Certificate of Compliance

We, **ADVANCE DATA TECHNOLOGY CORP.,** hereby certify that:

The product : INDUSTRIAL PANEL COMPUTER

Trade Name : AASIC

Model No. : T2-15AI, T2-10AI, T2-12AI,
T2-10AR, T2-12AR

Applicant : AASIC COMPUTER INC.

one sample of the designation has been tested in our facility on Aug. 11 ~ Aug. 17, 1999. The test record, data evaluation and Equipment Under Test (EUT) configuration represented in our report no. **CE88071404**, are in compliance with the following standards:

EN 55022:1994+A1: 1995+A2: 1997, Class A
EN 61000-3-2: 1995, Class A
EN 61000-3-3: 1995

EN 50082-2: 1995
EN 61000-4-2: 1995
EN 61000-4-3: 1996
EN 61000-4-4: 1995
EN 61000-4-6: 1996
EN 61000-4-8: 1993
ENV 50204: 1995

Mike Su / Manager

Issue Date: Aug. 20, 1999

ADVANCE DATA TECHNOLOGY CORP.
ADT CORP.
Head office: 11F, NO. 1, SEC. 4, NAN-KING EAST RD., TAIPEI, TAIWAN, R.O.C.
TEL: (02) 2603-2180 FAX: (02) 2602-2943 http: //www.adt.com.tw e-mail: service@mail.adt.com.tw

ADT CORP. TEL:(02)2603-2180-3 FAX:(02)2602-2943

TEST REPORT & CERTIFICATION SERVICES QUESTIONNAIRE

We, ADT Corp., would like to provide you a high quality report and certification in a timely manner. To achieve this goal, we would like you to response to the brief questions listed below in this questionnaire. Therefore your feed back is vital to us in order to determine how good our services are, and what areas could be improved.

Please indicate beside each question what you feel is the rating. Also, feel free to make comments and suggestions directly on this questionnaire, or by attaching separate sheet. The completed form should then be returned by mail or FAX to ***Harris W. Lai,*** *Director. Your cooperation and effort are truly appreciated.*

TEST REPORT NUMBER : _____

	YES	NO
1. Was the information presented clearly	[ ]	[ ]
2. Was the report complete ?	[ ]	[ ]
3. Was the report timely ?	[ ]	[ ]
4. Did the report satisfy your requirement ?	[ ]	[ ]
5. Was the Certification (if any) completed in the scheduled time ?	[ ]	[ ]

Your working field ? [ ] Engineering [ ] Manufacturing
[ ] Marketing [ ] Other

YOUR CONTACT INFORMATION (OPTIONAL) :

OPTIONAL COMMENTS :

Advance Data Technology Corporation 誠信科技股份有限公司
No.47,14 Ling,Chia Pau Tsuen,Lin Kou Hsiang,Taipei,Taiwan,R.O.C. TEL:(02)2603-2180-3 FAX:(02)2602-2943

致產品行銷歐洲之客戶 (CE Marking)

自 85 年 1 月 1 日起, 銷歐產品必需符合 EMC 指令之後才能上市.
自 86 年 1 月 1 日起, 銷歐產品必需符合低電壓指令(LVD---Safety) 之後才能上市.

下列文件是在行銷前必須準備齊全, 以備歐體國家機構隨時抽查:

1. EMC Compliance folder(含測試報告)和 LVD TCF (Technical Construction File) --- 可由實驗室核發或透過認證機構
2. Declaration of Conformity (DoC) Form --- 必須由歐洲分公司或進口商簽名負責 (見附件樣本)
3. 原始之設計圖稿及規格書 (如: 線路圖, 方塊圖, PCB Layout 圖, User's Manual 和 Service Manual 等)
4. 敘述製造時之生產檢查程序, 以確保 EMC 和 SAFETY 特性之維持
5. 任何會影響到 EMC 和 SAFETY 的變更敘述和必要之測試記錄

CE

附註:

* 產品上要貼上 CE 要求之 Label 標示, 如右
* DoC 簽名負責之廠商, 有責任確保銷售之產品在 EMC 方面仍符合規定
* 以上文件必需一份置於 DoC 簽名負責人手中備查

(附件樣本)

CE Declaration of Conformity

For the following equipment

_____

(Product Name)

_____

(Model designation)

is herewith confirmed to comply with the requirements set out in the council directive on the Approximation of the Law of the Member States relating to Electromagnetic Compatibility (89/336/EEC), Low-voltage Directive (73/23EEC) and the Amendment Directive (93/68/EEC). For the evaluation regarding the Directives, the following standards, were applied.

_____

_____

_____

_____

The following importer/manufacturer is responsible for this declaration:

_____	_____
(Company Name, Importer)	(Company Name, Manufacturer)
_____	_____
_____	_____
_____	_____
(Company Address)	(Company Address)
Person responsible for this declaration:	*Person responsible for this declaration:*
_____	_____
(Name, Surname, Importer)	(Name, Surname, Manufacturer)
_____	_____
(Position / Title)	(Position / Title)
_____ _____	_____ _____
(Place) (Date)	(Place) (Date)

EXHIBIT 1

DECLARATION OF CONFORMITY

(DoC) FORM

EXHIBIT 2

TEST REPORT

EMC

TEST REPORT

REPORT NO. : CE88071404
MODEL NO. : T2-15AI, T2-10AI, T2-12AI, T2-10AR, T2-12AR
DATE OF TEST : Aug. 11 ~ Aug. 17, 1999

PREPARED FOR : AASIC COMPUTER INC.

ADDRESS : 5F, NO. 5, ALLEY 6, LANE 45, PAO-HSIN RD. HSIN-TIEN CITY, TAIPEI, TAIWAN, R. O. C.

PREPARED BY: ADVANCE DATA TECHNOLOGY CORPORATION

NVLAP®
Accredited Laboratory

11F, NO.1, SEC.4, NAN-KING EAST RD., TAIPEI, TAIWAN, R.O.C.

1. CERTIFICATION

Issue date: Aug. 19, 1999

Product	:	INDUSTRIAL PANEL COMPUTER	
Trade Name	:	AASIC	
Model No.	:	T2-15AI, T2-10AI, T2-12AI, T2-10AR, T2-12AR	
Applicant	:	AASIC COMPUTER INC.	
Standard	:	EN 55022:1994+A1: 1995+A2: 1997, Class A	**EN 50082-2: 1995**
		EN 61000-3-2: 1995, Class A	EN 61000-4-2: 1995
		EN 61000-3-3: 1995	EN 61000-4-3: 1996
			EN 61000-4-4: 1995
			EN 61000-4-6: 1996
			EN 61000-4-8: 1993
			ENV 50204: 1995

We hereby certify that one sample of the designation has been tested in our facility from Aug. 11 to Aug. 17, 1999. The test record, data evaluation and Equipment Under Test (EUT) configurations represent herein are true and accurate representation of the measurements of the sample's EMC characteristics under the conditions herein specified.

TESTED BY (Emission) : Johnny Liu (Johnny Liu) , DATE: 8/19/99

TESTED BY (Immunity) : S.S. Wang (S. S. Wang) , DATE: 8/19/99

CHECKED BY : Sharon Hsiung (Sharon Hsiung), DATE: 8/19/99

APPROVED BY : Mike Su (Mike Su) DATE: 8/19/99

NVLAP Accredited Laboratory

ADVANCE DATA TECHNOLOGY CORPORATION

TABLE OF CONTENTS

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Product	:	INDUSTRIAL PANEL COMPUTER
Model No.	:	T2-15AI, T2-10AI, T2-12AI, T2-10AR, T2-12AR
Power Supply Type	:	Switching (from DC power supply)
Power Cord	:	NA

Note: The EUT is an INDUSTRIAL PANEL COMPUTER using 24Vdc.

The EUT has five model names which are identical to each other in all aspects except for their size of LCD panel and the touch screen type:

MODEL	LCD PANEL	TOUCH SCREEN TYPE
T2-15AI	15"	INFRARED TOUCH
T2-12AR	12"	ANALOG RESISTIVE
T2-12AI	12"	INFRARED TOUCH
T2-10AR	10"	ANALOG RESISTIVE
T2-10AI	10"	INFRARED TOUCH

From the above models, model: T2-15AI, model: T2-12AR, model: T2-10AR are selected as mode 1, 2 & 3, and the data are recorded in this report:

- Mode 1: T2-15AI
- Mode 2: T2-12AR
- Mode 3: T2-10AR

The EUT was tested under the following configuration:

*	HDD	: FUJITSU, Model: MHA2021AT
*	FDD	: NEC, Model: FD1238T
*	CPU	: INTEL Pentium MMX 233 MHz
*	POWER SUPPLY	: POWER ADD, model: PPS100-31 (71A) Input: 110/240V, 47-63 Hz, 3.15A, Output: +5V 12A, +12V 1A, -12V 0.5A

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

2.2 GENERAL DESCRIPTION OF APPLIED STANDARD

According to the manufacturer's request, the EUT was tested with the requirements of the following standards:

EN 55022:1994+A1: 1995+A2: 1997, Class A	**EN 50082-2: 1995**
EN 61000-3-2: 1995, Class A	EN 61000-4-2: 1995
EN 61000-3-3: 1995	EN 61000-4-3: 1996
	EN 61000-4-4: 1995
	EN 61000-4-6: 1996
	EN 61000-4-8: 1993
	ENV 50204: 1995

All tests are performed and recorded as per above standards.

2.3 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 are used to form representative test configuration during the tests.

FOR EMISSION TEST

No	Product	Brand	Model No.	Serial No.	I/O Cable
1.	COLOR MONITOR	ADI	PD-959	730020U00100292	Shielded Signal (1.5m) Nonshielded Power (1.8m)
2.	KEYBOARD	FORWARD	FDA-104GA	FDKB8110112	Shielded Signal (1.4m)
3.	USB KEYBOARD	BTC	7932	D7A140017	Shielded Signal (1.4m)
4.	MOUSE	DEXIN	A2P800A	80102114	Shielded Signal (1.5m)
5.	USB MOUSE	DEXIN	A2U800A	71001827	Shielded Signal (1.5m)
6.	MODEM	ACEEX	1414	980020540	Shielded Signal (1.8m) Nonshielded Power (1.8m)
7.	MODEM	ACEEX	1414	980020534	Shielded Signal (1.8m) Nonshielded Power (1.8m)
8.	MODEM	ACEEX	1414	980020509	Shielded Signal (1.8m) Nonshielded Power (1.8m)
9.	PRINTER	HP	2225C+	3030S79116	Shielded Signal (2.2m) Nonshielded Power (1.8m)
10.	PERSONAL COMPUTER	IBM	2156-D1N	BNA349G	Shielded Signal (1.5m) Nonshielded Power (1.8m)
11.	COLOR MONITOR	ADI	PD-959	730020U00100265	Shielded Signal (1.5m) Nonshielded Power (1.8m)
12.	KEYBOARD	FORWARD	FDA-104GA	FDKB8110123	Shielded Signal (1.5m)
13.	MOUSE	DEXIN	A2P800A	80102104	Shielded Signal (1.8m)
14.	LAN CARD	INTEL	S82555	00A0C9A6CB525271	Shielded UTP/S Cable (10.0m)

Note: 1. Support unit 3 & 5 were connected to the USB port of EUT.

2. Two RS-422/485 open loop cables (2.0, 1.6m) were connected to the EUT.

3. The EUT acted as SERVER PC and communicated with support units 10-14 which acted as HOST PC and partners of communication system via a UTP cable (10m)

FOR IMMUNITY TEST

No	Product	Brand	Model No.	Serial No.	I/O Cable
1.	COLOR MONITOR	ACER	7234e	9174302003	Shielded Signal (1.5m) Nonshielded Power (1.8m)
2.	KEYBOARD	HP	C3758A	C3758-60223	Shielded Signal (1.8m)
3.	USB KEYBOARD	ACER	6512-BU	NA	Shielded Signal (1.5m)
4.	MOUSE	LOGITECH	M-M30	LTR53500777	Shielded Signal (1.5m)
5.	USB MOUSE	FORWARD	FDM-F50	98001059	Shielded Signal (1.5m)
6.	MODEM	ACEEX	1414	980020517	Shielded Signal (1.25m) Nonshielded Power (1.5m)
7.	MODEM	ACEEX	1414	980020514	Shielded Signal (1.25m) Nonshielded Power (1.5m)
8.	MODEM	ACEEX	1414	980020520	Shielded Signal (1.25m) Nonshielded Power (1.5m)
9.	PRINTER	HP	C2145A	SG59N16035	Shielded Signal (1.5m) Nonshielded Power (1.8m)
10.	PERSONAL COMPUTER	IBM	6560-T7T	9983708	Shielded Signal (10.0m) Nonshielded Power (1.8m)
11.	COLOR MONITOR	ACTION	0951	NA	Shielded Signal (1.5m) Nonshielded Power (2.5m)
12.	KEYBOARD	HP	C3758A	NA	Shielded Signal (1.5m)
13.	MOUSE	DEXIN	A2P800A	80102121	Shielded Signal (1.5m)
14.	LAN CARD	INTEL	S82555	00A0C9A6CB5 25271	Shielded UTP/S Cable (10.0m)

Note: 1. Support unit 3 & 5 were connected to the USB port of EUT.

2. Two RS-422/485 open loop cables (1.8m) were connected to the EUT.

3. The EUT acted as SERVER PC and communicated with support units 10-14 which acted as HOST PC and partners of communication system via a UTP cable (10m)

2.4 TEST SETUP

Please refer to the photos of test configuration in Item 6.

3. TEST INSTRUMENTS

3.1 TEST INSTRUMENTS (EMISSION)

CONDUCTED EMISSION MEASUREMENT

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
ROHDE & SCHWARZ Test Receiver	ESH3	893495/006	July 7, 2000
ROHDE & SCHWARZ Spectrum Monitor	EZM	893787/013	July 8, 2000
ROHDE & SCHWARZ Artificial Mains Network	ESH3-Z5	839135/006	July 7, 2000
EMCO-L.I.S.N.	3825/2	9204-1964	July 7, 2000
Shielded Room	Site 2	ADT-C02	NA

Note: 1. The measurement uncertainty is less than +/- 2.6dB, which is calculated as per 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.

RADIATED EMISSION MEASUREMENT

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
HP Spectrum Analyzer	8594E	3412A01132	Sept. 24, 1999
CHASE Preamplifier	CPA9231A/4	3215	Nov. 1, 1999
HP Preamplifier	8347A	3307A01088	Sept. 9, 1999
ROHDE & SCHWARZ TEST RECEIVER	ESVS 10	846285/012	Dec. 14, 1999
SCHWARZBECK Tunable Dipole Antenna	VHA 9103 UHA 9105	E101051 E101055	Nov. 25, 1999
CHASE BILOG Antenna	CBL6112	2074	Dec. 25, 1999
EMCO Double Ridged Guide Antenna	3115	9312-4192	April 5, 2000
CHANCE Turn Table & Tower Controller	ACS-I	NA	NA
Open Field Test Site	Site 6	ADT-R06	Dec. 24, 1999

Note: 1. The measurement uncertainty is less than +/- 3dB, which is calculated as per 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.

3.2 TEST INSTRUMENTS (IMMUNITY)

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
KeyTek, ESD Test System	2000	9105240/41	Aug. 10, 2000
KeyTek, ESD Simulator	MZ-15/EC	92022232	April 14, 2000
KeyTek, EFT Generator	CE-40	9508257	Sept. 8, 1999
KeyTek, Capacitive Clamp	CE-40-CCL	9508259	Sept. 8, 1999
ROHDE & SCHWARZ Signal Generator	SMY01	840490/009	Sept. 30, 1999
KALMUS Power Amplifier	LA1000V	091995-1	NA
KALMUS Power Amplifier	757LC	091995-2	NA
HOLADAY Field Probe	HI-4422	89915	Oct. 27, 1999
EMCO BiconiLog Antenna	3141	1001	NA
FCC Coupling Decoupling Network	FCC-801-M3-25	48	NA
FCC Coupling Decoupling Network	FCC-801-M2-25	20	NA
FISCHER CUSTOM COMMUNICATIONS EM Injection Clamp	FCC-203I	50	NA
FCC Coupling Decoupling Network	FCC-801-M1-25	17	NA
BOONTON RF Voltage Meter	9200B	331801AE	Dec. 17, 1999
COMTEST Compact Full Anechoic Chamber (7x3x3 m)	CFAC	ADT-S01	Aug. 24, 2000
HAEFELY Magnetic Field Tester	MAG 100.1	083794-06	NA
COMBINOVA Magnetic Field Meter	MFM10	224	Aug. 24, 2000

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

3.3 LIMITS OF CONDUCTED AND RADIATED EMISSION

LIMIT OF RADIATED EMISSION OF EN 55022

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

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.

