



FCC TEST REPORT

REPORT NO.: RF920624R01A

MODEL NO.: WLL3050

RECEIVED: Jul. 20, 2004

TESTED: Jul. 23 ~ Aug. 18, 2004

APPLICANT: ASKEY COMPUTER CORP.

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TAIPEI TAIWAN R.O.C.

ISSUED BY: Advance Data Technology Corporation

LAB LOCATION: No. 19, Hwa Ya 2nd Rd., Wen Hwa Tsuen, Kwei
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No. 2177-01



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1 CERTIFICATION

PRODUCT : Mini-PCI CARD
MODEL NO. : WLL3050
BRAND NAME : ASKEY
APPLICANT : ASKEY TECHNOLOGY INC.
TESTED : Jul. 23 ~ Aug. 18, 2004
TEST ITEM: ENGINEERING SAMPLE
STANDARDS : FCC Part 15, Subpart C (Section 15.247),
ANSI C63.4-2001

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

PREPARED BY : Stacy Hsueh , **DATE:** Aug. 19, 2004
(Stacy Hsueh)

TECHNICAL
ACCEPTANCE : Gary Chang , **DATE:** Aug. 19, 2004
Responsible for RF (Gary Chang)

APPROVED BY : Cody Chang , **DATE:** Aug. 19, 2004
(Cody Chang, Deputy
Manager)



2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 15, Subpart C			
Standard Section	Test Type and Limit	Result	REMARK
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit Minimum passing margin is -13.94dB at 0.170MHz
15.247(a)(2)	Spectrum Bandwidth of a Direct Sequence Spread Spectrum System Limit: min. 500kHz	PASS	Meet the requirement of limit
15.247(b)	Maximum Peak Output Power Limit: max. 30dBm	PASS	Meet the requirement of limit
15.247(c)	Transmitter Radiated Emissions Limit: Table 15.209	PASS	Meet the requirement of limit Minimum passing margin is -2.08dB at 2487.10MHz
15.247(d)	Power Spectral Density Limit: max. 8dBm	PASS	Meet the requirement of limit
15.247(c)	Band Edge Measurement Limit: 20 dB less than the peak value of fundamental frequency	PASS	Meet the requirement of limit



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	3.63 dB
	200MHz ~1000MHz	3.65 dB
	1GHz ~ 18GHz	2.20 dB
	18GHz ~ 40GHz	1.88 dB

3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Mini-PCI CARD
MODEL NO.	WLL3050
POWER SUPPLY	3.3Vdc from host equipment
MODULATION TYPE	BPSK, QPSK, CCK, 16QAM, 64QAM
RADIO TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	802.11b: 11/5.5/2/1Mbps 802.11g: 54/48/36/24/18/12/9/6Mbps
FREQUENCY RANGE	2412MHz ~ 2462MHz
CHANNEL SPACING	5MHz
NUMBER OF CHANNEL	11
OUTPUT POWER	16.98dBm
ANTENNA TYPE	*refer to note2
DATA CABLE	NA
I/O PORTS	NA
ASSOCIATED DEVICES	NA

NOTE:

1. This report is prepared for FCC class II permissive change. The difference compared with the original design is adding sixteen antenna types to this EUT for the test. Please refer to following table:

Item	Brand	P/N	Type	Gain
1	NISSEI Electric Co., Ltd	CP115407-01	Inverted F	0.19dBi
2	NISSEI Electric Co., Ltd	CP115404-01	Inverted F	-1.19dBi
3	NISSEI Electric Co., Ltd	CP115410-01	Inverted F	0.39dBi
4	NISSEI Electric Co., Ltd	CP115401-01	Inverted F	-0.97dBi
5	NISSEI Electric Co., Ltd	CP115399-01	Inverted F	1.05dBi
6	NISSEI Electric Co., Ltd	CP115412-01	Inverted F	1.06dBi
7	Yokowo Co., Ltd	YCE-5008	Monopole	0.14dBi
8	Yokowo Co., Ltd	YCE-5008(008L00196)	Monopole	2.57dBi
9	NEC TOKIN Corp.	DA-120D-2454M-FJ01	Monopole	-0.80dBi
10	Yokowo Co., Ltd	YCE-5008(008L00197)	Monopole	2.48dBi
11	Yokowo Co., Ltd	YCE-5008	Monopole	2.85dBi
12	Yokowo Co., Ltd	YCE-5008(008L00197)	Monopole	0.69dBi
13	Yokowo Co., Ltd	YCE-5008(008L00197)	Monopole	1.03dBi
14	Yokowo Co., Ltd	YCE-5008	Monopole	1.49dBi
15	Yokowo Co., Ltd	YCE-5008(008L00197)	Monopole	2.31dBi
16	NISSEI Electric Co., Ltd	CP115391-01	Inverted F	-0.14dBi

* Item 6, 11 were chosen as a representative type and therefore only its test data was recorded in



this report.

2. The EUT complies with IEEE 802.11g standards and backwards compatible with IEEE 802.11b products.
3. The above EUT information was declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.



3.2 DESCRIPTION OF TEST MODES

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, the worst case, 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 for CCK technique and 6Mbps for OFDM technique, as the worst cases for the test among other data rates.
4. Two test results were presented in the following sections. The test result A was for CCK technique and the test result B was for OFDM technique.
5. For conducted emission and radiated emission below 1 GHz test, two test modes were presented in the following sections. The test mode 1 is for Inverted F antenna with 1.06dBi gain (refer to NOTE 2 of section 3.1), and test mode 2 is for Monopole antenna with 2.85dBi gain.

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a Mini-PCI CARD. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC Part 15, Subpart C. (15.247)
ANSI C63.4 : 1992

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

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



3.4 DESCRIPTION OF SUPPORT UNITS

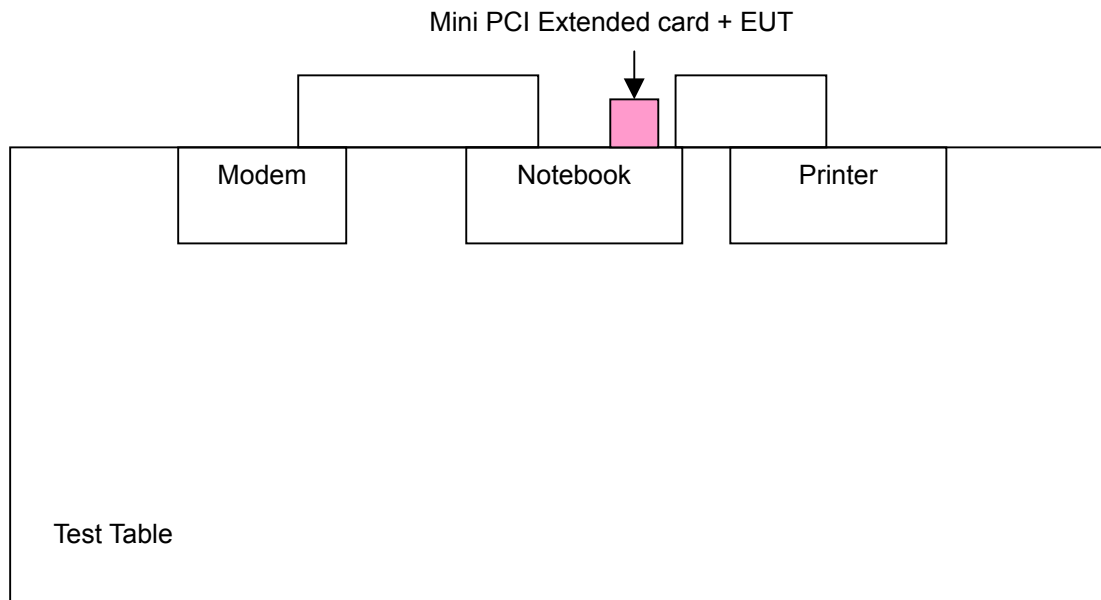
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK	DELL	LATITUDE	C640	IMRMPCIDE3
2	PRINTER	EPSON	LQ-300+	DCGY047265	FCC DoC Approved
2	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

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

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

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

4.1.2 TEST INSTRUMENTS

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

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



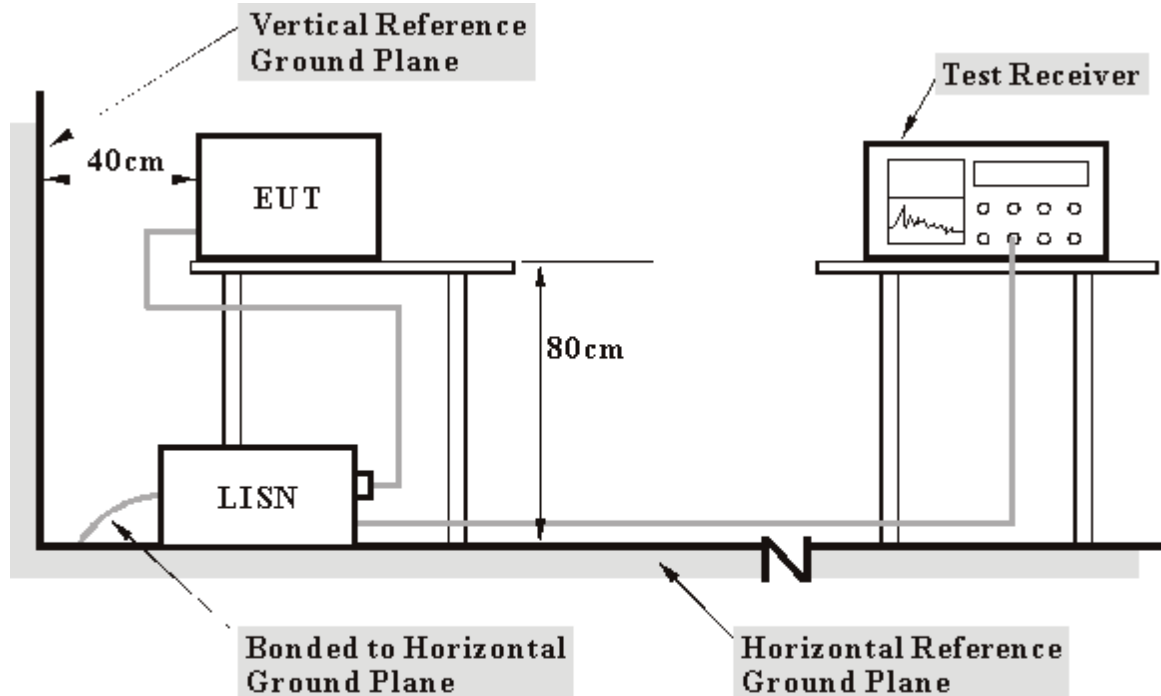
4.1.3 TEST PROCEDURES

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

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 TEST SETUP



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

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

4.1.6 EUT OPERATING CONDITIONS

- a. Connected the EUT and extended card into 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 computer system sent "H" messages to its screen.
- d. The computer system sent "H" messages to modem.
- e. The computer system sent "H" messages to printer, and the printer prints them on paper.
- f. Repeat steps c-e.

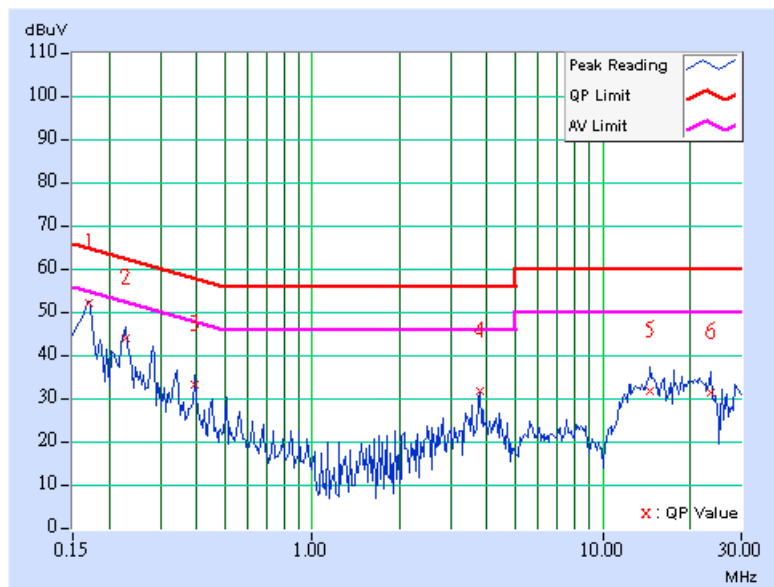


4.1.7 TEST RESULTS

EUT	Mini-PCI CARD	MODEL	WLL3050
MODE	Channel 01	6dB BANDWIDTH	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	TESTED BY: Leo Hung	

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.170	0.11	50.93	-	51.04	-	64.98	54.98	-13.94	-
2	0.228	0.12	43.05	-	43.17	-	62.52	52.52	-19.35	-
3	0.396	0.13	32.29	-	32.42	-	57.93	47.93	-25.52	-
4	3.781	0.20	30.59	-	30.79	-	56.00	46.00	-25.21	-
5	14.613	0.74	30.62	-	31.36	-	60.00	50.00	-28.64	-
6	23.492	1.12	30.45	-	31.57	-	60.00	50.00	-28.43	-

- 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.

