



FCC TEST REPORT

REPORT NO.: RF930910L07

MODEL NO.: WMP55AG ver. 1.2

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APPLICANT: Cisco-Linksys, LLC

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ILAC MRA



No. 2177-01

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1. CERTIFICATION

PRODUCT: Dual-Band Wireless A+G PCI Adapter
BRAND NAME: Linksys
MODEL NO.: WMP55AG ver. 1.2
APPLICANT: Cisco-Linksys, LLC
TEST SAMPLE: Engineering Sample
TESTED: Mar. 08 ~ Aug. 26, 2004
STANDARDS: FCC Part 15, Subpart C (Section 15.247),
Subpart E (Section 15.407), ANSI C63.4-2001

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

PREPARED BY : Windy Chou , **DATE:** Sep. 24, 2004
(Windy Chou)

TECHNICAL
ACCEPTANCE : Gary Chang , **DATE:** Sep. 24, 2004
Responsible for RF (Gary Chang)

APPROVED BY : Cody Chang , **DATE:** Sep. 24, 2004
(Cody Chang, Deputy Manager)

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 15, Subpart C (Section 15.247)			
Standard Section	Test Type and Limit	Result	Remark
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -14.76dB at 0.630MHz
15.247(a)(2)	Spectrum Bandwidth of a Direct Sequence Spread Spectrum System Limit: min. 500kHz	PASS	Meet the requirement of limit.
15.247(b)	Maximum Peak Output Power Limit: max. 30dBm	PASS	Meet the requirement of limit.
15.247(c)	Radiated Emissions Limit: Table 15.209	PASS	Meet the requirement of limit. Minimum passing margin is -1.19dB at 2483.5MHz
15.247(d)	Power Spectral Density Limit: max. 8dBm	PASS	Meet the requirement of limit.
15.247(c)	Band Edge Measurement Limit: 20dB less than the peak value of fundamental frequency	PASS	Meet the requirement of limit.



APPLIED STANDARD: FCC Part 15, Subpart E (Section 15.407)			
Standard Section	Test Type	Result	Remark
15.407(b)(5)	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -15.15dB at 0.685MHz
15.407(b/1/2/3)(b)(5)	Electric Field Strength Spurious Emissions, 30MHz ~ 40000MHz	PASS	Meet the requirement of limit. Minimum passing margin is -1.26dB at 5150.00MHz
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(g)	Frequency Stability	PASS	Meet the requirement of limit.

2.1 MEASUREMENT UNCERTAINTY

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

Measurement	Frequency	Uncertainty
Conducted emissions	9k~30MHz	2.44 dB
Radiated emissions	30MHz ~ 200MHz	3.73 dB
	200MHz ~1000MHz	3.74 dB
	1GHz ~ 18GHz	2.20 dB
	18GHz ~ 40GHz	1.88 dB



3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

EUT	Dual-Band Wireless A+G PCI Adapter
MODEL NO.	WMP55AG ver. 1.2
POWER SUPPLY	5.0Vdc from host equipment
MODULATION TYPE	DBPSK, DQPSK, CCK, 16QAM, 64QAM
MODULATION TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	802.11b: 11/5.5/2/1Mbps 802.11g: 54/48/36/24/18/12/9/6Mbps 802.11a: 54/48/36/24/18/12/9/6Mbps (Turbo mode: up to 108Mbps *see Note 2)
FREQUENCY RANGE	802.11b & 802.11g: 2412 ~ 2462MHz 802.11a: 5.15 ~ 5.35GHz and 5.725 ~ 5.850GHz
NUMBER OF CHANNEL	802.11b & 802.11g: 11 for Normal mode / 1 for Turbo mode 802.11a: 13 for Normal mode / 5 for Turbo mode
CHANNEL SPACING	802.11b & 802.11g: 5MHz 802.11a: 20MHz for Normal mode / 40MHz for Turbo mode
OUTPUT POWER	802.11b: 63.387mW 802.11g: 35.727mW 802.11a: 32.359mW
DATA CABLE	NA
ANTENNA TYPE	Dipole Dual band antenna, 1dBi antenna gain for 2.4GHz band 2dBi antenna gain for 5GHz band
I/O PORTS	NA
ASSOCIATED DEVICES	NA

NOTE:

1. The EUT operates in both the 5GHz and 2.4GHz Bands and compatibility with 802.11a and 802.11b, 802.11g technology.
2. This EUT is capable of providing data rates of up to 108Mbps in Turbo Mode depending upon reception quality.
3. The above EUT information was declared by the manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 DESCRIPTION OF TEST MODES

802.11b and 802.11g: Eleven channels are provided to this EUT.

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

NOTE:

- Below 1GHz, the channel 1, 6, and 11 were pre-tested in chamber. The channel 11, worst case one, was chosen for final test. Above 1GHz, the channel 1, 6, and 11 were tested individually.
- From our experience and technical viewpoint, we have chosen data rates, 11Mbps with CCK technique and 6Mbps with OFDM technique, as the worst cases for the test among other data rates.

One channel is provided to this EUT for Turbo Mode.

Channel	Frequency
6	2437 MHz

NOTE: One turbo mode at frequency 2437MHz.

For 802.11a: Twelve channels are provided to this EUT for Normal mode.

Channel	Frequency	Channel	Frequency
1	5180 MHz	7	5300 MHz
2	5200 MHz	8	5320 MHz
3	5220 MHz	9	5745MHz
4	5240 MHz	10	5765MHz
5	5260 MHz	11	5785MHz
6	5280 MHz	12	5805MHz

Five channels are provided to this EUT for Turbo Mode.

Channel	Frequency	Channel	Frequency
1	5210 MHz	4	5760 MHz
2	5250 MHz	5	5800 MHz
3	5290 MHz		

NOTE:

- The EUT was tested in both normal mode (channel bandwidth of approximately 30MHz) and turbo mode (channel bandwidth of approximately 60MHz).
- "Normal Mode" allows data rates of up to 54Mbps. The device was, therefore, tested in Normal mode at the data rate that produced the highest output power for normal mode (6Mbps).
- "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).
- Channel 1, 4, 5, 8, 9 and 12 are the closest frequencies to the band edge, were chosen for final test of Normal Mode.
- Channel 1~5 were chosen for final test of Turbo mode.



3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a Dual-Band Wireless A+G PCI Adapter. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

**FCC Part 15, Subpart C. (15.247),
Subpart E (15.407). ANSI C63.4 : 2001**

All test items 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

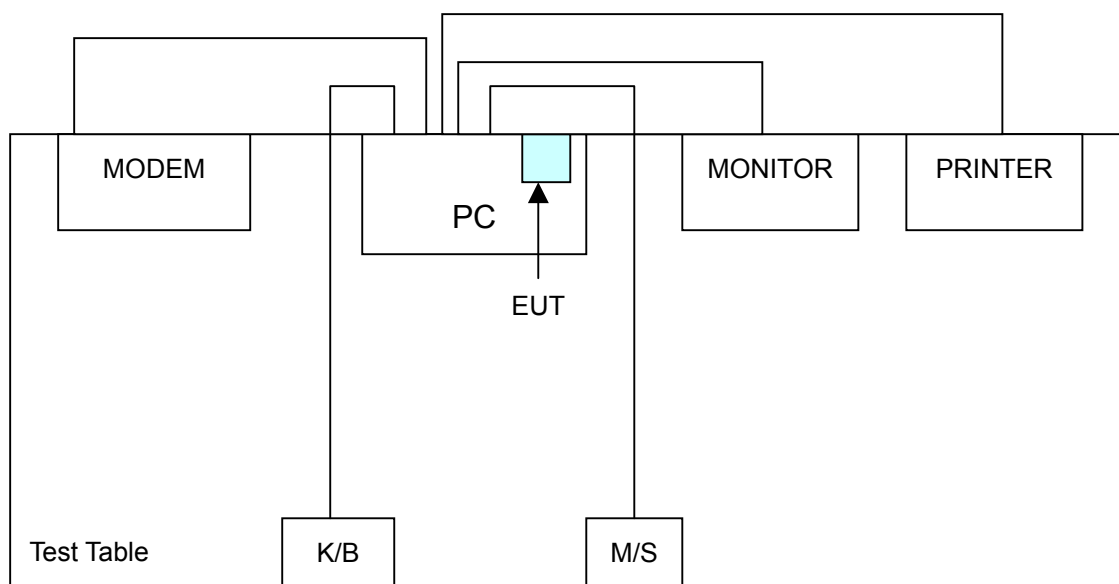
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	PERSONAL COMPUTER	MSI	Hetis 865G Giga	1A36I98A000220	FCC DoC Approved
2	MONITOR	ADI	CM100	020058T10200181	DOC
3	PRINTER	EPSON	LQ-300+	DCGY017031	FCC DoC Approved
4	MODEM	ACEEX	1414	980020520	IFAXDM1414
5	PS/2 KEYBOARD	BTC	5200T	F24800256	E5XKB5122WTH 0110
6	PS/2 MOUSE	BTC	M851	NA	E5XMSM860

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA
2	1.8 m braid shielded wire, terminated with VGA connector via metallic frame, w/o core
3	1.2m braid shielded wire, terminated with DB25 and Centronics connector via metallic frame, w/o core
4	1.2 m braid shielded wire, terminated with DB25 and DB9 connector via metallic frame, w/o core.
5	1.6 m foil shielded wire, terminated with PS/2 connector via metallic frame, w/o core.
6	1.5 m Non shielded wire, terminated with PS/2 connector via drain wire, w/o core.

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

3.5 CONFIGURATION OF SYSTEM UNDER TEST



4. TEST TYPES AND RESULTS (FOR PART 802.11b & 802.11g)

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

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

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

4.1.2 TEST INSTRUMENTS

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

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



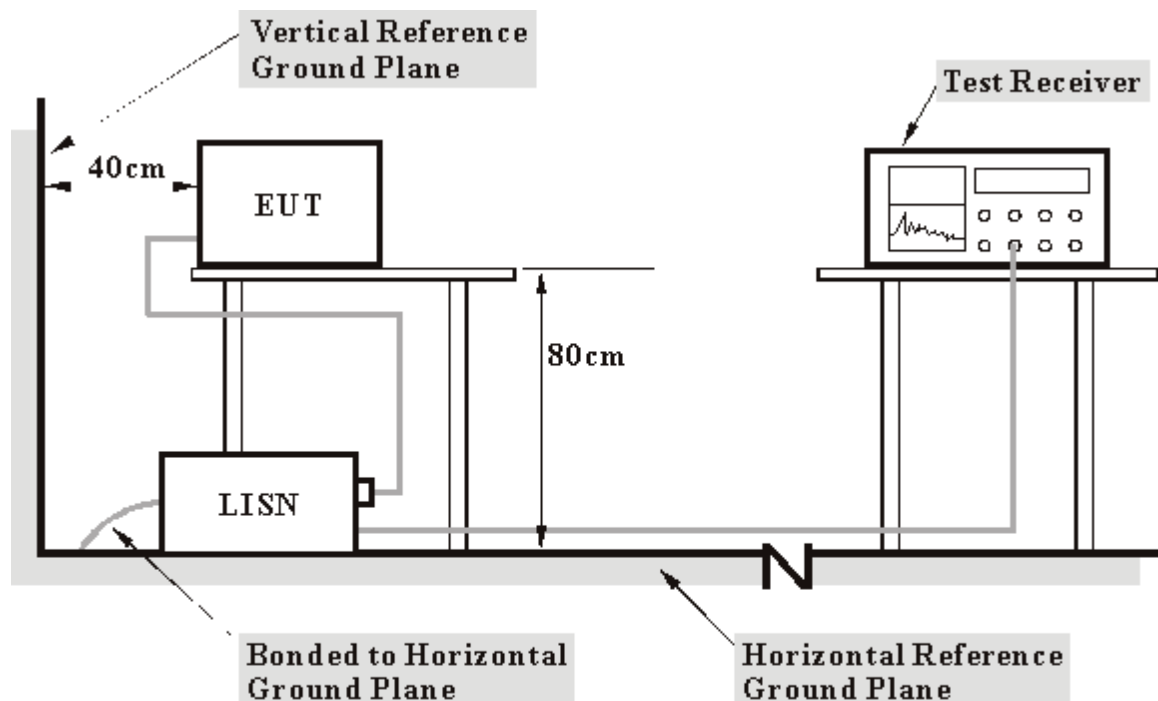
4.1.3 TEST PROCEDURES

- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 TEST SETUP



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

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

4.1.6 EUT OPERATING CONDITIONS

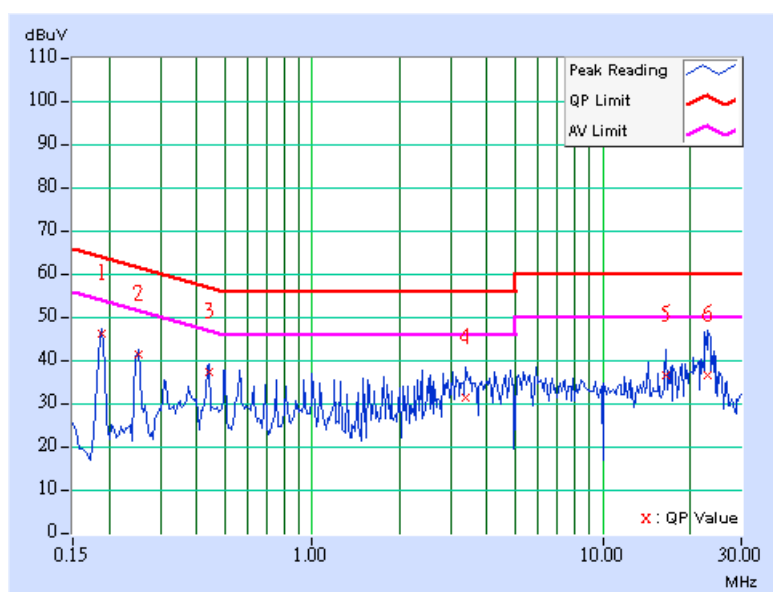
- a. Plug the EUT into the PCI slot of the computer system placed on testing table.
- b. The computer system ran a test program (provided by manufacturer) to enable EUT under transmission/receiving condition continuously at specific channel frequency.
- c. The computer system sent "H" messages to its screen.
- d. The computer system sent "H" messages to its modem.
- e. The computer system sent "H" messages to printer, and the printer prints them on paper.
- f. Repeat c ~ e.

4.1.7 TEST RESULTS

EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
MODE	Channel 1	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	TESTED BY: Leo Hung	

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.189	0.12	45.05	-	45.17	-	64.08	54.08	-18.91	-
2	0.252	0.12	40.25	-	40.37	-	61.71	51.71	-21.33	-
3	0.439	0.13	36.29	-	36.42	-	57.08	47.08	-20.66	-
4	3.379	0.19	30.35	-	30.54	-	56.00	46.00	-25.46	-
5	16.567	0.86	35.55	-	36.41	-	60.00	50.00	-23.59	-
6	23.031	1.10	35.50	-	36.60	-	60.00	50.00	-23.40	-

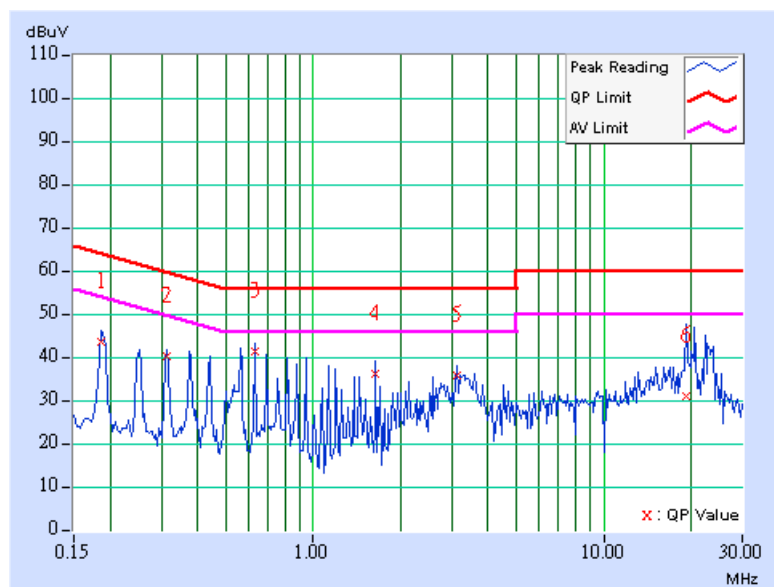
- REMARKS:** 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value =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



EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
MODE	Channel 1	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	TESTED BY: Leo Hung	

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.185	0.11	42.90	-	43.01	-	64.25	54.25	-21.24	-
2	0.314	0.11	39.79	-	39.90	-	59.86	49.86	-19.96	-
3	0.627	0.12	40.73	-	40.85	-	56.00	46.00	-15.15	-
4	1.633	0.16	35.50	-	35.66	-	56.00	46.00	-20.34	-
5	3.141	0.18	35.38	-	35.56	-	56.00	46.00	-20.44	-
6	19.148	0.70	30.52	-	31.22	-	60.00	50.00	-28.78	-

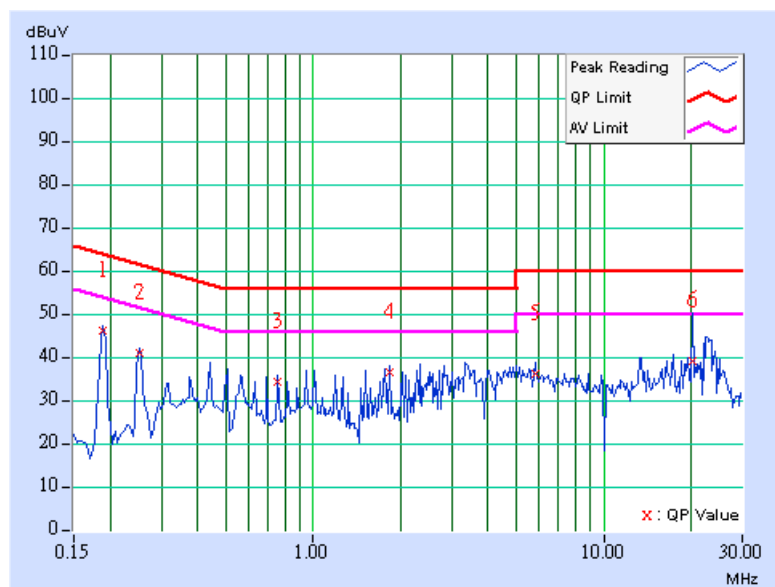
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
MODE	Channel 6	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	TESTED BY: Leo Hung	

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.189	0.12	45.13	-	45.25	-	64.08	54.08	-18.83	-
2	0.252	0.12	40.17	-	40.29	-	61.71	51.71	-21.41	-
3	0.755	0.14	33.35	-	33.49	-	56.00	46.00	-22.51	-
4	1.828	0.16	35.75	-	35.91	-	56.00	46.00	-20.09	-
5	5.805	0.26	35.29	-	35.55	-	60.00	50.00	-24.45	-
6	20.359	1.03	38.19	-	39.22	-	60.00	50.00	-20.78	-

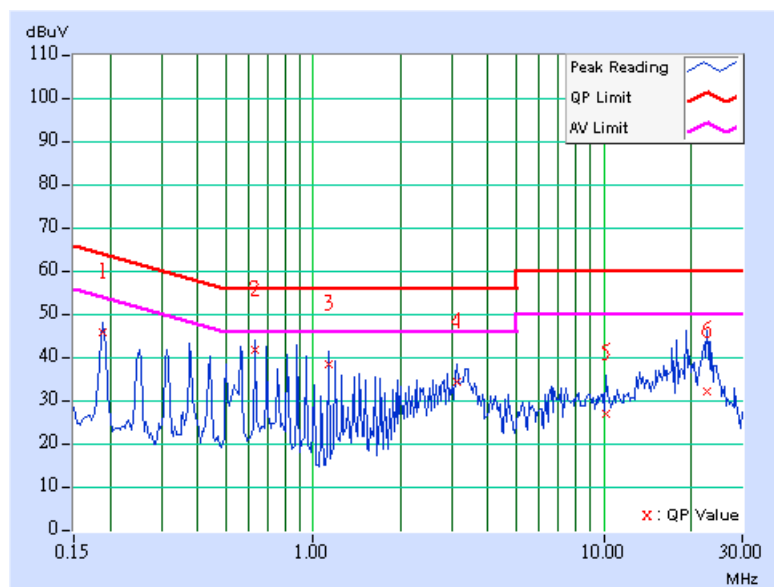
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
MODE	Channel 6	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	TESTED BY: Leo Hung	

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.189	0.11	45.07	-	45.18	-	64.08	54.08	-18.90	-
2	0.630	0.12	41.12	-	41.24	-	56.00	46.00	-14.76	-
3	1.133	0.15	37.88	-	38.03	-	56.00	46.00	-17.97	-
4	3.145	0.18	33.77	-	33.95	-	56.00	46.00	-22.05	-
5	10.246	0.30	26.34	-	26.64	-	60.00	50.00	-33.36	-
6	22.828	0.69	31.71	-	32.40	-	60.00	50.00	-27.60	-

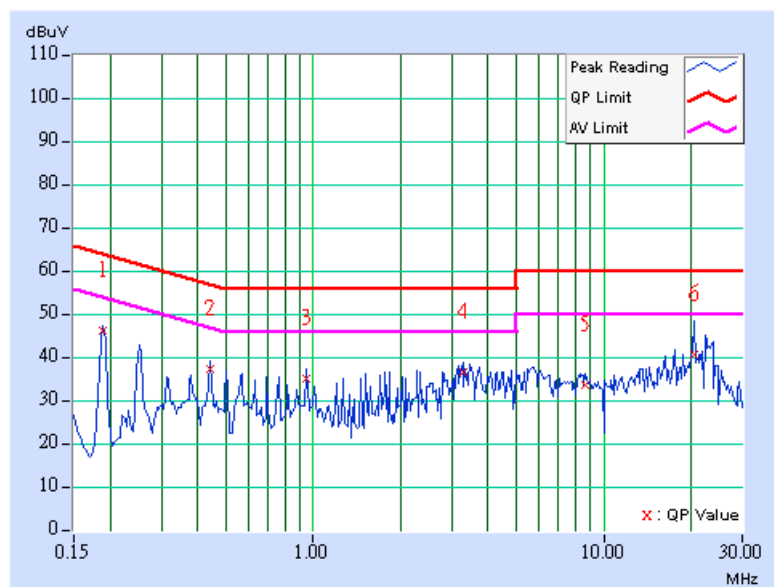
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
MODE	Channel 11	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	TESTED BY: Leo Hung	

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.189	0.12	45.19	-	45.31	-	64.08	54.08	-18.77	-
2	0.443	0.13	36.37	-	36.50	-	57.01	47.01	-20.51	-
3	0.947	0.15	33.97	-	34.12	-	56.00	46.00	-21.88	-
4	3.281	0.19	35.52	-	35.71	-	56.00	46.00	-20.29	-
5	8.645	0.30	32.77	-	33.07	-	60.00	50.00	-26.93	-
6	20.504	1.03	39.78	-	40.81	-	60.00	50.00	-19.19	-

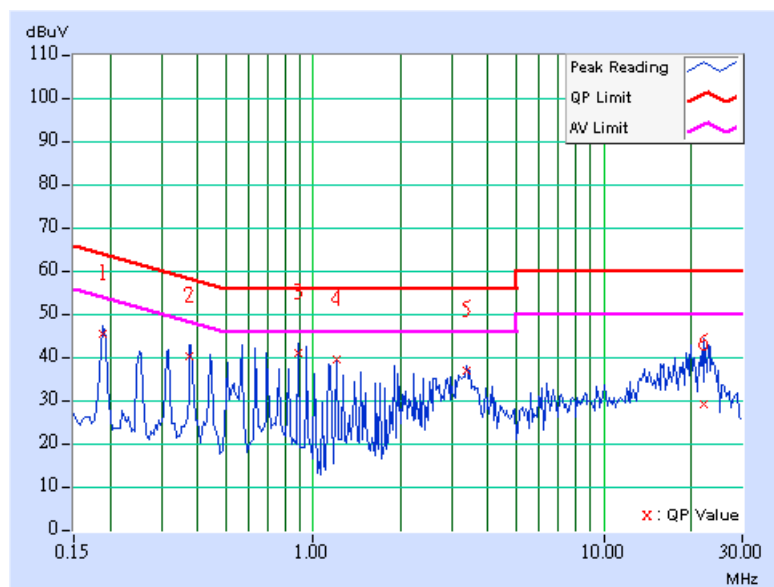
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
MODE	Channel 11	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	TESTED BY: Leo Hung	

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.189	0.11	44.70	-	44.81	-	64.08	54.08	-19.27	-
2	0.377	0.12	39.58	-	39.70	-	58.35	48.35	-18.66	-
3	0.884	0.14	40.28	-	40.42	-	56.00	46.00	-15.58	-
4	1.203	0.15	38.87	-	39.02	-	56.00	46.00	-16.98	-
5	3.355	0.19	36.19	-	36.38	-	56.00	46.00	-19.62	-
6	22.133	0.69	28.45	-	29.14	-	60.00	50.00	-30.86	-

- 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.





4.2 RADIATED EMISSION MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

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

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

NOTE:

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



4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
* HP Spectrum Analyzer	8593E	3911A07465	June 27, 2005
* HP Preamplifier	8447D	2432A03504	June 03, 2005
* HP Preamplifier	8449B	3008A01292	Aug. 11, 2004
SCHAFFNER Tunable Dipole Antenna	VHBA 9123	459	June 26, 2006
SCHWARZBECK Tunable Dipole Antenna	UHA 9105	977	
* ROHDE & SCHWARZ Test Receiver	ESI7	838496/016	Feb. 08, 2005
* Schwarzbeck Antenna	VULB9168	137	Feb. 27, 2005
* SCHWARZBECK Horn Antenna	BBHA9120-D1	D130	June 14, 2005
* ADT. Turn Table	TT100	0306	NA
* ADT. Tower	AT100	0306	NA
* Software	ADT_Radiated_V5.14	NA	NA
* TIMES RF cable	LL142	CABLE-CH6-01	Apr. 16, 2005

- NOTE:** 1. The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to NML/ROC and NIST/USA.
2. "*" = These equipment are used for the final measurement.
3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
4. The test was performed in ADT Chamber No. 6.



4.2.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi- anechoic. 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 the quasi-peak method or average method as specified and then reported in Data sheet peak mode and QP mode.

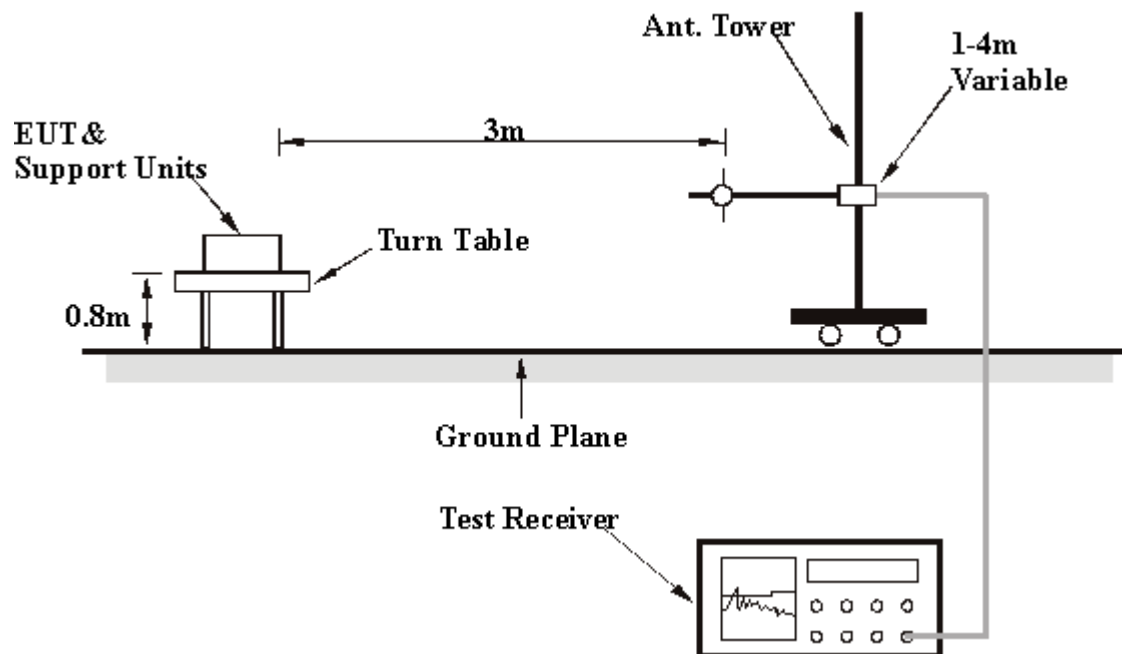
NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 Hz for Average detection (AV) at frequency above 1GHz.

4.2.4 DEVIATION FROM TEST STANDARD

No deviation

4.2.5 TEST SETUP



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

4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6

4.2.7 TEST RESULTS

EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
CHANNEL	Channel 11	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	15deg. C, 62 %RH, 991hPa	TESTED BY: Vincent Lin	

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	269.10	29.99 QP	46.00	-16.01	1.50 H	148	16.10	13.89
2	339.08	28.73 QP	46.00	-17.27	1.00 H	244	12.85	15.88
3	370.18	29.55 QP	46.00	-16.45	1.00 H	79	12.91	16.64
4	539.30	35.04 QP	46.00	-10.96	1.50 H	274	14.52	20.53
5	570.40	35.18 QP	46.00	-10.82	1.50 H	277	13.95	21.22
6	607.33	32.43 QP	46.00	-13.57	1.25 H	166	10.44	21.99
7	636.49	31.46 QP	46.00	-14.54	1.25 H	163	9.40	22.06
8	675.37	33.09 QP	46.00	-12.91	1.00 H	145	10.57	22.53
9	776.45	32.17 QP	46.00	-13.83	1.00 H	199	7.67	24.51
10	811.44	33.32 QP	46.00	-12.68	1.50 H	199	8.63	24.69
11	838.66	29.63 QP	46.00	-16.37	1.25 H	67	4.58	25.05
12	943.63	30.58 QP	46.00	-15.42	1.75 H	202	4.34	26.23

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	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
CHANNEL	Channel 11	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	15deg. C, 62 %RH, 991hPa	TESTED BY: Vincent Lin	

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	47.49	30.79 QP	40.00	-9.21	1.25 V	307	17.02	13.77
2	269.10	25.19 QP	46.00	-20.81	2.50 V	70	11.30	13.89
3	302.14	25.68 QP	46.00	-20.32	2.00 V	184	10.36	15.31
4	339.08	32.38 QP	46.00	-13.62	1.50 V	37	16.50	15.88
5	539.30	37.21 QP	46.00	-8.79	1.25 V	10	16.68	20.53
6	570.40	35.59 QP	46.00	-10.41	1.00 V	136	14.36	21.22
7	607.33	34.37 QP	46.00	-11.63	1.00 V	19	12.39	21.99
8	745.35	37.35 QP	46.00	-8.65	1.50 V	4	13.02	24.33
9	805.61	33.67 QP	46.00	-12.33	1.25 V	193	9.05	24.61
10	838.66	32.61 QP	46.00	-13.39	1.00 V	190	7.56	25.05
11	906.69	34.29 QP	46.00	-11.71	1.25 V	346	8.87	25.43
12	939.74	38.68 QP	46.00	-7.32	1.50 V	175	12.54	26.15
13	945.57	37.59 QP	46.00	-8.41	1.00 V	178	11.32	26.27

- 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	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
MODE	CCK		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20deg. C, 70%RH, 991hPa	TESTED BY: Vincent Lin	

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	2016.00	40.89 PK	74.00	-33.11	1.40 H	210	12.21	28.68
2	2387.00	52.01 PK	74.00	-21.99	1.76 H	130	21.71	30.30
2	2387.00	43.23 AV	54.00	-10.77	1.76 H	130	12.93	30.30
3	2390.00	51.81 PK	74.00	-22.19	1.76 H	130	21.49	30.32
3	2390.00	43.03 AV	54.00	-10.97	1.76 H	130	12.71	30.32
4	*2412.00	109.07 PK			1.76 H	130	78.66	30.41
4	*2412.00	100.29 AV			1.76 H	130	69.88	30.41
5	2688.00	41.98 PK	74.00	-32.02	1.52 H	137	10.85	31.12
6	4824.00	46.43 PK	74.00	-27.57	1.44 H	137	10.93	35.50
7	9748.00	54.20 PK	74.00	-19.80	1.48 H	245	9.17	45.04
7	9748.00	42.26 AV	54.00	-11.74	1.48 H	245	-2.77	45.04

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	2016.00	42.54 PK	74.00	-31.46	1.35 V	211	13.86	28.68
2	2387.00	55.05 PK	74.00	-18.95	1.00 V	227	24.75	30.30
2	2387.00	46.82 AV	54.00	-7.18	1.00 V	227	16.52	30.30
3	2390.00	54.85 PK	74.00	-19.15	1.00 V	227	24.53	30.32
3	2390.00	46.62 AV	54.00	-7.38	1.00 V	227	16.30	30.32
4	*2412.00	112.11 PK			1.00 V	227	81.70	30.41
4	*2412.00	103.88 AV			1.00 V	227	73.47	30.41
5	2688.00	45.12 PK	74.00	-28.88	1.61 V	72	14.00	31.12
6	4824.00	49.30 PK	74.00	-24.70	1.05 V	141	13.80	35.50
7	9648.00	55.58 PK	74.00	-18.42	1.00 V	255	10.26	45.32
7	9648.00	43.50 AV	54.00	-10.50	1.00 V	255	-1.82	45.32

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

EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
MODE	CCK		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20deg. C, 70%RH, 991hPa	TESTED BY: Vincent Lin	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2016.00	41.26 PK	74.00	-32.74	1.43 H	210	12.58	28.68
2	*2437.00	108.93 PK			1.78 H	131	78.43	30.50
2	*2437.00	100.35 AV			1.78 H	131	69.85	30.50
3	2688.00	42.03 PK	74.00	-31.97	1.51 H	210	10.91	31.12
4	4874.00	45.39 PK	74.00	-28.61	1.43 H	240	9.63	35.76
5	9748.00	53.66 PK	74.00	-20.34	1.55 H	223	8.63	45.04
5	9748.00	40.82 AV	54.00	-13.18	1.55 H	223	-4.21	45.04

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2016.00	41.85 PK	74.00	-32.15	1.45 V	140	13.17	28.68
2	*2437.00	113.52 PK			1.55 V	227	83.02	30.50
2	*2437.00	104.97 AV			1.55 V	227	74.47	30.50
3	2688.00	44.18 PK	74.00	-29.82	1.60 V	70	13.06	31.12
4	4874.00	48.06 PK	74.00	-25.94	1.25 V	151	12.30	35.76
5	9748.00	55.19 PK	74.00	-18.81	1.00 V	331	10.15	45.04
5	9748.00	42.67 AV	54.00	-11.33	1.00 V	331	-2.37	45.04

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

EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
MODE	CCK		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20deg. C, 70%RH, 991hPa	TESTED BY: Vincent Lin	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2016.00	40.28 PK	74.00	-33.72	1.00 H	222	11.60	28.68
2	*2462.00	107.64 PK			1.75 H	128	77.05	30.59
2	*2462.00	99.01 AV			1.75 H	128	68.42	30.59
3	2483.50	51.00 PK	74.00	-23.00	1.75 H	128	20.33	30.67
3	2483.50	42.37 AV	54.00	-11.63	1.75 H	128	11.70	30.67
4	2488.00	51.10 PK	74.00	-22.90	1.75 H	128	20.41	30.69
4	2488.00	42.47 AV	54.00	-11.53	1.75 H	128	11.78	30.69
5	2688.00	43.37 PK	74.00	-30.63	1.54 H	115	12.24	31.12
6	4924.00	46.98 PK	74.00	-27.02	1.21 H	122	11.00	35.99
7	9848.00	54.33 PK	74.00	-19.67	1.59 H	148	9.40	44.93
7	9848.00	40.51 AV	54.00	-13.49	1.59 H	148	-4.42	44.93

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2016.00	40.47 PK	74.00	-33.53	1.40 V	134	11.79	28.68
2	*2462.00	111.83 PK			1.26 V	228	81.24	30.59
2	*2462.00	103.34 AV			1.26 V	228	72.75	30.59
3	2483.50	55.19 PK	74.00	-18.81	1.26 V	228	24.52	30.67
3	2483.50	46.70 AV	54.00	-7.30	1.26 V	228	16.03	30.67
4	2488.00	55.29 PK	74.00	-18.71	1.26 V	228	24.60	30.69
4	2488.00	46.80 AV	54.00	-7.20	1.26 V	228	16.11	30.69
5	2688.00	43.44 PK	74.00	-30.56	1.62 V	71	12.31	31.12
6	4924.00	47.93 PK	74.00	-26.07	1.07 V	141	11.95	35.99
7	9848.00	54.35 PK	74.00	-19.65	1.00 V	350	9.42	44.93
7	9848.00	42.24 AV	54.00	-11.76	1.00 V	350	-2.69	44.93

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

Normal mode

EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
MODE	OFDM		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20deg. C, 70%RH, 991hPa	TESTED BY: Vincent Lin	

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	2016.00	48.63 PK	74.00	-25.37	1.10 H	127	19.95	28.68
2	2390.00	59.53 PK	74.00	-14.47	1.68 H	130	29.21	30.32
2	2390.00	48.47 AV	54.00	-5.53	1.68 H	130	18.15	30.32
3	*2412.00	106.17 PK			1.68 H	130	75.76	30.41
3	*2412.00	95.11 AV			1.68 H	130	64.70	30.41
4	2688.00	45.63 PK	74.00	-28.37	1.00 H	120	14.51	31.12
5	4824.00	45.28 PK	74.00	-28.72	1.12 H	176	9.78	35.50

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	2016.00	50.91 PK	74.00	-23.09	1.00 V	190	22.23	28.68
2	2390.00	64.11 PK	74.00	-9.89	1.00 V	227	33.79	30.32
2	2390.00	52.69 AV	54.00	-1.31	1.00 V	227	22.37	30.32
3	2412.00	110.75 PK			1.00 V	227	80.34	30.41
3	2412.00	99.33 AV			1.00 V	227	68.92	30.41
4	2688.00	54.84 PK	74.00	-19.16	1.05 V	181	23.72	31.12
4	2688.00	47.76 AV	54.00	-6.24	1.05 V	181	16.64	31.12
5	4824.00	44.01 PK	74.00	-29.99	1.14 V	230	8.51	35.50

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

EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
MODE	OFDM		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20deg. C, 70%RH, 99hPa	TESTED BY: Vincent Lin	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2016.00	48.19 PK	74.00	-25.81	1.08 H	126	19.51	28.68
2	*2437.00	105.44 PK			2.14 H	132	74.94	30.50
2	*2437.00	94.62 AV			2.14 H	132	64.12	30.50
3	2688.00	45.79 PK	74.00	-28.21	1.00 H	124	14.67	31.12
4	4874.00	45.28 PK	74.00	-28.72	1.11 H	181	9.52	35.76

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2016.00	51.36 PK	74.00	-22.64	1.00 V	190	22.68	28.68
1	2016.00	41.82 AV	54.00	-12.18	1.00 V	190	13.14	28.68
2	*2437.00	110.04 PK			1.00 V	228	79.54	30.50
2	*2437.00	98.97 AV			1.00 V	228	68.47	30.50
3	2688.00	54.88 PK	74.00	-19.12	1.06 V	185	23.76	31.12
3	2688.00	47.63 AV	54.00	-6.37	1.06 V	185	16.51	31.12
4	4874.00	45.47 PK	74.00	-28.53	1.07 V	126	9.71	35.76

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

EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
MODE	OFDM		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20deg. C, 70%RH, 991hPa	TESTED BY: Vincent Lin	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2016.00	49.03 PK	74.00	-24.97	1.05 H	130	20.35	28.68
2	*2462.00	104.95 PK			1.70 H	129	74.36	30.59
2	*2462.00	94.07 AV			1.70 H	129	63.48	30.59
3	2483.50	59.22 PK	74.00	-14.78	1.70 H	129	28.55	30.67
3	2483.50	48.34 AV	54.00	-5.66	1.70 H	129	17.67	30.67
4	2688.00	46.02 PK	74.00	-27.98	1.03 H	151	14.90	31.12
5	4924.00	45.28 PK	74.00	-28.72	1.05 H	201	9.29	35.99

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2016.00	51.89 PK	74.00	-22.11	1.03 V	184	23.21	28.68
1	2016.00	42.57 AV	54.00	-11.43	1.03 V	184	13.89	28.68
2	*2462.00	109.65 PK			1.16 V	121	79.06	30.59
2	*2462.00	98.54 AV			1.16 V	121	67.95	30.59
3	2483.50	63.92 PK	74.00	-10.08	1.16 V	121	33.25	30.67
3	2483.50	52.81 AV	54.00	-1.19	1.16 V	121	22.14	30.67
4	2688.00	55.17 PK	74.00	-18.83	1.06 V	177	24.05	31.12
4	2688.00	48.03 AV	54.00	-5.97	1.06 V	177	16.91	31.12
5	4924.00	46.08 PK	74.00	-27.92	1.26 V	228	10.10	35.99

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

Turbo mode

EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
MODE	OFDM		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20deg. C, 70%RH, 991hPa	TESTED BY: Vincent Lin	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2016.00	40.75 PK	74.00	-33.25	1.08 H	125	12.07	28.68
2	2390.00	54.13 PK	74.00	-19.87	1.77 H	133	23.81	30.32
2	2390.00	44.13 AV	54.00	-9.87	1.77 H	133	13.81	30.32
3	*2437.00	102.94 PK			1.77 H	133	72.44	30.50
3	*2437.00	92.94 AV			1.77 H	133	62.44	30.50
4	2483.50	52.29 PK	74.00	-21.71	1.77 H	133	21.62	30.67
4	2483.50	52.29 AV	54.00	-1.71	1.77 H	133	21.62	30.67
5	2688.00	40.66 PK	74.00	-33.34	1.00 H	123	9.53	31.12
6	4874.00	45.61 PK	74.00	-28.39	1.35 H	192	9.85	35.76

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2016.00	51.63 PK	74.00	-22.37	1.00 V	189	22.95	28.68
1	2016.00	42.84 AV	54.00	-11.16	1.00 V	189	14.16	28.68
2	2390.00	59.69 PK	74.00	-14.31	1.00 V	121	29.37	30.32
2	2390.00	49.33 AV	54.00	-4.67	1.00 V	121	19.01	30.32
3	*2437.00	108.50 PK			1.00 V	121	78.00	30.50
3	*2437.00	98.14 AV			1.00 V	121	67.64	30.50
4	2483.50	57.85 PK	74.00	-16.15	1.00 V	121	27.18	30.67
4	2483.50	47.49 AV	54.00	-6.51	1.00 V	121	16.82	30.67
5	2688.00	53.78 PK	74.00	-20.22	1.04 V	183	22.66	31.12
5	2688.00	47.89 AV	54.00	-6.11	1.04 V	183	16.77	31.12
6	4874.00	45.12 PK	74.00	-28.88	1.00 V	210	9.36	35.76

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

4.3 6dB BANDWIDTH MEASUREMENT

4.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 TEST INSTRUMENTS

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

NOTE:

