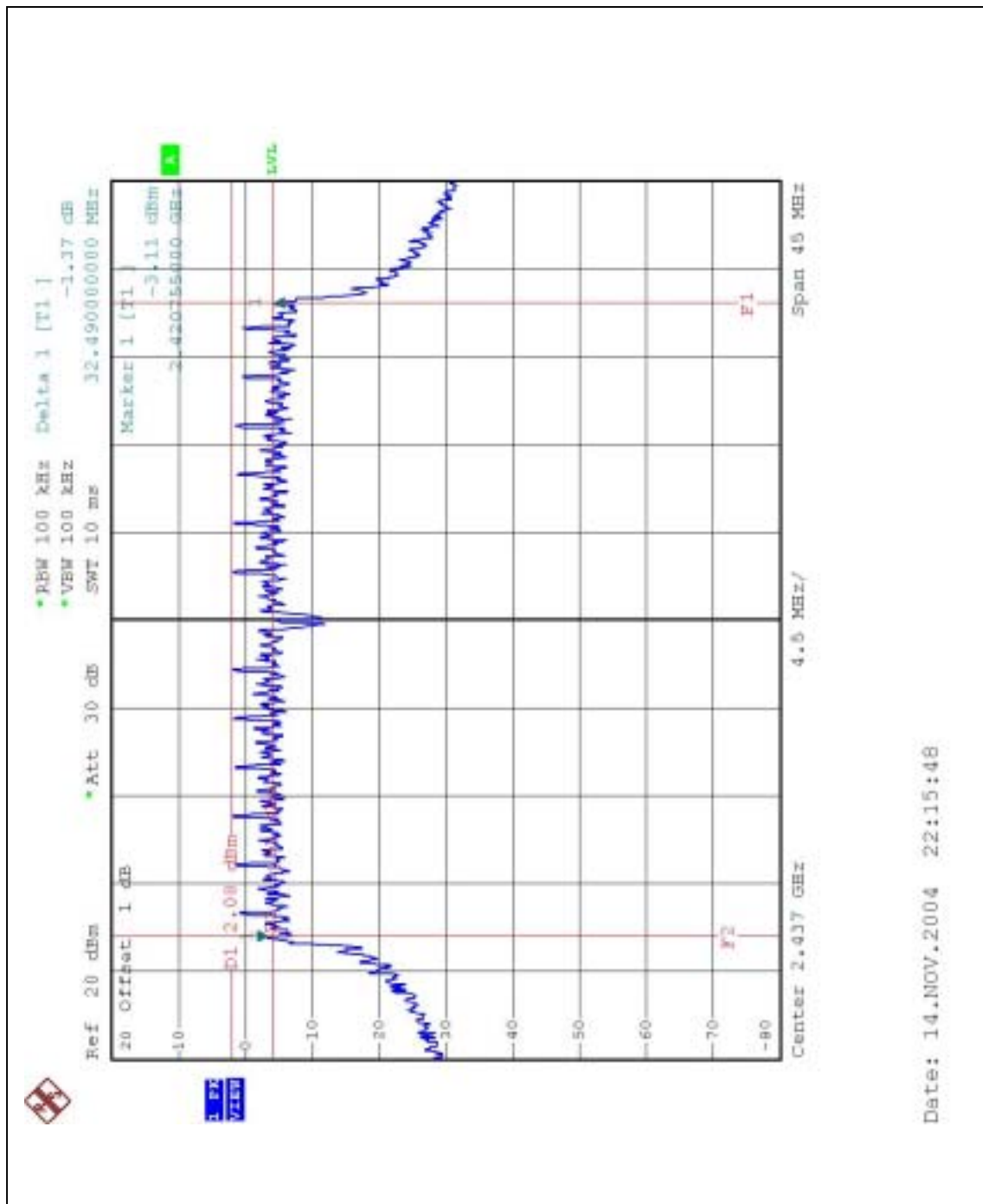
4.2.5 EUT OPERATING CONDITIONS

The software ("ART485") provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.2.6 TEST RESULTS-OFDM

EUT	IEEE802.11g WLAN Mini-PCI		
MODEL	WMP-G02	ENVIRONMENTAL CONDITIONS	24 deg. C, 64%RH, 978 hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	TESTED BY	Wen Yu

CHANNEL	CHANNEL FREQUENCY (MHz)	6 dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
Turbo 6	2437	32.49	0.5	PASS

Turbo CH6

4.3 MAXIMUM PEAK OUTPUT POWER

4.3.1 LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm.

4.3.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSP40	100037	May 06, 2005
R&S SIGNAL GENERATOR	SMP04	100011	May 28, 2005
TEKTRONIX OSCILLOSCOPE	TDS 220	B027241	Jun. 29, 2005
NARDA DETECTOR	4503A	FSCM99899	NA

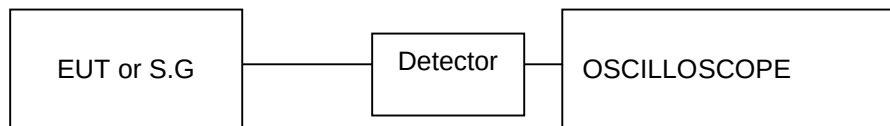
Note:

1. The measurement uncertainty is 1.25dB, which is calculated as per the document ETSI TR 100 028.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.3.3 TEST PROCEDURES

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

4.3.4 TEST SETUP



4.3.5 EUT OPERATING CONDITIONS

Same as Item 4.2.5



4.3.6 TEST RESULTS (A)

EUT	IEEE802.11g WLAN Mini-PCI	MODEL	WMP-G02
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 978 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST BY	Wen Yu		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	17.81	30	PASS
6	2437	17.75	30	PASS
11	2462	17.75	30	PASS

