FCC TEST REPORT

REPORT NO.: RF921112R05B
MODEL NO.: WBR2-G54, WBR2-B11, WLA2-G54S
RECEIVED: Feb. 05, 2004
TESTED: Feb. 06 to Mar. 09, 2004

APPLICANT: BUFFALO INC.

ADDRESS: 4-15, Shibata Hondori, Minami-ku, Nagoya 457-8520, Japan

ISSUED BY: Advance Data Technology Corporation

LAB LOCATION: No. 81-1, Lu Liao Keng, 9 Ling, Wu Lung Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien, Taiwan, R.O.C.

This test report consists of 117 pages in total. It may be duplicated completely for legal use with the approval of the applicant. It should not be reproduced except in full, without the written approval of our laboratory. The client should not use it to claim product endorsement by CNLA or any government agencies. The test results in the report only apply to the tested sample.

0536
ILAC MRA

Table of Contents

1 CERTIFICATION

Reference No.: 930205R03

PRODUCT :	AirStation Access Point
BRAND NAME :	BUFFALO
MODEL NO. :	WBR2-G54, WBR2-B11, WLA2-G54S
APPLICANT :	BUFFALO INC.
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. 06 to Mar. 09, 2004. The test record, data evaluation and Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions herein specified.

PREPARED BY: Carol Liao , **DATE:** *Mar. 12, 2004*

(Carol Liao)

APPROVED BY: , **DATE:** *Mar. 12, 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**
15.207	AC Power Conducted Emission Limit: 48dBuV	PASS	Meet the requirement of limit Minimum passing margin is –4.72 dBuV at 0.908 MHz
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 –1.30 dBuV at 400.01MHz
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	AirStation Access Point
MODEL NO.	WBR2-G54, WBR2-B11, WLA2-G54S
POWER SUPPLY	3.3VDC from power adapters
MODULATION TYPE	CCK, OFDM, DBPSK, DQPSK
RADIO TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	1/2/5.5/6/9/11/12/18/24/36/48/54Mbps
FREQUENCY RANGE	2412MHz ~ 2462MHz
NUMBER OF CHANNEL	11
OUTPUT POWER	11b: 16.90dBm 11g: 20.60dBm
ANTENNA TYPE	Please see below (note 3)
DATA CABLE	Nonshielded (1.8m) without Core for adapter (Model No.: UA312-3320) Nonshielded (1.1m) without Core for adapter (Model No.: AT7094A)
I/O PORTS	RJ45 port x 5 (Lan port x4; Wan port x1)
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. The EUT has three model names which are identical to each other in all aspects except for the followings:

Brand	Model Name	Description
BUFFALO	WBR2-G54	Normal
BUFFALO	WBR2-B11	Similar to WBR2-G54, except for change the firmware from 802.11 b+g to 802. 11b.
BUFFALO	WLA2-G54S	Similar to WBR2-G54, except for the WAN port has been removed.

4. There are four antennas provided to this EUT, please refer to the following table:

No.	Model No.	Gain (dBi)	Antenna Type	Antenna Connector
1	Main Antenna	1.99dBi	PIFA	NA
2	Auxiliary Antenna	2.15dBi	Printed Inverse F	NA
3	WLE-NDR Antenna	2.00dBi	External	MC
4	WLE-DA Antenna	4.00dBi	External	MC

5. The EUT was powered by AC adapters as bellows:

ADAPTER 1:	
BRAND:	BUFFALO
MODEL :	UA312-3320
INPUT :	100-240Vac, 50/60Hz, 0.4A
OUTPUT :	3.3Vdc, 2A

ADAPTER 2:	
BRAND:	BUFFALO
MODEL :	AT7094A
INPUT :	100-240Vac, 50/60Hz, 0.2A
OUTPUT :	3.3Vdc, 2A

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

3.2 DESCRIPTION OF TEST MODES

Eleven channels are provided in 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 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, 11Mbps with CCK technique and 6Mbps with OFDM technique, the worst case, were chosen for final test.
4. “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 AirStation Access Point . According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

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 47 CFR 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.

For Conducted test:

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK	DELL	PP01L	TW-0791UH-12800-123-5423	FCC DoC Approved
2	NOTEBOOK	DELL	PP01L	TW-0791UH-12800-11A-1063	FCC DoC Approved
3	MODEM	ACEEX	1414	980020516	IFAXDM1414
4	PRINTER	EPSON	LQ-300+	DCGY038835	FCC DoC Approved

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA
2	NA
3	1.2 m braid shielded wire, terminated with DB25 and DB9 connector via metallic frame, w/o core.
4	1.2m 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).

For Radiated test:

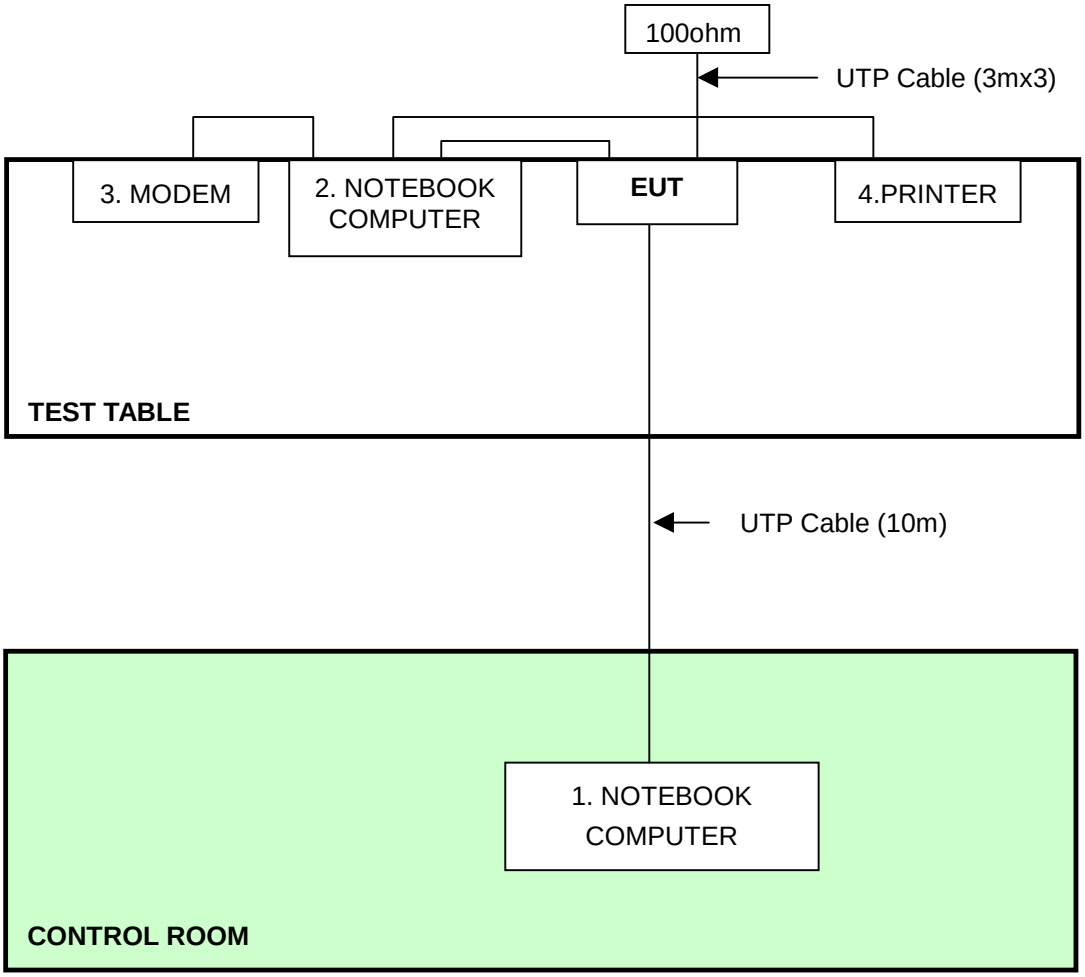
NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK	DELL	PP01L	TW-09C748-12800-1A3-1999	FCC DoC
2	NOTEBOOK	DELL	PP03L	NA	IMRMPCIDE3
3	WIRELESS CARD	BUFFALO	NA	03UT44960002	NA

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA
2	NA
3	NA

Note: All power cords of the above support units are unshielded (1.8m).

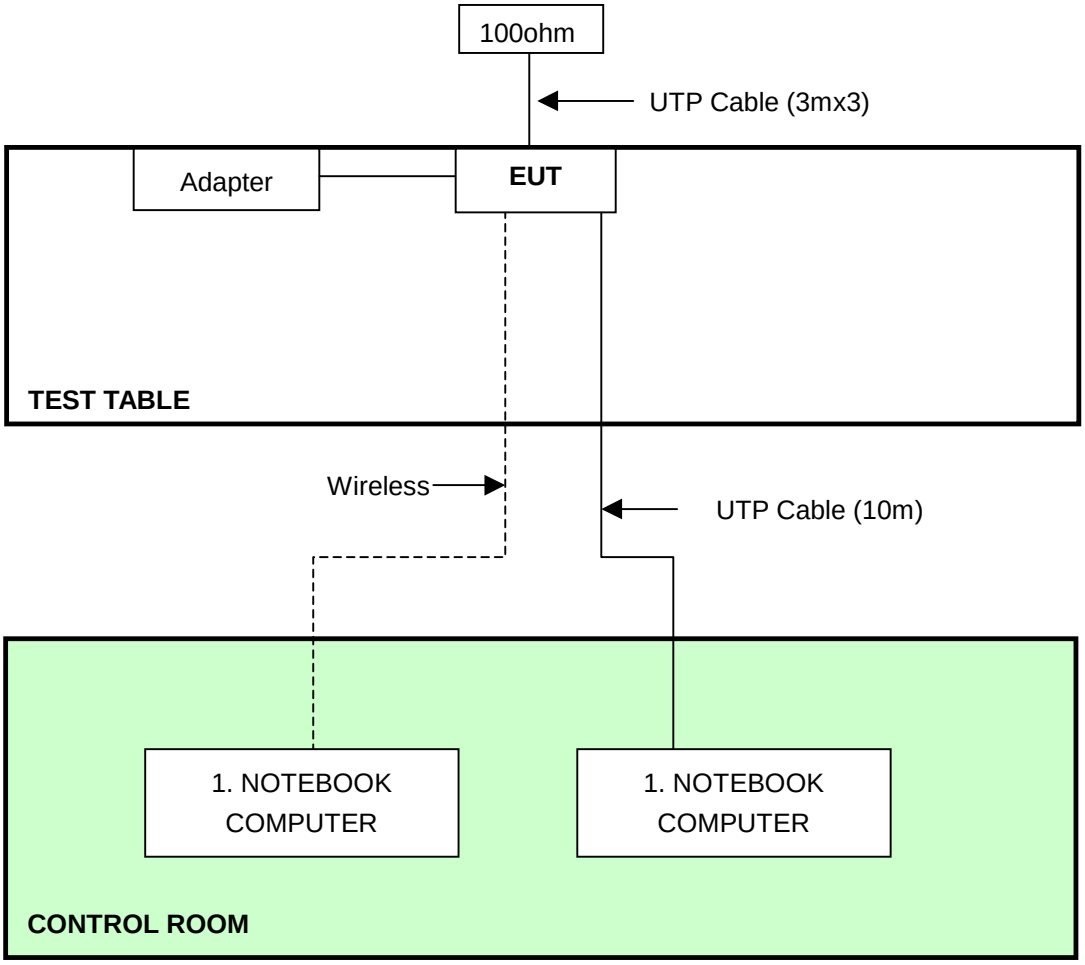
3.5 CONFIGURATION OF SYSTEM UNDER

For Conducted test:



NOTE: 1. Support unit 1 was kept in the control room during the test.
2. Please refer to the photos of test configuration in Item 5 also.

For Radiated test:



NOTE: 1. Support unit 1 was kept in the control room during the test.
2. Please refer to the photos of test configuration in Item 5 also.

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. All emanations from a class B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
ROHDE & SCHWARZ Test Receiver	ESCS 30	838251/021	Jan. 04, 2005
ROHDE & SCHWARZ Artificial Mains Network (for EUT)	ESH3-Z5	100218	Dec. 09, 2004
ROHDE & SCHWARZ Artificial Mains Network (for peripherals)	ESH3-Z5	100219	Dec. 09, 2004
ROHDE & SCHWARZ Artificial Mains Network (for peripherals)	ESH3-Z5	100220	Dec. 09, 2004
*ROHDE & SCHWARZ 4-wire ISN	ENY41	837032/016	Nov. 19, 2004
*ROHDE & SCHWARZ 2-wire ISN	ENY22	837497/016	Nov. 19, 2004
Software	Cond-V2M3	NA	NA
RF cable (JYEBAO)	5D-FB	Cable-C10.01	May 01, 2004
SUHNER Terminator (For ROHDE & SCHWARZ LISN)	65BNC-5001	E1-010770	Mar. 24, 2004
SUHNER Terminator (For ROHDE & SCHWARZ LISN)	65BNC-5001	E1-010773	Apr. 06, 2004

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. "*": These equipment are used for conducted telecom port test only (if tested).
3. The test was performed in ADT Shielded Room No. 10.
4. The VCCI Site Registration No. is C-1312.

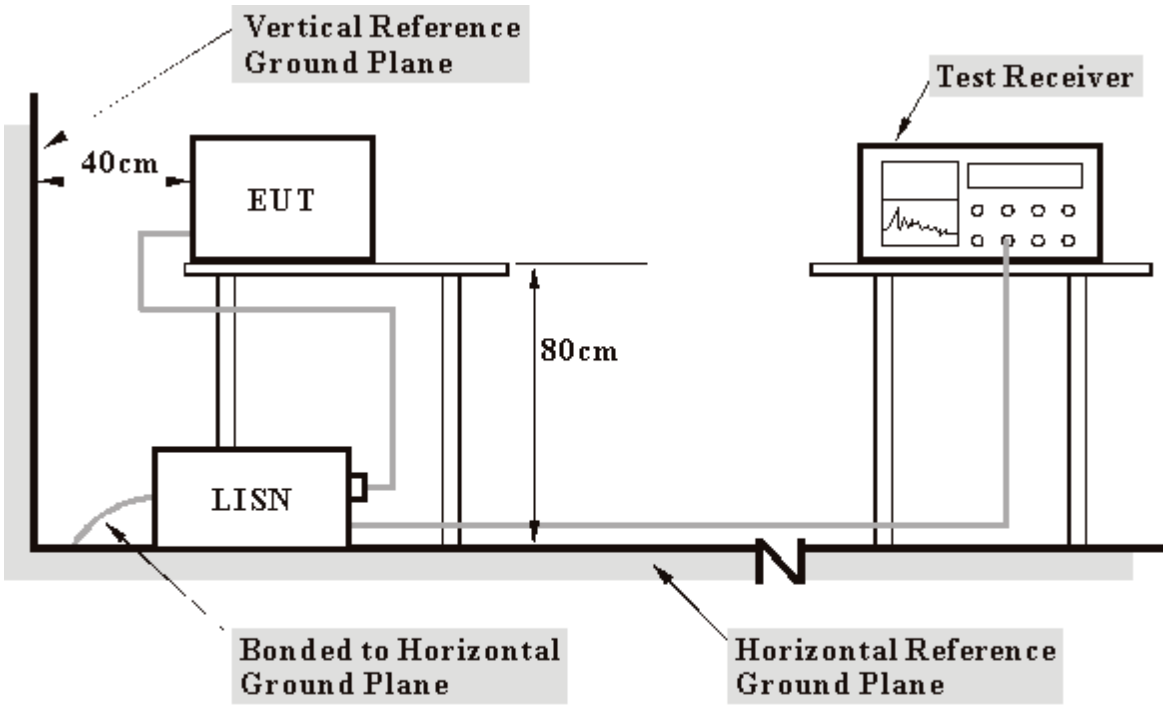
4.1.3 TEST PROCEDURES

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

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

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

4.1.4 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.

4.1.5 EUT OPERATING CONDITIONS

a. Connected the EUT to a notebook system placed on a testing table.

b. The computer system ran hyperterminal program to enable EUT under transmission/receiving condition continuously at specific channel frequency.

c. The notebook system sent "H" messages to its screen.

d. The notebook system sent “H” messages to modem.

e. The notebook system sent "H" messages to printer, and the printer prints them on paper.

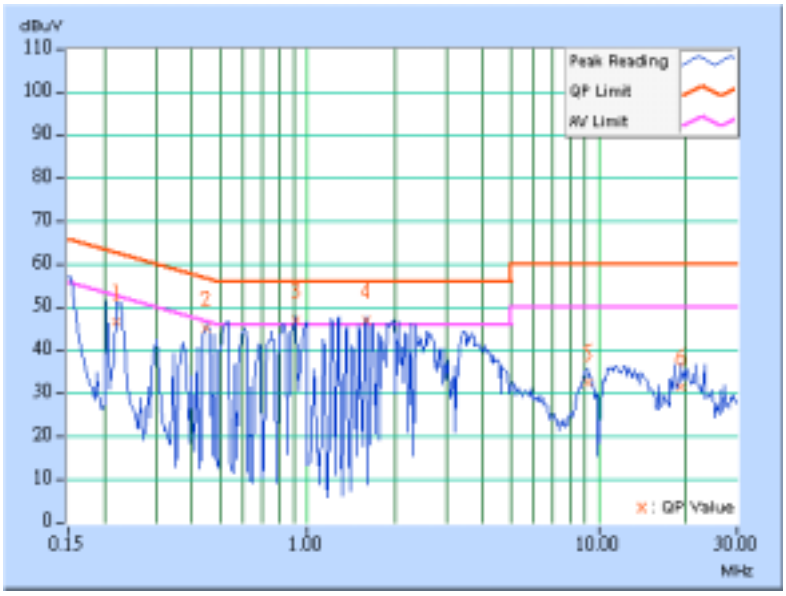
f. Repeat c ~ e.

4.1.6 TEST RESULTS (ADAPTER 1)

EUT	AirStation Access Point	**MODEL**	WBR2-G54
MODE	Channel 11	**6dB BANDWIDTH**	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	20deg. C, 65%RH, 991hPa	**TESTED BY**: Allen 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	0.220	0.10	45.79	-	45.89	-	62.81	52.81	-16.92	-
2	0.447	0.11	44.28	-	44.39	-	56.93	46.93	-12.55	-
3	**0.908**	**0.18**	**46.32**	**41.10**	**46.50**	**41.28**	**56.00**	**46.00**	**-9.50**	**-4.72**
4	1.590	0.20	46.28	37.69	46.48	37.89	56.00	46.00	-9.52	-8.11
5	9.207	0.56	31.88	-	32.44	-	60.00	50.00	-27.56	-
6	19.160	0.88	30.50	-	31.38	-	60.00	50.00	-28.62	-

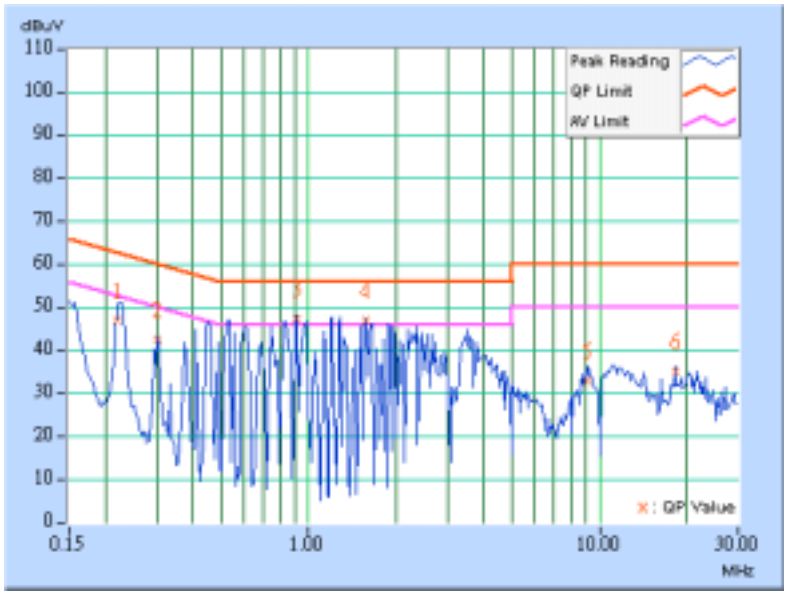
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	AirStation Access Point	**MODEL**	WBR2-G54
MODE	Channel 11	**6dB BANDWIDTH**	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	20deg. C, 65%RH, 991hPa	**TESTED BY**: Allen 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	0.220	0.10	46.13	-	46.23	-	62.81	52.81	-16.58	-
2	0.302	0.10	41.77	-	41.87	-	60.18	50.18	-18.31	-
3	0.912	0.19	46.68	40.94	46.87	41.13	56.00	46.00	-9.13	-4.87
4	1.582	0.20	46.44	36.44	46.64	36.64	56.00	46.00	-9.36	-9.36
5	9.094	0.47	32.27	-	32.74	-	60.00	50.00	-27.26	-
6	18.242	0.76	34.38	-	35.14	-	60.00	50.00	-24.86	-

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

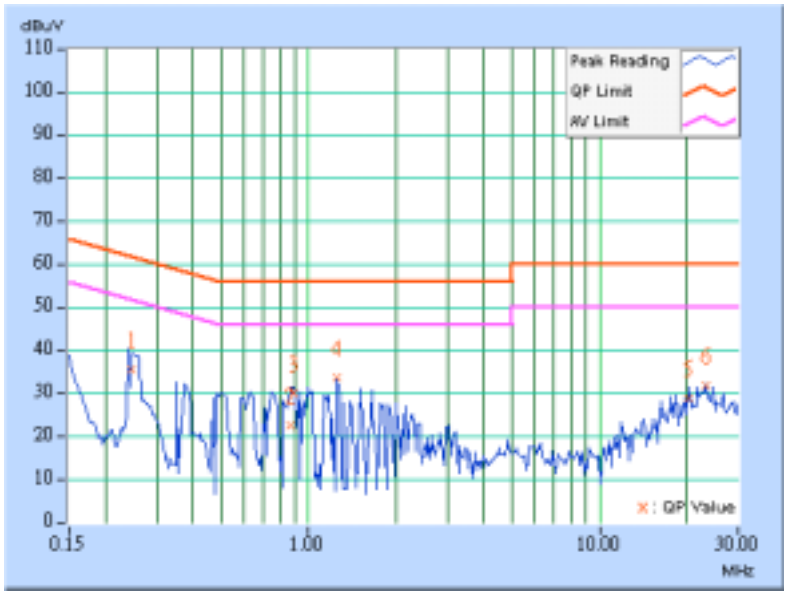


4.1.7 TEST RESULTS (ADAPTER 2)

EUT	AirStation Access Point	**MODEL**	WBR2-G54
MODE	Channel 11	**6dB BANDWIDTH**	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	20deg. C, 65%RH, 991hPa	**TESTED BY**: Allen 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	0.248	0.10	34.64	-	34.74	-	61.84	51.84	-27.10	-
2	0.869	0.18	21.67	-	21.85	-	56.00	46.00	-34.15	-
3	0.888	0.18	28.84	-	29.02	-	56.00	46.00	-26.98	-
4	1.254	0.20	32.66	-	32.86	-	56.00	46.00	-23.14	-
5	20.258	0.92	27.68	-	28.60	-	60.00	50.00	-31.40	-
6	23.129	1.09	30.62	-	31.71	-	60.00	50.00	-28.29	-

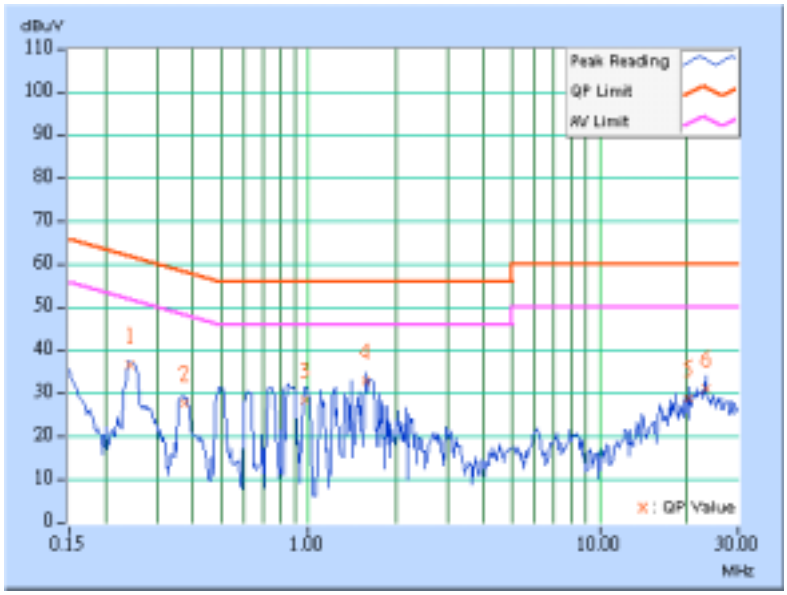
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	AirStation Access Point	**MODEL**	WBR2-G54
MODE	Channel 11	**6dB BANDWIDTH**	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	20deg. C, 65%RH, 991hPa	**TESTED BY**: Allen 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	0.244	0.10	35.60	-	35.70	-	61.97	51.97	-26.27	-
2	0.377	0.10	26.76	-	26.86	-	58.35	48.35	-31.49	-
3	0.970	0.20	27.70	-	27.90	-	56.00	46.00	-28.10	-
4	1.574	0.20	31.95	-	32.15	-	56.00	46.00	-23.85	-
5	20.258	0.81	28.00	-	28.81	-	60.00	50.00	-31.19	-
6	23.125	0.93	30.07	-	31.00	-	60.00	50.00	-29.00	-

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



4.2 RADIATED EMISSION MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

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 of Fundamental	
	uV/m	dBuV/m
30-88	100	40.0
88-216	150	43.5
216-960	200	46.0
Above 960	500	54.0

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	8594ER	3829U04676	Jul. 14, 2004
ADVANTEST Spectrum Analyzer	R3271A	85060311	May 21, 2004
CHASE RF Pre_Amplifier	CPA9232	1057	Apr. 24, 2004
HP Pre_Amplifier	8449B	3008A01281	June 27, 2004
ROHDE & SCHWARZ Test Receiver	ESVS 10	849231 /019	Nov. 03, 2004
CHASE Broadband Antenna	CBL6111c	2730	Jul 17, 2004
Schwarzbeck Horn_Antenna	3115	5619	Jul. 17, 2004
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	Nov. 5, 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. * = 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. C.
5. The FCC Site Registration No. is 656396.
6. The VCCI Site Registration No. is R-1626.
7. The CANADA Site Registration No. is IC 3789-C.

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.

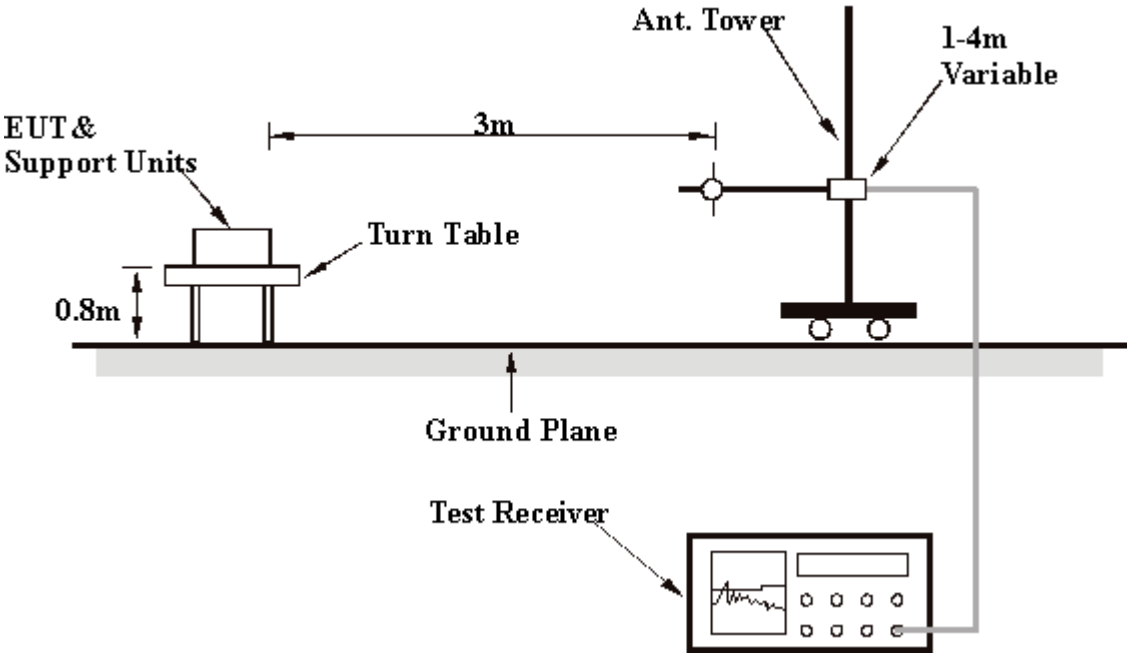
e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

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 TEST SETUP



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

4.2.5 EUT OPERATING CONDITIONS

a. Placed the EUT on the testing table.
b. Prepared another computer system to act as a communication partner and placed it outside of testing area.
c. The communication partner run a software provided by client to enable EUT under transmission/receiving condition continuously at specific channel frequency via RJ 45 cable and wireless.
d. The communication partner sent data to EUT by command "PING".

