

# FCC TEST REPORT

**REPORT NO.:** F900810A01

**MODEL NO.:** PF1800A

**MULTIPLE LISTING MODEL NO.:** See page 5

**RECEIVED:** Aug. 10, 2001

**TESTED:** Aug. 27 ~ Sept. 7, 2001

**APPLICANT:** PACIFIC IMAGE ELECTRONICS  
CO., LTD.

**ADDRESS:** No. 17, Industrial 5<sup>th</sup> Rd., Ping-Chen  
Industry Park, Taoyuan Hsien, Taiwan,  
R.O.C.

**ISSUED BY:** Advance Data Technology Corporation

**LAB LOCATION:** 47 14th Lin, Chiapau Tsun, Linko, Taipei,  
Taiwan, R.O.C.

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0528



Lab Code: 200102-0

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## 1 CERTIFICATION

**PRODUCT:** Film Scanner

**BRAND NAME:** PACIFIC IMAGE

**MODEL NO:** PF1800A

(Multiple listing model no.: See page 5)

**TEST ITEM:** ENGINEERING SAMPLE

**APPLICANT:** PACIFIC IMAGE ELECTRONICS CO., LTD.

**STANDARDS:** FCC Part 15, Subpart B, Class B

CISPR 22: 1997, Class B

ANSI C63.4-1992

We, **Advance Data Technology Corporation**, hereby certify that one sample (model: PF1800A) of the designation has been tested in our facility from Aug. 27 to Sept. 7, 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:** John Liao, **DATE:** Sep. 11, 2001  
( John Liao )

**CHECKED BY:** Vickie Yu, **DATE:** Sep. 11, 2001  
( Vickie Yu )

**APPROVED BY:** Jonson Lee, **DATE:** Sep. 11, 2001  
( Jonson Lee, Manager )

## 2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

Standard	Test Type	Result	Remarks
FCC Part 15, Subpart B, Class B / CISPR 22: 1997, Class B	Conducted Test	PASS	Meets Class B Limit Minimum passing margin is -12.08 dB at 0.166 MHz
	Radiated Test	PASS	Meets Class B Limit Minimum passing margin is -5.1 dB at 611.99 MHz

**NOTE:** For conducted emission test, the test limit used is according to FCC Part 15.107. In this part, conducted emission test for telecom port is not mentioned and therefore this item is not tested.

### 3 GENERAL INFORMATION

#### 3.1 GENERAL DESCRIPTION OF EUT

<b>PRODUCT</b>	Film Scanner	
<b>MODEL NO.</b>	PF1800A	
	Switching power adapter Power Cord: Nonshielded (1.8m), 2pin with one ferrite core	
<b>POWER SUPPLY</b>	Model: HPW-1512A Brand: High Power Rating: Input: 100-120V, 1A, 50-60Hz Output: +12Vdc, 1.25A	Model: UP01811120 Brand: I.T.E. Rating: Input: 100-250V, 0.5A 50-60Hz Output: +12Vdc, 1.5A
<b>DATA CABLE</b>	USB cable (1.5m) with one core	

**NOTE:** The EUT is a film color scanner.

The EUT has the following model names, which are identical to each other except for different customer requirement, as the following:

- ✧ PF1800A
- ✧ PrimeFilm 1800A
- ✧ 1800 Film Scanner
- ✧ FilmScan 1800
- ✧ FS 1800 Film Scanner
- ✧ ScanElite 1800
- ✧ PowerLook 180
- ✧ PrimeFilm AUTO

From the above model names, model: **PF1800A** was selected as the representative for the test and its data is recorded in this report.

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

#### 3.2 DESCRIPTION OF TEST MODES

Mode	Remark
1	The EUT tested with adapter (High Power)
2	The EUT tested with adapter (I.T.E.)

### 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	COMPAQ	EXM/P733/15C/9 /64V TAI	7045FR4Z0030	DOC
2	21" COLOR MONITOR	HP	D2846A	JP90512317	DOC
3	PRINTER	HP	2225C+	3030S79116	DSI6XU2225
4	MODEM	ACEEX	1414	980020534	IFAXDM1414
5	PS/2 KEYBOARD	FORWARD	FDA-104GA	FDKB8110112	F4ZDA-104G
6	MOUSE	LOGITECH	M-S43	LZE00703150	DZL211106
7	VGA CARD	Guillemot	3D Prophet DDR-DVI	000349189068	Doc

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA
2	1.8 m braid shielded wire, terminated with VGA connector via metallic frame, w/o core.
3	1.2m 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	1.5 m foil shielded wire, terminated with PS/2 connector via metallic frame, w/o core.
6	1.8 m foil shielded wire, terminated with PS2 connector via drain wire, w/o core.
7	NA

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

## 4 EMISSION TEST

### 4.1 CONDUCTED EMISSION MEASUREMENT

#### 4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

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

**NOTES:** (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	Feb. 21, 2002
ROHDE & SCHWARZ Artificial Mains Network (For EUT)	ESH2-Z5	892107/003	July 10, 2002
ROHDE & SCHWARZ 4-wire ISN	ENY41	838119/028	Dec. 12, 2001
ROHDE & SCHWARZ 2-wire ISN	ENY22	837497/018	Dec. 3, 2001
EMCO L.I.S.N. (For peripherals)	3825/2	9504-2359	July 10, 2002
Software	Cond-V2J	NA	NA
RF cable (JYEBAO)	RG-58A/U	Cable-C03.01	July 11, 2002
Terminator (For EMCO LISN)	NA	E1-01-300	Feb. 20, 2002
Terminator (For EMCO LISN)	NA	E1-01-301	Feb. 20, 2002
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.

