FCC TEST REPORT

REPORT NO.:	RF930909L04
MODEL NO.:	NL-2511SR PLUS(Pronto) (for brand: SENAO)
OEM MODEL NO.:	PN-CPP202 (for brand: Pronto)
RECEIVED:	Sep. 02, 2004
TESTED:	Sep. 02 ~ Sep. 11, 2004

APPLICANT:	SENAO INTERNATIONAL CO., LTD.
ADDRESS:	2F, NO. 531 CHUNG CHENG RD., HSIN-TIEN, TAIPEI, TAIWAN, R. O. C.

ISSUED BY:	Advance Data Technology Corporation
LAB ADDRESS:	No. 47, 14th Ling, Chia Pau Tsuen, Lin Kou Hsiang 244, Taipei Hsien, Taiwan, R.O.C.
TEST LOCATION:	No. 19, Hwa Ya 2nd Rd., Wen Hwa Tsuen, Kwei Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

ACCREDITED
No. 2177-01

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1 CERTIFICATION

PRODUCT :	Pronto Hotspot Controller
MODEL NO.:	NL-2511SR PLUS(Pronto) (for brand: SENAO)
OEM MODEL NO.:	PN-CPP202 (for brand: Pronto)
APPLICANT :	SENAO INTERNATIONAL CO., LTD.
TESTED :	Sep. 02 ~ Sep. 11, 2004
TEST SAMPLE :	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 : Windy chou , **DATE:** Oct. 01, 2004
(Windy Chou)

TECHNICAL ACCEPTANCE : Gary Chang , **DATE:** Oct. 01, 2004
Responsible for RF
(Gary Chang)

APPROVED BY : , **DATE:** Oct. 01, 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 –13.55 dB at 0.181 MHz.
15.247(a)(2)	Spectrum Bandwidth of a Direct Sequence Spread Spectrum System Limit : min. 500kHz	PASS	Meet the requirement of limit.
15.247(b)	Maximum Peak Output Power Limit: max. 30dBm	PASS	Meet the requirement of limit.
15.247(c)	Transmitter Radiated Emissions Limit: Table 15.209	PASS	Meet the requirement of limit. Minimum passing margin is –4.47 dB at 890.99 MHz.
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 GENERAL DESCRIPTION OF EUT

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	Pronto Hotspot Controller
MODEL NO.	NL-2511SR PLUS(Pronto) (for brand: SENAO)
OEM MODEL NO.	PN-CPP202 (for brand: Pronto)
POWER SUPPLY	12Vdc from AC adapter
MODULATION TYPE	BPSK, QPSK, CCK
MODULATION TECHNOLOGY	DSSS
TRANSFER RATE	802.11b:11/5.5/2/1Mbps
FREQUENCY RANGE	2412MHz ~ 2462MHz
NUMBER OF CHANNEL	11
MAXIMUM OUTPUT POWER	141.91mW
ANTENNA TYPE	Dipole antenna with 2 dBi antenna gain
DATA CABLE	NA
I/O PORTS	RJ45, RS232
ASSOCIATED DEVICES	NA

NOTE:

1. The following OEM model is provided to this EUT and identical to each other except for their brand and model name due to marketing requirement.

Brand	Model
Pronto	PN-CPP202

The EUT was tested with the following adapter:

Model	AM-121000
Input	120Vac, 60Hz, 20W
Output	12Vdc, 1000mA

2. The EUT operates in the 2.4GHz frequency spectrum with throughput of up to 11Mbps.
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

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 for CCK technique, as the worst cases for the test among other data rates.

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a Pronto Hotspot Controller. 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 C63.4-2001

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

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

3.4 DESCRIPTION OF SUPPORT UNITS

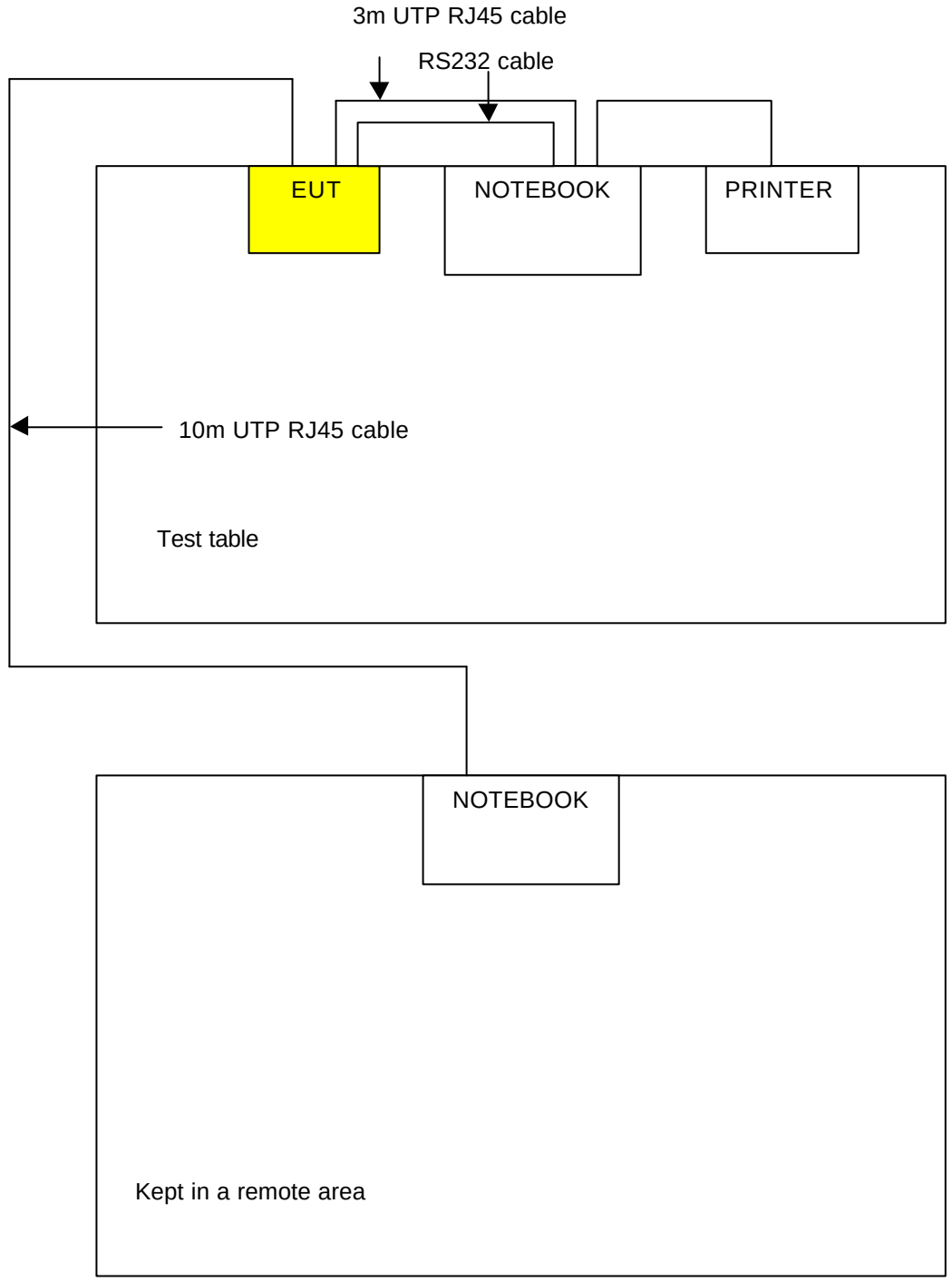
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK COMPUTER	DELL	PP05L	12130898320	E2K24CLNS
2	NOTEBOOK COMPUTER	DELL	PP05L	16484462992	E2K24CLNS
3	PRINTER	EPSON	LQ-300+	DCGY047265	FCC DoC Approved

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA
2	NA
3	1.2m shielded cable without core

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

3.5 CONFIGURATION 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 (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

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

4.1.2 TEST INSTRUMENTS

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

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

4.1.3 TEST PROCEDURES

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

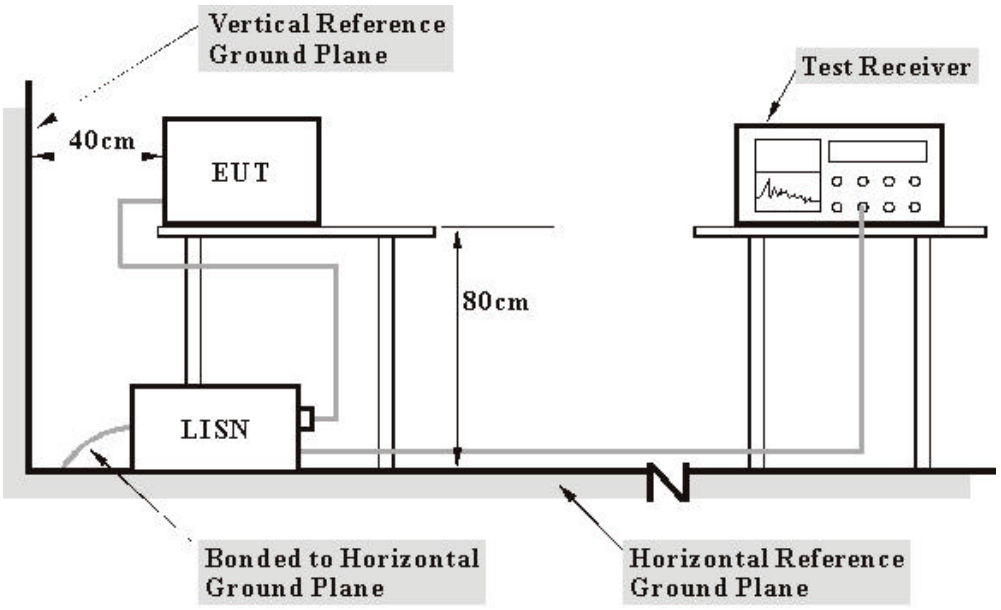
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 TEST SETUP



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

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

4.1.6 EUT OPERATING CONDITIONS

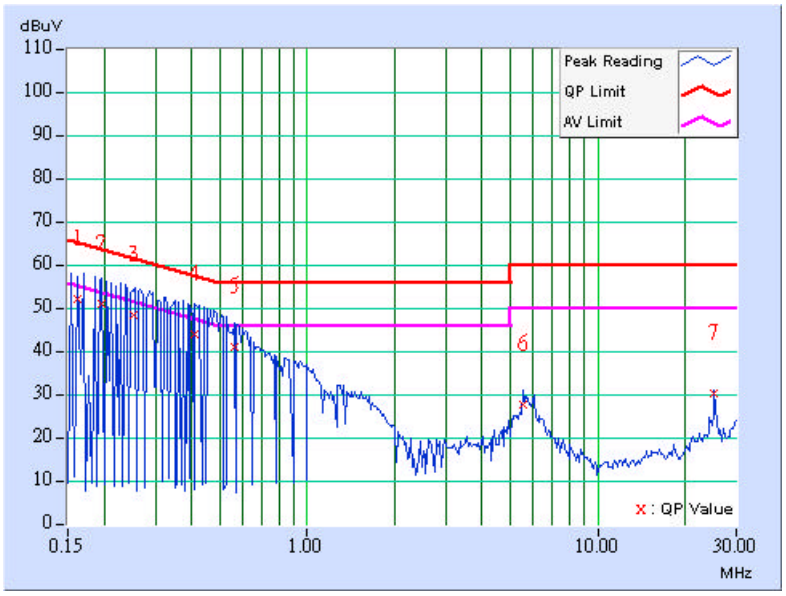
a. Placed the EUT on the testing table.
b. Prepared another computer system to act as a communication partner and placed it outside of testing area.
c. The communication partner run a test program (provided by manufacturer) to enable EUT under transmission/receiving condition continuously at specific channel frequency via an RJ45 cable.
d. The communication partner sent data to EUT by command "PING".
e. The computer system sent "H" messages to its screen.
f. The notebook system sent "H" messages to printer, and the printer printed them on paper.
g. Steps e ~ f were repeated.

