FCC TEST REPORT

REPORT NO.: FC960326A08

MODEL NO.: M870PU, M859PU, M871PU, M857PU

RECEIVED: March 26, 2007

TESTED: March 28 ~ 29, 2007

ISSUED: April 9, 2007

APPLICANT: BEHAVIOR TECH COMPUTER CORP.

ADDRESS: 20F-B, No.98, Sec. 1, Sintai 5th Rd., Sijhih City, Taipei County 22102, Taiwan (R.O.C.)

ISSUED BY: Advance Data Technology Corporation

LAB LOCATION: No. 47, 14th Ling, Chia Pau Tsuen, Lin Kou Hsiang 244, Taipei Hsien, Taiwan, R.O.C.

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1 CERTIFICATION

PRODUCT:	Mouse
BRAND NAME:	BTC, EMPREX
MODEL NO:	M870PU, M859PU, M871PU, M857PU
TEST ITEM:	ENGINEERING SAMPLE
APPLICANT:	BEHAVIOR TECH COMPUTER CORP.
TESTED:	March 28 ~ 29, 2007
STANDARDS:	FCC Part 15: 2006, Subpart B, Class B
	CISPR 22: 1997, Class B
	ICES-003: 2004, Class B
	ANSI C63.4-2003

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 : Jessica Cheng , **DATE:** April 9, 2007
(Jessica Cheng)

TECHNICAL ACCEPTANCE : Ken Liu , **DATE:** April 9, 2007
Responsible for EMI
(Ken Liu)

APPROVED BY : Kenny Meng , **DATE:** April 9, 2007
(Kenny Meng, Deputy Manager)

2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

Standard	Test Type	Result	Remarks
FCC Part 15: 2006 Subpart B, Class B CISPR 22: 1997, Class B ICES-003: 2004, Class B	Conducted Test	PASS	Meets Class B Limit Minimum passing margin is –22.47dB at 0.169 MHz
	Radiated Test	PASS	Meets Class B Limit Minimum passing margin is –6.02 dB at 984.20 MHz

Note: The limit for radiated test was performed according to CISPR 22: 1997, which was specified in FCC PART 15 Subpart B 15.109(g). Also the limits of ICES-003: 2004 and CISPR 22:1997 Subpart B are same.

2.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4:

"This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2."

Measurement	Value
Conducted emissions	2.45dB
Radiated emissions	3.42dB

3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Mouse
MODEL NO.	M870PU, M859PU, M871PU, M857PU
FCC ID	E5XMSM870PU
POWER SUPPLY	DC 5V (from PC)
DATA CABLE SUPPLIED	Shielded USB cable (1.8m) with one core.

NOTE:

1. The EUT is a Mouse with USB interface.
2. The EUT has four model names, which are identical to each other in all aspects for their outer appearance and PCB layout different the following:

Brand Name	Model Name	Remark
BTC, EMPREX	M870PU	outer appearance and PCB layout different
	M859PU	
	M871PU	
	M857PU	

From the above models, all models were selected as representative models for the test and these test data were recorded in this report.

3. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

3.2 DESCRIPTION OF TEST MODEL

The EUT was tested under the following modes:

Test Result	Test model
1	M870PU
2	M859PU
3	M871PU
4	M857PU

3.3 DESCRIPTION OF SUPPORT UNITS

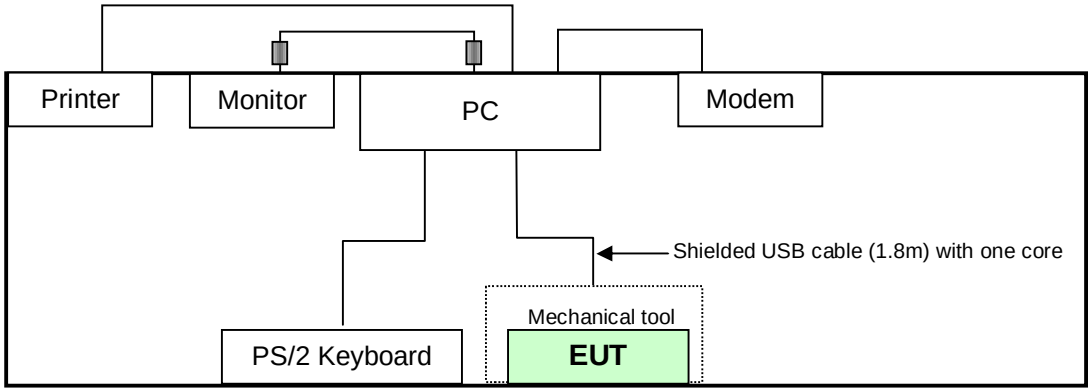
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	PERSONAL COMPUTER	LEO	Persica 8620G	1A36I98A000213	FCC DoC Approved
2	MONITOR	ADI	CM100	240058T00100112	FCC DoC Approved
3	PRINTER	EPSON	LQ-300+	DCGY017076	FCC DoC Approved
4	MODEM	ACEEX	1414	980020512	IFAXDM1414
5	PS/2 KEYBOARD	BTC	5200T	F24800258	E5XKB5122WTH0110

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	N/A
2	1.8 m braid shielded wire, terminated with VGA connector via metallic frame, with two cores
3	1.8m braid shielded wire, terminated with DB25 and Centronics connector via metallic frame, w/o core
4	1.2 m braid shielded wire, terminated with DB25 and DB9 connector via metallic frame, w/o core.
5	1.6 m foil shielded wire, terminated with PS/2 connector via metallic frame, w/o core.

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

TEST CONFIGURATION



4 EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

TEST STANDARD:
FCC Part 15: 2006, Subpart B (Section: 15.107)
CISPR 22: 1997 (section 5)
ICES-003: 2004 (Class A: section 5.2)
(Class B: section 5.3)

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79	66	66 - 56	56 - 46
0.50 - 5.0	73	60	56	46
5.0 - 30.0	73	60	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	ESHS 30	828765/002	Jul. 27, 2007
ROHDE & SCHWARZ Artificial Mains Network (for EUT)	ESH3-Z5	835239/001	Feb. 26, 2008
LISN With Adapter (for EUT)	AD10	C09Ada-001	Feb. 26, 2008
ROHDE & SCHWARZ Artificial Mains Network (for peripherals)	ESH3-Z5	835239/002	Mar. 13, 2008
ROHDE & SCHWARZ 4-wire ISN	ENY41	835154/007	Apr. 02, 2007
ROHDE & SCHWARZ 2-wire ISN	ENY22	833823/026	Apr. 02, 2007
Software	ADT_Cond_V7.3.2	NA	NA
Software	ADT_ISN_V7.3.2	NA	NA
RF cable (JYEBAO)	5D-FB	Cable-C09.01	Mar. 30, 2007
SUHNER Terminator (For ROHDE & SCHWARZ LISN)	65BNC-5001	E1-010789	May 21, 2007

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 ADT Shielded Room No. 9.
3. The VCCI Site Registration No. C-1312.

