

FCC TEST REPORT

REPORT NO.: RF901224R01

MODEL NO.: T-9800

RECEIVED: Aug. 16, 2002

TESTED: Aug. 20 ~ 21, 2002

APPLICANT: JEBSEE ELECTRONICS CO., LTD.

ADDRESS: 24-3, Sin-Lo Road, P.O. Box 57, Tainan Taiwan

ISSUED BY: Advance Data Technology Corporation

LAB LOCATION: 47 14th Lin, Chia Pau Tsuen, Linkou Hsiang,
Taipei, Taiwan, R.O.C.

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0528
ILAC MRA



Lab Code: 200102-0

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1. CERTIFICATION

PRODUCT : 2.4GHz Wireless A/V Sender with infrared extender
BRAND NAME : JEBSEE
MODEL NO : T-9800
APPLICANT : JEBSEE ELECTRONICS CO., LTD.
STANDARDS : 47 CFR Part 15, Subpart C (Section 15.249),
ANSI C63.4-1992

We, **Advance Data Technology Corporation**, hereby certify that one sample of the designation has been tested in our facility from Aug. 20, 2002 to Aug. 21, 2002. 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.

CHECKED BY : Emily Lu , DATE : Nov. 18, 2002
Emily Lu

APPROVED BY : Alan Lane , DATE : Nov. 18, 2002
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 PARAGRAPH	TEST TYPE	RESULT	REMARK
15.207	Conducted Emission Test	PASS	Minimum passing margin is -15.92dBuV at 0.502MHz
15.209 15.249	Radiated Emission Test	PASS	Minimum passing margin is -3.0dBuV at 840.00MHz
15.249	Band Edge Measurement Limit: 20 dB less than the peak value of fundamental frequency	PASS	Meet the requirement of limit

NOTE: The receiver part to communicate with the EUT has been verified to comply with FCC Part 15, Subpart B, Class B (DoC). The test report can be provided upon request.

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	2.4GHz Wireless A/V Sender with infrared extender
MODEL NO.	T-9800
POWER SUPPLY	9VDC from power adapter
MODULATION TYPE	ASK
CARRIER FREQUENCY OF EACH CHANNEL	2414, 2432, 2450, 2468MHz
BANDWIDTH OF EACH CHANNEL	18MHz
NUMBER OF CHANNEL	4
ANTENNA TYPE	Detachable antenna
DATA CABLE	1.9m (Nonshielded)
I/O PORTS	AV

NOTE:

- 1.The EUT include Transmitter part and Receiver part. The model no.: T-9800 is for transmitter which includes Tx of 2.4GHz application used for control signal transmitting and Rx of 433MHz application used for receive part of video sender and model no.: R-9800 is for receiver which includes Rx of 2.4GHz application and Tx of 433MHz application.
- 2.Test result of model R-9800 has been presented in DoC report.
- 3.The EUT was operated with following adapter:

Brand Name :	HON-KWANG
Model No. :	D7500-04
Input Power :	120V, 60Hz
Output Power :	9VDC, 400mA

- 4.For more detailed features description of the EUT, please refer to the manufacturer's specifications or the User's Manual.

3.2 DESCRIPTION OF TEST MODES

All channels are listed in the following table:

Channel	Frequency	Channel	Frequency
1	2414 MHz	2	2432 MHz
3	2450 MHz	4	2468 MHz

NOTE:

1. Below 1GHz, the channel 1, 2, and 4 were pre-tested in chamber. Channel 1, the worst case, was chosen for the final test.
2. Above 1GHz, the channel 1, 2, and 4 were tested individually.

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is the transmitter part of a 2.4GHz Wireless A/V Sender with infrared extender. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC CFR 47 Part 15, Subpart C. (15.249)
ANSI C63.4 : 1992

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

3.4 DESCRIPTION OF SUPPORT UNITS

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	DVD player	SONY	DVP-NS305	1000944	FCC DoC APPROVED

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA

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

4. TEST PROCEDURE AND RESULT

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

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

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

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
ROHDE & SCHWARZ Test Receiver	ESCS30	834115/016	Mar. 3, 2003
ROHDE & SCHWARZ Artificial Mains Network (For EUT)	ESH3-Z5	847265/023	Jan. 10, 2003
* ROHDE & SCHWARZ 4-wire ISN	ENY41	838119/028	Dec. 10, 2002
* ROHDE & SCHWARZ 2-wire ISN	ENY22	837497/018	Dec. 10, 2002
EMCO L.I.S.N. (For peripherals)	3825/2	9504-2359	July 10, 2003
Software	Cond-V2L	NA	NA
RF cable (JYBAO)	5D-FB	Cable-C03.01	July 11, 2003
Terminator (For EMCO LISN)	NA	E1-01-300	Feb. 20, 2003
Terminator (For EMCO LISN)	NA	E1-01-301	Feb. 20, 2003
Shielded Room	Site 3	ADT-C03	NA
VCCI Site Registration No.	Site 3	C-274	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 equipment are used for conducted telecom port test only (if tested).
 4. The test was performed in ADT Open Site No. 3.