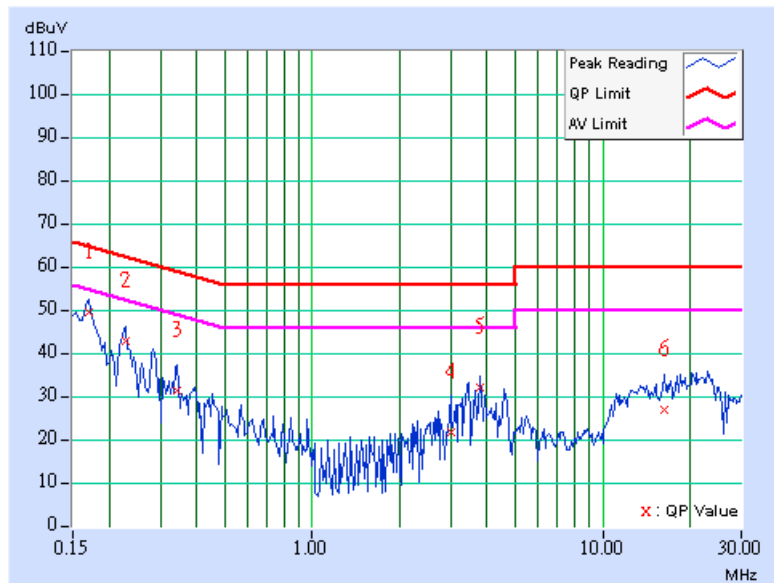




EUT	Mini-PCI CARD	MODEL	WLL3050
MODE	Channel 01	6dB BANDWIDTH	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	TESTED BY: Leo Hung	

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.170	0.10	48.90	-	49.00	-	64.98	54.98	-15.98	-
2	0.228	0.11	42.23	-	42.34	-	62.52	52.52	-20.18	-
3	0.341	0.11	30.68	-	30.79	-	59.17	49.17	-28.37	-
4	2.992	0.18	21.03	-	21.21	-	56.00	46.00	-34.79	-
5	3.789	0.20	31.59	-	31.79	-	56.00	46.00	-24.21	-
6	16.289	0.66	26.48	-	27.14	-	60.00	50.00	-32.86	-

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

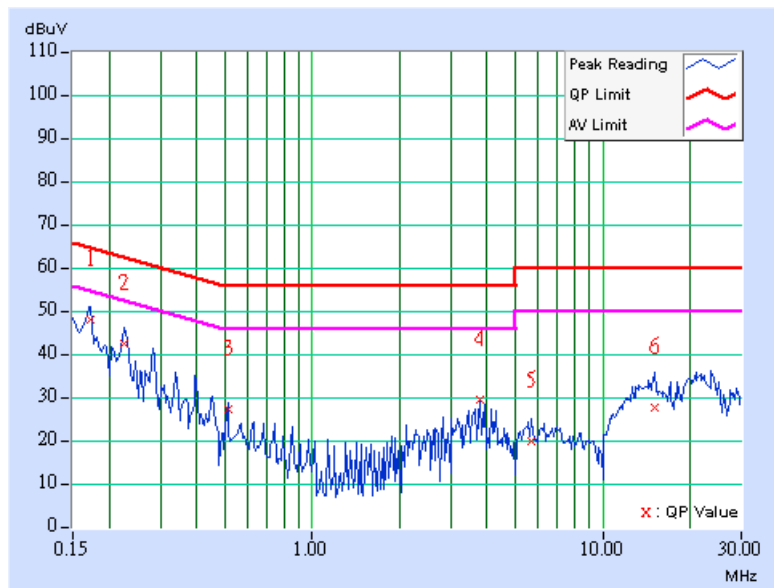




EUT	Mini-PCI CARD	MODEL	WLL3050
MODE	Channel 06	6dB BANDWIDTH	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	TESTED BY: Leo Hung	

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.173	0.11	47.47	-	47.58	-	64.79	54.79	-17.21	-
2	0.224	0.12	41.90	-	42.02	-	62.66	52.66	-20.64	-
3	0.513	0.13	26.63	-	26.76	-	56.00	46.00	-29.24	-
4	3.797	0.20	29.03	-	29.23	-	56.00	46.00	-26.77	-
5	5.664	0.25	19.05	-	19.30	-	60.00	50.00	-40.70	-
6	15.020	0.78	27.11	-	27.89	-	60.00	50.00	-32.11	-

- 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.

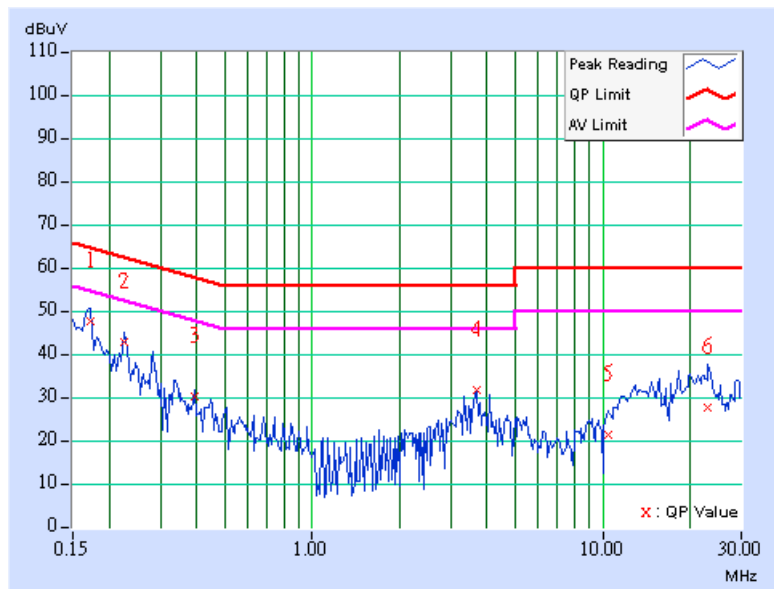




EUT	Mini-PCI CARD	MODEL	WLL3050
MODE	Channel 06	6dB BANDWIDTH	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	TESTED BY: Leo Hung	

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.173	0.10	46.96	-	47.06	-	64.79	54.79	-17.73	-
2	0.224	0.11	42.31	-	42.42	-	62.66	52.66	-20.24	-
3	0.396	0.12	29.61	-	29.73	-	57.93	47.93	-28.21	-
4	3.680	0.19	31.22	-	31.41	-	56.00	46.00	-24.59	-
5	10.410	0.31	20.75	-	21.06	-	60.00	50.00	-38.94	-
6	23.090	0.69	27.00	-	27.69	-	60.00	50.00	-32.31	-

- 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.

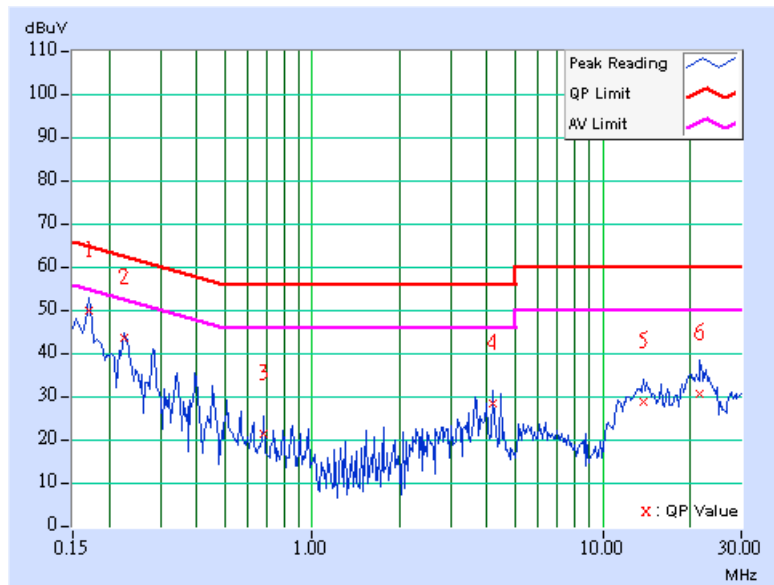




EUT	Mini-PCI CARD	MODEL	WLL3050
MODE	Channel 11	6dB BANDWIDTH	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	TESTED BY: Leo Hung	

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.170	0.11	48.93	-	49.04	-	64.98	54.98	-15.94	-
2	0.224	0.12	42.79	-	42.91	-	62.66	52.66	-19.75	-
3	0.681	0.13	20.51	-	20.64	-	56.00	46.00	-35.36	-
4	4.195	0.21	27.38	-	27.59	-	56.00	46.00	-28.41	-
5	13.828	0.67	27.88	-	28.55	-	60.00	50.00	-31.45	-
6	21.598	1.06	29.72	-	30.78	-	60.00	50.00	-29.22	-

- 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.

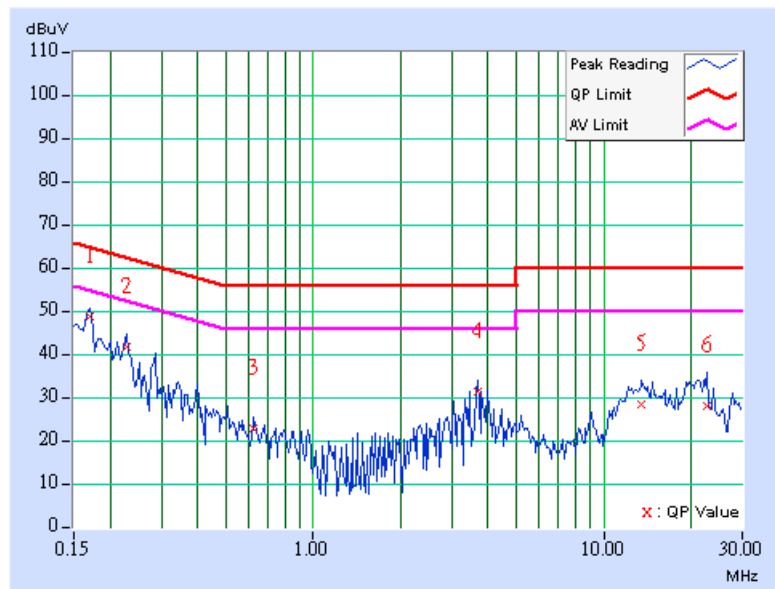




EUT	Mini-PCI CARD	MODEL	WLL3050
MODE	Channel 11	6dB BANDWIDTH	9kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	TESTED BY: Leo Hung	

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.170	0.10	48.25	-	48.35	-	64.98	54.98	-16.63	-
2	0.228	0.11	40.98	-	41.09	-	62.52	52.52	-21.43	-
3	0.623	0.12	22.16	-	22.28	-	56.00	46.00	-33.72	-
4	3.688	0.19	30.86	-	31.05	-	56.00	46.00	-24.95	-
5	13.555	0.54	27.95	-	28.49	-	60.00	50.00	-31.51	-
6	22.754	0.69	27.64	-	28.33	-	60.00	50.00	-31.67	-

- 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	838496/016	Feb. 09, 2005
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100041	Dec. 15, 2004
BILOG Antenna SCHWARZBECK	VULB9168	9168-155	Feb. 03, 2005
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-404	Feb. 03, 2005
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA 9170242	Feb. 23, 2005
Preamplifier Agilent	8447D	2944A10631	Jan. 15, 2005
Preamplifier Agilent	8449B	3008A01960	Jan. 22, 2005
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	219272/4	Mar. 04, 2005
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	219275/4	Mar. 04, 2005
Software ADT.	ADT_Radiated_V5.14	NA	NA
Antenna Tower inn-co GmbH	MA 4000	010303	NA
Antenna Tower Controller inn-co GmbH	CO2000	019303	NA
Turn Table ADT.	TT100.	TT93021704	NA
Turn Table Controller ADT.	SC100.	SC93021704	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 3.
 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 IC4924-4.



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 chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10 dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10 dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

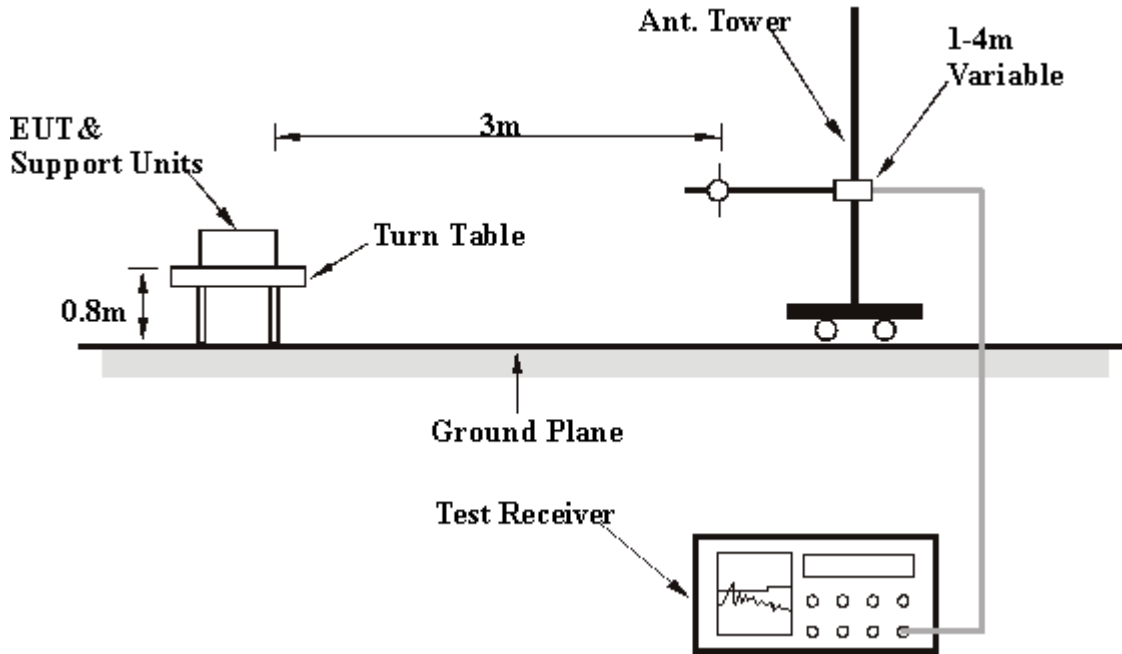
NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 300 Hz for Average detection (AV) at frequency above 1GHz.

4.2.4 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

Test Mode 1

EUT	Mini- PCI CARD	MODEL	WLL3050
MODE	Channel 11	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	26deg. C, 72%RH, 991hPa	TESTED BY: Martin Lee	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	166.00	32.17 QP	43.50	-11.33	1.88 H	147	22.05	10.12
2	253.98	35.65 QP	46.00	-10.35	1.25 H	111	22.00	13.65
3	298.78	32.68 QP	46.00	-13.32	1.00 H	31	17.37	15.31
4	398.35	33.59 QP	46.00	-12.41	1.06 H	56	15.60	17.99
5	499.80	34.25 QP	46.00	-11.75	2.10 H	122	14.45	19.80
6	530.95	35.97 QP	46.00	-10.03	1.25 H	31	15.60	20.37
7	667.50	40.74 QP	46.00	-5.26	1.27 H	230	17.72	23.02
8	798.20	39.65 QP	46.00	-6.35	1.00 H	274	14.51	25.14
9	880.00	36.58 QP	46.00	-9.42	1.47 H	124	12.26	24.32
10	930.00	35.26 QP	46.00	-10.74	1.65 H	62	10.61	24.65

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	64.75	28.27 QP	40.00	-11.73	1.00 V	227	21.68	6.59
2	166.57	29.47 QP	43.50	-14.03	1.66 V	5	19.36	10.11
3	176.00	32.49 QP	43.50	-11.01	1.34 V	255	22.59	9.90
4	232.20	32.58 QP	46.00	-13.42	1.00 V	83	20.46	12.12
5	501.30	34.49 QP	46.00	-11.51	1.50 V	153	14.66	19.83
6	536.30	38.66 QP	46.00	-7.34	1.92 V	33	18.19	20.47
7	657.70	37.46 QP	46.00	-8.54	1.85 V	156	14.65	22.81
8	664.45	41.15 QP	46.00	-4.85	1.85 V	357	18.19	22.96
9	798.00	39.34 QP	46.00	-6.66	1.00 V	132	14.20	25.14
10	931.70	33.66 QP	46.00	-12.34	1.00 V	297	8.99	24.67

- 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.