4.2.6 TEST RESULTS

EUT	AirStation Access Point	MODEL	WBR2-G54
MODE	Channel 11 (Anttenna 1 – Adapter 1)	FREQUENCY RANGE	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	20 deg. C, 65%RH, 976 hPa	TESTED BY	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	74.99	35.80 QP	40.00	-4.20	1.05 H	2	28.30	7.50
2	175.00	31.20 QP	43.50	-12.30	1.75 H	347	20.90	10.30
3	199.99	38.10 QP	43.50	-5.40	1.08 H	236	28.00	10.10
4	225.03	31.10 QP	46.00	-14.90	1.06 H	29	20.00	11.10
5	250.01	30.90 QP	46.00	-15.10	1.77 H	52	16.60	14.40
6	275.04	32.30 QP	46.00	-13.70	1.02 H	356	17.60	14.70
7	300.00	42.30 QP	46.00	-3.70	1.07 H	156	26.90	15.40
8	325.11	32.60 QP	46.00	-13.40	1.80 H	9	16.50	16.10
9	350.03	39.00 QP	46.00	-7.00	1.00 H	356	22.00	17.00
10	375.01	37.80 QP	46.00	-8.20	1.08 H	2	20.00	17.80
11	400.00	44.10 QP	46.00	-1.90	1.43 H	333	25.50	18.70
12	500.04	38.90 QP	46.00	-7.10	1.53 H	62	17.30	21.60
13	599.99	38.10 QP	46.00	-7.90	1.47 H	54	15.30	22.90
14	800.03	39.20 QP	46.00	-6.80	1.25 H	341	13.20	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	75.00	33.20 QP	40.00	-6.80	1.52 V	30	25.70	7.50
2	175.00	31.00 QP	43.50	-12.50	1.11 V	7	20.70	10.30
3	199.99	36.20 QP	43.50	-7.30	1.65 V	349	26.20	10.10
4	225.01	32.00 QP	46.00	-14.00	1.00 V	2	20.90	11.10
5	250.01	33.00 QP	46.00	-13.00	1.52 V	269	18.60	14.40
6	275.03	34.30 QP	46.00	-11.70	1.40 V	213	19.50	14.70
7	300.01	41.90 QP	46.00	-4.10	1.11 V	323	26.50	15.40
8	325.04	32.80 QP	46.00	-13.20	1.02 V	352	16.70	16.10
9	350.01	33.00 QP	46.00	-13.00	1.52 V	222	16.00	17.00
10	375.02	42.90 QP	46.00	-3.10	1.82 V	357	25.10	17.80
11	400.02	42.00 QP	46.00	-4.00	1.11 V	93	23.30	18.70
12	500.02	42.60 QP	46.00	-3.40	1.53 V	62	21.00	21.60
13	600.00	36.70 QP	46.00	-9.30	1.08 V	240	13.80	22.90
14	800.00	42.80 QP	46.00	-3.20	1.50 V	204	16.80	26.00

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

EUT	AirStation Access Point	MODEL	WBR2-G54
MODE	Channel 11 (Anttenna 1 – Adapter 2)	FREQUENCY RANGE	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	20 deg. C, 65%RH, 976 hPa	TESTED BY	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	75.02	36.00 QP	40.00	-4.00	1.11 H	24	28.50	7.50
2	175.10	29.30 QP	43.50	-14.20	2.00 H	56	19.00	10.30
3	200.00	37.20 QP	43.50	-6.30	1.53 H	62	27.20	10.10
4	225.01	32.00 QP	46.00	-14.00	1.00 H	2	20.90	11.10
5	250.00	32.00 QP	46.00	-14.00	1.47 H	54	17.60	14.40
6	275.11	33.00 QP	46.00	-13.00	1.53 H	69	18.30	14.70
7	299.99	41.70 QP	46.00	-4.30	1.46 H	359	26.30	15.40
8	325.02	33.20 QP	46.00	-12.80	1.12 H	18	17.10	16.10
9	350.02	37.50 QP	46.00	-8.50	1.65 H	229	20.50	17.00
10	375.02	38.00 QP	46.00	-8.00	1.20 H	247	20.20	17.80
11	400.01	43.70 QP	46.00	-2.30	2.02 H	36	25.00	18.70
12	500.01	37.90 QP	46.00	-8.10	1.98 H	69	16.30	21.60
13	600.00	38.20 QP	46.00	-7.80	1.35 H	200	15.40	22.90
14	800.01	37.90 QP	46.00	-8.10	1.47 H	5	11.90	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	74.99	32.70 QP	40.00	-7.30	1.83 V	62	25.20	7.50
2	175.03	30.20 QP	43.50	-13.30	1.09 V	250	19.90	10.30
3	200.07	37.30 QP	43.50	-6.20	1.02 V	36	27.20	10.10
4	225.00	31.50 QP	46.00	-14.50	1.07 V	52	20.40	11.10
5	250.00	33.70 QP	46.00	-12.30	1.70 V	346	19.30	14.40
6	275.00	34.70 QP	46.00	-11.30	1.90 V	0	20.00	14.70
7	300.03	42.60 QP	46.00	-3.40	1.15 V	63	27.20	15.40
8	325.10	31.30 QP	46.00	-14.70	1.01 V	2	15.20	16.10
9	350.00	33.00 QP	46.00	-13.00	1.82 V	349	16.00	17.00
10	375.11	43.70 QP	46.00	-2.30	1.88 V	36	25.90	17.80
11	400.02	43.80 QP	46.00	-2.20	1.04 V	24	25.10	18.70
12	500.02	41.60 QP	46.00	-4.40	1.47 V	300	20.00	21.60
13	600.00	35.40 QP	46.00	-10.60	1.54 V	74	12.50	22.90
14	800.01	43.20 QP	46.00	-2.80	1.24 V	24	17.20	26.00

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

EUT	AirStation Access Point	MODEL	WBR2-G54
MODE	Channel 11 (Anttenna 2 – Adapter 1)	FREQUENCY RANGE	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	24 deg. C, 66%RH, 976 hPa	TESTED BY	Tony Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	75.01	35.80 QP	40.00	-4.20	1.02 H	231	28.30	7.50
2	175.01	30.80 QP	43.50	-12.70	1.11 H	20	20.50	10.30
3	200.01	39.00 QP	43.50	-4.50	1.06 H	27	28.90	10.10
4	225.02	30.30 QP	46.00	-15.70	1.20 H	127	19.20	11.10
5	250.00	32.00 QP	46.00	-14.00	1.21 H	41	17.60	14.40
6	275.01	31.20 QP	46.00	-14.80	1.12 H	360	16.50	14.70
7	300.01	42.90 QP	46.00	-3.10	1.56 H	235	27.50	15.40
8	325.01	33.90 QP	46.00	-12.10	1.07 H	142	17.80	16.10
9	350.01	38.10 QP	46.00	-7.90	1.42 H	13	21.10	17.00
10	375.00	37.20 QP	46.00	-8.80	1.21 H	144	19.40	17.80
11	400.01	44.50 QP	46.00	-1.50	1.02 H	234	25.80	18.70
12	500.03	42.70 QP	46.00	-3.30	1.45 H	210	21.10	21.60
13	600.03	37.70 QP	46.00	-8.30	1.00 H	147	14.80	22.90
14	800.02	40.60 QP	46.00	-5.40	1.02 H	231	14.60	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	75.00	34.80 QP	40.00	-5.20	1.24 V	231	27.30	7.50
2	175.00	33.80 QP	43.50	-9.70	1.20 V	201	23.50	10.30
3	200.10	39.10 QP	43.50	-4.40	1.02 V	321	29.00	10.10
4	225.01	33.10 QP	46.00	-12.90	1.23 V	230	22.00	11.10
5	250.00	35.10 QP	46.00	-10.90	1.04 V	239	20.70	14.40
6	275.00	34.30 QP	46.00	-11.70	1.24 V	10	19.60	14.70
7	299.99	43.50 QP	46.00	-2.50	1.20 V	203	28.10	15.40
8	325.00	33.70 QP	46.00	-12.30	1.20 V	220	17.60	16.10
9	350.03	35.80 QP	46.00	-10.20	1.42 V	221	18.80	17.00
10	375.00	42.40 QP	46.00	-3.60	1.02 V	233	24.60	17.80
11	400.01	44.40 QP	46.00	-1.60	1.20 V	103	25.70	18.70
12	500.00	41.20 QP	46.00	-4.80	1.04 V	107	19.60	21.60
13	600.02	33.90 QP	46.00	-12.10	1.20 V	104	11.00	22.90
14	800.02	44.20 QP	46.00	-1.80	1.00 V	107	18.20	26.00

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

EUT	AirStation Access Point	MODEL	WBR2-G54
MODE	Channel 11 (Anttenna 2 – Adapter 2)	FREQUENCY RANGE	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	24 deg. C, 66%RH, 976 hPa	TESTED BY	Tony Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	75.01	34.60 QP	40.00	-5.40	1.04 H	201	27.10	7.50
2	175.01	27.30 QP	43.50	-16.20	1.20 H	278	17.00	10.30
3	200.00	39.10 QP	43.50	-4.40	1.00 H	21	29.00	10.10
4	225.00	31.20 QP	46.00	-14.80	1.07 H	239	20.10	11.10
5	250.00	32.40 QP	46.00	-13.60	1.09 H	222	18.00	14.40
6	275.04	30.60 QP	46.00	-15.40	1.17 H	278	15.90	14.70
7	300.01	43.50 QP	46.00	-2.50	1.11 H	278	28.10	15.40
8	325.01	33.30 QP	46.00	-12.70	1.42 H	296	17.20	16.10
9	350.00	35.20 QP	46.00	-10.80	1.44 H	222	18.20	17.00
10	375.00	38.20 QP	46.00	-7.80	1.23 H	20	20.40	17.80
11	400.00	44.10 QP	46.00	-1.90	1.04 H	135	25.40	18.70
12	500.00	37.10 QP	46.00	-8.90	1.00 H	147	15.50	21.60
13	599.99	34.70 QP	46.00	-11.30	1.23 H	199	11.80	22.90
14	799.99	40.00 QP	46.00	-6.00	1.04 H	56	14.00	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	75.00	32.80 QP	40.00	-7.20	1.20 V	21	25.30	7.50
2	175.00	30.10 QP	43.50	-13.40	1.07 V	234	19.80	10.30
3	200.10	38.80 QP	43.50	-4.70	1.05 V	222	28.70	10.10
4	225.01	31.80 QP	46.00	-14.20	1.11 V	207	20.70	11.10
5	250.01	33.00 QP	46.00	-13.00	1.24 V	14	18.60	14.40
6	275.01	33.30 QP	46.00	-12.70	1.00 V	347	18.60	14.70
7	300.01	43.80 QP	46.00	-2.20	1.05 V	221	28.40	15.40
8	325.01	32.80 QP	46.00	-13.20	1.45 V	237	16.70	16.10
9	350.01	32.80 QP	46.00	-13.20	1.47 V	222	15.80	17.00
10	375.00	42.70 QP	46.00	-3.30	1.10 V	107	24.90	17.80
11	400.01	44.30 QP	46.00	-1.70	1.26 V	200	25.60	18.70
12	500.00	41.30 QP	46.00	-4.70	1.23 V	207	19.60	21.60
13	600.02	34.80 QP	46.00	-11.20	1.44 V	110	11.90	22.90
14	800.01	43.80 QP	46.00	-2.20	1.23 V	26	17.80	26.00

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

EUT	AirStation Access Point	**MODEL**	WBR2-G54
MODE	Channel 11 (Anttenna 3 – Adapter 1)	**FREQUENCY RANGE**	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 976 hPa	**TESTED BY**	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	200.20	30.60 QP	43.50	-12.90	1.76 H	356	20.50	10.10
2	225.01	26.80 QP	46.00	-19.20	1.63 H	22	15.70	11.10
3	250.00	33.10 QP	46.00	-12.90	1.26 H	15	18.70	14.40
4	275.00	34.20 QP	46.00	-11.80	1.23 H	49	19.40	14.70
5	299.99	39.60 QP	46.00	-6.40	1.00 H	57	24.20	15.40
6	350.01	29.00 QP	46.00	-17.00	1.04 H	9	12.00	17.00
7	375.01	36.00 QP	46.00	-10.00	1.00 H	340	18.20	17.80
8	400.02	40.20 QP	46.00	-5.80	1.00 H	119	21.60	18.70
9	500.00	34.50 QP	46.00	-11.50	1.11 H	85	12.90	21.60
10	800.10	34.00 QP	46.00	-12.00	1.09 H	333	8.00	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	125.07	34.70 QP	43.50	-8.80	1.00 V	23	21.60	13.10
2	175.00	28.80 QP	43.50	-14.70	1.10 V	334	18.40	10.30
3	200.00	32.60 QP	43.50	-10.90	1.03 V	305	22.60	10.10
4	300.03	41.00 QP	46.00	-5.00	1.00 V	198	25.60	15.40
5	375.01	34.00 QP	46.00	-12.00	1.13 V	3	16.30	17.80
6	400.01	37.00 QP	46.00	-9.00	1.92 V	268	18.30	18.70
7	500.01	37.50 QP	46.00	-8.50	1.00 V	273	15.80	21.60
8	600.00	35.30 QP	46.00	-10.70	1.00 V	310	12.40	22.90
9	700.00	39.10 QP	46.00	-6.90	1.00 V	131	14.50	24.70
10	800.02	36.50 QP	46.00	-9.50	1.54 V	46	10.50	26.00

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

EUT	AirStation Access Point	MODEL	WBR2-G54
MODE	Channel 11 (Anttenna 3 – Adapter 2)	FREQUENCY RANGE	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 976 hPa	TESTED BY	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	125.00	24.10 QP	43.50	-19.40	1.12 H	3	11.00	13.10
2	250.00	37.30 QP	46.00	-8.70	1.54 H	241	22.90	14.40
3	250.00	34.40 QP	46.00	-11.60	2.00 H	356	20.00	14.40
4	300.00	37.40 QP	46.00	-8.60	1.76 H	346	22.00	15.40
5	350.10	34.80 QP	46.00	-11.20	1.11 H	5	17.80	17.00
6	375.02	38.80 QP	46.00	-7.20	1.08 H	9	21.00	17.80
7	400.00	43.50 QP	46.00	-2.50	1.67 H	353	24.80	18.70
8	500.02	40.50 QP	46.00	-5.50	1.00 H	24	18.90	21.60
9	700.00	32.90 QP	46.00	-13.10	1.47 H	93	8.20	24.70
10	800.00	40.20 QP	46.00	-5.80	1.01 H	279	14.20	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	74.99	35.20 QP	40.00	-4.80	1.34 V	2	27.70	7.50
2	125.01	36.40 QP	43.50	-7.10	1.43 V	83	23.40	13.10
3	150.02	29.80 QP	43.50	-13.70	1.31 V	332	17.20	12.60
4	200.00	32.50 QP	43.50	-11.00	1.00 V	123	22.50	10.10
5	250.02	30.00 QP	46.00	-16.00	1.02 V	47	15.60	14.40
6	300.03	40.40 QP	46.00	-5.60	1.10 V	22	25.00	15.40
7	400.00	37.50 QP	46.00	-8.50	1.31 V	287	18.80	18.70
8	500.01	39.80 QP	46.00	-6.20	1.19 V	282	18.10	21.60
9	600.02	36.10 QP	46.00	-9.90	1.70 V	109	13.20	22.90
10	700.00	38.90 QP	46.00	-7.10	1.40 V	201	14.20	24.70
11	800.00	40.30 QP	46.00	-5.70	1.21 V	35	14.30	26.00

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

EUT	AirStation Access Point	**MODEL**	WBR2-G54
MODE	Channel 11 (Anttenna 4 – Adapter 1)	**FREQUENCY RANGE**	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 976 hPa	**TESTED BY**	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	200.00	29.10 QP	43.50	-14.40	1.66 H	3	19.00	10.10
2	225.01	26.20 QP	46.00	-19.80	1.39 H	22	15.10	11.10
3	250.00	30.60 QP	46.00	-15.40	1.35 H	18	16.20	14.40
4	275.01	30.30 QP	46.00	-15.70	1.81 H	61	15.60	14.70
5	300.01	42.30 QP	46.00	-3.70	1.07 H	53	26.90	15.40
6	350.01	28.10 QP	46.00	-17.90	1.00 H	261	11.10	17.00
7	375.01	35.60 QP	46.00	-10.40	1.08 H	21	17.90	17.80
8	400.01	42.50 QP	46.00	-3.50	1.00 H	131	23.80	18.70
9	500.01	35.60 QP	46.00	-10.40	1.00 H	136	13.90	21.60
10	800.01	35.10 QP	46.00	-10.90	1.00 H	292	9.10	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	75.00	36.10 QP	40.00	-3.90	1.00 V	3	28.60	7.50
2	125.00	35.40 QP	43.50	-8.10	1.04 V	192	22.30	13.10
3	150.00	32.60 QP	43.50	-10.90	1.00 V	4	20.00	12.60
4	175.00	27.60 QP	43.50	-15.90	1.00 V	19	17.30	10.30
5	200.00	33.10 QP	43.50	-10.40	1.00 V	21	23.00	10.10
6	250.00	29.50 QP	46.00	-16.50	1.00 V	132	15.10	14.40
7	300.00	39.50 QP	46.00	-6.50	1.00 V	124	24.10	15.40
8	375.00	34.70 QP	46.00	-11.30	1.00 V	143	16.90	17.80
9	400.00	39.60 QP	46.00	-6.40	1.26 V	348	20.90	18.70
10	500.00	37.30 QP	46.00	-8.70	1.22 V	255	15.70	21.60
11	600.01	35.10 QP	46.00	-10.90	1.00 V	270	12.20	22.90
12	700.01	38.20 QP	46.00	-7.80	1.00 V	98	13.50	24.70
13	800.01	40.00 QP	46.00	-6.00	1.00 V	108	14.00	26.00

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

EUT	AirStation Access Point	MODEL	WBR2-G54
MODE	Channel 11 (Anttenna 4 – Adapter 2)	FREQUENCY RANGE	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 976 hPa	TESTED BY	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	75.01	20.20 QP	40.00	-19.80	3.10 H	2	12.70	7.50
2	125.00	22.60 QP	43.50	-20.90	2.60 H	252	9.60	13.10
3	200.00	26.60 QP	43.50	-16.90	2.30 H	22	16.50	10.10
4	225.00	30.50 QP	46.00	-15.50	1.59 H	25	19.40	11.10
5	250.00	37.40 QP	46.00	-8.60	1.22 H	22	23.00	14.40
6	275.00	30.40 QP	46.00	-15.60	1.22 H	34	15.60	14.70
7	300.00	37.20 QP	46.00	-8.80	1.62 H	356	21.80	15.40
8	350.00	33.60 QP	46.00	-12.40	1.53 H	161	16.60	17.00
9	375.01	38.30 QP	46.00	-7.70	1.11 H	2	20.50	17.80
10	**400.01**	**44.70 QP**	**46.00**	**-1.30**	**1.00 H**	**126**	**26.10**	**18.70**
11	500.01	40.70 QP	46.00	-5.30	1.00 H	22	19.00	21.60
12	600.02	31.70 QP	46.00	-14.30	1.00 H	254	8.90	22.90
13	700.02	30.80 QP	46.00	-15.20	1.06 H	226	6.10	24.70
14	800.02	41.00 QP	46.00	-5.00	1.00 H	268	15.00	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	75.00	33.00 QP	40.00	-7.00	1.00 V	307	25.50	7.50
2	124.99	31.60 QP	43.50	-11.90	1.00 V	25	18.50	13.10
3	175.00	29.40 QP	43.50	-14.10	1.00 V	0	19.00	10.30
4	200.00	30.80 QP	43.50	-12.70	1.00 V	183	20.70	10.10
5	250.01	39.60 QP	46.00	-6.40	1.08 V	182	25.20	14.40
6	300.01	35.40 QP	46.00	-10.60	1.08 V	190	20.00	15.40
7	350.01	29.20 QP	46.00	-16.80	1.00 V	218	12.20	17.00
8	375.00	43.30 QP	46.00	-2.70	1.22 V	2	25.60	17.80
9	400.01	43.10 QP	46.00	-2.90	1.36 V	354	24.50	18.70
10	500.00	42.80 QP	46.00	-3.20	1.14 V	283	21.10	21.60
11	625.01	41.50 QP	46.00	-4.50	1.00 V	235	17.70	23.80
12	700.02	35.80 QP	46.00	-10.20	1.00 V	90	11.10	24.70
13	750.02	35.20 QP	46.00	-10.80	1.00 V	81	9.10	26.10
14	800.01	41.00 QP	46.00	-5.00	1.33 V	2	15.00	26.00

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.

4.2.7 TEST RESULTS – DSSS (Antenna 1)

EUT	AirStation Access Point	**MODEL**	WBR2-G54
MODE	Channel 1	**FREQUENCY RANGE**	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average(AV)
ENVIRONMENTAL CONDITIONS	25 deg. C, 60%RH, 976 hPa	**TESTED BY**	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	54.30 PK	74.00	-19.70	1.00 H	310	23.90	30.40
1	2390.00	46.10 AV	54.00	-7.90	1.00 H	310	15.70	30.40
2	*2412.00	110.20 PK			1.00 H	310	79.70	30.50
2	*2412.00	102.00 AV			1.00 H	310	71.50	30.50
3	4824.00	47.50 PK	74.00	-26.50	1.29 H	76	11.20	36.20
4	#7236.00	49.20 PK	74.00	-24.80	1.37 H	321	7.50	41.70
5	#9648.00	51.60 PK	74.00	-22.40	1.28 H	98	6.70	44.90
5	#9648.00	41.60 AV	54.00	-12.40	1.28 H	98	-3.30	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	2390.00	47.80 PK	74.00	-26.20	1.00 V	311	17.40	30.40
2	*2412.00	103.70 PK			1.00 V	311	73.20	30.50
2	*2412.00	95.40 AV			1.00 V	311	64.80	30.50
3	4824.00	52.70 PK	74.00	-21.30	1.13 V	258	16.50	36.20
3	4824.00	47.40 AV	54.00	-6.60	1.13 V	258	11.20	36.20
4	#7236.00	49.00 PK	74.00	-25.00	1.42 V	291	7.30	41.70
5	#9648.00	53.20 PK	74.00	-20.80	1.18 V	90	8.30	44.90
5	#9648.00	45.10 AV	54.00	-8.90	1.18 V	90	0.20	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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency
7. "# " : The radiated frequency not falling in the restricted band.

EUT	AirStation Access Point	**MODEL**	WBR2-G54
MODE	Channel 6	**FREQUENCY RANGE**	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25 deg. C, 60%RH, 976 hPa	**TESTED BY**	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	108.20 PK			1.00 H	304	77.50	30.70
1	*2437.00	101.30 AV			1.00 H	304	70.70	30.70
2	4874.00	46.60 PK	74.00	-27.40	1.31 H	240	10.10	36.50
3	7311.00	49.20 PK	74.00	-24.80	1.31 H	255	7.40	41.80
4	#9748.00	52.10 PK	74.00	-21.90	1.19 H	100	7.40	44.60
4	#9748.00	44.00 AV	54.00	-10.00	1.19 H	100	-0.60	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	101.70 PK			1.00 V	297	71.00	30.70
1	*2437.00	96.20 AV			1.00 V	297	65.50	30.70
2	4874.00	49.00 PK	74.00	-25.00	1.32 V	238	12.60	36.50
3	7311.00	49.10 PK	74.00	-24.90	1.32 V	319	7.30	41.80
4	#9748.00	51.10 PK	74.00	-22.90	1.29 V	99	6.40	44.60
4	#9748.00	43.40 AV	54.00	-10.60	1.29 V	99	-1.20	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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency
7. "# " : The radiated frequency not falling in the restricted band.

EUT	AirStation Access Point	**MODEL**	WBR2-G54
MODE	Channel 11	**FREQUENCY RANGE**	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25 deg. C, 60%RH, 976 hPa	**TESTED BY**	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	104.80 PK			1.56 H	257	74.00	30.80
1	*2462.00	99.10 AV			1.56 H	257	68.20	30.80
2	2483.50	50.60 PK	74.00	-23.40	1.56 H	257	19.70	31.00
3	4924.00	47.20 PK	74.00	-26.80	1.50 H	101	10.50	36.70
4	7386.00	49.50 PK	74.00	-24.50	1.54 H	240	7.60	41.80
5	#9848.00	51.10 PK	74.00	-22.90	1.56 H	115	6.70	44.40
5	#9848.00	42.00 AV	54.00	-12.00	1.56 H	115	-2.40	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	99.00 PK			1.35 V	278	68.20	30.80
1	*2462.00	93.20 AV			1.35 V	278	62.40	30.80
2	2483.50	44.90 PK	74.00	-29.10	1.35 V	278	13.90	31.00
3	4924.00	49.90 PK	74.00	-24.10	1.13 V	127	13.20	36.70
4	7386.00	48.60 PK	74.00	-25.40	1.45 V	308	6.70	41.80
5	#9848.00	51.00 PK	74.00	-23.00	1.17 V	97	6.60	44.40
5	#9848.00	43.20 AV	54.00	-10.80	1.17 V	97	-1.10	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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency
7. "# " : The radiated frequency not falling in the restricted band.

4.2.8 TEST RESULTS – DSSS (Antenna 2)

EUT	AirStation Access Point	**MODEL**	WBR2-G54
MODE	Channel 1	**FREQUENCY RANGE**	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average(AV)
ENVIRONMENTAL CONDITIONS	25 deg. C, 60%RH, 976 hPa	**TESTED BY**	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	50.10 PK	74.00	-23.90	1.00 H	292	19.70	30.40
2	*2412.00	106.10 PK			1.00 H	292	75.50	30.50
2	*2412.00	97.20 AV			1.00 H	292	66.60	30.50
3	4824.00	48.70 PK	74.00	-25.30	1.24 H	75	12.50	36.20
4	#7236.00	50.20 PK	74.00	-23.80	1.32 H	355	8.50	41.70
5	#9648.00	52.30 PK	74.00	-21.70	1.28 H	95	7.40	44.90
5	#9648.00	42.40 AV	54.00	-11.60	1.28 H	95	-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	2390.00	55.00 PK	74.00	-19.00	1.00 V	22	24.50	30.40
1	2390.00	46.60 AV	54.00	-7.40	1.00 V	22	16.20	30.40
2	*2412.00	110.90 PK			1.00 V	22	80.30	30.50
2	*2412.00	102.60 AV			1.00 V	22	72.00	30.50
3	4824.00	52.70 PK	74.00	-21.30	1.13 V	258	16.50	36.20
3	4824.00	47.40 AV	54.00	-6.60	1.13 V	258	11.20	36.20
4	#7236.00	49.00 PK	74.00	-25.00	1.42 V	291	7.30	41.70
5	#9648.00	53.40 PK	74.00	-20.60	1.58 V	95	8.50	44.90
5	#9648.00	45.40 AV	54.00	-8.60	1.58 V	95	0.50	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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency
7. "# " : The radiated frequency not falling in the restricted band.

EUT	AirStation Access Point	**MODEL**	WBR2-G54
MODE	Channel 6	**FREQUENCY RANGE**	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25 deg. C, 60%RH, 976 hPa	**TESTED BY**	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	113.10 PK			1.00 H	320	82.40	30.70
1	*2437.00	105.90 AV			1.00 H	320	75.20	30.70
2	4874.00	48.70 PK	74.00	-25.30	1.35 H	251	12.20	36.50
3	7311.00	49.70 PK	74.00	-24.30	1.32 H	265	7.90	41.80
4	#9748.00	53.30 PK	74.00	-20.70	1.20 H	105	8.60	44.60
4	#9748.00	44.20 AV	54.00	-9.80	1.20 H	105	-0.50	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	*2437.00	109.70 PK			1.00 V	296	79.00	30.70
1	*2437.00	103.90 AV			1.00 V	296	73.20	30.70
2	4874.00	52.00 PK	74.00	-22.00	1.38 V	235	15.60	36.50
2	4874.00	48.20 AV	54.00	-5.80	1.38 V	235	11.70	36.50
3	7311.00	52.00 PK	74.00	-22.00	1.25 V	321	10.20	41.80
3	7311.00	41.30 AV	54.00	-12.70	1.25 V	321	-0.40	41.80
4	#9748.00	54.10 PK	74.00	-19.90	1.28 V	54	9.40	44.60
4	#9748.00	45.30 AV	54.00	-8.70	1.28 V	54	0.70	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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency
7. "# " : The radiated frequency not falling in the restricted band.

EUT	AirStation Access Point	**MODEL**	WBR2-G54
MODE	Channel 11	**FREQUENCY RANGE**	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25 deg. C, 60%RH, 976 hPa	**TESTED BY**	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	108.70 PK			1.07 H	22	77.80	30.80
1	*2462.00	101.80 AV			1.07 H	22	71.00	30.80
2	2483.50	54.50 PK	74.00	-19.50	1.07 H	22	23.60	31.00
2	2483.50	47.60 AV	54.00	-6.40	1.07 H	22	16.70	31.00
3	4924.00	47.10 PK	74.00	-26.90	1.52 H	100	10.40	36.70
4	7386.00	49.90 PK	74.00	-24.10	1.52 H	240	8.00	41.80
5	#9848.00	52.10 PK	74.00	-21.90	1.52 H	117	7.70	44.40
5	#9848.00	42.00 AV	54.00	-12.00	1.52 H	117	-2.30	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	111.70 PK			1.00 V	26	80.80	30.80
1	*2462.00	103.20 AV			1.00 V	26	72.40	30.80
2	2483.50	57.50 PK	74.00	-16.50	1.00 V	26	26.50	31.00
2	2483.50	49.00 AV	54.00	-5.00	1.00 V	26	18.10	31.00
3	4924.00	50.80 PK	74.00	-23.20	1.22 V	125	14.10	36.70
4	7386.00	49.20 PK	74.00	-24.80	1.52 V	308	7.30	41.80
5	#9848.00	52.40 PK	74.00	-21.60	1.24 V	100	8.00	44.40
5	#9848.00	44.30 AV	54.00	-9.70	1.24 V	100	0.00	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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency
7. "# " : The radiated frequency not falling in the restricted band.