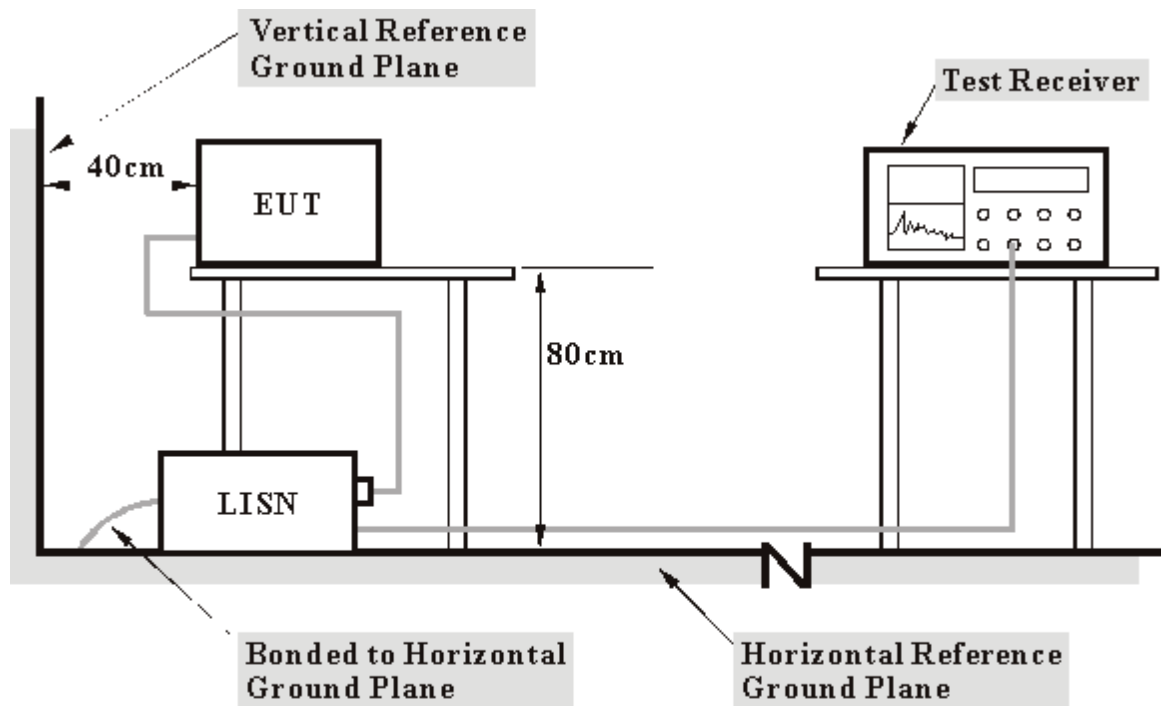
4.1.3 TEST PROCEDURES

- 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 150 kHz to 30 MHz was searched. Emission levels over 10dB under the prescribed limits could not be reported.

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 TEST SETUP



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

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

4.1.6 EUT OPERATING CONDITIONS

- a. Connected the EUT with a DVD player on the test report via A/V cable.
- b. The EUT received the signal from DVD player and transmitting the signal at specific channel.

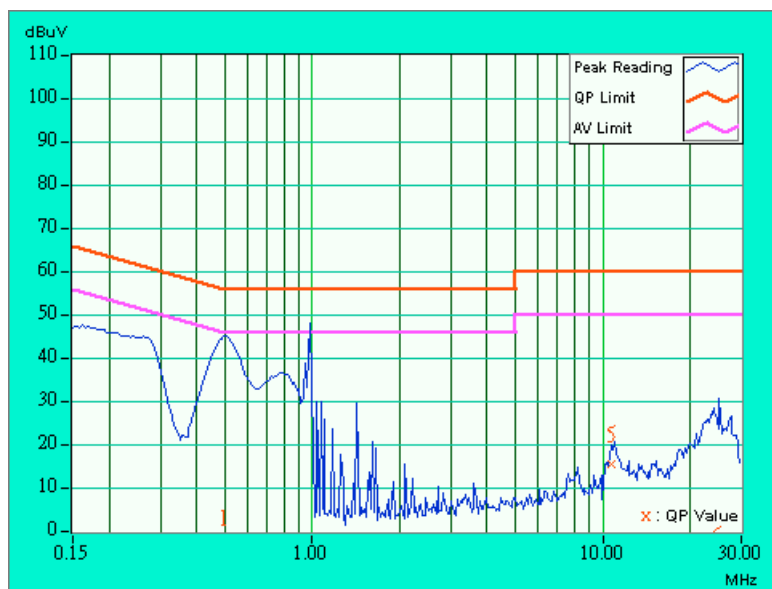
4.1.7 TEST RESULTS

EUT	2.4GHz Wireless A/V Sender with infrared extender	MODEL	T-9800
MODE	Channel 1	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	35deg. C, 50%RH, 1005 hPa	TESTED BY: Bunny Yao	

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	0.495	0.12	-4.56	-	-4.44	-	56.08	46.08	-60.52	-
2	0.982	0.20	-11.63	-	-11.43	-	56.00	46.00	-67.43	-
3	1.430	0.20	-11.18	-	-10.98	-	56.00	46.00	-66.98	-
4	1.613	0.20	-11.27	-	-11.07	-	56.00	46.00	-67.07	-
5	10.656	0.53	14.71	-	15.24	-	60.00	50.00	-44.76	-
6	24.797	0.90	-8.78	-	-7.88	-	60.00	50.00	-67.88	-

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.