LIMIT OF CONDUCTED EMISSION OF EN 55022

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)0	
	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 linearly with the logarithm of the frequency in the range 0.15 to 0.50 MHz
(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. TEST RESULTS (EMISSION)

4.1 RADIO DISTURBANCE

Product Family Standard	:	EN 55022+A1: 1995+A2: 1997, Class A
Frequency Range	:	0.15 - 30 MHz (Conducted Emission)
		30 - 1000 MHz (Radiated Emission)
Input Voltage	:	230 Vac, 50 Hz
Temperature	:	26 ℃
Humidity	:	67 %
Atmospheric Pressure	:	1006 mbar

TEST RESULT	Remarks
PASS	Minimum passing margin of conducted emission: -25.7 dB at 0.501 MHz Minimum passing margin of radiated emission: -2.0 dB at 240.30 MHz

4.2 EUT OPERATION CONDITION

1. Turn on the power of all equipment.
2. Industrial Panel Computer (EUT) reads a test program to enable all functions.
3. Industrial Panel Computer (EUT) reads and writes messages from HDD and FDD.
4. Industrial Panel Computer (EUT) sends and receives messages to and from SERVER PC via a LAN cable.
5. Industrial Panel Computer (EUT) sends "H" messages to monitor and monitor displays "H" patterns on screen.
6. Industrial Panel Computer (EUT) sends "H" messages to modem.
7. Industrial Panel Computer (EUT) sends "H" messages to printer and the printer prints them on paper.
8. Repeat steps 2-7.

4.3 TEST DATA OF CONDUCTED EMISSION (A)

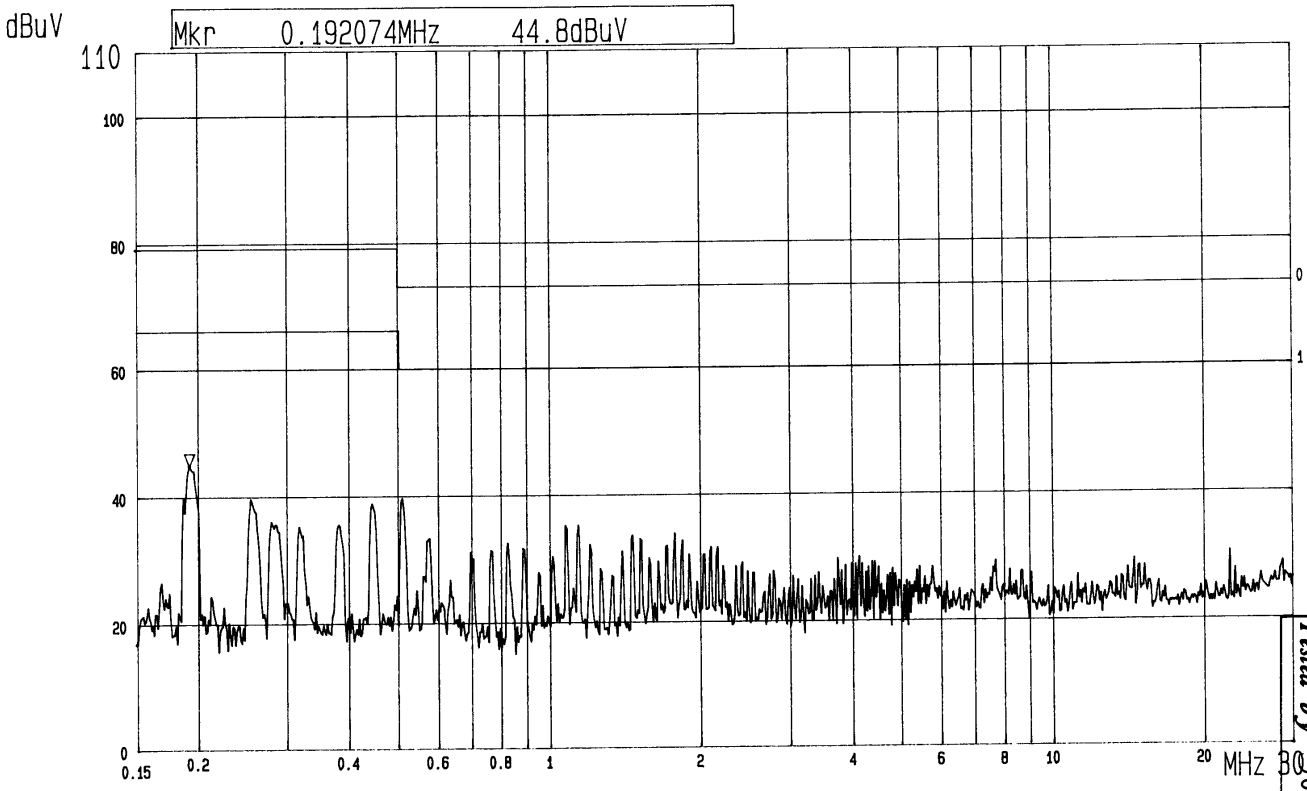
EUT: **INDUSTRIAL PANEL COMPUTER** MODEL: **T2-15AI**

MODE: **1** 6 dB Bandwidth: 10 kHz

PHASE: **LINE (L)**

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.
0.188	0.2	47.1	-	47.3	-	79.0	66.0	-31.7	-
0.440	0.2	35.5	-	35.7	-	79.0	66.0	-43.3	-
0.503	0.2	35.1	-	35.3	-	73.0	60.0	-37.7	-
1.068	0.2	30.7	-	30.9	-	73.0	60.0	-42.1	-
1.760	0.2	28.6	-	28.8	-	73.0	60.0	-44.2	-
2.198	0.2	23.7	-	23.9	-	73.0	60.0	-49.1	-

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



|--- Date 11.AUG '99 Time 15:11:54
EN 55022 CLASS A CONDUCTION TEST (PEAK VALUE) ADT CORP.
MODEL : T2-15AI (FULL SYSTEM) LISN: L

Report No. CE880140C4
Page 13-1
Tested by Johnny Xia

TEST DATA OF CONDUCTED EMISSION

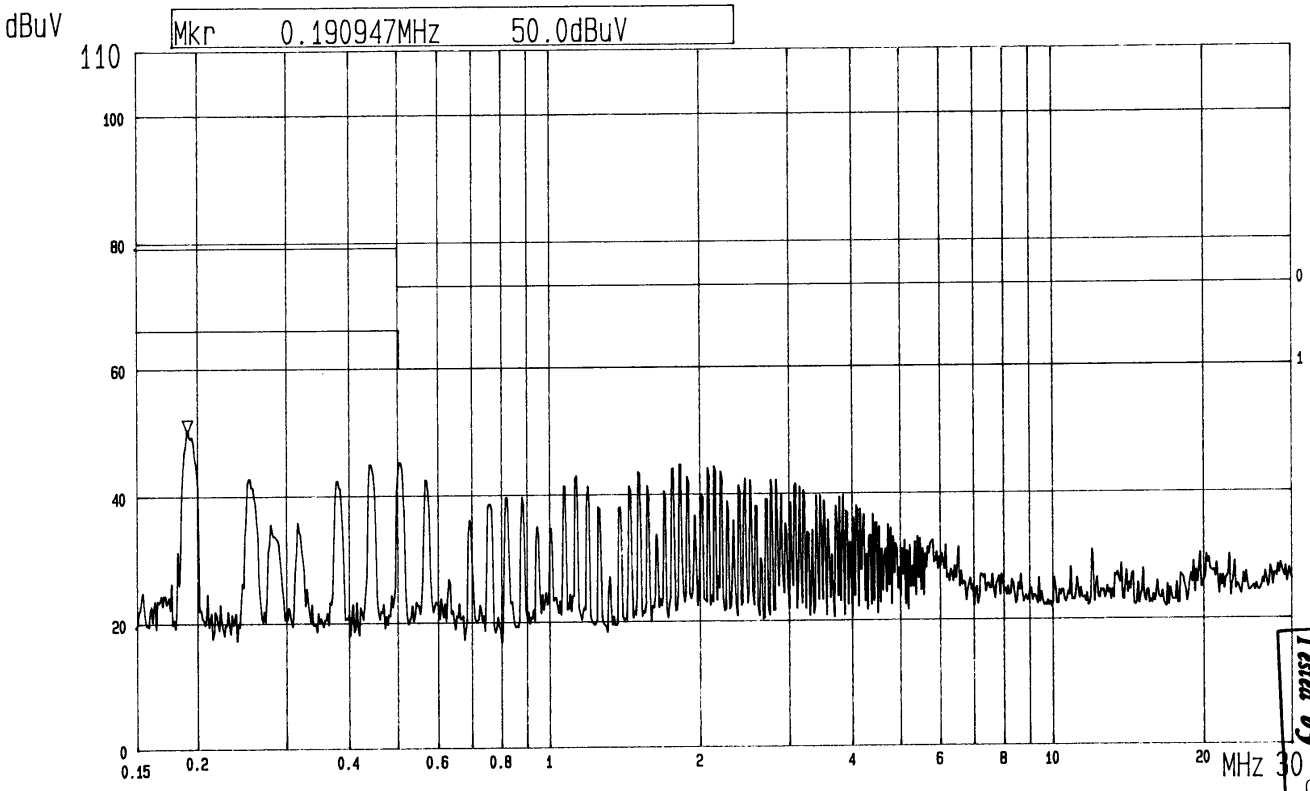
EUT: **INDUSTRIAL PANEL COMPUTER** MODEL: **T2-15AI**

MODE: 1 6 dB Bandwidth: 10 kHz

PHASE: **LINE (N)**

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.
0.188	0.2	47.2	-	47.4	-	79.0	66.0	-31.6	-
0.440	0.2	41.0	-	41.2	-	79.0	66.0	-37.8	-
0.503	0.2	40.8	-	41.0	-	73.0	60.0	-32.0	-
1.068	0.2	36.3	-	36.5	-	73.0	60.0	-36.5	-
1.760	0.2	39.2	-	39.4	-	73.0	60.0	-33.6	-
2.198	0.2	38.6	-	38.8	-	73.0	60.0	-34.2	-

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



|--- Date 11.AUG '99 Time 15:17:30
EN 55022 CLASS A CONDUCTION TEST (PEAK VALUE) ADT CORP.
MODEL : T2-15AI (FULL SYSTEM) LISN: N

Report No. CE88071404
Page 14-1
Tested by Johnny Xia

4.4 TEST DATA OF CONDUCTED EMISSION (B)

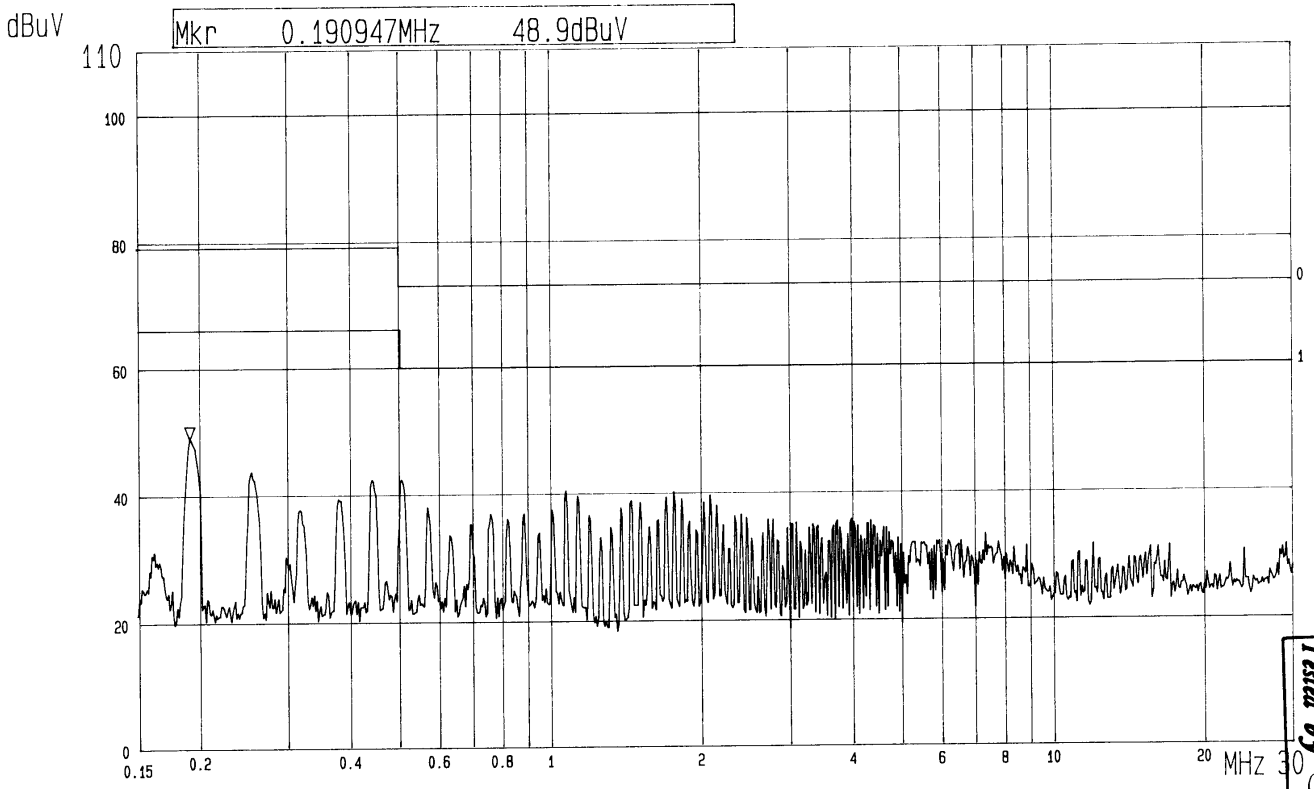
EUT: **INDUSTRIAL PANEL COMPUTER** MODEL: **T2-12AR**

MODE: **2** 6 dB Bandwidth: 10 kHz

PHASE: **LINE (L)**

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.
0.187	0.2	44.6	-	44.8	-	79.0	66.0	-34.2	-
0.250	0.2	39.2	-	39.4	-	79.0	66.0	-39.6	-
0.501	0.2	38.2	-	38.4	-	73.0	60.0	-34.6	-
1.065	0.2	35.6	-	35.8	-	73.0	60.0	-37.2	-
1.755	0.2	35.4	-	35.6	-	73.0	60.0	-37.4	-
4.012	0.4	31.9	-	32.3	-	73.0	60.0	-40.7	-

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



--- Date 11.AUG '99 Time 14:36:16
EN 55022 CLASS A CONDUCTION TEST (PEAK VALUE) ADT CORP.
MODEL : T2-12AR (FULL SYSTEM) LISN: L

Report No. CE88C1404
Page 15-1
Tested by Johnny Liu

TEST DATA OF CONDUCTED EMISSION

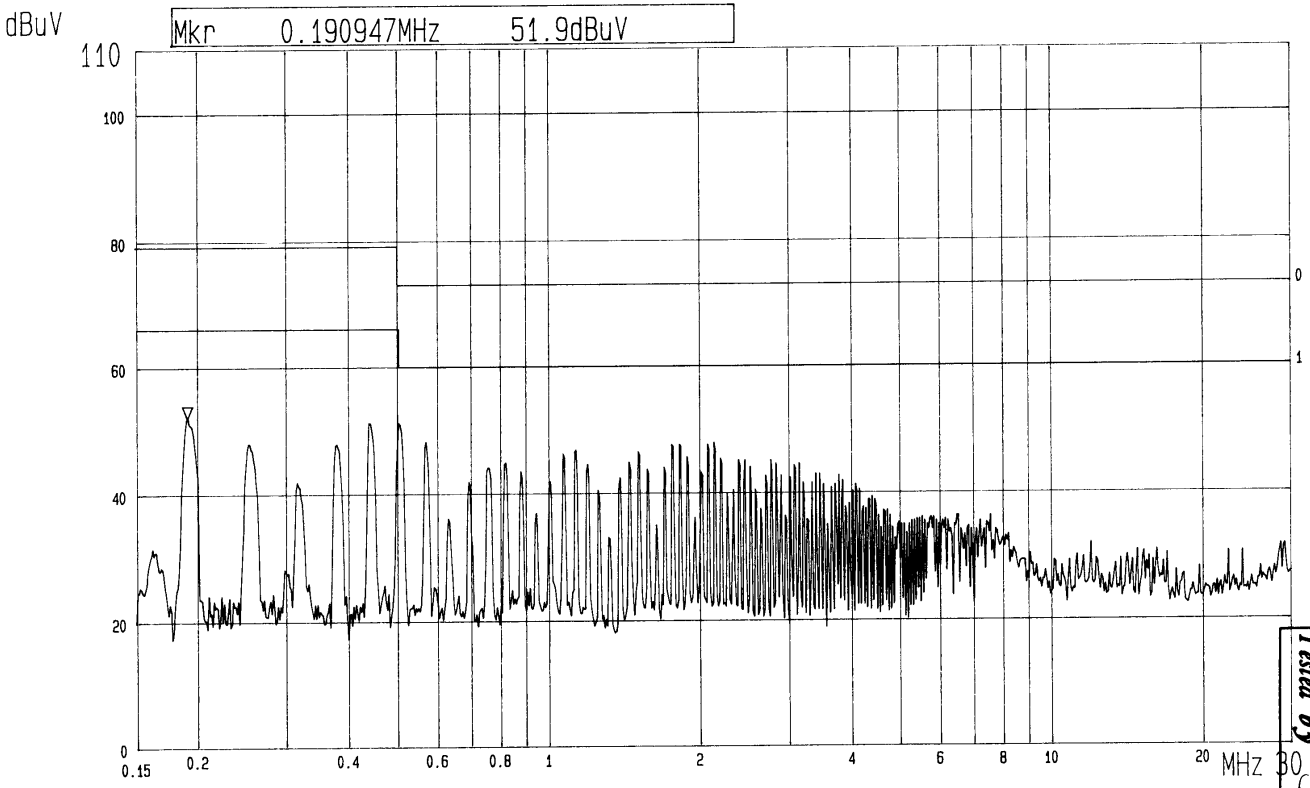
EUT: **INDUSTRIAL PANEL COMPUTER** MODEL: **T2-12AR**