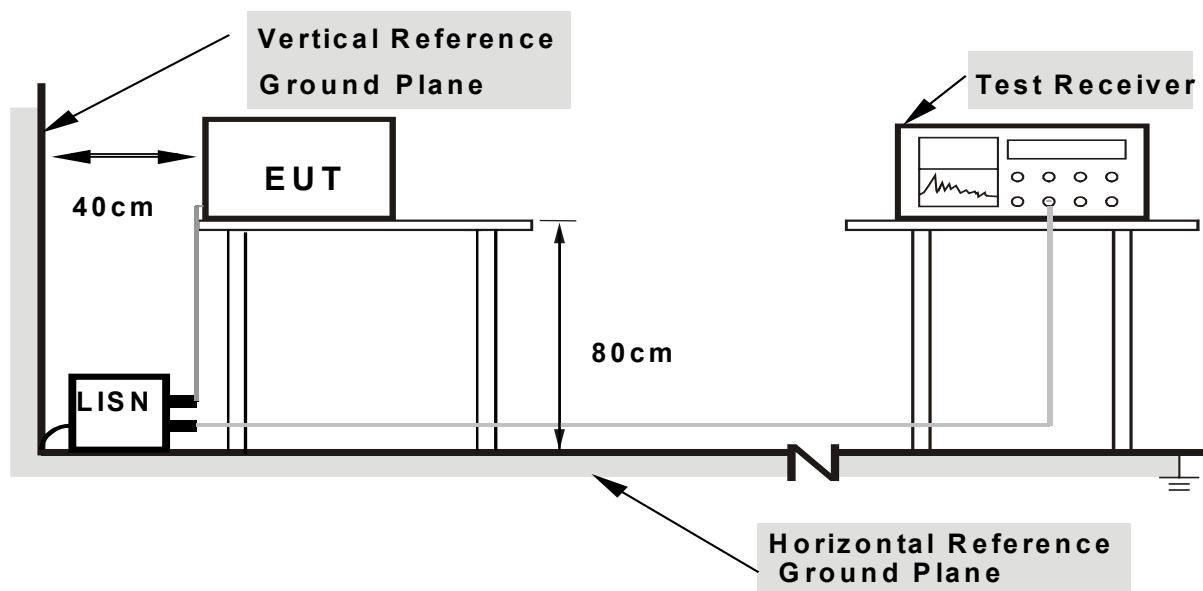
#### 4.1.3 TEST PROCEDURE

- 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) 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. Turn on the power of all equipment.
- b. PC ran a test program to enable all functions.
- c. Scanner (EUT) scanned an image and sent the message to PC.
- d. PC then sent the message to monitor and monitor displayed it on screen.
- e. Steps b-e were repeated.

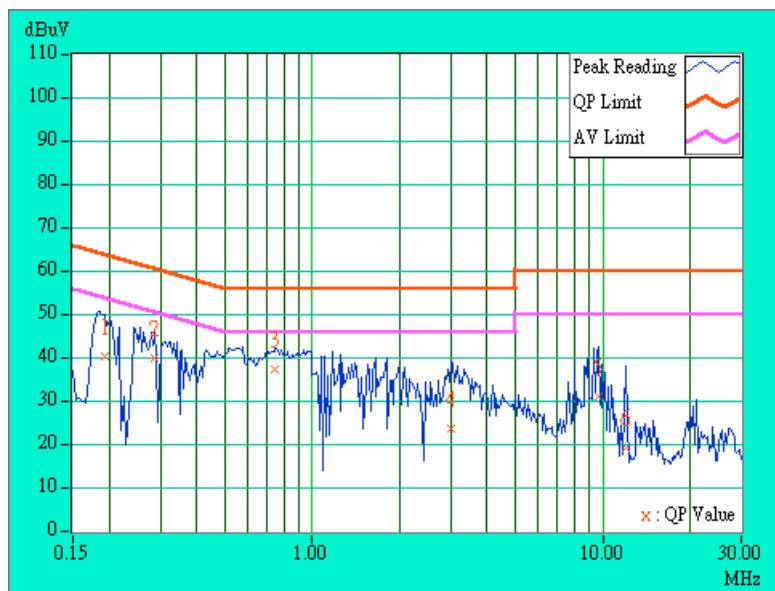
#### 4.1.7 TEST RESULTS (A)