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

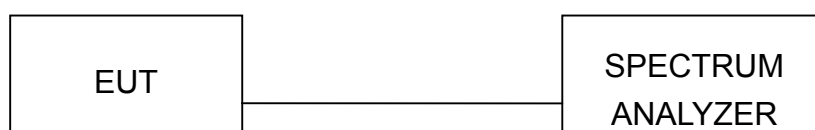
4.3.3 TEST PROCEDURE

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

4.3.4 DEVIATION FROM TEST STANDARD

No deviation

4.3.5 TEST SETUP



4.3.6 EUT OPERATING CONDITIONS

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

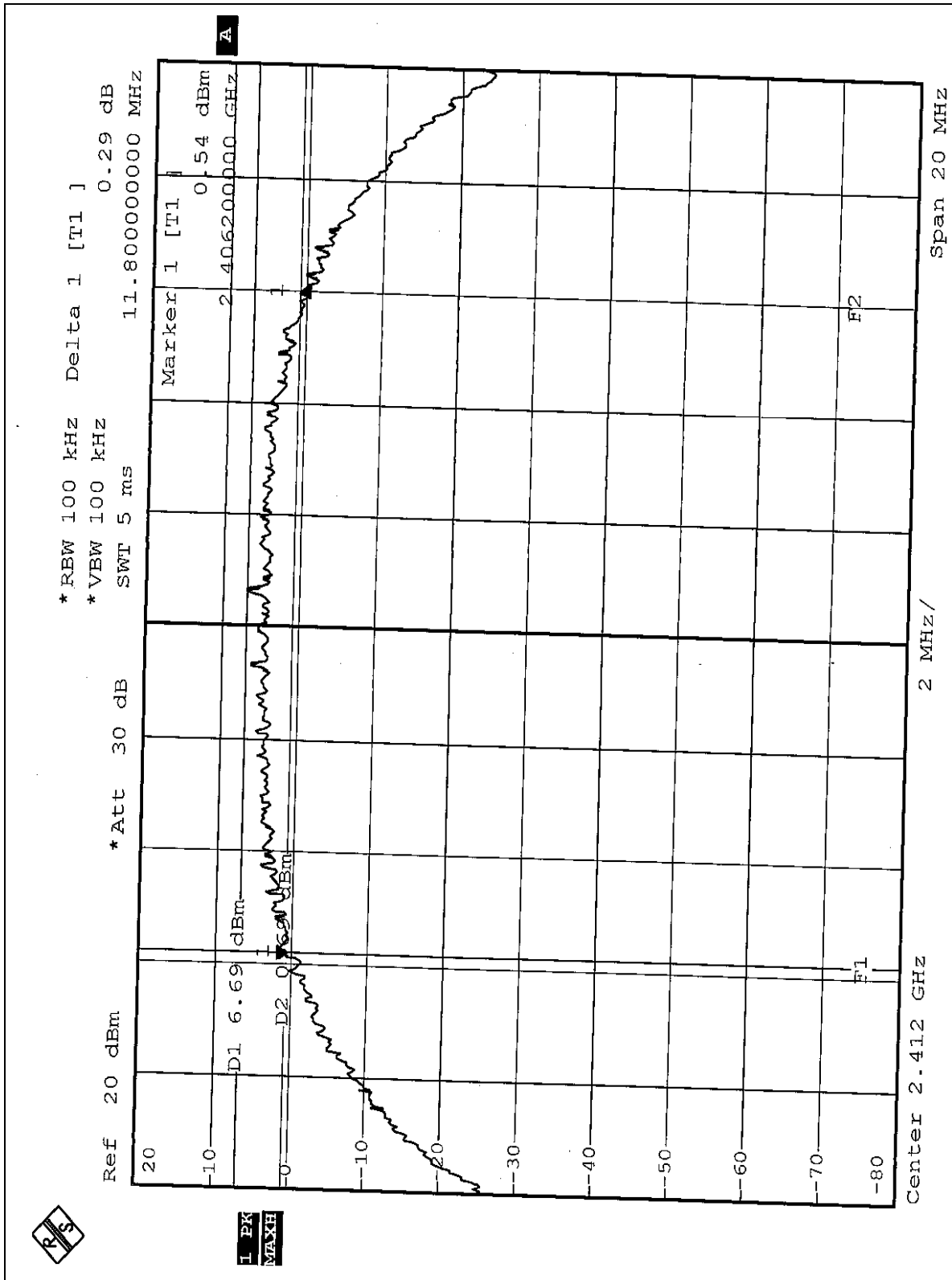


4.3.7 TEST RESULTS

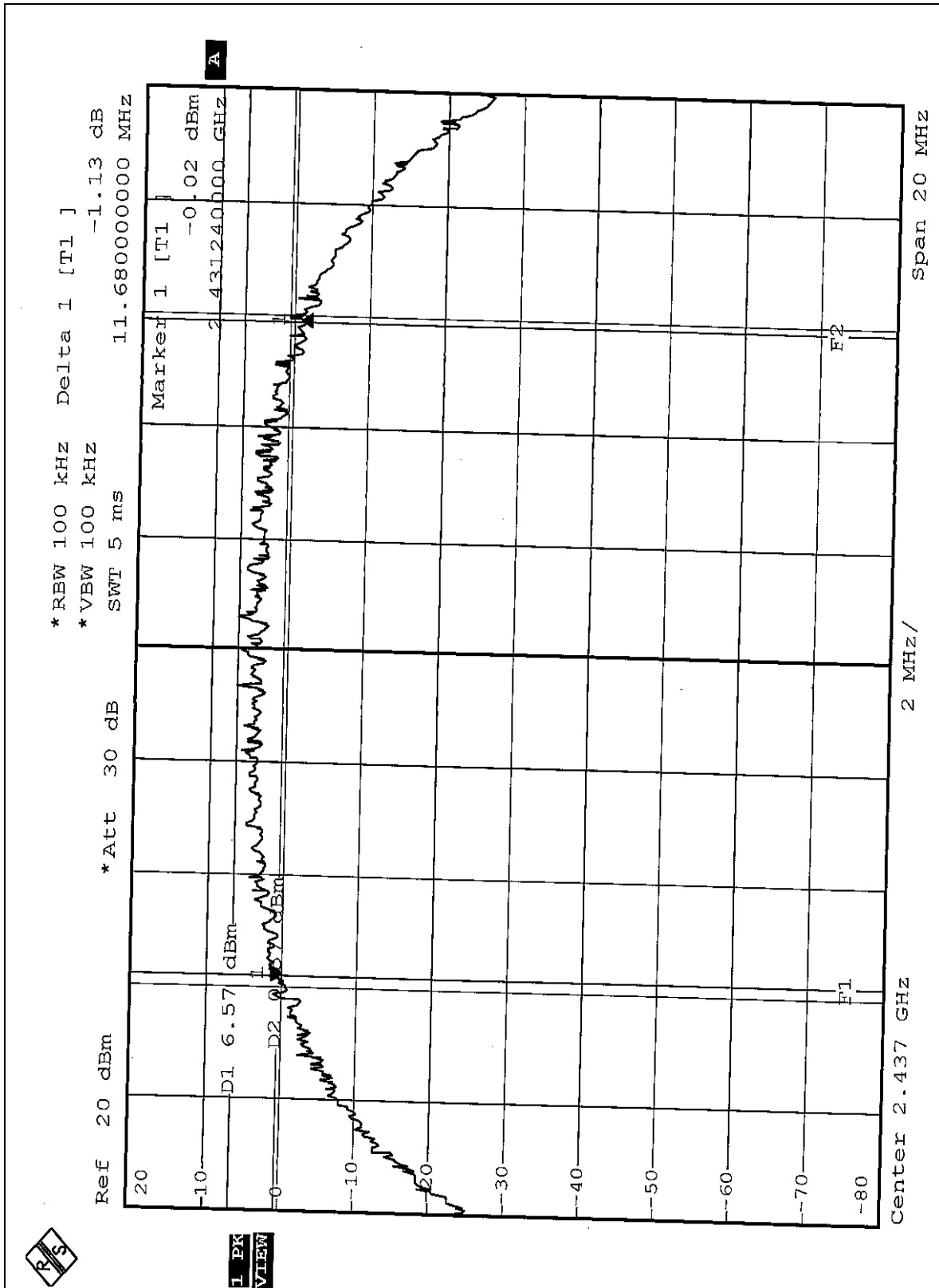
EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
MODE	CCK	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	TESTED BY	Steven Lu

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	11.80	0.5	PASS
6	2437	11.68	0.5	PASS
11	2462	11.64	0.5	PASS

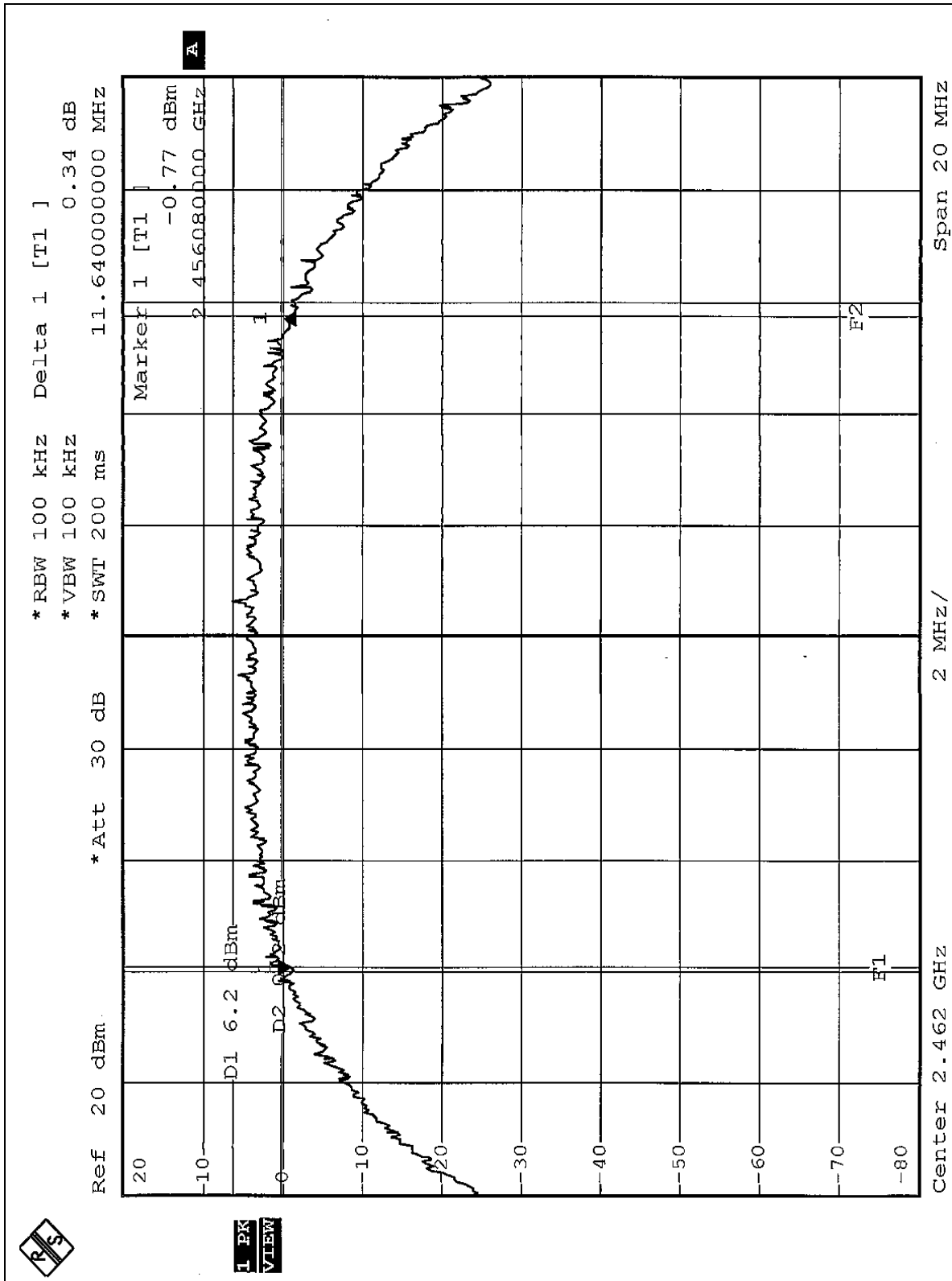
CH1



CH6



CH11

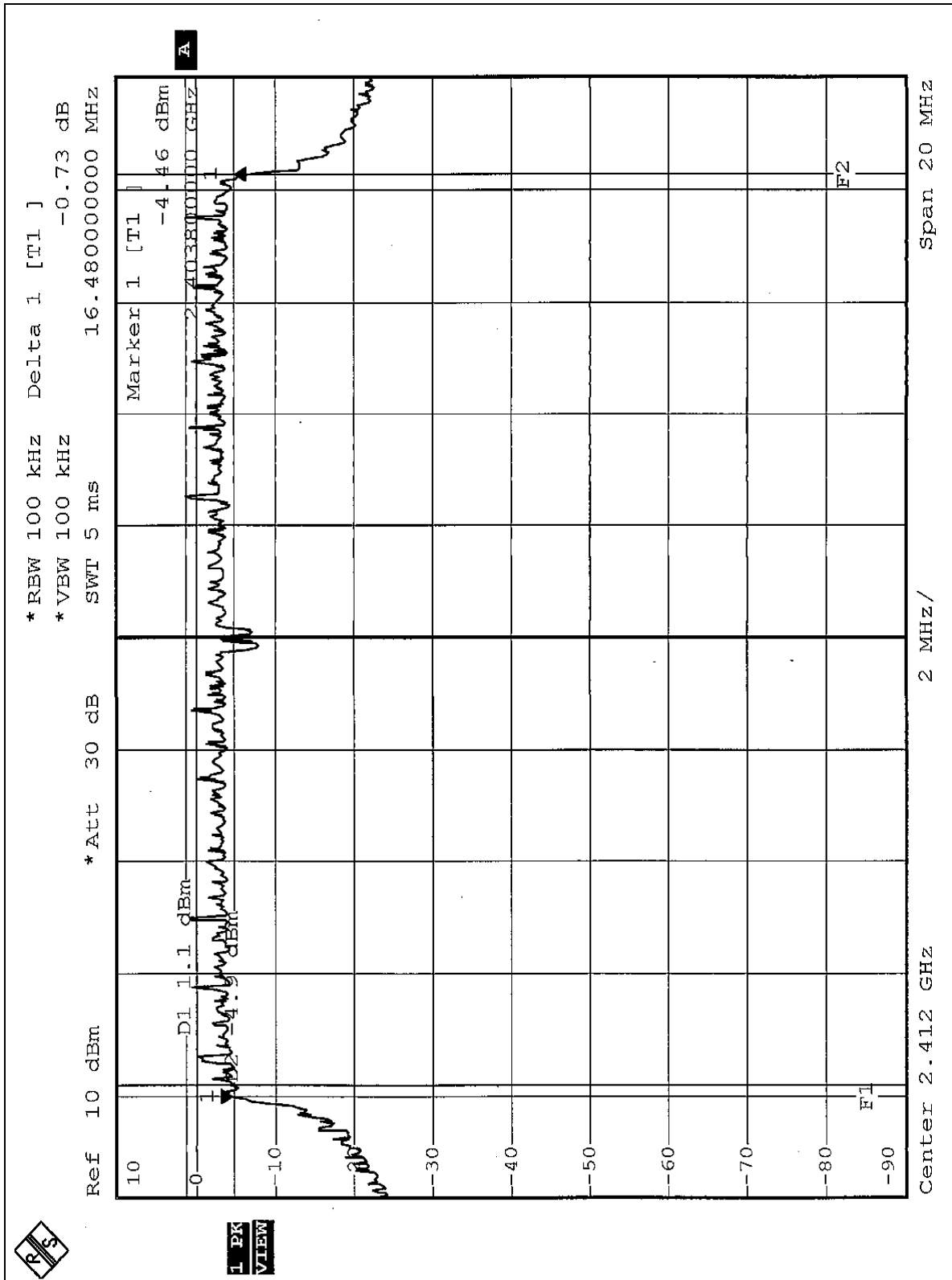


**Normal mode**

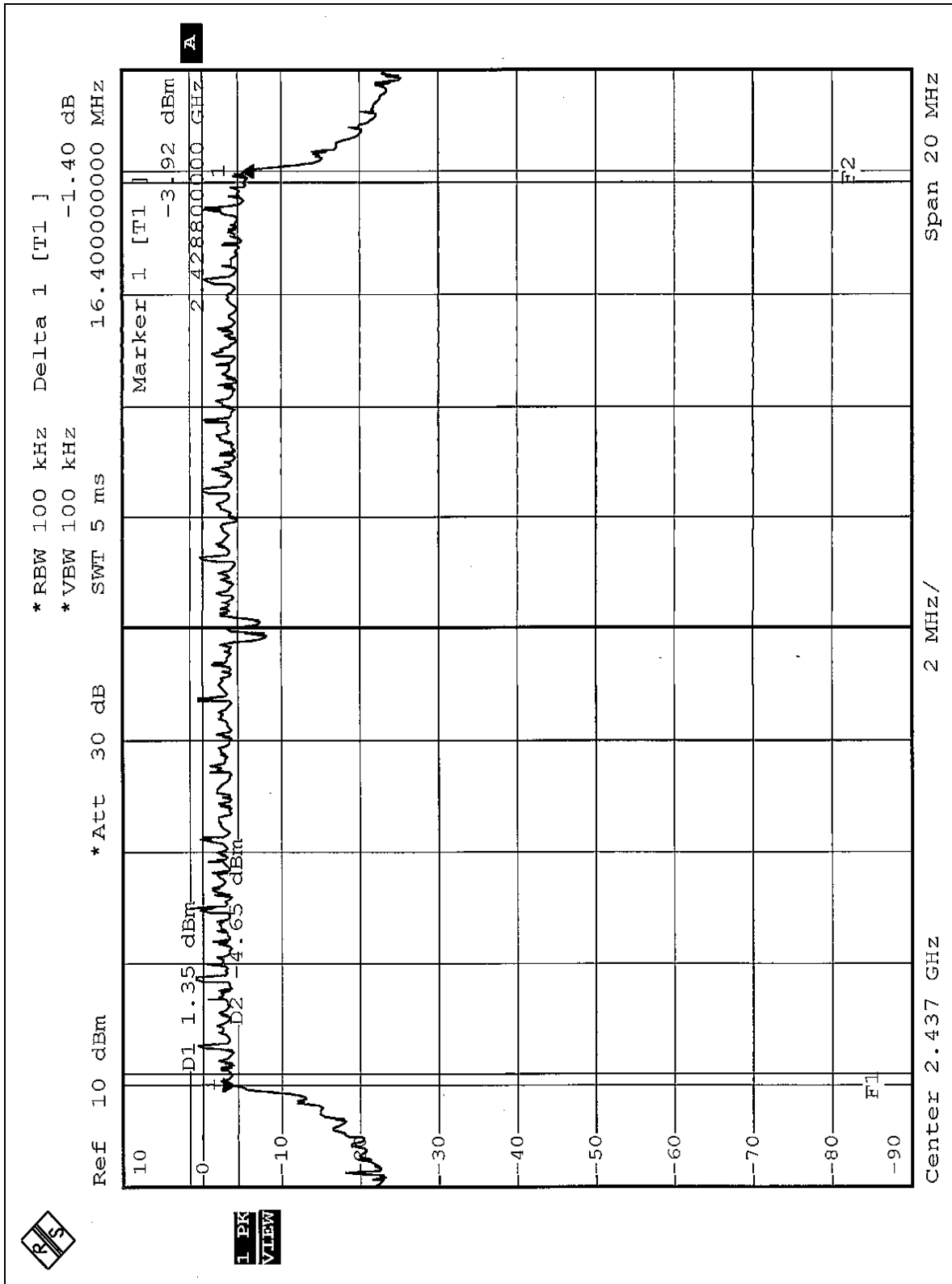
EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
MODE	OFDM	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	TESTED BY	Steven Lu

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	16.48	0.5	PASS
6	2437	16.40	0.5	PASS
11	2462	16.48	0.5	PASS

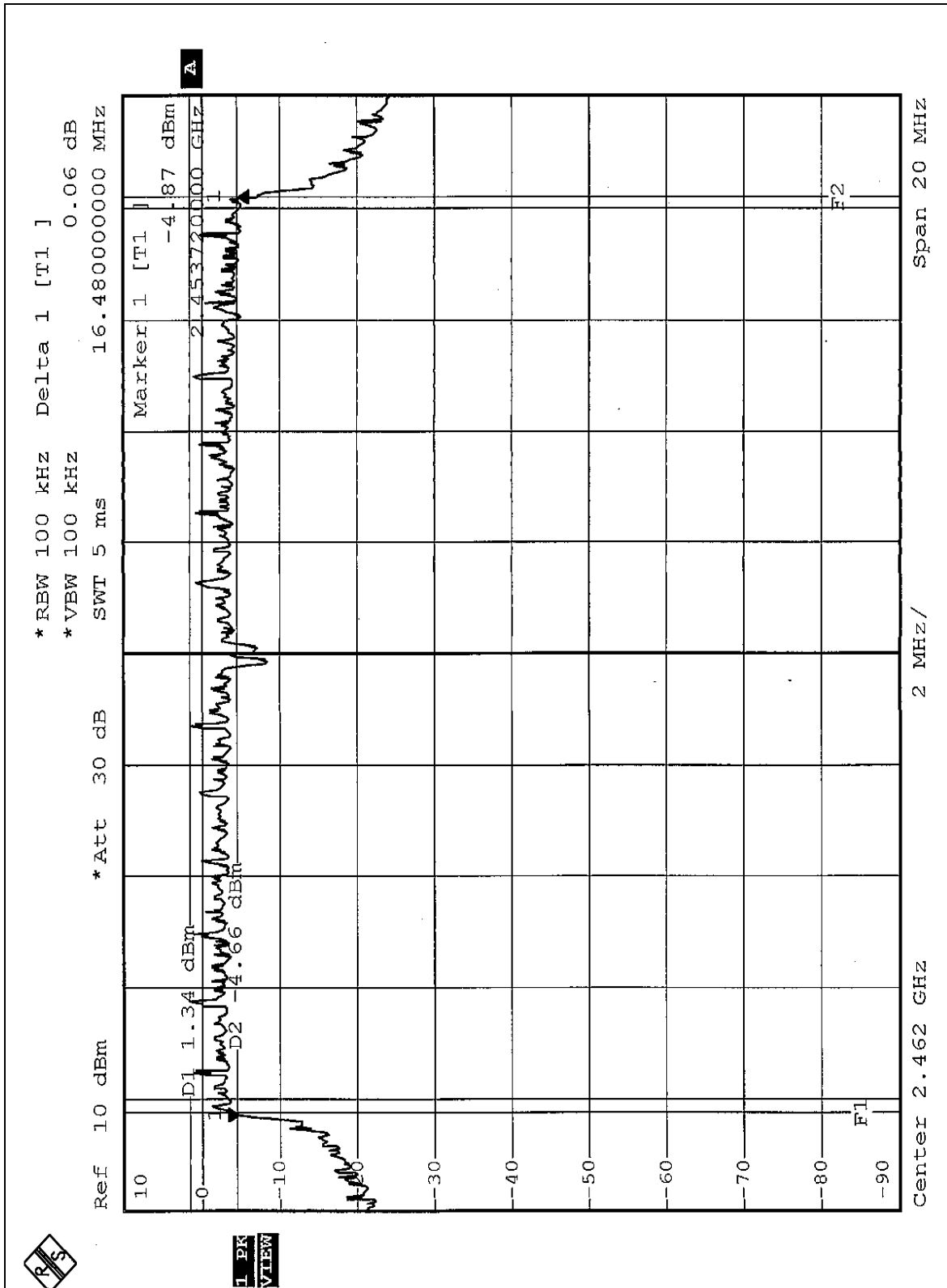
CH1



CH6



CH11

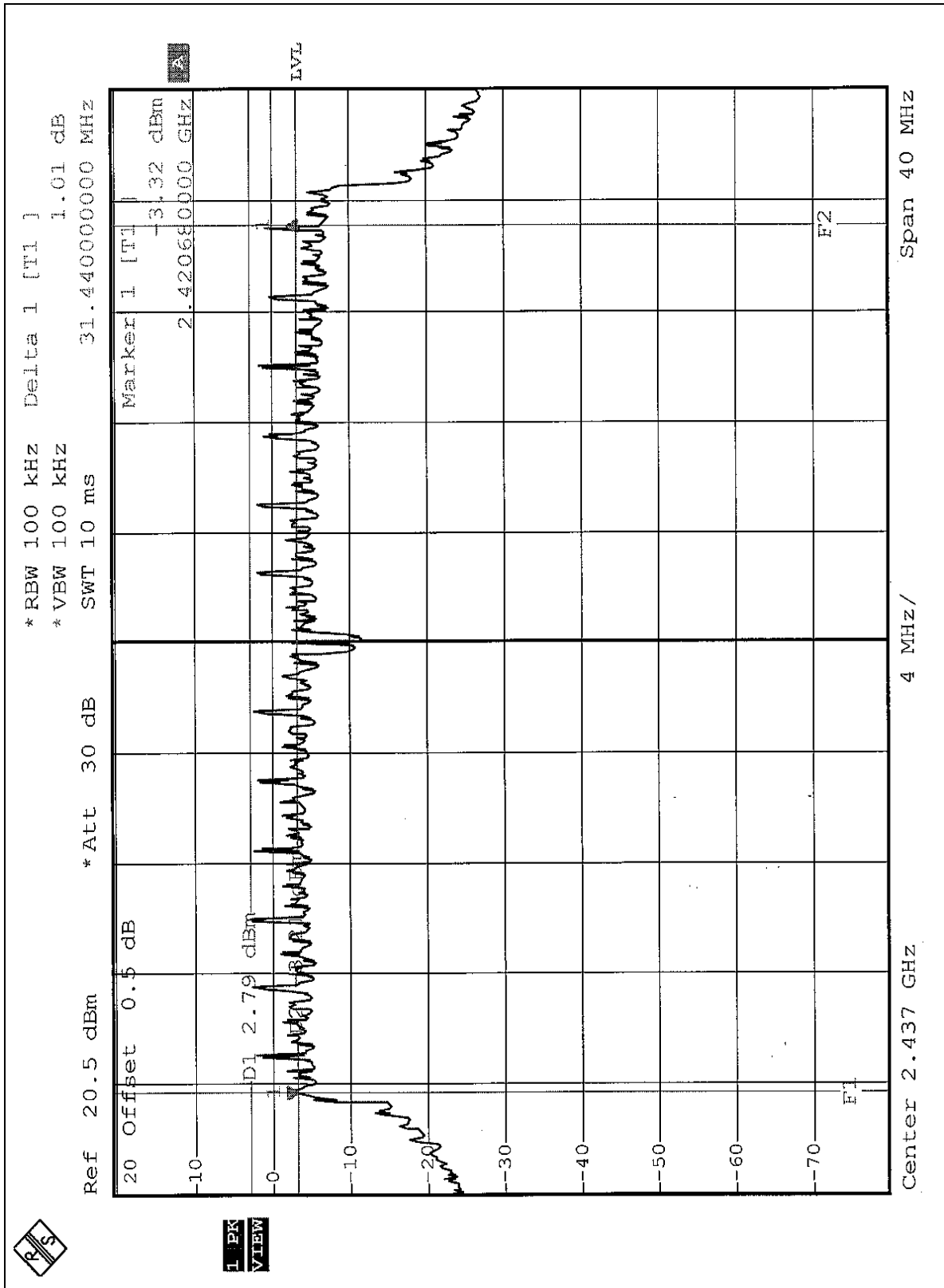


**Turbo mode**

EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
MODE	OFDM	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	TESTED BY	Steven Lu

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
6	2437	31.44	0.5	PASS

CH6



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 INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2005
AGILENT SIGNAL GENERATOR	E8257C	MY43320668	Dec. 31, 2004
TEKTRONIX OSCILLOSCOPE	TDS 1012	C019167	Feb. 01, 2005
NARDA DETECTOR	4503A	FSCM99899	NA

NOTE:

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

4.4.3 TEST PROCEDURES

1. A detector was used on the output port of the EUT. An oscilloscope was used to read the response of the detector.
2. Replaced the EUT by the signal generator. The center frequency of the S.G was adjusted to the center frequency of the measured channel.
3. Adjusted the power to have the same reading on oscilloscope. Record the power level.

4.4.4 TEST SETUP



4.4.5 EUT OPERATING CONDITIONS

Same as Item 4.3.6

4.4.6 TEST RESULTS

EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	24deg.C, 64%RH, 991hPa
MODE	CCK	TESTED BY	Steven Lu

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	63.387	18.02	30	PASS
6	2437	63.096	18.00	30	PASS
11	2462	63.241	18.01	30	PASS

Normal mode

EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	24deg.C, 64%RH, 991hPa
MODE	OFDM	TESTED BY	Steven Lu

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	35.563	15.51	30	PASS
6	2437	35.481	15.50	30	PASS
11	2462	35.727	15.53	30	PASS

**Turbo mode**

EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	24deg.C, 64%RH, 991hPa
MODE	OFDM	TESTED BY	Steven Lu

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
6	2437	28.774	14.59	30	PASS



4.5 POWER SPECTRAL DENSITY MEASUREMENT

4.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

4.5.2 TEST INSTRUMENTS

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

NOTE:

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

4.5.3 TEST PROCEDURE

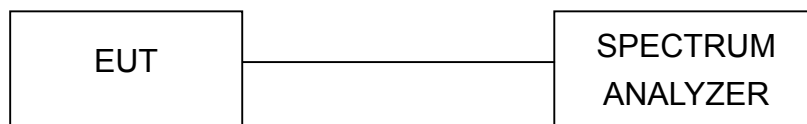
The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3 kHz RBW and 30 kHz VBW, set sweep time = span/3 kHz. The power spectral density was measured and recorded.

The sweep time is allowed to be longer than span/3 kHz for a full response of the mixer in the spectrum analyzer.

4.5.4 DEVIATION FROM TEST STANDARD

No deviation

4.5.5 TEST SETUP



4.5.6 EUT OPERATING CONDITION

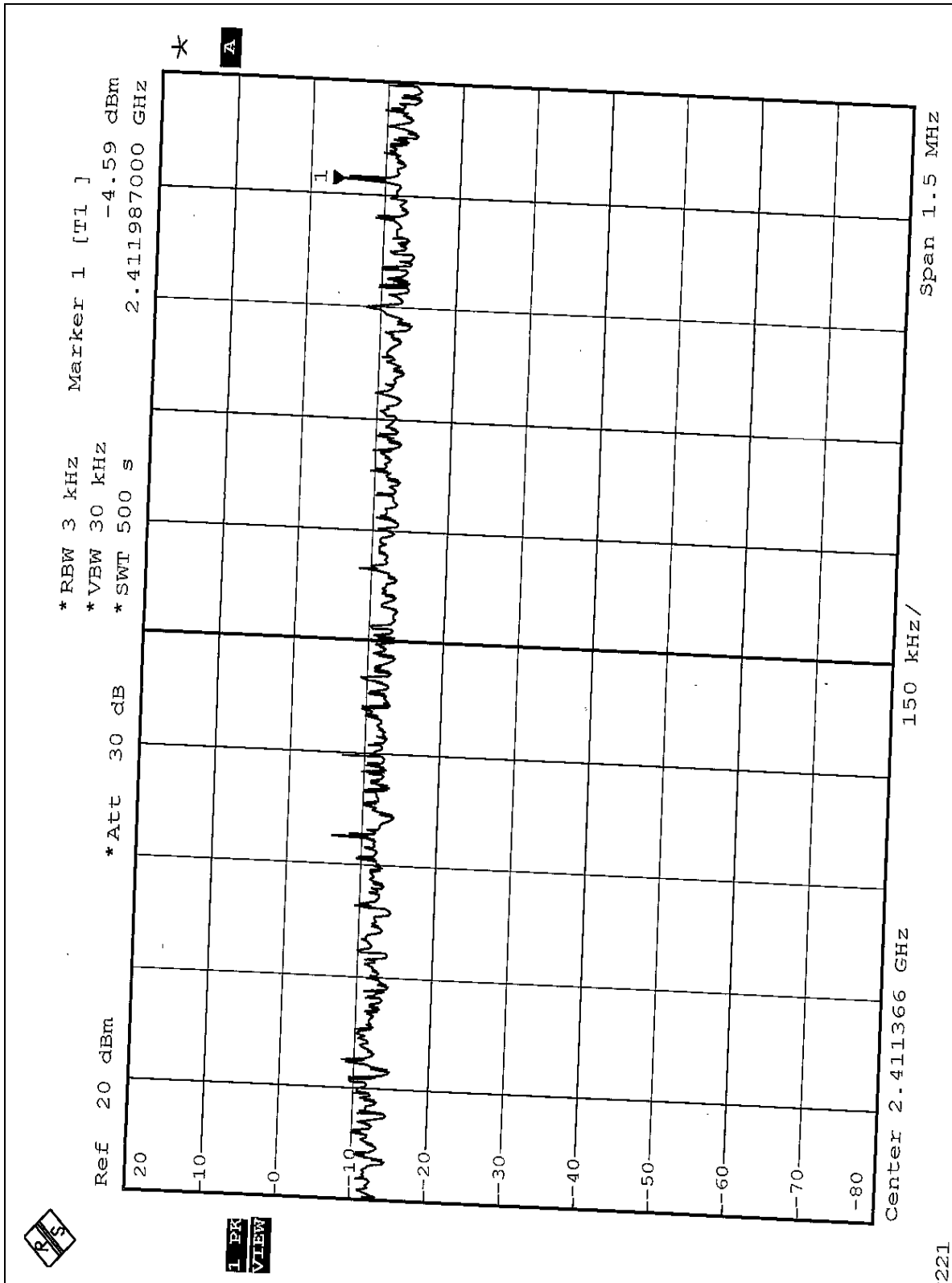
Same as Item 4.3.6

4.5.7 TEST RESULTS

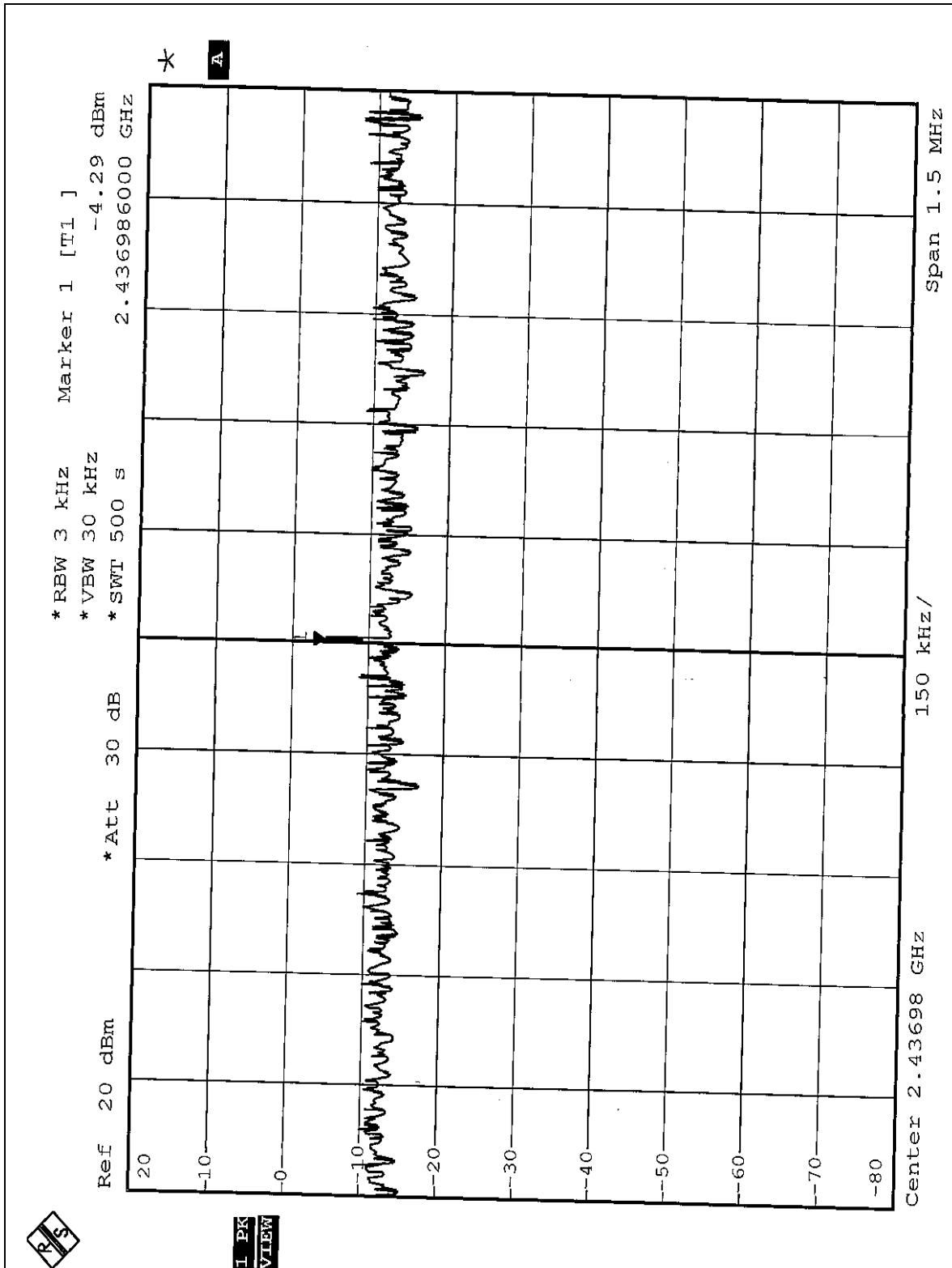
EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	24deg.C, 64%RH, 991hPa
MODE	CCK	TESTED BY	Steven Lu

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-4.59	8	PASS
6	2437	-4.29	8	PASS
11	2462	-4.98	8	PASS

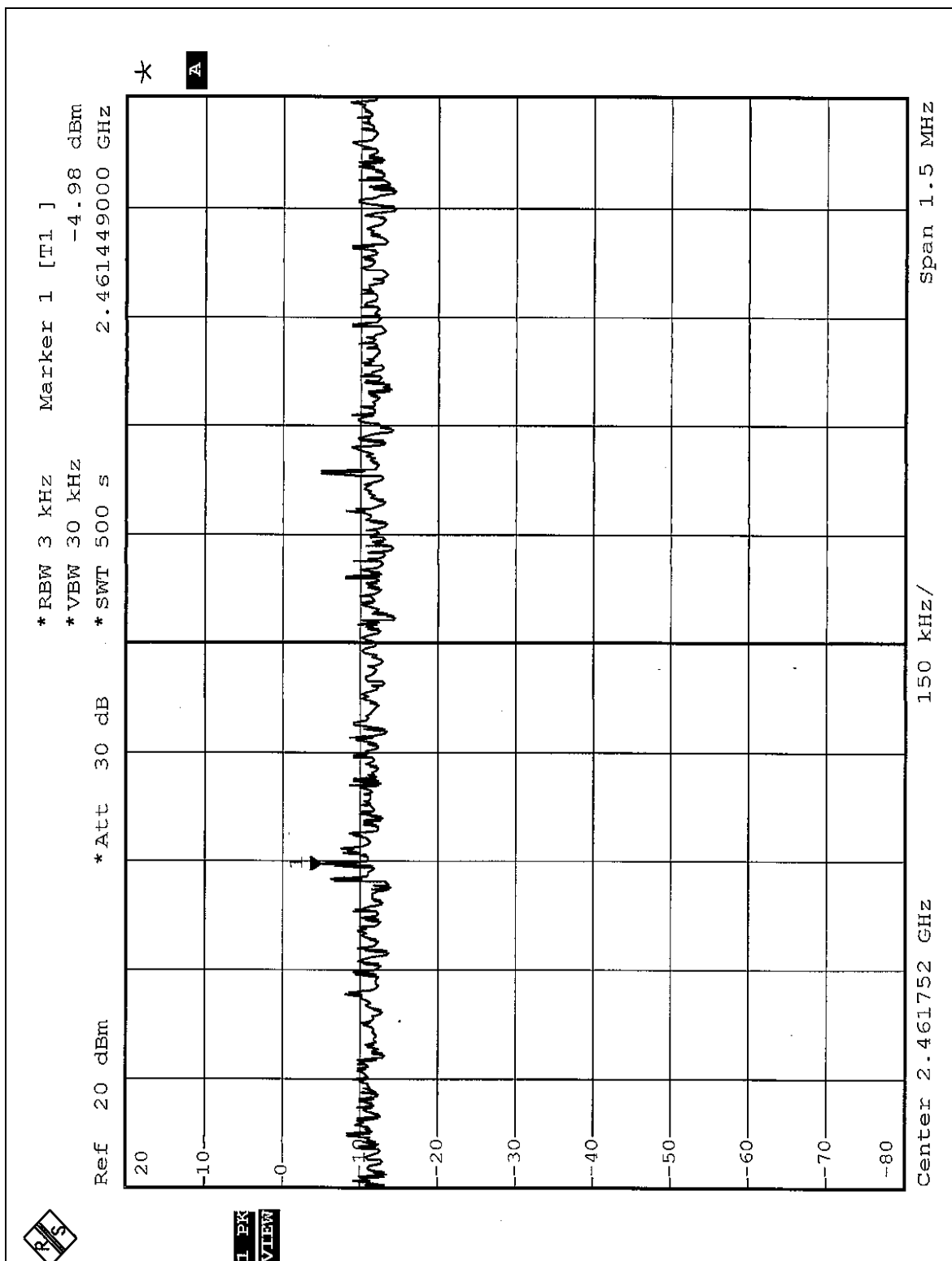
CH1



CH6



CH11

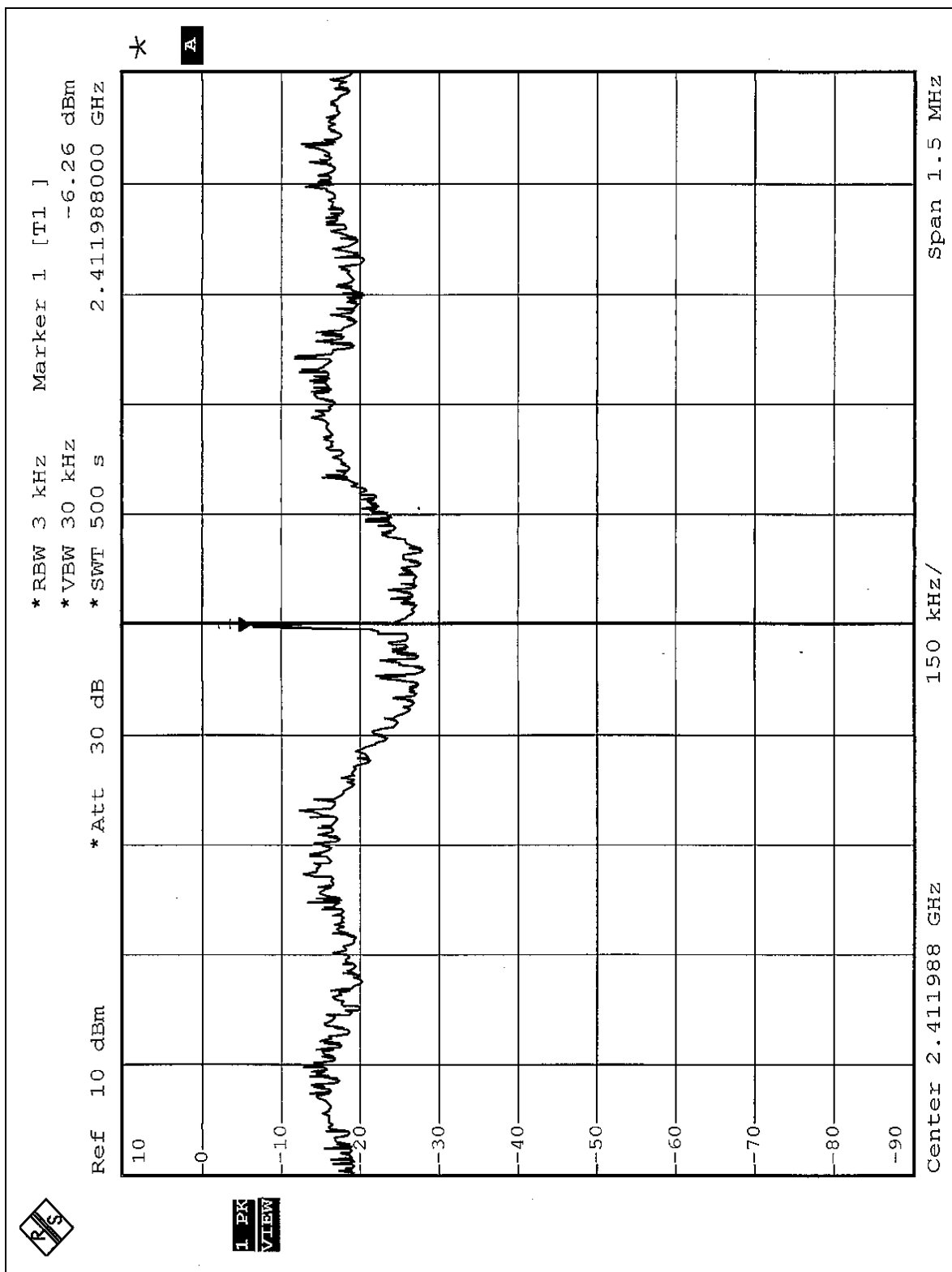


**Normal mode**

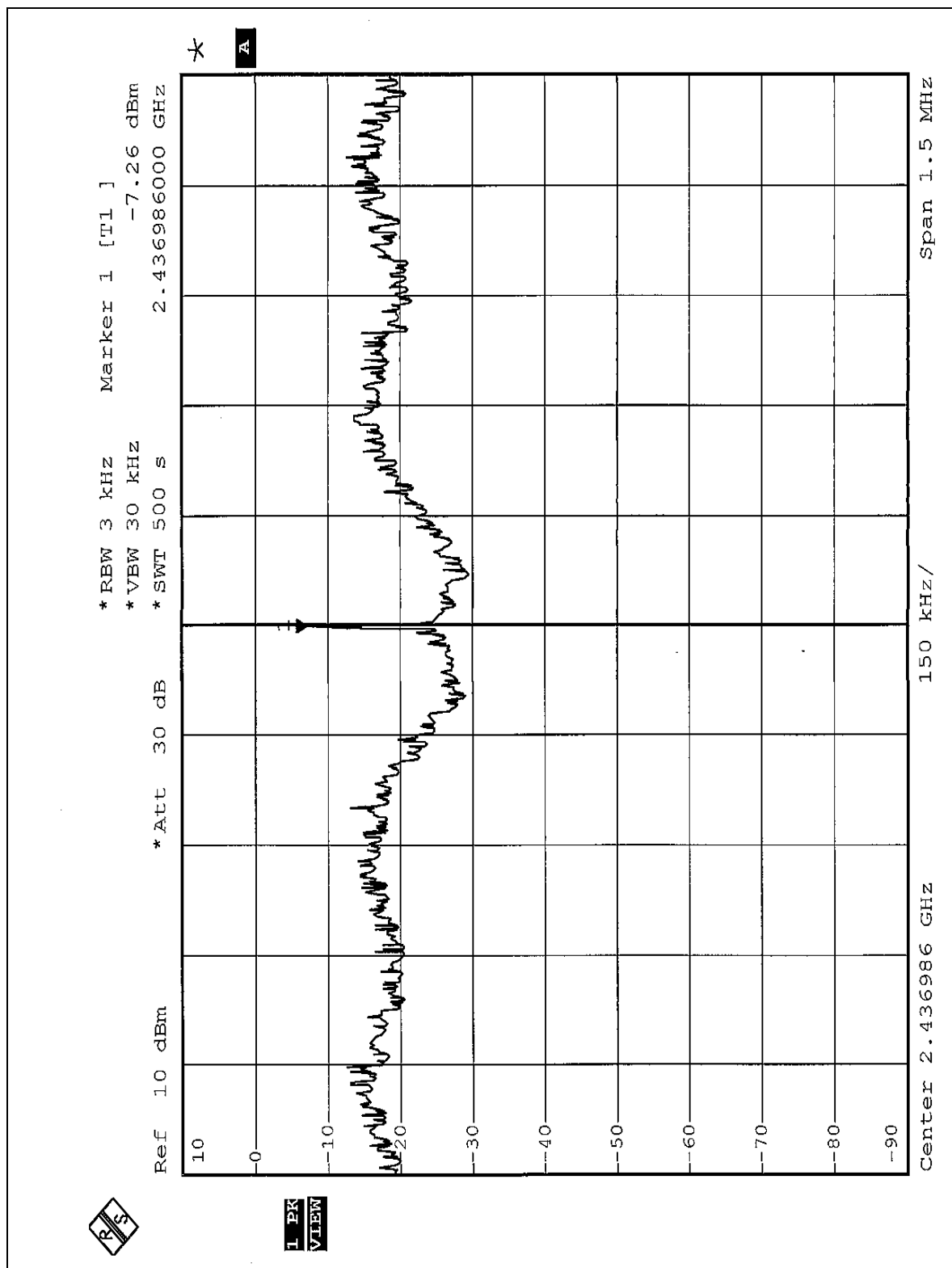
EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	24deg.C, 64%RH, 991hPa
MODE	OFDM	TESTED BY	Steven Lu

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-6.26	8	PASS
6	2437	-7.26	8	PASS
11	2462	-7.59	8	PASS

CH1

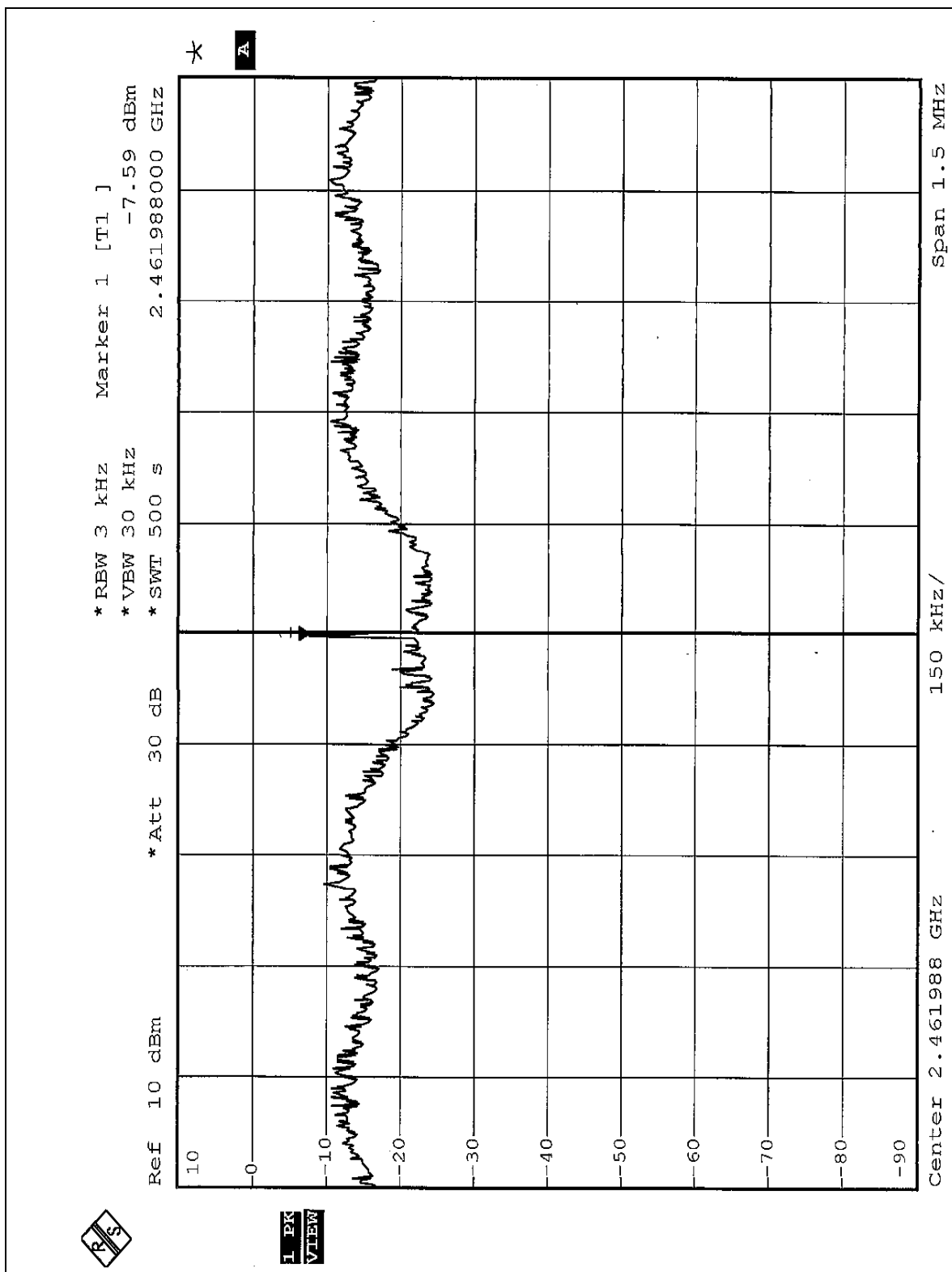


CH6





CH11

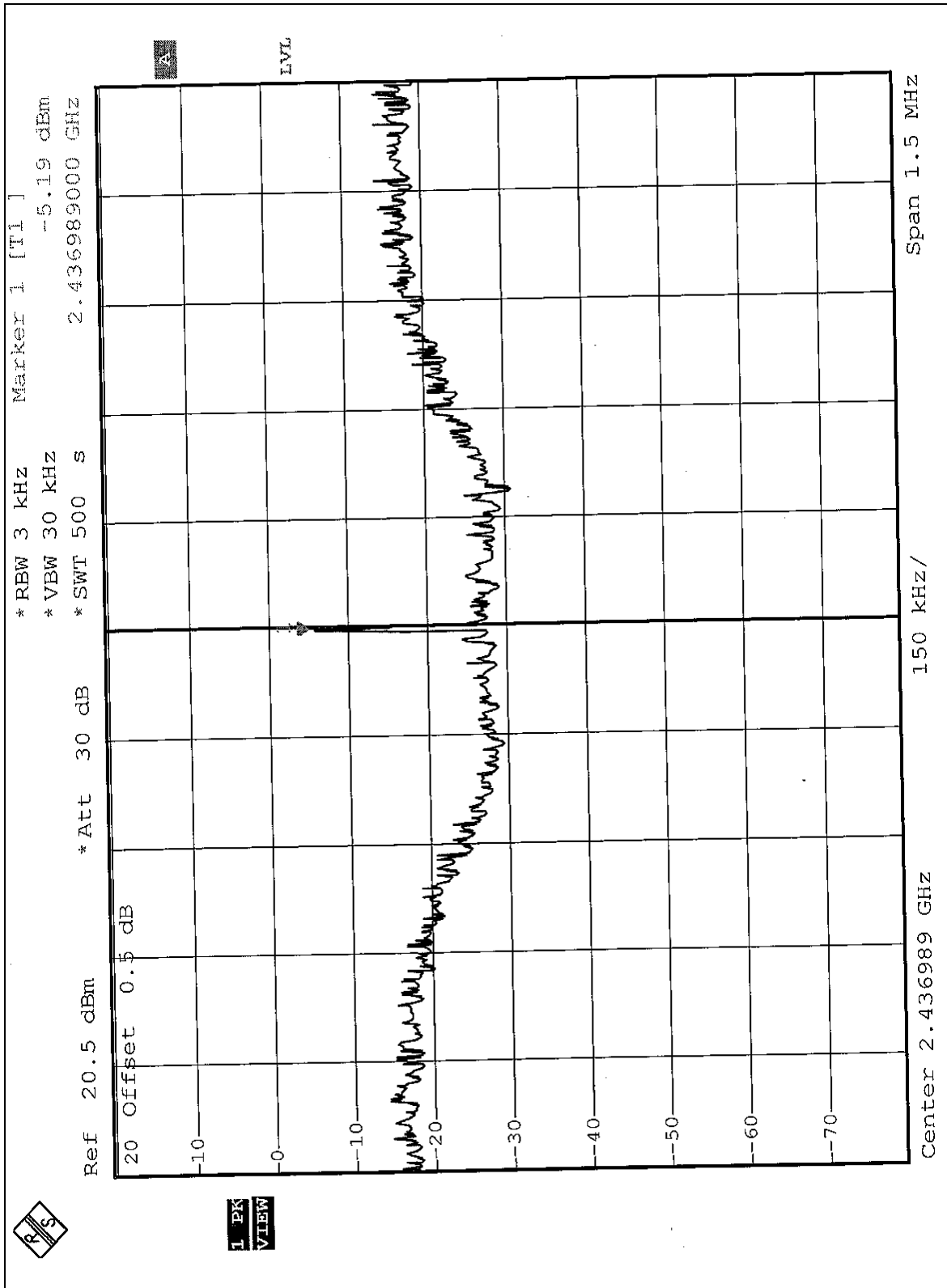


**Turbo mode**

EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	24deg.C, 64%RH, 991hPa
MODE	OFDM	TESTED BY	Steven Lu

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
6	2437	-5.19	8	PASS

CH6



4.6 BAND EDGES MEASUREMENT

4.6.1 LIMITS OF BAND EDGES MEASUREMENT

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

4.6.2 TEST INSTRUMENTS

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

NOTE:

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

4.6.3 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 1MHz and 10 Hz with suitable frequency span including 100 MHz bandwidth from band edge. The band edges was measured and recorded.

