



FCC TEST REPORT

REPORT NO.: RF910329R01

MODEL NO.: WAP54A

RECEIVED: Mar. 29, 2002

TESTED: Apr. 3~ Apr. 10, 2002

APPLICANT: The Linksys Group, Inc.

ADDRESS: 17401 Armstrong Ave., Irvine, CA 92614

ISSUED BY: Advance Data Technology Corporation

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

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0528
ILAC MRA



Lab Code: 200102-0



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1 CERTIFICATION

PRODUCT : 54Mbps Wireless Access Point
BRAND NAME : Linksys
MODEL NO. : WAP54A
APPLICANT : The Linksys Group, Inc.
STANDARDS : 47 CFR Part 15, Subpart E (Section 15.407),
ANSI C63.4-1992, Canada RSS 210

We, **Advance Data Technology Corporation**, hereby certify that one sample of the designation has been tested in our facility from Apr. 3, 2002 to Apr. 10, 2002, 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.

TESTED BY: Gary Chang, DATE: April 12, 2002
Gary Chang

CHECKED BY: Demi Chen, DATE: April 12, 2002
Demi Chen

APPROVED BY: Alan Lane, DATE: April 12, 2002
Dr. Alan Lane
Manager



2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: 47 CFR Part 15, Subpart E			
Standard Section	Test Type	Result	REMARK
15.407(b)(5)	AC Power Conducted Emission	PASS	Meet the requirement of limit Minimum passing margin is -2.55dBuV at 23.127MHz
15.407(b)(5)	Electric Field Strength Spurious Emissions, 30 MHz – 40000 MHz (Transmitting)	PASS	Meet the requirement of limit Minimum passing margin is -2.00 dBuV at 480.00MHz
15.407(a/1/2/3)	Peak Transmit Power	PASS	Meet the requirement of limit
15.407(a)(6)	Peak Power Excursion	PASS	Meet the requirement of limit
15.407(a/1/2/3)	Peak Power Spectral Density	PASS	Meet the requirement of limit
15.407(b1/2/3)	Effective Isotropic Radiated Power Spurious Emissions, 1 GHz – 40 GHz	PASS	Meet the requirement of limit Minimum passing margin is -5.2dBm at 1.0516.59GHz
15.407(g)	Frequency Stability	PASS	Meet the requirement of limit

3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	54Mbps Wireless Access Point
MODEL NO.	WAP54A
POWER SUPPLY	5.0VDC from AC Adapter
MODULATION TYPE	OFDM
TRANSFER RATE	6 to 54Mbps (Turbo mode: up to 72Mbps)
FREQUENCY RANGE	5180MHz ~ 5320MHz
NUMBER OF CHANNEL	8
OUTPUT POWER	14.79dBm
ANTENNA TYPE	Dipole Antenna
DATA CABLE	NA
I/O PORTS	RJ45 port
ASSOCIATED DEVICES	NA

NOTE:

1. The EUT was operated with power adapter as following

BRAND :	LINKSYS
MODEL :	MS15-050250-A1D
INPUT POWER :	AC100-240V, 50/60Hz, 0.5A
OUTPUT POWER :	DC5.0V, 2.5A

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

3.2 DESCRIPTION OF TEST MODES

Eight channels are provided in this EUT.

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

NOTE:

1. The EUT was transmitting at full power on the specified channel with a duty cycle of 99% (maximum allowed). The EUT was tested in both normal mode (channel bandwidth of approximately 30MHz) and turbo mode (channel bandwidth of approximately 60MHz).
2. "Normal Mode" allows data rates of up to 54Mb/s. The device was, therefore, tested in Normal mode at the data rate that produced the highest output power for normal mode (6Mb/s).
3. "Turbo Mode" allows data rates of up to 72Mb/s. At data rates higher than 12Mb/s 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. (12Mb/s).
4. Channel 1,4,5,8 were chosen for final test.

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a 54Mbps Wireless Access Point. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC CFR 47 Part 15, Subpart E. (15.407)

ANSI C63.4 : 1992, ANSI C63.4-1992, Canada RSS 210

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

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



3.4 DESCRIPTION OF SUPPORT UNITS

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

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	Notebook	Dell	PP01L	TW-09C748-12800-19O-B220	FCC DoC Approved
2	LAN Card	D-Link	DU-E100	UR15001597	NA

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

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

4 TEST TYPES AND RESULTS

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY (MHz)	Class B (dBuV)	
	Quasi-peak	Average
0.45 – 30	48	-

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	ESCS30	834115/016	Mar. 3, 2003
ROHDE & SCHWARZ Artificial Mains Network (For EUT)	ESH3-Z5	847265/023	Jan. 10, 2003
* ROHDE & SCHWARZ 4-wire ISN	ENY41	838119/028	Dec. 10, 2002
* ROHDE & SCHWARZ 2-wire ISN	ENY22	837497/018	Dec. 10, 2002
EMCO L.I.S.N. (For peripherals)	3825/2	9504-2359	July 10, 2002
Software	Cond-V2L	NA	NA
RF cable (JYEBAO)	5D-FB	Cable-C03.01	July 11, 2002
Terminator (For EMCO LISN)	NA	E1-01-300	Feb. 20, 2003
Terminator (For EMCO LISN)	NA	E1-01-301	Feb. 20, 2003
Shielded Room	Site 3	ADT-C03	NA
VCCI Site Registration No.	Site 3	C-274	NA

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

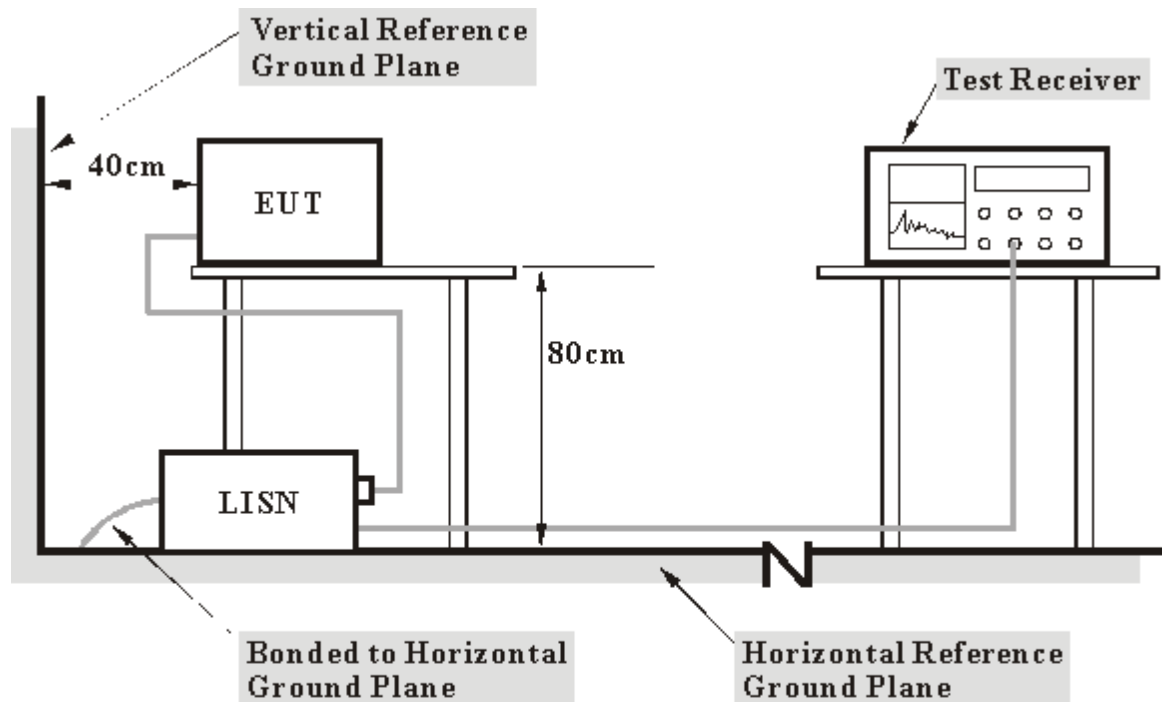
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

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

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 450 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. 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 test program to enable EUT under transmission/receiving condition continuously at specific channel frequency via an RJ 45 cable.
- d. The communication partner sent data to EUT by command "PIN".

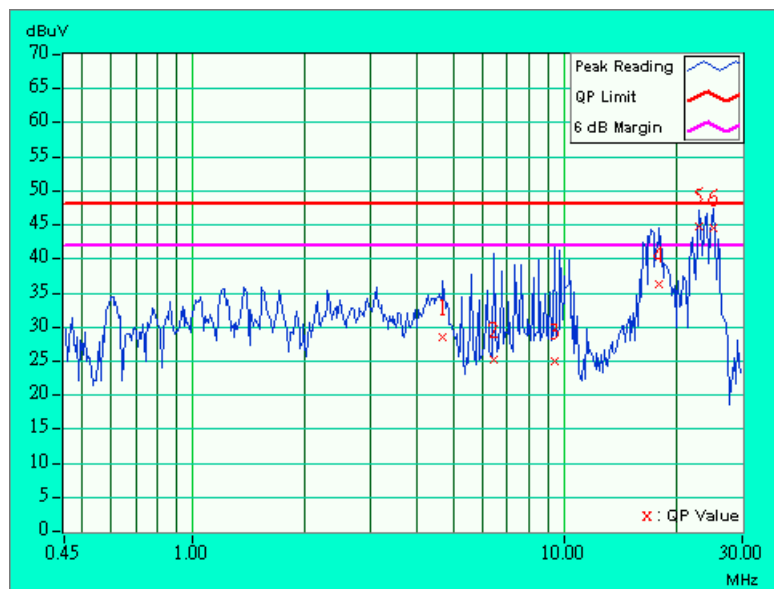
4.1.6 TEST RESULTS (TRANSMITTING)

EUT	54Mbps Wireless Access Point	MODEL	WAP54A
MODE	Normal	6dB BANDWIDTH	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1005 hPa	TESTED BY: Gary 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	4.699	0.31	28.08	-	28.39	-	48.00	-	-19.61	-
2	6.469	0.34	24.66	-	25.00	-	48.00	-	-23.00	-
3	9.402	0.39	24.47	-	24.86	-	48.00	-	-23.14	-
4	17.939	0.56	35.71	-	36.27	-	48.00	-	-11.73	-
5	22.951	0.54	44.32	-	44.86	-	48.00	-	-3.14	-
6	25.021	0.50	43.93	-	44.43	-	48.00	-	-3.57	-

NOTE:

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

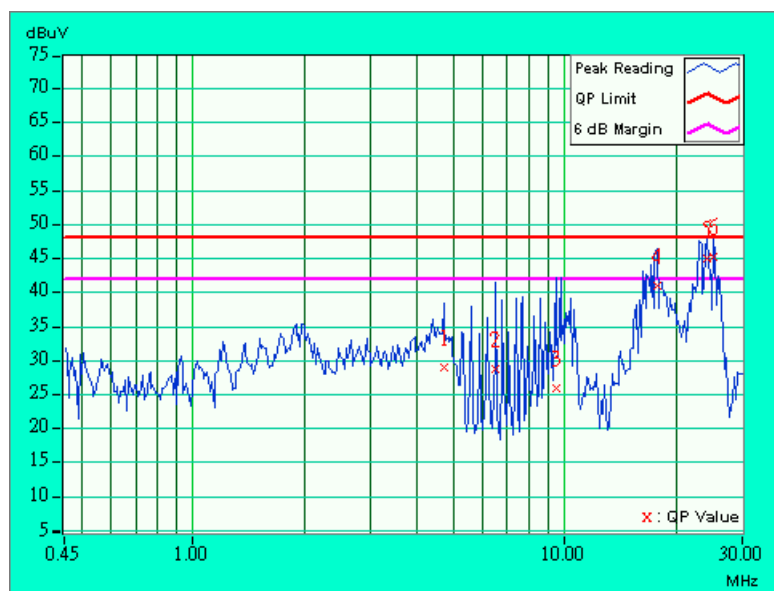


EUT	54Mbps Wireless Access Point	MODEL	WAP54A
MODE	Normal	6dB BANDWIDTH	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	20deg. C, 70%RH, 1005 hPa	TESTED BY: Gary Chang	