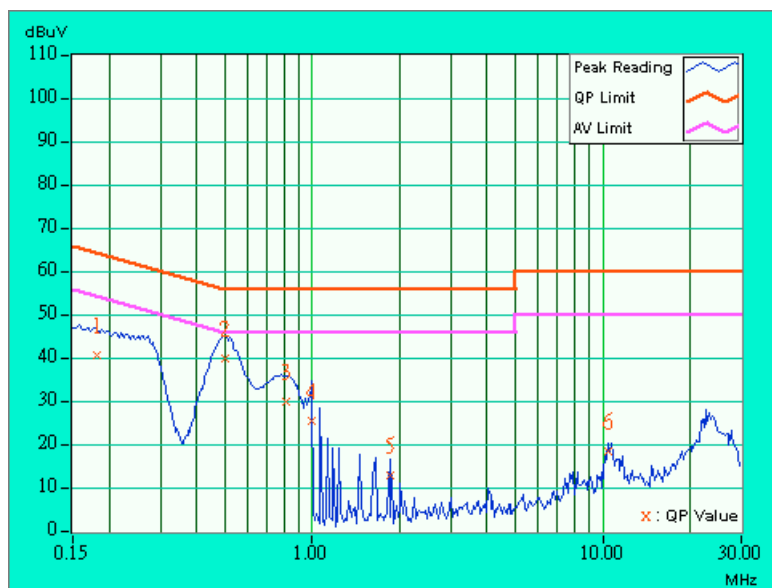


EUT	2.4GHz Wireless A/V Sender with infrared extender	MODEL	T-9800
MODE	Channel 1	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	35deg. C, 50%RH, 1005 hPa	TESTED BY:	Bunny Yao

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	0.182	0.10	40.36	-	40.46	-	64.37	54.37	-23.91	-
2	0.502	0.12	39.61	-	39.73	-	56.00	46.00	-16.27	-
3	0.814	0.17	29.50	-	29.67	-	56.00	46.00	-26.33	-
4	0.994	0.20	25.30	-	25.50	-	56.00	46.00	-30.50	-
5	1.852	0.20	12.61	-	12.81	-	56.00	46.00	-43.19	-
6	10.508	0.41	17.96	-	18.37	-	60.00	50.00	-41.63	-

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.

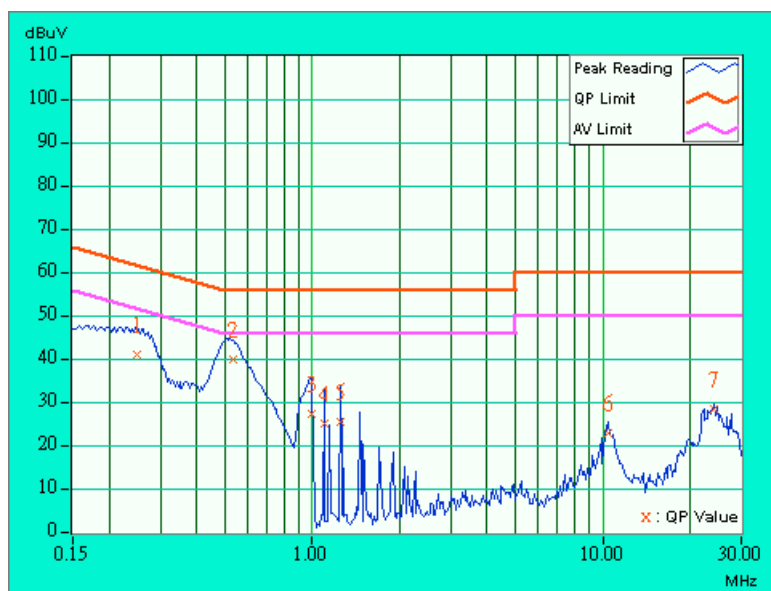


EUT	2.4GHz Wireless A/V Sender with infrared extender	MODEL	T-9800
MODE	Channel 2	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	35deg. C, 50%RH, 1005 hPa	TESTED BY:	Bunny Yao

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	0.250	0.10	40.14	-	40.24	-	61.77	51.77	-21.53	-
2	0.535	0.12	38.97	-	39.09	-	56.00	46.00	-16.91	-
3	0.994	0.20	26.52	-	26.72	-	56.00	46.00	-29.28	-
4	1.102	0.20	24.16	-	24.36	-	56.00	46.00	-31.64	-
5	1.246	0.20	24.53	-	24.73	-	56.00	46.00	-31.27	-
6	10.453	0.52	22.18	-	22.70	-	60.00	50.00	-37.30	-
7	24.164	0.88	27.49	-	28.37	-	60.00	50.00	-31.63	-

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.

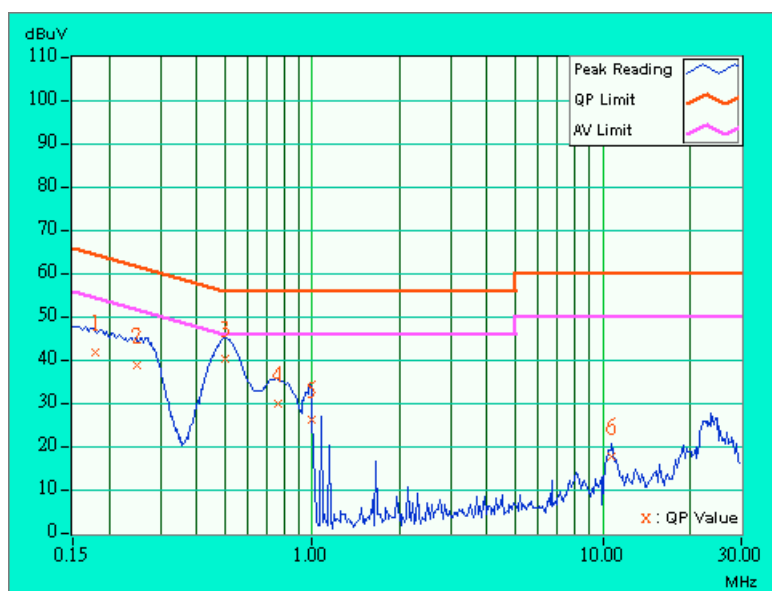


EUT	2.4GHz Wireless A/V Sender with infrared extender	MODEL	T-9800
MODE	Channel 2	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	35deg. C, 50%RH, 1005 hPa	TESTED BY: Bunny Yao	