4.1.3 TEST PROCEDURE

The basic test procedure was in accordance with ANSI C63.4-2003 (section 7), CISPR 22 (section 9) and ICES-003: 2004 (section 4).

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.

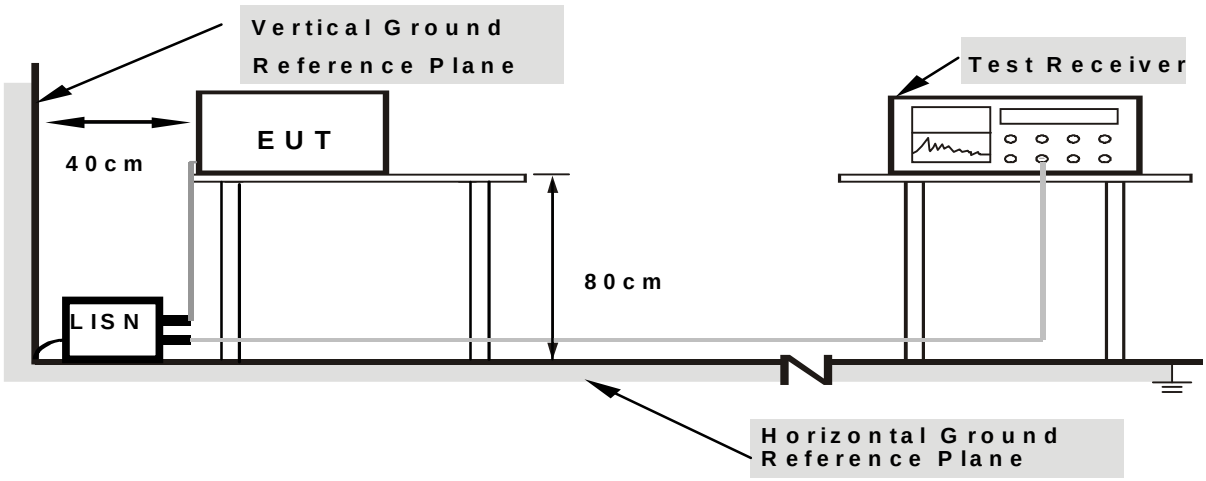
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit - 20dB) were 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) are 80 cm from EUT and at least 80 cm from other units and other metal planes

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

4.1.6 EUT OPERATING CONDITIONS

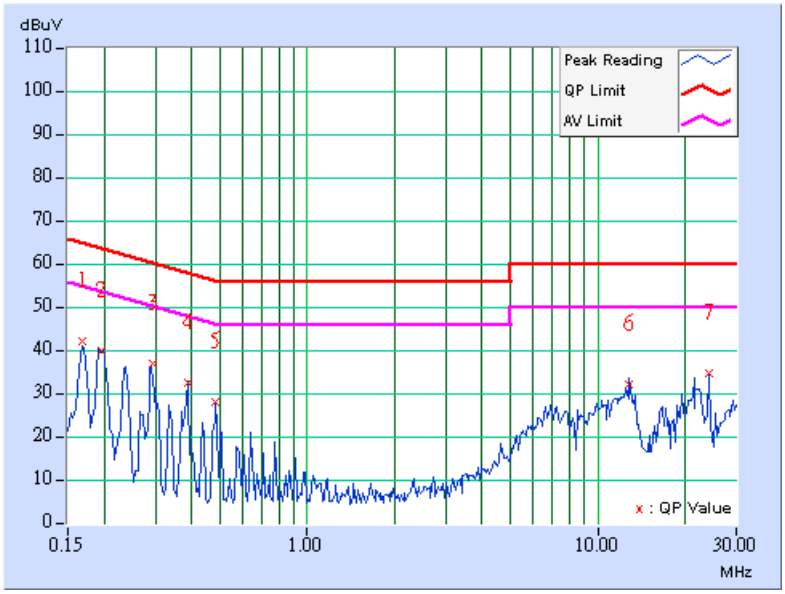
a. Turned on the power of all equipment.
b. PC ran a test program to enable all functions.
c. PC read and wrote messages from HDD.
d. PC sent "H" messages to monitor and monitor displays "H" patterns on screen.
e. A mechanical tool designed for help the EUT, was turned on the working mode function.
f. PC sent messages to modem.
g. PC sent messages to printer, and then printer printed them out.
h. Steps c-h were repeated.

4.1.7 TEST RESULTS (1)

TEST MODEL	M870PU	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	22deg. C, 75%RH, 1002hPa	TESTED BY	Martin Lee

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	0.169	0.30	40.60	-	40.90	-	65.03	55.03	-24.13	-
2	0.195	0.30	38.21	-	38.51	-	63.80	53.80	-25.29	-
3	0.292	0.30	35.38	-	35.68	-	60.45	50.45	-24.77	-
4	0.390	0.30	30.89	-	31.19	-	58.07	48.07	-26.88	-
5	0.483	0.30	26.48	-	26.78	-	56.29	46.29	-29.51	-
6	12.848	0.97	30.56	-	31.53	-	60.00	50.00	-28.47	-
7	24.047	1.62	33.11	-	34.73	-	60.00	50.00	-25.27	-

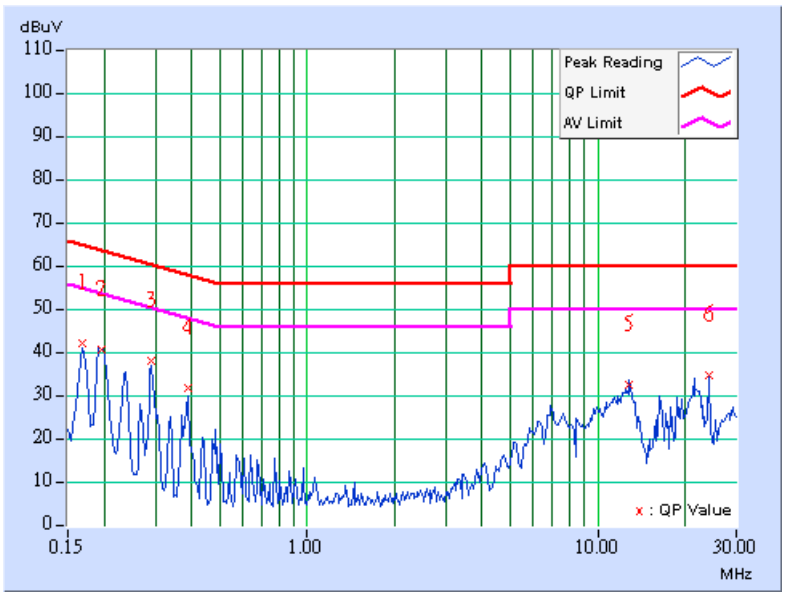
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



TEST MODEL	M870PU	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	22deg. C, 75%RH, 1002hPa	**TESTED BY**	Martin Lee

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	0.169	0.20	40.78	-	40.98	-	65.02	55.02	-24.04	-
2	0.196	0.20	39.44	-	39.64	-	63.78	53.78	-24.14	-
3	0.291	0.20	36.55	-	36.75	-	60.50	50.50	-23.75	-
4	0.387	0.20	30.35	-	30.55	-	58.13	48.13	-27.58	-
5	12.848	0.87	31.10	-	31.97	-	60.00	50.00	-28.03	-
6	24.046	1.42	33.29	-	34.71	-	60.00	50.00	-25.29	-

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.