4.2.9 TEST RESULTS – DSSS (Antenna 3)

EUT	AirStation Access Point	**MODEL**	WBR2-G54
MODE	Channel 1	**FREQUENCY RANGE**	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average(AV)
ENVIRONMENTAL CONDITIONS	23 deg. C, 64%RH, 976 hPa	**TESTED BY**	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2388.00	44.40 PK	74.00	-29.60	1.11 H	360	14.00	30.40
2	2390.00	43.20 PK	74.00	-30.80	1.32 H	202	12.80	30.40
3	*2412.00	100.00 PK			1.23 H	200	69.50	30.50
3	*2412.00	92.90 AV			1.23 H	200	62.40	30.50
4	4824.00	43.40 PK	74.00	-30.60	1.11 H	47	7.20	36.20
5	#7236.00	47.50 PK	74.00	-26.50	1.05 H	286	5.90	41.70
6	#9648.00	49.40 PK	74.00	-24.60	1.11 H	202	4.50	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	2388.00	53.20 PK	74.00	-20.80	1.11 V	65	22.80	30.40
1	2388.00	46.20 AV	54.00	-7.80	1.11 V	65	15.80	30.40
2	2390.00	52.40 PK	74.00	-21.60	1.32 V	241	21.90	30.40
2	2390.00	46.70 AV	54.00	-7.30	1.32 V	241	16.30	30.40
3	*2412.00	110.50 PK			1.22 V	178	80.00	30.50
3	*2412.00	103.60 AV			1.22 V	178	73.10	30.50
4	4824.00	51.20 PK	74.00	-22.80	1.12 V	286	15.00	36.20
4	4824.00	48.40 AV	54.00	-5.60	1.12 V	286	12.20	36.20
5	#7236.00	49.30 PK	74.00	-24.70	1.23 V	245	7.70	41.70
6	#9648.00	50.80 PK	74.00	-23.20	1.54 V	241	5.90	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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency
7. "# " : The radiated frequency not falling in the restricted band.

EUT	AirStation Access Point	**MODEL**	WBR2-G54
MODE	Channel 6	**FREQUENCY RANGE**	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23 deg. C, 64%RH, 976 hPa	**TESTED BY**	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	100.40 PK			1.32 H	226	69.70	30.70
1	*2437.00	93.50 AV			1.32 H	226	62.80	30.70
2	4874.00	41.90 PK	74.00	-32.10	1.47 H	54	5.40	36.50
3	7311.00	48.70 PK	74.00	-25.30	1.09 H	65	6.90	41.80
4	#9748.00	49.10 PK	74.00	-24.90	1.47 H	5	4.40	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	*2437.00	111.60 PK			1.46 V	174	80.90	30.70
1	*2437.00	104.40 AV			1.46 V	174	73.70	30.70
2	4874.00	52.70 PK	74.00	-21.30	1.32 V	54	16.20	36.50
2	4874.00	48.00 AV	54.00	-6.00	1.32 V	54	11.50	36.50
3	7311.00	50.80 PK	74.00	-23.20	1.65 V	34	9.00	41.80
4	#9748.00	50.30 PK	74.00	-23.70	1.02 V	44	5.60	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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency
7. "# " : The radiated frequency not falling in the restricted band.

EUT	AirStation Access Point	**MODEL**	WBR2-G54
MODE	Channel 11	**FREQUENCY RANGE**	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23 deg. C, 64%RH, 976 hPa	**TESTED BY**	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	101.80 PK			1.24 H	24	71.00	30.80
1	*2462.00	94.80 AV			1.24 H	24	64.00	30.80
2	2483.50	48.60 PK	74.00	-25.40	1.11 H	36	17.70	31.00
3	2484.00	47.60 PK	74.00	-26.40	1.02 H	35	16.70	31.00
4	4924.00	43.20 PK	74.00	-30.80	1.36 H	62	6.50	36.70
5	7386.00	48.50 PK	74.00	-25.50	1.43 H	60	6.70	41.80
6	#9848.00	49.00 PK	74.00	-25.00	1.76 H	3	4.60	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			1.46 V	174	80.20	30.80
1	*2462.00	104.80 AV			1.46 V	174	74.00	30.80
2	2483.50	59.40 PK	74.00	-14.60	1.01 V	41	28.40	31.00
2	2483.50	51.30 AV	54.00	-2.70	1.01 V	41	20.40	31.00
3	2484.00	58.50 PK	74.00	-15.50	1.11 V	47	27.60	31.00
3	2484.00	51.00 AV	54.00	-3.00	1.11 V	47	20.00	31.00
4	4924.00	52.80 PK	74.00	-21.20	1.32 V	54	16.10	36.70
4	4924.00	49.60 AV	54.00	-4.40	1.32 V	54	12.90	36.70
5	7386.00	51.00 PK	74.00	-23.00	1.02 V	54	9.10	41.80
5	7386.00	43.20 AV	54.00	-10.80	1.02 V	54	1.30	41.80
6	#9848.00	51.10 PK	74.00	-22.90	1.02 V	323	6.70	44.40
6	#9848.00	43.40 AV	54.00	-10.60	1.02 V	323	-1.00	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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency
7. "# " : The radiated frequency not falling in the restricted band.

4.2.10 TEST RESULTS – DSSS (Antenna 4)

EUT	AirStation Access Point	**MODEL**	WBR2-G54
MODE	Channel 1	**FREQUENCY RANGE**	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average(AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 65%RH, 976 hPa	**TESTED BY**	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	54.10 PK	74.00	-19.90	1.00 H	183	23.70	30.40
1	2390.00	48.20 AV	54.00	-5.80	1.00 H	183	17.80	30.40
2	*2412.00	110.90 PK			1.00 H	183	80.30	30.50
2	*2412.00	105.00 AV			1.00 H	183	74.40	30.50
3	4824.00	51.70 PK	74.00	-22.30	1.00 H	154	15.50	36.20
3	4824.00	48.90 AV	54.00	-5.10	1.00 H	154	12.70	36.20
4	#7236.00	48.90 PK	74.00	-25.10	1.00 H	182	7.20	41.70
5	#9648.00	52.20 PK	74.00	-21.80	1.08 H	243	7.30	44.90
5	#9648.00	43.90 AV	54.00	-10.10	1.08 H	243	-1.00	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	2390.00	41.00 PK	74.00	-33.00	1.32 V	183	10.60	30.40
2	*2412.00	97.90 PK			1.37 V	188	67.30	30.50
2	*2412.00	92.50 AV			1.37 V	188	61.90	30.50
3	4824.00	50.20 PK	74.00	-23.80	1.79 V	180	14.00	36.20
4	#7236.00	49.10 PK	74.00	-24.90	1.54 V	183	7.40	41.70
5	#9648.00	54.40 PK	74.00	-19.60	1.83 V	307	9.50	44.90
5	#9648.00	48.70 AV	54.00	-5.30	1.83 V	307	3.80	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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency
7. "# " : The radiated frequency not falling in the restricted band.

EUT	AirStation Access Point	**MODEL**	WBR2-G54
MODE	Channel 6	**FREQUENCY RANGE**	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 65%RH, 976 hPa	**TESTED BY**	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	111.70 PK			1.18 H	184	81.00	30.70
1	*2437.00	106.00 AV			1.18 H	184	75.30	30.70
2	#4874.00	53.60 PK	74.00	-20.40	1.12 H	152	17.20	36.50
2	#4874.00	51.80 AV	54.00	-2.20	1.12 H	152	15.40	36.50
3	7311.00	49.20 PK	74.00	-24.80	1.10 H	222	7.40	41.80
4	#9748.00	52.30 PK	74.00	-21.70	1.22 H	230	7.70	44.60
4	#9748.00	44.60 AV	54.00	-9.40	1.22 H	230	0.00	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	100.90 PK			1.10 V	210	70.20	30.70
1	*2437.00	94.70 AV			1.10 V	210	64.00	30.70
2	#4874.00	50.30 PK	74.00	-23.70	1.00 V	207	13.90	36.50
3	7311.00	49.90 PK	74.00	-24.10	1.09 V	178	8.10	41.80
4	#9748.00	53.90 PK	74.00	-20.10	1.12 V	243	9.30	44.60
4	#9748.00	47.10 AV	54.00	-6.90	1.12 V	243	2.50	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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency
7. "# " : The radiated frequency not falling in the restricted band.

EUT	AirStation Access Point	**MODEL**	WBR2-G54
MODE	Channel 11	**FREQUENCY RANGE**	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 65%RH, 976 hPa	**TESTED BY**	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	110.40 PK			1.18 H	180	79.50	30.80
1	*2462.00	104.60 AV			1.18 H	180	73.80	30.80
2	2483.50	54.80 PK	74.00	-19.20	1.18 H	180	23.90	31.00
2	2483.50	49.00 AV	54.00	-5.00	1.18 H	180	18.10	31.00
3	4924.00	52.20 PK	74.00	-21.80	1.00 H	150	15.50	36.70
3	4924.00	49.60 AV	54.00	-4.40	1.00 H	150	12.90	36.70
4	7386.00	48.10 PK	74.00	-25.90	1.04 H	173	6.30	41.80
5	#9848.00	52.90 PK	74.00	-21.10	1.04 H	159	8.50	44.40
5	#9848.00	43.00 AV	54.00	-11.00	1.04 H	159	-1.40	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	101.10 PK			1.03 V	173	70.30	30.80
1	*2462.00	95.50 AV			1.03 V	173	64.60	30.80
2	2483.50	45.50 PK	74.00	-28.50	1.00 V	181	14.60	31.00
3	4924.00	50.20 PK	74.00	-23.80	1.47 V	131	13.50	36.70
4	7386.00	49.20 PK	74.00	-24.80	1.36 V	184	7.30	41.80
5	#9848.00	56.60 PK	74.00	-17.40	1.45 V	304	12.30	44.40
5	#9848.00	52.20 AV	54.00	-1.80	1.45 V	304	7.80	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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency
7. "# " : The radiated frequency not falling in the restricted band.

4.2.11 TEST RESULTS –OFDM (Antenna 1)

EUT	AirStation Access Point	**MODEL**	WBR2-G54
MODE	Channel 1	**FREQUENCY RANGE**	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average(AV)
ENVIRONMENTAL CONDITIONS	24 deg. C, 62%RH, 976 hPa	**TESTED BY**	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	58.00 PK	74.00	-16.00	1.61 H	254	27.60	30.40
1	2390.00	50.00 AV	54.00	-4.00	1.61 H	254	19.60	30.40
2	#2392.00	68.50 PK	87.50	-19.00	1.61 H	254	38.10	30.40
2	#2392.00	60.60 AV	79.60	-19.00	1.61 H	254	30.20	30.40
3	*2412.00	107.50 PK			1.61 H	254	77.00	30.50
3	*2412.00	99.60 AV			1.61 H	254	69.10	30.50
4	4824.00	49.90 PK	74.00	-24.10	1.46 H	317	13.60	36.20
5	#7236.00	52.40 PK	74.00	-21.60	1.53 H	243	10.80	41.70
5	#7236.00	40.00 AV	54.00	-14.00	1.53 H	243	-1.70	41.70
6	#9648.00	51.60 PK	74.00	-22.40	1.53 H	136	6.70	44.90
6	#9648.00	43.70 AV	54.00	-10.30	1.53 H	136	-1.20	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	2390.00	54.00 PK	74.00	-20.00	1.35 V	307	23.60	30.40
1	2390.00	47.70 AV	54.00	-6.30	1.35 V	307	17.30	30.40
2	#2392.00	64.60 PK	84.20	-19.60	1.35 V	307	34.20	30.40
2	#2392.00	58.20 AV	77.20	-19.00	1.35 V	307	27.80	30.40
3	*2412.00	104.20 PK			1.35 V	307	73.70	30.50
3	*2412.00	97.20 AV			1.35 V	307	66.70	30.50
4	4824.00	53.80 PK	74.00	-20.20	1.11 V	259	17.60	36.20
4	4824.00	50.20 AV	54.00	-3.80	1.11 V	259	13.90	36.20
5	#7236.00	48.60 PK	74.00	-25.40	1.25 V	91	6.90	41.70
6	#9648.00	50.90 PK	74.00	-23.10	1.34 V	99	6.00	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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency
7. "# " : The radiated frequency not falling in the restricted band.

EUT	AirStation Access Point	**MODEL**	WBR2-G54
MODE	Channel 6	**FREQUENCY RANGE**	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24 deg. C, 62%RH, 976 hPa	**TESTED BY**	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	104.10 PK			1.46 H	248	73.40	30.70
1	*2437.00	97.30 AV			1.46 H	248	66.60	30.70
2	4874.00	46.60 PK	74.00	-27.40	1.48 H	314	10.10	36.50
3	7311.00	50.20 PK	74.00	-23.80	1.58 H	247	8.40	41.80
4	#9748.00	51.30 PK	74.00	-22.70	1.72 H	95	6.70	44.60
4	#9748.00	41.90 AV	54.00	-12.10	1.72 H	95	-2.80	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	100.60 PK			1.38 V	281	69.90	30.70
1	*2437.00	93.50 AV			1.38 V	281	62.80	30.70
2	4874.00	50.30 PK	74.00	-23.70	1.54 V	253	13.90	36.50
3	7311.00	49.30 PK	74.00	-24.70	1.56 V	253	7.60	41.80
4	#9748.00	51.30 PK	74.00	-22.70	1.61 V	114	6.60	44.60
4	#9748.00	40.50 AV	54.00	-13.50	1.61 V	114	-4.10	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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency
7. "# " : The radiated frequency not falling in the restricted band.

EUT	AirStation Access Point	**MODEL**	WBR2-G54
MODE	Channel 11	**FREQUENCY RANGE**	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24 deg. C, 62%RH, 976 hPa	**TESTED BY**	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	104.80 PK			1.00 H	337	74.00	30.80
1	*2462.00	98.20 AV			1.00 H	337	67.40	30.80
2	#2482.00	66.30 PK	84.80	-18.50	1.00 H	337	35.40	30.90
2	#2482.00	59.70 AV	78.20	-18.50	1.00 H	337	28.80	30.90
3	2483.50	55.00 PK	74.00	-19.00	1.00 H	337	24.10	31.00
3	2483.50	48.40 AV	54.00	-5.60	1.00 H	337	17.50	31.00
4	4924.00	47.20 PK	74.00	-26.80	1.29 H	235	10.50	36.70
5	7386.00	49.40 PK	74.00	-24.60	1.14 H	249	7.60	41.80
6	#9848.00	51.70 PK	74.00	-22.30	1.17 H	133	7.30	44.40
6	#9848.00	41.10 AV	54.00	-12.90	1.17 H	133	-3.20	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	95.90 PK			1.00 V	298	65.10	30.80
1	*2462.00	89.40 AV			1.00 V	298	58.50	30.80
2	#2482.00	57.40 PK	74.00	-16.60	1.00 V	298	26.50	30.90
2	#2482.00	50.90 AV	54.00	-3.10	1.00 V	298	19.90	30.90
3	2483.50	46.10 PK	74.00	-27.90	1.00 V	298	15.10	31.00
4	4924.00	47.70 PK	74.00	-26.30	1.27 V	127	11.00	36.70
5	7386.00	49.40 PK	74.00	-24.60	1.00 V	0	7.60	41.80
6	#9848.00	51.60 PK	74.00	-22.40	1.00 V	0	7.20	44.40
6	#9848.00	40.00 AV	54.00	-14.00	1.00 V	0	-4.30	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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency
7. "# " : The radiated frequency not falling in the restricted band.

EUT	AirStation Access Point	**MODEL**	WBR2-G54
MODE	Turbo Channel 6	**FREQUENCY RANGE**	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24 deg. C, 62%RH, 976 hPa	**TESTED BY**	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	108.70 PK			1.64 H	266	78.00	30.70
1	*2437.00	100.30 AV			1.64 H	266	69.60	30.70
2	4874.00	45.90 PK	74.00	-28.10	1.75 H	122	9.40	36.50
3	7311.00	50.20 PK	74.00	-23.80	1.61 H	242	8.40	41.80
4	#9748.00	51.90 PK	74.00	-22.10	1.54 H	124	7.20	44.60
4	#9748.00	42.10 AV	54.00	-11.90	1.54 H	124	-2.50	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	*2437.00	102.00 PK			1.64 V	216	71.30	30.70
1	*2437.00	93.90 AV			1.64 V	216	63.20	30.70
2	4874.00	51.80 PK	74.00	-22.20	1.29 V	129	15.30	36.50
2	4874.00	46.70 AV	54.00	-7.30	1.29 V	129	10.20	36.50
3	7311.00	48.90 PK	74.00	-25.10	1.13 V	269	7.20	41.80
4	#9748.00	52.00 PK	74.00	-22.00	1.37 V	106	7.40	44.60
4	#9748.00	41.70 AV	54.00	-12.30	1.37 V	106	-2.90	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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency
7. "# " : The radiated frequency not falling in the restricted band.

4.2.12 TEST RESULTS –OFDM (Antenna 2)

EUT	AirStation Access Point	**MODEL**	WBR2-G54
MODE	Channel 1	**FREQUENCY RANGE**	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average(AV)
ENVIRONMENTAL CONDITIONS	25 deg. C, 60%RH, 976 hPa	**TESTED BY**	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	57.90 PK	74.00	-16.10	1.10 H	329	27.50	30.40
1	2390.00	49.10 AV	54.00	-4.90	1.10 H	329	18.70	30.40
2	#2392.00	69.00 PK	87.50	-18.50	1.10 H	329	38.50	30.40
2	#2392.00	60.20 AV	78.70	-18.50	1.10 H	329	29.80	30.40
3	*2412.00	107.50 PK			1.10 H	329	76.90	30.50
3	*2412.00	98.70 AV			1.10 H	329	68.20	30.50
4	4824.00	48.40 PK	74.00	-25.60	1.45 H	322	12.20	36.20
5	#7236.00	51.50 PK	74.00	-22.50	1.54 H	213	9.80	41.70
5	#7236.00	38.80 AV	54.00	-15.20	1.54 H	213	-2.90	41.70
6	#9648.00	51.00 PK	74.00	-23.00	1.40 H	152	6.10	44.90
6	#9648.00	42.60 AV	54.00	-11.40	1.40 H	152	-2.30	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	2390.00	60.10 PK	74.00	-13.90	1.00 V	43	29.70	30.40
1	2390.00	51.30 AV	54.00	-2.70	1.00 V	43	20.90	30.40
2	#2392.00	70.70 PK	89.70	-19.00	1.00 V	43	40.30	30.40
2	#2392.00	61.90 AV	80.90	-19.00	1.00 V	43	31.50	30.40
3	*2412.00	109.70 PK			1.00 V	43	79.20	30.50
3	*2412.00	100.90 AV			1.00 V	43	70.40	30.50
4	4824.00	54.60 PK	74.00	-19.40	1.12 V	245	18.40	36.20
4	4824.00	50.30 AV	54.00	-3.70	1.12 V	245	14.10	36.20
5	#7236.00	49.50 PK	74.00	-24.50	1.22 V	100	7.80	41.70
6	#9648.00	52.40 PK	74.00	-21.60	1.52 V	56	7.50	44.90
6	#9648.00	43.40 AV	54.00	-10.60	1.52 V	56	-1.50	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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency
7. "# " : The radiated frequency not falling in the restricted band.

EUT	AirStation Access Point	**MODEL**	WBR2-G54
MODE	Channel 6	**FREQUENCY RANGE**	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25 deg. C, 60%RH, 976 hPa	**TESTED BY**	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	105.10 PK			1.45 H	248	74.40	30.70
1	*2437.00	98.30 AV			1.45 H	248	67.60	30.70
2	4874.00	46.70 PK	74.00	-27.30	1.45 H	321	10.20	36.50
3	7311.00	50.70 PK	74.00	-23.30	1.54 H	246	8.90	41.80
4	#9748.00	52.30 PK	74.00	-21.70	1.75 H	96	7.70	44.60
4	#9748.00	42.30 AV	54.00	-11.70	1.75 H	96	-2.40	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	*2437.00	110.30 PK			1.33 V	284	79.60	30.70
1	*2437.00	103.50 AV			1.33 V	284	72.80	30.70
2	4874.00	50.30 PK	74.00	-23.70	1.52 V	255	13.80	36.50
3	7311.00	49.30 PK	74.00	-24.70	1.50 V	253	7.50	41.80
4	#9748.00	52.30 PK	74.00	-21.70	1.60 V	115	7.70	44.60
4	#9748.00	42.50 AV	54.00	-11.50	1.60 V	115	-2.10	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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency
7. "# " : The radiated frequency not falling in the restricted band.

EUT	AirStation Access Point	**MODEL**	WBR2-G54
MODE	Channel 11	**FREQUENCY RANGE**	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25 deg. C, 60%RH, 976 hPa	**TESTED BY**	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	108.50 PK			1.17 H	298	77.60	30.80
1	*2462.00	99.30 AV			1.17 H	298	68.50	30.80
2	#2482.00	70.00 PK	88.50	-18.50	1.17 H	298	39.00	30.90
2	#2482.00	60.80 AV	79.30	-18.50	1.17 H	298	29.90	30.90
3	2483.50	58.70 PK	74.00	-15.30	1.17 H	298	27.70	31.00
3	2483.50	49.50 AV	54.00	-4.50	1.17 H	298	18.60	31.00
4	4824.00	45.20 PK	74.00	-28.80	1.16 H	123	8.90	36.20
5	7386.00	51.30 PK	74.00	-22.70	1.15 H	207	9.50	41.80
5	7386.00	38.10 AV	54.00	-15.90	1.15 H	207	-3.70	41.80
6	#9848.00	53.00 PK	74.00	-21.00	1.15 H	102	8.60	44.40
6	#9848.00	40.80 AV	54.00	-13.20	1.15 H	102	-3.50	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	110.90 PK			1.24 V	354	80.10	30.80
1	*2462.00	100.80 AV			1.24 V	354	69.90	30.80
2	#2482.00	72.30 PK	90.90	-18.60	1.24 V	354	41.30	30.90
2	#2482.00	62.30 AV	80.80	-18.50	1.24 V	354	31.30	30.90
3	2483.50	61.10 PK	74.00	-12.90	1.24 V	354	30.10	31.00
3	2483.50	51.00 AV	54.00	-3.00	1.24 V	354	20.00	31.00
4	4924.00	48.80 PK	74.00	-25.20	1.24 V	116	12.10	36.70
5	7386.00	50.80 PK	74.00	-23.20	1.24 V	147	9.00	41.80
6	#9848.00	53.70 PK	74.00	-20.30	1.25 V	73	9.30	44.40
6	#9848.00	45.40 AV	54.00	-8.60	1.25 V	73	1.10	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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency
7. "# " : The radiated frequency not falling in the restricted band.

EUT	AirStation Access Point	**MODEL**	WBR2-G54
MODE	Turbo Channel 6	**FREQUENCY RANGE**	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25 deg. C, 60%RH, 976 hPa	**TESTED BY**	Hank Chung

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	108.90 PK			1.65 H	244	78.20	30.70
1	*2437.00	101.20 AV			1.65 H	244	70.50	30.70
2	4874.00	45.90 PK	74.00	-28.10	1.52 H	142	9.50	36.50
3	7311.00	50.20 PK	74.00	-23.80	1.61 H	142	8.50	41.80
4	#9748.00	52.90 PK	74.00	-21.10	1.54 H	122	8.30	44.60
4	#9748.00	42.10 AV	54.00	-11.90	1.54 H	122	-2.60	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			1.65 V	220	81.20	30.70
1	*2437.00	103.80 AV			1.65 V	220	73.10	30.70
2	4874.00	51.60 PK	74.00	-22.40	1.26 V	124	15.10	36.50
2	4874.00	46.60 AV	54.00	-7.40	1.26 V	124	10.10	36.50
3	7311.00	49.70 PK	74.00	-24.30	1.12 V	254	7.90	41.80
4	#9748.00	51.60 PK	74.00	-22.40	1.58 V	154	7.00	44.60
4	#9748.00	41.30 AV	54.00	-12.70	1.58 V	154	-3.40	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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency
7. "# " : The radiated frequency not falling in the restricted band.

4.2.13 TEST RESULTS –OFDM (Antenna 3)

EUT	AirStation Access Point	**MODEL**	WBR2-G54
MODE	Channel 1	**FREQUENCY RANGE**	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average(AV)
ENVIRONMENTAL CONDITIONS	23 deg. C, 64%RH, 976 hPa	**TESTED BY**	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	48.60 PK	74.00	-25.40	1.70 H	101	18.20	30.40
2	#2392.00	61.70 PK	78.70	-17.00	1.11 H	47	31.30	30.40
2	#2392.00	54.80 AV	70.20	-15.40	1.11 H	47	24.40	30.40
3	*2412.00	98.70 PK			1.02 H	333	68.20	30.50
3	*2412.00	90.20 AV			1.02 H	333	59.70	30.50
4	4824.00	44.40 PK	74.00	-29.60	1.45 H	6	8.20	36.20
5	#7236.00	48.50 PK	74.00	-25.50	1.42 H	333	6.80	41.70
6	#9648.00	51.10 PK	74.00	-22.90	1.10 H	203	6.20	44.90
6	#9648.00	40.70 AV	54.00	-13.30	1.10 H	203	-4.20	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	2390.00	60.40 PK	74.00	-13.60	1.11 V	3	30.00	30.40
1	2390.00	51.70 AV	54.00	-2.30	1.11 V	3	21.30	30.40
2	#2392.00	71.60 PK	88.30	-16.70	1.08 V	243	41.20	30.40
2	#2392.00	64.00 AV	81.40	-17.40	1.08 V	243	33.60	30.40
3	*2412.00	108.30 PK			1.25 V	175	77.80	30.50
3	*2412.00	101.40 AV			1.25 V	175	70.90	30.50
4	4824.00	49.20 PK	74.00	-24.80	1.11 V	47	13.00	36.20
5	7236.00	52.90 PK	74.00	-21.10	1.06 V	9	11.30	41.70
5	#7236.00	43.90 AV	54.00	-10.10	1.06 V	9	2.20	41.70
6	#9648.00	51.10 PK	74.00	-22.90	1.35 V	6	6.20	44.90
6	#9648.00	40.60 AV	54.00	-13.40	1.35 V	6	-4.30	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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency
7. "# " : The radiated frequency not falling in the restricted band.

EUT	AirStation Access Point	**MODEL**	WBR2-G54
MODE	Channel 6	**FREQUENCY RANGE**	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23 deg. C, 64%RH, 976 hPa	**TESTED BY**	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	96.70 PK			1.01 H	354	66.00	30.70
1	*2437.00	89.70 AV			1.01 H	354	59.00	30.70
2	4874.00	44.70 PK	74.00	-29.30	1.19 H	63	8.20	36.50
3	7311.00	49.70 PK	74.00	-24.30	1.03 H	99	7.90	41.80
4	#9748.00	50.60 PK	74.00	-23.40	1.65 H	24	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	109.00 PK			1.00 V	229	78.30	30.70
1	*2437.00	101.70 AV			1.00 V	229	71.00	30.70
2	4874.00	48.70 PK	74.00	-25.30	1.02 V	24	12.20	36.50
3	7311.00	52.70 PK	74.00	-21.30	1.11 V	104	10.90	41.80
3	7311.00	42.90 AV	54.00	-11.10	1.11 V	104	1.10	41.80
4	#9748.00	50.70 PK	74.00	-23.30	1.02 V	47	6.10	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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency
7. "# " : The radiated frequency not falling in the restricted band.

EUT	AirStation Access Point	**MODEL**	WBR2-G54
MODE	Channel 11	**FREQUENCY RANGE**	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23 deg. C, 64%RH, 976 hPa	**TESTED BY**	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	96.70 PK			1.20 H	201	65.90	30.80
1	*2462.00	89.50 AV			1.20 H	201	58.70	30.80
2	#2481.00	60.90 PK	74.00	-13.10	1.02 H	24	30.00	30.90
2	#2481.00	53.10 AV	54.00	-0.90	1.02 H	24	22.20	30.90
3	2483.50	47.40 PK	74.00	-26.60	1.35 H	62	16.40	31.00
4	4924.00	45.20 PK	74.00	-28.80	1.58 H	74	8.50	36.70
5	7386.00	49.70 PK	74.00	-24.30	1.11 H	201	7.80	41.80
6	#9848.00	50.00 PK	74.00	-24.00	1.02 H	24	5.60	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	108.10 PK			1.18 V	204	77.30	30.80
1	*2462.00	101.90 AV			1.18 V	204	71.00	30.80
2	#2481.00	70.80 PK	88.10	-17.30	1.30 V	225	39.90	30.90
2	#2481.00	63.40 AV	81.90	-18.50	1.30 V	225	32.50	30.90
3	2483.50	58.90 PK	74.00	-15.10	1.21 V	223	27.90	31.00
3	2483.50	51.40 AV	54.00	-2.60	1.21 V	223	20.40	31.00
4	4924.00	49.60 PK	74.00	-24.40	1.75 V	62	12.90	36.70
5	7386.00	51.20 PK	74.00	-22.80	1.02 V	67	9.30	41.80
5	7386.00	44.30 AV	54.00	-9.70	1.02 V	67	2.50	41.80
6	#9848.00	50.80 PK	74.00	-23.20	1.11 V	45	6.40	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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency
7. "# " : The radiated frequency not falling in the restricted band.

