FCC TEST REPORT

REPORT NO.: RF930920L05
MODEL NO.: WUB-500A
RECEIVED: Sep. 14, 2004
TESTED: Sep. 14 ~ Oct. 20, 2004

APPLICANT: U-MEDIA Communications, Inc.

ADDRESS: 9F, No.1, Jin-shan 7th St., Hsinchu 300, Taiwan, R.O.C.

ISSUED BY: Advance Data Technology Corporation

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

LAB LOCATION: No. 19, Hwa Ya 2nd Rd., Wen Hwa Tsuen, Kwei Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

ACCREDITED
No. 2177-01

CNLA
0528
ILAC MRA

Table of Contents

1. CERTIFICATION

PRODUCT:	USB2.0 802.11a/b/g wireless network adapter
BRAND NAME:	U-MEDIA
MODEL NO.:	WUB-500A
APPLICANT:	U-MEDIA Communications, Inc.
TEST ITEM:	Engineering Sample
TESTED:	Sep. 14 ~ Oct. 20, 2004
STANDARDS:	FCC Part 15, Subpart C (Section 15.247), Subpart E (Section 15.407), ANSI C63.4-2003

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 : Andrea Hsia (Andrea Hsia), **DATE:** Oct. 21, 2004

TECHNICAL ACCEPTANCE Responsible for RF : Gary Chang (Gary Chang), **DATE:** Oct. 21, 2004

APPROVED BY : (Cody Chang, Deputy Manager), **DATE:** Oct. 21, 2004

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 –18.58dB at 0.173MHz
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 –1.67dB at 2483.50MHz
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.

For Freq. 5.15 ~ 5.35GHz:

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 –19.31dB at 0.205MHz
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 –1.00dB at 15540.00MHz
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.

For Freq. 5.725 ~ 5.850GHz：

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 –19.31dB at 0.205MHz
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 –1.03dB at 3883.00MHz
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.

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	3.55 dB
	200MHz ~1000MHz	3.58 dB
	1GHz ~ 18GHz	2.20 dB
	18GHz ~ 40GHz	1.88 dB

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

EUT	USB2.0 802.11a/b/g wireless network adapter
MODEL NO.	WUB-500A
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
FREQUENCY RANGE	802.11b and 802.11g: 2412~2462MHz 802.11a: 5.15~5.35GHz and 5.725~5.850GHz
NUMBER OF CHANNEL	802.11b and 802.11g: 11 802.11a: 13
CHANNEL SPACING	802.11b and 802.11g: 5MHz 802.11a: 20MHz
OUTPUT POWER	802.11b and 802.11g: 64.57mW 802.11a: 25.65mW
DATA CABLE	USB shielded cable 1.5m
ANTENNA TYPE	Test Mode 1: Dipole and Printed Antenna with 2.0dBi gain (for 2.4GHz band) Dipole and Printed Antenna with 1.5dBi gain (for 5.0GHz band) Test Mode 2 Printed and Printed Antenna with 0dBi gain (for 2.4GHz band) Printed and Printed Antenna with –1.0dBi gain (for 5.0GHz band)
I/O PORTS	USB
ASSOCIATEDDEVICES	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. 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:

1. Below 1GHz, the channel 1, 6, and 11 were pre-tested in chamber. The channel 11, worst case one, was chosen for final test.
2. Above 1GHz, the channel 1, 6, and 11 were tested individually.
3. 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.
4. For Conducted emission and Radiated Emission there are two test mode, the test mode 1 is for Dipole + Printed antenna and the test mode 2 is for Printed + Printed antenna.

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

Channel	Frequency	Channel	Frequency
1	5180 MHz	8	5320 MHz
2	5200 MHz	9	5745 MHz
3	5220 MHz	10	5765 MHz
4	5240 MHz	11	5785 MHz
5	5260 MHz	12	5805 MHz
6	5280 MHz	13	5825 MHz
7	5300 MHz		

NOTE:

1. The EUT allows data rates of up to 54Mbps and was tested at 6Mbps data rate that produced the highest output power.
2. Channel 1, 4, 5, 8, 9, 10 and 12 are the closest frequencies to the band edge, were chosen for final test.

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a USB2.0 802.11a/b/g wireless network 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 : 2003

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

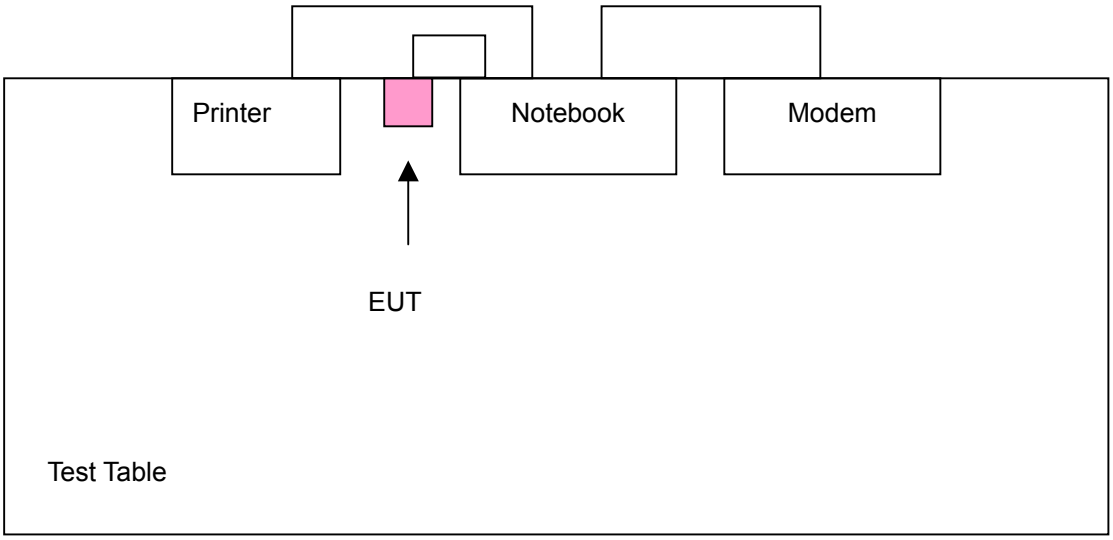
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK COMPUTER	DELL	PP05L	9954115984	E2K24CLNS
2	PRINTER	EPSON	LQ-300+	DCGY047265	FCC DoC Approved
3	MODEM	ACEEX	1414V/3	0401008248	IFAXDM1414

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA
2	1.2m shielded cable without core.
3	1.2m shielded cable without 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 0.5-5 5-30	66 to 56 56 60	56 to 46 46 50

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

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESCS30	100288	Dec. 11, 2004
RF signal cable Woken	5D-FB	Cable-HyC02-01	Mar. 07, 2005
LISN ROHDE & SCHWARZ	ESH2-Z5	100100	Mar. 10, 2005
LISN ROHDE & SCHWARZ	ESH3-Z5	100311	Mar. 04, 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 2.

3. The VCCI Site Registration No. is C-2047.

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.

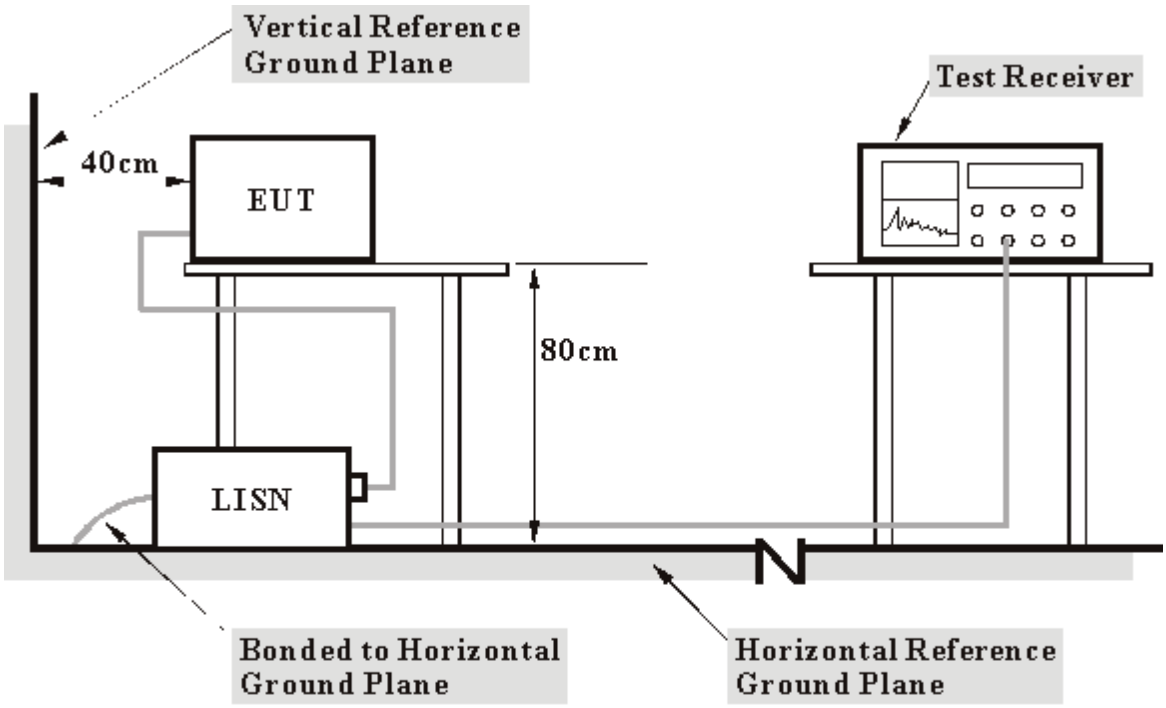
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

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

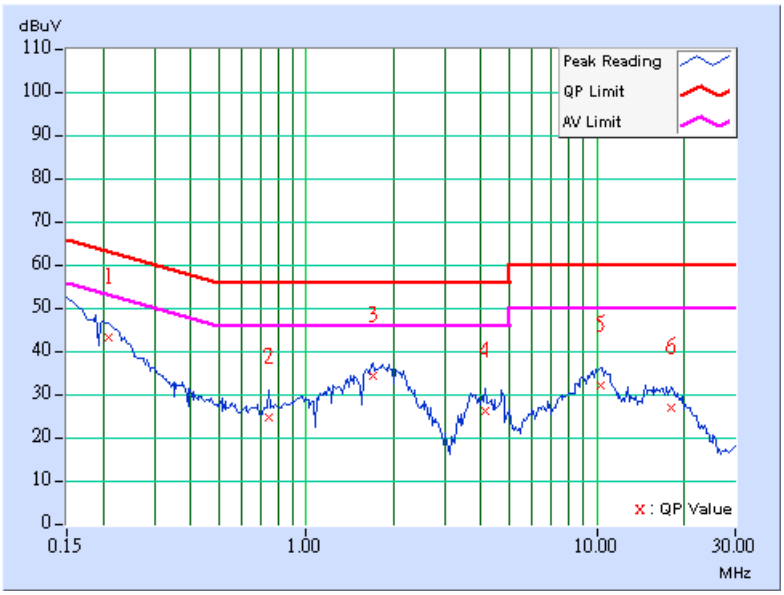
a. Connected the EUT to a notebook system placed on a testing table.
b. The notebook system ran a test program (provided by manufacturer) to enable EUT under transmission/receiving condition continuously at specific channel frequency.
c. The notebook system sent "H" messages to its screen.
d. The notebook system sent “H” messages to modem.
e. The notebook system sent "H" messages to printer, and the printer prints them on paper.
f. Steps c-e are repeated.

4.1.7 TEST RESULTS

EUT	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
MODE	Channel 1	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa	**TEST MODE**	Test Mode 1
TESTED BY	Match Tsui		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.209	0.10	42.54	-	42.64	-	63.26	53.26	-20.62	-
2	0.744	0.19	24.11	-	24.30	-	56.00	46.00	-31.70	-
3	1.695	0.26	33.64	-	33.90	-	56.00	46.00	-22.10	-
4	4.141	0.32	25.33	-	25.65	-	56.00	46.00	-30.35	-
5	10.363	0.54	31.36	-	31.90	-	60.00	50.00	-28.10	-
6	18.094	0.84	26.27	-	27.11	-	60.00	50.00	-32.89	-

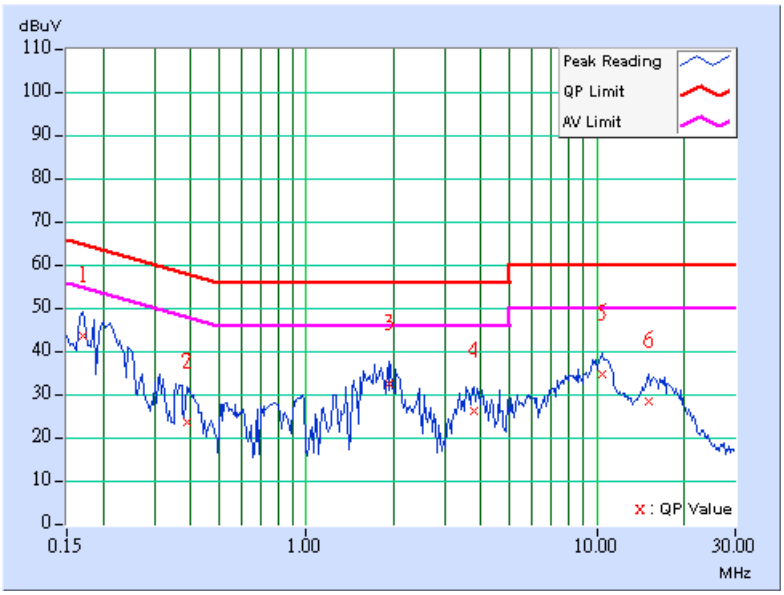
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
MODE	Channel 1	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa	**TEST MODE**	Test Mode 1
TESTED BY	Match Tsui		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.170	0.10	43.08	-	43.18	-	64.98	54.98	-21.81	-
2	0.388	0.11	23.02	-	23.13	-	58.10	48.10	-34.97	-
3	1.938	0.25	31.99	-	32.24	-	56.00	46.00	-23.76	-
4	3.793	0.30	25.88	-	26.18	-	56.00	46.00	-29.82	-
5	10.418	0.50	34.34	-	34.84	-	60.00	50.00	-25.16	-
6	15.148	0.56	27.82	-	28.38	-	60.00	50.00	-31.62	-

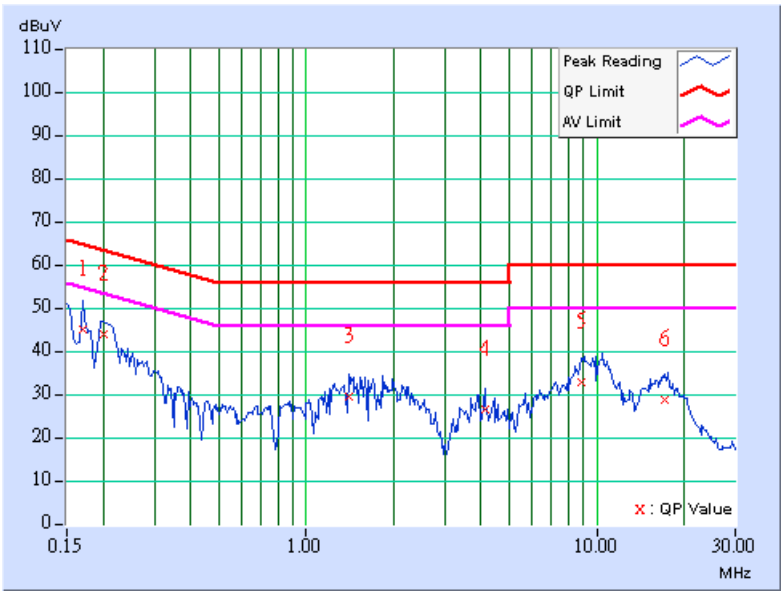
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
MODE	Channel 6	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa	**TEST MODE**	Test Mode 1
TESTED BY	Match Tsui		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.170	0.10	44.21	-	44.31	-	64.98	54.98	-20.67	-
2	0.201	0.10	43.28	-	43.38	-	63.58	53.58	-20.20	-
3	1.398	0.25	28.77	-	29.02	-	56.00	46.00	-26.98	-
4	4.109	0.32	25.97	-	26.29	-	56.00	46.00	-29.71	-
5	8.820	0.49	32.05	-	32.54	-	60.00	50.00	-27.46	-
6	17.184	0.80	28.02	-	28.82	-	60.00	50.00	-31.18	-

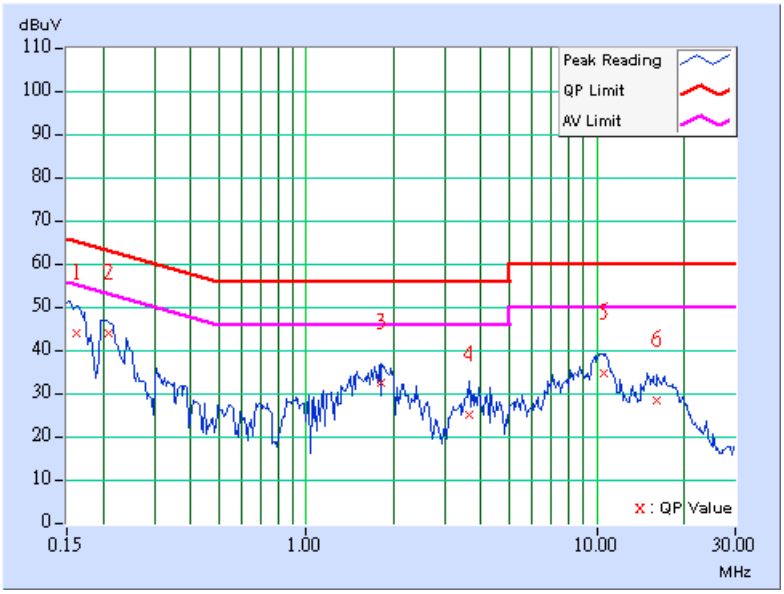
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
MODE	Channel 6	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa	**TEST MODE**	Test Mode 1
TESTED BY	Match Tsui		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.162	0.10	43.55	-	43.65	-	65.38	55.38	-21.73	-
2	0.209	0.10	43.60	-	43.70	-	63.26	53.26	-19.56	-
3	1.820	0.25	32.03	-	32.28	-	56.00	46.00	-23.72	-
4	3.633	0.29	24.44	-	24.73	-	56.00	46.00	-31.27	-
5	10.605	0.50	34.05	-	34.55	-	60.00	50.00	-25.45	-
6	16.176	0.58	27.98	-	28.56	-	60.00	50.00	-31.44	-

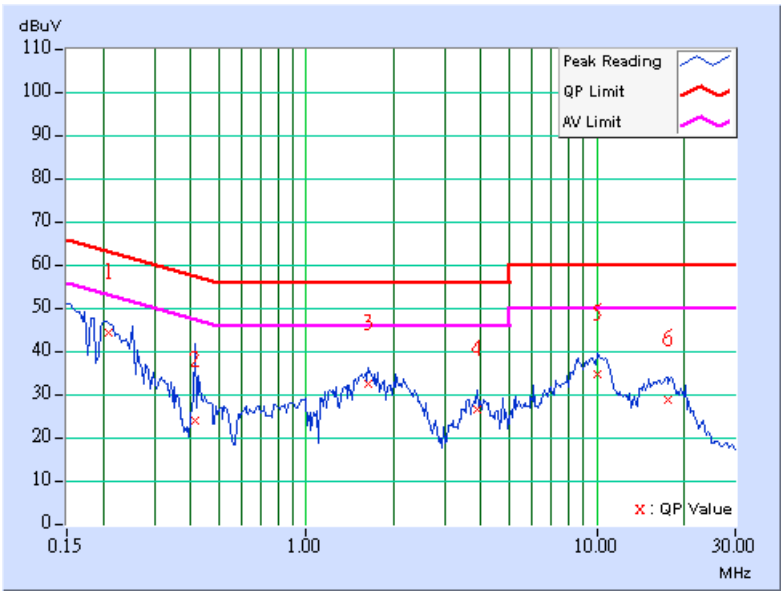
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
MODE	Channel 11	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa	**TEST MDOE**	Test Mode 1
TESTED BY	Match Tsui		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.209	0.10	43.52	-	43.62	-	63.26	53.26	-19.64	-
2	0.416	0.12	23.16	-	23.28	-	57.54	47.54	-34.26	-
3	1.633	0.26	31.80	-	32.06	-	56.00	46.00	-23.94	-
4	3.887	0.31	25.97	-	26.28	-	56.00	46.00	-29.72	-
5	10.109	0.53	34.16	-	34.69	-	60.00	50.00	-25.31	-
6	17.508	0.81	27.94	-	28.75	-	60.00	50.00	-31.25	-

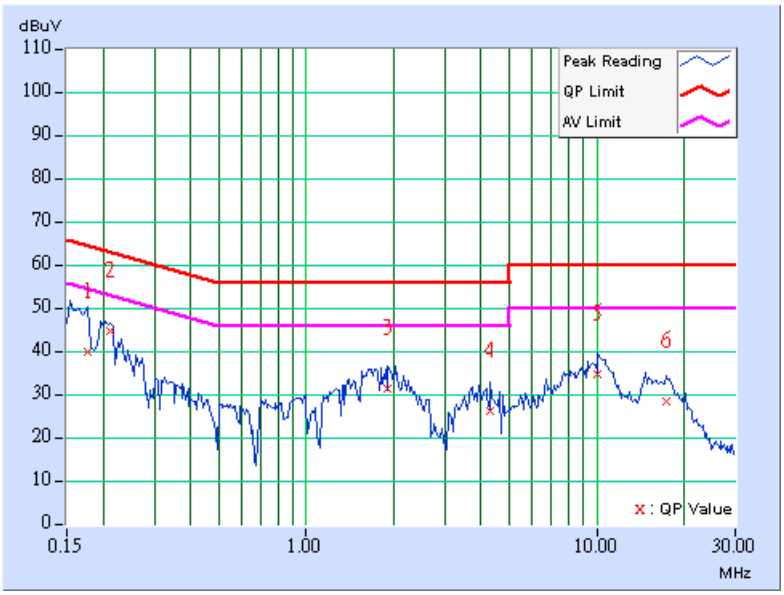
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
MODE	Channel 11	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa	**TEST MODE**	Test Mode 1
TESTED BY	Match Tsui		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.177	0.10	39.30	-	39.40	-	64.61	54.61	-25.21	-
2	0.213	0.10	44.27	-	44.37	-	63.11	53.11	-18.74	-
3	1.914	0.25	30.74	-	30.99	-	56.00	46.00	-25.01	-
4	4.320	0.32	25.62	-	25.94	-	56.00	46.00	-30.06	-
5	10.082	0.49	34.06	-	34.55	-	60.00	50.00	-25.45	-
6	17.344	0.60	27.89	-	28.49	-	60.00	50.00	-31.51	-

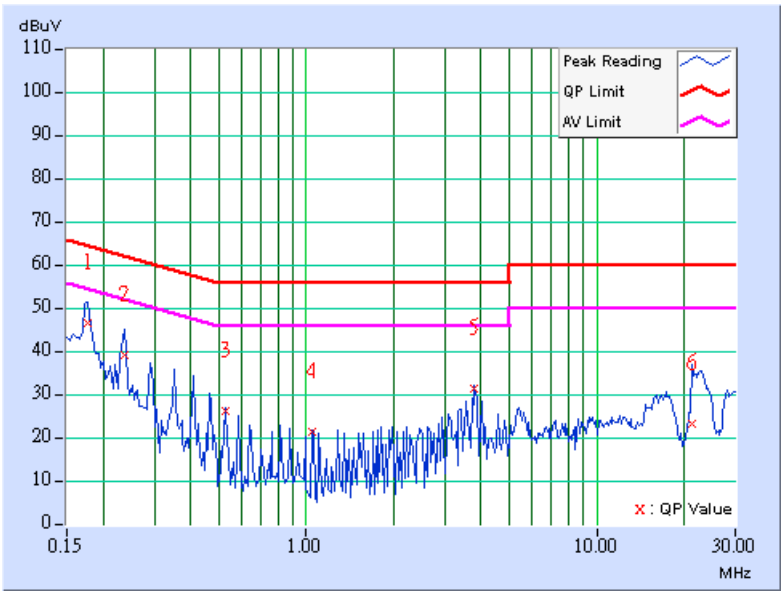
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
MODE	Channel 1	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	**TEST MODE**	Test Mode 2
TESTED BY	Leo Hung		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.177	0.10	45.64	-	45.74	-	64.61	54.61	-18.87	-
2	0.236	0.10	38.31	-	38.41	-	62.24	52.24	-23.83	-
3	0.525	0.14	25.27	-	25.41	-	56.00	46.00	-30.59	-
4	1.051	0.25	20.66	-	20.91	-	56.00	46.00	-35.09	-
5	3.801	0.31	30.59	-	30.90	-	56.00	46.00	-25.10	-
6	21.371	0.99	22.26	-	23.25	-	60.00	50.00	-36.75	-

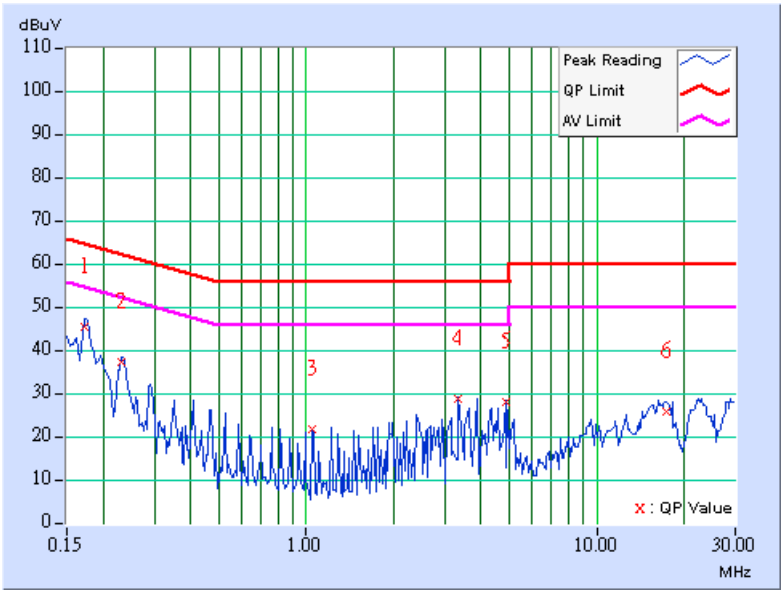
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
MODE	Channel 1	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	**TEST MODE**	Test Mode 2
TESTED BY	Leo Hung		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.173	0.10	44.98	-	45.08	-	64.79	54.79	-19.72	-
2	0.232	0.10	36.65	-	36.75	-	62.38	52.38	-25.62	-
3	1.051	0.24	21.34	-	21.58	-	56.00	46.00	-34.42	-
4	3.332	0.29	28.46	-	28.75	-	56.00	46.00	-27.25	-
5	4.852	0.34	27.46	-	27.80	-	56.00	46.00	-28.20	-
6	17.359	0.60	25.35	-	25.95	-	60.00	50.00	-34.05	-

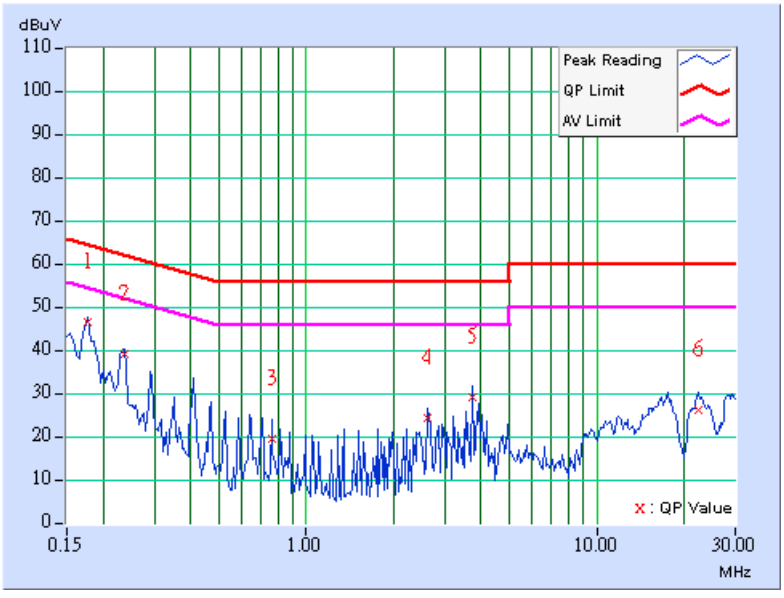
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
MODE	Channel 6	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	**TEST MODE**	Test Mode 2
TESTED BY	Leo Hung		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.177	0.10	45.80	-	45.90	-	64.61	54.61	-18.71	-
2	0.236	0.10	38.37	-	38.47	-	62.24	52.24	-23.77	-
3	0.759	0.19	18.75	-	18.94	-	56.00	46.00	-37.06	-
4	2.629	0.28	23.43	-	23.71	-	56.00	46.00	-32.29	-
5	3.738	0.31	28.28	-	28.59	-	56.00	46.00	-27.41	-
6	22.387	1.03	25.16	-	26.19	-	60.00	50.00	-33.81	-

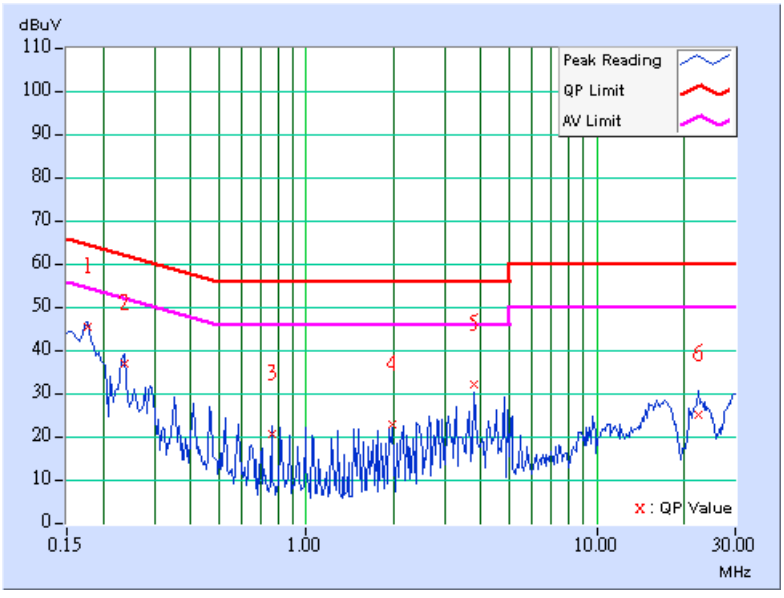
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
MODE	Channel 6	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	**TEST MODE**	Test Mode 2
TESTED BY	Leo Hung		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.177	0.10	44.92	-	45.02	-	64.61	54.61	-19.59	-
2	0.236	0.10	36.35	-	36.45	-	62.24	52.24	-25.79	-
3	0.759	0.18	20.20	-	20.38	-	56.00	46.00	-35.62	-
4	1.988	0.25	22.22	-	22.47	-	56.00	46.00	-33.53	-
5	3.797	0.30	31.55	-	31.85	-	56.00	46.00	-24.15	-
6	22.383	0.67	24.38	-	25.05	-	60.00	50.00	-34.95	-

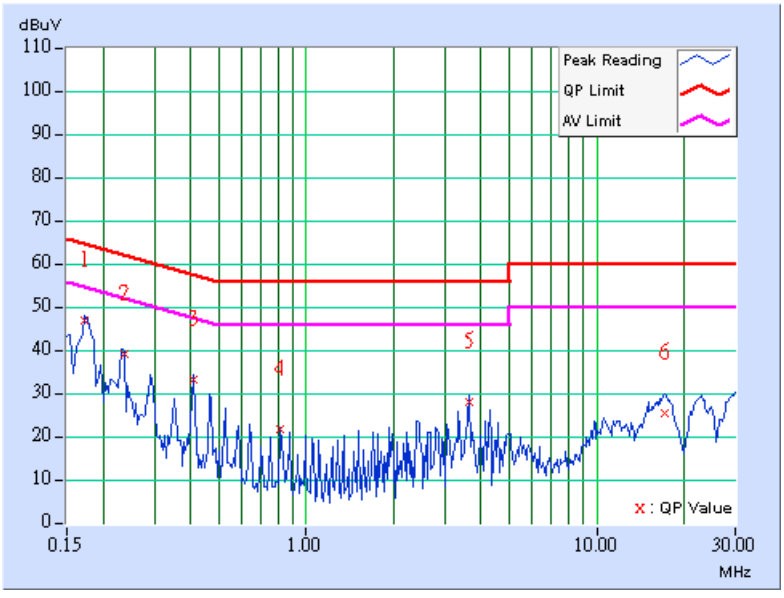
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
MODE	Channel 11	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	**TEST MDOE**	Test Mode 2
TESTED BY	Leo Hung		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	**0.173**	**0.10**	**46.11**	**-**	**46.21**	**-**	**64.79**	**54.79**	**-18.58**	**-**
2	0.236	0.10	38.39	-	38.49	-	62.24	52.24	-23.75	-
3	0.408	0.12	32.52	-	32.64	-	57.69	47.69	-25.06	-
4	0.818	0.21	20.90	-	21.11	-	56.00	46.00	-34.89	-
5	3.621	0.30	27.45	-	27.75	-	56.00	46.00	-28.25	-
6	17.074	0.79	24.76	-	25.55	-	60.00	50.00	-34.45	-

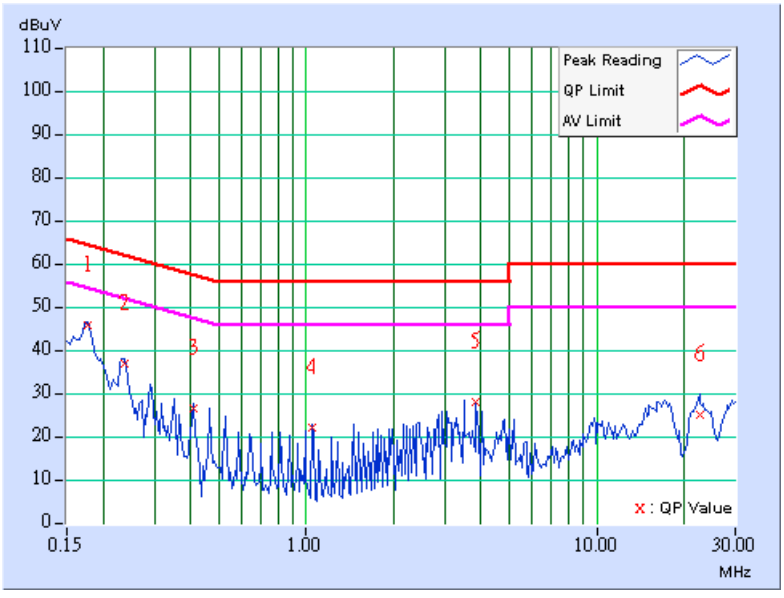
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
MODE	Channel 11	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	**TEST MODE**	Test Mode 2
TESTED BY	Leo Hung		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.177	0.10	45.14	-	45.24	-	64.61	54.61	-19.37	-
2	0.236	0.10	36.51	-	36.61	-	62.24	52.24	-25.63	-
3	0.408	0.12	26.04	-	26.16	-	57.69	47.69	-31.54	-
4	1.051	0.24	21.56	-	21.80	-	56.00	46.00	-34.20	-
5	3.852	0.30	27.31	-	27.61	-	56.00	46.00	-28.39	-
6	22.656	0.68	24.37	-	25.05	-	60.00	50.00	-34.95	-

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(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

NOTE:

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

4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESI7	100033	Jun, 08, 2005
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100040	Dec. 15, 2004
BILOG Antenna SCHWARZBECK	VULB9168	9168-153	Feb. 03, 2005
HORN Antenna SCHWARZBECK	9120D	9120D-408	Feb. 03, 2005
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA 9170243	Feb. 23, 2005
Preamplifier Agilent	8447D	2944A10633	Jan. 15, 2005
Preamplifier Agilent	8449B	3008A01964	Jan. 27, 2005
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	218183/4	Mar. 05, 2005
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	218195/4	Mar. 05, 2005
Software ADT.	ADT_Radiated_V5.14	NA	NA
Antenna Tower inn-co GmbH	MA 4000	013303	NA
Antenna Tower Controller inn-co GmbH	CO2000	017303	NA
Turn Table ADT.	TT100.	TT93021703	NA
Turn Table Controller ADT.	SC100.	SC93021703	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 Chamber 2.

3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.

4. The IC Site Registration No. is IC4924-3.

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.