<b>EUT</b>	Film Scanner	<b>MODEL</b>	PF1800A
<b>MODE</b>	1	<b>6dB BANDWIDTH</b>	10 kHz
<b>INPUT POWER</b>	120Vac, 60 Hz	<b>PHASE</b>	Line (L)
<b>ENVIRONMENTAL CONDITIONS</b>	26 deg. C, 70 % RH, 1005 hPa		<b>TESTED BY:</b> John Liao

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
	0.194	0.10	40.30	-	40.40	-	63.86	53.86	-23.46	-
1	0.287	0.10	40.02	-	40.12	-	60.62	50.62	-20.50	-
2	0.748	0.16	37.51	-	37.67	-	56.00	46.00	-18.33	-
3	3.011	0.25	23.82	-	24.07	-	56.00	46.00	-31.93	-
4	9.680	0.39	31.20	-	31.59	-	60.00	50.00	-28.41	-
5	12.000	0.44	19.20	-	19.64	-	60.00	50.00	-40.36	-

**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.

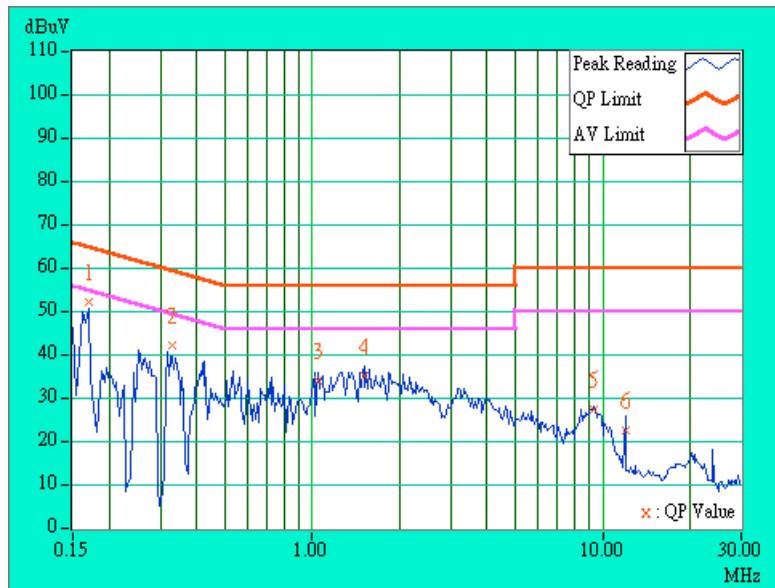


<b>EUT</b>	Film Scanner	<b>MODEL</b>	PF1800A
<b>MODE</b>	1	<b>6dB BANDWIDTH</b>	10 kHz
<b>INPUT POWER</b>	120Vac, 60 Hz	<b>PHASE</b>	Neutral (N)
<b>ENVIRONMENTAL CONDITIONS</b>	26 deg. C, 70 % RH, 1005 hPa	<b>TESTED BY:</b>	John Liao

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.170	0.10	52.38	-	52.48	-	64.98	54.98	-12.50	-
2	0.329	0.10	42.29	-	42.39	-	59.48	49.48	-17.09	-
3	1.051	0.20	34.09	-	34.29	-	56.00	46.00	-21.71	-
4	1.523	0.20	35.21	-	35.41	-	56.00	46.00	-20.59	-
5	9.293	0.39	27.59	-	27.98	-	60.00	50.00	-32.02	-
6	12.004	0.48	22.55	-	23.03	-	60.00	50.00	-36.97	-

**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.



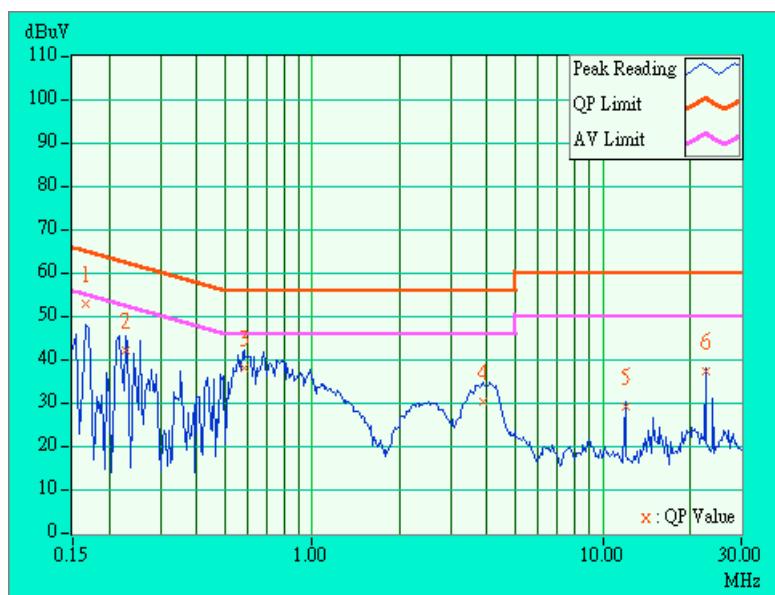
#### 4.1.8 TEST RESULTS (B)