Test Mode 2

EUT	Mini- PCI CARD	MODEL	WLL3050
MODE	Channel 11	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	26deg. C, 72%RH, 991hPa	TESTED BY: Martin Lee	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	64.45	30.75 QP	40.00	-9.25	1.00 H	122	24.16	6.59
2	124.72	28.09 QP	43.50	-15.41	1.20 H	133	15.92	12.17
3	136.36	24.78 QP	43.50	-18.72	1.74 H	104	13.12	11.66
4	150.01	30.09 QP	43.50	-13.41	1.52 H	44	19.22	10.87
5	166.57	34.51 QP	43.50	-8.99	1.24 H	176	24.4	10.11
6	374.76	38.06 QP	46.00	-7.94	1.82 H	312	21.01	17.05
7	532.80	36.29 QP	46.00	-9.71	1.39 H	353	15.88	20.41
8	569.50	38.70 QP	46.00	-7.30	1.00 H	214	17.63	21.07
9	667.00	38.87 QP	46.00	-7.13	1.00 H	356	15.86	23.01
10	794.45	36.06 QP	46.00	-9.94	1.00 H	223	10.93	25.13

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	133.00	26.81 QP	43.50	-16.69	1.14 V	130	15.00	11.81
2	149.80	29.97 QP	43.50	-13.53	2.14 V	273	19.08	10.89
3	165.72	35.47 QP	43.50	-8.03	2.31 V	134	25.35	10.12
4	185.50	32.45 QP	43.50	-11.05	2.36 V	197	22.54	9.91
5	236.83	30.22 QP	46.00	-15.78	1.68 V	144	17.82	12.40
6	399.23	34.43 QP	46.00	-11.57	1.02 V	238	16.40	18.03
7	503.00	37.22 QP	46.00	-8.78	2.01 V	231	17.36	19.86
8	566.10	38.36 QP	46.00	-7.64	1.91 V	290	17.35	21.01
9	633.23	35.80 QP	46.00	-10.20	1.34 V	279	13.50	22.30
10	669.28	37.00 QP	46.00	-9.00	1.68 V	202	13.94	23.06
11	799.35	43.14 QP	46.00	-2.86	1.05 V	0	18.00	25.14
12	880.00	35.41 QP	46.00	-10.59	1.00 V	145	11.09	24.32
13	930.75	34.03 QP	46.00	-11.97	1.00 V	357	9.37	24.66

- 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.



4.2.8 TEST RESULTS (A)

Test Mode 1

EUT	Mini- PCI CARD	MODEL	WLL3050
CHANNEL	Channel 1	FREQUENCY RANGE	Above 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	28deg. C, 56%RH, 991hPa	TESTED BY: Allen Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2386.80	54.47 PK	74.00	-19.53	1.42 H	235	20.66	33.81
1	2386.80	46.15 AV	54.00	-7.85	1.42 H	235	12.34	33.81
2	*2412.00	105.64 PK			1.42 H	235	71.71	33.93
2	*2412.00	97.32 AV			1.42 H	235	63.39	33.93
3	2688.00	45.60 PK	74.00	-28.40	1.18 H	207	10.74	34.86
4	4824.00	54.67 PK	74.00	-19.33	1.24 H	120	14.01	40.66

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	2386.80	57.59 PK	74.00	-16.41	1.00 V	211	23.78	33.81
1	2386.80	49.35 AV	54.00	-4.65	1.00 V	211	15.54	33.81
2	*2412.00	108.76 PK			1.00 V	211	74.83	33.93
2	*2412.00	99.52 AV			1.00 V	211	65.59	33.93
3	2688.00	45.35 PK	74.00	-28.65	1.00 V	183	10.49	34.86
4	4824.00	57.34 PK	74.00	-16.66	1.00 V	142	16.68	40.66
4	4824.00	41.82 AV	54.00	-12.18	1.00 V	142	1.16	40.66

- 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	Mini- PCI CARD	MODEL	WLL3050
CHANNEL	Channel 6	FREQUENCY RANGE	Above 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	28deg. C, 56%RH, 991hPa	TESTED BY: Allen Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	105.40 PK			1.23 H	238	71.35	34.05
1	*2437.00	97.20 AV			1.23 H	238	63.15	34.05
2	2688.00	44.96 PK	74.00	-29.04	1.11 H	96	10.10	34.86
3	4874.00	51.51 PK	74.00	-22.49	1.10 H	113	10.82	40.69

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	108.34 PK			1.77 V	231	74.29	34.05
1	*2437.00	99.95 AV			1.77 V	231	65.90	34.05
2	2688.00	45.94 PK	74.00	-28.06	1.00 V	182	11.08	34.86
3	4874.00	51.78 PK	74.00	-22.22	1.04 V	242	11.09	40.69

- 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	Mini- PCI CARD	MODEL	WLL3050
CHANNEL	Channel 11	FREQUENCY RANGE	Above 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	28deg. C, 56%RH, 991hPa	TESTED BY: Allen Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	105.77 PK			1.00 H	303	71.61	34.16
1	*2462.00	98.55 AV			1.00 H	303	64.39	34.16
2	2487.50	58.52 PK	74.00	-15.48	1.00 H	303	24.24	34.28
2	2487.50	50.30 AV	54.00	-3.70	1.00 H	303	16.02	34.28
3	2688.00	45.53 PK	74.00	-28.47	1.00 H	232	10.67	34.86
3	2688.00	35.63 AV	54.00	-18.37	1.00 H	232	0.77	34.86
4	4924.00	53.02 PK	74.00	-20.98	1.06 H	127	12.16	40.86

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	108.67 PK			1.00 V	224	74.51	34.16
1	*2462.00	100.46 AV			1.00 V	224	66.30	34.16
2	2487.50	59.42 PK	74.00	-14.58	1.00 V	224	25.14	34.28
2	2487.50	51.21 AV	54.00	-2.79	1.00 V	224	16.93	34.28
3	2688.00	47.70 PK	74.00	-26.30	1.00 V	214	12.84	34.86
3	2688.00	39.56 AV	54.00	-14.44	1.00 V	214	4.70	34.86
4	4924.00	55.17 PK	74.00	-18.83	1.07 V	175	14.31	40.86

- 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.



Test Mode 2

EUT	Mini- PCI CARD	MODEL	WLL3050
CHANNEL	Channel 1	FREQUENCY RANGE	Above 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	28deg. C, 56%RH, 991hPa	TESTED BY: Allen Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2386.80	60.12 PK	74.00	-13.88	1.16 H	189	26.31	33.81
1	2386.80	51.82 AV	54.00	-2.18	1.16 H	189	18.01	33.81
2	*2412.00	109.54 PK			1.23 H	214	75.61	33.93
2	*2412.00	100.24 AV			1.23 H	214	66.31	33.93
3	2688.00	47.45 PK	74.00	-26.55	1.17 H	151	12.59	34.86
3	2688.00	37.49 AV	54.00	-16.51	1.17 H	151	2.63	34.86
4	4824.00	54.70 PK	74.00	-19.30	1.16 H	189	14.04	40.66

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	2386.80	54.19 PK	74.00	-19.81	1.45 V	79	20.38	33.81
1	2386.80	45.90 AV	54.00	-8.10	1.45 V	79	12.09	33.81
2	*2412.00	102.61 PK			1.45 V	79	68.68	33.93
2	*2412.00	94.32 AV			1.45 V	79	60.39	33.93
3	2688.00	46.38 PK	74.00	-27.62	1.36 V	248	11.52	34.86
4	4824.00	52.20 PK	74.00	-21.80	1.22 V	50	11.54	40.66

- 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	Mini- PCI CARD	MODEL	WLL3050
CHANNEL	Channel 6	FREQUENCY RANGE	Above 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	28deg. C, 56%RH, 991hPa	TESTED BY: Allen Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	110.58 PK			1.51 H	340	76.53	34.05
1	*2437.00	101.37 AV			1.51 H	340	67.32	34.05
2	2688.00	45.74 PK	74.00	-28.26	1.17 H	127	10.88	34.86
2	2688.00	35.36 AV	54.00	-18.64	1.17 H	127	0.50	34.86
3	4874.00	52.47 PK	74.00	-21.53	1.17 H	127	11.78	40.69

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	103.65 PK			1.42 V	93	69.60	34.05
1	*2437.00	95.41 AV			1.42 V	93	61.36	34.05
2	2688.00	46.39 PK	74.00	-27.61	1.35 V	251	11.53	34.86
2	2688.00	35.40 AV	54.00	-18.60	1.35 V	251	0.54	34.86
3	4874.00	50.50 PK	74.00	-23.50	1.00 V	88	9.81	40.69

- 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	Mini- PCI CARD	MODEL	WLL3050
CHANNEL	Channel 11	FREQUENCY RANGE	Above 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	28deg. C, 56%RH, 991hPa	TESTED BY: Allen Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	110.28 PK			1.81 H	204	76.12	34.16
1	*2462.00	100.93 AV			1.81 H	204	66.77	34.16
2	2487.10	60.27 PK	74.00	-13.73	1.81 H	204	25.99	34.28
2	2487.10	51.92 AV	54.00	-2.08	1.81 H	204	17.64	34.28
3	2688.00	45.30 PK	74.00	-28.70	1.19 H	117	10.44	34.86
4	4924.00	52.31 PK	74.00	-21.69	1.04 H	69	11.45	40.86

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	104.13 PK			1.39 V	95	69.97	34.16
1	*2462.00	96.00 AV			1.39 V	95	61.84	34.16
2	2487.10	55.12 PK	74.00	-18.88	1.39 V	95	20.84	34.28
2	2487.10	46.99 AV	54.00	-7.01	1.39 V	95	12.71	34.28
3	2688.00	46.06 PK	74.00	-27.94	1.38 V	249	11.20	34.86
4	4924.00	52.97 PK	74.00	-21.03	1.20 V	219	12.11	40.86

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



4.2.9 TEST RESULTS (B)

Test Mode 1

EUT	Mini- PCI CARD	MODEL	WLL3050
CHANNEL	Channel 1	FREQUENCY RANGE	Above 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	28deg. C, 56%RH, 991hPa	TESTED BY: Allen Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	57.92 PK	74.00	-16.08	1.97 H	256	24.09	33.83
1	2390.00	46.44 AV	54.00	-7.56	1.97 H	256	12.61	33.83
2	*2412.00	104.25 PK			1.97 H	256	70.32	33.93
2	*2412.00	92.77 AV			1.97 H	256	58.84	33.93
3	2688.00	45.53 PK	74.00	-28.47	1.25 H	149	10.67	34.86
3	2688.00	33.53 AV	54.00	-20.47	1.25 H	149	-1.33	34.86
4	4824.00	52.50 PK	74.00	-21.50	1.00 H	7	11.84	40.66
4	4824.00	38.86 AV	54.00	-15.14	1.00 H	7	-1.80	40.66

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	2390.00	60.26 PK	74.00	-13.74	1.50 V	248	26.43	33.83
1	2390.00	49.18 AV	54.00	-4.82	1.50 V	248	15.35	33.83
2	*2412.00	106.59 PK			1.50 V	248	72.66	33.93
2	*2412.00	95.51 AV			1.50 V	248	61.58	33.93
3	2688.00	44.71 PK	74.00	-29.29	1.25 V	124	9.85	34.86
3	2688.00	31.88 AV	54.00	-22.12	1.25 V	124	-2.98	34.86
4	4824.00	51.73 PK	74.00	-22.27	1.22 V	345	11.07	40.66
4	4824.00	38.21 AV	54.00	-15.79	1.22 V	345	-2.45	40.66

- 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	Mini- PCI CARD	MODEL	WLL3050
CHANNEL	Channel 6	FREQUENCY RANGE	Above 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	28deg. C, 56%RH, 991hPa	TESTED BY: Allen Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	104.44 PK			1.97 H	257	70.39	34.05
1	*2437.00	93.87 AV			1.97 H	257	59.82	34.05
2	2688.00	45.18 PK	74.00	-28.82	1.41 H	251	10.32	34.86
3	4874.00	50.85 PK	74.00	-23.15	1.18 H	25	10.16	40.69

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	106.34 PK			1.57 V	248	72.29	34.05
1	*2437.00	98.59 AV			1.57 V	248	64.54	34.05
2	2688.00	46.27 PK	74.00	-27.73	1.00 V	121	11.41	34.86
3	4874.00	51.09 PK	74.00	-22.91	1.31 V	258	10.40	40.69

- 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	Mini- PCI CARD	MODEL	WLL3050
CHANNEL	Channel 11	FREQUENCY RANGE	Above 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	28deg. C, 56%RH, 991hPa	TESTED BY: Allen Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	104.99 PK			1.00 H	306	70.83	34.16
1	*2462.00	94.26 AV			1.00 H	306	60.10	34.16
2	2483.50	58.92 PK	74.00	-15.08	1.00 H	306	24.66	34.26
2	2483.50	48.19 AV	54.00	-5.81	1.00 H	306	13.93	34.26
3	2688.00	46.24 PK	74.00	-27.76	1.03 H	246	11.38	34.86
3	2688.00	35.85 AV	54.00	-18.15	1.03 H	246	0.99	34.86
4	4924.00	50.73 PK	74.00	-23.27	1.05 H	222	9.87	40.86
4	4924.00	37.47 AV	54.00	-16.53	1.05 H	222	-3.39	40.86

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	106.13 PK			1.48 V	249	71.97	34.16
1	*2462.00	94.91 AV			1.48 V	249	60.75	34.16
2	2483.50	63.06 PK	74.00	-10.94	1.48 V	249	28.80	34.26
2	2483.50	51.84 AV	54.00	-2.16	1.48 V	249	17.58	34.26
3	2688.00	48.14 PK	74.00	-25.86	1.00 V	214	13.28	34.86
3	2688.00	39.54 AV	54.00	-14.46	1.00 V	214	4.68	34.86
4	4924.00	50.95 PK	74.00	-23.05	1.02 V	258	10.09	40.86
4	4924.00	37.44 AV	54.00	-16.56	1.02 V	258	-3.42	40.86

- 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.