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	4.715	0.31	27.92	-	28.23	-	48.00	-	-19.77	-
2	6.492	0.34	27.66	-	28.00	-	48.00	-	-20.00	-
3	9.441	0.39	24.93	-	25.32	-	48.00	-	-22.68	-
4	17.721	0.76	40.06	-	40.82	-	48.00	-	-7.18	-
5	24.206	0.98	44.12	-	45.10	-	48.00	-	-2.90	-
6	25.100	1.01	44.35	-	45.36	-	48.00	-	-2.64	-

NOTE:

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

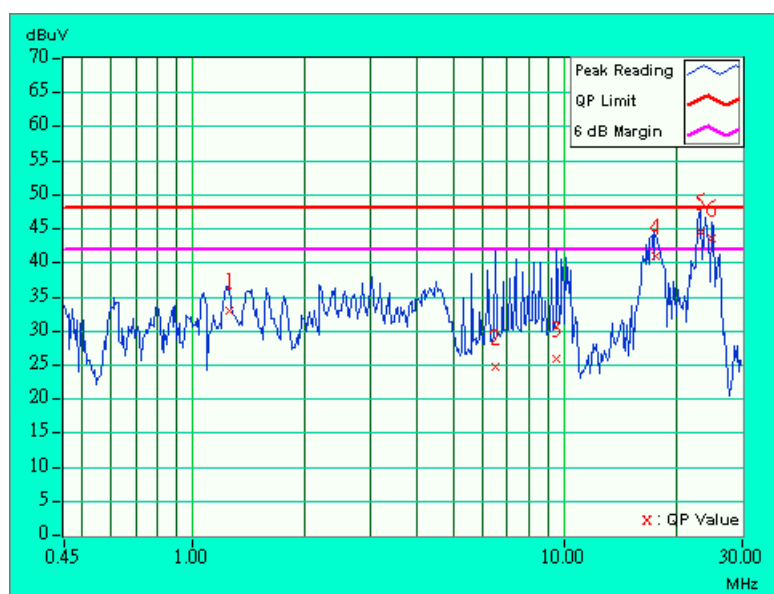


EUT	54Mbps Wireless Access Point	MODEL	WAP54A
MODE	Turbo	6dB BANDWIDTH	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1005 hPa	TESTED BY: Gary Chang	

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	1.246	0.20	32.43	-	32.63	-	48.00	-	-15.37	-
2	6.504	0.34	24.33	-	24.67	-	48.00	-	-23.33	-
3	9.469	0.39	25.49	-	25.88	-	48.00	-	-22.12	-
4	17.475	0.55	40.43	-	40.98	-	48.00	-	-7.02	-
5	23.097	0.54	44.00	-	44.54	-	48.00	-	-3.46	-
6	24.879	0.50	43.13	-	43.63	-	48.00	-	-4.37	-

NOTE:

6. QP. and AV. are abbreviations of quasi-peak and average individually.
7. "-": NA
8. The emission levels of other frequencies were very low against the limit.
9. Margin value = Emission level - Limit value
10. Emission Level = Reading Value + Correction Factor.

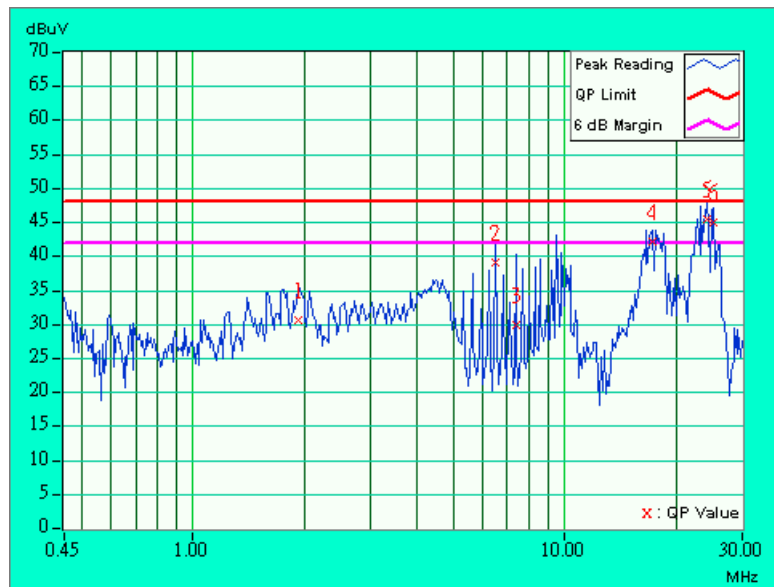


EUT	54Mbps Wireless Access Point	MODEL	WAP54A
MODE	Turbo	6dB BANDWIDTH	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	20deg. C, 70%RH, 1005 hPa	TESTED BY: Gary Chang	

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	1.918	0.20	29.69	-	29.89	-	48.00	-	-18.11	-
2	6.520	0.34	38.10	-	38.44	-	48.00	-	-9.56	-
3	7.406	0.36	28.98	-	29.34	-	48.00	-	-18.66	-
4	17.195	0.73	41.17	-	41.90	-	48.00	-	-6.10	-
5	24.009	0.98	44.40	-	45.38	-	48.00	-	-2.62	-
6	25.196	1.02	43.99	-	45.01	-	48.00	-	-2.99	-

NOTE:

6. QP. and AV. are abbreviations of quasi-peak and average individually.
7. "-": NA
8. The emission levels of other frequencies were very low against the limit.
9. Margin value = Emission level - Limit value
10. Emission Level = Reading Value + Correction Factor.



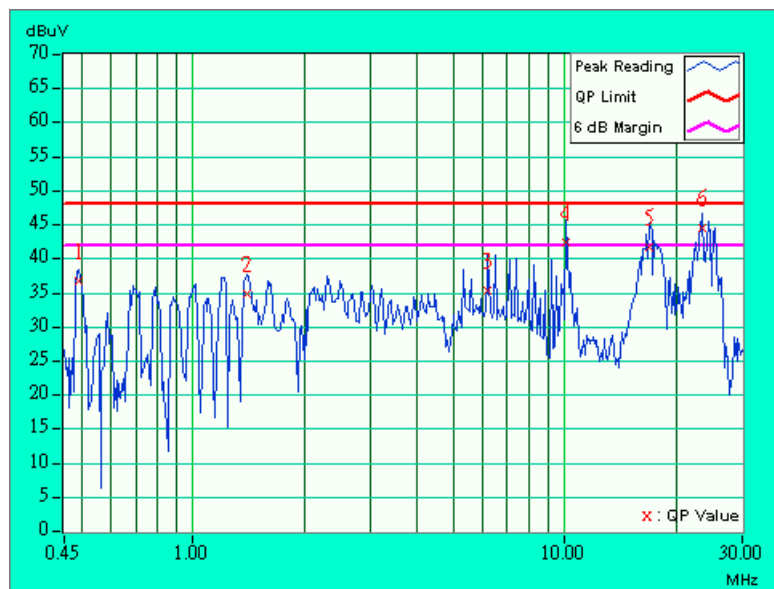
4.1.7 TEST RESULTS (RECEIVING)

EUT	54Mbps Wireless Access Point	MODEL	WAP54A
MODE	Normal	6dB BANDWIDTH	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1005 hPa	TESTED BY: Gary 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	0.493	0.12	36.31	-	36.43	-	48.00	-	-11.57	-
2	1.395	0.20	34.30	-	34.50	-	48.00	-	-13.50	-
3	6.211	0.34	34.72	-	35.06	-	48.00	-	-12.94	-
4	10.060	0.40	41.97	-	42.37	-	48.00	-	-5.63	-
5	16.867	0.54	41.15	-	41.69	-	48.00	-	-6.31	-
6	23.375	0.53	44.09	-	44.62	-	48.00	-	-3.38	-

NOTE:

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

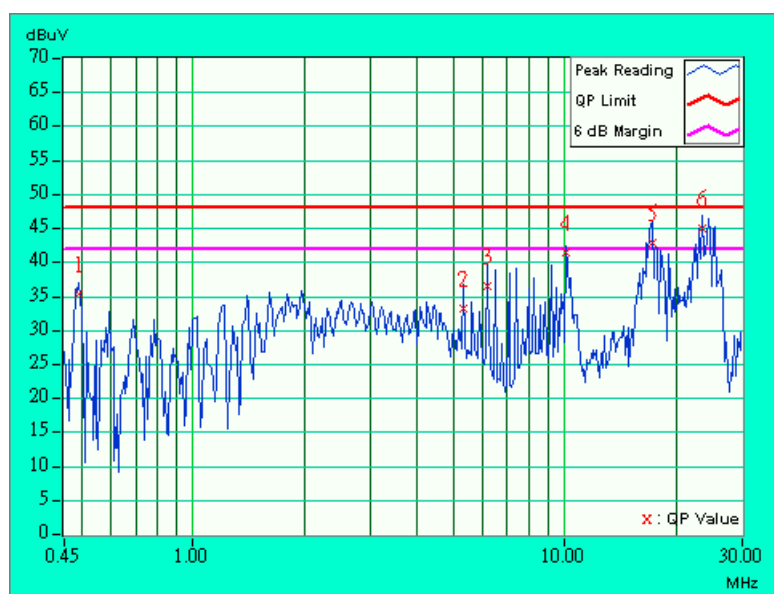


EUT	54Mbps Wireless Access Point	MODEL	WAP54A
MODE	Normal	6dB BANDWIDTH	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 1005 hPa	TESTED BY: Gary Chang	

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	0.493	0.12	34.46	-	34.58	-	48.00	-	-13.42	-
2	5.320	0.32	32.15	-	32.47	-	48.00	-	-15.53	-
3	6.207	0.34	35.45	-	35.79	-	48.00	-	-12.21	-
4	10.053	0.40	40.44	-	40.84	-	48.00	-	-7.16	-
5	17.146	0.73	42.03	-	42.76	-	48.00	-	-5.24	-
6	23.359	0.97	44.15	-	45.12	-	48.00	-	-2.88	-

NOTE:

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

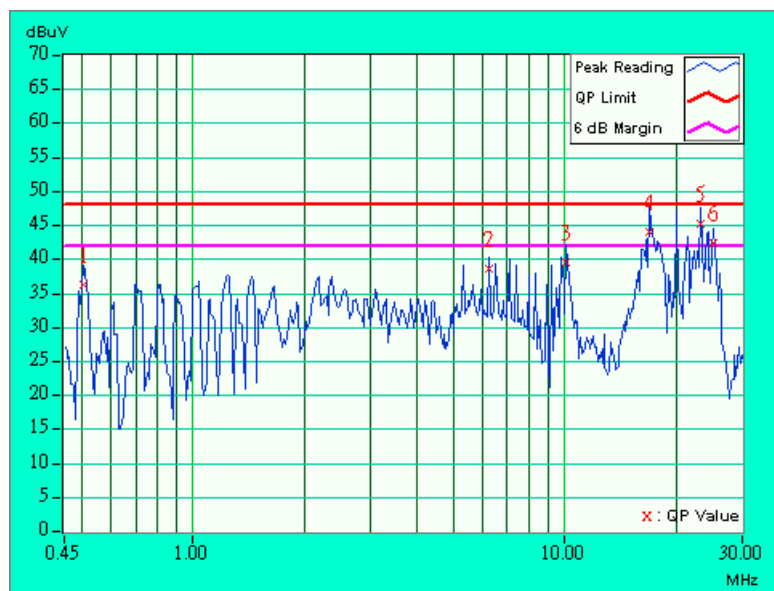


EUT	54Mbps Wireless Access Point	MODEL	WAP54A
MODE	Turbo	6dB BANDWIDTH	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1005 hPa	TESTED BY: Gary Chang	

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	0.509	0.12	35.82	-	35.94	-	48.00	-	-12.06	-
2	6.227	0.34	38.06	-	38.40	-	48.00	-	-9.60	-
3	10.082	0.40	39.02	-	39.42	-	48.00	-	-8.58	-
4	16.899	0.54	43.47	-	44.01	-	48.00	-	-3.99	-
5	23.128	0.54	44.70	-	45.24	-	48.00	-	-2.76	-
6	25.200	0.50	41.94	-	42.44	-	48.00	-	-5.56	-

NOTE:

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

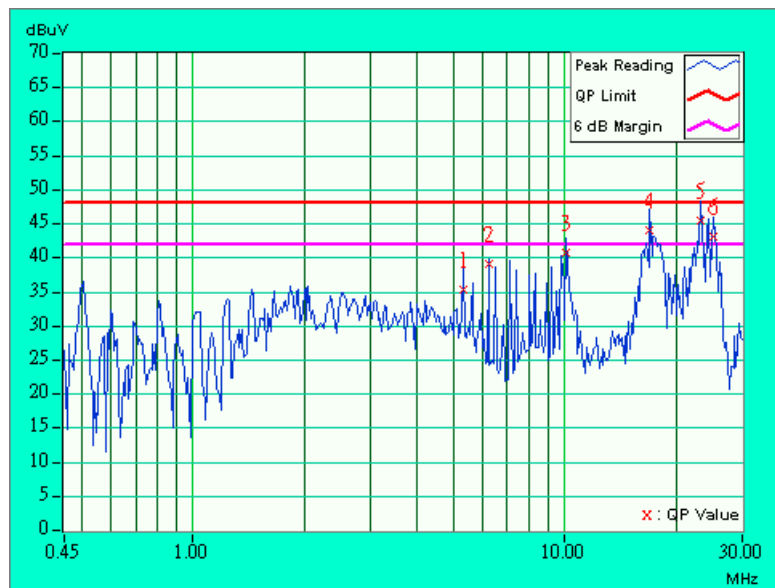


EUT	54Mbps Wireless Access Point	MODEL	WAP54A
MODE	Turbo	6dB BANDWIDTH	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1005 hPa	TESTED BY: Gary Chang	

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	5.336	0.32	34.22	-	34.54	-	48.00	-	-13.46	-
2	6.227	0.34	38.00	-	38.34	-	48.00	-	-9.66	-
3	10.080	0.40	39.83	-	40.23	-	48.00	-	-7.77	-
4	16.902	0.71	43.07	-	43.78	-	48.00	-	-4.22	-
5	23.127	0.96	44.49	-	45.45	-	48.00	-	-2.55	-
6	25.202	1.02	42.22	-	43.24	-	48.00	-	-4.76	-

NOTE:

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



4.2 RADIATED EMISSION MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

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	8590L	3544A01176	May 7, 2002
* HP Preamplifier	8447D	2944A08485	May 7, 2002
* HP Preamplifier	8449B	3008A01201	Dec. 06, 2002
* HP Preamplifier	8449B	3008A01292	Aug. 21, 2002
* ROHDE & SCHWARZ TEST RECEIVER	ESMI	839013/007 839379/002	Jan. 27, 2003
SCHWARZBECK Tunable Dipole Antenna	VHA 9103 UHA 9105	E101051 E101055	Nov. 23, 2002
* CHASE BILOG Antenna	CBL6112A	2221	Aug. 2, 2002
* SCHWARZBECK Horn Antenna	BBHA9120-D1	D130	July 6, 2002
* EMCO Horn Antenna	3115	9312-4192	April 15, 2002
* EMCO Turn Table	1060	1115	NA
* SHOSHIN Tower	AP-4701	A6Y005	NA
* Software	AS61D4	NA	NA
* ANRITSU RF Switches	MP59B	M35046	Aug. 2, 2002
* TIMES RF cable	LMR-600	CABLE-ST5-01	Aug. 2, 2002
Antenna (Horn)	BBHA9120-D	D130	July 10, 2002
Open Field Test Site	Site 5	ADT-R05	July 28, 2002
VCCI Site Registration No.	Site 5	R-1039	NA
Site Registration No.	FCC: 90422 Canada IC: IC 3789 VCCI : R-1039		

- NOTE:** 1. The measurement uncertainty is less than +/- 3.0dB, 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.
3. "*" = These equipment are used for the final measurement.
4. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz.



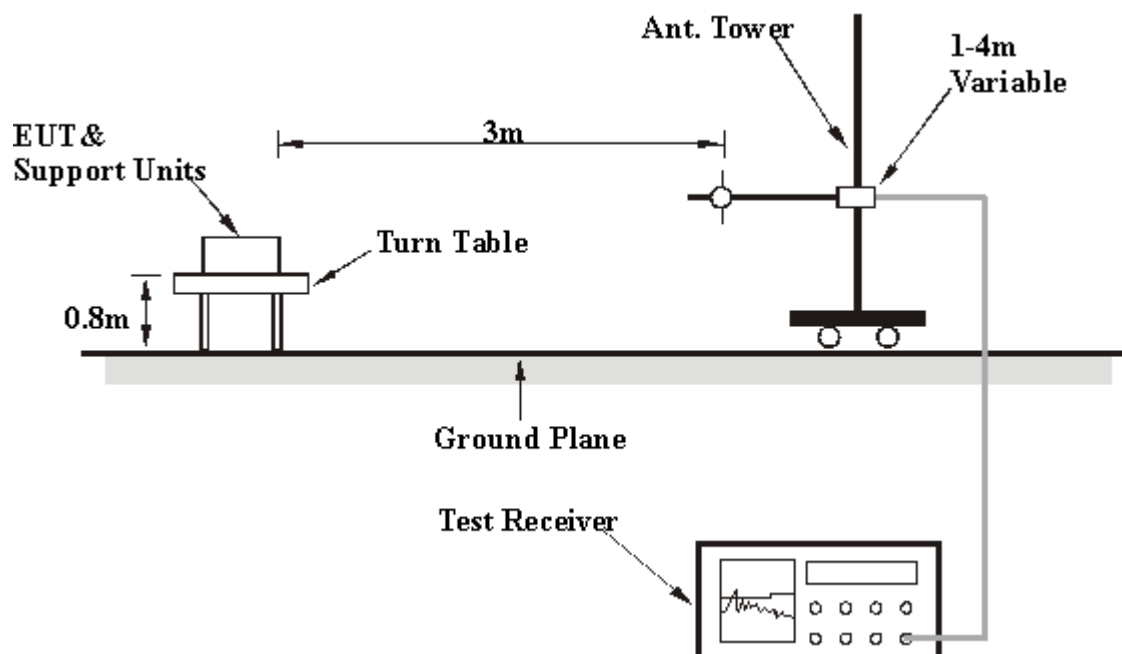
4.2.3 TEST PROCEDURES

- 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

Same as 4.1.5.

4.2.6 TEST RESULTS(TRANSMITTING)

EUT	54Mbps Wireless Access Point	MODEL	WAP54A
MODE	Normal Mode	CHANNEL	1
FREQUENCY RANGE	30-1000 MHz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Gary Chang		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	191.97	27.8 QP	43.50	-15.70	2.06H	358	44.48	8.95	1.39	27.00	16.65
2	319.99	23.5 QP	46.00	-22.50	1.25H	3	34.90	13.62	1.95	27.00	11.43
3	416.00	29.8 QP	46.00	-16.20	1.67H	326	38.35	16.18	2.29	27.00	8.52
4	448.00	30.5 QP	46.00	-15.50	1.84H	96	38.70	16.35	2.40	27.00	8.25
5	480.00	44.0 QP	46.00	-2.00	1.04H	58	24.60	16.92	2.47	0.00	-19.38
6	512.00	40.0 QP	46.00	-6.00	1.04H	357	47.08	17.42	2.55	27.00	7.04
7	512.01	37.3 QP	46.00	-8.70	1.00H	348	44.35	17.42	2.55	27.00	7.03
8	544.01	25.9 QP	46.00	-20.10	1.68H	16	32.36	17.86	2.66	27.00	6.48
9	576.00	37.1 QP	46.00	-8.90	1.25H	3	43.08	18.28	2.76	27.00	5.96
10	608.00	33.5 QP	46.00	-12.50	1.58H	4	38.93	18.70	2.86	27.00	5.45
11	640.00	34.8 QP	46.00	-11.20	1.65H	358	39.72	19.12	2.99	27.00	4.89
12	672.01	33.0 QP	46.00	-13.00	1.02H	3	37.65	19.27	3.08	27.00	4.66
13	736.01	35.9 QP	46.00	-10.10	1.16H	20	39.78	19.93	3.23	27.00	3.85
14	768.01	35.0 QP	46.00	-11.00	1.13H	342	38.37	20.36	3.28	27.00	3.36
15	864.01	40.5 QP	46.00	-5.50	1.05H	32	43.38	20.57	3.52	27.00	2.91
16	960.01	32.9 QP	54.00	-21.10	1.34H	294	34.85	21.24	3.79	27.00	1.96

NOTE:

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

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	160.00	25.4 QP	43.50	-18.10	1.16V	101	41.51	9.62	1.26	27.00	16.11
2	288.00	30.0 QP	46.00	-16.00	1.28V	3	42.35	12.88	1.81	27.00	12.31
3	384.01	33.4 QP	46.00	-12.60	1.54V	353	42.73	15.50	2.18	27.00	9.33
4	416.00	34.0 QP	46.00	-12.00	1.28V	4	42.50	16.18	2.29	27.00	8.52
5	448.01	34.1 QP	46.00	-11.90	1.11V	354	42.33	16.35	2.40	27.00	8.25
6	480.01	43.7 QP	46.00	-2.30	1.46V	126	51.33	16.92	2.47	27.00	7.63
7	576.01	39.0 QP	46.00	-7.00	1.76V	97	44.92	18.28	2.76	27.00	5.96
8	608.01	33.6 QP	46.00	-12.40	1.92V	328	39.07	18.70	2.86	27.00	5.44
9	640.01	32.3 QP	46.00	-13.70	1.84V	353	37.17	19.12	2.99	27.00	4.89
10	672.01	32.7 QP	46.00	-13.30	1.46V	22	37.33	19.27	3.08	27.00	4.65
11	800.01	28.9 QP	46.00	-17.10	1.21V	357	31.91	20.69	3.32	27.00	2.99
12	864.01	32.7 QP	46.00	-13.30	1.07V	3	35.65	20.57	3.52	27.00	2.91
13	960.01	34.7 QP	54.00	-18.30	1.48V	32	36.68	21.24	3.79	27.00	1.96

NOTE:

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



EUT	54Mbps Wireless Access Point	MODEL	WAP54A
MODE	Normal Mode	CHANNEL	1
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Gary Chang		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	1344.00	51.4 PK	74.00	-22.60	1.06H	30	58.00	25.22	3.71	35.52	6.60
2	1728.00	47.1 PK	74.00	-26.90	1.36H	18	51.00	25.38	5.83	35.12	3.92
3	2112.00	43.7 PK	74.00	-30.30	1.44H	176	48.00	25.62	5.02	34.90	4.26
4	2688.00	46.7 PK	74.00	-27.30	1.21H	2	48.50	28.00	5.15	34.94	1.79.