4.3.7 TEST RESULTS (B)

EUT	IEEE802.11g WLAN Mini-PCI	MODEL	WMP-G02
ENVIRONMENTAL CONDITIONS	22deg. C, 64%RH, 978 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST BY	Wen Yu		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	16.42	30	PASS
6	2437	17.68	30	PASS
11	2462	17.68	30	PASS
Turbo 6	2437	17.68	30	PASS

4.4 POWER SPECTRAL DENSITY MEASUREMENT

4.4.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

4.4.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSP40	100037	May. 06, 2005

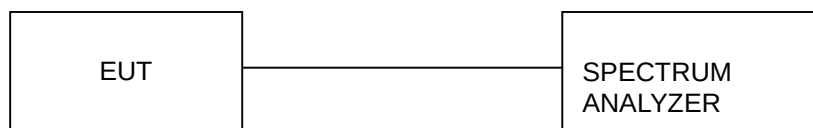
Note:

1. The measurement uncertainty is 1.02dB, which is calculated as per the document ETSI TR 100 028.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.4.3 TEST 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.

4.4.4 TEST SETUP



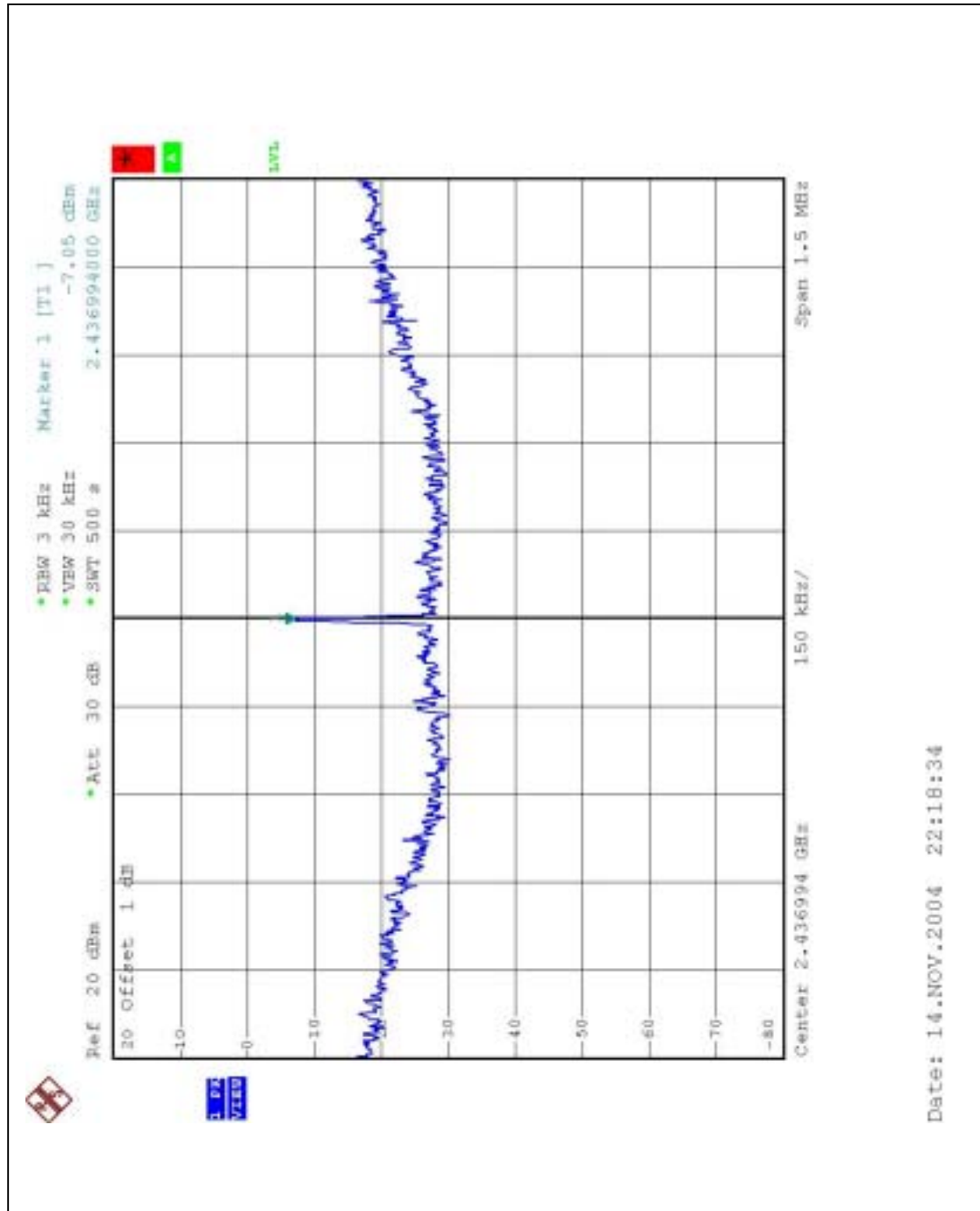
4.4.5 EUT OPERATING CONDITIONS

Same as 4.2.5

4.4.6 TEST RESULTS-OFDM

EUT	IEEE802.11g WLAN Mini-PCI		
MODEL	WMP-G02	ENVIRONMENTAL CONDITIONS	24 deg. C, 64%RH, 978 hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	TESTED BY	Wen Yu

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 KHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
Turbo 6	2437	-7.05	8	PASS

Turbo CH 6

4.5 BAND EDGES MEASUREMENT

4.5.1 LIMITS OF BAND EDGES MEASUREMENT

Below –20dB of the highest emission level of operating band (in 1MHz Resolution Bandwidth).

4.5.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSP40	100037	May. 06, 2005

Note:

1. The measurement uncertainty is 2.79dB, which is calculated as per the document ETSI TR 100 028
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.5.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer via a low lose cable. Set RBW spectrum analyzer to 1 MHz and set VBW spectrum analyzer to 10 Hz with suitable frequency span including 1 MHz bandwidth from band edge. The band edges was measured and recorded.