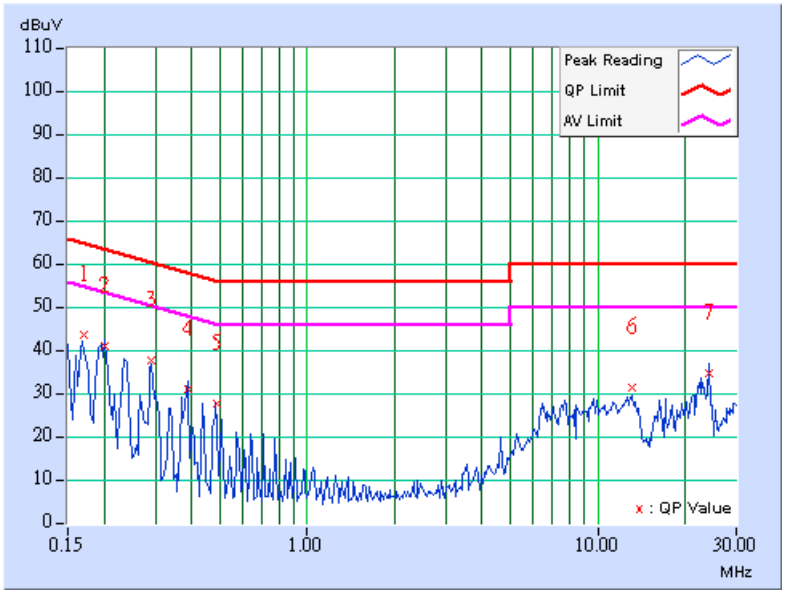


4.1.8 TEST RESULTS (2)

TEST MODEL	M859PU	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	22deg. C, 75%RH, 1002hPa	**TESTED BY**	Martin Lee

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	**0.169**	**0.30**	**42.23**	**-**	**42.53**	**-**	**65.00**	**55.00**	**-22.47**	**-**
2	0.201	0.30	39.46	-	39.76	-	63.57	53.57	-23.81	-
3	0.291	0.30	36.32	-	36.62	-	60.50	50.50	-23.88	-
4	0.391	0.30	29.45	-	29.75	-	58.05	48.05	-28.30	-
5	0.486	0.30	25.97	-	26.27	-	56.24	46.24	-29.97	-
6	13.148	0.99	29.88	-	30.87	-	60.00	50.00	-29.13	-
7	24.074	1.63	33.01	-	34.64	-	60.00	50.00	-25.36	-

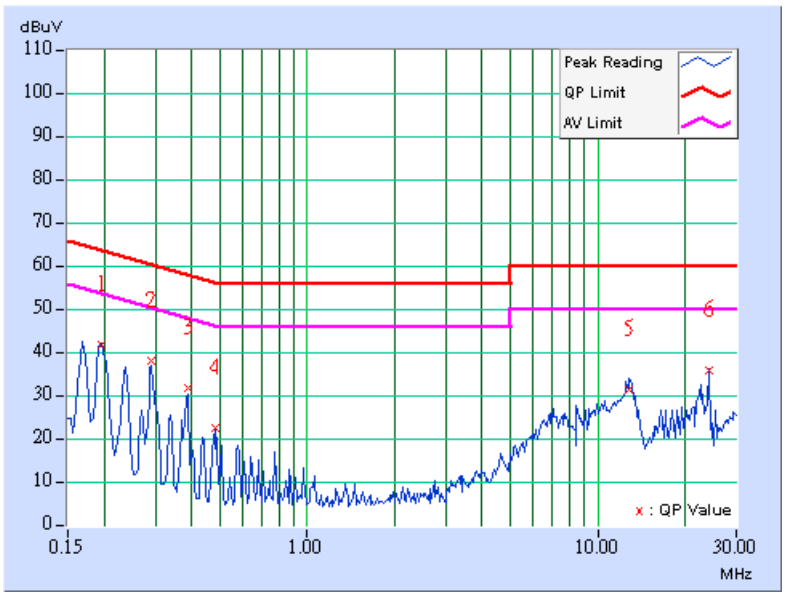
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



TEST MODEL	M859PU	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	22deg. C, 75%RH, 1002hPa	**TESTED BY**	Martin Lee

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	0.195	0.20	40.40	-	40.60	-	63.82	53.82	-23.22	-
2	0.291	0.20	36.55	-	36.75	-	60.50	50.50	-23.75	-
3	0.387	0.20	30.43	-	30.63	-	58.13	48.13	-27.50	-
4	0.483	0.20	21.06	-	21.26	-	56.29	46.29	-35.03	-
5	12.848	0.87	30.00	-	30.87	-	60.00	50.00	-29.13	-
6	24.071	1.43	34.64	-	36.07	-	60.00	50.00	-23.93	-

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.