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	1151.00	43.7 PK	74.00	-30.30	1.98V	98	51.20	24.81	3.47	35.76	7.49
2	1344.00	46.4 PK	74.00	-27.60	1.18V	326	53.00	25.22	3.71	35.52	6.60
3	1728.00	48.1 PK	74.00	-25.90	1.27V	2	52.00	25.38	5.83	35.12	3.93
4	2112.00	43.7 PK	74.00	-30.30	1.07V	352	48.00	25.62	5.02	34.90	4.26
5	2688.00	45.2 PK	74.00	-28.80	1.00V	3	47.00	28.00	5.15	34.94	1.79.

NOTE:

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



EUT	54Mbps Wireless Access Point	MODEL	WAP54A
MODE	Normal Mode	CHANNEL	4
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Gary Chang		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	1264.00	43.9 PK	74.00	-30.10	1.16H	44	51.00	25.01	3.50	35.64	7.13
2	1342.00	42.6 PK	74.00	-31.40	1.12H	178	49.20	25.22	3.71	35.52	6.60
3	1920.00	46.9 PK	74.00	-27.10	1.43H	358	51.40	25.17	5.27	34.95	4.52
4	2110.00	44.7 PK	74.00	-29.30	1.05H	118	49.00	25.62	5.02	34.90	4.26
5	2687.00	46.9 PK	74.00	-27.10	1.40H	351	48.70	28.00	5.15	34.94	1.79

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	1150.00	42.5 PK	74.00	-31.50	1.38V	188	50.00	24.81	3.47	35.76	7.49
2	1246.00	40.9 PK	74.00	-23.10	1.42V	327	48.00	25.01	3.50	35.64	7.13
3	1342.00	45.4 PK	74.00	-28.60	1.35V	100	52.00	25.22	3.71	35.52	6.60
4	1726.00	47.5 PK	74.00	-26.50	1.12V	288	51.40	25.38	5.83	35.12	3.92
5	1918.00	45.5 PK	74.00	-28.50	1.07V	343	50.00	25.17	5.27	34.95	4.52
6	2112.00	46.7 PK	74.00	-27.30	1.00V	167	51.00	25.62	5.02	34.90	4.26
7	2688.00	46.9 PK	74.00	-27.10	1.35V	111	48.70	28.00	5.15	34.94	1.79

NOTE:

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



EUT	54Mbps Wireless Access Point	MODEL	WAP54A
MODE	Normal Mode	CHANNEL	5
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Gary Chang		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	1246.00	44.9 PK	74.00	-29.10	1.22H	301	52.00	25.01	3.50	35.64	7.13
2	1341.00	47.4 PK	74.00	-26.60	1.28H	352	54.00	25.22	3.71	35.52	6.60
3	1726.00	43.1 PK	74.00	-30.90	1.18H	5	47.00	25.38	5.83	35.12	3.92
4	2110.00	47.1 PK	74.00	-26.90	1.31H	354	51.40	25.62	5.02	34.90	4.26

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	1150.00	44.5 PK	74.00	-29.50	1.27V	48	52.00	24.81	3.47	35.76	7.49
2	1341.00	44.4 PK	74.00	-29.60	1.27V	4	51.00	25.22	3.71	35.52	6.61
3	1742.00	49.1 PK	74.00	-24.90	1.22V	144	53.00	25.38	5.83	35.12	3.92
4	1920.00	46.5 PK	74.00	-27.50	1.20V	234	51.00	25.17	5.27	34.95	4.52
5	2112.00	45.7 PK	74.00	-28.30	1.08V	5	50.00	25.62	5.02	34.90	4.26
6	2879.00	48.7 PK	74.00	-25.30	1.38V	177	50.00	28.34	5.32	34.97	1.32
7	3167.00	44.4 PK	74.00	-29.60	1.13V	4	45.00	28.57	5.75	34.93	0.62

NOTE:

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



EUT	54Mbps Wireless Access Point	MODEL	WAP54A
MODE	Normal Mode	CHANNEL	8
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Gary Chang		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	1244.00	42.9 PK	74.00	-31.10	1.13H	195	50.00	25.01	3.50	35.64	7.13
2	1348.00	44.4 PK	74.00	-29.60	1.10H	232	51.00	25.22	3.71	35.52	6.60
3	1784.00	44.9 PK	74.00	-29.10	1.11H	140	48.90	25.34	5.75	35.09	4.01
4	2110.00	45.7 PK	74.00	-28.30	1.08H	90	50.00	25.62	5.02	34.90	4.26

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	1150.00	42.5 PK	74.00	-31.50	1.10V	61	50.00	24.81	3.47	35.76	7.49
2	1348.00	44.4 PK	74.00	-29.60	1.13V	5	51.00	25.22	3.71	35.52	6.60
3	1746.00	46.4 PK	74.00	-27.60	1.05V	122	50.40	25.34	5.75	35.09	4.01
4	1920.00	44.5 PK	74.00	-29.50	1.13V	170	49.00	25.17	5.27	34.95	4.52
5	2110.00	43.7 PK	74.00	-30.30	1.22V	234	48.00	25.62	5.02	34.90	4.26

NOTE:

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

EUT	54Mbps Wireless Access Point	MODEL	WAP54A
MODE	Turbo Mode	CHANNEL	1
FREQUENCY RANGE	30-1000 MHz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Gary Chang		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	191.97	27.8 QP	43.50	-15.70	2.06H	358	44.48	8.95	1.39	27.00	16.65
2	319.99	23.5 QP	46.00	-22.50	1.25H	3	34.90	13.62	1.95	27.00	11.43
3	416.00	29.8 QP	46.00	-16.20	1.67H	326	38.35	16.18	2.29	27.00	8.52
4	448.00	30.5 QP	46.00	-15.50	1.84H	96	38.70	16.35	2.40	27.00	8.25
5	480.00	44.0 QP	46.00	-2.00	1.04H	58	24.60	16.92	2.47	0.00	-19.38
6	512.00	40.0 QP	46.00	-6.00	1.04H	357	47.08	17.42	2.55	27.00	7.04
7	512.01	37.3 QP	46.00	-8.70	1.00H	348	44.35	17.42	2.55	27.00	7.03
8	544.01	25.9 QP	46.00	-20.10	1.68H	16	32.36	17.86	2.66	27.00	6.48
9	576.00	37.1 QP	46.00	-8.90	1.25H	3	43.08	18.28	2.76	27.00	5.96
10	608.00	33.5 QP	46.00	-12.50	1.58H	4	38.93	18.70	2.86	27.00	5.45
11	640.00	34.8 QP	46.00	-11.20	1.65H	358	39.72	19.12	2.99	27.00	4.89
12	672.01	33.0 QP	46.00	-13.00	1.02H	3	37.65	19.27	3.08	27.00	4.66
13	736.01	35.9 QP	46.00	-10.10	1.16H	20	39.78	19.93	3.23	27.00	3.85
14	768.01	35.0 QP	46.00	-11.00	1.13H	342	38.37	20.36	3.28	27.00	3.36
15	864.01	40.5 QP	46.00	-5.50	1.05H	32	43.38	20.57	3.52	27.00	2.91
16	960.01	32.9 QP	54.00	-21.10	1.34H	294	34.85	21.24	3.79	27.00	1.96

NOTE:

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

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	160.00	25.4 QP	43.50	-18.10	1.16V	101	41.51	9.62	1.26	27.00	16.11
2	288.00	30.0 QP	46.00	-16.00	1.28V	3	42.35	12.88	1.81	27.00	12.31
3	384.01	33.4 QP	46.00	-12.60	1.54V	353	42.73	15.50	2.18	27.00	9.33
4	416.00	34.0 QP	46.00	-12.00	1.28V	4	42.50	16.18	2.29	27.00	8.52
5	448.01	34.1 QP	46.00	-11.90	1.11V	354	42.33	16.35	2.40	27.00	8.25
6	480.01	43.7 QP	46.00	-2.30	1.46V	126	51.33	16.92	2.47	27.00	7.63
7	576.01	39.0 QP	46.00	-7.00	1.76V	97	44.92	18.28	2.76	27.00	5.96
8	608.01	33.6 QP	46.00	-12.40	1.92V	328	39.07	18.70	2.86	27.00	5.44
9	640.01	32.3 QP	46.00	-13.70	1.84V	353	37.17	19.12	2.99	27.00	4.89
10	672.01	32.7 QP	46.00	-13.30	1.46V	22	37.33	19.27	3.08	27.00	4.65
11	800.01	28.9 QP	46.00	-17.10	1.21V	357	31.91	20.69	3.32	27.00	2.99
12	864.01	32.7 QP	46.00	-13.30	1.07V	3	35.65	20.57	3.52	27.00	2.91
13	960.01	34.7 QP	54.00	-18.30	1.48V	32	36.68	21.24	3.79	27.00	1.96

NOTE:

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



EUT	54Mbps Wireless Access Point	MODEL	WAP54A
MODE	Turbo Mode	CHANNEL	1
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Gary Chang		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	1247.00	42.9 PK	74.00	-31.10	1.11H	5	50.00	25.01	3.50	35.64	7.13
2	1344.00	47.4 PK	74.00	-26.60	1.55H	335	54.00	25.22	3.71	35.52	6.60
3	2112.00	46.7 PK	74.00	-27.30	1.16H	4	51.00	25.62	5.02	34.90	4.27
4	2688.00	46.2 PK	74.00	-27.80	1.46H	356	48.00	28.00	5.15	34.94	1.79

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	1152.00	42.5 PK	74.00	-31.50	1.38V	137	50.00	24.81	3.47	35.76	7.49
2	1728.00	44.8 PK	74.00	-29.20	1.28V	185	48.70	25.38	5.83	35.12	3.93
3	1828.80	30.9 PK	74.00	-43.10	1.33V	326	35.12	25.25	5.60	35.02	4.18
4	1920.00	44.5 PK	74.00	-29.50	1.73V	356	49.00	25.17	5.27	34.95	4.53
5	2688.00	47.2 PK	74.00	-26.80	1.00V	358	49.00	28.00	5.15	34.94	1.79

NOTE:

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



EUT	54Mbps Wireless Access Point	MODEL	WAP54A
MODE	Turbo Mode	CHANNEL	4
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Gary Chang		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	1247.00	42.9 PK	74.00	-31.10	1.11H	5	50.00	25.01	3.50	35.64	7.13
2	1344.00	47.9 PK	74.00	-26.10	1.57H	350	54.50	25.22	3.71	35.52	6.60
3	1920.00	45.5 PK	74.00	-28.50	1.03H	64	50.00	25.17	5.27	34.95	4.52
4	2304.00	46.6 PK	74.00	-27.40	1.28H	347	50.00	26.69	4.85	34.90	3.36
5	2688.00	47.2 PK	74.00	-26.80	1.02H	12	49.00	28.00	5.15	34.94	1.80