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	0.180	0.10	41.40	-	41.50	-	64.47	54.47	-22.97	-
2	0.249	0.10	38.54	-	38.64	-	61.79	51.79	-23.15	-
3	0.502	0.12	39.96	-	40.08	-	56.00	46.00	-15.92	-
4	0.759	0.16	29.71	-	29.87	-	56.00	46.00	-26.13	-
5	0.994	0.20	25.90	-	26.10	-	56.00	46.00	-29.90	-
6	10.672	0.41	17.41	-	17.82	-	60.00	50.00	-42.18	-

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.

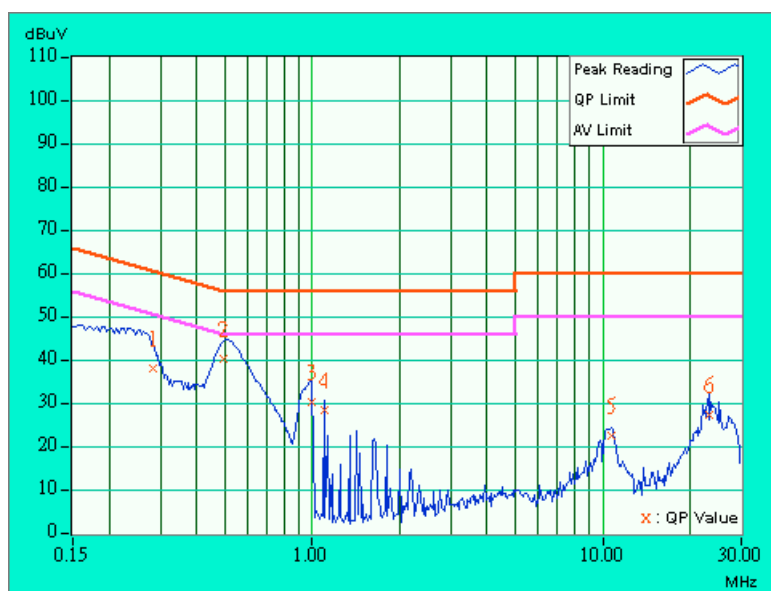


EUT	2.4GHz Wireless A/V Sender with infrared extender	MODEL	T-9800
MODE	Channel 4	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	35deg. C, 50%RH, 1005 hPa	TESTED BY:	Bunny Yao

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	0.282	0.10	37.26	-	37.36	-	60.75	50.75	-23.39	-
2	0.498	0.12	39.34	-	39.46	-	56.04	46.04	-16.58	-
3	0.998	0.20	29.51	-	29.71	-	56.00	46.00	-26.29	-
4	1.102	0.20	27.66	-	27.86	-	56.00	46.00	-28.14	-
5	10.680	0.53	21.67	-	22.20	-	60.00	50.00	-37.80	-
6	23.223	0.86	26.51	-	27.37	-	60.00	50.00	-32.63	-

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.

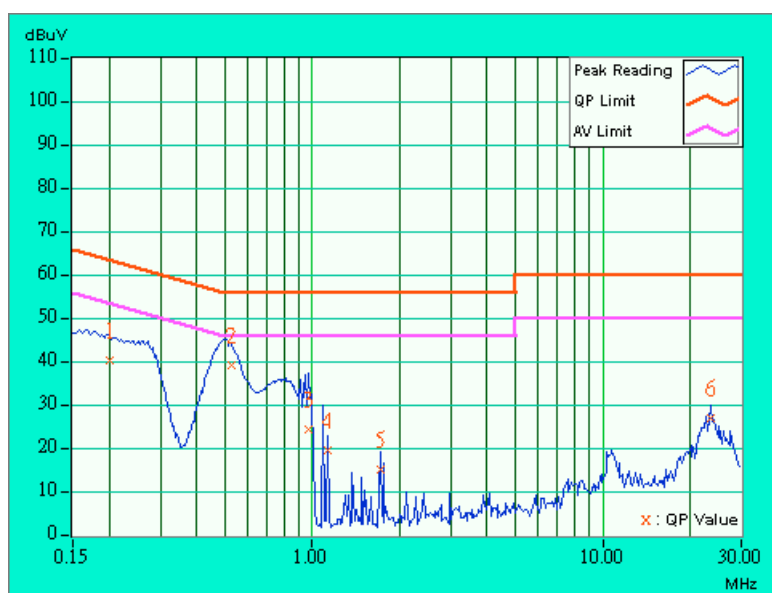


EUT	2.4GHz Wireless A/V Sender with infrared extender	MODEL	T-9800
MODE	Channel 4	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	35deg. C, 50%RH, 1005 hPa	TESTED BY: Bunny Yao	

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	0.201	0.10	39.69	-	39.79	-	63.58	53.58	-23.79	-
2	0.528	0.12	38.55	-	38.67	-	56.00	46.00	-17.33	-
3	0.966	0.19	23.93	-	24.12	-	56.00	46.00	-31.88	-
4	1.125	0.20	19.14	-	19.34	-	56.00	46.00	-36.66	-
5	1.715	0.20	14.70	-	14.90	-	56.00	46.00	-41.10	-
6	23.469	0.60	26.29	-	26.89	-	60.00	50.00	-33.11	-

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.