Test Mode 2

EUT	Mini- PCI CARD	MODEL	WLL3050
CHANNEL	Channel 1	FREQUENCY RANGE	Above 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	28deg. C, 56%RH, 991hPa	TESTED BY: Allen Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	60.65 PK	74.00	-13.35	1.26 H	212	26.82	33.83
1	2390.00	49.64 AV	54.00	-4.36	1.26 H	212	15.81	33.83
2	*2412.00	107.90 PK			1.26 H	212	73.97	33.93
2	*2412.00	95.89 AV			1.26 H	212	61.96	33.93
3	2688.00	46.43 PK	74.00	-27.57	1.37 H	154	11.57	34.86
3	2688.00	36.37 AV	54.00	-17.63	1.37 H	154	1.51	34.86
4	4824.00	50.07 PK	74.00	-23.93	1.04 H	352	9.41	40.66

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	2390.00	55.07 PK	74.00	-18.93	1.50 V	75	21.24	33.83
1	2390.00	43.79 AV	54.00	-10.21	1.50 V	75	9.96	33.83
2	*2412.00	101.32 PK			1.50 V	75	67.39	33.93
2	*2412.00	90.04 AV			1.50 V	75	56.11	33.93
3	2688.00	46.03 PK	74.00	-27.97	1.36 V	253	11.17	34.86
4	4824.00	49.40 PK	74.00	-24.60	1.00 V	25	8.74	40.66

- 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	Mini- PCI CARD	MODEL	WLL3050
CHANNEL	Channel 6	FREQUENCY RANGE	Above 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	28deg. C, 56%RH, 991hPa	TESTED BY: Allen Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	107.88 PK			1.48 H	339	73.83	34.05
1	*2437.00	96.48 AV			1.48 H	339	62.43	34.05
2	2688.00	46.92 PK	74.00	-27.08	1.63 H	126	12.06	34.86
2	2688.00	37.68 AV	54.00	-16.32	1.63 H	126	2.82	34.86
3	4874.00	50.46 PK	74.00	-23.54	1.00 H	246	9.77	40.69

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	101.65 PK			1.50 V	104	67.60	34.05
1	*2437.00	90.63 AV			1.50 V	104	56.58	34.05
2	2688.00	46.15 PK	74.00	-27.85	1.35 V	253	11.29	34.86
2	2688.00	36.76 AV	54.00	-17.24	1.35 V	253	1.90	34.86
3	4874.00	50.48 PK	74.00	-23.52	1.09 V	161	9.79	40.69

- 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	Mini- PCI CARD	MODEL	WLL3050
CHANNEL	Channel 11	FREQUENCY RANGE	Above 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	28deg. C, 56%RH, 991hPa	TESTED BY: Allen Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	108.22 PK			1.49 H	340	74.06	34.16
1	*2462.00	97.28 AV			1.49 H	340	63.12	34.16
2	2483.50	62.19 PK	74.00	-11.81	1.49 H	340	27.93	34.26
2	2483.50	51.25 AV	54.00	-2.75	1.49 H	340	16.99	34.26
3	2688.00	48.09 PK	74.00	-25.91	1.60 H	322	13.23	34.86
3	2688.00	40.37 AV	54.00	-13.63	1.60 H	322	5.51	34.86
4	4924.00	50.81 PK	74.00	-23.19	1.01 H	52	9.95	40.86

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	100.56 PK			1.08 V	12	66.40	34.16
1	*2462.00	90.02 AV			1.08 V	12	55.86	34.16
2	2483.50	54.53 PK	74.00	-19.47	1.08 V	12	20.27	34.26
2	2483.50	43.99 AV	54.00	-10.01	1.08 V	12	9.73	34.26
3	2688.00	46.19 PK	74.00	-27.81	1.34 V	252	11.33	34.86
3	2688.00	36.51 AV	54.00	-17.49	1.34 V	252	1.65	34.86
4	4974.00	51.12 PK	74.00	-22.88	1.05 V	275	9.94	41.18

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



4.3 6dB BANDWIDTH MEASUREMENT

4.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 TEST INSTRUMENTS

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

NOTE:

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

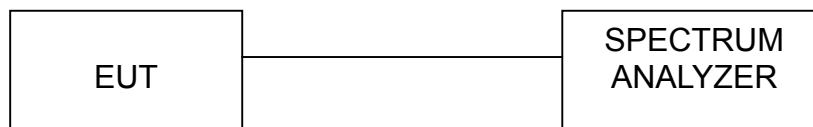
4.3.3 TEST PROCEDURE

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

4.3.4 DEVIATION FROM TEST STANDARD

No deviation

4.3.5 TEST SETUP



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

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.



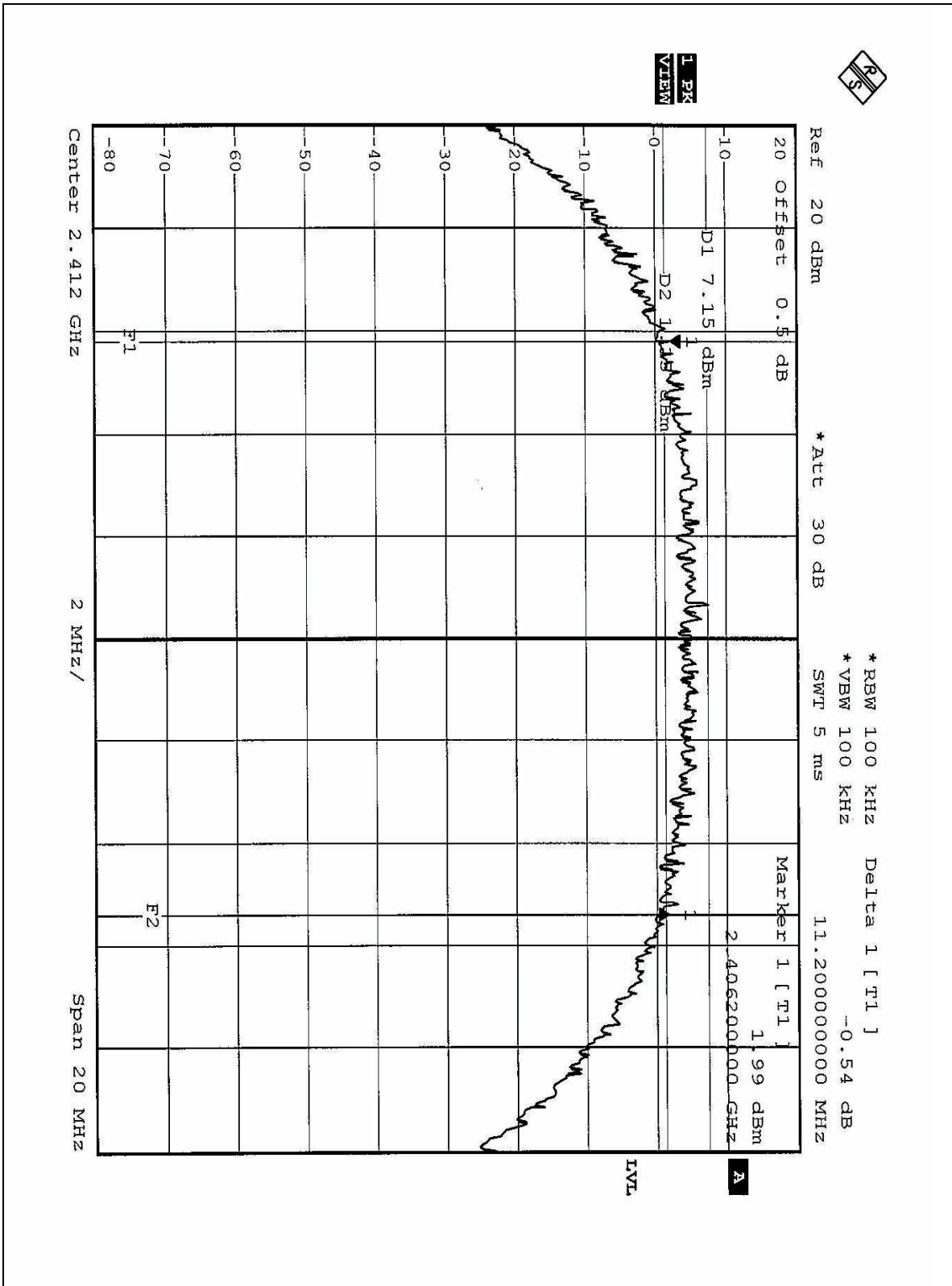
4.3.7 TEST RESULTS (A)

EUT	Mini- PCI CARD	MODEL	WLL3050
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	27deg. C, 57%RH, 991hPa
TESTED BY	Steven Lu		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	11.20	0.5	PASS
6	2437	12.28	0.5	PASS
11	2462	11.32	0.5	PASS

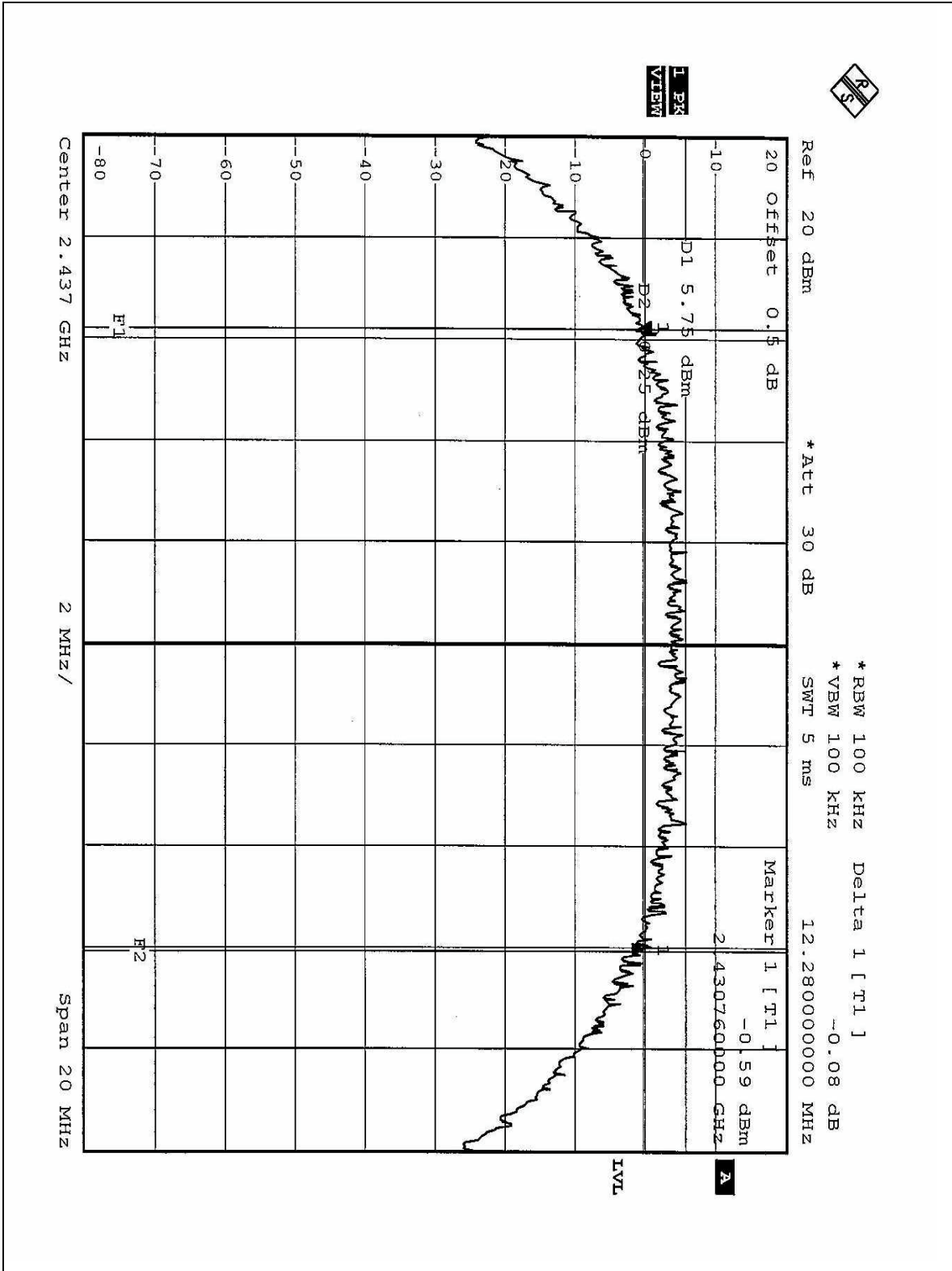


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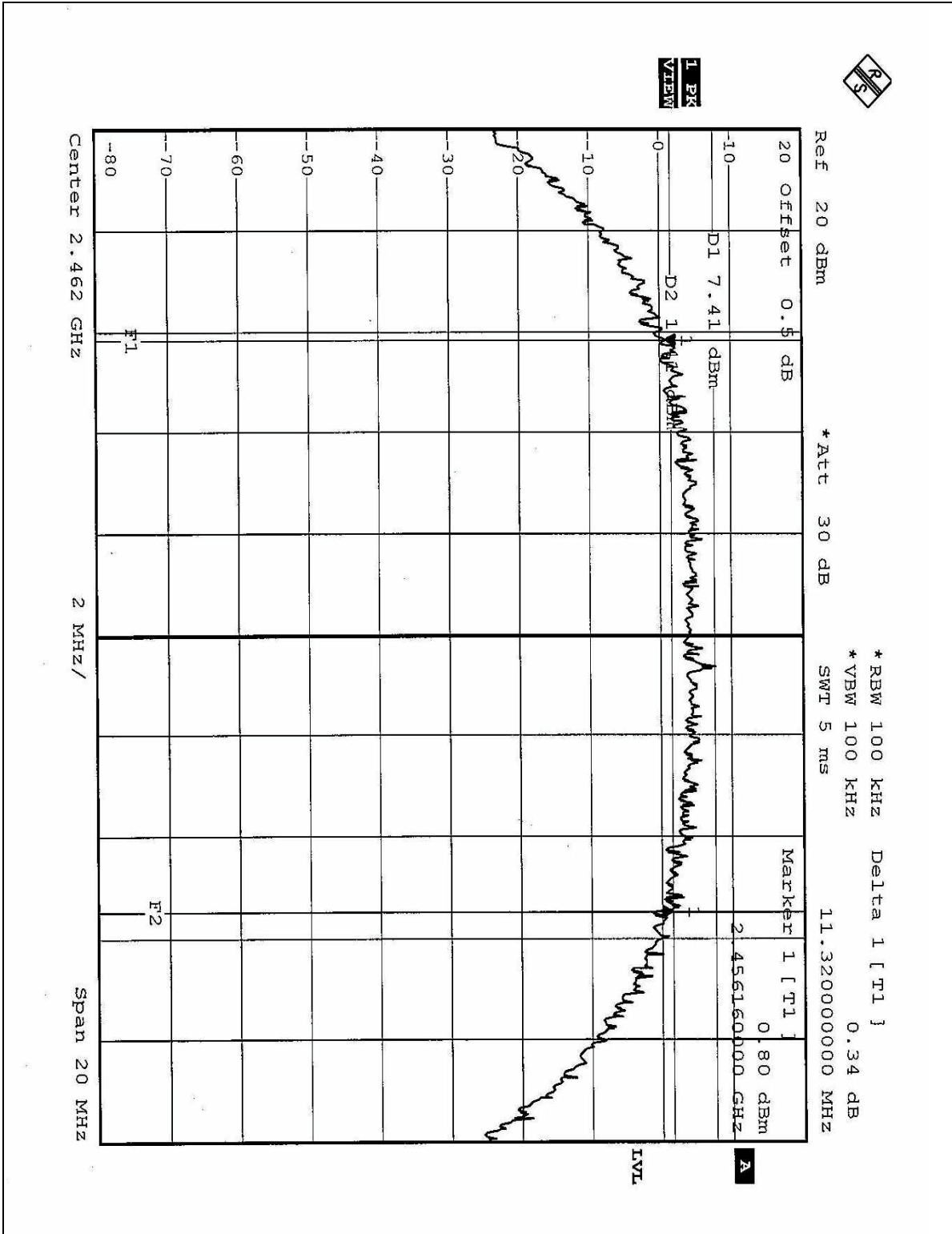