4.5.4 EUT OPERATING CONDITION

Same as Item 4.2.5



4.5.5 TEST RESULTS (A- with Dipole antenna)

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

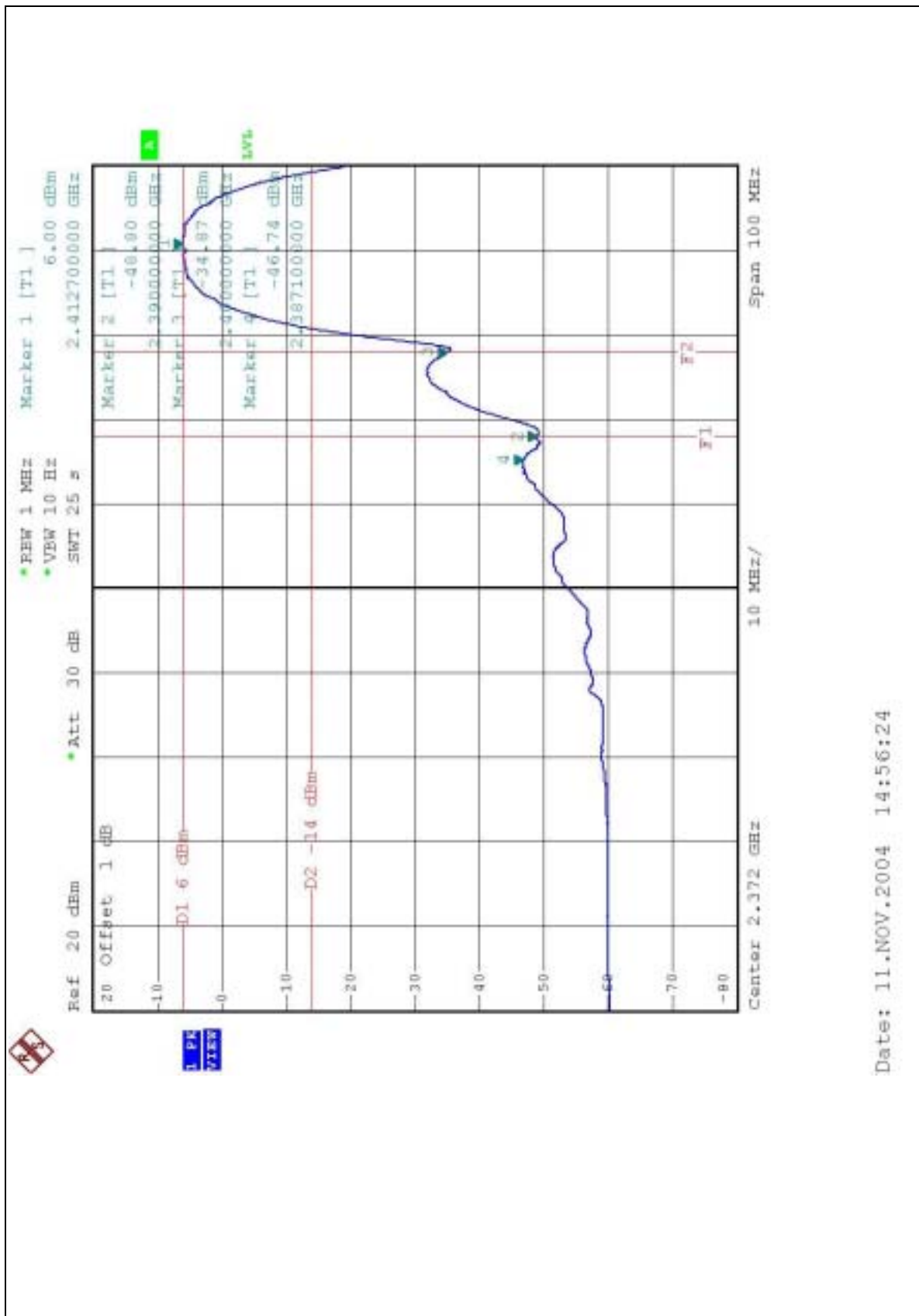
Note - The delta method is only used up to 2 MHz away from the restricted bandage, The radiated emissions which located in other restricted frequency band, the result, please refer to 4.2.

NOTE:

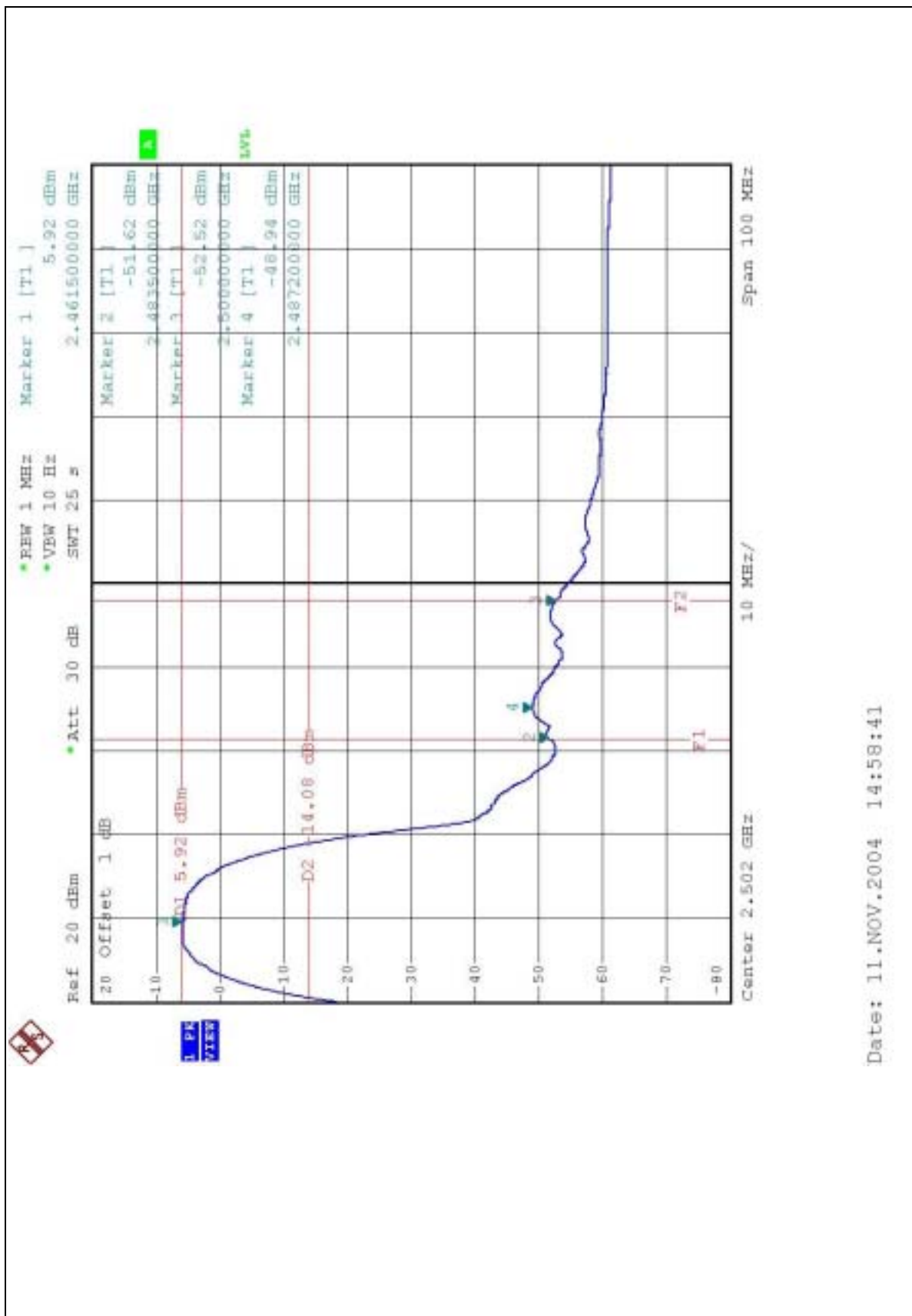
The band edge emission plot on the following first page shows 54.80dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 104.40dBuV/m, so the maximum field strength in restrict band is $104.40 - 54.80 = 49.60$ dBuV/m which is under 54 dBuV/m limit.

NOTE:

The band edge emission plot on the following second page shows 57.54dB delta between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 104.6dBuV/m, so the maximum field strength in restrict band is $104.6 - 57.54 = 47.06$ dBuV/m which is under 54 dBuV/m limit.



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4.5.6 TEST RESULTS (A- with PIFA antenna)

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

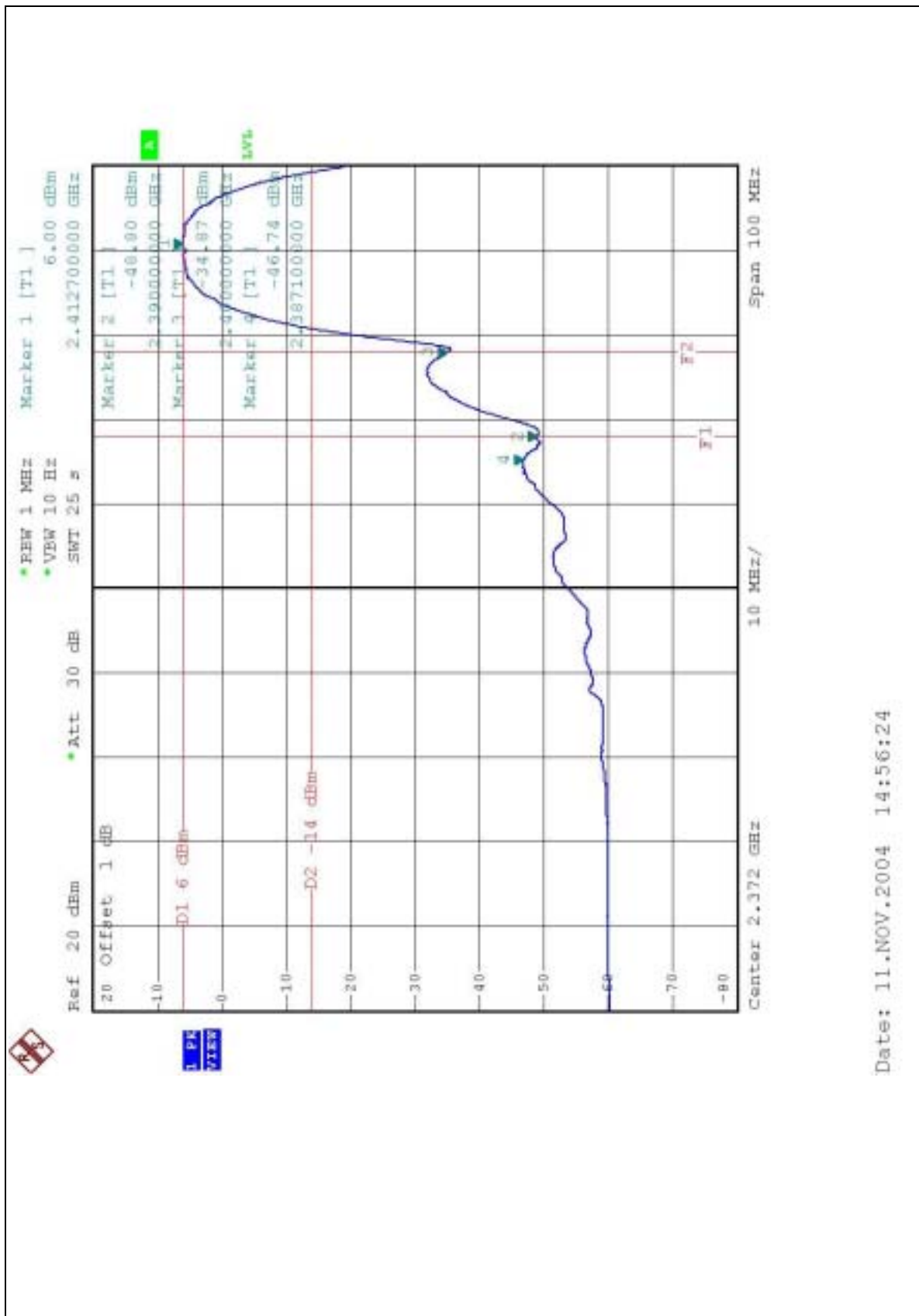
Note - The delta method is only used up to 2 MHz away from the restricted bandage, The radiated emissions which located in other restricted frequency band, the result, please refer to 4.2.