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	1344.00	45.9 PK	74.00	-28.10	1.83V	8	52.50	25.22	3.71	35.52	6.60
2	1728.00	50.1 PK	74.00	-23.90	1.00V	343	54.00	25.38	5.83	35.12	3.92
3	1920.00	45.5 PK	74.00	-28.50	1.07V	11	50.00	25.17	5.27	34.95	4.52
4	2304.00	44.6 PK	74.00	-29.40	1.44V	275	48.00	26.69	4.85	34.90	3.36
5	2880.00	48.9 PK	74.00	-25.10	1.02V	103	50.20	28.34	5.32	34.97	1.32

NOTE:

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



EUT	54Mbps Wireless Access Point	MODEL	WAP54A
MODE	Turbo Mode	CHANNEL	5
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Gary Chang		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	1248.00	41.9 PK	74.00	-32.10	1.03H	318	49.00	25.01	3.50	35.64	7.13
2	1344.00	41.2 PK	74.00	-32.80	1.55H	4	47.80	25.22	3.71	35.52	6.60
3	1720.00	45.9 PK	74.00	-28.10	1.01H	215	49.80	25.38	5.83	35.12	3.92
4	1920.00	44.0 PK	74.00	-30.00	1.00H	5	48.50	25.17	5.27	34.95	4.52
5	2112.00	46.7 PK	74.00	-27.30	1.05H	6	51.00	25.62	5.02	34.90	4.26
6	2607.00	46.1 PK	74.00	-27.90	1.41H	212	48.00	27.83	5.17	34.92	1.93

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	1248.00	41.3 PK	74.00	-32.70	1.12V	5	48.40	25.01	3.50	35.64	7.13
2	1344.00	49.4 PK	74.00	-24.60	1.28V	346	56.00	25.22	3.71	35.52	6.60
3	1728.00	47.1 PK	74.00	-26.90	1.25V	357	51.00	25.38	5.83	35.12	3.92
4	1920.00	43.5 PK	74.00	-30.50	1.39V	4	48.00	25.17	5.27	34.95	4.52
5	2112.00	44.7 PK	74.00	-29.30	1.48V	349	49.00	25.62	5.02	34.90	4.26
6	2688.00	48.4 PK	74.00	-25.60	1.24V	8	50.20	28.00	5.15	34.94	1.79
7	3072.00	47.5 PK	74.00	-26.50	1.05V	358	48.50	28.58	5.43	34.97	0.95

NOTE:

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



EUT	54Mbps Wireless Access Point	MODEL	WAP54A
MODE	Turbo Mode	CHANNEL	8
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Gary Chang		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	1248.00	43.9 PK	74.00	-30.10	1.07H	356	51.00	25.01	3.50	35.64	7.13
2	1344.00	41.4 PK	74.00	-32.60	1.55H	15	48.00	25.22	3.71	35.52	6.60
3	2112.00	44.2 PK	74.00	-29.80	1.76H	308	48.50	25.62	5.02	34.90	4.26
4	2304.00	44.8 PK	74.00	-29.20	1.45H	85	48.20	26.69	4.85	34.90	3.37
5	2688.00	46.9 PK	74.00	-27.10	1.21H	35	48.70	28.00	5.15	34.94	1.80

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	1248.00	41.4 PK	74.00	-32.60	1.72V	275	48.50	25.01	3.50	35.64	7.13
2	1344.00	42.1 PK	74.00	-31.90	1.14V	4	48.70	25.22	3.71	35.52	6.60
3	1727.00	49.1 PK	74.00	-24.90	1.00V	357	53.00	25.38	5.83	35.12	3.92
4	1920.00	44.7 PK	74.00	-29.30	1.01V	73	49.20	25.17	5.27	34.95	4.52
5	2110.00	42.7 PK	74.00	-31.30	1.39V	96	47.00	25.62	5.02	34.90	4.26
6	2637.00	47.6 PK	74.00	-26.40	1.21V	151	49.50	27.92	5.16	34.93	1.86
7	2880.00	46.2 PK	74.00	-27.80	1.00V	77	47.50	28.34	5.32	34.97	1.33

NOTE:

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

4.2.7 TEST RESULTS(RECEIVING)

EUT	54Mbps Wireless Access Point	MODEL	WAP54A
MODE	Normal Mode	CHANNEL	1
FREQUENCY RANGE	30-1000 MHz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Gary Chang		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	288.00	30.6 QP	46.00	-15.40	1.68H	6	42.90	12.88	1.81	27.00	12.31
2	383.99	30.6 QP	46.00	-15.40	1.62H	275	39.93	15.50	2.18	27.00	9.33
3	480.00	40.0 QP	46.00	-6.00	1.45H	345	47.60	16.92	2.47	27.00	7.62
4	512.00	35.9 QP	46.00	-10.10	1.62H	13	42.94	17.42	2.55	27.00	7.03
5	576.00	43.7 QP	46.00	-2.30	1.57H	327	22.70	18.28	2.76	0.00	-21.04
6	608.01	34.8 QP	46.00	-11.20	1.25H	5	40.25	18.70	2.86	27.00	5.44
7	640.01	35.7 QP	46.00	-10.30	1.03H	356	40.56	19.12	2.99	27.00	4.89
8	672.01	35.8 QP	46.00	-10.20	1.33H	5	40.45	19.27	3.08	27.00	4.66
9	864.01	40.0 QP	46.00	-6.00	1.01H	7	42.96	20.57	3.52	27.00	2.92

NOTE:

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

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	160.00	32.0 PK	43.50	-11.50	1.34V	33	48.09	9.62	1.26	27.00	16.11
2	192.00	31.6 PK	43.50	-11.90	1.21V	196	48.21	8.95	1.39	27.00	16.65
3	384.01	30.2 PK	46.00	-15.80	1.75V	7	39.51	15.50	2.18	27.00	9.34
4	480.00	39.0 PK	46.00	-7.00	1.89V	356	46.62	16.92	2.47	27.00	7.63
5	512.01	37.9 PK	46.00	-8.10	1.02V	62	44.97	17.42	2.55	27.00	7.03
6	576.00	39.0 PK	46.00	-7.00	1.86V	342	44.96	18.28	2.76	27.00	5.96
7	608.01	33.1 PK	46.00	-12.90	1.86V	5	38.58	18.70	2.86	27.00	5.45
8	640.01	31.6 PK	46.00	-14.40	1.40V	314	36.53	19.12	2.99	27.00	4.89
9	672.01	33.8 PK	46.00	-12.20	1.66V	5	38.45	19.27	3.08	27.00	4.66
10	736.01	28.5 PK	46.00	-17.50	1.50V	3	32.34	19.93	3.23	27.00	3.84
11	768.01	31.5 PK	46.00	-14.50	1.20V	9	34.86	20.36	3.28	27.00	3.36
12	864.01	38.6 PK	46.00	-7.40	1.33V	357	41.49	20.57	3.52	27.00	2.91

NOTE:

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



EUT	54Mbps Wireless Access Point	MODEL	WAP54A
MODE	Normal Mode	CHANNEL	1
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Gary Chang		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	1347.00	47.0 PK	74.00	-27.00	1.17H	353	53.60	25.22	3.71	35.52	6.60
2	1730.00	46.8 PK	74.00	-27.20	1.15H	53	50.72	25.38	5.83	35.12	3.92
3	2113.00	48.0 PK	74.00	-26.00	1.23H	356	52.26	25.62	5.02	34.90	4.26
4	2689.00	47.2 PK	74.00	-26.80	1.24H	14	48.99	28.00	5.15	34.94	1.80

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	1347.00	45.0 PK	74.00	-29.00	1.00V	354	51.60	25.22	3.71	35.52	6.60
2	1730.00	45.8 PK	74.00	-28.20	1.15V	240	49.72	25.38	5.83	35.12	3.92
3	1925.00	46.0 PK	74.00	-28.00	1.27V	273	50.52	25.17	5.27	34.95	4.52
4	2113.00	47.0 PK	74.00	-27.00	1.32V	23	51.26	25.62	5.02	34.90	4.26

NOTE:

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

EUT	54Mbps Wireless Access Point	MODEL	WAP54A
MODE	Normal Mode	CHANNEL	4
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Gary Chang		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	1347.00	48.0 PK	74.00	-26.00	1.27H	314	54.60	25.22	3.71	35.52	6.60
2	1732.00	47.2 PK	74.00	-26.80	1.16H	46	51.12	25.38	5.83	35.12	3.92
3	2688.00	48.2 PK	74.00	-25.80	1.27H	336	49.99	28.00	5.15	34.94	1.79
4	3401.00	46.0 PK	74.00	-28.00	1.37H	349	46.33	28.52	6.00	34.85	0.33

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	1115.00	45.0 PK	74.00	-29.00	1.28V	114	52.73	24.71	3.39	35.82	7.73
2	1348.00	47.0 PK	74.00	-27.00	1.26V	160	53.60	25.22	3.71	35.52	6.60
3	1731.00	45.8 PK	74.00	-28.20	1.30V	203	49.72	25.38	5.83	35.12	3.92
4	2113.00	46.2 PK	74.00	-27.80	1.26V	259	50.46	25.62	5.02	34.90	4.26
5	2881.00	45.7 PK	74.00	-28.30	1.16V	310	47.02	28.34	5.32	34.97	1.32

NOTE:

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



EUT	54Mbps Wireless Access Point	MODEL	WAP54A
MODE	Normal Mode	CHANNEL	5
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Gary Chang		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	1347.00	46.7 PK	74.00	-27.30	1.11H	274	53.30	25.22	3.71	35.52	6.60
2	1734.00	45.0 PK	74.00	-29.00	1.26H	28	48.92	25.38	5.83	35.12	3.92
3	2113.00	46.5 PK	74.00	-27.50	1.21H	320	50.76	25.62	5.02	34.90	4.26
4	2881.00	47.0 PK	74.00	-27.00	1.42H	176	48.32	28.34	5.32	34.97	1.32

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	1347.00	46.1 PK	74.00	-27.90	1.14V	251	52.70	25.22	3.71	35.52	6.60
2	1731.00	47.0 PK	74.00	-27.00	1.16V	205	50.92	25.38	5.83	35.12	3.92
3	1923.00	45.8 PK	74.00	-28.20	1.10V	138	50.32	25.17	5.27	34.95	4.52
4	2113.00	46.5 PK	74.00	-27.50	1.39V	357	50.76	25.62	5.02	34.90	4.26
5	2881.00	47.2 PK	74.00	-26.80	1.15V	54	48.52	28.34	5.32	34.97	1.33
6	3170.00	47.0 PK	74.00	-27.00	1.22V	338	47.62	28.57	5.75	34.93	0.62

NOTE:

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



EUT	54Mbps Wireless Access Point	MODEL	WAP54A
MODE	Normal Mode	CHANNEL	8
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Gary Chang		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	1347.00	46.2 PK	74.00	-27.80	1.39H	356	52.80	25.22	3.71	35.52	6.60
2	1734.00	46.7 PK	74.00	-27.30	1.36H	119	50.62	25.38	5.83	35.12	3.92
3	1922.00	46.7 PK	74.00	-27.30	1.27H	64	51.22	25.17	5.27	34.95	4.52
4	2113.00	46.0 PK	74.00	-28.00	1.12H	356	50.26	25.62	5.02	34.90	4.26
5	2669.00	47.0 PK	74.00	-27.00	1.30H	4	48.86	27.92	5.16	34.93	1.86