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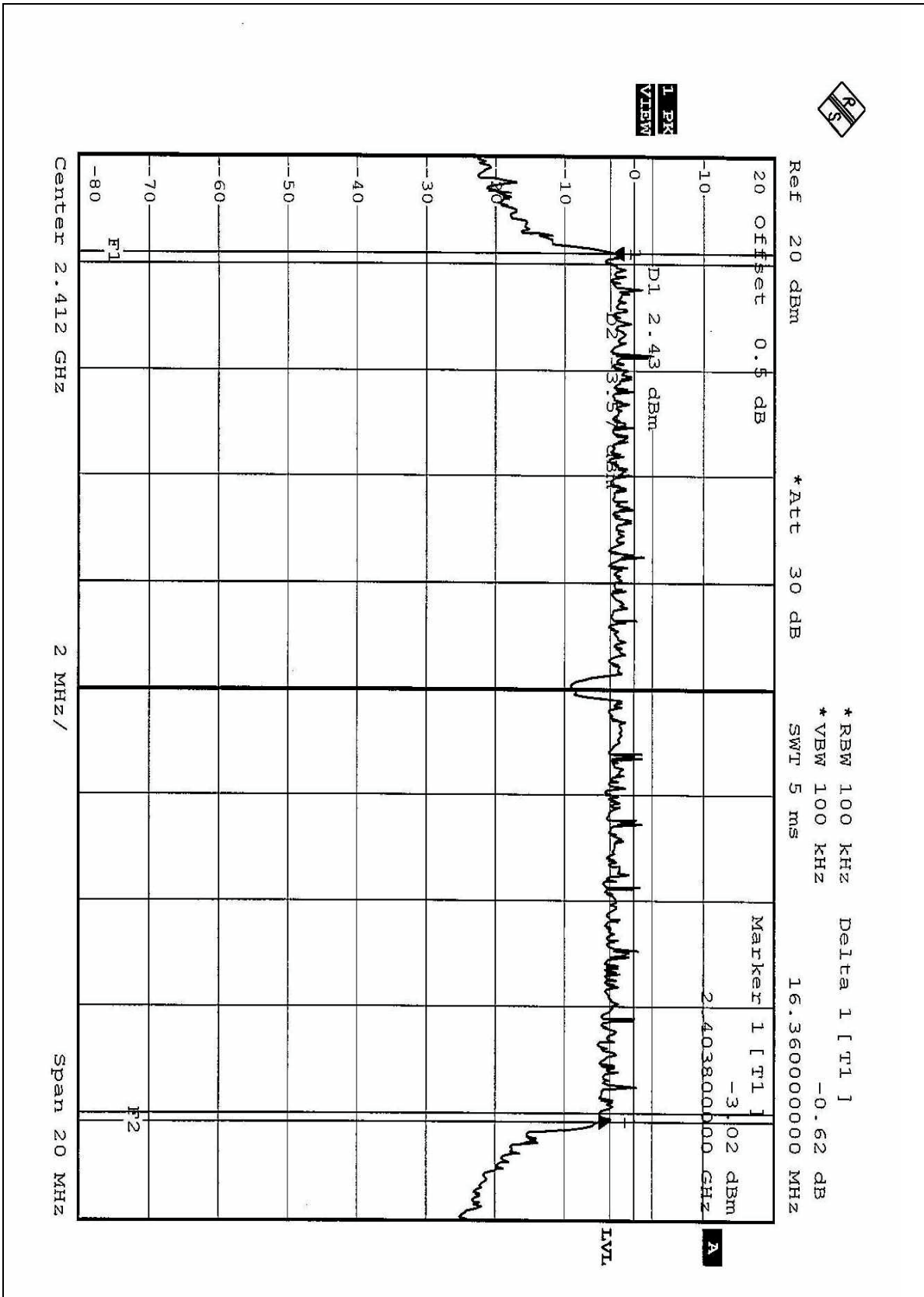
4.3.8 TEST RESULTS (B)

EUT	Mini-PCI CARD	MODEL	WLL3050
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	27deg. C, 57%RH, 991hPa
TESTED BY	Steven Lu		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	16.36	0.5	PASS
6	2437	16.44	0.5	PASS
11	2462	16.52	0.5	PASS

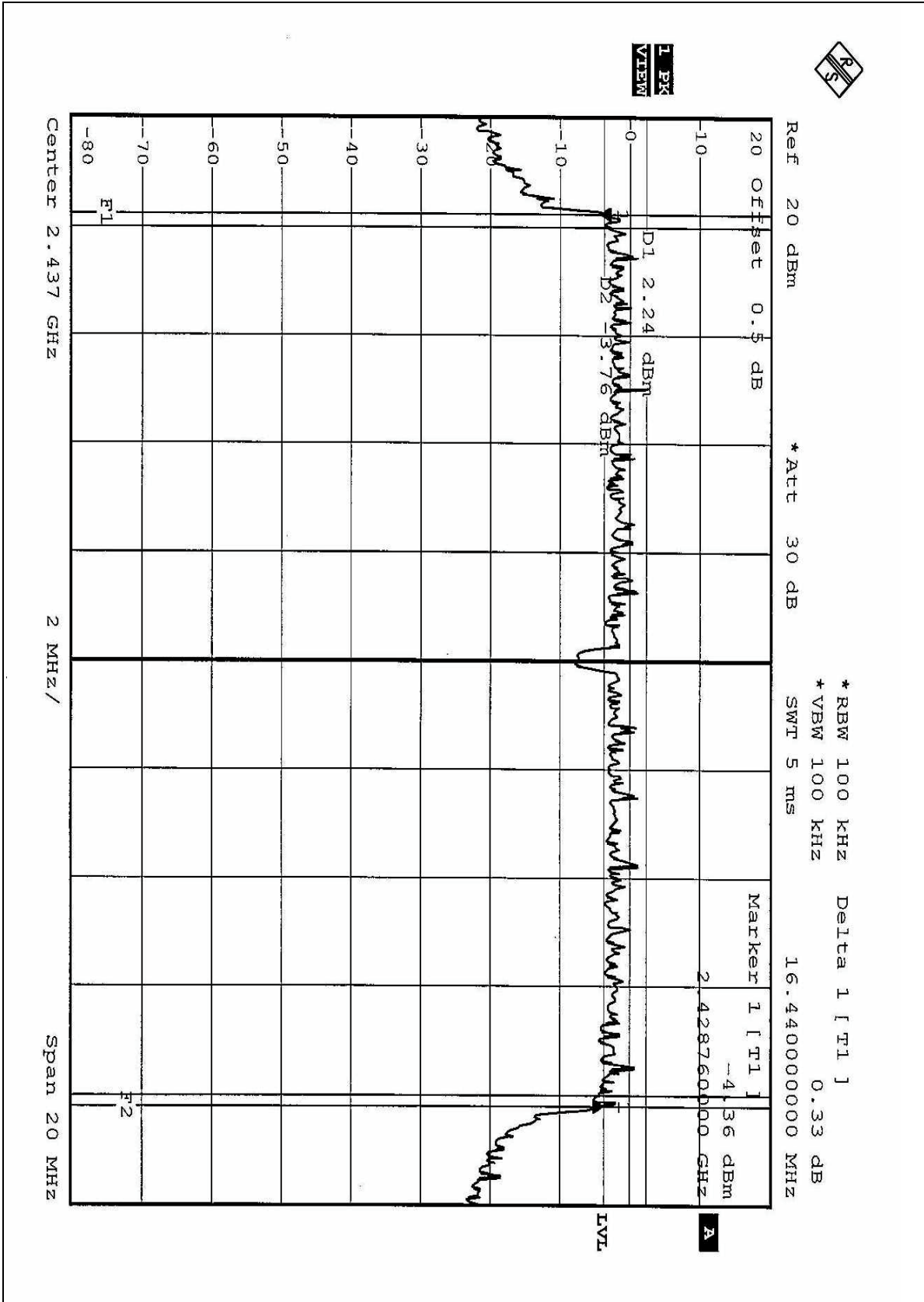


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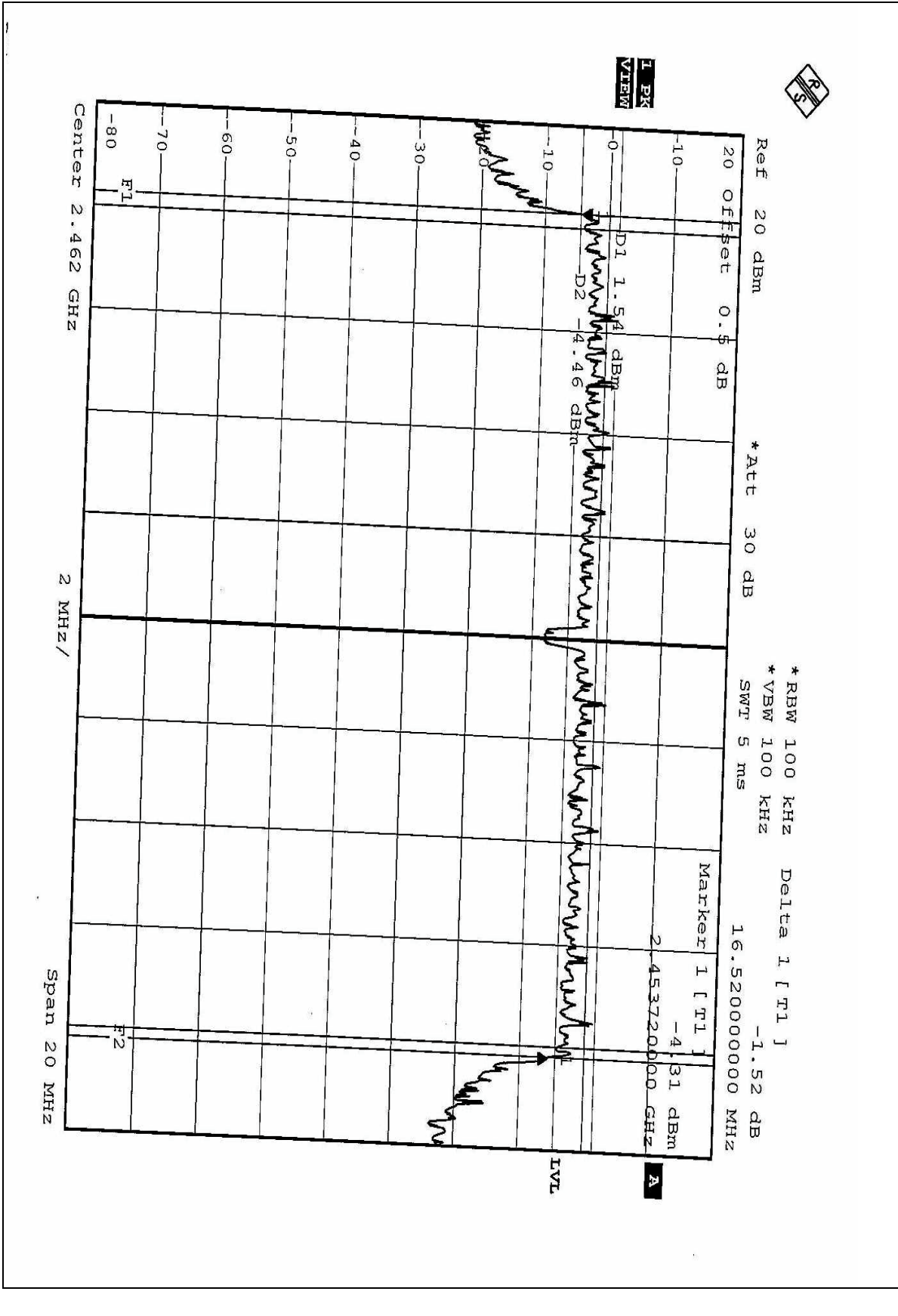


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4.4 MAXIMUM PEAK OUTPUT POWER

4.4.1 LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm.

4.4.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2005
AGILENT SIGNAL GENERATOR	E8257C	MY43320668	Dec. 31, 2004
TEKTRONIX OSCILLOSCOPE	TDS 220	C019167	Feb. 1, 2005
NARDA DETECTOR	4503A	FSCM99899	NA

NOTE:

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



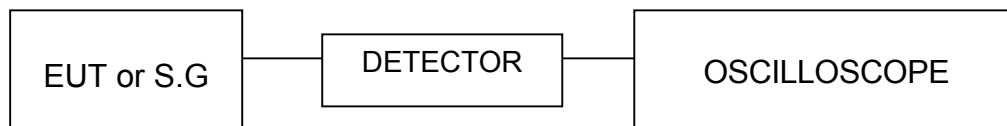
4.4.3 TEST PROCEDURES

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

4.4.4 DEVIATION FROM TEST STANDARD

No deviation

4.4.5 TEST SETUP



4.4.6 EUT OPERATING CONDITIONS

Same as Item 4.3.6



4.4.7 TEST RESULTS (A)

EUT	Mini-PCI CARD	MODEL	WLL3050
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	27deg. C, 57%RH, 991hPa
TESTED BY	Steven Lu		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	16.98	30	PASS
6	2437	16.95	30	PASS
11	2462	16.97	30	PASS

4.4.8 TEST RESULTS (B)

EUT	Mini-PCI CARD	MODEL	WLL3050
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	27deg. C, 57%RH, 991hPa
TESTED BY	Steven Lu		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	16.89	30	PASS
6	2437	16.92	30	PASS
11	2462	16.90	30	PASS



4.5 POWER SPECTRAL DENSITY MEASUREMENT

4.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

4.5.2 TEST INSTRUMENTS

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

NOTE:

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

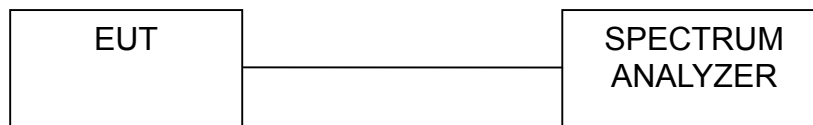
4.5.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 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 CONDITIONS