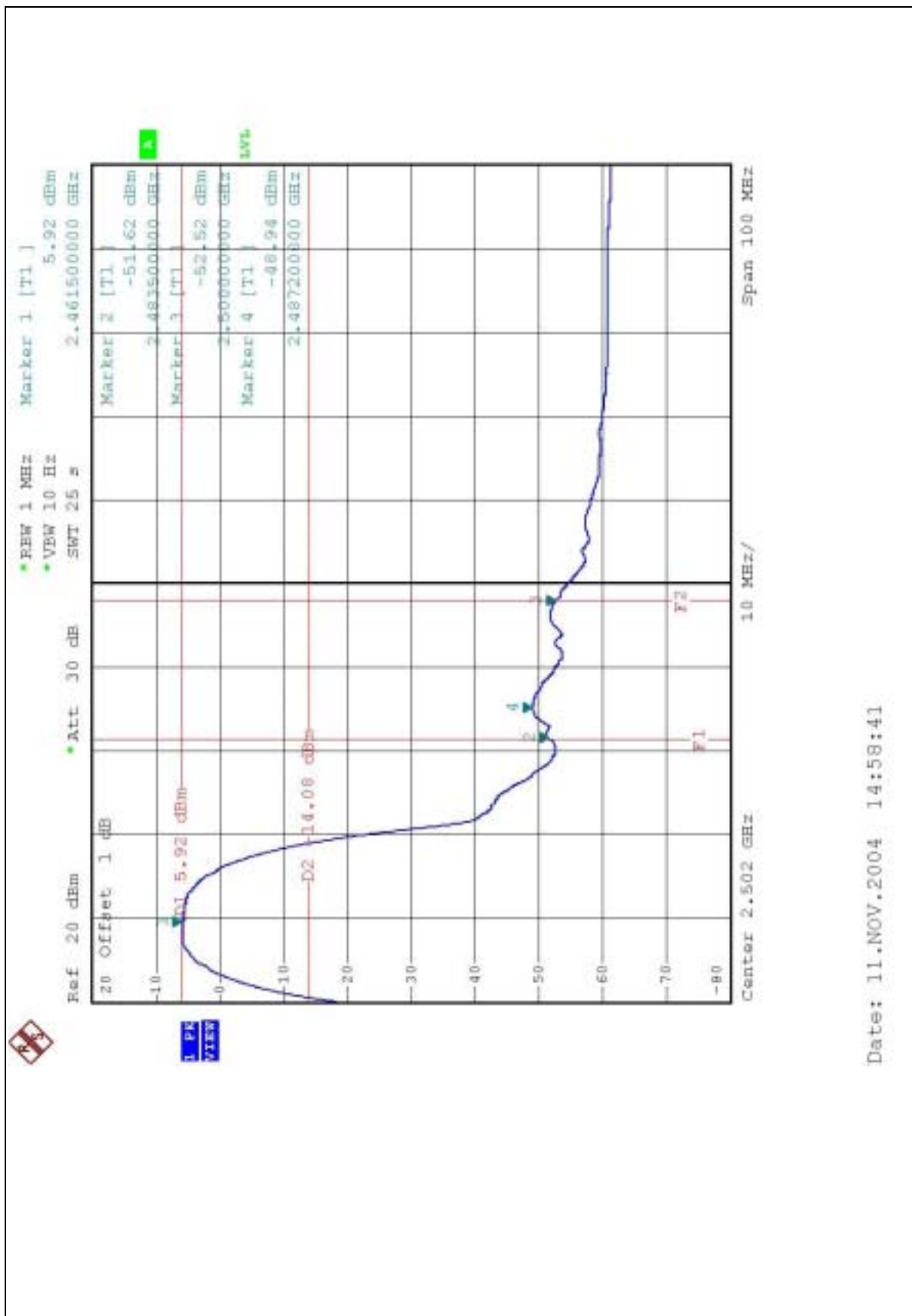
NOTE:

The band edge emission plot on the following first page shows 54.80dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 99.80dBuV/m, so the maximum field strength in restrict band is $99.80 - 54.80 = 45.00$ dBuV/m which is under 54 dBuV/m limit.

NOTE:

The band edge emission plot on the following second page shows 57.54dB delta between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 98.90dBuV/m, so the maximum field strength in restrict band is $98.90 - 57.54 = 41.36$ dBuV/m which is under 54 dBuV/m limit.