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	1347.00	47.0 PK	74.00	-27.00	1.00V	3	53.60	25.22	3.71	35.52	6.60
2	1732.00	46.1 PK	74.00	-27.90	1.33V	323	50.02	25.38	5.83	35.12	3.92
3	2111.00	48.0 PK	74.00	-26.00	1.39V	350	52.26	25.62	5.02	34.90	4.26
4	2881.00	47.2 PK	74.00	-26.80	1.17V	11	48.52	28.34	5.32	34.97	1.33

NOTE:

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



EUT	54Mbps Wireless Access Point	MODEL	WAP54A
MODE	Turbo Mode	CHANNEL	1
FREQUENCY RANGE	30-1000 MHz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Gary Chang		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	288.00	30.6 QP	46.00	-15.40	1.68H	6	42.90	12.88	1.81	27.00	12.31
2	383.99	30.6 QP	46.00	-15.40	1.62H	275	39.93	15.50	2.18	27.00	9.33
3	480.00	40.0 QP	46.00	-6.00	1.45H	345	47.60	16.92	2.47	27.00	7.62
4	512.00	35.9 QP	46.00	-10.10	1.62H	13	42.94	17.42	2.55	27.00	7.03
5	576.00	43.7 QP	46.00	-2.30	1.57H	327	22.70	18.28	2.76	0.00	-21.04
6	608.01	34.8 QP	46.00	-11.20	1.25H	5	40.25	18.70	2.86	27.00	5.44
7	640.01	35.7 QP	46.00	-10.30	1.03H	356	40.56	19.12	2.99	27.00	4.89
8	672.01	35.8 QP	46.00	-10.20	1.33H	5	40.45	19.27	3.08	27.00	4.66
9	864.01	40.0 QP	46.00	-6.00	1.01H	7	42.96	20.57	3.52	27.00	2.92

NOTE:

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

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	160.00	32.0 PK	43.50	-11.50	1.34V	33	48.09	9.62	1.26	27.00	16.11
2	192.00	31.6 PK	43.50	-11.90	1.21V	196	48.21	8.95	1.39	27.00	16.65
3	384.01	30.2 PK	46.00	-15.80	1.75V	7	39.51	15.50	2.18	27.00	9.34
4	480.00	39.0 PK	46.00	-7.00	1.89V	356	46.62	16.92	2.47	27.00	7.63
5	512.01	37.9 PK	46.00	-8.10	1.02V	62	44.97	17.42	2.55	27.00	7.03
6	576.00	39.0 PK	46.00	-7.00	1.86V	342	44.96	18.28	2.76	27.00	5.96
7	608.01	33.1 PK	46.00	-12.90	1.86V	5	38.58	18.70	2.86	27.00	5.45
8	640.01	31.6 PK	46.00	-14.40	1.40V	314	36.53	19.12	2.99	27.00	4.89
9	672.01	33.8 PK	46.00	-12.20	1.66V	5	38.45	19.27	3.08	27.00	4.66
10	736.01	28.5 PK	46.00	-17.50	1.50V	3	32.34	19.93	3.23	27.00	3.84
11	768.01	31.5 PK	46.00	-14.50	1.20V	9	34.86	20.36	3.28	27.00	3.36
12	864.01	38.6 PK	46.00	-7.40	1.33V	357	41.49	20.57	3.52	27.00	2.91

NOTE:

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



EUT	54Mbps Wireless Access Point	MODEL	WAP54A
MODE	Turbo Mode	CHANNEL	1
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Gary Chang		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	1347.00	46.8 PK	74.00	-27.20	1.19H	6	53.40	25.22	3.71	35.52	6.60
2	2689.00	46.7 PK	74.00	-27.30	1.25H	337	48.49	28.00	5.15	34.94	1.79
3	2881.00	47.0 PK	74.00	-27.00	1.21H	354	48.32	28.34	5.32	34.97	1.32
4	3401.00	45.5 PK	74.00	-28.50	1.11H	5	45.83	28.52	6.00	34.85	0.33

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	1347.00	48.0 PK	74.00	-26.00	1.50V	338	54.60	25.22	3.71	35.52	6.60
2	1731.00	47.0 PK	74.00	-27.00	1.10V	3	50.92	25.38	5.83	35.12	3.93
3	1924.00	46.2 PK	74.00	-27.80	1.08V	64	50.72	25.17	5.27	34.95	4.52
4	2113.00	47.0 PK	74.00	-27.00	1.13V	345	51.26	25.62	5.02	34.90	4.26
5	2889.00	46.7 PK	74.00	-27.30	1.26V	1	48.02	28.34	5.32	34.97	1.32
6	3078.00	46.5 PK	74.00	-27.50	1.13V	354	47.45	28.58	5.43	34.97	0.95

NOTE:

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

EUT	54Mbps Wireless Access Point	MODEL	WAP54A
MODE	Turbo Mode	CHANNEL	4
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Gary Chang		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	1150.00	46.0 PK	74.00	-28.00	1.30H	4	53.49	24.81	3.47	35.76	7.49
2	1348.00	47.0 PK	74.00	-27.00	1.34H	11	53.60	25.22	3.71	35.52	6.60
3	1627.00	47.2 PK	74.00	-26.80	1.32H	339	52.26	25.46	4.67	35.19	5.06
4	2113.00	48.2 PK	74.00	-25.80	1.22H	1	52.46	25.62	5.02	34.90	4.26
5	3401.00	46.1 PK	74.00	-27.90	1.13H	250	46.43	28.52	6.00	34.85	0.33

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	1347.00	47.0 PK	74.00	-27.00	1.26V	350	53.60	25.22	3.71	35.52	6.60
2	1731.00	45.0 PK	74.00	-29.00	1.29V	67	48.92	25.38	5.83	35.12	3.92
3	1922.00	46.2 PK	74.00	-27.80	1.29V	170	50.72	25.17	5.27	34.95	4.52
4	2113.00	46.3 PK	74.00	-27.70	1.24V	146	50.56	25.62	5.02	34.90	4.26
5	2881.00	47.0 PK	74.00	-27.00	1.47V	4	48.32	28.34	5.32	34.97	1.32
6	3075.00	46.7 PK	74.00	-27.30	1.33V	316	47.65	28.58	5.43	34.97	0.95

NOTE:

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



EUT	54Mbps Wireless Access Point	MODEL	WAP54A
MODE	Turbo Mode	CHANNEL	5
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Gary Chang		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	1347.00	47.2 PK	74.00	-26.80	1.25H	140	53.80	25.22	3.71	35.52	6.60
2	1925.00	45.2 PK	74.00	-28.80	1.09H	354	49.72	25.17	5.27	34.95	4.52
3	2113.00	46.2 PK	74.00	-27.80	1.25H	283	50.46	25.62	5.02	34.90	4.26
4	2609.00	45.8 PK	74.00	-28.20	1.26H	229	47.73	27.83	5.17	34.92	1.93
5	2887.00	48.2 PK	74.00	-25.80	1.22H	313	49.52	28.34	5.32	34.97	1.32
6	3401.00	45.0 PK	74.00	-29.00	1.42H	104	45.33	28.52	6.00	34.85	0.33

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	1348.00	49.0 PK	74.00	-25.00	1.28V	318	55.60	25.22	3.71	35.52	6.60
2	2113.00	47.2 PK	74.00	-26.80	1.38V	5	51.46	25.62	5.02	34.90	4.27
3	2881.00	46.2 PK	74.00	-27.80	1.00V	290	47.52	28.34	5.32	34.97	1.32
4	3400.00	45.7 PK	74.00	-28.30	1.28V	56	46.03	28.52	6.00	34.85	0.33

NOTE:

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



EUT	54Mbps Wireless Access Point	MODEL	WAP54A
MODE	Turbo Mode	CHANNEL	8
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Gary Chang		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	1347.00	47.4 PK	74.00	-26.60	1.23H	276	54.00	25.22	3.71	35.52	6.60
2	1732.00	46.0 PK	74.00	-28.00	1.13H	4	49.92	25.38	5.83	35.12	3.93
3	2113.00	45.8 PK	74.00	-28.20	1.42H	195	50.06	25.62	5.02	34.90	4.26
4	2881.00	47.0 PK	74.00	-27.00	1.23H	60	48.32	28.34	5.32	34.97	1.33

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	1348.00	46.0 PK	74.00	-28.00	1.07V	56	52.60	25.22	3.71	35.52	6.60
2	1725.00	47.1 PK	74.00	-26.90	1.04V	105	51.02	25.38	5.83	35.12	3.92
3	1921.00	46.4 PK	74.00	-27.60	1.09V	168	50.92	25.17	5.27	34.95	4.52
4	2114.00	46.5 PK	74.00	-27.50	1.15V	222	50.76	25.62	5.02	34.90	4.26
5	2881.00	47.3 PK	74.00	-26.70	1.20V	276	48.62	28.34	5.32	34.97	1.32

NOTE:

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

4.3 PEAK TRANSMIT POWER MEASUREMENT

4.3.1 LIMITS OF PEAK TRANSMIT POWER MEASUREMENT

Frequency Band	Limit
5.15 – 5.25 GHz	50mW or 4 dBm +10 log B
5.25 – 5.35 GHz	250 mW or 11 dBm +10 log B
5.725 – 5.825 GHz	1W or 17 dBm +10 log B

Note: Where B is the 26 dB emission bandwidth in MHz.

4.3.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
ROHDE&SCHWARZ SINGLE CHANNEL POWER METER	NRVS	100026	Mar. 21, 2003
ROHDE&SCHWARZ PEAK POWER METER	NRV-Z32	100013	Mar. 21, 2003

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 peak power sensor.

4.3.4 TEST SETUP



4.3.5 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.