4.6.4 DEVIATION FROM TEST STANDARD

No deviation

4.6.5 EUT OPERATING CONDITION

Same as Item 4.3.6



4.6.6 TEST RESULTS

The spectrum plots are attached on the following 12 pages. D2 line indicates the highest level, and D1 line indicates the 20dB offset below D2. It shows compliance with the requirement in part 15.247(C).

NOTE 1: The band edge emission plot of CCK technique on page 66 show 55.99dB delta between carrier maximum power and local maximum emission in restrict band (2.3874GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 103.883dBuV/m, so the maximum field strength in restrict band is $103.88 - 55.99 = 47.89$ dBuV/m which is under 54dBuV/m limit.

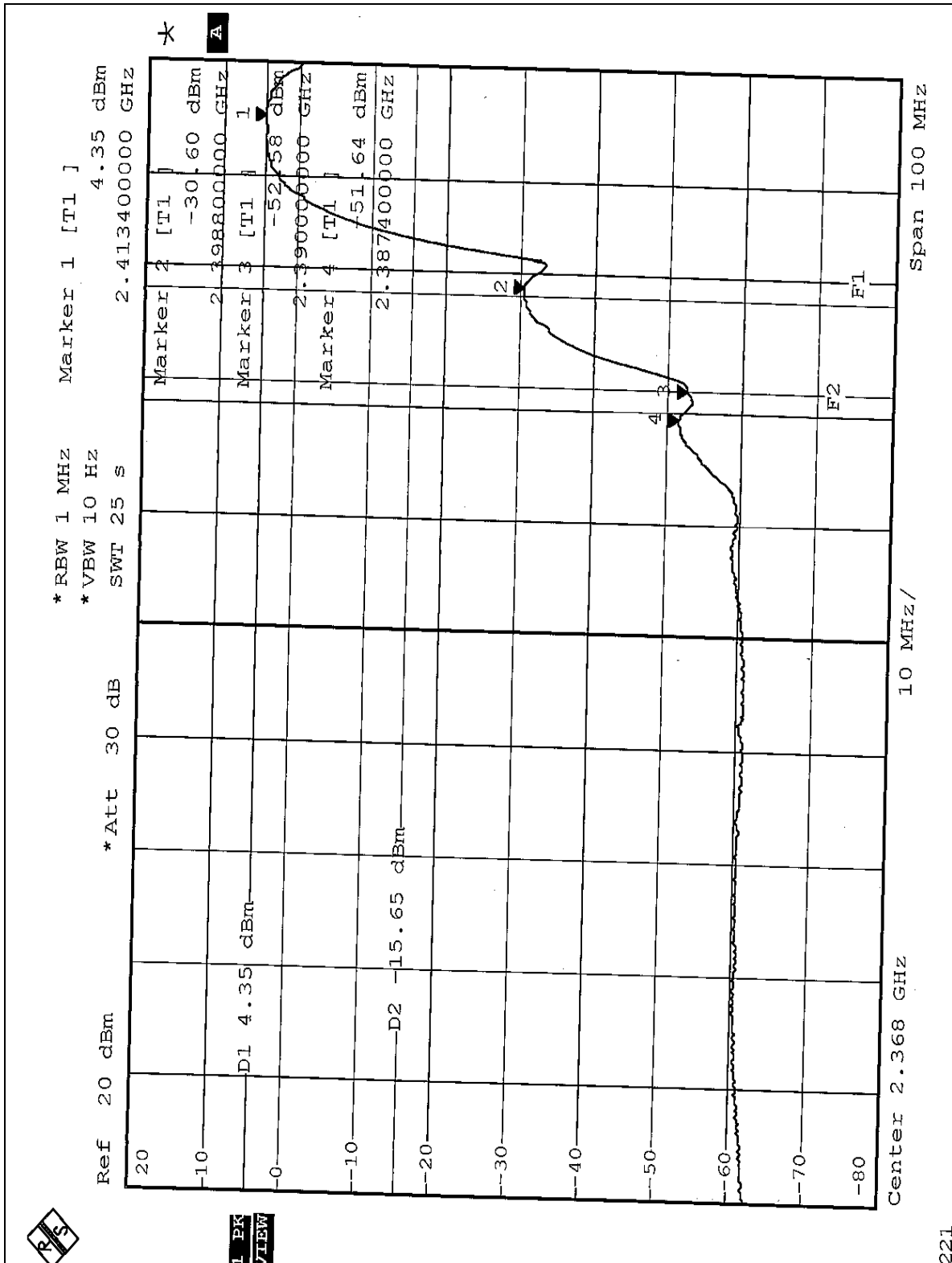
NOTE 2: The band edge emission plot of CCK technique on page 68 show 54.72dB delta between carrier maximum power and local maximum emission in restrict band (2.4865GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 103.34dBuV/m, so the maximum field strength in restrict band is $103.34 - 54.72 = 48.62$ dBuV/m which is under 54dBuV/m limit.

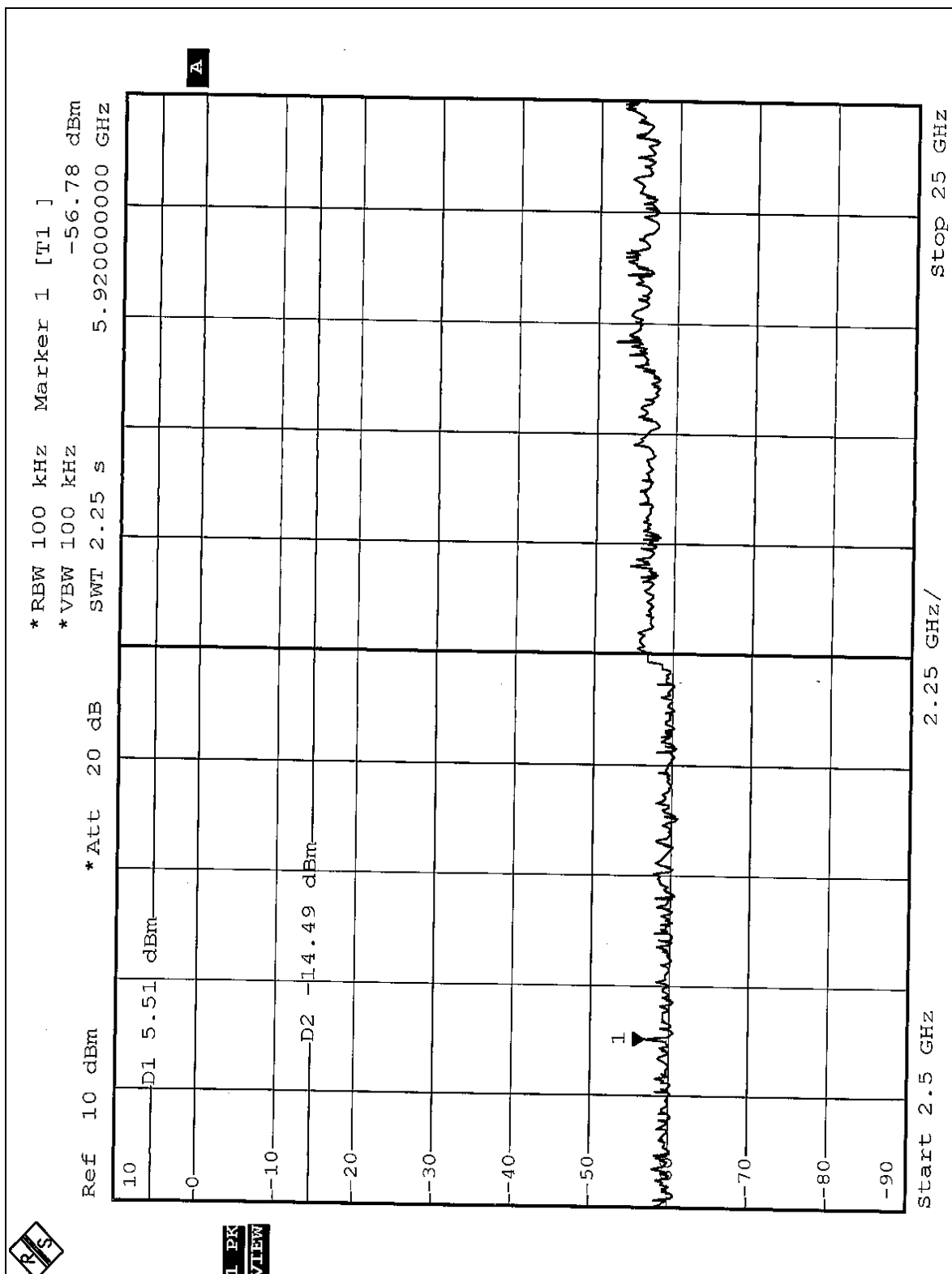
NOTE 3: The band edge emission plot of OFDM technique with Normal mode on page 70 show 46.69dB delta between carrier maximum power and local maximum emission in restrict band (2.3898GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 99.33dBuV/m, so the maximum field strength in restrict band is $99.33 - 46.69 = 52.64$ dBuV/m which is under 54dBuV/m limit.

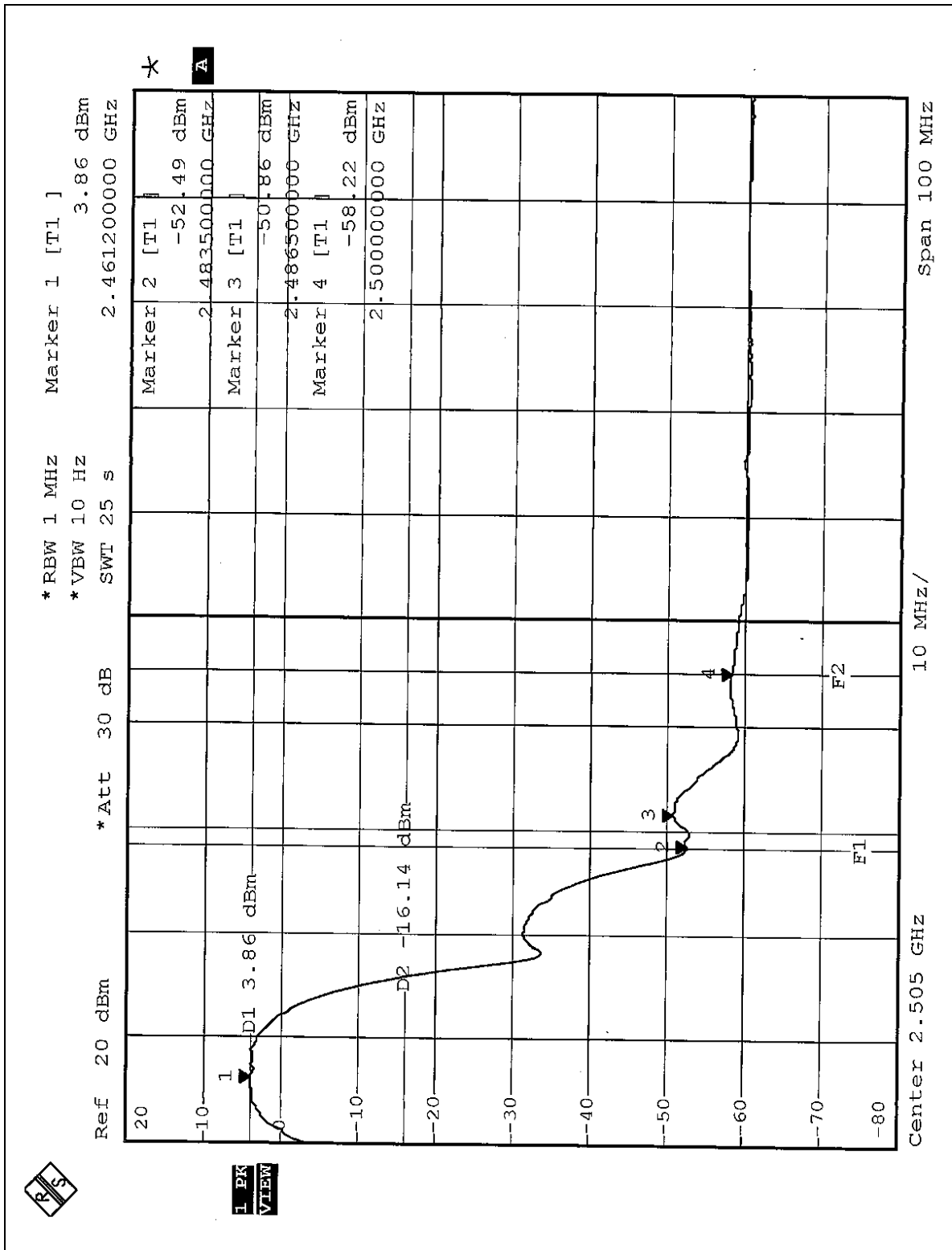
NOTE 4: The band edge emission plot of OFDM technique with Normal mode on page 72 show 45.71dB delta between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 98.54dBuV/m, so the maximum field strength in restrict band is $98.54 - 45.71 = 52.83$ dBuV/m which is under 54dBuV/m limit.

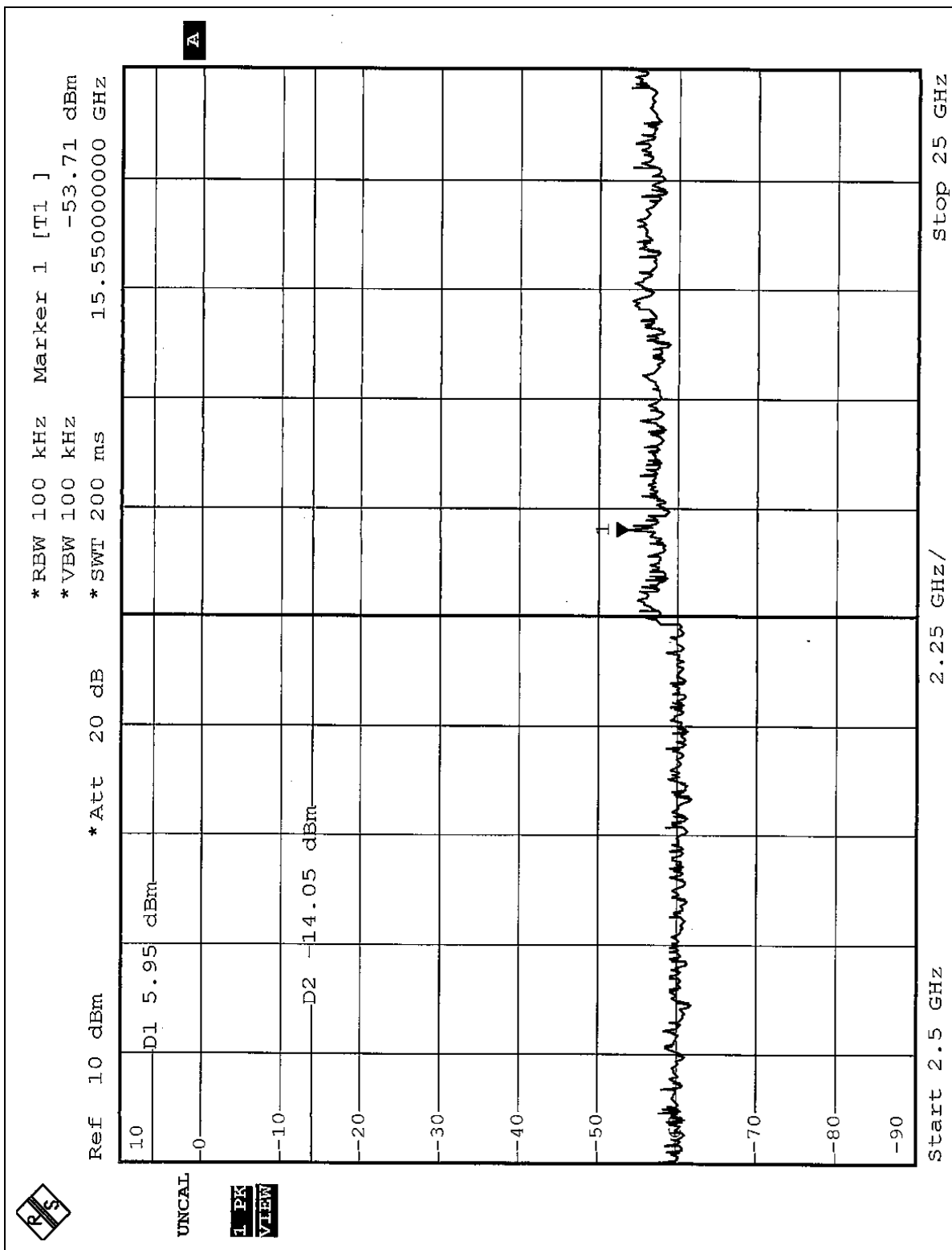
NOTE 5: The band edge emission plot of OFDM technique with Turbo mode on page 74 shows 48.09dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 6 at the item 4.2.7 is 98.14dBuV/m, so the maximum field strength in restrict band is $98.14 - 48.09 = 50.05$ dBuV/m which is under 54dBuV/m limit.

NOTE 6: The band edge emission plot of OFDM technique with Turbo mode on page 76 shows 49.81dB 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 6 at the item 4.2.7 is 98.14dBuV/m, so the maximum field strength in restrict band is $98.14 - 49.81 = 48.33$ dBuV/m which is under 54dBuV/m limit.

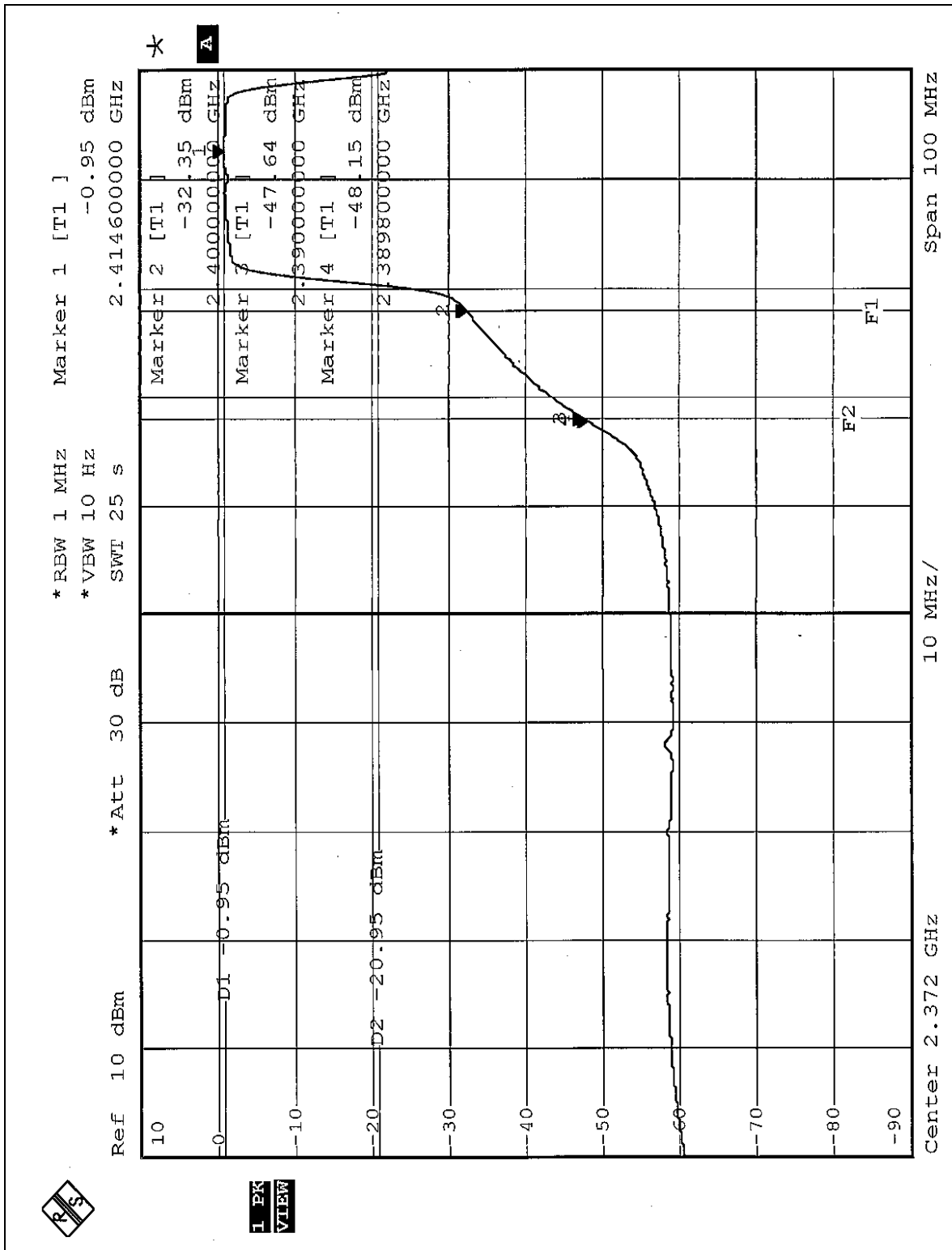
CCK mode:

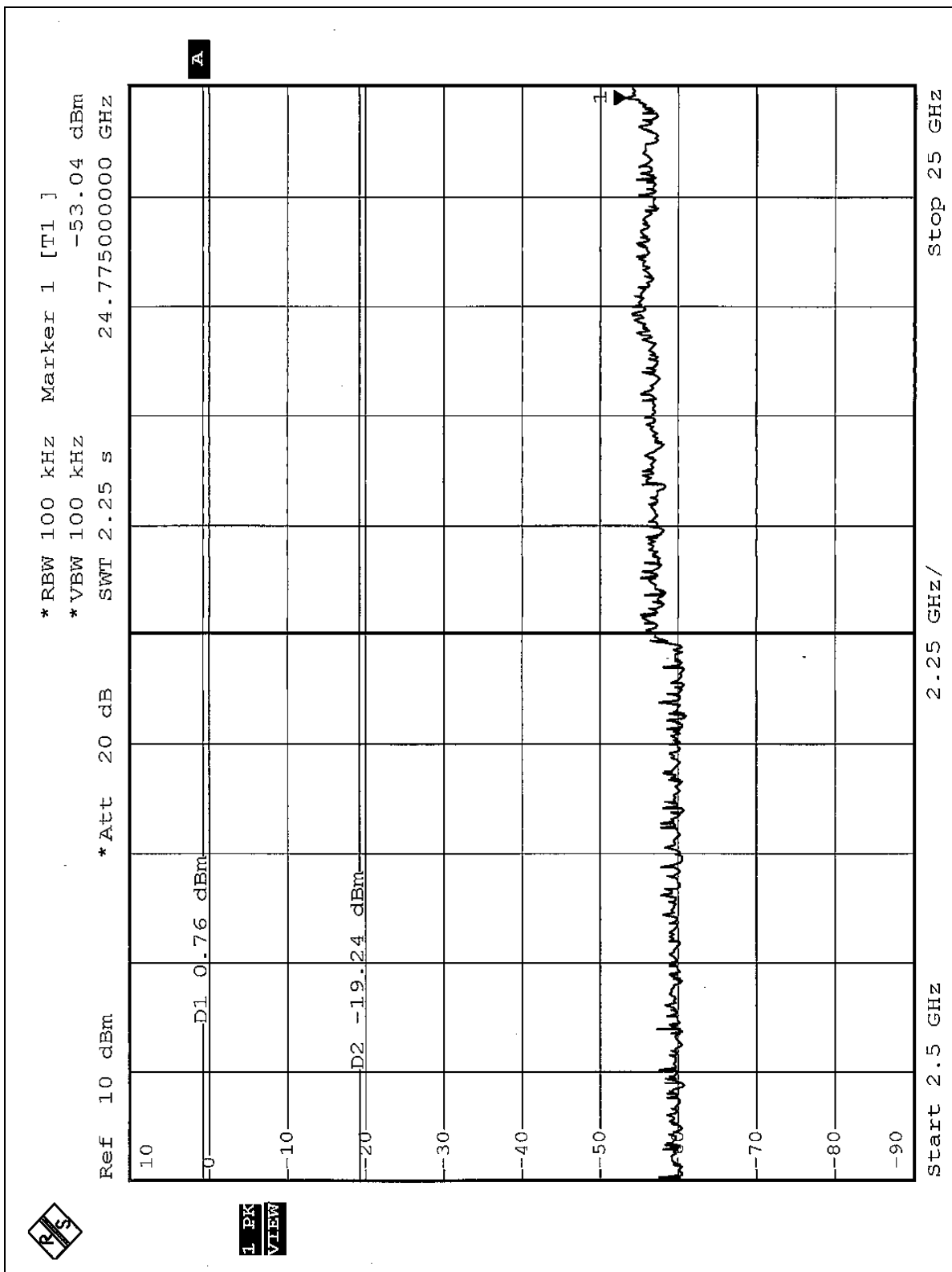


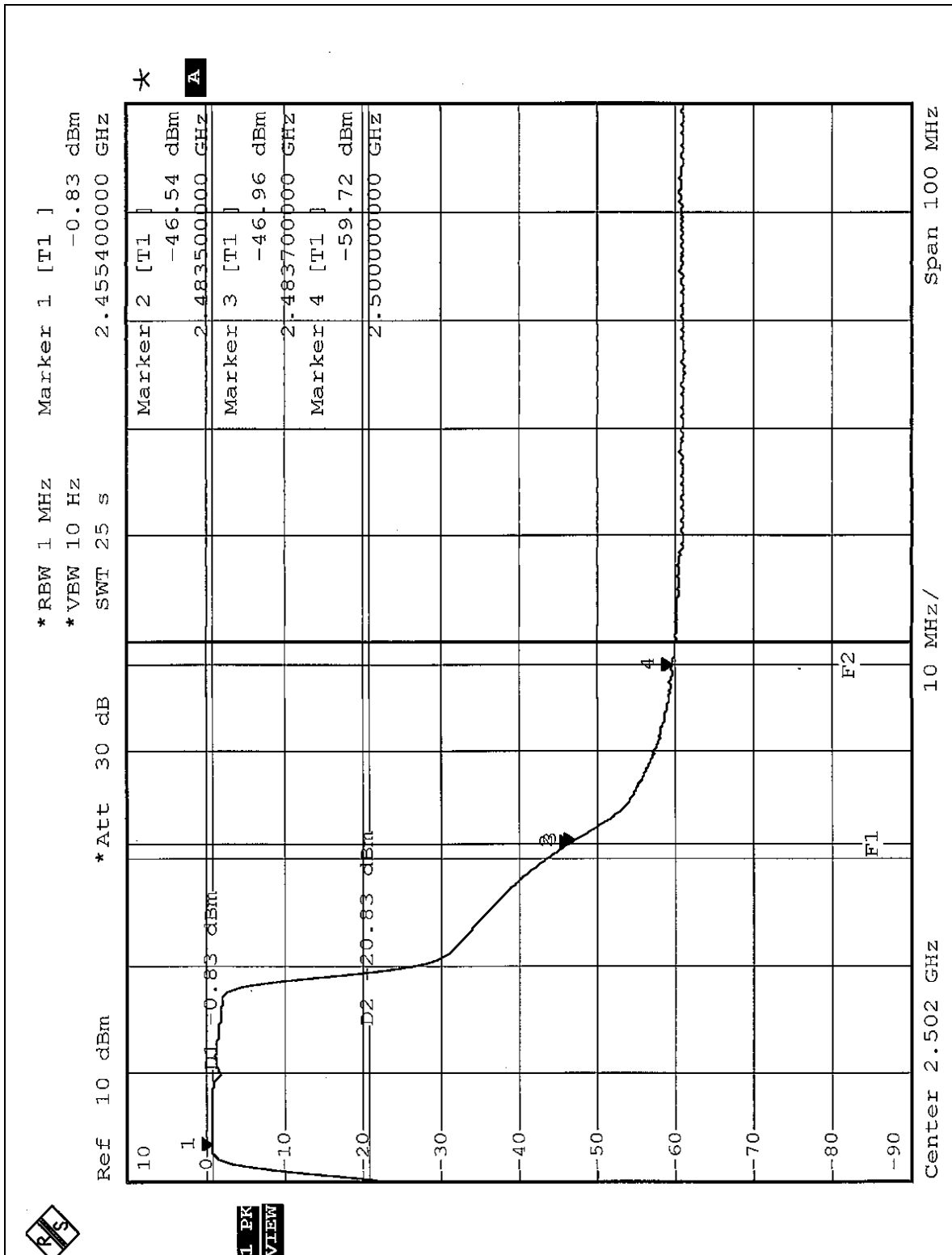


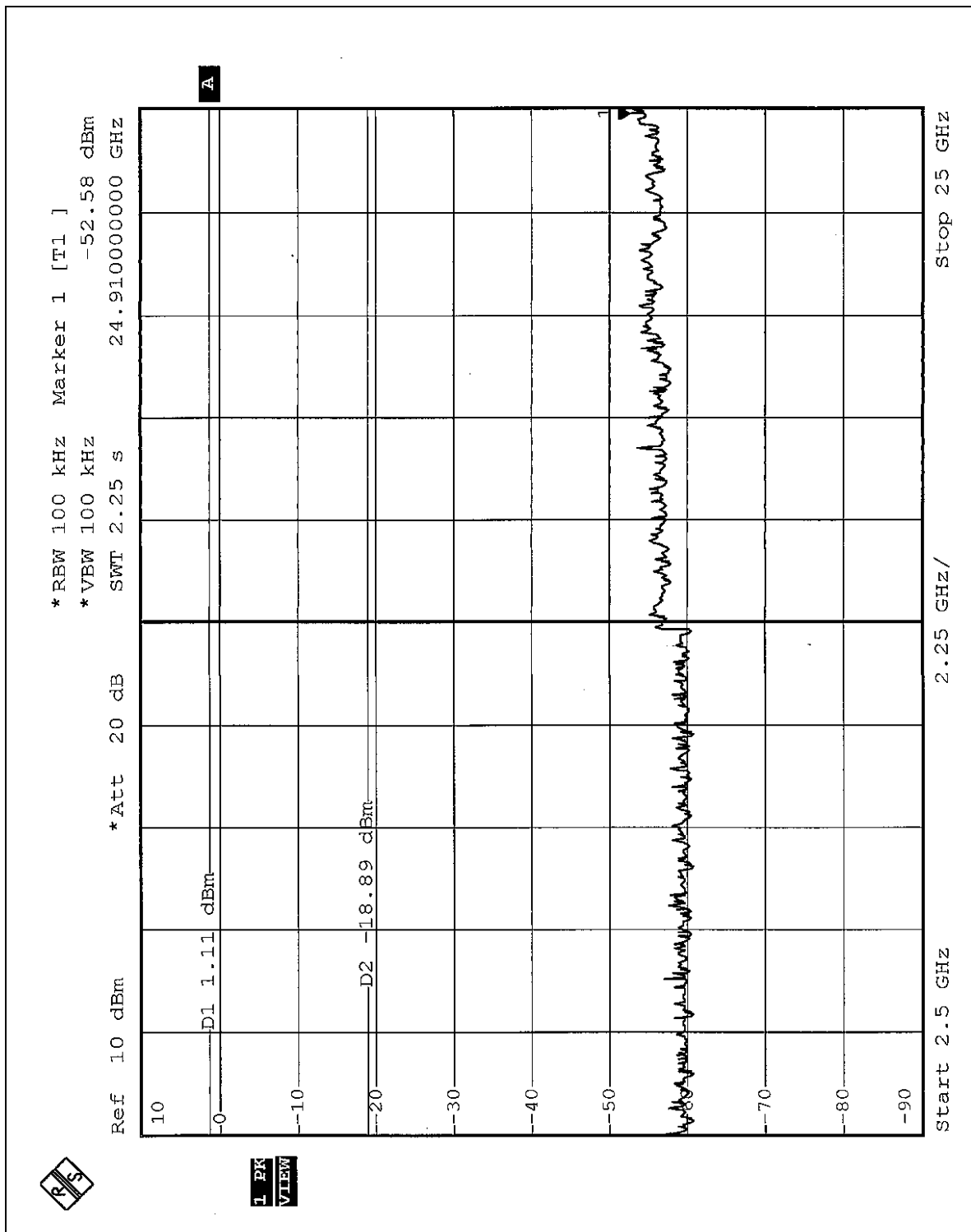


OFDM mode:

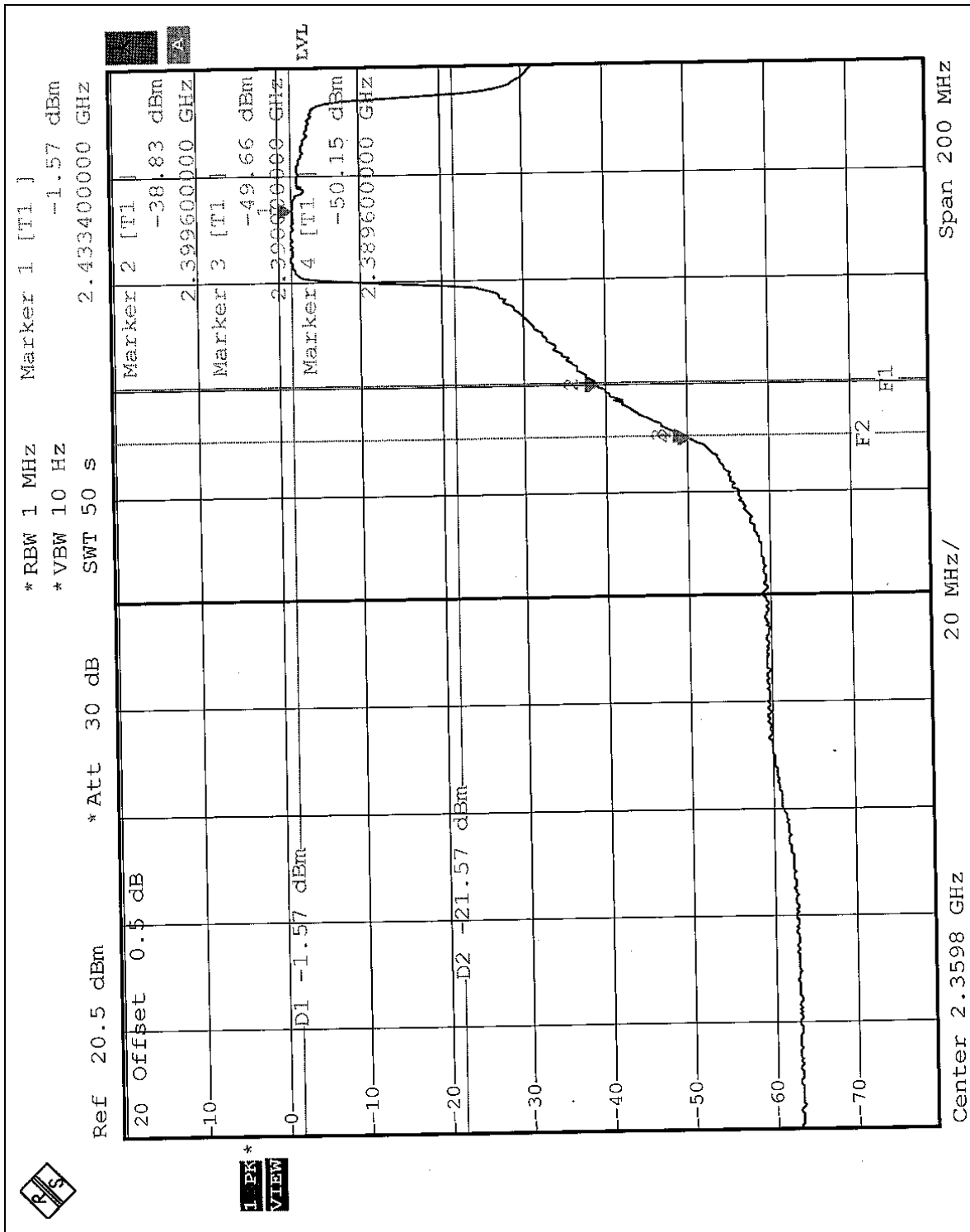


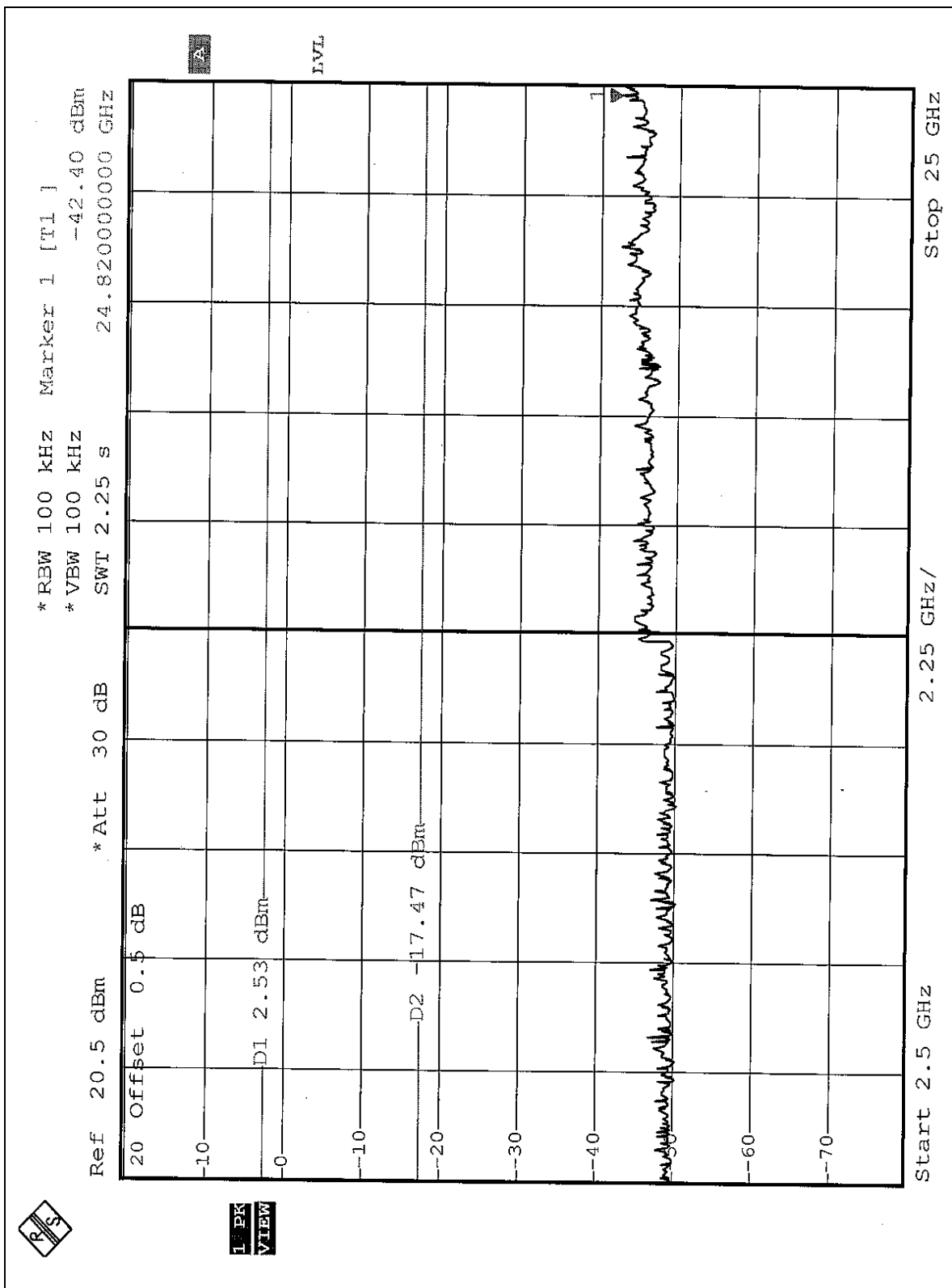


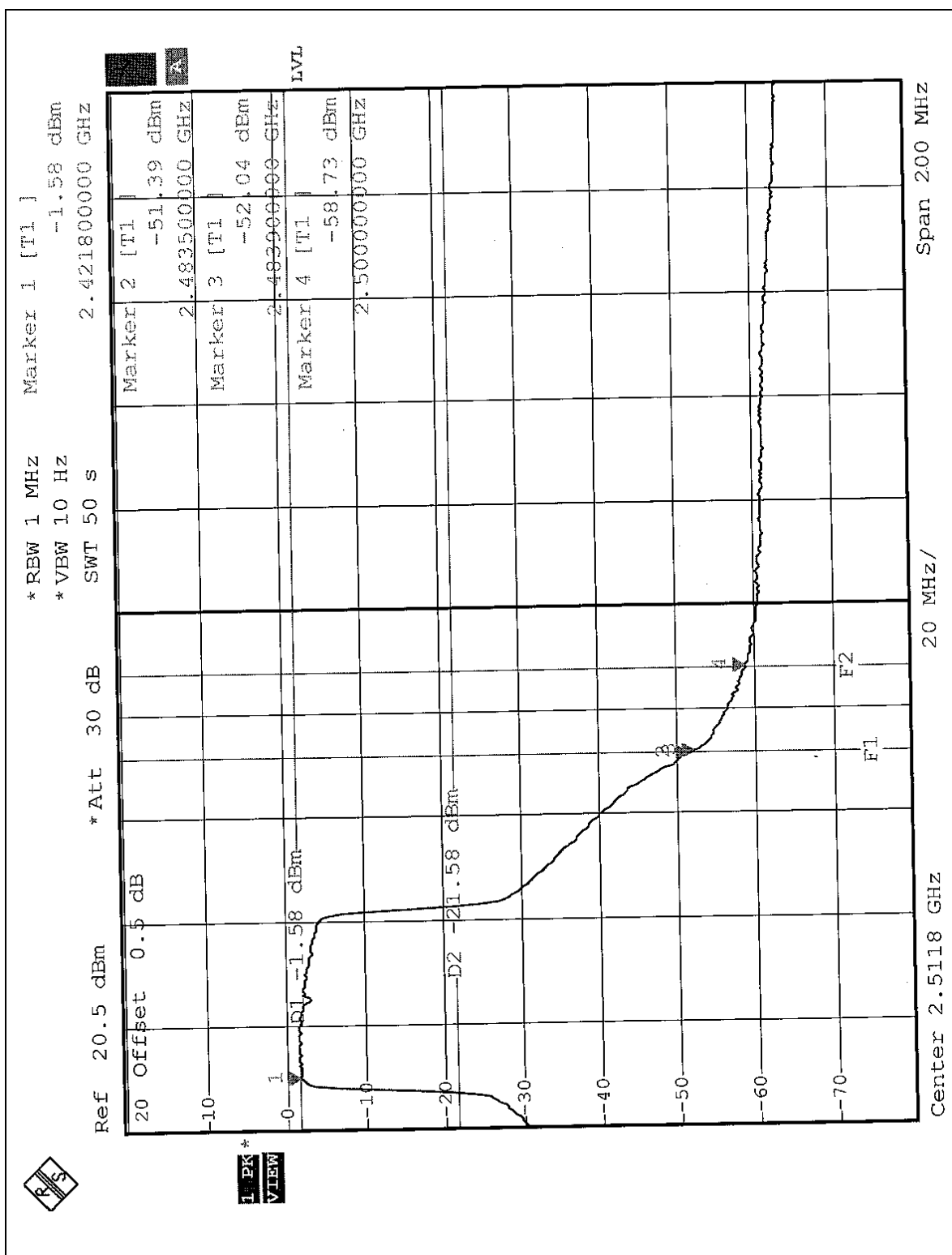




OFDM Turbo mode:











4.7 ANTENNA REQUIREMENT

4.7.1 STANDARD APPLICABLE

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

4.7.2 ANTENNA CONNECTED CONSTRUCTION

The antenna used in this product is Dipole antenna with UFL connector. The maximum Gain of the antenna is 1.0dBi.