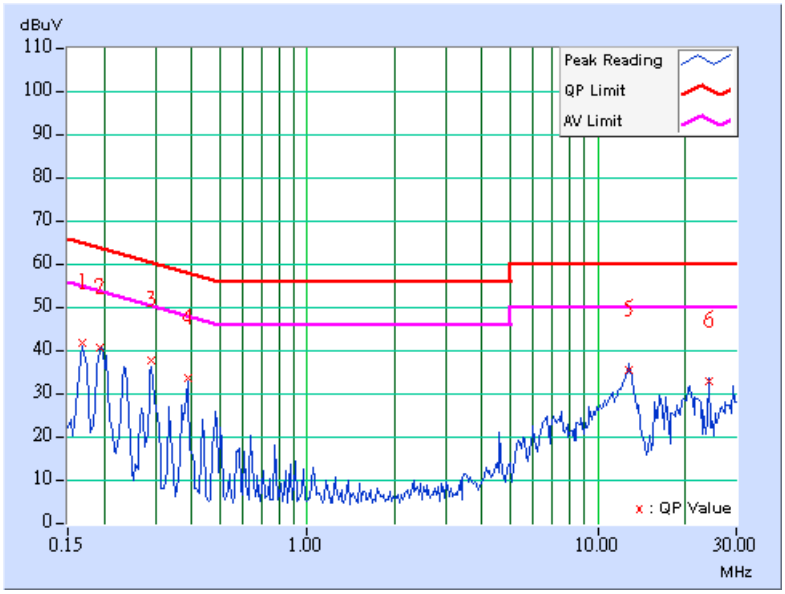


4.1.9 TEST RESULTS (3)

TEST MODEL	M871PU	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	22deg. C, 75%RH, 1002hPa	TESTED BY	Martin Lee

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	0.168	0.30	40.30	-	40.60	-	65.06	55.06	-24.46	-
2	0.194	0.30	38.93	-	39.23	-	63.88	53.88	-24.65	-
3	0.291	0.30	36.10	-	36.40	-	60.50	50.50	-24.10	-
4	0.388	0.30	32.02	-	32.32	-	58.11	48.11	-25.79	-
5	12.851	0.97	33.99	-	34.96	-	60.00	50.00	-25.04	-
6	24.110	1.63	31.36	-	32.99	-	60.00	50.00	-27.01	-

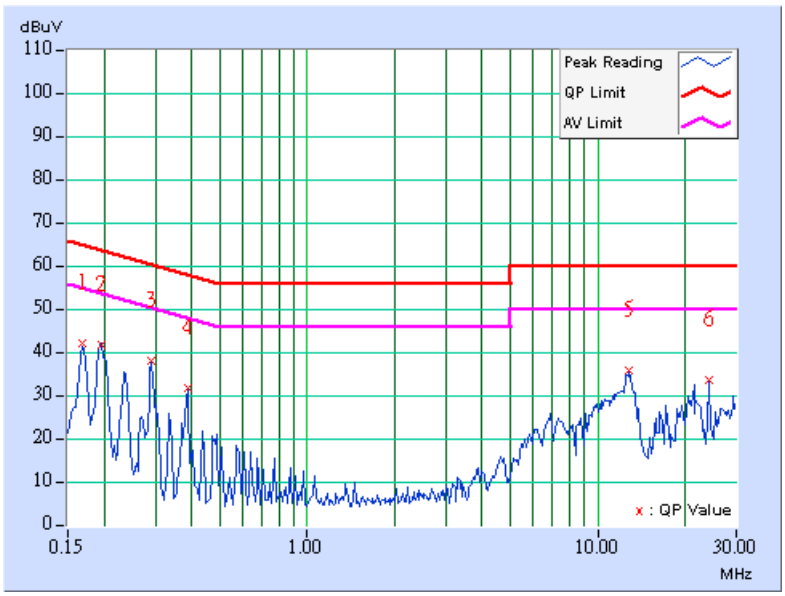
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



TEST MODEL	M871PU	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	22deg. C, 75%RH, 1002hPa	**TESTED BY**	Martin Lee

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	0.168	0.20	40.66	-	40.86	-	65.04	55.04	-24.18	-
2	0.195	0.20	40.38	-	40.58	-	63.82	53.82	-23.24	-
3	0.291	0.20	36.63	-	36.83	-	60.50	50.50	-23.67	-
4	0.387	0.20	30.39	-	30.59	-	58.13	48.13	-27.54	-
5	12.848	0.87	34.32	-	35.19	-	60.00	50.00	-24.81	-
6	24.109	1.43	32.09	-	33.52	-	60.00	50.00	-26.48	-

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.

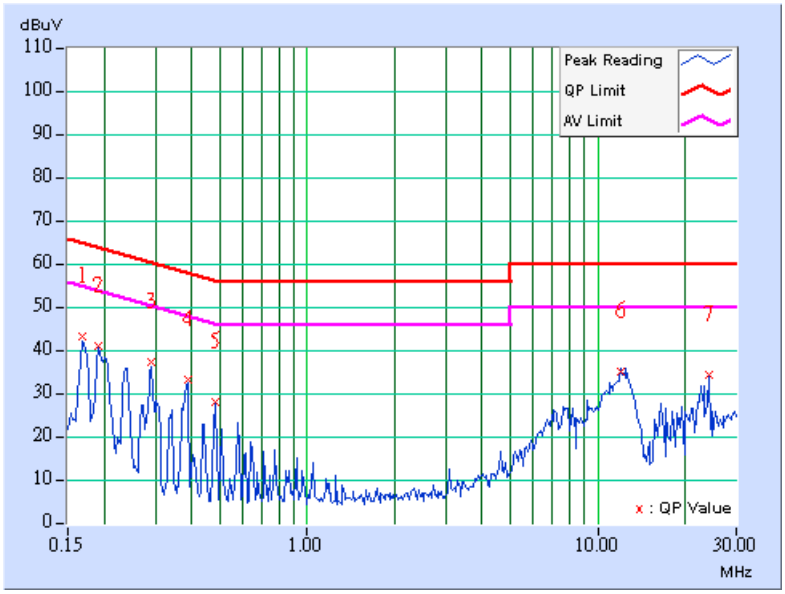


4.1.10 TEST RESULTS (4)

TEST MODEL	M857PU	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	22deg. C, 75%RH, 1002hPa	TESTED BY	Martin Lee

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	0.168	0.30	41.69	-	41.99	-	65.04	55.04	-23.05	-
2	0.192	0.30	39.32	-	39.62	-	63.95	53.95	-24.33	-
3	0.291	0.30	35.70	-	36.00	-	60.50	50.50	-24.50	-
4	0.387	0.30	31.66	-	31.96	-	58.13	48.13	-26.17	-
5	0.481	0.30	26.54	-	26.84	-	56.32	46.32	-29.48	-
6	11.945	0.92	33.73	-	34.65	-	60.00	50.00	-25.35	-
7	24.026	1.62	32.77	-	34.39	-	60.00	50.00	-25.61	-