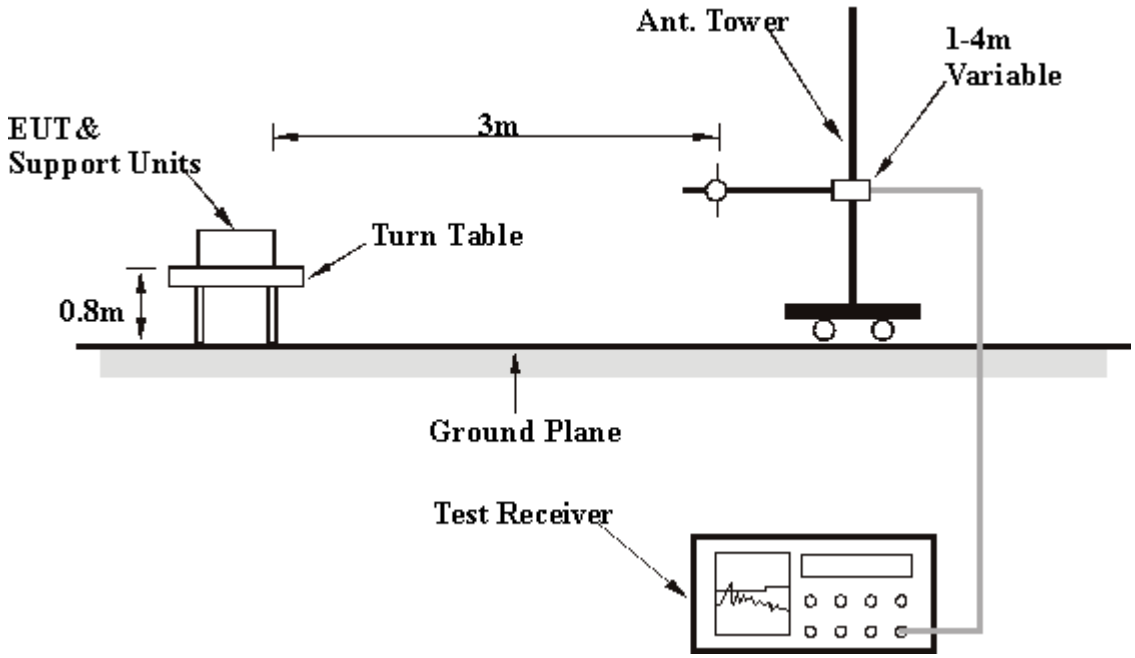
NOTE:

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	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
MODE	Channel 11	**FREQUENCY RANGE**	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	**TEST MODE**	Test Mode 1
TESTED BY	Match Tsui		

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	61.10	29.00 QP	40.00	-11.00	4.00 H	13	15.17	13.83
2	117.47	38.09 QP	43.50	-5.41	1.50 H	76	25.46	12.63
3	160.24	32.81 QP	43.50	-10.69	1.75 H	280	18.10	14.71
4	199.12	33.04 QP	43.50	-10.46	2.00 H	262	21.51	11.53
5	249.66	35.86 QP	46.00	-10.14	1.00 H	289	22.45	13.41
6	360.46	33.31 QP	46.00	-12.69	1.00 H	346	17.22	16.09
7	440.16	32.04 QP	46.00	-13.96	1.00 H	301	14.15	17.88
8	519.86	28.42 QP	46.00	-17.58	1.25 H	184	9.27	19.15
9	599.56	31.88 QP	46.00	-14.12	1.50 H	280	10.65	21.24
10	667.60	31.64 QP	46.00	-14.36	1.00 H	148	9.50	22.14
11	801.72	31.56 QP	46.00	-14.44	1.75 H	88	7.77	23.79

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	61.10	29.65 QP	40.00	-10.35	1.00 V	292	15.82	13.83
2	113.59	30.97 QP	43.50	-12.53	1.25 V	331	18.67	12.30
3	160.24	35.81 QP	43.50	-7.69	1.25 V	313	21.10	14.71
4	249.66	33.21 QP	46.00	-12.79	2.00 V	346	19.80	13.41
5	401.28	32.87 QP	46.00	-13.13	1.00 V	73	15.88	16.99
6	440.16	34.43 QP	46.00	-11.57	1.00 V	61	16.55	17.88
7	455.71	34.93 QP	46.00	-11.07	1.00 V	85	16.75	18.18
8	560.68	28.06 QP	46.00	-17.94	1.00 V	346	7.94	20.12
9	720.08	32.77 QP	46.00	-13.23	1.25 V	52	9.79	22.98
10	797.84	32.38 QP	46.00	-13.62	1.75 V	55	8.61	23.77

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	USB2.0 802.11a/b/g wireless network adapter	MODEL	WUB-500A
MODE	Channel 11	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	TEST MODE	Test Mode 2
TESTED BY	Match Tsui		

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	119.42	31.11 QP	43.50	-12.39	1.50 H	67	18.14	12.97
2	173.85	32.38 QP	43.50	-11.12	1.50 H	64	18.83	13.55
3	249.66	29.17 QP	46.00	-16.83	1.00 H	229	15.96	13.22
4	278.82	33.52 QP	46.00	-12.48	1.00 H	238	19.38	14.14
5	360.46	30.14 QP	46.00	-15.86	1.00 H	244	14.26	15.88
6	399.34	29.78 QP	46.00	-16.22	1.00 H	187	13.04	16.74
7	449.88	28.42 QP	46.00	-17.58	1.00 H	292	10.35	18.07
8	601.50	32.61 QP	46.00	-13.39	1.00 H	256	11.58	21.03
9	679.26	30.94 QP	46.00	-15.06	1.00 H	328	8.90	22.04
10	720.08	31.84 QP	46.00	-14.16	1.00 H	325	9.05	22.79
11	731.74	36.75 QP	46.00	-9.25	1.00 H	292	13.67	23.08
12	799.78	33.02 QP	46.00	-12.98	1.00 H	304	9.20	23.82
13	863.93	35.33 QP	46.00	-10.67	1.50 H	22	10.88	24.45

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	66.93	32.57 QP	40.00	-7.43	1.00 V	106	19.64	12.93
2	133.03	31.12 QP	43.50	-12.38	1.00 V	19	17.18	13.94
3	249.66	24.08 QP	46.00	-21.92	1.25 V	158	10.86	13.22
4	366.29	27.85 QP	46.00	-18.15	1.25 V	350	11.84	16.01
5	399.34	29.54 QP	46.00	-16.46	1.75 V	25	12.80	16.74
6	440.16	36.34 QP	46.00	-9.66	1.00 V	136	18.53	17.81
7	449.88	33.75 QP	46.00	-12.25	1.50 V	187	15.68	18.07
8	599.56	34.08 QP	46.00	-11.92	1.00 V	1	13.08	21.00
9	735.63	33.89 QP	46.00	-12.11	1.50 V	7	10.72	23.18
10	801.54	33.17 QP	46.00	-12.83	1.50 V	147	9.34	23.83
11	865.87	34.46 QP	46.00	-11.54	1.00 V	271	9.98	24.48

REMARKS: 1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)

2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)

3. The other emission levels were very low against the limit.

4. Margin value = Emission level – Limit value.

4.2.8 TEST RESULTS (A)

EUT	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
CHANNEL	Channel 1	**FREQUENCY RANGE**	1 ~ 25 GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	**TEST MODE**	Test Mode 1
TESTED BY	Match Tsui		

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	39.72 PK	74.00	-34.28	1.00 H	221	9.80	29.92
1	2016.00	30.51 AV	54.00	-23.49	1.00 H	221	0.59	29.92
2	2320.00	45.86 PK	74.00	-28.14	1.25 H	211	14.42	31.44
2	2320.00	35.74 AV	54.00	-18.26	1.25 H	211	4.30	31.44
3	2390.00	50.29 PK	74.00	-23.71	1.13 H	46	18.68	31.61
3	2390.00	42.05 AV	54.00	-11.95	1.13 H	46	10.44	31.61
4	*2412.00	104.07 PK			1.13 H	46	72.37	31.70
4	*2412.00	95.83 AV			1.13 H	46	64.13	31.70
5	2688.00	53.22 PK	74.00	-20.78	1.00 H	244	20.52	32.70
5	2688.00	45.58 AV	54.00	-8.42	1.00 H	244	12.88	32.70
6	4824.00	54.32 PK	74.00	-19.68	1.06 H	253	16.74	37.58
6	4824.00	46.87 AV	54.00	-7.13	1.06 H	253	9.29	37.58

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	40.67 PK	74.00	-33.33	1.21 V	322	10.75	29.92
1	2016.00	34.53 AV	54.00	-19.47	1.21 V	322	4.61	29.92
2	2320.00	56.40 PK	74.00	-17.60	1.04 V	360	24.96	31.44
2	2320.00	45.08 AV	54.00	-8.92	1.04 V	360	13.64	31.44
3	2390.00	59.41 PK	74.00	-14.59	1.08 V	299	27.80	31.61
3	2390.00	51.19 AV	54.00	-2.81	1.08 V	299	19.58	31.61
4	*2412.00	113.19 PK			1.08 V	299	81.49	31.70
4	*2412.00	104.97 AV			1.08 V	299	73.27	31.70
5	2688.00	56.44 PK	74.00	-17.56	1.20 V	75	23.74	32.70
5	2688.00	50.73 AV	54.00	-3.27	1.20 V	75	18.03	32.70
6	4874.00	58.55 PK	74.00	-15.45	1.00 V	246	20.89	37.66
6	4874.00	51.31 AV	54.00	-2.69	1.00 V	246	13.65	37.66

REMARS:
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	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
CHANNEL	Channel 6	**FREQUENCY RANGE**	1 ~ 25 GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	**TEST MODE**	Test Mode 1
TESTED BY	Match Tsui		

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	2320.00	42.43 PK	74.00	-31.57	1.10 H	168	10.99	31.44
1	2320.00	38.41 AV	54.00	-15.59	1.10 H	168	6.97	31.44
2	*2437.00	106.11 PK			1.22 H	102	74.26	31.85
2	*2437.00	98.54 AV			1.22 H	102	66.69	31.85
3	2688.00	51.71 PK	74.00	-22.29	1.29 H	103	19.01	32.70
3	2688.00	48.82 AV	54.00	-5.18	1.29 H	103	16.12	32.70
4	4874.00	54.53 PK	74.00	-19.47	1.00 H	257	16.87	37.66
4	4874.00	44.64 AV	54.00	-9.36	1.00 H	257	6.98	37.66

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	2320.00	54.34 PK	74.00	-19.66	1.09 V	75	22.90	31.44
1	2320.00	47.54 AV	54.00	-6.46	1.09 V	75	16.10	31.44
2	*2437.00	114.20 PK			1.27 V	100	82.35	31.85
2	*2437.00	105.90 AV			1.27 V	100	74.05	31.85
3	2688.00	56.30 PK	74.00	-17.70	1.11 V	255	23.60	32.70
3	2688.00	51.24 AV	54.00	-2.76	1.11 V	255	18.54	32.70
4	4874.00	56.65 PK	74.00	-17.35	1.00 V	221	18.99	37.66
4	4874.00	50.05 AV	54.00	-3.95	1.00 V	221	12.39	37.66

REMARS: 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	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
CHANNEL	Channel 11	**FREQUENCY RANGE**	1 ~ 25 GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	**TEST MODE**	Test Mode 1
TESTED BY	Match Tsui		

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	41.14 PK	74.00	-32.86	1.23 H	112	11.22	29.92
1	2016.00	37.88 AV	54.00	-16.12	1.23 H	112	7.96	29.92
2	2320.00	41.95 PK	74.00	-32.05	1.00 H	211	10.51	31.44
2	2320.00	38.56 AV	54.00	-15.44	1.00 H	211	7.12	31.44
3	*2462.00	103.50 PK			1.24 H	259	71.50	32.00
3	*2462.00	95.53 AV			1.24 H	259	63.53	32.00
4	2483.50	45.17 PK	74.00	-28.83	1.24 H	259	13.04	32.13
4	2483.50	37.20 AV	54.00	-16.80	1.24 H	259	5.07	32.13
5	2688.00	53.47 PK	74.00	-20.53	1.32 H	214	20.77	32.70
5	2688.00	51.53 AV	54.00	-2.47	1.32 H	214	18.83	32.70
6	4924.00	50.56 PK	74.00	-23.44	1.06 H	255	12.82	37.74

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	41.24 PK	74.00	-32.76	1.00 V	360	11.32	29.92
1	2016.00	37.08 AV	54.00	-16.92	1.00 V	360	7.16	29.92
2	2320.00	54.72 PK	74.00	-19.28	1.06 V	135	23.28	31.44
2	2320.00	46.02 AV	54.00	-7.98	1.06 V	135	14.58	31.44
3	*2462.00	113.25 PK			1.00 V	259	81.25	32.00
3	*2462.00	104.97 AV			1.00 V	259	72.97	32.00
4	2483.50	54.99 PK	74.00	-19.01	1.00 V	259	22.86	32.13
4	2483.50	45.92 AV	54.00	-8.08	1.00 V	259	13.79	32.13
5	2688.00	55.72 PK	74.00	-18.28	1.21 V	75	23.02	32.70
5	2688.00	49.76 AV	54.00	-4.24	1.21 V	75	17.06	32.70
6	4924.00	53.57 PK	74.00	-20.43	1.08 V	253	15.83	37.74
6	4924.00	46.44 AV	54.00	-7.56	1.08 V	253	8.70	37.74

REMARS: 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	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
CHANNEL	Channel 1	**FREQUENCY RANGE**	1 ~ 25 GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	**TEST MODE**	Test Mode 2
TESTED BY	Leo Hung		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	54.77 PK	74.00	-19.23	1.20 H	172	21.50	33.27
1	2390.00	46.46 AV	54.00	-7.54	1.20 H	172	13.19	33.27
2	*2412.00	111.56 PK			1.20 H	172	78.21	33.35
2	*2412.00	103.25 AV			1.20 H	172	69.90	33.35
3	2688.00	47.58 PK	74.00	-26.42	1.00 H	128	12.92	34.66
3	2688.00	38.90 AV	54.00	-15.10	1.00 H	128	4.24	34.66
4	4824.00	63.40 PK	74.00	-10.60	1.05 H	128	22.39	41.01
4	4824.00	49.14 AV	54.00	-4.86	1.05 H	128	8.13	41.01

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	53.10 PK	74.00	-20.90	1.38 V	179	20.25	32.85
1	2390.00	45.03 AV	54.00	-8.97	1.38 V	179	12.18	32.85
2	*2412.00	109.89 PK			1.38 V	179	76.96	32.93
2	*2412.00	101.82 AV			1.38 V	179	68.89	32.93
3	2688.00	46.68 PK	74.00	-27.32	1.00 V	7	12.50	34.18
3	2688.00	38.01 AV	54.00	-15.99	1.00 V	7	3.83	34.18
4	4824.00	58.96 PK	74.00	-15.04	1.05 V	213	18.71	40.25
4	4824.00	46.55 AV	54.00	-7.45	1.05 V	213	6.30	40.25

REMARS:
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	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
CHANNEL	Channel 6	**FREQUENCY RANGE**	1 ~ 25 GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	**TEST MODE**	Test Mode 2
TESTED BY	Leo Hung		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	112.82 PK			1.17 H	183	79.34	33.48
1	*2437.00	102.55 AV			1.17 H	183	69.07	33.48
2	2688.00	46.57 PK	74.00	-27.43	1.04 H	324	11.91	34.66
2	2688.00	36.65 AV	54.00	-17.35	1.04 H	324	1.99	34.66
3	4874.00	65.20 PK	74.00	-8.80	1.24 H	110	24.14	41.06
3	4874.00	50.91 AV	54.00	-3.09	1.24 H	110	9.85	41.06

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	110.41 PK			1.04 V	75	77.34	33.07
1	*2437.00	100.17 AV			1.04 V	75	67.10	33.07
2	2688.00	47.88 PK	74.00	-26.12	1.00 V	133	13.70	34.18
2	2688.00	37.53 AV	54.00	-16.47	1.00 V	133	3.35	34.18
3	4874.00	60.58 PK	74.00	-13.42	1.00 V	77	20.32	40.26
3	4874.00	46.25 AV	54.00	-7.75	1.00 V	77	5.99	40.26

REMARS: 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	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
CHANNEL	Channel 11	**FREQUENCY RANGE**	1 ~ 25 GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	**TEST MODE**	Test Mode 2
TESTED BY	Leo Hung		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	111.86 PK			1.19 H	175	78.25	33.61
1	*2462.00	102.80 AV			1.19 H	175	69.19	33.61
2	2483.50	52.58 PK	74.00	-21.42	1.19 H	175	18.86	33.72
2	2483.50	43.52 AV	54.00	-10.48	1.19 H	175	9.80	33.72
3	2688.00	47.40 PK	74.00	-26.60	1.05 H	186	12.74	34.66
3	2688.00	38.50 AV	54.00	-15.50	1.05 H	186	3.84	34.66
4	4924.00	59.64 PK	74.00	-14.36	1.03 H	178	18.57	41.07
4	4924.00	45.21 AV	54.00	-8.79	1.03 H	178	4.14	41.07

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	109.21 PK			1.03 V	119	76.01	33.20
1	*2462.00	100.87 AV			1.03 V	119	67.67	33.20
2	2483.50	49.93 PK	74.00	-24.07	1.03 V	119	16.61	33.32
2	2483.50	41.59 AV	54.00	-12.41	1.03 V	119	8.27	33.32
3	2688.00	46.99 PK	74.00	-27.01	1.34 V	280	12.81	34.18
3	2688.00	39.74 AV	54.00	-14.26	1.34 V	280	5.56	34.18
4	4924.00	59.54 PK	74.00	-14.46	1.11 V	70	19.31	40.23
4	4924.00	45.33 AV	54.00	-8.67	1.11 V	70	5.10	40.23

REMARS: 1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)

2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)

3. The other emission levels were very low against the limit.

4. Margin value = Emission level – Limit value.

5. " * " : Fundamental frequency.

4.2.9 TEST RESULTS (B)

EUT	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
CHANNEL	Channel 1	**FREQUENCY RANGE**	1 ~ 25 GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	**TEST MODE**	Test Mode 1
TESTED BY	Match Tsui		

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	37.00 PK	74.00	-37.00	1.13 H	258	7.08	29.92
1	2016.00	34.44 AV	54.00	-19.56	1.13 H	258	4.52	29.92
2	2320.00	45.66 PK	74.00	-28.34	1.00 H	58	14.22	31.44
2	2320.00	37.10 AV	54.00	-16.90	1.00 H	58	5.66	31.44
3	2390.00	53.57 PK	74.00	-20.43	1.25 H	255	21.96	31.61
3	2390.00	44.06 AV	54.00	-9.94	1.25 H	255	12.45	31.61
4	*2412.00	101.28 PK			1.25 H	255	69.58	31.70
4	*2412.00	91.77 AV			1.25 H	255	60.07	31.70
5	2688.00	52.06 PK	74.00	-21.94	1.14 H	145	19.36	32.70
5	2688.00	46.08 AV	54.00	-7.92	1.14 H	145	13.38	32.70
6	4824.00	42.17 PK	74.00	-31.83	1.02 H	322	4.59	37.58
6	4824.00	38.78 AV	54.00	-15.22	1.02 H	322	1.20	37.58

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	39.47 PK	74.00	-34.53	1.28 V	234	9.55	29.92
1	2016.00	30.11 AV	54.00	-23.89	1.28 V	234	0.19	29.92
2	2320.00	46.80 PK	74.00	-27.20	1.15 V	332	15.36	31.44
2	2320.00	36.17 AV	54.00	-17.83	1.15 V	332	4.73	31.44
3	2390.00	63.57 PK	74.00	-10.43	1.06 V	212	31.96	31.61
3	2390.00	52.31 AV	54.00	-1.69	1.06 V	212	20.70	31.61
4	*2412.00	111.28 PK			1.06 V	212	79.58	31.70
4	*2412.00	100.02 AV			1.06 V	212	68.32	31.70
5	2688.00	54.07 PK	74.00	-19.93	1.10 V	259	21.37	32.70
5	2688.00	52.11 AV	54.00	-1.89	1.10 V	259	19.41	32.70
6	4824.00	56.40 PK	74.00	-17.60	1.00 V	78	18.82	37.58
6	4824.00	41.23 AV	54.00	-12.77	1.00 V	78	3.65	37.58

REMARS:
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	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
CHANNEL	Channel 6	**FREQUENCY RANGE**	1 ~ 25 GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	**TEST MODE**	Test Mode 1
TESTED BY	Match Tsui		

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	40.22 PK	74.00	-33.78	1.01 H	211	10.30	29.92
1	2016.00	31.11 AV	54.00	-22.89	1.01 H	211	1.19	29.92
2	2320.00	47.72 PK	74.00	-26.28	1.00 H	55	16.28	31.44
2	2320.00	36.33 AV	54.00	-17.67	1.00 H	55	4.89	31.44
3	*2437.00	106.12 PK			1.19 H	56	74.27	31.85
3	*2437.00	96.17 AV			1.19 H	56	64.32	31.85
4	2688.00	52.45 PK	74.00	-21.55	1.08 H	244	19.75	32.70
4	2688.00	49.73 AV	54.00	-4.27	1.08 H	244	17.03	32.70
5	4874.00	50.08 PK	74.00	-23.92	1.10 H	137	12.42	37.66
5	4874.00	37.17 AV	54.00	-16.83	1.10 H	137	-0.49	37.66

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	37.35 PK	74.00	-36.65	1.00 V	231	7.43	29.92
1	2016.00	29.00 AV	54.00	-25.00	1.00 V	231	-0.92	29.92
2	2320.00	50.97 PK	74.00	-23.03	1.08 V	221	19.53	31.44
2	2320.00	45.55 AV	54.00	-8.45	1.08 V	221	14.11	31.44
3	*2437.00	112.45 PK			1.08 V	339	80.60	31.85
3	*2437.00	102.43 AV			1.08 V	339	70.58	31.85
4	2688.00	57.33 PK	74.00	-16.67	1.00 V	40	24.63	32.70
4	2688.00	51.43 AV	54.00	-2.57	1.00 V	40	18.73	32.70
5	4874.00	49.50 PK	74.00	-24.50	1.14 V	225	11.84	37.66
5	4874.00	40.72 AV	54.00	-13.28	1.14 V	225	3.06	37.66

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	USB2.0 802.11a/b/g wireless network adapter	MODEL	WUB-500A
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25 GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	TEST MODE	Test Mode 1
TESTED BY	Match Tsui		

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	40.91 PK	74.00	-33.09	1.21 H	78	10.99	29.92
1	2016.00	30.61 AV	54.00	-23.39	1.21 H	78	0.69	29.92
2	2320.00	47.10 PK	74.00	-26.90	1.31 H	236	15.66	31.44
2	2320.00	36.53 AV	54.00	-17.47	1.31 H	236	5.09	31.44
3	*2462.00	101.84 PK			1.15 H	59	69.84	32.00
3	*2462.00	92.90 AV			1.15 H	59	60.90	32.00
4	2483.50	53.76 PK	74.00	-20.24	1.15 H	59	21.63	32.13
4	2483.50	44.82 AV	54.00	-9.18	1.15 H	59	12.69	32.13
5	2688.00	52.75 PK	74.00	-21.25	1.07 H	246	20.05	32.70
5	2688.00	49.73 AV	54.00	-4.27	1.07 H	246	17.03	32.70
6	4824.00	47.86 PK	74.00	-26.14	1.00 H	188	10.28	37.58
6	4824.00	35.32 AV	54.00	-18.68	1.00 H	188	-2.26	37.58

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	41.22 PK	74.00	-32.78	1.00 V	114	11.30	29.92
1	2016.00	32.44 AV	54.00	-21.56	1.00 V	114	2.52	29.92
2	2320.00	53.43 PK	74.00	-20.57	1.09 V	276	21.99	31.44
2	2320.00	44.63 AV	54.00	-9.37	1.09 V	276	13.19	31.44
3	*2462.00	110.09 PK			1.24 V	40	78.09	32.00
3	*2462.00	100.41 AV			1.24 V	40	68.41	32.00
4	2483.50	62.01 PK	74.00	-11.99	1.24 V	40	29.88	32.13
4	**2483.50**	**52.33 AV**	**54.00**	**-1.67**	**1.24 V**	**40**	**20.20**	**32.13**
5	2688.00	53.91 PK	74.00	-20.09	1.00 V	38	21.21	32.70
5	2688.00	52.14 AV	54.00	-1.86	1.00 V	38	19.44	32.70
6	4924.00	48.99 PK	74.00	-25.01	1.07 V	360	11.25	37.74
6	4924.00	38.23 AV	54.00	-15.77	1.07 V	360	0.49	37.74

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	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
CHANNEL	Channel 1	**FREQUENCY RANGE**	1 ~ 25 GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	**TEST MODE**	Test Mode 2
TESTED BY	Leo Hung		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	60.86 PK	74.00	-13.14	1.04 H	75	27.59	33.27
1	2390.00	49.26 AV	54.00	-4.74	1.04 H	75	15.99	33.27
2	*2412.00	110.89 PK			1.04 H	75	77.54	33.35
2	*2412.00	99.29 AV			1.04 H	75	65.94	33.35
3	2688.00	47.40 PK	74.00	-26.60	1.04 H	185	12.74	34.66
3	2688.00	40.57 AV	54.00	-13.43	1.04 H	185	5.91	34.66
4	4824.00	53.19 PK	74.00	-20.81	1.00 H	112	12.18	41.01
4	4824.00	46.75 AV	54.00	-7.25	1.00 H	112	5.74	41.01

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	59.84 PK	74.00	-14.16	1.12 V	119	26.99	32.85
1	2390.00	47.54 AV	54.00	-6.46	1.12 V	119	14.69	32.85
2	*2412.00	109.87 PK			1.12 V	119	76.94	32.93
2	*2412.00	97.57 AV			1.12 V	119	64.64	32.93
3	2688.00	46.69 PK	74.00	-27.31	1.10 V	211	12.51	34.18
3	2688.00	38.59 AV	54.00	-15.41	1.10 V	211	4.41	34.18
4	4824.00	59.05 PK	74.00	-14.95	1.11 V	167	18.80	40.25
4	4824.00	45.39 AV	54.00	-8.61	1.11 V	167	5.14	40.25

REMARS: 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	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
CHANNEL	Channel 6	**FREQUENCY RANGE**	1 ~ 25 GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	**TEST MODE**	Test Mode 2
TESTED BY	Leo Hung		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	111.22 PK			1.12 H	80	77.74	33.48
1	*2437.00	100.70 AV			1.12 H	80	67.22	33.48
2	2688.00	47.23 PK	74.00	-26.77	1.00 H	315	12.57	34.66
2	2688.00	39.50 AV	54.00	-14.50	1.00 H	315	4.84	34.66
3	4874.00	61.08 PK	74.00	-12.92	1.42 H	125	20.02	41.06
3	4874.00	46.24 AV	54.00	-7.76	1.42 H	125	5.18	41.06

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	110.14 PK			1.12 V	80	77.07	33.07
1	*2437.00	98.74 AV			1.12 V	80	65.67	33.07
2	2688.00	46.36 PK	74.00	-27.64	1.00 V	315	12.18	34.18
3	2688.00	38.65 AV	54.00	-15.35	1.00 V	315	4.47	34.18
3	4874.00	60.21 PK	74.00	-13.79	1.42 V	125	19.95	40.26
3	4874.00	45.11 AV	54.00	-8.89	1.42 V	125	4.85	40.26

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	USB2.0 802.11a/b/g wireless network adapter	MODEL	WUB-500A
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25 GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	TEST MODE	Test Mode 2
TESTED BY	Leo Hung		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	109.21 PK			1.04 H	75	75.60	33.61
1	*2462.00	98.34 AV			1.04 H	75	64.73	33.61
2	2483.50	58.49 PK	74.00	-15.51	1.04 H	75	24.77	33.72
2	2483.50	47.62 AV	54.00	-6.38	1.04 H	75	13.90	33.72
3	2688.00	47.83 PK	74.00	-26.17	1.23 H	211	13.17	34.66
3	2688.00	41.18 AV	54.00	-12.82	1.23 H	211	6.52	34.66
4	4924.00	55.96 PK	74.00	-18.04	1.05 H	160	14.89	41.07
4	4924.00	42.79 AV	54.00	-11.21	1.05 H	160	1.72	41.07

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	107.32 PK			1.12 V	119	74.12	33.20
1	*2462.00	97.11 AV			1.12 V	119	63.91	33.20
2	2483.50	56.60 PK	74.00	-17.40	1.12 V	119	23.28	33.32
2	2483.50	46.39 AV	54.00	-7.61	1.12 V	119	13.07	33.32
3	2688.00	47.92 PK	74.00	-26.08	1.16 V	78	13.74	34.18
3	2688.00	40.44 AV	54.00	-13.56	1.16 V	78	6.26	34.18
4	4924.00	53.02 PK	74.00	-20.98	1.22 V	232	12.79	40.23
4	4924.00	40.38 AV	54.00	-13.62	1.22 V	232	0.15	40.23

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.
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	FSEK 30	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 6dB.

4.3.4 DEVIATION FROM TEST STANDARD

No deviation

4.3.5 TEST SETUP

4.3.6 EUT OPERATING CONDITIONS

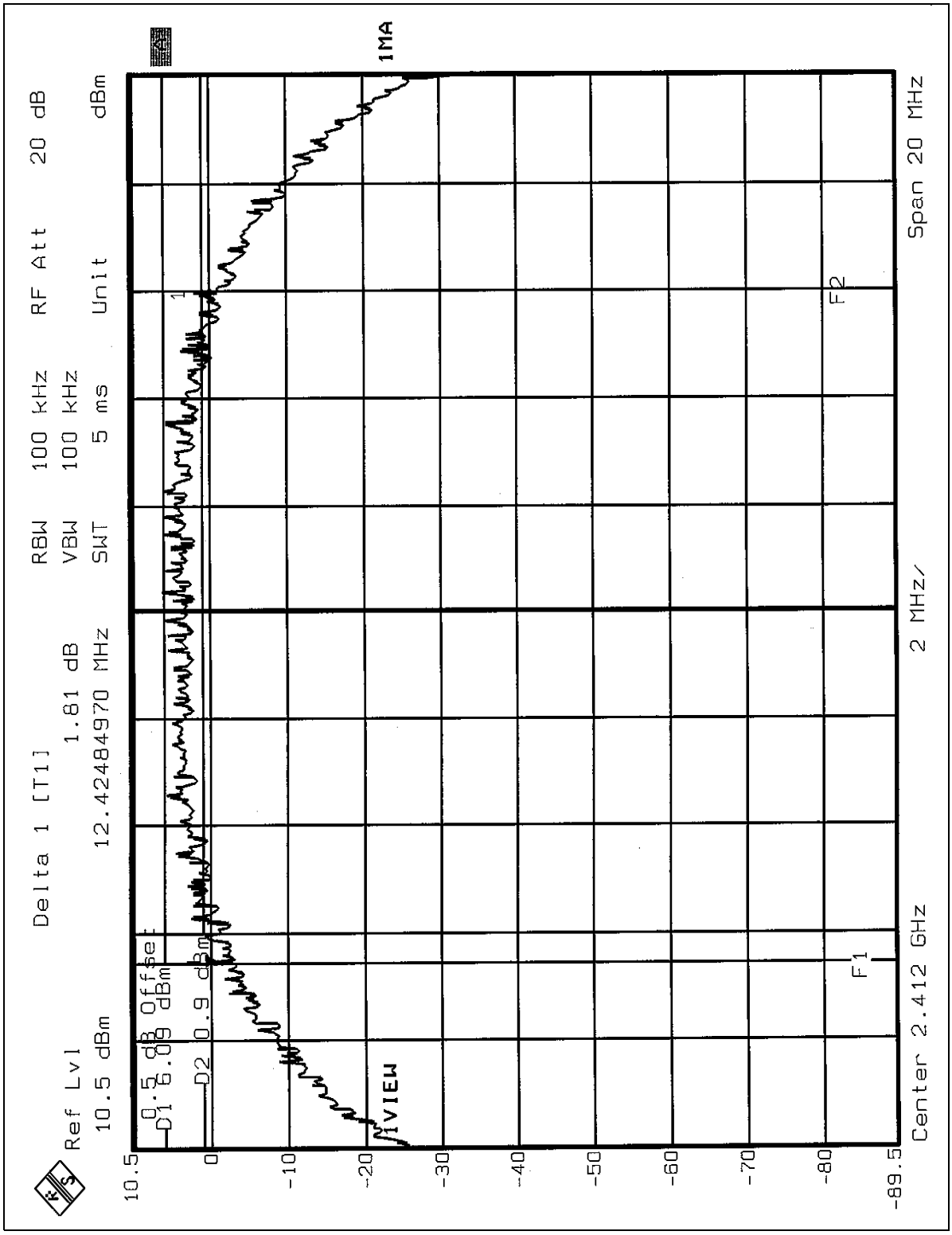
The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.3.7 TEST RESULTS (A)

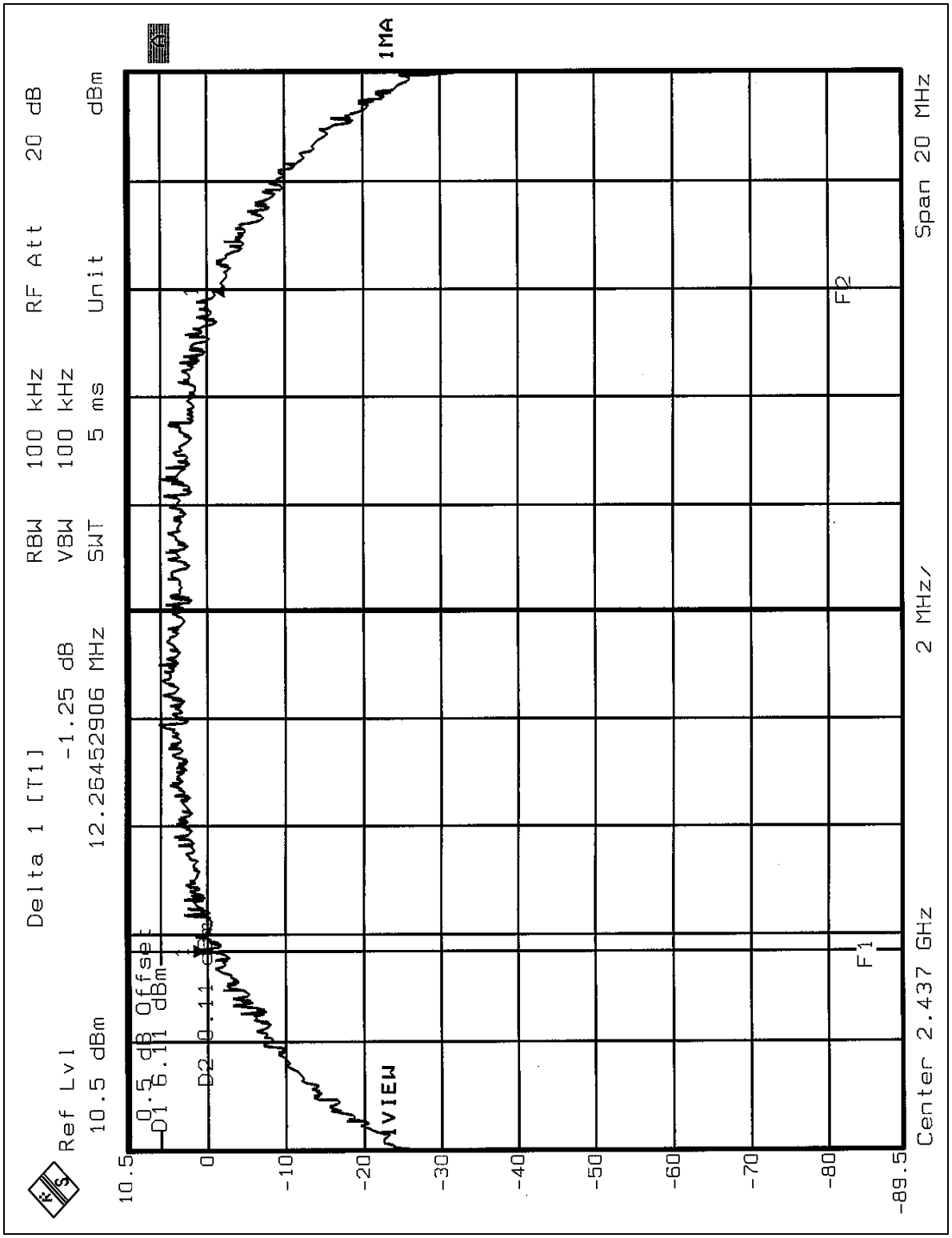
EUT	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
MODE	CCK	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	24deg. C, 67%RH, 991hPa	**TESTED BY**	Match Tsui

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	12.42	0.5	PASS
6	2437	12.26	0.5	PASS
11	2462	12.74	0.5	PASS

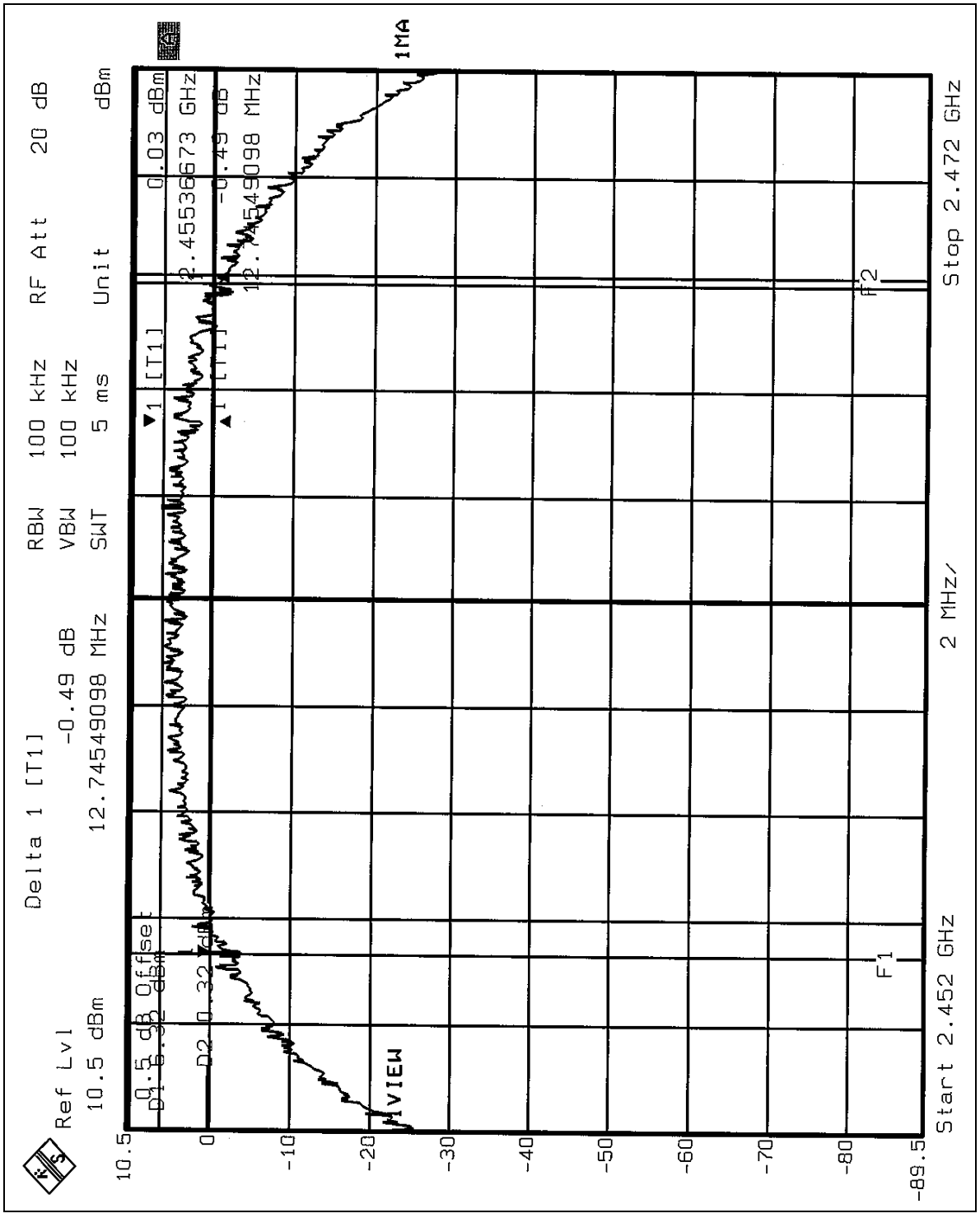
CH1


Delta 1 [T1]
1.81 dB
12.42484970 MHz
RBW 100 kHz
VBW 100 kHz
SWT 5 ms
RF Att 20 dB
Unit dBm
Ref Lvl
10.5 dBm
0.5 dB Offset
D1 6.09 dBm
D2 0.9 dBm
1MA
1VIEW
F1
F2
Center 2.412 GHz
2 MHz/
Span 20 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

CH6


Delta 1 [T1]
-1.25 dB
12.26452906 MHz
RBW 100 kHz
VBW 100 kHz
SWT 5 ms
RF Att 20 dB
Unit dBm
Ref Lvl
10.5 dBm
0.5 dB Offset
D1 6.11 dBm
D2 0.11 dB
1MA
VIEW
F1
F2
Center 2.437 GHz
2 MHz/
Span 20 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

CH11

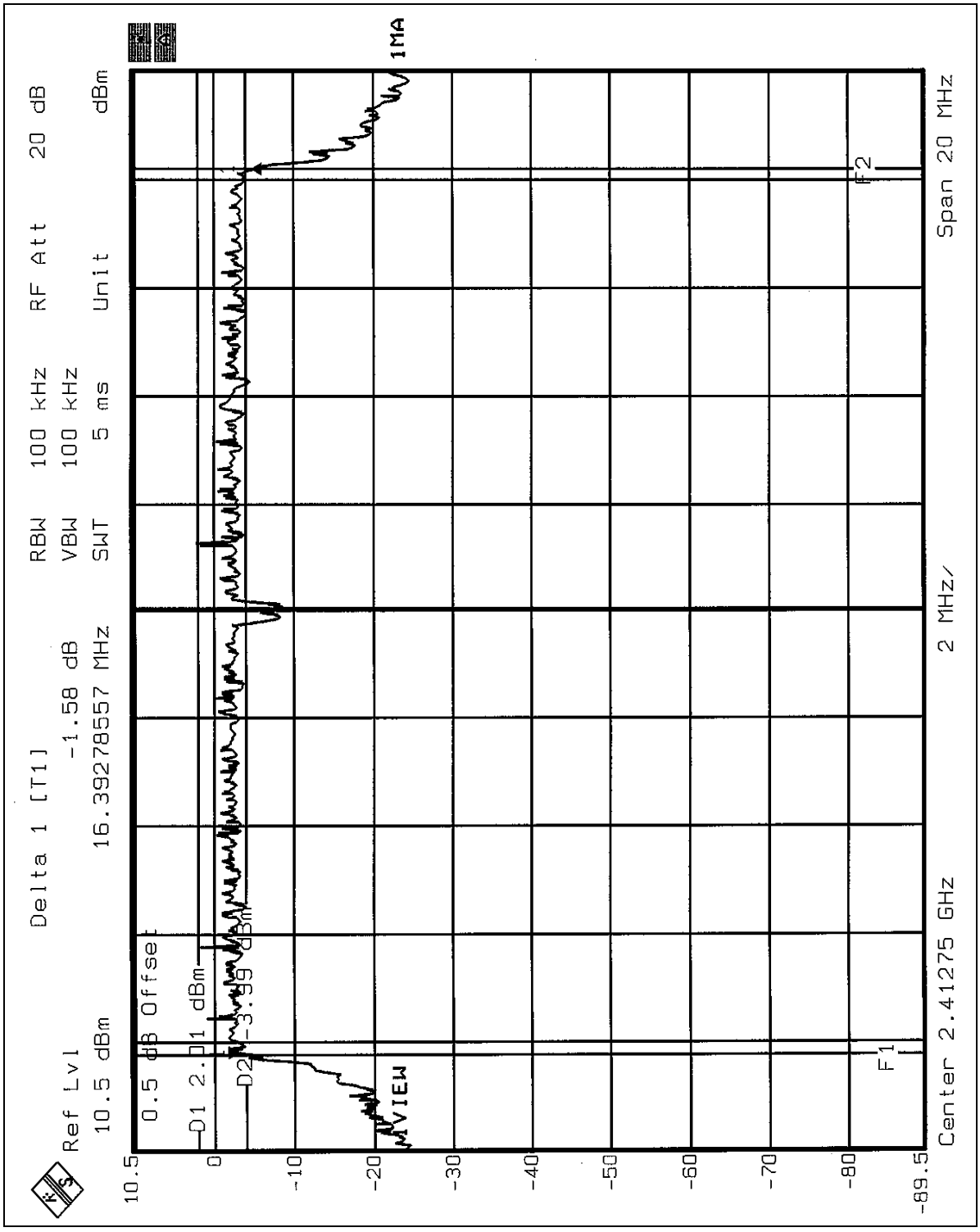

Delta 1 [T1]
-0.49 dB
12.74549098 MHz
Ref Lvl
10.5 dBm
RBW 100 kHz
VBW 100 kHz
SWT 5 ms
RF Att 20 dB
Unit dBm
0.5 dB Offset
D1 6.32 dBm
D2 0.32 dB
1MA
VIEW
1 [T1] 0.03 dBm
2.45536673 GHz
1 [T1] -0.49 dB
12.74549098 MHz
F1
F2
Start 2.452 GHz
2 MHz/
Stop 2.472 GHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