MODE: **2** 6 dB Bandwidth: 10 kHz

PHASE: **LINE (N)**

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.
0.187	0.2	48.4	-	48.6	-	79.0	66.0	-30.4	-
0.250	0.2	44.5	-	44.7	-	79.0	66.0	-34.3	-
0.501	0.2	47.1	-	47.3	-	73.0	60.0	-25.7	-
1.065	0.2	42.3	-	42.5	-	73.0	60.0	-30.5	-
1.755	0.2	42.9	-	43.1	-	73.0	60.0	-29.9	-
4.012	0.4	37.6	-	38.0	-	73.0	60.0	-35.0	-

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



--- Date 11.AUG '99 Time 14:38:11
EN 55022 CLASS A CONDUCTION TEST (PEAK VALUE) ADT CORP.
MODEL : T2-12AR (FULL SYSTEM) LISN: N

Report No. CE880714-04
Page 16-1
Tested by Johnny Kuo

4.5 TEST DATA OF CONDUCTED EMISSION (C)

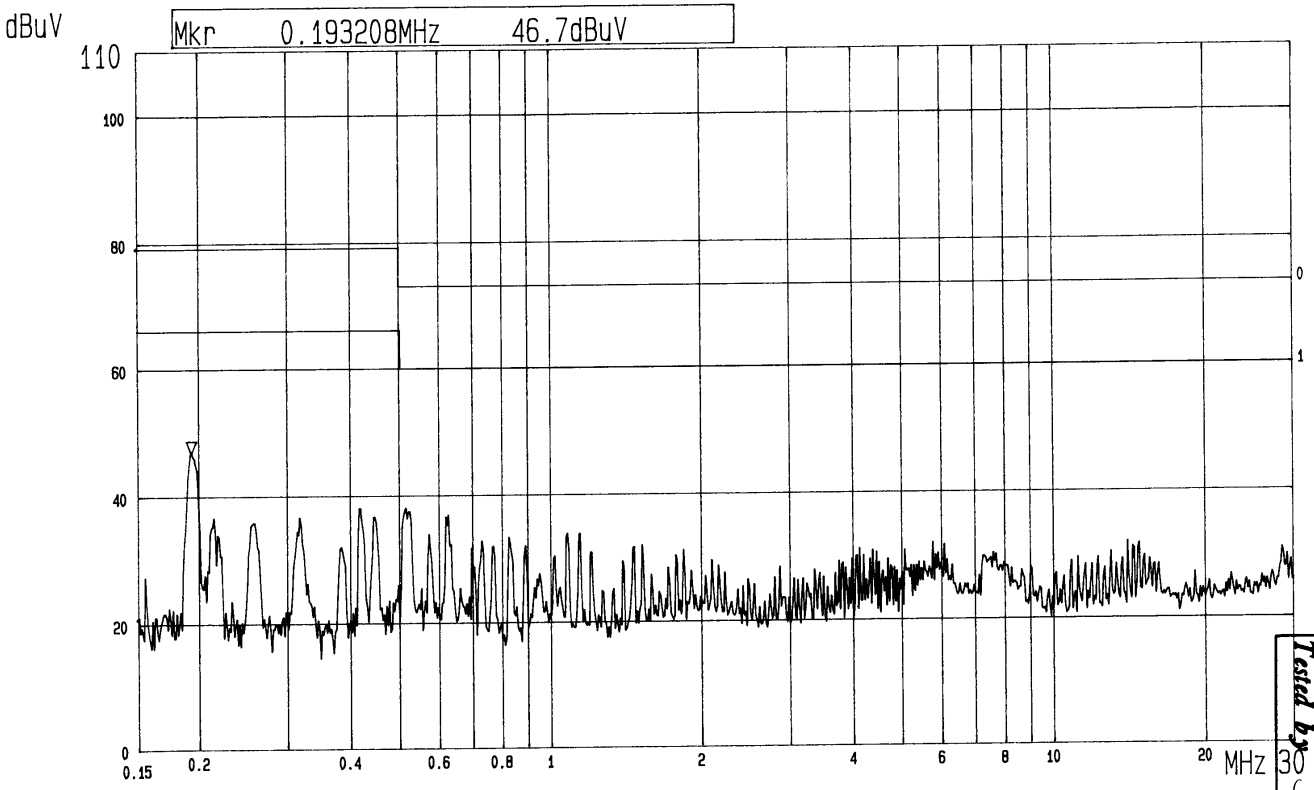
EUT: **INDUSTRIAL PANEL COMPUTER** MODEL: **T2-10AR**

MODE: **3** 6 dB Bandwidth: 10 kHz

PHASE: **LINE (L)**

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.
0.190	0.2	43.4	-	43.6	-	79.0	66.0	-35.4	-
0.445	0.2	31.8	-	32.0	-	79.0	66.0	-47.0	-
0.509	0.2	33.6	-	33.8	-	73.0	60.0	-39.2	-
1.145	0.2	29.7	-	29.9	-	73.0	60.0	-43.1	-
1.843	0.2	23.8	-	24.0	-	73.0	60.0	-49.0	-
2.857	0.3	21.3	-	21.6	-	73.0	60.0	-51.4	-

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



|--- Date 11.AUG '99 Time 14:54:40
EN 55022 CLASS A CONDUCTION TEST (PEAK VALUE) ADT CORP.
MODEL : T2-10AR (FULL SYSTEM) LISN: L

Report No. CE880714C4
Page 17-1
Tested by Johnny Xia

TEST DATA OF CONDUCTED EMISSION

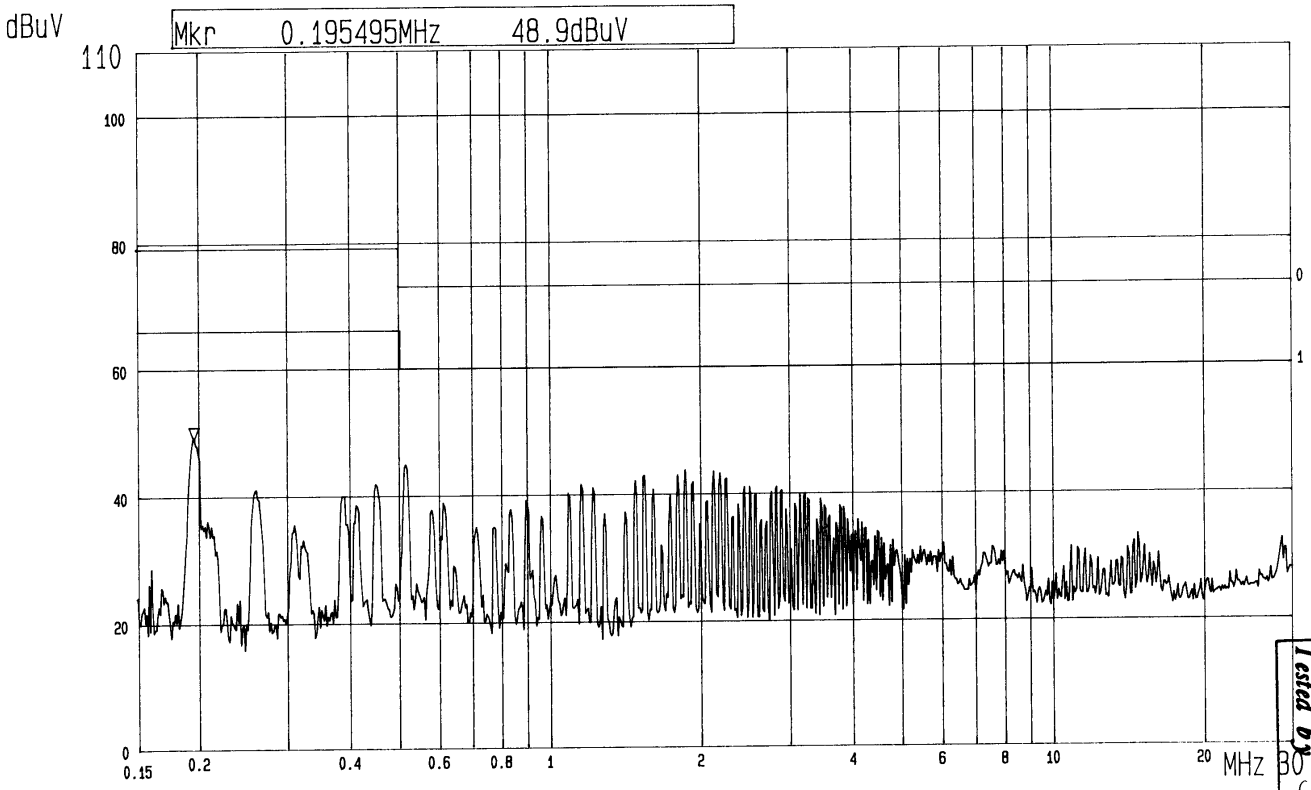
EUT: **INDUSTRIAL PANEL COMPUTER** MODEL: **T2-10AR**

MODE: **3** 6 dB Bandwidth: 10 kHz

PHASE: **LINE (N)**

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.
0.190	0.2	44.9	-	45.1	-	79.0	66.0	-33.9	-
0.445	0.2	38.1	-	38.3	-	79.0	66.0	-40.7	-
0.509	0.2	40.1	-	40.3	-	73.0	60.0	-32.7	-
1.145	0.2	38.7	-	38.9	-	73.0	60.0	-34.1	-
1.843	0.2	39.3	-	39.5	-	73.0	60.0	-33.5	-
2.857	0.3	38.2	-	38.5	-	73.0	60.0	-34.5	-

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



--- Date 11.AUG '99 Time 14:49:46
EN 55022 CLASS A CONDUCTION TEST (PEAK VALUE) ADT CORP.
MODEL : T2-10AR (FULL SYSTEM) LISN: N

Report No. CE98011404
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Tested by Johnny Liu

4.6 TEST DATA OF RADIATED EMISSION (A)

EUT: **INDUSTRIAL PANEL COMPUTER** MODEL: **T2-15AI**

MODE: 1 ANT. POLARITY: Horizontal

DETECTOR FUNCTION: Quasi-peak 6 dB BANDWIDTH: 120 kHz

FREQUENCY RANGE: 30-1000 MHz MEASURED DISTANCE: 10 M

Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
42.58	16.1	13.1	29.2	40.0	-10.8	400	0
66.82	7.4	18.5	25.9	40.0	-14.1	400	338
133.63	14.1	9.4	23.5	40.0	-16.5	400	232
144.20	13.2	23.0	36.2	40.0	-3.8	400	152
167.04	10.8	16.4	27.2	40.0	-12.8	400	22
192.24	11.0	23.9	34.9	40.0	-5.1	400	0
200.42	11.1	24.9	36.0	40.0	-4.0	400	309
224.98	13.5	12.3	25.8	40.0	-14.2	400	242
233.84	14.3	19.6	33.9	47.0	-13.1	400	166
240.30	15.0	30.0	45.0	47.0	-2.0	376	65
269.98	16.6	12.2	28.8	47.0	-18.2	400	206
292.47	16.3	17.7	34.0	47.0	-13.0	400	120
322.47	17.4	13.6	31.0	47.0	-16.0	400	315
336.43	18.1	24.7	42.8	47.0	-4.2	400	31

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

TEST DATA OF RADIATED EMISSION

EUT: **INDUSTRIAL PANEL COMPUTER** MODEL: **T2-15AI**

MODE: 1 ANT. POLARITY: Vertical

DETECTOR FUNCTION: Quasi-peak 6 dB BANDWIDTH: 120 kHz

FREQUENCY RANGE: 30-1000 MHz MEASURED DISTANCE: 10 M

Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
48.07	10.2	26.2	36.4	40.0	-3.6	100	212
112.50	12.7	15.8	28.5	40.0	-11.5	100	0
133.62	13.2	11.6	24.8	40.0	-15.2	100	169
142.49	13.6	18.4	32.0	40.0	-8.0	100	0
157.49	13.3	17.6	30.9	40.0	-9.1	100	344
167.03	12.4	21.4	33.8	40.0	-6.2	100	328
172.49	11.7	18.7	30.4	40.0	-9.6	100	0
192.26	11.7	17.2	28.9	40.0	-11.1	100	212
200.43	12.2	23.1	35.3	40.0	-4.7	100	357
202.48	12.3	14.2	26.5	40.0	-13.5	100	0
217.48	12.7	19.5	32.2	40.0	-7.8	100	0
224.98	13.0	16.7	29.7	40.0	-10.3	100	360
232.48	13.2	19.7	32.9	47.0	-14.1	110	19
240.31	13.5	21.7	35.2	47.0	-11.8	110	5
277.46	15.2	15.8	31.0	47.0	-16.0	131	20
307.48	17.0	15.7	32.7	47.0	-14.3	120	5
336.42	18.5	13.0	31.5	47.0	-15.5	100	5
359.95	19.7	16.1	35.8	47.0	-11.2	100	54

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

4.7 TEST DATA OF RADIATED EMISSION (B)

EUT: **INDUSTRIAL PANEL COMPUTER** MODEL: **T2-12AR**

MODE: **2** ANT. POLARITY: Horizontal

DETECTOR FUNCTION: Quasi-peak 6 dB BANDWIDTH: 120 kHz

FREQUENCY RANGE: 30-1000 MHz MEASURED DISTANCE: 10 M

Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
66.82	7.4	22.4	29.8	40.0	-10.2	400	353
111.38	14.0	10.4	24.4	40.0	-15.6	400	80
133.65	14.1	12.9	27.0	40.0	-13.0	400	18
167.04	10.8	16.1	26.9	40.0	-13.1	400	304
183.73	10.9	18.4	29.3	40.0	-10.7	400	11
192.27	11.0	23.4	34.4	40.0	-5.6	400	292
200.45	11.1	24.7	35.8	40.0	-4.2	400	20
215.10	12.5	16.3	28.8	40.0	-11.2	400	235
220.00	13.0	16.0	29.0	40.0	-11.0	400	0
225.50	13.5	17.1	30.6	40.0	-9.4	296	185
233.85	14.3	21.0	35.3	47.0	-11.7	279	140
240.33	15.0	27.0	42.0	47.0	-5.0	264	209
336.46	18.1	23.6	41.7	47.0	-5.3	238	117
400.89	21.8	19.9	41.7	47.0	-5.3	207	114

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

TEST DATA OF RADIATED EMISSION

EUT: **INDUSTRIAL PANEL COMPUTER** MODEL: **T2-12AR**

MODE: **2** ANT. POLARITY: Vertical

DETECTOR FUNCTION: Quasi-peak 6 dB BANDWIDTH: 120 kHz

FREQUENCY RANGE: 30-1000 MHz MEASURED DISTANCE: 10 M

Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
48.07	10.2	25.2	35.4	40.0	-4.6	100	357
66.82	7.5	23.5	31.0	40.0	-9.0	100	209
133.65	13.2	12.5	25.7	40.0	-14.3	100	174
167.04	12.4	18.8	31.2	40.0	-8.8	100	1
185.40	11.2	14.4	25.6	40.0	-14.4	100	7
192.27	11.7	18.0	29.7	40.0	-10.3	100	356
200.47	12.2	24.3	36.5	40.0	-3.5	100	2
220.01	12.8	21.9	34.7	40.0	-5.3	100	356
225.51	13.0	24.6	37.6	40.0	-2.4	100	0
233.84	13.2	24.6	37.8	40.0	-2.2	100	355
275.61	15.1	20.1	35.2	47.0	-11.8	100	0
336.46	18.5	17.3	35.8	47.0	-11.2	100	26
400.89	21.7	20.4	42.1	47.0	-4.9	100	5