4.1.7 TEST RESULTS

EUT	Pronto Hotspot Controller	**MODEL**	NL-2511SR PLUS(Pronto)
CHANNEL	1	**6dB BANDWIDTH**	9kHz
INPUT POWER (SYSTEM)	120 Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	25 deg. C, 65% RH, 991 hPa	**TESTED BY**	Steven Lu

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	0.11	51.05	-	51.16	-	65.38	55.38	-14.22	-
2	0.197	0.12	49.90	-	50.02	-	63.74	53.74	-13.72	-
3	0.251	0.12	47.33	-	47.45	-	61.71	51.71	-14.26	-
4	0.412	0.13	42.99	-	43.12	-	57.61	47.61	-14.50	-
5	0.564	0.13	39.91	-	40.04	-	56.00	46.00	-15.96	-
6	5.531	0.25	26.61	-	26.86	-	60.00	50.00	-33.14	-
7	25.266	1.18	29.01	-	30.19	-	60.00	50.00	-29.81	-

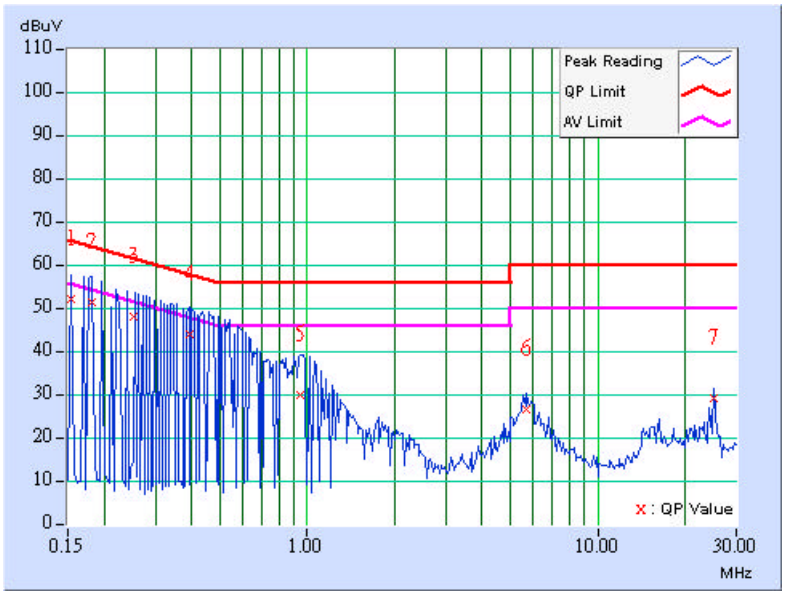
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	Pronto Hotspot Controller	**MODEL**	NL-2511SR PLUS(Pronto)
CHANNEL	1	**6dB BANDWIDTH**	9kHz
INPUT POWER (SYSTEM)	120 Vac, 60 Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	25 deg. C, 65% RH, 991 hPa	**TESTED BY**	Steven Lu

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	51.52	-	51.62	-	65.79	55.79	-14.17	-
2	**0.181**	**0.11**	**50.77**	**-**	**50.88**	**-**	**64.43**	**54.43**	**-13.55**	**-**
3	0.251	0.11	47.50	-	47.61	-	61.71	51.71	-14.10	-
4	0.392	0.12	43.26	-	43.38	-	58.02	48.02	-14.64	-
5	0.947	0.15	29.33	-	29.48	-	56.00	46.00	-26.52	-
6	5.656	0.24	25.88	-	26.12	-	60.00	50.00	-33.88	-
7	25.266	0.67	28.54	-	29.21	-	60.00	50.00	-30.79	-

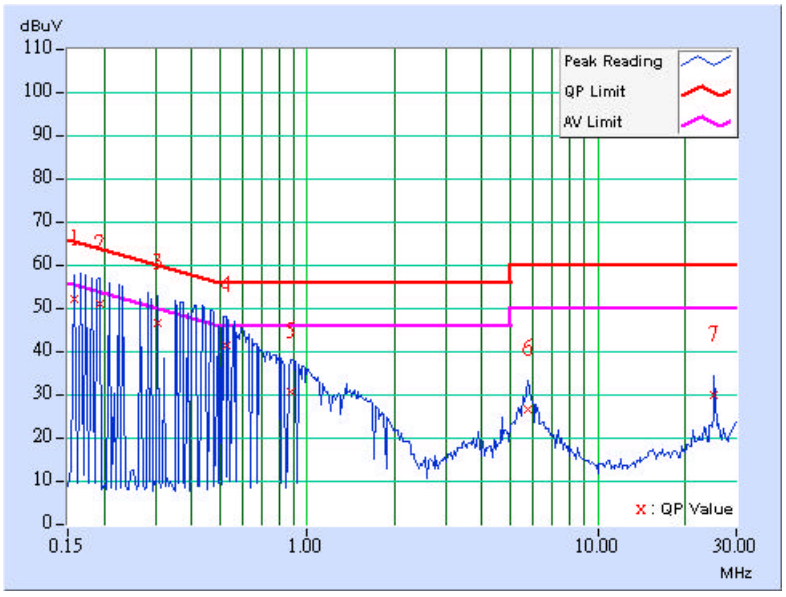
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	Pronto Hotspot Controller	**MODEL**	NL-2511SR PLUS(Pronto)
CHANNEL	6	**6dB BANDWIDTH**	9kHz
INPUT POWER (SYSTEM)	120 Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	25 deg. C, 65% RH, 991 hPa	**TESTED BY**	Steven Lu

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	0.158	0.11	51.08	-	51.19	-	65.58	55.58	-14.39	-
2	0.193	0.12	49.81	-	49.93	-	63.91	53.91	-13.98	-
3	0.306	0.12	45.51	-	45.63	-	60.07	50.07	-14.44	-
4	0.525	0.13	40.30	-	40.43	-	56.00	46.00	-15.57	-
5	0.877	0.14	29.52	-	29.66	-	56.00	46.00	-26.34	-
6	5.785	0.26	25.34	-	25.60	-	60.00	50.00	-34.40	-
7	25.266	1.18	28.99	-	30.17	-	60.00	50.00	-29.83	-

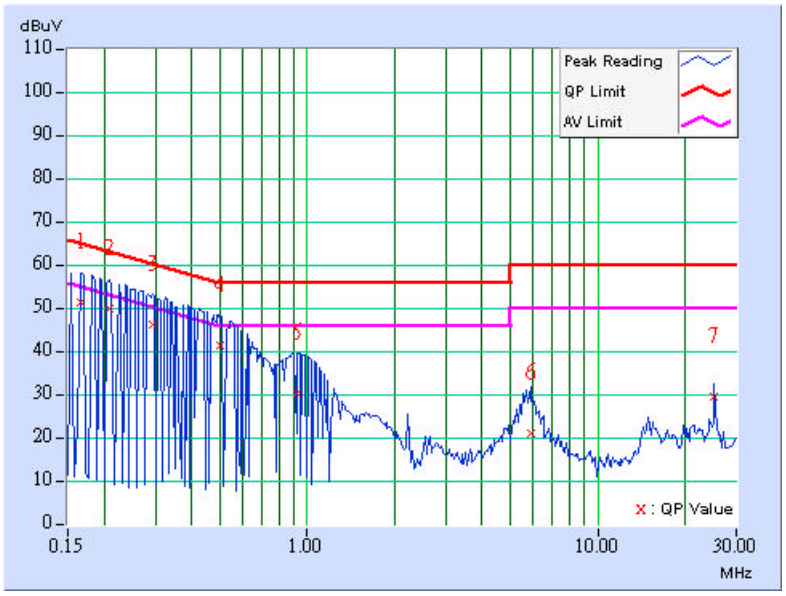
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	Pronto Hotspot Controller	**MODEL**	NL-2511SR PLUS(Pronto)
CHANNEL	6	**6dB BANDWIDTH**	9kHz
INPUT POWER (SYSTEM)	120 Vac, 60 Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	25 deg. C, 65% RH, 991 hPa	**TESTED BY**	Steven Lu

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	0.166	0.10	50.99	-	51.09	-	65.18	55.18	-14.08	-
2	0.209	0.11	49.34	-	49.45	-	63.26	53.26	-13.81	-
3	0.295	0.11	45.63	-	45.74	-	60.40	50.40	-14.65	-
4	0.501	0.12	40.80	-	40.92	-	56.00	46.00	-15.08	-
5	0.927	0.14	29.68	-	29.82	-	56.00	46.00	-26.18	-
6	5.871	0.24	20.35	-	20.59	-	60.00	50.00	-39.41	-
7	25.266	0.67	28.97	-	29.64	-	60.00	50.00	-30.36	-