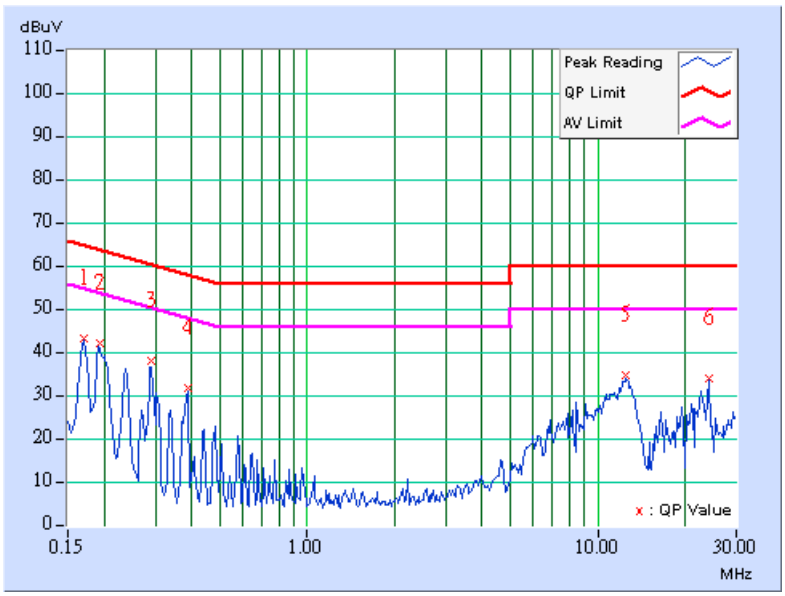
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



TEST MODEL	M857PU	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	22deg. C, 75%RH, 1002hPa	**TESTED BY**	Martin Lee

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	0.171	0.20	41.87	-	42.07	-	64.89	54.89	-22.82	-
2	0.194	0.20	40.90	-	41.10	-	63.87	53.87	-22.77	-
3	0.290	0.20	36.65	-	36.85	-	60.53	50.53	-23.68	-
4	0.387	0.20	30.39	-	30.59	-	58.13	48.13	-27.54	-
5	12.547	0.85	33.54	-	34.39	-	60.00	50.00	-25.61	-
6	24.026	1.42	32.49	-	33.91	-	60.00	50.00	-26.09	-

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

TEST STANDARD:
FCC Part 15: 2006, Subpart B (Section: 15.109)
CISPR 22: 1997 (section 6)
ICES-003: 2004 (Class A: Section 5.4)
(Class B: Section 5.5)

FOR FREQUENCY BELOW 1000 MHz

FREQUENCY (MHz)	Class A (at 10m)	Class B (at 10m)
	dBuV/m	dBuV/m
30 – 230	40	30
230 - 1000	47	37

Note: The limit for radiated test was performed according to CISPR 22: 1997, which was specified in FCC PART 15B 15.109(g). Also the limits of ICES-003: 2004 and CISPR 22: 1997 are same.

LIMIT OF RADIATED EMISSION OF FCC PART 15, SUBPART B FOR FREQUENCY ABOVE 1000 MHz

FREQUENCY (MHz)	Class A (dBuV/m) (at 3m)		Class B (dBuV/m) (at 3m)	
	PEAK	AVERAGE	PEAK	AVERAGE
Above 1000	80.0	60.0	74.0	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) All emanation 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.

FREQUENCY RANGE OF RADIATED MEASUREMENT (For unintentional radiators)

Highest frequency generated or Upper frequency of measurement used in the device or on which the device operates or tunes (MHz)	Range (MHz)
Below 1.705	30
1.705 – 108	1000
108 – 500	2000
500 – 1000	5000
Above 1000	5th harmonic of the highest frequency or 40 GHz, whichever is lower

4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
HP Preamplifier	8449B	3008A01292	Aug. 06, 2007
HP Preamplifier	8449B	3008A01638	Sep. 17, 2007
ROHDE & SCHWARZ TEST RECEIVER	ESVS 30	841977/008	May 04, 2007
SCHAFFNER BILOG Antenna	CBL6111C	2793	Jun. 22, 2007
EMCO Horn Antenna	3115	00028257	Sep. 11, 2007
EMCO Horn Antenna	BBHA-9170	BBHA9170190	May 22, 2007
ADT. Turn Table	TT100	0201	NA
ADT. Tower	AT100	0201	NA
Software	ADT_Radiated_V 7.6.15	NA	NA
ADT RF Switches BOX	EM-H-01-1	1004	Dec. 22, 2007
WOKEN RF cable	8D	CABLE-ST10-01	Dec. 22, 2007

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 horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
3. The test was performed in ADT Open Site No. 10.
4. The VCCI Site Registration No. R-1625.
5. The Industry Canada Reference No. IC 3789A-10.

4.2.3 TEST PROCEDURE

The basic test procedure was in accordance with ANSI C63.4-2003 (section 8), CISPR 22 (section 10) and ICES-003: 2004 (section 4).

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 10 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 turn 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. The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

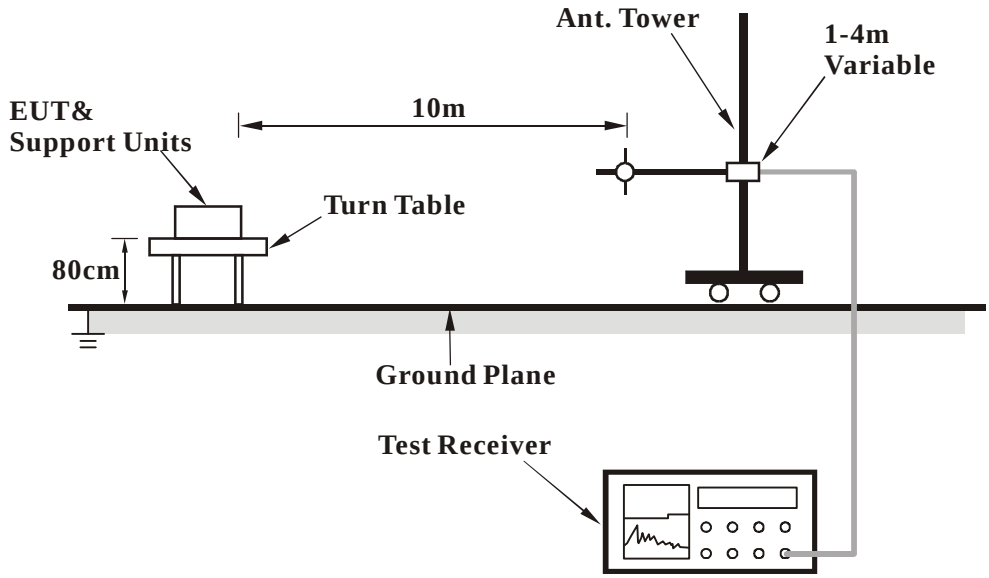
NOTE:

1. The resolution bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth is 1MHz and video bandwidth of test receiver/spectrum analyzer is 3MHz for Peak detection at frequency above 1GHz. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz for Average detection (AV) at frequency above 1GHz.
3. For measurement of frequency above 1000 MHz, the EUT was set 3 meters away from the interference antenna.