Same as 4.3.6



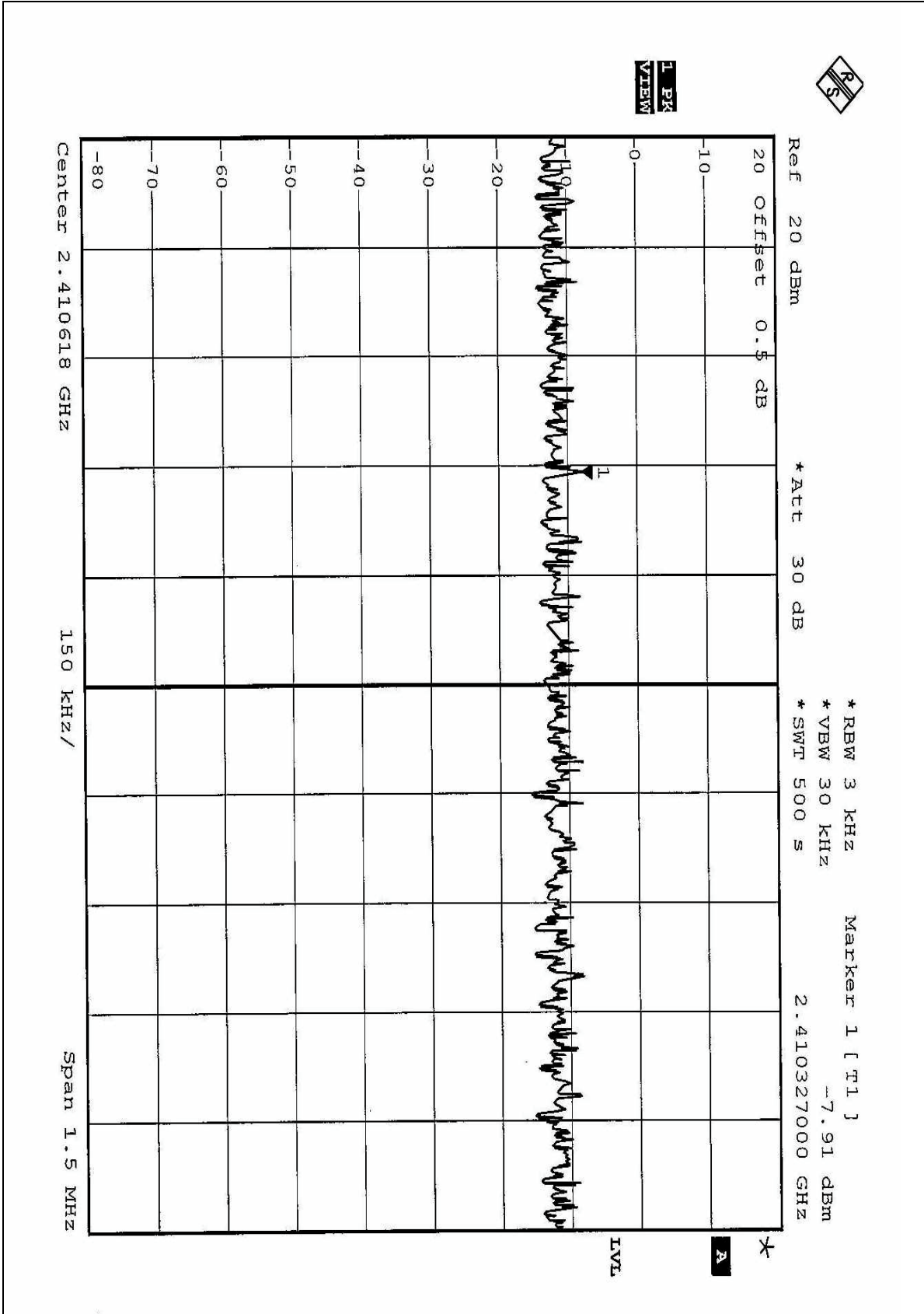
4.5.7 TEST RESULTS (A)

EUT	Mini-PCI CARD	MODEL	WLL3050
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	27deg. C, 57%RH, 991hPa
TESTED BY	Steven Lu		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-7.91	8	PASS
6	2437	-8.52	8	PASS
11	2462	-8.76	8	PASS

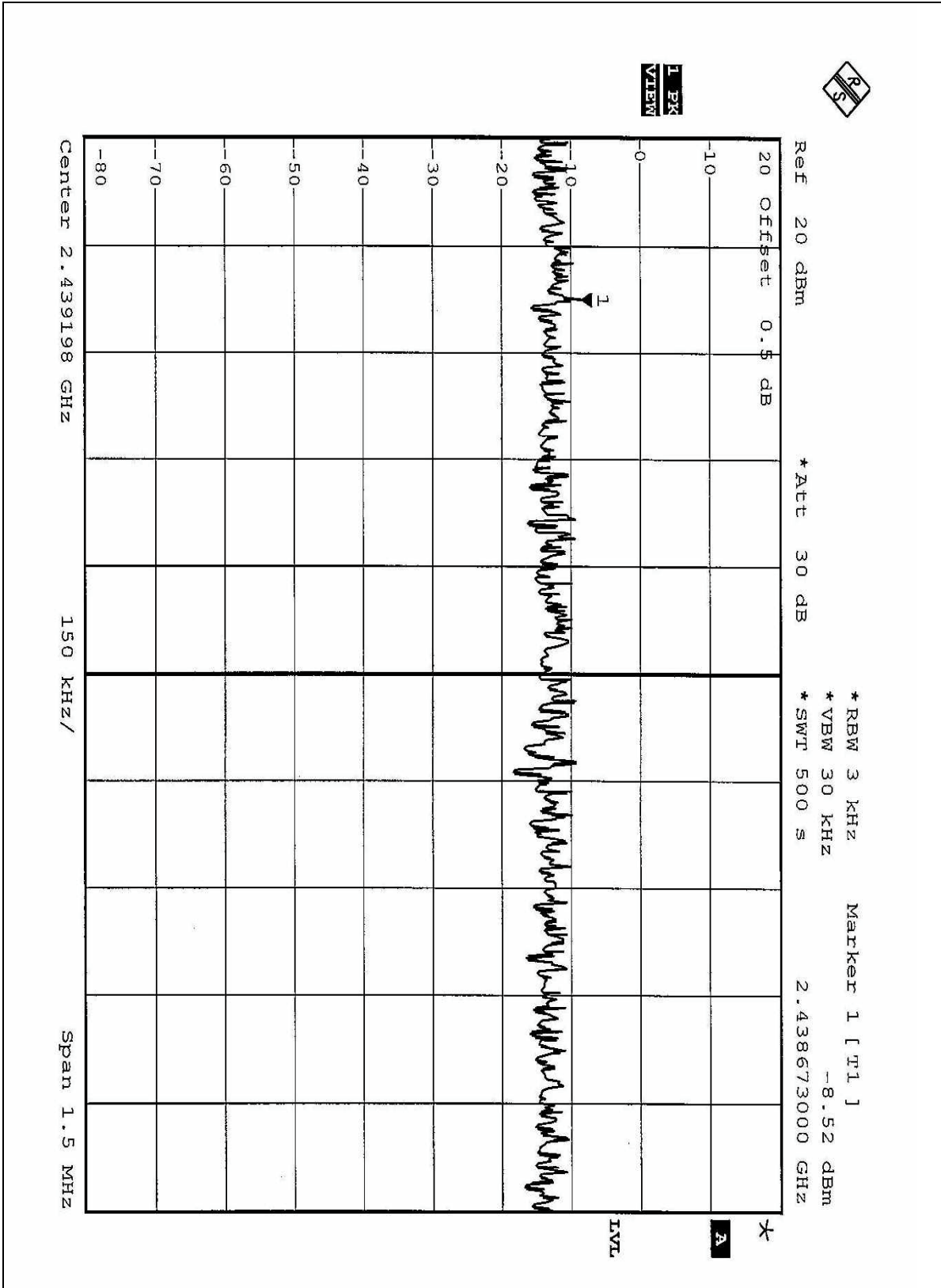


CH1



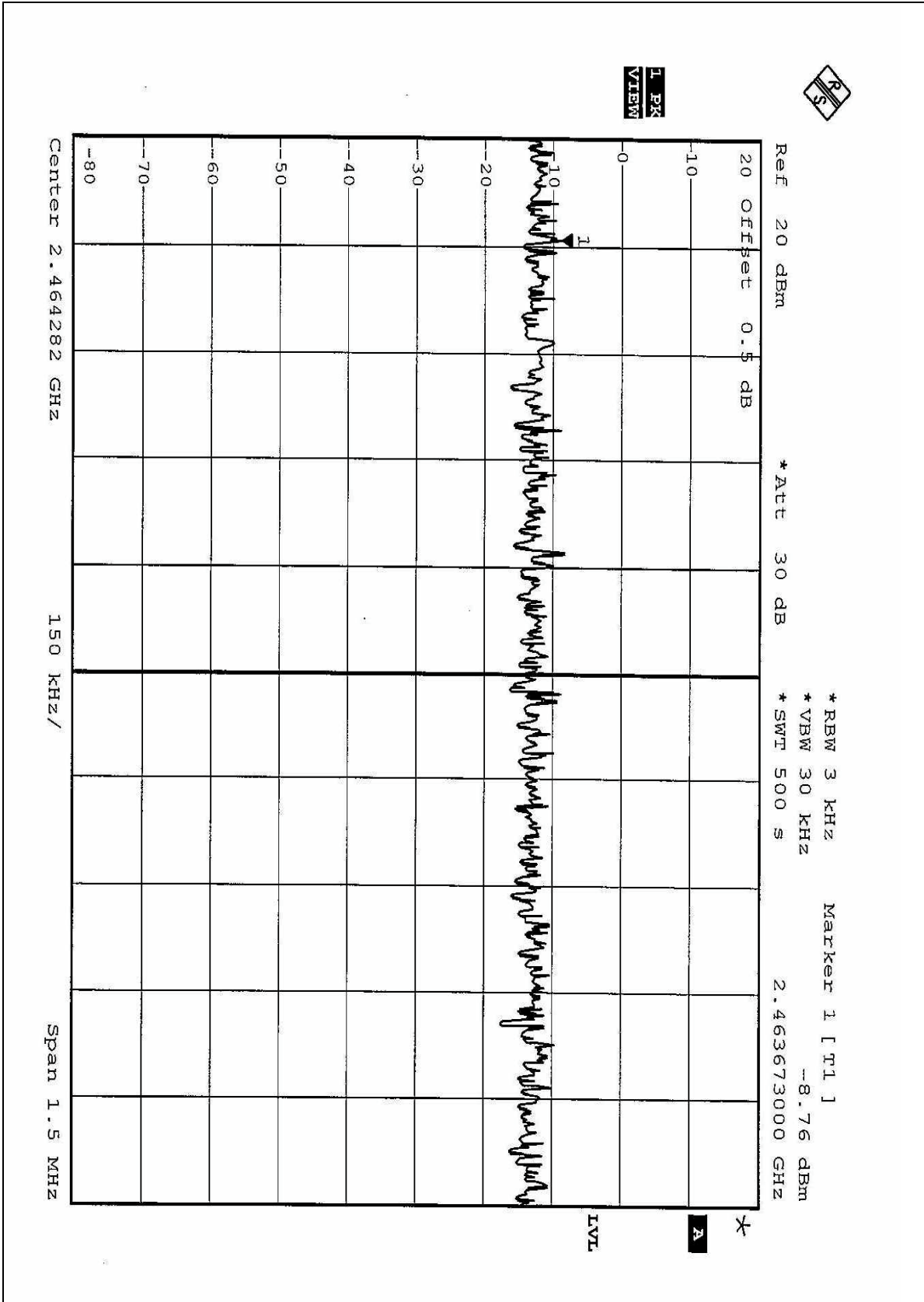


CH6





CH11





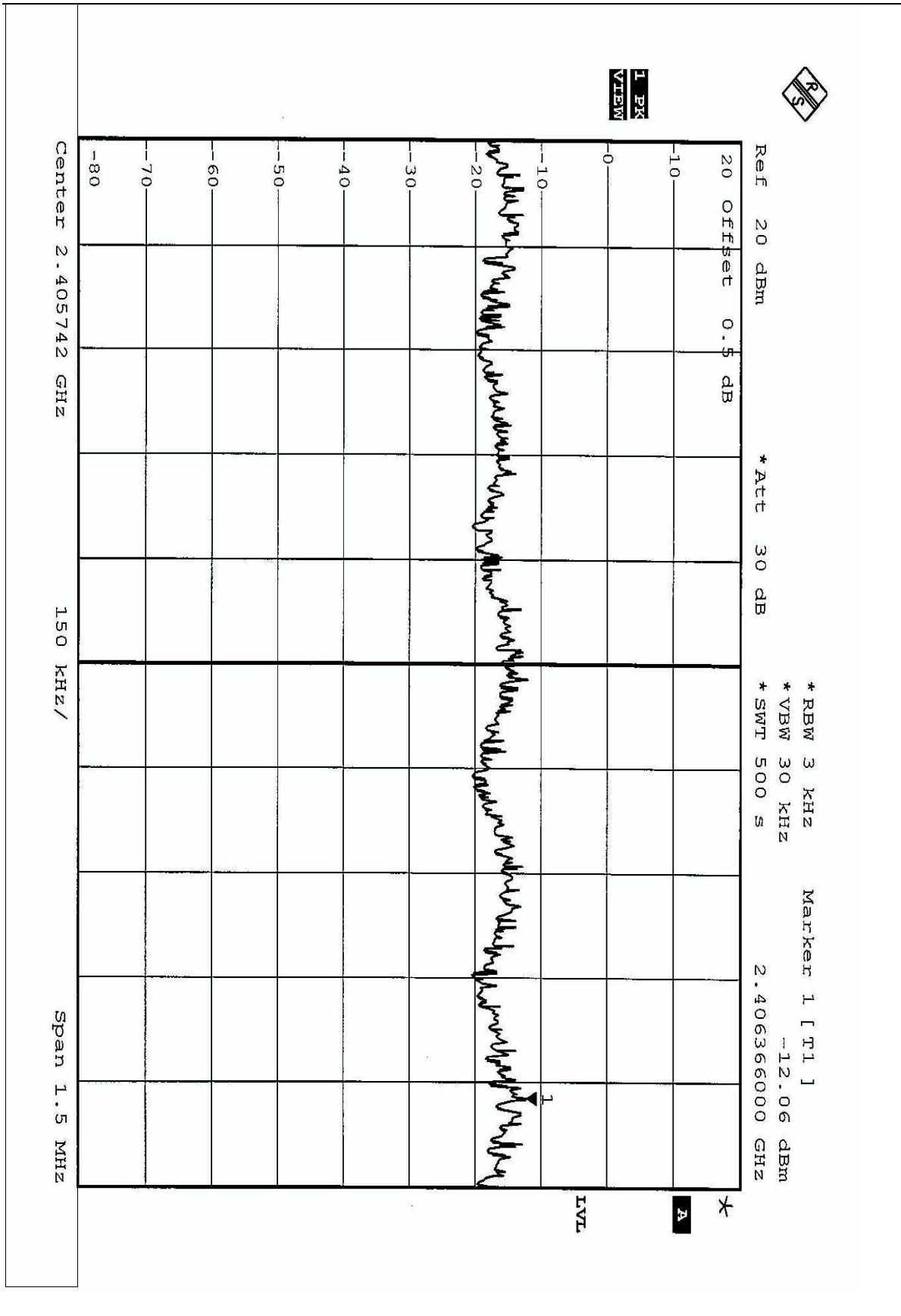
4.5.8 TEST RESULTS (B)

EUT	Mini-PCI CARD	MODEL	WLL3050
MODE	OFDM	ENVIRONMENTAL CONDITIONS	27deg. C, 57%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	TESTED BY: Steven Lu	

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-12.06	8	PASS
6	2437	-12.15	8	PASS
11	2462	-11.12	8	PASS