4.3.8 TEST RESULTS (B)

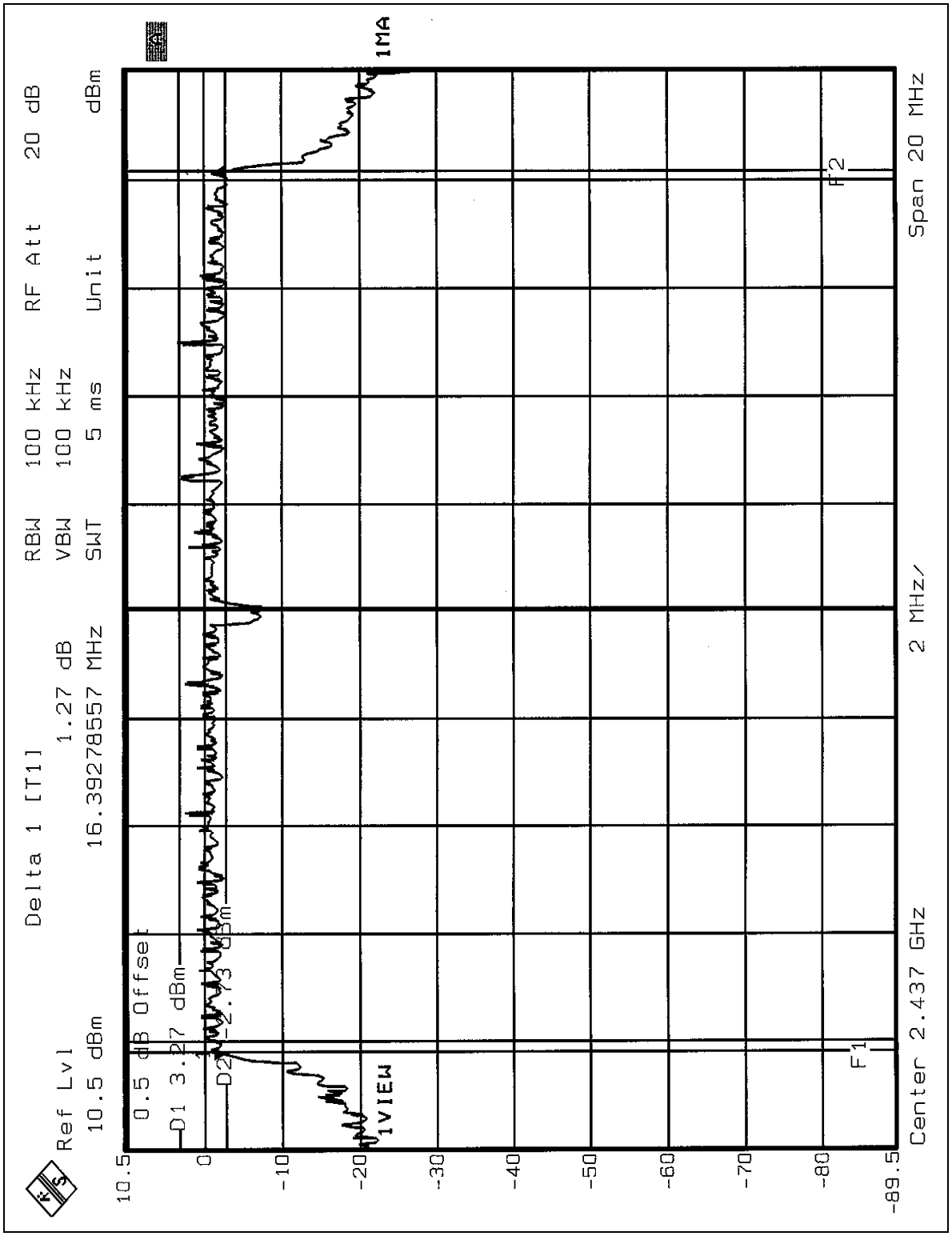
EUT	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
MODE	OFDM	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	24deg. C, 57%RH, 991hPa	**TESTED BY**	Match Tsui

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	16.39	0.5	PASS
6	2437	16.39	0.5	PASS
11	2462	16.31	0.5	PASS

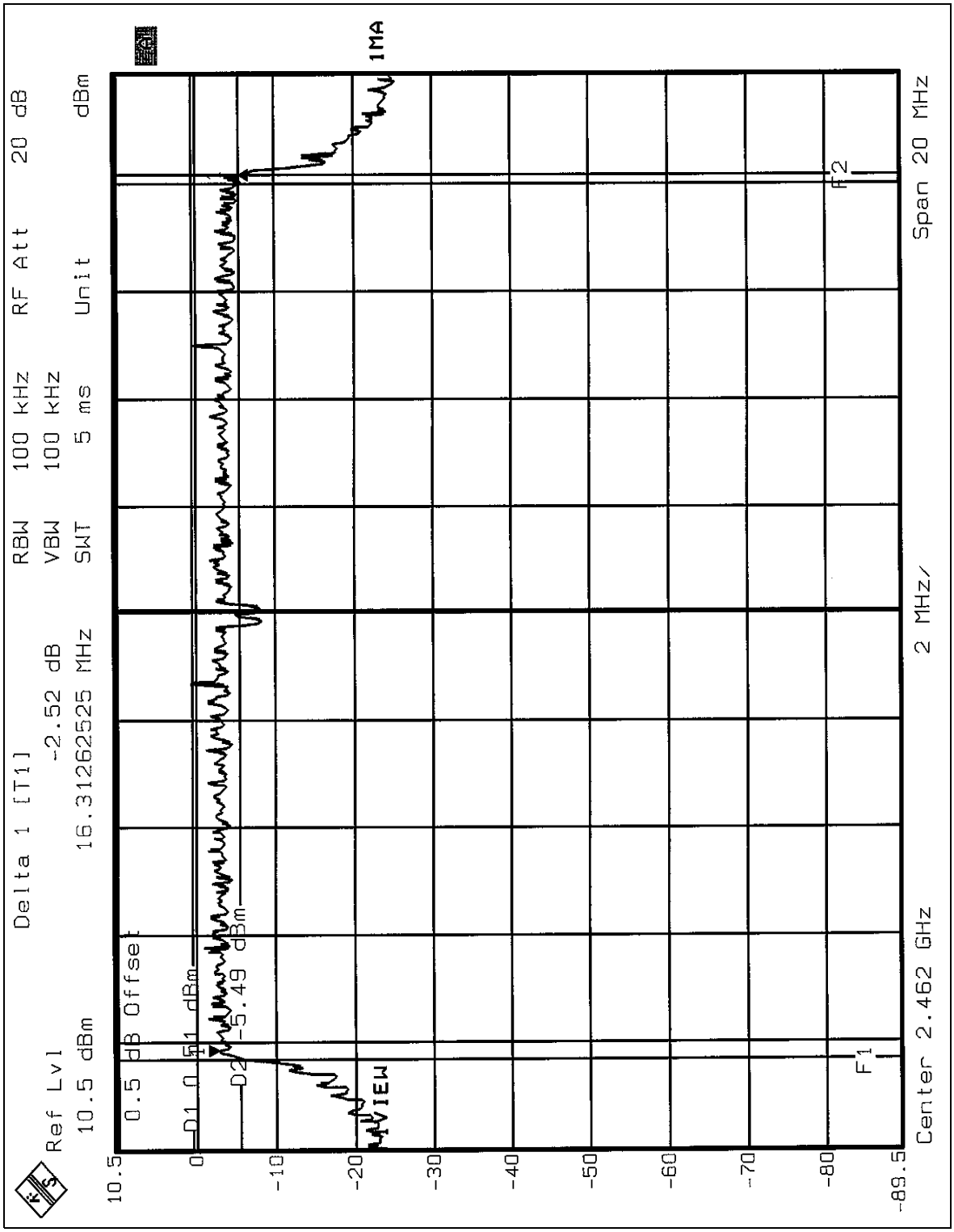
CH1


Delta 1 [T1]
-1.58 dB
16.39278557 MHz
RBW 100 kHz
VBW 100 kHz
SWT 5 ms
RF Att 20 dB
Unit dBm
Ref Lvl
10.5 dBm
0.5 dB Offset
D1 2.01 dBm
D2 -3.99 dBm
1MA
VIEW
F1
F2
Center 2.41275 GHz
2 MHz/
Span 20 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

CH6


Delta 1 [T1]
1.27 dB
16.39278557 MHz
Ref Lvl
10.5 dBm
RBW 100 kHz
VBW 100 kHz
SWT 5 ms
RF Att 20 dB
Unit dBm
0.5 dB Offset
D1 3.27 dBm
D2 -2.73 dBm
1MA
1VIEW
F1
F2
Center 2.437 GHz
2 MHz/
Span 20 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

CH11


Delta 1 [T1]
-2.52 dB
16.31262525 MHz
RBW 100 kHz
VBW 100 kHz
SWT 5 ms
RF Att 20 dB
Unit dBm
Ref Lvl
10.5 dBm
0.5 dB Offset
D1 0 dBm
D2 -5.49 dBm
1MA
VIEW
F1
F2
Center 2.462 GHz
2 MHz/
Span 20 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

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..

.

4.4.1 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.

4.4.2 DEVIATION FROM TEST STANDARD

No deviation

4.4.3 TEST SETUP

4.4.4 EUT OPERATING CONDITIONS

Same as Item 4.3.6

4.4.3 TEST RESULTS (A)

EUT	USB2.0 802.11a/b/g wireless network adapter	MODEL	WUB-500A
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	24deg. C, 67%RH, 991hPa
MODE	CCK	TESTED BY	Match Tsui

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	64.57	18.10	30	PASS
6	2437	63.10	18.00	30	PASS
11	2462	51.29	17.10	30	PASS

4.4.4 TEST RESULTS (B)

EUT	USB2.0 802.11a/b/g wireless network adapter	MODEL	WUB-500A
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	24deg. C, 67%RH, 991hPa
MODE	OFDM	TESTED BY	Match Tsui

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	51.29	17.10	30	PASS
6	2437	64.57	18.10	30	PASS
11	2462	41.69	16.20	30	PASS

4.5 POWER SPECTRAL DENSITY MEASUREMENT

4.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

4.5.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	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.

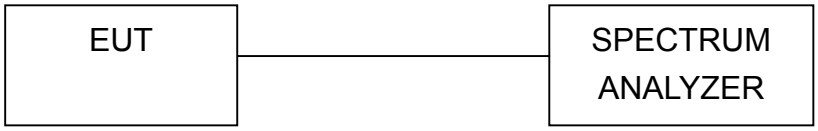
4.5.3 TEST PROCEDURE

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 3kHz RBW and 30kHz VBW, set sweep time = span/3kHz. The power spectral density was measured and recorded.
The sweep time is allowed to be longer than span/3kHz for a full response of the mixer in the spectrum analyzer.

4.5.4 DEVIATION FROM TEST STANDARD

No deviation

4.5.5 TEST SETUP



4.5.6 EUT OPERATING CONDITION

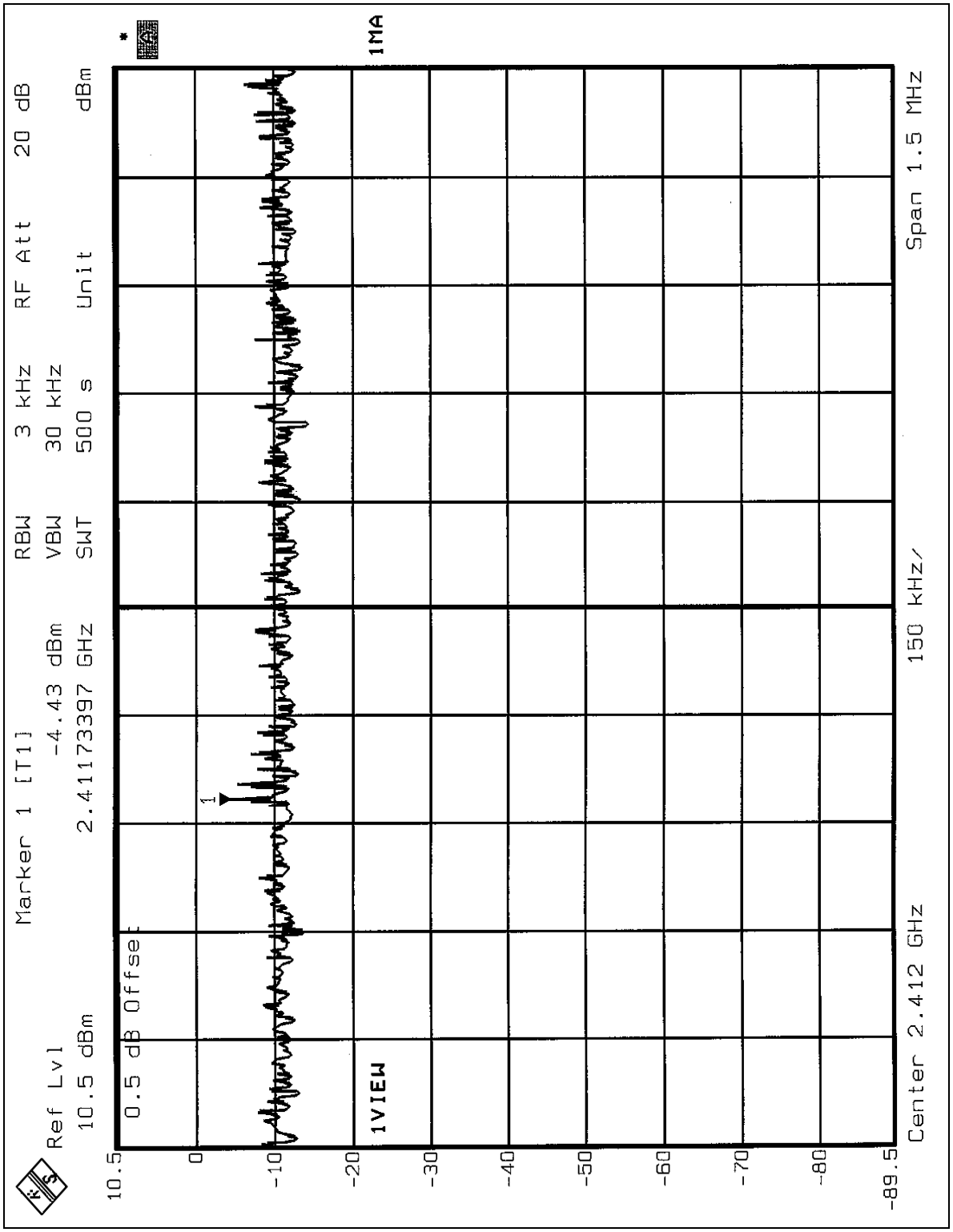
Same as Item 4.3.6

4.5.7 TEST RESULTS (A)

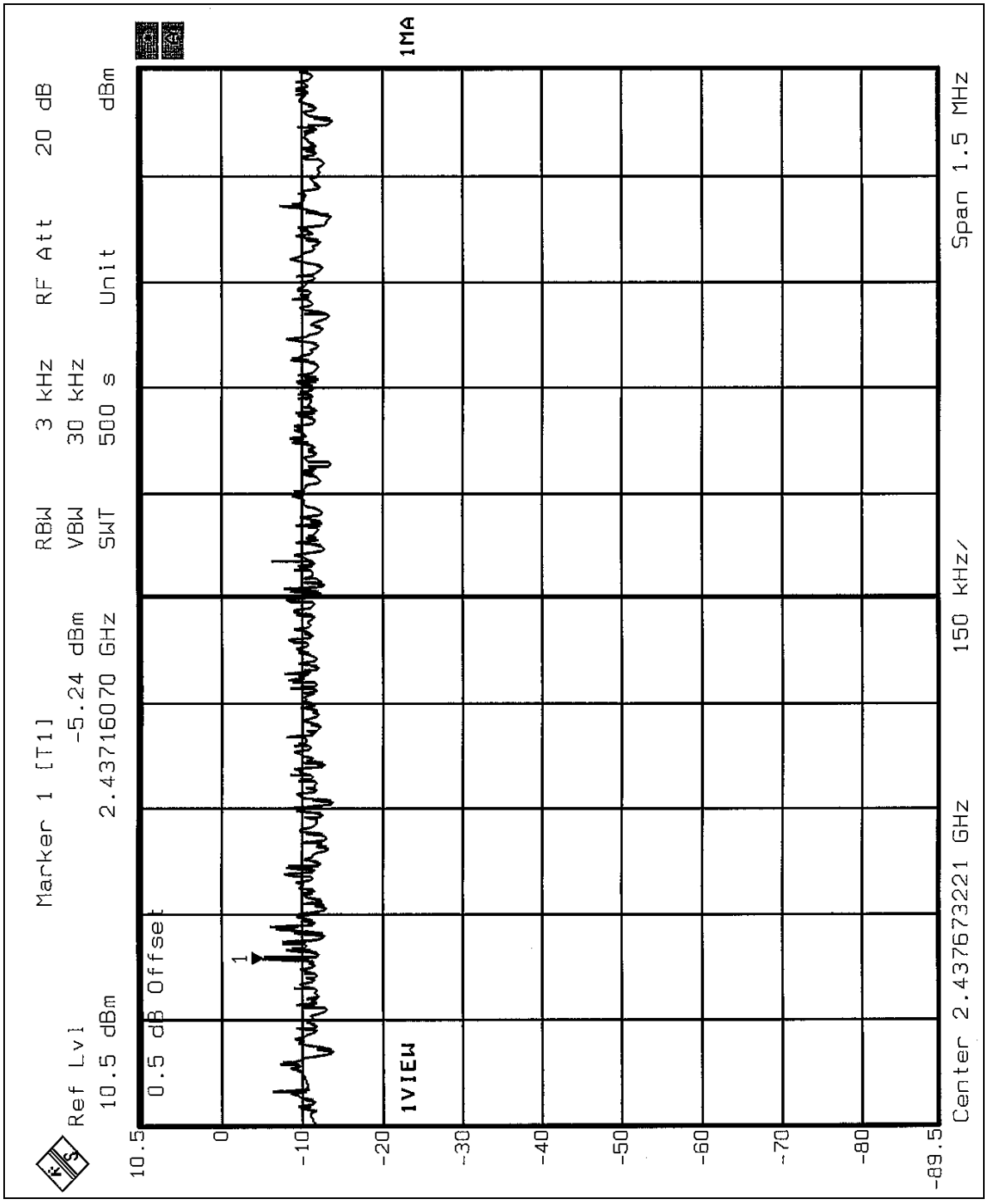
EUT	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
INPUT POWER (SYSTEM)	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	24deg. C, 67%RH, 991hPa
MODE	CCK	**TESTED BY**	Match Tsui

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-4.43	8	PASS
6	2437	-5.24	8	PASS
11	2462	-5.05	8	PASS

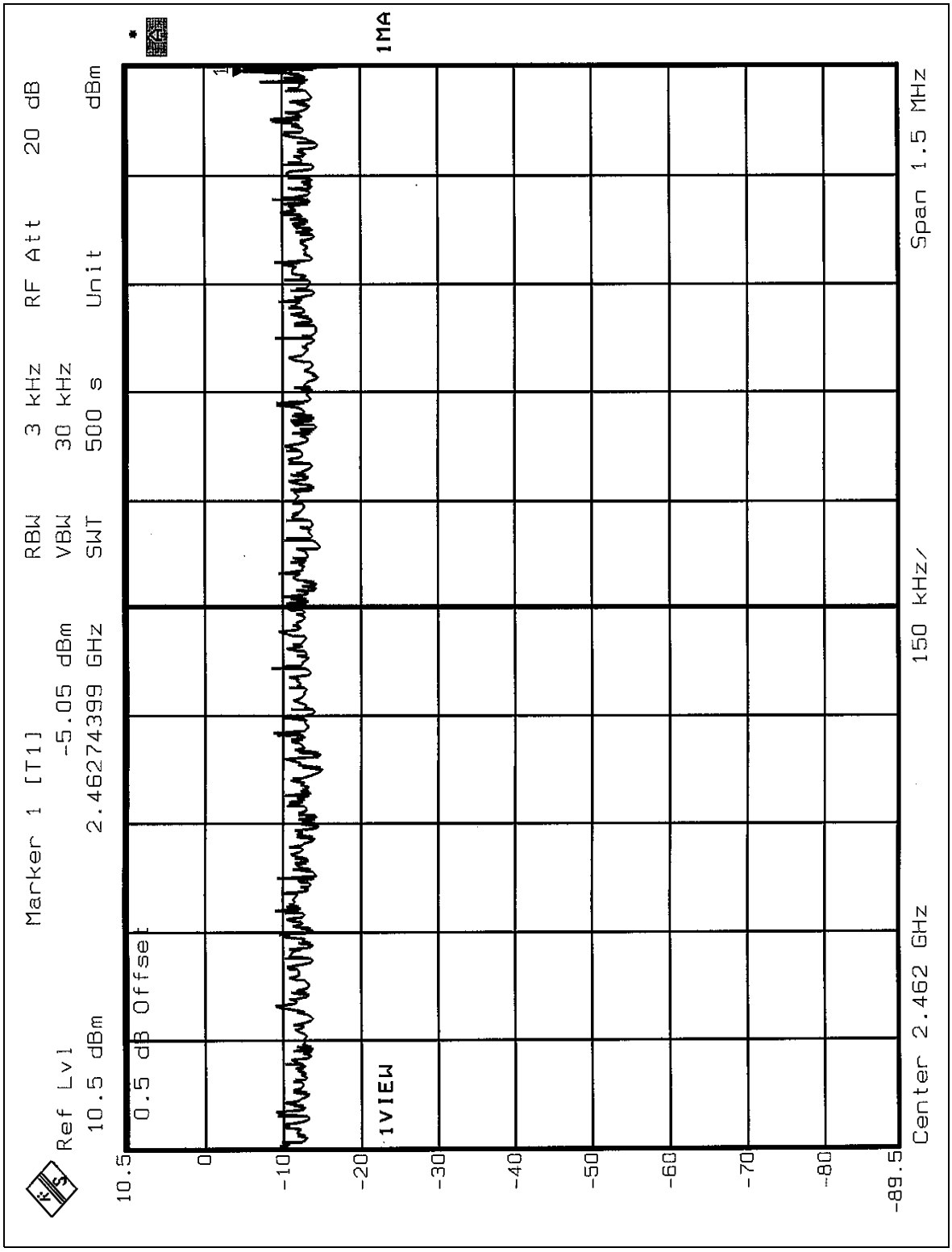
CH1


Ref Lvl
10.5 dBm
0.5 dB Offset
Marker 1 [T1]
-4.43 dBm
2.41173397 GHz
RBW 3 kHz
VBW 30 kHz
SWT 500 s
RF Att 20 dB
Unit dBm
1MA
1VIEW
Center 2.412 GHz
150 kHz/
Span 1.5 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

CH6


Marker 1 [T1]
-5.24 dBm
2.43716070 GHz
RBW 3 kHz
VBW 30 kHz
SWT 500 s
RF Att 20 dB
Unit dBm
Ref Lvl
10.5 dBm
0.5 dB Offset
1MA
1VIEW
Center 2.437673221 GHz
150 kHz/
Span 1.5 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

CH11

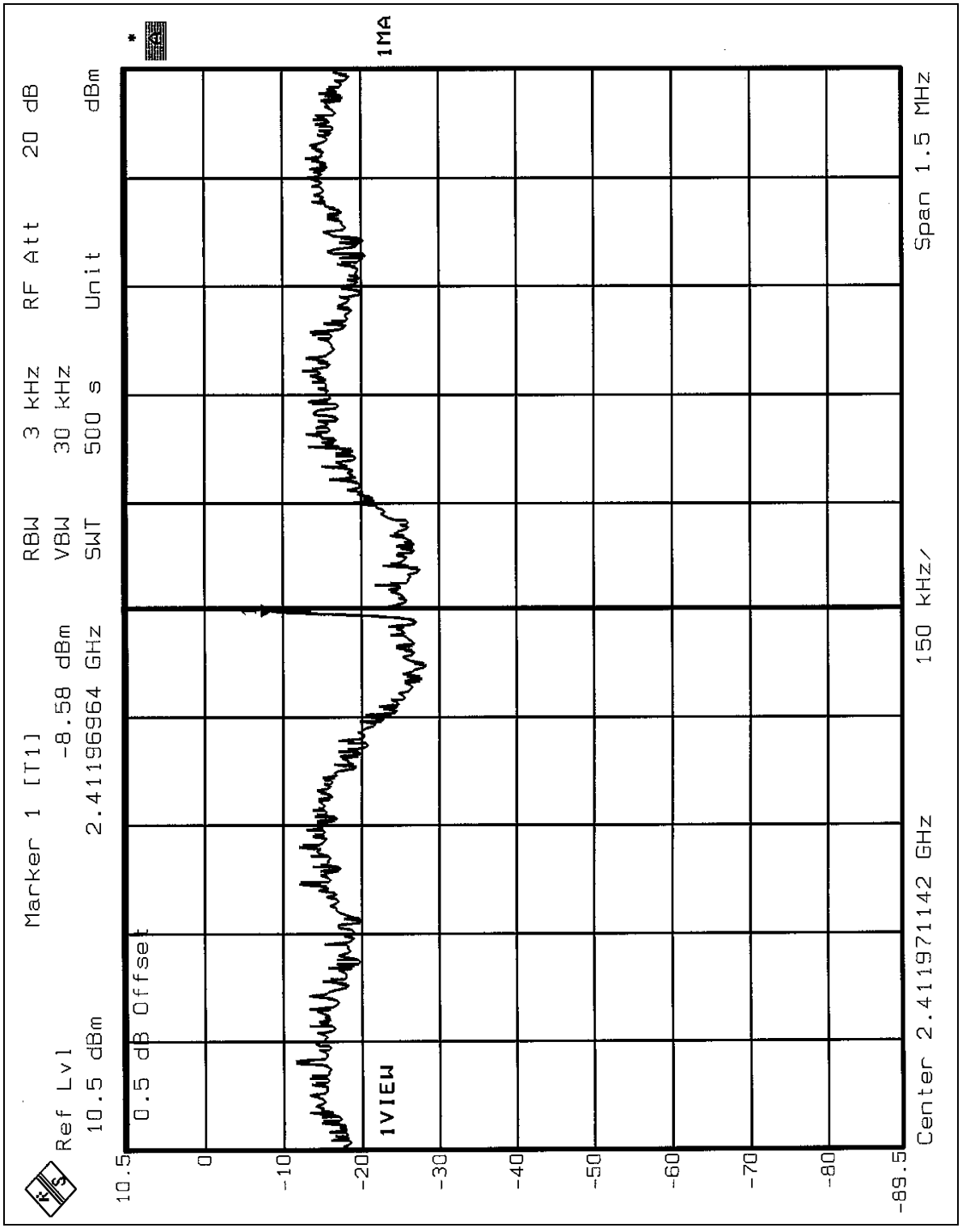

Marker 1 [T1]
-5.05 dBm
2.46274399 GHz
RBW 3 kHz
VBW 30 kHz
SWT 500 s
RF Att 20 dB
Unit dBm
Ref Lvl
10.5 dBm
0.5 dB Offset
1MA
1VIEW
Center 2.462 GHz
150 kHz/
Span 1.5 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

4.5.8 TEST RESULTS (B)

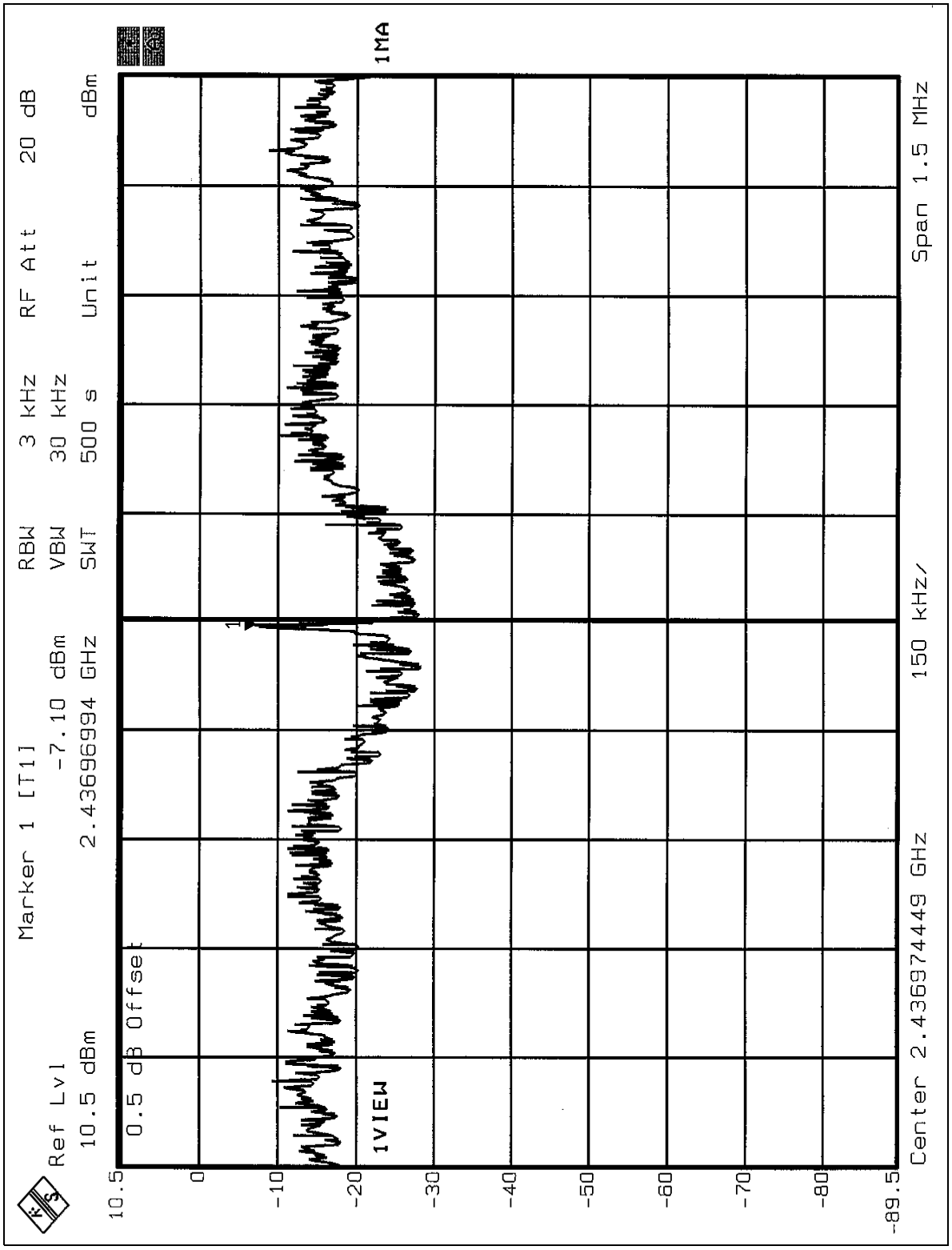
EUT	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
INPUT POWER (SYSTEM)	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	24deg. C, 67%RH, 991hPa
MODE	OFDM	**TESTED BY**	Match Tsui

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-8.58	8	PASS
6	2437	-7.10	8	PASS
11	2462	-9.89	8	PASS

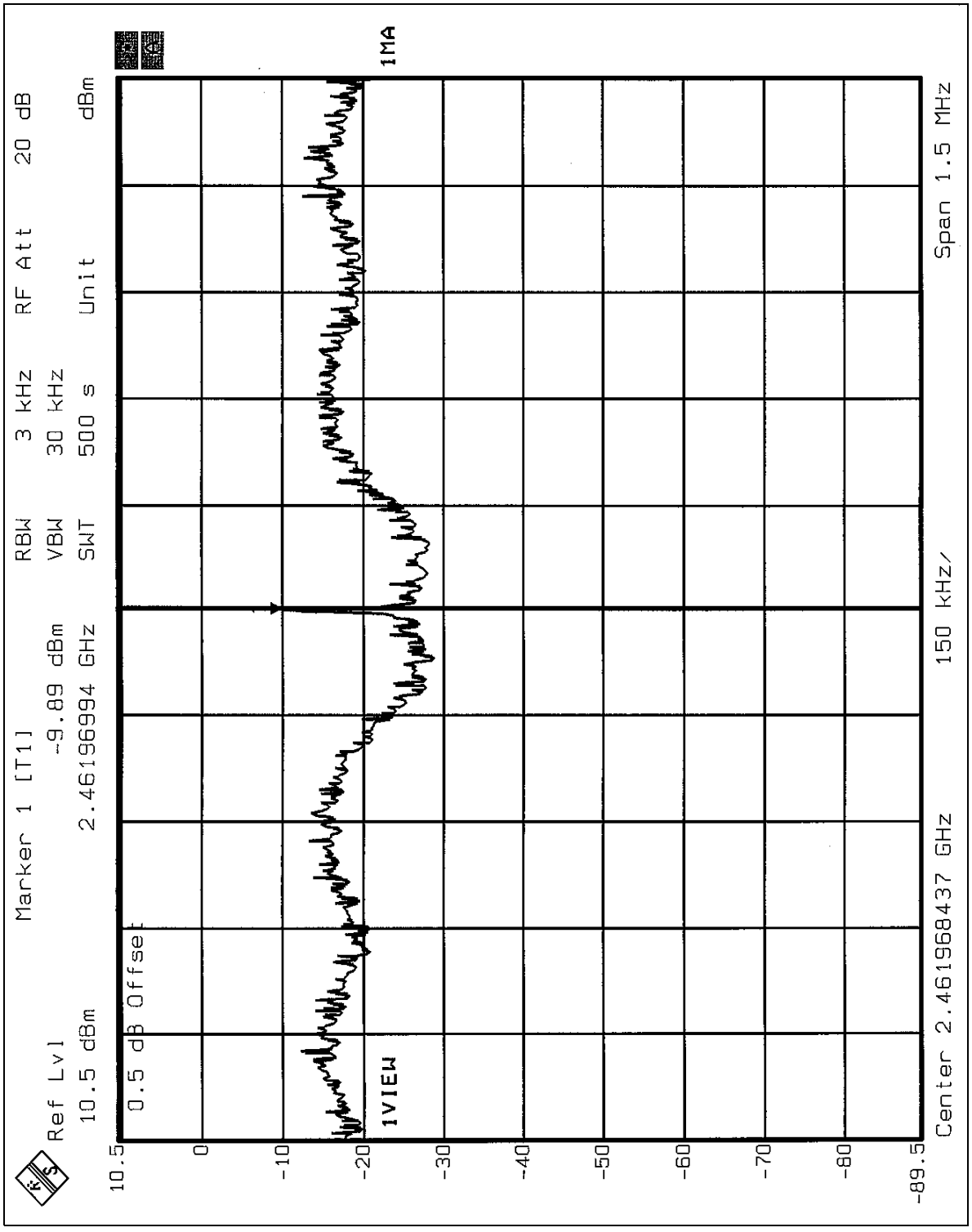
CH1


Marker 1 [T1]
-8.58 dBm
2.41196964 GHz
RBW 3 kHz
VBW 30 kHz
SWT 500 s
RF Att 20 dB
Unit dBm
Ref Lvl
10.5 dBm
0.5 dB Offset
1VIEW
1MA
Center 2.411971142 GHz
150 kHz/
Span 1.5 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

CH6


Ref Lvl
10.5 dBm
0.5 dB Offset
Marker 1 [T1]
-7.10 dBm
2.43696994 GHz
RBW 3 kHz
VBW 30 kHz
SWT 500 s
RF Att 20 dB
Unit dBm
1VIEW
1MA
Center 2.436974449 GHz
150 kHz/
Span 1.5 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

CH11


Marker 1 [T1]
-9.89 dBm
2.46196994 GHz
RBW 3 kHz
VBW 30 kHz
SWT 500 s
RF Att 20 dB
Unit dBm
Ref Lvl
10.5 dBm
0.5 dB Offset
1VIEW
1MA
Center 2.46196437 GHz
150 kHz/
Span 1.5 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

4.6 BAND EDGES MEASUREMENT

4.6.1 LIMITS OF BAND EDGES MEASUREMENT

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

4.6.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	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 100kHz 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).

Test Mode 1

NOTE1: The band edge emission plot of CCK technique on the page 72 shows 55.38dB delta between carrier maximum power and local maximum emission in restrict band (2.3870GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.8 is 104.97dBuV/m, so the maximum field strength in restrict band is 104.97-55.38=49.59dBuV/m which is under 54dBuV/m limit.

NOTE2: The band edge emission plot of CCK technique on the page 74 shows 60.06dB delta between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.8 is 104.97dBuV/m, so the maximum field strength in restrict band is 104.97-60.06=44.19dBuV/m which is under 54 dBuV/m limit.

NOTE3: The band edge emission plot of OFDM technique on the page 76 shows 48.81dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.9 is 100.02dBuV/m, so the maximum field strength in restrict band is 100.02-48.81=51.21dBuV/m which is under 54 dBuV/m limit.

NOTE4: The band edge emission plot of OFDM technique on the page 78 shows 49.16dB delta between carrier maximum power and local maximum emission in restrict band (2.4570GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.9 is 100.41dBuV/m, so the maximum field strength in restrict band is 100.41-49.16=51.25dBuV/m which is under 54dBuV/m limit.

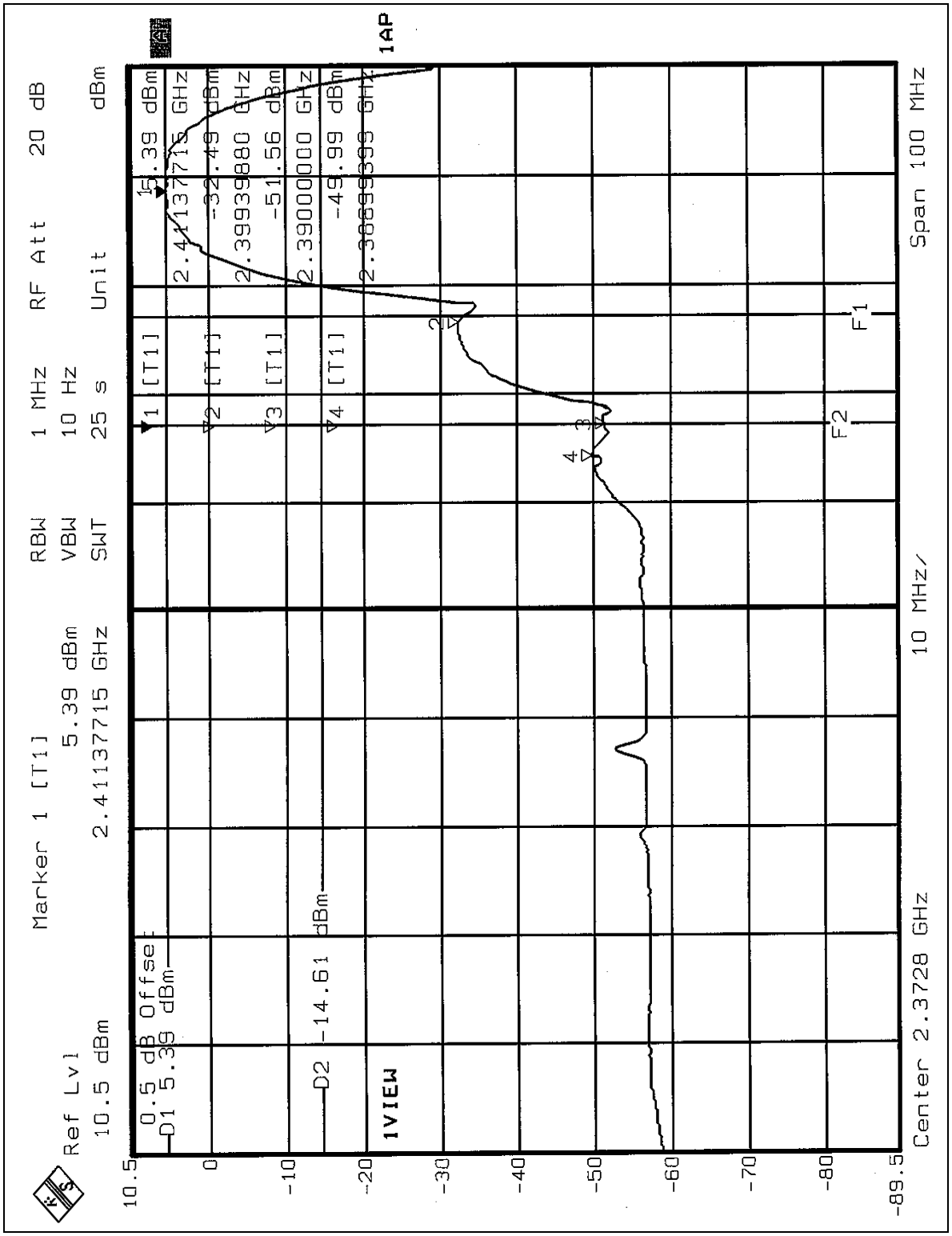
Test Mode 2

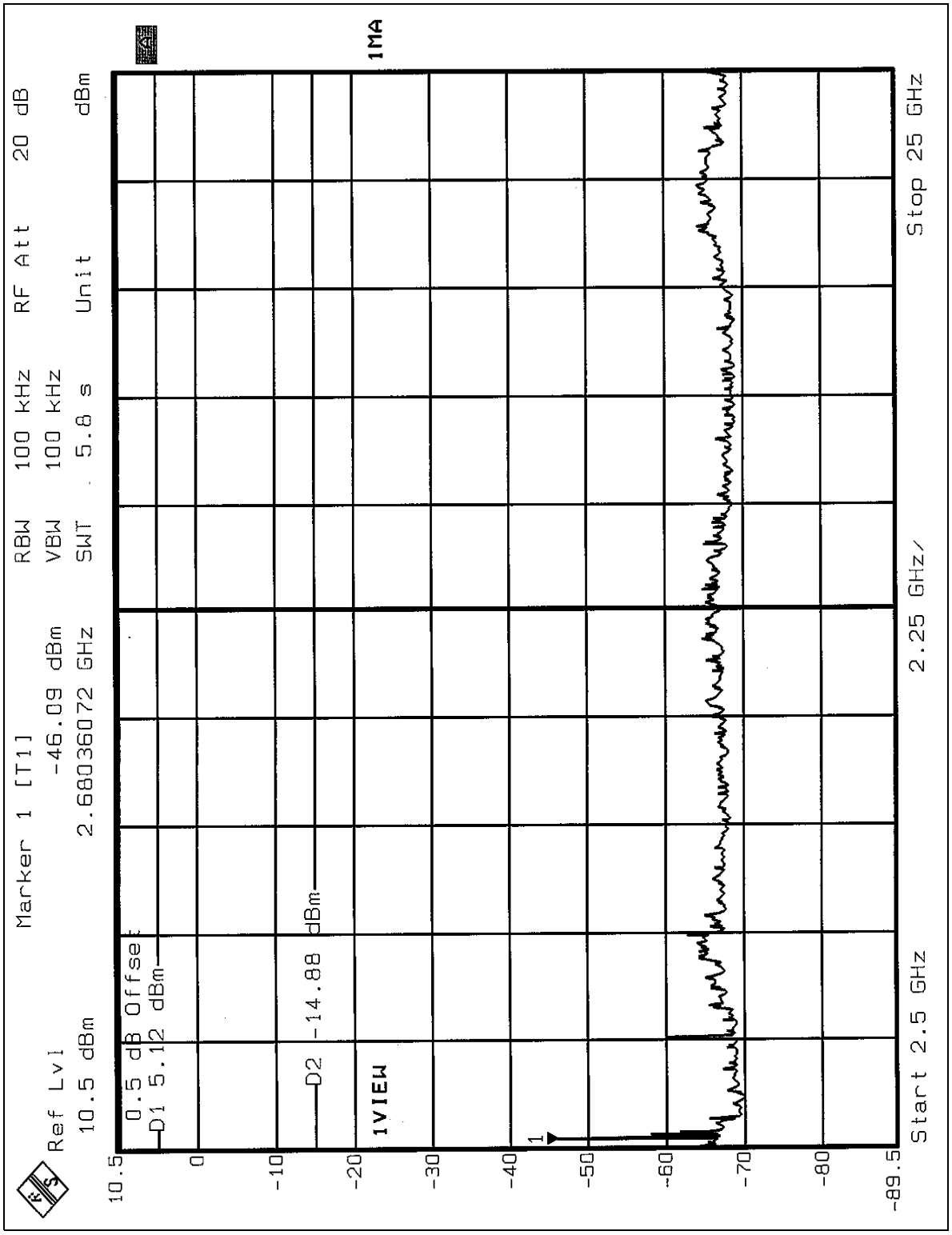
NOTE1: The band edge emission plot of CCK technique on the page 72 shows 55.38dB delta between carrier maximum power and local maximum emission in restrict band (2.3870GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.8 is 103.25dBuV/m, so the maximum field strength in restrict band is 103.25-55.38=47.87dBuV/m which is under 54dBuV/m limit.