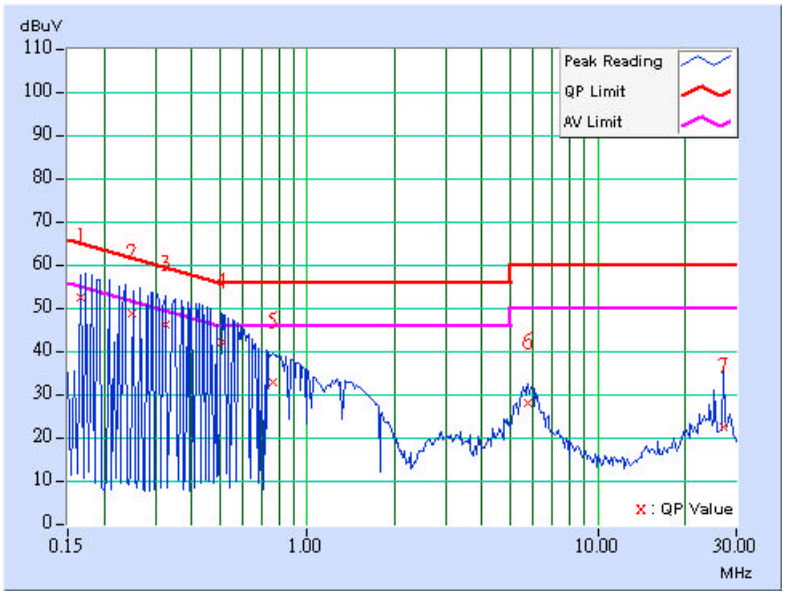
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	Pronto Hotspot Controller	**MODEL**	NL-2511SR PLUS(Pronto)
CHANNEL	11	**6dB BANDWIDTH**	9kHz
INPUT POWER (SYSTEM)	120 Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	25 deg. C, 65% RH, 991 hPa	**TESTED BY**	Steven Lu

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	0.166	0.11	51.20	-	51.31	-	65.18	55.18	-13.87	-
2	0.250	0.12	47.70	-	47.82	-	61.76	51.76	-13.94	-
3	0.326	0.12	45.12	-	45.24	-	59.56	49.56	-14.31	-
4	0.505	0.13	41.01	-	41.14	-	56.00	46.00	-14.86	-
5	0.759	0.14	31.78	-	31.92	-	56.00	46.00	-24.08	-
6	5.781	0.26	27.03	-	27.29	-	60.00	50.00	-32.71	-
7	27.157	1.29	21.27	-	22.56	-	60.00	50.00	-37.44	-

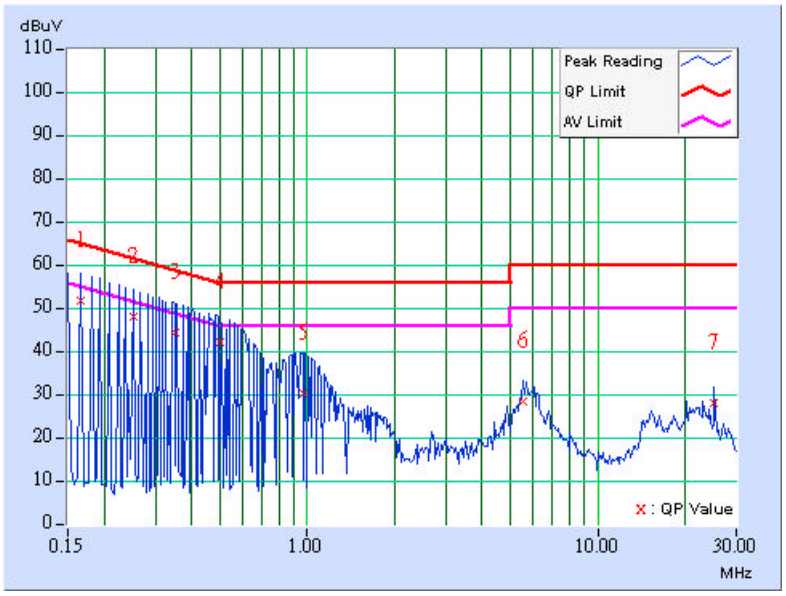
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	Pronto Hotspot Controller	**MODEL**	NL-2511SR PLUS(Pronto)
CHANNEL	11	**6dB BANDWIDTH**	9kHz
INPUT POWER (SYSTEM)	120 Vac, 60 Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	25 deg. C, 65% RH, 991 hPa	**TESTED BY**	Steven Lu

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	0.166	0.10	51.02	-	51.12	-	65.18	55.18	-14.05	-
2	0.251	0.11	47.44	-	47.55	-	61.72	51.72	-14.17	-
3	0.353	0.12	43.90	-	44.02	-	58.89	48.89	-14.88	-
4	0.503	0.12	41.61	-	41.73	-	56.00	46.00	-14.27	-
5	0.966	0.15	29.63	-	29.78	-	56.00	46.00	-26.22	-
6	5.531	0.24	27.94	-	28.18	-	60.00	50.00	-31.82	-
7	25.270	0.67	27.43	-	28.10	-	60.00	50.00	-31.90	-

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 maters 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.

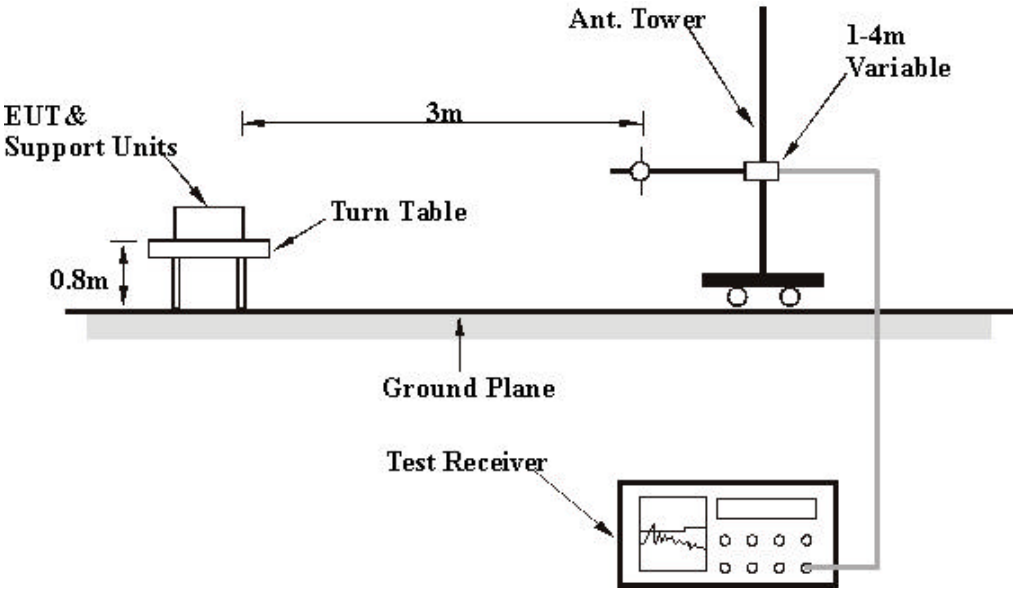
NOTE:

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 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	Pronto Hotspot Controller	**MODEL**	NL-2511SR PLUS(Pronto)
CHANNEL	11	**FREQUENCY RANGE**	Below 1000 MHz
INPUT POWER (SYSTEM)	120 Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	30 deg. C, 73 % RH, 991 hPa	**TESTED BY**	Linden 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	105.39	34.55	43.50	-8.95	1.73 H	265	23.29	11.26
2	115.12	28.69	43.50	-14.81	1.53 H	231	16.23	12.46
3	198.15	23.89	43.50	-19.61	1.39 H	88	13.67	10.22
4	231.00	22.84	46.00	-23.16	1.99 H	95	10.70	12.14
5	297.00	29.54	46.00	-16.46	1.13 H	119	14.19	15.35
6	396.00	40.14	46.00	-5.86	1.02 H	232	22.02	18.12
7	494.99	36.24	46.00	-9.76	1.00 H	275	16.19	20.05
8	596.30	31.93	46.00	-14.07	1.61 H	83	10.00	21.93
9	693.00	35.16	46.00	-10.84	1.31 H	135	12.85	22.31
10	**890.99**	**41.53**	**46.00**	**-4.47**	**1.51 H**	**302**	**17.28**	**24.25**

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	Pronto Hotspot Controller	**MODEL**	NL-2511SR PLUS(Pronto)
CHANNEL	11	**FREQUENCY RANGE**	Below 1000 MHz
INPUT POWER (SYSTEM)	120 Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	30 deg. C, 73 % RH, 991 hPa	**TESTED BY**	Linden Chang

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	47.80	30.35	40.00	-9.65	1.00 V	270	18.48	11.87
2	231.00	27.42	46.00	-17.58	1.00 V	265	16.28	12.14
3	269.99	25.94	46.00	-20.06	1.00 V	96	10.59	16.78
4	363.00	35.96	46.00	-10.04	1.34 V	293	19.18	15.35
5	369.00	35.83	46.00	-10.17	1.73 V	98	17.71	18.12
6	417.99	26.58	46.00	-19.42	1.44 V	58	8.17	18.41
7	462.00	31.65	46.00	-14.35	1.51 V	82	12.63	19.02
8	495.01	39.19	46.00	-6.81	1.00 V	106	19.14	20.05
9	560.99	35.59	46.00	-10.41	2.09 V	159	13.81	21.78
10	627.01	36.86	46.00	-9.14	2.04 V	352	14.80	22.16
11	890.99	40.99	46.00	-5.01	1.77 V	20	16.74	24.25

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	Pronto Hotspot Controller	**MODEL**	NL-2511SR PLUS(Pronto)
CHANNEL	1	**FREQUENCY RANGE**	1 ~ 25 GHz
INPUT POWER (SYSTEM)	120 Vac, 60 Hz	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25 deg. C, 62 % RH, 991 hPa	**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	1088.00	43.90 PK	74.00	-30.10	1.40 H	298	16.03	27.88
2	2038.00	47.65 PK	74.00	-26.35	1.26 H	52	17.61	30.04
3	*2412.00	109.07 PK			1.07 H	33	77.37	31.70
3	*2412.00	100.58 AV			1.07 H	33	68.88	31.70
4	2478.80	46.49 PK	74.00	-27.51	1.40 H	298	14.39	32.10
5	2578.30	49.89 PK	74.00	-24.11	1.20 H	16	17.46	32.43
6	4824.00	47.38 PK	74.00	-26.62	1.12 H	146	9.80	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	1088.00	45.28 PK	74.00	-28.72	1.35 V	34	17.41	27.88
2	2038.00	50.42 PK	74.00	-23.58	1.00 V	79	20.38	30.04
2	2038.00	47.43 AV	54.00	-6.57	1.00 V	79	17.39	30.04
3	2389.80	55.22 PK	74.00	-18.78	1.03 V	274	23.61	31.61
3	2389.80	47.27 AV	54.00	-6.73	1.03 V	274	15.66	31.61
4	*2412.00	112.04 PK			1.03 V	274	80.34	31.70
4	*2412.00	104.09 AV			1.03 V	274	72.39	31.70
5	2578.40	54.35 PK	74.00	-19.65	1.02 V	56	21.92	32.43
5	2578.40	48.81 AV	54.00	-5.19	1.02 V	56	16.38	32.43
6	4824.00	50.93 PK	74.00	-23.07	1.12 V	286	13.35	37.58
6	4824.00	38.79 AV	54.00	-15.21	1.12 V	286	1.21	37.58