5. TEST TYPES AND RESULTS (FOR PART 802.11a)

5.1 CONDUCTED EMISSION MEASUREMENT

5.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

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

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

5.1.2 TEST INSTRUMENTS

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

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



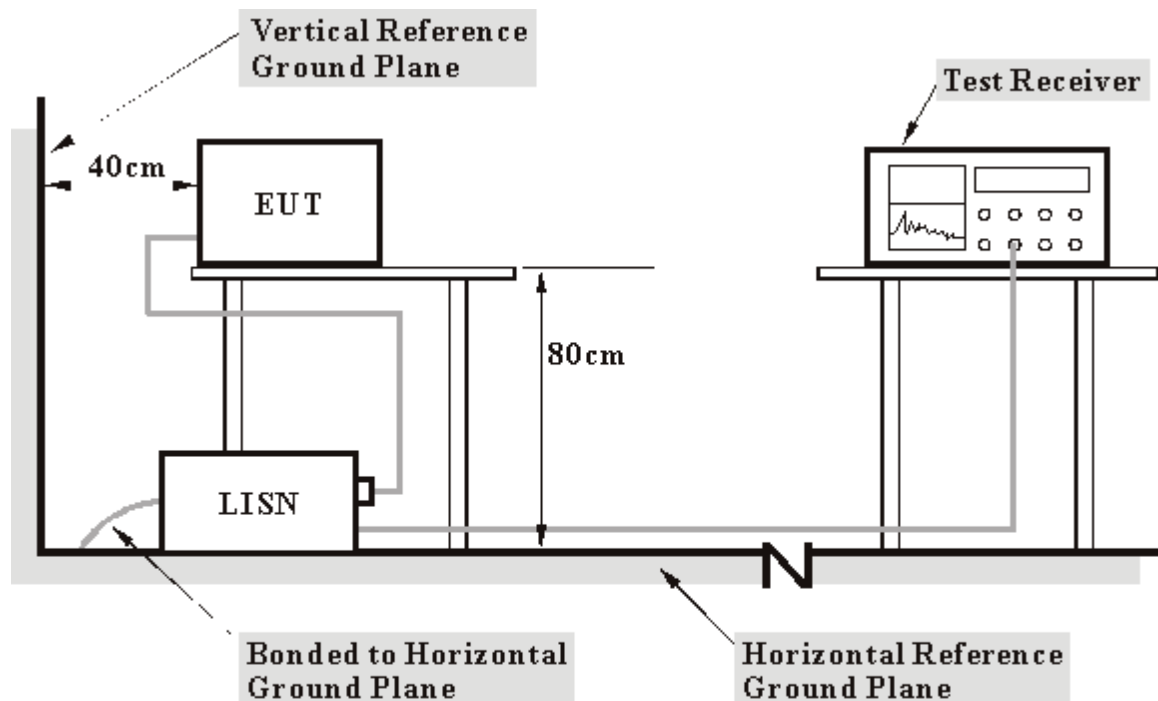
5.1.3 TEST PROCEDURES

- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

5.1.4 DEVIATION FROM TEST STANDARD

No deviation

5.1.5 TEST SETUP



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

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

5.1.6 EUT OPERATING CONDITIONS

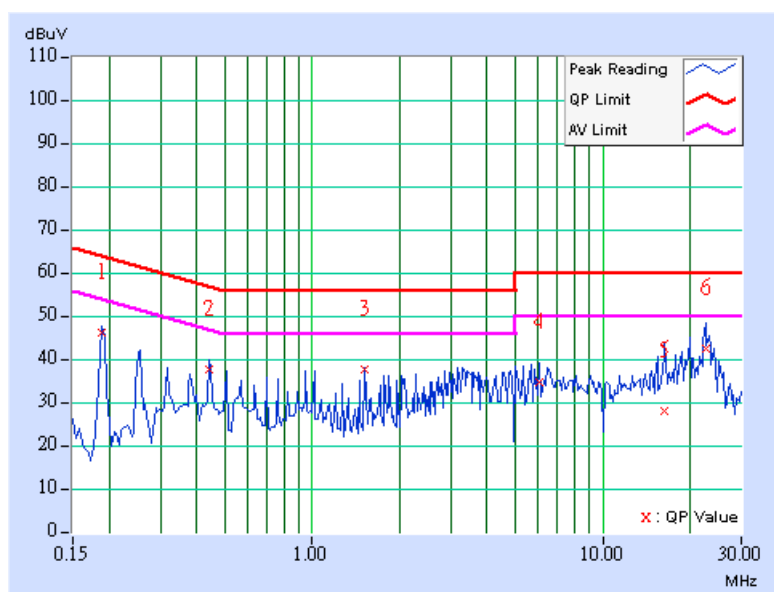
Same as 4.1.6

5.1.7 TEST RESULTS

EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
		6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	TESTED BY: Leo Hung	

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.189	0.12	45.15	-	45.27	-	64.08	54.08	-18.81	-
2	0.443	0.13	36.61	-	36.74	-	57.01	47.01	-20.27	-
3	1.523	0.16	36.50	-	36.66	-	56.00	46.00	-19.34	-
4	6.082	0.27	33.86	-	34.13	-	60.00	50.00	-25.87	-
5	16.406	0.85	26.95	-	27.80	-	60.00	50.00	-32.20	-
6	22.629	1.09	41.33	-	42.42	-	60.00	50.00	-17.58	-

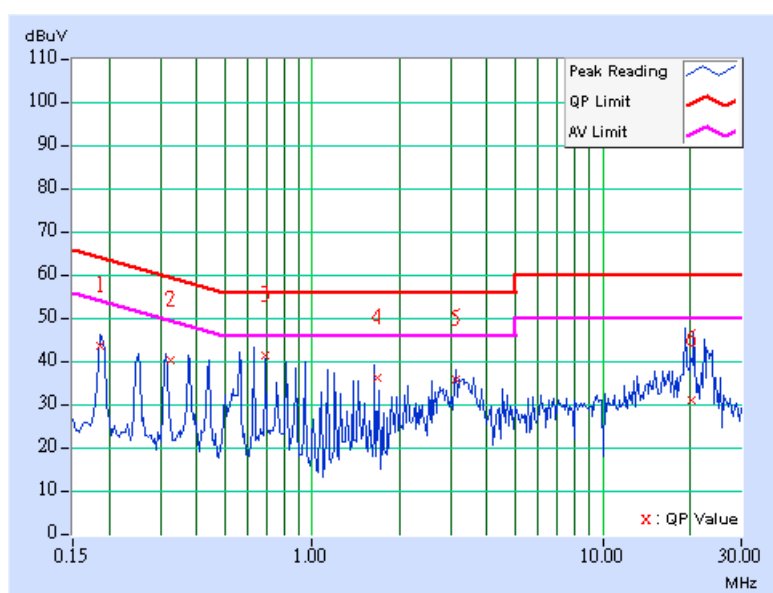
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
		6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	TESTED BY: Leo Hung	

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.185	0.11	42.90	-	43.01	-	64.24	54.24	-21.23	-
2	0.325	0.11	39.79	-	39.90	-	59.59	49.59	-19.68	-
3	0.685	0.12	40.73	-	40.85	-	56.00	46.00	-15.15	-
4	1.679	0.16	35.50	-	35.66	-	56.00	46.00	-20.34	-
5	3.141	0.18	35.38	-	35.56	-	56.00	46.00	-20.44	-
6	20.125	0.71	30.52	-	31.23	-	60.00	50.00	-28.77	-

- 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.



5.2 RADIATED EMISSION MEASUREMENT

5.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

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

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

NOTE:

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



5.2.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

Frequencies (MHz)	EIRP Limit (dBm)	Equivalent Field Strength at 3m (dBμV/m) *note 3
5150~5250	-27	68.3
5250~5350	-27	68.3
5725~5825	-27 *note 1	68.3
	-17 *note 2	78.3

NOTE:

1. For frequencies 10MHz or greater above or below the band edge.
2. All emissions within the frequency range from the band edge to 10MHz above or below the band edge.
3. The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength

$$E = \frac{1000000\sqrt{30P}}{3} \mu\text{V/m, where P is the eirp (Watts)}$$



5.2.3 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
* HP Spectrum Analyzer	8593E	3911A07465	June 27, 2005
* HP Preamplifier	8447D	2432A03504	June 03, 2005
* HP Preamplifier	8449B	3008A01292	Aug. 11, 2004
SCHAFFNER Tunable Dipole Antenna	VHBA 9123	459	June 26, 2006
SCHWARZBECK Tunable Dipole Antenna	UHA 9105	977	
* ROHDE & SCHWARZ Test Receiver	ESI7	838496/016	Feb. 08, 2005
* Schwarzbeck Antenna	VULB9168	137	Feb. 27, 2005
* SCHWARZBECK Horn Antenna	BBHA9120-D1	D130	June 14, 2005
* ADT. Turn Table	TT100	0306	NA
* ADT. Tower	AT100	0306	NA
* Software	ADT_Radiated_V5.14	NA	NA
* TIMES RF cable	LL142	CABLE-CH6-01	Apr. 16, 2005

- NOTE:**
1. The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to NML/ROC and NIST/USA.
 2. "*" = These equipment are used for the final measurement.
 3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
 4. The test was performed in ADT Chamber No. 6.

5.2.4 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB 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 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

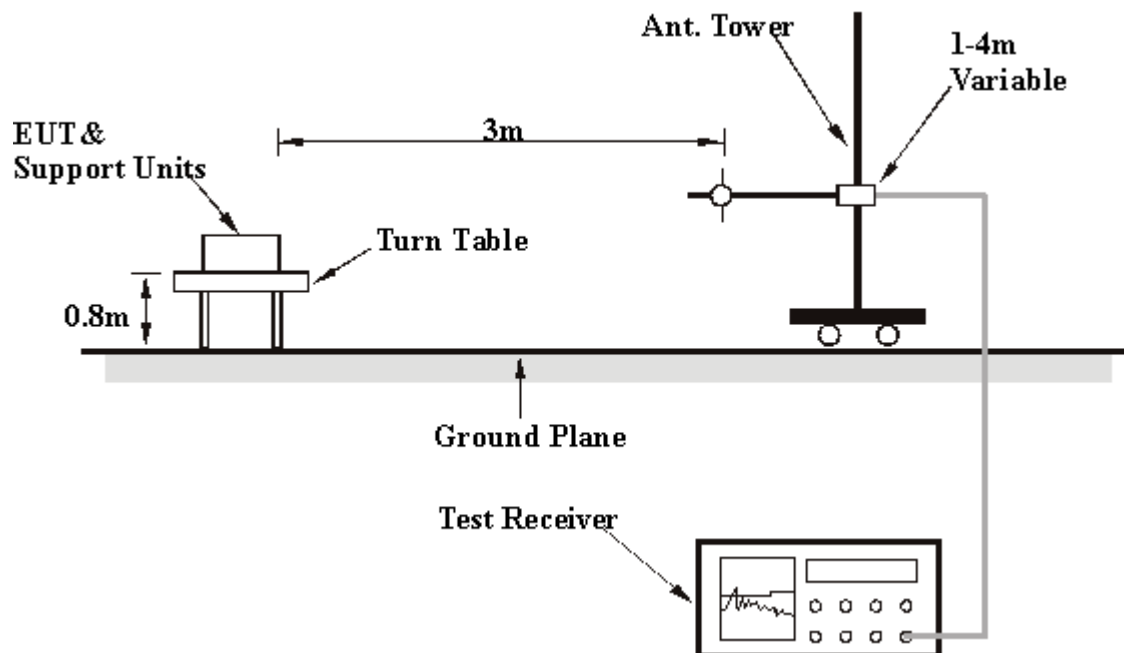
NOTE:

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 10 Hz for Average detection (AV) at frequency above 1GHz.

5.2.5 DEVIATION FROM TEST STANDARD

No deviation

5.2.6 TEST SETUP



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

5.2.7 EUT OPERATING CONDITIONS

Same as 4.1.6

5.2.8 TEST RESULTS

EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
CHANNEL	Channel 5	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	15deg. C, 62 %RH, 991hPa	TESTED BY: Vincent Lin	

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	269.10	29.99 QP	46.00	-16.01	1.50 H	148	16.10	13.89
2	339.08	28.73 QP	46.00	-17.27	1.00 H	244	12.85	15.88
3	370.18	29.55 QP	46.00	-16.45	1.00 H	79	12.91	16.64
4	539.30	35.04 QP	46.00	-10.96	1.50 H	274	14.52	20.53
5	570.40	35.18 QP	46.00	-10.82	1.50 H	277	13.95	21.22
6	607.33	32.43 QP	46.00	-13.57	1.25 H	166	10.44	21.99
7	636.49	31.46 QP	46.00	-14.54	1.25 H	163	9.40	22.06
8	675.37	33.09 QP	46.00	-12.91	1.00 H	145	10.57	22.53
9	776.45	32.17 QP	46.00	-13.83	1.00 H	199	7.67	24.51
10	811.44	33.32 QP	46.00	-12.68	1.50 H	199	8.63	24.69
11	838.66	29.63 QP	46.00	-16.37	1.25 H	67	4.58	25.05
12	943.63	30.58 QP	46.00	-15.42	1.75 H	202	4.34	26.23

- 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	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
CHANNEL	Channel 5	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	15deg. C, 62 %RH, 991hPa	TESTED BY: Vincent Lin	

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	47.49	30.79 QP	40.00	-9.21	1.25 V	307	17.02	13.77
2	269.10	25.19 QP	46.00	-20.81	2.50 V	70	11.30	13.89
3	302.14	25.68 QP	46.00	-20.32	2.00 V	184	10.36	15.31
4	339.08	32.38 QP	46.00	-13.62	1.50 V	37	16.50	15.88
5	539.30	37.21 QP	46.00	-8.79	1.25 V	10	16.68	20.53
6	570.40	35.59 QP	46.00	-10.41	1.00 V	136	14.36	21.22
7	607.33	34.37 QP	46.00	-11.63	1.00 V	19	12.39	21.99
8	745.35	37.35 QP	46.00	-8.65	1.50 V	4	13.02	24.33
9	805.61	33.67 QP	46.00	-12.33	1.25 V	193	9.05	24.61
10	838.66	32.61 QP	46.00	-13.39	1.00 V	190	7.56	25.05
11	906.69	34.29 QP	46.00	-11.71	1.25 V	346	8.87	25.43
12	939.74	38.68 QP	46.00	-7.32	1.50 V	175	12.54	26.15
13	945.57	37.59 QP	46.00	-8.41	1.00 V	178	11.32	26.27

- 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	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
MODE	Normal Mode	CHANNEL	1
FREQUENCY RANGE	1 ~ 40 GHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH, 991hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Martin 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)
1	#5150.00	55.07 PK	74.00	-18.93	1.00 H	214	17.07	38.00
1	#5150.00	44.24 AV	54.00	-9.76	1.00 H	214	6.24	38.00
2	*5180.00	105.42 PK			1.00 H	214	67.33	38.09
2	*5180.00	94.59 AV			1.00 H	214	56.50	38.09
3	10360.00	60.10 PK	68.30	-8.20	1.27 H	167	15.40	44.70

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)
1	#5150.00	63.40 PK	74.00	-10.60	1.16 V	294	25.40	38.00
1	#5150.00	52.74 AV	54.00	-1.26	1.16 V	294	14.74	38.00
2	*5180.00	113.77 PK			1.16 V	294	75.68	38.09
2	*5180.00	103.09 AV			1.16 V	294	65.00	38.09
3	10360.00	66.60 PK	68.30	-1.70	1.36 V	211	21.90	44.70

NOTE:

1. Emission level = Raw value + Correction Factor
2. Correction Factor = Ant. Factor + Cable loss
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency
6. "#" The radiated frequency falling in the restricted band.

EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
MODE	Normal Mode	CHANNEL	4
FREQUENCY RANGE	1 ~ 40 GHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH, 991hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Martin 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)
1	*5240.00	106.21 PK			1.00 H	25	68.00	38.21
1	*5240.00	94.88 AV			1.00 H	25	56.67	38.21
2	10481.00	49.50 PK	68.30	-18.80	1.22 H	208	4.87	44.63

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)
1	*5240.00	112.35 PK			1.00 V	25	74.14	38.21
1	*5240.00	102.21 AV			1.00 V	25	64.00	38.21
2	10480.00	62.64 PK	68.30	-5.66	1.00 V	337	18.01	44.63

NOTE:

1. Emission level = Raw value + Correction Factor
2. Correction Factor = Ant. Factor + Cable loss
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency



EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
MODE	Normal Mode	CHANNEL	5
FREQUENCY RANGE	1 ~ 40 GHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH, 991hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Martin 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)
1	*5260.00	103.23 PK			1.00 H	99	65.00	38.23
1	*5260.00	92.91 AV			1.00 H	99	54.68	38.23
2	10520.00	55.80 PK	68.30	-12.50	1.12 H	145	11.23	44.57

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)
1	*5260.00	112.40 PK			1.21 V	299	74.17	38.23
1	*5260.00	101.56 AV			1.21 V	299	63.33	38.23
2	10520.00	58.65 PK	68.30	-9.65	1.00 V	25	14.08	44.57

NOTE:

1. Emission level = Raw value + Correction Factor
2. Correction Factor = Ant. Factor + Cable loss
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency



EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
MODE	Normal Mode	CHANNEL	8
FREQUENCY RANGE	1 ~ 40 GHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH, 991hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Martin 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)	Antenna Factor (dB)
1	*5320.00	105.15 PK			1.20 H	25	66.83	38.32
1	*5320.00	94.65 AV			1.20 H	25	56.33	38.32
2	#5350.00	52.52 PK	74.00	-21.48	1.20 H	25	14.16	38.36
2	#5350.00	42.02 AV	54.00	-11.98	1.20 H	25	3.66	38.36
3	#10640.00	56.72 PK	74.00	-17.28	1.16 H	209	12.33	44.40
3	#10640.00	43.88 AV	54.00	-10.12	1.16 H	209	-0.51	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)	Antenna Factor (dB)
1	*5320.00	112.15 PK			1.00 V	258	73.83	38.32
1	*5320.00	101.15 AV			1.00 V	258	62.83	38.32
2	#5350.00	59.52 PK	74.00	-14.48	1.00 V	258	21.16	38.36
2	#5350.00	48.52 AV	54.00	-5.48	1.00 V	258	10.16	38.36
3	#10640.00	59.55 PK	74.00	-14.45	1.19 V	157	15.16	44.40
3	#10640.00	46.72 AV	54.00	-7.28	1.19 V	157	2.33	44.40

NOTE:

1. Emission level = Raw value + Correction Factor
2. Correction Factor = Ant. Factor + Cable loss
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency
6. "#" The radiated frequency falling in the restricted band.

EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
MODE	Normal Mode	CHANNEL	9
FREQUENCY RANGE	1 ~ 40 GHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH, 991hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Martin 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	5715.00	56.89 PK	68.30	-11.41	1.20 H	186	18.11	38.78
2	5725.00	68.40 PK	78.30	-9.90	1.20 H	186	29.60	38.80
3	*5745.00	100.17 PK			1.20 H	186	61.33	38.84
3	*5745.00	89.01 AV			1.20 H	186	50.17	38.84
4	#11491.00	57.00 PK	74.00	-17.00	1.20 H	186	11.82	45.18
4	#11491.00	44.74 AV	54.00	-9.26	1.20 H	186	-0.44	45.18

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	5715.00	59.80 PK	68.30	-8.50	1.28 V	261	21.02	38.78
2	5725.00	76.63 PK	78.30	-1.67	1.28 V	261	37.83	38.80
3	*5745.00	109.67 PK			1.28 V	261	70.83	38.84
3	*5745.00	98.51 AV			1.28 V	261	59.67	38.84
4	#11491.00	65.83 PK	74.00	-8.17	1.18 V	174	20.65	45.18
4	#11491.00	51.50 AV	54.00	-2.50	1.18 V	174	6.32	45.18

NOTE:

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

EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
MODE	Normal Mode	CHANNEL	12
FREQUENCY RANGE	1 ~ 40 GHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH, 991hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Martin 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	*5805.00	100.78 PK			1.20 H	38	61.83	38.95
1	*5805.00	90.12 AV			1.20 H	38	51.17	38.95
2	5825.00	73.46 PK	78.30	-4.84	1.20 H	38	34.50	38.96
3	5835.00	58.64 PK	68.30	-9.66	1.20 H	38	19.68	38.96
4	#11610.00	59.20 PK	74.00	-14.80	1.20 H	229	13.95	45.25
4	#11610.00	45.86 AV	54.00	-8.14	1.20 H	229	0.61	45.25

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	*5805.00	111.62 PK			1.19 V	259	72.67	38.95
1	*5805.00	100.28 AV			1.19 V	259	61.33	38.95
2	5825.00	76.76 PK	78.30	-1.54	1.19 V	259	37.80	38.96
3	5835.00	60.35 PK	68.30	-7.95	1.19 V	259	21.39	38.96
4	#11610.00	62.36 PK	74.00	-11.64	1.20 V	177	17.11	45.25
4	#11610.00	48.36 AV	54.00	-5.64	1.20 V	177	3.11	45.25

NOTE:

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

EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
MODE	Turbo Mode	CHANNEL	1
FREQUENCY RANGE	1 ~ 40 GHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH, 991hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Martin 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)
1	#5150.00	55.37 PK	74.00	-18.63	1.12 H	35	17.34	38.03
1	#5150.00	45.37 AV	54.00	-8.63	1.12 H	35	7.34	38.03
2	*5210.00	103.53 PK			1.12 H	35	65.32	38.21
2	*5210.00	93.53 AV			1.12 H	35	55.32	38.21
3	10422.00	56.25 PK	68.30	-12.05	1.00 H	57	11.63	44.62

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)
1	#5150.00	61.55 PK	74.00	-12.45	1.14 V	339	23.52	38.03
1	#5150.00	51.55 AV	54.00	-2.45	1.14 V	339	13.52	38.03
2	*5210.00	109.71 PK			1.14 V	339	71.50	38.21
2	*5210.00	99.71 AV			1.14 V	339	61.50	38.21
3	10422.00	61.58 PK	68.30	-6.72	1.17 V	157	16.96	44.62

NOTE:

1. Emission level = Raw value+ Correction Factor
2. Correction Factor = Ant. Factor + Cable loss
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency
6. "#" The radiated frequency falling in the restricted band.

EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
MODE	Turbo Mode	CHANNEL	2
FREQUENCY RANGE	1 ~ 40 GHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH, 991hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Martin 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)
1	*5250.00	102.77 PK			1.00 H	310	64.50	38.27
1	*5250.00	92.94 AV			1.00 H	310	54.67	38.27
2	10500.00	57.25 PK	68.30	-11.05	1.12 H	36	12.75	44.50

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)
1	*5250.00	110.10 PK			1.03 V	339	71.83	38.27
1	*5250.00	99.94 AV			1.03 V	339	61.67	38.27
2	10500.00	62.32 PK	68.30	-5.98	1.00 V	225	17.82	44.50

NOTE:

1. Emission level = Raw value + Correction Factor
2. Correction Factor = Ant. Factor + Cable loss
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. “#” The radiated frequency falling in the restricted band.



EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
MODE	Turbo Mode	CHANNEL	3
FREQUENCY RANGE	1 ~ 40 GHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH, 991hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Martin 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)
1	*5290.00	103.83 PK			1.00 H	24	65.50	38.33
1	*5290.00	91.33 AV			1.00 H	24	53.00	38.33
2	#5350.00	52.16 PK	74.00	-21.84	1.00 H	24	13.73	38.43
2	#5350.00	39.66 AV	54.00	-14.34	1.00 H	24	1.23	38.43
3	10580.00	53.49 PK	68.30	-14.81	1.52 H	55	9.10	44.39

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)
1	*5290.00	111.00 PK			1.15 V	339	72.67	38.33
1	*5290.00	101.16 AV			1.15 V	339	62.83	38.33
2	#5350.00	59.33 PK	74.00	-14.67	1.15 V	339	20.90	38.43
2	#5350.00	49.49 AV	54.00	-4.51	1.15 V	339	11.06	38.43
3	10580.00	59.16 PK	68.30	-9.14	1.33 V	161	14.77	44.39

NOTE:

1. Emission level = Raw value + Correction Factor
2. Correction Factor = Ant. Factor + Cable loss
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency
6. "#" The radiated frequency falling in the restricted band.



EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
MODE	Turbo Mode	CHANNEL	4
FREQUENCY RANGE	1 ~40 GHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH, 991hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Martin 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)
1	5715.00	55.87 PK	68.30	-12.43	1.10 H	25	17.09	38.78
2	5725.00	73.00 PK	78.30	-5.30	1.15 H	322	34.20	38.80
3	*5760.00	97.55 PK			1.15 H	322	58.68	38.87
3	*5760.00	87.37 AV			1.15 H	322	48.50	38.87
4	#11520.00	53.80 PK	74.00	-20.20	1.20 H	124	8.61	45.19
4	#11520.00	41.40 AV	54.00	-12.60	1.20 H	124	-3.79	45.19

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)
1	5715.00	56.30 PK	68.30	-12.00	1.00 V	315	17.52	38.78
2	5725.00	76.80 PK	78.30	-1.50	1.00 V	315	38.00	38.80
3	*5760.00	105.54 PK			1.00 V	315	66.67	38.87
3	*5760.00	96.17 AV			1.00 V	315	57.30	38.87
4	#11520.00	54.33 PK	74.00	-19.67	1.12 V	24	9.14	45.19
4	#11520.00	41.50 AV	54.00	-12.50	1.12 V	24	-3.69	45.19

NOTE:

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

EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
MODE	Turbo Mode	CHANNEL	5
FREQUENCY RANGE	1 ~ 40 GHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH, 991hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Martin 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)
1	*5800.00	95.95 PK			1.00 H	324	57.00	38.95
1	*5800.00	87.20 AV			1.00 H	324	48.25	38.95
2	5825.00	75.29 PK	78.30	-3.01	1.00 H	324	36.33	38.96
3	5835.00	56.89 PK	68.30	-11.41	1.00 H	324	17.93	38.96
4	#11602.00	51.83 PK	74.00	-22.17	1.00 H	357	4.00	45.26
4	#11602.00	37.67 AV	54.00	-16.33	1.00 H	357	-10.16	45.26

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)	Correction Factor (dB)
1	*5800.00	105.12 PK			1.01 V	24	66.17	38.95
1	*5800.00	95.45 AV			1.01 V	24	56.50	38.95
2	5825.00	76.38 PK	78.30	-1.92	1.01 V	24	37.42	38.96
3	5835.00	57.30 PK	68.30	-11.00	1.01 V	24	18.34	38.96
4	#11602.00	53.33 PK	74.00	-20.67	1.05 V	227	8.07	45.26
4	#11602.00	40.17 AV	54.00	-13.93	1.05 V	227	-5.09	45.26

NOTE:

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

5.3 PEAK TRANSMIT POWER MEASUREMENT

5.3.1 LIMITS OF PEAK TRANSMIT POWER MEASUREMENT

Frequency Band	Limit
5.15 – 5.25 GHz	The lesser of 50mW (17dBm) or 4dBm + 10logB
5.25 – 5.35 GHz	The lesser of 250mW (24dBm) or 11dBm + 10logB
5.725 – 5.825 GHz	The lesser of 1W (30dBm) or 17dBm + 10logB

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

5.3.2 TEST INSTRUMENTS

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

NOTE:

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

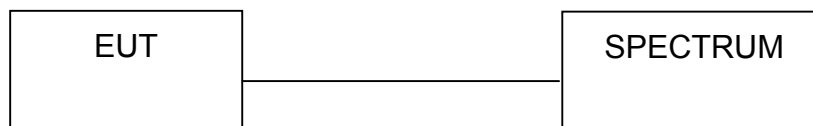
5.3.3 TEST PROCEDURE

1. The transmitter output was connected to the spectrum analyzer.
2. Set span to encompass the entire emission bandwidth of the signal.
3. Set RBW to 1MHz, VBW to 300kHz.
4. Using the spectrum analyzer's channel power measurement function to measure the output power.

5.3.4 DEVIATION FROM TEST STANDARD

No deviation

5.3.5 TEST SETUP



5.3.6 EUT OPERATING CONDITIONS

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

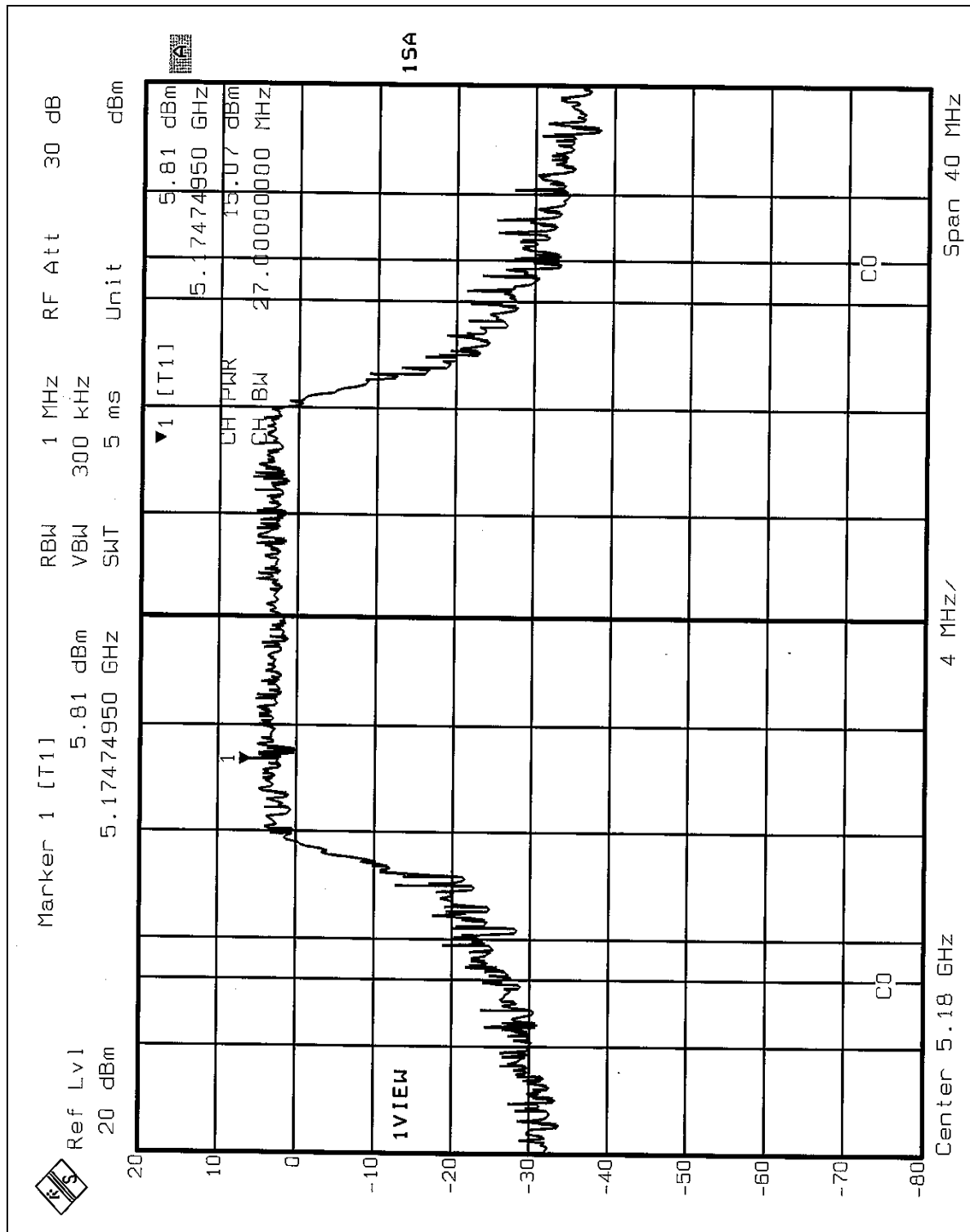
5.3.7 TEST RESULTS

EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
MODE	Normal	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	24deg. C, 67%RH, 991hPa	TESTED BY	Leo Hung

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	26dBc Occupied Bandwidth (MHz)	PASS/FAIL
1	5180	32.137	15.07	17.00	26.95	PASS
4	5240	32.137	15.07	17.00	28.07	PASS
5	5260	32.359	15.10	24.00	29.26	PASS
8	5320	31.623	15.00	24.00	28.84	PASS
9	5745	18.281	12.62	30.00	27.79	PASS
12	5805	18.365	12.64	30.00	26.53	PASS

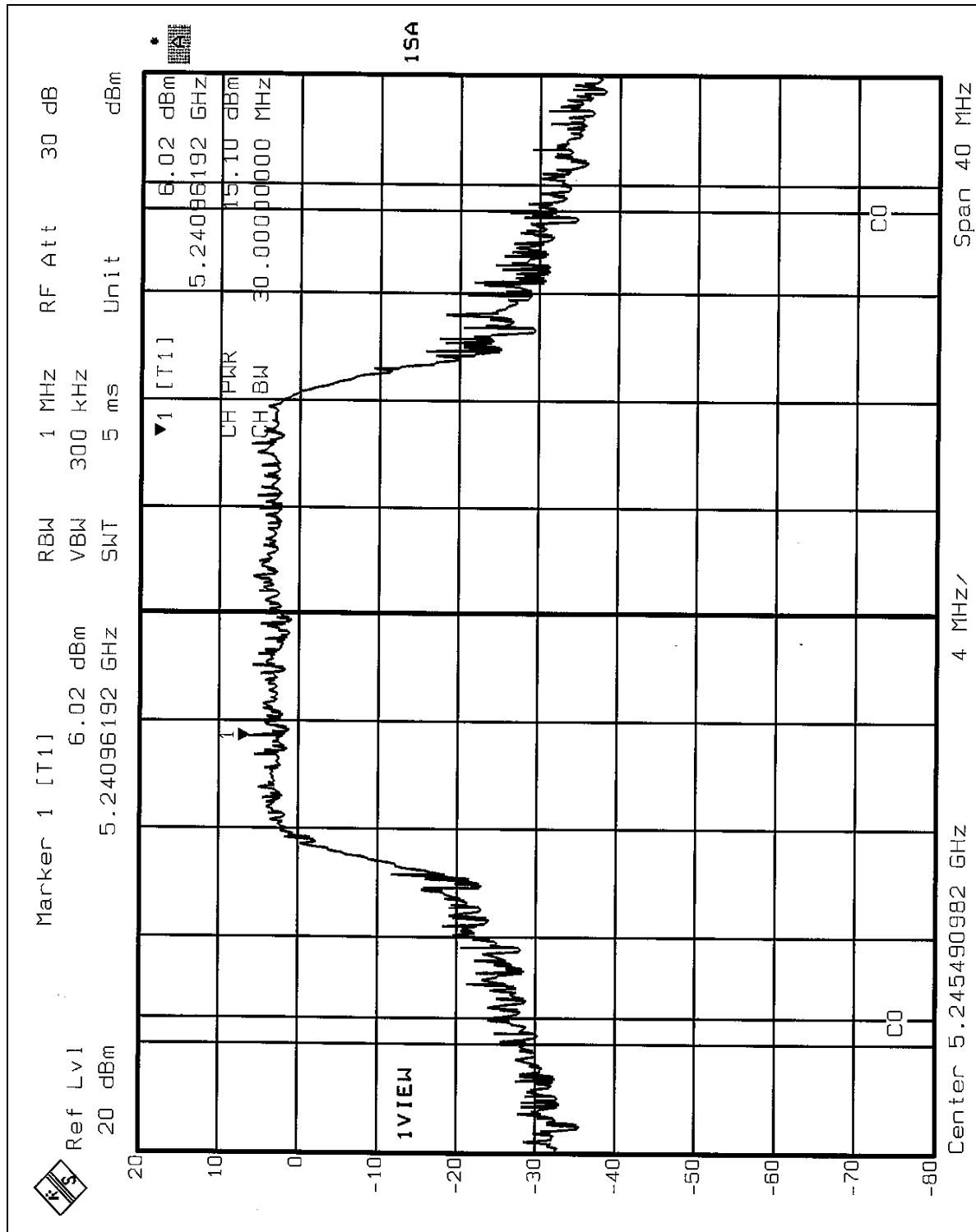
NOTE: The 26dBc Occupied Bandwidth plot, please refer to the following pages.

Peak Power Output:
CH 1

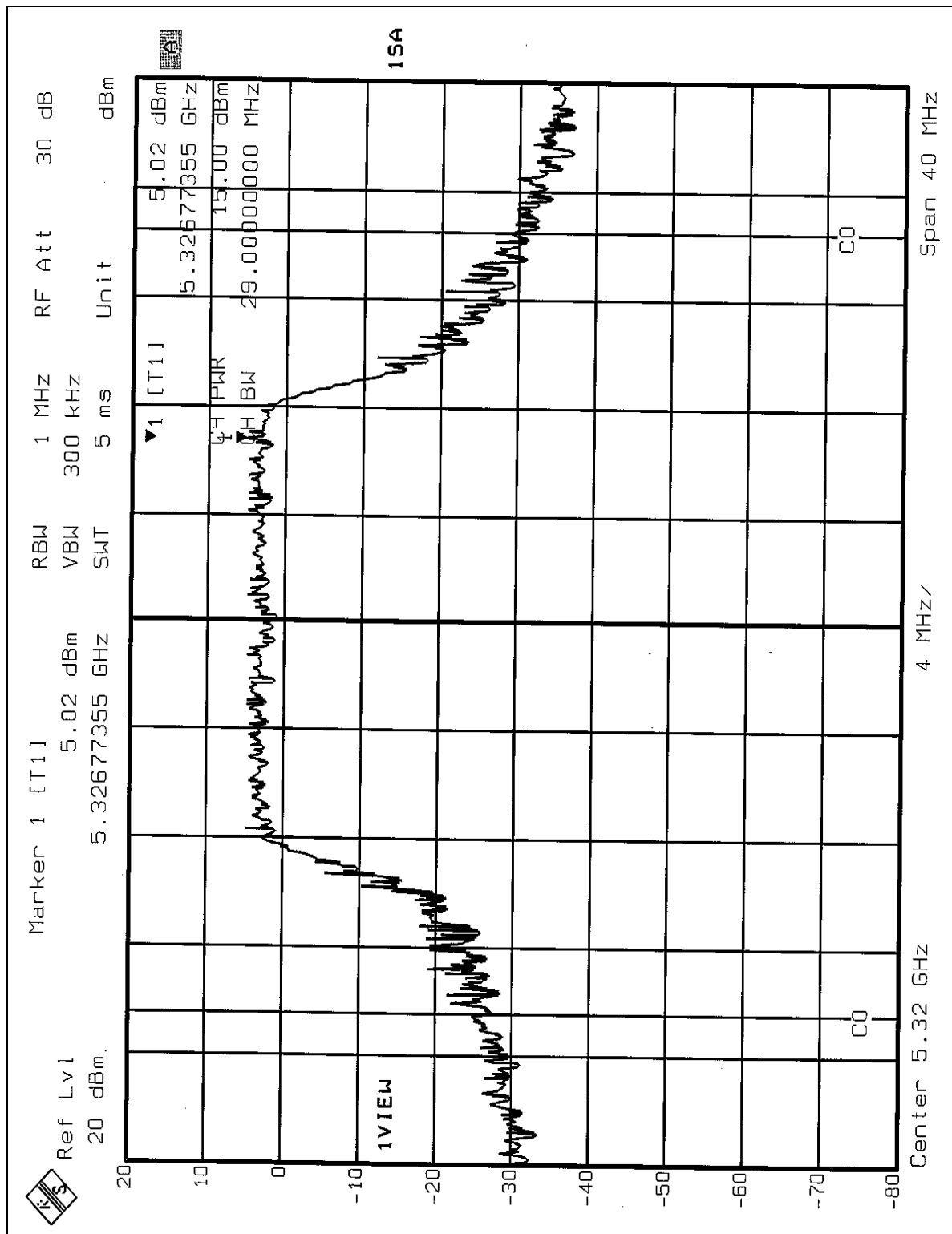


Marker 1 [T1]
 Ref Lvl 20 dBm
 5.24549098 GHz
 6.01 dBm
 1 MHz
 300 kHz
 5 ms
 Unit dBm
 RF Att 30 dB
 RBW
 VBW
 SWT
 1 CH PWR
 5.24549098 GHz
 15.07 dBm
 29.00000000 MHz
 1 SA
 1 VIEW
 Center 5.24 GHz
 4 MHz
 Span 40 MHz

CH 5



CH 8



1VIEW

20 dBm

10

0

-10

-20

-30

-40

-50

-60

-70

-80

Marker 1 [T1]