<b>EUT</b>	Film Scanner	<b>MODEL</b>	PF1800A
<b>MODE</b>	2	<b>6dB BANDWIDTH</b>	10 kHz
<b>INPUT POWER</b>	120Vac, 60 Hz	<b>PHASE</b>	Line (L)
<b>ENVIRONMENTAL CONDITIONS</b>	30 deg. C, 65 % RH, 1005 hPa		<b>TESTED BY:</b> John Liao

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
	0.166	0.10	53.00	-	53.10	-	65.18	55.18	-12.08	-
1	0.228	0.10	42.20	-	42.30	-	62.52	52.52	-20.22	-
2	0.584	0.13	38.20	-	38.33	-	56.00	46.00	-17.67	-
3	3.891	0.29	30.44	-	30.73	-	56.00	46.00	-25.27	-
4	12.000	0.44	29.40	-	29.84	-	60.00	50.00	-30.16	-
5	22.570	0.55	37.38	-	37.93	-	60.00	50.00	-22.07	-
6										

**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.

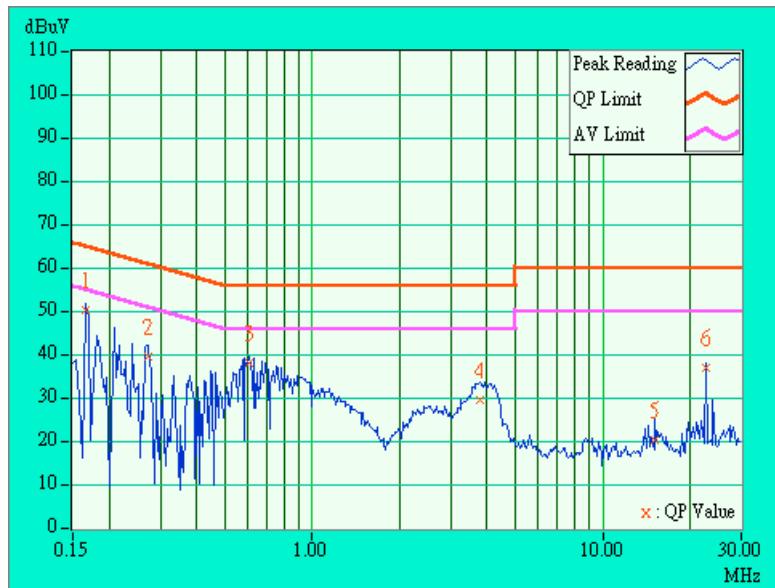


<b>EUT</b>	Film Scanner	<b>MODEL</b>	PF1800A
<b>MODE</b>	2	<b>6dB BANDWIDTH</b>	10 kHz
<b>INPUT POWER</b>	120Vac, 60 Hz	<b>PHASE</b>	Neutral (N)
<b>ENVIRONMENTAL CONDITIONS</b>	30 deg. C, 65 % RH, 1005 hPa	<b>TESTED BY:</b>	John Liao

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.166	0.10	50.53	-	50.63	-	65.18	55.18	-14.55	-
2	0.271	0.10	39.80	-	39.90	-	61.08	51.08	-21.18	-
3	0.603	0.13	38.04	-	38.17	-	56.00	46.00	-17.83	-
4	3.793	0.29	29.50	-	29.79	-	56.00	46.00	-26.21	-
5	15.066	0.60	20.55	-	21.15	-	60.00	50.00	-38.85	-
6	22.570	0.95	36.98	-	37.93	-	60.00	50.00	-22.07	-

**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 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

### 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.

#### 4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
HP Spectrum Analyzer	8590L	3520A00667	Aug. 30, 2002
CHASE Preamplifier	CPA9231A/4	3215	Nov. 12, 2001
* HP Preamplifier	8449B	3008A01201	Dec. 13, 2001
* HP Preamplifier	8449B	3008A01292	Aug. 21, 2002
* ROHDE & SCHWARZ TEST RECEIVER	ESVS10	846285/012	Dec. 28, 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	CBL6112	2074	Dec. 25, 2001
* SCHWARZBECK Horn Antenna	BBHA9120-D1	D130	July 6, 2002
* EMCO Horn Antenna	3115	9312-4192	April 15, 2002
* CHANCE Turn Table & Tower Controller	ACS-I	NA	NA
* Software	AS61D4	NA	NA
* ANRITSU RF Switches	MP59B	M51167	Dec. 25, 2001
* TIMES RF cable	LMR-600	CABLE-ST6-01	Dec. 25, 2001
Open Field Test Site	Site 6	ADT-R06	Dec. 24, 2001
VCCI Site Registration No.	Site 6	R-728	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.