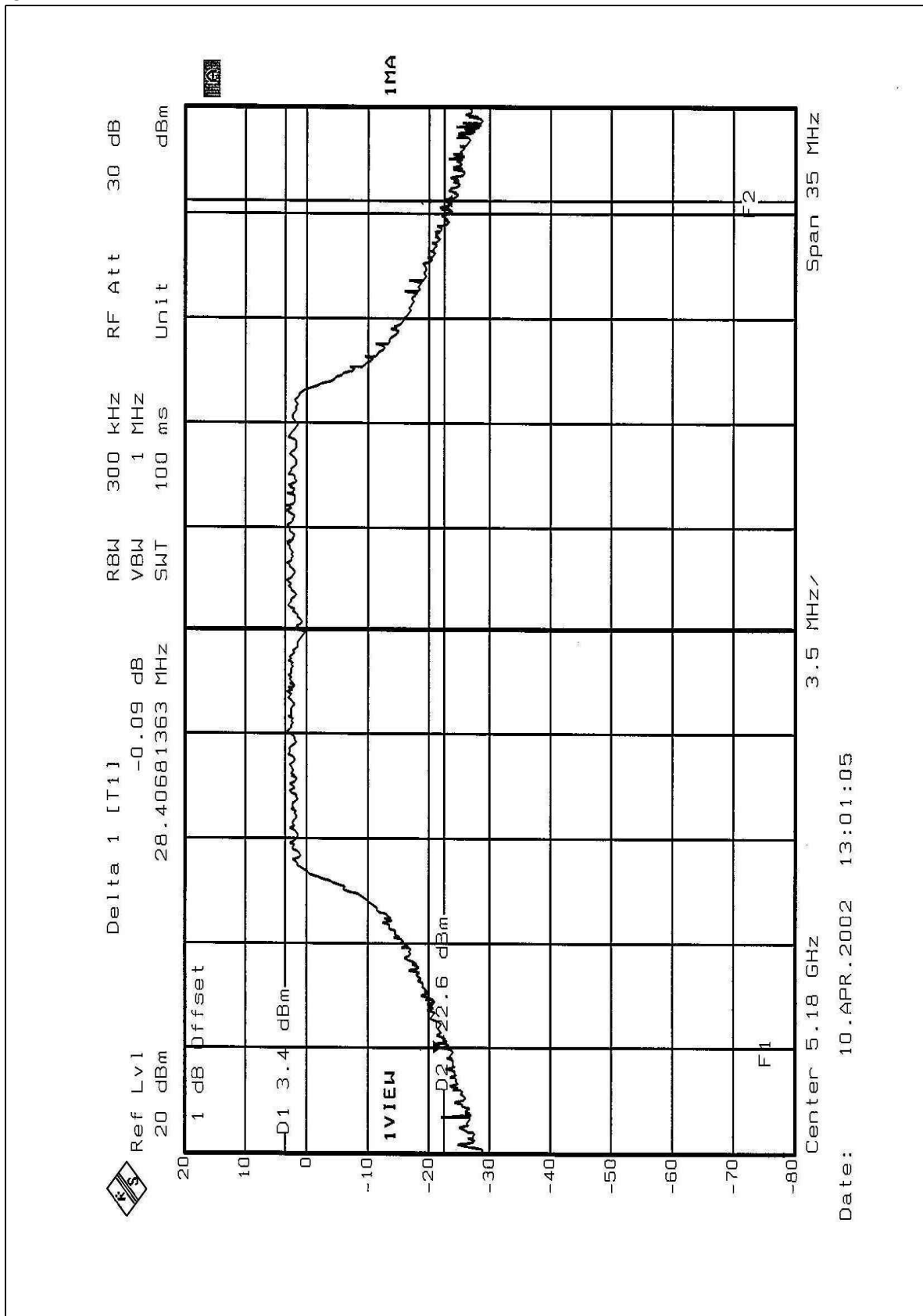
4.3.6 TEST RESULTS

EUT	54Mbps Wireless Access Point	MODEL	WAP54A
MODE	Normal	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	27 deg. C, 52%RH, 1005 hPa	TESTED BY	Steven Lu

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	26dBc Occupied Bandwidth (MHz)	PASS/FAIL
1	5180	14.79	18.53	28.41	PASS
4	5240	14.57	18.51	28.27	PASS
5	5260	14.24	25.49	28.13	PASS
8	5320	14.05	25.46	27.96	PASS

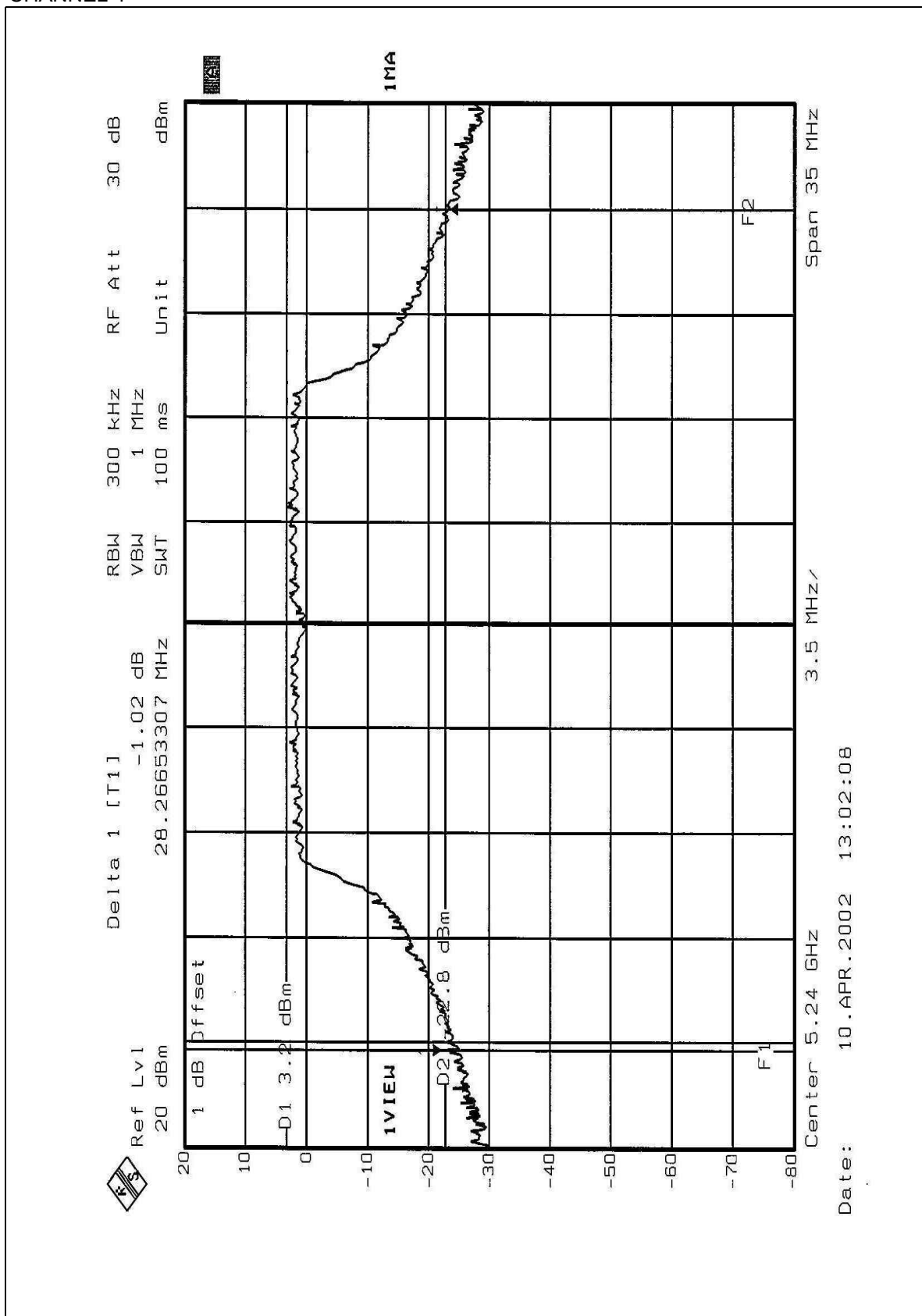
NOTE: The 26dBc Occupied Bandwidth plot, please refer next 3 pages.