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	Pronto Hotspot Controller	**MODEL**	NL-2511SR PLUS(Pronto)
CHANNEL	6	**FREQUENCY RANGE**	1 ~ 25 GHz
INPUT POWER (SYSTEM)	120 Vac, 60 Hz	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25 deg. C, 62 % RH, 991 hPa	**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	1088.00	44.20 PK	74.00	-29.80	1.12 H	249	16.32	27.88
2	2062.00	47.54 PK	74.00	-26.46	1.12 H	50	17.38	30.16
3	*2437.00	108.61 PK			1.09 H	34	76.76	31.85
3	*2437.00	100.97 AV			1.09 H	34	69.12	31.85
4	4874.00	47.14 PK	74.00	-26.86	1.19 H	124	9.48	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	1088.00	46.21 PK	74.00	-27.79	1.48 V	30	18.33	27.88
2	2062.00	51.22 PK	74.00	-22.78	1.10 V	85	21.06	30.16
2	2062.00	47.92 AV	54.00	-6.08	1.10 V	85	17.76	30.16
3	*2437.00	114.76 PK			1.29 V	36	82.91	31.85
3	*2437.00	107.06 AV			1.29 V	36	75.21	31.85
4	4874.00	51.08 PK	74.00	-22.92	1.47 V	229	13.42	37.66
4	4874.00	40.25 AV	54.00	-13.75	1.47 V	229	2.59	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	Pronto Hotspot Controller	**MODEL**	NL-2511SR PLUS(Pronto)
CHANNEL	11	**FREQUENCY RANGE**	1 ~ 25 GHz
INPUT POWER (SYSTEM)	120 Vac, 60 Hz	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25 deg. C, 62 % RH, 991 hPa	**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	1088.00	44.18 PK	74.00	-29.82	1.08 H	251	16.30	27.88
2	2088.00	46.94 PK	74.00	-27.06	1.05 H	48	16.64	30.30
3	*2462.00	109.02 PK			1.03 H	307	77.02	32.00
3	*2462.00	101.50 AV			1.03 H	307	69.50	32.00
4	2483.50	50.10 PK	74.00	-23.90	1.03 H	307	17.97	32.13
4	2483.50	42.58 AV	54.00	-11.42	1.03 H	307	10.45	32.13
5	4924.00	48.32 PK	74.00	-25.68	1.24 H	338	10.58	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	1088.00	45.59 PK	74.00	-28.41	1.23 V	38	17.71	27.88
2	2088.00	50.89 PK	74.00	-23.11	1.18 V	85	20.59	30.30
2	2088.00	48.01 AV	54.00	-5.99	1.18 V	85	17.71	30.30
3	*2462.00	113.30 PK			1.27 V	62	81.30	32.00
3	*2462.00	105.29 AV			1.27 V	62	73.29	32.00
4	2483.50	54.38 PK	74.00	-19.62	1.27 V	62	22.25	32.13
4	2483.50	46.37 AV	54.00	-7.63	1.27 V	62	14.24	32.13
5	4924.00	51.38 PK	74.00	-22.62	1.12 V	318	13.64	37.74
5	4924.00	41.47 AV	54.00	-12.53	1.12 V	318	3.73	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.

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 100 kHz 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

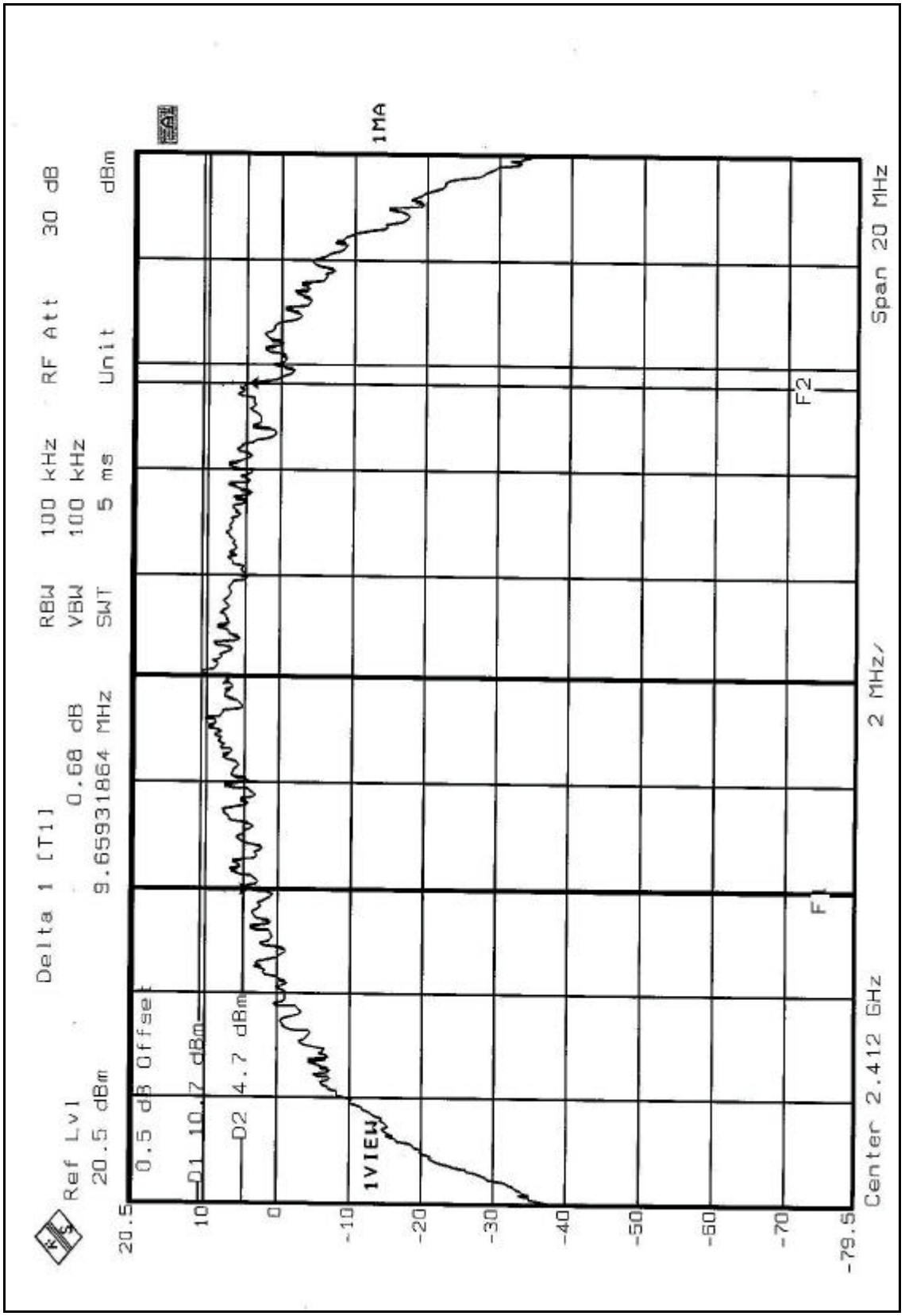
The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.3.7 TEST RESULTS

EUT	Pronto Hotspot Controller	**MODEL**	NL-2511SR PLUS(Pronto)
ENVIRONMENTAL CONDITIONS	24 deg. C, 67% RH, 991 hPa	**INPUT POWER (SYSTEM)**	120 Vac, 60 Hz
TESTED BY:	Steven Lu		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	9.659	0.5	PASS
6	2437	9.699	0.5	PASS
11	2462	9.338	0.5	PASS

CH 1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D1 10.7 dBm
D2 4.7 dBm
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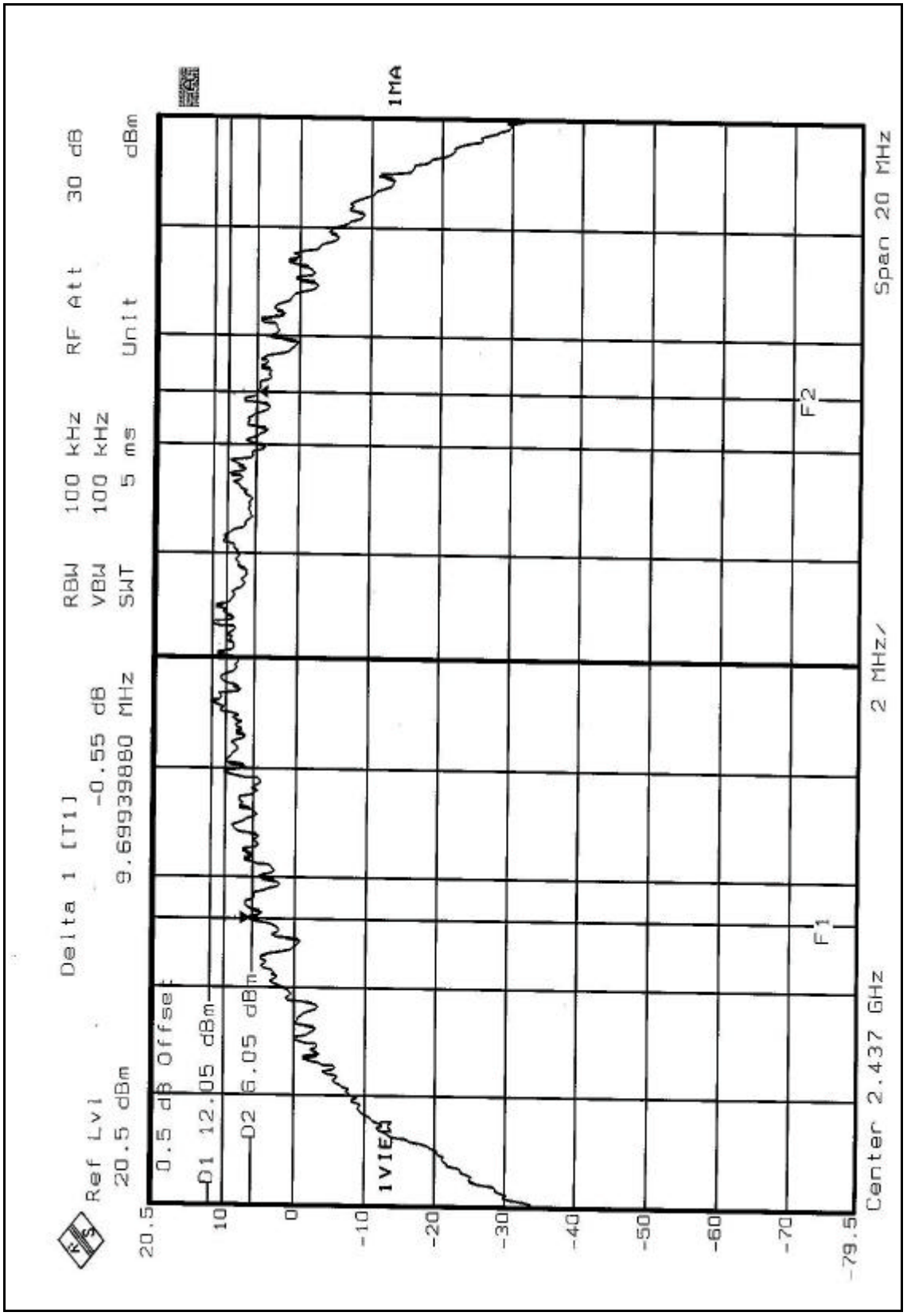
0.68 dB
9.65931864 MHz
RBW 100 kHz
VBW 100 kHz
SWT 5 ms
RF Att 30 dB
Unit dBm
1MA
1VIEW
F1
F2
Center 2.412 GHz
2 MHz/
Span 20 MHz
20.5
10
0
-10
-20
-30
-40
-50
-60
-70
-79.5