4.5.7 TEST RESULTS (B- with Dipole antenna)

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

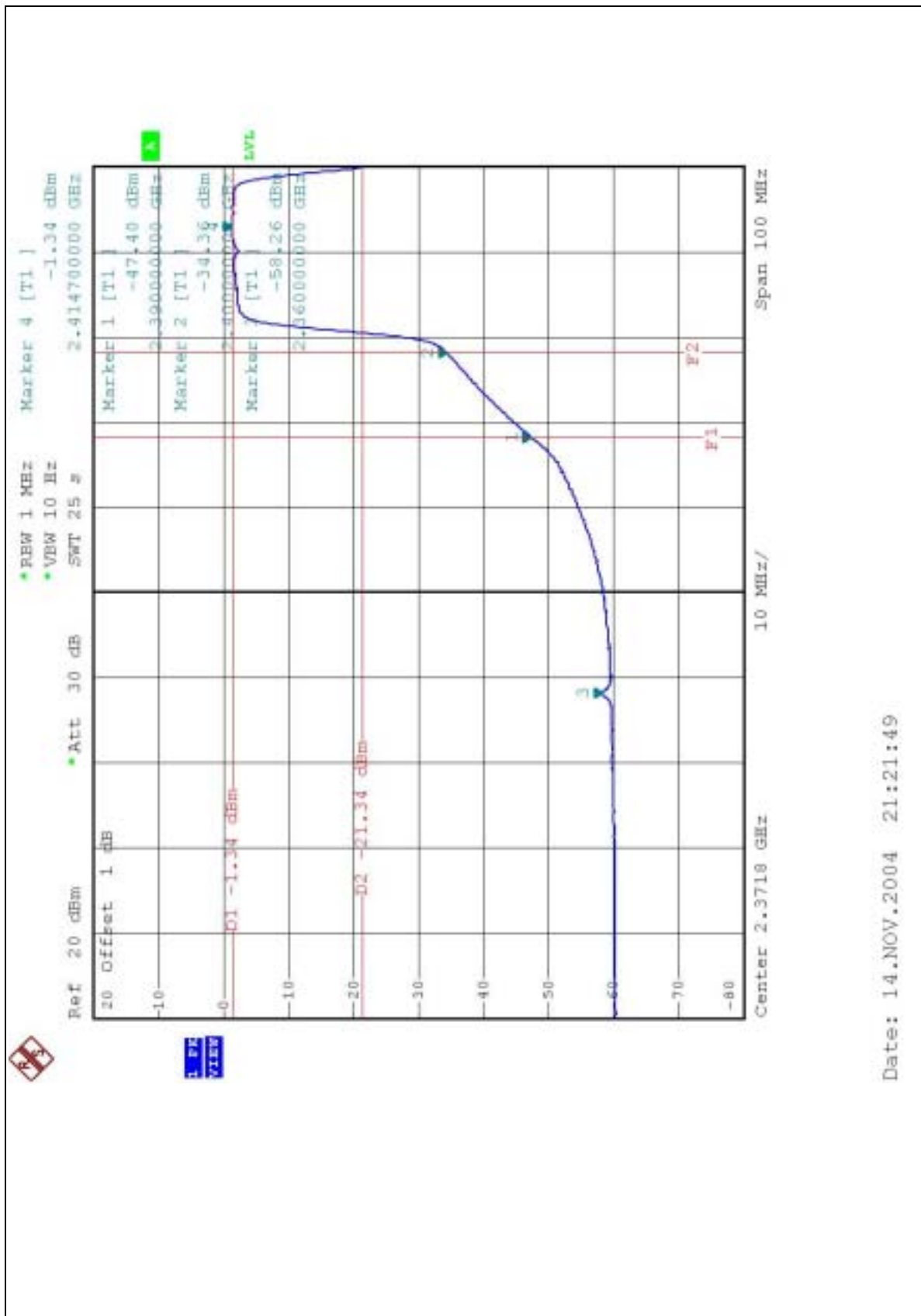
Note - The delta method is only used up to 2 MHz away from the restricted bandage, The radiated emissions which located in other restricted frequency band, the result, please refer to 4.2.

NOTE:

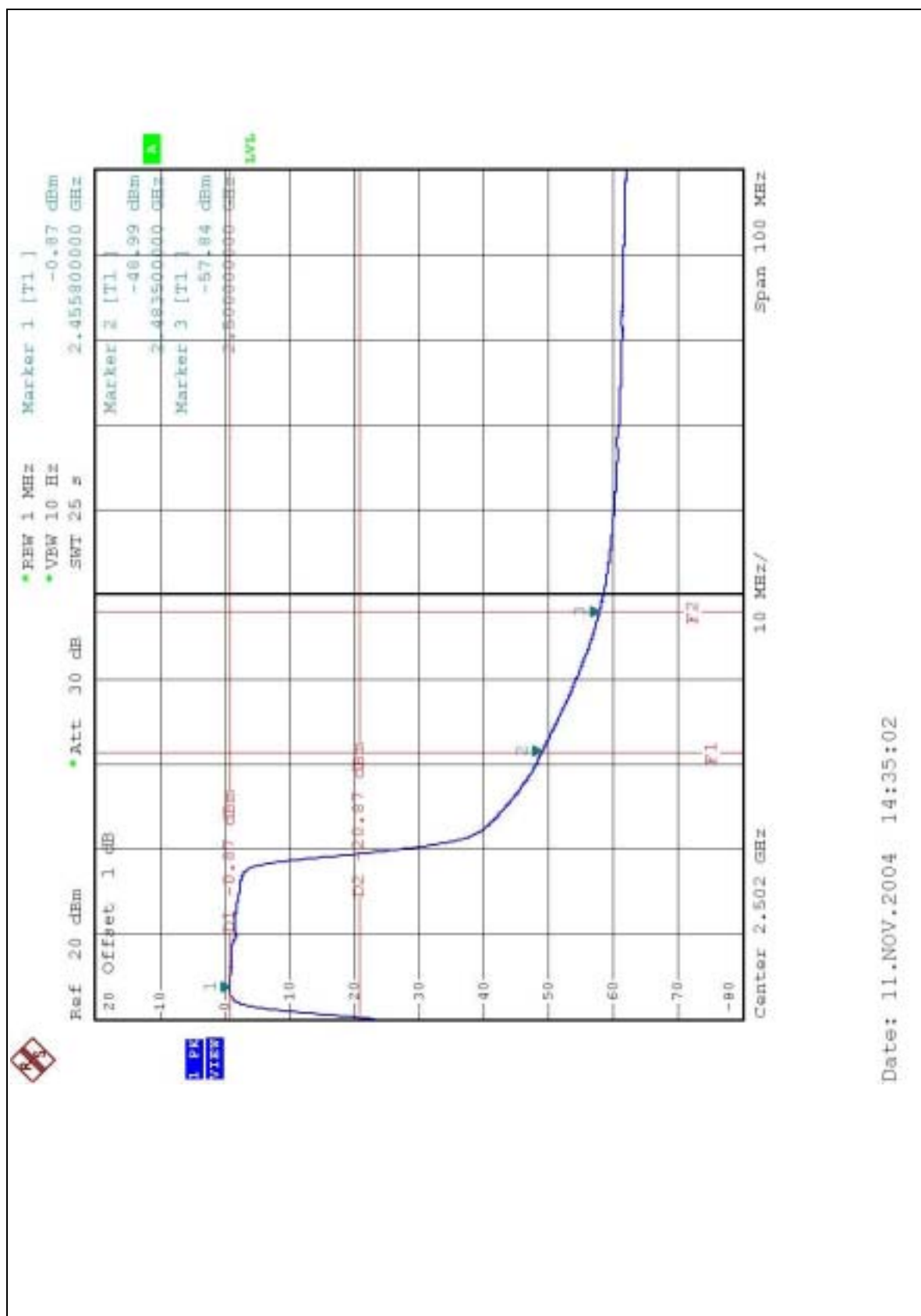
The band edge emission plot on the following first page shows 46.06dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.8 is 98.90dBuV/m, so the maximum field strength in restrict band is $98.90 - 46.06 = 52.84$ dBuV/m which is under 54 dBuV/m limit.