CHANNEL 1

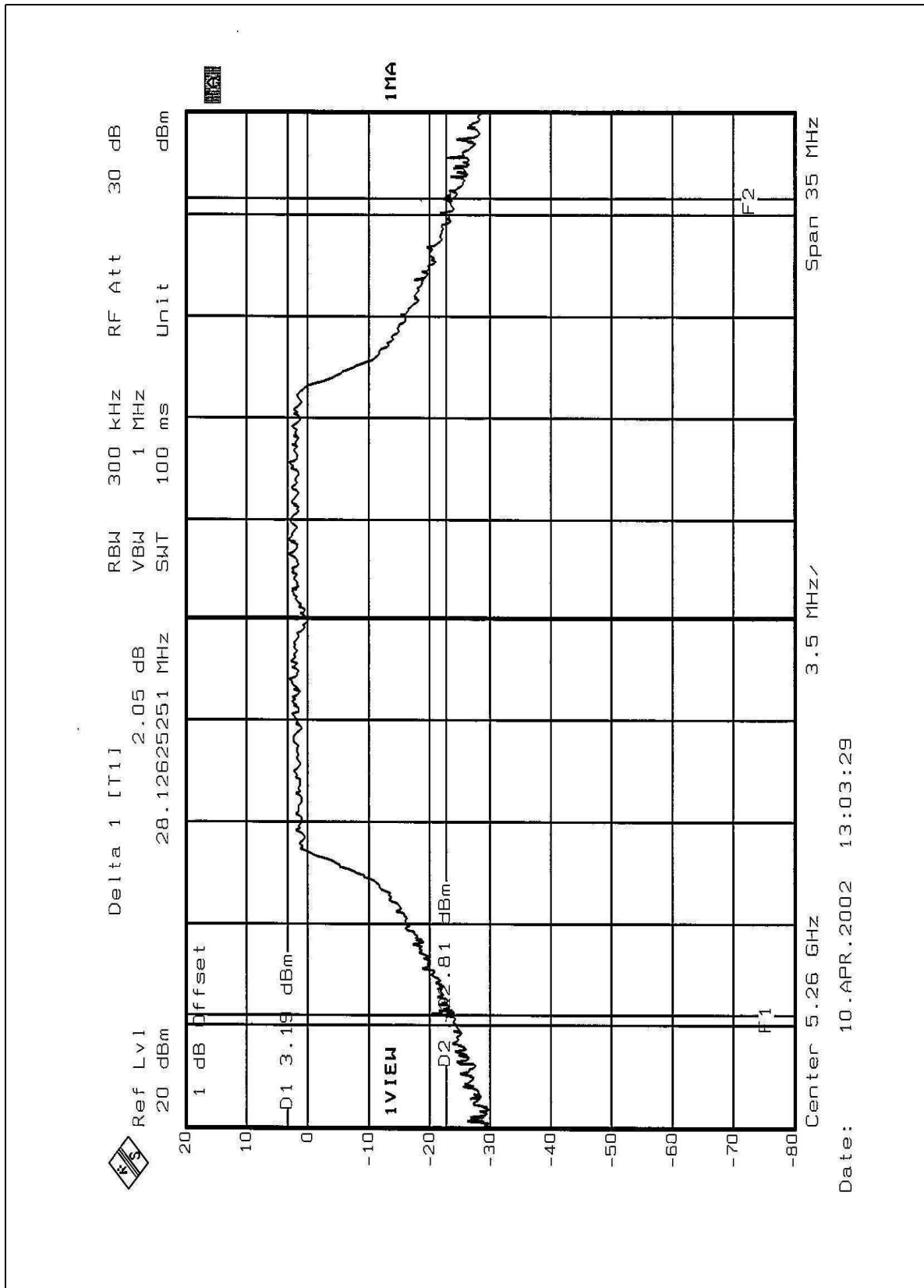




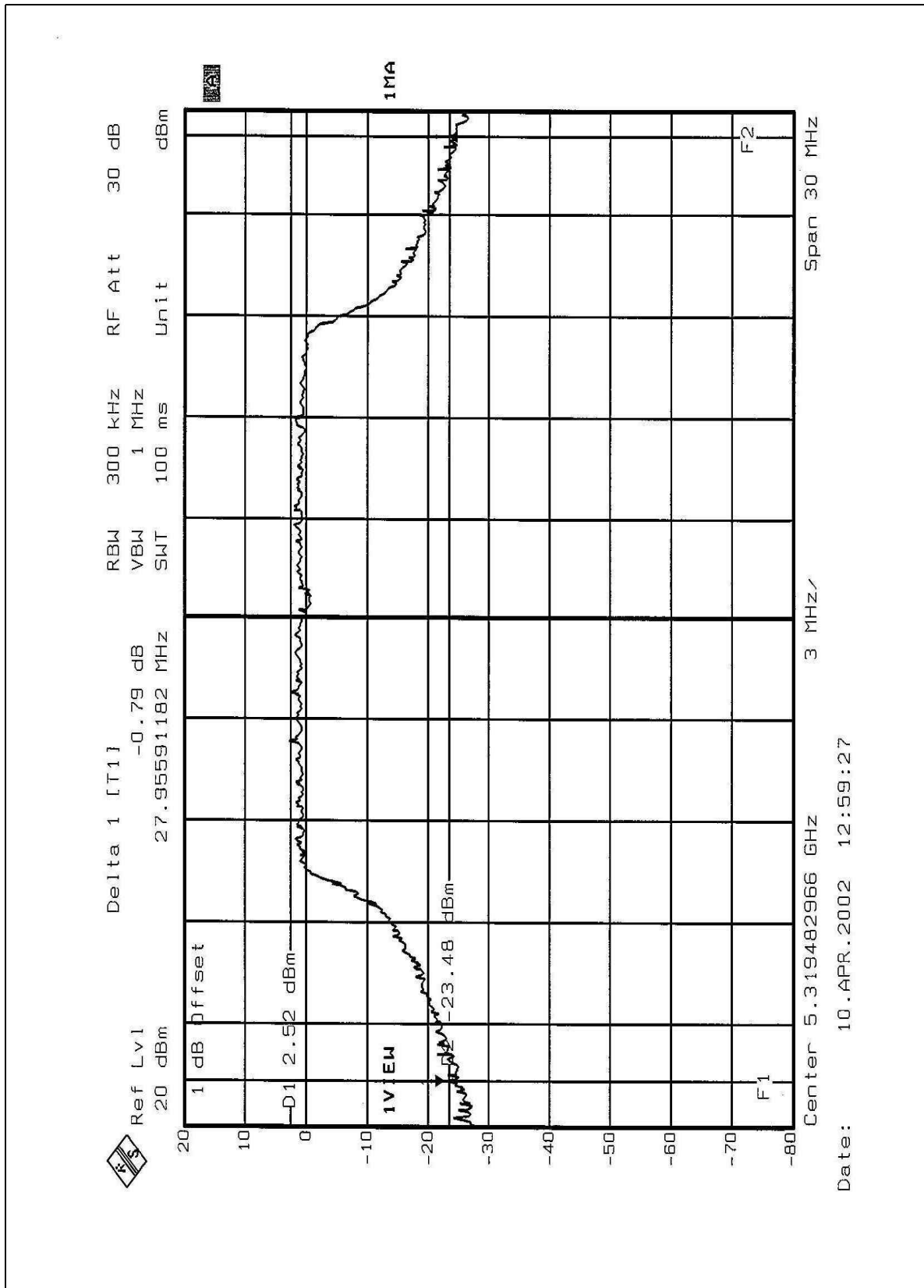
CHANNEL 4



CHANNEL 5



CHANNEL 8





EUT	54Mbps Wireless Access Point	MODEL	WAP54A
MODE	Turbo	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	22 deg. C, 57%RH, 1005 hPa	TESTED BY	Steven Lu

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	26dBc Occupied Bandwidth (MHz)	PASS/FAIL
1	5180	14.23	20.80	47.98	PASS
4	5240	14.27	20.20	41.72	PASS
5	5260	14.17	27.64	46.17	PASS
8	5320	13.96	26.56	45.33	PASS

NOTE: The 26dBc Occupied Bandwidth plot, please refer next 3 pages.

Delta 1 [T1] 0.16 dB 47.97595190 MHz RBW 300 kHz VBW 1 MHz SWT 100 ms RF Att Unit 30 dB Span 60 MHz

Ref Lvl 20 dBm

1 dB Offset

D1 4.6 dBm

1VIEW

D2 21.4 dBm

F1

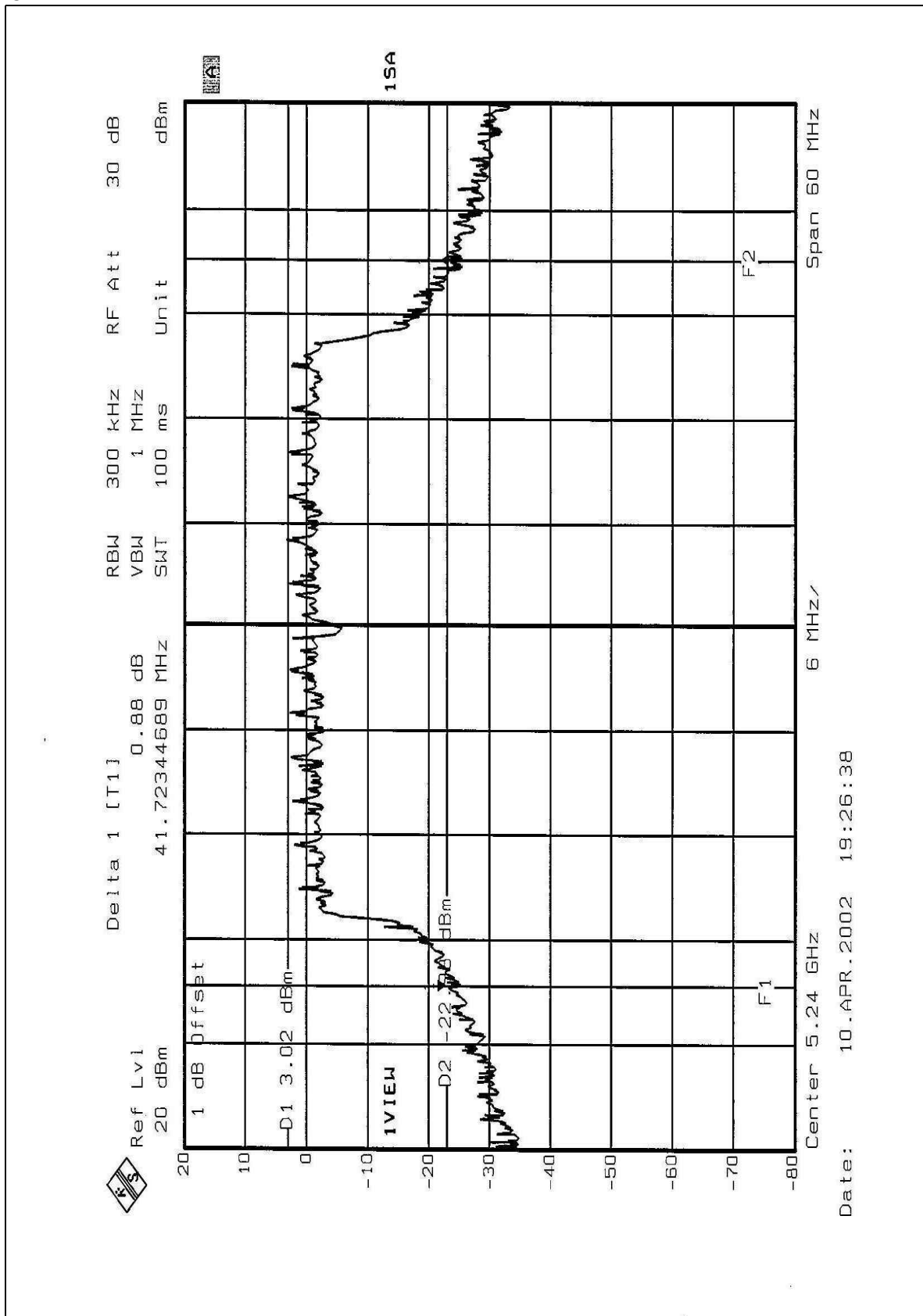
F2

Center 5.18 GHz

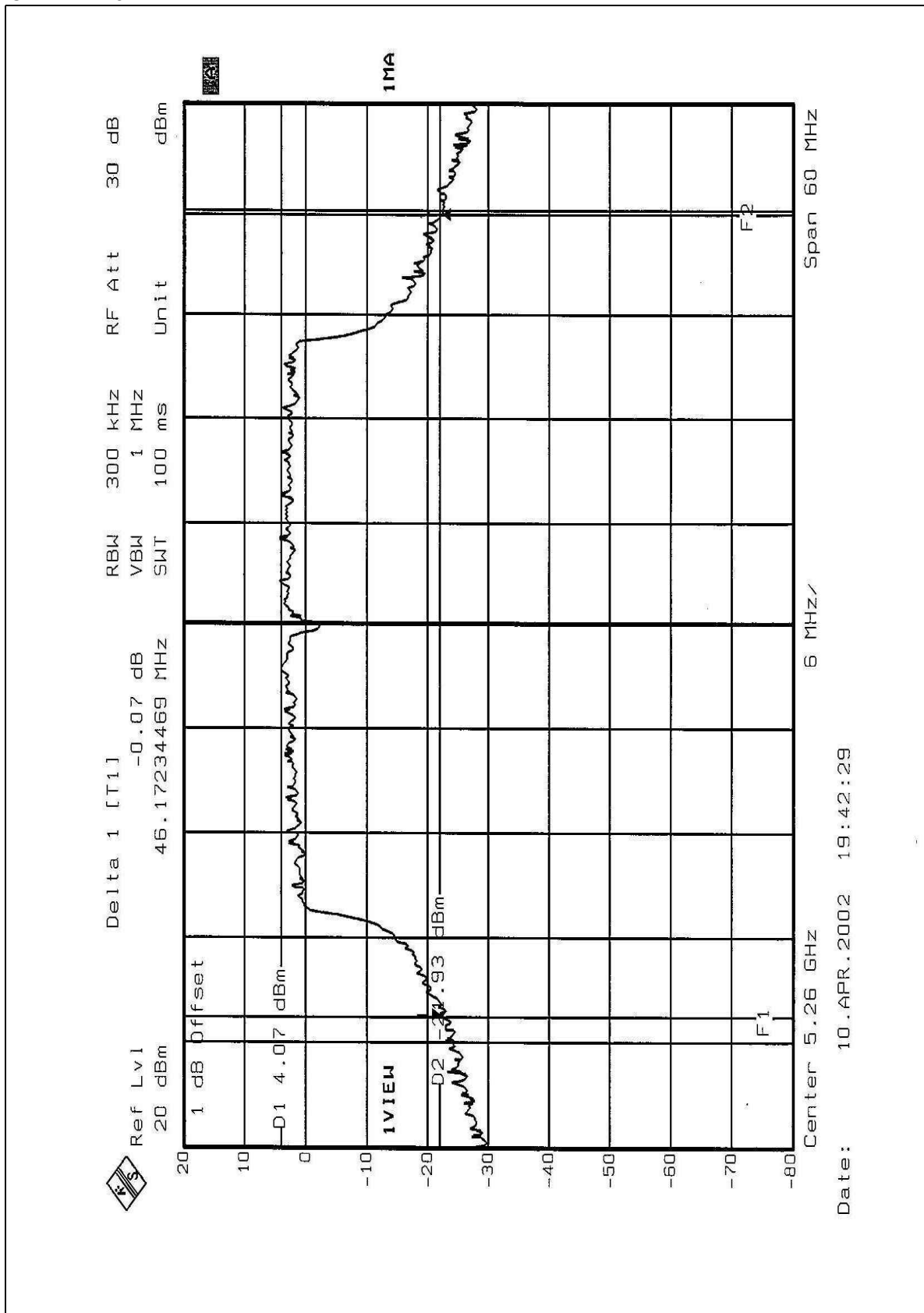
Date: 10.APR.2002 19:19:43



CHANNEL 4



CHANNEL 5



CHANNEL 8