CH 6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D2 6.05 dBm
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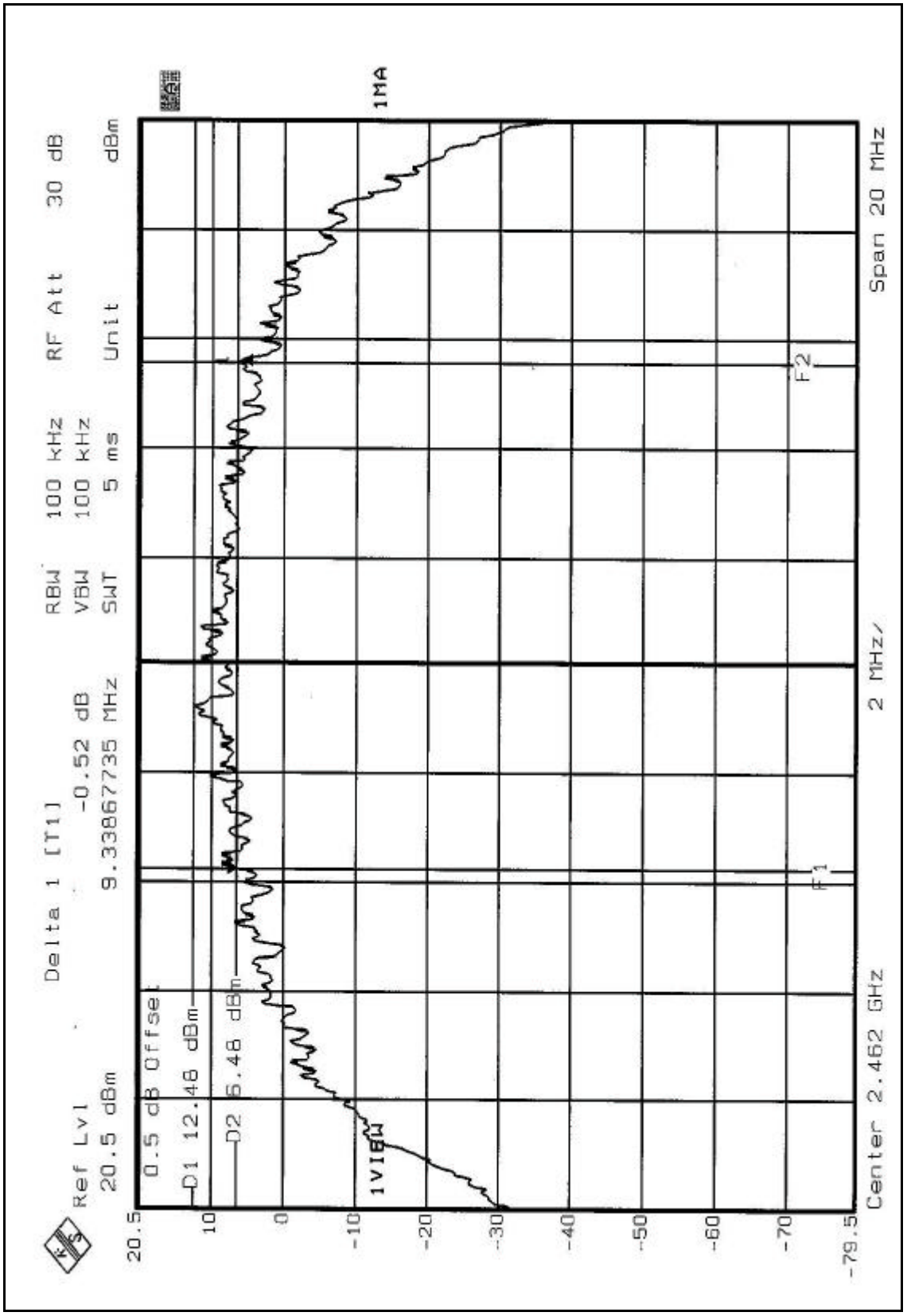
-0.55 dB
9.69939880 MHz
RBW 100 kHz
VBW 100 kHz
SWT 5 ms
RF Att 30 dB
Unit dBm
1MA
1VIEW
F1
F2
Center 2.437 GHz
2 MHz/
Span 20 MHz
20.5
10
0
-10
-20
-30
-40
-50
-60
-70
-79.5

CH 11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D2 6.48 dBm
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-0.52 dB
9.33867735 MHz
RBW 100 kHz
VBW 100 kHz
SWT 5 ms
RF Att 30 dB
Unit dBm
1MA
1VIEW
F1
F2
Center 2.462 GHz
2 MHz/
Span 20 MHz
20.5
10
0
-10
-20
-30
-40
-50
-60
-70
-79.5

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 TEST INSTRUMENTS

Description & Manufacturer	Model	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. 01, 2005
NARDA DETECTOR	4503A	FSCM99899	NA

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

4.4.3 TEST PROCEDURES

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

EUT	Pronto Hotspot Controller	**MODEL**	NL-2511SR PLUS(Pronto)
ENVIRONMENTAL CONDITIONS	24 deg. C, 67% RH, 991 hPa	**INPUT POWER (SYSTEM)**	120 Vac, 60 Hz
TESTED BY:	Steven Lu		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	141.58	21.51	30	PASS
6	2437	141.91	21.52	30	PASS
11	2462	141.25	21.50	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.

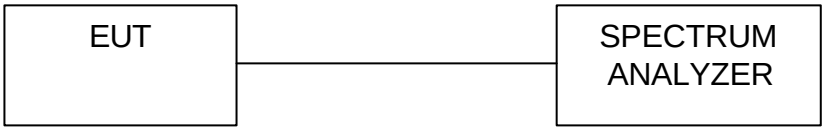
4.5.3 TEST PROCEDURE

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

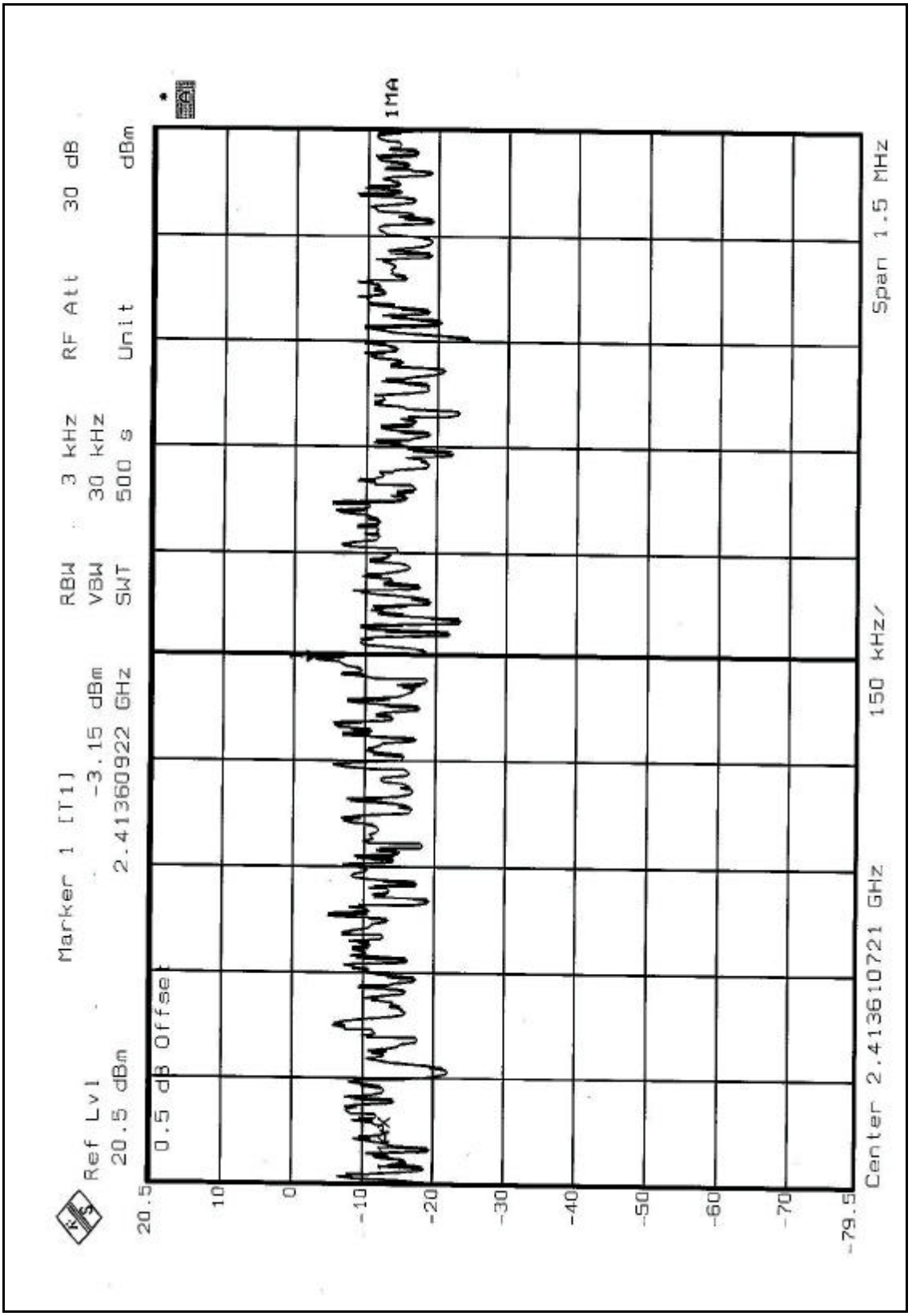
Same as 4.3.6 .