#### 4.2.3 TEST PROCEDURE

- The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10-meter open field site. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- 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 polarization of the antenna are set to make

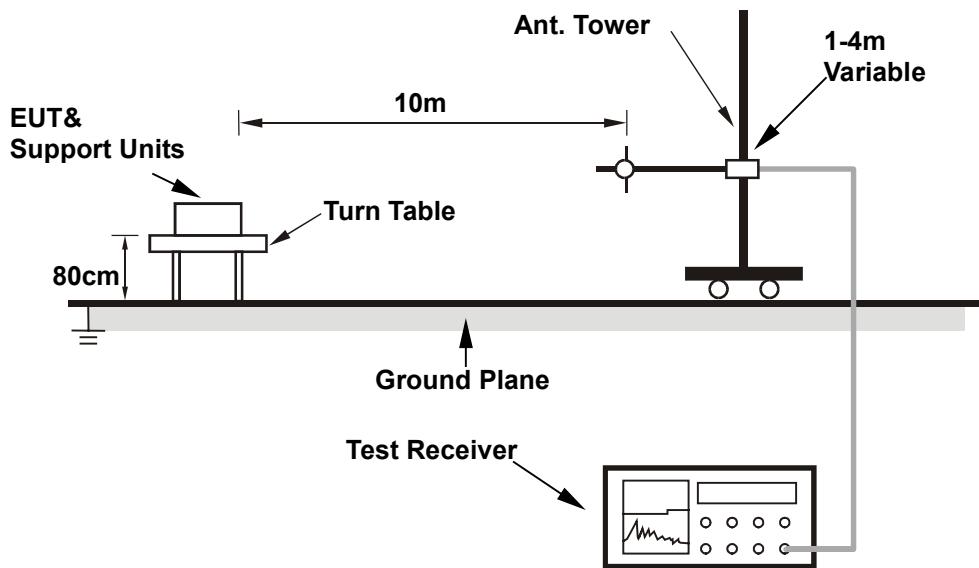
the measurement.

- 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.
- g. For measurement of frequency above 1000 MHz, the EUT was set 3 meters away from the interference antenna and the detect function was set to Peak or Average.

#### **4.2.4 DEVIATION FROM TEST STANDARD**

No deviation

#### 4.2.5 TEST SETUP



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

#### 4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6

#### 4.2.7 TEST RESULTS (A)

<b>EUT</b>	Film Scanner	<b>MODEL</b>	PF1800A
<b>MODE</b>	1	<b>FREQUENCY RANGE</b>	30-1000 MHz
<b>INPUT POWER</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION &amp; BANDWIDTH</b>	Quasi-Peak, 120kHz
<b>ENVIRONMENTAL CONDITIONS</b>	33 deg. C, 55 % RH, 1005 hPa	<b>TESTED BY:</b> John Liao	

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)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Gain (dB)	Correction Factor (dB/m)
1	108.00	20.3 QP	30.00	-9.70	4.00H	336	7.75	11.66	0.88	0.00	-12.55
2	132.00	15.9 QP	30.00	-14.10	4.00H	58	2.82	12.11	0.97	0.00	-13.08
3	144.00	16.9 QP	30.00	-13.10	4.00H	258	4.36	11.53	1.02	0.00	-12.54
4	168.00	14.9 QP	30.00	-15.10	4.00H	171	4.01	9.84	1.05	0.00	-10.89
5	191.99	16.4 QP	30.00	-13.60	4.00H	192	5.97	9.30	1.13	0.00	-10.43
6	216.02	16.6 QP	30.00	-13.40	4.00H	187	5.18	10.19	1.20	0.00	-11.40
7	287.99	24.6 QP	37.00	-12.40	4.00H	241	10.46	12.73	1.40	0.00	-14.14
8	311.98	26.1 QP	37.00	-10.90	2.51H	277	11.42	13.22	1.46	0.00	-14.68
9	384.04	22.9 QP	37.00	-14.10	2.49H	269	5.92	15.36	1.62	0.00	-16.99
10	503.98	26.8 QP	37.00	-10.20	1.44H	287	7.59	17.31	1.90	0.00	-19.22
11	611.96	27.9 QP	37.00	-9.10	2.07H	314	7.16	18.64	2.10	0.00	-20.74
12	635.99	27.7 QP	37.00	-9.30	2.27H	60	6.48	19.03	2.17	0.00	-21.21
13	698.96	30.1 QP	37.00	-6.90	1.55H	127	8.41	19.41	2.28	0.00	-21.69
14	707.97	28.4 QP	37.00	-8.60	1.79H	209	6.50	19.59	2.31	0.00	-21.90

**REMARKS:**

1. Emission level(dBuV/m)=Raw Value(dBuV) – Correction Factor(dB)
2. Correction Factor(dB/m) = Pre-Amplifier Gain (dB) - Antenna Factor (dB/m) - Cable Factor (dB)
3. Pre-Amplifier Gain (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.