EUT	AirStation Access Point	**MODEL**	WBR2-G54
MODE	Turbo Channel 6	**FREQUENCY RANGE**	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23 deg. C, 64%RH, 976 hPa	**TESTED BY**	Hank Chung

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	99.60 PK			1.21 H	155	68.90	30.70
1	*2437.00	92.70 AV			1.21 H	155	62.00	30.70
2	4874.00	45.90 PK	74.00	-28.10	1.47 H	74	9.40	36.50
3	7311.00	47.10 PK	74.00	-26.90	1.56 H	63	5.30	41.80
4	#9748.00	48.30 PK	74.00	-25.70	1.65 H	354	3.70	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	110.70 PK			1.22 V	178	80.00	30.70
1	*2437.00	105.20 AV			1.22 V	178	74.50	30.70
2	4874.00	51.70 PK	74.00	-22.30	1.36 V	54	15.20	36.50
2	4874.00	46.70 AV	54.00	-7.30	1.36 V	54	10.20	36.50
3	7311.00	50.80 PK	74.00	-23.20	1.36 V	69	9.00	41.80
4	#9748.00	49.20 PK	74.00	-24.80	1.05 V	87	4.50	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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency
7. "# " : The radiated frequency not falling in the restricted band.

4.2.14 TEST RESULTS –OFDM (Antenna 4)

EUT	AirStation Access Point	**MODEL**	WBR2-G54
MODE	Channel 1	**FREQUENCY RANGE**	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average(AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 65%RH, 976 hPa	**TESTED BY**	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	58.60 PK	74.00	-15.40	1.00 H	178	28.20	30.40
1	2390.00	51.20 AV	54.00	-2.80	1.00 H	178	20.80	30.40
2	*2412.00	109.70 PK			1.00 H	178	79.10	30.50
2	*2412.00	102.30 AV			1.00 H	178	71.80	30.50
3	4824.00	49.60 PK	74.00	-24.40	1.25 H	112	13.30	36.20
4	#7236.00	49.50 PK	74.00	-24.50	1.35 H	199	7.80	41.70
5	#9648.00	53.40 PK	74.00	-20.60	1.00 H	253	8.50	44.90
5	#9648.00	44.00 AV	54.00	-10.00	1.00 H	253	-0.90	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	2390.00	47.30 PK	74.00	-26.70	1.07 V	200	16.90	30.40
2	*2412.00	98.40 PK			1.09 V	195	67.90	30.50
2	*2412.00	91.60 AV			1.09 V	195	61.00	30.50
3	4824.00	47.80 PK	74.00	-26.20	1.30 V	102	11.50	36.20
4	#7236.00	49.40 PK	74.00	-24.60	1.25 V	187	7.70	41.70
5	#9648.00	51.60 PK	74.00	-22.40	1.00 V	240	6.70	44.90
5	#9648.00	42.40 AV	54.00	-11.60	1.00 V	240	-2.50	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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency
7. "# " : The radiated frequency not falling in the restricted band.

EUT	AirStation Access Point	**MODEL**	WBR2-G54
MODE	Channel 6	**FREQUENCY RANGE**	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 65%RH, 976 hPa	**TESTED BY**	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	111.10 PK			1.19 H	190	80.40	30.70
1	*2437.00	103.00 AV			1.19 H	190	72.30	30.70
2	4874.00	53.90 PK	74.00	-20.10	1.03 H	161	17.40	36.50
2	4874.00	48.70 AV	54.00	-5.30	1.03 H	161	12.20	36.50
3	7311.00	49.60 PK	74.00	-24.40	1.07 H	175	7.90	41.80
4	#9748.00	50.50 PK	74.00	-23.50	1.00 H	259	5.90	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	101.60 PK			1.04 V	189	70.90	30.70
1	*2437.00	93.50 AV			1.04 V	189	62.80	30.70
2	4874.00	49.40 PK	74.00	-24.60	1.16 V	181	12.90	36.50
3	7311.00	48.90 PK	74.00	-25.10	1.10 V	194	7.10	41.80
4	#9748.00	50.90 PK	74.00	-23.10	1.00 V	235	6.20	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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency
7. "# " : The radiated frequency not falling in the restricted band.

EUT	AirStation Access Point	**MODEL**	WBR2-G54
MODE	Channel 11	**FREQUENCY RANGE**	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 65%RH, 976 hPa	**TESTED BY**	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	109.50 PK			1.43 H	182	78.70	30.80
1	*2462.00	100.80 AV			1.43 H	182	69.90	30.80
2	2483.50	59.60 PK	74.00	-14.40	1.43 H	182	28.60	31.00
2	2483.50	50.90 AV	54.00	-3.10	1.43 H	182	19.90	31.00
3	4924.00	49.80 PK	74.00	-24.20	1.21 H	233	13.10	36.70
4	#7386.00	50.00 PK	74.00	-24.00	1.56 H	123	8.10	41.80
5	#9848.00	53.30 PK	74.00	-20.70	1.17 H	235	8.90	44.40
5	#9848.00	43.70 AV	54.00	-10.30	1.17 H	235	-0.70	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	100.00 PK			1.05 V	156	69.20	30.80
1	*2462.00	91.80 AV			1.05 V	156	61.00	30.80
2	2483.50	50.00 PK	74.00	-24.00	1.09 V	163	19.10	31.00
3	4924.00	47.70 PK	74.00	-26.30	1.19 V	267	11.00	36.70
4	#7386.00	49.80 PK	74.00	-24.20	1.15 V	192	7.90	41.80
5	#9848.00	51.60 PK	74.00	-22.40	1.07 V	262	7.30	44.40
5	#9848.00	42.70 AV	54.00	-11.30	1.07 V	262	-1.70	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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency
7. "# " : The radiated frequency not falling in the restricted band.

EUT	AirStation Access Point	**MODEL**	WBR2-G54
MODE	Turbo Channel 6	**FREQUENCY RANGE**	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 65%RH, 976 hPa	**TESTED BY**	Hank Chung

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	111.70 PK			1.00 H	184	81.10	30.70
1	*2437.00	103.10 AV			1.00 H	184	72.40	30.70
2	#4874.00	50.00 PK	74.00	-24.00	1.00 H	176	13.50	36.50
3	7311.00	49.10 PK	74.00	-24.90	1.06 H	179	7.40	41.80
4	#9748.00	51.30 PK	74.00	-22.70	1.11 H	235	6.70	44.60
4	#9748.00	44.60 AV	54.00	-9.40	1.11 H	235	0.00	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	102.10 PK			1.28 V	184	71.40	30.70
1	*2437.00	93.90 AV			1.28 V	184	63.20	30.70
2	#4874.00	49.00 PK	74.00	-25.00	1.00 V	182	12.50	36.50
3	7311.00	48.50 PK	74.00	-25.50	1.00 V	198	6.70	41.80
4	#9748.00	50.20 PK	74.00	-23.80	1.01 V	283	5.60	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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency
7. "# " : The radiated frequency not falling in the restricted band.

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
R&S SPECTRUM ANALYZER	FSP40	100037	May. 06, 2004

NOTE:

1. The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
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 PROCEDURE

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

4.3.4 TEST SETUP

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

4.3.5 EUT OPERATING CONDITIONS

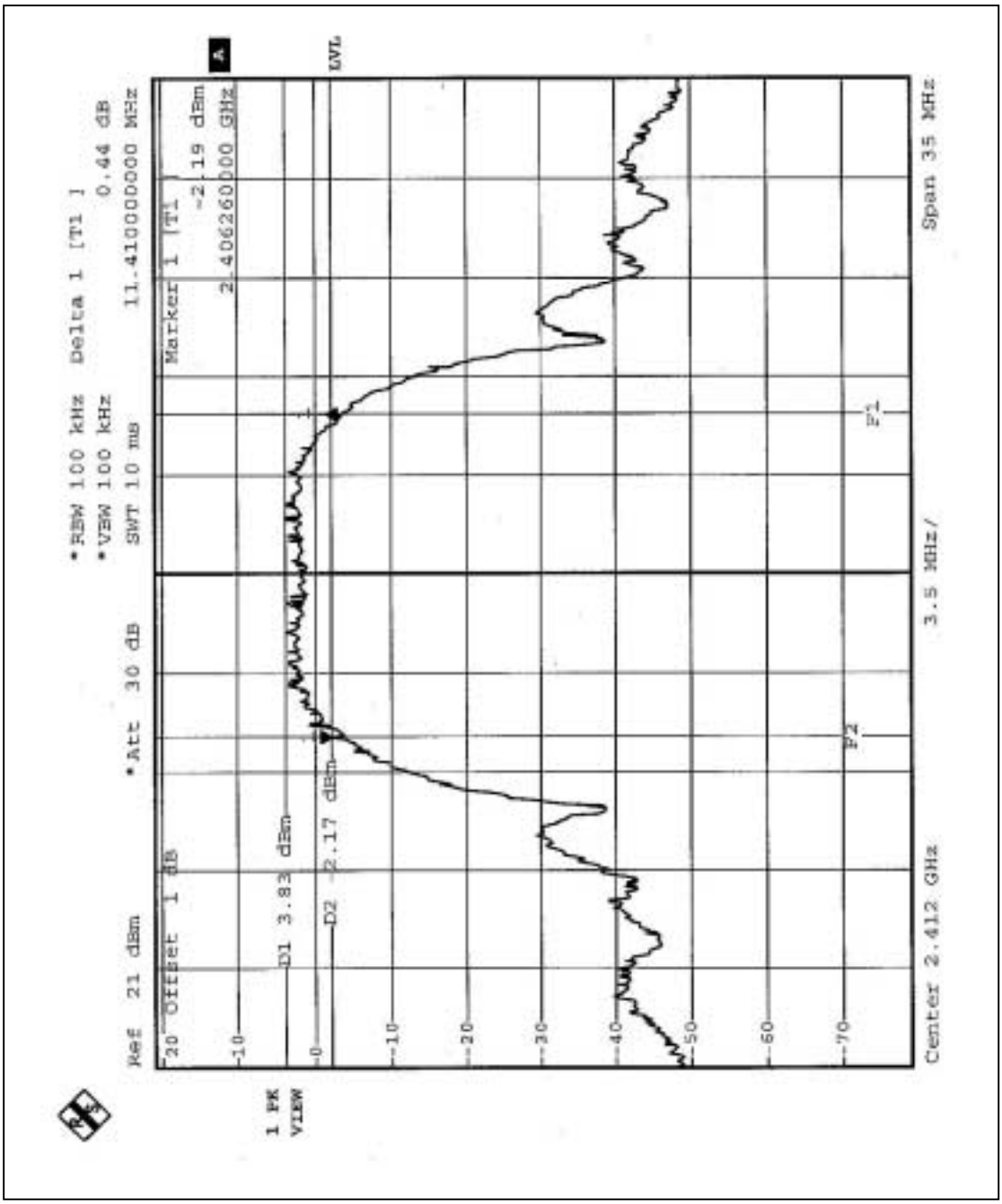
The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.3.6 TEST RESULTS-DSSS

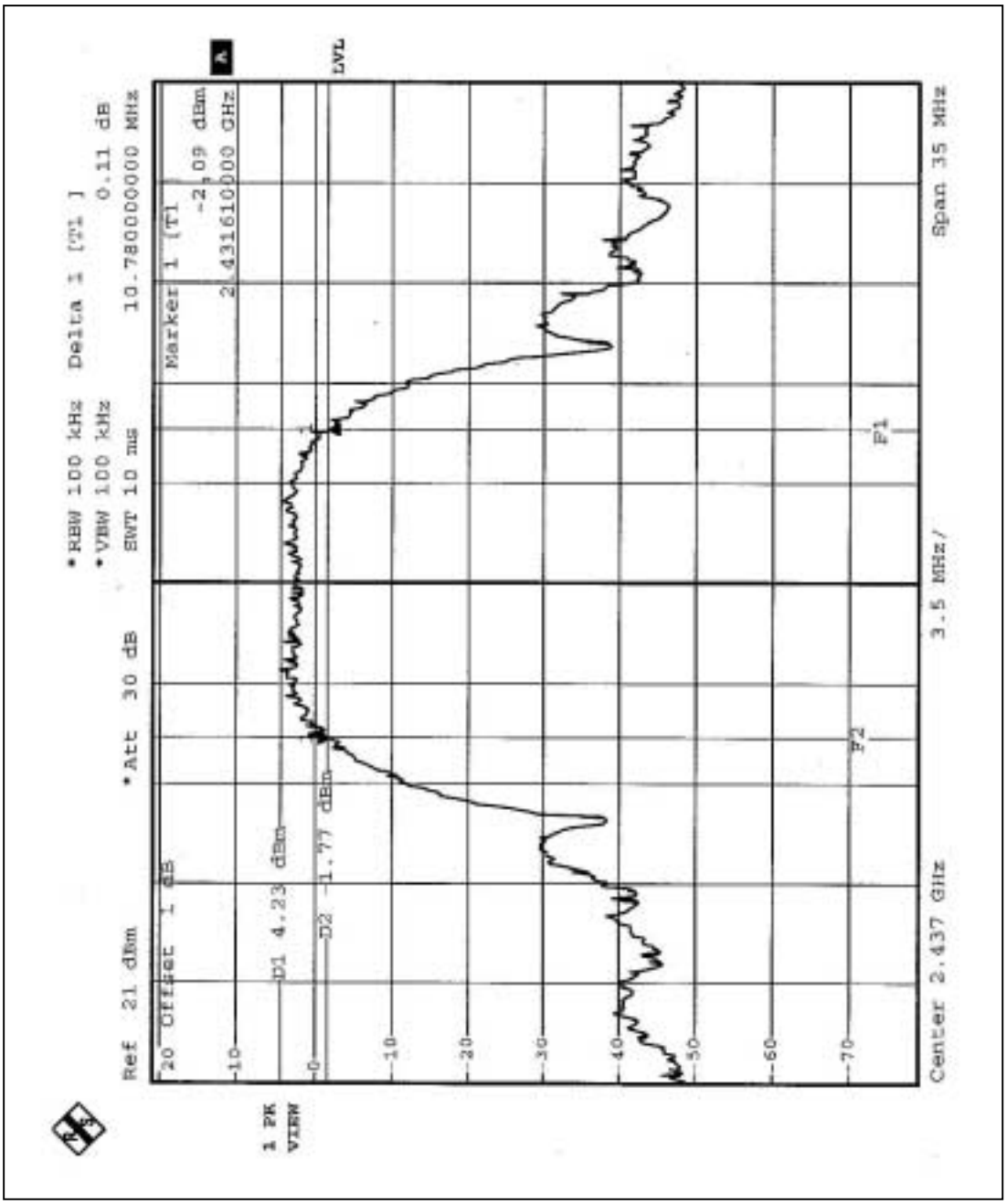
EUT	AirStation Access Point		
MODEL	WBR2-G54	**ENVIRONMENTAL CONDITIONS**	24 deg. C, 62%RH, 976 hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**TESTED BY**	Eric Lee

CHANNEL	CHANNEL FREQUENCY (MHz)	6 dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	11.41	0.5	PASS
6	2437	10.78	0.5	PASS
11	2462	11.48	0.5	PASS

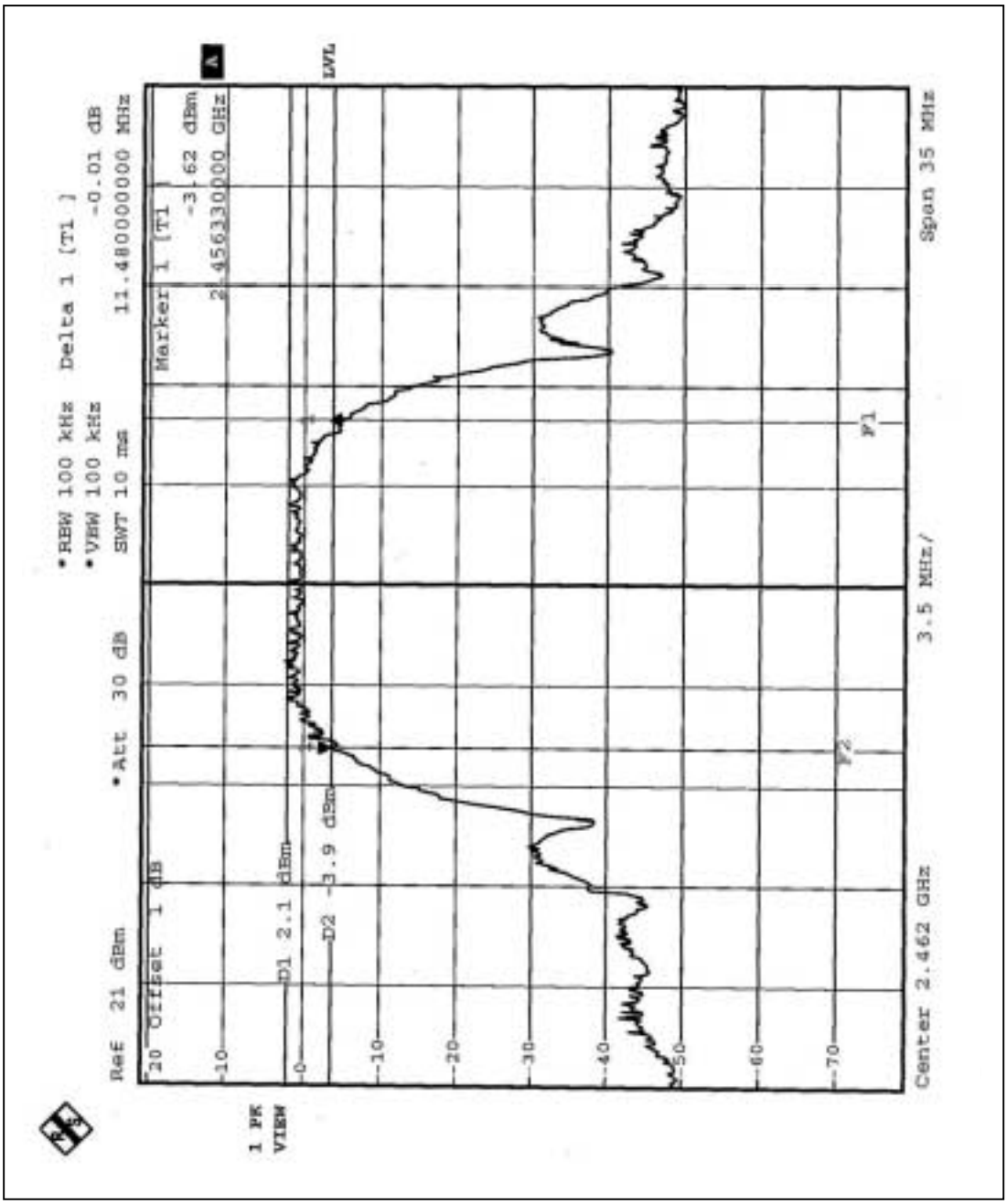
CH1


RBW 100 kHz
VBW 100 kHz
SWT 10 ms
Att 30 dB
Offset 1 dB
Ref 21 dBm
Delta 1 [T1]
0.44 dB
11.41000000 MHz
Marker 1 [T1]
-2.19 dBm
2.40626000 GHz
D1 3.83 dBm
D2 2.17 dBm
1 PK VIEW
Center 2.412 GHz
3.5 MHz/
Span 35 MHz

CH6


RBW 100 kHz
VBW 100 kHz
SWT 10 ms
Delta 1 [T1]
0.11 dB
10.780000000 MHz
Marker 1 [T1
-2.09 dBm
2.431610000 GHz
Ref 21 dBm
Offset 1 dB
Att 30 dB
D1 4.23 dBm
D2 -1.77 dBm
Center 2.437 GHz
3.5 MHz/
Span 35 MHz
1 PK
VIEW

CH11

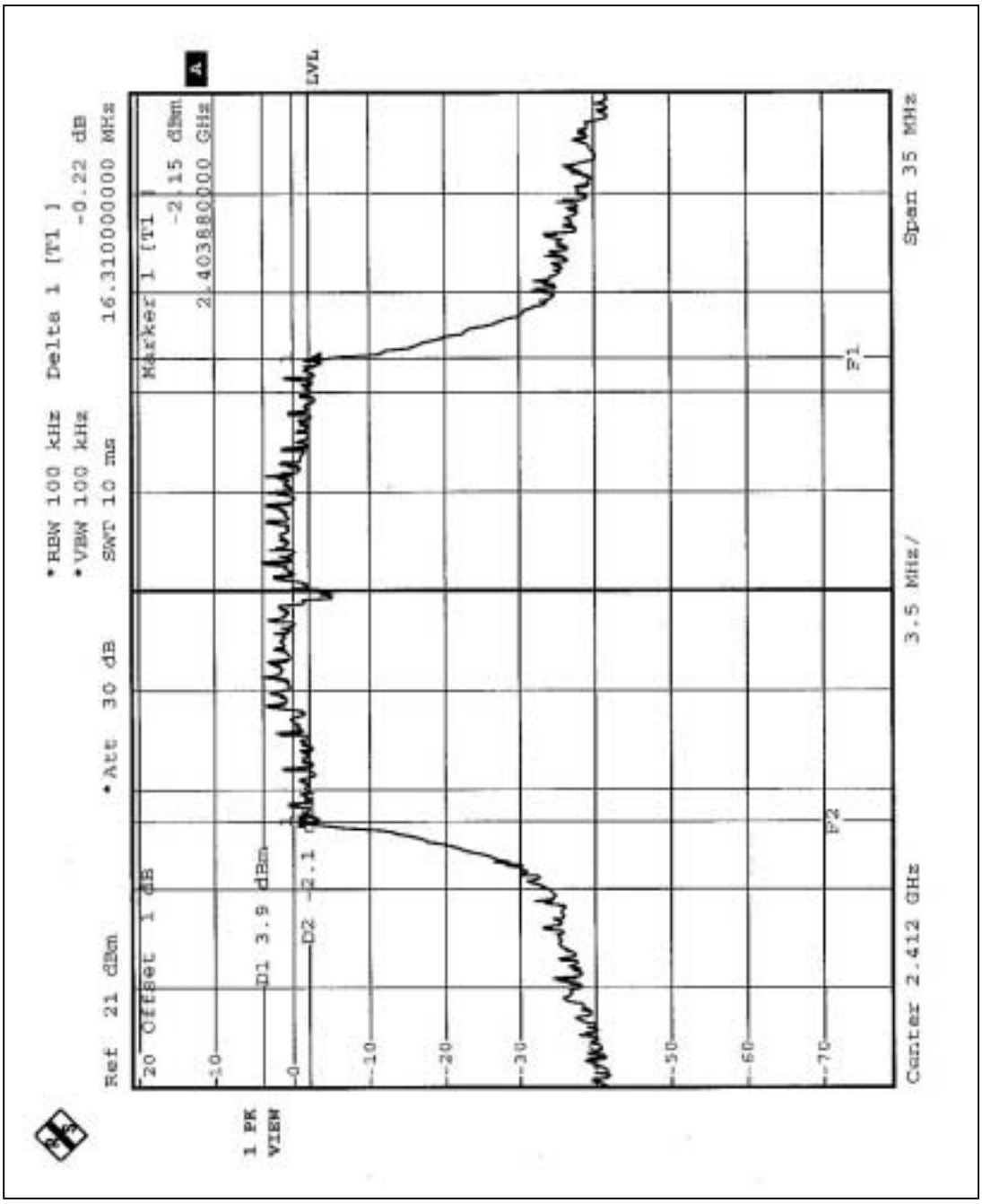

RBW 100 kHz
VBW 100 kHz
SWT 10 ms
Delta 1 [T1]
-0.01 dB
11.480000000 MHz
Marker 1 [T1]
-3.62 dBm
2.456330000 GHz
Ref 21 dBm
Offset 1 dB
Att 30 dB
D1 2.1 dBm
D2 -3.9 dBm
Center 2.462 GHz
3.5 MHz/
Span 35 MHz
1 PK
VIEW

4.3.7 TEST RESULTS-OFDM

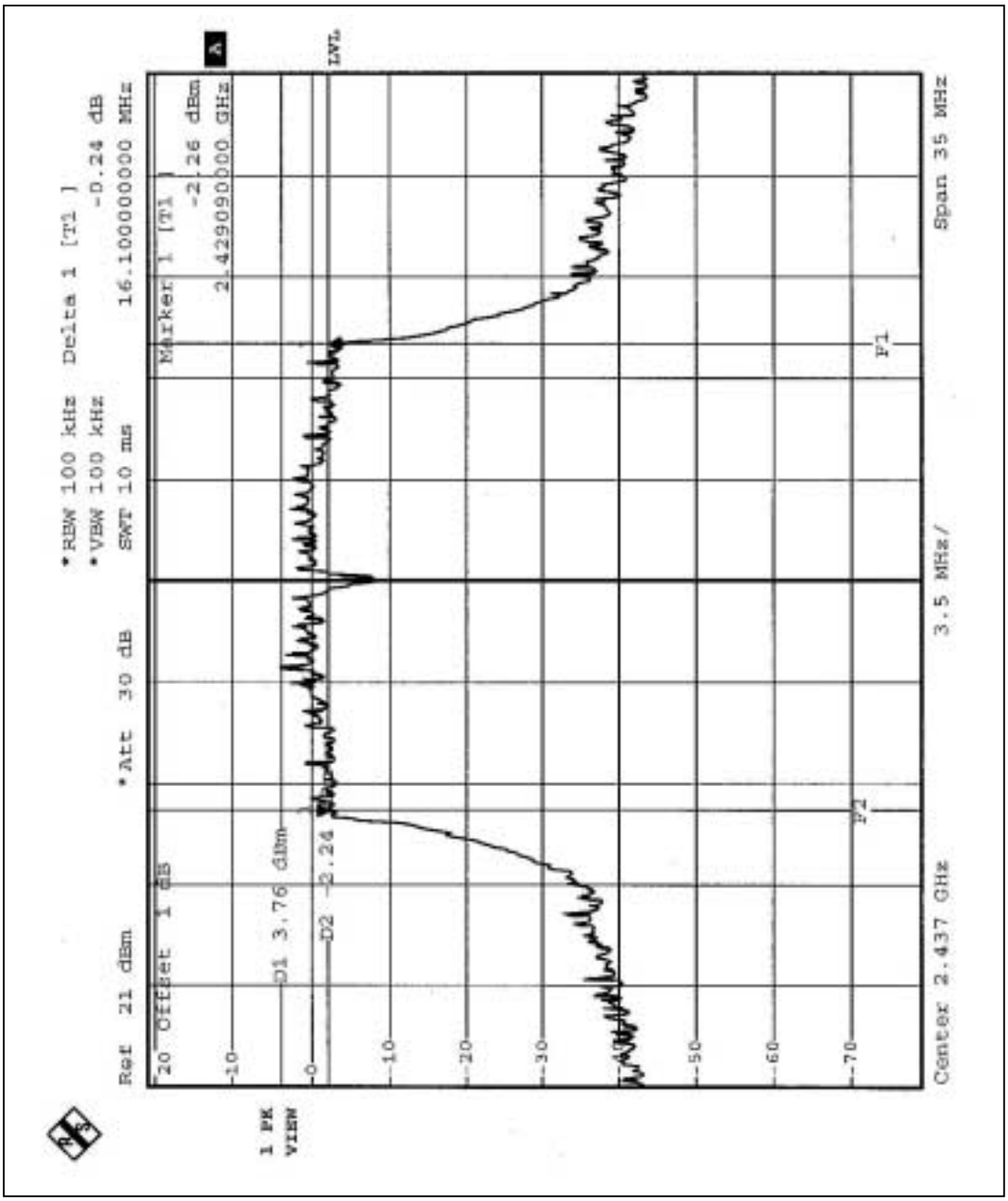
EUT	AirStation Access Point		
MODEL	WBR2-G54	**ENVIRONMENTAL CONDITIONS**	24 deg. C, 62%RH, 976 hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**TESTED BY**	Eric Lee

CHANNEL	CHANNEL FREQUENCY (MHz)	6 dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	16.31	0.5	PASS
6	2437	16.10	0.5	PASS
11	2462	16.31	0.5	PASS
Turbo 6	2437	15.12	0.5	PASS

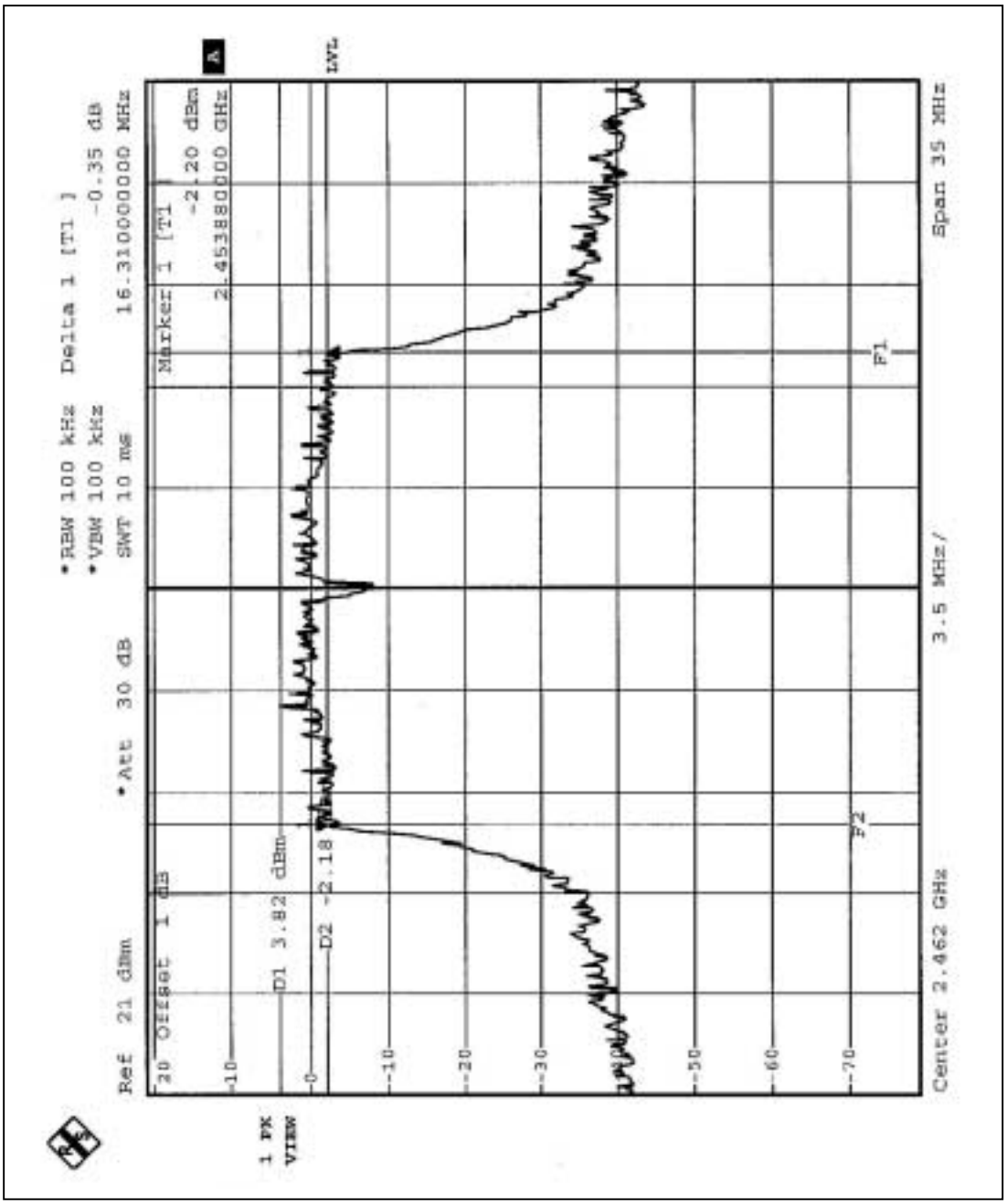
CH1


RBW 100 kHz
VBW 100 kHz
SWT 10 ms
Delta 1 [T1]
-0.22 dB
16.310000000 MHz
Marker 1 [T1]
-2.15 dBm
2.403880000 GHz
Att 30 dB
Ref 21 dBm
Offset 1 dB
D1 3.9 dBm
D2 -2.1
1 PK
VIEW
P1
P2
Center 2.412 GHz
3.5 MHz/
Span 35 MHz