4.2 RADIATED EMISSION MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

According to 15.249 the field strength of emissions from intentional radiators operated under these frequencies bands shall not exceed the following:

Fundamental Frequency (MHz)	Field Strength of Fundamental (dBuV/m)	
	Peak	Average
2400 – 2483.5	114	94

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

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 INSTRUMENT

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
* HP Spectrum Analyzer	8590L	3544A01176	May 13, 2003
* HP Preamplifier	8447D	2944A08485	Apr. 29, 2003
* HP Preamplifier	8449B	3008A01201	Dec. 06, 2002
* HP Preamplifier	8449B	3008A01292	Aug. 07, 2003
* ROHDE & SCHWARZ TEST RECEIVER	ESMI	839013/007 839379/002	Jan. 27, 2003
SCHWARZBECK Tunable Dipole Antenna	VHA 9103 UHA 9105	E101051 E101055	Nov. 23, 2002
ANTENNA (Large Biconical)	VHBA9123	449	Dec. 10, 2002
* CHASE BILOG Antenna	CBL6112A	2221	Aug. 02, 2003
* SCHWARZBECK Horn Antenna	BBHA9120-D1	D130	Jul. 03, 2003
* EMCO Horn Antenna	3115	9312-4192	Apr. 09, 2003
* EMCO Turn Table	1060	1115	NA
* SHOSHIN Tower	AP-4701	A6Y005	NA
* Software	AS61D4	NA	NA
* ANRITSU RF Switches	MP59B	M35046	Jan. 25, 2003
* TIMES RF cable	LMR-600	CABLE-ST5-01	Jul. 12, 2003
Open Field Test Site	Site 5	ADT-R05	Jul. 19, 2003
VCCI Site Registration No.	Site 5	R-1039	NA

- 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 equipment are used for the final measurement.
4. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
5. The test was performed in ADT Open Site No. 5.

4.2.3 TEST PROCEDURE

- 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 the quasi-peak method or average method as specified and then reported in Data sheet peak mode and QP mode.

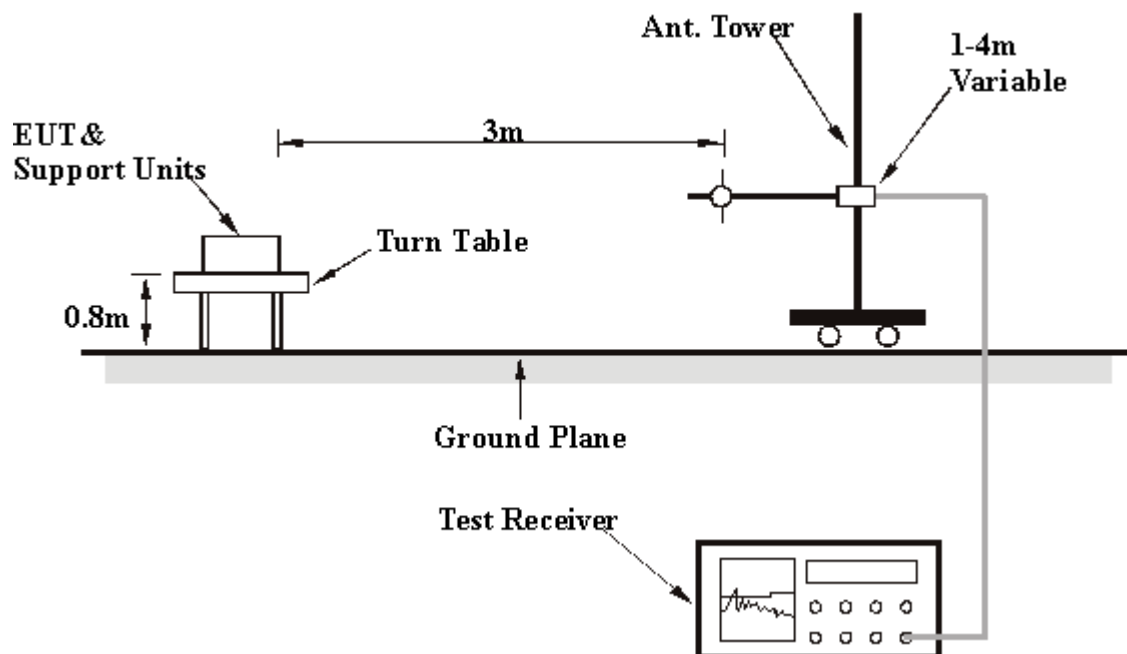
NOTE:

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

4.2.4 DEVIATION FROM TEST STANDARD

No deviation

4.2.5 TEST SETUP



For the actual test configuration, please refer to the related item in this test report - Photographs of the Test Configuration.