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

4.8 TEST DATA OF RADIATED EMISSION (C)

EUT: **INDUSTRIAL PANEL COMPUTER** MODEL: **T2-10AR**

MODE: 3 ANT. POLARITY: Horizontal

DETECTOR FUNCTION: Quasi-peak 6 dB BANDWIDTH: 120 kHz

FREQUENCY RANGE: 30-1000 MHz MEASURED DISTANCE: 10 M

Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
66.83	7.3	20.0	27.3	40.0	-12.7	400	0
167.05	10.1	14.3	24.4	40.0	-15.6	400	249
167.73	10.1	13.6	23.7	40.0	-16.3	400	230
183.77	10.1	23.2	33.3	40.0	-6.7	400	5
192.28	10.2	25.9	36.1	40.0	-3.9	400	224
200.48	10.3	26.8	37.1	40.0	-2.9	400	138
240.35	13.9	30.6	44.5	47.0	-2.5	320	35
336.54	16.3	24.1	40.4	47.0	-6.6	323	82
390.08	19.0	19.1	38.1	47.0	-8.9	265	258
507.09	20.6	21.4	42.0	47.0	-5.0	145	154
624.12	21.6	18.5	40.1	47.0	-6.9	162	64
741.15	22.8	19.0	41.8	47.0	-5.2	125	25
819.16	23.8	18.0	41.8	47.0	-5.2	111	224

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

TEST DATA OF RADIATED EMISSION

EUT: **INDUSTRIAL PANEL COMPUTER** MODEL: **T2-10AR**

MODE: 3 ANT. POLARITY: Vertical

DETECTOR FUNCTION: Quasi-peak 6 dB BANDWIDTH: 120 kHz

FREQUENCY RANGE: 30-1000 MHz MEASURED DISTANCE: 10 M

Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
66.82	7.4	22.3	29.7	40.0	-10.3	100	89
144.21	13.0	14.4	27.4	40.0	-12.6	100	290
167.06	11.7	15.5	27.2	40.0	-12.8	100	223
183.75	10.3	17.5	27.8	40.0	-12.2	100	197
195.03	11.0	22.4	33.4	40.0	-6.6	100	0
200.48	11.4	26.2	37.6	40.0	-2.4	100	352
240.35	12.4	27.5	39.9	47.0	-7.1	100	44
312.05	15.6	18.4	34.0	47.0	-13.0	100	152
336.50	16.7	23.9	40.6	47.0	-6.4	100	348
351.06	17.3	22.6	39.9	47.0	-7.1	100	30
362.75	17.8	20.2	38.0	47.0	-9.0	100	48
370.58	18.1	20.4	38.5	47.0	-8.5	100	60
390.06	19.0	24.0	43.0	47.0	-4.0	100	2
468.08	20.1	17.4	37.5	47.0	-9.5	345	334
741.13	23.0	18.0	41.0	47.0	-6.0	400	187

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

4.9 DISTURBANCE IN SUPPLY SYSTEM

Product Family Standard	:	EN 61000-3-2, Class A
Input Voltage	:	230Vac, 50Hz
Temperature	:	21 ℃
Humidity	:	58 %
Atmospheric Pressure	:	985 mbar

TEST RESULT	Remarks
PASS	MODE 1, MODE 2, MODE 3 Meets the requirement of Class A limit.

Note: Class A or Class D is classified by test instruments automatically.

4.9.1 EUT OPERATION CONDITION

Same as item **4.1.1**.

4.9.2 MEASUREMENT DATA OF HARMONICS TEST (A)

EUT: **INDUSTRIAL PANEL COMPUTER** MODEL: **T2-15AI**

MODE: **1**

Fundamental Voltage : 229.820 Vrms
Amperes : 0.485 Arms
Frequency: 50 Hz

Power Consumption : 50.742 W

Harm. Order	Reading Data (A)	Limit (A)
1	-	-
3	0.21	2.30
5	0.20	1.14
7	0.18	0.77
9	0.16	0.40
11	0.14	0.33
13	0.11	0.21
15	0.09	0.15
17	0.07	0.13
19	0.05	0.12
21	0.03	0.11
23	0.01	0.10
25	0.01	0.09
27	0.01	0.08
29	0.02	0.08
31	0.02	0.07
33	0.02	0.07
35	0.01	0.06
37	0.01	0.06
39	0.01	0.06

Harm. Order	Reading Data (A)	Limit (A)
2	0.00	1.08
4	0.01	0.43
6	0.00	0.30
8	0.00	0.23
10	0.01	0.18
12	0.00	0.15
14	0.00	0.13
16	0.00	0.11
18	0.00	0.10
20	0.00	0.09
22	0.00	0.08
24	0.00	0.08
26	0.00	0.07
28	0.00	0.07
30	0.00	0.06
32	0.00	0.06
34	0.00	0.05
36	0.00	0.05
38	0.00	0.05
40	0.00	0.05

Note: Steady state values on AC mains are recorded in the table.

4.9.3 MEASUREMENT DATA OF HARMONICS TEST (B)

EUT: **INDUSTRIAL PANEL COMPUTER** MODEL: **T2-12AR**

MODE: **2**

Fundamental Voltage : 229.691 Vrms
Amperes : 0.476 Arms
Frequency: 50 Hz

Power Consumption : 49.553 W

Harm. Order	Reading Data (A)	Limit (A)
1	-	-
3	0.20	2.30
5	0.19	1.14
7	0.17	0.77
9	0.16	0.40
11	0.13	0.33
13	0.11	0.21
15	0.09	0.15
17	0.07	0.13
19	0.05	0.12
21	0.03	0.11
23	0.01	0.10
25	0.01	0.09
27	0.01	0.08
29	0.02	0.08
31	0.02	0.07
33	0.02	0.07
35	0.01	0.06
37	0.01	0.06
39	0.01	0.06

Harm. Order	Reading Data (A)	Limit (A)
2	0.01	1.08
4	0.02	0.43
6	0.01	0.30
8	0.00	0.23
10	0.00	0.18
12	0.00	0.15
14	0.00	0.13
16	0.00	0.11
18	0.00	0.10
20	0.00	0.09
22	0.00	0.08
24	0.00	0.08
26	0.00	0.07
28	0.00	0.07
30	0.00	0.06
32	0.00	0.06
34	0.00	0.05
36	0.00	0.05
38	0.00	0.05
40	0.00	0.05

Note: Steady state values on AC mains are recorded in the table.

4.9.4 MEASUREMENT DATA OF HARMONICS TEST (C)

EUT: **INDUSTRIAL PANEL COMPUTER** MODEL: **T2-10AR**

MODE: **3**

Fundamental Voltage : 229.701 Vrms
Amperes : 0.457 Arms
Frequency: 50 Hz

Power Consumption : 47.235 W

Harm. Order	Reading Data (A)	Limit (A)
1	-	-
3	0.19	2.30
5	0.18	1.14
7	0.17	0.77
9	0.15	0.40
11	0.13	0.33
13	0.11	0.21
15	0.09	0.15
17	0.06	0.13
19	0.05	0.12
21	0.03	0.11
23	0.01	0.10
25	0.01	0.09
27	0.01	0.08
29	0.01	0.08
31	0.02	0.07
33	0.02	0.07
35	0.01	0.06
37	0.01	0.06
39	0.01	0.06

Harm. Order	Reading Data (A)	Limit (A)
2	0.00	1.08
4	0.01	0.43
6	0.02	0.30
8	0.01	0.23
10	0.00	0.18
12	0.01	0.15
14	0.01	0.13
16	0.00	0.11
18	0.00	0.10
20	0.00	0.09
22	0.00	0.08
24	0.00	0.08
26	0.00	0.07
28	0.00	0.07
30	0.00	0.06
32	0.00	0.06
34	0.00	0.05
36	0.00	0.05
38	0.00	0.05
40	0.00	0.05

Note: Steady state values on AC mains are recorded in the table.

4.10 VOLTAGE FLUCTUATIONS AND FLICKER

Basic Standard	:	EN 61000-3-3
Input Voltage	:	230.Vac, 50Hz
Temperature	:	21 ℃
Humidity	:	58 %
Atmospheric Pressure	:	985 mbar

TEST RESULT	Remarks
PASS	MODE 1, MODE 2, MODE 3

4.10.1 EUT OPERATION CONDITION

Same as item **4.1.1**.

4.10.2 TEST DATA OF VOLTAGE FLUCTUATIONS AND FLICKER (A)

EUT: **INDUSTRIAL PANEL COMPUTER** MODEL: **T2-15AI**

MODE: 1

Input Voltage : 229.820 Vrms Input Amperes : 0.485 Arms

Power Factor : 0.455 Power Frequency: 50 Hz

Observation period (Tp): 2 hour

Test Parameter	Measurement Value	Limitation	Remark
Pst	0.086	1.0	pass
Plt	0.038	0.65	pass
Tdt (ms)	0	200	pass
dmax (%)	0	4%	pass
dc (%)	0	3%	pass

Note: (1) Plt means long-term flicker indicator
(2) Pst means short-term flicker indicator
(3) dc means relative steady-state voltage change
(4) dmax means maximum relative voltage change
(5) Tdt means maximum time that dt exceeds 3 %

4.10.3 TEST DATA OF VOLTAGE FLUCTUATIONS AND FLICKER (B)

EUT: **INDUSTRIAL PANEL COMPUTER** MODEL: **T2-12AR**

MODE: **2**

Input Voltage : 229.691 Vrms Input Amperes : 0.476 Arms

Power Factor : 0.453 Power Frequency: 50 Hz

Observation period (Tp): 2 hour

Test Parameter	Measurement Value	Limitation	Remark
Pst	0.087	1.0	pass
Plt	0.038	0.65	pass
Tdt (ms)	0	200	pass
dmax (%)	0	4%	pass
dc (%)	0	3%	pass

Note: (1) Plt means long-term flicker indicator
(2) Pst means short-term flicker indicator
(3) dc means relative steady-state voltage change
(4) dmax means maximum relative voltage change
(5) Tdt means maximum time that dt exceeds 3 %

4.10.4 TEST DATA OF VOLTAGE FLUCTUATIONS AND FLICKER (C)

EUT: **INDUSTRIAL PANEL COMPUTER** MODEL: **T2-10AR**

MODE: 3

Input Voltage : 229.701 Vrms Input Amperes : 0.457 Arms

Power Factor : 0.450 Power Frequency: 50 Hz

Observation period (Tp): 2 hour

Test Parameter	Measurement Value	Limitation	Remark
Pst	0.085	1.0	pass
Plt	0.037	0.65	pass
Tdt (ms)	0	200	pass
dmax (%)	0	4%	pass
dc (%)	0	3%	pass

Note: (1) Plt means long-term flicker indicator
(2) Pst means short-term flicker indicator
(3) dc means relative steady-state voltage change
(4) dmax means maximum relative voltage change
(5) Tdt means maximum time that dt exceeds 3 %

5. TEST RESULTS (IMMUNITY)

5.1 GENERAL DESCRIPTION

Generic Standard	:	EN 50082-2: 1995	
Basic Standard Specification and Performance Criteria	:	EN 61000-4-2	(Electrostatic Discharge, ESD, 8kV air discharge, 4kV Contact discharge, Performance Criterion B)
		EN 61000-4-3	(Radio-Frequency Electromagnetic Field Susceptibility Test, RS, 80-1000 MHz, 10V/m, 80% AM (1kHz), Performance Criterion A)
		EN 61000-4-4	(Electrical Fast Transient/Burst, EFT, Power line: 2kV, Signal line: 1kV, Performance Criterion B)
		EN 61000-4-6	(Conducted Radio Frequency Disturbances Test, CS, 0.15-80 MHz, 10V/m, 80% AM, 1kHz, Performance Criterion A)
		EN 61000-4-8	(Power Frequency Magnetic Field Test, 50 Hz, 30A/m, Performance Criterion A)
		ENV 50204	(Radio-Frequency Electromagnetic Field, Pulse modulated, 900+/-5 MHz, 10V/m, 50 % duty cycle, Rep. Frequency 200 Hz, Performance Criterion A)
Input Voltage	:	230 Vdc, 50 Hz	
Temperature	:	26 ℃	
Humidity	:	58 %	
Atmospheric Pressure	:	1006 mbar	

5.2 PERFORMANCE CRITERIA DESCRIPTION

Criterion A - The apparatus shall continue to operate as intended. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended.

Criterion B - The apparatus shall continue to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended.

Criterion C - Temporary loss of function is allowed, provided the function is self-recoverable or can be restored by the operation of the controls.

5.3 EUT OPERATION CONDITION

Same as item **4.2.**

5.4 TEST RESULT OF ELECTROSTATIC DISCHARGE (ESD)

Basic Standard	:	EN 61000-4-2
Discharge Impedance	:	330 ohm / 150 pF
Discharge Voltage	:	Air Discharge - 8 kV (Direct) Contact Discharge - 4 kV (Direct/Indirect)
Polarity	:	Positive/Negative
Number of Discharge	:	Minimum 10 times at each test point
Discharge Mode	:	Single Discharge
Discharge Period	:	1-second minimum

Test Result		Remarks
Criterion A	PASS	MODE 1, 2 & 3

OBSERVATION DESCRIPTION

Direct Application			Test Result	
Discharge Level (kV)	Polarity (+/-)	Test Point	Contact Discharge	Air Discharge
8	+/-	1 ~ 10	NA	Note 1
4	+/-	1 ~ 6	Note 1	N/A

Description of test point: (Pls. refer to ESD test photo)

1. Metal Case
2. AC Input
3. VGA port
4. Serial Port
5. Parallel port
6. USB port
7. PS2 port
8. FDD
9. RJ 45
10. Junction of case

Indirect Application			Test Result	
Discharge Level (kV)	Polarity (+/-)	Test Point	Horizontal Coupling	Vertical Coupling
4	+/-	1 ~ 4	Note 1	Note 1

Description of test point:

1. Front side
2. Left side
3. Right side
4. Rear side

Description of test result:

Note 1: There was no change compared with initial operation during the test.

5.5 TEST RESULT OF RADIATED ELECTROMAGNETIC FIELDS (RS)

Basic Standard	:	EN 61000-4-3
Frequency range	:	80 MHz - 1000 MHz
Field strength	:	10 V/m
Modulation	:	1kHz Sine Wave, 80%, AM Modulation
Frequency step	:	1 % of fundamental
Polarity of Antenna	:	Horizontal and Vertical
Test distance	:	3 m

Test Result		Remarks
Criterion A	PASS	MODE 1, 2 & 3

Note: Four sides of EUT are verified separately.

Description of test result:

There was no change compared with initial operation during the test.

5.6 TEST RESULT OF ELECTRICAL FAST TRANSIENT (EFT)

Basic Standard	:	EN 61000-4-4
Test Voltage	:	Power Line - 2 kV Signal/Control Line – 1kV
Polarity	:	Positive/Negative
Impulse Frequency	:	5 kHz
Tr / Tn	:	5/50 ns
Burst Duration	:	15 ms
Burst Period	:	300 ms
Test Duration	:	Not less than 1 min.

Test Result		Remarks
Criterion B	**PASS**	MODE 1, 2 & 3

OBSERVATION DESCRIPTION

Test Point	Polarity	Test Level (kV)	Result
L1	+/−	2	Note 1
L2	+/−	2	Note 1
GND	+/−	2	Note 1
Singal/Control Line	+/−	1	Note 1

Description of test result:

Note 1: Transmission of messages stops during the test, but self-recoverable after the test.

5.7 TEST RESULT OF CONDUCTED RADIO FREQUENCY DISTURBANCES (CS)

Basic Standard	:	EN 61000-4-6
Frequency range	:	0.15 MHz - 80 MHz
Field strength	:	10 V/m
Modulation	:	1kHz Sine Wave, 80%, AM Modulation
Frequency step	:	1 % of fundamental
Coupled cable	:	DC power, Anode and Cathode (Unshielded)
Coupling device	:	CDN-M3 (3 wires), Clamp

Test Result		Remarks
Criterion A	**PASS**	MODE 1, 2 & 3

OBSERVATION DESCRIPTION

There was no change compared with initial operation during the test.

5.8 TEST RESULT OF POWER FREQUENCY MAGNETIC FIELD

Basic Standard	:	EN 61000-4-8
Frequency range	:	50Hz
Field strength	:	30 A/m
Observation Time	:	1 minute
Inductance coil	:	Rectangular type, 1mx1m

Test Result		Remarks
Criterion A	PASS	MODE 1, 2 & 3

OBSERVATION DESCRIPTION

There was no change compared with initial operation during the test.