<b>EUT</b>	Film Scanner	<b>MODEL</b>	PF1800A
<b>MODE</b>	1	<b>FREQUENCY RANGE</b>	30-1000 MHz
<b>INPUT POWER</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION &amp; BANDWIDTH</b>	Quasi-Peak, 120kHz
<b>ENVIRONMENTAL CONDITIONS</b>	33 deg. C, 55 % RH, 1005 hPa	<b>TESTED BY:</b> John Liao	

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)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Gain (dB)	Correction Factor (dB/m)
1	48.01	20.1 QP	30.00	-9.90	1.00V	228	7.56	11.89	0.64	0.00	-12.54
2	72.01	17.8 QP	30.00	-12.20	1.66V	180	11.00	6.06	0.75	0.00	-6.80
3	120.02	24.1 QP	30.00	-5.90	1.00V	224	10.73	12.45	0.92	0.00	-13.37
4	132.01	23.5 QP	30.00	-6.50	1.00V	235	10.42	12.11	0.97	0.00	-13.08
5	144.03	22.8 QP	30.00	-7.20	1.00V	105	10.26	11.53	1.02	0.00	-12.54
6	168.01	17.9 QP	30.00	-12.10	1.00V	349	7.01	9.84	1.05	0.00	-10.89
7	192.03	19.2 QP	30.00	-10.80	1.00V	71	8.77	9.30	1.13	0.00	-10.44
8	216.03	20.6 QP	30.00	-9.40	1.00V	355	9.20	10.19	1.20	0.00	-11.40
9	228.00	18.4 QP	30.00	-11.60	1.00V	0	6.31	10.85	1.23	0.00	-12.09
10	312.00	22.1 QP	37.00	-14.90	1.25V	332	7.42	13.22	1.46	0.00	-14.68
11	611.98	26.5 QP	37.00	-10.50	1.89V	29	5.76	18.64	2.10	0.00	-20.75
12	636.01	23.6 QP	37.00	-13.40	2.20V	304	2.39	19.03	2.17	0.00	-21.21
13	700.23	27.3 QP	37.00	-9.70	2.69V	99	5.61	19.41	2.28	0.00	-21.69

**REMARKS:**

1. Emission level(dBuV/m)=Raw Value(dBuV) – Correction Factor(dB)
2. Correction Factor(dB/m) = Pre-Amplifier Gain (dB) - Antenna Factor (dB/m) - Cable Factor (dB)
3. Pre-Amplifier Gain (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.

## 4.2.8 TEST RESULTS (B)

<b>EUT</b>	Film Scanner	<b>MODEL</b>	PF1800A
<b>MODE</b>	2	<b>FREQUENCY RANGE</b>	30-1000 MHz
<b>INPUT POWER</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION &amp; BANDWIDTH</b>	Quasi-Peak, 120kHz
<b>ENVIRONMENTAL CONDITIONS</b>	33 deg. C, 55 % RH, 1005 hPa	<b>TESTED BY:</b> John Liao	

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)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Gain (dB)	Correction Factor (dB/m)
1	132.01	16.5 QP	30.00	-13.50	4.00H	268	3.42	12.11	0.97	0.00	-13.08
2	144.02	19.5 QP	30.00	-10.50	4.00H	106	6.96	11.53	1.02	0.00	-12.54
3	168.00	19.4 QP	30.00	-10.60	4.00H	200	8.55	9.84	1.05	0.00	-10.89
4	192.00	17.8 QP	30.00	-12.20	4.00H	88	7.41	9.30	1.13	0.00	-10.44
5	216.00	16.1 QP	30.00	-13.90	4.00H	240	4.70	10.19	1.20	0.00	-11.40
6	287.99	23.4 QP	37.00	-13.60	4.00H	306	9.26	12.73	1.40	0.00	-14.14
7	311.99	27.1 QP	37.00	-9.90	2.66H	268	12.44	13.22	1.46	0.00	-14.68
8	384.06	20.8 QP	37.00	-16.20	2.22H	268	3.82	15.36	1.62	0.00	-16.98
9	503.96	25.6 QP	37.00	-11.40	2.25H	102	6.39	17.31	1.90	0.00	-19.21
10	611.99	31.9 QP	37.00	-5.10	1.77H	303	11.16	18.64	2.10	0.00	-20.74
11	635.98	30.7 QP	37.00	-6.30	1.87H	228	9.49	19.03	2.17	0.00	-21.21
12	700.00	30.5 QP	37.00	-6.50	1.74H	147	8.81	19.41	2.28	0.00	-21.69
13	707.97	29.2 QP	37.00	-7.80	2.43H	315	7.30	19.59	2.31	0.00	-21.90

**REMARKS:**

1. Emission level(dBuV/m)=Raw Value(dBuV) – Correction Factor(dB)
2. Correction Factor(dB/m) = Pre-Amplifier Gain (dB) - Antenna Factor (dB/m) - Cable Factor (dB)
3. Pre-Amplifier Gain (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.