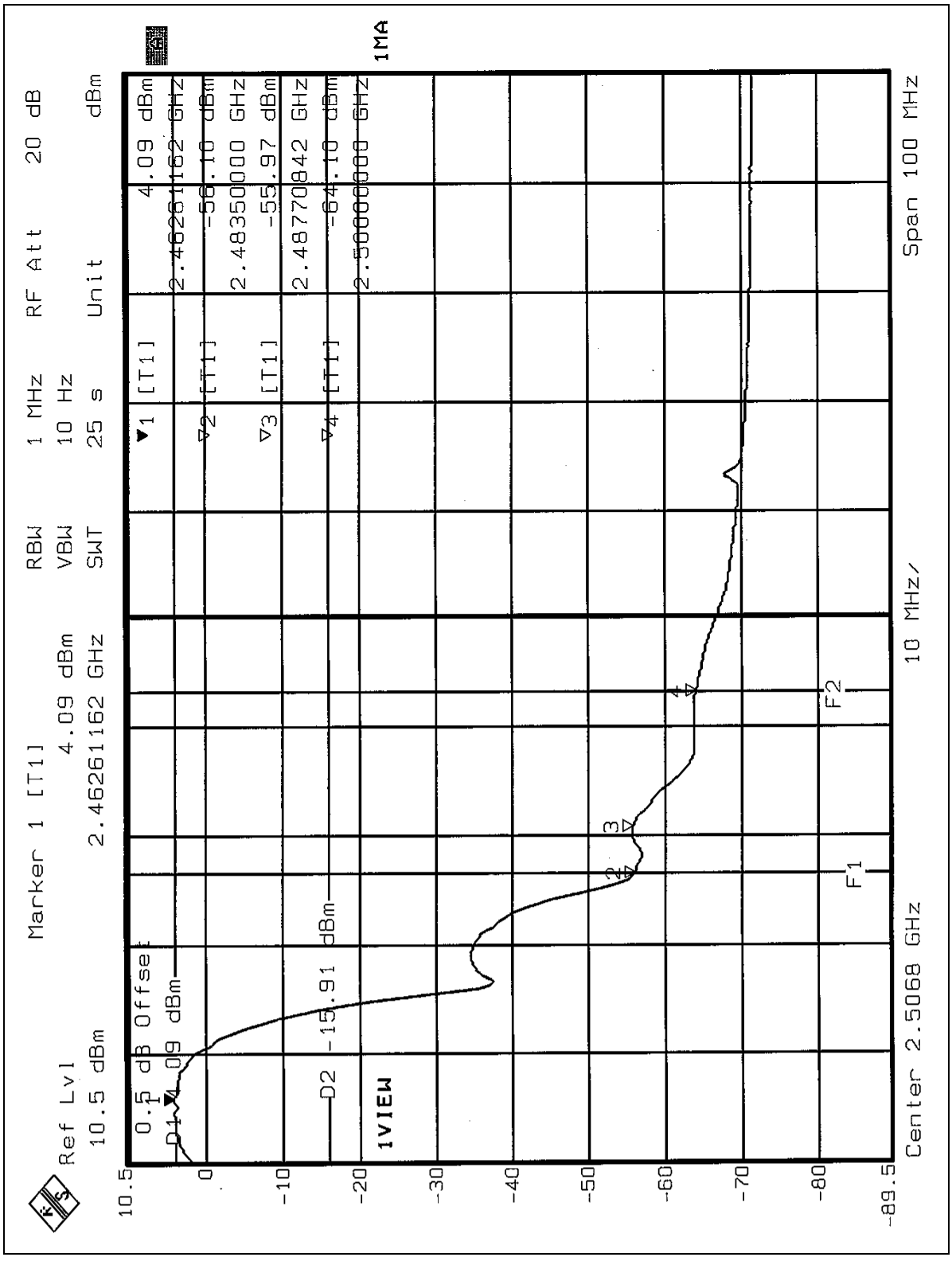
NOTE2: The band edge emission plot of CCK technique on the page 74 shows 60.06dB delta between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.8 is 102.80dBuV/m, so the maximum field strength in restrict band is 102.80-60.06=42.74dBuV/m which is under 54 dBuV/m limit.

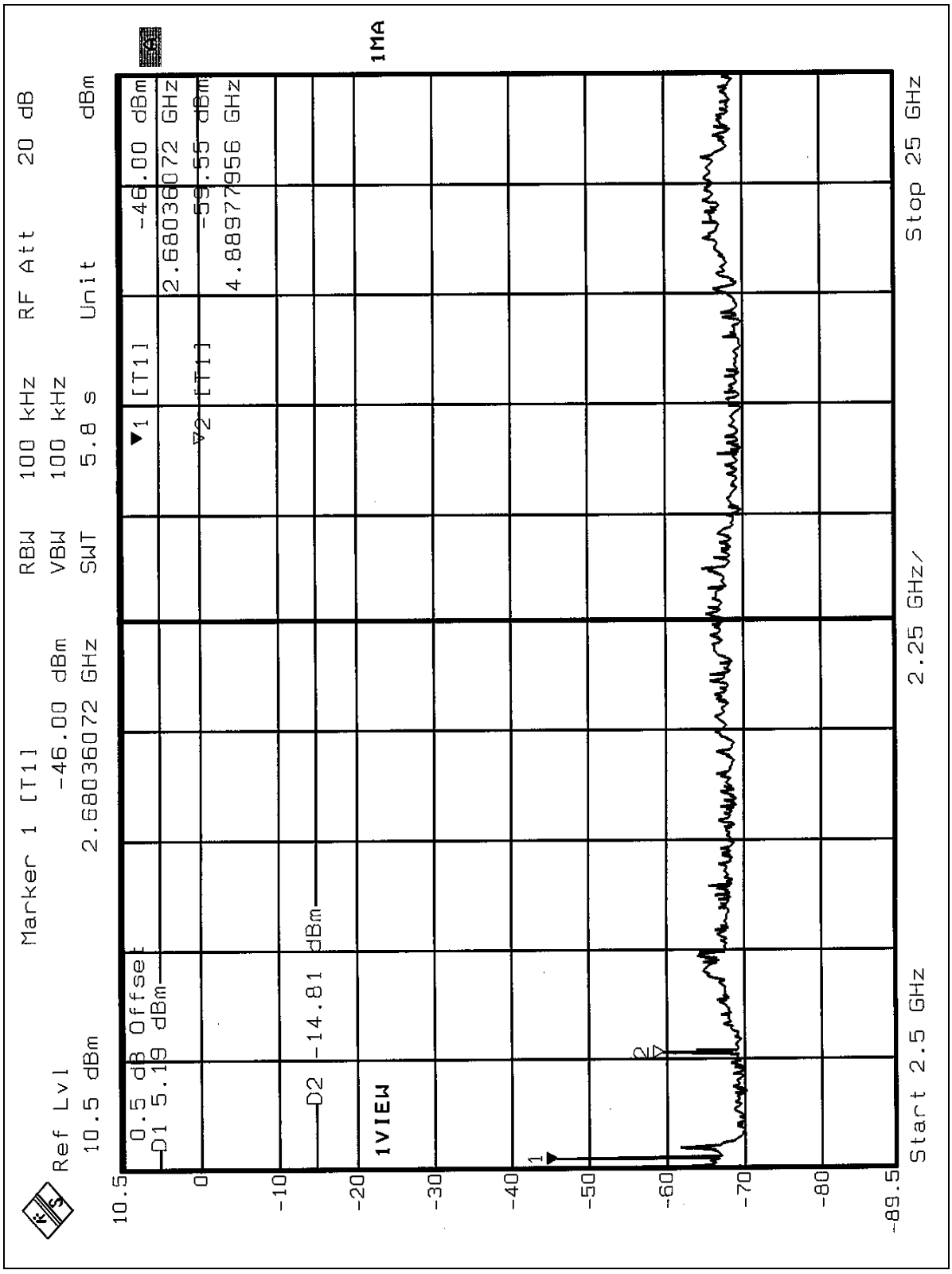
NOTE3: The band edge emission plot of OFDM technique on the page 76 shows 48.81dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.9 is 99.29dBuV/m, so the maximum field strength in restrict band is 99.29-48.81=50.48dBuV/m which is under 54 dBuV/m limit.

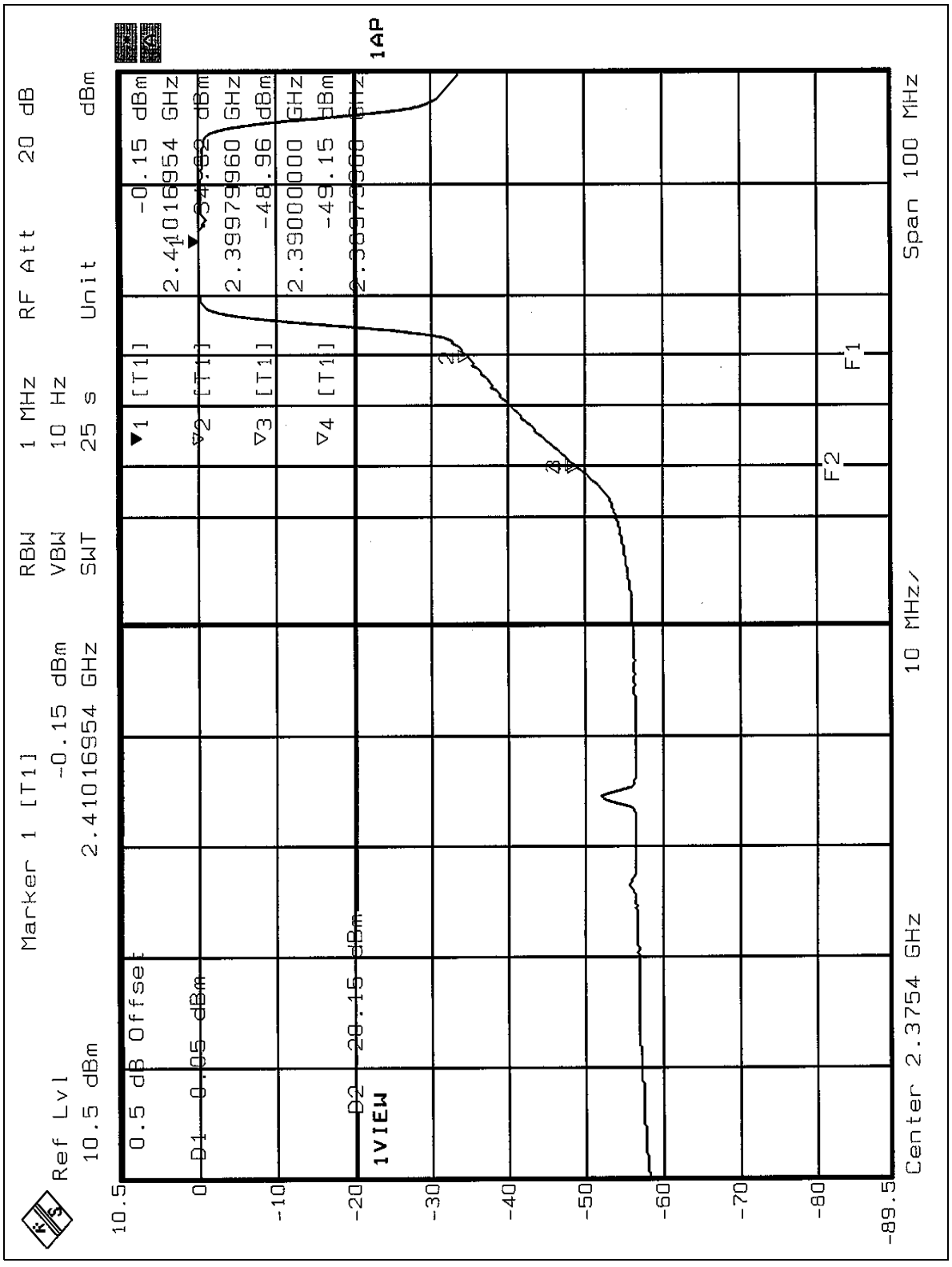
NOTE4: The band edge emission plot of OFDM technique on the page 78 shows 49.16dB delta between carrier maximum power and local maximum emission in restrict band (2.4570GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.9 is 98.34dBuV/m, so the maximum field strength in restrict band is 98.34-49.16=49.18dBuV/m which is under 54dBuV/m limit.

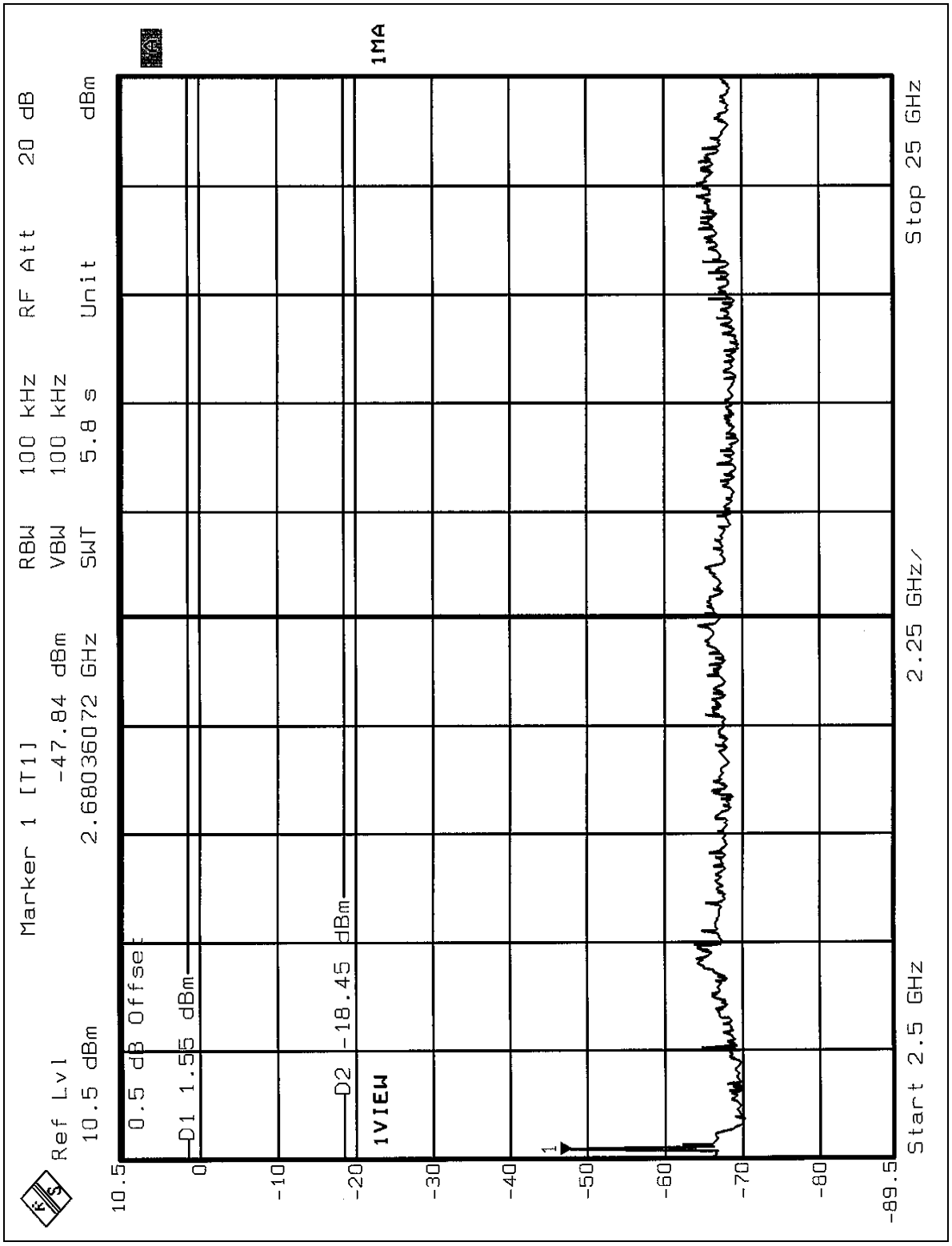

Marker 1 [T1]
5.39 dBm
2.41137715 GHz
RBW 1 MHz
VBW 10 Hz
SWT 25 s
RF Att 20 dB
Unit dBm
Ref Lvl
10.5 dBm
0.5 dB Offset
D1 5.39 dBm
D2 -14.61 dBm
1 [T1] 5.39 dBm 2.41137715 GHz
2 [T1] -32.49 dBm 2.39939880 GHz
3 [T1] -51.56 dBm 2.39000000 GHz
4 [T1] -49.99 dBm 2.38699399 GHz
1VIEW
1AP
Center 2.3728 GHz
10 MHz/
Span 100 MHz
F1
F2
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

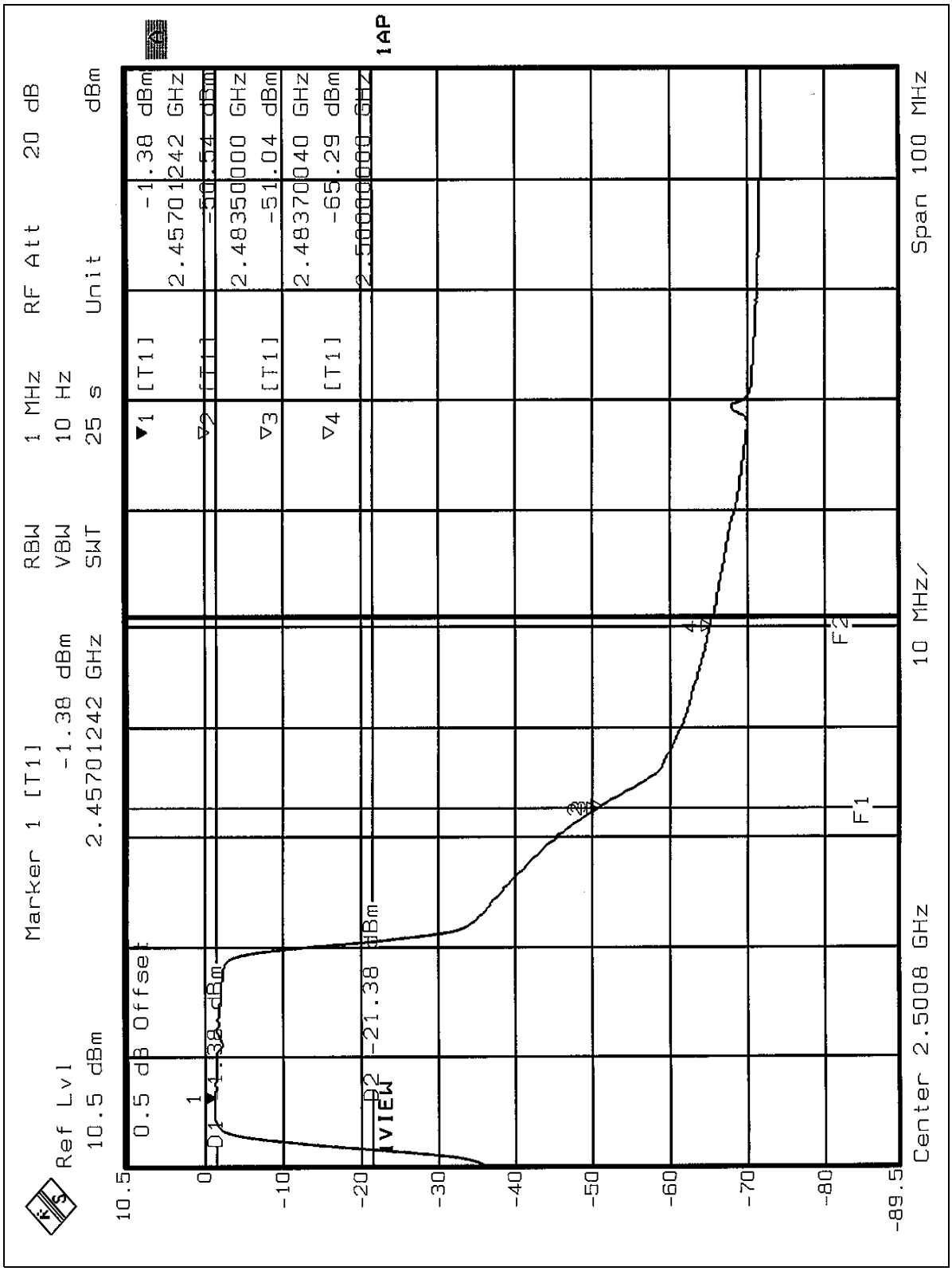

Marker 1 [T1]
-46.09 dBm
2.68036072 GHz
RBW 100 kHz
VBW 100 kHz
SWT 5.8 s
RF Att 20 dB
Unit dBm
Ref Lvl
10.5 dBm
0.5 dB Offset
D1 5.12 dBm
D2 -14.88 dBm
1VIEW
1MA
Start 2.5 GHz
2.25 GHz/
Stop 25 GHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

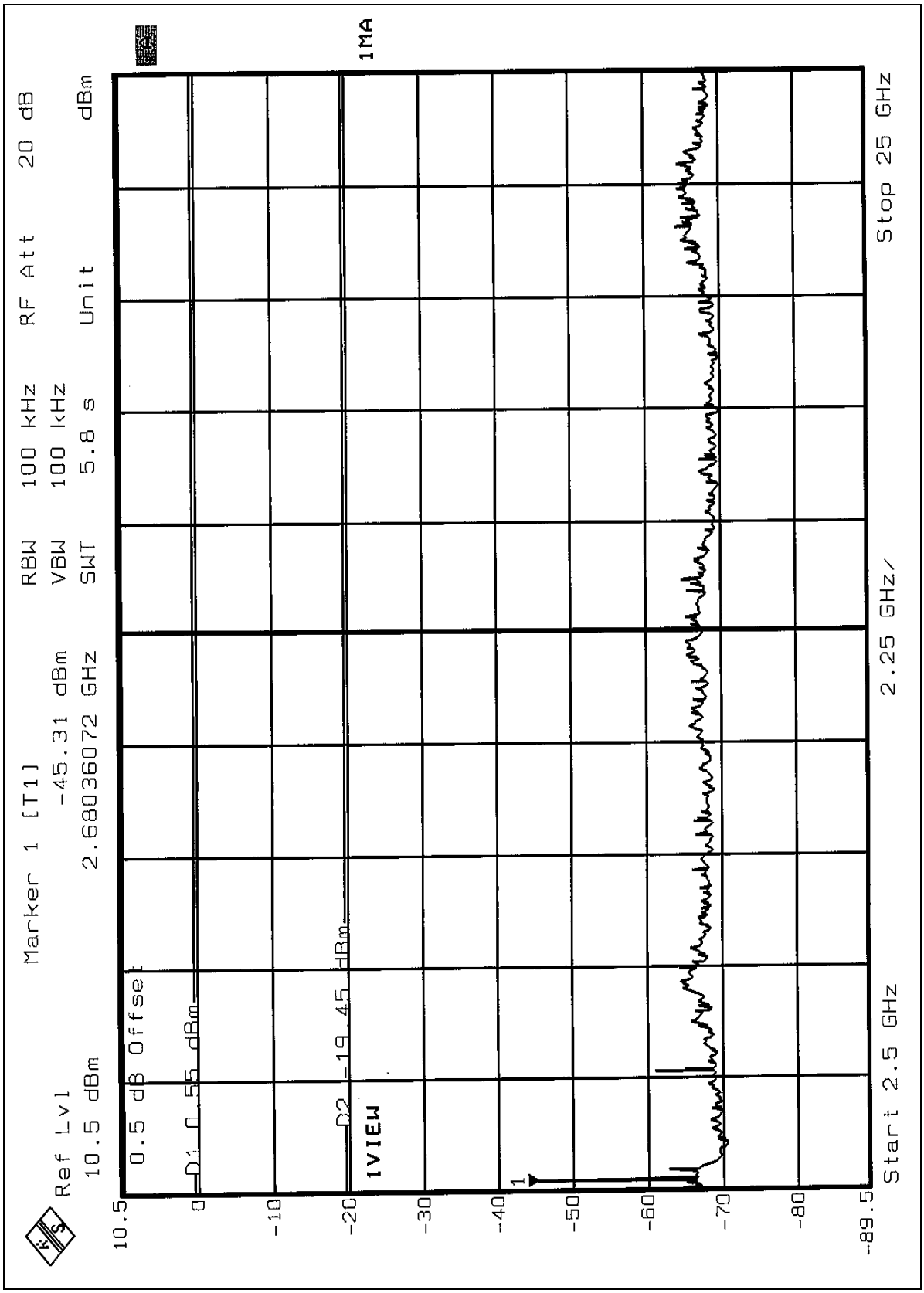

Marker 1 [T1]
4.09 dBm
2.46261162 GHz
RBW 1 MHz
VBW 10 Hz
SWT 25 s
RF Att 20 dB
Unit dBm
Ref Lvl
10.5 dBm
0.5 dB Offset
-4.09 dBm
-15.91 dBm
1VIEW
1MA
Center 2.5068 GHz
10 MHz/
Span 100 MHz
F1
F2
1 [T1] 4.09 dBm 2.46261162 GHz
2 [T1] -56.10 dBm 2.48350000 GHz
3 [T1] -55.97 dBm 2.48770842 GHz
4 [T1] -64.10 dBm 2.50000000 GHz


Marker 1 [T1]
-46.00 dBm
2.68036072 GHz
RBW 100 kHz
VBW 100 kHz
SWT 5.8 s
RF Att 20 dB
Unit dBm
Ref Lvl
10.5 dBm
0.5 dB Offset
D1 5.19 dBm
D2 -14.81 dBm
1VIEW
1MA
▼1 [T1] -46.00 dBm 2.68036072 GHz
▼2 [T1] -59.55 dBm 4.88977956 GHz
Start 2.5 GHz
2.25 GHz/
Stop 25 GHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5


Marker 1 [T1]
-0.15 dBm
2.41016954 GHz
Ref Lvl
10.5 dBm
RBW 1 MHz
VBW 10 Hz
SWT 25 s
RF Att 20 dB
Unit dBm
0.5 dB Offset
D1 0.05 dBm
D2 20.15 dBm
1VIEW
1AP
Center 2.3754 GHz
10 MHz/
Span 100 MHz
F1
F2
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5


Marker 1 [T1]
-47.84 dBm
2.68036072 GHz
RBW 100 kHz
VBW 100 kHz
SWT 5.8 s
RF Att 20 dB
Unit dBm
Ref Lvl
10.5 dBm
0.5 dB Offset
D1 1.55 dBm
D2 -18.45 dBm
1VIEW
1MA
Start 2.5 GHz
2.25 GHz/
Stop 25 GHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5


Marker 1 [T1]
-1.38 dBm
2.45701242 GHz
RBW 1 MHz
VBW 10 Hz
SWT 25 s
RF Att 20 dB
Unit dBm
Ref Lvl
10.5 dBm
0.5 dB Offset
1AP
1 [T1] -1.38 dBm 2.45701242 GHz
2 [T1] -50.54 dBm
3 [T1] -51.04 dBm 2.48370040 GHz
4 [T1] -65.29 dBm 2.50000000 GHz
D1 -1.38 dBm
D2 -21.38 dBm
VIEW
F1
F2
Center 2.5008 GHz
10 MHz/
Span 100 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5


Ref Lvl
10.5 dBm
0.5 dB Offset
D1 0.55 dBm
D2 -19.45 dBm
Marker 1 [T1]
-45.31 dBm
2.68036072 GHz
RBW 100 kHz
VBW 100 kHz
SWT 5.8 s
RF Att 20 dB
Unit dBm
1MA
1VIEW
Start 2.5 GHz
2.25 GHz/
Stop 25 GHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

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 are Dipole and Printed antenna with UFL connector and Printed antennas without connector. The maximum Gain of the antenna is 2.0dBi.

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 0.5-5 5-30	66 to 56 56 60	56 to 46 46 50

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

5.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESCS30	100288	Dec. 11, 2004
RF signal cable Woken	5D-FB	Cable-HyC02-01	Mar. 07, 2005
LISN ROHDE & SCHWARZ	ESH2-Z5	100100	Mar. 10, 2005
LISN ROHDE & SCHWARZ	ESH3-Z5	100311	Mar. 04, 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 2.

3. The VCCI Site Registration No. is C-2047.

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.

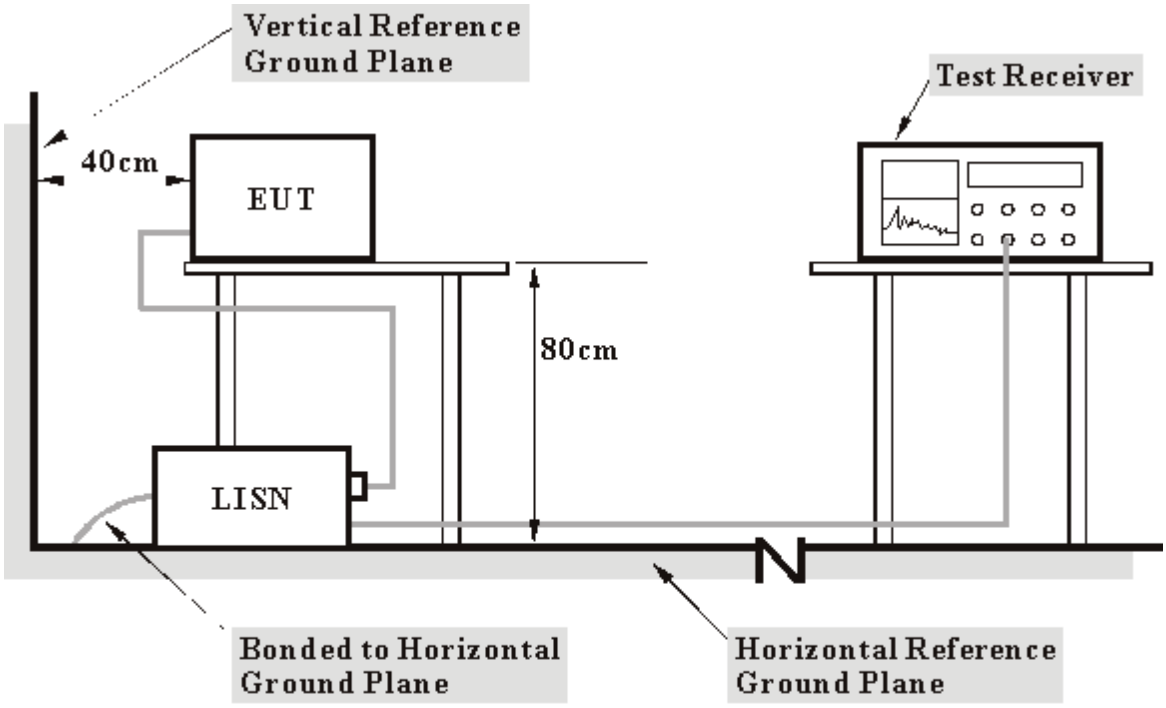
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

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

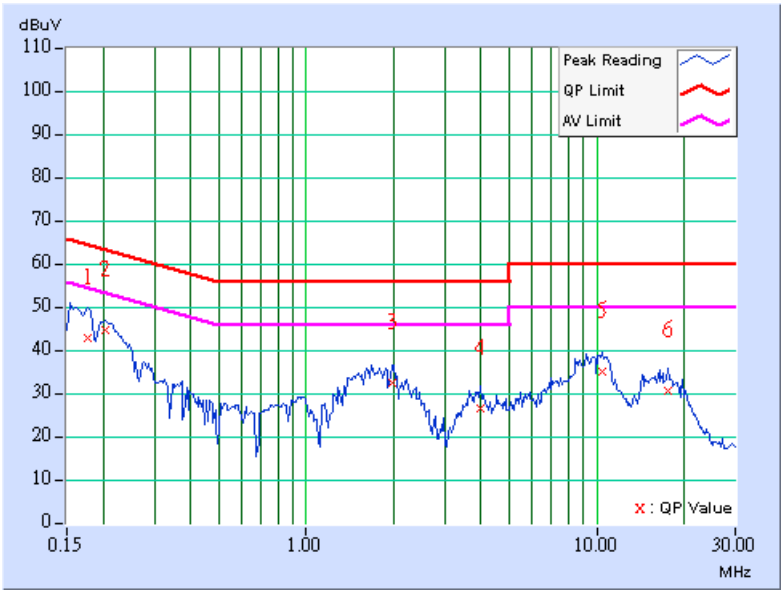
Same as 4.1.6

5.1.7 TEST RESULTS

EUT	USB2.0 802.11a/b/g wireless network adapter	MODEL	WUB-500A
INPUT POWER (SYSTEM)	120Vac, 60 Hz	6dB BANDWIDTH	9 kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa	PHASE	Line (L)
TEST MODE	Test Mode 1, 2	TESTED BY	Match Tsui

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.177	0.10	42.16	-	42.26	-	64.61	54.61	-22.35	-
2	**0.205**	**0.10**	**44.01**	**-**	**44.11**	**-**	**63.42**	**53.42**	**-19.31**	**-**
3	1.980	0.26	31.69	-	31.95	-	56.00	46.00	-24.05	-
4	3.965	0.31	25.81	-	26.12	-	56.00	46.00	-29.88	-
5	10.406	0.54	34.52	-	35.06	-	60.00	50.00	-24.94	-
6	17.695	0.82	29.91	-	30.73	-	60.00	50.00	-29.27	-

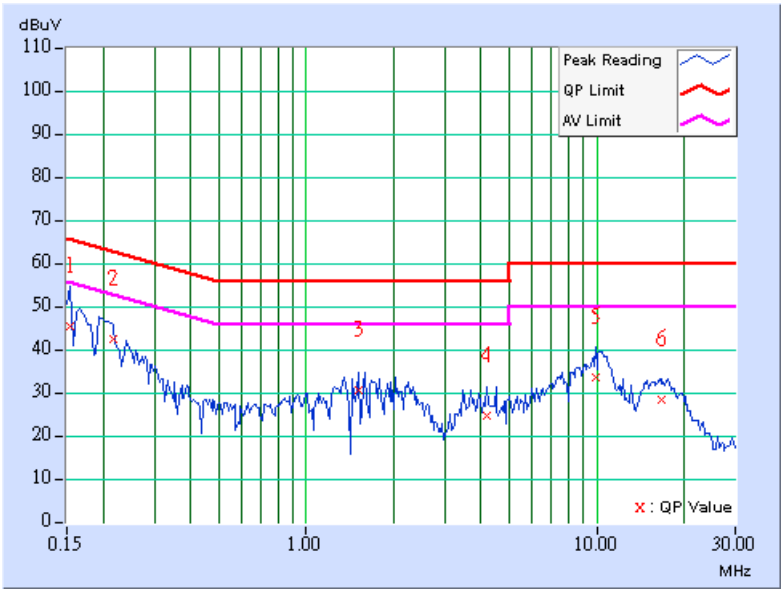
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	USB2.0 802.11a/b/g wireless network adapter	MODEL	WUB-500A
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	26deg. C, 62%RH, 991hPa	6dB BANDWIDTH	9 kHz
TEST MODE	Test Mode 1, 2	TESTED BY	Match Tsui

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.154	0.10	45.04	-	45.14	-	65.79	55.79	-20.65	-
2	0.216	0.10	41.91	-	42.01	-	62.96	52.96	-20.94	-
3	1.520	0.25	30.30	-	30.55	-	56.00	46.00	-25.45	-
4	4.207	0.31	24.13	-	24.44	-	56.00	46.00	-31.56	-
5	9.879	0.49	33.29	-	33.78	-	60.00	50.00	-26.22	-
6	16.816	0.59	27.96	-	28.55	-	60.00	50.00	-31.45	-

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

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

5.2.3 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESI7	100033	Jun, 08, 2005
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100040	Dec. 15, 2004
BILOG Antenna SCHWARZBECK	VULB9168	9168-153	Feb. 03, 2005
HORN Antenna SCHWARZBECK	9120D	9120D-408	Feb. 03, 2005
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA 9170243	Feb. 23, 2005
Preamplifier Agilent	8447D	2944A10633	Jan. 15, 2005
Preamplifier Agilent	8449B	3008A01964	Jan. 27, 2005
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	218183/4	Mar. 05, 2005
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	218195/4	Mar. 05, 2005
Software ADT.	ADT_Radiated_V5.14	NA	NA
Antenna Tower inn-co GmbH	MA 4000	013303	NA
Antenna Tower Controller inn-co GmbH	CO2000	017303	NA
Turn Table ADT.	TT100.	TT93021703	NA
Turn Table Controller ADT.	SC100.	SC93021703	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 Chamber 2.

3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.

4. The IC Site Registration No. is IC4924-3.

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 camber. 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.