5.9 TEST RESULT OF RADIO-FREQUENCY ELECTROMAGNETIC FIELD, PULSE MODULATED

Basic Standard	:	ENV 50204
Frequency range	:	900 +/- 5 MHz
Field strength	:	10 V/m
Modulation	:	200Hz, Square Wave, 50% Duty Cycle
Dwell Time	:	30 second
Polarity of Antenna	:	Horizontal and Vertical
Test distance	:	3 m

Test Result		Remarks
Criterion A	PASS	MODE 1, 2 & 3

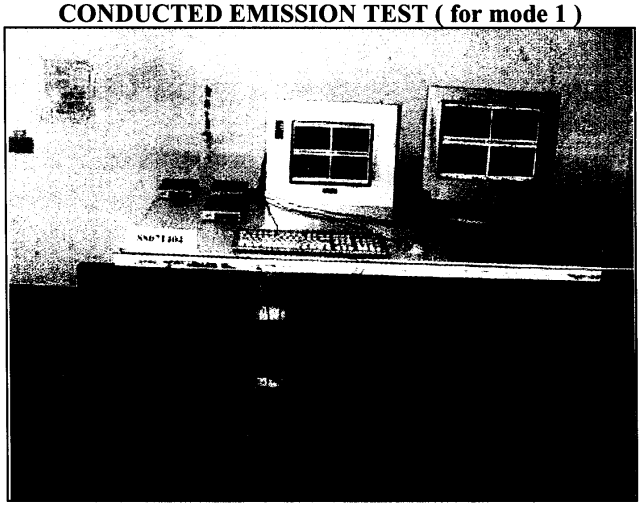
Note: Four sides of EUT are verified separately.

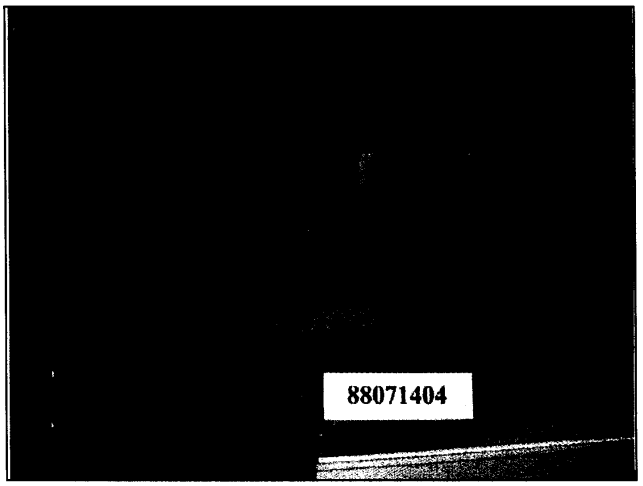
OBSERVATION DESCRIPTION

There was no change compared with initial operation during the test.

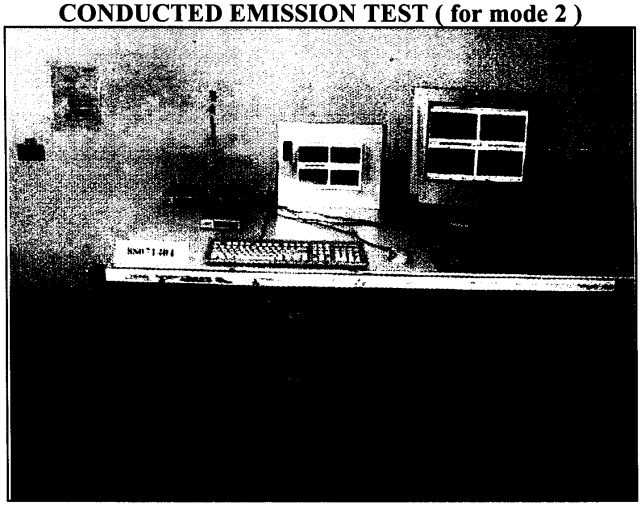
6. PHOTOGRAPHS OF THE TEST CONFIGURATION

CONDUCTED EMISSION TEST (for mode 1)

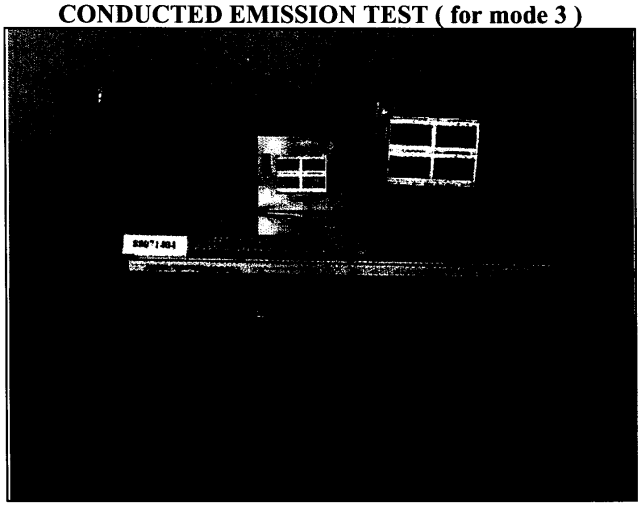


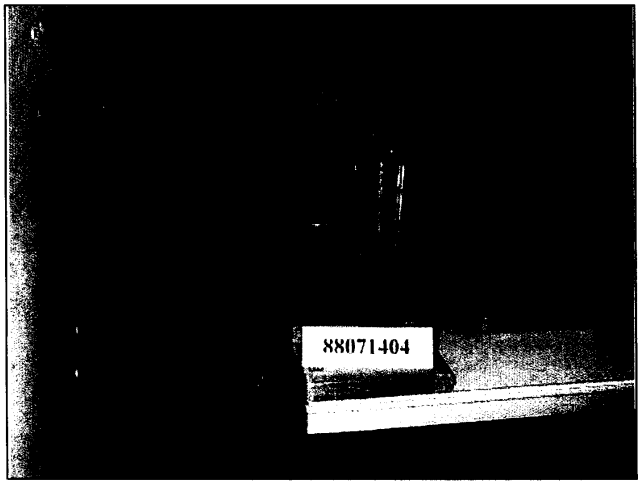


CONDUCTED EMISSION TEST (for mode 2)

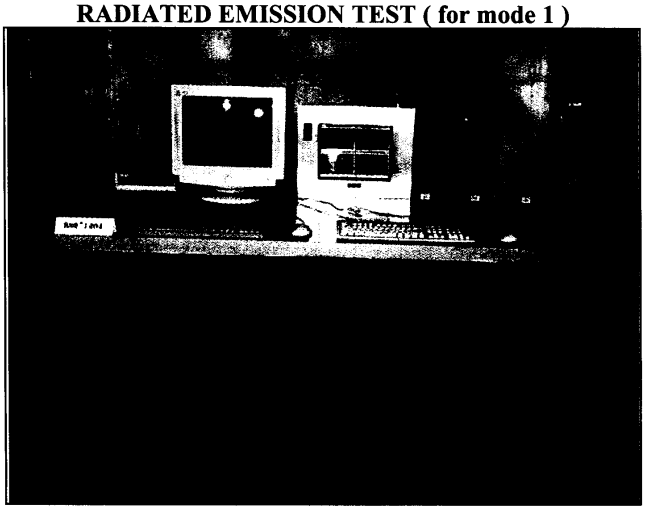


CONDUCTED EMISSION TEST (for mode 3)

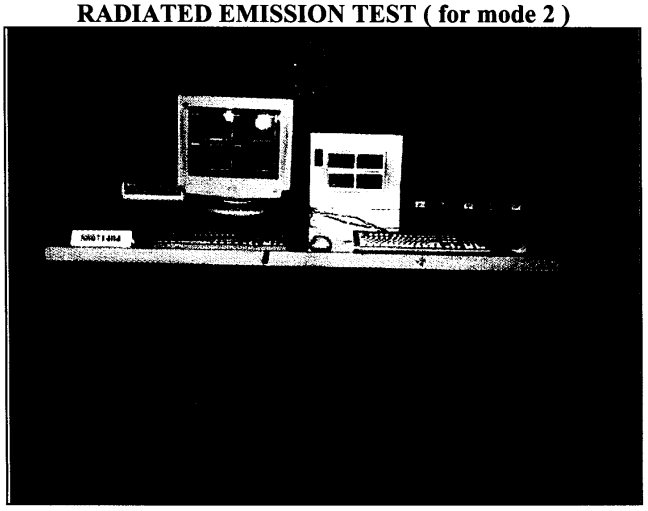


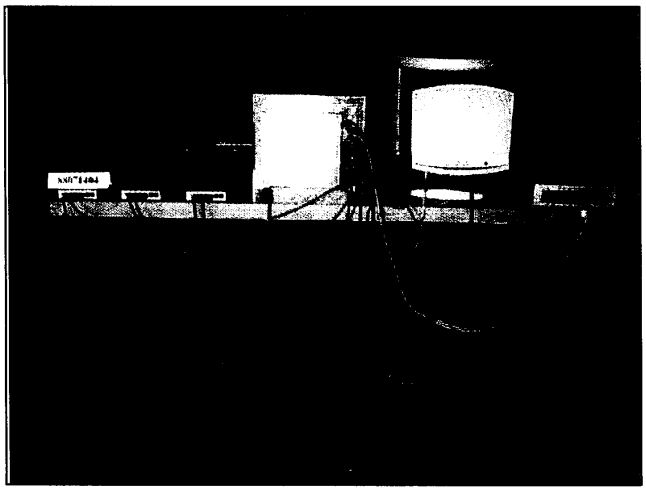


RADIATED EMISSION TEST (for mode 1)

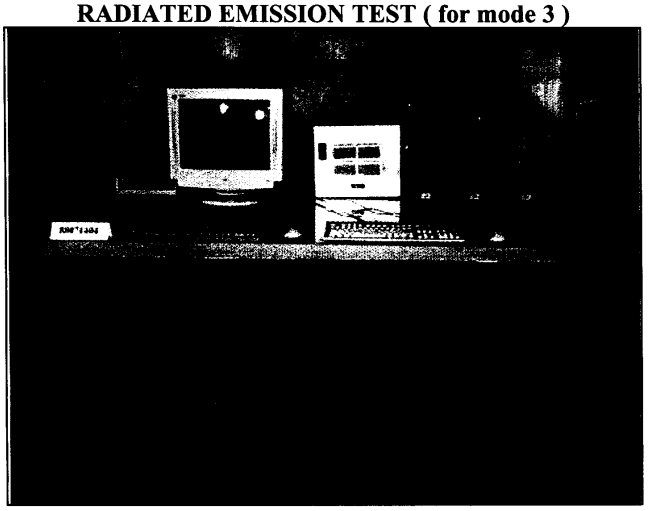


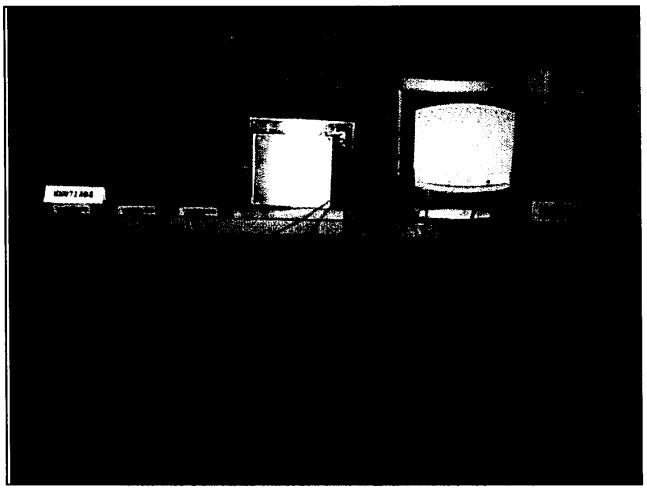
RADIATED EMISSION TEST (for mode 2)



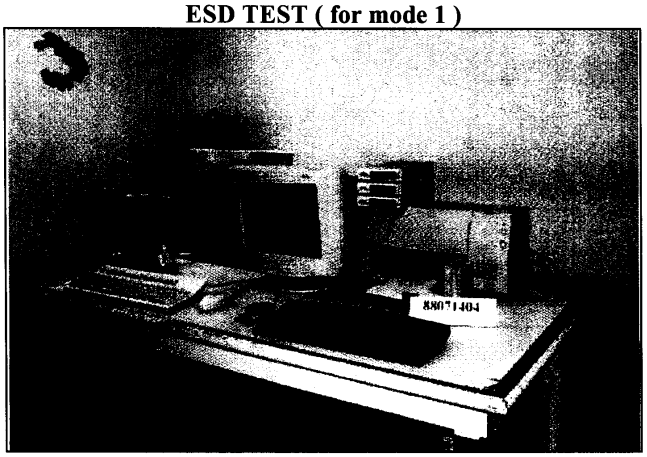


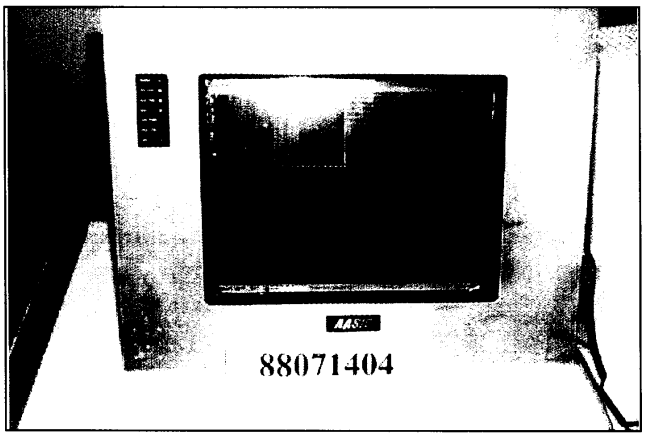
RADIATED EMISSION TEST (for mode 3)

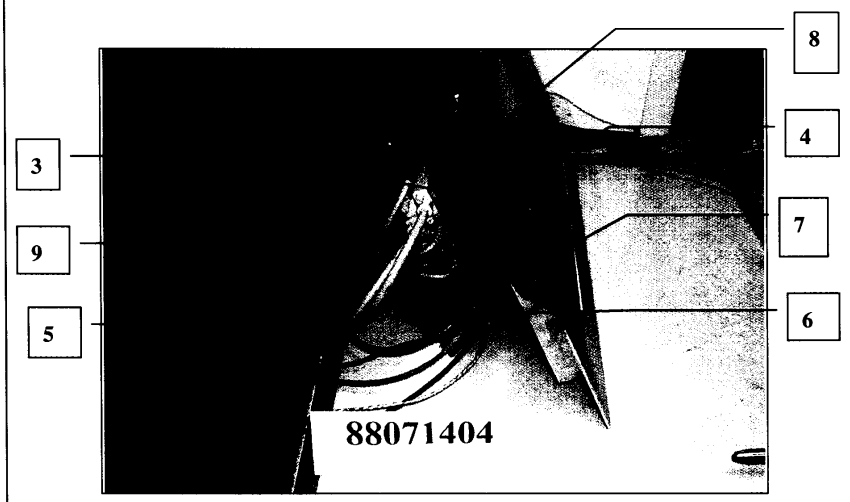




ESD TEST (for mode 1)






8
4
3
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88071404


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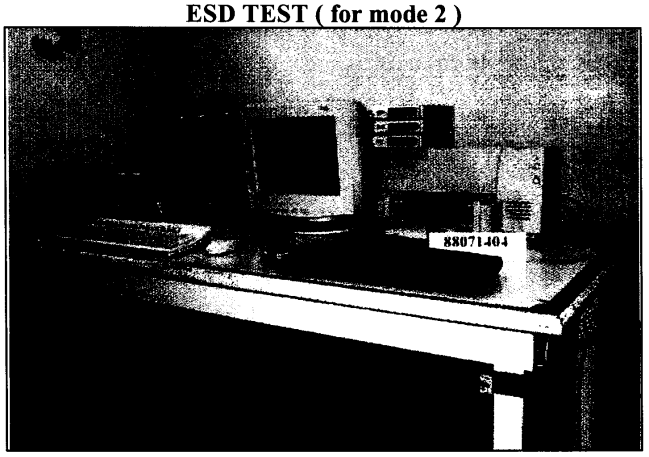
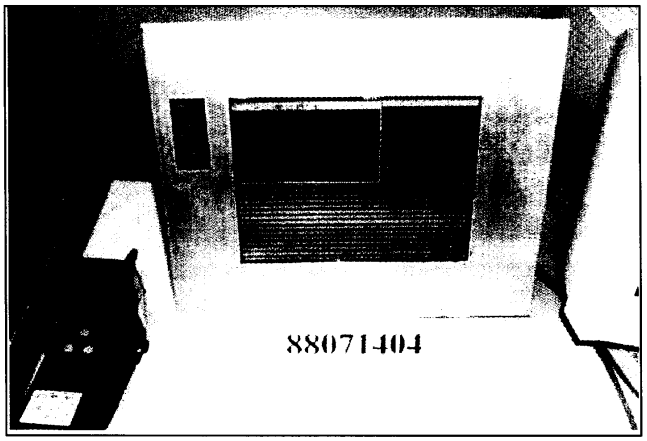
88071404