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

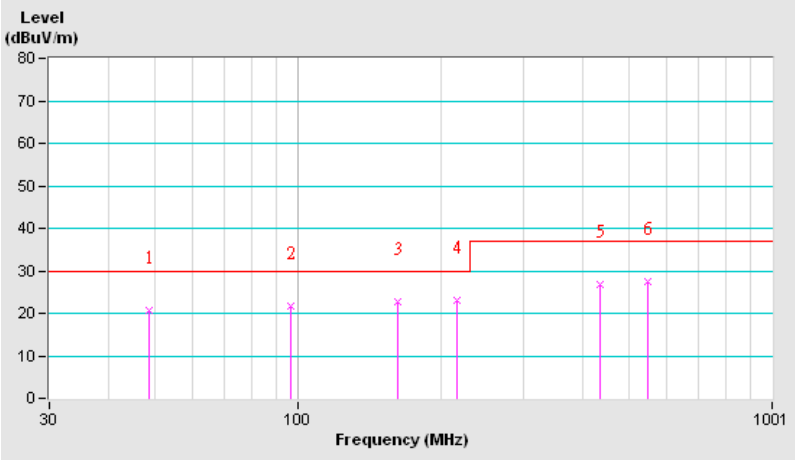
Same as item 4.1.6

4.2.7 TEST RESULTS (1)

TEST MODEL	M870PU	**FREQUENCY RANGE**	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION & RESOLUTION BANDWIDTH**	Quasi-Peak, 120kHz
ENVIRONMENTAL CONDITIONS	17deg. C, 80% RH, 1001hPa	**TESTED BY**	Martin Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 10 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	48.53	20.74 QP	30.00	-9.26	4.00 H	318	9.78	10.96
2	96.42	21.69 QP	30.00	-8.31	4.00 H	0	10.15	11.54
3	162.70	22.74 QP	30.00	-7.26	4.00 H	286	10.16	12.58
4	217.00	23.15 QP	30.00	-6.85	4.00 H	222	10.38	12.77
5	434.00	26.78 QP	37.00	-10.22	2.04 H	41	5.99	20.79
6	546.00	27.41 QP	37.00	-9.59	1.89 H	63	4.04	23.37

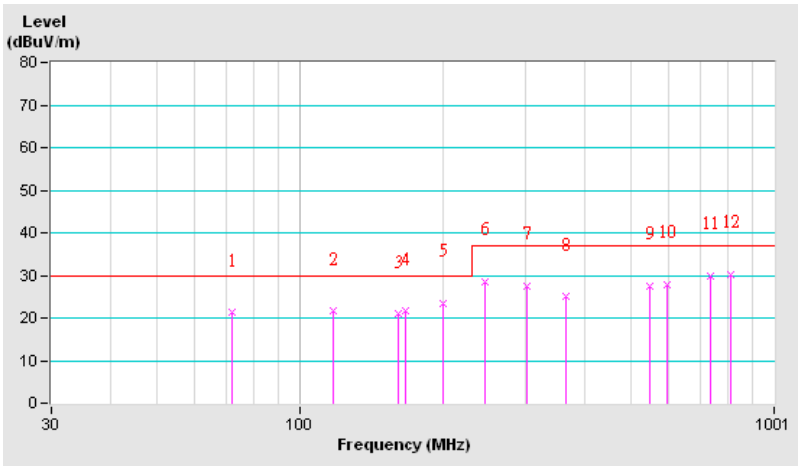
REMARKS: 1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.



TEST MODEL	M870PU	**FREQUENCY RANGE**	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION & RESOLUTION BANDWIDTH**	Quasi-Peak, 120kHz
ENVIRONMENTAL CONDITIONS	17deg. C, 80% RH, 1001hPa	**TESTED BY**	Martin Lee

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 10 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	72.04	21.21 QP	30.00	-8.79	1.00 V	221	12.90	8.31
2	117.66	21.61 QP	30.00	-8.39	1.00 V	72	8.13	13.48
3	161.60	20.90 QP	30.00	-9.10	1.00 V	100	8.24	12.66
4	166.80	21.60 QP	30.00	-8.40	1.00 V	190	9.31	12.29
5	201.00	23.35 QP	30.00	-6.65	1.00 V	308	11.94	11.41
6	246.60	28.47 QP	37.00	-8.53	1.00 V	66	13.20	15.27
7	300.60	27.42 QP	37.00	-9.58	1.00 V	213	11.01	16.41
8	364.30	24.97 QP	37.00	-12.03	1.00 V	272	6.46	18.51
9	547.00	27.51 QP	37.00	-9.49	1.83 V	53	4.13	23.38
10	595.00	27.84 QP	37.00	-9.16	1.00 V	199	3.52	24.32
11	736.00	29.95 QP	37.00	-7.05	2.38 V	351	2.66	27.29
12	809.50	30.26 QP	37.00	-6.74	3.05 V	50	2.28	27.98

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

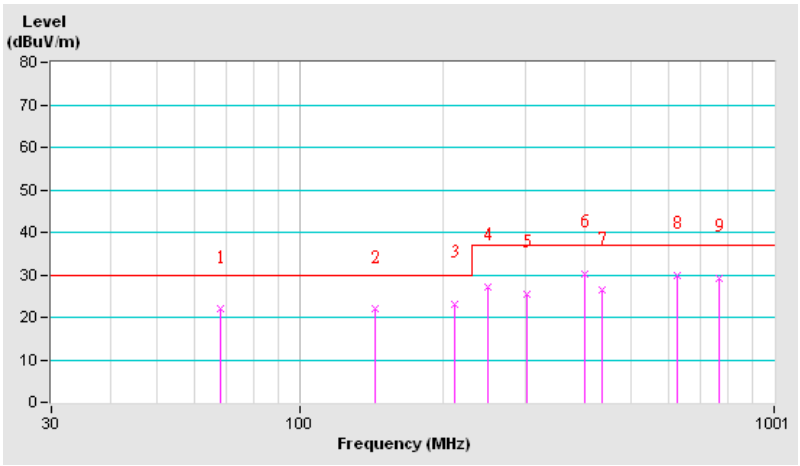


4.2.8 TEST RESULTS (2)

TEST MODEL	M859PU	FREQUENCY RANGE	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION & RESOLUTION BANDWIDTH	Quasi-Peak, 120kHz
ENVIRONMENTAL CONDITIONS	17deg. C, 80% RH, 1001hPa	TESTED BY	Martin Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 10 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	68.19	21.89 QP	30.00	-8.11	4.00 H	341	13.97	7.92
2	143.88	21.90 QP	30.00	-8.10	4.00 H	83	8.61	13.29
3	212.00	23.20 QP	30.00	-6.80	3.90 H	228	10.85	12.35
4	249.00	27.10 QP	37.00	-9.90	4.00 H	82	11.62	15.48
5	301.80	25.35 QP	37.00	-11.65	1.02 H	84	8.90	16.45
6	398.00	30.29 QP	37.00	-6.71	2.48 H	19	10.76	19.53
7	433.00	26.32 QP	37.00	-10.68	1.89 H	211	5.57	20.75
8	625.50	29.97 QP	37.00	-7.03	1.99 H	278	4.93	25.04
9	767.30	29.09 QP	37.00	-7.91	2.79 H	121	1.30	27.79