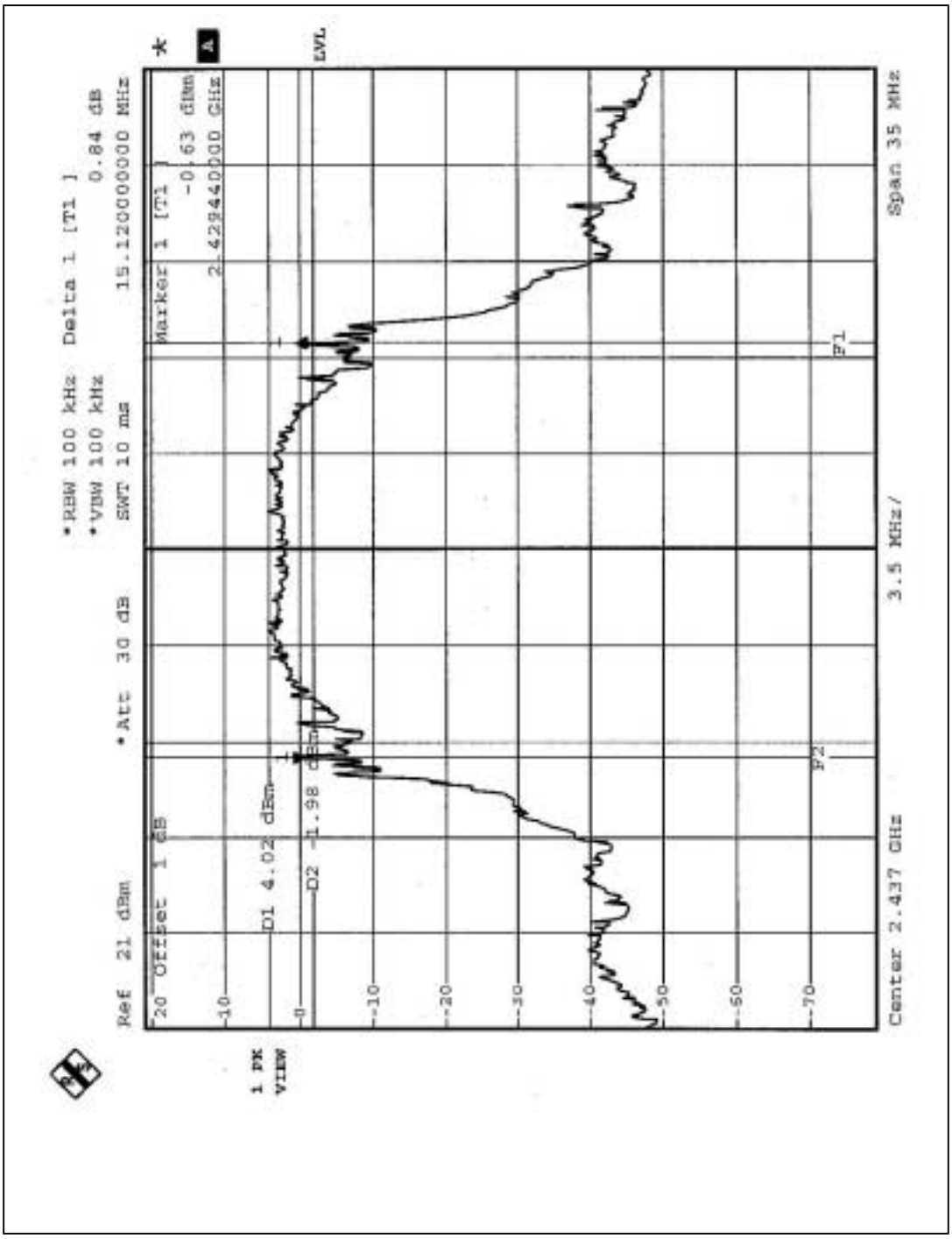
CH6


RBW 100 kHz
VBW 100 kHz
SWT 10 ms
Delta 1 [T1]
-0.24 dB
16.100000000 MHz
Marker 1 [T1]
-2.26 dBm
2.429090000 GHz
Ref 21 dBm
Offset 1 dB
Att 30 dB
D1 3.76 dBm
D2 -2.24
Center 2.437 GHz
3.5 MHz/
Span 35 MHz
1 PK
VIEW

CH11


RBW 100 kHz
VBW 100 kHz
SWT 10 ms
Delta 1 [T1]
-0.35 dB
16.310000000 MHz
Marker 1 [T1
-2.20 dBm
2.453880000 GHz
Att 30 dB
Ref 21 dBm
Offset 1 dB
D1 3.82 dBm
D2 -2.18
1 PK
VIEW
Center 2.462 GHz
3.5 MHz/
Span 35 MHz
F1
F2

Turbo CH6


RBW 100 kHz
VBW 100 kHz
SWT 10 ms
Delta 1 [T1]
0.84 dB
15.120000000 MHz
Marker 1 [T1]
-0.63 dBm
2.429440000 GHz
Att 30 dB
Ref 21 dBm
Offset 1 dB
D1 4.02 dBm
D2 -1.98 dBm
1 PK
VIEW
Center 2.437 GHz
3.5 MHz/
Span 35 MHz

4.4 MAXIMUM PEAK OUTPUT POWER

4.4.1 LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm.

4.4.2 TEST INSTRUMENTS

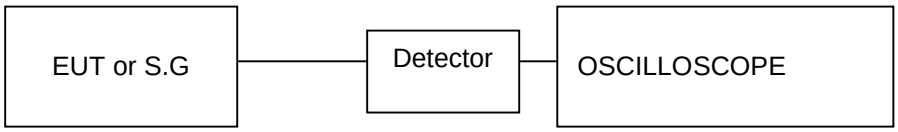
Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSP40	100037	May. 06, 2004
R&S SIGNAL GENERATOR	SMP04	100011	May 28, 2004
TEKTRONIX OSCILLOSCOPE	TDS 220	B048470	Mar. 05, 2004
NARDA DETECTOR	4503A	FSCM99899	NA

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

4.4.3 TEST PROCEDURES

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

4.4.4 TEST SETUP



4.4.5 EUT OPERATING CONDITIONS

Same as Item 4.3.5

4.4.6 TEST RESULTS- DSSS

EUT	AirStation Access Point		
MODEL	WBR2-G54	**ENVIRONMENTAL CONDITIONS**	24 deg. C, 62%RH, 976 hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**TESTED BY**	Eric Lee

Antenna 1 (Gain 1.99 dBi)

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	16.00	30	PASS
6	2437	16.90	30	PASS
11	2462	16.90	30	PASS

Antenna 2 (Gain 2.15 dBi)

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	15.80	30	PASS
6	2437	16.70	30	PASS
11	2462	16.80	30	PASS

Antenna 3 (Gain 2.0 dBi)

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	16.00	30	PASS
6	2437	16.07	30	PASS
11	2462	16.20	30	PASS

Antenna 4 (Gain 4.0 dBi)

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	14.87	30	PASS
6	2437	15.1	30	PASS
11	2462	15.34	30	PASS

4.4.7 TEST RESULTS- OFDM

EUT	AirStation Access Point		
MODEL	WBR2-G54	ENVIRONMENTAL CONDITIONS	24 deg. C, 62%RH, 976 hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	TESTED BY	Eric Lee

Antenna 1 (Gain 1.99 dBi)

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	20.20	30	PASS
6	2437	20.30	30	PASS
11	2462	20.60	30	PASS
Turbo 6	2462	17.30	30	PASS

Antenna 2 (Gain 2.15dBi)

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	20.10	30	PASS
6	2437	20.00	30	PASS
11	2462	20.40	30	PASS
Turbo 6	2462	17.20	30	PASS

Antenna 3 (Gain 2.0dBi)

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	20.01	30	PASS
6	2437	20.24	30	PASS
11	2462	20.17	30	PASS
Turbo 6	2462	17.20	30	PASS

Antenna 4 (Gain 4.0dBi)

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	18.00	30	PASS
6	2437	18.23	30	PASS
11	2462	18.40	30	PASS
Turbo 6	2462	15.40	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
R&S SPECTRUM ANALYZER	FSP40	100037	May. 06, 2004

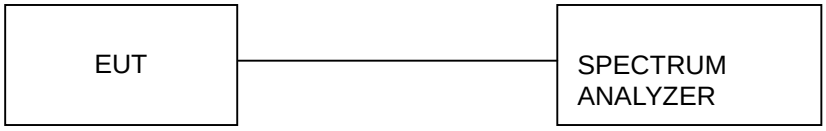
NOTE:

1. The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
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 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 TEST SETUP



4.5.5 EUT OPERATING CONDITIONS

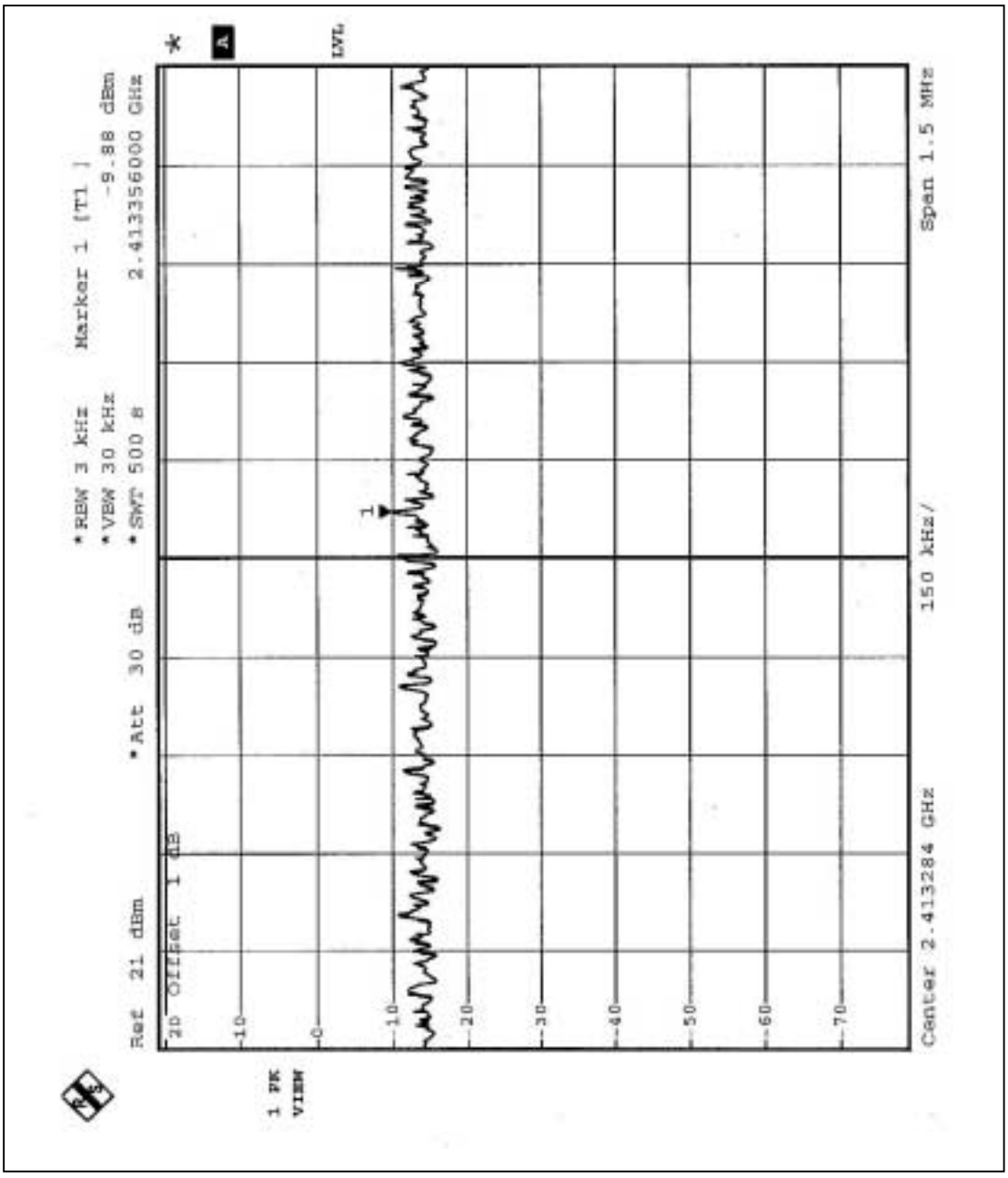
1. Same as 4.3.5

4.5.6 TEST RESULTS-DSSS

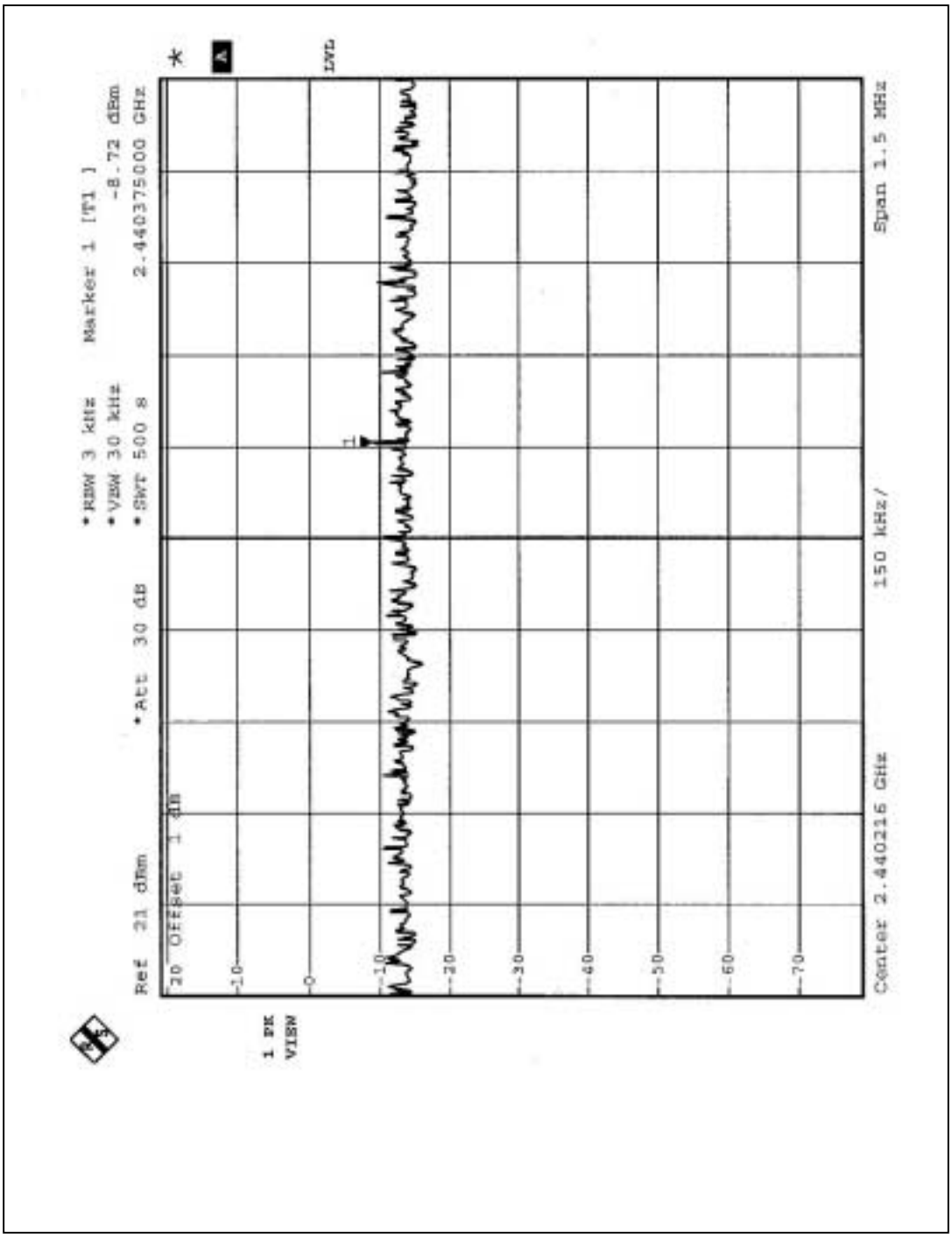
EUT	AirStation Access Point		
MODEL	WBR2-G54	**ENVIRONMENTAL CONDITIONS**	24 deg. C, 62%RH, 976 hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**TESTED BY**	Eric Lee

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 KHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-9.88	8	PASS
6	2437	-8.72	8	PASS
11	2462	-12.69	8	PASS

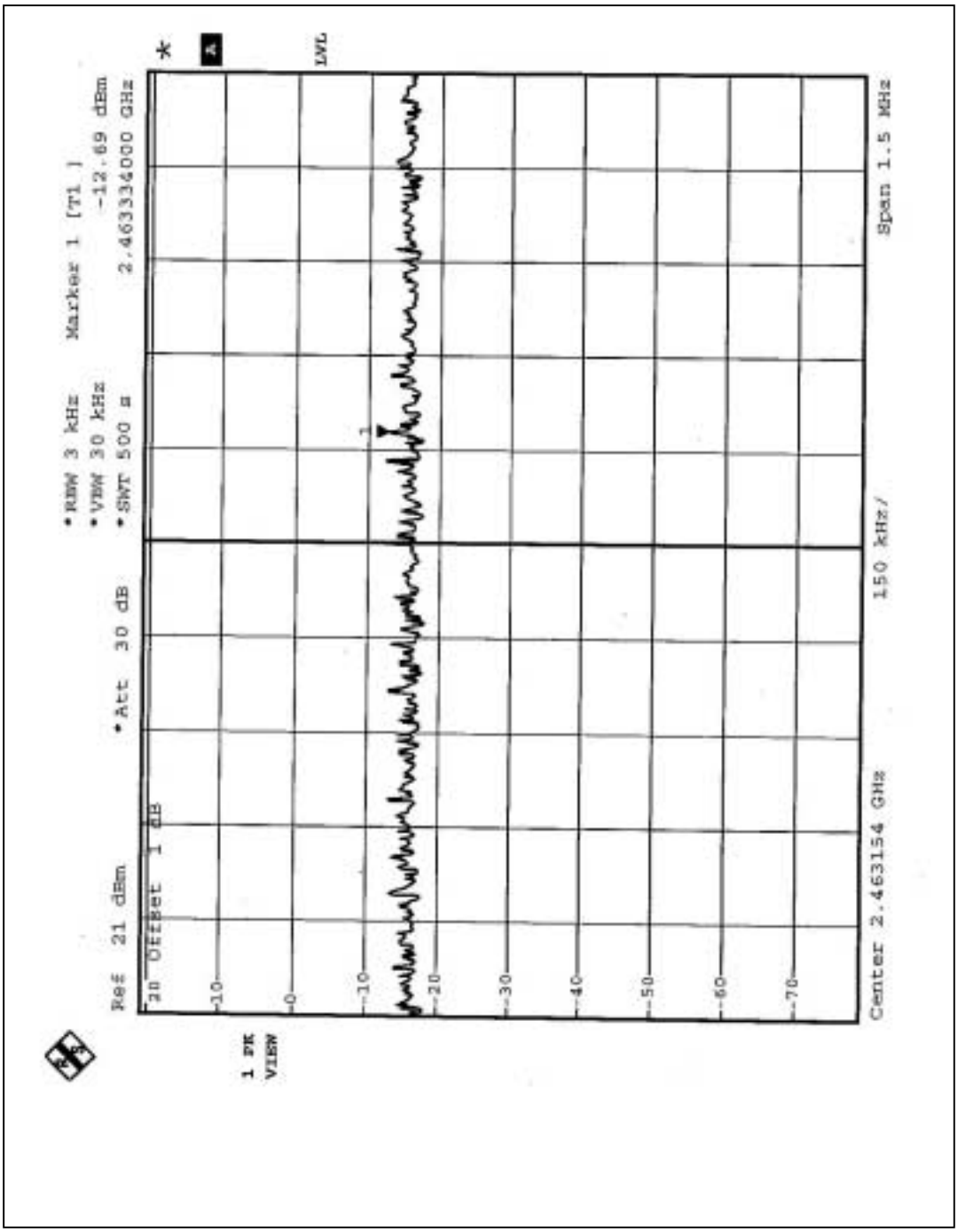
CH1


Ref 21 dBm
Offset 1 dB
*Att 30 dB
*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-9.88 dBm
2.413356000 GHz
1 PK
VIEW
Center 2.413284 GHz
150 kHz/
Span 1.5 MHz

CH6


Ref 31 dBm
20 Offset 1 dB
#Att 30 dB
#RBW 3 kHz
#VBW 30 kHz
#Swp 500 s
Marker 1 [T1]
-8.72 dBm
2.440375000 GHz
1 PK
VIEW
Center 2.440216 GHz
150 kHz/
Span 1.5 MHz

CH11

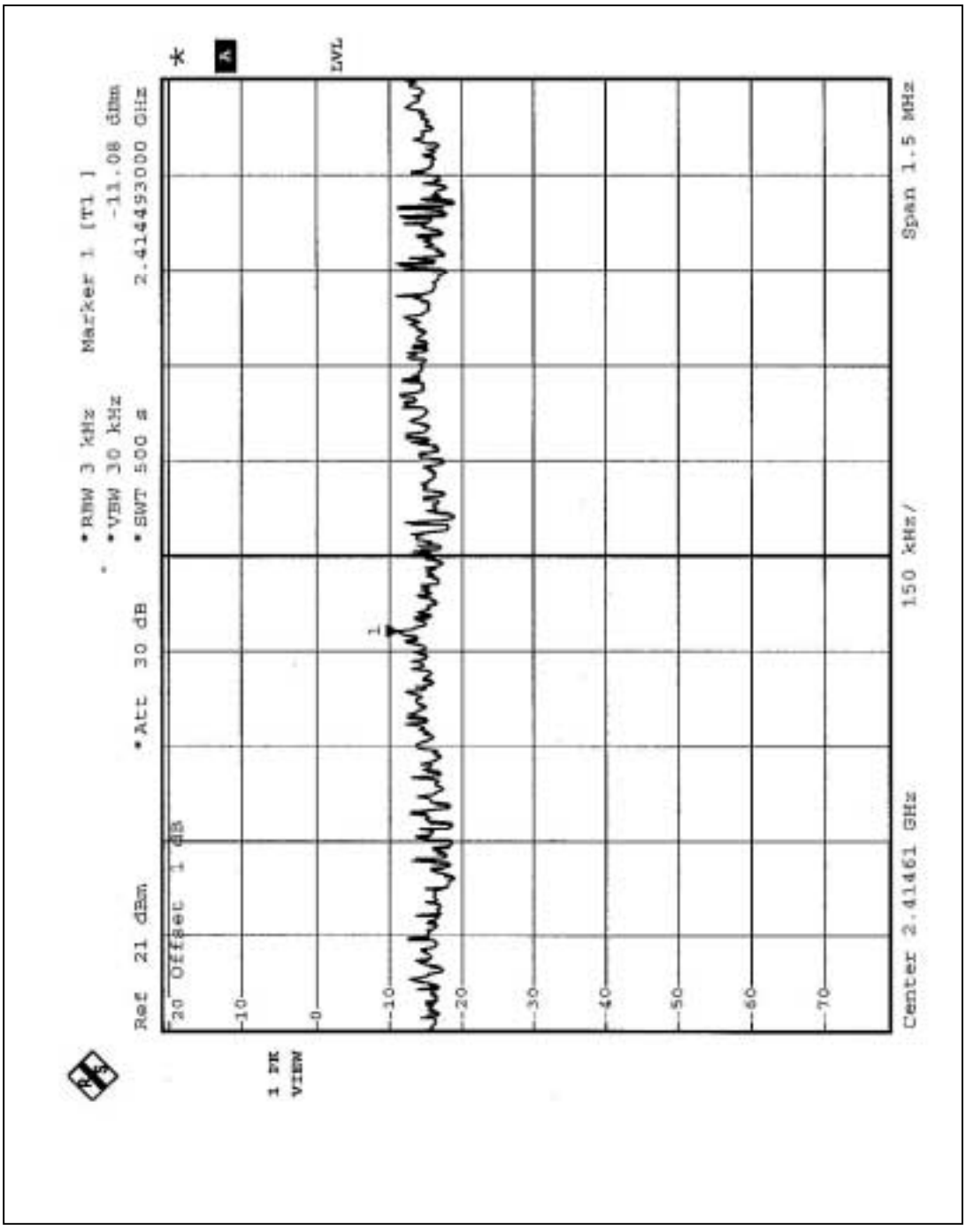

RBW 3 kHz
VBW 30 kHz
SWT 500 ms
Marker 1 [T1]
-12.69 dBm
2.463334000 GHz
Att 30 dB
Ref 21 dBm
Offset 1 dB
1 PK VIEW
LVL
Center 2.463154 GHz
150 kHz/
Span 1.5 MHz

4.5.7 TEST RESULTS-OFDM

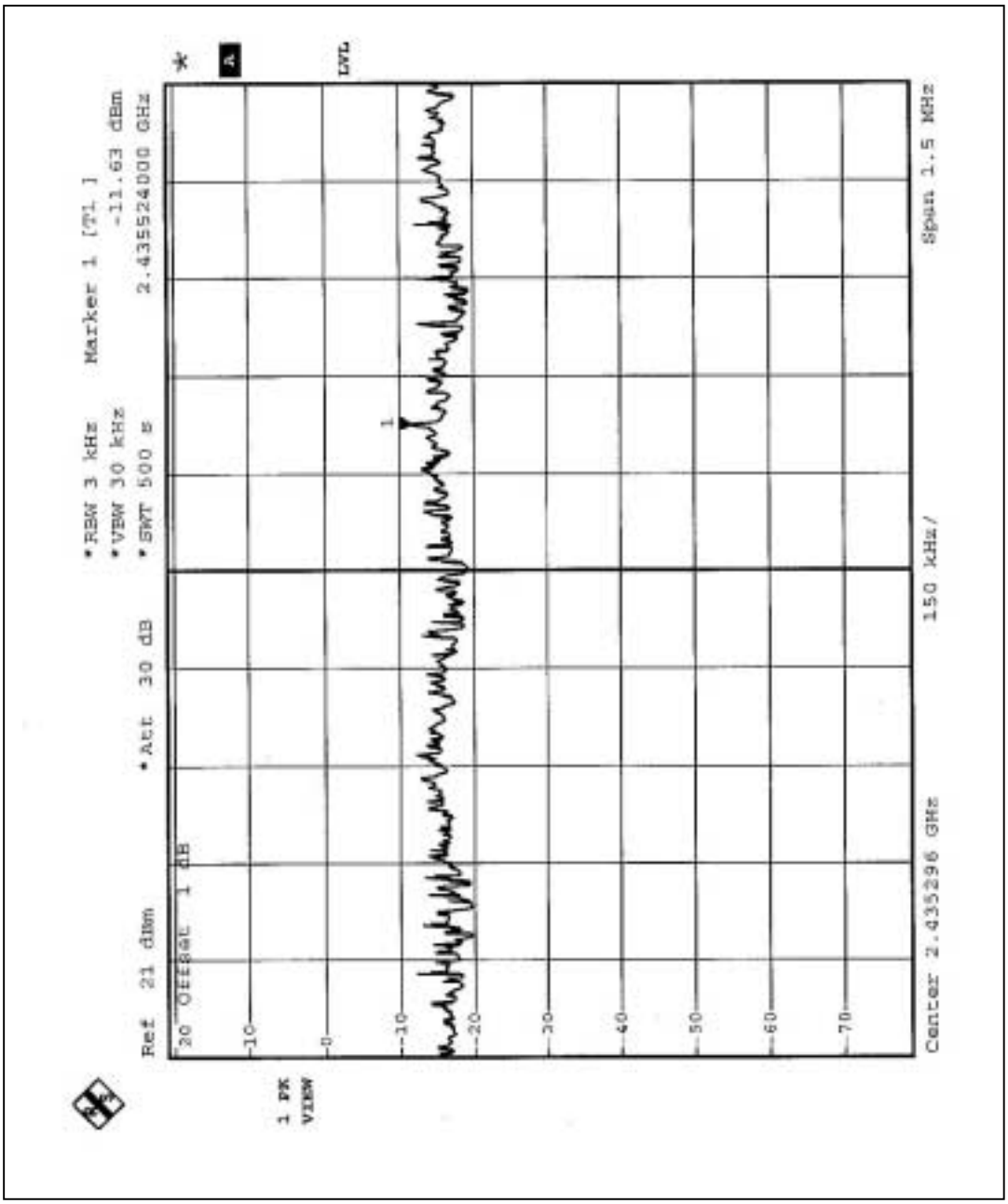
EUT	AirStation Access Point		
MODEL	WBR2-G54	**ENVIRONMENTAL CONDITIONS**	24 deg. C, 62%RH, 976 hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**TESTED BY**	Eric Lee