4.5.7 TEST RESULTS

EUT	Pronto Hotspot Controller	**MODEL**	NL-2511SR PLUS(Pronto)
ENVIRONMENTAL CONDITIONS	24 deg. C, 67% RH, 991 hPa	**INPUT POWER (SYSTEM)**	120 Vac, 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	-3.15	8	PASS
6	2437	-3.07	8	PASS
11	2462	-4.00	8	PASS

CH 1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20.5 dBm
0.5 dB Offset
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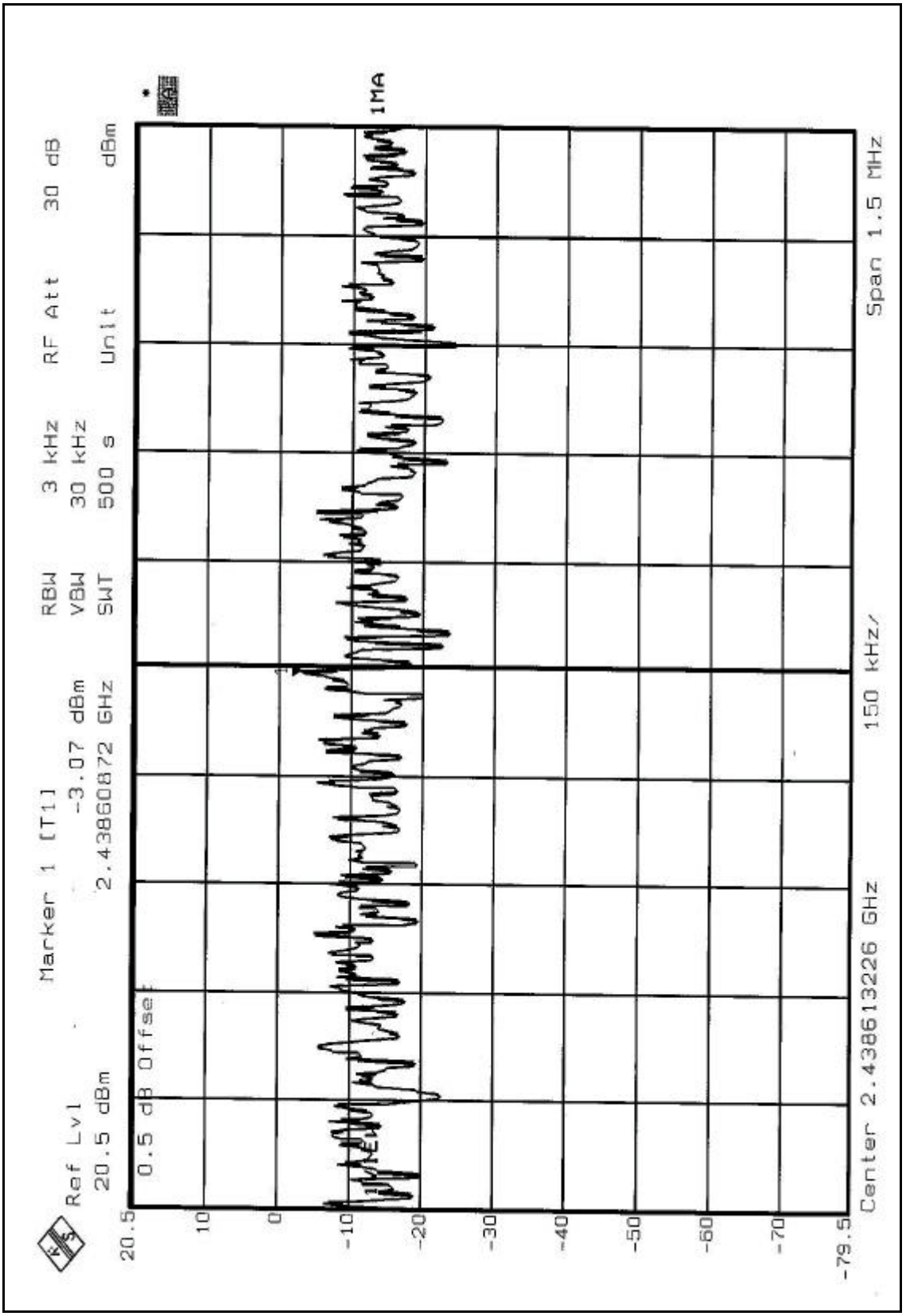
-3.15 dBm
2.41360922 GHz
RBW 3 kHz
VBW 30 kHz
SWT 500 s
RF Att 30 dB
Unit dBm
1MA
Center 2.413610721 GHz
150 kHz/
Span 1.5 MHz
20.5
10
0
-10
-20
-30
-40
-50
-60
-70
-79.5

CH6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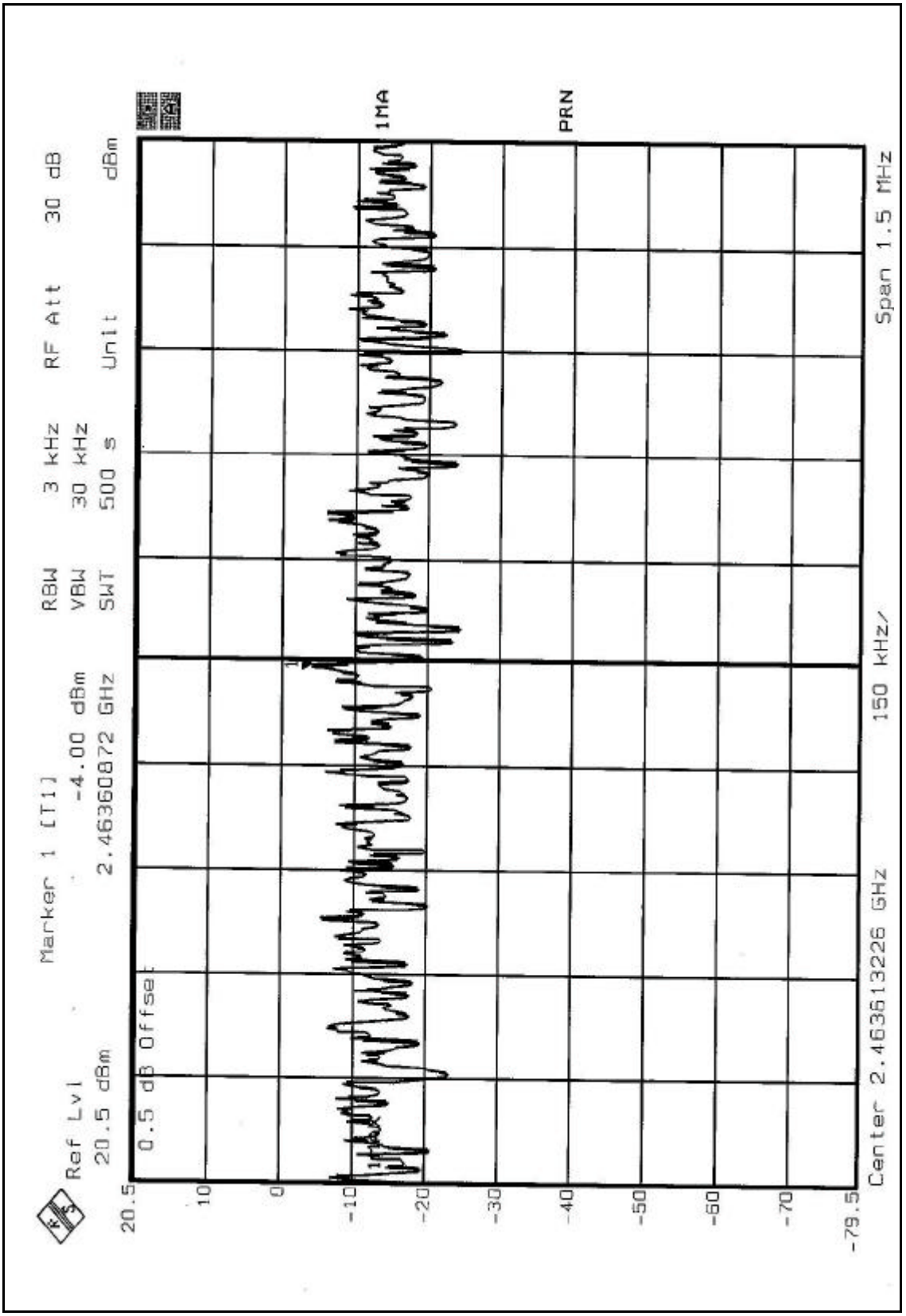
2.43860872 GHz
RBW 3 kHz
VBW 30 kHz
SWT 500 s
RF Att 30 dB
Unit dBm
1MA
Center 2.438613226 GHz
150 kHz/
Span 1.5 MHz
20.5
10
0
-10
-20
-30
-40
-50
-60
-70
-79.5

CH 11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RBW 3 kHz
VBW 30 kHz
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Unit dBm
1MA
PRN
Center 2.463613226 GHz
150 kHz/
Span 1.5 MHz
20.5
10
0
-10
-20
-30
-40
-50
-60
-70
-79.5

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
SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2004

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 100MHz 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