4.2.6 EUT OPERATING CONDITION

Same as item 4.1.6

4.2.7 TEST RESULT

EUT	2.4GHz Wireless A/V Sender with infrared extender	MODEL	T-9800
FREQUENCY RANGE	30 – 1000 MHz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	35deg. C, 50%RH, 1050 hPa	TESTED BY: Bunny Yao	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	240.00	23.5 QP	46.00	-22.50	1.75H	12	10.78	11.41	1.31	0.00	-12.72
2	298.00	20.0 QP	46.00	-26.00	1.75H	190	5.37	13.18	1.45	0.00	-14.63
3	420.00	39.2 QP	46.00	-6.80	2.20H	23	21.47	16.21	1.57	0.00	-17.78
4	512.00	26.9 QP	46.00	-19.10	1.28H	83	7.71	17.42	1.77	0.00	-19.20
5	544.00	28.8 QP	46.00	-17.20	1.31H	9	9.12	17.86	1.82	0.00	-19.69
6	576.00	24.3 QP	46.00	-21.70	1.38H	9	4.14	18.28	1.88	0.00	-20.17
7	848.00	42.8 QP	46.00	-3.20	1.15H	9	19.95	20.49	2.36	0.00	-22.86

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	240.00	25.8 QP	46.00	-20.20	1.33V	217	13.08	11.41	1.31	0.00	-12.72
2	320.00	27.0 QP	46.00	-19.00	1.33V	2	11.93	13.62	1.45	0.00	-15.07
3	420.00	38.8 QP	46.00	-7.20	1.14V	135	21.02	16.21	1.57	0.00	-17.79
4	544.00	23.5 QP	46.00	-22.50	1.74V	72	3.82	17.86	1.82	0.00	-19.69
5	576.00	27.0 QP	46.00	-19.00	1.74V	16	6.84	18.28	1.88	0.00	-20.17
6	840.00	43.0 QP	46.00	-3.00	1.41V	285	20.13	20.52	2.35	0.00	-22.88

NOTE:

1. Emission level(dBuV/m)=Raw Value(dBuV) – Correction Factor(dB)
2. Correction Factor(dB) = Pre-Amplifier Factor (dB) - Antenna Factor (dB) - Cable Factor (dB)
3. Pre-Amplifier Factor (dB) = 0, when the test receiver is used to read the value and because it did not use the Pre-Amplifier.
4. The other emission levels were very low against the limit.
5. Margin value = Emission level – Limit value.

EUT	2.4GHz Wireless A/V Sender with infrared extender	MODEL	T-9800
		FREQUENCY RANGE	Above 1 GHz
MODE	Channel 1	DETECTOR FUNCTION	Peak / Average
ENVIRONMENTAL CONDITIONS	35deg. C, 50%RH, 1050 hPa	TESTED BY: Bunny Yao	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	*2414.00	77.0 AV	94.00	-17.00	1.54H	202	44.28	27.67	5.10	0.00	-32.77
2	*2414.00	80.1 PK	114.00	-33.90	1.54H	202	47.30	27.67	5.10	0.00	-32.77
3	4828.00	38.9 AV	54.00	-15.10	1.46H	209	34.80	31.52	7.23	34.63	-4.12
4	4828.00	48.7 PK	74.00	-25.30	1.46H	209	44.60	31.52	7.23	34.63	-4.12

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	*2414.00	72.8 PK	114.00	-41.20	1.61V	302	40.00	27.67	5.10	0.00	-32.77
2	*2414.00	70.4 AV	94.00	-23.60	1.61V	302	37.60	27.67	5.10	0.00	-32.77
3	4828.00	40.9 AV	54.00	-13.10	1.17V	30	36.80	31.52	7.23	34.63	-4.12
4	4828.00	49.8 PK	74.00	-24.20	1.17V	0	45.70	31.52	7.23	34.63	-4.12

NOTE:

1. Emission level(dBuV/m)=Raw Value(dBuV) – Correction Factor(dB)
2. Correction Factor(dB) = Pre-Amplifier Factor (dB) - Antenna Factor (dB) - Cable Factor (dB)
3. Pre-Amplifier Factor (dB) = 0, when the test receiver is used to read the value and because it did not use the Pre-Amplifier.
4. The other emission levels were very low against the limit.
5. Margin value = Emission level – Limit value.
6. “*” = Fundamental frequency

EUT	2.4GHz Wireless A/V Sender with infrared extender	MODEL	T-9800
		FREQUENCY RANGE	Above 1 GHz
MODE	Channel 2	DETECTOR FUNCTION	Peak / Average
ENVIRONMENTAL CONDITIONS	35deg. C, 50%RH, 1050 hPa	TESTED BY: Bunny Yao	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	*2432.00	76.9 AV	94.00	-17.10	1.52H	193	44.00	27.81	5.08	0.00	-32.89
2	*2432.00	78.6 PK	114.00	-35.40	1.52H	193	45.70	27.81	5.08	0.00	-32.89
3	4864.00	50.1 PK	74.00	-23.90	1.42H	123	45.90	31.59	7.21	34.63	-4.17
4	4864.00	39.5 AV	54.00	-14.50	1.42H	123	35.30	31.59	7.21	34.63	-4.17

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	*2432.00	73.8 PK	114.00	-40.20	1.44V	49	40.90	27.81	5.08	0.00	-32.89
2	*2432.00	70.9 AV	94.00	-23.10	1.44V	49	38.00	27.81	5.08	0.00	-32.89
3	4864.00	40.2 AV	54.00	-13.80	1.22V	93	36.00	31.59	7.21	34.63	-4.17
4	4864.00	50.5 PK	74.00	-23.50	1.22V	93	46.30	31.59	7.21	34.63	-4.18

