



FCC TEST REPORT

REPORT NO.: RF900606R03

MODEL NO.: IWE100U

RECEIVED: June 6, 2001

TESTED: June 5 ~ June 29, 2001

APPLICANT: INTEREPOCH TECHNOLOGY INC.

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ISSUED BY: Advance Data Technology Corporation

LAB LOCATION: 47 14th Lin, Chiapau Tsuen, Linko, Taipei,
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0528



Lab Code: 200102-0



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1 CERTIFICATION

PRODUCT : Wireless USB Adapter
BRAND NAME : InterEpoch
MODEL NO. : IWE100U
APPLICANT : INTEREPOCH TECHNOLOGY INC.
STANDARDS : 47 CFR Part 15, Subpart C (Section 15.247),
ANSI C63.4-1992

We, **Advance Data Technology Corporation**, hereby certify that one sample of the designation has been tested in our facility from June 5, 2001 to June 29, 2001, The test record, data evaluation and Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions herein specified.

TESTED BY: Gary Chang, **DATE:** July 16, 2001
Gary Chang

CHECKED BY: Demi Chen, **DATE:** July 16, 2001
Demi Chen

APPROVED BY: Dr. Alan Lane, **DATE:** July 16, 2001
Dr. Alan Lane
Manager



2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: 47 CFR Part 15, Subpart C			
Standard Section	Test Type and Limit	Result	REMARK
15.107	AC Power Conducted Emission Limit: 48dBuV	PASS	Meet the requirement of limit Minimum passing margin is -7.21dBuV at 2.75135MHz
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 -2.5dBuV at 396.01 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



3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Wireless USB Adapter
MODEL NO.	IWE100U
POWER SUPPLY	5VDC from computer
MODULATION TYPE	BPSK, QPSK, CCK
RADIO TECHNOLOGY	DSSS
TRANSFER RATE	1/2/5.5/11Mbps
FREQUENCY RANGE	2412MHz ~ 2462MHz
NUMBER OF CHANNEL	11
OUTPUT POWER	<20 dBm
ANTENNA TYPE	Dipole antenna and Printed antenna
DATA CABLE	USB Port
I/O PORTS	1.2m Nonshielded
ASSOCIATED DEVICES	NA

NOTE :

1. The EUT is able to build a wireless LAN and to connect PC with an access point wirelessly to share the wired network resource.
2. The EUT was provided two antenna types in this report. One is Dipole antenna and the other one is Printed antenna.
3. For a 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 in 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 1 GHz, the channel 1, 6, and 11 were pre-tested in chamber. The channel 11, worst case one, was chosen for final test.
2. Above 1 GHz, the channel 1, 6, and 11 were tested individually.

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a Wireless USB Adapter, according to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC CFR 47 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	IBM	TYPE2635-9AH	97-84L54	FCC DoC Approved
2	PRINTER	HP	2225C+	3123S97230	DSI6XU2225
3	MODEM	ACEEX	1414	980020510	IFAXDM1414

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA
2	1.2m braid shielded wire, terminated with DB25 and Centronics connector via metallic frame, w/o core.
3	1.2 m braid shielded wire, terminated with DB25 and DB9 connector via metallic frame, w/o core.

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



4 TEST TYPES AND RESULTS

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

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

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. All emanations from a class B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
ROHDE & SCHWARZ Test Receiver	ESHS30	828109/007	July 6, 2001
ROHDE & SCHWARZ Artificial Mains Network (for EUT)	ESH3-Z5	839135/006	July 9, 2001
ROHDE & SCHWARZ 4-wire ISN	ENY41	837032/016	Nov. 28, 2001
ROHDE & SCHWARZ 2-wire ISN	ENY22	837497/016	Dec. 3, 2001
EMCO-L.I.S.N. (for support units)	3825/2	9204-1964	July 9, 2001
Software	Cond-V2e	NA	NA
RF cable (JYEBAO)	RG-58A/U	Cable-C02.01	July 9, 2001
HP Terminator (For EMCO LISN)	11593A	E1-01-298	Feb. 20, 2002
HP Terminator (For EMCO LISN)	11593A	E1-01-299	Feb. 20, 2002
Shielded Room	Site 2	ADT-C02	NA
VCCI Site Registration No.	Site 2	C-240	NA

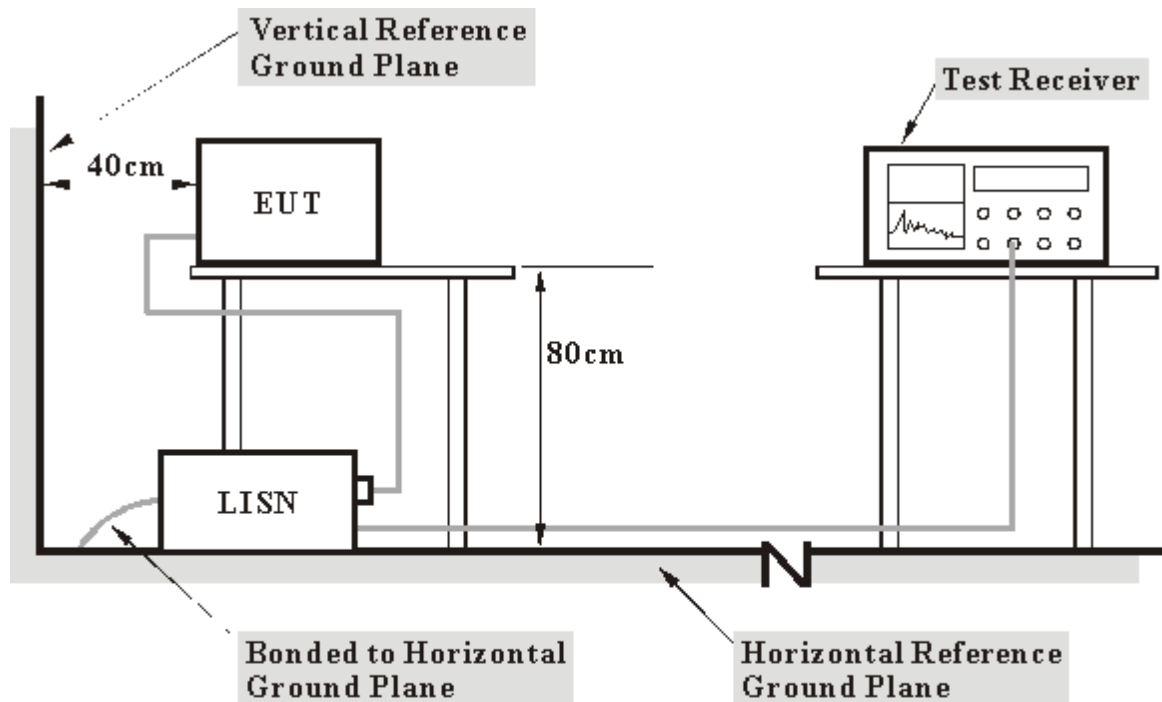
NOTE:

1. The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. "*" = These equipments are used for the final measurement.

4.1.3 TEST PROCEDURES

- 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.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150 kHz to 30 MHz was searched. Emission levels over 10dB under the prescribed limits could not be reported

4.1.4 TEST SETUP



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

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



4.1.5 EUT OPERATING CONDITIONS

- a. Connected the EUT to a computer system placed on a testing table.
- b. The computer system ran a test program 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.



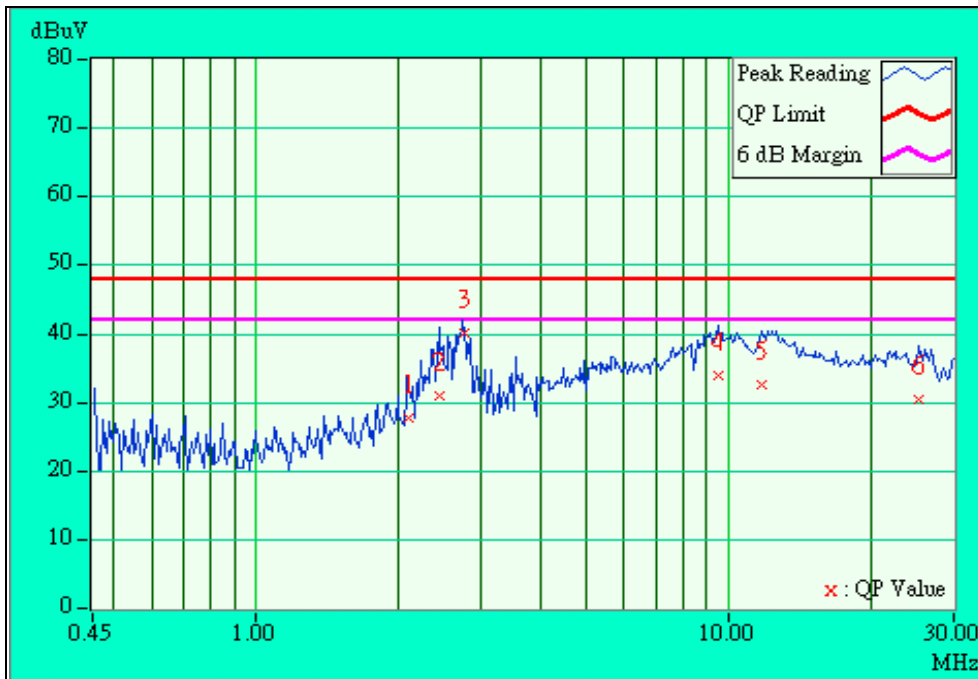
4.1.6 TEST RESULTS(A)

EUT	Wireless USB Adapter	MODEL	IWE100U
MODE	Channel 1	6dB BANDWIDTH	10 kHz
ANTENNA TYPE	Printed Antenna	INPUT POWER	110Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	30 deg. C, 60%RH, 1005 hPa	PHASE	Line (L)
TESTED BY: Gary Chang			

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	2.09054	0.21	27.87	-	28.08	-	48.00	-	-19.92	-
2	2.44505	0.24	31.10	-	31.34	-	48.00	-	-16.66	-
3	2.74708	0.27	40.15	-	40.42	-	48.00	-	-7.58	-
4	9.49780	0.67	33.83	-	34.50	-	48.00	-	-13.50	-
5	11.74700	0.80	32.71	-	33.51	-	48.00	-	-14.49	-
6	25.35800	1.41	30.49	-	31.90	-	48.00	-	-16.10	-

NOTE:

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



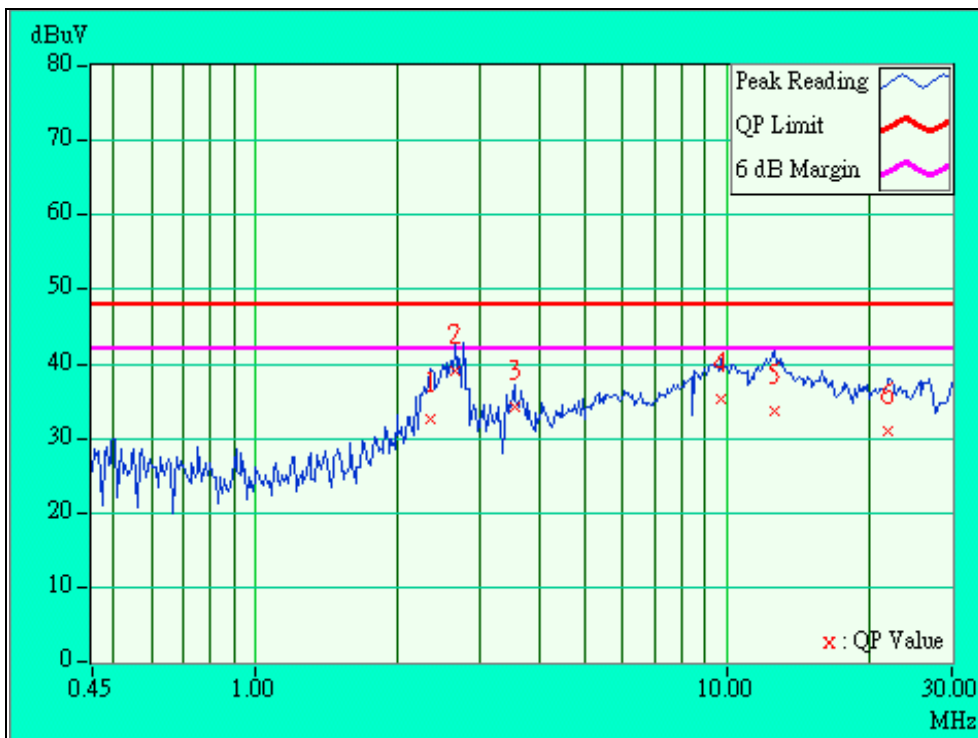


EUT	Wireless USB Adapter	MODEL	IWE100U
MODE	Channel 1	6dB BANDWIDTH	10 kHz
ANTENNA TYPE	Printed Antenna	INPUT POWER	110Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	30 deg. C, 60%RH, 1005 hPa	PHASE	Neutral (N)
TESTED BY: Gary Chang			