3.39 dBm

5.73834790 GHz

300 kHz

5 ms

Unit

dBm

1

CH PWR

12.62 dBm

CH BW

28.00000000 MHz

5.738894790 GHz

3.39 dBm

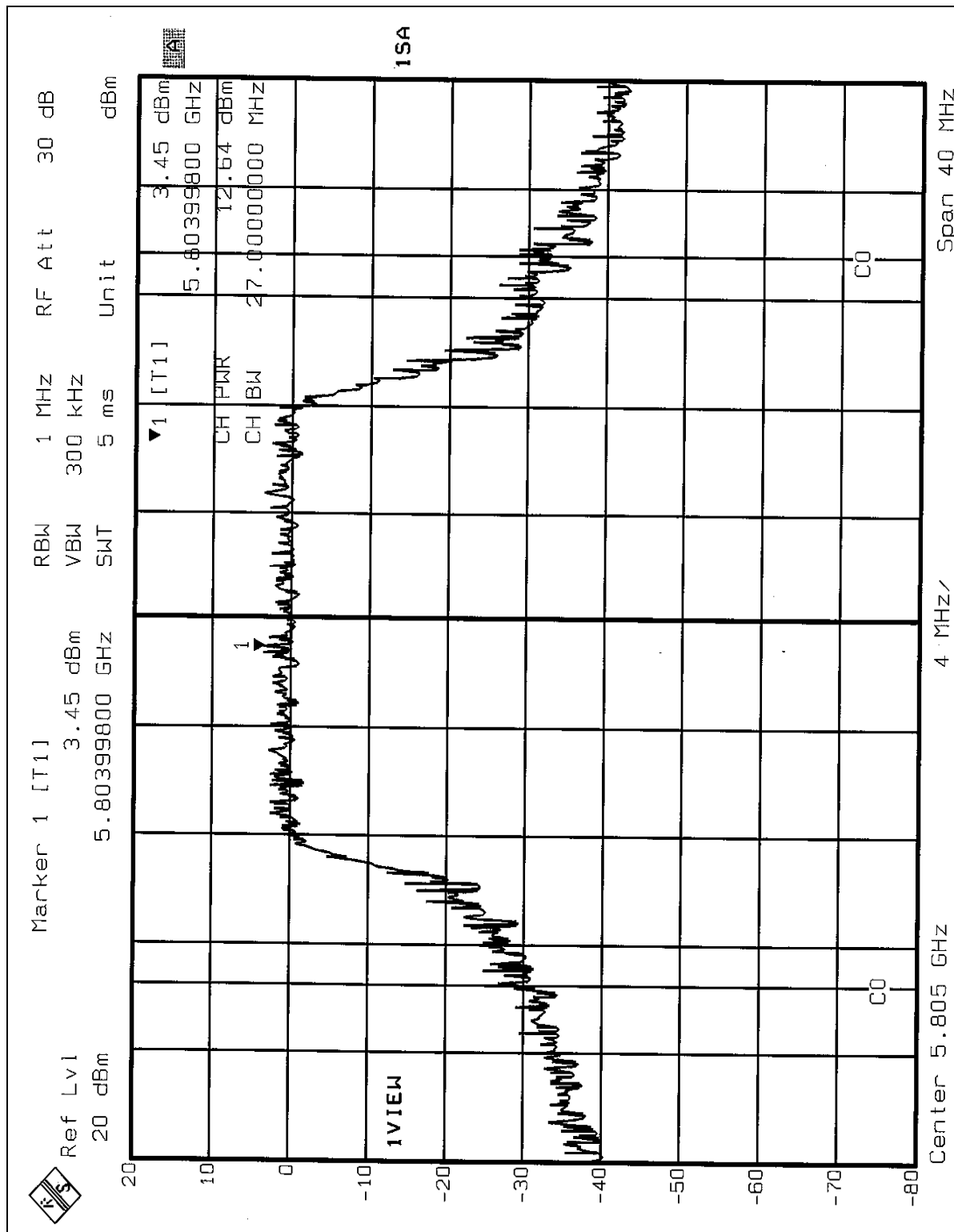
1SA

Center 5.745 GHz

4 MHz

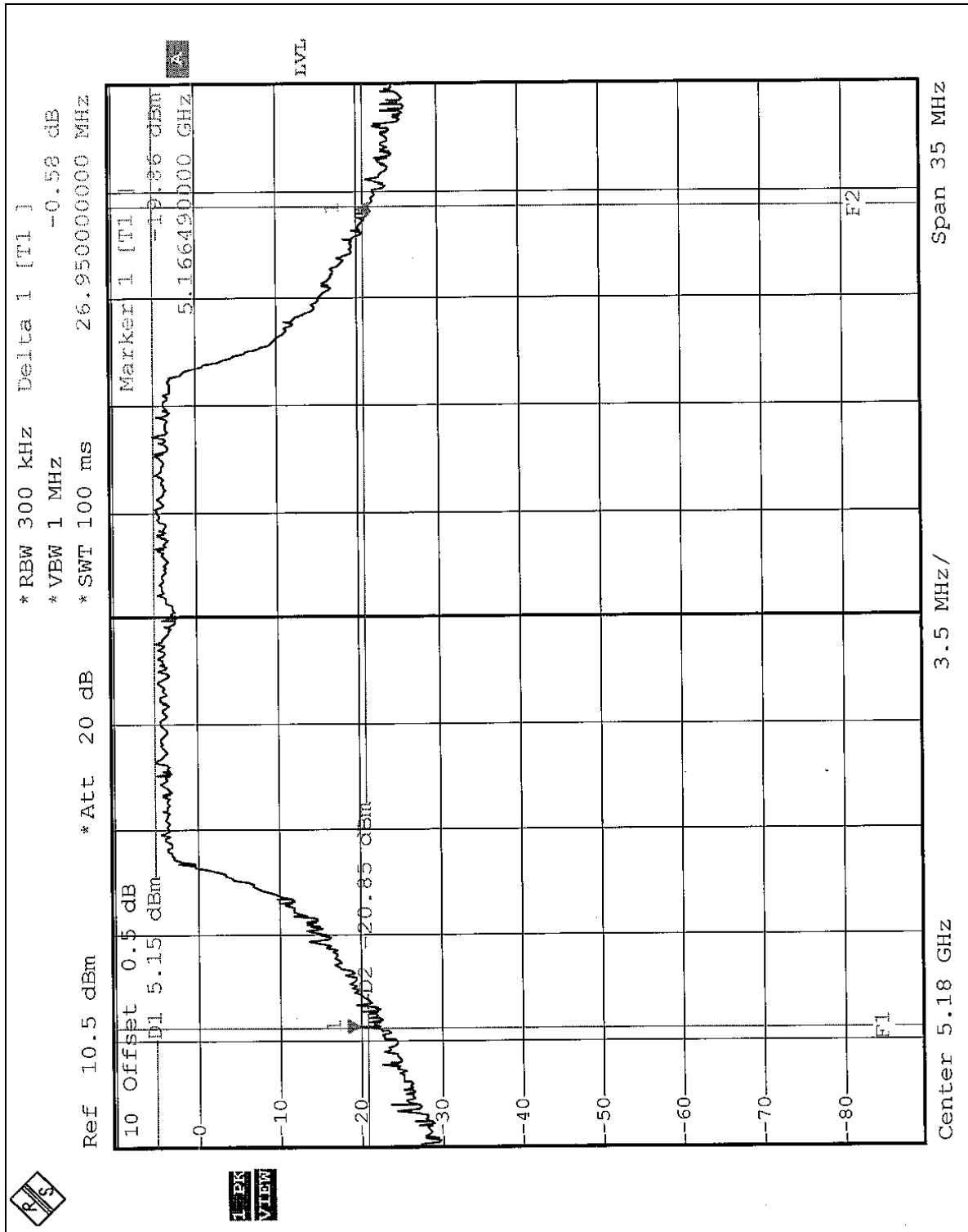
Span 40 MHz

CH 12

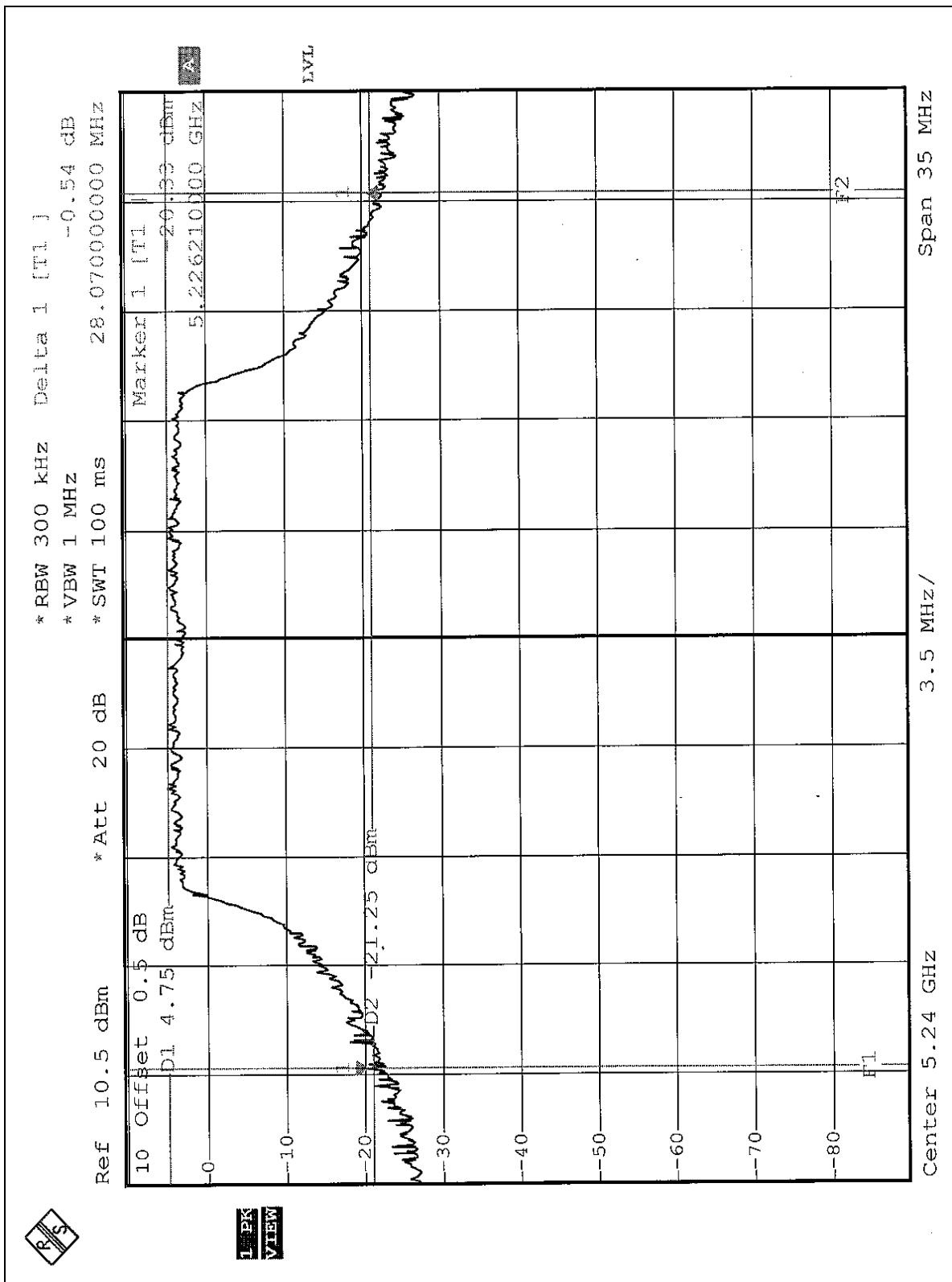


26dB Occupied Bandwidth:

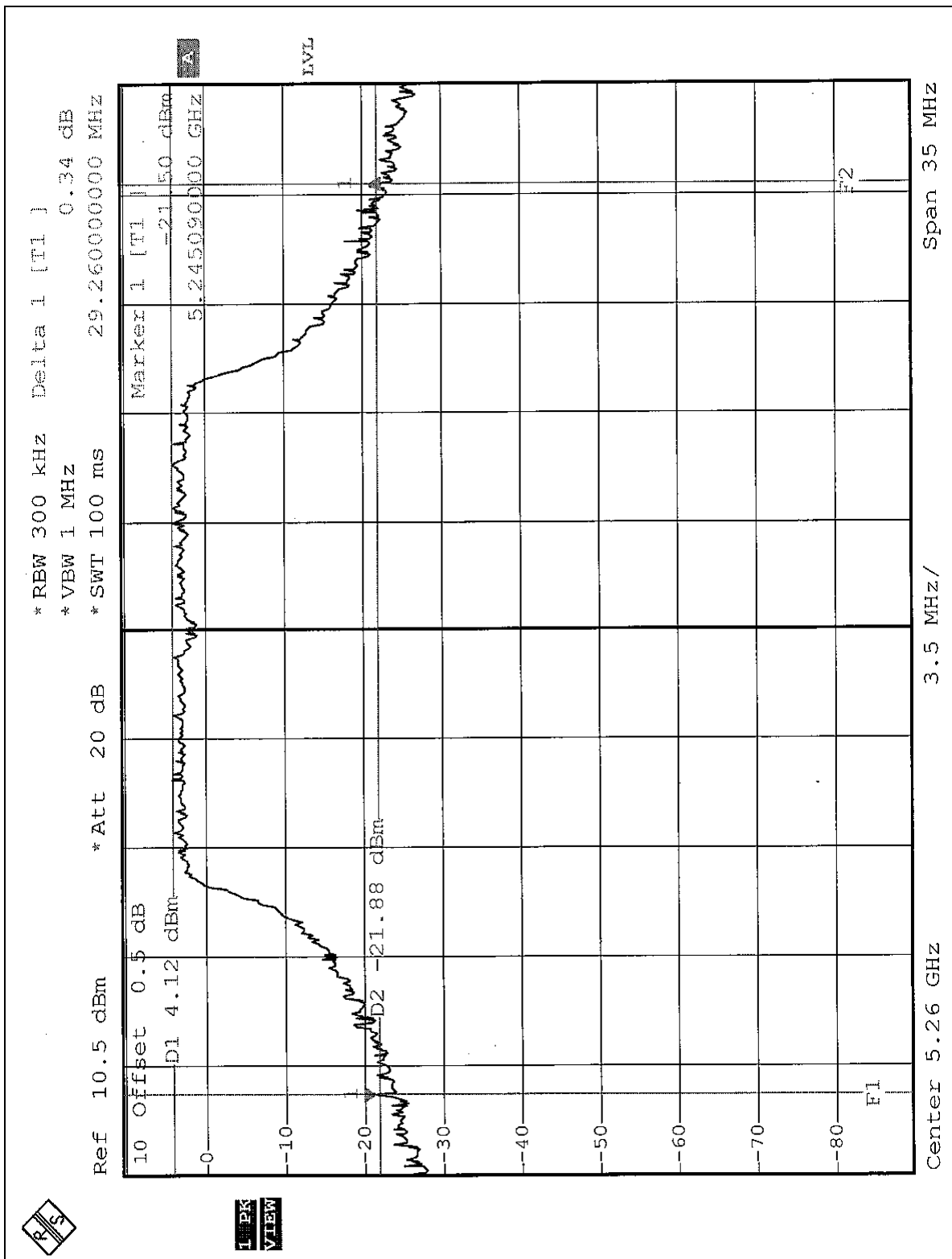
CH 1



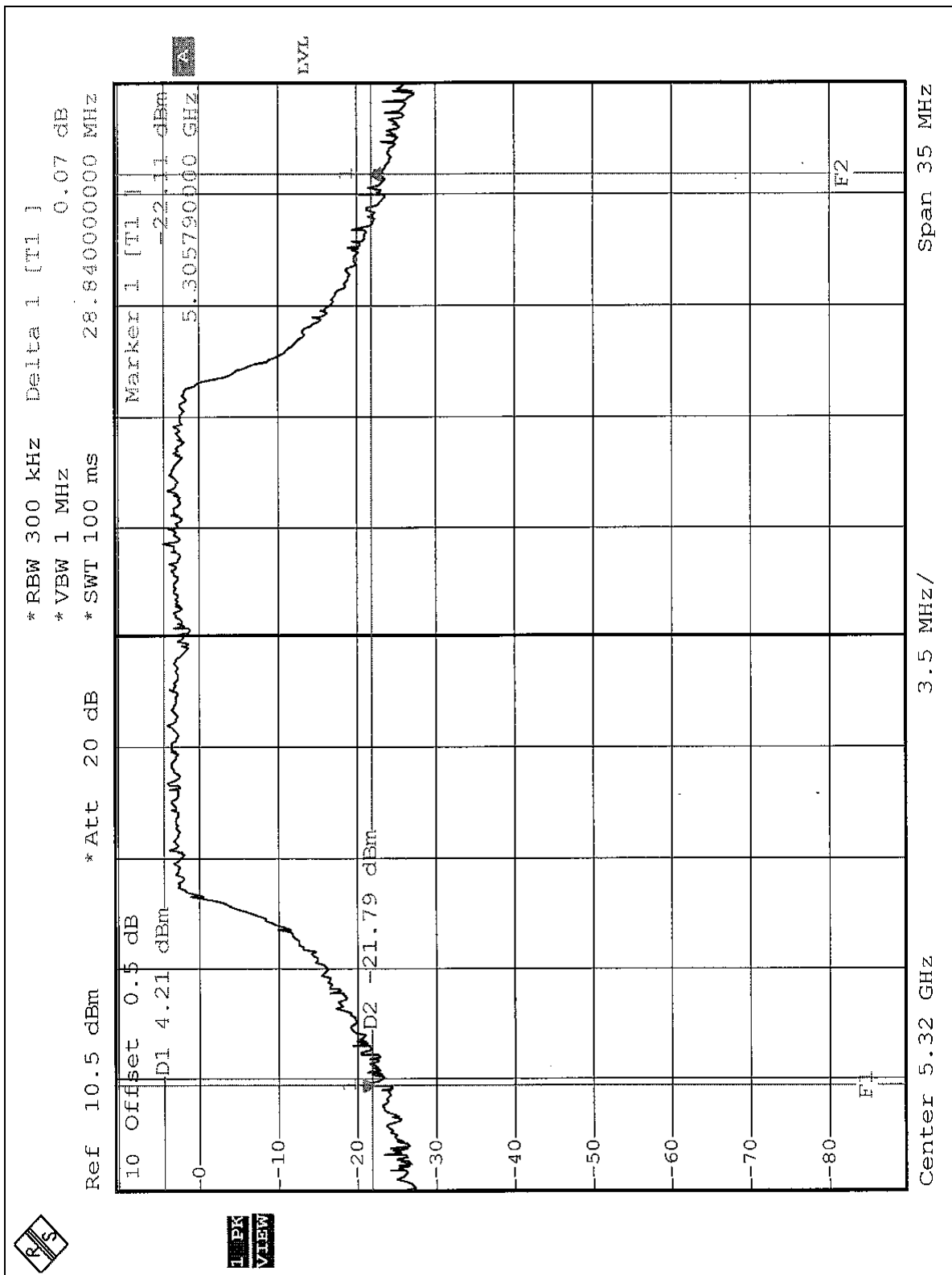
CH 4



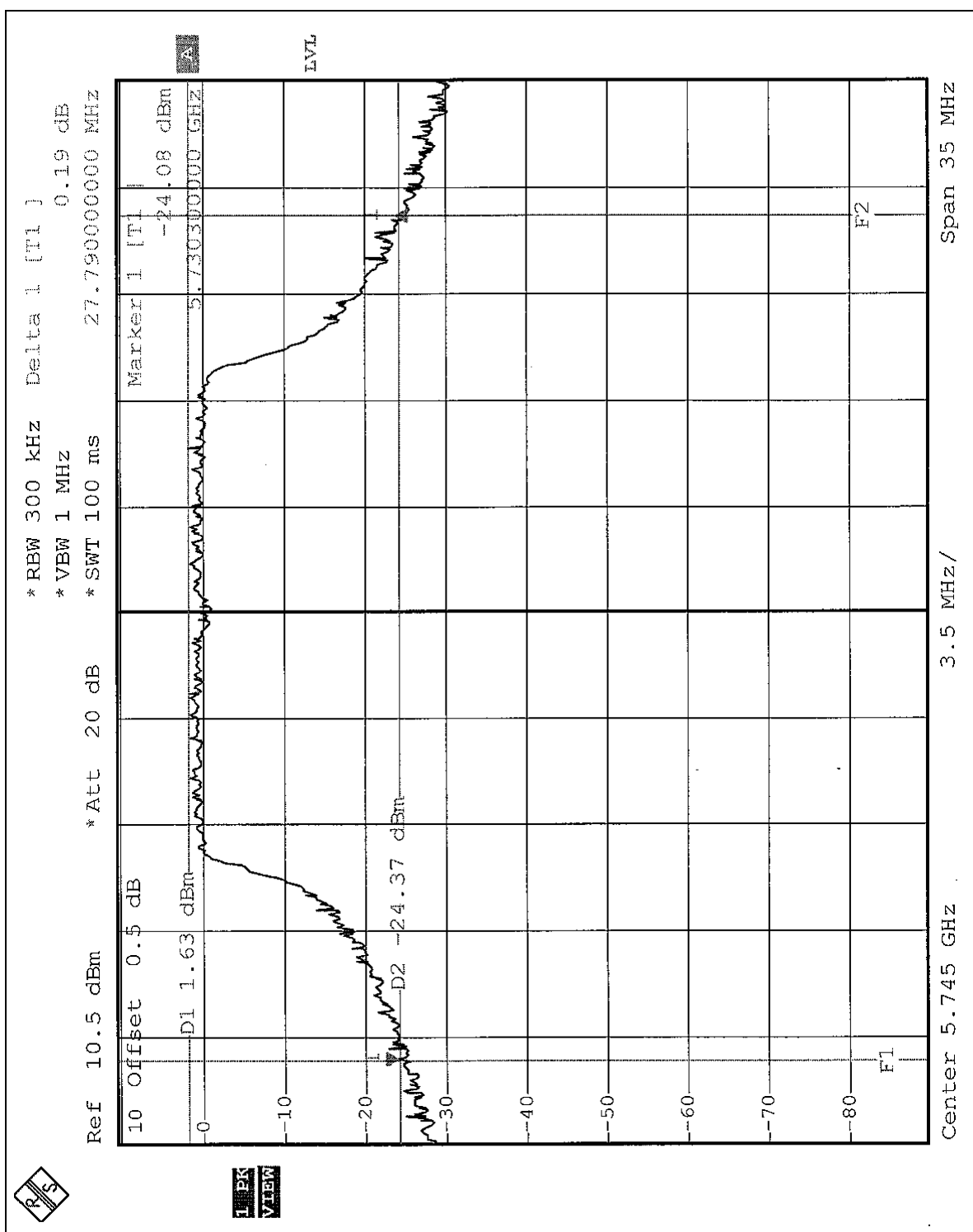
CH 5



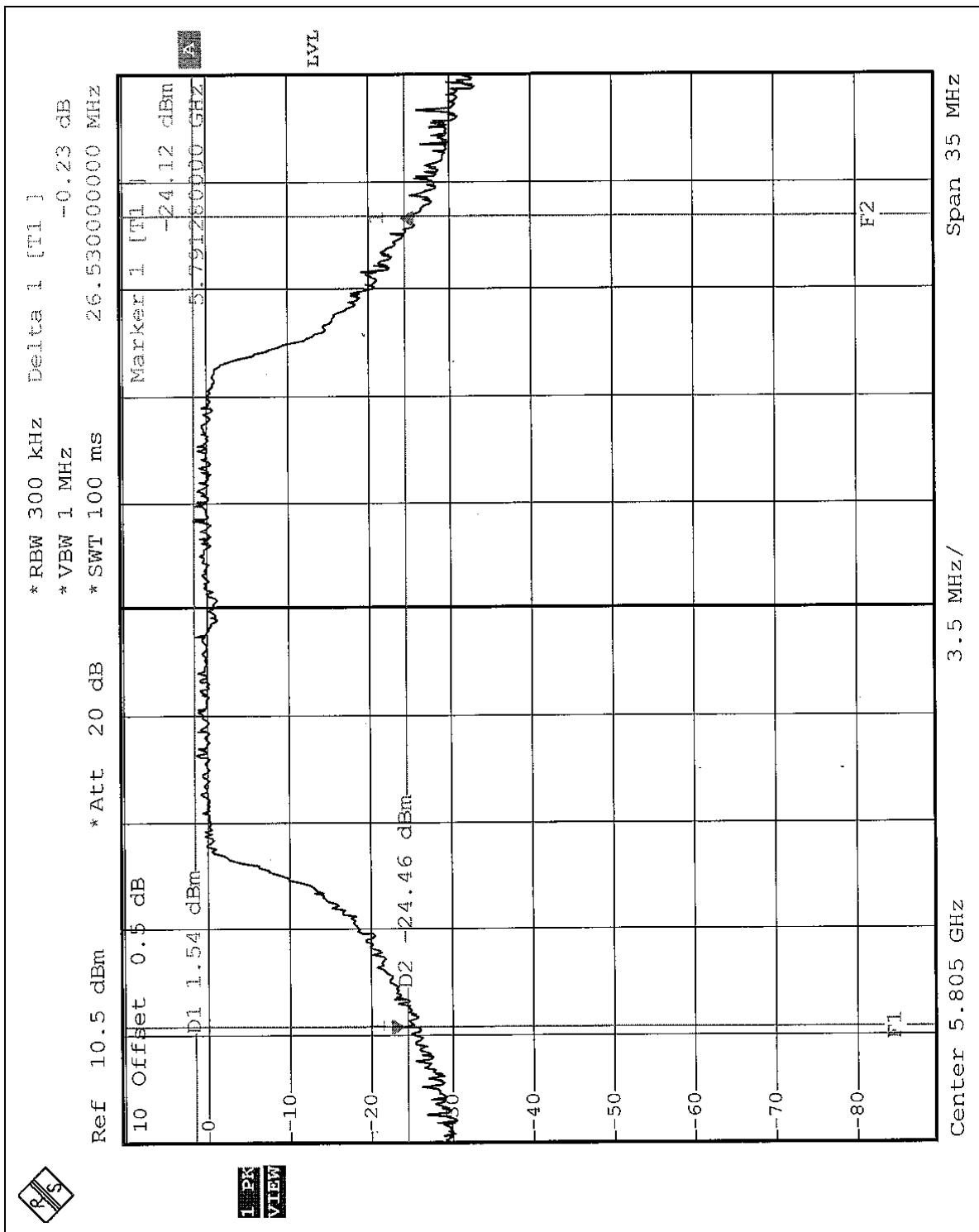
CH 8



CH 9



CH 12





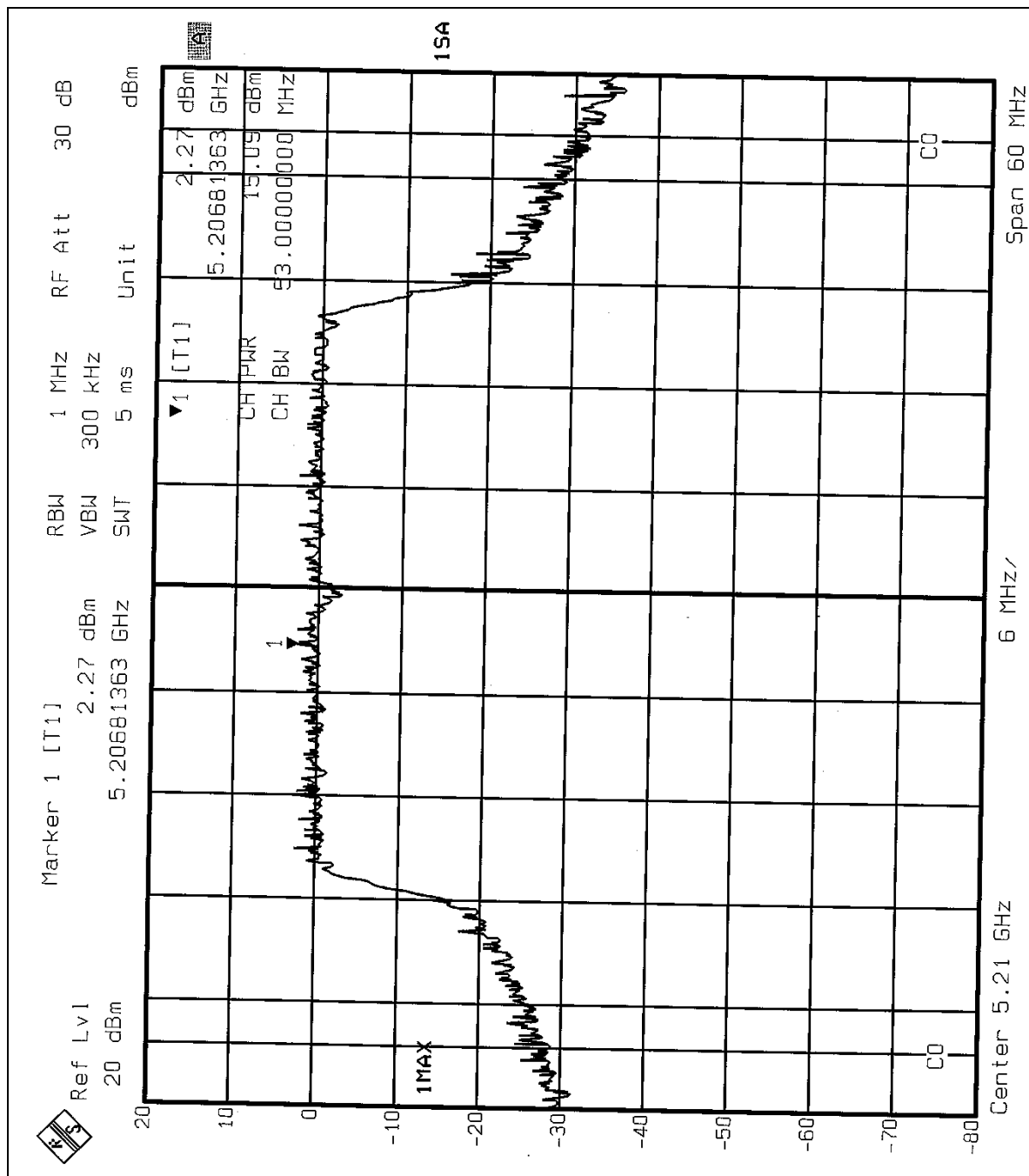
EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
MODE	Turbo	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	24deg. C, 67%RH, 991hPa	TESTED BY	Leo Hung

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	26dBc Occupied Bandwidth (MHz)	PASS/FAIL
1	5210	32.285	15.09	17.00	52.32	PASS
2	5250	32.285	15.09	17.00	52.80	PASS
3	5290	32.137	15.07	24.00	54.36	PASS
4	5760	18.239	12.61	30.00	48.84	PASS
5	5800	17.824	12.51	30.00	52.08	PASS

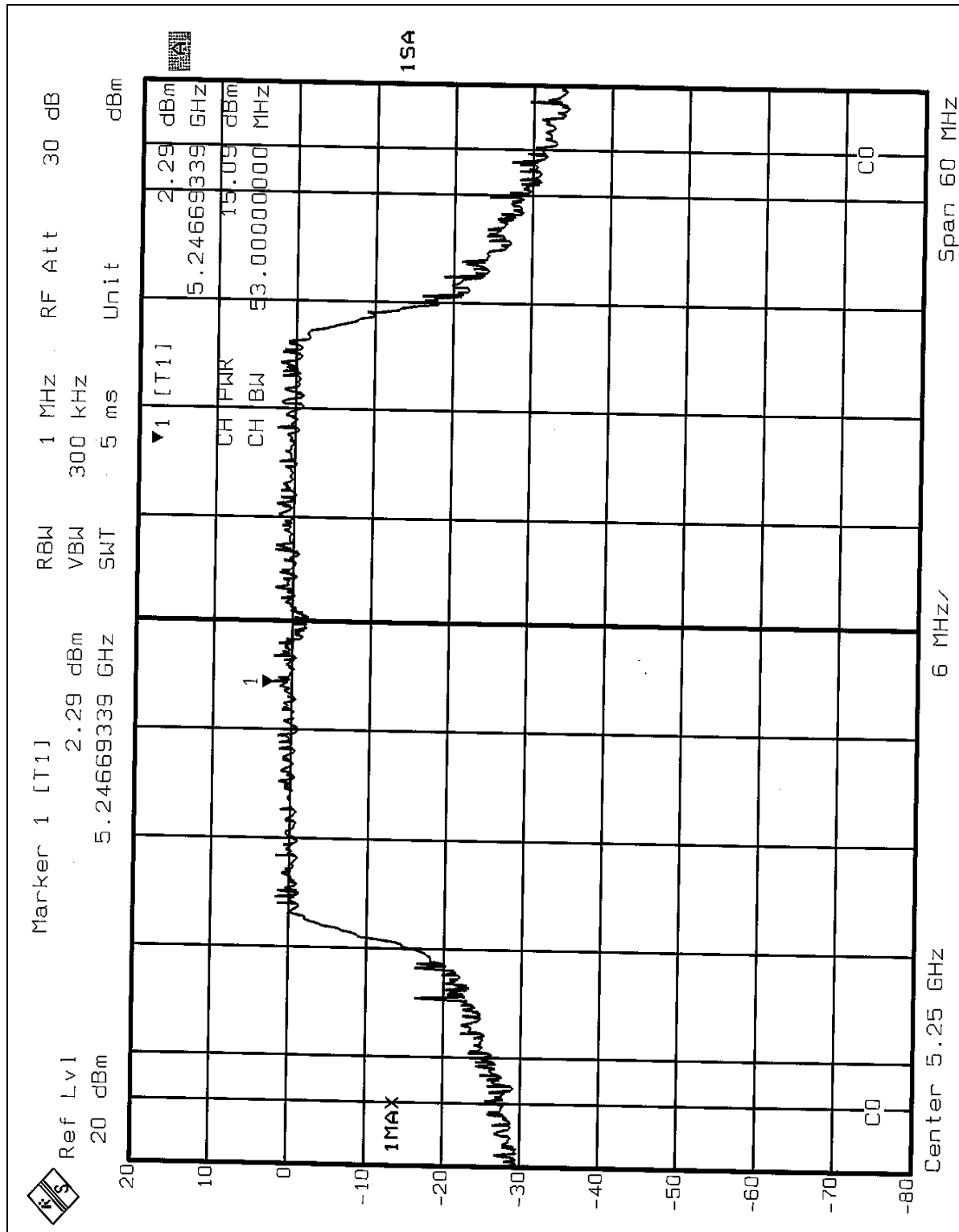
NOTE: The 26dBc Occupied Bandwidth plot, please refer to the following pages.

Peak Power Output:

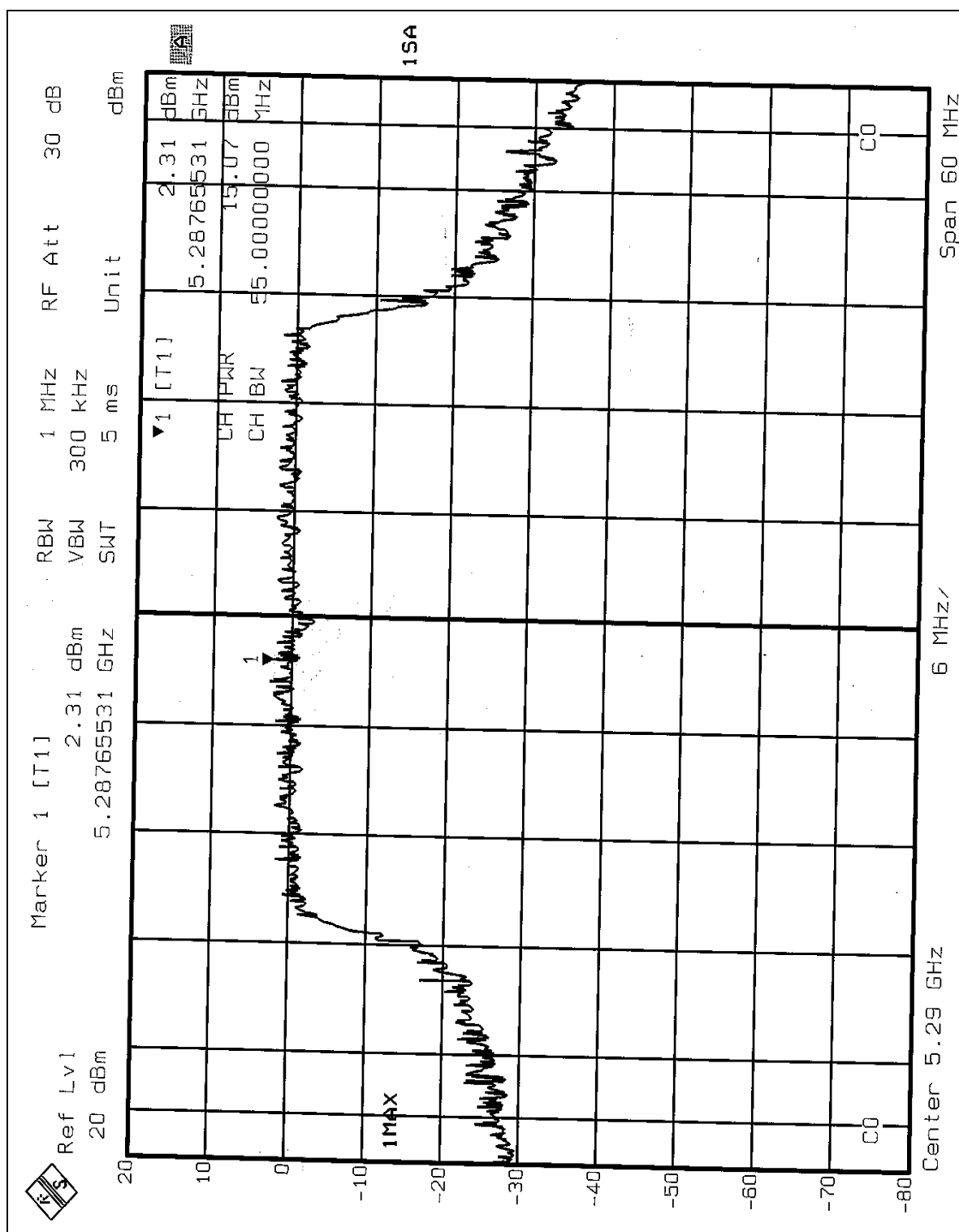
CH 1



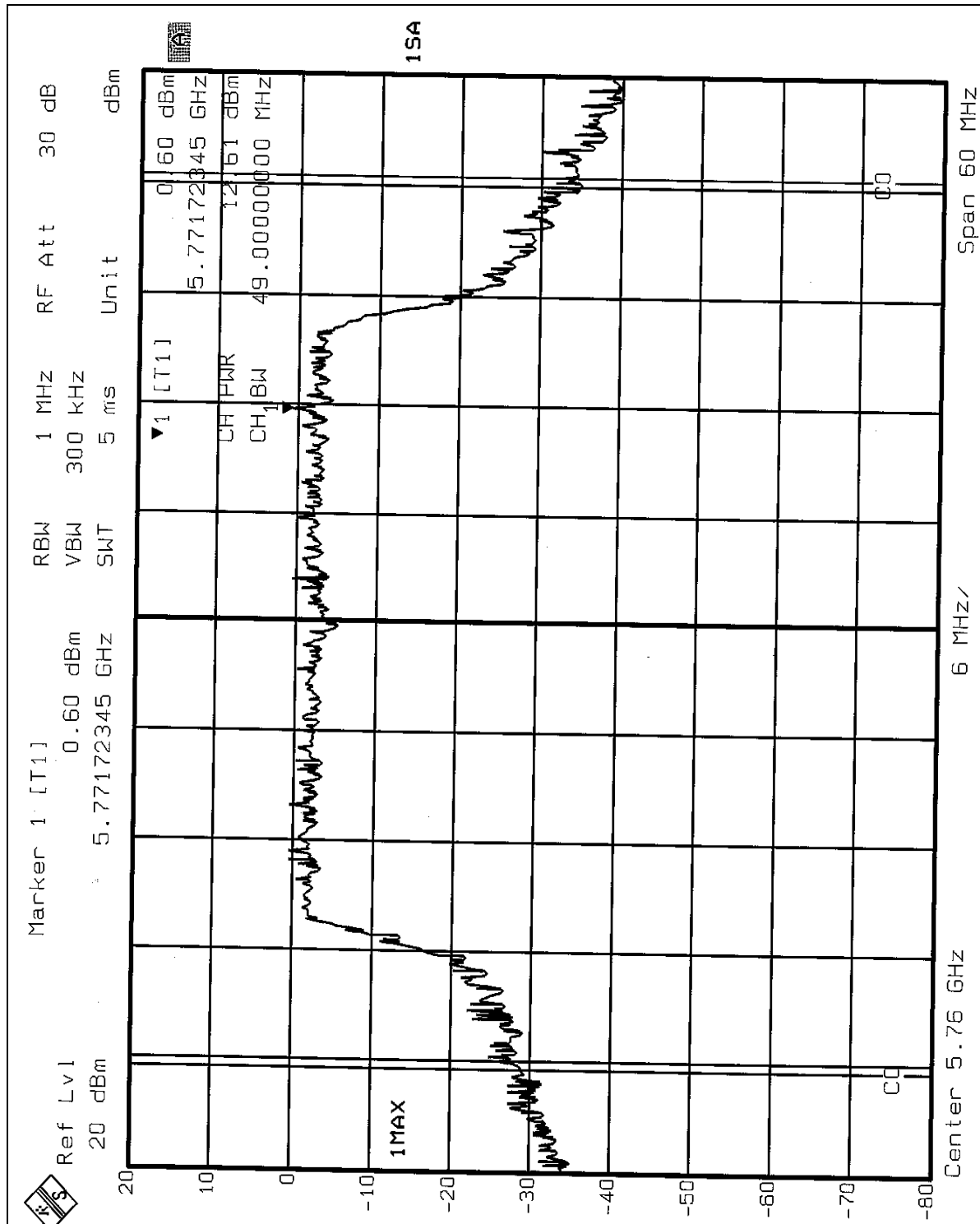
CH 2



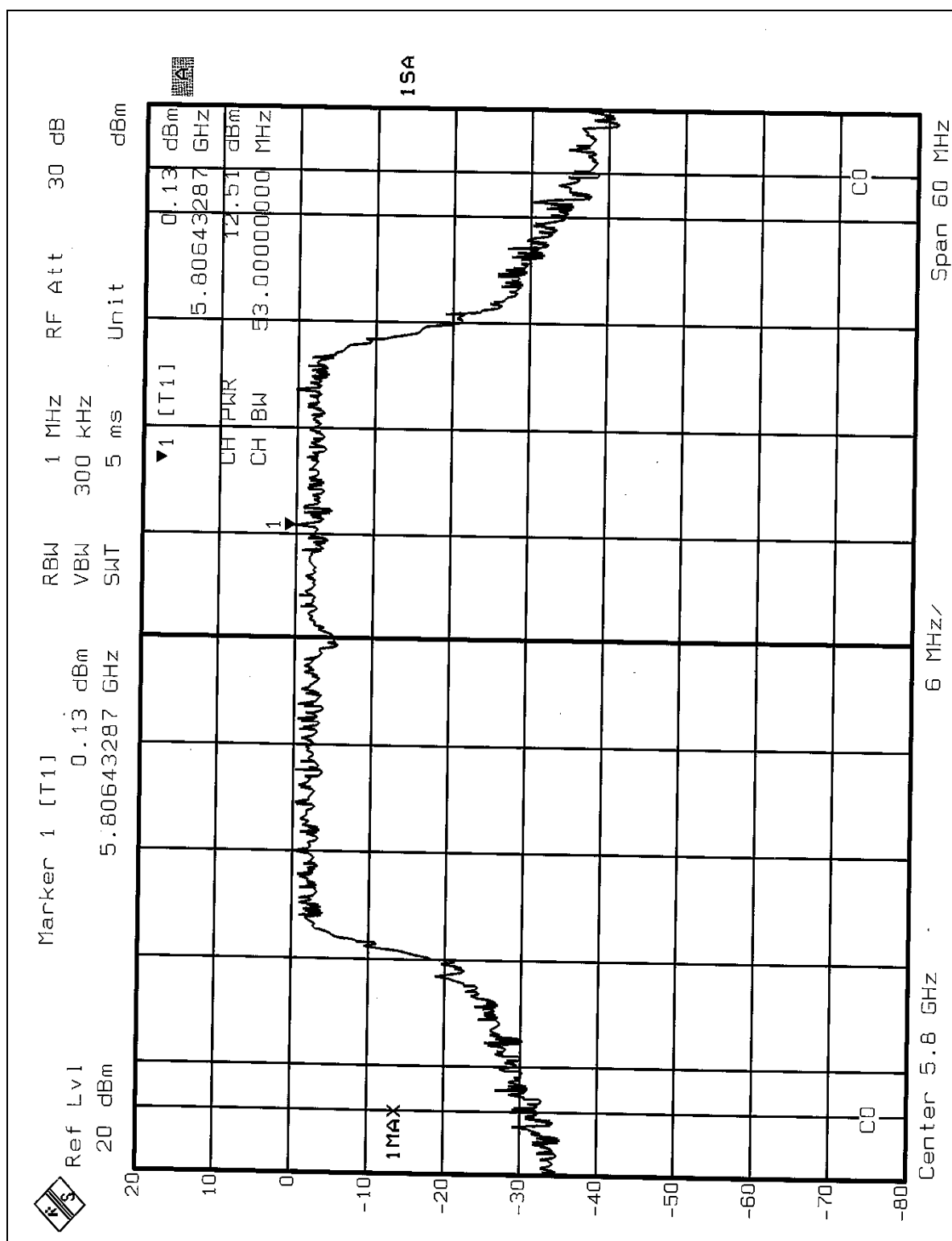
CH 3



CH 4

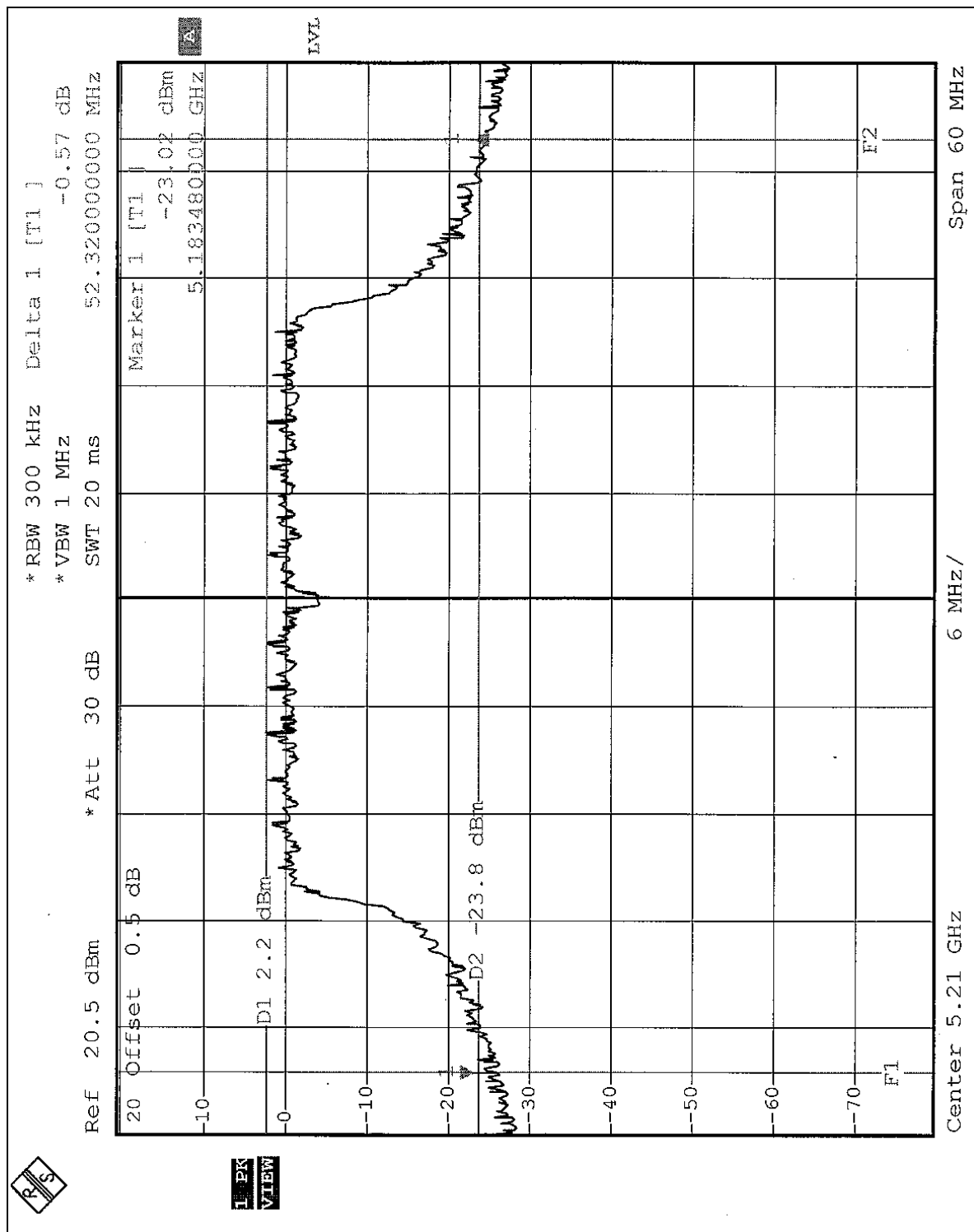


CH 5

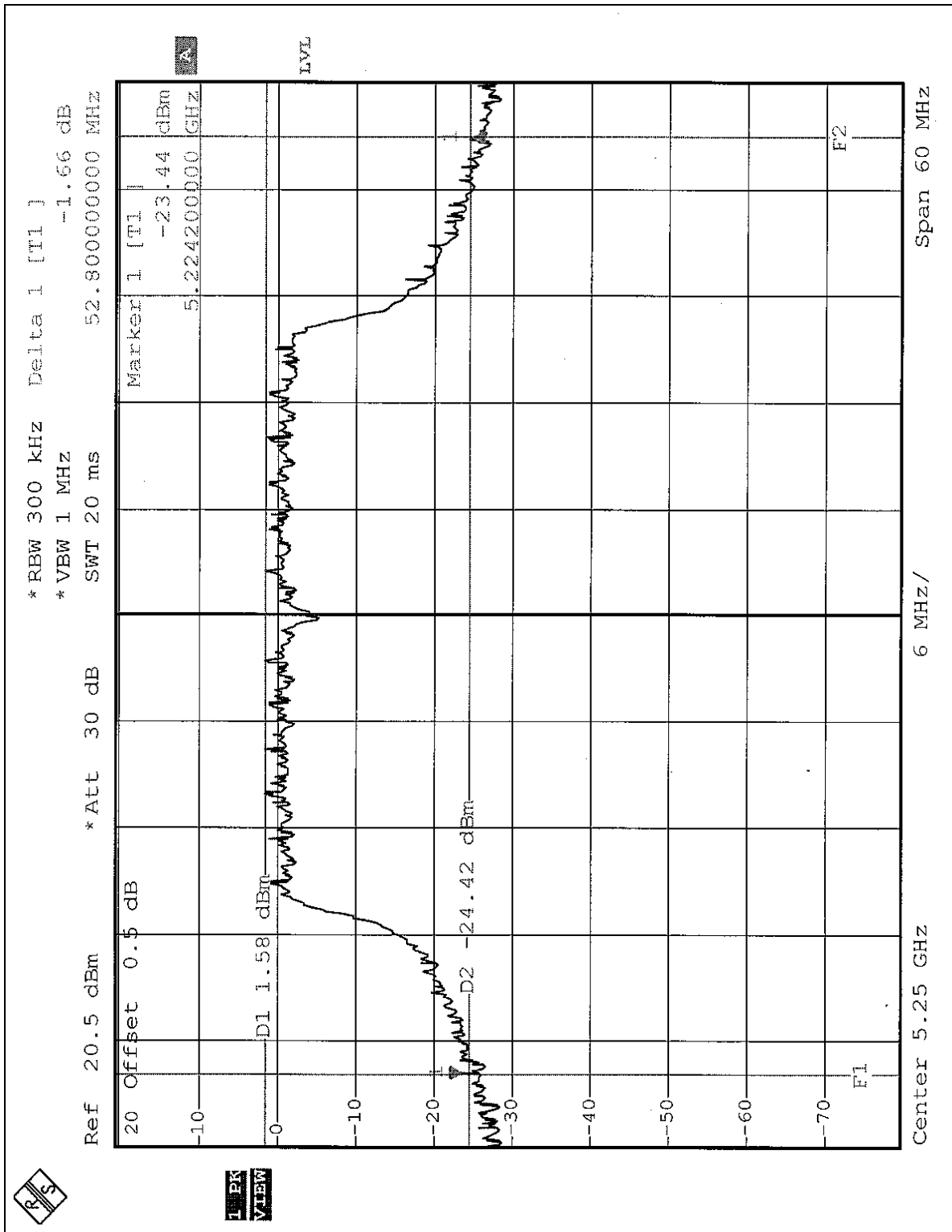


26dB Occupied Bandwidth:

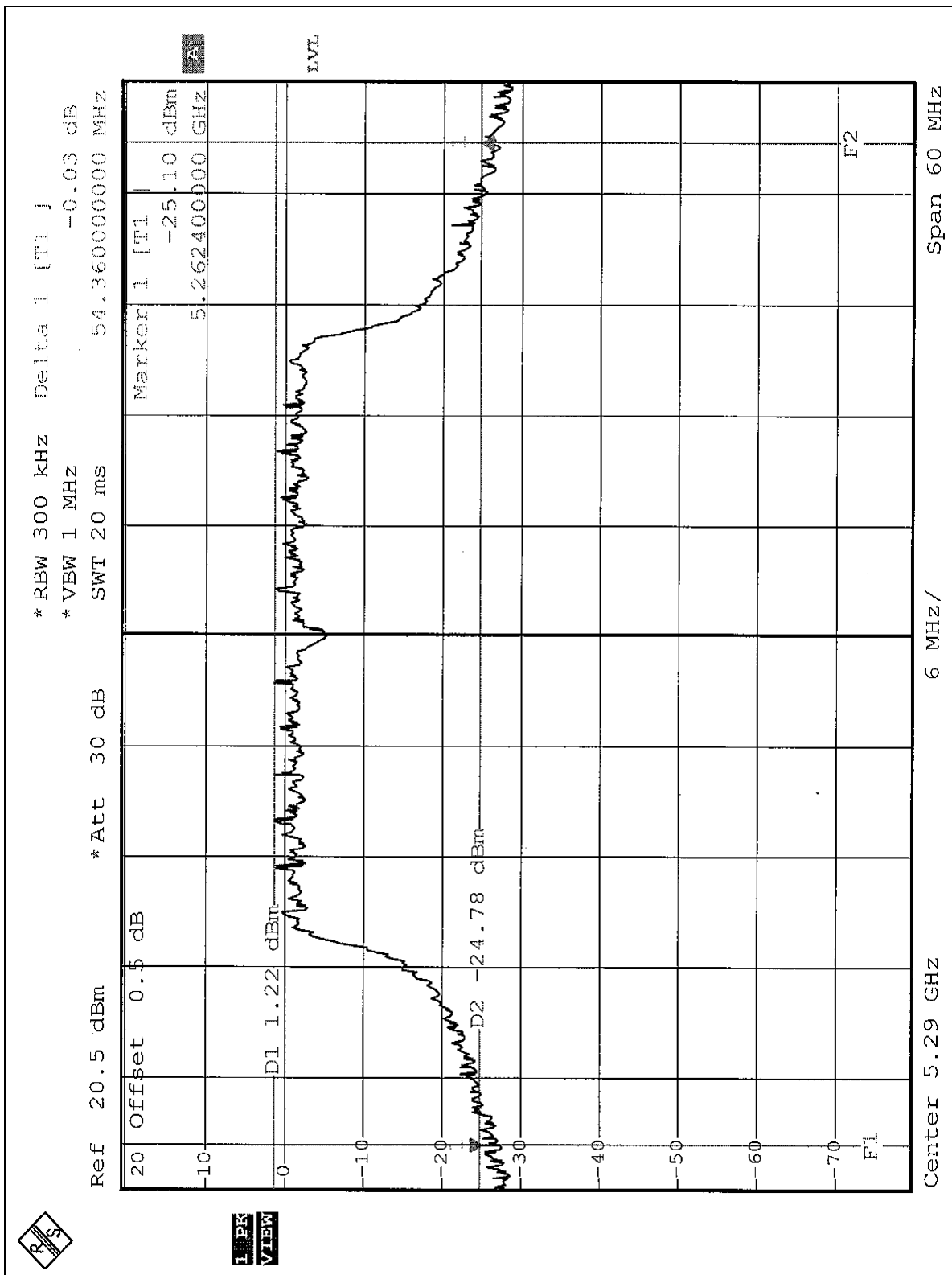
CH 1



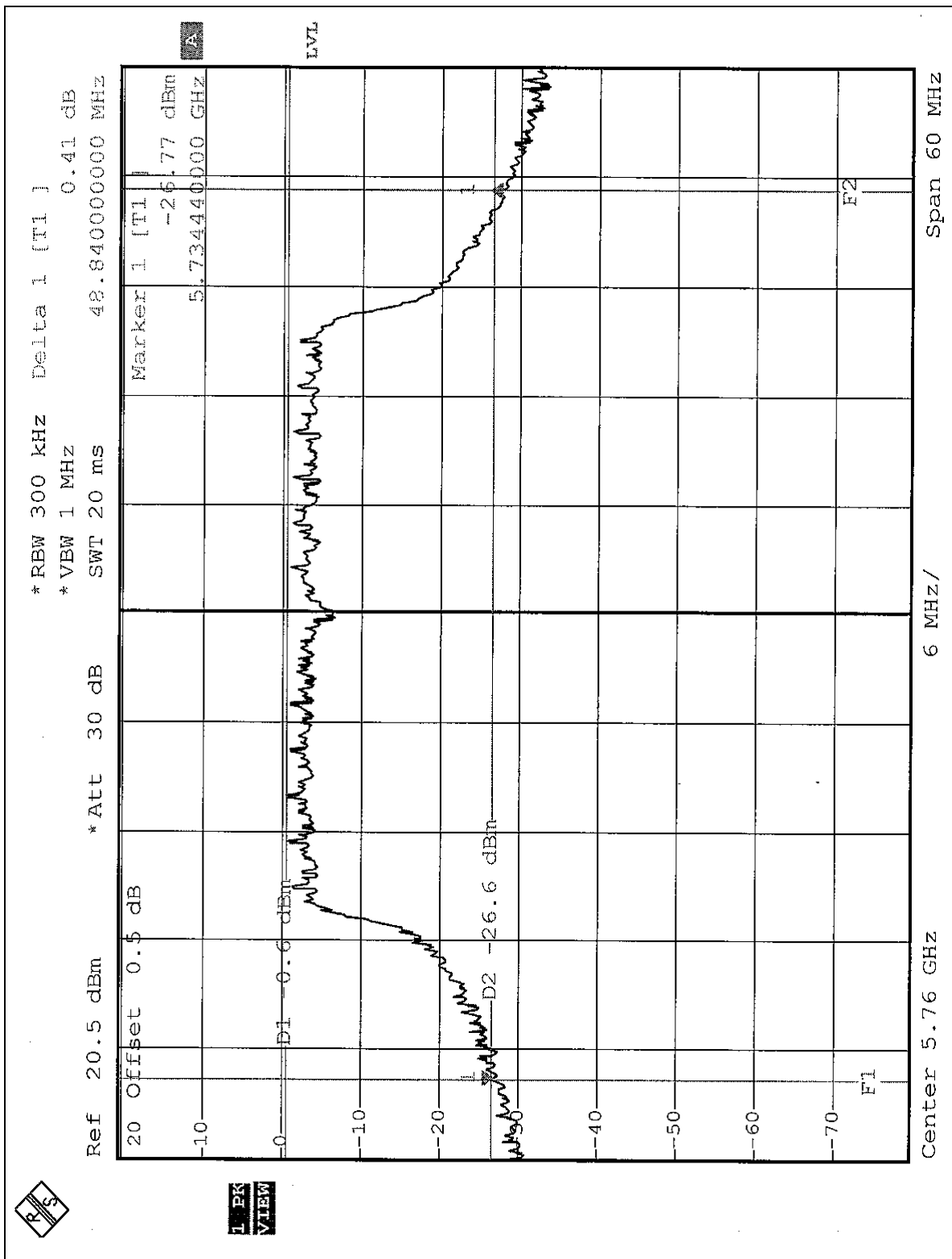
CH 2



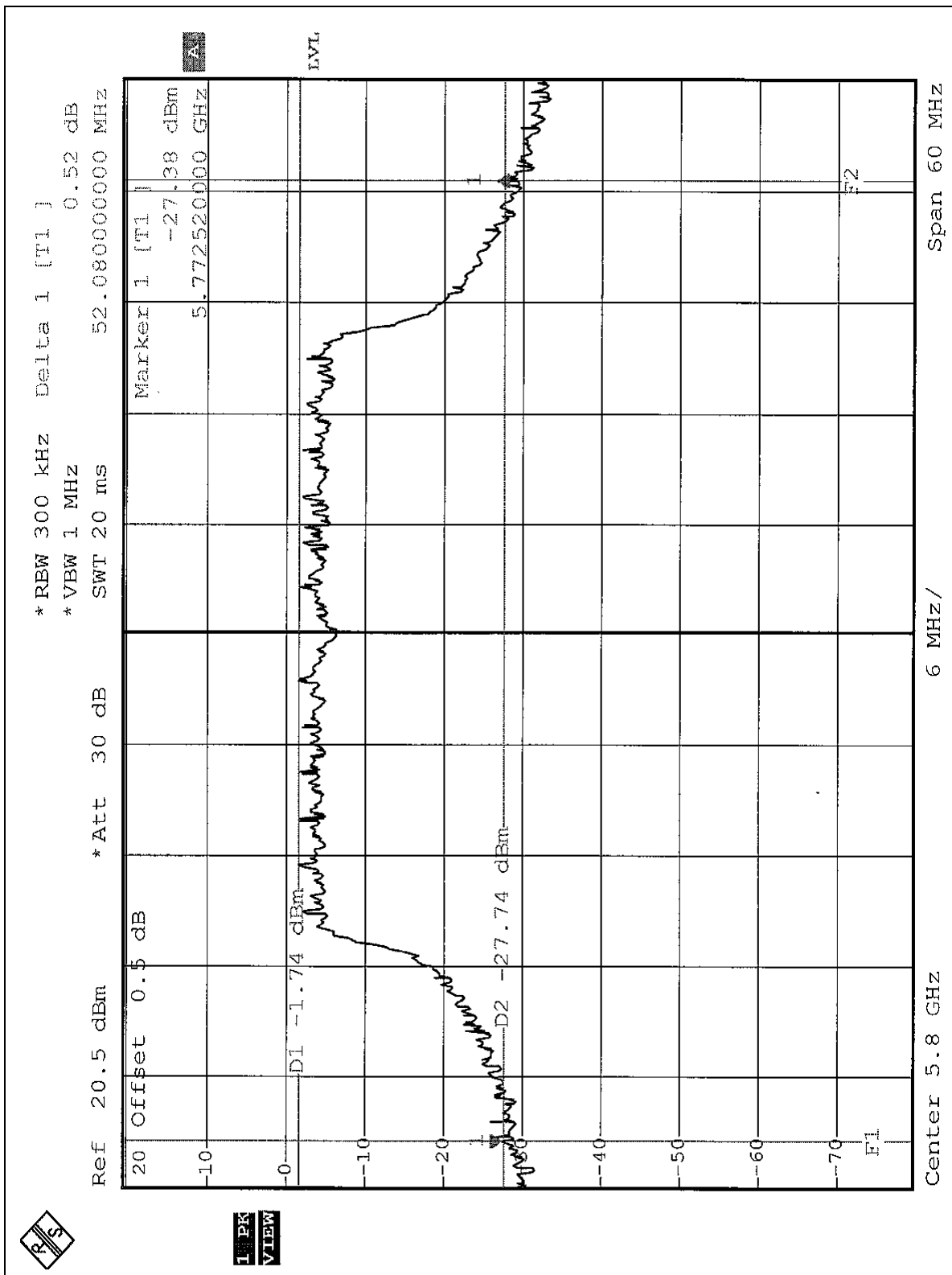
CH 3



CH 4



CH 5



5.4 PEAK POWER EXCURSION MEASUREMENT

5.4.1 LIMITS OF PEAK POWER EXCURSION MEASUREMENT

Frequency Band	Limit
5.15 – 5.25 GHz	13dB
5.25 – 5.35 GHz	13dB
5.725 – 5.825 GHz	13dB

5.4.2 TEST INSTRUMENTS

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

NOTE:

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

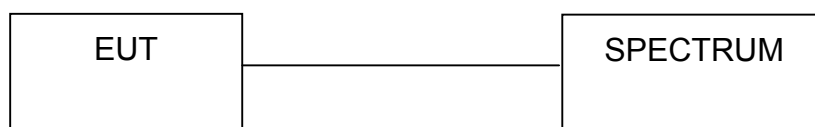
5.4.3 TEST PROCEDURE

1. The transmitter output was connected to the spectrum analyzer.
2. Set the spectrum bandwidth span to view the entire spectrum.
3. Using peak detector and Max-hold function for Trace 1 (RB=1MHz, VB=3MHz) and 2 (RB=1MHz, VB=300KHz).
4. The largest difference between Trace 1 and Trace 2 in any 1MHz band on any frequency was recorded.

5.4.4 DEVIATION FROM TEST STANDARD

No deviation

5.4.5 TEST SETUP



5.4.6 EUT OPERATING CONDITIONS

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

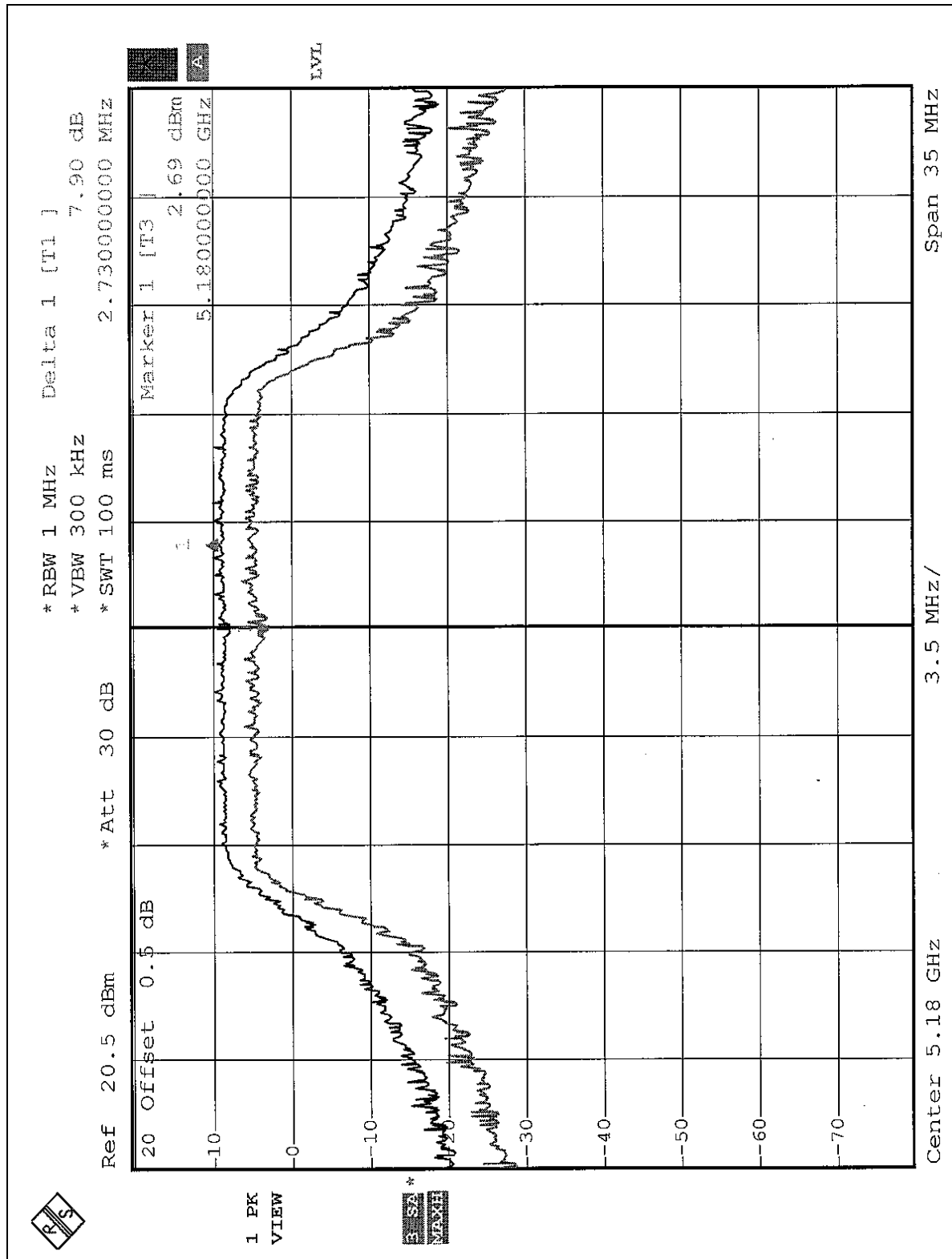


5.4.7 TEST RESULTS

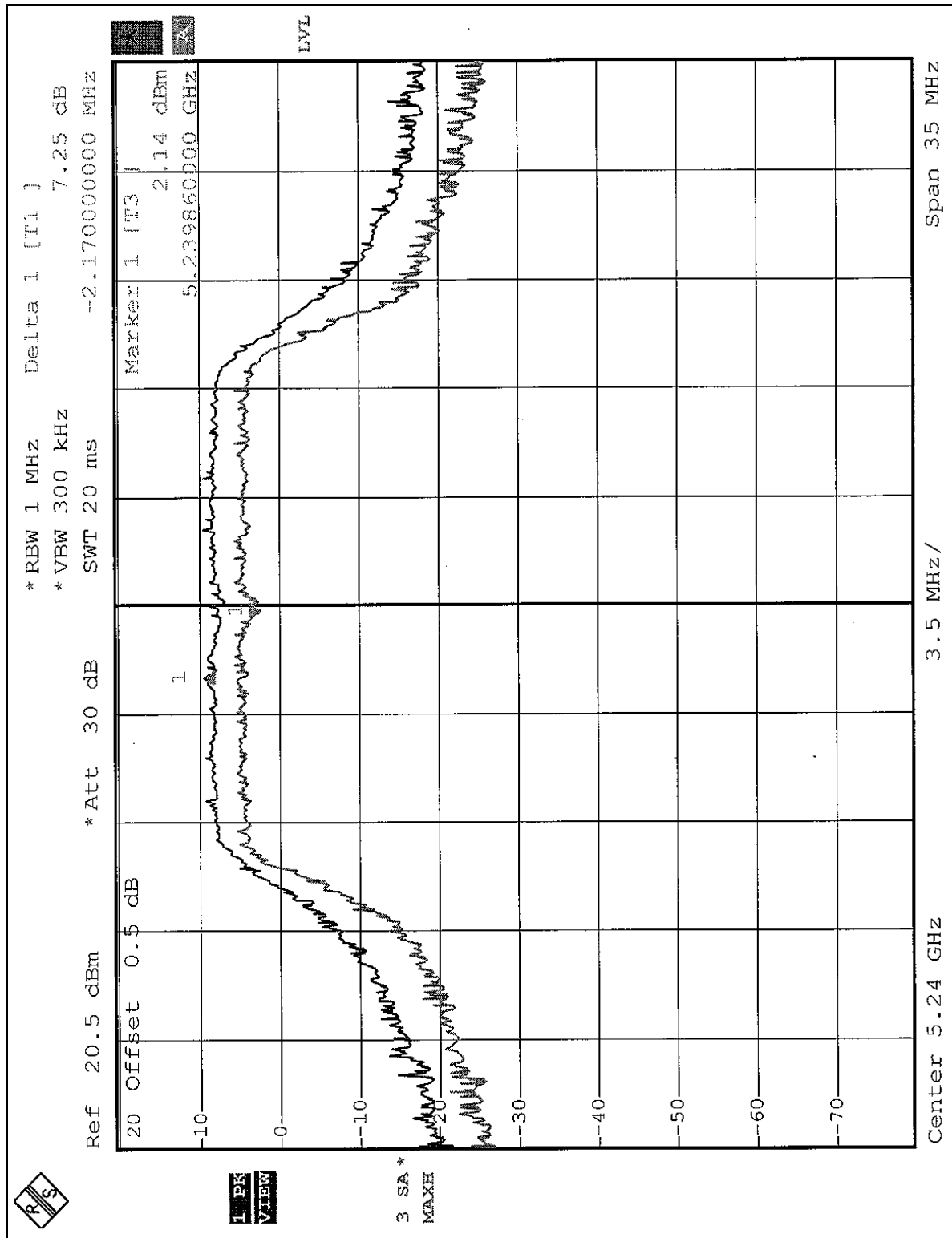
EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
MODE	Normal	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	24deg. C, 67%RH, 991hPa	TESTED BY	Leo Hung

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
1	5180	7.90	13	PASS
4	5240	7.25	13	PASS
5	5260	7.24	13	PASS
8	5320	6.25	13	PASS
9	5745	6.12	13	PASS
12	5805	6.96	13	PASS

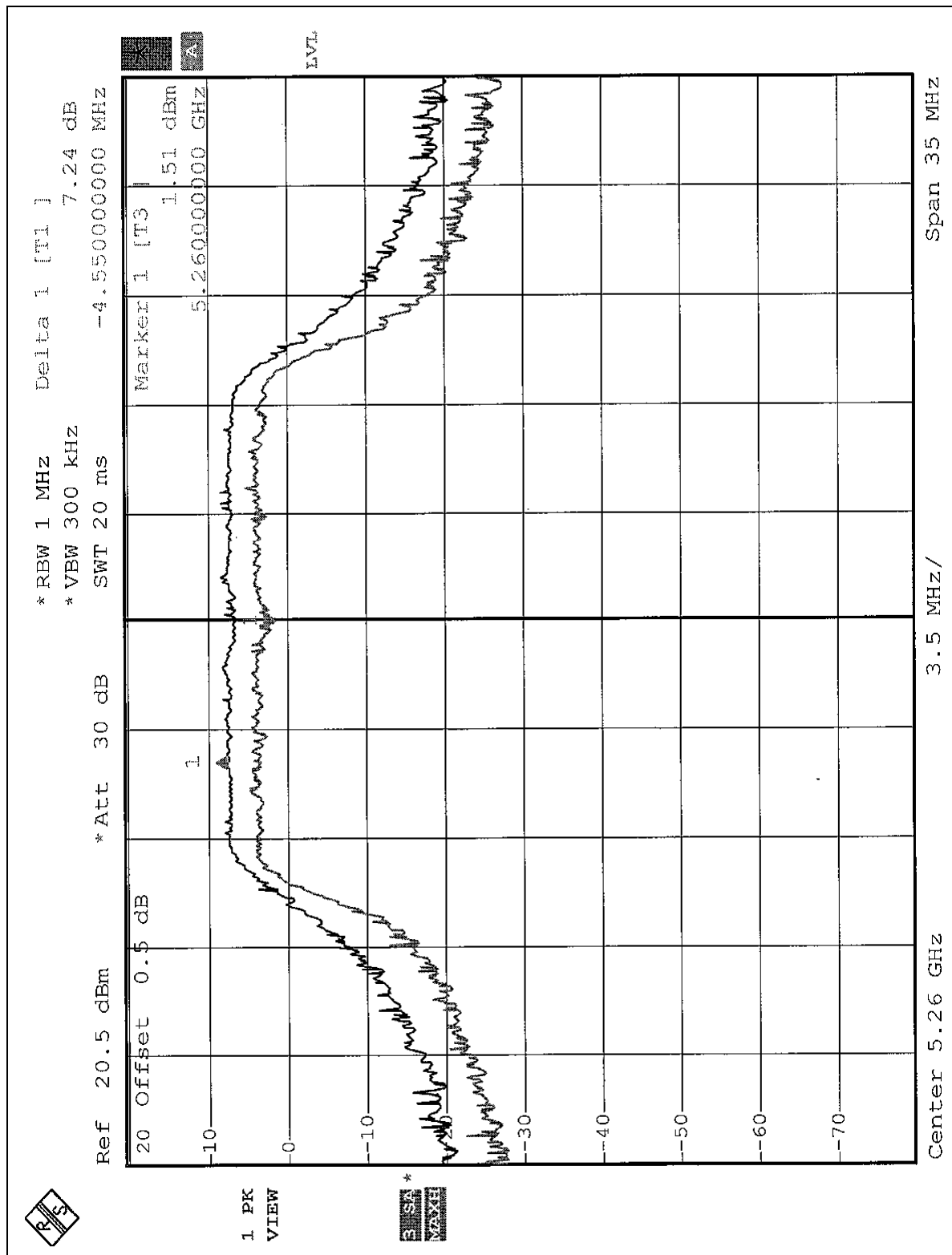
CH 1



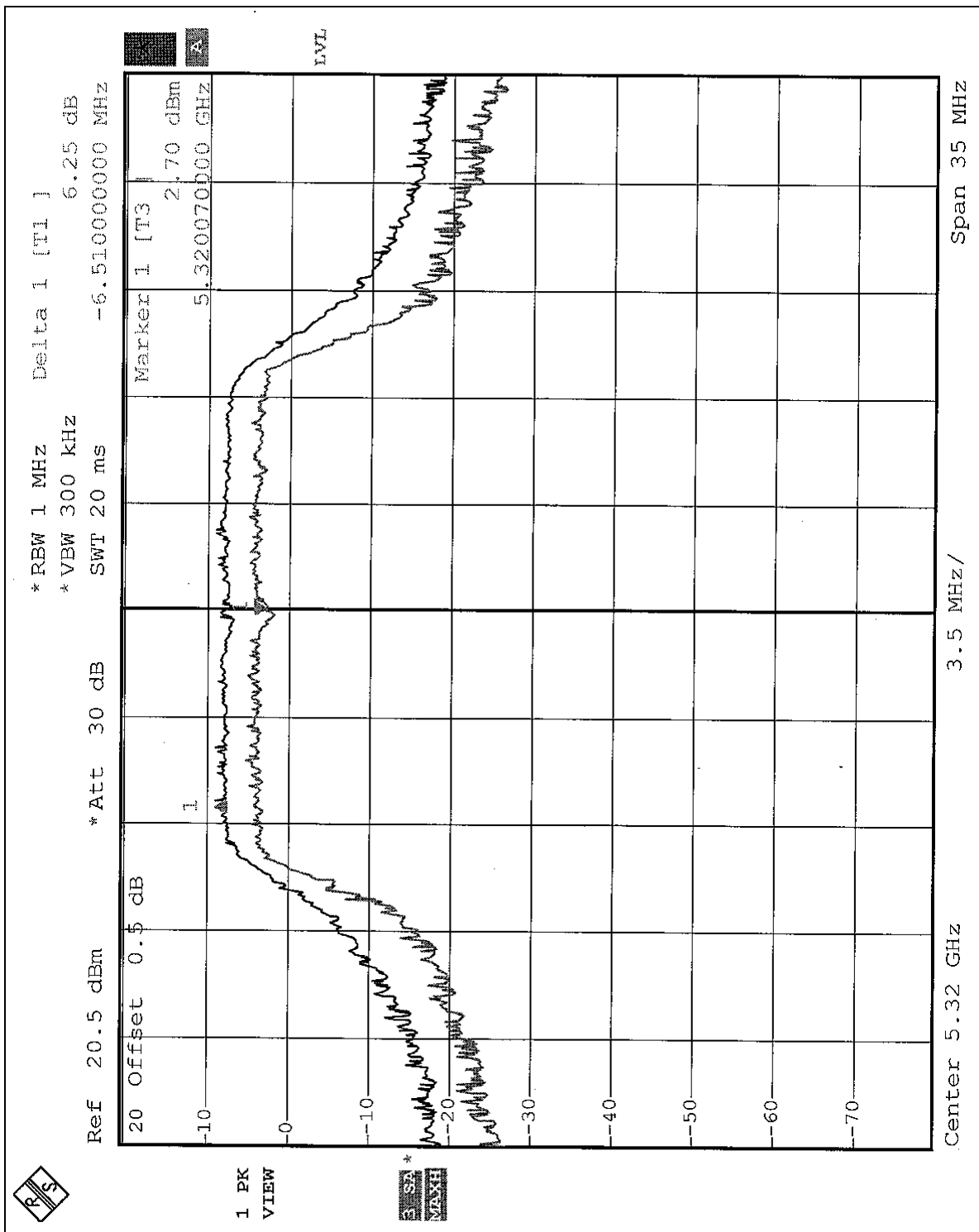
CH 4



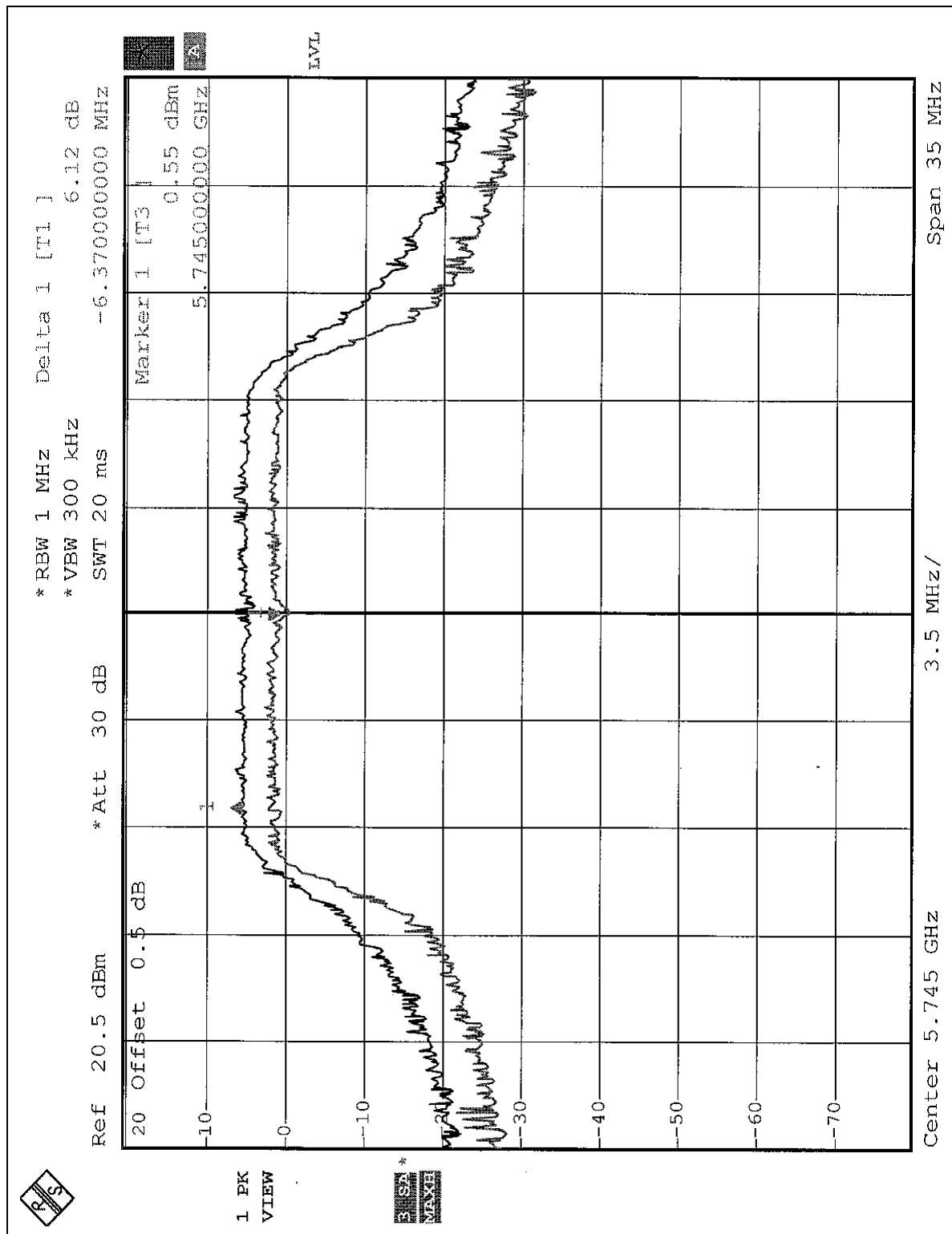
CH 5



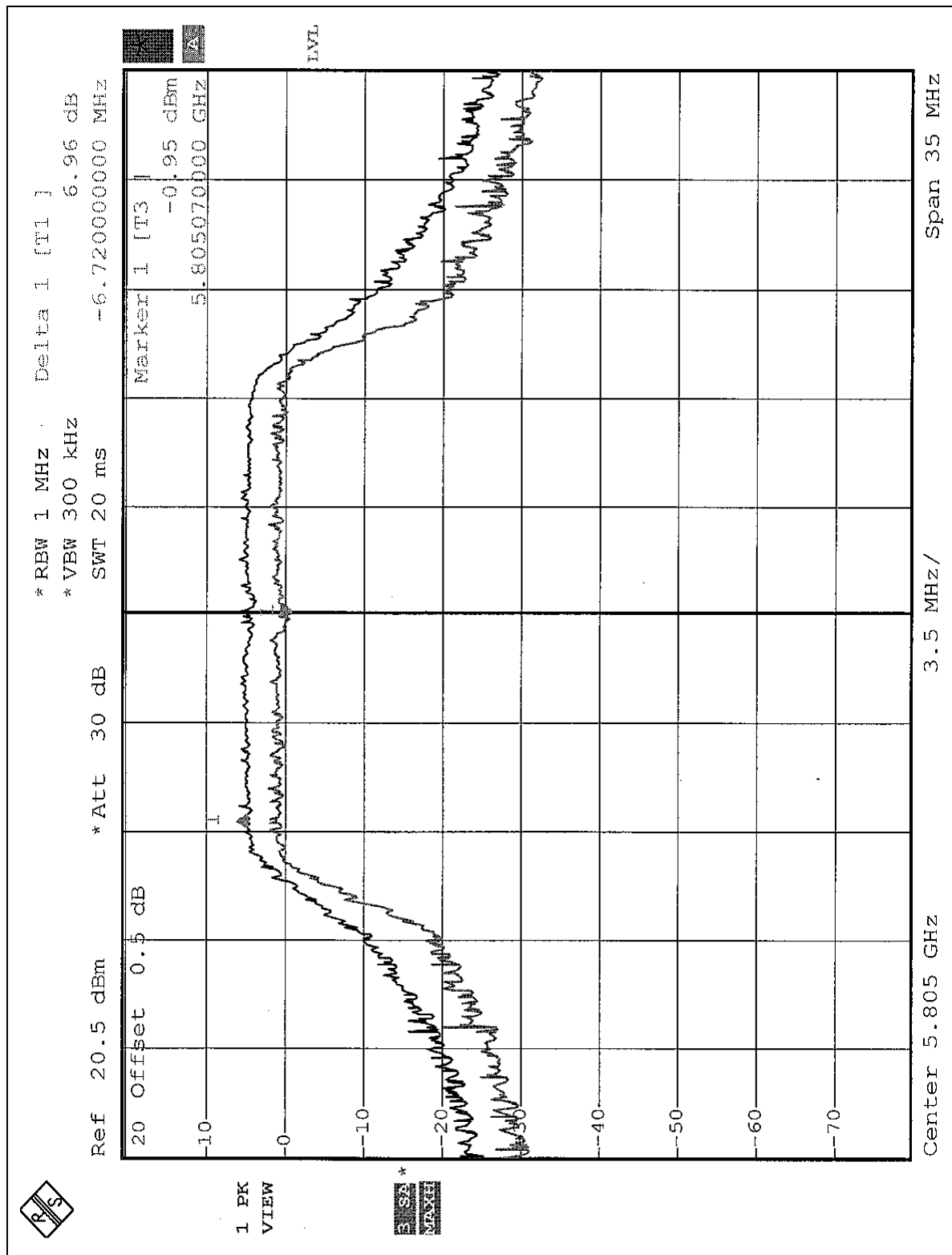
CH 8



CH 9



CH 12

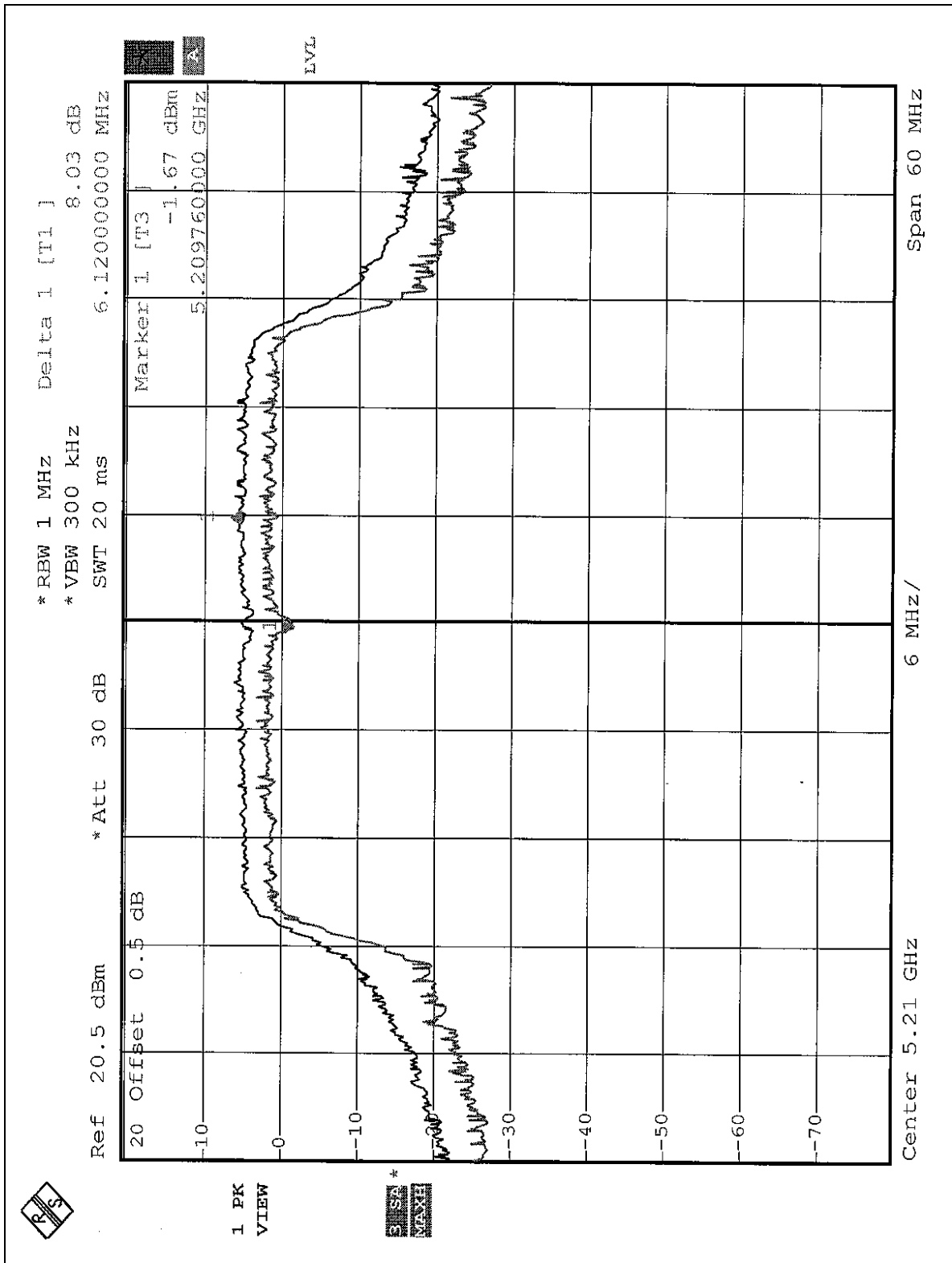




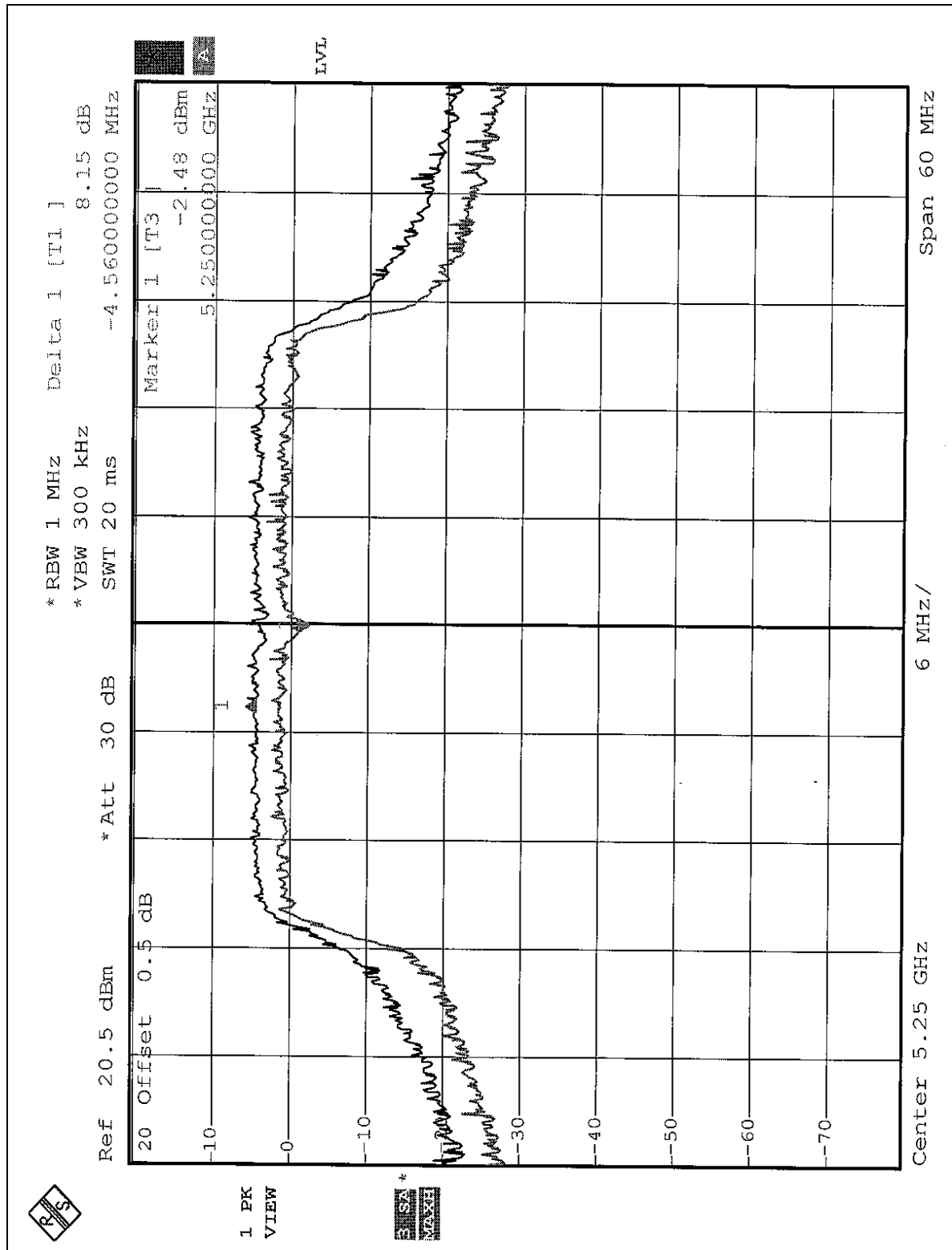
EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
MODE	Turbo	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	24deg. C, 67%RH, 991hPa	TESTED BY	Leo Hung

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
1	5210	8.03	13	PASS
2	5250	8.15	13	PASS
3	5290	6.32	13	PASS
4	5760	7.68	13	PASS
5	5800	7.39	13	PASS