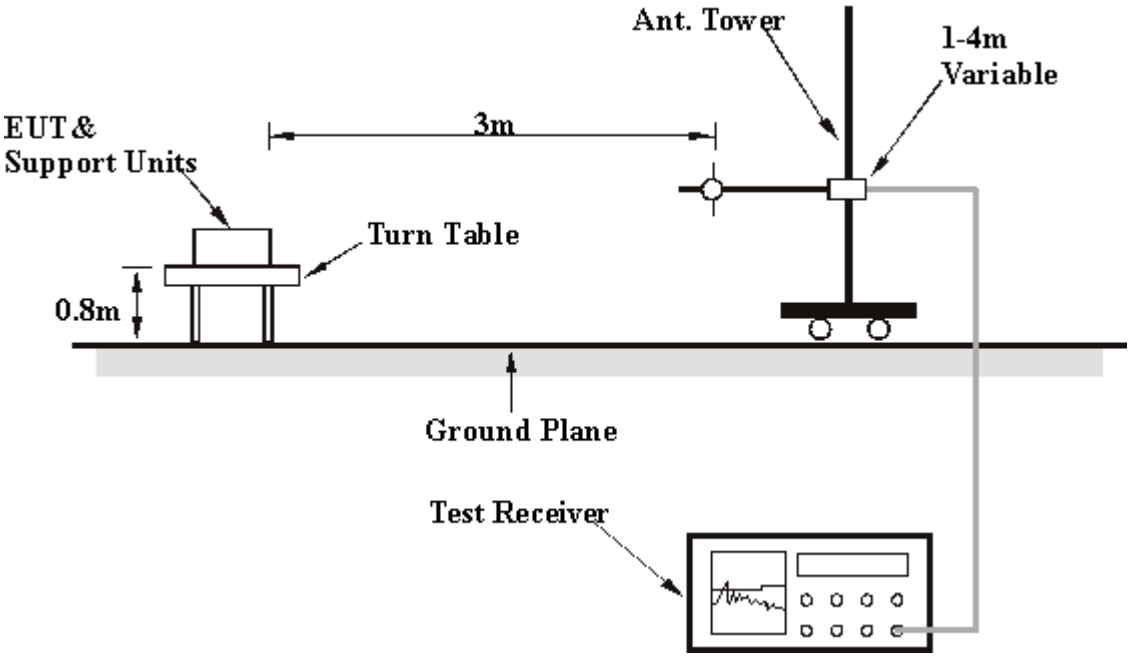
NOTE:

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	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
MODE	Channel 11	**FREQUENCY RANGE**	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 62%RH, 991hPa	**TEST MODE**	Test Mode 1
TESTED BY	Match Tsui		

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	61.10	29.00 QP	40.00	-11.00	4.00 H	13	15.17	13.83
2	117.47	38.09 QP	43.50	-5.41	1.50 H	76	25.46	12.63
3	160.24	32.81 QP	43.50	-10.69	1.75 H	280	18.10	14.71
4	199.12	33.04 QP	43.50	-10.46	2.00 H	262	21.51	11.53
5	249.66	35.86 QP	46.00	-10.14	1.00 H	289	22.45	13.41
6	360.46	33.31 QP	46.00	-12.69	1.00 H	346	17.22	16.09
7	440.16	32.04 QP	46.00	-13.96	1.00 H	301	14.15	17.88
8	519.86	28.42 QP	46.00	-17.58	1.25 H	184	9.27	19.15
9	599.56	31.88 QP	46.00	-14.12	1.50 H	280	10.65	21.24
10	667.60	31.64 QP	46.00	-14.36	1.00 H	148	9.50	22.14
11	801.72	31.56 QP	46.00	-14.44	1.75 H	88	7.77	23.79

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	61.10	29.65 QP	40.00	-10.35	1.00 V	292	15.82	13.83
2	113.59	30.97 QP	43.50	-12.53	1.25 V	331	18.67	12.30
3	160.24	35.81 QP	43.50	-7.69	1.25 V	313	21.10	14.71
4	249.66	33.21 QP	46.00	-12.79	2.00 V	346	19.80	13.41
5	401.28	32.87 QP	46.00	-13.13	1.00 V	73	15.88	16.99
6	440.16	34.43 QP	46.00	-11.57	1.00 V	61	16.55	17.88
7	455.71	34.93 QP	46.00	-11.07	1.00 V	85	16.75	18.18
8	560.68	28.06 QP	46.00	-17.94	1.00 V	346	7.94	20.12
9	720.08	32.77 QP	46.00	-13.23	1.25 V	52	9.79	22.98
10	797.84	32.38 QP	46.00	-13.62	1.75 V	55	8.61	23.77

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	USB2.0 802.11a/b/g wireless network adapter	MODEL	WUB-500A
MODE	Channel 11	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	TEST MODE	Test Mode 2
TESTED BY	Match Tsui		

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	119.42	31.11 QP	43.50	-12.39	1.50 H	67	18.14	12.97
2	173.85	32.38 QP	43.50	-11.12	1.50 H	64	18.83	13.55
3	249.66	29.17 QP	46.00	-16.83	1.00 H	229	15.96	13.22
4	278.82	33.52 QP	46.00	-12.48	1.00 H	238	19.38	14.14
5	360.46	30.14 QP	46.00	-15.86	1.00 H	244	14.26	15.88
6	399.34	29.78 QP	46.00	-16.22	1.00 H	187	13.04	16.74
7	449.88	28.42 QP	46.00	-17.58	1.00 H	292	10.35	18.07
8	601.50	32.61 QP	46.00	-13.39	1.00 H	256	11.58	21.03
9	679.26	30.94 QP	46.00	-15.06	1.00 H	328	8.90	22.04
10	720.08	31.84 QP	46.00	-14.16	1.00 H	325	9.05	22.79
11	731.74	36.75 QP	46.00	-9.25	1.00 H	292	13.67	23.08
12	799.78	33.02 QP	46.00	-12.98	1.00 H	304	9.20	23.82
13	863.93	35.33 QP	46.00	-10.67	1.50 H	22	10.88	24.45

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	66.93	32.57 QP	40.00	-7.43	1.00 V	106	19.64	12.93
2	133.03	31.12 QP	43.50	-12.38	1.00 V	19	17.18	13.94
3	249.66	24.08 QP	46.00	-21.92	1.25 V	158	10.86	13.22
4	366.29	27.85 QP	46.00	-18.15	1.25 V	350	11.84	16.01
5	399.34	29.54 QP	46.00	-16.46	1.75 V	25	12.80	16.74
6	440.16	36.34 QP	46.00	-9.66	1.00 V	136	18.53	17.81
7	449.88	33.75 QP	46.00	-12.25	1.50 V	187	15.68	18.07
8	599.56	34.08 QP	46.00	-11.92	1.00 V	1	13.08	21.00
9	735.63	33.89 QP	46.00	-12.11	1.50 V	7	10.72	23.18
10	801.54	33.17 QP	46.00	-12.83	1.50 V	147	9.34	23.83
11	865.87	34.46 QP	46.00	-11.54	1.00 V	271	9.98	24.48

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	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
FREQUENCY RANGE	1 ~ 40 GHz	**CHANNEL**	1
ENVIRONMENTAL CONDITIONS	25deg. C, 62%RH, 991hPa	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TEST MODE**	Test Mode 1
TESTED BY	Match Tsui		

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	3453.00	49.89 PK	68.30	-18.41	1.00 H	227	14.31	35.58
2	#5150.00	47.07 PK	74.00	-26.93	1.19 H	225	7.97	39.10
2	#5150.00	36.77 AV	54.00	-17.23	1.19 H	225	-2.33	39.10
3	*5180.00	102.07 PK			1.19 H	225	62.90	39.17
3	*5180.00	91.77 AV			1.19 H	225	52.60	39.17
4	10360.00	61.28 PK	68.30	-7.02	1.22 H	289	15.99	45.29
5	#15540.00	65.41 PK	74.00	-8.59	1.17 H	65	16.87	48.54
5	#15540.00	49.64 AV	54.00	-4.36	1.17 H	65	1.10	48.54

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	3453.00	51.01 PK	68.30	-17.29	1.06 V	355	15.43	35.58
2	#5150.00	50.94 PK	74.00	-23.06	1.15 V	360	11.84	39.10
2	#5150.00	39.96 AV	54.00	-14.04	1.15 V	360	0.86	39.10
3	*5180.00	105.94 PK			1.15 V	360	66.77	39.17
3	*5180.00	94.96 AV			1.15 V	360	55.79	39.17
4	10360.00	56.90 PK	68.30	-11.40	1.08 V	205	11.61	45.29
5	#15540.00	63.43 PK	74.00	-10.57	1.06 V	263	14.89	48.54
5	#15540.00	49.63 AV	54.00	-4.37	1.06 V	263	1.09	48.54

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	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
FREQUENCY RANGE	1 ~ 40 GHz	**CHANNEL**	4
ENVIRONMENTAL CONDITIONS	25deg. C, 62%RH, 991hPa	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TEST MODE**	Test Mode 1
TESTED BY	Match Tsui		

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	3493.00	48.93 PK	68.30	-19.37	1.21 H	18	13.24	35.70
2	*5240.00	103.24 PK			1.21 H	216	64.06	39.18
2	*5240.00	92.59 AV			1.21 H	216	53.41	39.18
3	10480.00	60.27 PK	68.30	-8.03	1.28 H	292	14.18	46.08
4	#15720.00	61.94 PK	74.00	-12.06	1.24 H	111	14.18	47.76
4	#15720.00	48.73 AV	54.00	-5.27	1.24 H	111	0.97	47.76

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	3493.00	52.46 PK	68.30	-15.84	1.20 V	288	16.77	35.70
2	*5240.00	105.36 PK			1.10 V	31	66.18	39.18
2	*5240.00	94.69 AV			1.10 V	31	55.51	39.18
3	10480.00	59.42 PK	68.30	-8.88	1.09 V	241	13.33	46.08
4	#15720.00	61.91 PK	74.00	-12.09	1.18 V	76	14.15	47.76
4	#15720.00	49.04 AV	54.00	-4.96	1.18 V	76	1.28	47.76

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	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
FREQUENCY RANGE	1 ~ 40 GHz	**CHANNEL**	5
ENVIRONMENTAL CONDITIONS	25deg. C, 62%RH, 991hPa	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TEST MODE**	Test Mode 1
TESTED BY	Match Tsui		

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	3506.00	48.17 PK	68.30	-20.13	1.06 H	125	12.43	35.73
2	*5260.00	102.80 PK			1.20 H	300	63.64	39.16
2	*5260.00	93.80 AV			1.20 H	300	54.64	39.16
3	10520.00	60.42 PK	68.30	-7.88	1.17 H	208	14.27	46.16
4	#15780.00	62.60 PK	74.00	-11.40	1.09 H	293	15.34	47.25
4	#15780.00	48.25 AV	54.00	-5.75	1.09 H	293	0.99	47.25

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	3506.00	48.25 PK	68.30	-20.05	1.05 V	112	12.51	35.73
2	*5260.00	105.12 PK			1.02 V	296	65.96	39.16
2	*5260.00	94.73 AV			1.02 V	296	55.57	39.16
3	10520.00	58.68 PK	68.30	-9.62	1.08 V	254	12.53	46.16
4	#15780.00	63.79 PK	74.00	-10.21	1.07 V	257	16.53	47.25
4	#15780.00	49.01 AV	54.00	-4.99	1.07 V	257	1.75	47.25

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	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
FREQUENCY RANGE	1 ~ 40 GHz	**CHANNEL**	8
ENVIRONMENTAL CONDITIONS	25deg. C, 62%RH, 991hPa	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TEST MODE**	Test Mode 1
TESTED BY	Match Tsui		

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	3546.00	49.49 PK	68.30	-18.81	1.00 H	278	13.64	35.85
2	*5320.00	103.98 PK			1.26 H	47	64.83	39.15
2	*5320.00	93.50 AV			1.26 H	47	54.35	39.15
3	#5350.00	45.05 PK	74.00	-28.95	1.26 H	47	5.85	39.20
3	#5350.00	34.57 AV	54.00	-19.43	1.26 H	47	-4.63	39.20
4	#10640.00	61.60 PK	74.00	-12.40	1.13 H	75	15.37	46.23
4	#10640.00	47.20 AV	54.00	-6.80	1.13 H	75	0.97	46.23
5	#15960.00	60.63 PK	74.00	-13.37	1.06 H	279	15.67	44.96
5	#15960.00	46.25 AV	54.00	-7.75	1.06 H	279	1.29	44.96

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	3546.00	47.99 PK	68.30	-20.31	1.16 V	192	12.14	35.85
2	*5320.00	105.70 PK			1.07 V	96	66.55	39.15
2	*5320.00	94.72 AV			1.07 V	96	55.57	39.15
3	#5350.00	46.77 PK	74.00	-27.23	1.07 V	96	7.57	39.20
3	#5350.00	35.79 AV	54.00	-18.21	1.07 V	96	-3.41	39.20
4	#10640.00	56.98 PK	74.00	-17.02	1.08 V	7	10.75	46.23
4	#10640.00	44.62 AV	54.00	-9.38	1.08 V	7	-1.61	46.23
5	#15960.00	61.73 PK	74.00	-12.27	1.19 V	76	16.77	44.96
5	#15960.00	46.85 AV	54.00	-7.15	1.19 V	76	1.89	44.96

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	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
FREQUENCY RANGE	1 ~ 40 GHz	**CHANNEL**	9
ENVIRONMENTAL CONDITIONS	25deg. C, 62%RH, 991hPa	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TEST MODE**	Test Mode 1
TESTED BY	Match Tsui		

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	3830.00	50.31 PK	74.00	-23.69	1.07 H	113	13.97	36.34
1	3830.00	42.62 AV	54.00	-11.38	1.07 H	113	6.28	36.34
2	*5745.00	104.53 PK			1.29 H	127	63.63	40.90
2	*5745.00	93.64 AV			1.29 H	127	52.74	40.90
3	#11490.00	58.34 PK	74.00	-15.66	1.28 H	264	10.96	47.38
3	#11490.00	45.85 AV	54.00	-8.15	1.28 H	264	-1.53	47.38

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	3830.00	52.32 PK	74.00	-21.68	1.11 V	298	15.98	36.34
1	3830.00	47.09 AV	54.00	-6.91	1.11 V	298	10.75	36.34
2	*5745.00	110.70 PK			1.00 V	243	69.80	40.90
2	*5745.00	99.87 AV			1.00 V	243	58.97	40.90
3	#11490.00	60.22 PK	74.00	-13.78	1.14 V	273	12.84	47.38
3	#11490.00	47.78 AV	54.00	-6.22	1.14 V	273	0.40	47.38

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	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
FREQUENCY RANGE	1 ~ 40 GHz	**CHANNEL**	11
ENVIRONMENTAL CONDITIONS	25deg. C, 62%RH, 991hPa	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TEST MODE**	Test Mode 1
TESTED BY	Match Tsui		

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	3856.00	50.13 PK	74.00	-23.87	1.00 H	142	13.70	36.43
1	3856.00	43.01 AV	54.00	-10.99	1.00 H	142	6.58	36.43
2	*5785.00	103.95 PK			1.27 H	108	62.90	41.05
2	*5785.00	93.56 AV			1.27 H	108	52.51	41.05
3	#11570.00	59.13 PK	74.00	-14.87	1.00 H	218	11.66	47.47
3	#11570.00	46.64 AV	54.00	-7.36	1.00 H	218	-0.83	47.47

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	3856.00	55.30 PK	74.00	-18.70	1.12 V	173	18.87	36.43
1	3856.00	51.19 AV	54.00	-2.81	1.12 V	173	14.76	36.43
2	*5785.00	111.78 PK			1.00 V	70	70.73	41.05
2	*5785.00	101.35 AV			1.00 V	70	60.30	41.05
3	#11570.00	61.45 PK	74.00	-12.55	1.00 V	185	13.98	47.47
3	#11570.00	48.82 AV	54.00	-5.18	1.00 V	185	1.35	47.47

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	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
FREQUENCY RANGE	1 ~ 40 GHz	**CHANNEL**	13
ENVIRONMENTAL CONDITIONS	25deg. C, 62%RH, 991hPa	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TEST MODE**	Test Mode 1
TESTED BY	Match Tsui		

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	3883.00	51.57 PK	74.00	-22.43	1.10 H	137	15.05	36.52
1	3883.00	45.45 AV	54.00	-8.55	1.10 H	137	8.93	36.52
2	*5825.00	104.56 PK			1.00 H	123	63.61	40.95
2	*5825.00	94.60 AV			1.00 H	123	53.65	40.95
3	#11650.00	61.54 PK	74.00	-12.46	1.10 H	219	13.82	47.72
3	#11650.00	47.34 AV	54.00	-6.66	1.10 H	219	-0.38	47.72

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	3883.00	56.69 PK	74.00	-17.31	1.10 V	147	20.17	36.52
1	**3883.00**	**52.97 AV**	**54.00**	**-1.03**	**1.10 V**	**147**	**16.45**	**36.52**
2	*5825.00	110.33 PK			1.08 V	77	69.38	40.95
2	*5825.00	99.47 AV			1.08 V	77	58.52	40.95
3	#11650.00	62.47 PK	74.00	-11.53	1.12 V	282	14.75	47.72
3	#11650.00	49.29 AV	54.00	-4.71	1.12 V	282	1.57	47.72

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	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
MODE	Channel 11	**FREQUENCY RANGE**	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	**TEST MODE**	Test Mode 2
TESTED BY	Match Tsui		

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	119.42	31.11 QP	43.50	-12.39	1.50 H	67	18.14	12.97
2	173.85	32.38 QP	43.50	-11.12	1.50 H	64	18.83	13.55
3	249.66	29.17 QP	46.00	-16.83	1.00 H	229	15.96	13.22
4	278.82	33.52 QP	46.00	-12.48	1.00 H	238	19.38	14.14
5	360.46	30.14 QP	46.00	-15.86	1.00 H	244	14.26	15.88
6	399.34	29.78 QP	46.00	-16.22	1.00 H	187	13.04	16.74
7	449.88	28.42 QP	46.00	-17.58	1.00 H	292	10.35	18.07
8	601.50	32.61 QP	46.00	-13.39	1.00 H	256	11.58	21.03
9	679.26	30.94 QP	46.00	-15.06	1.00 H	328	8.90	22.04
10	720.08	31.84 QP	46.00	-14.16	1.00 H	325	9.05	22.79
11	731.74	36.75 QP	46.00	-9.25	1.00 H	292	13.67	23.08
12	799.78	33.02 QP	46.00	-12.98	1.00 H	304	9.20	23.82
13	863.93	35.33 QP	46.00	-10.67	1.50 H	22	10.88	24.45

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	66.93	32.57 QP	40.00	-7.43	1.00 V	106	19.64	12.93
2	133.03	31.12 QP	43.50	-12.38	1.00 V	19	17.18	13.94
3	249.66	24.08 QP	46.00	-21.92	1.25 V	158	10.86	13.22
4	366.29	27.85 QP	46.00	-18.15	1.25 V	350	11.84	16.01
5	399.34	29.54 QP	46.00	-16.46	1.75 V	25	12.80	16.74
6	440.16	36.34 QP	46.00	-9.66	1.00 V	136	18.53	17.81
7	449.88	33.75 QP	46.00	-12.25	1.50 V	187	15.68	18.07
8	599.56	34.08 QP	46.00	-11.92	1.00 V	1	13.08	21.00
9	735.63	33.89 QP	46.00	-12.11	1.50 V	7	10.72	23.18
10	801.54	33.17 QP	46.00	-12.83	1.50 V	147	9.34	23.83
11	865.87	34.46 QP	46.00	-11.54	1.00 V	271	9.98	24.48

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	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
FREQUENCY RANGE	1 ~ 40 GHz	**CHANNEL**	1
ENVIRONMENTAL CONDITIONS	25deg. C, 62%RH, 991hPa	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TEST MODE**	Test Mode 2
TESTED BY	Match Tsui		

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	3453.00	51.96 PK	68.30	-16.34	1.06 H	117	14.16	37.80
2	#5150.00	51.57 PK	74.00	-22.43	1.07 H	192	10.08	41.49
2	#5150.00	41.87 AV	54.00	-12.13	1.07 H	192	0.38	41.49
3	*5180.00	100.57 PK			1.07 H	192	59.01	41.56
3	*5180.00	90.87 AV			1.07 H	192	49.31	41.56
4	10360.00	63.59 PK	68.30	-4.71	1.00 H	251	15.00	48.59
5	#15540.00	65.84 PK	74.00	-8.16	1.00 H	23	14.70	51.14
5	#15540.00	52.54 AV	54.00	-1.46	1.00 H	23	1.40	51.14

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	3453.00	53.91 PK	68.30	-14.39	1.07 V	7	18.34	35.58
2	#5150.00	56.30 PK	74.00	-17.70	1.11 V	343	17.20	39.10
2	#5150.00	45.57 AV	54.00	-8.43	1.11 V	343	6.47	39.10
3	*5180.00	104.31 PK			1.11 V	343	65.14	39.17
3	*5180.00	93.76 AV			1.11 V	343	54.59	39.17
4	10360.00	60.96 PK	68.30	-7.34	1.13 V	154	15.67	45.29
5	#15540.00	67.08 PK	74.00	-6.92	1.02 V	63	18.54	48.54
5	#15540.00	53.00 AV	54.00	-1.00	1.02 V	63	4.46	48.54

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	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
FREQUENCY RANGE	1 ~ 40 GHz	**CHANNEL**	4
ENVIRONMENTAL CONDITIONS	25deg. C, 62%RH, 991hPa	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TEST MODE**	Test Mode 2
TESTED BY	Match Tsui		

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	3493.00	54.36 PK	68.30	-13.94	1.05 H	110	16.50	37.87
2	*5240.00	102.22 PK			1.16 H	100	60.58	41.64
2	*5240.00	92.48 AV			1.16 H	100	50.84	41.64
3	10480.00	59.73 PK	68.30	-8.57	1.06 H	176	11.67	48.06
4	#15720.00	66.29 PK	74.00	-7.71	1.05 H	97	15.38	50.92
4	#15720.00	52.82 AV	54.00	-1.18	1.05 H	97	1.91	50.92

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	3493.00	53.80 PK	68.30	-14.50	1.05 V	350	16.44	37.36
2	*5240.00	104.02 PK			1.09 V	333	63.18	40.84
2	*5240.00	94.07 AV			1.09 V	333	53.23	40.84
3	10480.00	58.84 PK	68.30	-9.46	1.01 V	97	11.08	47.76
4	#15720.00	68.02 PK	74.00	-5.98	1.03 V	61	17.53	50.50
4	#15720.00	52.98 AV	54.00	-1.02	1.03 V	61	2.49	50.50

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. "*" : Fundamental frequency
6. "#"The radiated frequency falling in the restricted band.

EUT	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
FREQUENCY RANGE	1 ~ 40 GHz	**CHANNEL**	5
ENVIRONMENTAL CONDITIONS	25deg. C, 62%RH, 991hPa	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TEST MODE**	Test Mode 2
TESTED BY	Match Tsui		

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	3506.00	50.70 PK	68.30	-17.60	1.04 H	360	12.80	37.90
2	*5260.00	102.70 PK			1.21 H	342	61.03	41.67
2	*5260.00	92.84 AV			1.21 H	342	51.17	41.67
3	10520.00	58.65 PK	68.30	-9.65	1.06 H	178	10.75	47.90
4	#15780.00	64.23 PK	74.00	-9.77	1.13 H	234	13.33	50.90
4	#15780.00	52.31 AV	54.00	-1.69	1.13 H	234	1.41	50.90

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3506.00	50.70 PK	68.30	-17.60	1.04 V	360	13.30	37.40
2	*5260.00	104.29 PK			1.21 V	342	63.42	40.87
2	*5260.00	94.34 AV			1.21 V	342	53.47	40.87
3	10520.00	58.65 PK	68.30	-9.65	1.06 V	178	11.06	47.59
4	#15780.00	64.23 PK	74.00	-9.77	1.13 V	234	13.81	50.42
4	#15780.00	52.31 AV	54.00	-1.69	1.13 V	234	1.89	50.42

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	USB2.0 802.11a/b/g wireless network adapter	MODEL	WUB-500A
FREQUENCY RANGE	1 ~ 40 GHz	CHANNEL	8
ENVIRONMENTAL CONDITIONS	25deg. C, 62%RH, 991hPa	DETECTOR FUNCTION	Peak(PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60Hz	TEST MODE	Test Mode 2
TESTED BY	Match Tsui		

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	3546.00	50.85 PK	68.30	-17.45	1.05 H	350	12.81	38.04
2	*5320.00	102.89 PK			1.21 H	102	61.19	41.70
2	*5320.00	93.25 AV			1.21 H	102	51.55	41.70
3	#5350.00	52.89 PK	74.00	-21.11	1.21 H	102	11.20	41.69
3	#5350.00	43.25 AV	54.00	-10.75	1.21 H	102	1.56	41.69
4	#10640.00	60.43 PK	74.00	-13.57	1.11 H	245	12.38	48.05
4	#10640.00	46.74 AV	54.00	-7.26	1.11 H	245	-1.31	48.05
5	#15960.00	65.40 PK	74.00	-8.60	1.03 H	275	12.93	52.47
5	#15960.00	52.82 AV	54.00	-1.18	1.03 H	275	0.35	52.47

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	3546.00	51.12 PK	68.30	-17.18	1.02 V	205	13.58	37.54
2	*5320.00	104.33 PK			1.08 V	350	63.40	40.93
2	*5320.00	94.42 AV			1.08 V	350	53.49	40.93
3	#5350.00	54.33 PK	74.00	-19.67	1.08 V	350	13.40	40.93
3	#5350.00	44.42 AV	54.00	-9.58	1.08 V	350	3.49	40.93
4	#10640.00	58.10 PK	74.00	-15.90	1.08 V	350	10.41	47.69
4	#10640.00	46.14 AV	54.00	-7.86	1.08 V	350	-1.55	47.69
5	#15960.00	64.25 PK	74.00	-9.75	1.08 V	280	12.44	51.81
5	#15960.00	52.83 AV	54.00	-1.17	1.08 V	280	1.02	51.81

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	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
FREQUENCY RANGE	1 ~ 40 GHz	**CHANNEL**	9
ENVIRONMENTAL CONDITIONS	25deg. C, 62%RH, 991hPa	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TEST MODE**	Test Mode 2
TESTED BY	Match Tsui		

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	#3830.00	51.11 PK	74.00	-22.89	1.09 H	5	12.25	38.85
1	#3830.00	41.06 AV	54.00	-12.94	1.09 H	5	2.20	38.85
2	*5745.00	102.92 PK			1.11 H	55	60.42	42.50
2	*5745.00	92.73 AV			1.11 H	55	50.23	42.50
3	#11490.00	61.72 PK	74.00	-12.28	1.00 H	220	11.61	50.11
3	#11490.00	49.95 AV	54.00	-4.05	1.00 H	220	-0.16	50.11

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	#3830.00	50.50 PK	74.00	-23.50	1.00 V	360	12.14	38.35
1	#3830.00	41.50 AV	54.00	-12.49	1.00 V	360	3.15	38.35
2	*5745.00	106.10 PK			1.00 V	344	64.35	41.75
2	*5745.00	96.36 AV			1.00 V	344	54.61	41.75
3	#11490.00	61.40 PK	74.00	-12.60	1.07 V	144	11.89	49.51
3	#11490.00	49.04 AV	54.00	-4.96	1.07 V	144	-0.47	49.51

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	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
FREQUENCY RANGE	1 ~ 40 GHz	**CHANNEL**	11
ENVIRONMENTAL CONDITIONS	25deg. C, 62%RH, 991hPa	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TEST MODE**	Test Mode 2
TESTED BY	Match Tsui		

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	#3856.00	50.14 PK	74.00	-23.86	1.01 H	67	11.31	38.83
1	#3856.00	41.55 AV	54.00	-12.45	1.01 H	67	2.72	38.83
2	*5785.00	101.72 PK			1.26 H	36	59.04	42.68
2	*5785.00	92.40 AV			1.26 H	36	49.72	42.68
3	#11570.00	63.82 PK	74.00	-10.18	1.01 H	67	13.12	50.70
3	#11570.00	52.55 AV	54.00	-1.45	1.01 H	67	1.85	50.70

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/m)
1	#3856.00	49.77 PK	74.00	-24.23	1.01 V	358	11.44	38.33
1	#3856.00	40.28 AV	54.00	-13.72	1.01 V	358	1.95	38.33
2	*5785.00	103.29 PK			1.15 V	45	61.37	41.92
2	*5785.00	93.35 AV			1.15 V	45	51.43	41.92
3	#11570.00	62.21 PK	74.00	-11.79	1.07 V	230	11.99	50.22
3	#11570.00	49.73 AV	54.00	-4.27	1.07 V	230	-0.49	50.22

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	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
FREQUENCY RANGE	1 ~ 40 GHz	**CHANNEL**	13
ENVIRONMENTAL CONDITIONS	25deg. C, 62%RH, 991hPa	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TEST MODE**	Test Mode 2
TESTED BY	Match Tsui		

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	#3883.00	54.00 PK	74.00	-20.00	1.11 H	236	15.19	38.81
1	#3883.00	46.37 AV	54.00	-7.63	1.11 H	236	7.56	38.81
2	*5825.00	102.04 PK			1.10 H	269	59.31	42.73
2	*5825.00	92.02 AV			1.10 H	269	49.29	42.73
3	#11650.00	62.17 PK	74.00	-11.83	1.00 H	150	11.66	50.51
3	#11650.00	52.91 AV	54.00	-1.09	1.00 H	150	2.40	50.51

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	#3883.00	55.00 PK	74.00	-19.00	1.08 V	298	16.69	38.31
1	#3883.00	49.41 AV	54.00	-4.59	1.08 V	298	11.10	38.31
2	*5825.00	104.33 PK	74.00	30.33	1.26 V	44	62.36	41.97
2	*5825.00	93.34 AV	54.00	39.34	1.26 V	44	51.37	41.97
3	#11650.00	61.57 PK	74.00	-12.43	1.04 V	307	11.39	50.18
3	#11650.00	49.84 AV	54.00	-4.16	1.04 V	307	-0.34	50.18

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.

FOR FREQUENCY 5.15~5.35GHz

5.3 PEAK TRANSMIT POWER MEASUREMENT

5.3.1 LIMITS OF PEAK TRANSMIT POWER MEASUREMENT

Frequency Band	Limit
5.15 – 5.25GHz	The lesser of 50mW (17dBm) or 4dBm + 10logB
5.25 – 5.35GHz	The lesser of 250mW (24dBm) or 11dBm + 10logB
5.725 – 5.825GHz	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
R&S 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.

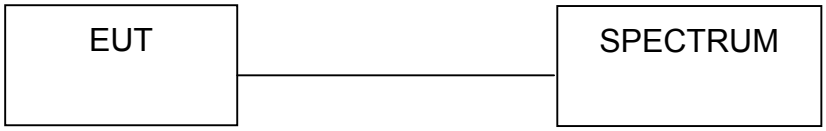
5.3.3 TEST PROCEDURE

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

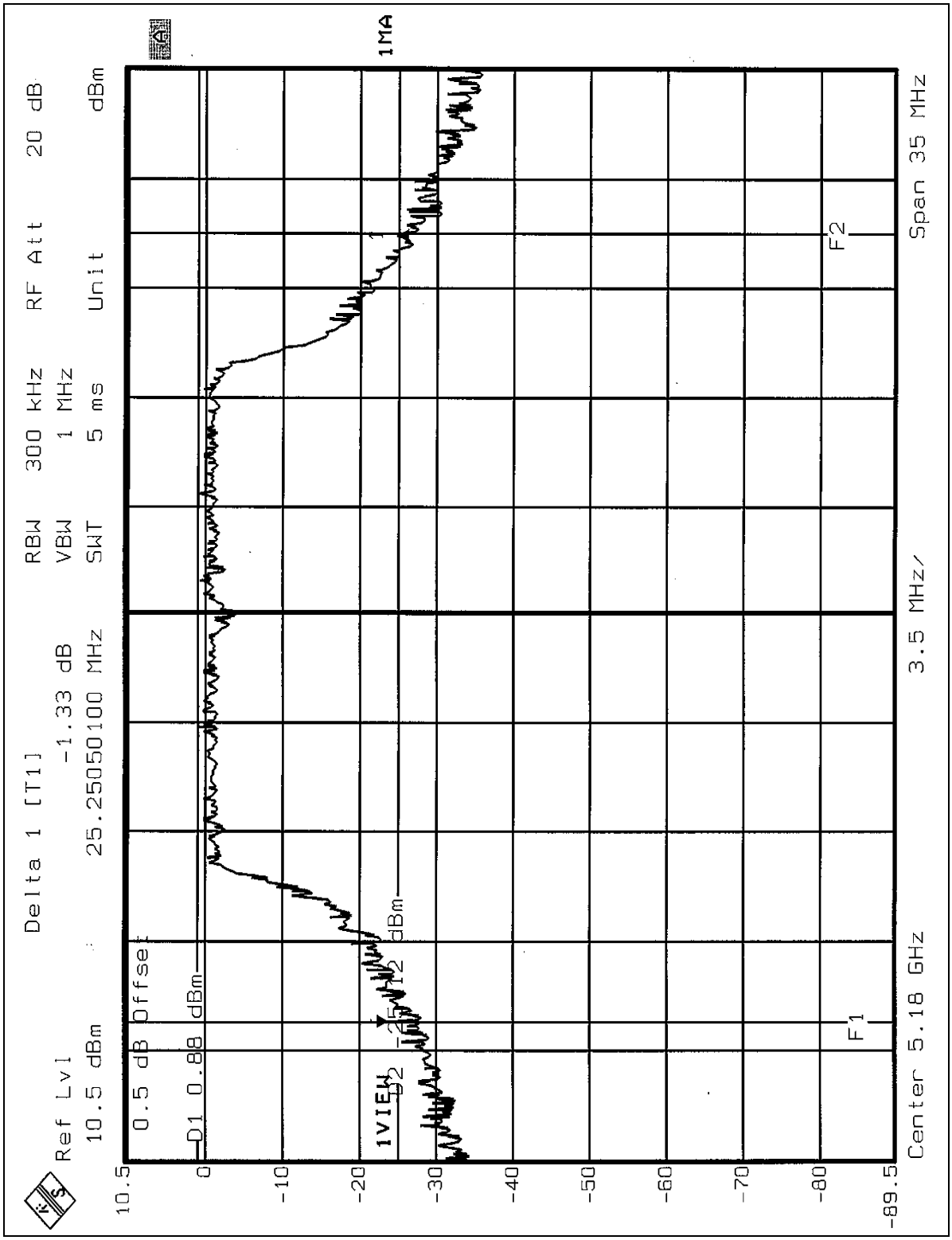
EUT	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH, 991hPa	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
TESTED BY	Leo Hung		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	26dBc Occupied Bandwidth (MHz)	PASS/FAIL
1	5180	25.47	14.06	17.00	25.25	PASS
4	5240	25.53	14.07	17.00	25.32	PASS
5	5260	25.53	14.07	24.00	25.32	PASS
8	5320	25.29	14.03	24.00	25.11	PASS

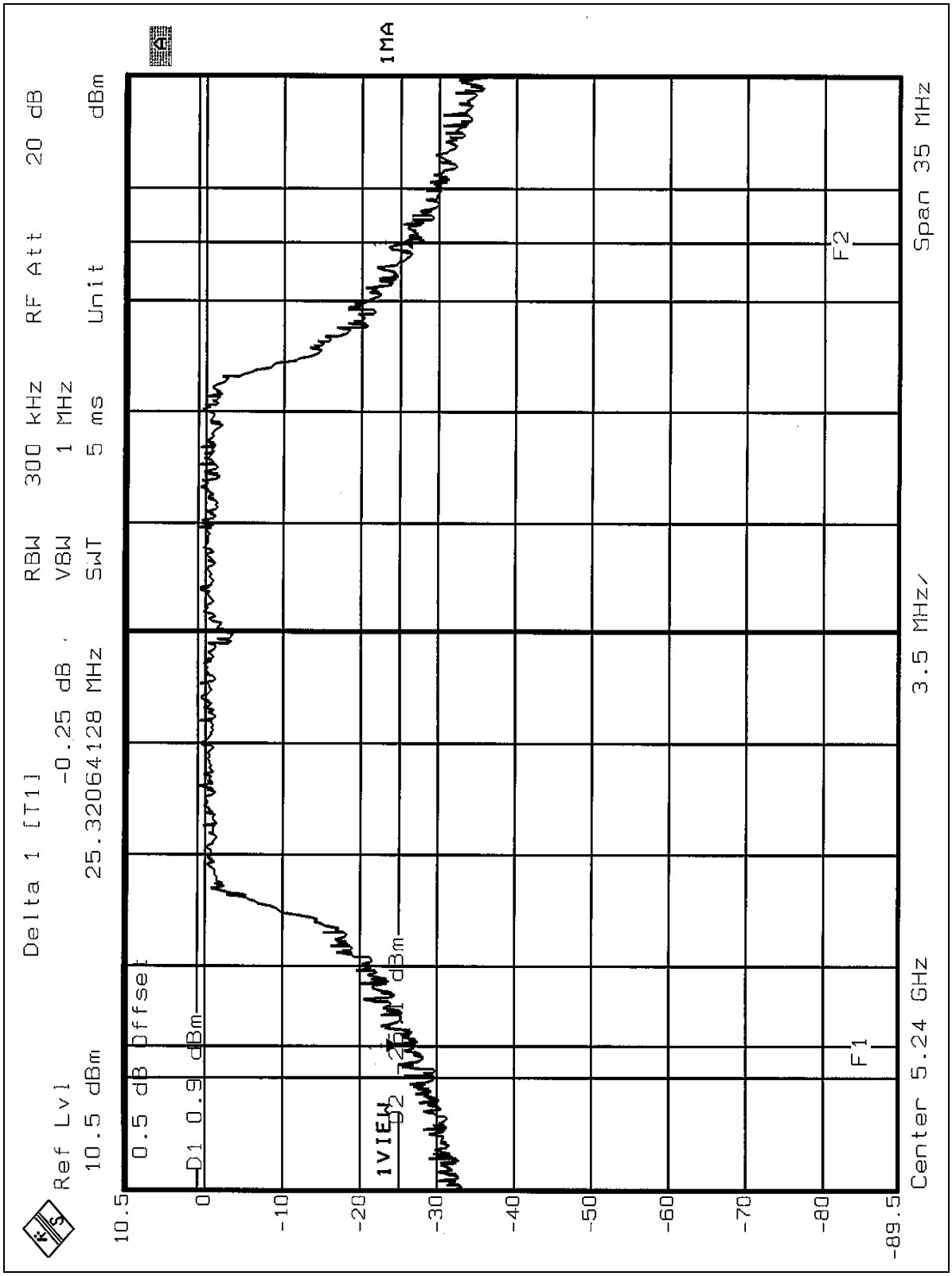
NOTE: The 26dBc Occupied Bandwidth plot, please refer to the following pages.