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	2.33700	0.23	32.53	-	32.76	-	48.00	-	-15.24	-
2	2.64254	0.26	39.10	-	39.36	-	48.00	-	-8.64	-
3	3.54300	0.35	34.19	-	34.54	-	48.00	-	-13.46	-
4	9.75500	0.59	35.41	-	36.00	-	48.00	-	-12.00	-
5	12.67334	0.76	33.79	-	34.55	-	48.00	-	-13.45	-
6	22.01763	1.12	31.11	-	32.23	-	48.00	-	-15.77	-

NOTE:

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



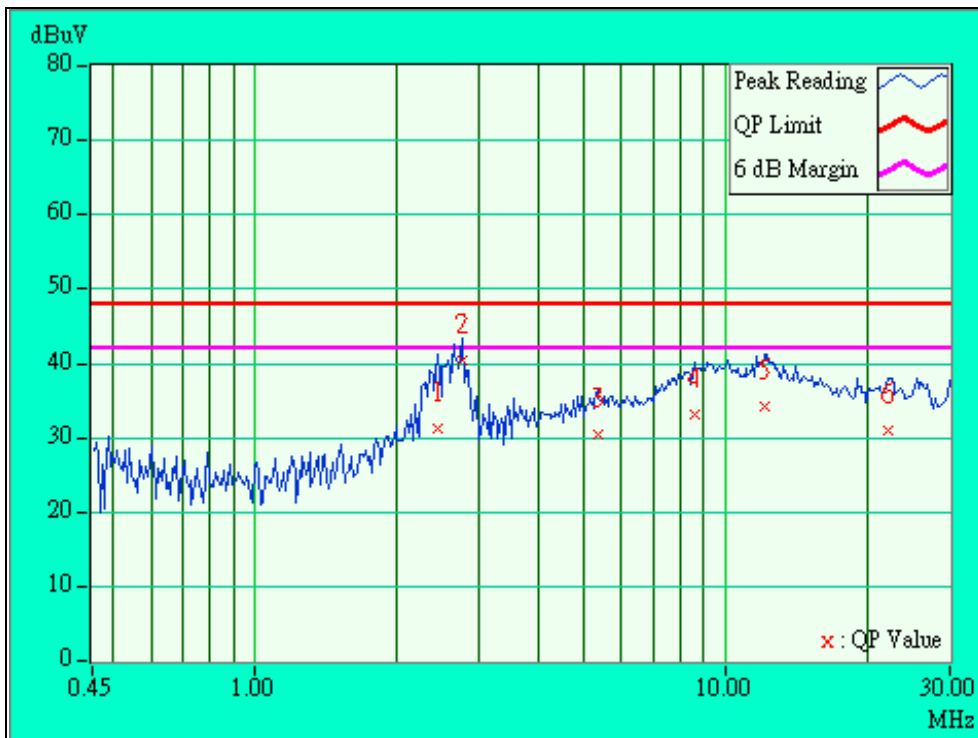


EUT	Wireless USB Adapter	MODEL	IWE100U
MODE	Channel 6	6dB BANDWIDTH	10 kHz
ANTENNA TYPE	Printed Antenna	INPUT POWER	110Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	30 deg. C, 60%RH, 1005 hPa	PHASE	Line (L)
TESTED BY: Gary Chang			

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	2.43900	0.24	31.18	-	31.42	-	48.00	-	-16.58	-
2	2.75135	0.28	40.51	-	40.79	-	48.00	-	-7.21	-
3	5.35100	0.47	30.41	-	30.88	-	48.00	-	-17.12	-
4	8.60000	0.63	33.09	-	33.72	-	48.00	-	-14.28	-
5	12.16354	0.83	34.23	-	35.06	-	48.00	-	-12.94	-
6	22.18009	1.23	30.88	-	32.11	-	48.00	-	-15.89	-

NOTE:

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



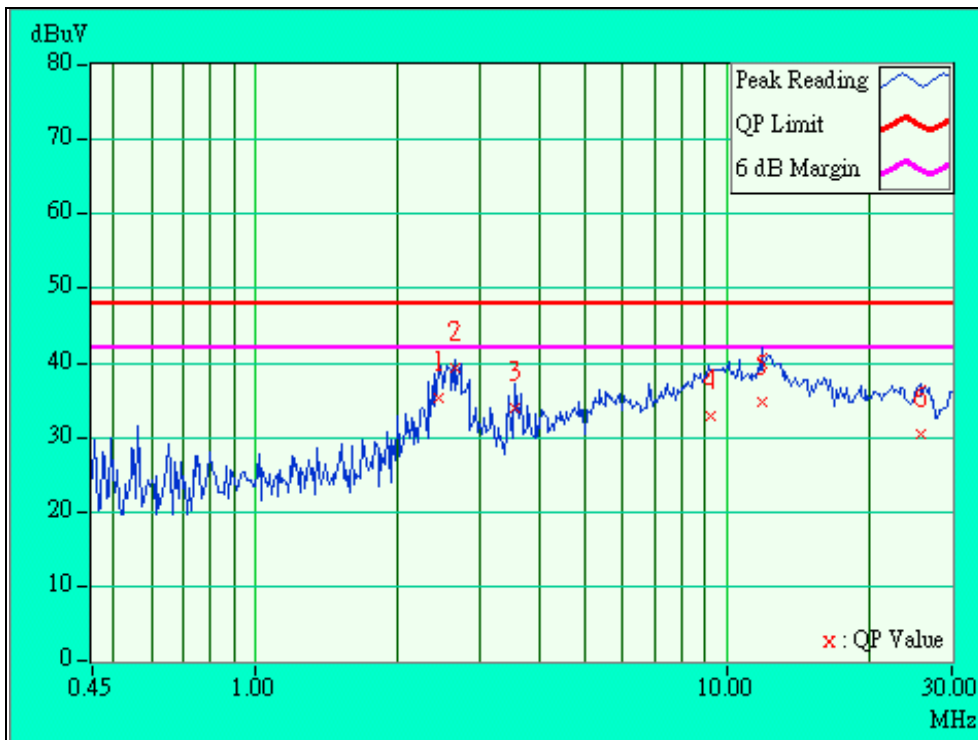


EUT	Wireless USB Adapter	MODEL	IWE100U
MODE	Channel 6	6dB BANDWIDTH	10 kHz
ANTENNA TYPE	Printed Antenna	INPUT POWER	110Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	30 deg. C, 60%RH, 1005 hPa	PHASE	Neutral (N)
TESTED BY: Gary Chang			

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.
1	2.44200	0.24	35.34	-	35.58	-	48.00	-	-12.42	-
2	2.64128	0.26	39.38	-	39.64	-	48.00	-	-8.36	-
3	3.54300	0.35	34.03	-	34.38	-	48.00	-	-13.62	-
4	9.19008	0.57	32.91	-	33.48	-	48.00	-	-14.52	-
5	11.89699	0.71	34.70	-	35.41	-	48.00	-	-12.59	-
6	25.74859	1.31	30.38	-	31.69	-	48.00	-	-16.31	-

NOTE:

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



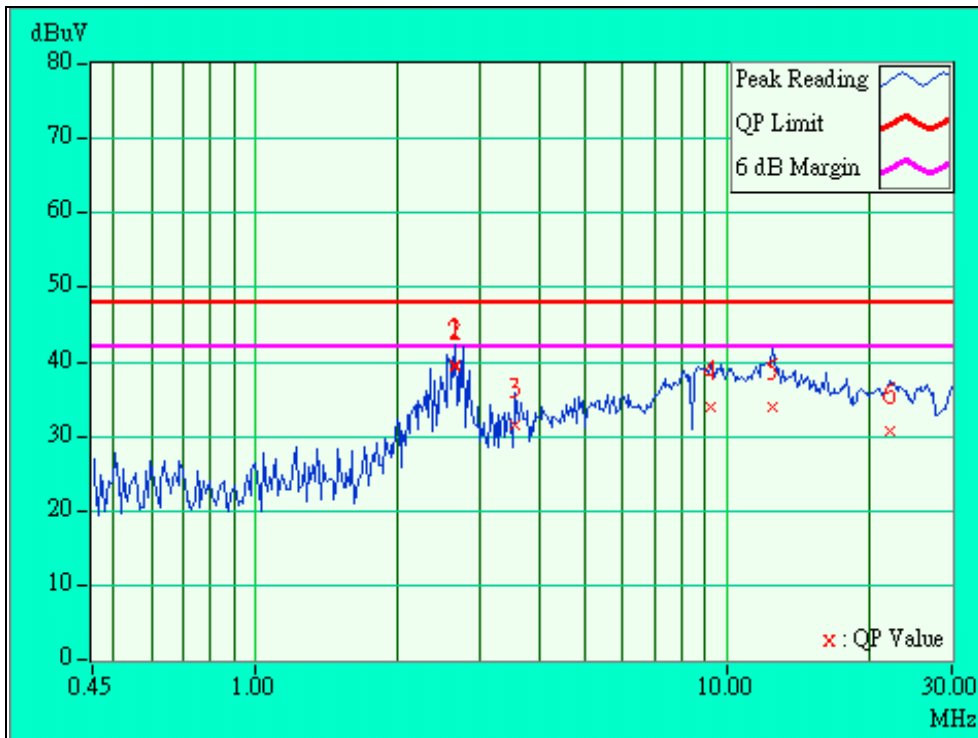


EUT	Wireless USB Adapter	MODEL	IWE100U
MODE	Channel 11	6dB BANDWIDTH	10 kHz
ANTENNA TYPE	Printed Antenna	INPUT POWER	110Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	30 deg. C, 60%RH, 1005 hPa	PHASE	Line (L)
TESTED BY: Gary Chang			

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	2.64553	0.26	39.60	-	39.86	-	48.00	-	-8.14	-
2	2.64555	0.26	39.32	-	39.58	-	48.00	-	-8.42	-
3	3.56400	0.36	31.53	-	31.89	-	48.00	-	-16.11	-
4	9.20981	0.66	33.89	-	34.55	-	48.00	-	-13.45	-
5	12.46359	0.85	33.90	-	34.75	-	48.00	-	-13.25	-
6	22.10685	1.23	30.66	-	31.89	-	48.00	-	-16.11	-

NOTE:

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



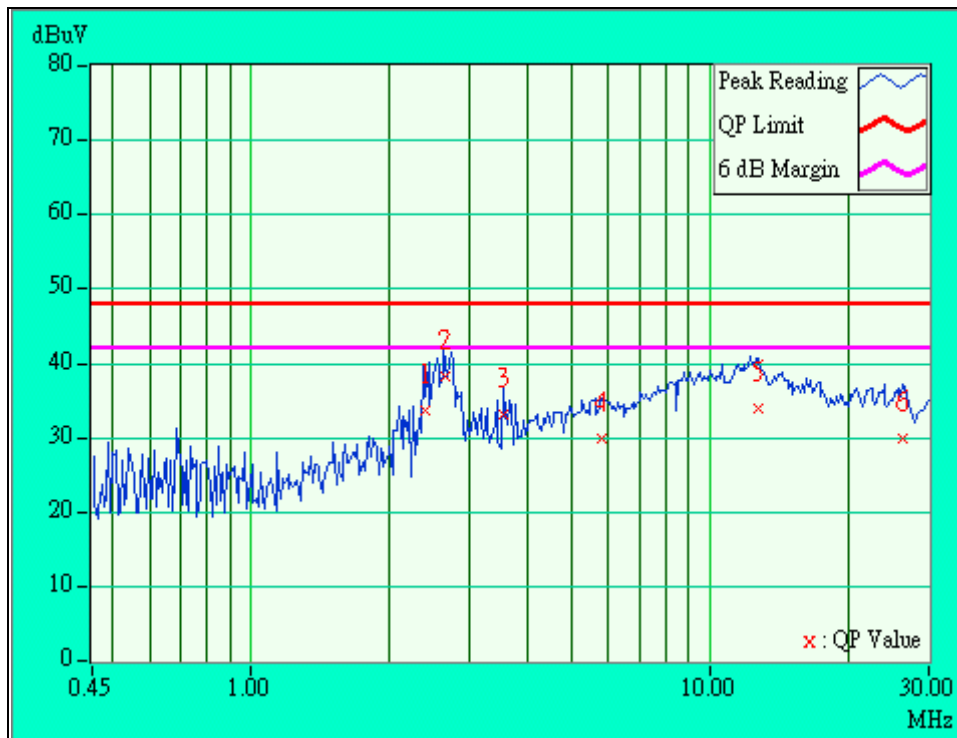


EUT	Wireless USB Adapter	MODEL	IWE100U
MODE	Channel 11	6dB BANDWIDTH	10 kHz
ANTENNA TYPE	Printed Antenna	INPUT POWER	110Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	30 deg. C, 60%RH, 1005 hPa	PHASE	Neutral (N)
TESTED BY: Gary Chang			

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	2.39549	0.24	33.73	-	33.97	-	48.00	-	-14.03	-
2	2.64971	0.26	38.28	-	38.54	-	48.00	-	-9.46	-
3	3.54926	0.35	33.09	-	33.44	-	48.00	-	-14.56	-
4	5.78507	0.46	29.98	-	30.44	-	48.00	-	-17.56	-
5	12.68854	0.76	34.01	-	34.77	-	48.00	-	-13.23	-
6	26.21209	1.32	29.80	-	31.12	-	48.00	-	-16.88	-