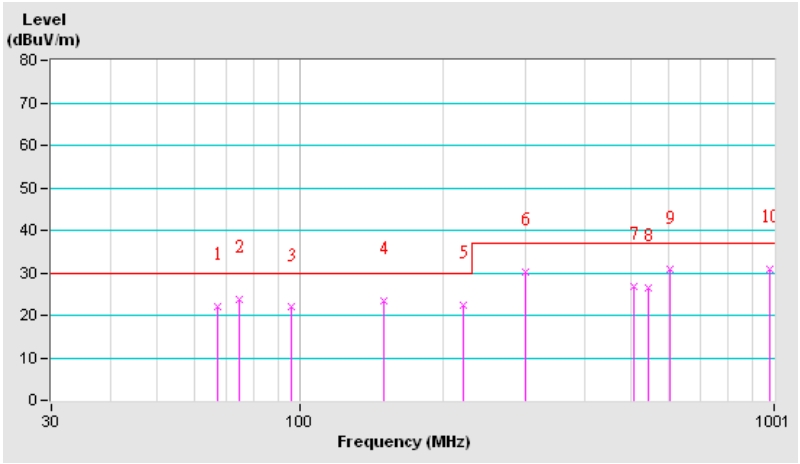
REMARKS: 1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.



TEST MODEL	M859PU	**FREQUENCY RANGE**	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION & RESOLUTION BANDWIDTH**	Quasi-Peak, 120kHz
ENVIRONMENTAL CONDITIONS	17deg. C, 80% RH, 1001hPa	**TESTED BY**	Martin Lee

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 10 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	67.19	22.20 QP	30.00	-7.80	1.00 V	74	14.35	7.85
2	74.75	23.71 QP	30.00	-6.29	1.00 V	208	15.05	8.66
3	96.17	21.92 QP	30.00	-8.08	1.00 V	284	10.41	11.51
4	150.70	23.36 QP	30.00	-6.64	1.00 V	225	10.29	13.07
5	221.80	22.36 QP	30.00	-7.64	1.00 V	324	9.19	13.17
6	300.00	30.13 QP	37.00	-6.87	1.00 V	160	13.74	16.39
7	506.50	26.72 QP	37.00	-10.28	2.98 V	198	4.09	22.63
8	543.30	26.48 QP	37.00	-10.52	2.63 V	326	3.16	23.32
9	602.80	30.70 QP	37.00	-6.30	1.87 V	59	6.21	24.49
10	980.70	30.86 QP	37.00	-6.14	1.93 V	14	0.10	30.76

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

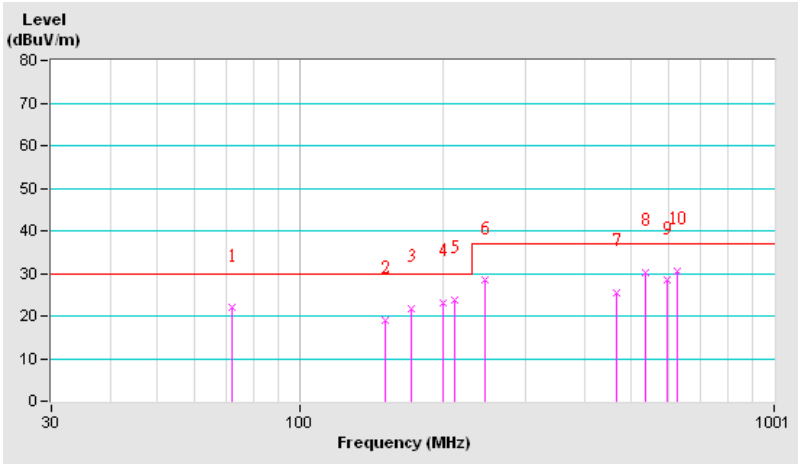


4.2.9 TEST RESULTS (3)

TEST MODEL	M871PU	FREQUENCY RANGE	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION & RESOLUTION BANDWIDTH	Quasi-Peak, 120kHz
ENVIRONMENTAL CONDITIONS	17deg. C, 80% RH, 1001hPa	TESTED BY	Martin Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 10 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	71.90	21.88 QP	30.00	-8.12	4.00 H	293	13.59	8.29
2	151.70	19.06 QP	30.00	-10.94	4.00 H	52	6.02	13.04
3	171.94	21.73 QP	30.00	-8.27	4.00 H	134	9.81	11.92
4	200.00	23.00 QP	30.00	-7.00	4.00 H	263	11.67	11.33
5	212.00	23.89 QP	30.00	-6.11	2.66 H	19	11.54	12.35
6	245.00	28.36 QP	37.00	-8.64	1.00 H	29	13.22	15.14
7	465.50	25.47 QP	37.00	-11.53	1.82 H	293	3.76	21.71
8	535.00	30.09 QP	37.00	-6.91	1.51 H	212	6.93	23.16
9	593.80	28.36 QP	37.00	-8.64	1.98 H	329	4.06	24.30
10	626.30	30.58 QP	37.00	-6.42	1.78 H	315	5.52	25.06

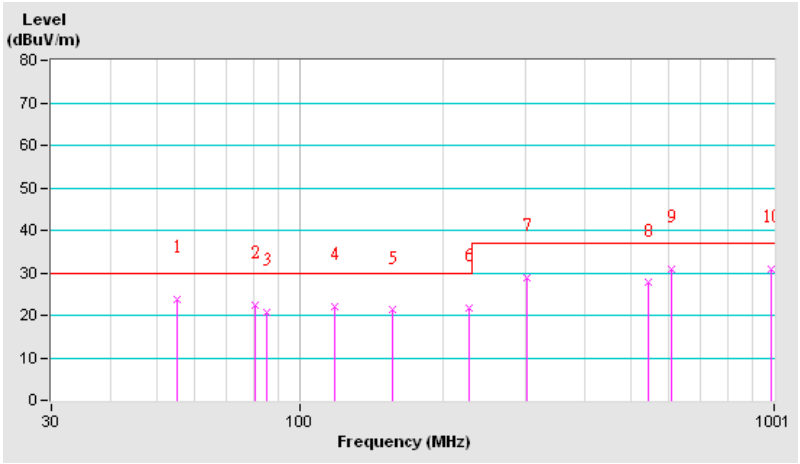
REMARKS: 1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.