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 KHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-11.08	8	PASS
6	2437	-11.63	8	PASS
11	2462	-11.61	8	PASS
Turbo 6	2437	-9.94	8	PASS

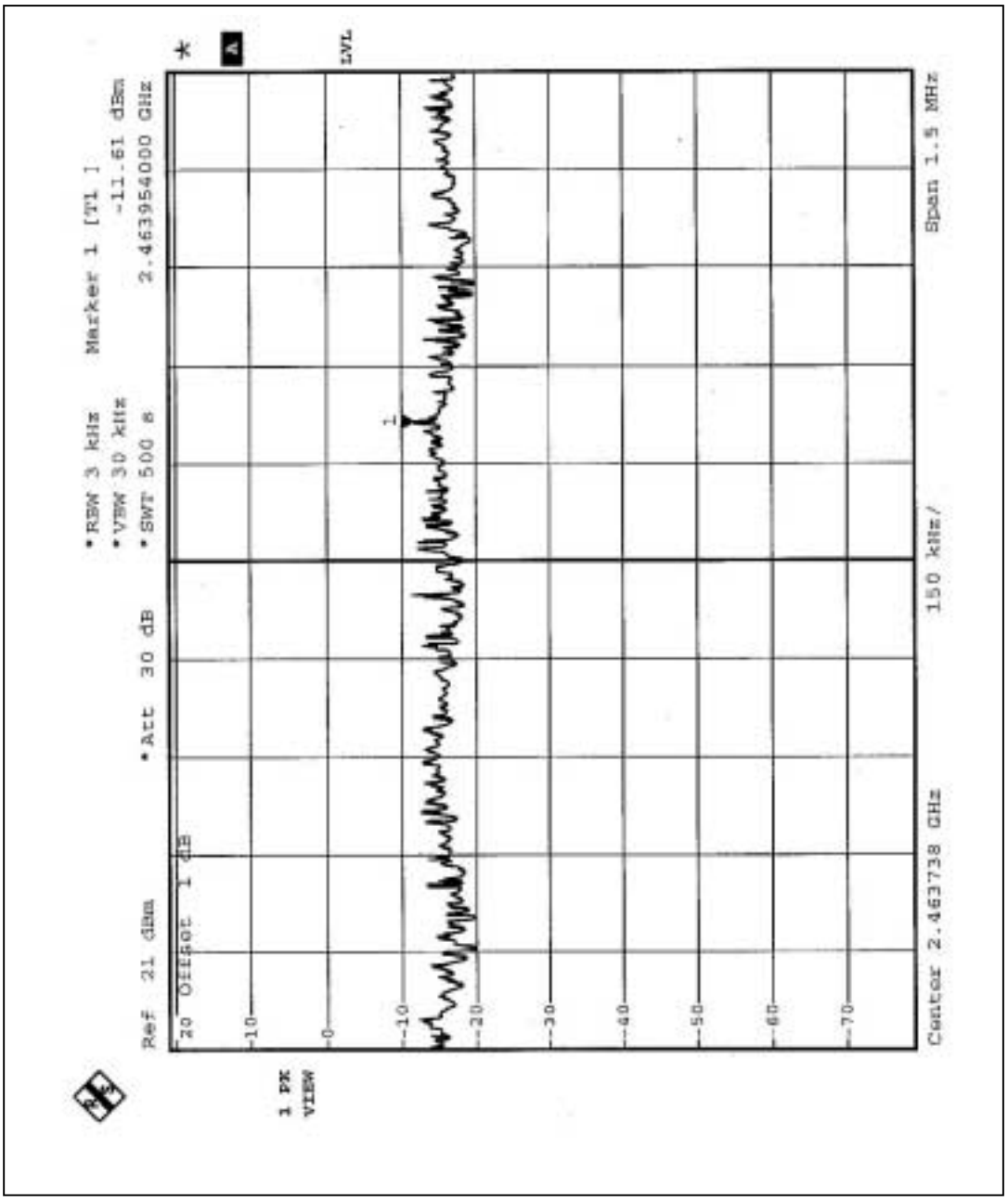
CH1


Ref 21 dBm
Offset 1 dB
Att 30 dB
RBW 3 kHz
VBW 30 kHz
SWT 500 s
Marker 1 [T1]
-11.08 dBm
2.41493000 GHz
Center 2.41461 GHz
150 kHz/
Span 1.5 MHz
1 PK
VIEW

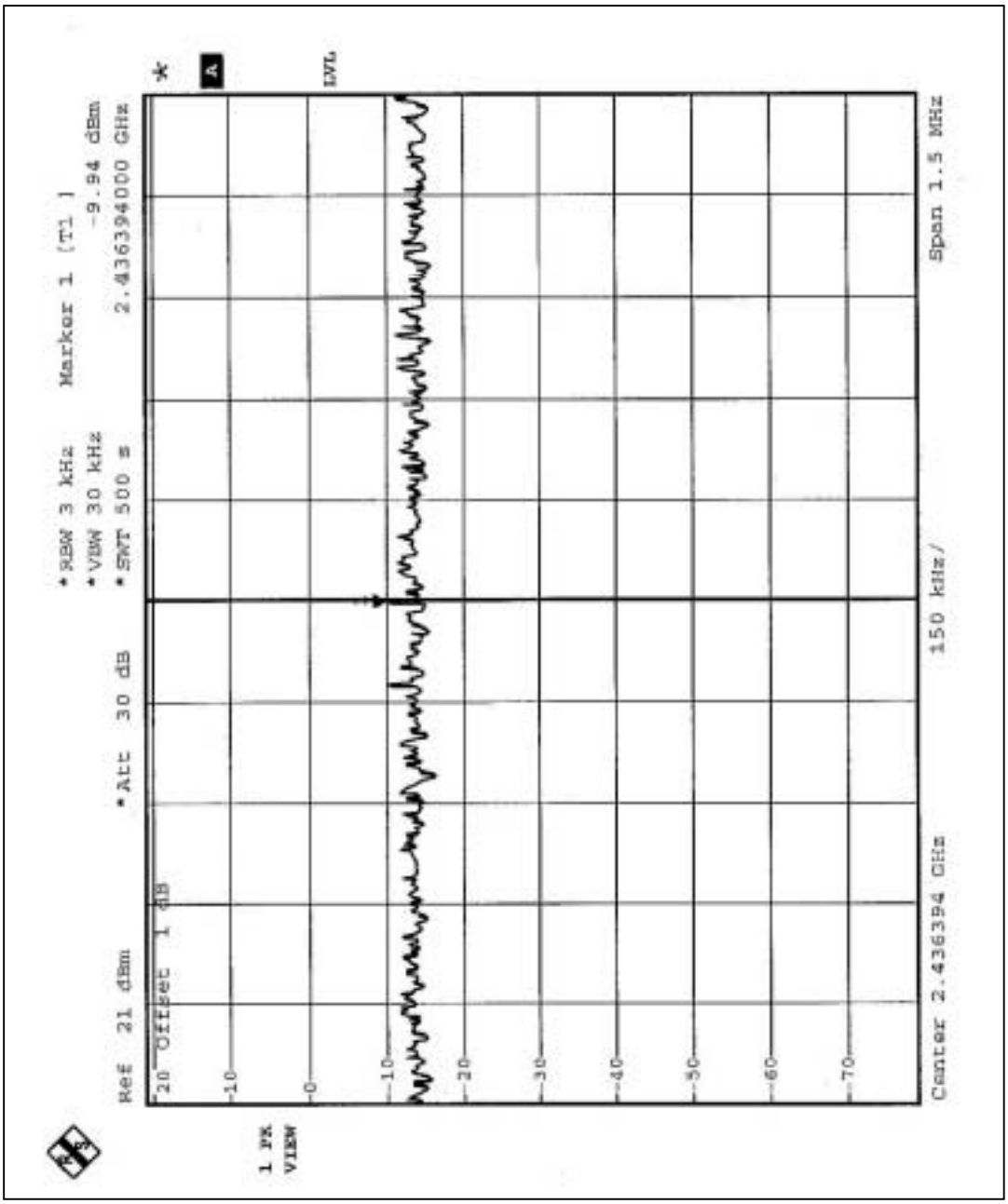
CH6


Ref 21 dBm
Offset 1 dB
#Att 30 dB
#RBW 3 kHz
#VBW 30 kHz
#SWT 500 s
Marker 1 [T1]
-11.63 dBm
2.435524000 GHz
1 PK
VIEW
Center 2.435296 GHz
150 kHz/
Span 1.5 MHz

CH11


Ref 21 dBm
Offset 1 dB
*Att 30 dB
*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-11.61 dBm
2.463954000 GHz
1
Center 2.463738 GHz
150 kHz/
Span 1.5 MHz
3 PK
VIEW
LVL

Turbo CH6


Ref 21 dBm
Offset 1 dB
Att 30 dB
RBW 3 kHz
VBW 30 kHz
SWT 500 s
Marker 1 [T1]
-9.94 dBm
2.436394000 GHz
Center 2.436394 GHz
150 kHz/
Span 1.5 MHz
1 PK
VIEW

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
R&S SPECTRUM ANALYZER	FSP40	100037	May. 06, 2004

NOTE:

1. The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
2. 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 EUT OPERATING CONDITION

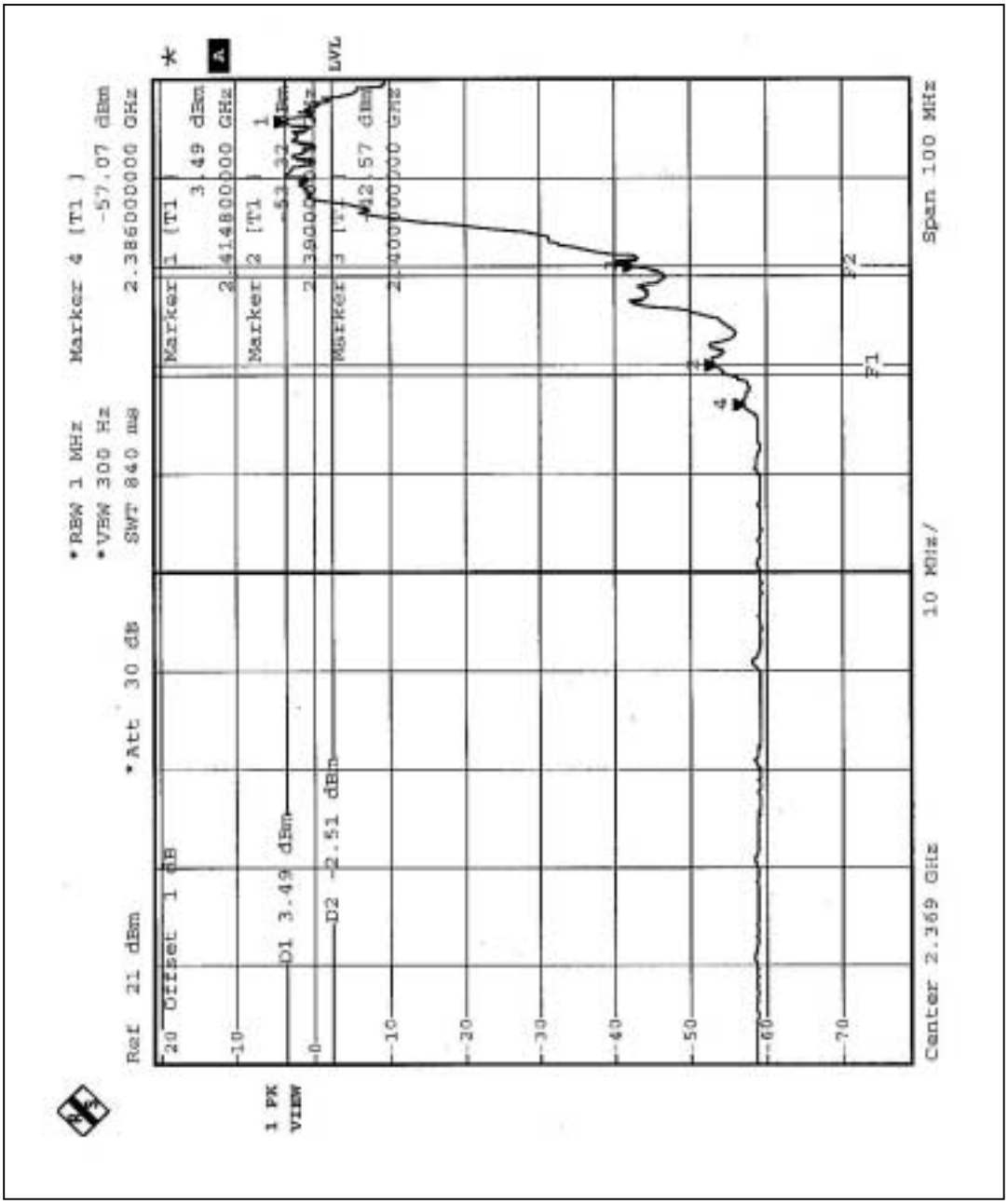
Same as Item 4.3.5

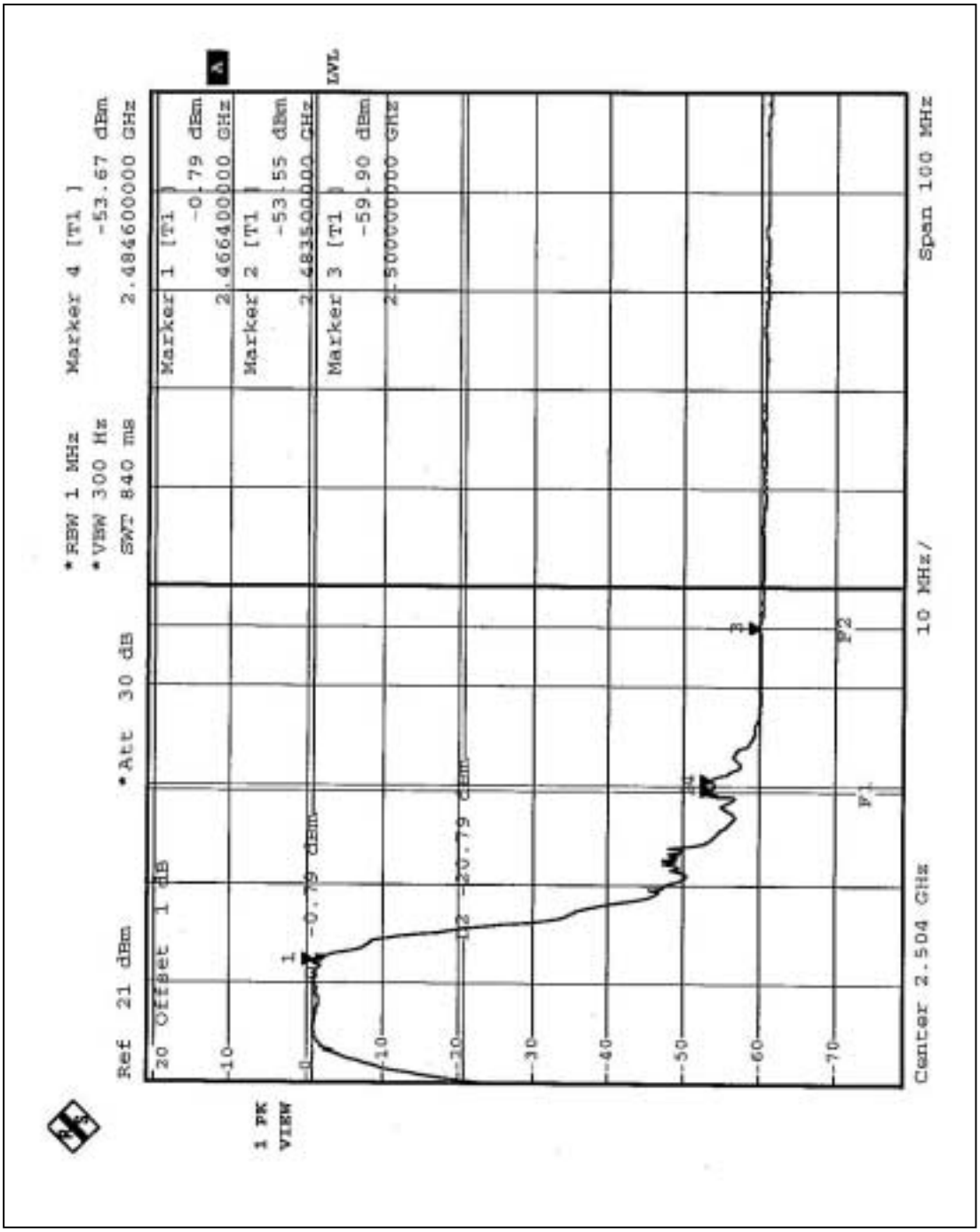
4.6.5 TEST RESULTS – DSSS (Antenna 1)

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

NOTE (1): The band edge emission plot on the following first page shows 56.81dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 102.0dBuV/m, so the maximum field strength in restrict band is 102.0-56.81=45.19dBuV/m which is under 54 dBuV/m limit.

NOTE (2): The band edge emission plot on the following second page shows 52.76dB delta between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 99.1dBuV/m, so the maximum field strength in restrict band is 99.1-52.76=46.34dBuV/m which is under 54 dBuV/m limit.


*RBW 1 MHz
*VBW 300 Hz
SWT 840 ms
Marker 4 [T1]
-57.07 dBm
2.386000000 GHz
*Att 30 dB
Ref 21 dBm
Offset 1 dB
D1 3.49 dBm
D2 -2.51 dBm
1 PK
VIEW
Marker 1 [T1] 3.49 dBm 2.414800000 GHz
Marker 2 [T1] -53.32 dBm 2.390000000 GHz
Marker 3 [T1] 12.57 dBm 2.400000000 GHz
LVL
Center 2.369 GHz
10 MHz/
Span 100 MHz
F1
F2

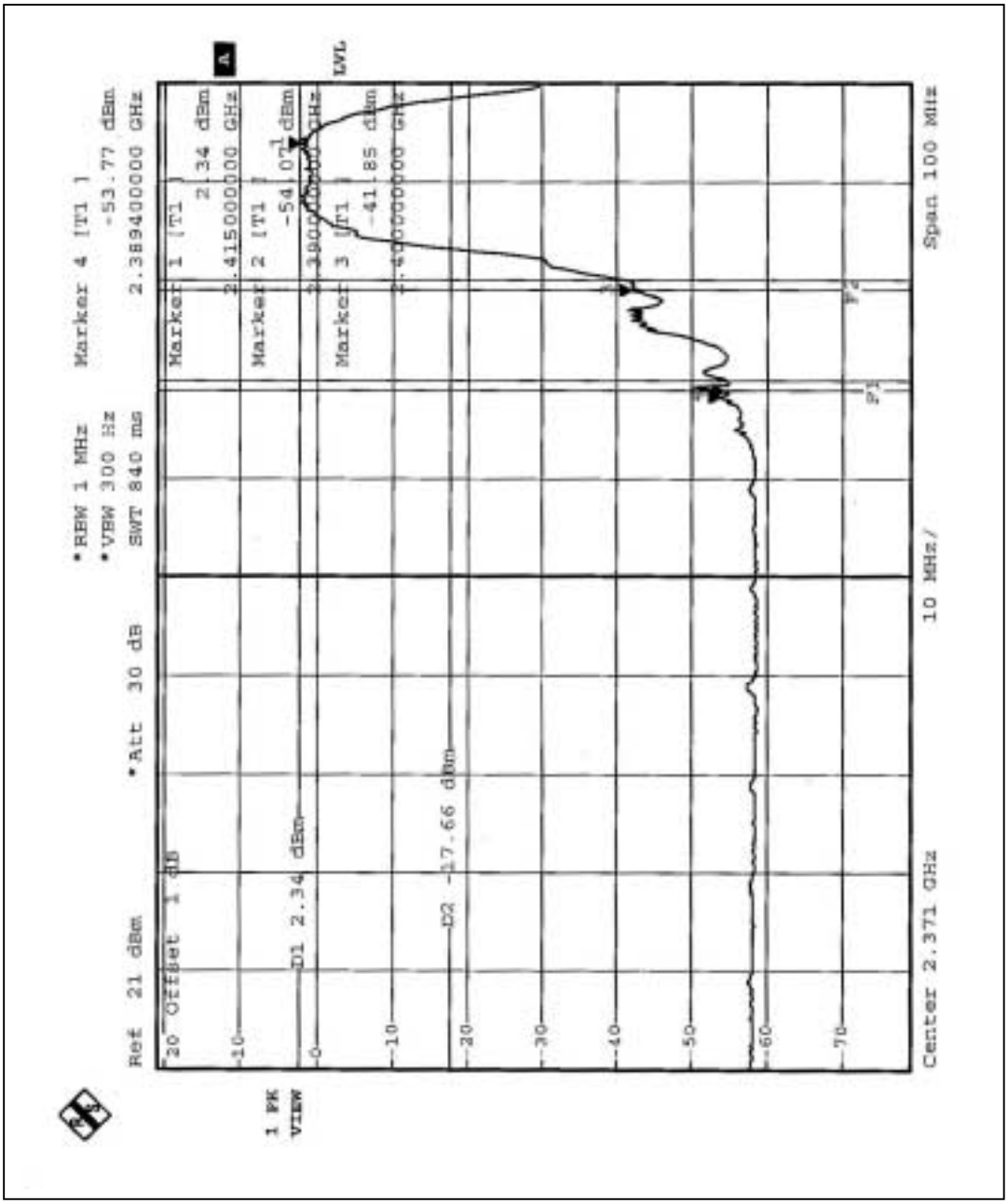

RBW 1 MHz
VBW 300 Hz
SWT 840 ms
Att 30 dB
Offset 1 dB
Ref 21 dBm
Marker 4 [T1]
-53.67 dBm
2.484600000 GHz
Marker 1 [T1]
-0.79 dBm
2.466400000 GHz
Marker 2 [T1]
-53.55 dBm
2.483500000 GHz
Marker 3 [T1]
-59.90 dBm
2.500000000 GHz
LVL
1 PK
VIEW
-0.79 dBm
-20.79 dBm
Center 2.504 GHz
10 MHz/
Span 100 MHz

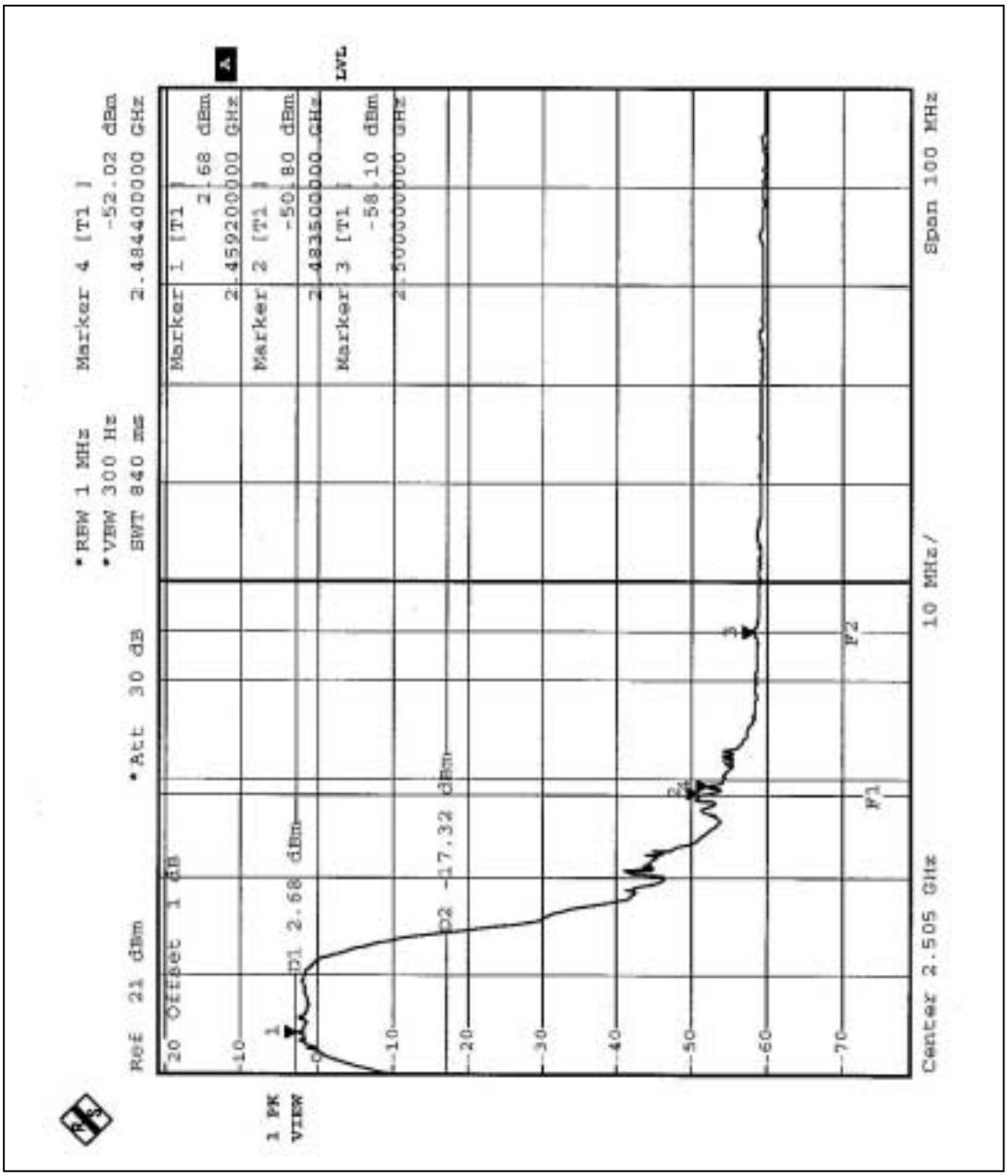
4.6.6 TEST RESULTS – DSSS (Antenna 2)

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

NOTE (1): The band edge emission plot on the following first page shows 56.11dB delta between carrier maximum power and local maximum emission in restrict band (2.3894GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 102.6dBuV/m, so the maximum field strength in restrict band is 102.6-56.11=46.49dBuV/m which is under 54 dBuV/m limit.

NOTE (2): The band edge emission plot on the following second page shows 53.48dB delta between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 103.2dBuV/m, so the maximum field strength in restrict band is 103.2-53.48=49.72dBuV/m which is under 54 dBuV/m limit.