NOTE:

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





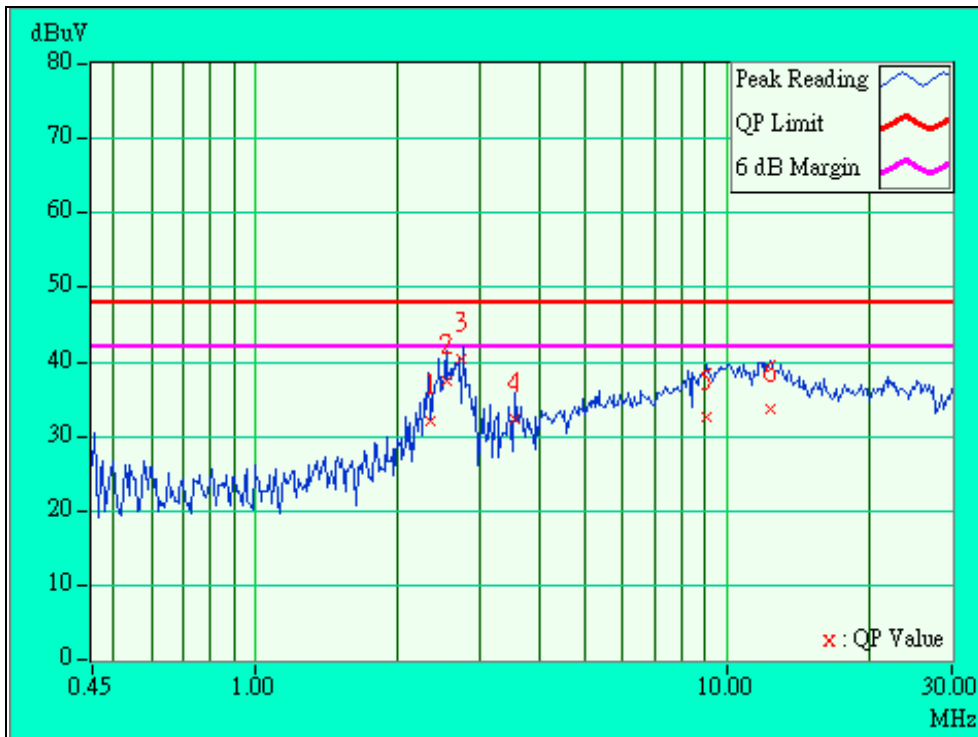
4.1.7 TEST RESULTS(B)

EUT	Wireless USB Adapter	MODEL	IWE100U
MODE	Channel 1	6dB BANDWIDTH	10 kHz
ANTENNA TYPE	Dipole Antenna	INPUT POWER	110Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	30 deg. C, 60%RH, 1005 hPa	PHASE	Line (L)
TESTED BY: Gary Chang			

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	2.33909	0.23	32.01	-	32.24	-	48.00	-	-15.76	-
2	2.53867	0.25	37.34	-	37.59	-	48.00	-	-10.41	-
3	2.74295	0.27	40.33	-	40.60	-	48.00	-	-7.40	-
4	3.55500	0.36	32.35	-	32.71	-	48.00	-	-15.29	-
5	9.00866	0.65	32.53	-	33.18	-	48.00	-	-14.82	-
6	12.35162	0.84	33.54	-	34.38	-	48.00	-	-13.62	-

NOTE:

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



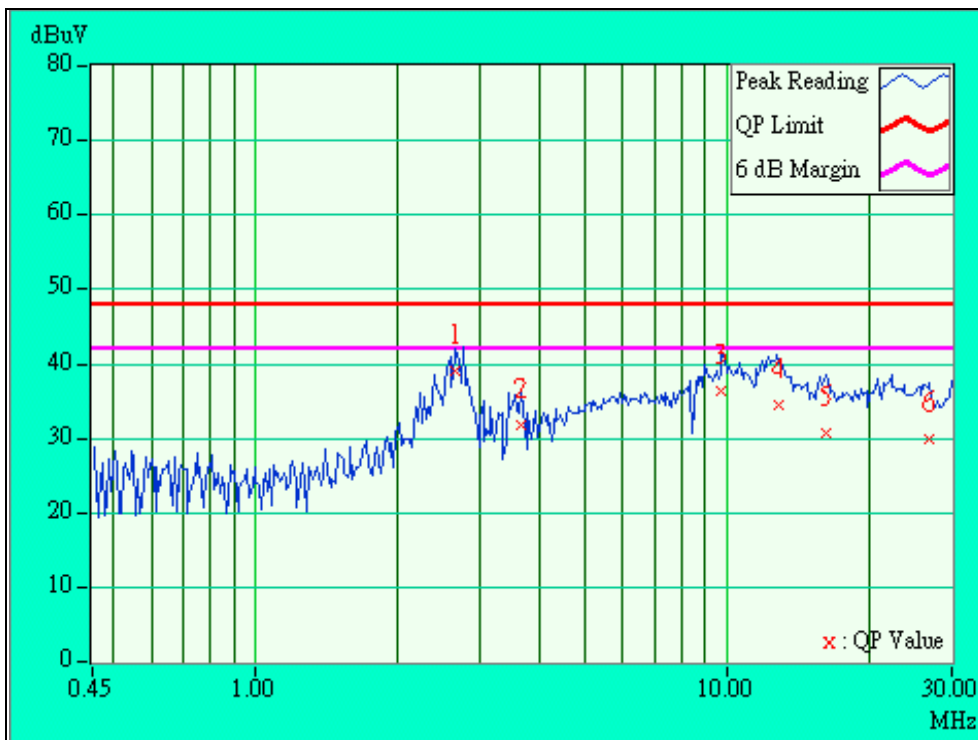


EUT	Wireless USB Adapter	MODEL	IWE100U
MODE	Channel 1	6dB BANDWIDTH	10 kHz
ANTENNA TYPE	Dipole Antenna	INPUT POWER	110Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	30 deg. C, 60%RH, 1005 hPa	PHASE	Neutral (N)
TESTED BY: Gary Chang			

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	2.63831	0.26	39.00	-	39.26	-	48.00	-	-8.74	-
2	3.66300	0.37	31.72	-	32.09	-	48.00	-	-15.91	-
3	9.75799	0.59	36.28	-	36.87	-	48.00	-	-11.13	-
4	12.81153	0.77	34.51	-	35.28	-	48.00	-	-12.72	-
5	16.16844	0.92	30.59	-	31.51	-	48.00	-	-16.49	-
6	26.94500	1.34	29.97	-	31.31	-	48.00	-	-16.69	-

NOTE:

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



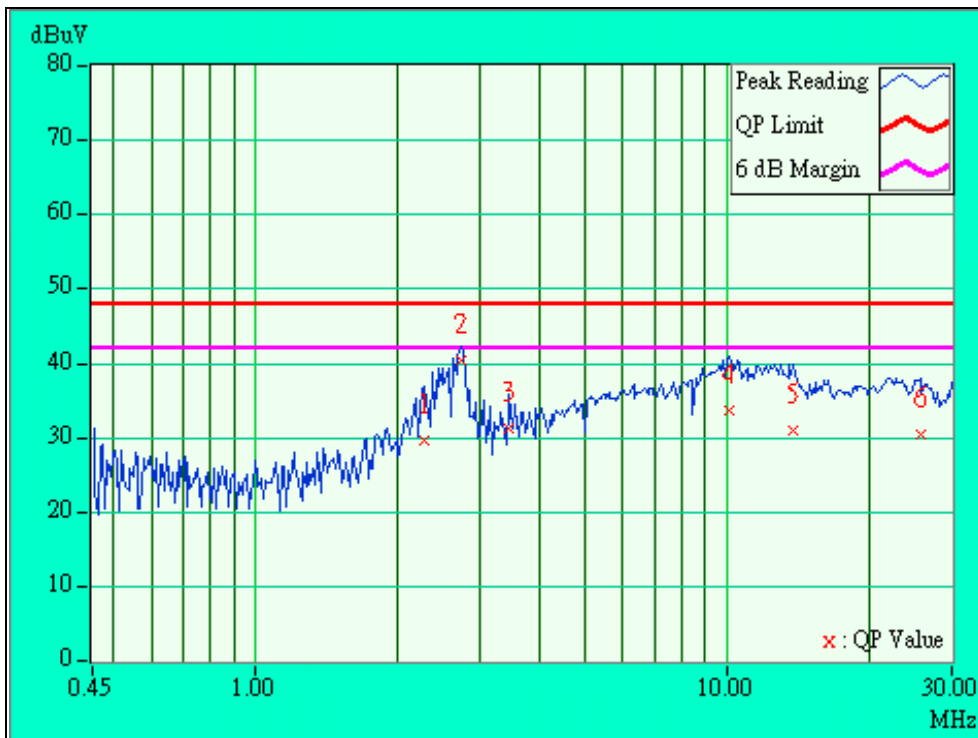


EUT	Wireless USB Adapter	MODEL	IWE100U
MODE	Channel 6	6dB BANDWIDTH	10 kHz
ANTENNA TYPE	Dipole Antenna	INPUT POWER	110Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	30 deg. C, 60%RH, 1005 hPa	PHASE	Line (L)
TESTED BY: Gary Chang			

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	2.27771	0.23	29.76	-	29.99	-	48.00	-	-18.01	-
2	2.73896	0.27	40.27	-	40.54	-	48.00	-	-7.46	-
3	3.45000	0.35	31.37	-	31.72	-	48.00	-	-16.28	-
4	10.08696	0.71	33.71	-	34.42	-	48.00	-	-13.58	-
5	13.84389	0.93	30.99	-	31.92	-	48.00	-	-16.08	-
6	25.72700	1.43	30.57	-	32.00	-	48.00	-	-16.00	-

NOTE:

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



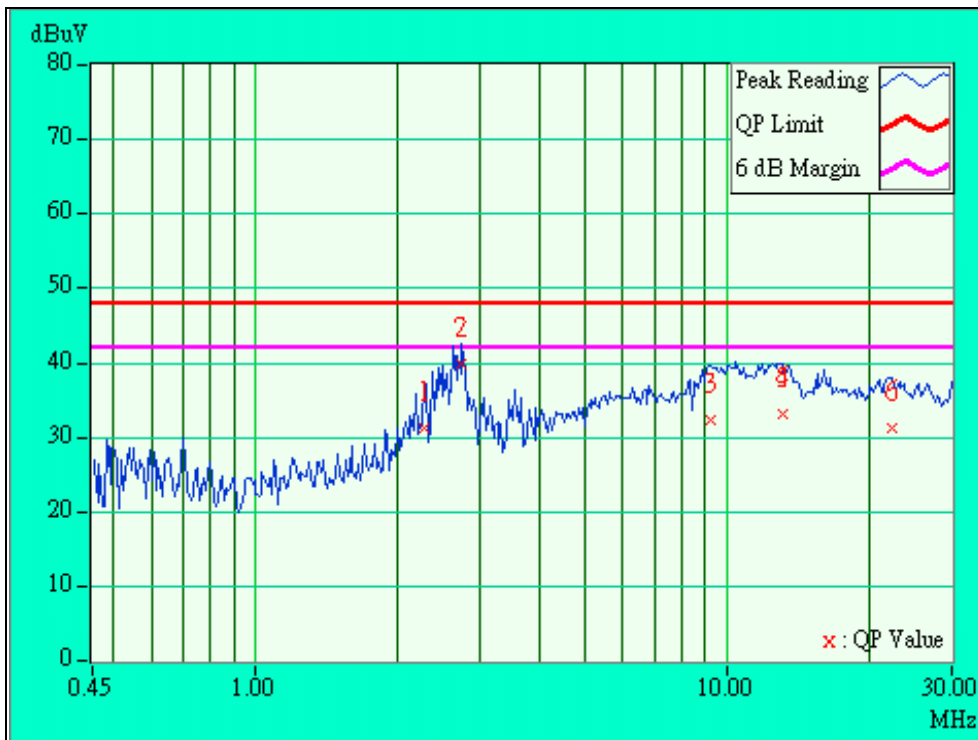


EUT	Wireless USB Adapter	MODEL	IWE100U
MODE	Channel 6	6dB BANDWIDTH	10 kHz
ANTENNA TYPE	Dipole Antenna	INPUT POWER	110Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	30 deg. C, 60%RH, 1005 hPa	PHASE	Neutral (N)
TESTED BY: Gary Chang			

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	2.28300	0.23	31.26	-	31.49	-	48.00	-	-16.51	-
2	2.74281	0.27	39.87	-	40.14	-	48.00	-	-7.86	-
3	9.19608	0.57	32.45	-	33.02	-	48.00	-	-14.98	-
4	13.08800	0.79	33.24	-	34.03	-	48.00	-	-13.97	-
5	13.08800	0.79	33.22	-	34.01	-	48.00	-	-13.99	-
6	22.34600	1.14	31.32	-	32.46	-	48.00	-	-15.54	-

NOTE:

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



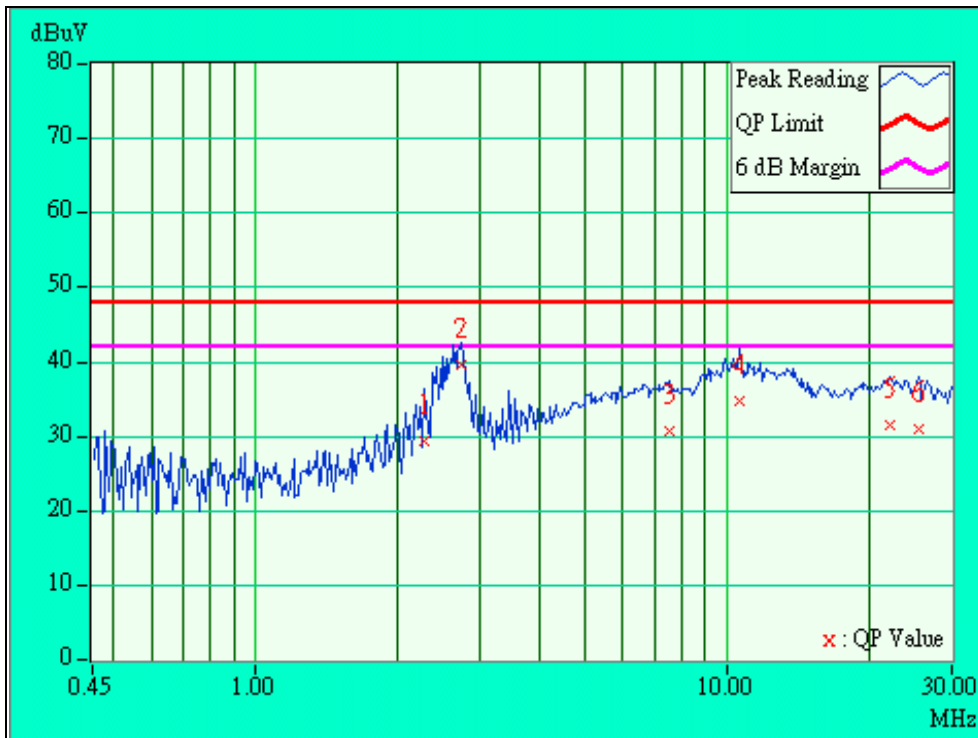


EUT	Wireless USB Adapter	MODEL	IWE100U
MODE	Channel 11	6dB BANDWIDTH	10 kHz
ANTENNA TYPE	Dipole Antenna	INPUT POWER	110Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	30 deg. C, 60%RH, 1005 hPa	PHASE	Line (L)
TESTED BY: Gary Chang			

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	2.28706	0.23	29.42	-	29.65	-	48.00	-	-18.35	-
2	2.73710	0.27	39.71	-	39.98	-	48.00	-	-8.02	-
3	7.52334	0.58	30.83	-	31.41	-	48.00	-	-16.59	-
4	10.67220	0.74	34.87	-	35.61	-	48.00	-	-12.39	-
5	22.28900	1.24	31.44	-	32.68	-	48.00	-	-15.32	-
6	25.46045	1.42	30.86	-	32.28	-	48.00	-	-15.72	-

NOTE:

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



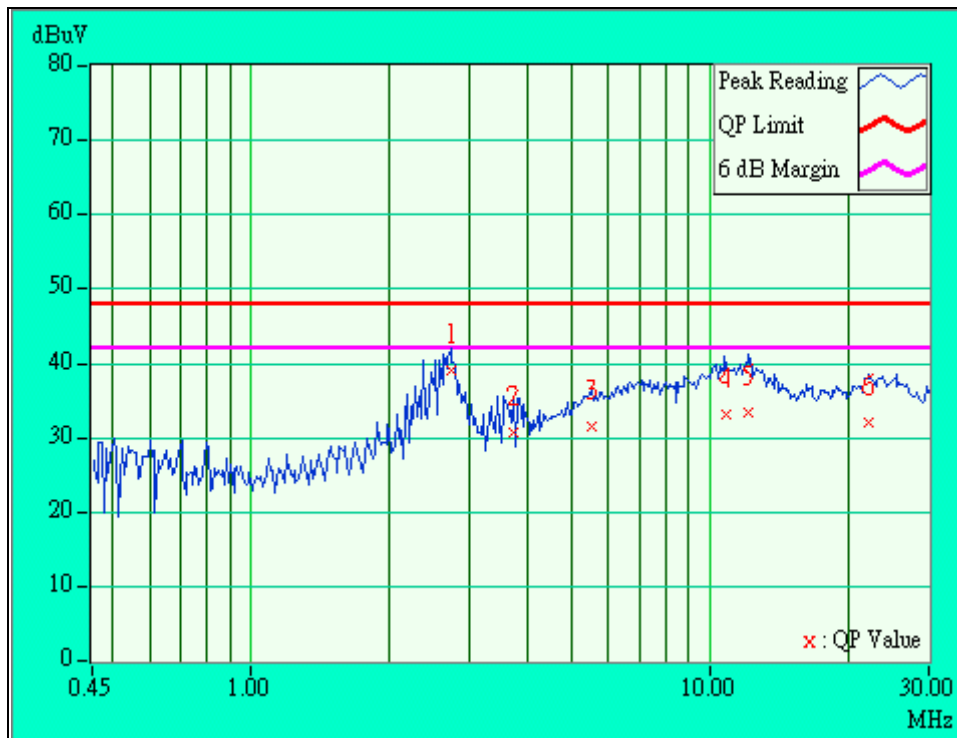


EUT	Wireless USB Adapter	MODEL	IWE100U
MODE	Channel 11	6dB BANDWIDTH	10 kHz
ANTENNA TYPE	Dipole Antenna	INPUT POWER	110Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	30 deg. C, 60%RH, 1005 hPa	PHASE	Neutral (N)
TESTED BY: Gary Chang			

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	2.73301	0.27	39.03	-	39.30	-	48.00	-	-8.70	-
2	3.71904	0.37	30.69	-	31.06	-	48.00	-	-16.94	-
3	5.52800	0.45	31.53	-	31.98	-	48.00	-	-16.02	-
4	10.80958	0.65	33.21	-	33.86	-	48.00	-	-14.14	-
5	12.16063	0.73	33.37	-	34.10	-	48.00	-	-13.90	-
6	22.16933	1.13	31.92	-	33.05	-	48.00	-	-14.95	-

NOTE:

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





4.2 RADIATED EMISSION MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

Field strength limits are at the distance of 3 meters, emissions radiated outside of the specified bands, shall be according to the general radiated limits in 15.209 as following:

Frequencies (MHz)	Field Strength of Fundamental	
	uV/m	dBuV/m
30-88	100	40.0
88-216	150	43.5
216-960	200	46.0
Above 960	500	54.0

NOTE:

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



4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
*HP Spectrum Analyzer	8590L	3544A01176	May 7, 2002
*HP Preamplifier	8447D	2944A08485	Nov. 4, 2001
* HP Preamplifier	8449B	3008A01201	Dec. 13, 2001
* ROHDE & SCHWARZ TEST RECEIVER	ESMI	839013/007 839379/002	Jan. 25, 2002
SCHWARZBECK Tunable Dipole Antenna	VHA 9103 UHA 9105	E101051 E101055	Nov. 23, 2001
* CHASE BILOG Antenna	CBL6112A	2221	Aug. 4, 2001
* EMCO Turn Table	1060	1115	NA
* SHOSHIN Tower	AP-4701	A6Y005	NA
* Software	AS61D	NA	NA
* ANRITSU RF Switches	MP59B	M35046	Aug. 4, 2001
* TIMES RF cable	LMR-600	CABLE-ST5-01	Aug. 4, 2001
* Antenna (Horn)	BBHA9120-D	D130	July 10, 2001
Open Field Test Site	Site 5	ADT-R05	July 28, 2001
Site Registration No.	FCC: 90422 Canada IC: IC 3789 VCCI : R-1039		

NOTE:

1. The measurement uncertainty is less than +/- 3.0dB, which is calculated as per the NAMAS document NIS81.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. "*" = These equipments are used for the final measurement.



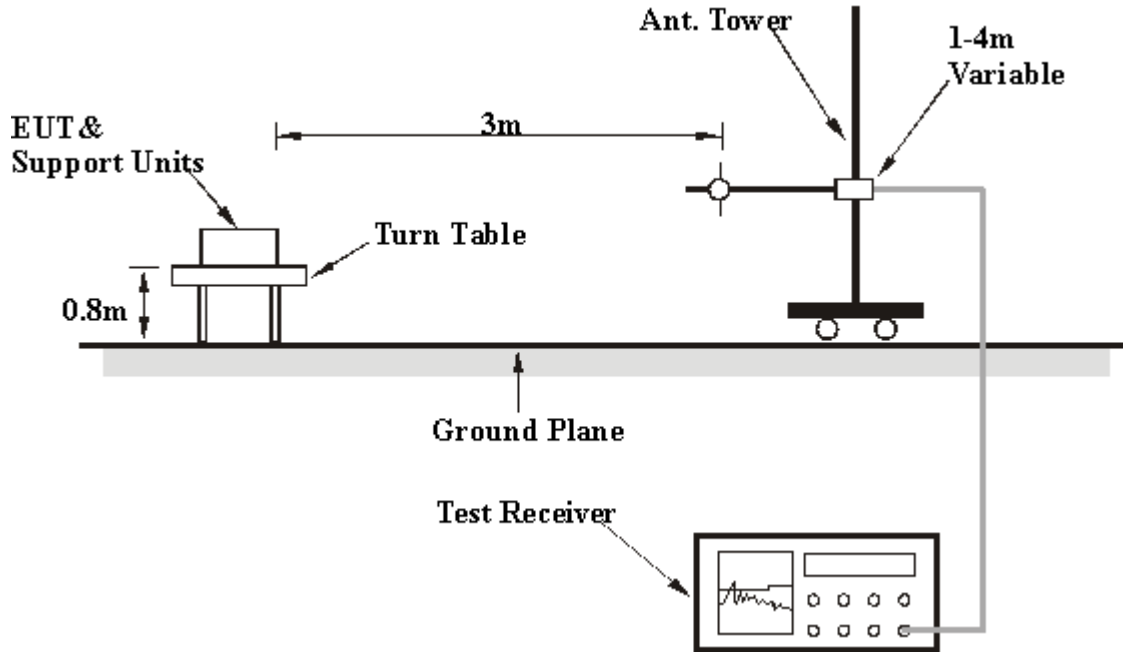
4.2.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10 dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10 dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

NOTE:

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

4.2.4 TEST SETUP



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

4.2.5 EUT OPERATING CONDITIONS

Same as 4.1.5.



4.2.6 TEST RESULTS(A)

EUT	Wireless USB Adapter	MODEL	IWE100U
MODE	11	FREQUENCY RANGE	30-1000 MHz
ANTENNA TYPE	Printed Antenna	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	30 deg. C, 60 % RH, 1050 hPa	INPUT POWER (SYSTEM)	110Vac, 60 Hz
TESTED BY: Gary Chang			

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M											
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	132.20	32.7 QP	43.50	-10.80	1.00H	257	19.20	10.97	2.52	0.00	-13.49
2	264.75	32.2 QP	46.00	-13.80	1.00H	356	17.20	12.00	2.96	0.00	-14.96
3	308.24	35.3 QP	46.00	-10.70	1.65H	164	19.40	12.77	3.15	0.00	-15.92
4	395.98	37.1 QP	46.00	-8.90	1.09H	232	18.40	15.22	3.46	0.00	-18.68
5	528.43	36.1 QP	46.00	-9.90	1.64H	358	15.40	17.04	3.67	0.00	-20.71
6	748.10	38.8 QP	46.00	-7.20	1.64H	306	15.80	18.80	4.21	0.00	-23.02

NOTE:

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



EUT	Wireless USB Adapter	MODEL	IWE100U
MODE	11	FREQUENCY RANGE	30-1000 MHz
ANTENNA TYPE	Printed Antenna	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	30 deg. C, 60 % RH, 1050 hPa	INPUT POWER (SYSTEM)	110Vac, 60 Hz
TESTED BY: Gary 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)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	132.00	38.1 QP	43.50	-5.40	1.00V	305	24.60	10.97	2.52	0.00	-13.49
2	176.00	36.7 QP	43.50	-6.80	1.00V	348	25.30	8.73	2.65	0.00	-11.39
3	220.31	41.6 QP	46.00	-4.40	1.00V	288	29.20	9.58	2.82	0.00	-12.42
4	352.56	37.3 QP	46.00	-8.70	1.23V	197	20.01	13.88	3.38	0.00	-17.25
5	396.01	43.5 QP	46.00	-2.50	1.41V	158	24.80	15.22	3.46	0.00	-18.68
6	440.12	35.1 QP	46.00	-10.90	1.79V	94	15.90	15.93	3.27	0.00	-19.20
7	528.30	34.5 QP	46.00	-11.50	1.59V	138	13.80	17.03	3.67	0.00	-20.71
8	660.00	37.2 QP	46.00	-8.80	1.56V	225	15.60	17.77	3.84	0.00	-21.61
9	748.20	38.3 QP	46.00	-7.70	1.80V	314	15.30	18.80	4.21	0.00	-23.02