26dB Occupied Bandwidth:

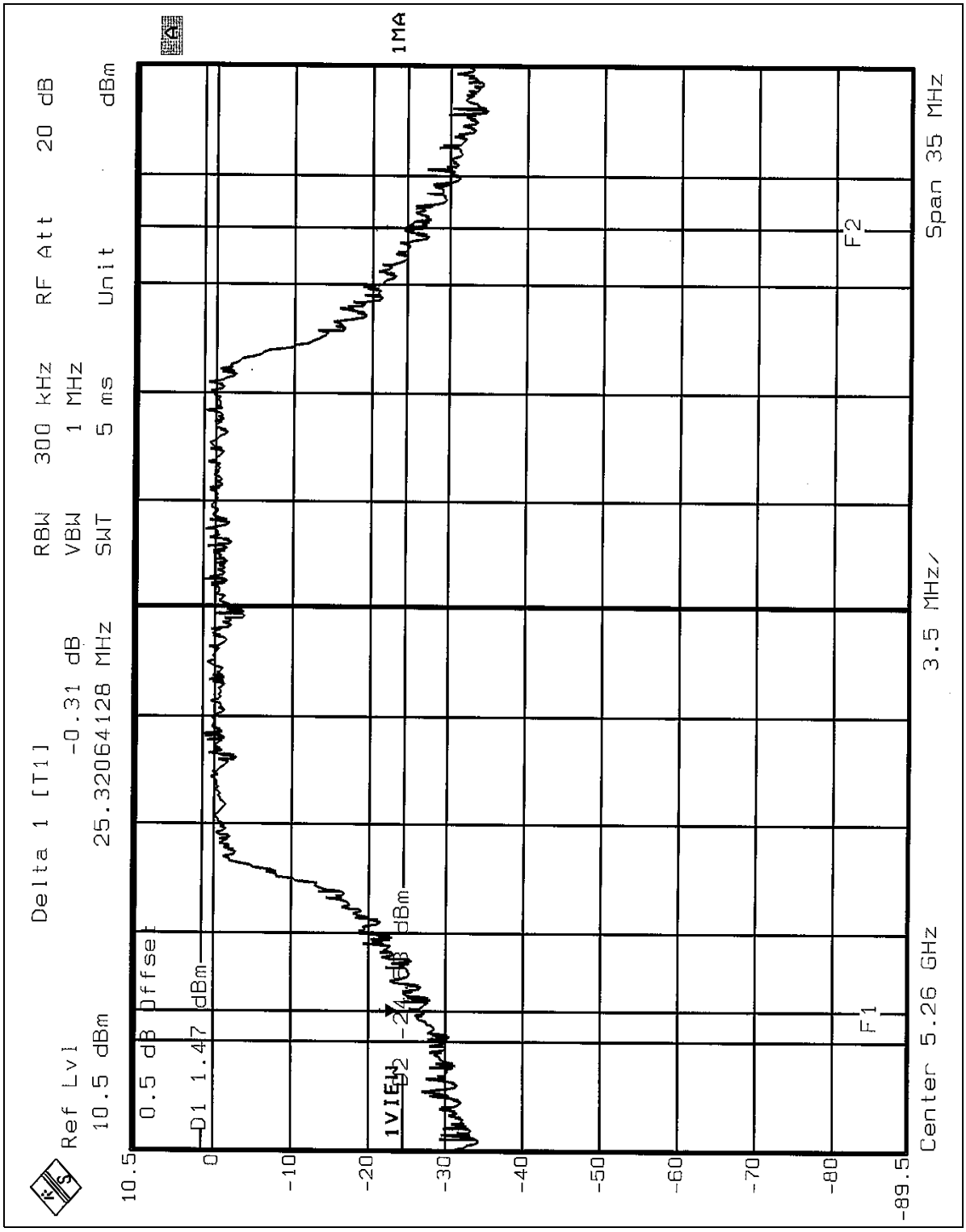
CH1



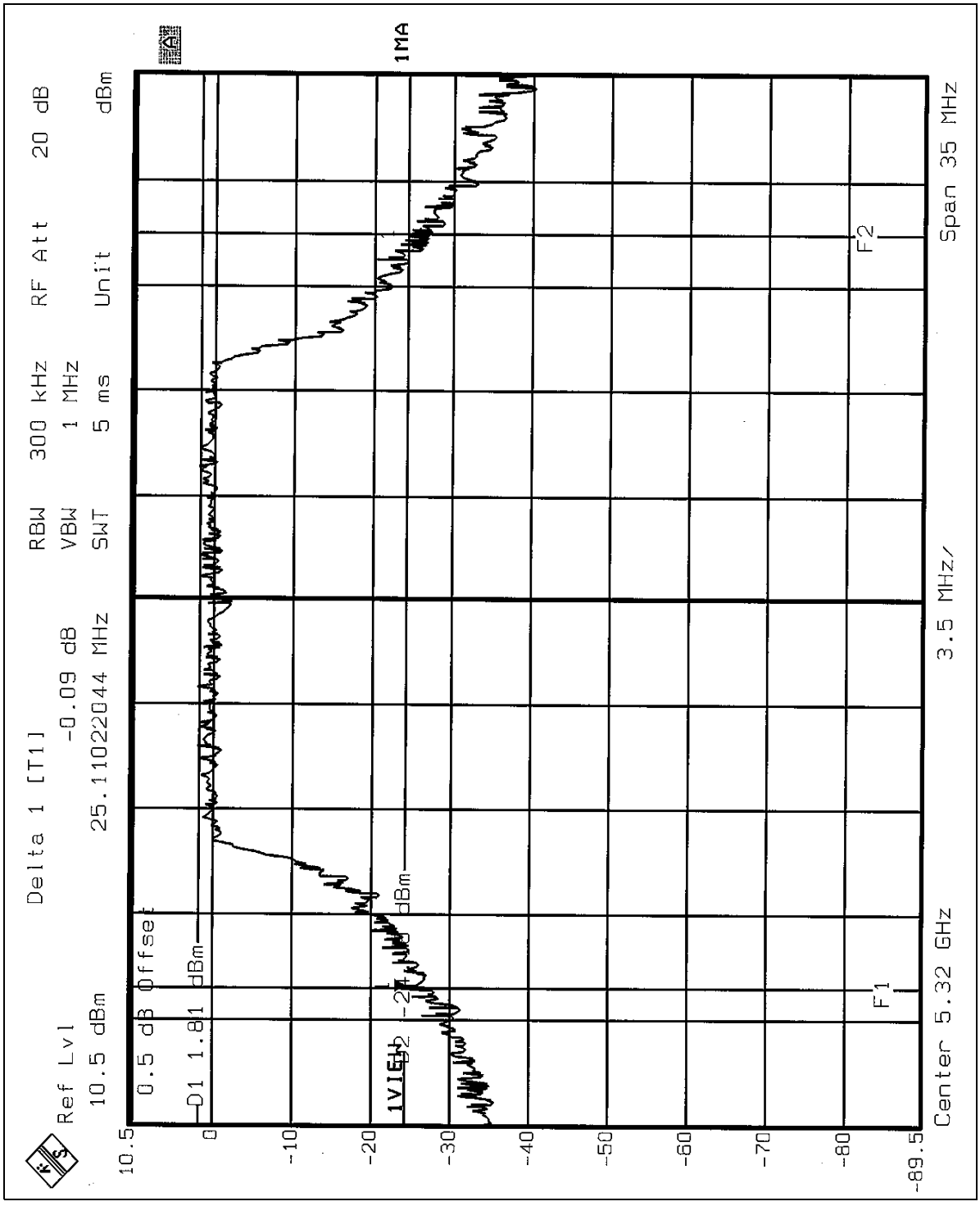
CH4


Delta 1 [T1]
-0.25 dB
25.32064128 MHz
RBW 300 kHz
VBW 1 MHz
SWT 5 ms
RF Att 20 dB
Unit dBm
Ref Lvl
10.5 dBm
0.5 dB Offset
D1 0.9 dBm
1VIEW
D2 dBm
1MA
F1
F2
Center 5.24 GHz
3.5 MHz/
Span 35 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

CH5

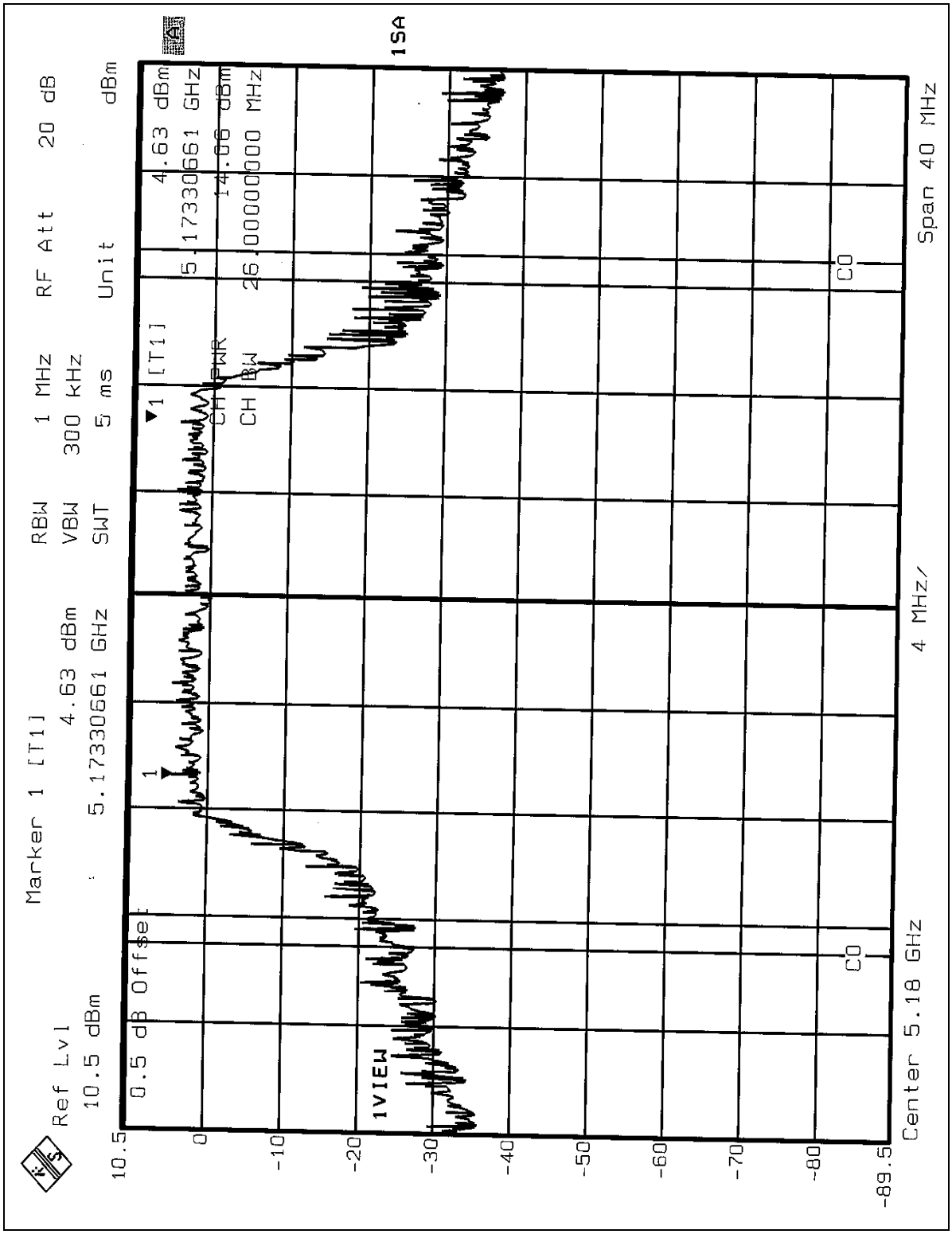

Delta 1 [T1]
-0.31 dB
25.32064128 MHz
RBW 300 kHz
VBW 1 MHz
SWT 5 ms
RF Att 20 dB
Unit dBm
Ref Lvl
10.5 dBm
0.5 dB Offset
D1 1.47 dBm
1MA
1VIEW
-24 dBm
F1
F2
Center 5.26 GHz
3.5 MHz/
Span 35 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

CH8

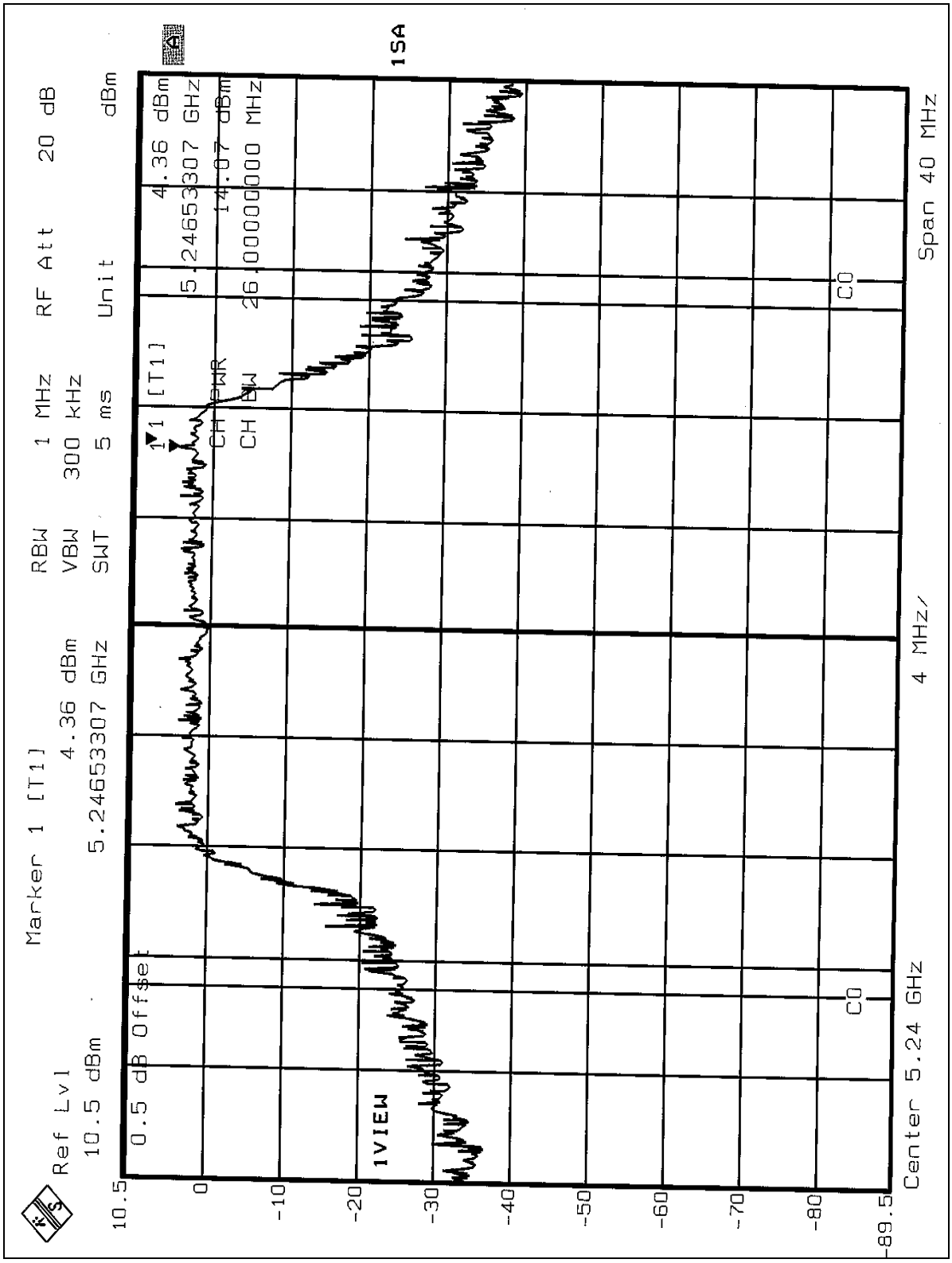

Delta 1 [T1]
-0.09 dB
25.11022044 MHz
RBW 300 kHz
VBW 1 MHz
SWT 5 ms
RF Att 20 dB
Unit dBm
Ref Lvl
10.5 dBm
0.5 dB Offset
D1 1.81 dBm
1VIEW
1MA
F1
F2
Center 5.32 GHz
3.5 MHz/
Span 35 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

Peak Power Output:

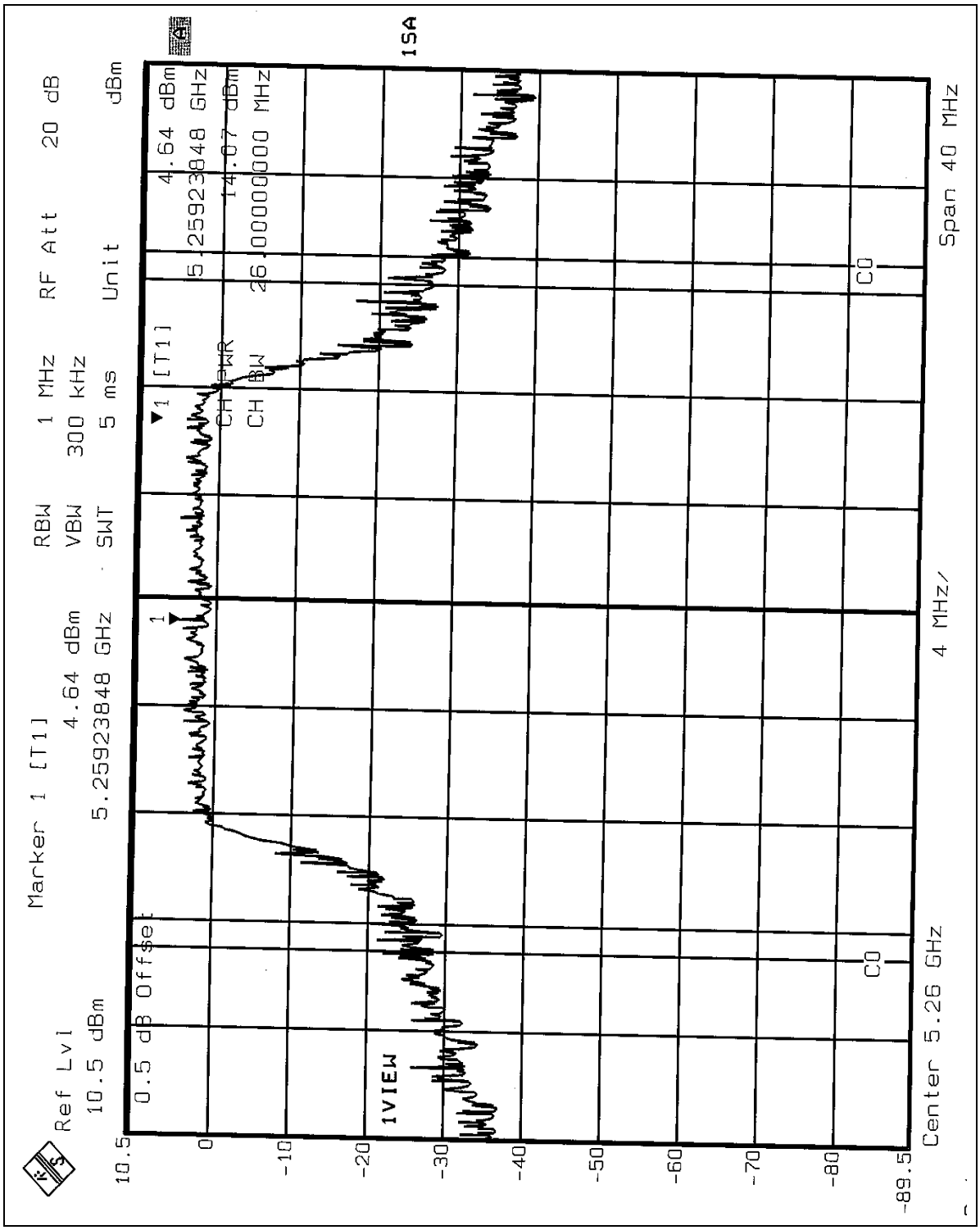
CH1



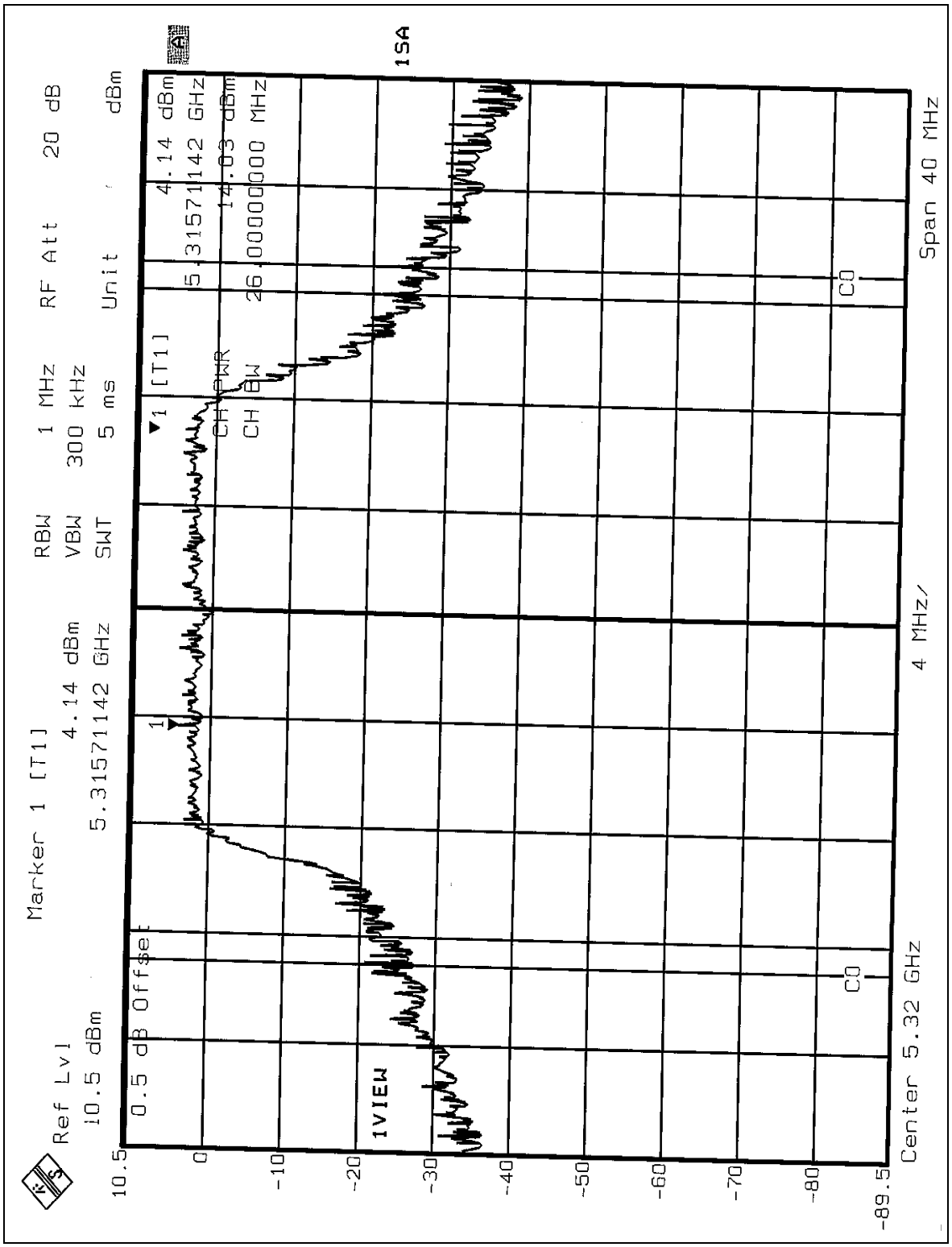
CH4


Marker 1 [T1]
4.36 dBm
5.24653307 GHz
Ref Lvl
10.5 dBm
0.5 dB Offset
RBW 1 MHz
VBW 300 kHz
SWT 5 ms
RF Att 20 dB
Unit dBm
1VIEW
1SA
1 [T1]
4.36 dBm
5.24653307 GHz
CH PWR 14.07 dBm
CH BW 26.000000000 MHz
Center 5.24 GHz
4 MHz/
Span 40 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

CH5


Marker 1 [T1]
4.64 dBm
5.25923848 GHz
Ref Lvl
10.5 dBm
0.5 dB Offset
RBW 1 MHz
VBW 300 kHz
SWT 5 ms
RF Att 20 dB
Unit dBm
1SA
1VIEW
CH PWR
CH BW
4.64 dBm
5.25923848 GHz
14.07 dBm
26.000000000 MHz
Center 5.26 GHz
4 MHz/
Span 40 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

CH8


Marker 1 [T1]
4.14 dBm
5.31571142 GHz
Ref Lvl
10.5 dBm
0.5 dB Offset
RBW 1 MHz
VBW 300 kHz
SWT 5 ms
RF Att 20 dB
Unit dBm
1VIEW
1SA
CH PWR
CH BW
4.14 dBm
5.31571142 GHz
14.03 dBm
26.000000000 MHz
Center 5.32 GHz
4 MHz/
Span 40 MHz

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
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.

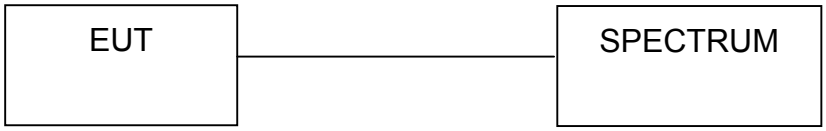
5.4.3 TEST PROCEDURE

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

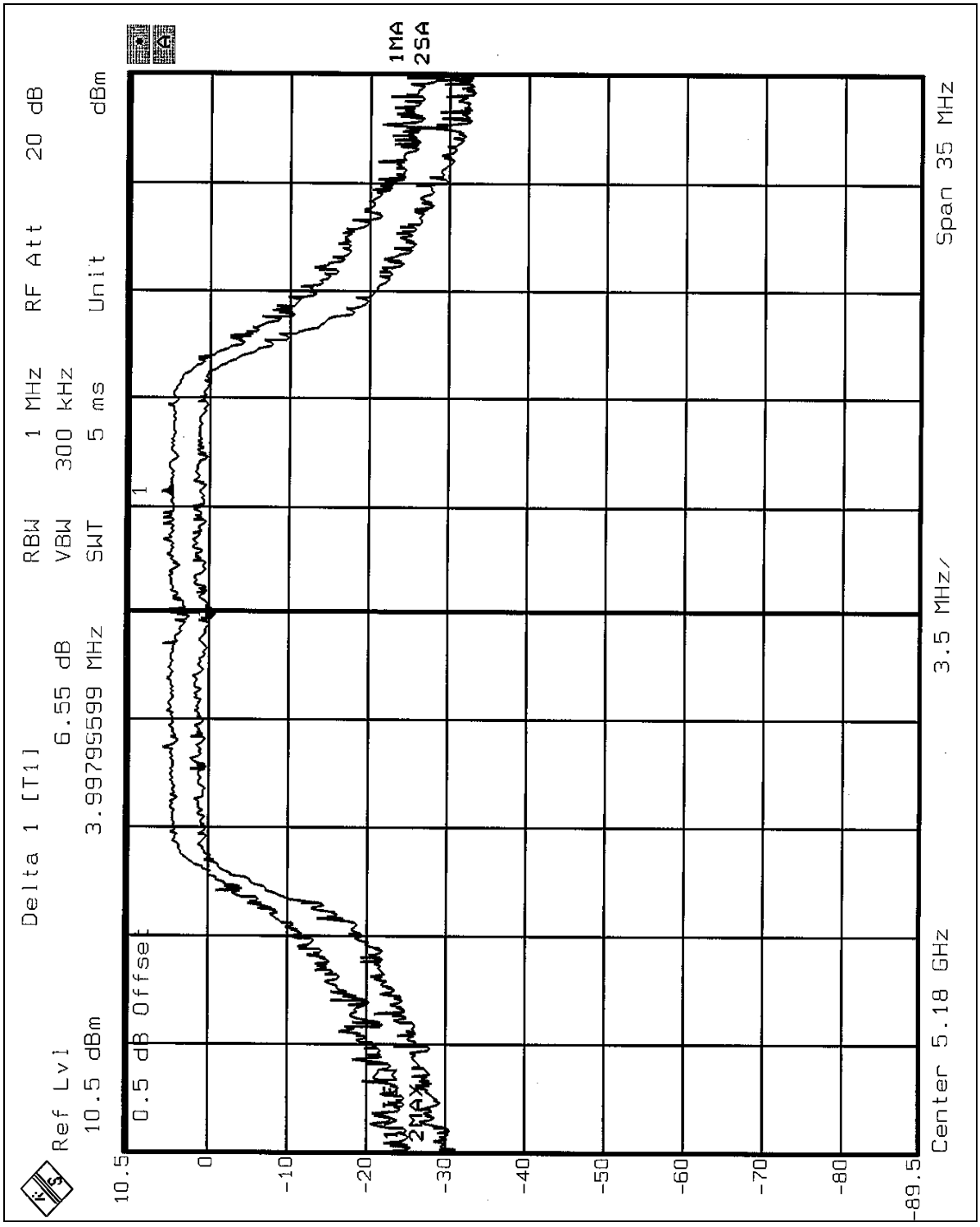
The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.

5.4.7 TEST RESULTS

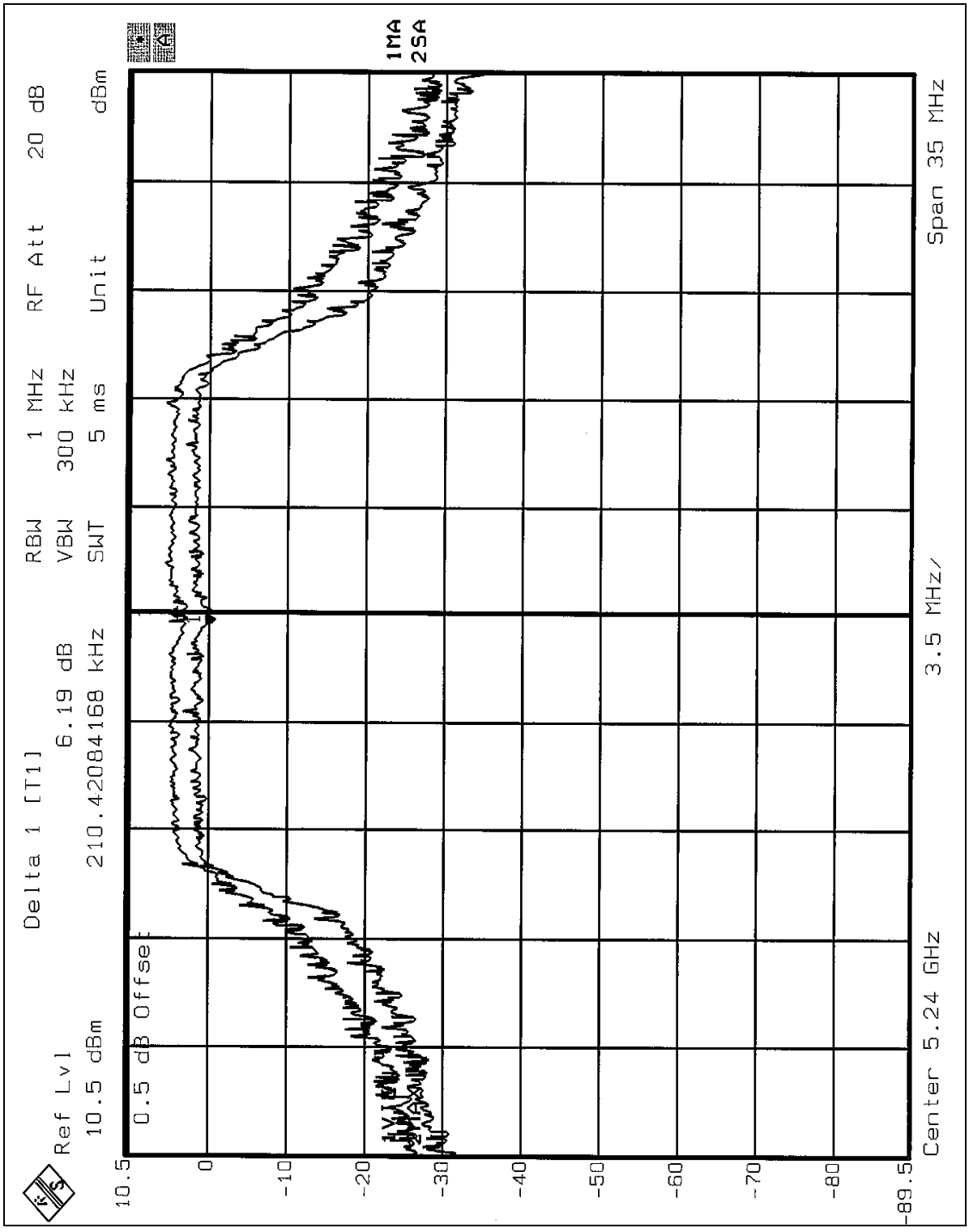
EUT	USB2.0 802.11a/b/g wireless network adapter	MODEL	WUB-500A
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH, 991hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Leo Hung		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
1	5180	6.55	13	PASS
4	5240	6.19	13	PASS
5	5260	6.08	13	PASS
8	5320	6.91	13	PASS

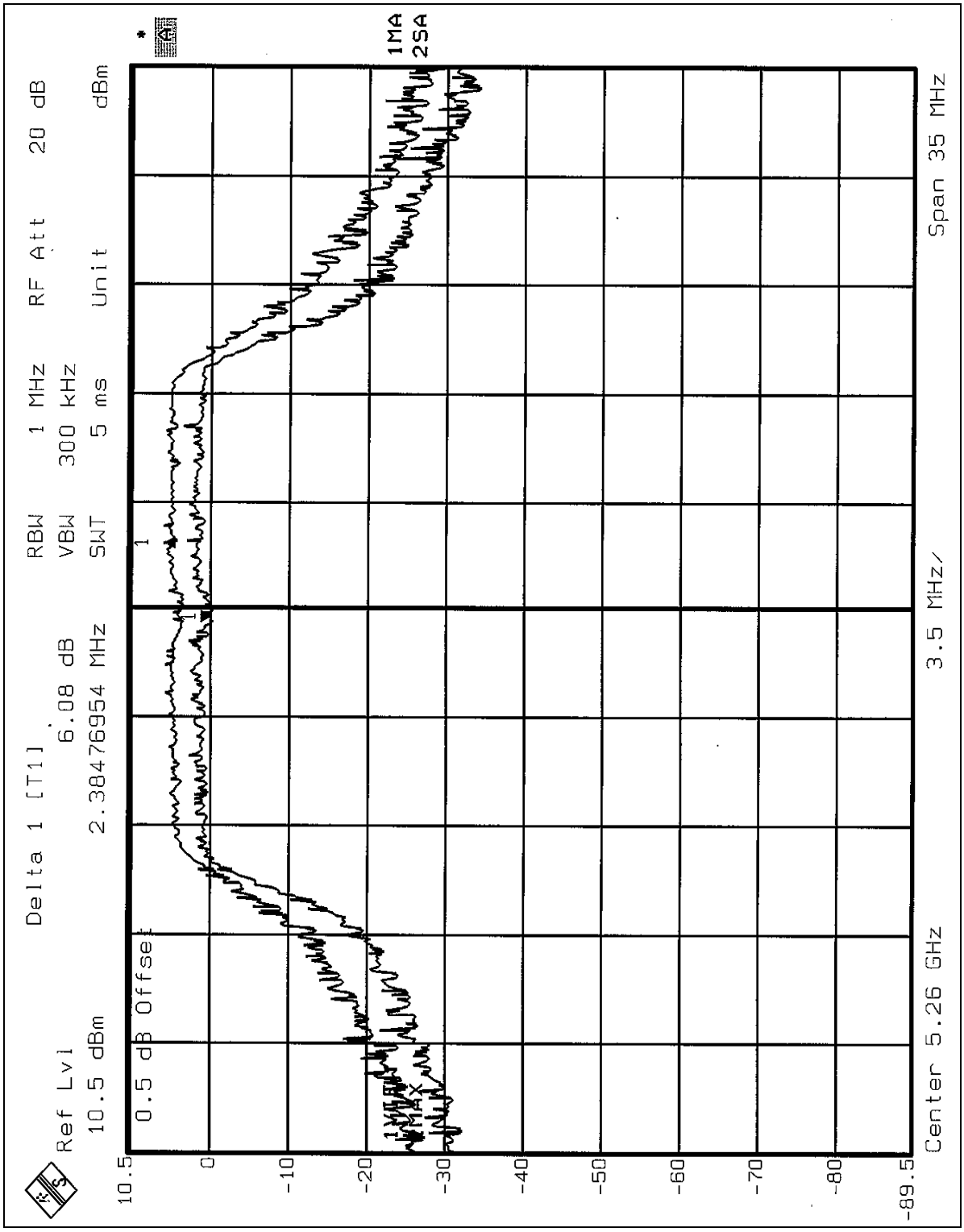
CH1


Delta 1 [T1]
6.55 dB
3.99795599 MHz
Ref Lvl
10.5 dBm
0.5 dB Offset
RBW 1 MHz
VBW 300 kHz
SWT 5 ms
RF Att 20 dB
Unit dBm
1MA
2SA
Center 5.18 GHz
3.5 MHz/
Span 35 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

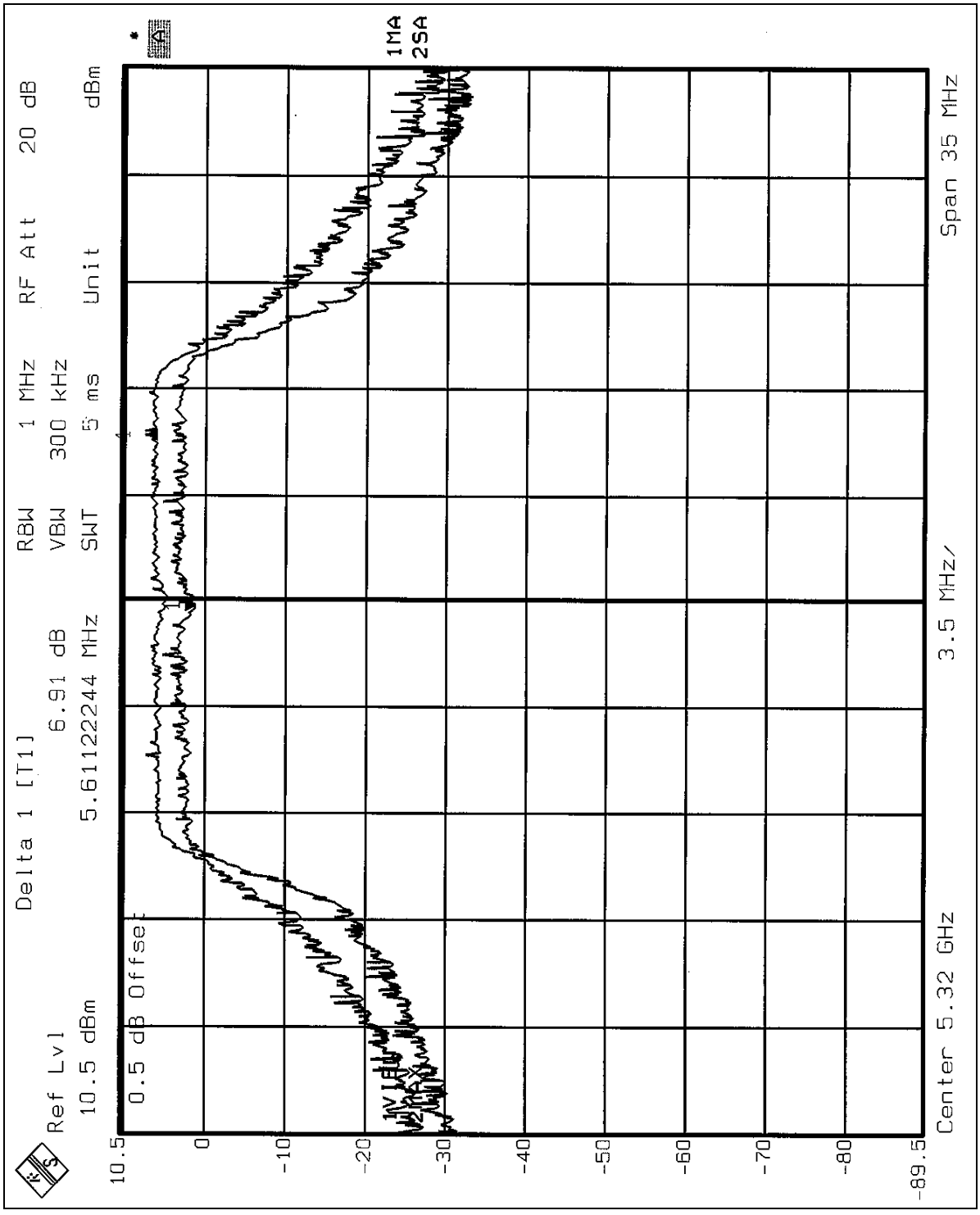
CH4


Delta 1 [T1]
6.19 dB
210.4208416 kHz
Ref Lvl
10.5 dBm
0.5 dB Offset
RBW 1 MHz
VBW 300 kHz
SWT 5 ms
RF Att 20 dB
Unit dBm
1MA
2SA
Center 5.24 GHz
3.5 MHz/
Span 35 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

CH5


Delta 1 [T1]
6.08 dB
2.38476954 MHz
RBW 1 MHz
VBW 300 kHz
SWT 5 ms
RF Att 20 dB
Unit dBm
1MA
2SA
Ref Lvl
10.5 dBm
0.5 dB Offset
Center 5.26 GHz
3.5 MHz/
Span 35 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

CH8


Delta 1 [T1]
6.91 dB
5.61122244 MHz
Ref Lvl
10.5 dBm
0.5 dB Offset
RBW 1 MHz
VBW 300 kHz
SWT 5 ms
RF Att 20 dB
Unit dBm
1MA
2SA
Center 5.32 GHz
3.5 MHz/
Span 35 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

5.5 PEAK POWER SPECTRAL DENSITY MEASUREMENT

5.5.1 LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT

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

5.5.2 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.