NOTE:

1. Emission level(dBuV/m)=Raw Value(dBuV) – Correction Factor(dB)
2. Correction Factor(dB) = Pre-Amplifier Factor (dB) - Antenna Factor (dB) - Cable Factor (dB)
3. Pre-Amplifier Factor (dB) = 0, when the test receiver is used to read the value and because it did not use the Pre-Amplifier.
4. The other emission levels were very low against the limit.
5. Margin value = Emission level – Limit value.
6. “*” = Fundamental frequency

EUT	2.4GHz Wireless A/V Sender with infrared extender	MODEL	T-9800
		FREQUENCY RANGE	Above 1 GHz
MODE	Channel 4	DETECTOR FUNCTION	Peak / Average
ENVIRONMENTAL CONDITIONS	35deg. C, 50%RH, 1050 hPa	TESTED BY: Bunny Yao	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	*2468.00	74.3 AV	94.00	-19.70	1.46H	227	41.30	27.96	5.06	0.00	-33.01
2	*2468.00	75.9 PK	114.00	-38.10	1.46H	227	42.90	27.96	5.06	0.00	-33.01
3	4936.00	48.4 PK	74.00	-25.60	1.18H	279	44.00	31.72	7.26	34.61	-4.38
4	4936.00	39.1 AV	54.00	-14.90	1.18H	279	34.70	31.72	7.26	34.61	-4.38

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	*2468.00	70.8 PK	114.00	-43.20	1.32V	172	37.80	27.96	5.06	0.00	-33.01
2	*2468.00	69.0 AV	94.00	-25.00	1.32V	172	36.00	27.96	5.06	0.00	-33.01
3	4936.00	40.1 AV	54.00	-13.90	1.09V	189	35.70	31.72	7.26	34.61	-4.38
4	4936.00	49.5 PK	74.00	-24.50	1.09V	189	45.10	31.72	7.26	34.61	-4.39

NOTE:

1. Emission level(dBuV/m)=Raw Value(dBuV) – Correction Factor(dB)
2. Correction Factor(dB) = Pre-Amplifier Factor (dB) - Antenna Factor (dB) - Cable Factor (dB)
3. Pre-Amplifier Factor (dB) = 0, when the test receiver is used to read the value and because it did not use the Pre-Amplifier.
4. The other emission levels were very low against the limit.
5. Margin value = Emission level – Limit value.
6. “*” = Fundamental frequency

4.3 BAND EDGES MEASUREMENT

4.3.1 LIMITS OF BAND EDGES MEASUREMENT

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

4.3.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK30	100049	July 24, 2003

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

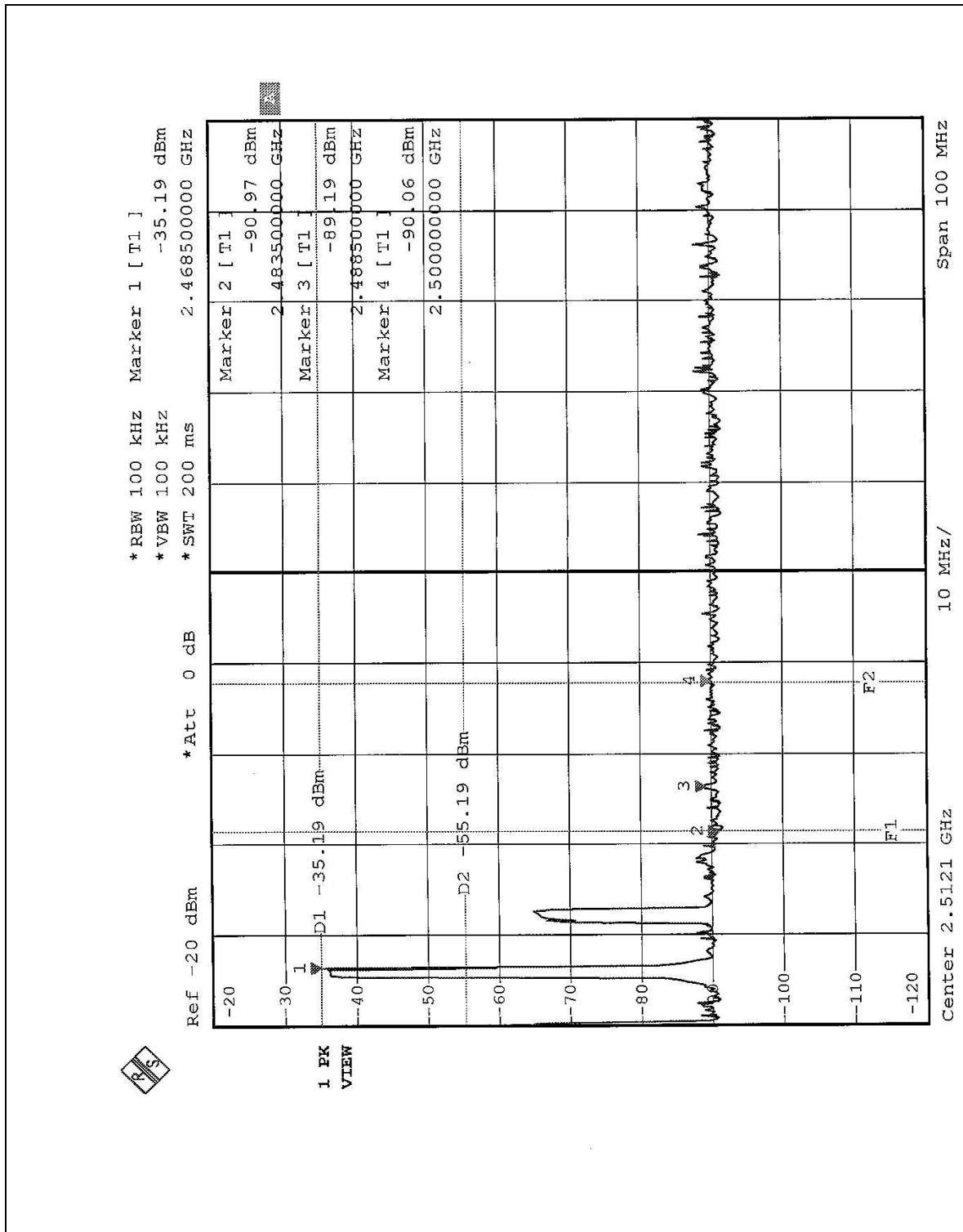
The transmitter output was connected to the spectrum analyzer via a low lose cable. Set both RBW and VBW of spectrum analyzer to 100 kHz with suitable frequency span including 100 kHz bandwidth from band edge. The band edges was measured and recorded.