NOTE:

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



EUT	Wireless USB Adapter	MODEL	IWE100U
MODE	Channel 1	FREQUENCY RANGE	Above 1000 MHz
ANTENNA TYPE	Printed Antenna	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 60 % RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY: Gary Chang			

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M											
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	2038.00	54.0 PK	74.00	-20.00	1.00H	9	23.10	27.57	3.29	0.00	-30.86
2	2038.00	50.9 AV	54.00	-3.10	1.00H	9	20.07	27.57	3.29	0.00	-30.86
3	*2412.50	100.1 PK	NA	NA	1.00H	160	68.12	28.33	3.62	0.00	-31.95
4	*2412.50	91.0 AV	NA	NA	1.00H	160	59.00	28.33	3.62	0.00	-31.95
5	4076.00	53.8 PK	74.00	-20.20	1.84H	303	16.68	32.40	4.77	0.00	-37.17
6	4824.30	52.7 PK	74.00	-21.30	1.50H	203	14.50	32.99	5.21	0.00	-38.20

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M											
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	2037.90	50.5 PK	74.00	-23.50	1.58V	234	19.60	27.57	3.29	0.00	-30.86
2	*2412.30	88.1 AV	NA	NA	1.59V	7	56.10	28.33	3.62	0.00	-31.95
3	*2412.30	95.4 PK	NA	NA	1.59V	7	63.40	28.33	3.62	0.00	-31.95
4	4076.20	53.2 PK	74.00	-20.80	1.38V	253	16.00	32.40	4.77	0.00	-37.17
5	4824.10	53.1 PK	74.00	-20.90	1.00V	282	14.90	32.99	5.21	0.00	-38.20

NOTE:

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



EUT	Wireless USB Adapter	MODEL	IWE100U
MODE	Channel 6	FREQUENCY RANGE	Above 1000 MHz
ANTENNA TYPE	Printed Antenna	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 60 % RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY: Gary Chang			

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M											
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	2063.00	52.6 PK	74.00	-21.40	1.66H	175	21.71	27.61	3.31	0.00	-30.92
2	*2435.90	99.2 PK	NA	NA	1.14H	349	67.22	28.38	3.64	0.00	-32.03
3	*2435.90	92.2 AV	NA	NA	1.14H	349	60.20	28.38	3.64	0.00	-32.03
4	4126.50	53.2 PK	74.00	-20.80	1.00H	3	15.97	32.40	4.79	0.00	-37.20
5	4874.20	52.1 PK	74.00	-21.90	1.08H	84	13.80	33.07	5.25	0.00	-38.31

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M											
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	2063.40	50.0 AV	74.00	-24.00	1.00V	105	19.04	27.61	3.31	0.00	-30.92
2	*2435.80	96.6 PK	NA	NA	1.11V	56	64.55	28.38	3.64	0.00	-32.02.
3	*2435.80	87.1 AV	NA	NA	1.11V	56	55.05	28.38	3.64	0.00	-32.02.
4	4126.50	52.6 PK	74.00	-21.40	1.01V	128	15.46	32.40	4.79	0.00	-37.19
5	4874.20	52.5 PK	74.00	-21.50	1.07V	238	14.20	33.07	5.25	0.00	-38.31

NOTE:

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



EUT	Wireless USB Adapter	MODEL	IWE100U
MODE	Channel 11	FREQUENCY RANGE	Above 1000 MHz
ANTENNA TYPE	Printed Antenna	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 60 % RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY: Gary Chang			

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	2088.00	51.8 PK	74.00	-22.20	1.70H	161	20.82	27.66	3.33	0.00	-30.99
2	*2462.50	99.1 PK	NA	NA	1.35H	185	67.02	28.42	3.66	0.00	-32.09
3	*2462.50	91.0 AV	NA	NA	1.35H	185	58.90	28.42	3.66	0.00	-32.09
4	2497.50	51.9 PK	74.00	-22.10	1.00H	198	19.70	28.53	3.70	0.00	-32.22
5	4175.20	57.2 PK	74.00	-16.80	1.04H	195	20.02	32.40	4.81	0.00	-37.21.
6	4175.20	45.0 AV	54.00	-9.00	1.04H	195	7.76	32.40	4.81	0.00	-37.21
7	4924.40	51.2 PK	74.00	-22.80	1.04H	79	12.80	33.15	5.28	0.00	-38.43

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	2088.10	49.2 PK	74.00	-24.80	1.13V	318	18.20	27.66	3.33	0.00	-30.99
2	2463.10	86.9 AV	NA	NA	1.00V	162	54.83	28.42	3.66	0.00	-32.09
3	2463.10	95.0 PK	NA	NA	1.00V	162	62.88	28.42	3.66	0.00	-32.09
4	2493.70	51.5 PK	74.00	-22.50	1.20V	299	19.40	28.47	3.68	0.00	-32.15
5	4176.20	53.4 PK	74.00	-20.60	1.28V	286	16.20	32.40	4.81	0.00	-37.21
6	4924.40	52.7 PK	74.00	-21.30	1.00V	303	14.30	33.15	5.28	0.00	-38.43

NOTE:

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

4.2.7 TEST RESULTS(B)

EUT	Wireless USB Adapter	MODEL	IWE100U
MODE	11	FREQUENCY RANGE	30-1000 MHz
ANTENNA TYPE	Dipole Antenna	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	30 deg. C, 60 % RH, 1050 hPa	INPUT POWER (SYSTEM)	110Vac, 60 Hz
TESTED BY: Gary Chang			

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M											
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	132.40	31.7 QP	43.50	-11.80	1.00H	251	18.20	10.97	2.52	0.00	-13.49
2	264.70	31.2 QP	46.00	-14.80	1.00H	204	16.20	12.00	2.96	0.00	-14.96
3	308.40	34.2 QP	46.00	-11.80	1.25H	33	18.30	12.77	3.15	0.00	-15.93
4	395.40	36.1 QP	46.00	-9.90	1.62H	94	17.40	15.22	3.46	0.00	-18.68
5	440.70	34.6 QP	46.00	-11.40	1.59H	112	15.40	15.93	3.27	0.00	-19.20
6	528.40	34.9 QP	46.00	-11.10	1.92H	169	14.20	17.04	3.67	0.00	-20.71
7	528.40	34.9 QP	46.00	-11.10	1.92H	145	14.20	17.04	3.67	0.00	-20.71
8	747.95	39.4 QP	46.00	-6.60	1.48H	247	16.40	18.80	4.21	0.00	-23.02

NOTE:

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



EUT	Wireless USB Adapter	MODEL	IWE100U
MODE	11	FREQUENCY RANGE	30-1000 MHz
ANTENNA TYPE	Dipole Antenna	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	30 deg. C, 60 % RH, 1050 hPa	INPUT POWER (SYSTEM)	110Vac, 60 Hz
TESTED BY: Gary 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)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	132.10	38.1 QP	43.50	-5.40	1.00V	92	24.60	10.97	2.52	0.00	-13.49
2	176.21	36.7 QP	43.50	-6.80	1.00V	144	25.30	8.73	2.65	0.00	-11.38
3	220.31	41.6 QP	46.00	-4.40	1.00V	197	29.20	9.58	2.82	0.00	-12.41
4	352.56	37.3 QP	46.00	-8.70	1.64V	168	20.01	13.88	3.38	0.00	-17.25
5	396.01	40.2 QP	46.00	-5.80	1.57V	260	21.50	15.22	3.46	0.00	-18.68
6	528.10	33.1 QP	46.00	-12.90	1.74V	348	12.40	17.03	3.67	0.00	-20.71
7	616.20	35.9 QP	46.00	-10.10	1.40V	303	14.60	17.68	3.61	0.00	-21.29
8	748.30	39.2 QP	46.00	-6.80	1.64V	270	16.20	18.80	4.21	0.00	-23.03

NOTE:

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



EUT	Wireless USB Adapter	MODEL	IWE100U
MODE	Channel 1	FREQUENCY RANGE	Above 1000 MHz
ANTENNA TYPE	Dipole Antenna	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 60 % RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY: Gary Chang			

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M											
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	2038.00	51.1 PK	74.00	-22.90	1.00H	356	20.21	27.57	3.29	0.00	-30.86
2	*2411.10	97.0 PK	NA	NA	1.88H	352	65.06	28.33	3.62	0.00	-31.95
3	*2411.10	92.7 AV	NA	NA	1.88H	352	60.70	28.33	3.62	0.00	-31.95
4	4074.20	53.4 PK	74.00	-20.60	1.45H	146	16.20	32.40	4.77	0.00	-37.17
5	4874.10	53.1 PK	74.00	-20.90	1.39H	36	14.80	33.07	5.25	0.00	-38.31

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M											
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	2037.40	53.0 PK	74.00	-21.00	1.44V	69	22.09	27.57	3.29	0.00	-30.86
2	*2410.00	98.3 PK	NA	NA	1.34V	348	66.33	28.33	3.62	0.00	-31.96
3	*2410.00	93.4 AV	NA	NA	1.34V	348	61.40	28.33	3.62	0.00	-31.96
4	4075.20	52.5 PK	74.00	-21.50	1.38V	286	15.31	32.40	4.77	0.00	-37.17
5	4824.10	52.9 PK	74.00	-21.10	1.08V	357	14.70	32.99	5.21	0.00	-38.20

NOTE:

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



EUT	Wireless USB Adapter	MODEL	IWE100U
MODE	Channel 6	FREQUENCY RANGE	Above 1000 MHz
ANTENNA TYPE	Dipole Antenna	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 60 % RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY: Gary Chang			

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M											
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	2063.00	51.8 PK	74.00	-22.20	1.00H	15	20.84	27.61	3.31	0.00	-30.92
2	*2437.20	99.3 PK	NA	NA	1.47H	40	67.29	28.38	3.64	0.00	-32.03
3	*2437.20	93.2 AV	NA	NA	1.47H	40	61.20	28.38	3.64	0.00	-32.03
4	4126.30	53.2 PK	74.00	-20.80	1.25H	157	16.02	32.40	4.79	0.00	-37.19
5	4824.10	52.8 PK	74.00	-21.20	1.25H	112	14.60	32.99	5.21	0.00	-38.20

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M											
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	2062.40	52.2 PK	74.00	-21.80	1.16V	210	21.30	27.61	3.31	0.00	-30.92
2	*2437.10	92.4 AV	NA	NA	1.48V	341	60.40	28.38	3.64	0.00	-32.03
3	*2437.10	96.7 PK	NA	NA	1.48V	341	64.70	28.38	3.64	0.00	-32.03
4	4126.20	53.0 PK	74.00	-21.00	1.00V	209	15.79	32.40	4.79	0.00	-37.19
5	4874.20	52.3 PK	74.00	-21.70	1.33V	37	14.00	33.07	5.25	0.00	-38.32

NOTE:

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



EUT	Wireless USB Adapter	MODEL	IWE100U
MODE	Channel 11	FREQUENCY RANGE	Above 1000 MHz
ANTENNA TYPE	Dipole Antenna	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 60 % RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY: Gary Chang			

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	2088.20	50.8 PK	74.00	-23.20	1.88H	358	19.78	27.66	3.33	0.00	-30.99
2	*2460.80	101.6 PK	NA	NA	1.00H	328	69.50	28.42	3.66	0.00	-32.09
3	*2460.80	94.8 AV	NA	NA	1.00H	328	62.70	28.42	3.66	0.00	-32.09
4	2486.40	52.2 PK	74.00	-21.80	1.16H	131	20.10	28.47	3.68	0.00	-32.15
5	4176.20	52.8 PK	74.00	-21.20	1.57H	189	15.59	32.40	4.81	0.00	-37.21
6	4924.10	53.1 PK	74.00	-20.90	1.23H	273	14.70	33.15	5.28	0.00	-38.43

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	2088.00	53.1 PK	74.00	-20.90	1.00V	164	22.10	27.66	3.33	0.00	-30.99
2	*2460.80	99.9 PK	NA	NA	1.25V	79	67.80	28.42	3.66	0.00	-32.08.
3	*2460.80	91.5 AV	NA	NA	1.25V	79	59.40	28.42	3.66	0.00	-32.08.
4	2496.30	49.7 PK	74.00	-24.30	1.52V	196	17.52	28.53	3.70	0.00	-32.22
5	4176.20	54.0 PK	74.00	-20.00	1.12V	318	16.78	32.40	4.81	0.00	-37.21
6	4176.20	45.6 AV	54.00	-8.40	1.12V	318	8.35	32.40	4.81	0.00	-37.21
7	4924.20	52.3 PK	74.00	-21.70	1.11V	62	13.90	33.15	5.28	0.00	-38.43

NOTE:

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

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
ROHDE & SCHWARZ TEST RECEIVER	ESMI	839379/002	Dec. 28, 2001
HP ATTENUATOR	8496B	3247A18505	Cal. on use
HP PLOTTER	7475A	2641V27755	N/A