TEST MODEL	M871PU	**FREQUENCY RANGE**	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION & RESOLUTION BANDWIDTH**	Quasi-Peak, 120kHz
ENVIRONMENTAL CONDITIONS	17deg. C, 80% RH, 1001hPa	**TESTED BY**	Martin Lee

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 10 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	55.22	23.88 QP	30.00	-6.12	1.00 V	325	15.11	8.77
2	80.59	22.53 QP	30.00	-7.47	1.00 V	271	13.12	9.41
3	85.29	20.71 QP	30.00	-9.29	1.00 V	166	10.69	10.02
4	118.10	22.00 QP	30.00	-8.00	1.00 V	54	8.48	13.52
5	156.50	21.25 QP	30.00	-8.75	1.00 V	141	8.37	12.88
6	227.50	21.67 QP	30.00	-8.33	1.00 V	196	8.01	13.66
7	301.80	28.85 QP	37.00	-8.15	1.00 V	355	12.40	16.45
8	545.00	27.64 QP	37.00	-9.36	1.54 V	0	4.29	23.35
9	606.30	30.89 QP	37.00	-6.11	2.07 V	37	6.32	24.57
10	**984.20**	**30.98 QP**	**37.00**	**-6.02**	**2.24 V**	**19**	**0.22**	**30.76**

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

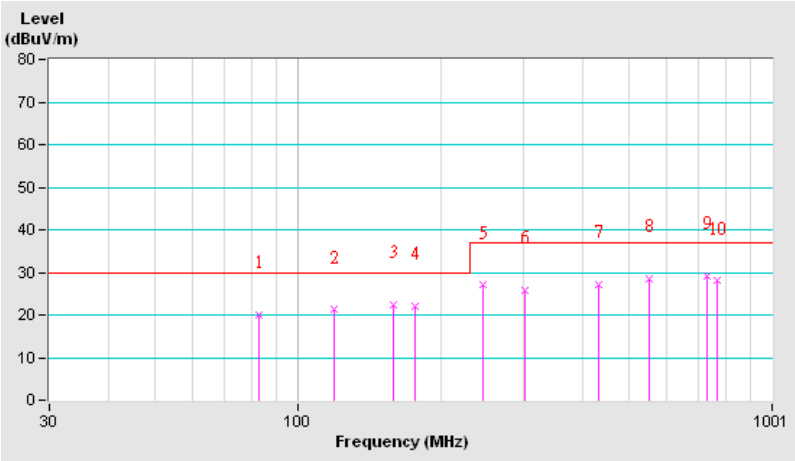


4.2.10 TEST RESULTS (4)

TEST MODEL	M857PU	**FREQUENCY RANGE**	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION & RESOLUTION BANDWIDTH**	Quasi-Peak, 120kHz
ENVIRONMENTAL CONDITIONS	17deg. C, 80% RH, 1001hPa	**TESTED BY**	Martin Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 10 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	83.01	20.15 QP	30.00	-9.85	4.00 H	268	10.43	9.72
2	119.27	21.24 QP	30.00	-8.76	4.00 H	122	7.63	13.61
3	158.83	22.51 QP	30.00	-7.49	4.00 H	28	9.70	12.81
4	177.23	22.03 QP	30.00	-7.97	4.00 H	178	10.48	11.55
5	245.00	27.01 QP	37.00	-9.99	1.48 H	295	11.87	15.14
6	301.30	25.82 QP	37.00	-11.18	2.97 H	178	9.39	16.43
7	432.50	27.06 QP	37.00	-9.94	2.20 H	348	6.33	20.73
8	550.00	28.59 QP	37.00	-8.41	2.08 H	328	5.15	23.44
9	730.00	29.08 QP	37.00	-7.92	1.29 H	281	2.02	27.06
10	765.00	28.04 QP	37.00	-8.96	1.00 H	28	0.25	27.79

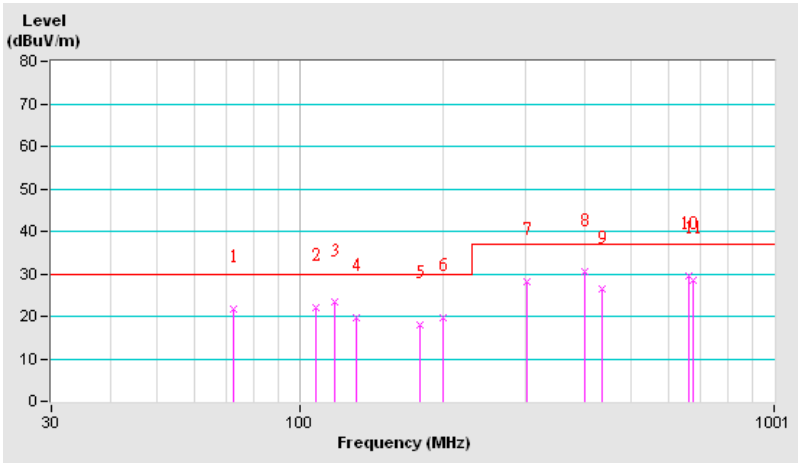
REMARKS: 1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.



TEST MODEL	M857PU	**FREQUENCY RANGE**	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION & RESOLUTION BANDWIDTH**	Quasi-Peak, 120kHz
ENVIRONMENTAL CONDITIONS	17deg. C, 80% RH, 1001hPa	**TESTED BY**	Martin Lee

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 10 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	72.32	21.83 QP	30.00	-8.17	1.78 V	133	13.48	8.35
2	108.42	21.97 QP	30.00	-8.03	1.00 V	278	9.24	12.73
3	118.19	23.23 QP	30.00	-6.77	1.00 V	325	9.71	13.52
4	131.73	19.77 QP	30.00	-10.23	1.00 V	19	6.25	13.52
5	179.80	17.91 QP	30.00	-12.09	1.00 V	95	6.55	11.36
6	201.00	19.72 QP	30.00	-10.28	1.00 V	171	8.31	11.41
7	301.00	28.13 QP	37.00	-8.87	1.00 V	61	11.71	16.42
8	400.00	30.41 QP	37.00	-6.59	1.98 V	59	10.82	19.59
9	434.50	26.35 QP	37.00	-10.65	1.00 V	299	5.55	20.80
10	661.00	29.53 QP	37.00	-7.47	3.02 V	272	3.82	25.71
11	674.50	28.64 QP	37.00	-8.36	2.65 V	18	2.85	25.79

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

USA	FCC, UL,A2LA
Germany	TUV Rheinland
Japan	VCCI
Norway	NEMKO
Canada	INDUSTRY CANADA , CSA
R.O.C.	CNLA, BSMI, NCC
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: 886-2-26051924

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

Email: service@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.

APPENDIX-A

MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications are made to the EUT by the lab during the test.