NOTE:

The band edge emission plot on the following second page shows 48.12dB delta between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.8 is 101.00dBuV/m, so the maximum field strength in restrict band is $101.00 - 48.12 = 52.88$ dBuV/m which is under 54 dBuV/m limit.



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4.5.8 TEST RESULTS (B- with PIFA antenna)

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

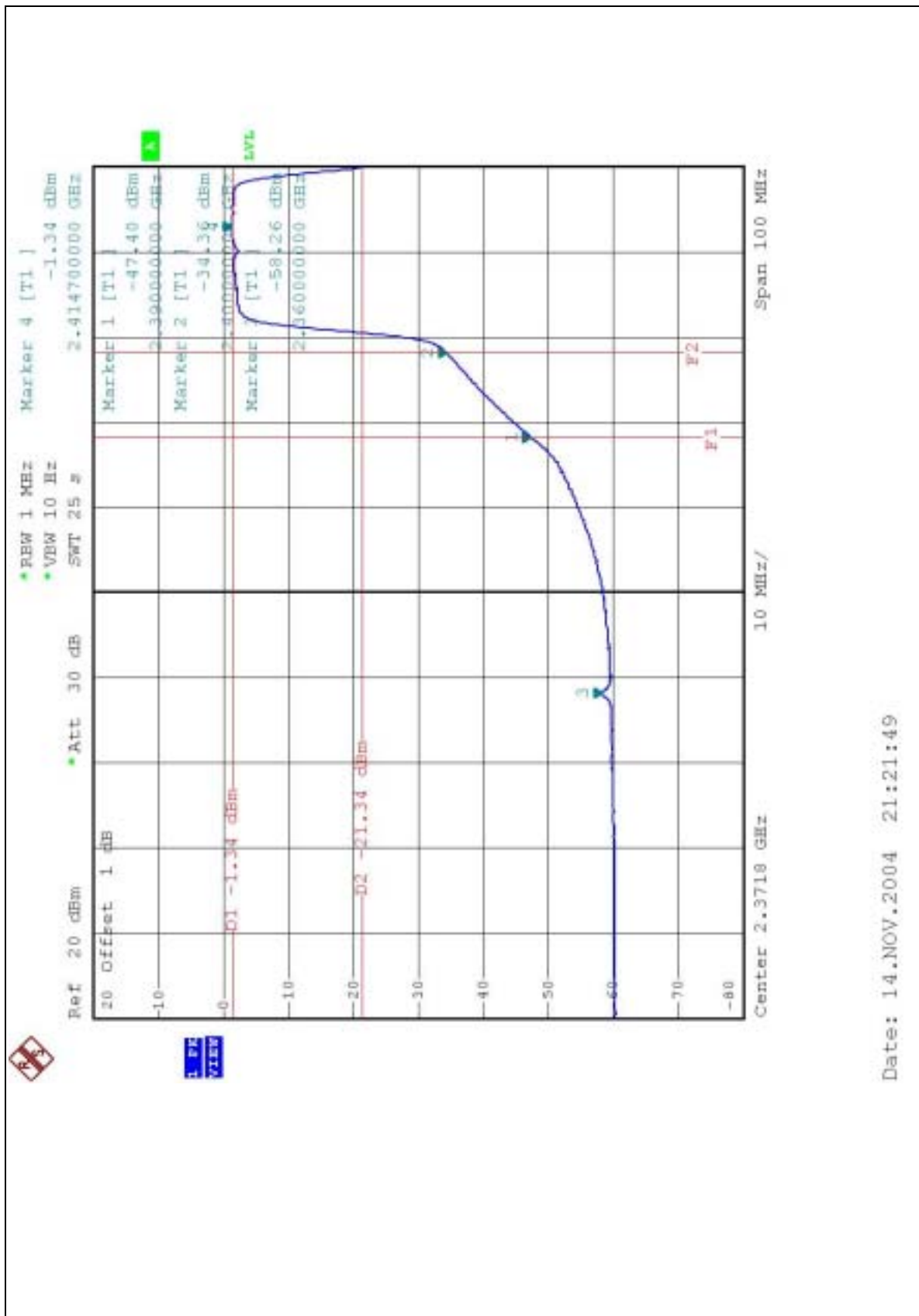
Note - The delta method is only used up to 2 MHz away from the restricted bandage, The radiated emissions which located in other restricted frequency band, the result, please refer to 4.2.