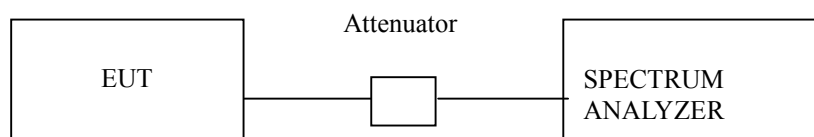
NOTE:

- 1.The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
- 2.The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.3.3 TEST PROCEDURE

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

4.3.4 TEST SETUP



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

4.3.5 EUT OPERATING CONDITIONS

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



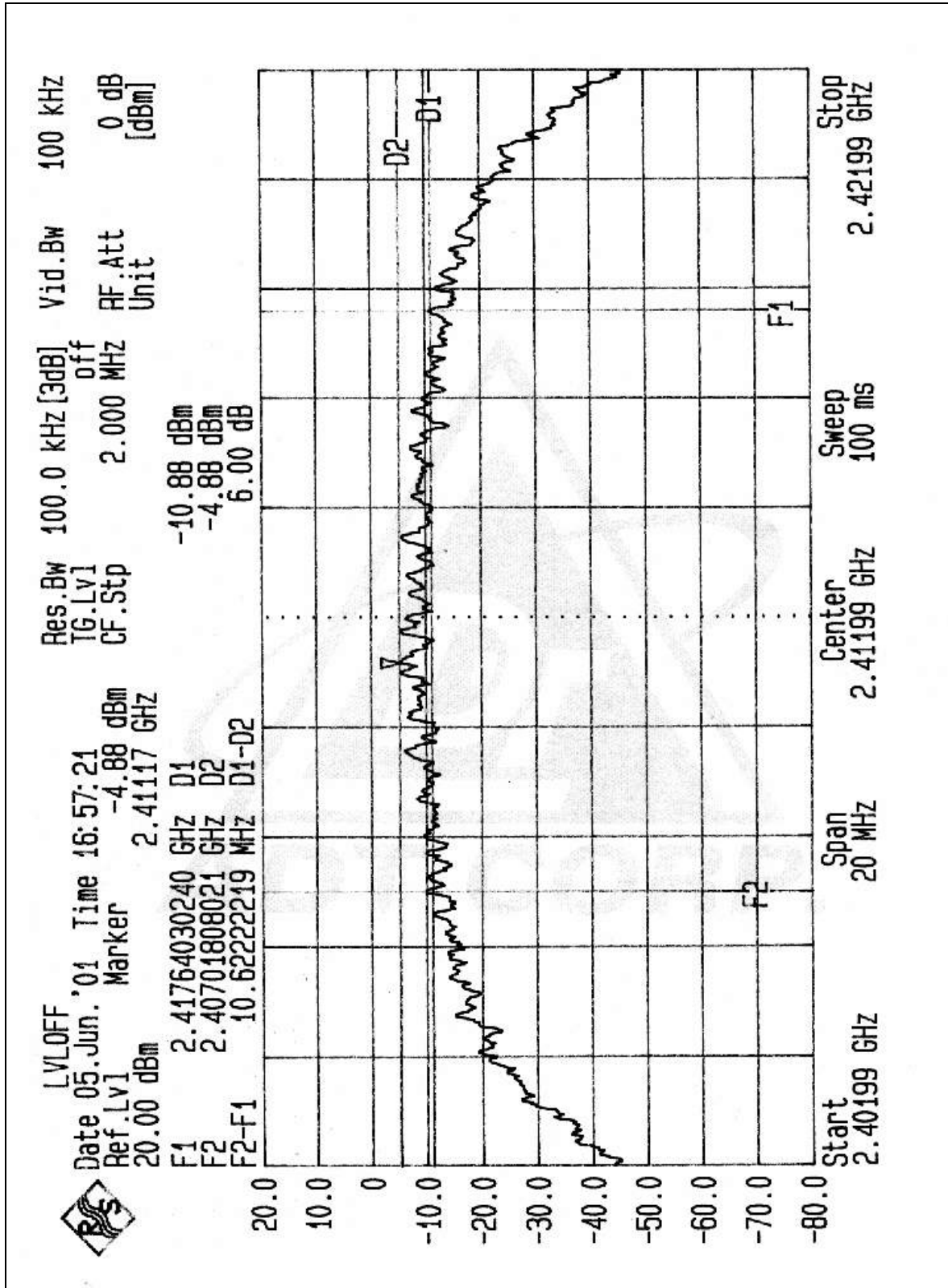
4.3.6 TEST RESULTS

EUT	Wireless USB Adapter	MODEL	IWE100U
INPUT POWER (SYSTEM)	110Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	28 deg. C, 70%RH, 1005 hPa
TESTED BY: Gary Chang			

CHANNEL	CHANNEL FREQUENCY (MHz)	6 dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	10.62	0.5	PASS
6	2437	10.60	0.5	PASS
11	2462	10.60	0.5	PASS

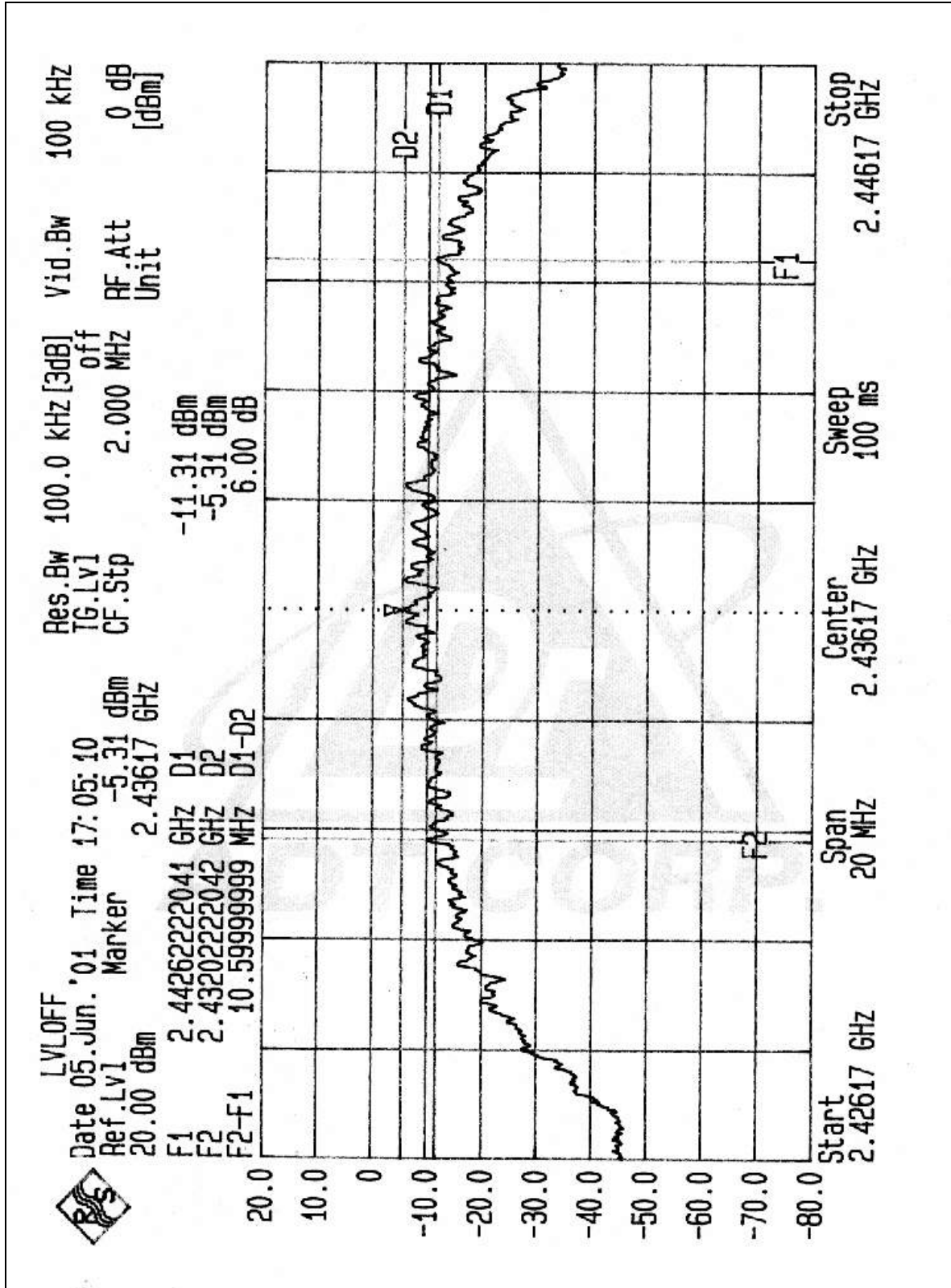


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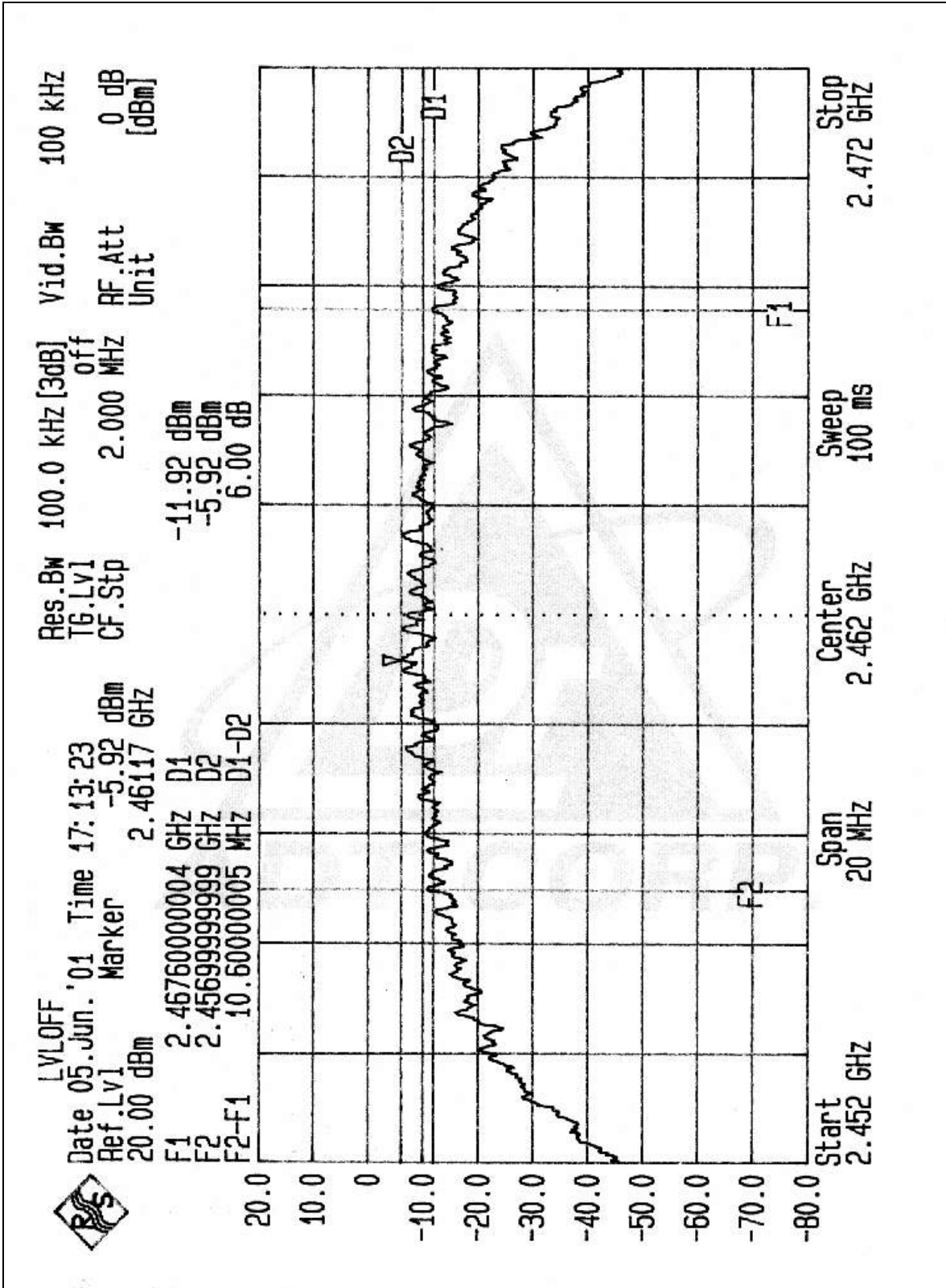


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CH11





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
ROHDE & SCHWARZ TEST RECEIVER	ESMI	839379/002	Dec. 28, 2001
HP ATTENUATOR	8496B	3247A18505	Cal. on use
HP PLOTTER	7475A	2641V27755	N/A

NOTE:

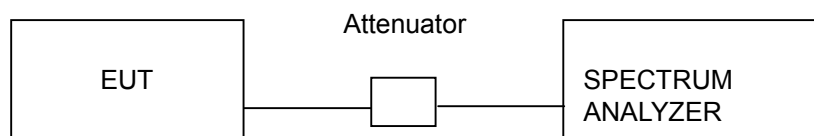
1. The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.4.3 TEST PROCEDURES

- a. The transmitter output was connected to the spectrum analyzer through an attenuator.
- b. The center frequency of the spectrum analyzer was set to the fundamental frequency and using 3 MHz RBW and 3 MHz VBW.
- c. The span of the spectrum analyzer should be larger than 6dB BandWidth plus 10MHz.
- d. Used Peak Search to read the peak power after Maximum Hold function was activated.
- e. Shifted the marker to +/- 3MHz and +/-6MHz, and recorded the reading.
- f. The Maximum Peak Output Power was the linear summation of the 5 readings in (4) and (5).