RBW 1 MHz
VBW 300 Hz
SWT 840 ms
Marker 4 [T1]
-53.77 dBm
2.389400000 GHz
Att 30 dB
Ref 21 dBm
Offset 1 dB
Marker 1 [T1]
2.34 dBm
2.415000000 GHz
Marker 2 [T1]
-54.07 dBm
2.390000000 GHz
Marker 3 [T1]
-41.85 dBm
2.400000000 GHz
D1 2.34 dBm
D2 -17.66 dBm
1 PK VIEW
Center 2.371 GHz
10 MHz/
Span 100 MHz

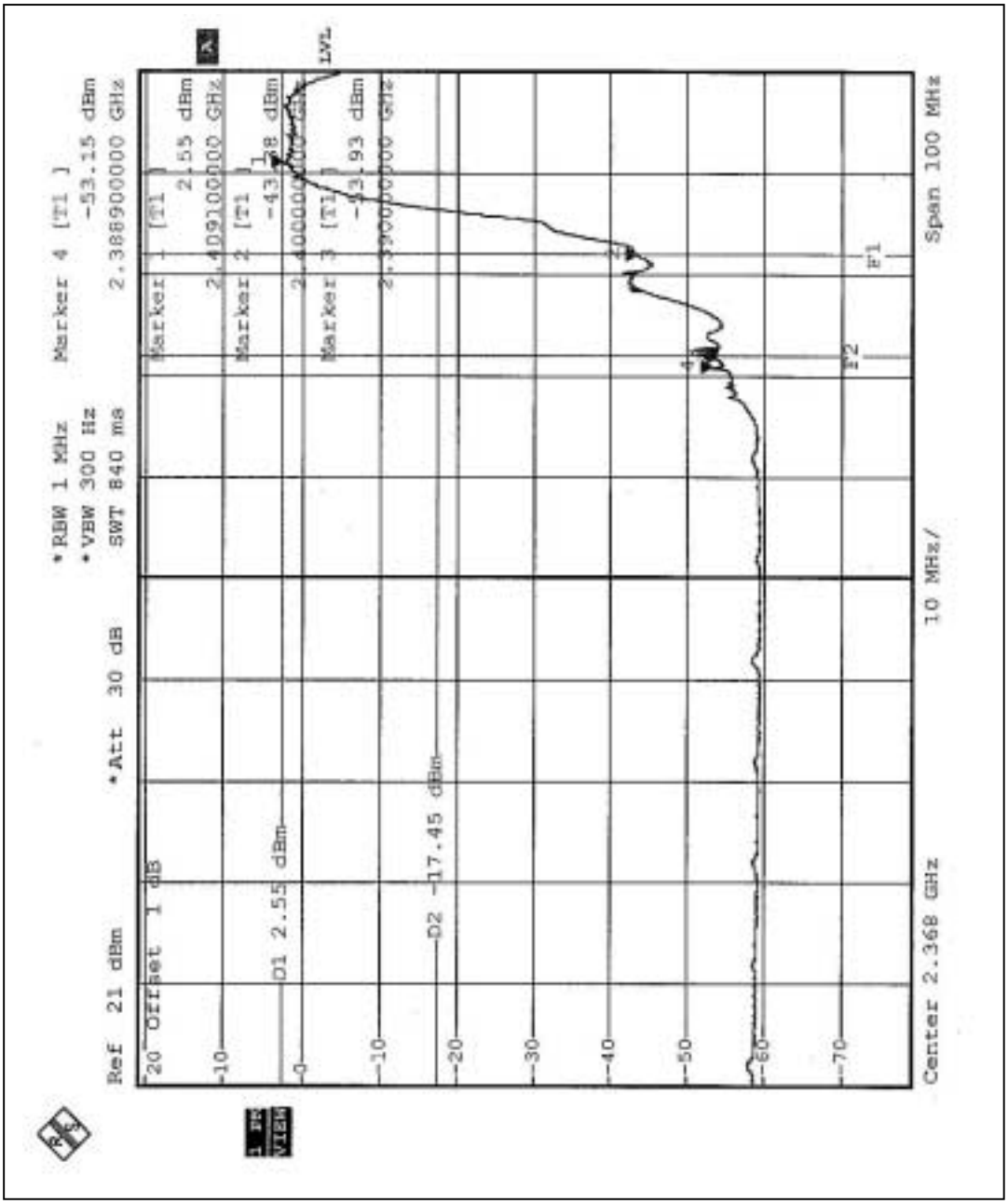

RBW 1 MHz
VBW 300 Hz
SWT 840 ms
Marker 4 [T1]
-52.02 dBm
2.48440000 GHz
Att 30 dB
Offset 1 dB
Ref 21 dBm
Marker 1 [T1]
2.68 dBm
2.45920000 GHz
Marker 2 [T1]
-50.80 dBm
2.48350000 GHz
Marker 3 [T1]
-58.10 dBm
2.50000000 GHz
D1 2.68 dBm
D2 -17.32 dBm
1 PK
VIEW
Center 2.505 GHz
10 MHz/
Span 100 MHz

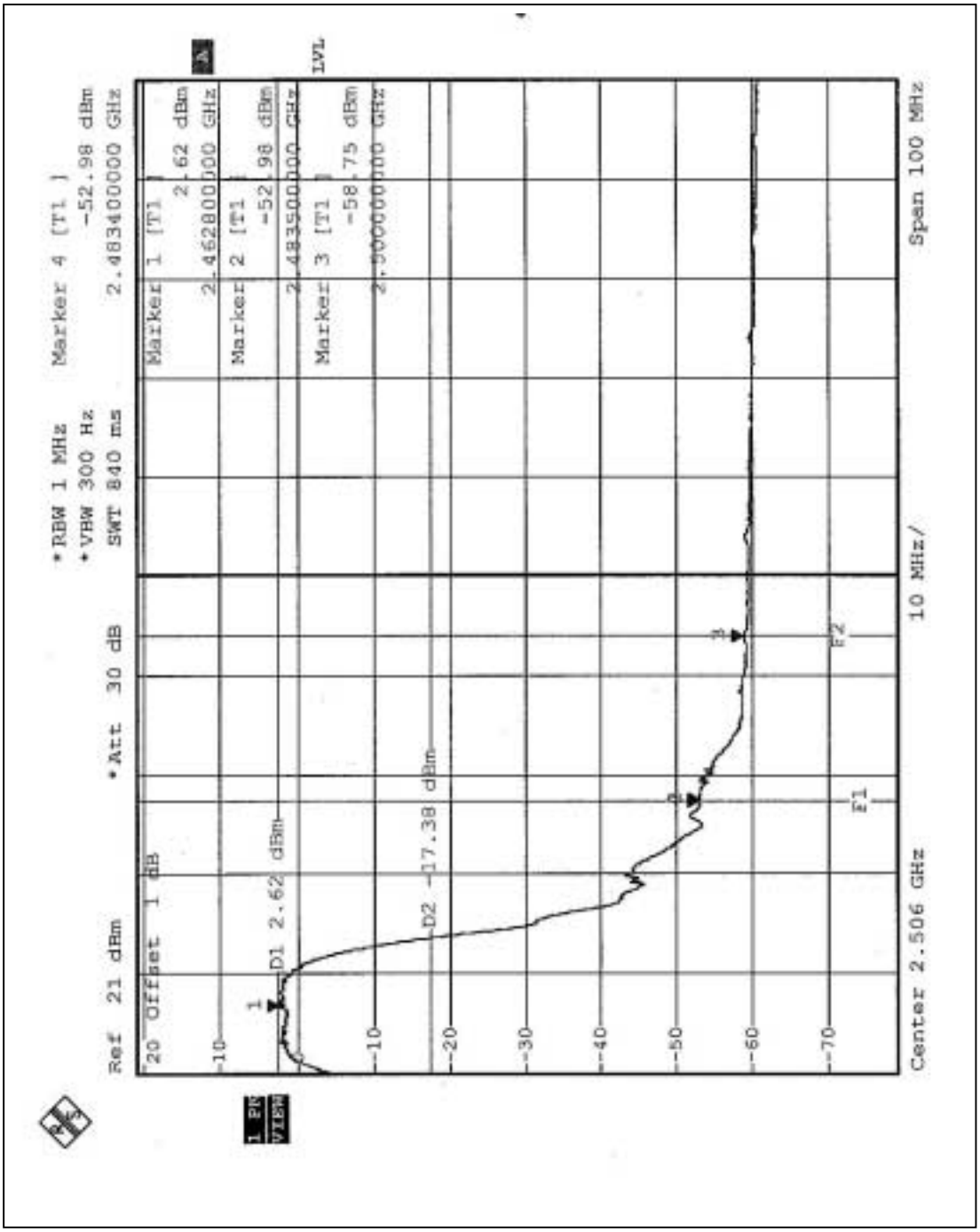
4.6.7 TEST RESULTS – DSSS (Antenna 3)

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

NOTE (1): The band edge emission plot on the following first page shows 56.48dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 103.6dBuV/m, so the maximum field strength in restrict band is 103.6-56.48=47.12dBuV/m which is under 54 dBuV/m limit.

NOTE (2): The band edge emission plot on the following second page shows 55.60dB delta between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 104.8dBuV/m, so the maximum field strength in restrict band is 104.8-55.60=49.20dBuV/m which is under 54 dBuV/m limit.


Ref 21 dBm
Offset 1 dB
*Att 30 dB
*VBW 300 Hz
SWT 840 ms
Marker 4 [T1]
-53.15 dBm
2.38690000 GHz
Marker 1 [T1]
2.55 dBm
2.40910000 GHz
Marker 2 [T1]
-43.38 dBm
2.40000000 GHz
Marker 3 [T1]
-43.93 dBm
2.39000000 GHz
D1 2.55 dBm
D2 -17.45 dBm
Center 2.368 GHz
10 MHz/
Span 100 MHz

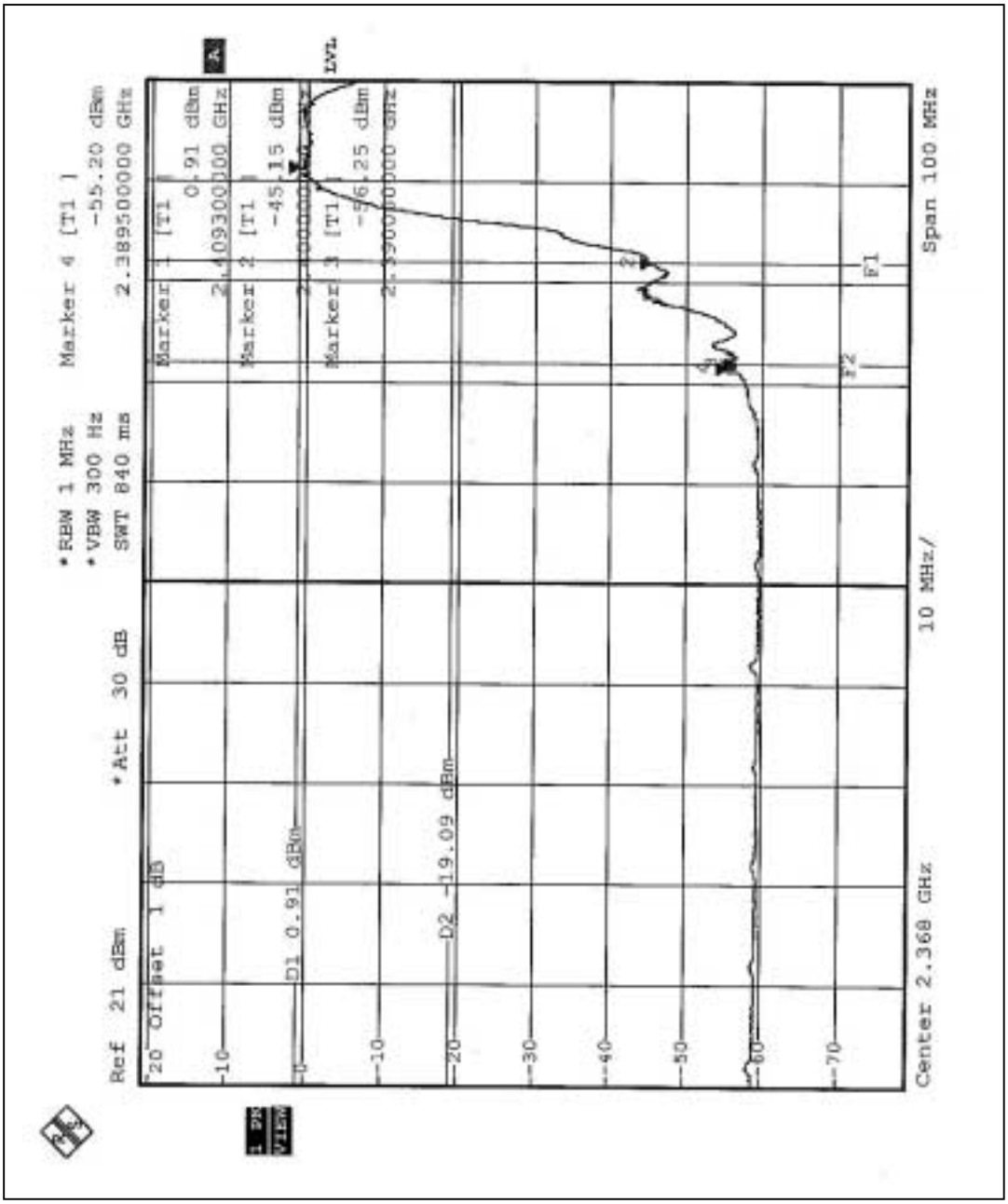

*RBW 1 MHz
*VBW 300 Hz
SWT 840 ms
*Att 30 dB
Ref 21 dBm
Offset 1 dB
Marker 4 [T1]
-52.98 dBm
2.483400000 GHz
Marker 1 [T1]
2.62 dBm
2.462800000 GHz
Marker 2 [T1]
-52.98 dBm
2.483500000 GHz
Marker 3 [T1]
-58.75 dBm
2.500000000 GHz
D1 2.62 dBm
D2 -17.38 dBm
F1
F2
Center 2.506 GHz
10 MHz/
Span 100 MHz

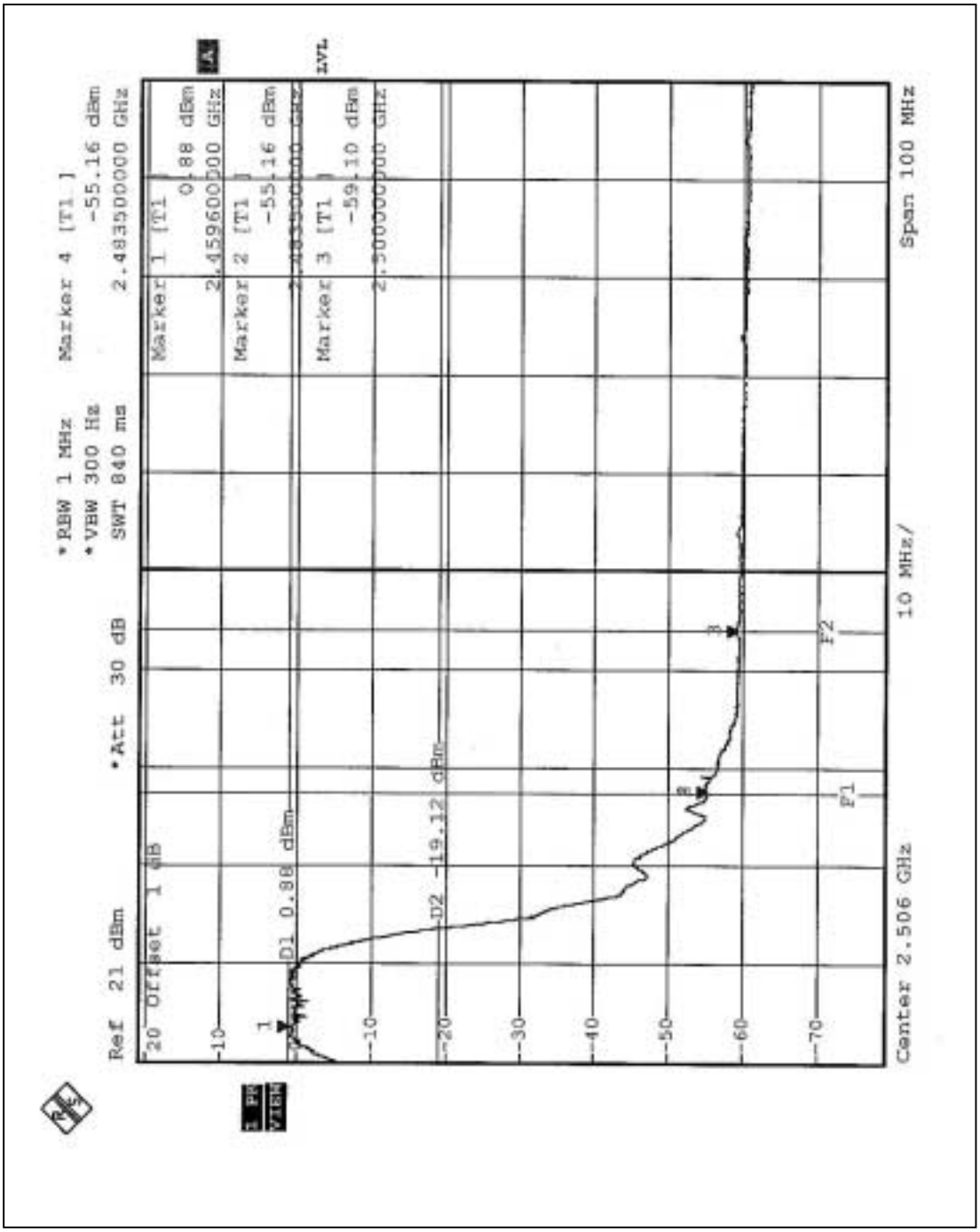
4.6.8 TEST RESULTS – DSSS (Antenna 4)

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

NOTE (1): The band edge emission plot on the following first page shows 57.16dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 105.0dBuV/m, so the maximum field strength in restrict band is 105.0-57.16=47.84dBuV/m which is under 54 dBuV/m limit.

NOTE (2): The band edge emission plot on the following second page shows 56.04dB delta between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 104.6dBuV/m, so the maximum field strength in restrict band is 104.6-56.04=48.56dBuV/m which is under 54 dBuV/m limit.


RBW 1 MHz
VBW 300 Hz
SWT 840 ms
Marker 4 [T1]
-55.20 dBm
2.389500000 GHz
Marker 1 [T1
0.91 dBm
2.409300000 GHz
Marker 2 [T1
-45.15 dBm
Marker 3 [T1
-56.25 dBm
Ref 21 dBm
Offset 1 dB
Att 30 dB
D1 0.91 dBm
D2 -19.09 dBm
Center 2.360 GHz
10 MHz/
Span 100 MHz

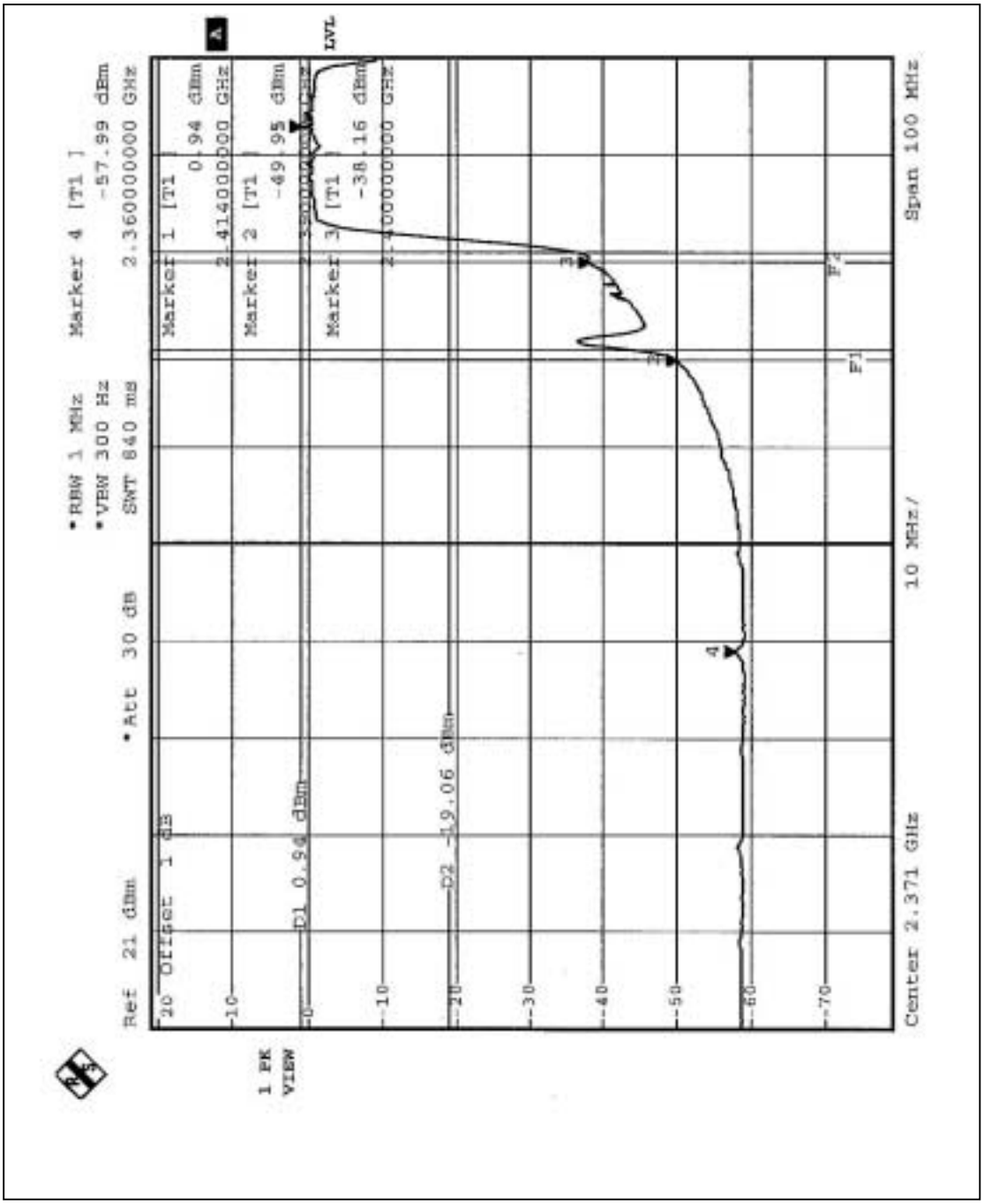

RBW 1 MHz
VBW 300 Hz
SWT 840 ms
Marker 4 [T1]
-55.16 dBm
2.48350000 GHz
Att 30 dB
Ref 21 dBm
Offset 1 dB
Marker 1 [T1]
0.88 dBm
2.45960000 GHz
Marker 2 [T1]
-55.16 dBm
2.48350000 GHz
Marker 3 [T1]
-59.10 dBm
2.50000000 GHz
D1 0.88 dBm
D2 -19.12 dBm
Center 2.506 GHz
10 MHz/
Span 100 MHz

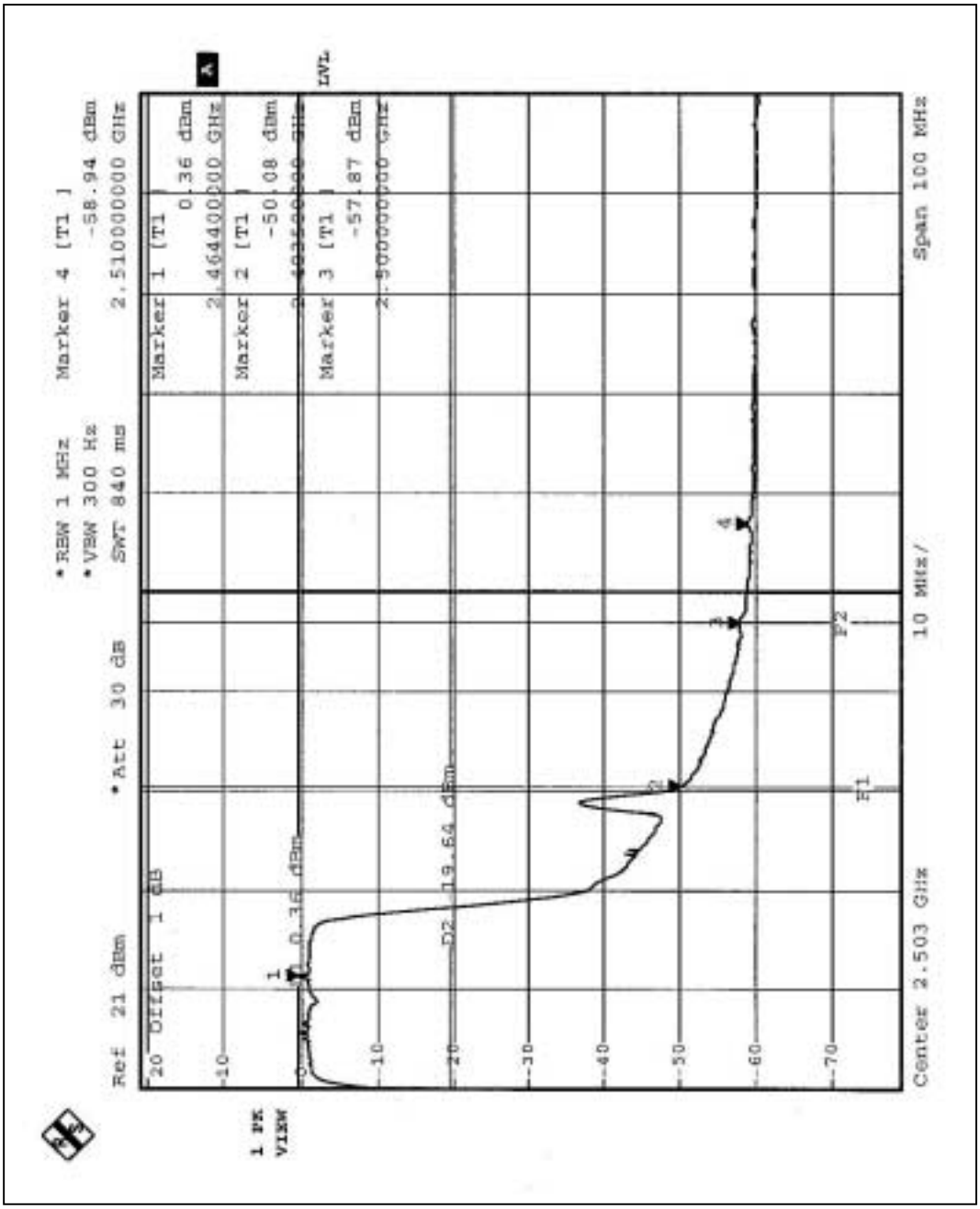
4.6.9 TEST RESULTS-OFDM (Antenna 1)

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

NOTE (1): The band edge emission plot on the following first page shows 50.89dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.8 is 99.6dBuV/m, so the maximum field strength in restrict band is 99.6-50.89=48.71dBuV/m which is under 54 dBuV/m limit.

NOTE (2): The band edge emission plot on the following second page shows 50.44dB delta between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.8 is 98.2dBuV/m, so the maximum field strength in restrict band is 98.2-50.44=47.76dBuV/m which is under 54 dBuV/m limit.


RBW 1 MHz
VBW 300 Hz
SWT 840 ms
Marker 4 [T1]
-57.99 dBm
2.360000000 GHz
Att 30 dB
Offset 1 dB
Ref 21 dBm
Marker 1 [T1]
0.94 dBm
2.414000000 GHz
Marker 2 [T1]
-49.95 dBm
2.390000000 GHz
Marker 3 [T1]
-38.16 dBm
2.400000000 GHz
D1 0.94 dBm
D2 -19.06 dBm
1 PK VIEW
LVL
Center 2.371 GHz
10 MHz/
Span 100 MHz

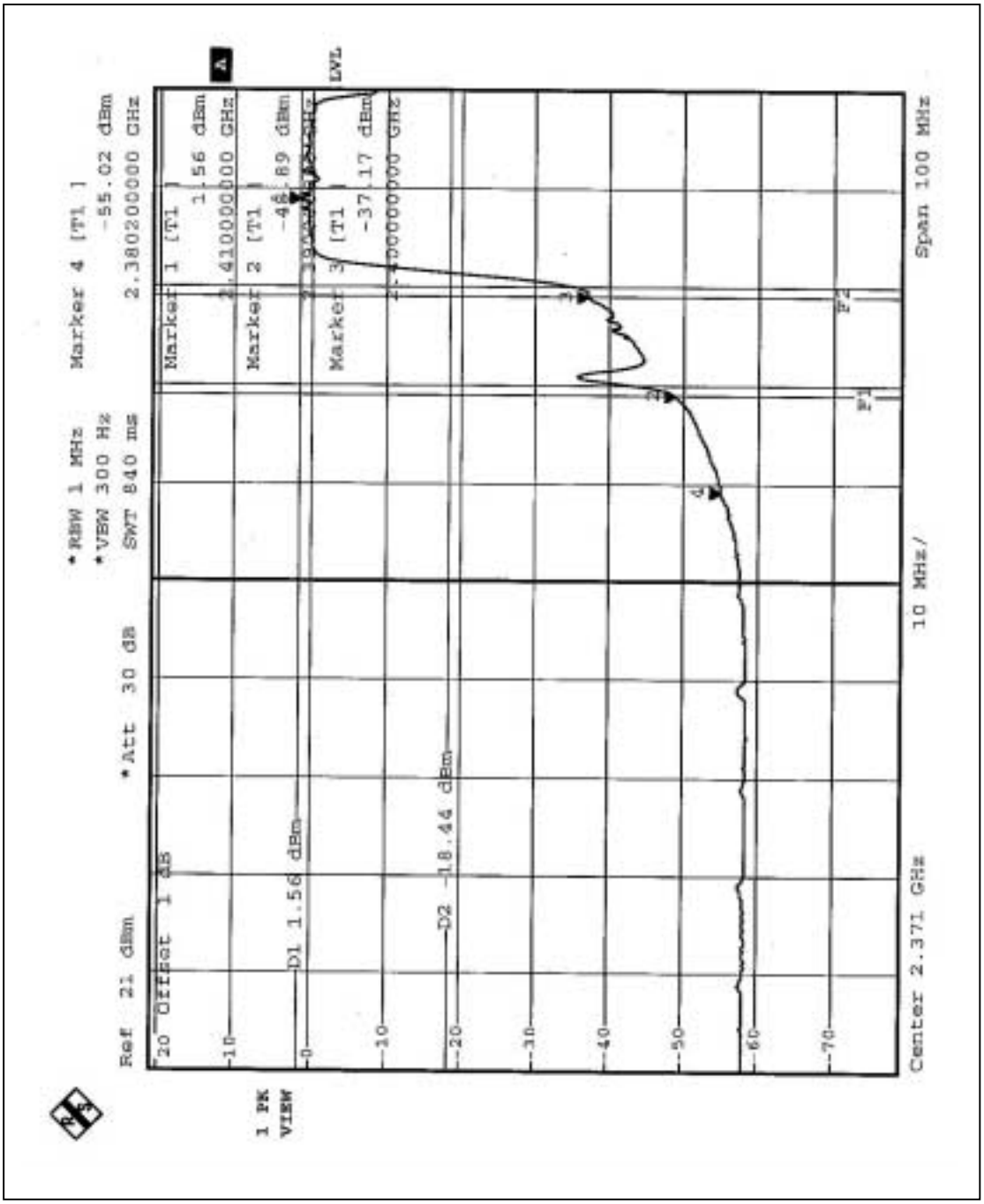

RBW 1 MHz
VBW 300 Hz
SWT 840 ms
Att 30 dB
Offset 1 dB
Ref 21 dBm
Marker 4 [T1]
-58.94 dBm
2.51000000 GHz
Marker 1 [T1]
0.36 dBm
2.46440000 GHz
Marker 2 [T1]
-50.08 dBm
Marker 3 [T1]
-57.87 dBm
D2 19.64 dBm
Center 2.503 GHz
10 MHz/
Span 100 MHz
1 PK
VIEW

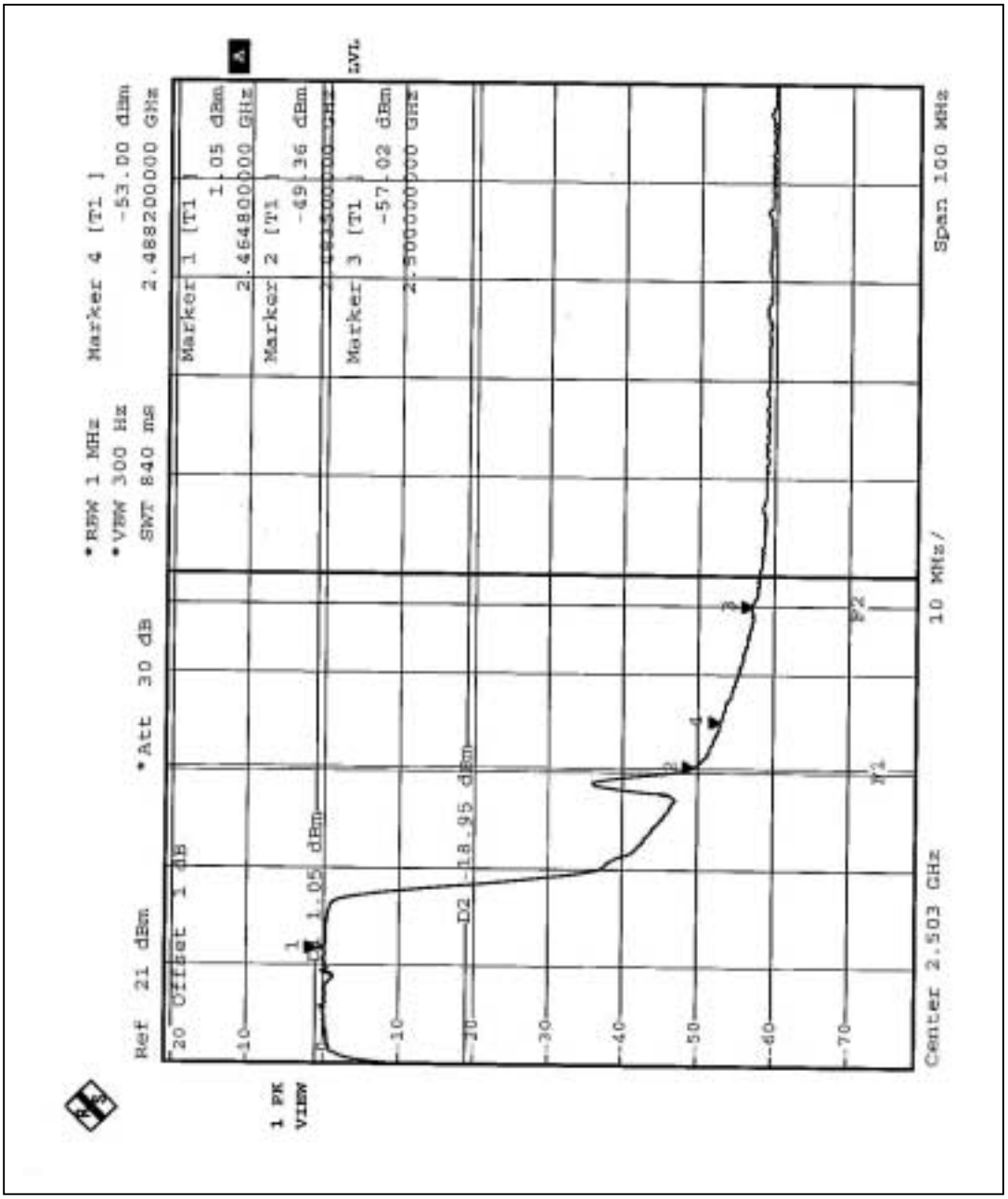
4.6.10 TEST RESULTS-OFDM (Antenna 2)

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

NOTE (1): The band edge emission plot on the following first page shows 50.45dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.8 is 100.9dBuV/m, so the maximum field strength in restrict band is 100.9-50.45=50.45dBuV/m which is under 54 dBuV/m limit.