NOTE:

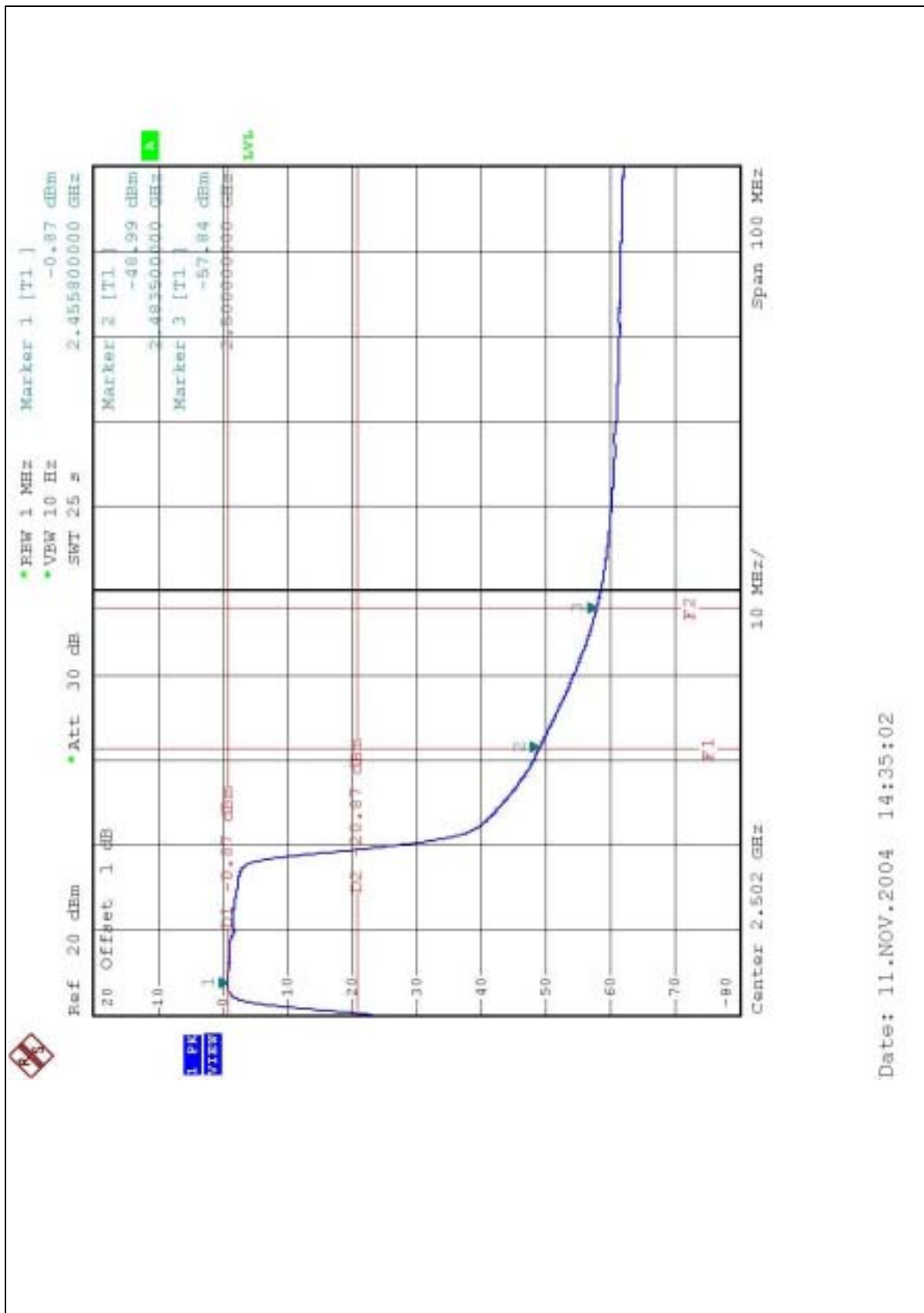
The band edge emission plot on the following first page shows 46.06dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.8 is 91.80dBuV/m, so the maximum field strength in restrict band is $91.80 - 46.06 = 45.74\text{dBuV/m}$ which is under 54 dBuV/m limit.

NOTE:

The band edge emission plot on the following second page shows 48.12dB delta between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.8 is 90.70 dBuV/m, so the maximum field strength in restrict band is $90.70 - 48.12 = 42.58\text{dBuV/m}$ which is under 54 dBuV/m limit.



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4.6 ANTENNA REQUIREMENT

4.6.1 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.

4.6.2 ANTENNA CONNECTED CONSTRUCTION

The maximum Gain antennas used in this product are PIFA antenna with IPEX(In EUT) antenna connector and Dipole antenna with RP-SMA(with reverse SMA cable to IPEX(EUT)) antenna connector. And the maximum Gain of these antennas is 5dBi.

5 PHOTOGRAPHS OF THE TEST CONFIGURATION

RADIATED EMISSION TEST





6 INFORMATION ON THE TESTING LABORATORIES

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

USA	FCC, NVLAP, UL, A2LA
Germany	TUV Rheinland
Japan	VCCI
Norway	NEMKO
Canada	INDUSTRY CANADA, CSA
R.O.C.	CNLA, BSMI, DGT
Netherlands	Telefication
Singapore	PSB, GOST-ASIA (MOU)
Russia	CERTIS (MOU)

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

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