NOTE: This measurement is the total power of 15MHz bandwidth which is far more wider than 6dB bandwidth.

4.4.4 TEST SETUP



4.4.5 EUT OPERATING CONDITIONS

Same as Item 4.3.5



4.4.6 TEST RESULTS

EUT	Wireless USB Adapter	MODEL	IWE100U
INPUT POWER (SYSTEM)	110Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	28 deg. C, 70%RH, 1005 hPa
TESTED BY: Gary Chang			

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	11.71	30	PASS
6	2437	9.81	30	PASS
11	2462	9.25	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
ROHDE & SCHWARZ TEST RECEIVER	ESMI	839379/002	Dec. 28, 2001
HP ATTENUATOR	8496B	3247A18505	Cal. on use
HP PLOTTER	7475A	2641V27755	N/A

NOTE:

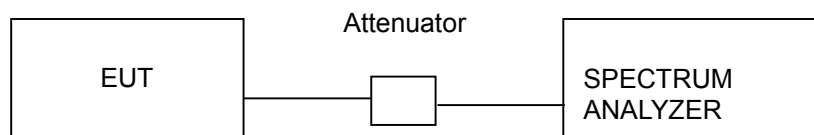
1. The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.5.3 TEST PROCEDURE

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

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

4.5.4 TEST SETUP



4.5.5 EUT OPERATING CONDITIONS

Same as 4.3.5



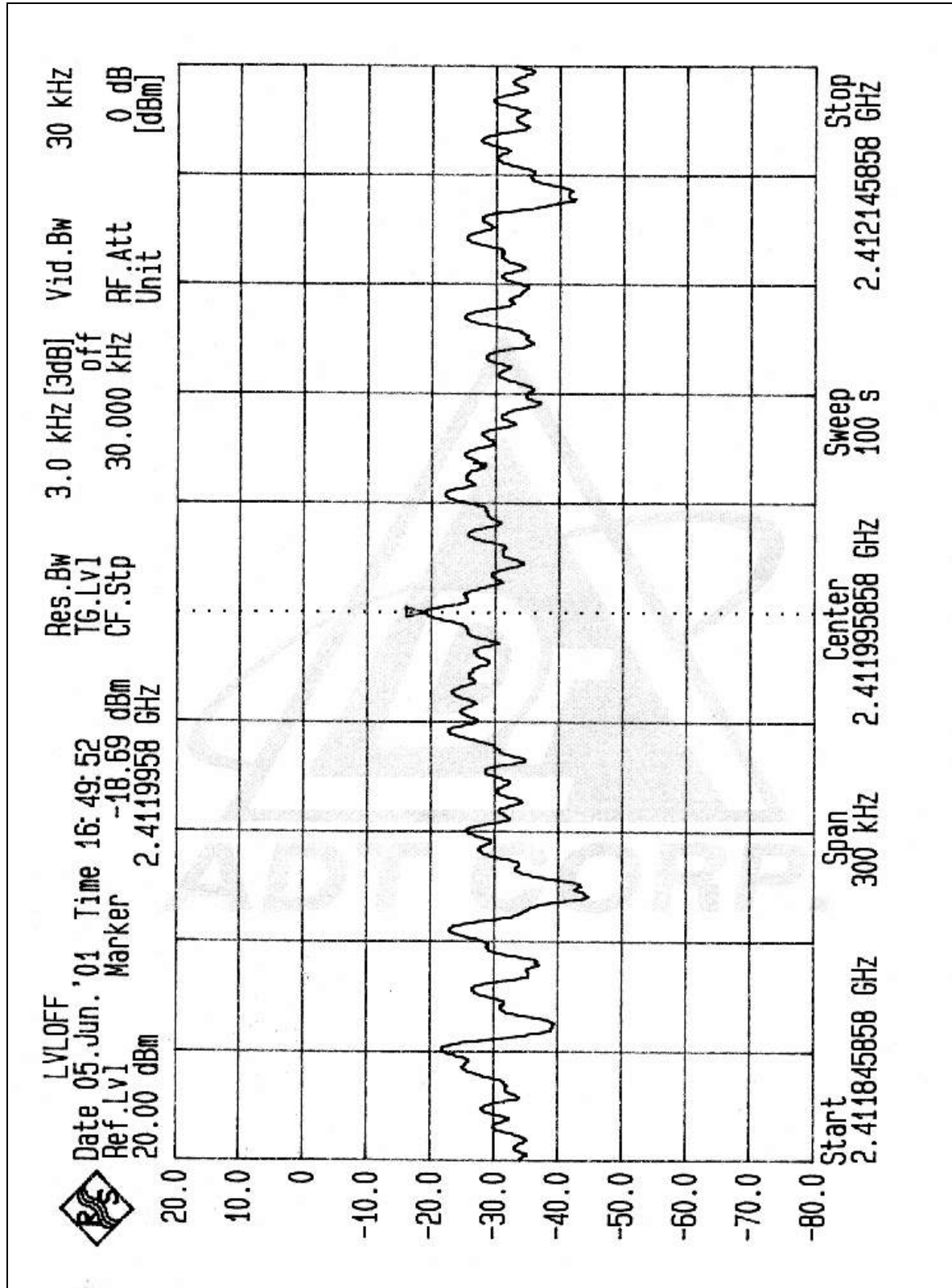
4.5.6 TEST RESULTS

EUT	Wireless USB Adapter	MODEL	IWE100U
INPUT POWER (SYSTEM)	110Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	28 deg. C, 70%RH, 1005 hPa
TESTED BY: Gary Chang			

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 KHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-18.69	8	PASS
6	2437	-19.41	8	PASS
11	2462	-19.41	8	PASS

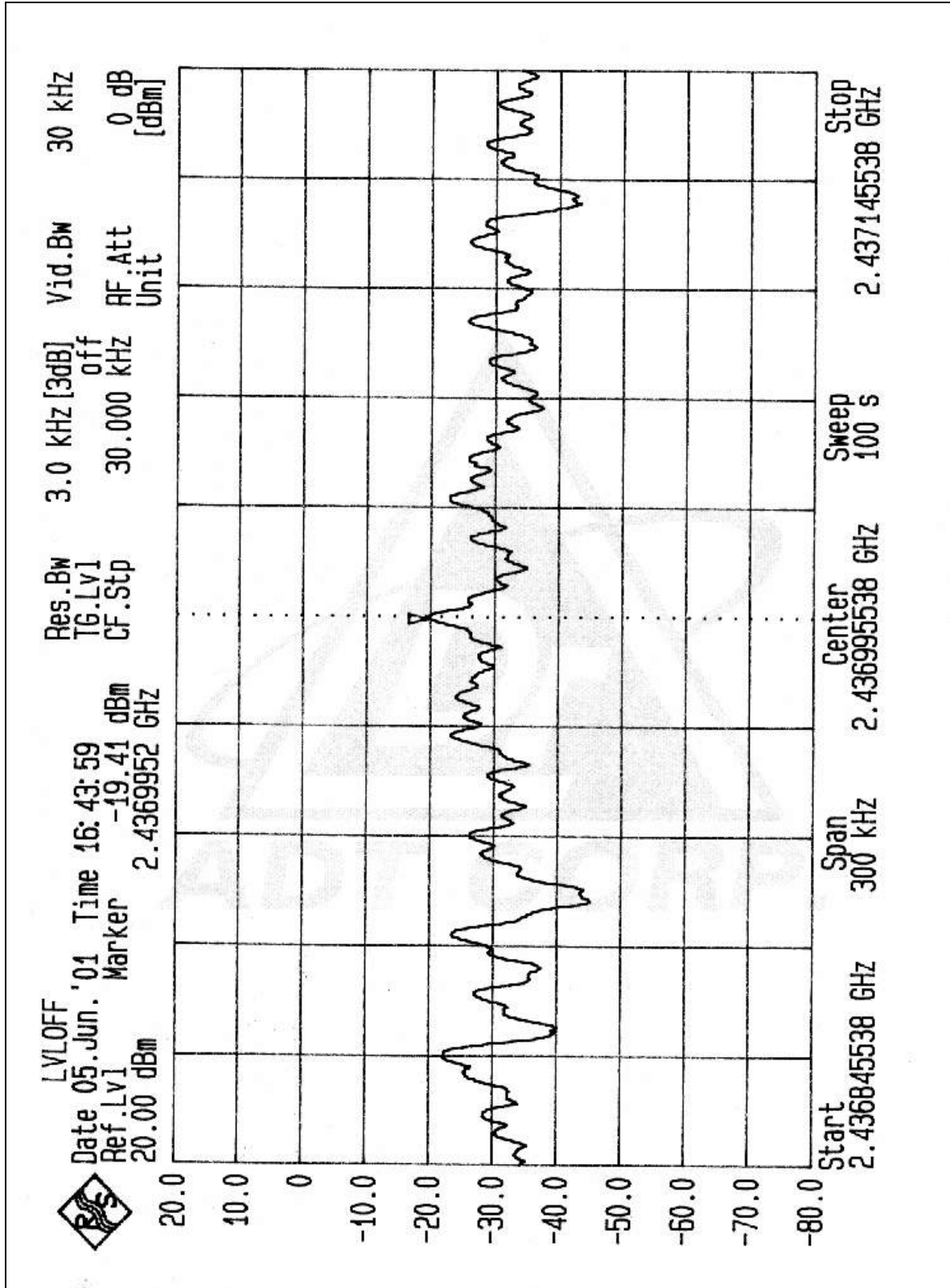


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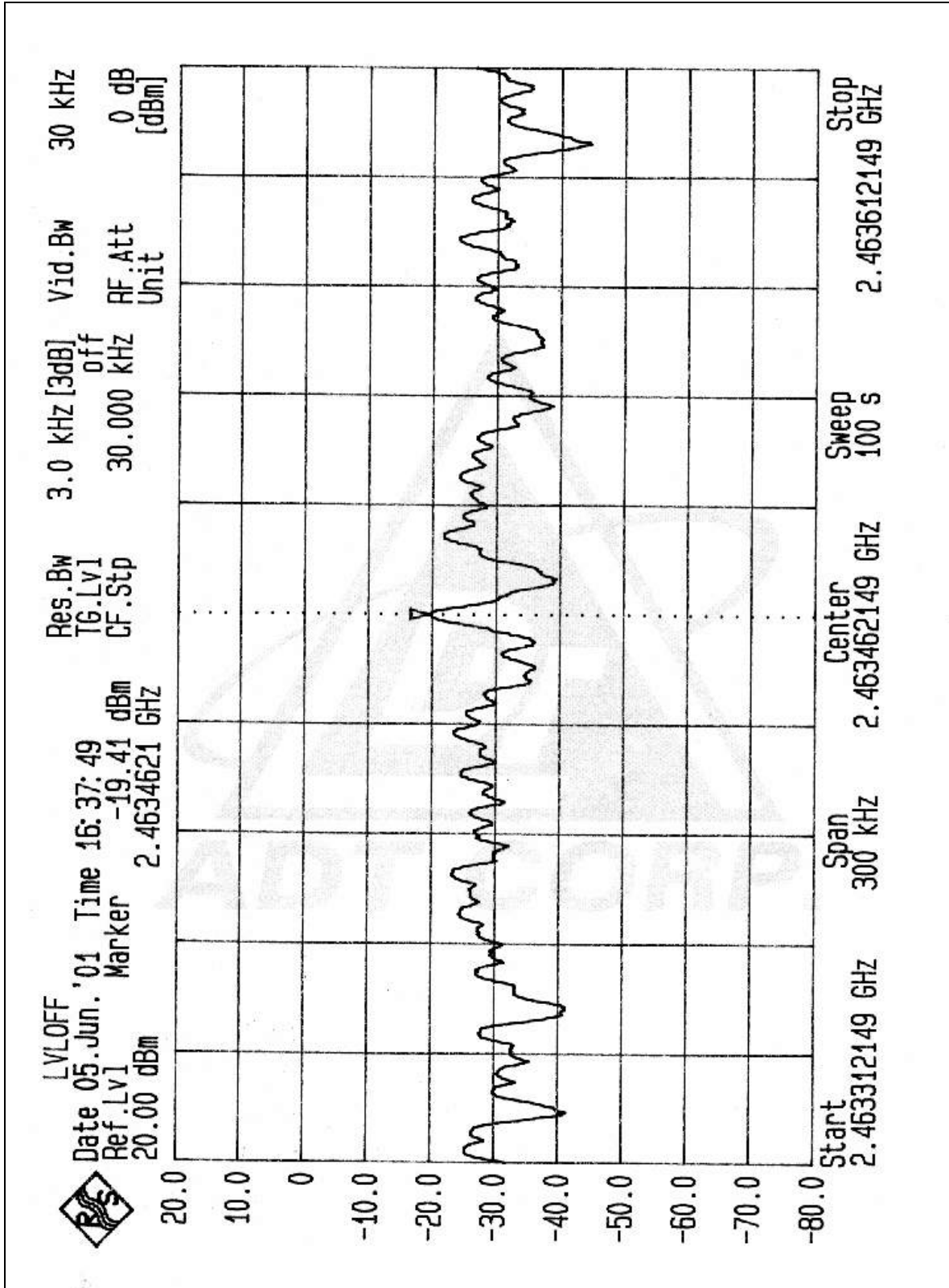


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CH11



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
ROHDE & SCHWARZ TEST RECEIVER	ESMI	848926/005 846839/018	Dec 28, 2001
HP ATTENUATOR	8496B	3247A18505	Cal. on use
HP PLOTTER	7475A	2641V27755	N/A

NOTE:

1. The measurement uncertainty is less than $\pm 2.6\text{dB}$, which is calculated as per the NAMAS document NIS81.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.6.3 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 100 kHz with suitable frequency span including 100 kHz bandwidth from band edge. The band edges was measured and recorded.