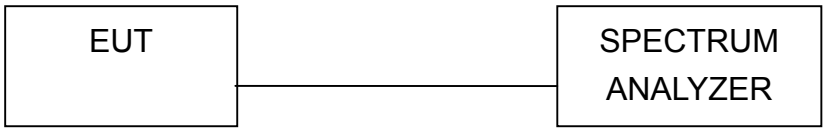
5.5.3 TEST PROCEDURES

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

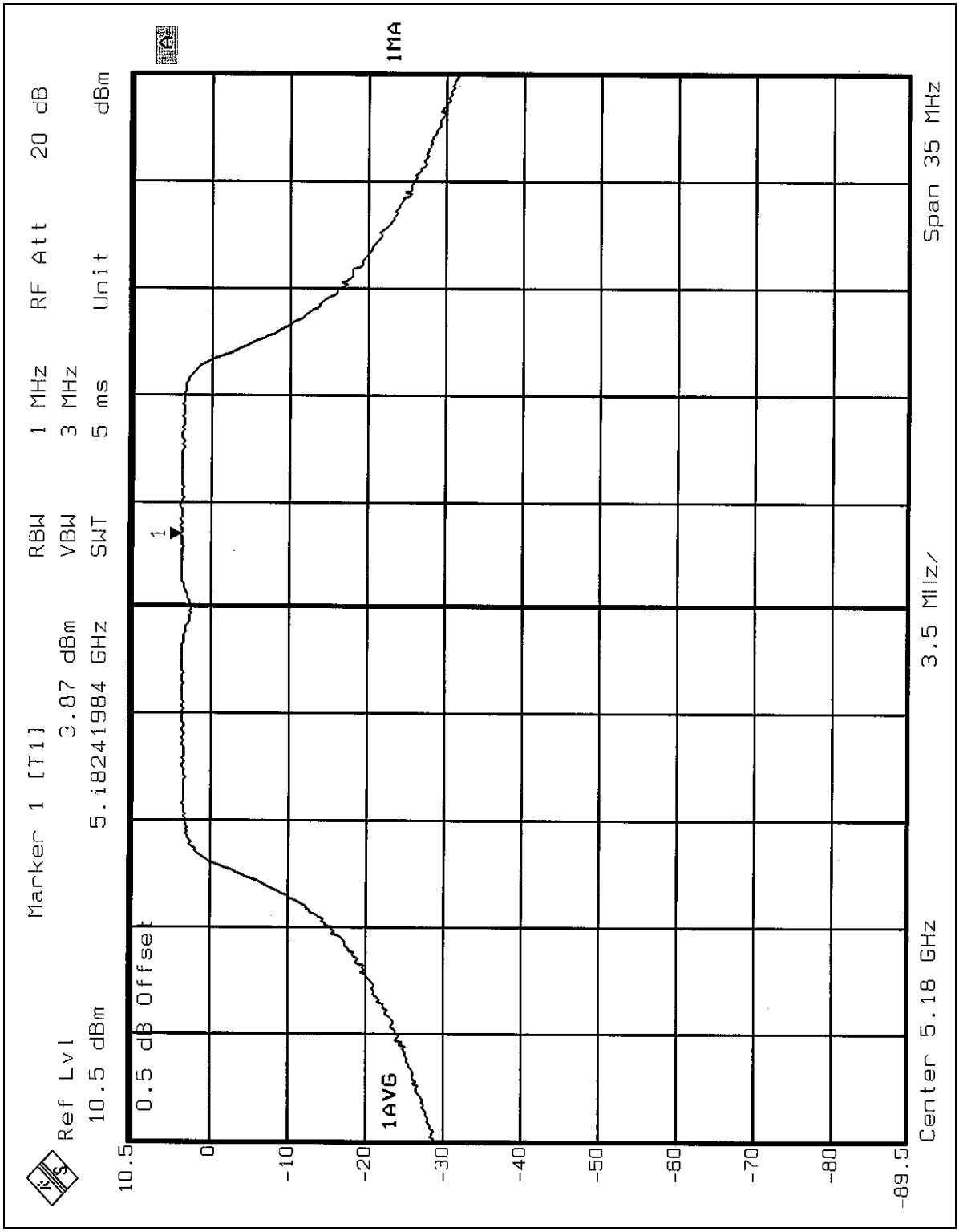
Same as 5.3.6

5.5.7 TEST RESULTS

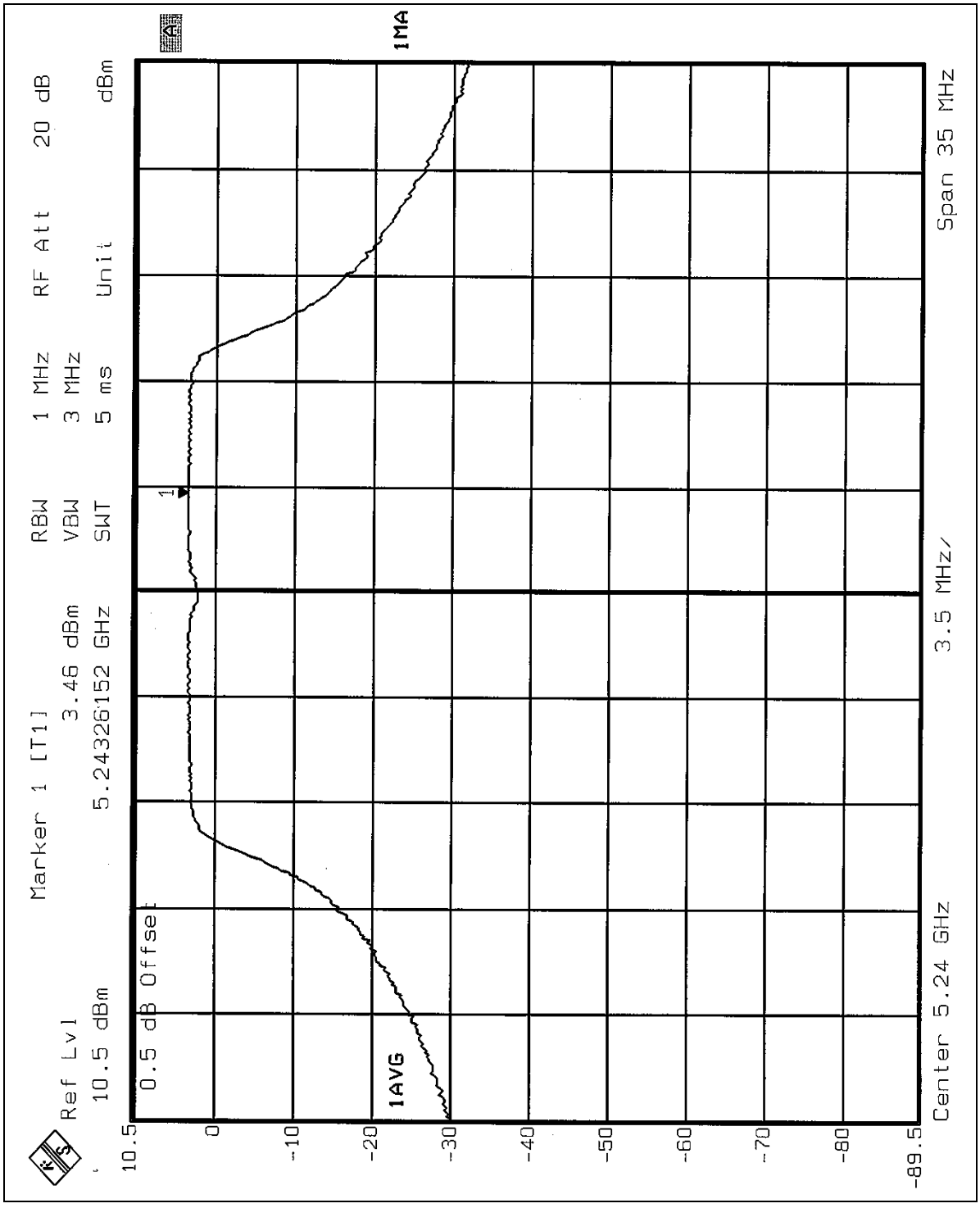
EUT	USB2.0 802.11a/b/g wireless network adapter	MODEL	WUB-500A
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH, 991hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Leo Hung		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	5180	3.87	4	PASS
4	5240	3.46	4	PASS
5	5260	3.83	11	PASS
8	5320	3.35	11	PASS

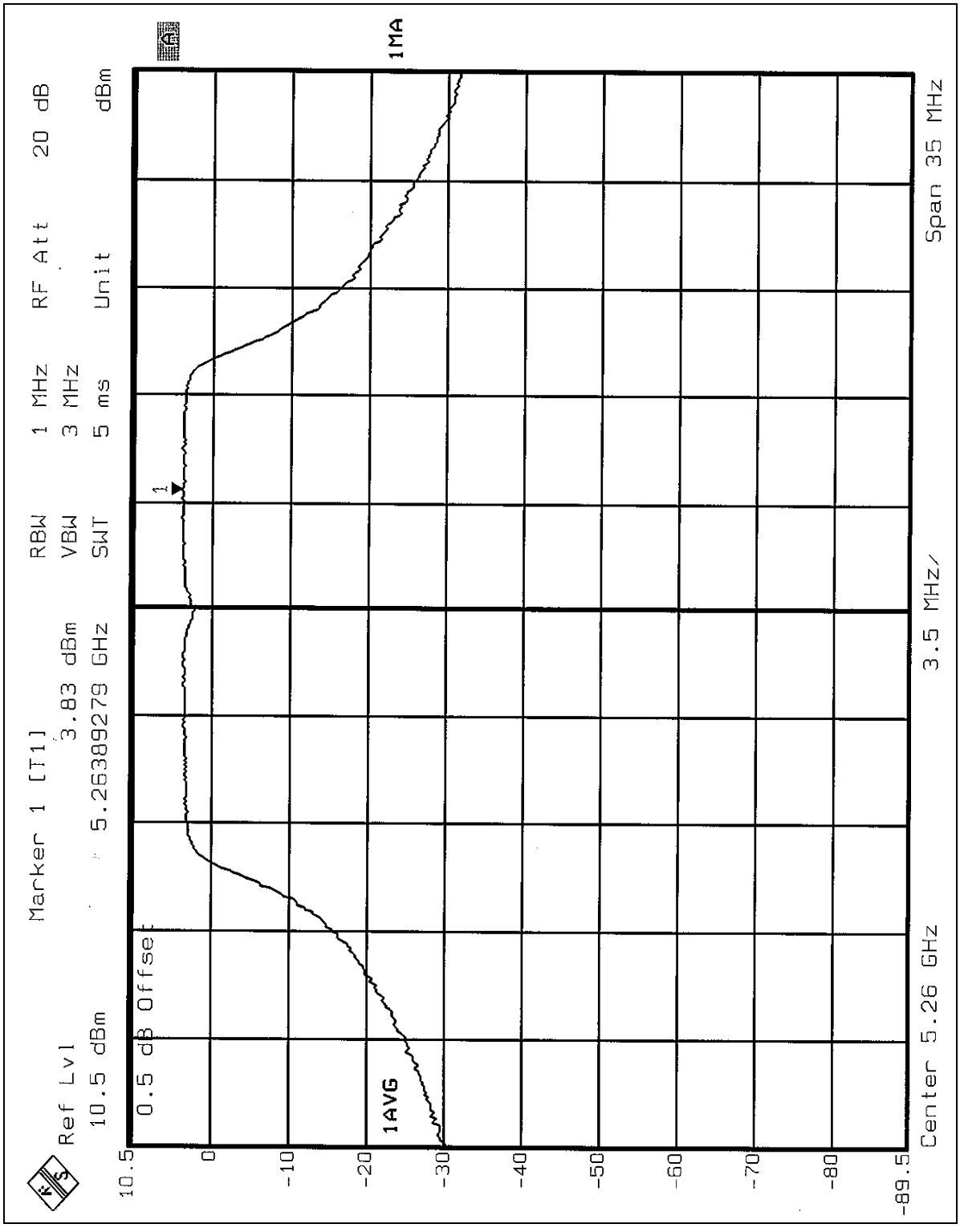
CH1


Marker 1 [T1]
3.87 dBm
5.18241984 GHz
Ref Lvl
10.5 dBm
0.5 dB Offset
RBW 1 MHz
VBW 3 MHz
SWT 5 ms
RF Att 20 dB
Unit dBm
1MA
1AVG
Center 5.18 GHz
3.5 MHz/
Span 35 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

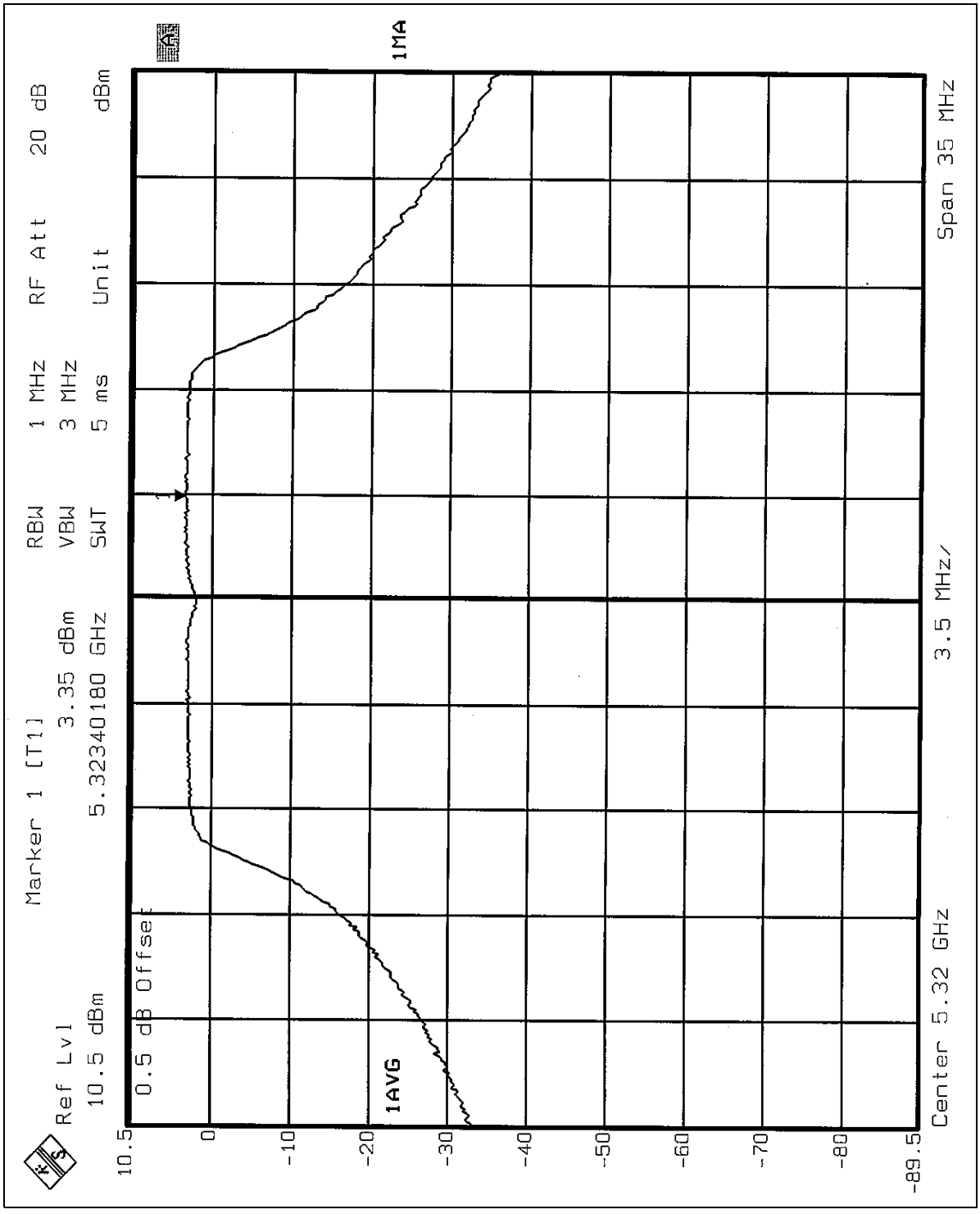
CH4


Marker 1 [T1]
3.46 dBm
5.24326152 GHz
RBW 1 MHz
VBW 3 MHz
SWT 5 ms
RF Att 20 dB
Unit dBm
Ref Lvl
10.5 dBm
0.5 dB Offset
1MA
1AVG
Center 5.24 GHz
3.5 MHz/
Span 35 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

CH5


Marker 1 [T1]
3.83 dBm
5.26389279 GHz
Ref Lvl
10.5 dBm
0.5 dB Offset
RBW 1 MHz
VBW 3 MHz
SWT 5 ms
RF Att 20 dB
Unit dBm
1MA
1AVG
Center 5.26 GHz
3.5 MHz/
Span 35 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

CH8


Marker 1 [T1]
5.32340180 GHz
3.35 dBm
RBW 1 MHz
VBW 3 MHz
SWT 5 ms
RF Att 20 dB
Unit dBm
Ref Lvl
10.5 dBm
0.5 dB Offset
1MA
1AVG
Center 5.32 GHz
3.5 MHz/
Span 35 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

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	Aug. 12, 2005
WIT STANDARD TEMPERATURE AND HUMIDITY CHAMBER	TH-4S-C	W901030	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.

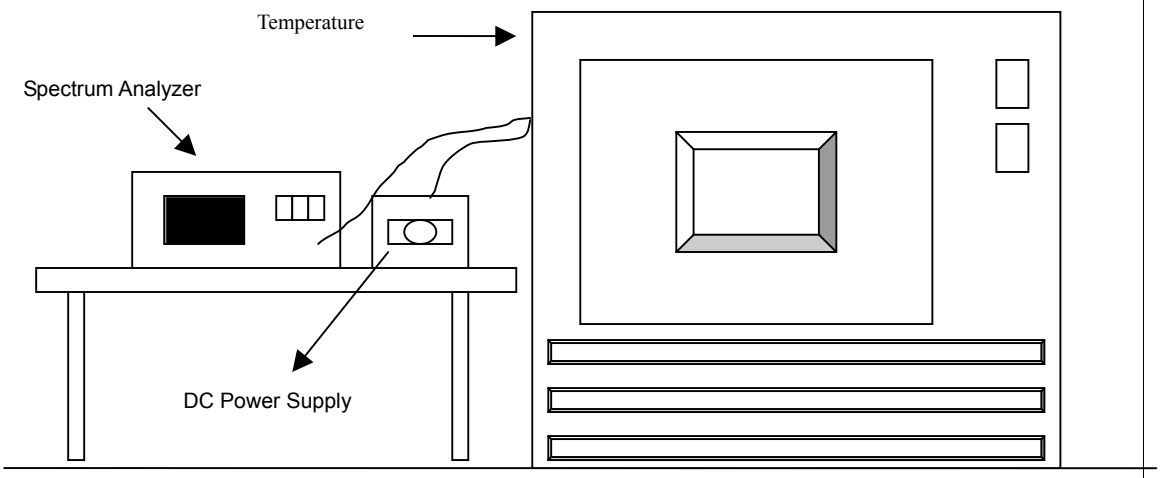
5.6.3 TEST PROCEDURE

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 : ± 0.01%			
Temp. (℃)	Power supply (VDC)	2 minute		5 minute		10 minute	
		(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
50	138	5319.9502	-0.0009361	5319.9515	-0.0009117	5319.9532	-0.0008797
	120	5319.9512	-0.0009173	5319.9522	-0.0008985	5319.9538	-0.0008684
	102	5319.9518	-0.0009060	5319.9525	-0.0008929	5319.9538	-0.0008684
40	138	5319.9398	-0.0011316	5319.9388	-0.0011504	5319.9395	-0.0011372
	120	5319.9388	-0.0011504	5319.9385	-0.0011560	5319.9395	-0.0011372
	102	5319.9398	-0.0011316	5319.9395	-0.0011372	5319.9395	-0.0011372
30	138	5319.9382	-0.0011617	5319.9388	-0.0011504	5319.9395	-0.0011372
	120	5319.9388	-0.0011504	5319.9392	-0.0011429	5319.9395	-0.0011372
	102	5319.9392	-0.0011429	5319.9392	-0.0011429	5319.9388	-0.0011504
20	138	5319.9515	-0.0009117	5319.9515	-0.0009060	5319.9518	-0.0009060
	120	5319.9515	-0.0009117	5319.9518	-0.0009060	5319.9522	-0.0008985
	102	5319.9518	-0.0009060	5319.9518	-0.0006241	5319.9518	-0.0009060
10	138	5319.9668	-0.0006241	5319.9668	-0.0006241	5319.9672	-0.0006165
	120	5319.9668	-0.0006241	5319.9668	-0.0006165	5319.9672	-0.0006165
	102	5319.9668	-0.0006241	5319.9672	-0.0003158	5319.9672	-0.0006165
0	138	5319.9981	-0.0000357	5319.9832	-0.0003102	5319.9838	-0.0003045
	120	5319.9828	-0.0003233	5319.9835	-0.0040695	5319.9842	-0.0002970
	102	5319.9828	-0.0003233	5319.7835	0.0000226	5319.9845	-0.0002914
-10	138	5320.0005	0.0000094	5320.0012	0.0000282	5320.0015	0.0000282
	120	5320.0008	0.0000150	5320.0015	0.0000282	5320.0015	0.0000282
	102	5320.0012	0.0000226	5320.0015	0.0002218	5320.0018	0.0000338
-20	138	5320.0118	0.0002218	5320.0118	0.0002218	5320.0118	0.0002218
	120	5320.0118	0.0002218	5320.0118	0.0002218	5320.0118	0.0002218
	102	5320.0118	0.0002218	5320.0118	0.0001410	5320.0118	0.0002218
-30	138	5320.0072	0.0001353	5320.0075	0.0001410	5320.0075	0.0001410
	120	5320.0075	0.0001410	5320.0075	0.0001466	5320.0068	0.0001278
	102	5320.0075	0.0001410	5320.0078	0.0001466	5320.0068	0.0001278

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 lose 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 was 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 filed strength of the intentional signal made on the OATS to calculate the field strength of the unintentional signals.
The spectrum plots (Peak RBW=VBW=1MHz; Average RBW=1MHz, VBW=10Hz) are attached on the following pages.

Test Mode 1

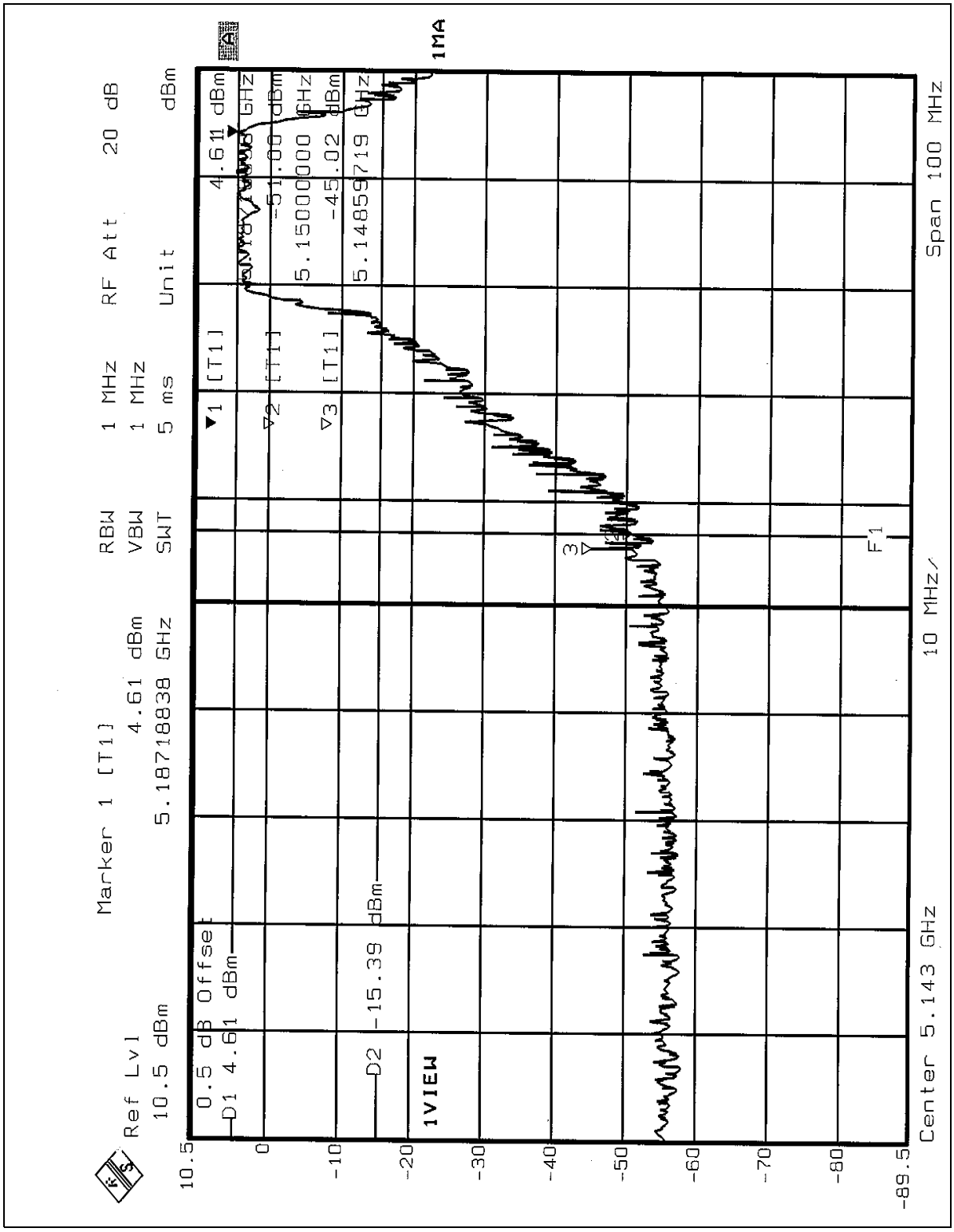
Channel 1 (5180MHz)
The band edge emission plot on the pages 138~139 shows 49.63dBc (Peak) / 58.26Bc (Average) between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 94.9dBuV/m, so the maximum field strength in restrict band is 94.96-58.26=36.70dBuV/m which is under 54dBuV/m limit.

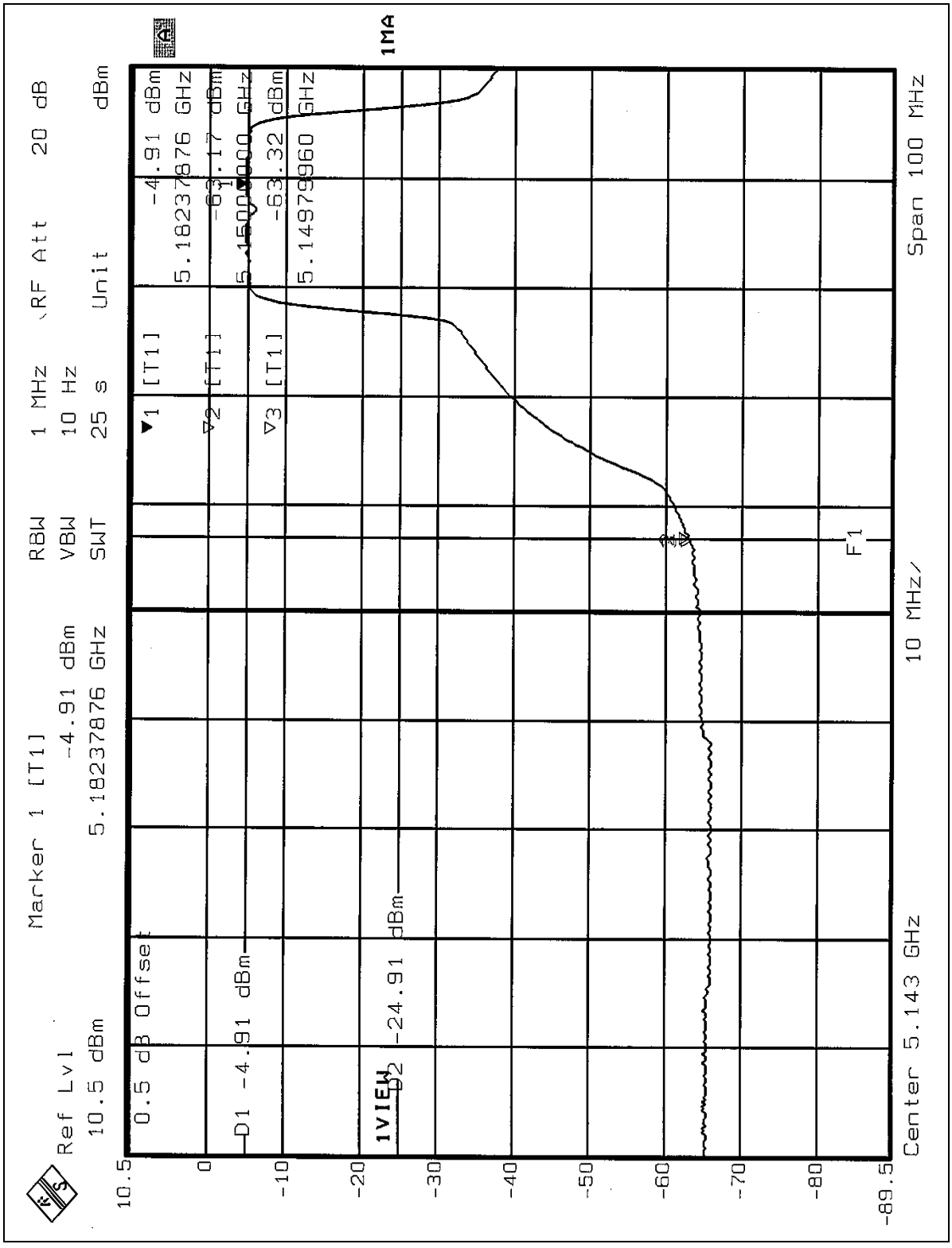
Channel 8 (5320MHz)
The band edge emission plot on the pages 140~141shows 43.57dBc (Peak) / 56.37dBc (Average) between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 8 is 94.72dBuV/m, so the maximum field strength in restrict band is 94.72-56.37=38.35dBuV/m which is under 54dBuV/m limit.

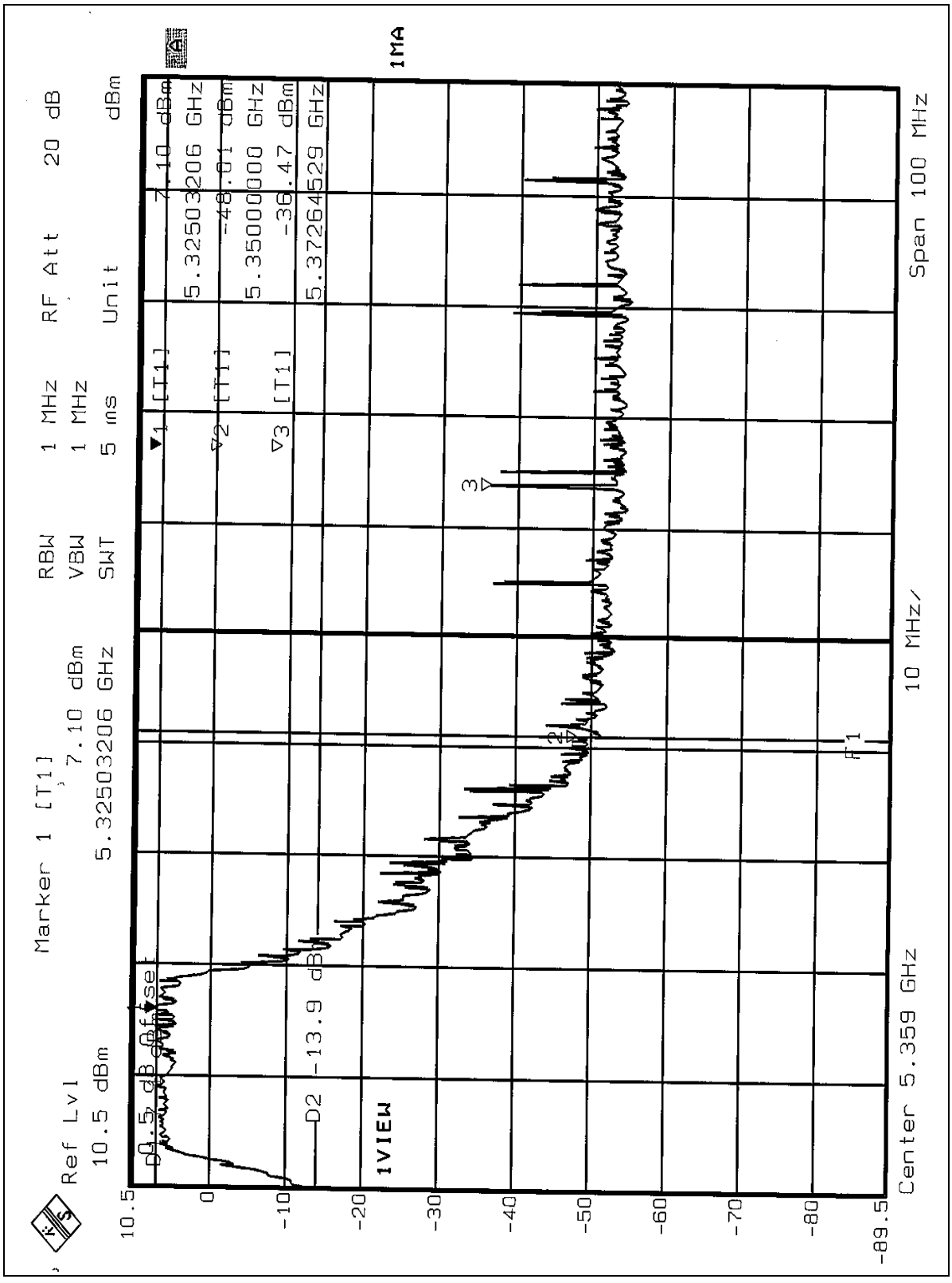
Test Mode 2

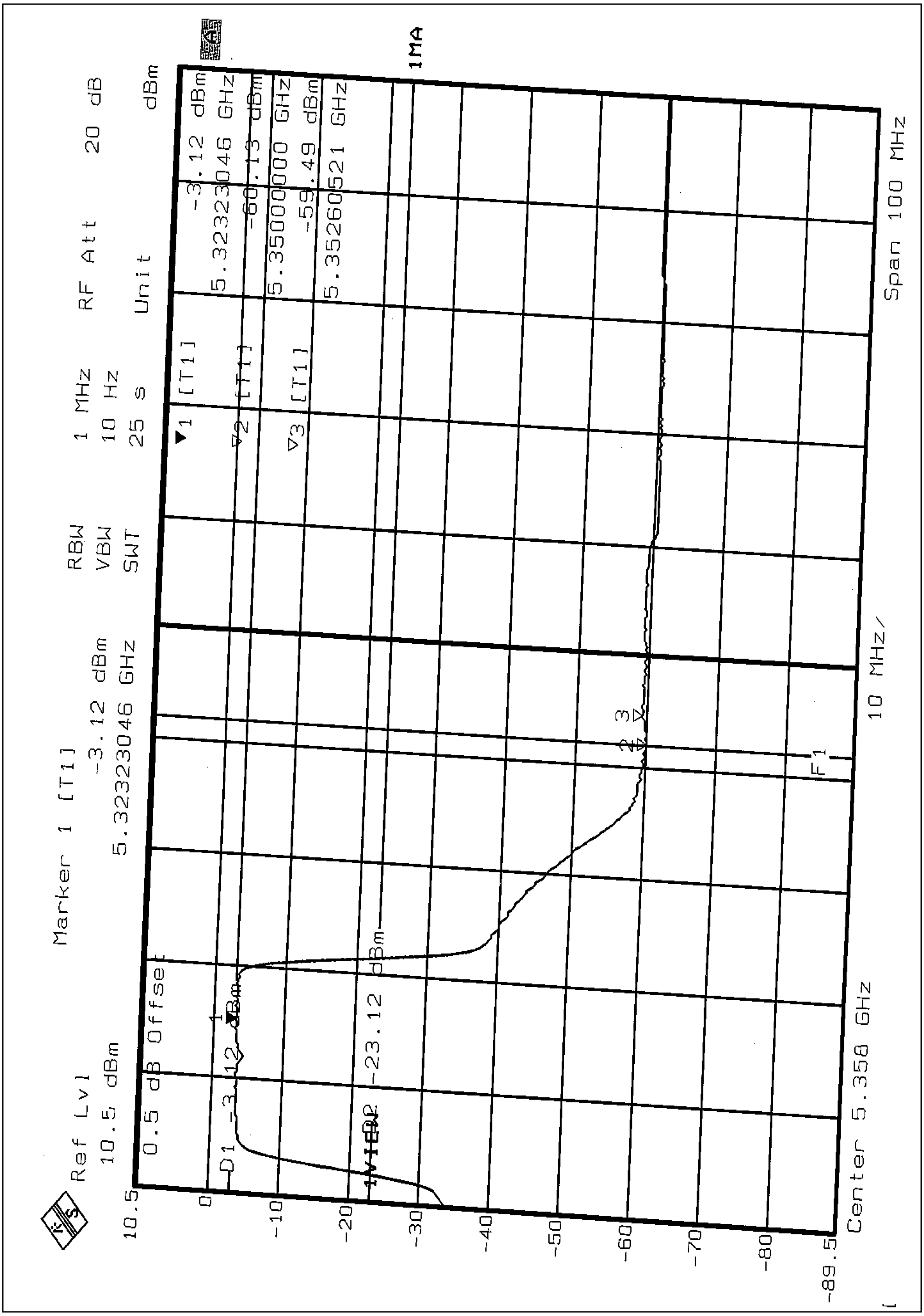
Channel 1 (5180MHz)
The band edge emission plot on the pages 138~139 shows 49.63dBc (Peak) / 58.26Bc (Average) between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 93.76dBuV/m, so the maximum field strength in restrict band is 93.76-58.26=35.50dBuV/m which is under 54dBuV/m limit.

Channel 8 (5320MHz)
The band edge emission plot on the pages 140~141 shows 43.57dBc (Peak) / 56.37dBc (Average) between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 8 is 94.42dBuV/m, so the maximum field strength in restrict band is 94.42-56.37=38.05dBuV/m which is under 54dBuV/m limit.


Marker 1 [T1]
4.61 dBm
5.18718838 GHz
RBW 1 MHz
VBW 1 MHz
SWT 5 ms
RF Att 20 dB
Unit dBm
Ref Lvl
10.5 dBm
0.5 dB Offset
D1 4.61 dBm
D2 -15.39 dBm
1VIEW
1MA
1 [T1] 4.61 dBm 5.18718838 GHz
2 [T1] -51.00 dBm 5.15000000 GHz
3 [T1] -45.02 dBm 5.14859719 GHz
Center 5.143 GHz
10 MHz/
Span 100 MHz
F1
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5


Marker 1 [T1]
-4.91 dBm
5.18237876 GHz
RBW 1 MHz
VBW 10 Hz
SWT 25 s
RF Att 20 dB
Unit dBm
Ref Lvl
10.5 dBm
0.5 dB Offset
D1 -4.91 dBm
1VIEW
D2 -24.91 dBm
1MA
Center 5.143 GHz
10 MHz/
Span 100 MHz
F1
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5


Marker 1 [T1]
7.10 dBm
5.32503206 GHz
RBW 1 MHz
VBW 1 MHz
SWT 5 ms
RF Att 20 dB
Unit dBm
Ref Lvl
10.5 dBm
Offset 0.5 dB
D2 -13.9 dB
1VIEW
1MA
1 [T1] 7.10 dBm 5.32503206 GHz
2 [T1] -48.01 dBm 5.35000000 GHz
3 [T1] -36.47 dBm 5.37264529 GHz
Center 5.359 GHz
10 MHz/
Span 100 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5


Ref Lvl
10.5 dBm
0.5 dB Offset
Marker 1 [T1]
-3.12 dBm
5.32323046 GHz
RBW 1 MHz
VBW 10 Hz
SWT 25 s
RF Att 20 dB
Unit dBm
▼1 [T1] -3.12 dBm
5.32323046 GHz
▽2 [T1] -60.13 dBm
5.35000000 GHz
▽3 [T1] -59.49 dBm
5.35260521 GHz
1MA
D1 -3.12 dBm
D2 -23.12 dBm
1VIEW
F1
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5
Center 5.358 GHz
10 MHz/
Span 100 MHz

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 are Dipole antenna with UFL connector and Printed antenna without connector. The maximum Gain of the antenna is 1.5dBi.

FOR FREQUENCY 5.725~5.850GHz

5.9 6dB BANDWIDTH MEASUREMENT

5.9.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

5.9.2 TEST INSTRUMENTS

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

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

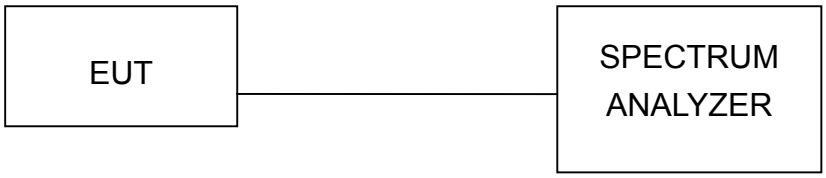
5.9.3 TEST PROCEDURE

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 6dB.