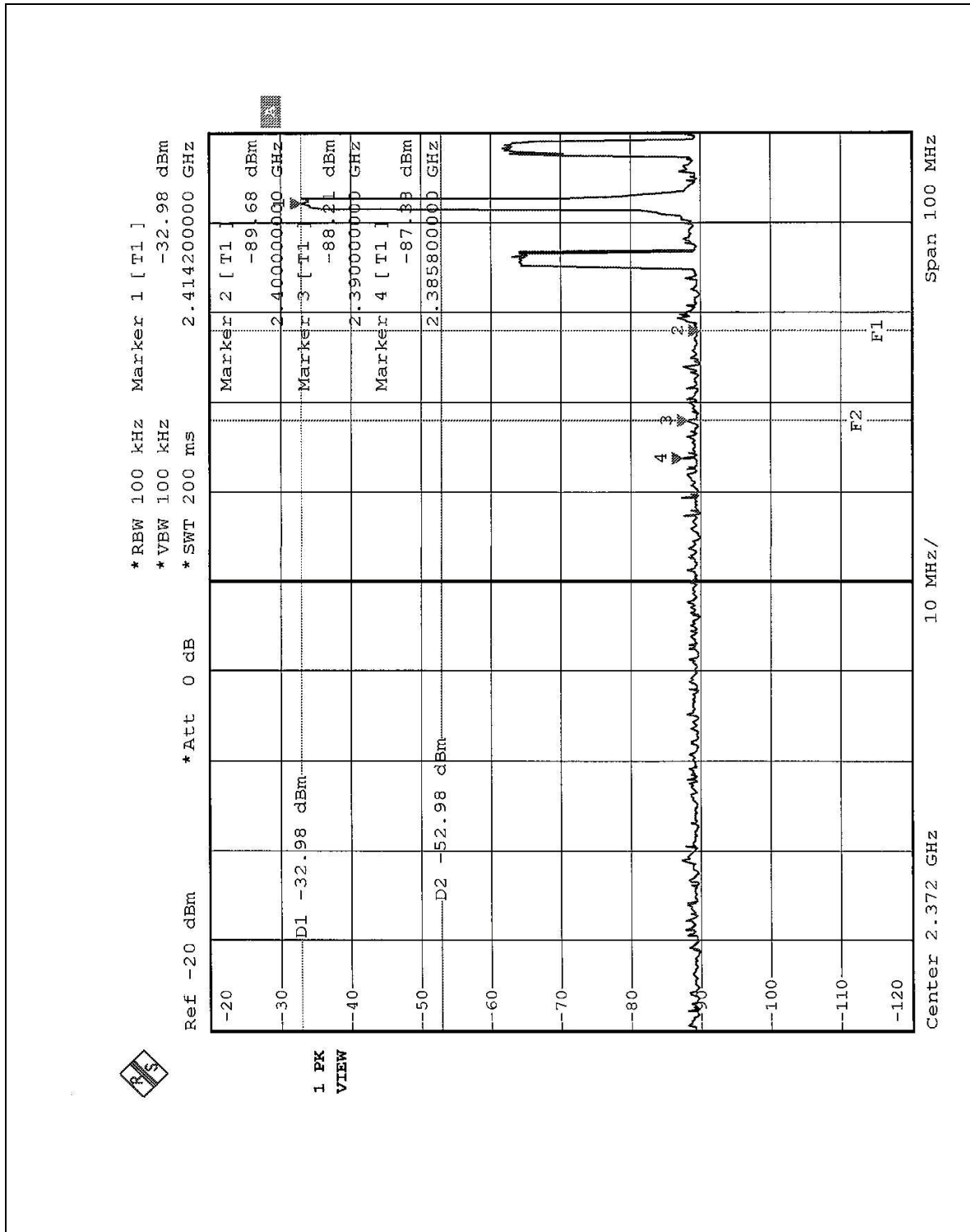
4.3.4 EUT OPERATING CONDITION

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

4.3.5 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 15.249(C).





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 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:

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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.