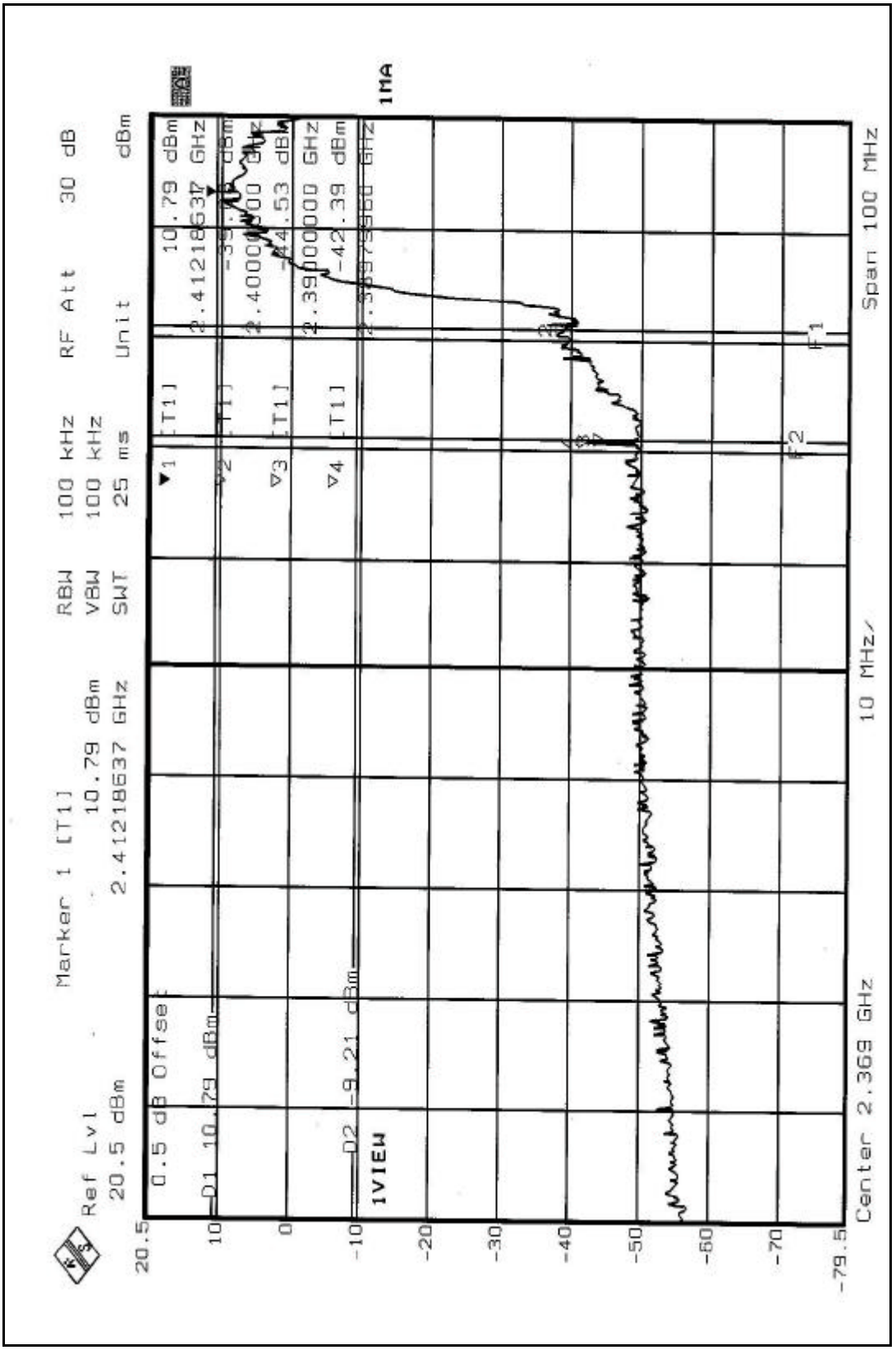
4.6.6 TEST RESULTS

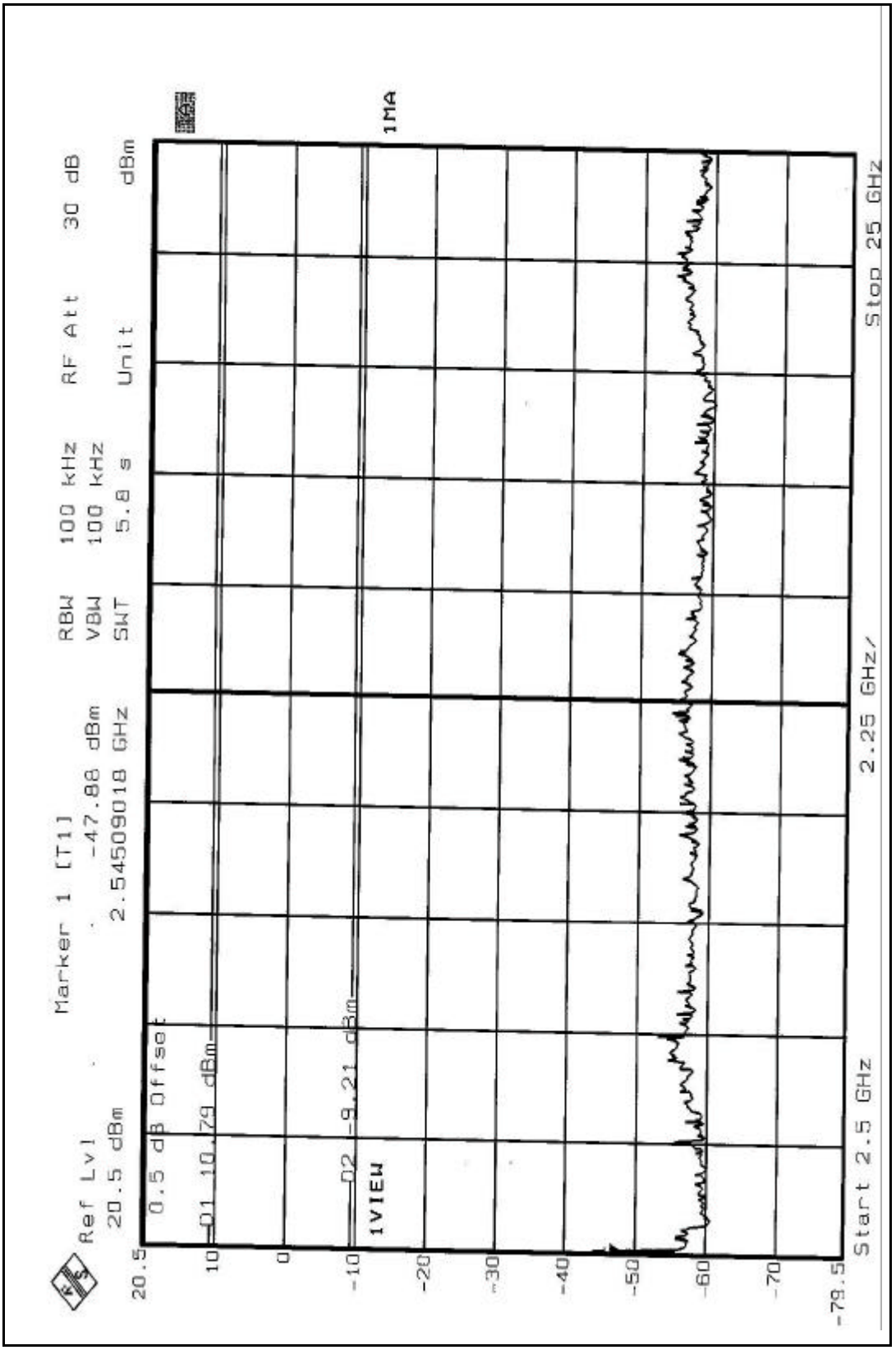
The spectrum plots are attached on the following 4 pages. D2 line indicates the highest level and D1 line indicates the 20dB offset below D2. It shows compliance with the requirement in part 15.247(C).

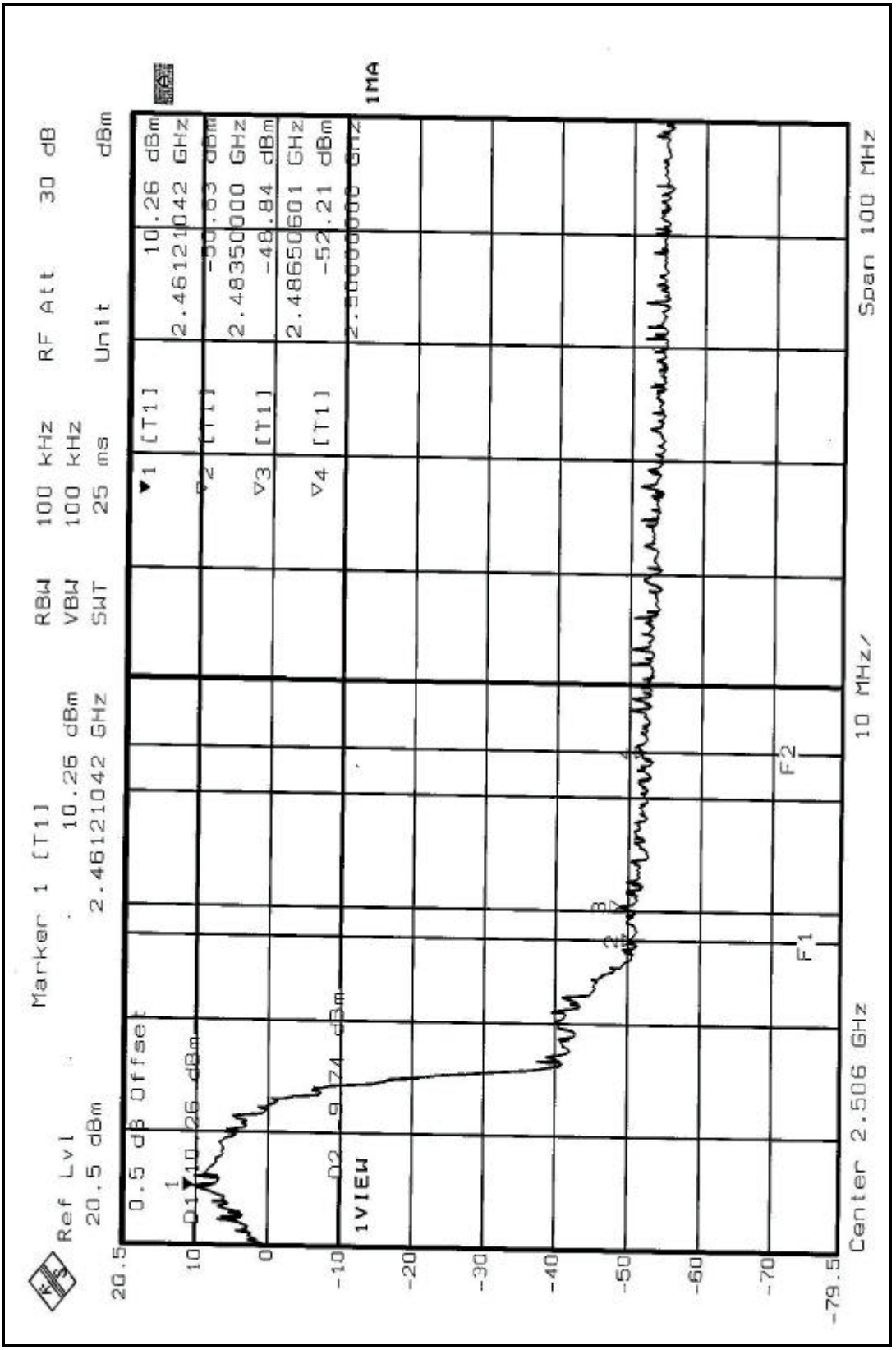
NOTE:

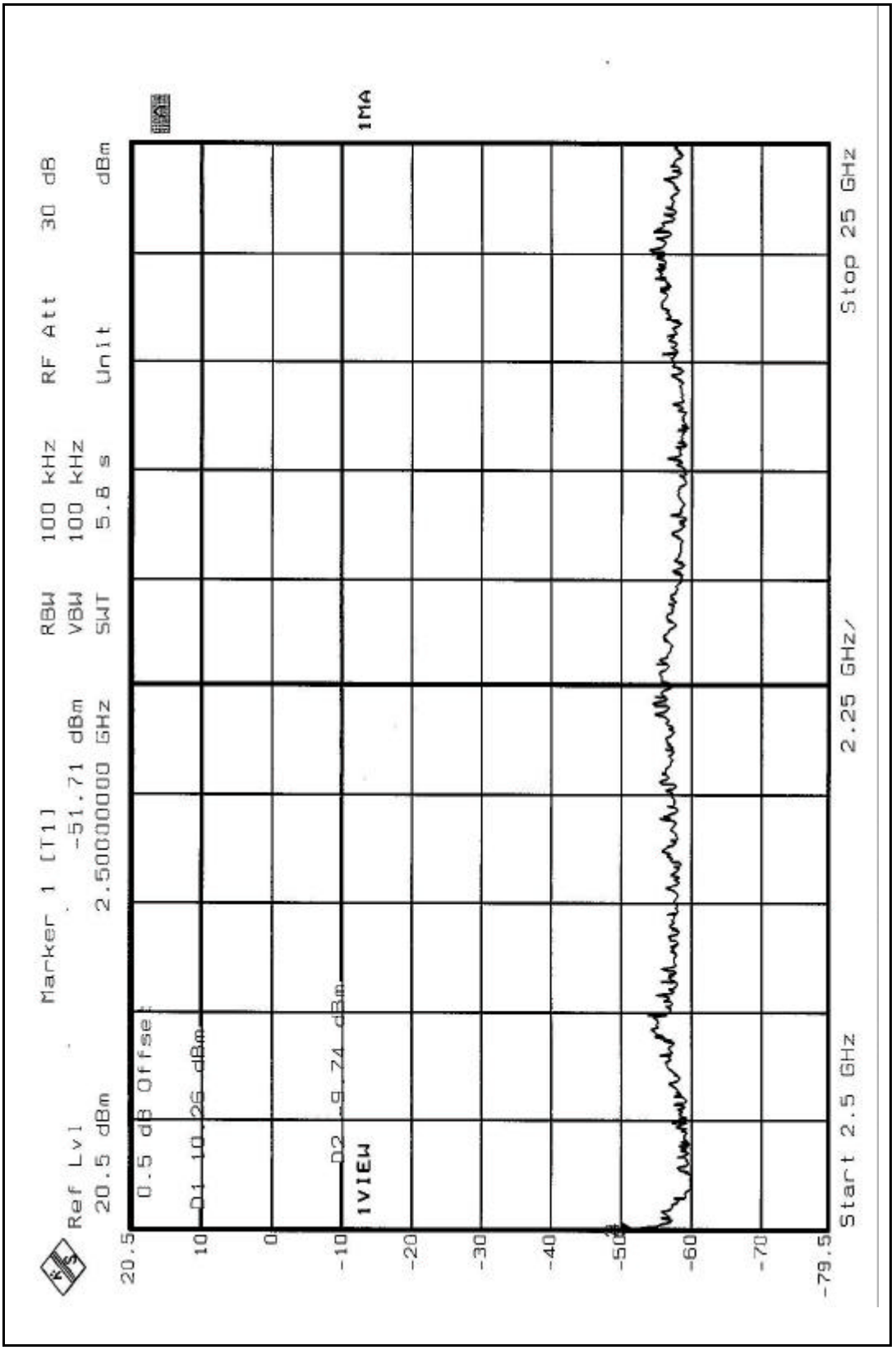
The band edge emission plot of CCK technique on the following 1~2 pages show 53.18 dB between carrier maximum power and local maximum emission in restrict band (2.3897 GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 104.09 dBuV/m, so the maximum field strength in restrict band is 104.09-53.18=50.91 dBuV/m which is under 54 dBuV/m limit.

The band edge emission plot of CCK technique on the following 3~4 pages show 59.10 dB delta between carrier maximum power and local maximum emission in restrict band (2.4865 GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 105.29 dBuV/m, so the maximum field strength in restrict band is 105.29-59.10=46.19 dBuV/m which is under 54 dBuV/m limit.


Marker 1 [T1]
10.79 dBm
2.41218637 GHz
RBW 100 kHz
VBW 100 kHz
SWT 25 ms
RF Att 30 dB
Unit dBm
Ref Lvl
20.5 dBm
0.5 dB Offset
D1 10.79 dBm
D2 -9.21 dBm
1VIEW
1MA
Center 2.369 GHz
10 MHz/
Span 100 MHz
F1
F2


Marker 1 [T1]
-47.88 dBm
2.54509018 GHz
RBW 100 kHz
VBW 100 kHz
SWT 5.8 s
RF Att 30 dB
Unit dBm
Ref Lvl
20.5 dBm
0.5 dB Offset
01 10.79 dBm
02 -9.21 dBm
1VIEW
1MA
20.5
10
0
-10
-20
-30
-40
-50
-60
-70
-79.5
Start 2.5 GHz
2.25 GHz/
Stop 25 GHz


Marker 1 [T1]
10.26 dBm
2.46121042 GHz
RBW 100 kHz
VBW 100 kHz
SWT 25 ms
RF Att 30 dB
Unit dBm
Ref Lvl
20.5 dBm
0.5 dB Offset
1VIEW
1MA
Center 2.506 GHz
Span 100 MHz
10 MHz/
F1
F2


Ref Lvl
20.5 dBm
0.5 dB Offset
D1 10.25 dBm
D2 -9.74 dBm
1VIEW
Marker 1 [T1]
-51.71 dBm
2.5000000 GHz
RBW 100 kHz
VBW 100 kHz
SWT 5.8 s
RF Att 30 dB
Unit dBm
1MA
20.5
10
0
-10
-20
-30
-40
-50
-60
-70
-79.5
Start 2.5 GHz
2.25 GHz/
Stop 25 GHz

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 type used in this product is dipole antenna with UFL antenna connector. The maximum Gain of the antenna is 2 dBi

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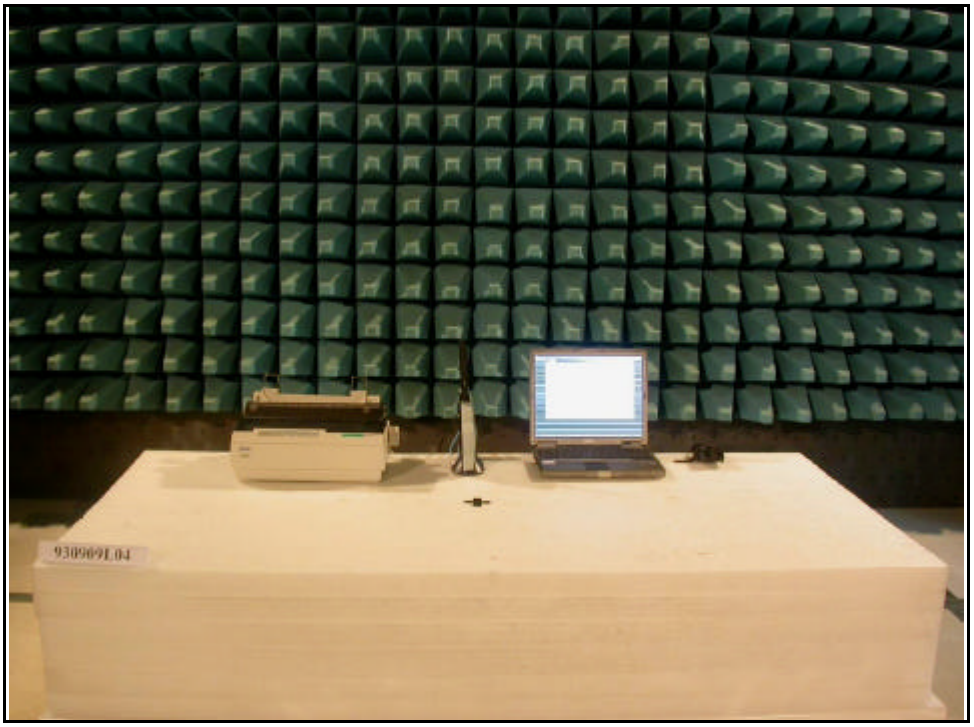
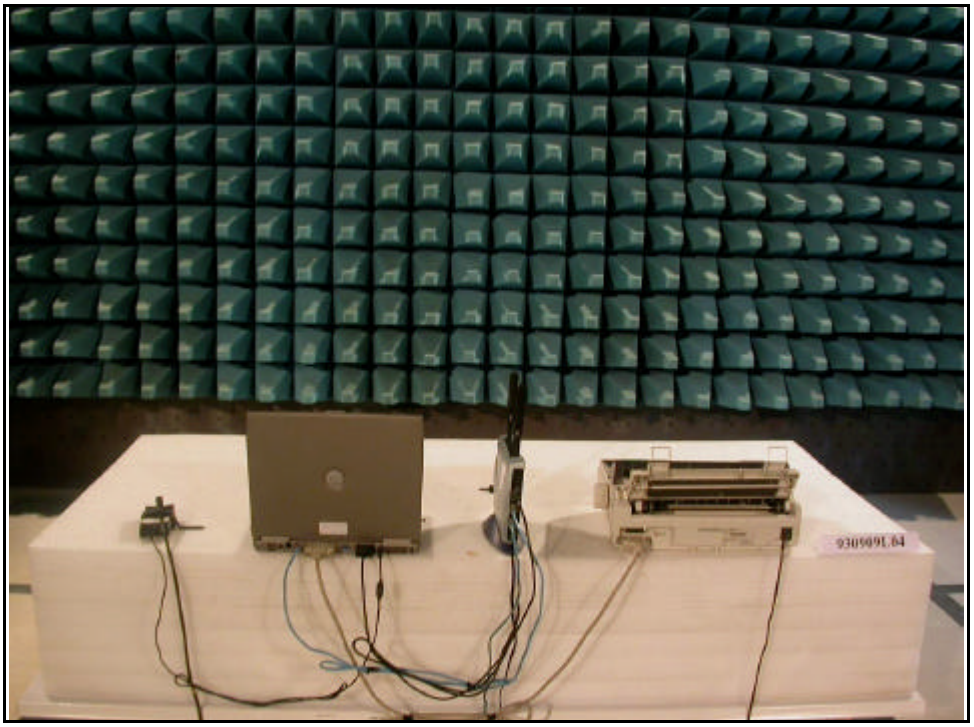
5 PHOTOGRAPHS OF THE TEST CONFIGURATION

CONDUCTED EMISSION TEST

RADIATED EMISSION TEST





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:

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

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

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

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