ESD TEST (for mode 2)



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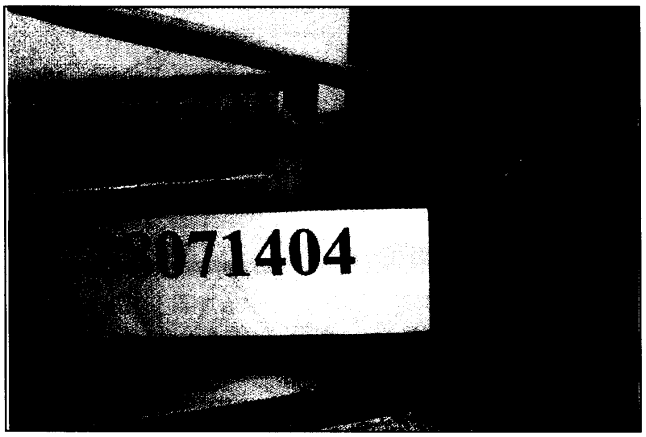
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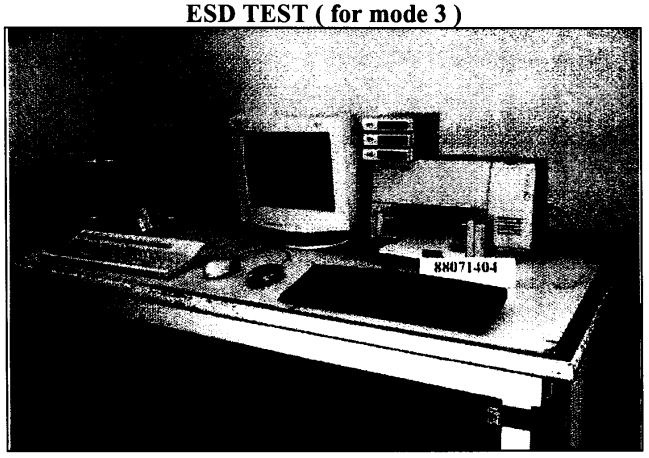
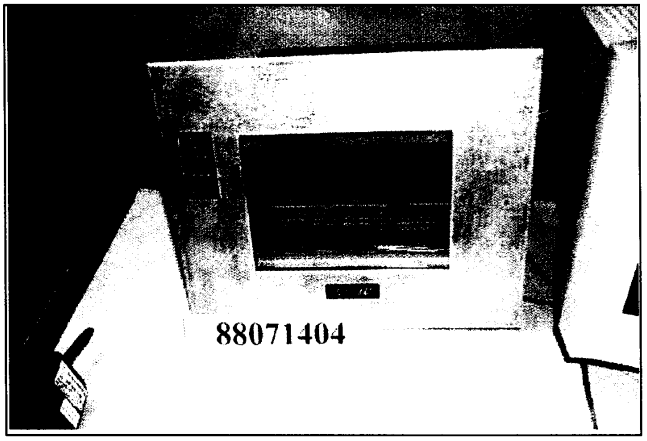
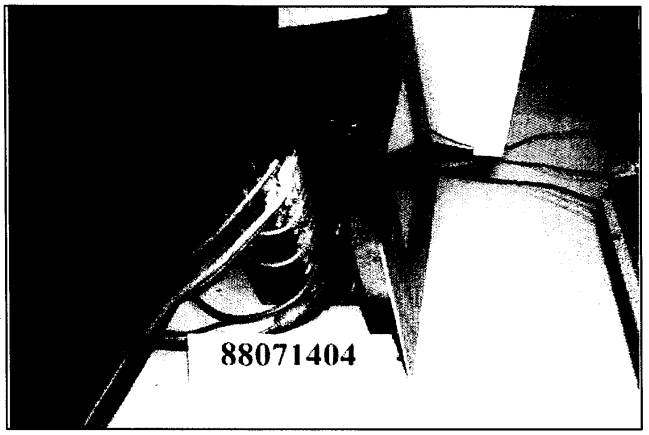
ESD TEST (for mode 3)



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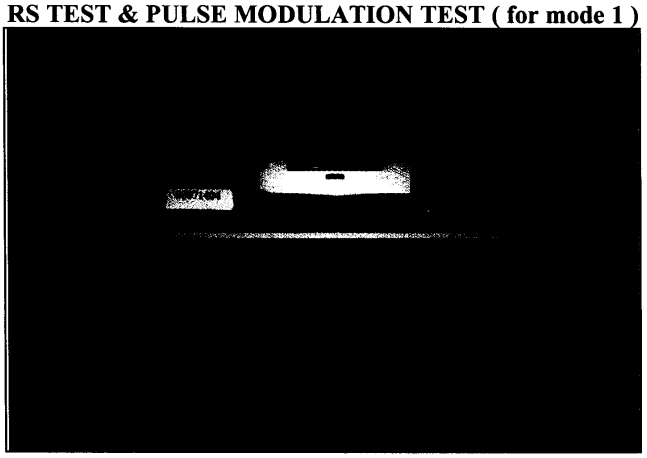
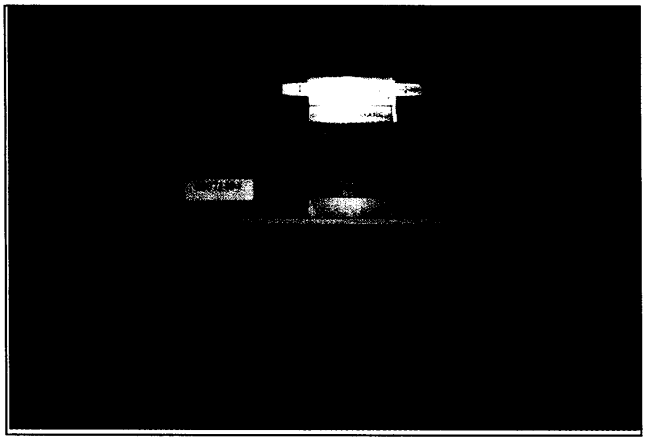
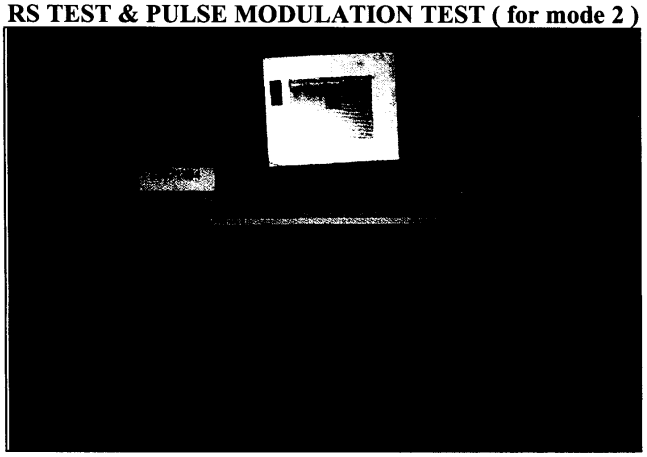
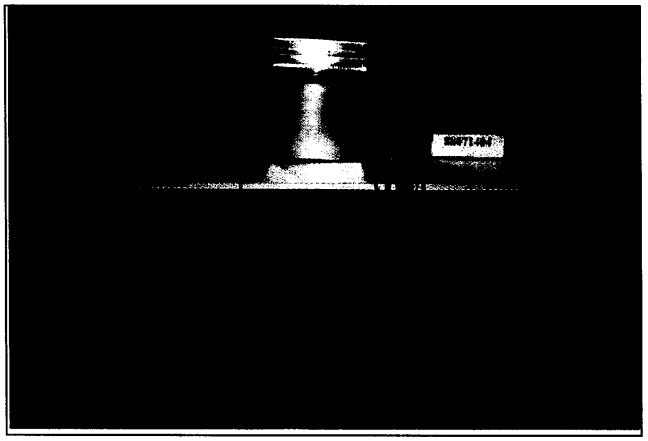
RS TEST & PULSE MODULATION TEST (for mode 1)



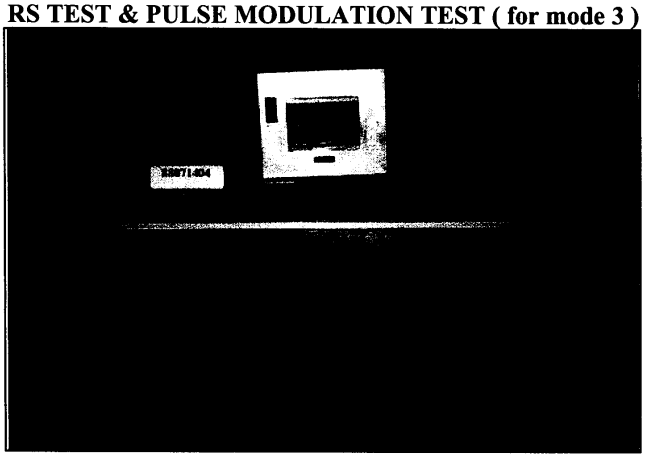


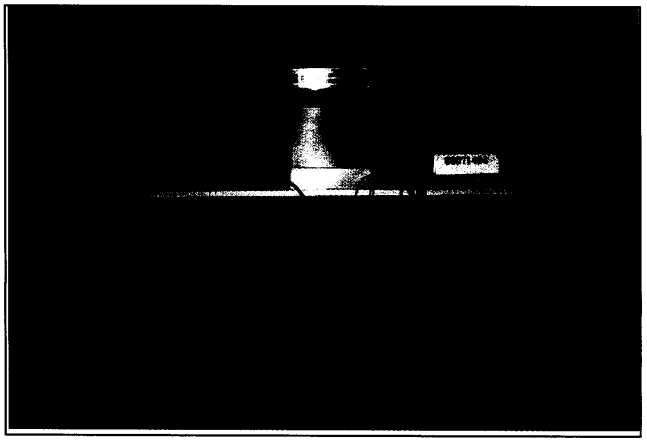
RS TEST & PULSE MODULATION TEST (for mode 2)



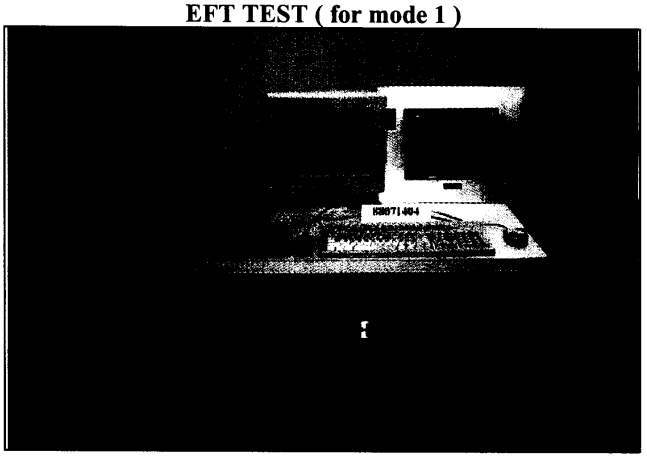


RS TEST & PULSE MODULATION TEST (for mode 3)

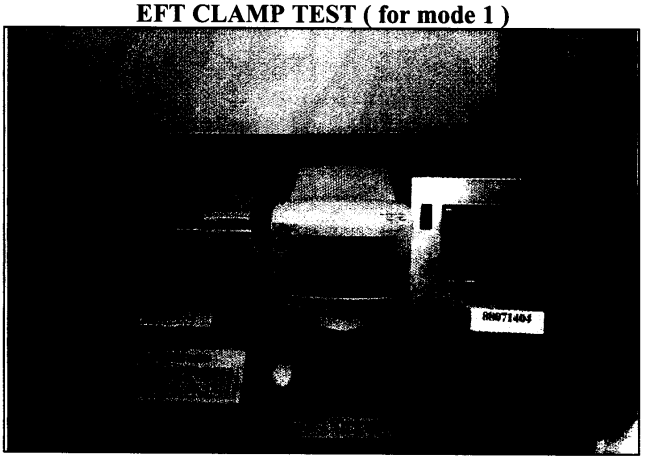




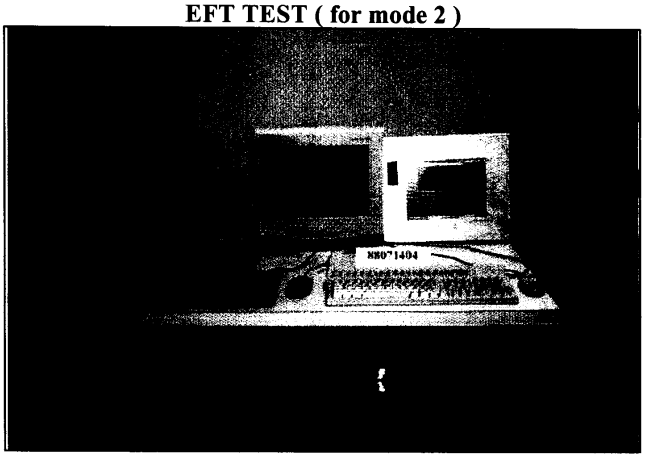
EFT TEST (for mode 1)



EFT CLAMP TEST (for mode 1)



EFT TEST (for mode 2)



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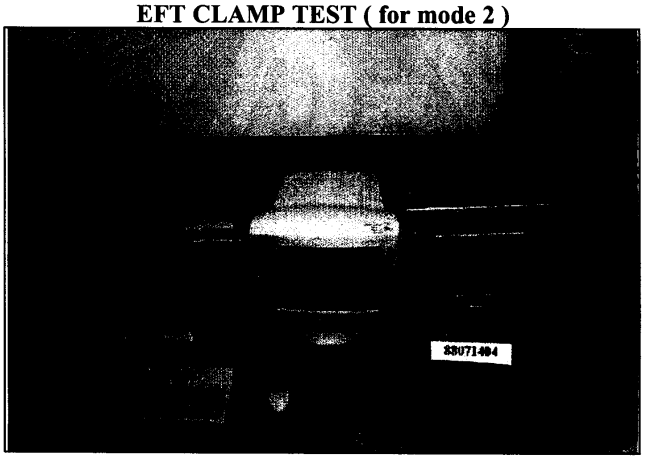
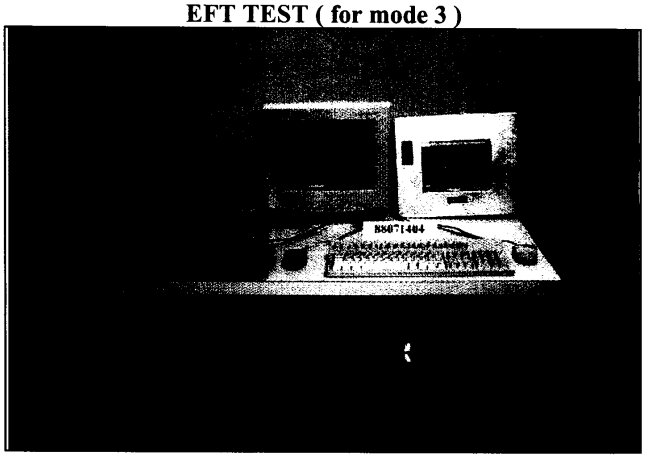
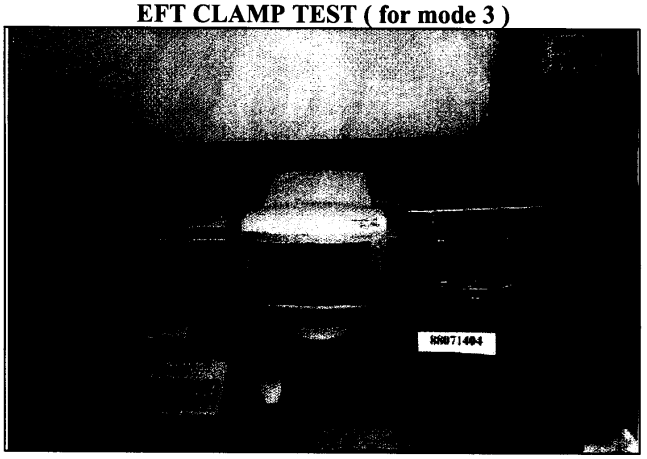