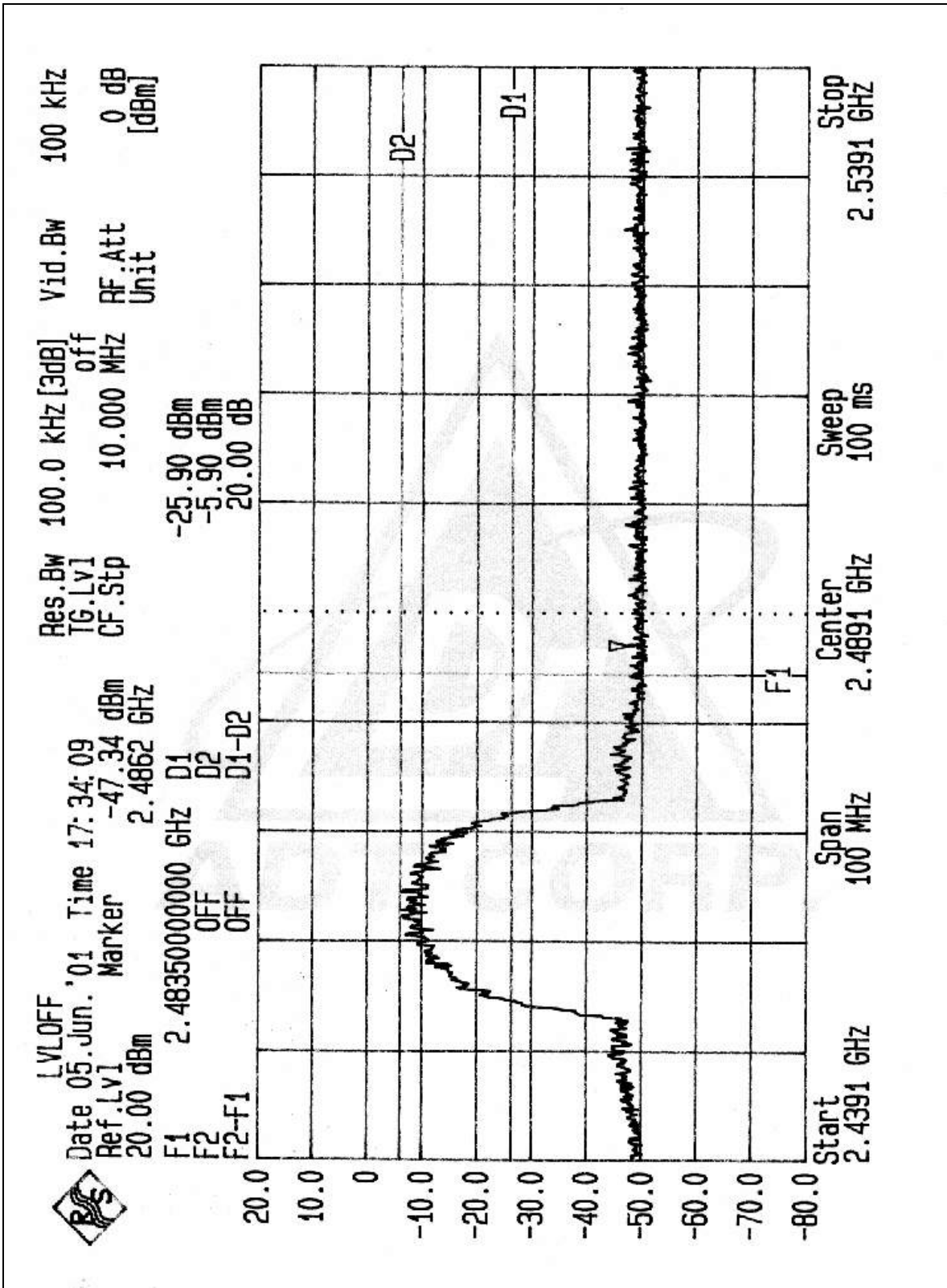
4.6.4 EUT OPERATING CONDITION

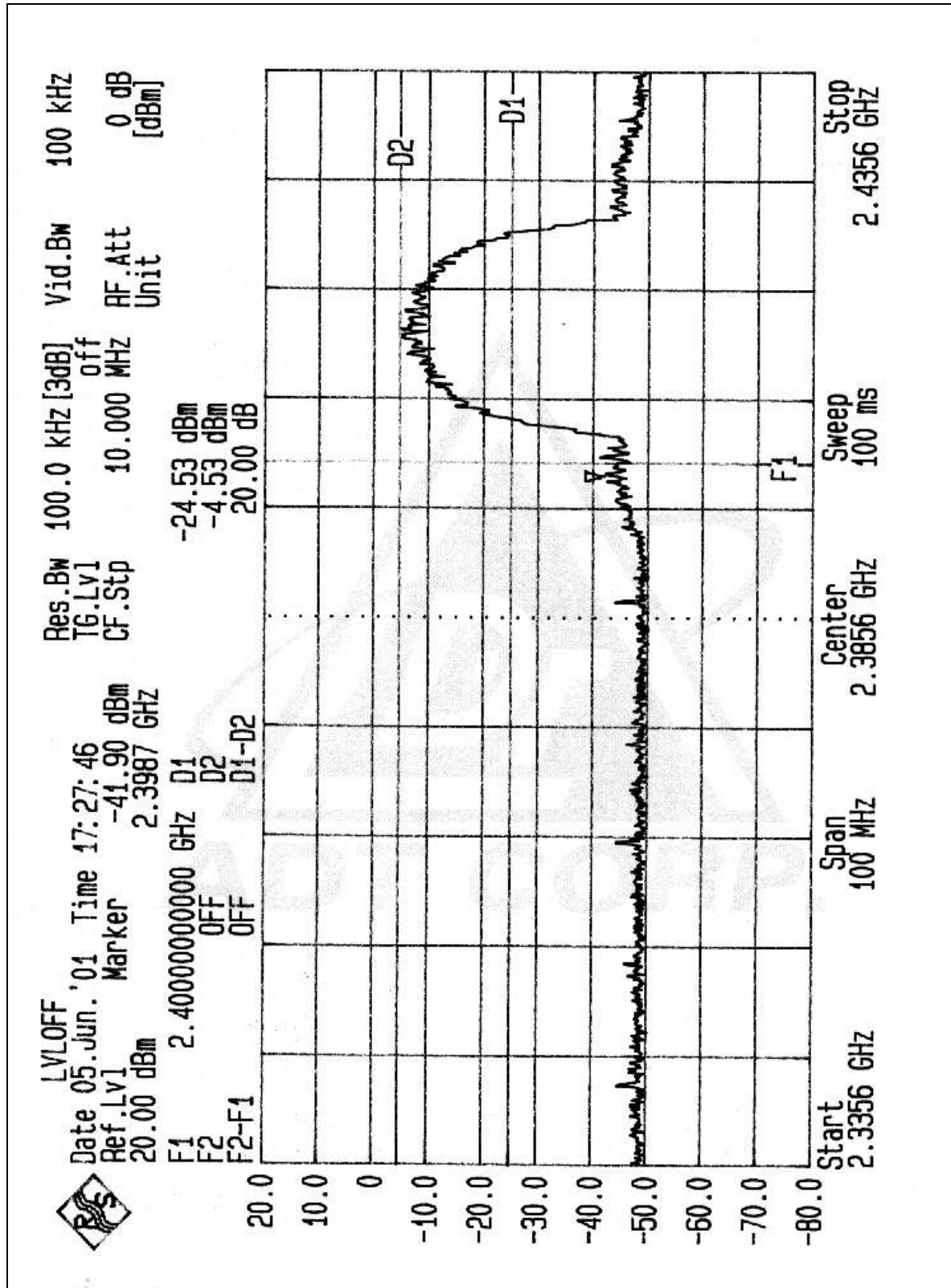
Same as Item 4.3.5

4.6.5 TEST RESULTS

The spectrum plots are attached on the following 2 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).

NOTE: The band edge emission plot on the following 2 pages shows 41.44dB delta between carrier maximum power and local maximum emission in restrict band (2486.20GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.6 (Page 37) is 94.80dBuV/m, so the maximum field strength in restrict band is $94.80 - 41.44 = 53.36$ dBuV/m which is under 54 dBuV/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

The antenna used in this product is printed antenna and dipole antenna. There is no antenna connector. And the maximum Gain of this antenna is only 1dBi.

5 PHOTOGRAPHS OF THE TEST CONFIGURATION

CONDUCTED EMISSION TEST (Printed Antenna)



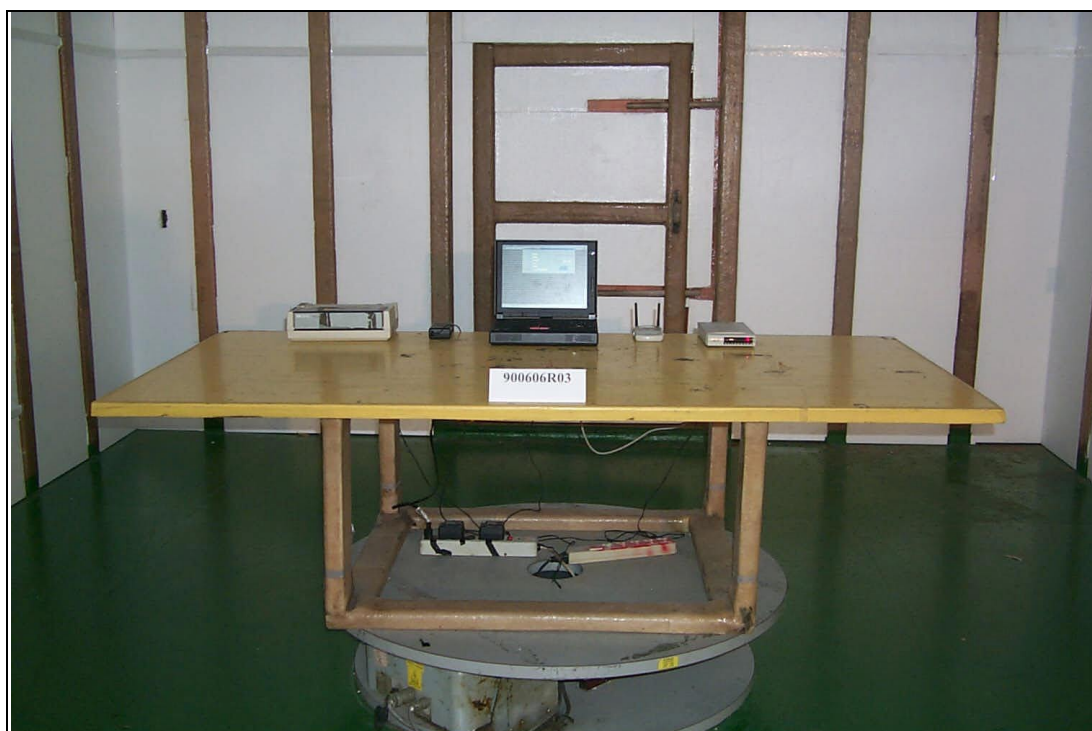
CONDUCTED EMISSION TEST (Dipole Antenna)



RADIATED EMISSION TEST (Printed Antenna)



RADIATED EMISSION TEST (Dipole Antenna)





6 INFORMATION ON THE TESTING LABORATORIES

We, ADT Corp., were founded in 1988 to provide our best service in EMC 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
Germany	TUV Rheinland
Japan	VCCI
New Zealand	MoC
Norway	NEMKO
R.O.C.	BSMI, DGT, CNLA

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:

Lin Kou EMC Lab:

Tel: 886-2-26052180
Fax: 886-2-26052943

Hsin Chu EMC Lab:

Tel: 886-35-935343
Fax: 886-35-935342

Lin Kou Safety Lab:

Tel: 886-2-26093195
Fax: 886-2-26093184

Lin Kou RF&Telecom 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.