<b>EUT</b>	Film Scanner	<b>MODEL</b>	PF1800A
<b>MODE</b>	2	<b>FREQUENCY RANGE</b>	30-1000 MHz
<b>INPUT POWER</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION &amp; BANDWIDTH</b>	Quasi-Peak, 120kHz
<b>ENVIRONMENTAL CONDITIONS</b>	33 deg. C, 55 % RH, 1005 hPa		<b>TESTED BY:</b> John Liao

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)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Gain (dB)	Correction Factor (dB/m)
1	48.00	19.0 QP	30.00	-11.00	1.00V	314	6.47	11.89	0.64	0.00	-12.54
2	72.01	17.2 QP	30.00	-12.80	1.00V	49	10.40	6.06	0.75	0.00	-6.80
3	84.03	18.3 QP	30.00	-11.70	1.00V	152	8.81	8.66	0.80	0.00	-9.47
4	120.01	20.0 QP	30.00	-10.00	1.00V	266	6.63	12.45	0.92	0.00	-13.37
5	132.00	16.4 QP	30.00	-13.60	1.00V	134	3.32	12.11	0.97	0.00	-13.08
6	144.00	19.7 QP	30.00	-10.30	1.00V	204	7.18	11.53	1.02	0.00	-12.54
7	168.02	18.1 QP	30.00	-11.90	1.00V	160	7.21	9.84	1.05	0.00	-10.89
8	191.99	17.8 QP	30.00	-12.20	1.00V	96	7.37	9.30	1.13	0.00	-10.44
9	216.01	21.4 QP	30.00	-8.60	1.00V	348	10.05	10.19	1.20	0.00	-11.40
10	227.99	18.9 QP	30.00	-11.10	1.00V	40	6.81	10.85	1.23	0.00	-12.09
11	312.00	20.9 QP	37.00	-16.10	1.00V	262	6.22	13.22	1.46	0.00	-14.68
12	611.59	24.2 QP	37.00	-12.80	2.14V	211	3.46	18.64	2.10	0.00	-20.74
13	635.98	27.6 QP	37.00	-9.40	2.11V	308	6.39	19.03	2.17	0.00	-21.21
14	699.96	28.5 QP	37.00	-8.50	2.35V	117	6.81	19.41	2.28	0.00	-21.69

**REMARKS:**

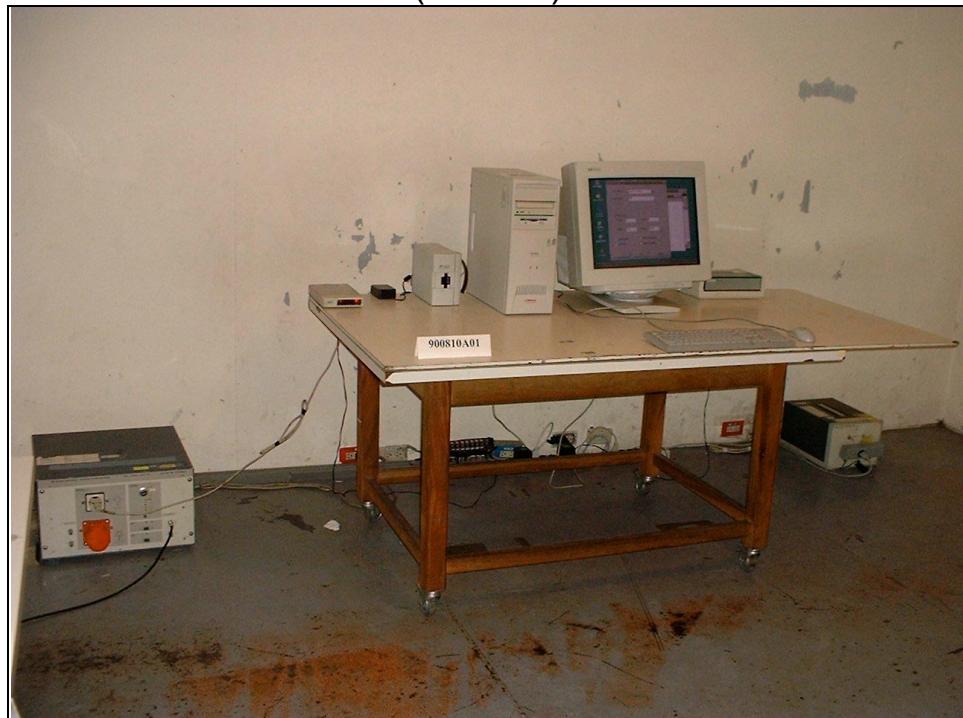
1. Emission level(dBuV/m)=Raw Value(dBuV) – Correction Factor(dB)
2. Correction Factor(dB/m) = Pre-Amplifier Gain (dB) - Antenna Factor (dB/m) - Cable Factor (dB)
3. Pre-Amplifier Gain (dB) = 0, when the test receiver is used to read the value and because it did not use the Pre-Amplifier.
4. The other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