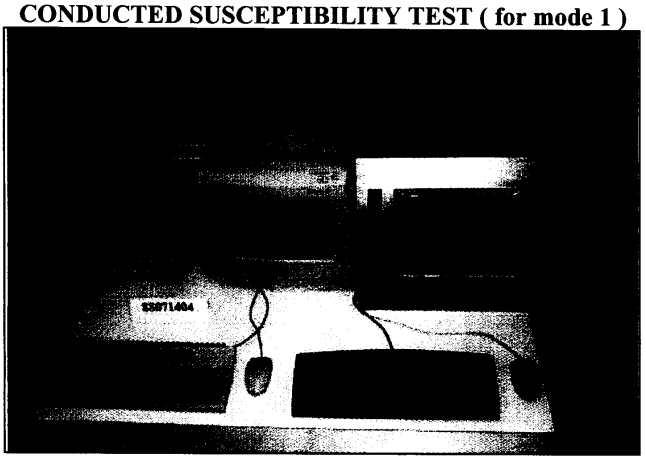
EFT TEST (for mode 3)



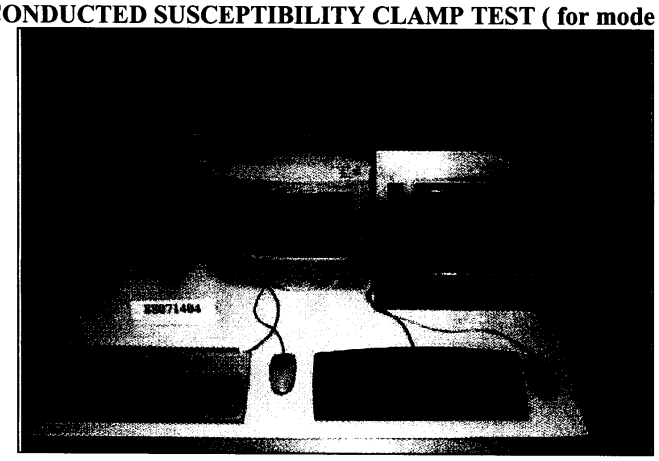
EFT CLAMP TEST (for mode 3)



CONDUCTED SUSCEPTIBILITY TEST (for mode 1)



CONDUCTED SUSCEPTIBILITY CLAMP TEST (for mode 1)



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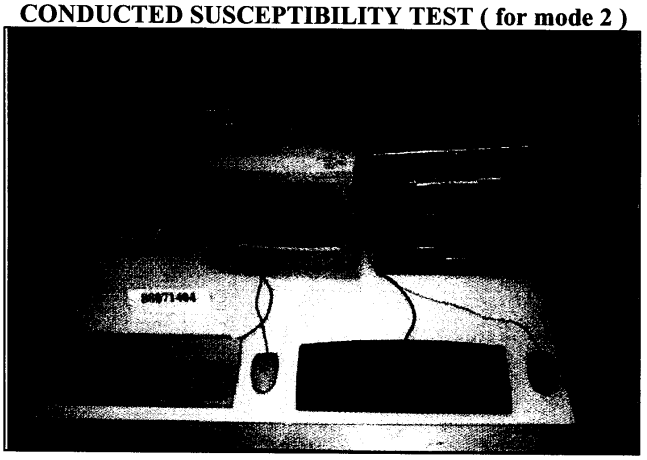
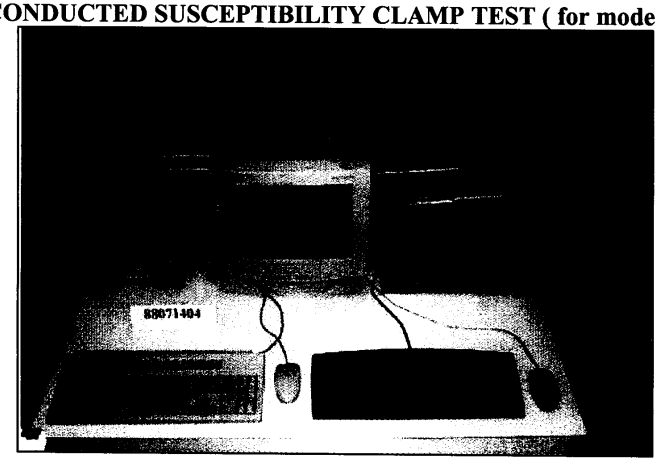
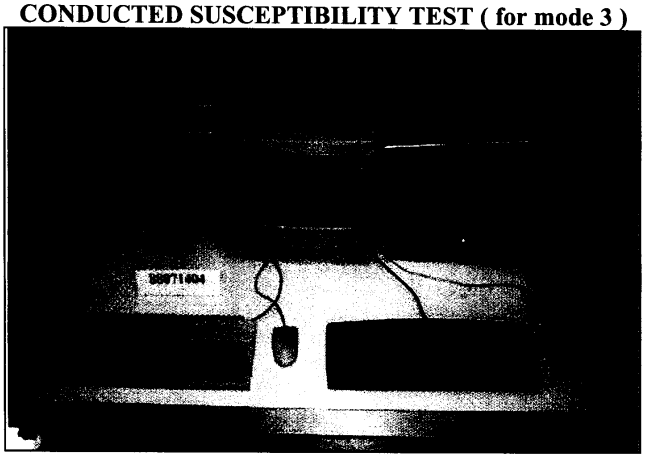


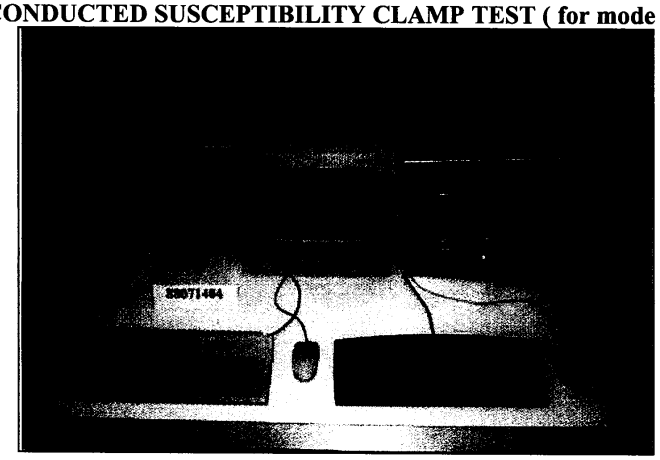
CONDUCTED SUSCEPTIBILITY CLAMP TEST (for mode 2)



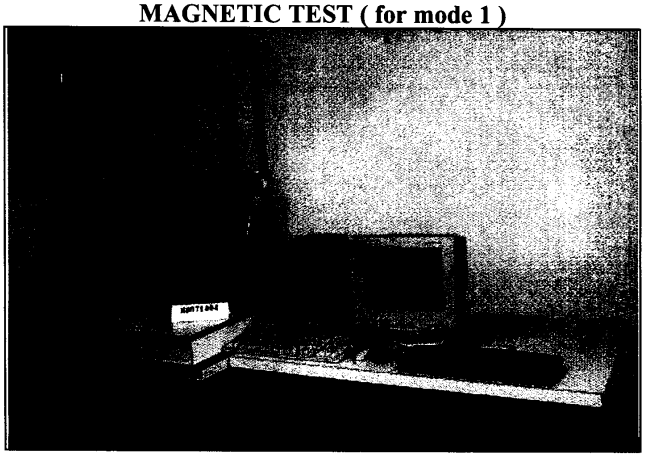
CONDUCTED SUSCEPTIBILITY TEST (for mode 3)



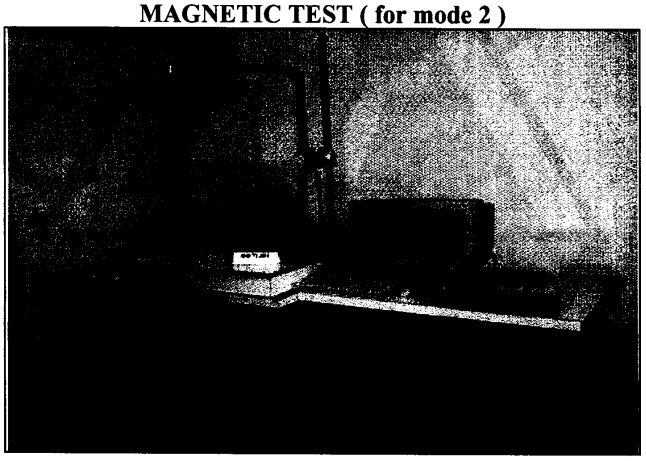
CONDUCTED SUSCEPTIBILITY CLAMP TEST (for mode 3)



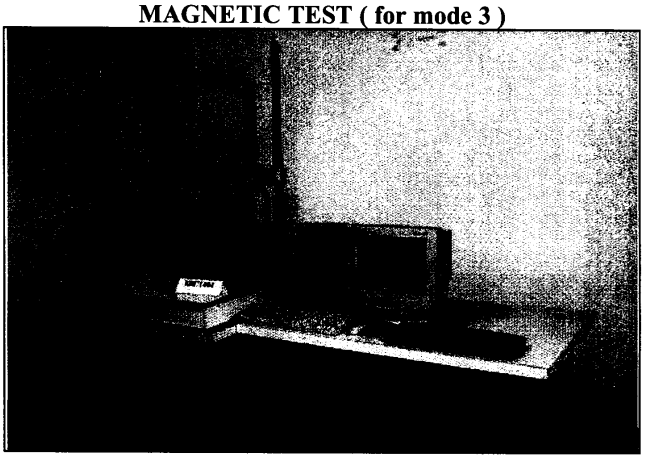
MAGNETIC TEST (for mode 1)



MAGNETIC TEST (for mode 2)



MAGNETIC TEST (for mode 3)



7. APPENDIX - INFORMATION OF THE TESTING LABORATORY

Information of the testing laboratory

We, ADT Corp., are founded in 1988, to provide our best service in EMC and Safety consultation. Our laboratory is accredited by the following approval agencies according to ISO/IEC Guide 25 or EN 45001:

• USA	FCC, UL, NVLAP
• Germany	TUV Rheinland
	TUV Product Service
• Japan	VCCI
• New Zealand	RFS
• Norway	NEMKO, DNV
• U.K.	INCHCAPE
• R.O.C.	BSMI

Enclosed please find some certificates of our laboratory obtained from approval agencies. If you have any comments, please feel free to contact us with the following:

Lin Kou EMC Lab.:
Tel: 886-2-26032180
Fax: 886-2-26022943

Hsin Chu EMC Lab:
Tel: 886-35-935343
Fax: 886-35-935342

Lin Kou Safety Lab.:
Tel: 886-2-26093195
Fax: 886-2-26093184

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

E-mail: **service@mail.adt.com.tw**
http://www.adt.com.tw

FEDERAL COMMUNICATIONS COMMISSION

7435 Oakland Mills Road
Columbia, MD 21046
Telephone: 301-725-1585 (ext-2118)
Facsimile: 301-344-2050

October 21, 1998

IN REPLY REFER TO
31040/SIT
1300F2

Advance Data Technology Corporation
12F, No. 1, Sec. 4
Nan-King East Rd.
Taipei, Taiwan, R.O.C.

Attention: Hams W. Lai

Re: Measurement facility located at above address, Site No. 1
(3 and 10 meters)

Gentlemen:

Your submission of the description of the subject measurement facility has been reviewed and found to be in compliance with the requirements of Section 2.948 of the FCC Rules. The description has, therefore, been placed on file and the name of your organization added to the Commission's list of facilities whose measurement data will be accepted in conjunction with applications for certification or notification under Parts 15 or 18 of the Commission's Rules. Our list will also indicate that the facility complies with the radiated and AC line conducted test site criteria in ANSI C63.4-1992. Please note that this filing must be updated for any changes made to the facility, and at least every three years the data on file must be certified as current.

Per your request, the above mentioned facility has been also added to our list of those who perform these measurement services for the public on a fee basis. This list is published periodically and is also available on the Laboratory's Public Access Link as described in the enclosed Public Notice.

Sincerely,

Thomas W. Phillips
Electronics Engineer
Customer Service Branch

Enclosure:
PAL PN

FEDERAL COMMUNICATIONS COMMISSION

7435 Oakland Mills Road
Columbia, MD 21046
Telephone: 301-725-1585 (ext-2118)
Facsimile: 301-344-2050

September 15, 1998

IN REPLY REFER TO
31040/SIT
1300F2

Advance Data Technology Corporation
12F, No. 1, Sec. 4
Nan-King E. Rd.
Taipei, Taiwan, R.O.C.

Attention: Hams Lai

Re: Measurement facility located at Lin Kou, Sites 2 & 3
(3 & 10 meters)

Gentlemen:

Your submission of the description of the subject measurement facility has been reviewed and found to be in compliance with the requirements of Section 2.948 of the FCC Rules. The description has, therefore, been placed on file and the name of your organization added to the Commission's list of facilities whose measurement data will be accepted in conjunction with applications for certification or notification under Parts 15 or 18 of the Commission's Rules. Please note that this filing must be updated for any changes made to the facility, and at least every three years the data on file must be certified as current.

Per your request, the above mentioned facility has also been added to our list of those who perform these measurement services for the public on a fee basis. An up-to-date list is available on the Internet at the FCC Website www.fcc.gov under Electronic Filing.

Sincerely,

Thomas W. Phillips
Electronics Engineer
Customer Service Branch

FEDERAL COMMUNICATIONS COMMISSION

7435 Oakland Mills Road
Columbia, MD 21046
Telephone: 301-725-1585 (ext-2118)
Facsimile: 301-344-2050

April 17, 1998

IN REPLY REFER TO
31040/SIT
1300F2

Advance Data Technology Corporation
12F., No. 1, Sec. 4
Nan-King E. Rd.
Taipei, Taiwan, R.O.C.

Attention: Harris W. Lai

Re: Measurement facility located at above address
Site No. 4 (3 and 10 meters)

Gentlemen:

Your submission of the description of the subject measurement facility has been reviewed and found to be in compliance with the requirements of Section 2.948 of the FCC Rules. The description has, therefore, been placed on file and the name of your organization added to the Commission's list of facilities whose measurement data will be accepted in conjunction with applications for certification or notification under Parts 15 or 18 of the Commission's Rules. Our list will also indicate that the facility complies with the radiated and AC line conducted test site criteria in ANSI C63.4-1992. Please note that this filing must be updated for any changes made to the facility, and at least every three years the data on file must be certified as current.

Per your request, the above mentioned facility has been also added to our list of those who perform these measurement services for the public on a fee basis. This list is published periodically and is also available on the Laboratory's Public Access Link as described in the enclosed Public Notice.

Sincerely,

Thomas W. Phillips
Electronics Engineer
Customer Service Branch

Enclosure:
PAL PN

FEDERAL COMMUNICATIONS COMMISSION

7435 Oakland Mills Road
Columbia, MD 21046
Telephone: 301-725-1585 (ext-2118)
Facsimile: 301-344-2050

October 21, 1998

IN REPLY REFER TO
31040/SIT
1300F2

Advance Data Technology Corporation
12F, No. 1, Sec. 4
Nan-King East Rd.
Taipei, Taiwan, R.O.C.

Attention: Hams W. Lai

Re: Measurement facility located at above address, Site No. 5
(3 and 10 meters)

Gentlemen:

Your submission of the description of the subject measurement facility has been reviewed and found to be in compliance with the requirements of Section 2.948 of the FCC Rules. The description has, therefore, been placed on file and the name of your organization added to the Commission's list of facilities whose measurement data will be accepted in conjunction with applications for certification or notification under Parts 15 or 18 of the Commission's Rules. Our list will also indicate that the facility complies with the radiated and AC line conducted test site criteria in ANSI C63.4-1992. Please note that this filing must be updated for any changes made to the facility, and at least every three years the data on file must be certified as current.

Per your request, the above mentioned facility has been also added to our list of those who perform these measurement services for the public on a fee basis. This list is published periodically and is also available on the Laboratory's Public Access Link as described in the enclosed Public Notice.

Sincerely,

Thomas W. Phillips
Electronics Engineer
Customer Service Branch

Enclosure:
PAL PN

FEDERAL COMMUNICATIONS COMMISSION

7435 Oakland Mills Road
Columbia, MD 21046
Telephone: 301-725-1585 ext-2181
Facsimile: 301-344-2050

February 25, 1998

IN REPLY REFER TO
31040/SIT
1300F2

Advance Data Technology Corporation
12F, No. 1, Sec. 4, Nan-King E. Rd.
Taipei, Taiwan

Attention: Harris W. Lai

Re: Measurement facility located at above address, Site No. 8
(3 and 10 meters)

Gentlemen:

Your submission of the description of the subject measurement facility has been reviewed and found to be in compliance with the requirements of Section 2.948 of the FCC Rules. The description has, therefore, been placed on file and the name of your organization added to the Commission's list of facilities whose measurement data will be accepted in conjunction with applications for certification or notification under Parts 15 or 18 of the Commission's Rules. Our list will also indicate that the facility complies with the radiated and AC line conducted test site criteria in ANSI C63.4-1992. Please note that this filing must be updated for any changes made to the facility, and at least every three years the data on file must be certified as current.

Per your request, the above mentioned facility has been also added to our list of those who perform these measurement services for the public on a fee basis. This list is updated monthly and is available on the Laboratory's Public Access Link (PAL) at 301-725-1072, and also on the Internet at the FCC Website www.fcc.gov/oet/info/database/testsite/.