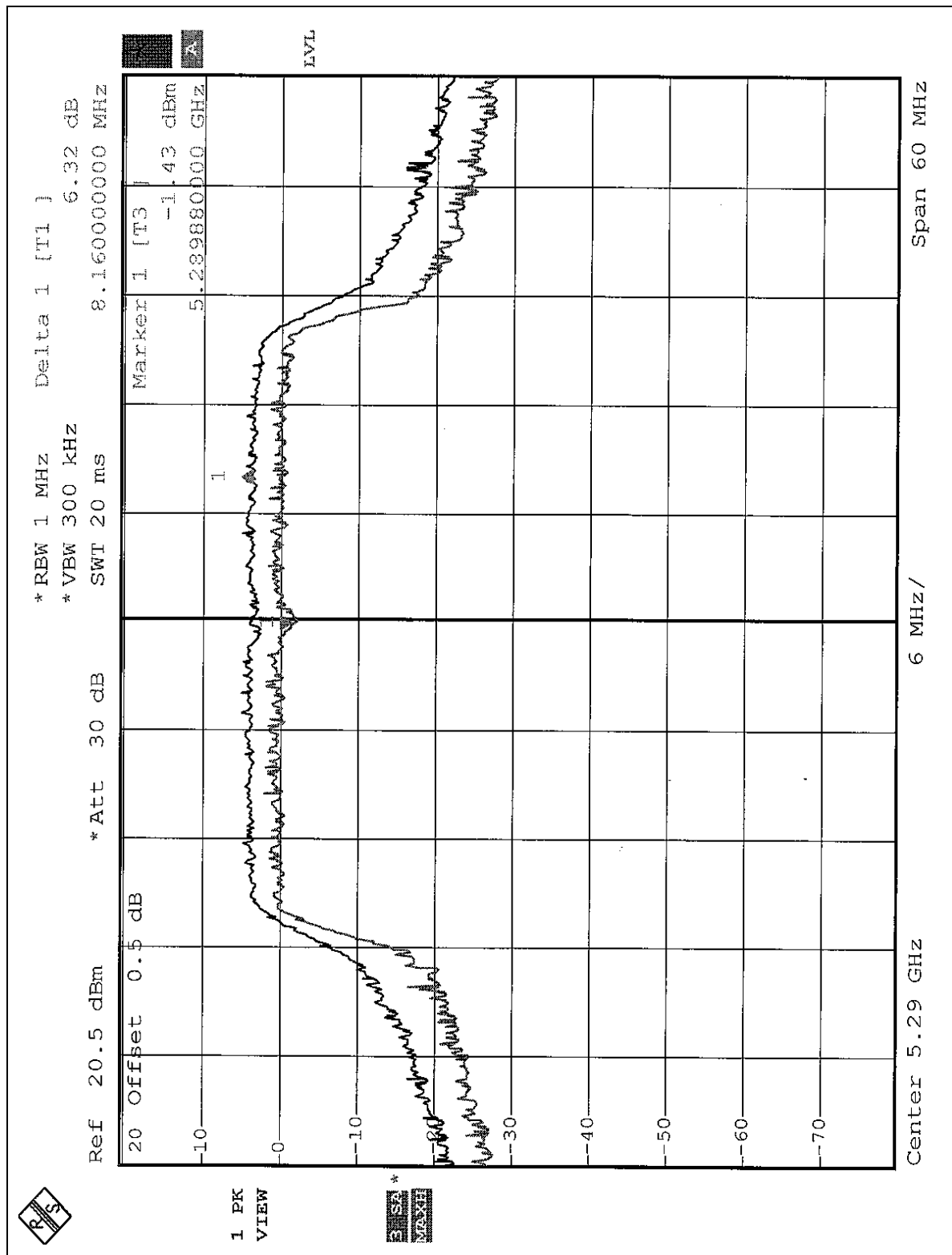
CH 1



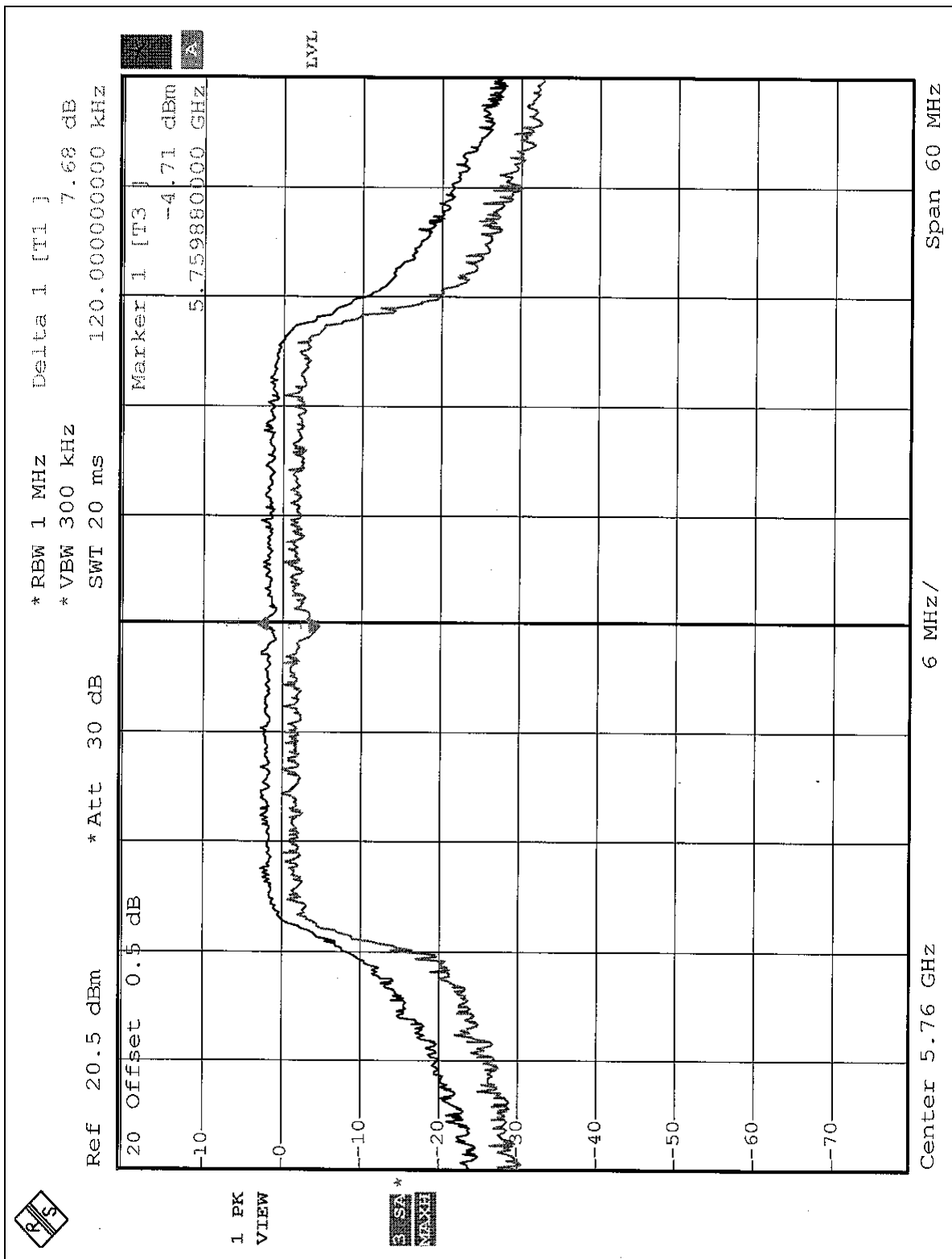
CH 2



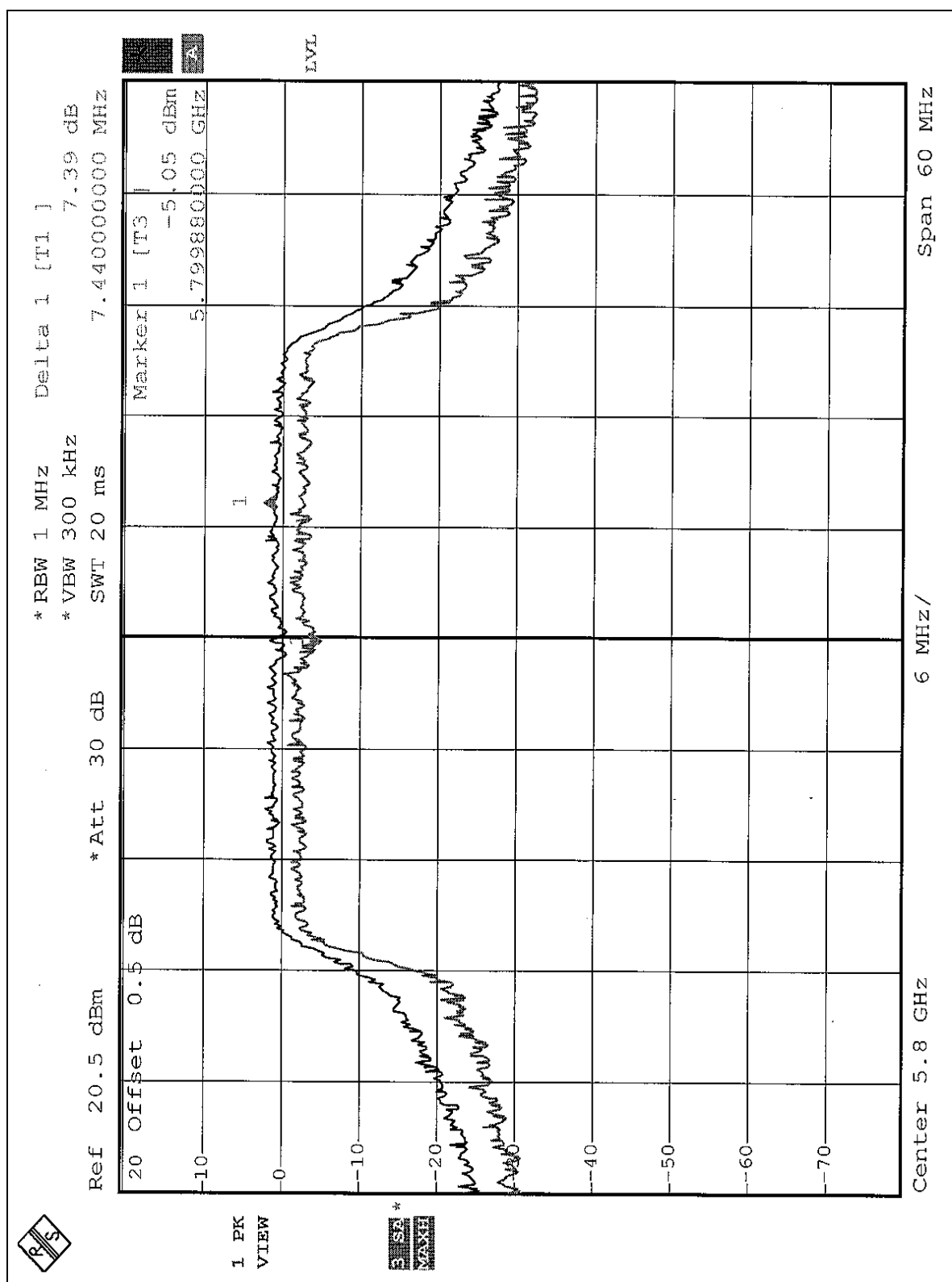
CH 3



CH 4



CH 5



5.5 PEAK POWER SPECTRAL DENSITY MEASUREMENT

5.5.1 LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT

Frequency Band	Limit
5.15 – 5.25 GHz	4dBm
5.25 – 5.35 GHz	11dBm
5.725 – 5.825 GHz	17dBm

5.5.2 TEST INSTRUMENTS

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

NOTE:

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

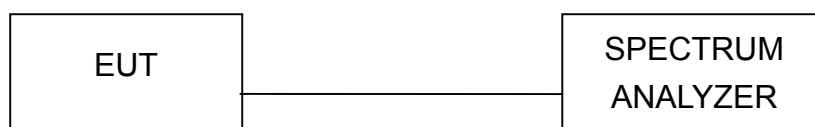
5.5.3 TEST PROCEDURES

1. The transmitter output was connected to the spectrum analyzer.
2. Set RBW=1MHz, VBW=3MHz. The PPSD is the highest level found across the emission in any 1MHz band.

5.5.4 DEVIATION FROM TEST STANDARD

No deviation

5.5.5 TEST SETUP



5.5.6 EUT OPERATING CONDITIONS

Same as 5.3.6

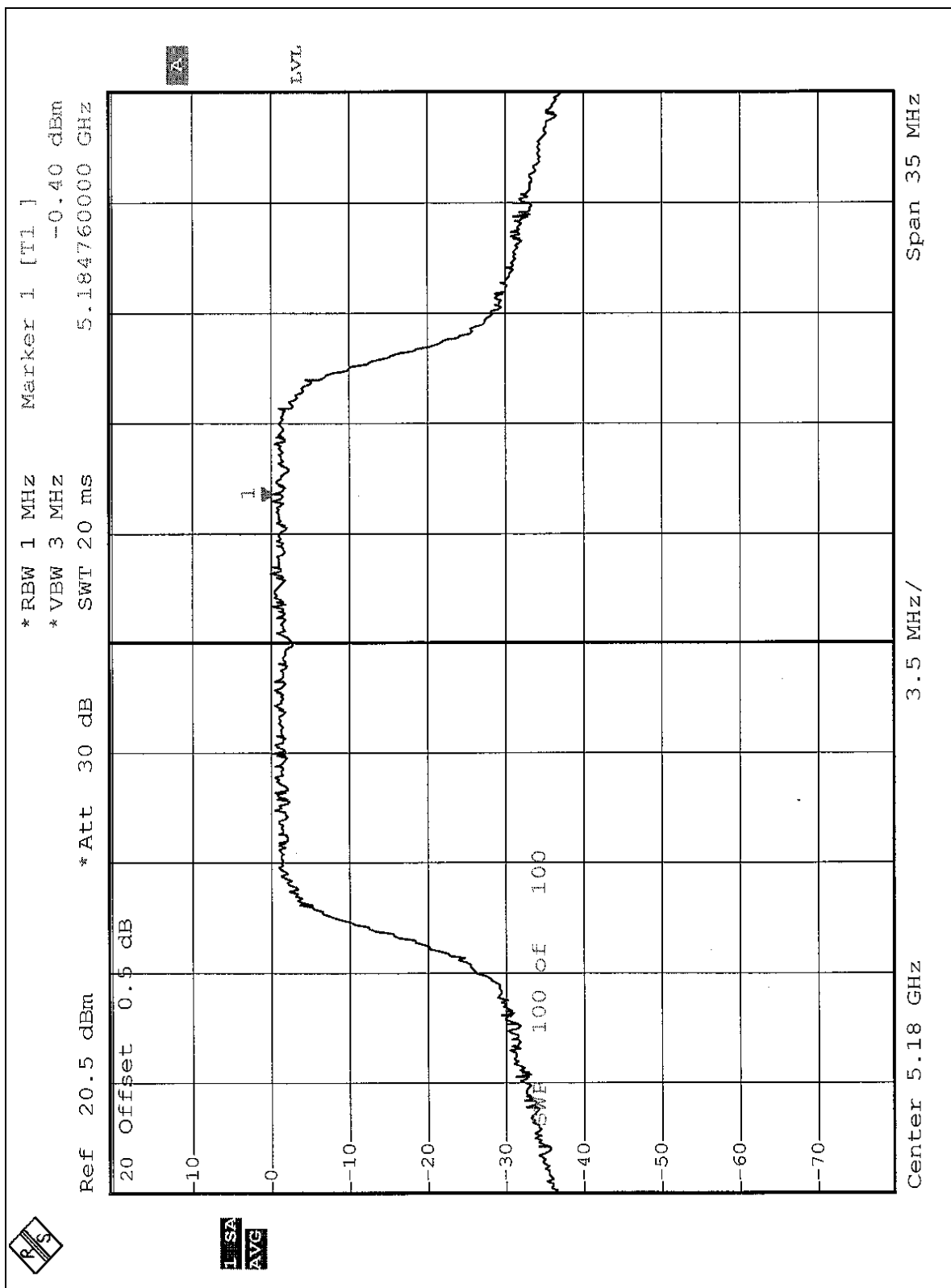


5.5.7 TEST RESULTS

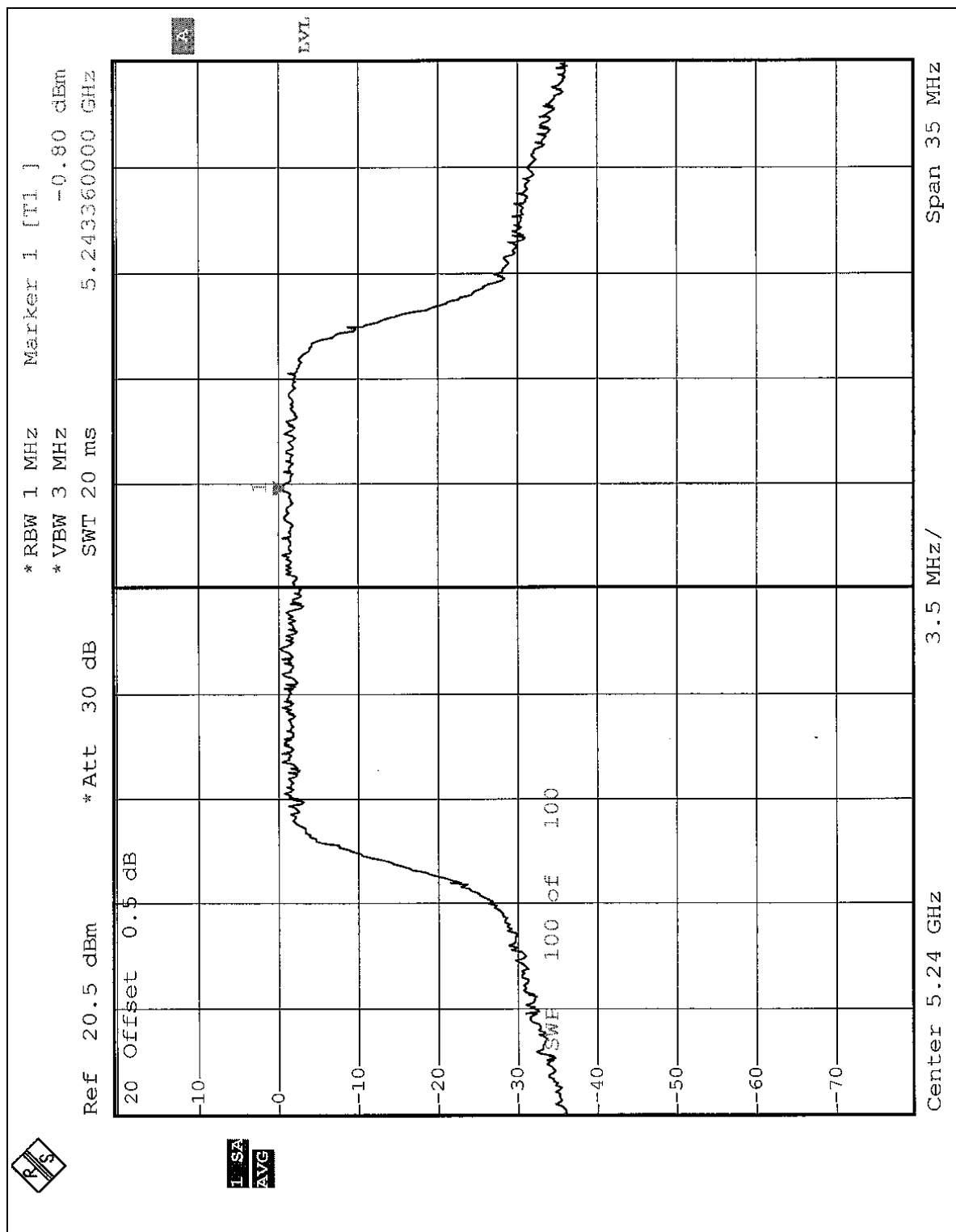
EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
MODE	Normal	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	24deg. C, 67%RH, 991hPa	TESTED BY	Leo Hung

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1 MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	5180	-0.40	4	PASS
4	5240	-0.80	4	PASS
5	5260	-1.79	11	PASS
8	5320	-1.45	11	PASS
9	5745	-3.74	17	PASS
12	5805	-3.54	17	PASS

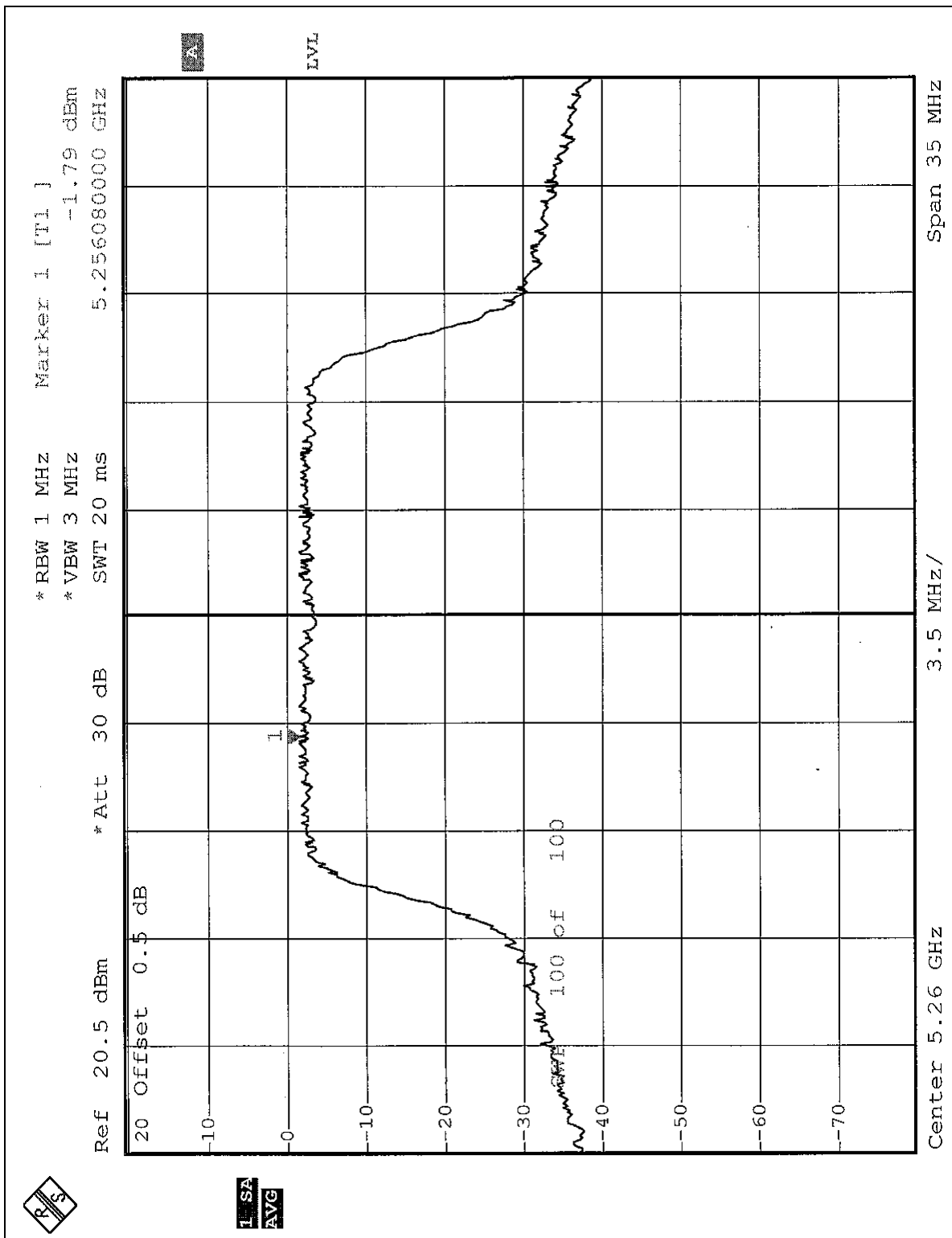
CH 1



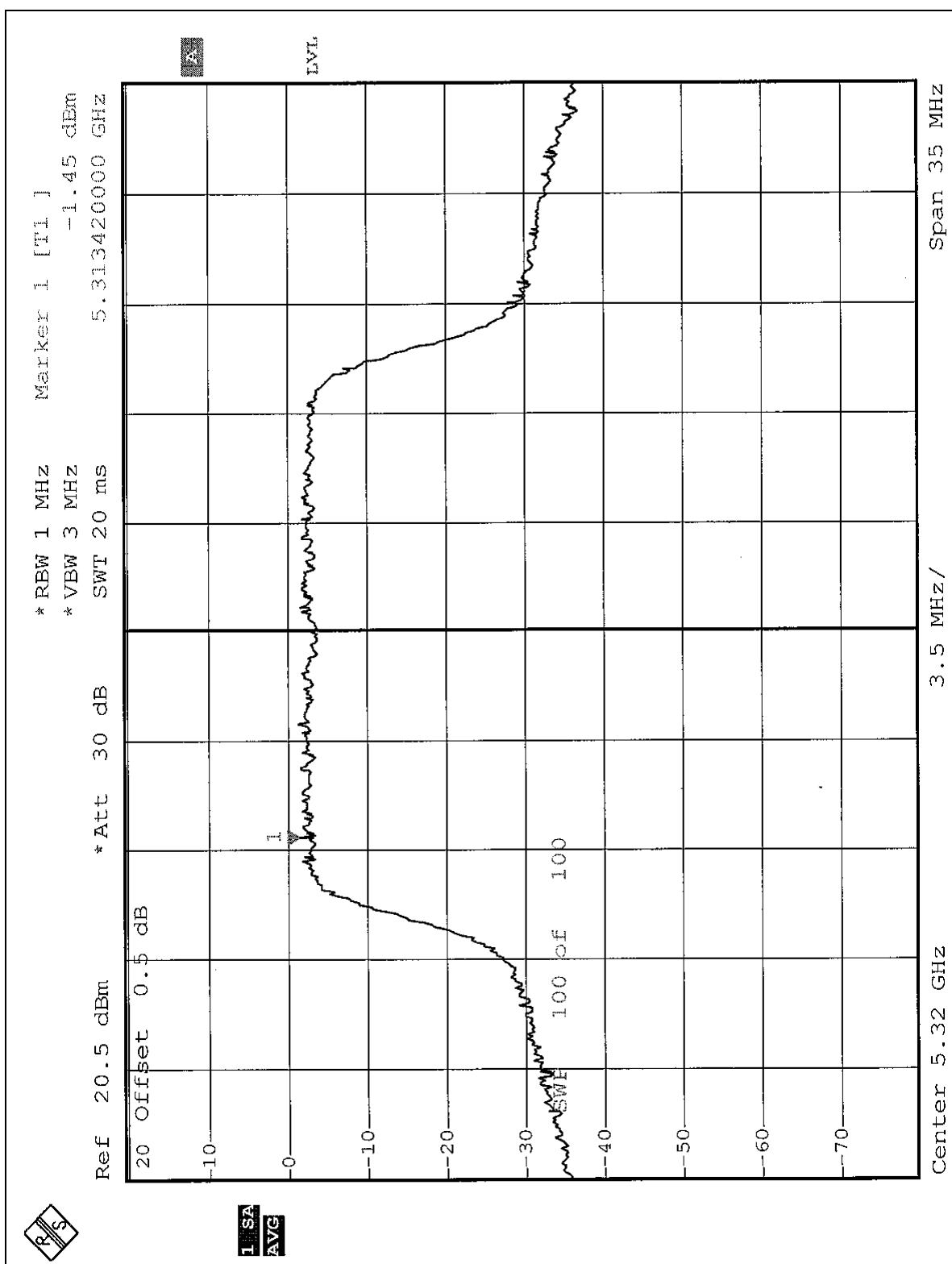
CH 4



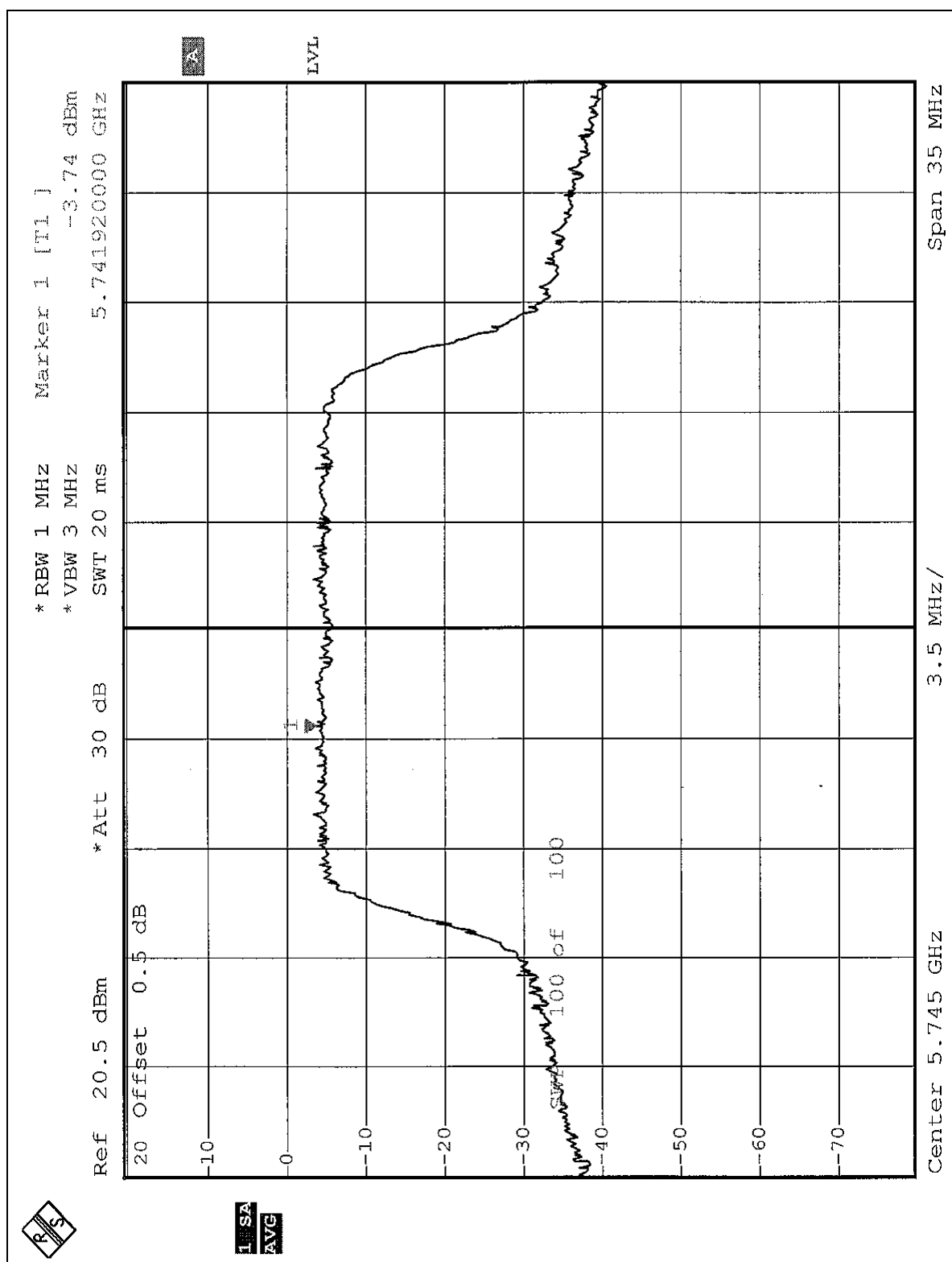
CH 5



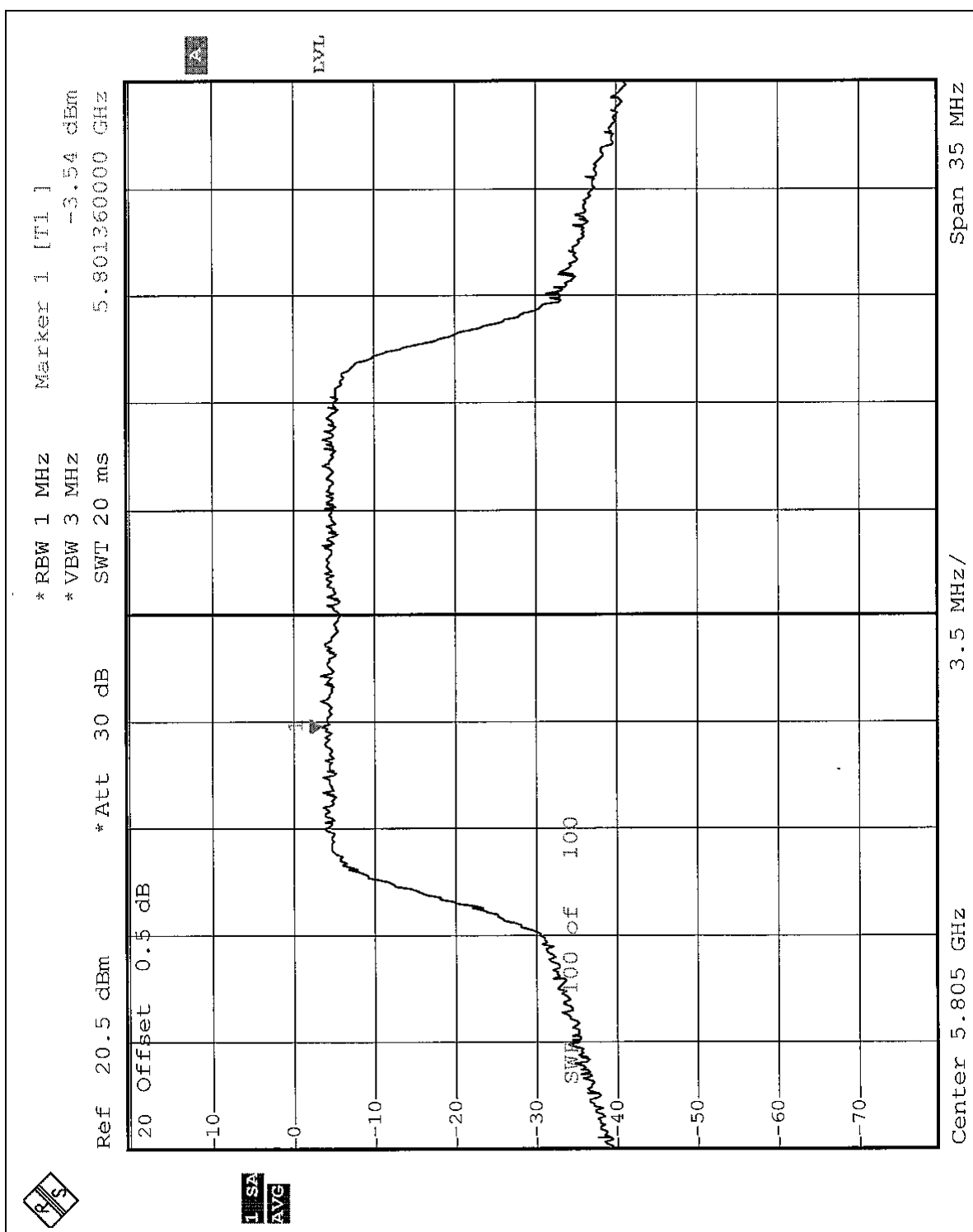
CH 8



CH 9



CH 12

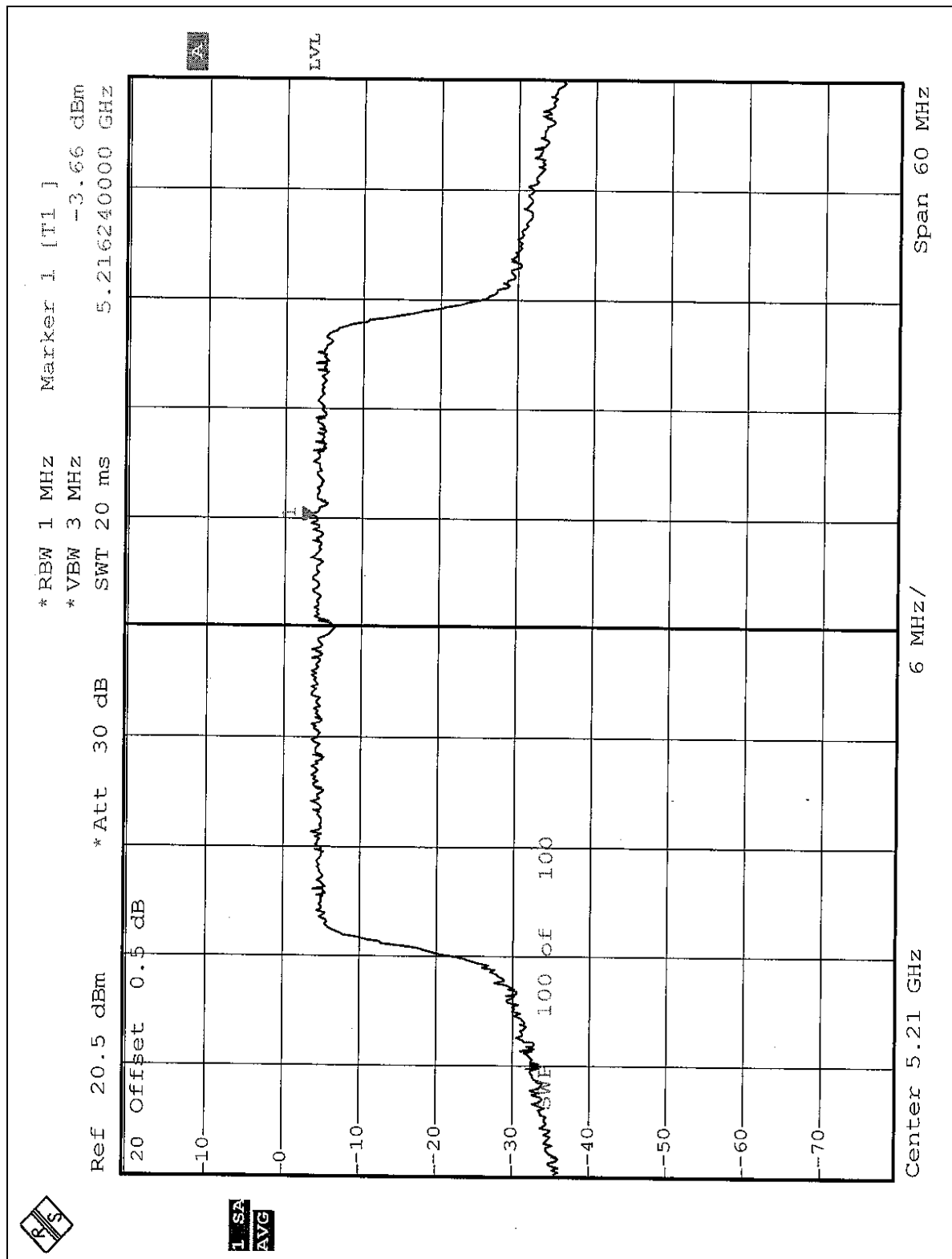




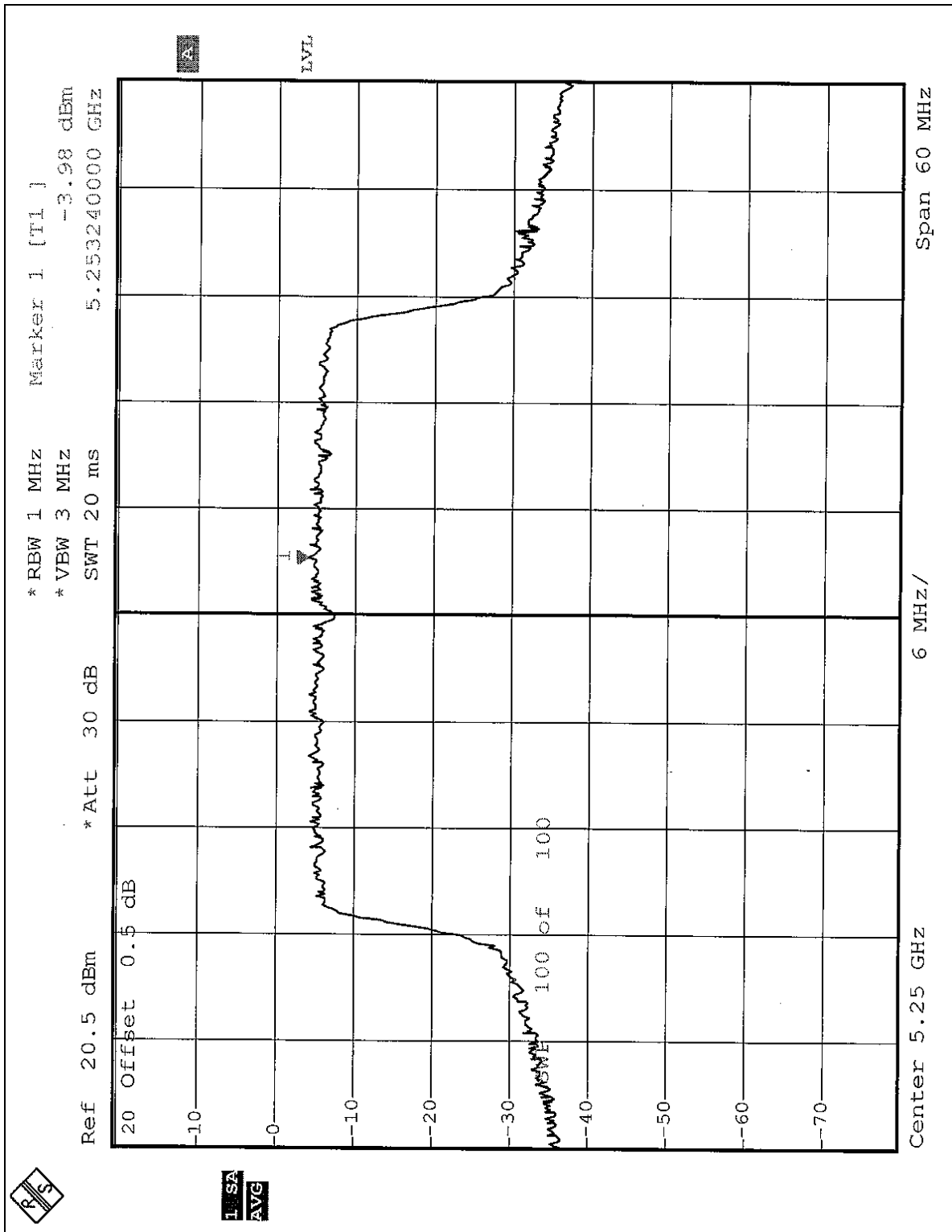
EUT	Dual-Band Wireless A+G PCI Adapter	MODEL	WMP55AG ver. 1.2
MODE	Turbo	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	24deg. C, 67%RH, 991hPa	TESTED BY	Leo Hung

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1 MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	5210	-3.66	4	PASS
2	5250	-3.98	4	PASS
3	5290	-5.07	11	PASS
4	5760	-6.90	17	PASS
5	5800	-8.21	17	PASS

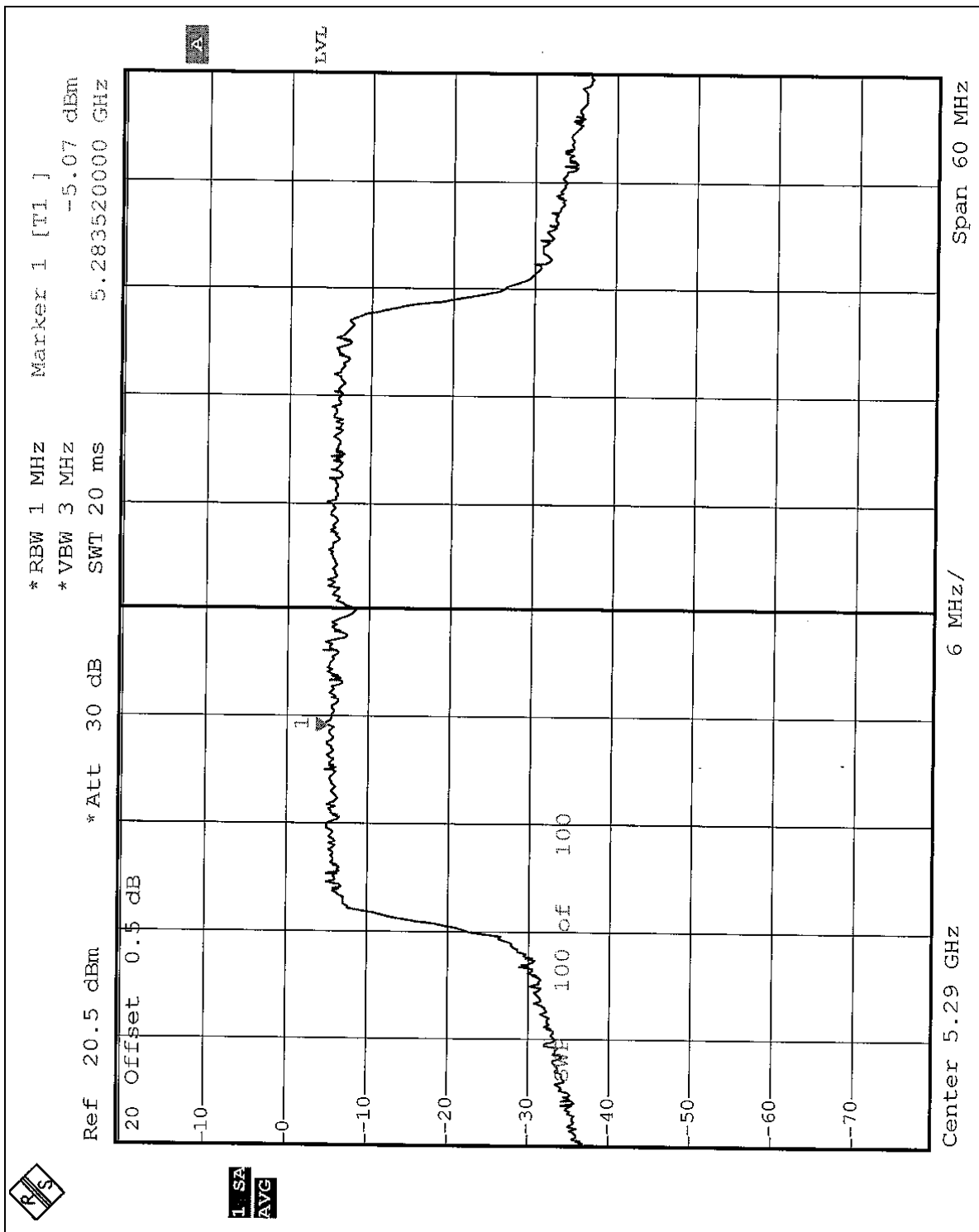
CH 1



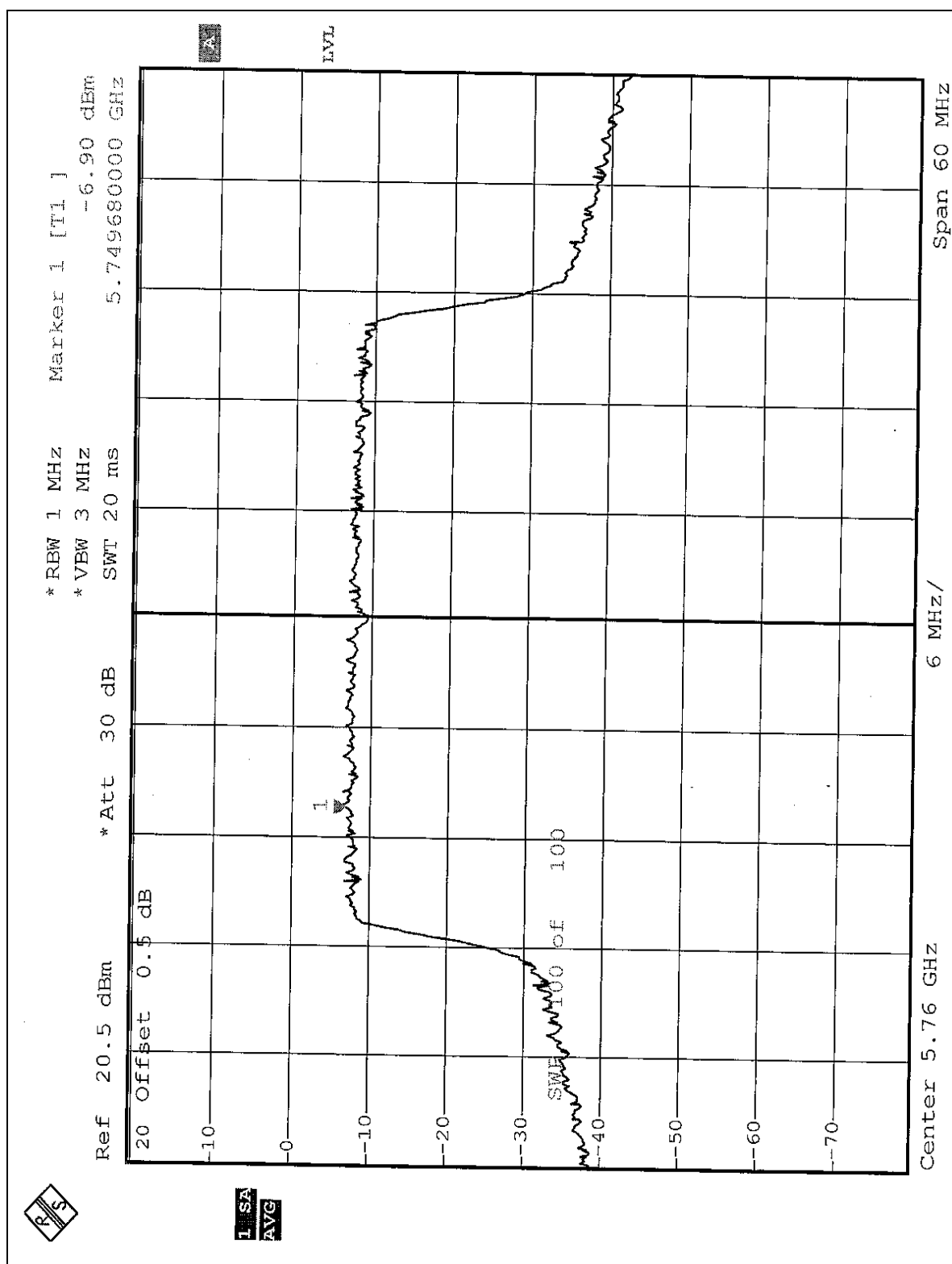
CH 2



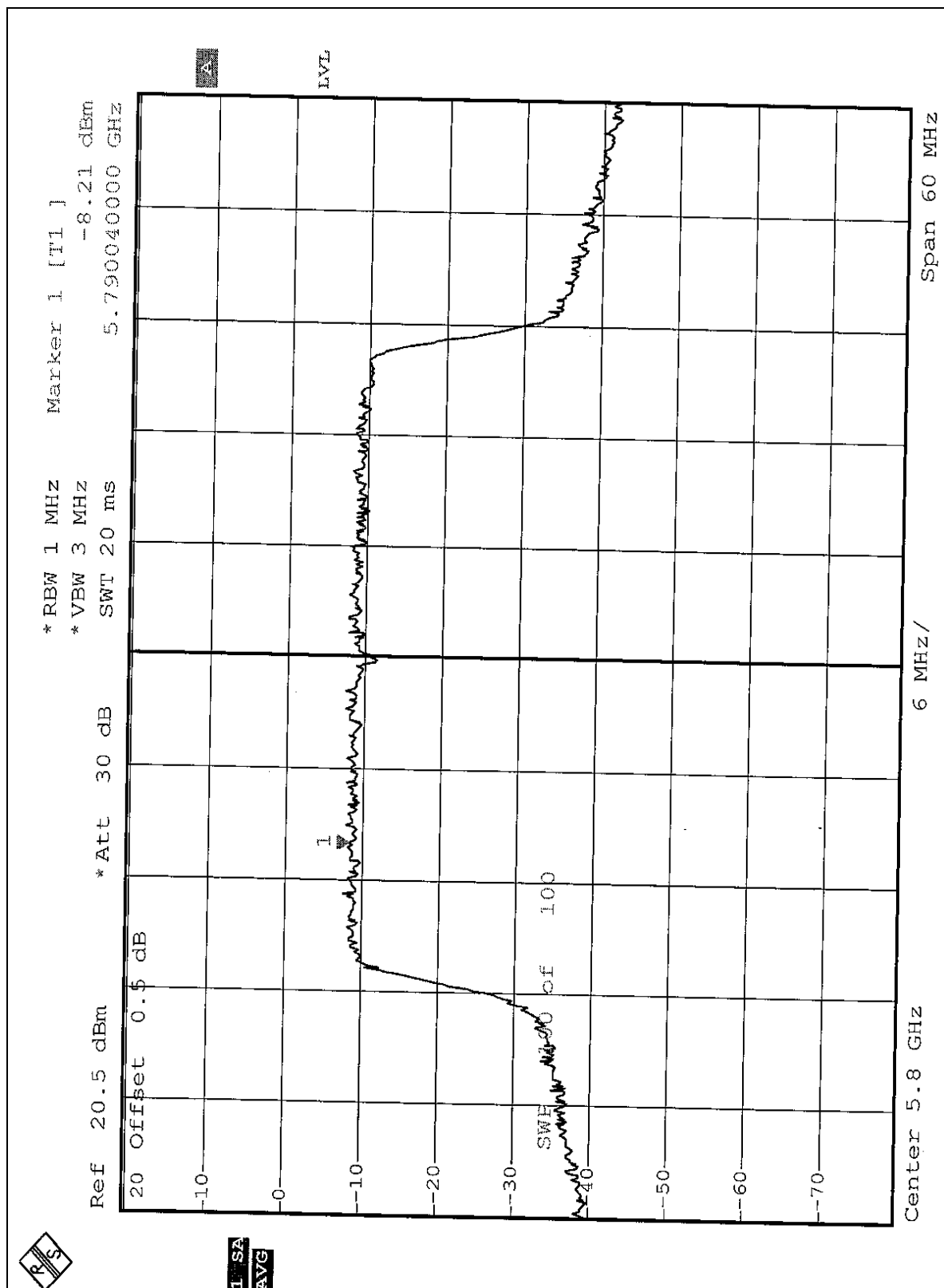
CH 3



CH 4



CH 5



5.6 FREQUENCY STABILITY

5.6.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

The frequency tolerance of the carrier signal shall be maintained within +/- 0.02% of the operating frequency over a temperature variation of -30 degrees to 50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C.