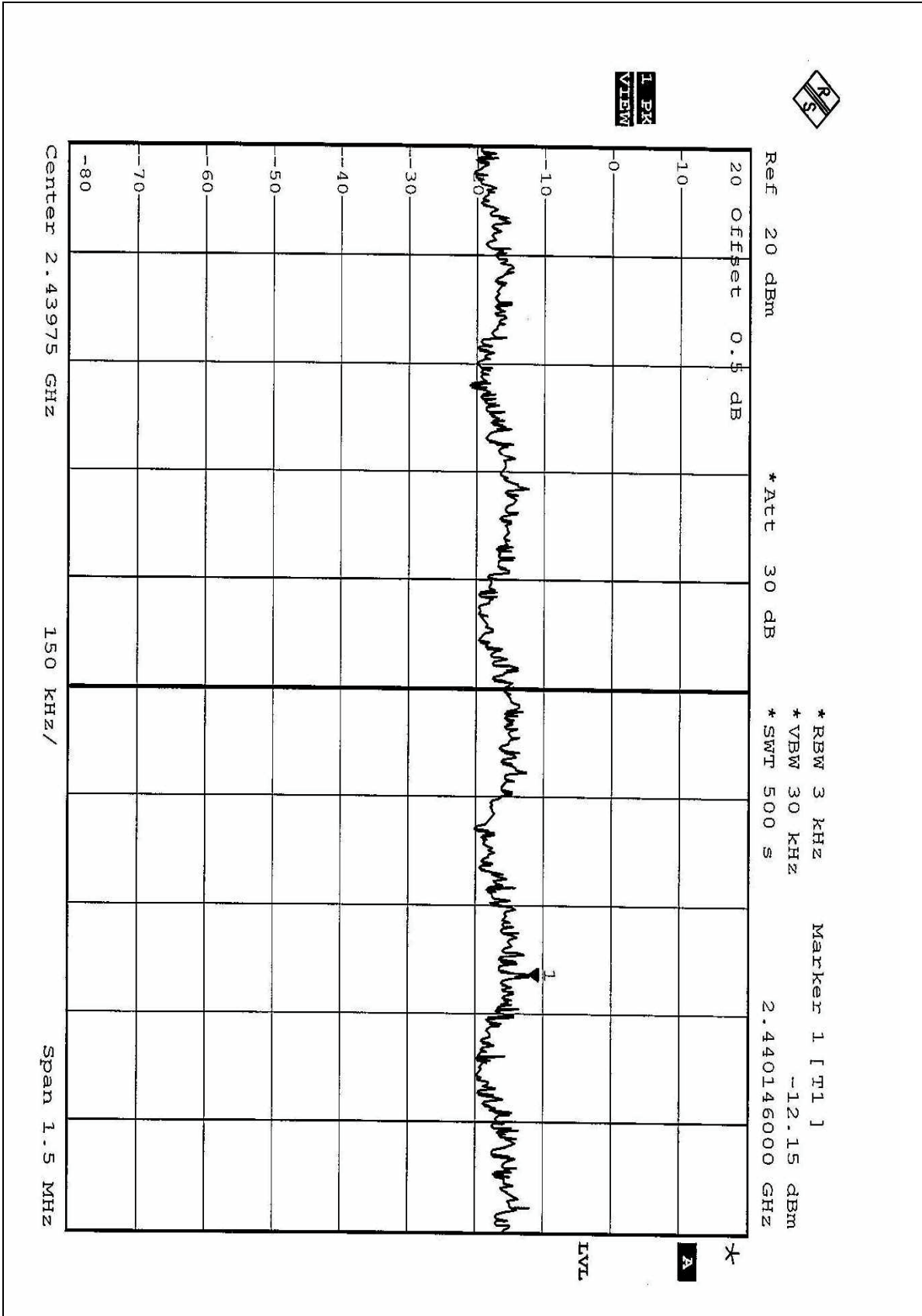


CH1



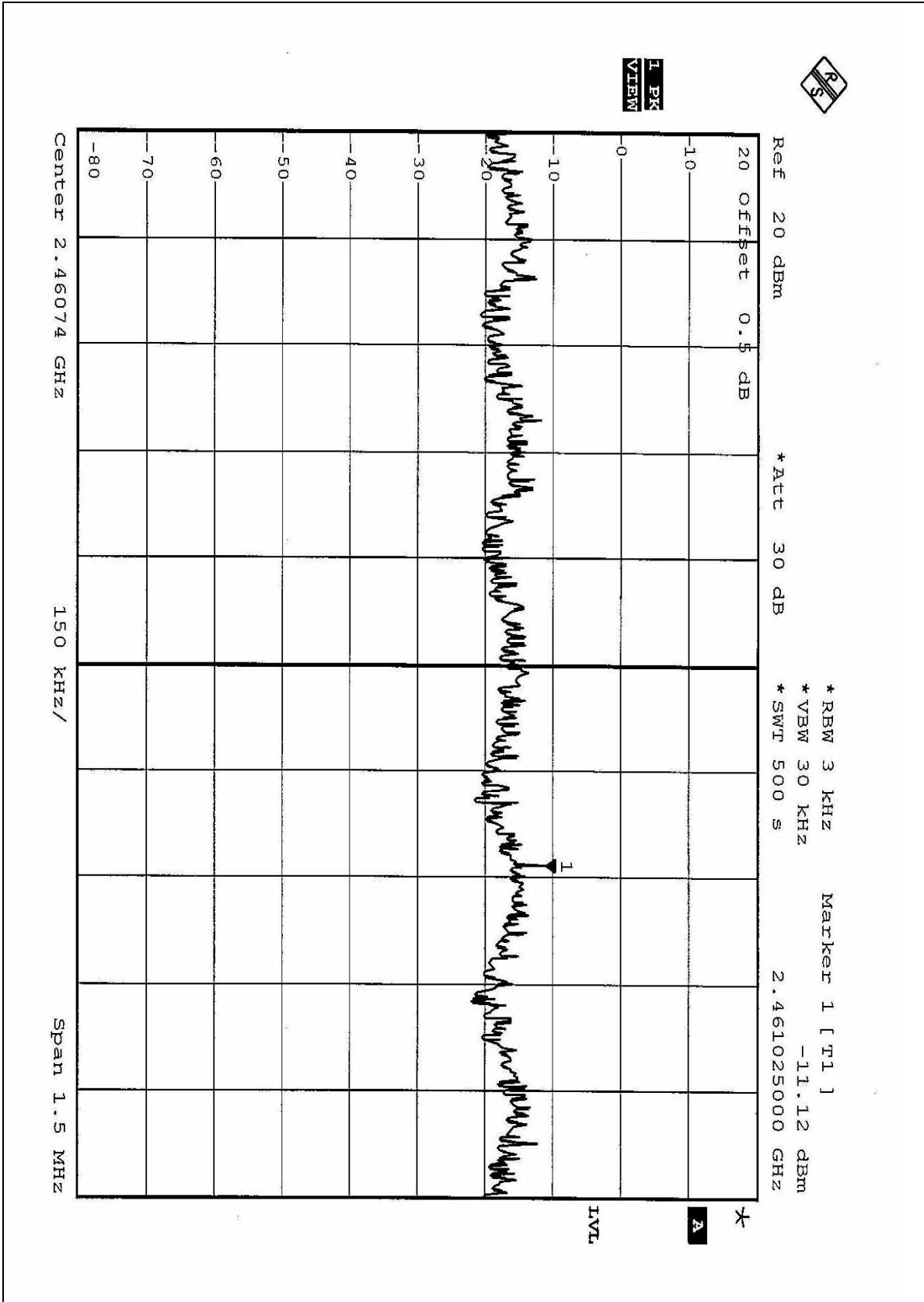


CH6





CH11





4.6 BAND EDGES MEASUREMENT

4.6.1 LIMITS OF BAND EDGES MEASUREMENT

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

4.6.2 TEST INSTRUMENTS

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

NOTE:

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

4.6.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer via a low lose cable. Set both RBW and VBW of spectrum analyzer to 100kHz for CCK technique and 1MHz and 300Hz for OFDM technique with suitable frequency span including 100kHz 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 8 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).

Test Mode 1

NOTE1: The band edge emission plot of CCK technique on page 64 shows 48.85dB delta between carrier maximum power and local maximum emission in restrict band (2.3886GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.8 is 99.52dBuV/m, so the maximum field strength in restrict band is $99.52-48.85=50.67$ dBuV/m which is under 54dBuV/m limit.

NOTE2: The band edge emission plot of CCK on page 65 shows 51.04dB delta between carrier maximum power and local maximum emission in restrict band (2.4879GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.8 is 100.46dBuV/m, so the maximum field strength in restrict band is $100.46-51.04=49.42$ dBuV/m which is under 54 dBuV/m limit.

NOTE3: The band edge emission plot of OFDM technique on page 66 shows 45.13dB 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 95.51dBuV/m, so the maximum field strength in restrict band is $95.51-45.13=50.38$ dBuV/m which is under 54 dBuV/m limit.

NOTE4: The band edge emission plot of OFDM on page 67 shows 44.08dB 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 4.2.9 is 94.91dBuV/m, so the maximum field strength in restrict band is $94.91-44.08=50.83$ dBuV/m which is under 54dBuV/m limit.



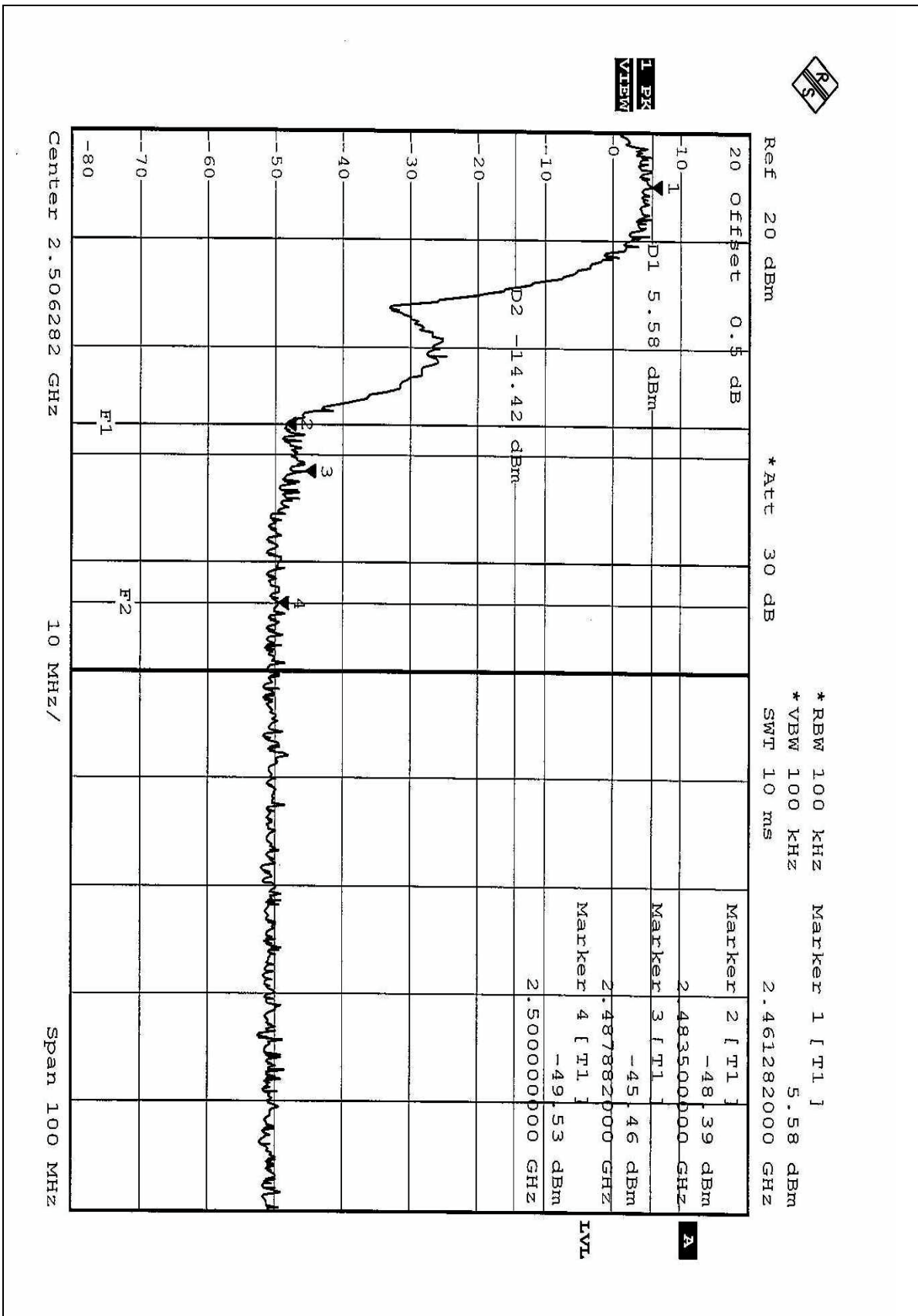
Test Mode 2

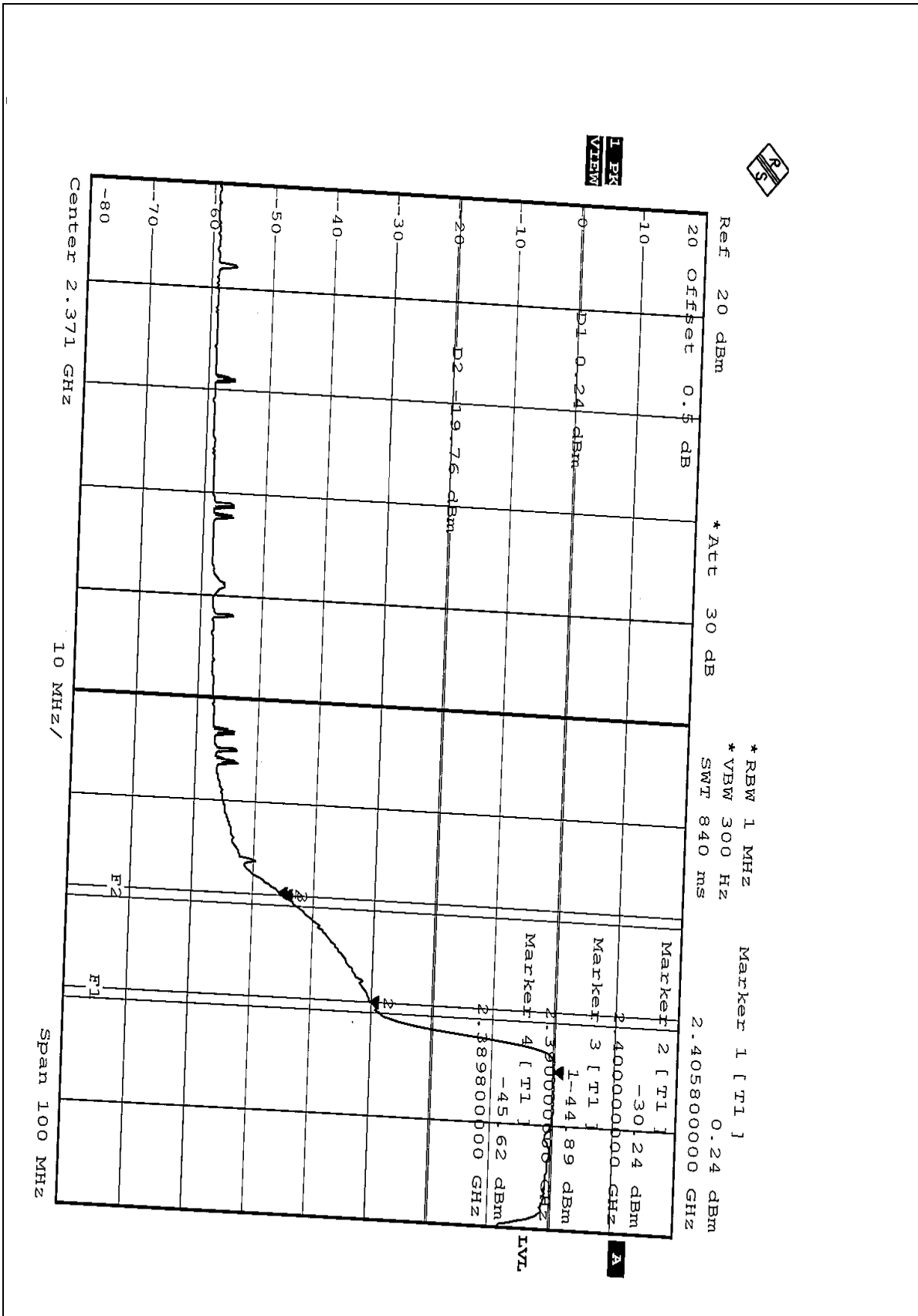
NOTE1: The band edge emission plot of CCK technique on page 64 shows 48.85dB delta between carrier maximum power and local maximum emission in restrict band (2.3886GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.8 is 100.24dBuV/m, so the maximum field strength in restrict band is $100.24 - 48.85 = 51.39$ dBuV/m which is under 54dBuV/m limit.