NOTE (2): The band edge emission plot on the following second page shows 50.41dB delta between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.8 is 100.8dBuV/m, so the maximum field strength in restrict band is 100.8-50.41=50.39dBuV/m which is under 54 dBuV/m limit.


Ref 21 dBm
Offset 1 dB
*Att 30 dB
*VBW 300 Hz
SWT 840 ms
*RBW 1 MHz
Marker 4 [T1]
-55.02 dBm
2.380200000 GHz
Marker 1 [T1]
1.56 dBm
2.410000000 GHz
Marker 2 [T1]
-48.89 dBm
Marker 3 [T1]
-37.17 dBm
D1 1.56 dBm
D2 -18.44 dBm
1 PK
VIEW
Center 2.371 GHz
10 MHz/
Span 100 MHz

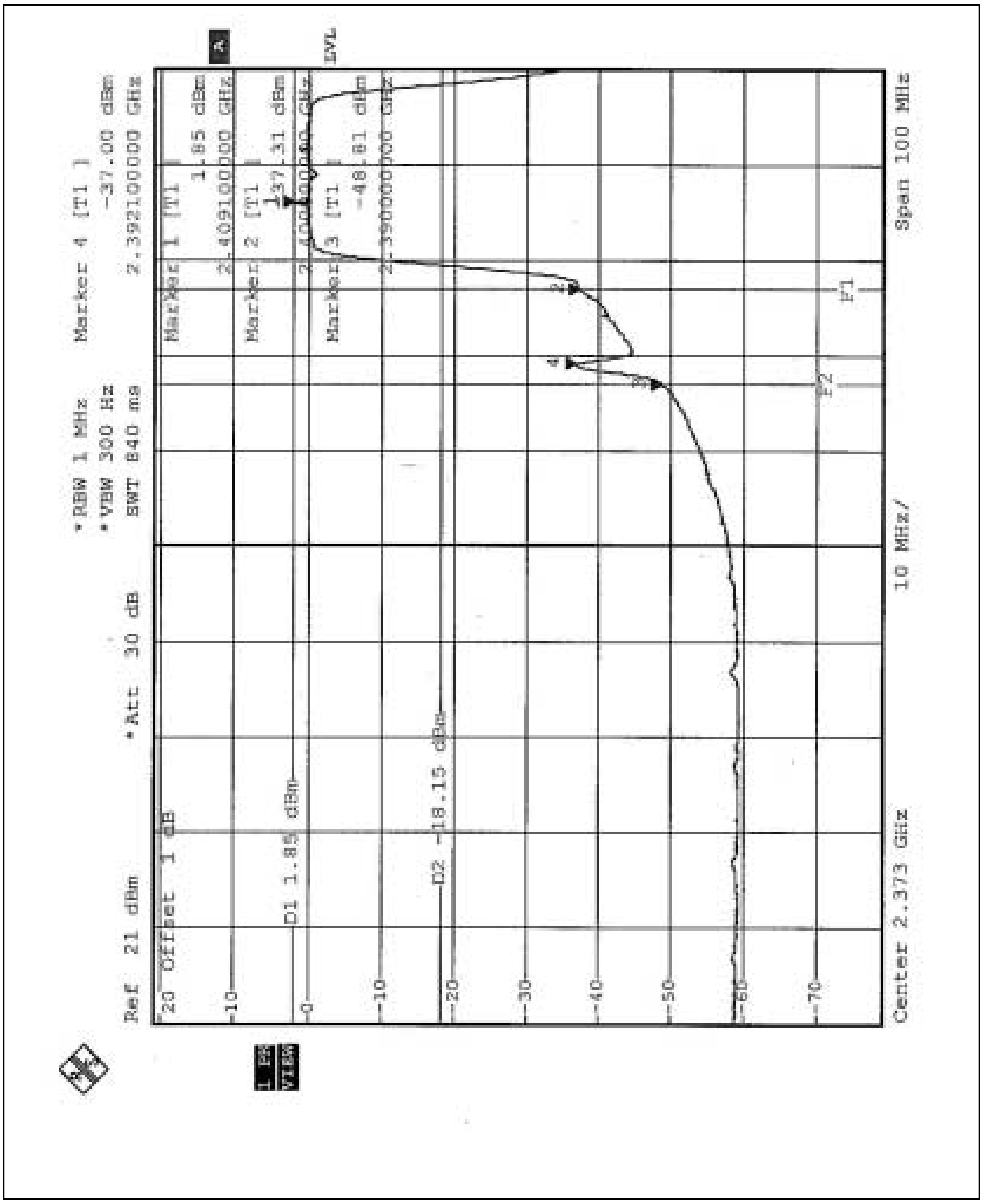

RBW 1 MHz
VBW 300 Hz
SWT 840 ms
Marker 4 [T1]
-53.00 dBm
2.488200000 GHz
Att 30 dB
Offset 1 dB
Ref 21 dBm
Marker 1 [T1]
1.05 dBm
2.464800000 GHz
Marker 2 [T1]
-49.36 dBm
Marker 3 [T1]
-57.02 dBm
D2 -18.95 dBm
1 PK
VIEW
Center 2.503 GHz
10 MHz/
Span 100 MHz

4.6.11 TEST RESULTS-OFDM (Antenna 3)

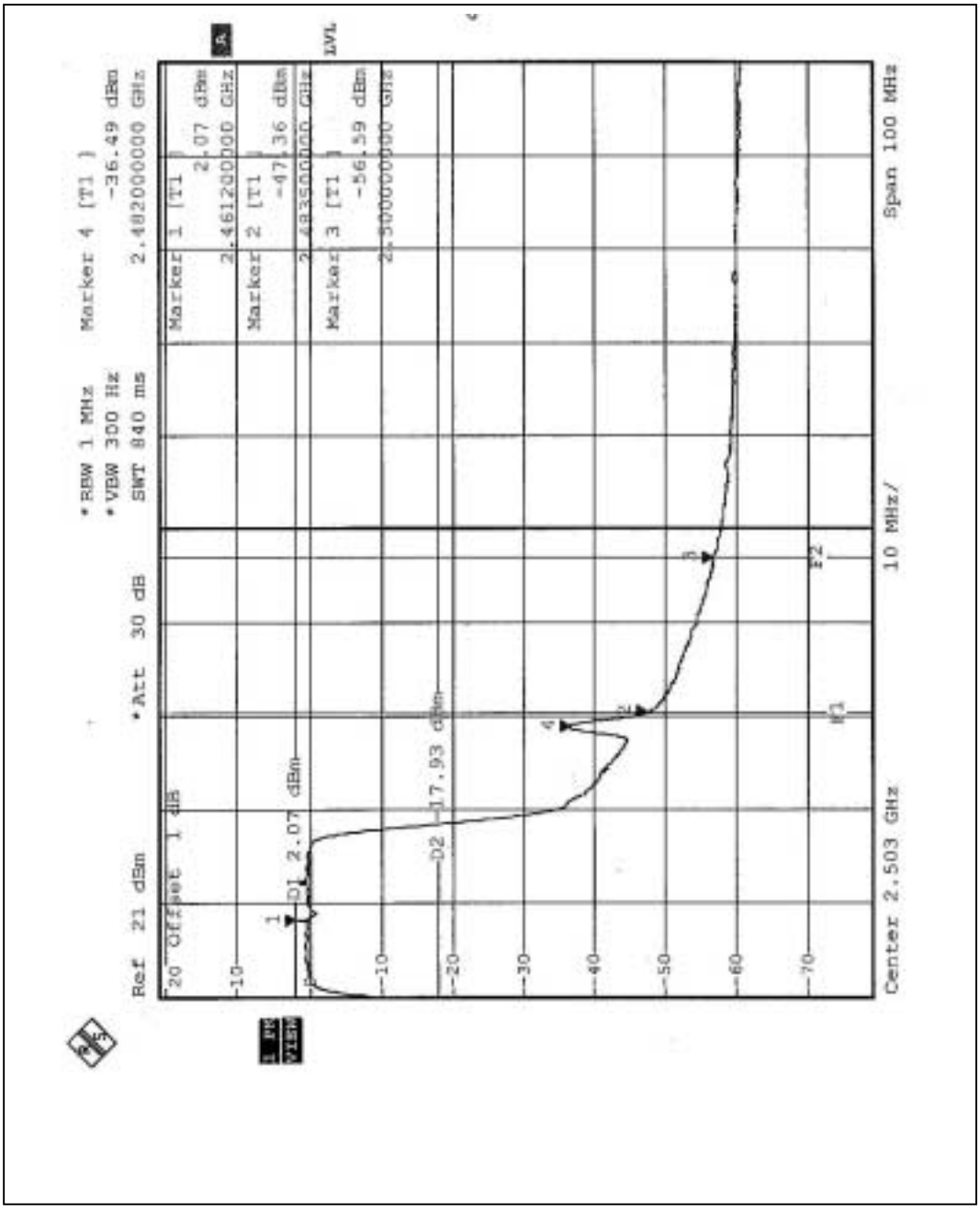
The spectrum plots are attached on the following 2 pages. D1 line indicates the highest level, D2 line indicates the 20dB offset below D1. It shows compliance with the requirement in part 15.247(C).

NOTE (1): The band edge emission plot on the following first page shows 50.66dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.8 is 101.4dBuV/m, so the maximum field strength in restrict band is 101.4-50.66=50.74dBuV/m which is under 54 dBuV/m limit.

NOTE (2): The band edge emission plot on the following second page shows 49.43dB delta between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.8 is 101.9dBuV/m, so the maximum field strength in restrict band is 101.9-49.43=52.47dBuV/m which is under 54 dBuV/m limit.



Ref 21 dBm
*Att 30 dB
*RBW 1 MHz
*VBW 300 Hz
SWT 840 ms
Marker 4 [T1]
-37.00 dBm
2.39210000 GHz
Offset 1 dB
Marker 1 [T1]
1.85 dBm
2.40910000 GHz
Marker 2 [T1]
-37.31 dBm
Marker 3 [T1]
-48.81 dBm
2.39000000 GHz
D1 1.85 dBm
D2 -18.15 dBm
LVL
F1
F2
Center 2.373 GHz
10 MHz/
Span 100 MHz

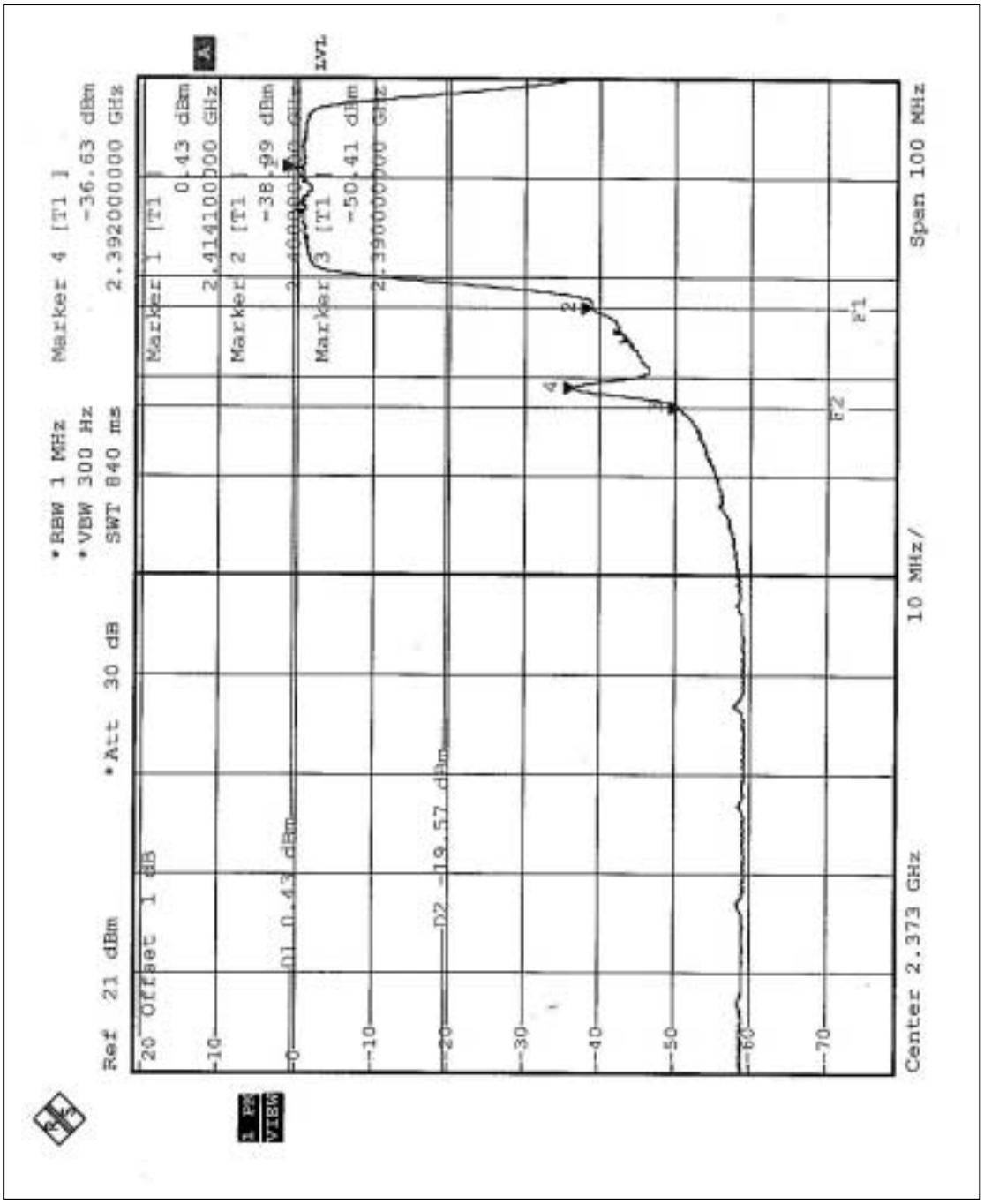

RBW 1 MHz
VBW 300 Hz
SWT 840 ms
Marker 4 [T1]
-36.49 dBm
2.402000000 GHz
Ref 21 dBm
Offset 1 dB
Att 30 dB
Marker 1 [T1]
2.07 dBm
2.461200000 GHz
Marker 2 [T1]
-47.36 dBm
2.483500000 GHz
Marker 3 [T1]
-56.59 dBm
2.500000000 GHz
D1 2.07 dBm
D2 -17.93 dBm
Center 2.503 GHz
10 MHz/
Span 100 MHz

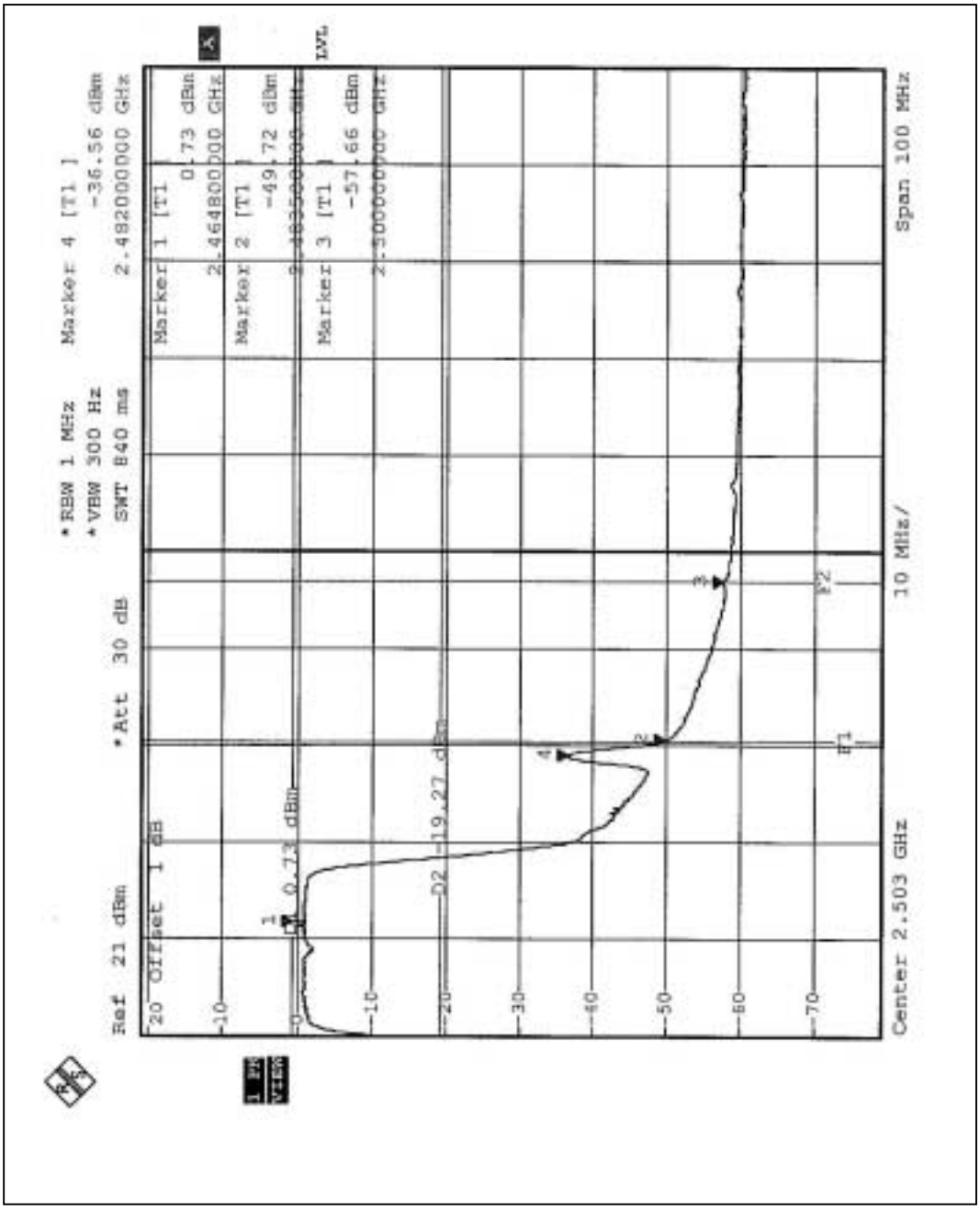
4.6.12 TEST RESULTS-OFDM (Antenna 4)

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

NOTE (1): The band edge emission plot on the following first page shows 50.84dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.8 is 102.3dBuV/m, so the maximum field strength in restrict band is 102.3-50.84=51.46dBuV/m which is under 54 dBuV/m limit.

NOTE (2): The band edge emission plot on the following second page shows 50.45dB delta between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.8 is 100.8dBuV/m, so the maximum field strength in restrict band is 100.8-50.45=50.35dBuV/m which is under 54 dBuV/m limit.


RBW 1 MHz
VBW 300 Hz
SWT 840 ms
Att 30 dB
Ref 21 dBm
Offset 1 dB
Marker 4 [T1]
-36.63 dBm
2.392000000 GHz
Marker 1 [T1
0.43 dBm
2.414100000 GHz
Marker 2 [T1
-38.99 dBm
Marker 3 [T1
-50.41 dBm
2.390000000 GHz
D1 0.43 dBm
D2 -19.57 dBm
Center 2.373 GHz
10 MHz/
Span 100 MHz
PW
VBW


RBW 1 MHz
VBW 300 Hz
SWT 840 ms
Marker 4 [T1]
-36.56 dBm
2.482000000 GHz
Marker 1 [T1]
0.73 dBm
2.464800000 GHz
Marker 2 [T1]
-49.72 dBm
Marker 3 [T1]
-57.66 dBm
Ref 21 dBm
Offset 1 dB
Att 30 dB
0.73 dBm
D2 -19.27 dBm
Center 2.503 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 antennas used in this product are PIFA antenna, Printed Inverse F Antenna without connector and External Antenna with MC connector.

Antenna 1: The maximum Gain of the antenna is 1.99dBi.

Antenna 2: The maximum Gain of the antenna is 2.15dBi.

Antenna 3: The maximum Gain of the antenna is 2.0dBi.

Antenna 4: The maximum Gain of the antenna is 4.0dBi.

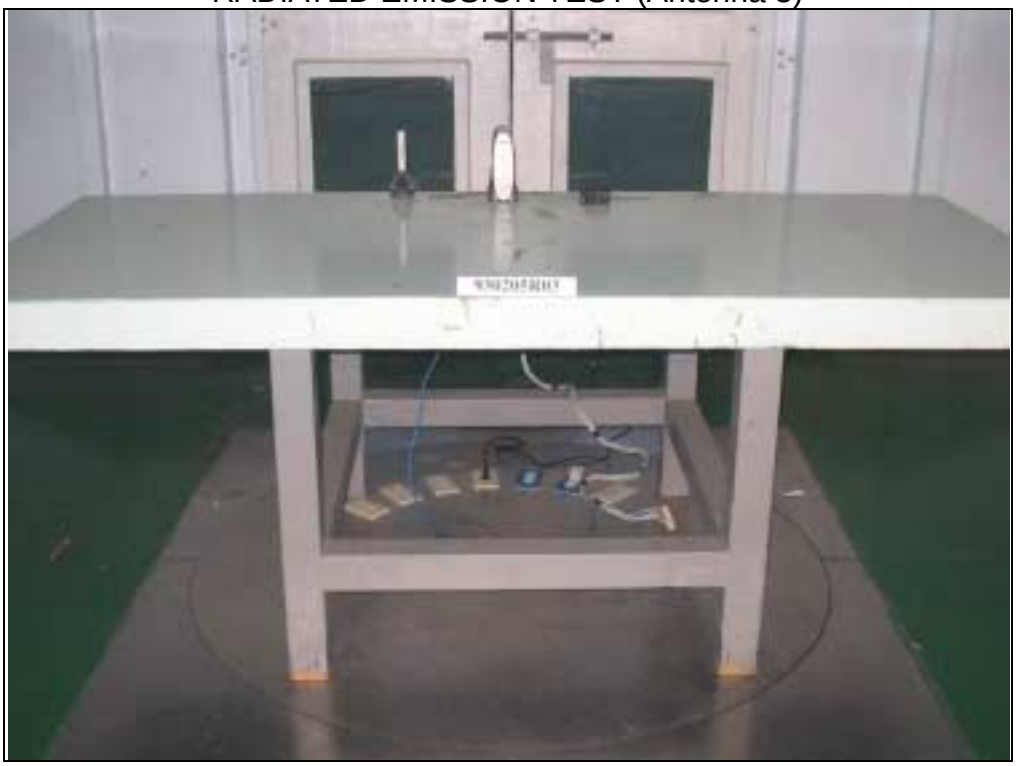
5 PHOTOGRAPHS OF THE TEST CONFIGURATION

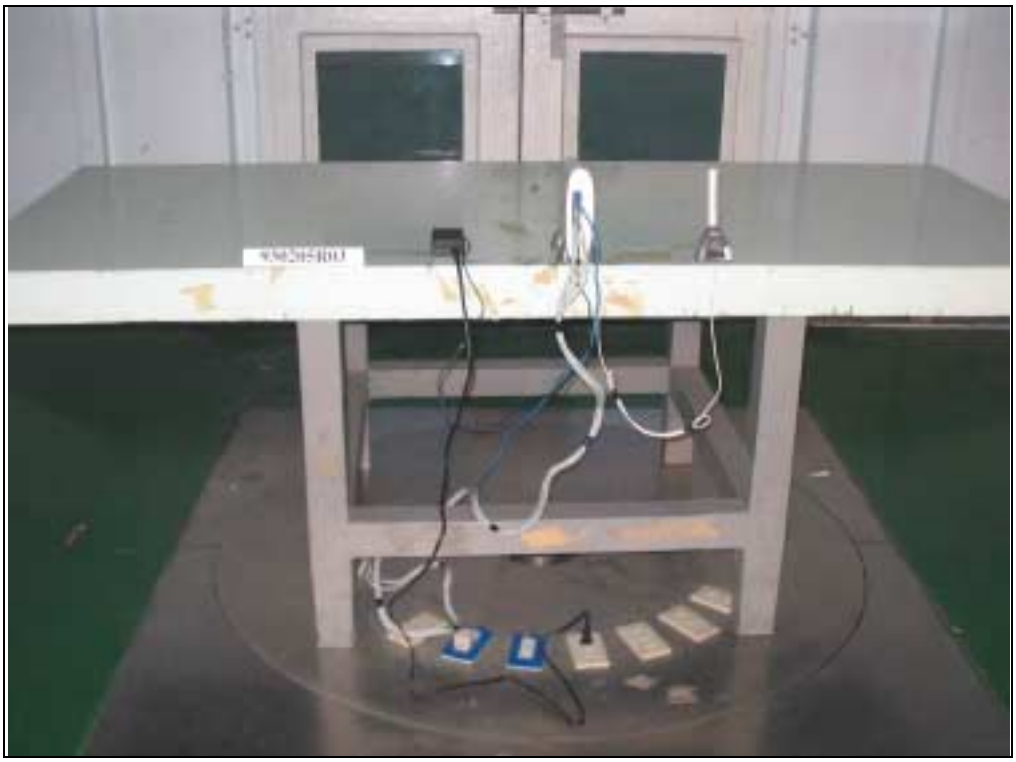
CONDUCTED EMISSION TEST (Adapter 1)

CONDUCTED EMISSION TEST (Adapter 2)

RADIATED EMISSION TEST (Antenna 1 and 2)

RADIATED EMISSION TEST (Antenna 3)





RADIATED EMISSION TEST (Antenna 4)

6 INFORMATION ON THE TESTING LABORATORIES

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

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

Copies of accreditation certificates of our laboratories obtained from approval agencies can be downloaded from our web site: www.adt.com.tw/index.5/phtml. If you have any comments, please feel free to contact us at the following:

Linko EMC/RF Lab:
Tel: 886-2-26052180
Fax: 886-2-26052943

Hsin Chu EMC/RF Lab:
Tel: 886-3-5935343
Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety Lab:
Tel: 886-3-3183232
Fax: 886-3-3185050

Linko RF & Telecom Lab.
Tel: 886-3-3270910
Fax: 886-3-3270892

Email: service@mail.adt.com.tw
Web Site: www.adt.com.tw

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