## 5 PHOTOGRAPHS OF THE TEST CONFIGURATION

### CONDUCTED EMISSION TEST (Mode 1)



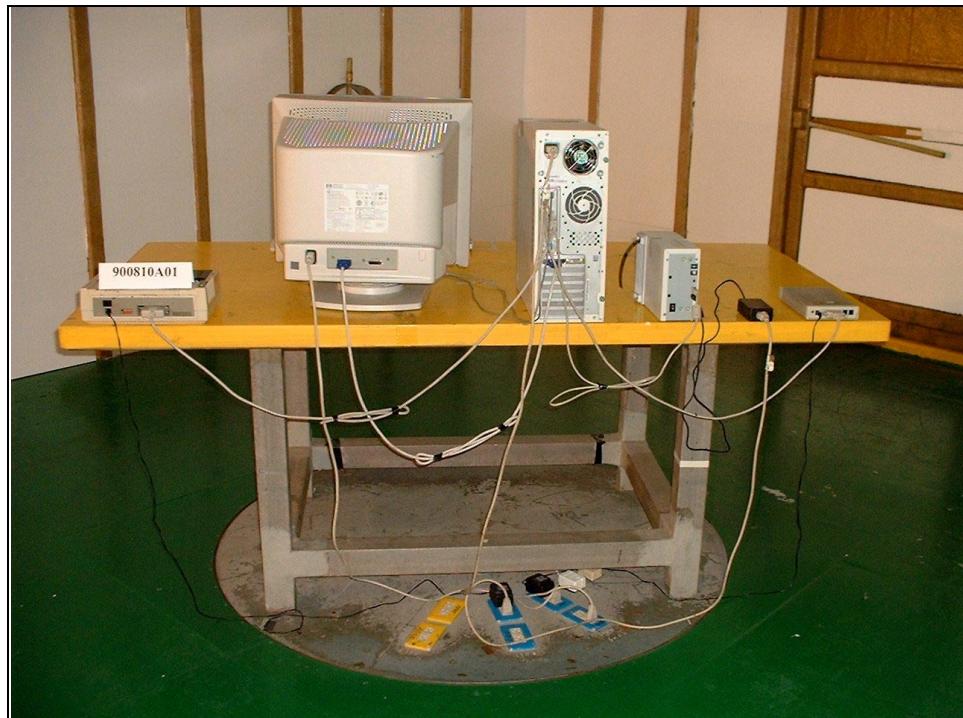
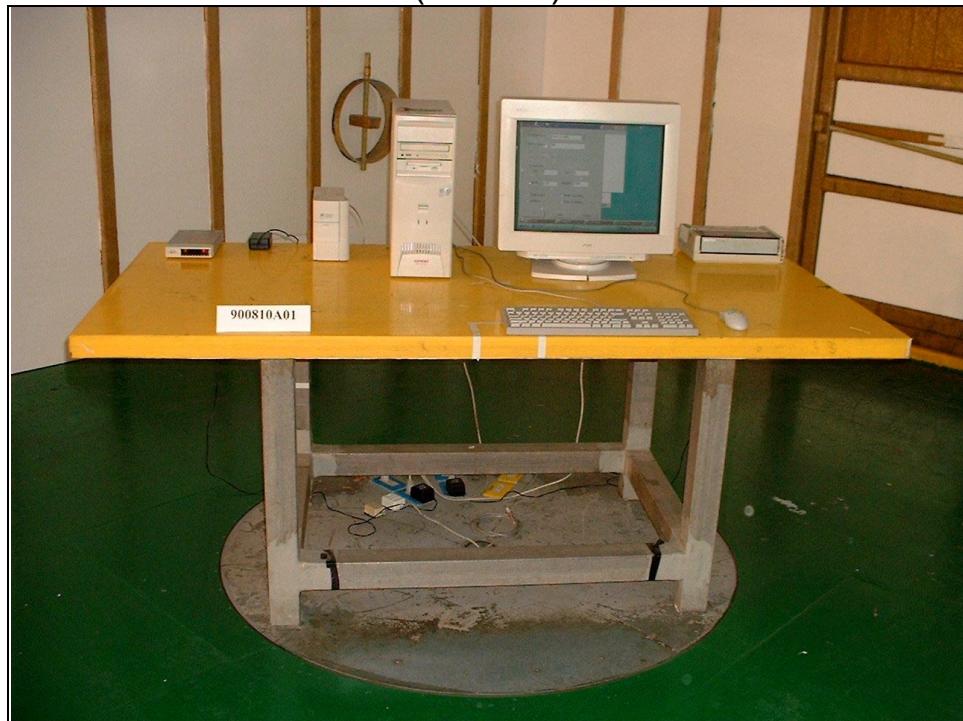
(Mode 2)



RADIATED EMISSION TEST (Mode 1)



(Mode 2)



## 6 APPENDIX - 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:

<b>USA</b>	FCC, NVLAP, UL
<b>Germany</b>	TUV Rheinland
<b>Japan</b>	VCCI
<b>New Zealand</b>	MoC
<b>Norway</b>	NEMKO, DNV
<b>Canada</b>	INDUSTRY CANADA
<b>R.O.C.</b>	CNLA, BSMI

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](http://www.adt.com.tw/index.5/phtml).

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