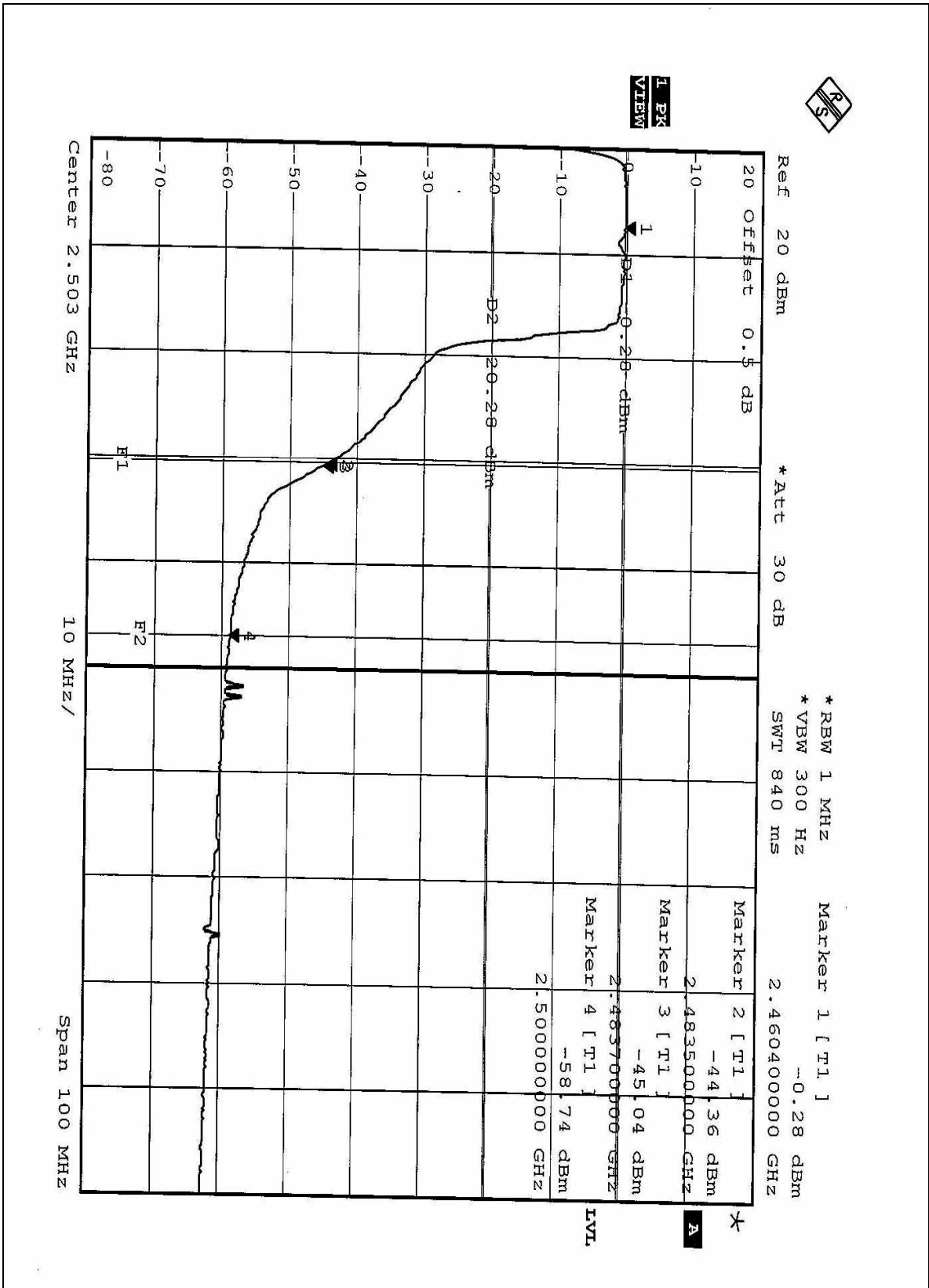
NOTE2: The band edge emission plot of CCK on page 65 shows 51.04dB delta between carrier maximum power and local maximum emission in restrict band (2.4879GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.8 is 100.93dBuV/m, so the maximum field strength in restrict band is $100.93 - 51.04 = 49.89$ dBuV/m which is under 54 dBuV/m limit.

NOTE3: The band edge emission plot of OFDM technique on page 66 shows 45.13dB 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 95.89dBuV/m, so the maximum field strength in restrict band is $95.89 - 45.13 = 50.76$ dBuV/m which is under 54 dBuV/m limit.

NOTE4: The band edge emission plot of OFDM on page 67 shows 44.08dB 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 4.2.9 is 97.28dBuV/m, so the maximum field strength in restrict band is $97.28 - 44.08 = 53.20$ dBuV/m which is under 54dBuV/m limit.









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

Please refer to NOTE 2 of section 3.1 for all antenna types. All the antenna types with UFL connector. The maximum Gain of these antennas are 2.85dBi.

5 PHOTOGRAPHS OF THE TEST CONFIGURATION

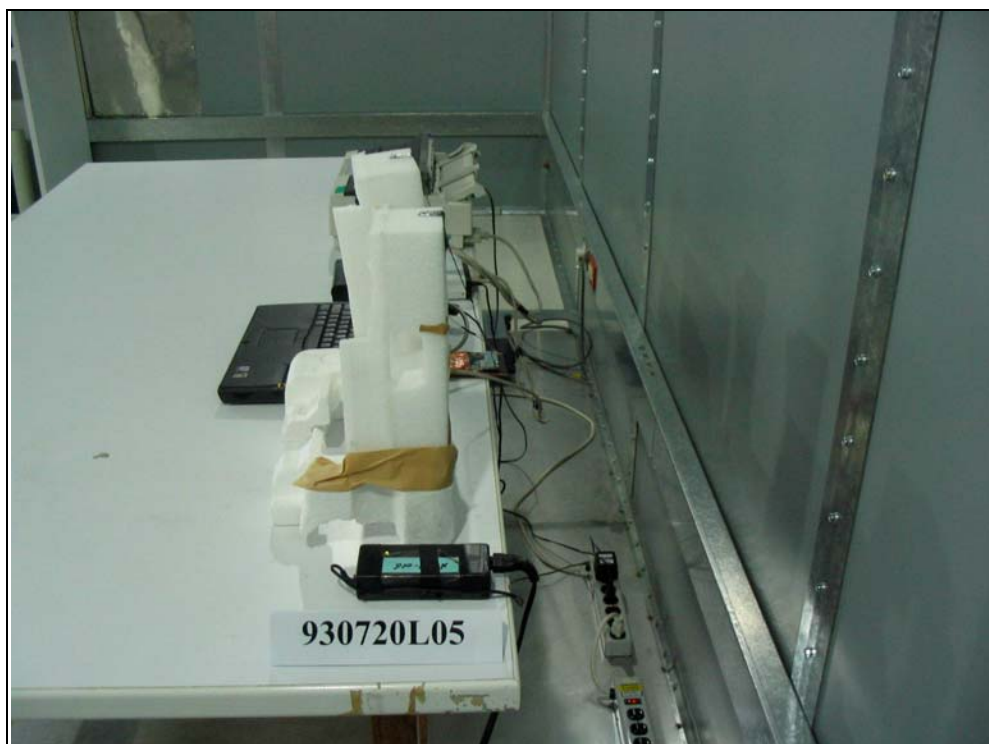
CONDUCTED EMISSION TEST

(Mode 1)



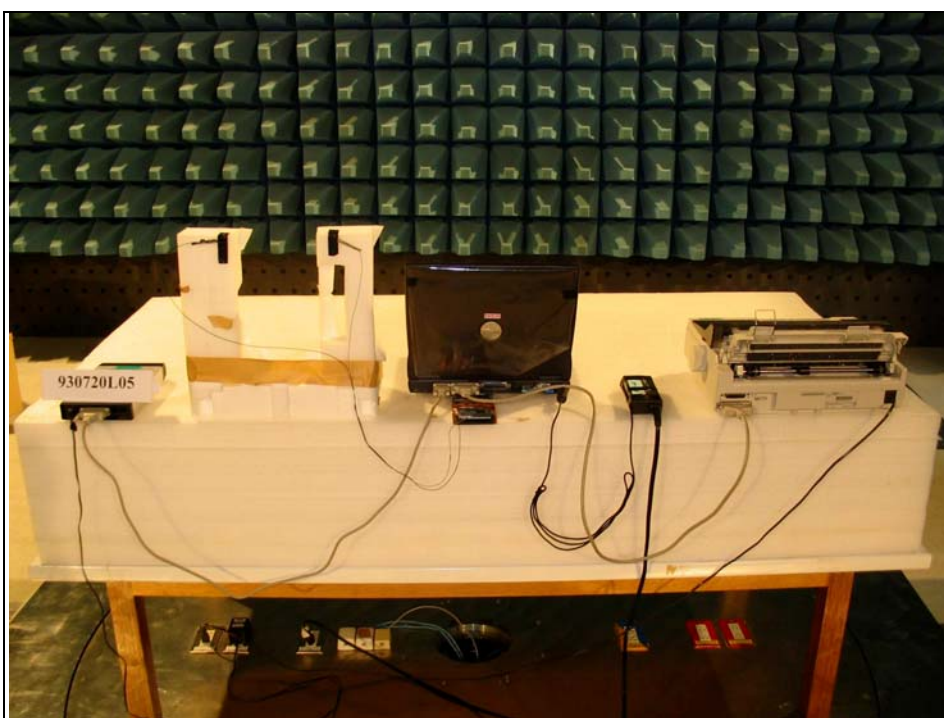
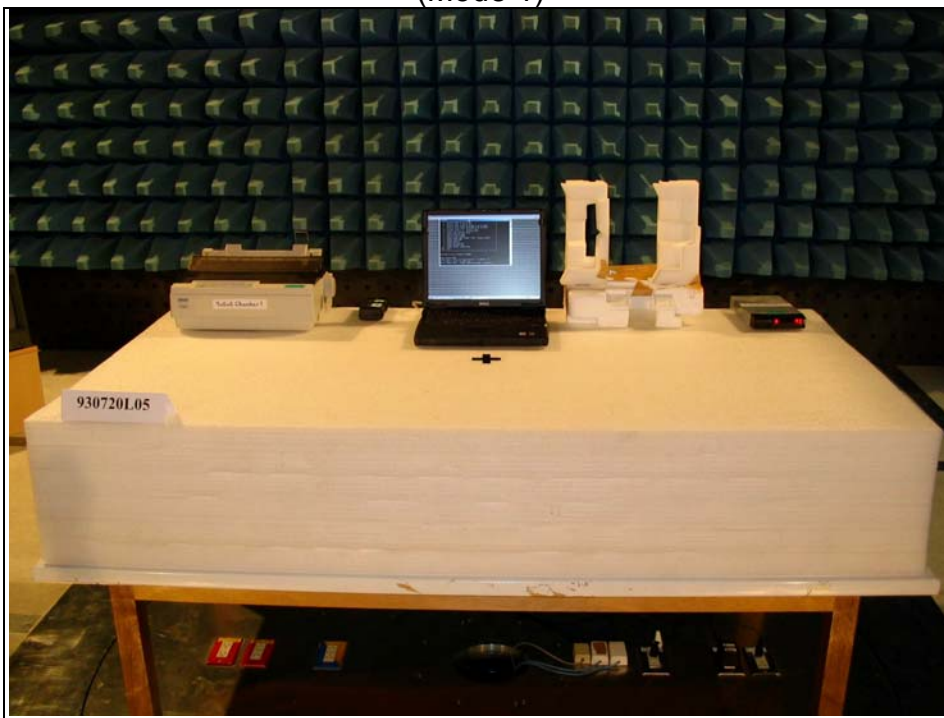


(Mode 2)



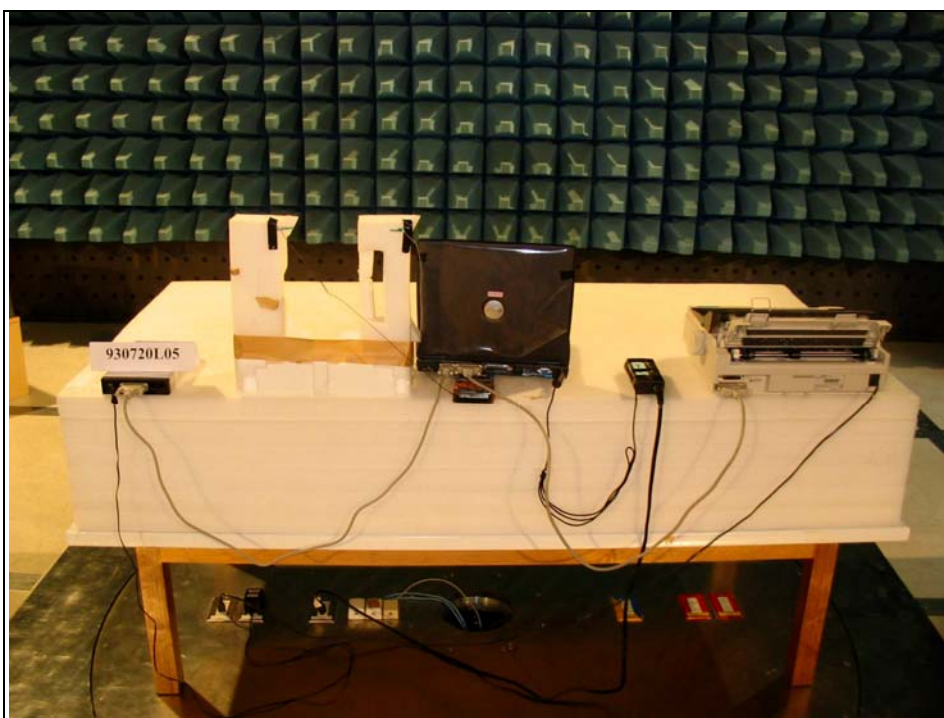


RADIATED EMISSION TEST (Mode 1)





(Mode 2)







6 INFORMATION ON THE TESTING LABORATORIES

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

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

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

www.adt.com.tw/index.5/phtml. If you have any comments, please feel free to contact us at the following:

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Fax: 886-2-26052943

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Tel: 886-3-5935343

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

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