5.9.4 DEVIATION FROM TEST STANDARD

No deviation

5.9.5 TEST SETUP



5.9.6 EUT OPERATING CONDITIONS

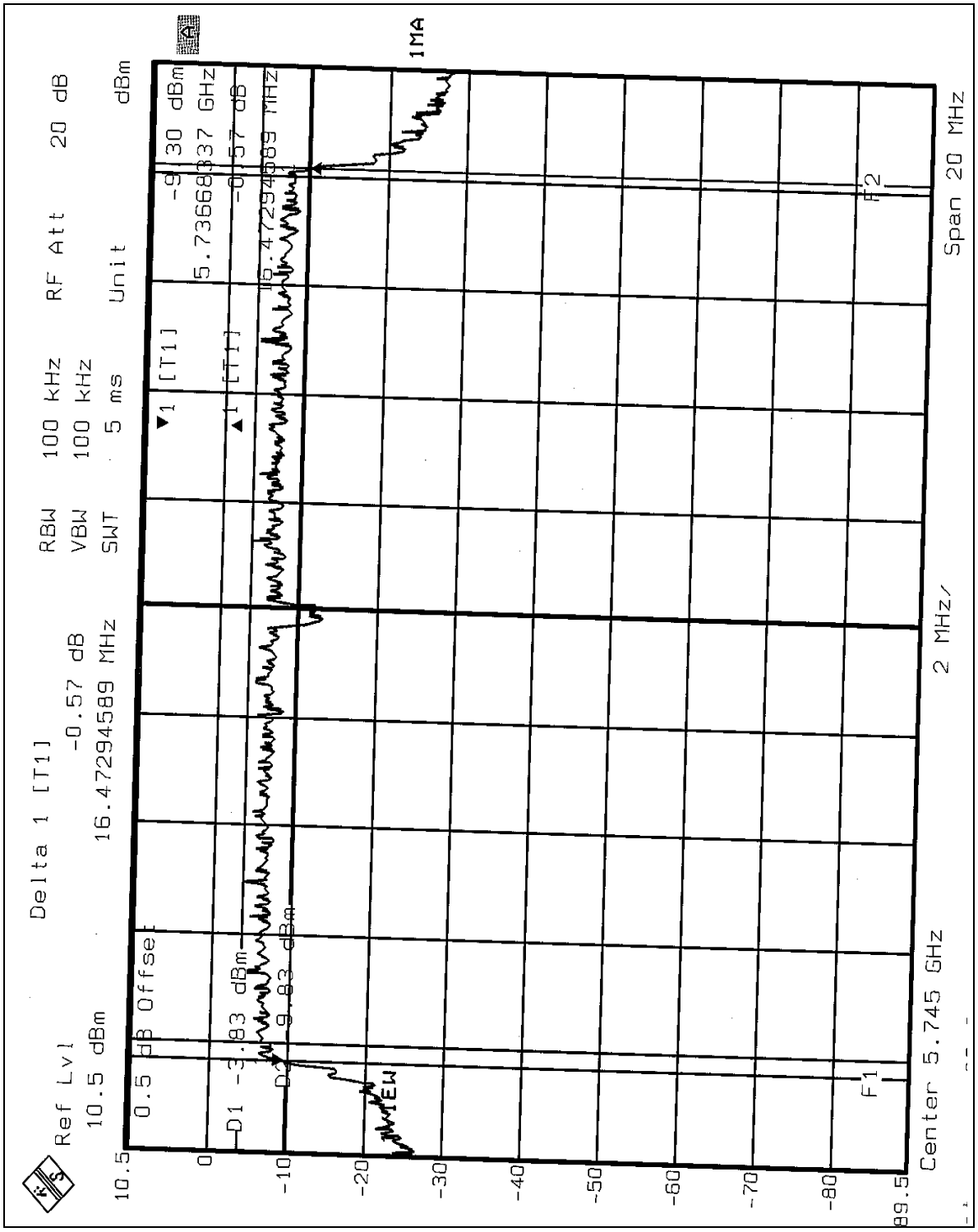
The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

5.9.7 TEST RESULTS

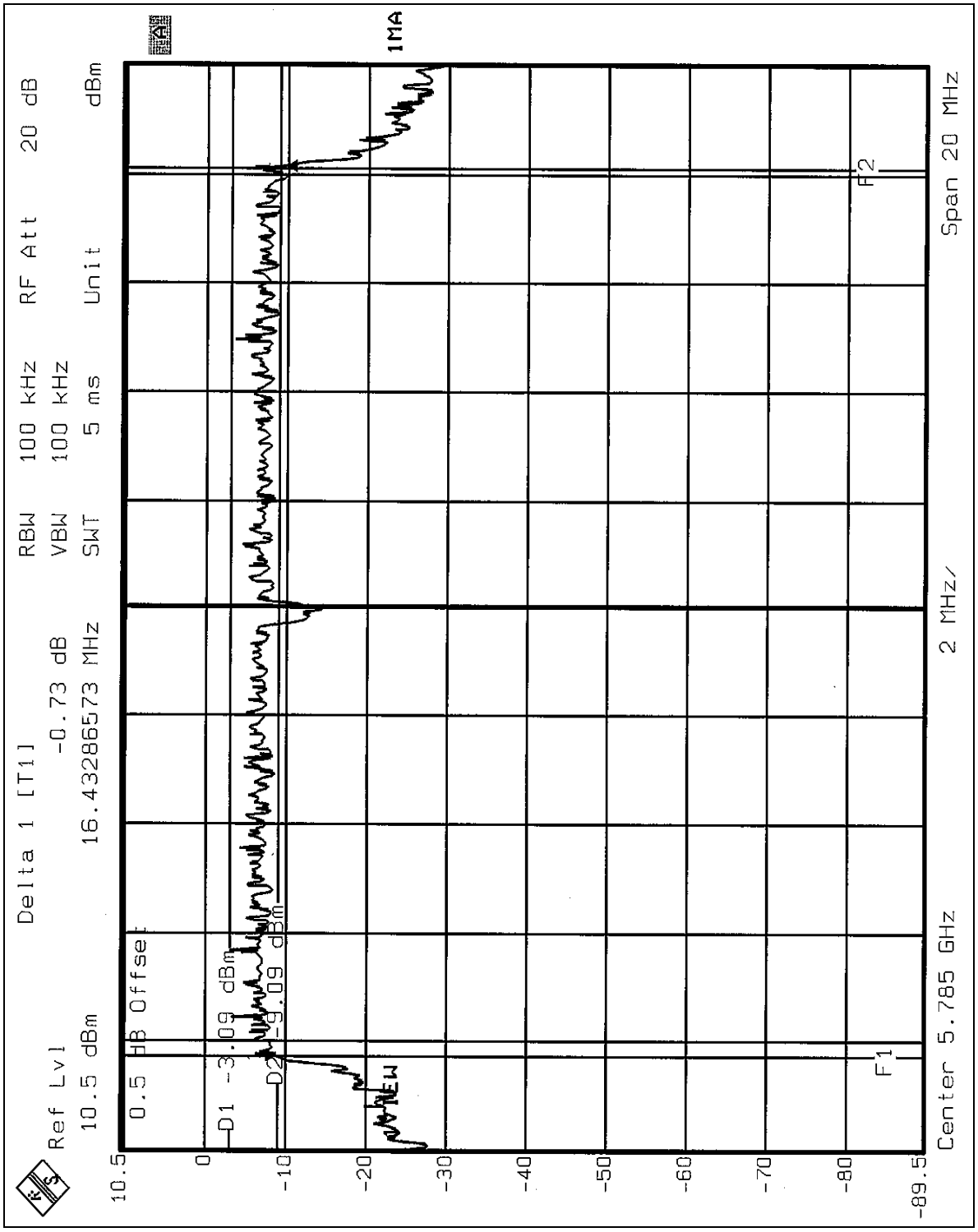
EUT	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991 hPa	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
TESTED BY	Leo Hung		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
9	5745	16.47	0.5	PASS
11	5785	16.43	0.5	PASS
13	5825	16.47	0.5	PASS

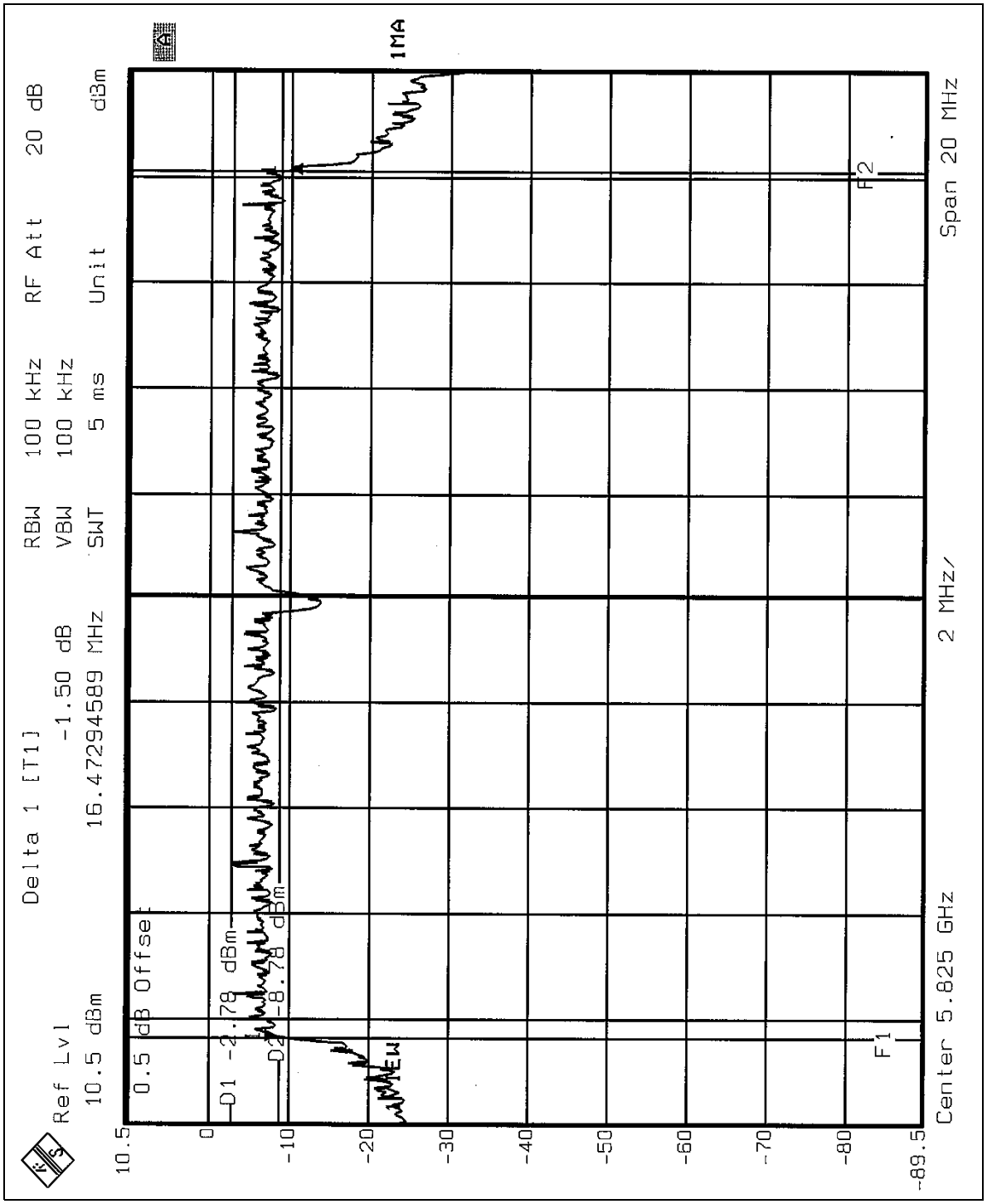
CH9


Delta 1 [T1]
-0.57 dB
16.47294589 MHz
Ref Lvl
10.5 dBm
0.5 dB Offset
RBW 100 kHz
VBW 100 kHz
SWT 5 ms
RF Att 20 dB
Unit dBm
1MA
Center 5.745 GHz
2 MHz/
Span 20 MHz
D1 -3.83 dBm
D2 9.83 dBm
F1
F2

CH11


Delta 1 [T1]
-0.73 dB
16.43286573 MHz
RBW 100 kHz
VBW 100 kHz
SWT 5 ms
RF Att 20 dB
Unit dBm
Ref Lvl
10.5 dBm
0.5 HB Offset
D1 -3.09 dBm
D2 -9.09 dBm
1MA
1MAVG
F1
F2
Center 5.785 GHz
2 MHz/
Span 20 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

CH13


Delta 1 [T1]
-1.50 dB
16.47294589 MHz
RBW 100 kHz
VBW 100 kHz
SWT 5 ms
RF Att 20 dB
Unit dBm
Ref Lvl
10.5 dBm
0.5 dB Offset
D1 -2.78 dBm
D2 -8.78 dBm
1MA
1MW
F1
F2
Center 5.825 GHz
2 MHz/
Span 20 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

5.10 MAXIMUM PEAK OUTPUT POWER

5.10.1 LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm.

5.10.2 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..

5.10.3 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.

5.10.4 DEVIATION FROM TEST STANDARD

No deviation

5.10.5 TEST SETUP

5.10.6 EUT OPERATING CONDITIONS

Same as Item 5.9.6

5.10.7 TEST RESULTS

EUT	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
TESTED BY	Leo Hung		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
9	5745	25.65	14.09	30.00	PASS
11	5785	25.53	14.07	30.00	PASS
12	5825	25.29	14.03	30.00	PASS

5.11 POWER SPECTRAL DENSITY MEASUREMENT

5.11.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

5.11.2 TEST INSTRUMENTS

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

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

5.11.3 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.

5.11.4 DEVIATION FROM TEST STANDARD

No deviation

5.11.5 TEST SETUP

5.11.6 EUT OPERATING CONDITION

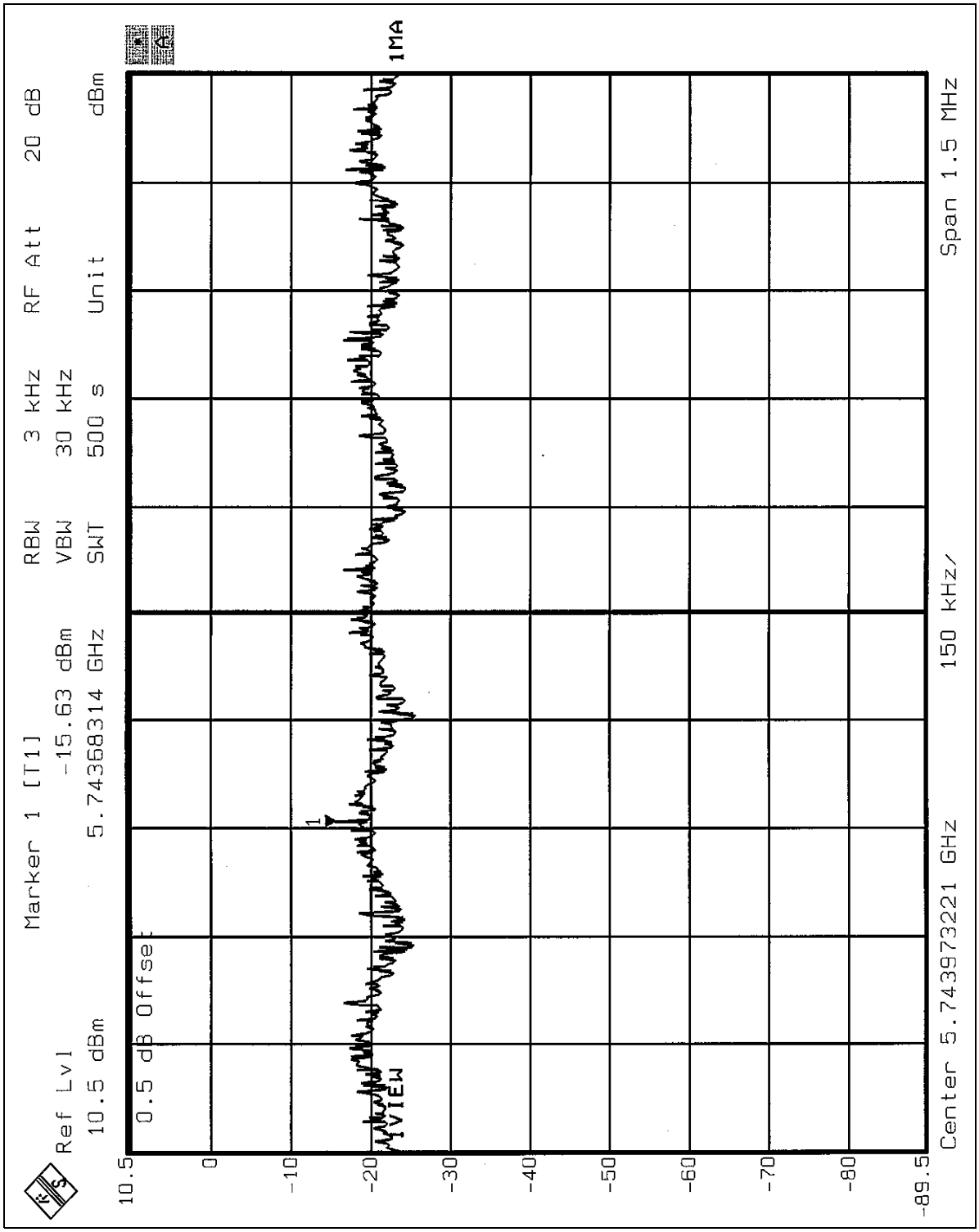
Same as Item 5.9.6

5.11.7 TEST RESULTS

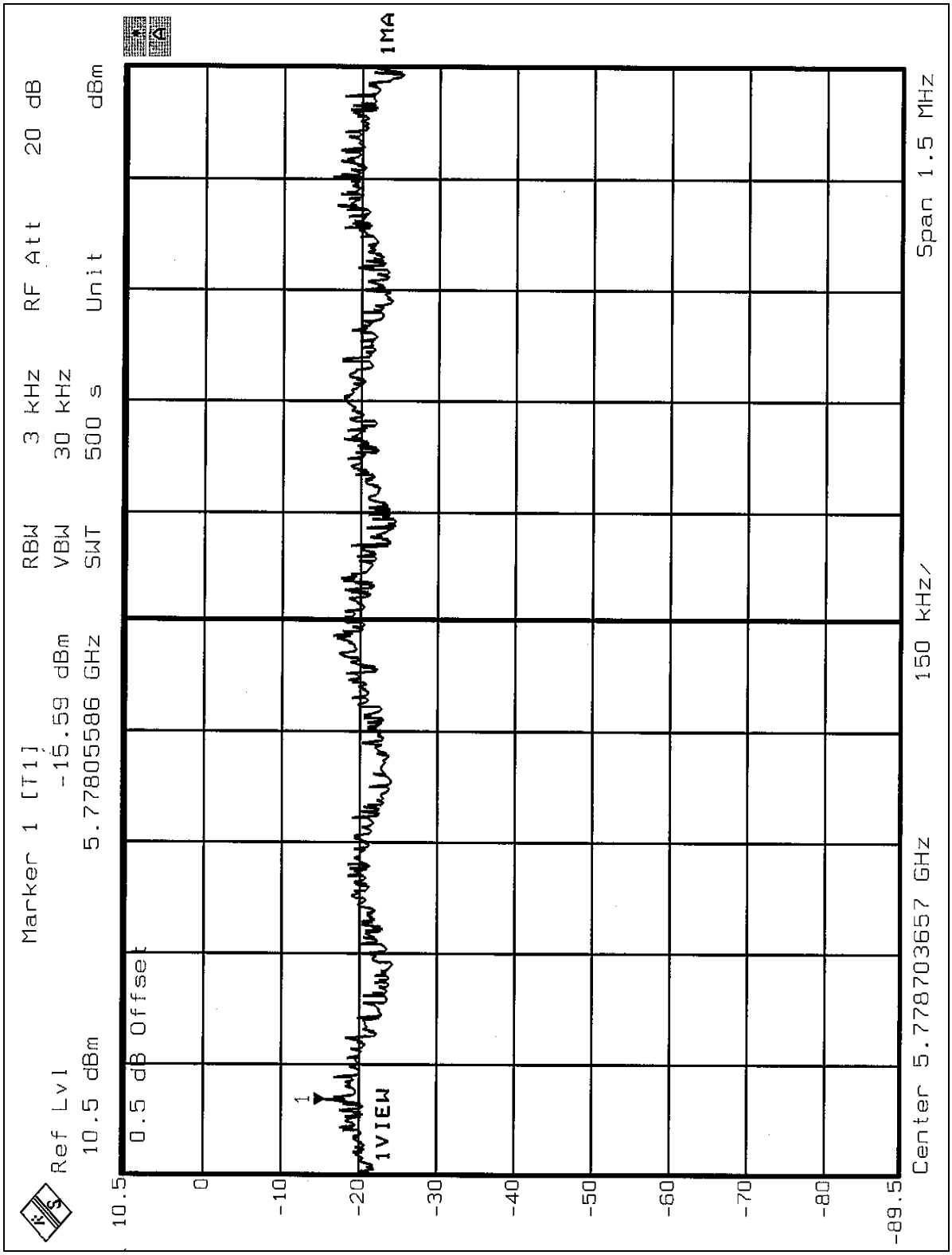
EUT	USB2.0 802.11a/b/g wireless network adapter	**MODEL**	WUB-500A
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991 hPa	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
TESTED BY	Leo Hung		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
9	5745	3.12	8	PASS
11	5785	3.88	8	PASS
12	5825	3.33	8	PASS

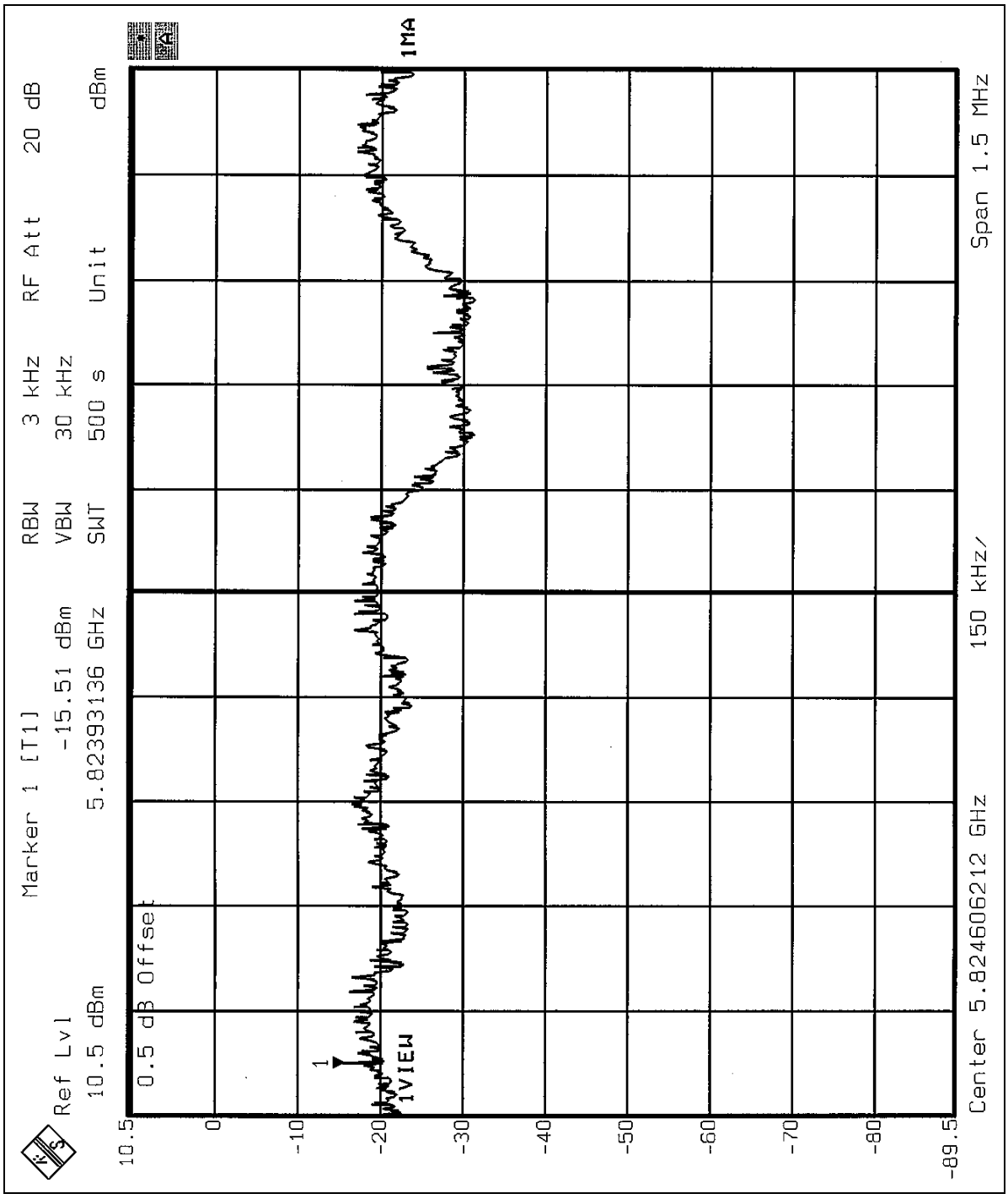
CH9


Marker 1 [T1]
-15.63 dBm
5.74368314 GHz
RBW 3 kHz
VBW 30 kHz
SWT 500 s
RF Att 20 dB
Unit dBm
Ref Lvl
10.5 dBm
0.5 dB Offset
1MA
VIEW
Center 5.74397321 GHz
150 kHz/
Span 1.5 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

CH11


Marker 1 [T1]
-15.59 dBm
5.77805586 GHz
RBW 3 kHz
VBW 30 kHz
SWT 500 s
RF Att 20 dB
Unit dBm
Ref Lvl
10.5 dBm
0.5 dB Offset
1VIEW
1MA
Center 5.77870365? GHz
150 kHz/
Span 1.5 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

CH12


Ref Lvl
10.5 dBm
0.5 dB Offset
Marker 1 [T1]
-15.51 dBm
5.82393136 GHz
RBW 3 kHz
VBW 30 kHz
SWT 500 s
RF Att 20 dB
Unit dBm
1MA
1VIEW
Center 5.82460212 GHz
150 kHz/
Span 1.5 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

5.12 BAND EDGES MEASUREMENT

5.12.1 LIMITS OF BAND EDGES MEASUREMENT

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

5.12.2 TEST INSTRUMENTS

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

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

5.12.3 TEST PROCEDURE

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

5.12.4 DEVIATION FROM TEST STANDARD

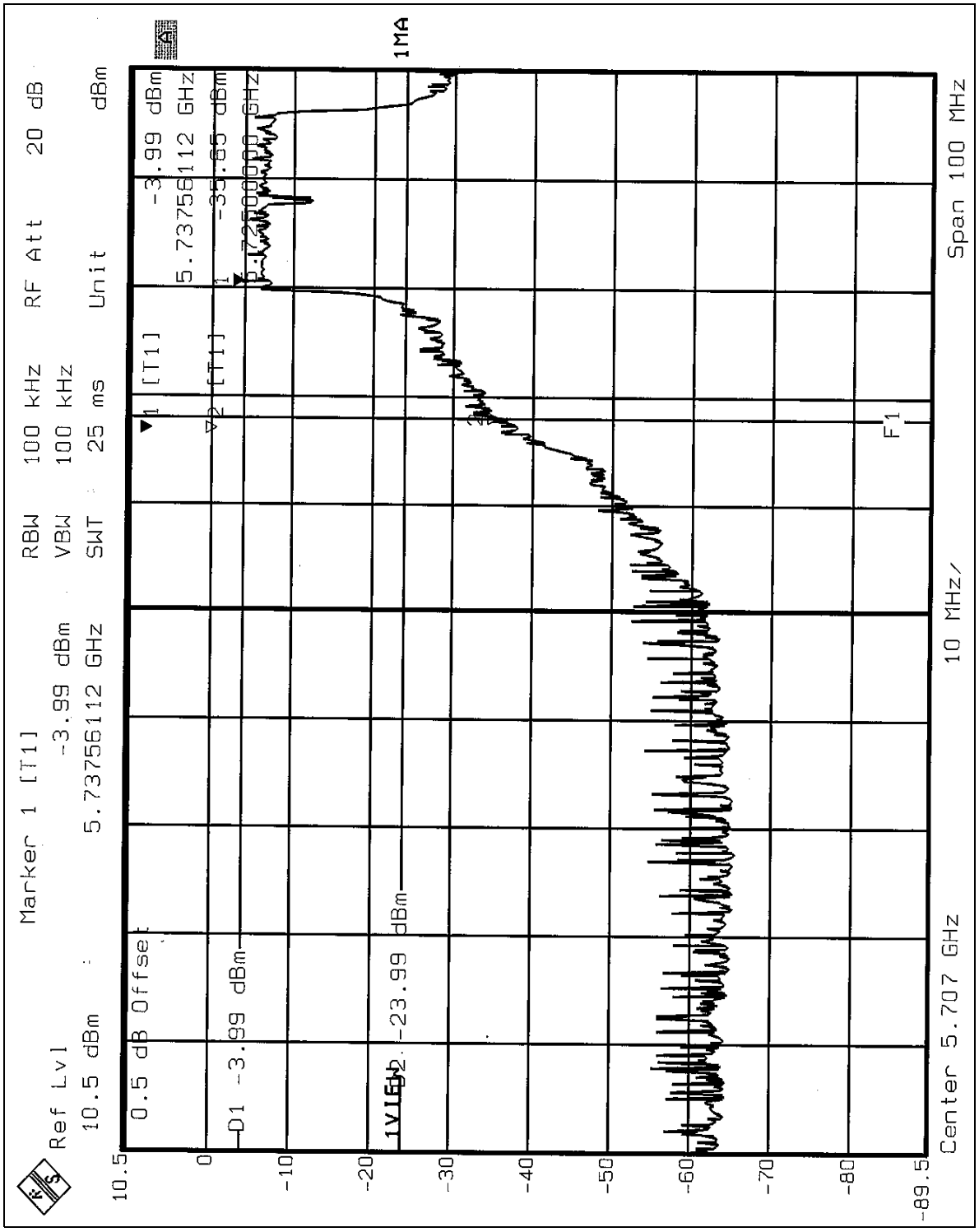
No deviation

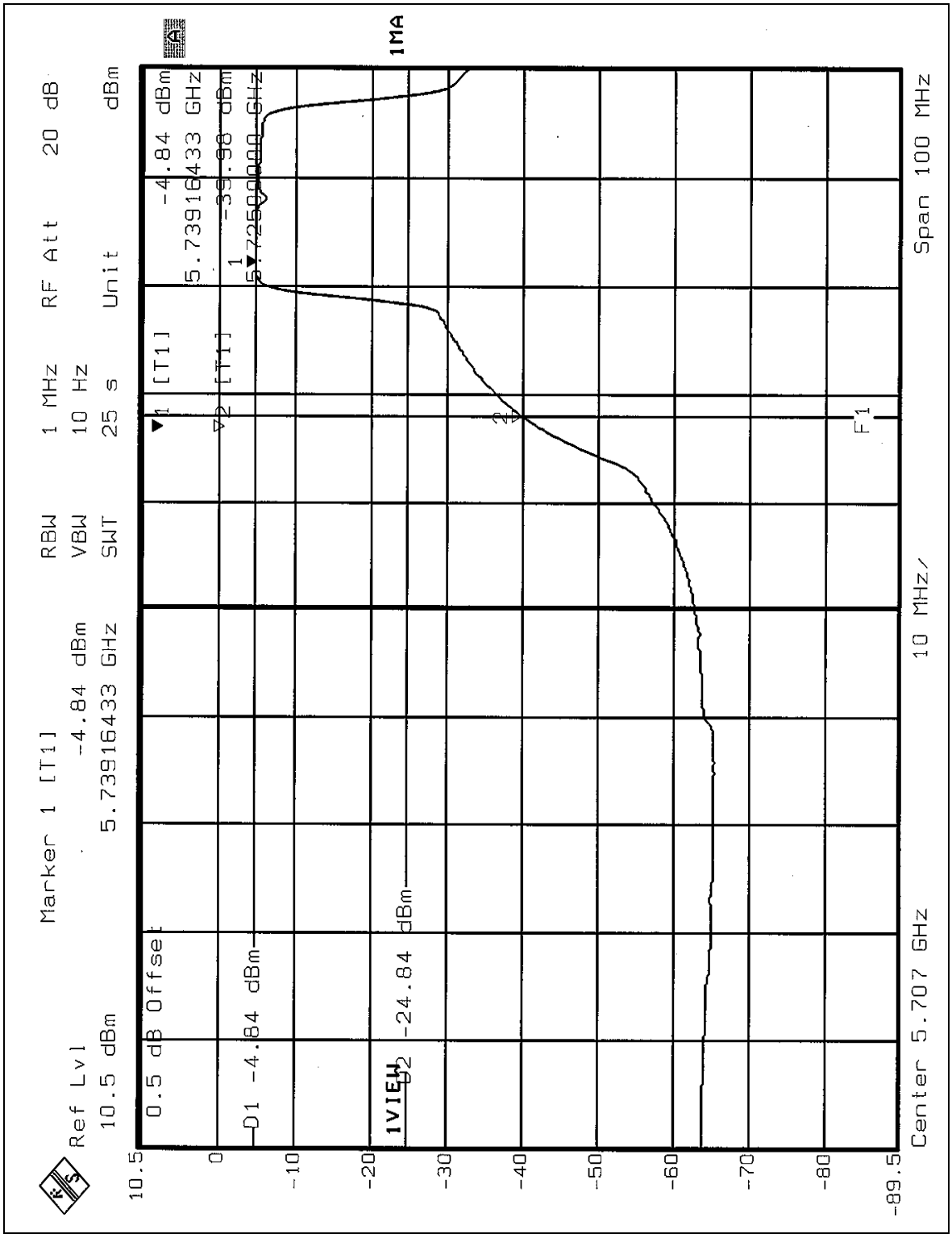
5.12.5 EUT OPERATING CONDITION

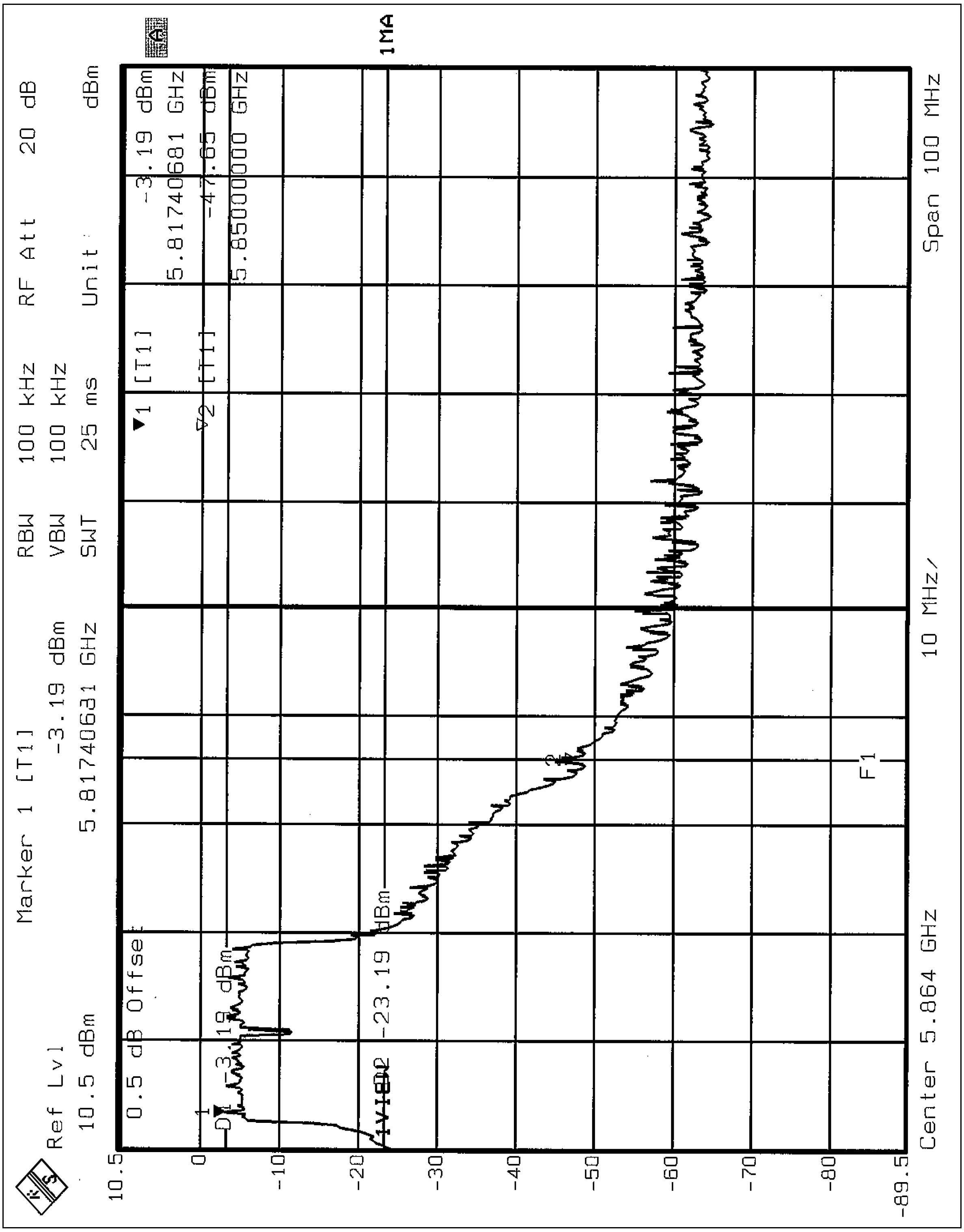
Same as Item 5.9.6

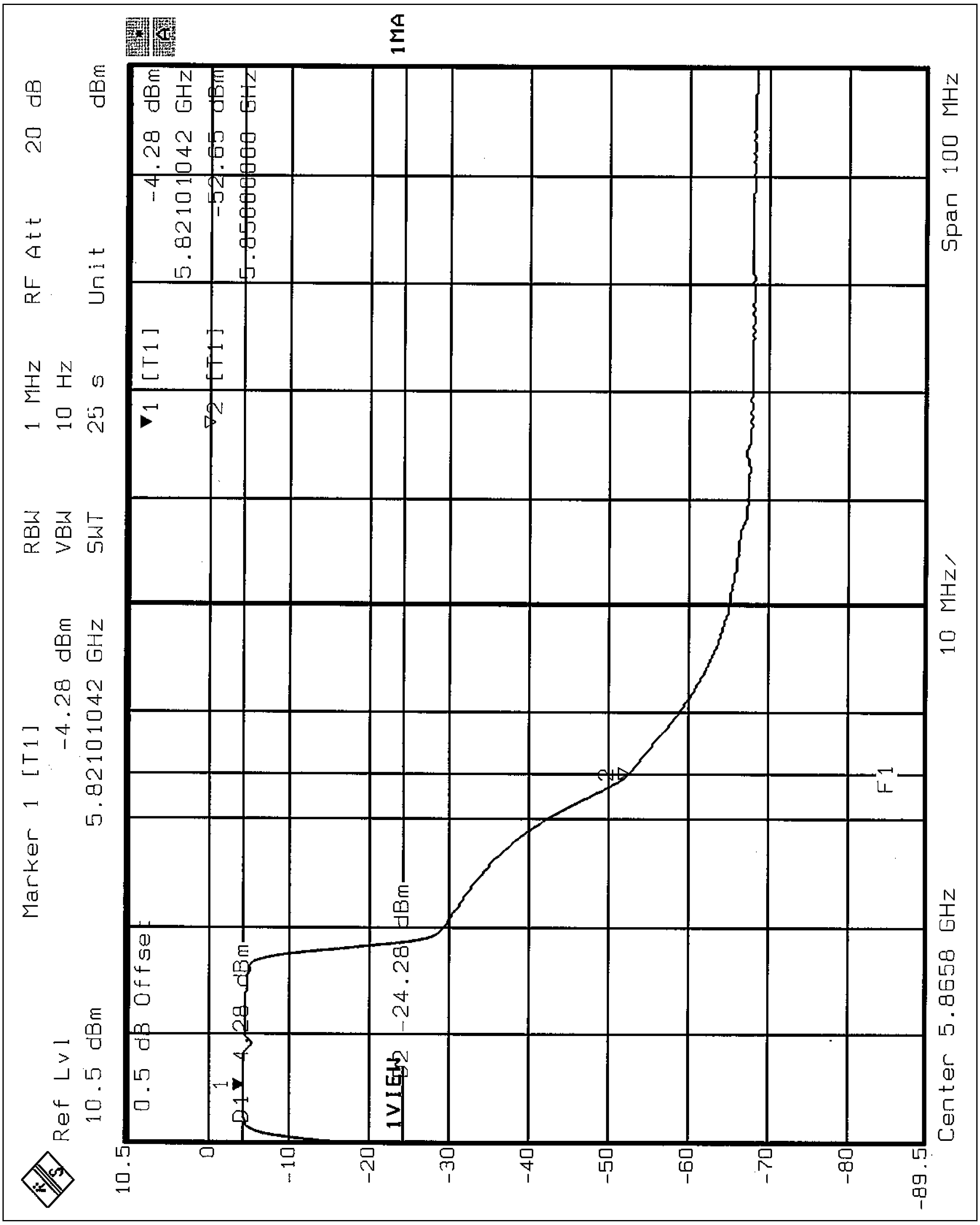
5.12.6 TEST RESULTS

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


Agilent Technologies
Ref Lvl
10.5 dBm
Offset 0.5 dB
D1 -3.99 dBm
1VIEW
-23.99 dBm
Marker 1 [T1]
-3.99 dBm
5.73756112 GHz
RBW 100 kHz
VBW 100 kHz
SWT 25 ms
RF Att 20 dB
Unit dBm
1 [T1]
-3.99 dBm
5.73756112 GHz
2 [T1]
-35.65 dBm
5.72500000 GHz
1MA
F1
Center 5.707 GHz
10 MHz/
Span 100 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5


Marker 1 [T1]
-4.84 dBm
5.73916433 GHz
Ref Lvl
10.5 dBm
0.5 dB Offset
D1 -4.84 dBm
D2 -24.84 dBm
VIEW
RBW 1 MHz
VBW 10 Hz
SWT 25 s
RF Att 20 dB
Unit dBm
1 [T1] -4.84 dBm
5.73916433 GHz
2 [T1] -39.98 dBm
5.72500000 GHz
1MA
Center 5.707 GHz
10 MHz/
Span 100 MHz
F1
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5


Marker 1 [T1]
-3.19 dBm
5.81740631 GHz
RBW 100 kHz
VBW 100 kHz
SWT 25 ms
RF Att 20 dB
Unit dBm
Ref Lvl
10.5 dBm
0.5 dB Offset
▼1 [T1] -3.19 dBm 5.81740631 GHz
∇2 [T1] -47.65 dBm 5.85000000 GHz
1MA
D1 -3.19 dBm
D2 -23.19 dBm
1VIEW
F1
Center 5.864 GHz
10 MHz/
Span 100 MHz


Marker 1 [T1]
-4.28 dBm
5.82101042 GHz
RBW 1 MHz
VBW 10 Hz
SWT 25 s
RF Att 20 dB
Unit dBm
▼1 [T1] -4.28 dBm 5.82101042 GHz
▽2 [T1] -52.65 dBm 5.85000000 GHz
Ref Lvl 10.5 dBm
0.5 dB Offset
D1 -4.28 dBm
D2 -24.28 dBm
1MA
1VIEW
F1
Center 5.8658 GHz
10 MHz/
Span 100 MHz

5.13 ANTENNA REQUIREMENT

5.13.1 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(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.

5.13.2 ANTENNA CONNECTED CONSTRUCTION

The antenna used in this product are Dipole antenna with UFL connector and Printed antenna without connector. The maximum Gain of the antenna is 1.5dBi.

6. PHOTOGRAPHS OF THE TEST CONFIGURATION

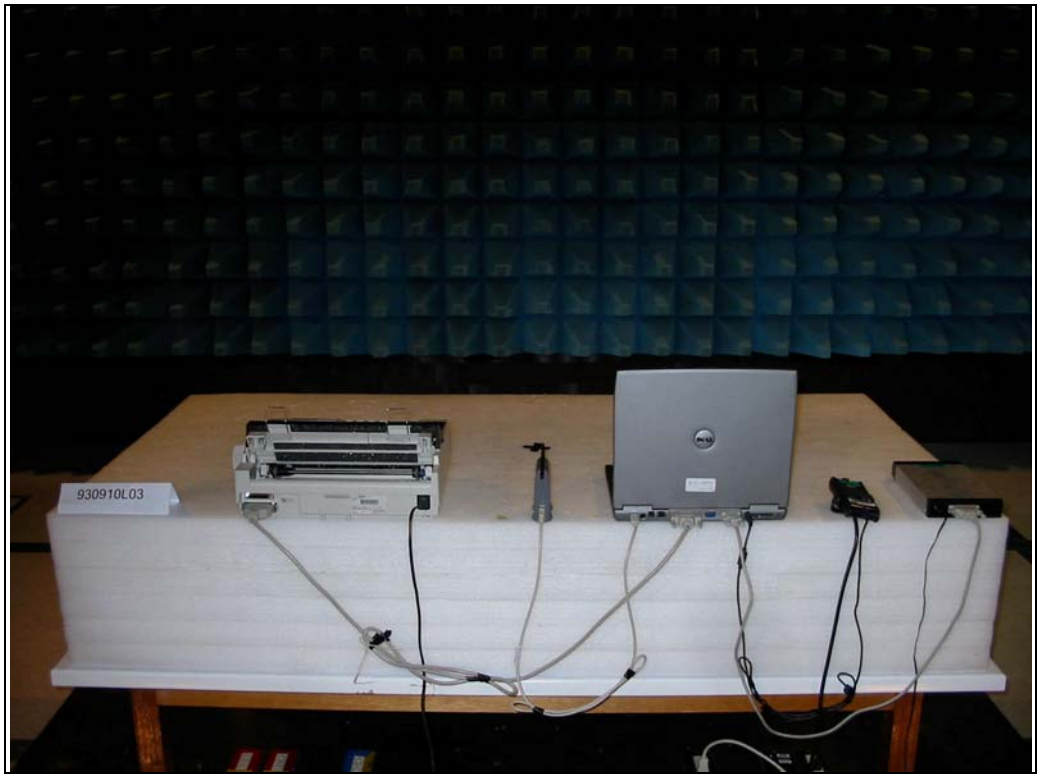
CONDUCTED EMISSION TEST

Test Mode 1

Test Mode 2

RADIATED EMISSION TEST

Test Mode 1



Test Mode 2

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:
Tel: 886-3-3183232
Fax: 886-3-3185050

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

Web Site: www.adt.com.tw

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

Report Format Version 1.5