5.6.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
ANRITSU SPECTRUM ANALYZER	MS2667C	M10281	Feb. 09, 2005
WIT STANDARD TEMPERATURE AND HUMIDITY CHAMBER	TH-4S-C	W981030	Jul. 18, 2005

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

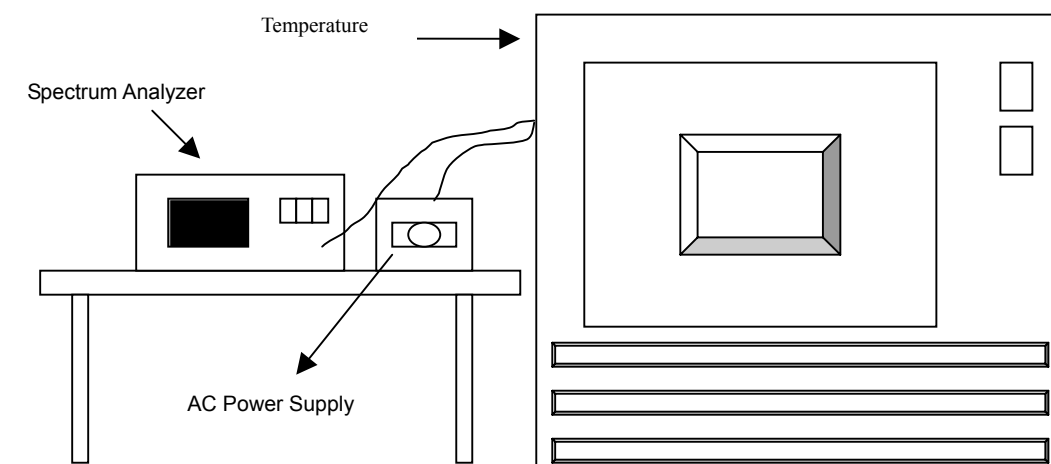
5.6.3 TEST PROCEDURE

1. The EUT was placed inside the environmental test chamber and powered by nominal DC voltage.
2. Turn the EUT on and couple its output to a spectrum analyzer.
3. Turn the EUT off and set the chamber to the highest temperature specified.
4. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
5. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
6. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

5.6.4 DEVIATION FROM TEST STANDARD

No deviation

5.6.5 TEST SETUP



5.6.6 EUT OPERATING CONDITION

Same as Item 4.1.6

5.6.7 TEST RESULTS

Operating frequency: 5320MHz				Limit : $\pm 0.01\%$			
Temp. (°C)	Power supply (VDC)	2 minute		5 minute		10 minute	
		(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
50	93.5	5319.9790	-0.0003947	5319.9790	-0.0003947	5319.9793	-0.0003891
	110.0	5319.9790	-0.0003947	5319.9793	-0.0003891	5319.9797	-0.0003816
	126.5	5319.9790	-0.0003947	5319.9797	-0.0003816	5319.9790	-0.0003947
40	93.5	5319.9667	-0.0006259	5319.9670	-0.0006203	5319.9670	-0.0006203
	110.0	5319.9670	-0.0006203	5319.9673	-0.0006147	5319.9673	-0.0006147
	126.5	5319.9670	-0.0006203	5319.9670	-0.0006203	5319.9670	-0.0006203
30	93.5	5319.9657	-0.0006447	5319.9660	-0.0006391	5319.9660	-0.0006391
	110.0	5319.9657	-0.0006447	5319.9660	-0.0006391	5319.9660	-0.0006391
	126.5	5319.9663	-0.0006335	5319.9660	-0.0006391	5319.9660	-0.0006391
20	93.5	5319.9660	-0.0006391	5319.9653	-0.0006523	5319.9653	-0.0006523
	110.0	5319.9660	-0.0006391	5319.9653	-0.0006523	5319.9653	-0.0006523
	126.5	5319.9660	-0.0006391	5319.9653	-0.0006523	5319.9653	-0.0006523
10	93.5	5319.9670	-0.0006203	5319.9657	-0.0006447	5319.9660	-0.0006391
	110.0	5319.9670	-0.0006203	5319.9660	-0.0006391	5319.9660	-0.0006391
	126.5	5319.9663	-0.0006335	5319.9667	-0.0006259	5319.9657	-0.0006447
0	93.5	5319.9657	-0.0006447	5319.9657	-0.0006447	5319.9660	-0.0006391
	110.0	5319.9657	-0.0006447	5319.9657	-0.0006447	5319.9657	-0.0006447
	126.5	5319.9657	-0.0006447	5319.9660	-0.0006391	5319.9653	-0.0006523
-10	93.5	5319.9697	-0.0005695	5319.9703	-0.0005583	5319.9703	-0.0005583
	110.0	5319.9697	-0.0005695	5319.9703	-0.0005583	5319.9697	-0.0005695
	126.5	5319.9700	-0.0005639	5319.9703	-0.0005583	5319.9700	-0.0005639
-20	93.5	5319.9753	-0.0004643	5319.9757	-0.0004568	5319.9757	-0.0004568
	110.0	5319.9753	-0.0004643	5319.9760	-0.0004511	5319.9760	-0.0004511
	126.5	5319.9750	-0.0004699	5319.9757	-0.0004568	5319.9760	-0.0004511
-30	93.5	5319.9810	-0.0003571	5319.9817	-0.0003440	5319.9823	-0.0003327
	110.0	5319.9810	-0.0003571	5319.9817	-0.0003440	5319.9823	-0.0003327
	126.5	5319.9813	-0.0003515	5319.9820	-0.0003383	5319.9823	-0.0003327

5.7 BAND EDGES MEASUREMENT

5.7.1 TEST INSTRUMENTS

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

NOTE:

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

5.7.2 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer via a low loss cable. Set both RBW and VBW of spectrum analyzer to 1MHz with suitable frequency span including 100 MHz bandwidth from band edge. The band edges were measured and recorded.

5.7.3 EUT OPERATING CONDITION

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

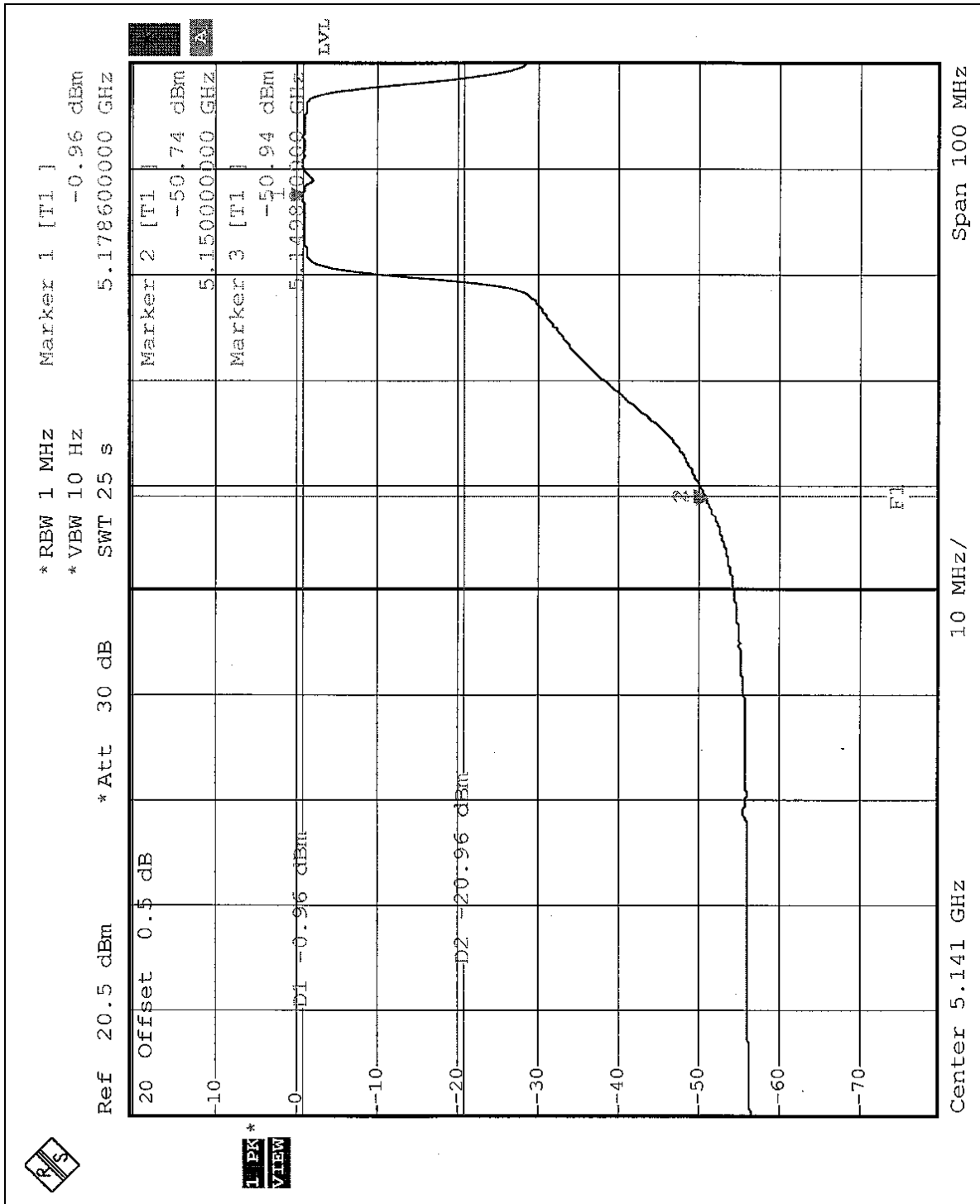
5.7.4 TEST RESULTS

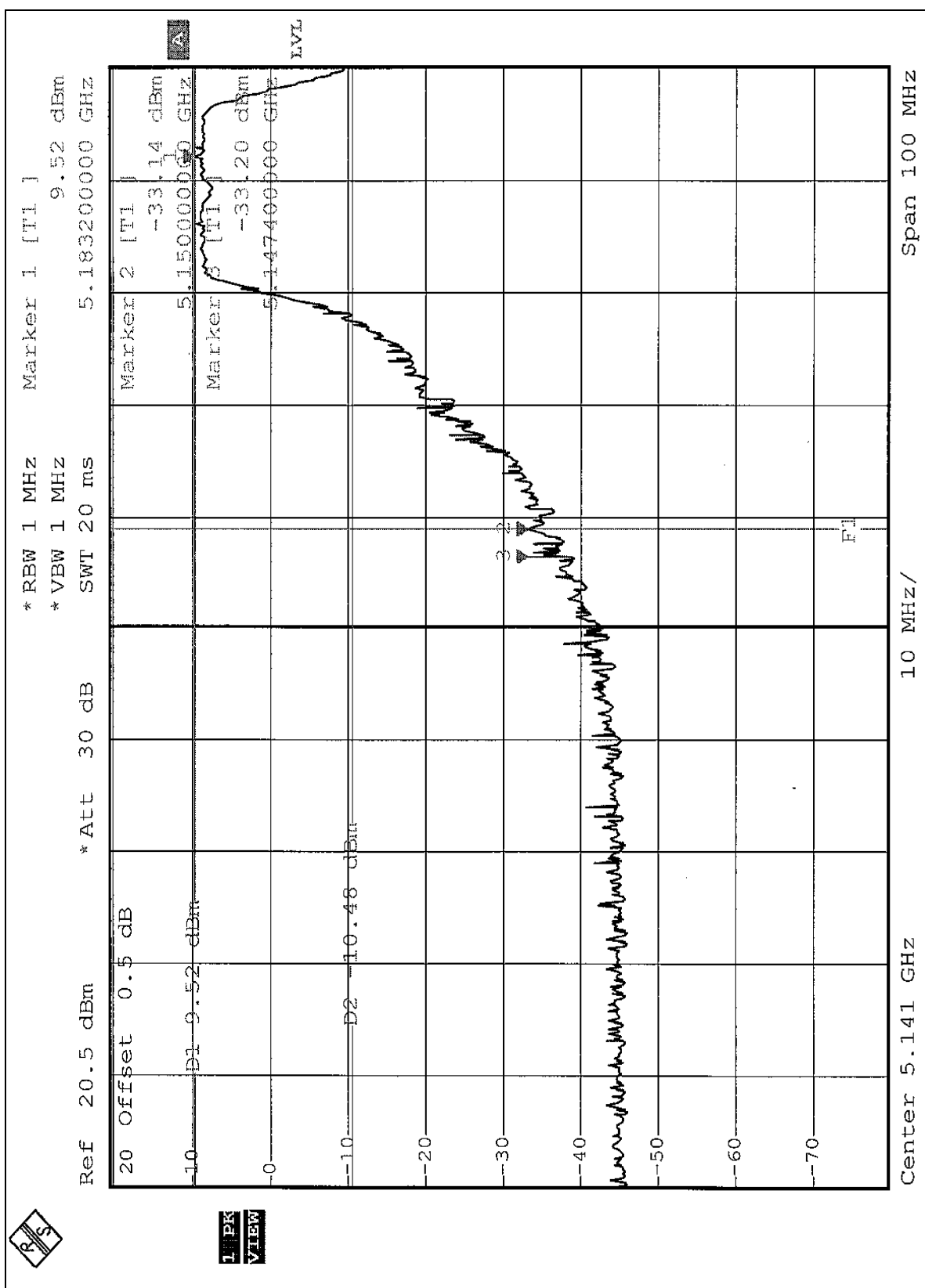
For signals in the restricted bands above and below the 5.15 to 5.35GHz allocated band a measurement was made of the amplitude of the spurious emissions with respect to the intentional signals. The relative amplitude, in dBc, was applied to the average and peak field strength of the intentional signal made on the OATS to calculate the field strength of the unintentional signals.

The spectrum plots (Average RBW=1MHz, VBW=10Hz) are attached on the following 4 pages.

Normal Mode: Channel 1 (5180 MHz)

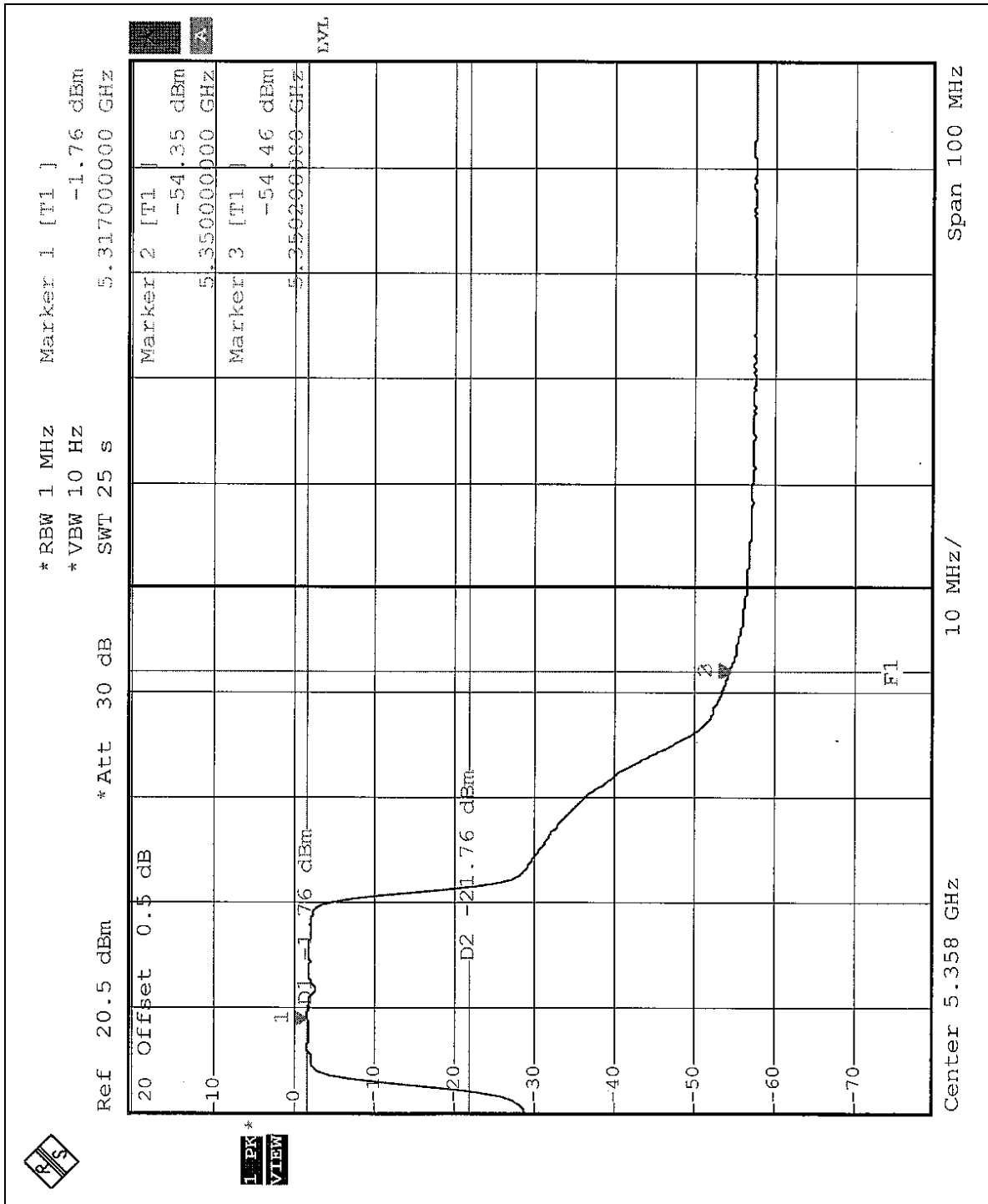
The band edge emission plot on the following page shows 49.78dBc (Average) / 42.66dBc (Peak) between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 (normal mode) is 103.09dBuV/m, so the maximum field strength in restrict band is $103.09 - 49.78 = 53.31$ dBuV/m which is under 54dBuV/m limit.

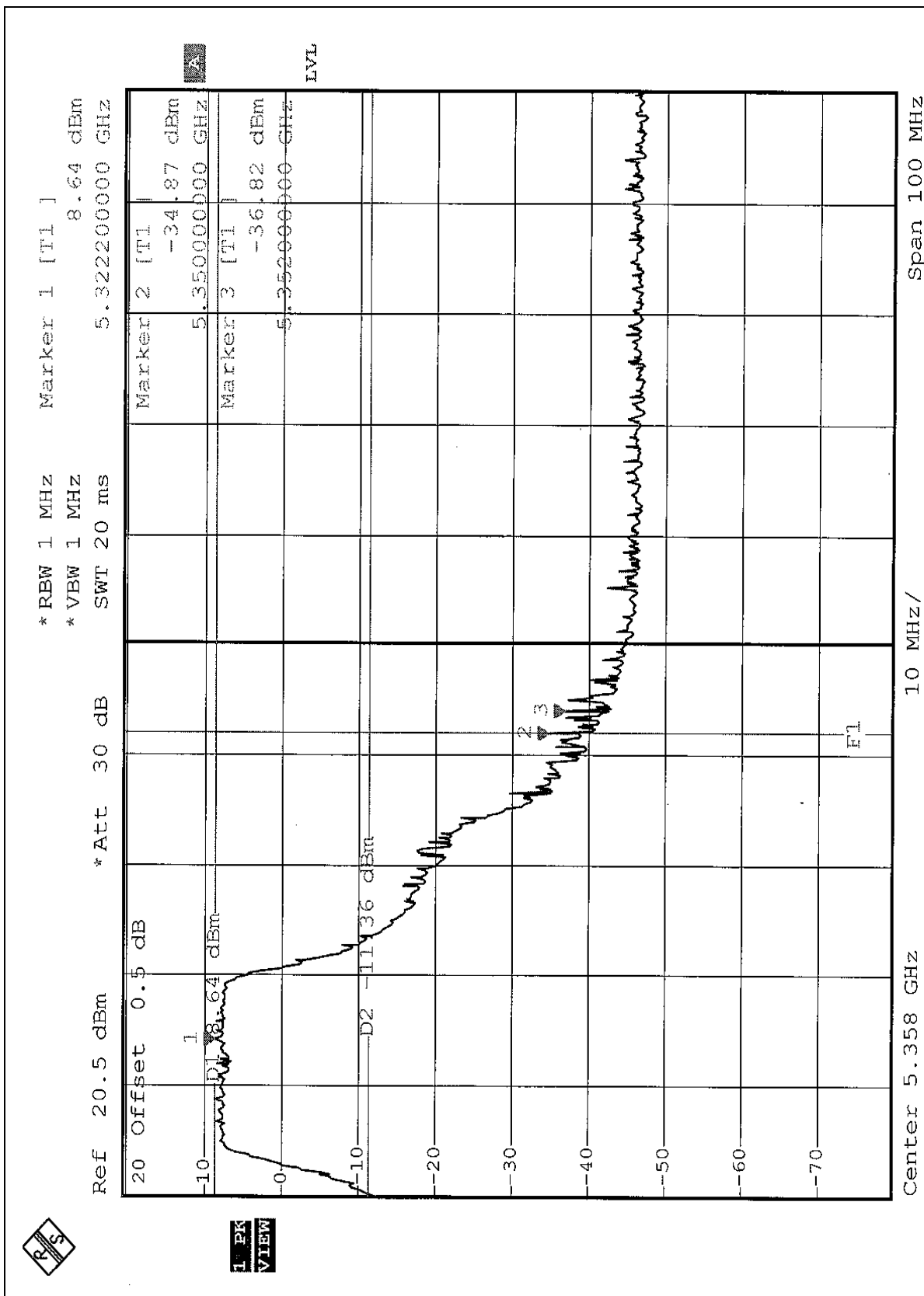




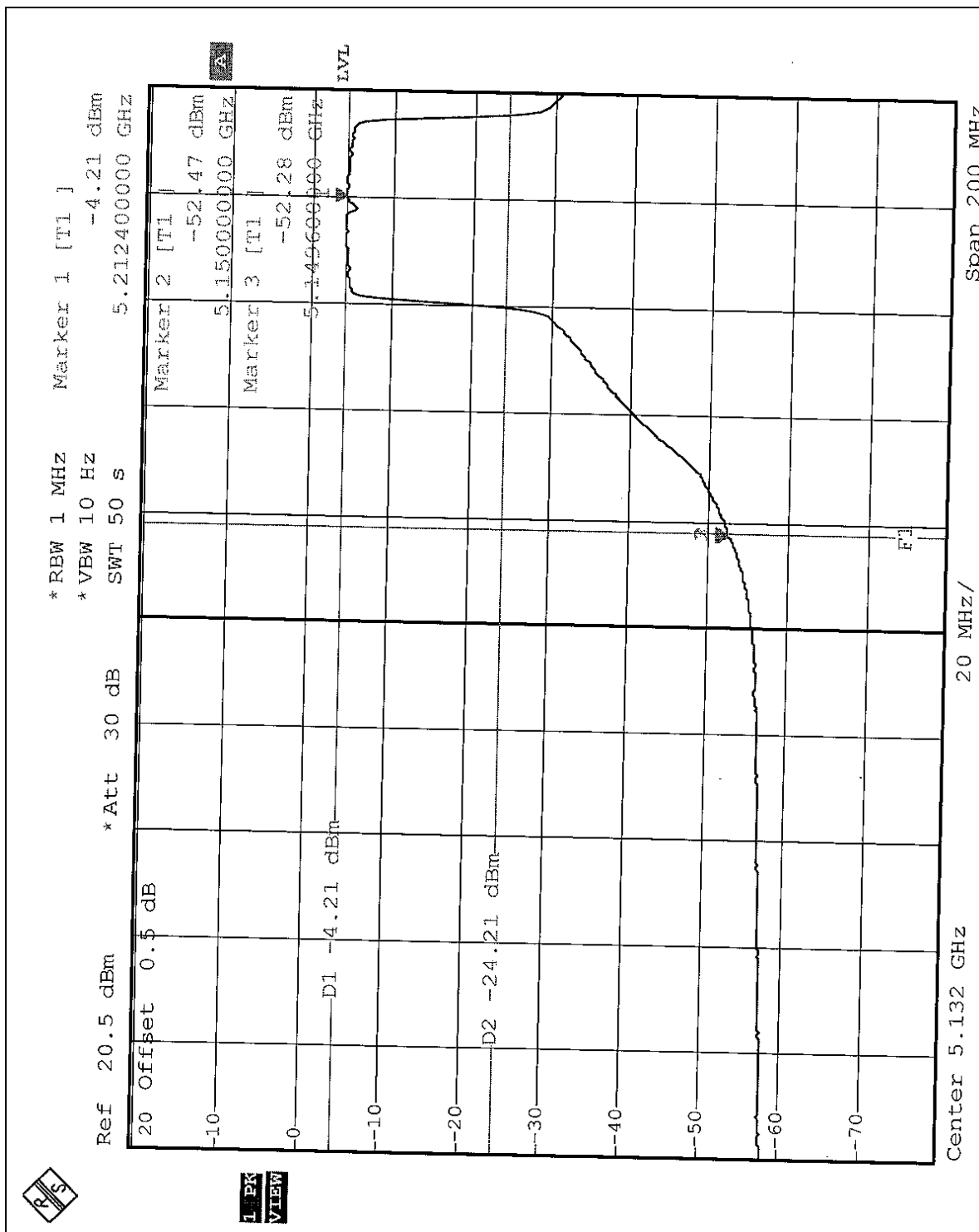
Normal Mode: Channel 8 (5320 MHz)

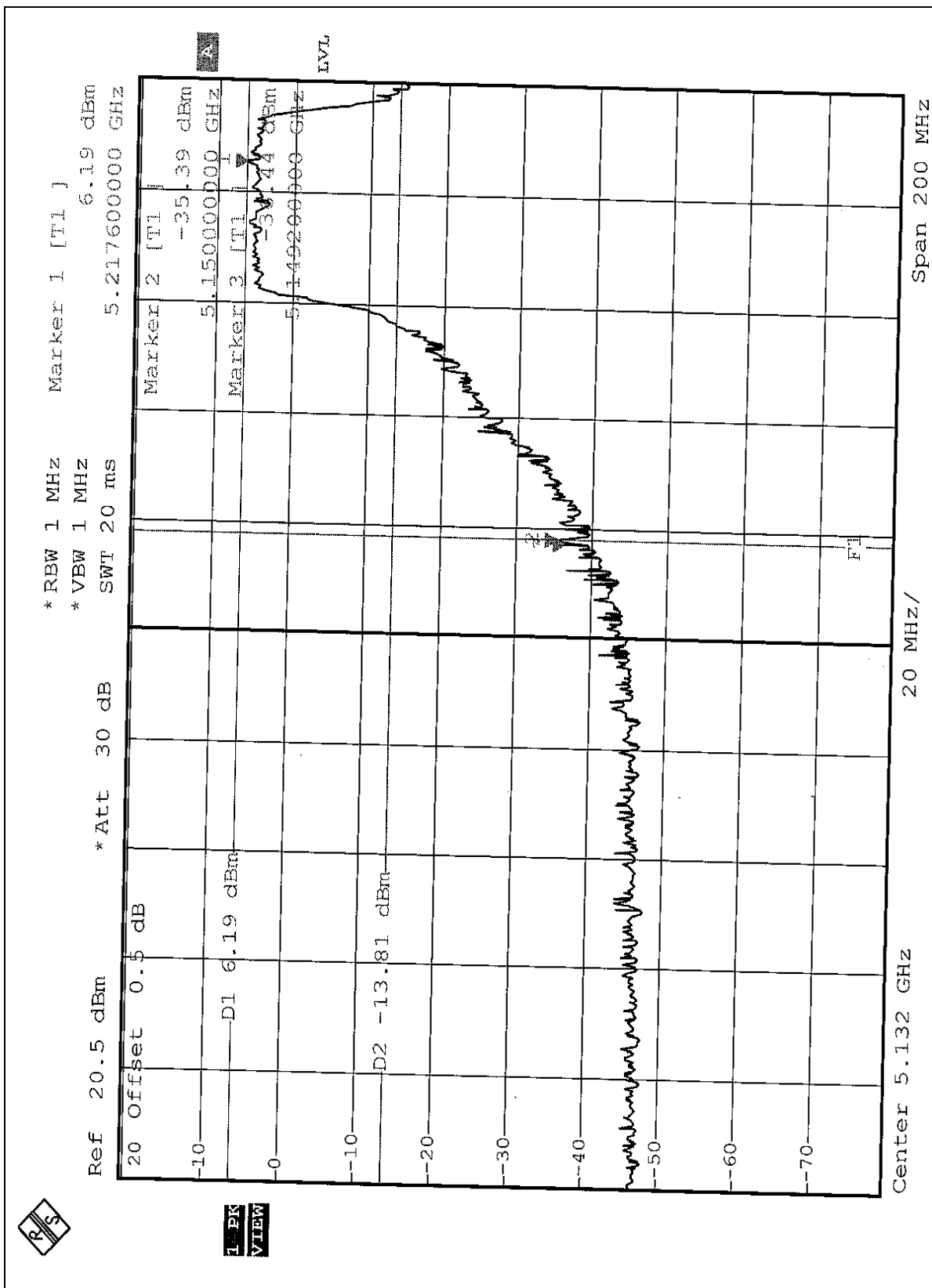
The band edge emission plot on the following page shows 52.59dBc (Average) / 43.51dBc (Peak) between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 8 (normal mode) is 101.15dBuV/m, so the maximum field strength in restrict band is $101.15 - 52.59 = 48.56$ dBuV/m which is under 54dBuV/m limit.





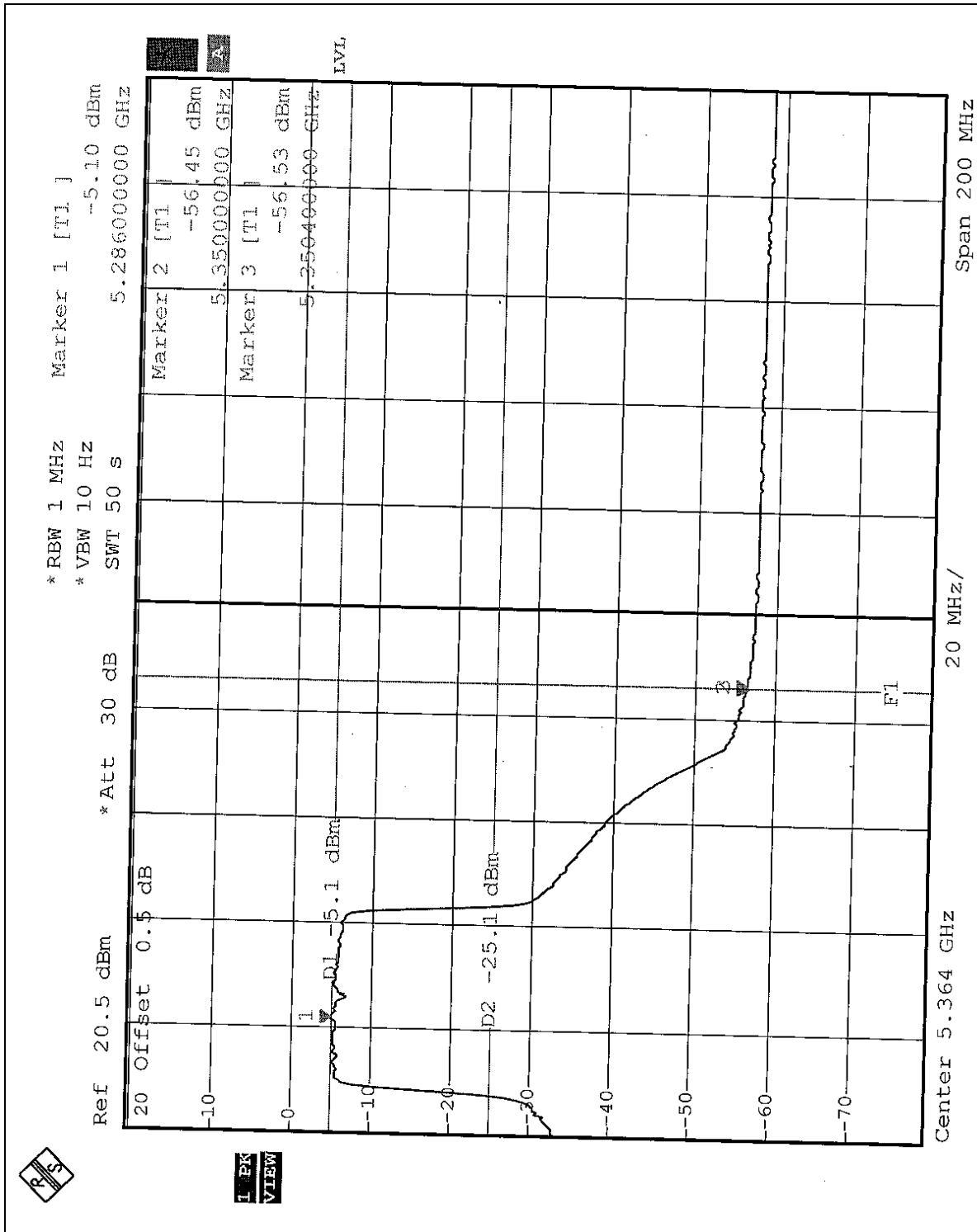
The band edge emission plot on the following page shows 48.07dBc (Average) / 41.58dBc (Peak) between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 (trubo mode) is 99.71dBuV/m, so the maximum field strength in restrict band is 99.71-48.07=51.64dBuV/m which is under 54dBuV/m limit.

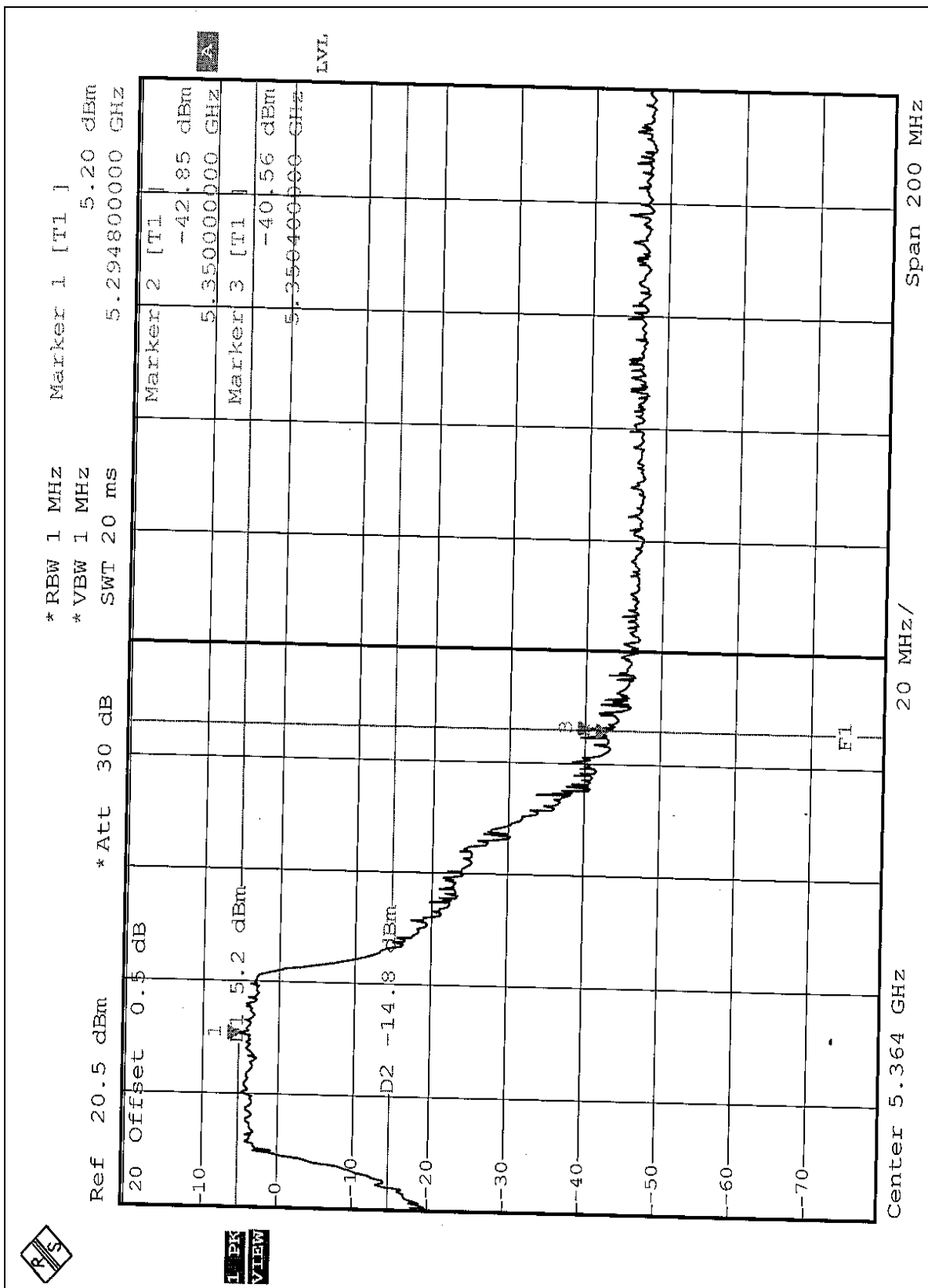




Turbo Mode: Channel 3 (5290 MHz)

The band edge emission plot on the following page shows 51.35dBc (Average) / 45.76dBc (Peak) between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 3 (turbo mode) is 101.16dBuV/m, so the maximum field strength in restrict band is $101.16 - 51.35 = 49.81$ dBuV/m which is under 54dBuV/m limit.







5.8 ANTENNA REQUIREMENT

5.8.1 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 15.407(a), 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.

5.8.2 ANTENNA CONNECTED CONSTRUCTION

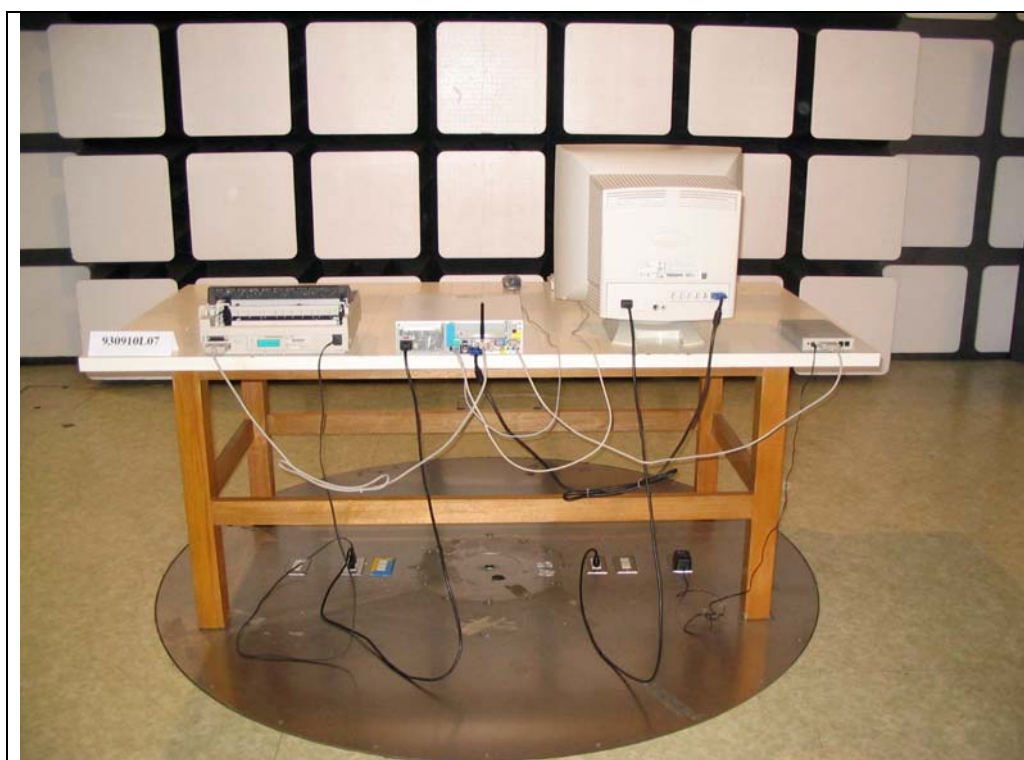
The antenna used in this product is Dipole antenna with UFL antenna connector. The maximum Gain of the antenna is 2.0dBi.

6. PHOTOGRAPHS OF THE TEST CONFIGURATION

CONDUCTED EMISSION TEST



RADIATED EMISSION TEST





7. INFORMATION ON THE TESTING LABORATORIES

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

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

Copies of accreditation certificates of our laboratories obtained from approval agencies can be downloaded from our web site:

www.adt.com.tw/index.5/phtml. 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 Telecom Lab:

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Linko RF Lab.

Tel: 886-3-3270910

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Web Site: www.adt.com.tw

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

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