Sincerely,

Thomas W. Phillips
Electronics Engineer
Customer Service Branch

FEDERAL COMMUNICATIONS COMMISSION

7435 Oakland Mills Road
Columbia, MD 21046
Telephone: 301-725-1585 ext-2181
Facsimile: 301-344-2050

July 16, 1998

IN REPLY REFER TO
31040/SIT
1300F2

Advance Data Technology Corporation
12F., No. 1, Sec. 4
Nan-King East Rd.
Taipei, Taiwan, R.O.C.

Attention: Harris W. Lai

Re: Measurement facility located at Hsin Chu (3 & 10 meter site)

Gentlemen:

Your submission of the description of the subject measurement facility has been reviewed and found to be in compliance with the requirements of Section 2.948 of the FCC Rules. The description has, therefore, been placed on file and the name of your organization added to the Commission's list of facilities whose measurement data will be accepted in conjunction with applications for certification or notification under Parts 15 or 18 of the Commission's Rules. Our list will also indicate that the facility complies with the radiated and AC line conducted test site criteria in ANSI C63.4-1992. Please note that this filing must be updated for any changes made to the facility, and at least every three years the data on file must be certified as current.

Per your request, the above mentioned facility has also been added to our list of those who perform these measurement services for the public on a fee basis. An up-to-date list is available on the Internet at the FCC Website www.fcc.gov under Electronic Filing.

Sincerely,

Thomas W. Phillips
Electronics Engineer
Customer Service Branch

FEDERAL COMMUNICATIONS COMMISSION
Equipment Authorization Division
7435 Oakland Mills Road
Columbia, MD. 21046

December 23, 1998

Registration Number: 92753

Advance Data Technology Corporation
12F, No. 1, Sec. 4
Nan-King East Road
Taipei
Taiwan, R.O.C.

Attention: Harris Lai

Re: Measurement facility located at Hsin-Chu, Site B
3 & 10 meter site

Gentlemen:

Your submission of the description of the subject measurement facility has been reviewed and found to be in compliance with the requirements of Section 2.948 of the FCC Rules. The description has, therefore, been placed on file and the name of your organization added to the Commission's list of facilities whose measurement data will be accepted in conjunction with applications for Certification under Parts 15 or 18 of the Commission's Rules. Please note that this filing must be updated for any changes made to the facility, and at least every three years the data on file must be certified as current.

If requested, the above mentioned facility has been added to our list of those who perform these measurement services for the public on a fee basis. An up-to-date list of such public test facilities is available on the Internet on the FCC Website at WWW.FCC.GOV, Electronic Filing, OET Equipment Authorization Electronic Filing.

Sincerely,

Thomas W Phillips
Electronics Engineer

CERTIFICATE

Facility: NO. 1 SITE
(Radiation 3 and 10 meter site)
Company : Advance Data Technology Corp.
Address : No.47, CHIA PAU TSUEN, LIN KOU HSIANG, TAIPEI HSIEN, TAIWAN

This is to certify that the following measuring facility has been registered in accordance with the Regulations for Voluntary Control Measures.

Registration No. : R-236
Date of Registration : July 1, 1998
This Certificate is valid until September 30, 2001

Voluntary Control Council for Interference by Information Technology Equipment

CERTIFICATE

Facility: NO. 2 SITE
(Radiation 3 and 10 meter site)
Company : Advance Data Technology Corp.
Address : No.47, CHIA PAU TSUEN, LIN KOU HSIANG, TAIPEI HSIEN, TAIWAN

This is to certify that the following measuring facility has been registered in accordance with the Regulations for Voluntary Control Measures.

Registration No. : R-237
Date of Registration : July 1, 1998
This Certificate is valid until September 30, 2001

Voluntary Control Council for Interference by Information Technology Equipment

CERTIFICATE

Facility: NO. 2 SITE
(Conducted Interference Measurement)
Company : Advance Data Technology Corp.
Address : No.47, CHIA PAU TSUEN, LIN KOU HSIANG, TAIPEI HSIEN, TAIWAN

This is to certify that the following measuring facility has been registered in accordance with the Regulations for Voluntary Control Measures.

Registration No. : C-240
Date of Registration : July 1, 1998
This Certificate is valid until September 30, 2001

Voluntary Control Council for Interference by Information Technology Equipment

CERTIFICATE

Facility: No.3 Site
(Radiation 3 and 10 meter site)
Company : Advance Data Technology Corp.
Address : No.47 CHIA PAU TSUEN, LIN KOU HSIANG, TAIPEI HSIEN, TAIWAN

This is to certify that the following measuring facility has been registered in accordance with the Regulations for Voluntary Control Measures

Registration No. : R-269
Date of Registration : January 1, 1999
This Certificate is valid until March 31, 2002

Voluntary Control Council for Interference by Information Technology Equipment

CERTIFICATE

Facility: No.3 Site
(Conducted Interference Measurement)
Company : Advance Data Technology Corp.
Address : No.47 CHIA PAU TSUEN, LIN KOU HSIANG,TAIPEI HSIEN,TAIWAN

This is to certify that the following measuring facility has been registered in accordance with the Regulations for Voluntary Control Measures

Registration No. : C-274
Date of Registration : January 1, 1999
This Certificate is valid until March 31, 2002

Voluntary Control Council for Interference by Information Technology Equipment

CERTIFICATE

Facility: No.4 Site
(Radiation 3 and 10 meter site)
Company : ADVANCE DATA TECHNOLOGY CORP.
Address : No.47, CHIA PAU TSUEN,LIN KOU HSIANG,TAIPEI HSIEN,TAIWAN

This is to certify that the following measuring facility has been registered in accordance with the Regulations for Voluntary Control Measures, Article 8.

Registration No. : R-489
Date of Registration : December 20,1996
This Certificate is valid until December 31,1999

Voluntary Control Council for Interference by Information Technology Equipment

CERTIFICATE

Facility: No.5 Site
(Radiation 3 and 10 meter site)
Company : ADVANCE DATA TECHNOLOGY CORP.
Address : No.47, CHIA PAU TSUEN,LIN KOU HSIANG,TAIPEI HSIEN,TAIWAN

This is to certify that the following measuring facility has been registered in accordance with the Regulations for Voluntary Control Measures, Article 8.

Registration No. : R-490
Date of Registration : December 20,1996
This Certificate is valid until December 31,1999

Voluntary Control Council for Interference by Information Technology Equipment

CERTIFICATE

Facility: ADVANCE DATA TECHNOLOGY CORPORATION
(Conducted Interference Measurement)
Company : ADVANCE DATA TECHNOLOGY CORPORATION
Address : No.47, CHIA PAU TSUEN,LIN KOU HSIANG,TAIPEI HSIEN,TAIWAN

This is to certify that the following measuring facility has been registered in accordance with the Regulations for Voluntary Control Measures, Article 8.

Registration No. : C-505
Date of Registration : December 20,1996
This Certificate is valid until December 31,1999

Voluntary Control Council for Interference by Information Technology Equipment

CERTIFICATE

Facility: Advance Data Technology Corp Site 6
(Radiation 3 and 10 meter site)
Company : Advance Data Technology Corp.
Address : No.47, CHIA PAU TSUEN, LIN KOU HSIANG,
TAIPEI HSIEN,TAIWAN

This is to certify that the following measuring facility has been registered in accordance with the Regulations for Voluntary Control Measures.

Registration No. : R-728
Date of Registration : May 19, 1998
This Certificate is valid until June 30, 2001

Voluntary Control Council for Interference by Information Technology Equipment

CERTIFICATE

Facility: Advance Data Technology Corp Site A
(Radiation 3 and 10 meter site)
Company : Advance Data Technology Corp.
Address : NO. 81-1, LU LIAO KENG, 9 LING, WU LING TSUEN,
CHUNG LIN HSIANG, HSIN CHU HSIEN, TAIWAN

This is to certify that the following measuring facility has been registered in accordance with the Regulations for Voluntary Control Measures

Registration No. : R-782
Date of Registration : September 29, 1998
This Certificate is valid until September 30, 2001

Voluntary Control Council for Interference by Information Technology Equipment

CERTIFICATE

Facility: Advance Data Technology Corp Shielded Room A
(Conducted Interference Measurement)
Company : Advance Data Technology Corp.
Address : NO. 81-1, LU LIAO KENG, 9 LING, WU LING TSUEN,
CHUNG LIN HSIANG, HSIN CHU HSIEN, TAIWAN

This is to certify that the following measuring facility has been registered in accordance with the Regulations for Voluntary Control Measures

Registration No. : C-817
Date of Registration : September 29, 1998
This Certificate is valid until September 30, 2001

Voluntary Control Council for Interference by Information Technology Equipment

CERTIFICATE

Facility: ADVANCE DATA TECHNOLOGY CORPORATION OPEN SITE B
(Radiation 3 and 10 meter site)
Company : ADVANCE DATA TECHNOLOGY CORPORATION
Address : NO. 81-1, LU LIAO KENG, 9 LING, WU LING TSUEN,
CHUNG LIN HSIANG, HSIN CHU HSIEN, TAIWAN

This is to certify that the following measuring facility has been registered in accordance with the Regulations for Voluntary Control Measures

Registration No. : R-847
Date of Registration : March 1, 1999
This Certificate is valid until March 31, 2002

Voluntary Control Council for Interference by Information Technology Equipment

Nemko Worldwide Testing and Certification

ELA 4

EMC Laboratory Authorization

Aut. No. : ELA 112

EMC Laboratory: **ADT Advance Data Technology Corporation**
No. 47, 14 Ling, Chia Pau Tsuen,
Lin Kou Hsiang, Taipei Hsien,
Taiwan R.O.C.

Scope of Authorization: **All CENELEC standards (ENs) for EMC that are listed on the accompanying page, and, all of the corresponding CISPR, IEC, and ISO EMC standards that are listed on the accompanying page.**

This Authorisation Document confirms that the above mentioned EMC Laboratory has been validated against EN 45001 and found to be compliant. The laboratory also fulfils the conditions described in Nemko Document ELA 10. During Nemko's visit to the laboratory on 9. October 1996, an assessment was made of the relevant parts of your organisation - i.e. facilities, personnel qualifications, test equipment, and testing practices. It was found that the EMC Laboratory is capable of performing tests within the Scope of Authorisation given on the accompanying page. Accordingly, Nemko will accept your test reports as a basis for attesting conformity to these EMC Standards for the products in question under either the European Union EMC Directive or the European Union Automotive EMC Directive (as applicable).

In case of applications for Product Certification(s) to be issued by Nemko, your EMC Laboratory's test report(s) will be accepted by Nemko if they are enclosed with the Application Form submitted by the manufacturer.

In order to maintain the Authorization, the information given in the enclosed ELA-INFOs (if any) must be carefully followed. Nemko is to be promptly notified about any changes in the situation at your EMC Laboratory which may affect the basis for this Authorization. The Authorization may at any time be withdrawn if the conditions are no longer considered to be fulfilled.

The Authorisation is valid through February 28, 1999.

Oslo, 13 March 1998

For Nemko AS:

Kjell Bergh, Head of EMC Section

Postal address: P.O.Box 73 Blindern
Telephone: +47 22 96 03 30
Fax: +47 22 96 03 30
Telex: 69626, NEMKO N

Nemko Worldwide Testing and Certification

ELA 4

EMC Laboratory Authorisation

Aut. No. : ELA 112

(Page 2 of 2)

SCOPE OF AUTHORIZATION

GENERIC & PRODUCT-FAMILY STANDARDS

EN 50081-1, EN 50081-2	EN 50082-1, EN 50082-2	EN 55011, Gr. 1, CISPR 11
EN 55013, CISPR 13	EN 55014-1, CISPR 14-1	EN 55015, CISPR 15
EN 55022	EN 60555-2, IEC 555-2, EN 61000-3-2, IEC 61000-3-2	EN 60555-3, IEC 555-3, EN 61000-3-3, IEC 61000-3-3

BASIC STANDARDS

EN 61000-4-2, IEC 61000-4-2, IEC 801-2	EN 61000-4-3, ENV 50140, ENV 50204, IEC 61000-4-3, IEC 801-3	EN 61000-4-4, IEC 61000-4-4, IEC 801-4
EN 61000-4-5, IEC 61000-4-5	EN 61000-4-6, ENV 50141, IEC 61000-4-6	EN 61000-4-8, IEC 61000-4-8
EN 61000-4-11, IEC 61000-4-11		

Oslo, 13 March 1998

Kjell Bergh, Nemko EMC Services

Postal address: P.O.Box 73 Blindern
Telephone: +47 22 96 03 30
Fax: +47 22 96 03 30
Telex: 69626, NEMKO N

Nemko World-wide Testing and Certification

ELA 4

EMC Laboratory Authorization

Aut. No. : ELA 112-b

Hsin Chu EMC Laboratory

EMC Laboratory: **ADT Advance Data Technology Corporation**
Hsin Chu EMC Laboratory
No. 81-1, Lu Liao Keng, 9 Ling,
Wu Lung Tsuen, Chiung Lin Hsiang,
Hsin Chu Hsien, Taiwan R.O.C.

Scope of Authorization: **All CENELEC standards (ENs) for EMC that are listed on the accompanying page, and, all of the corresponding CISPR, IEC, and ISO EMC standards that are listed on the accompanying page.**

This Authorisation Document confirms that the above mentioned EMC Laboratory has been validated against EN 45001 and found to be compliant. The laboratory also fulfils the conditions described in Nemko Document ELA 10. Based on submitted materials, an assessment has been made of the relevant parts of your organisation - i.e. facilities, personnel qualifications, test equipment, and testing practices. It was found that the EMC Laboratory is capable of performing tests within the Scope of Authorisation given on the accompanying page. Accordingly, Nemko will accept your test reports as a basis for attesting conformity to these EMC Standards for the products in question under the European Union EMC Directive.

In case of applications for Product Certification(s) to be issued by Nemko, your EMC Laboratory's test report(s) will be accepted by Nemko if they are enclosed with the Application Form submitted by the manufacturer.

In order to maintain the Authorization, the information given in the enclosed ELA-INFOs (if any) must be carefully followed. Nemko is to be promptly notified about any changes in the situation at your EMC Laboratory which may affect the basis for this Authorization. The Authorization may at any time be withdrawn if the conditions are no longer considered to be fulfilled.

The Authorisation is valid through February 28, 1999.

Oslo, 15 December 1998

For Nemko AS:

Kjell Bergh, Head of EMC Section

Postal address: P.O.Box 73 Blindern
Telephone: +47 22 96 03 30
Fax: +47 22 96 03 30

Nemko World-wide Testing and Certification

ELA 4

EMC Laboratory Authorisation

Aut. No. : ELA 112-b

Hsin Chu EMC Laboratory

(Page 2 of 2)

SCOPE OF AUTHORIZATION

GENERIC & PRODUCT-FAMILY STANDARDS

EN 50081-1, EN 50081-2	EN 50082-1, EN 50082-2	EN 55011, Gr. 1, CISPR 11
EN 55014-1, CISPR 14-1 (except discontinuous noise)	EN 55014-2, CISPR 14-2	EN 55022, CISPR 22
EN 55024, CISPR 24	EN 60555-2, IEC 60555-2, EN 61000-3-2, IEC 61000-3-2	EN 60555-3, IEC 60555-3, EN 61000-3-3, IEC 61000-3-3

BASIC STANDARDS

EN 61000-4-2, IEC 61000-4-2,	EN 61000-4-3, IEC 61000-4-3, ENV 50204	EN 61000-4-4, IEC 61000-4-4
EN 61000-4-5, IEC 61000-4-5	EN 61000-4-6, ENV 50141, IEC 61000-4-6	EN 61000-4-8, IEC 61000-4-8
EN 61000-4-11, IEC 61000-4-11		

Oslo, 15 December 1998

Kjell Bergh, Nemko EMC Services

Postal address: P.O.Box 73 Blindern
Telephone: +47 22 96 03 30
Fax: +47 22 96 03 30

National Institute of Standards and Technology — NVLAP® — National Voluntary Laboratory Accreditation Program

ISO/IEC GUIDE 25:1990
ISO 9002:1987

Scope of Accreditation

Page 1 of 1

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

NVLAP LAB CODE 200102-0

ADVANCE DATA TECHNOLOGY CORPORATION
No. 47, 14 Ling, Chia Pau Tsuen,
Lin Kou Hsiang
Taipei Hsien
TAIWAN
Mr. Harris W. Lu
Phone: 886-2-6032180 Fax: 886-2-6022943

NVLAP Code	*Designation / Description*
International Special Committee on Radio Interference (CISPR) Methods	
12/CIS22	IEC/CISPR 22:1993: Limits and methods of measurement of radio disturbance characteristics of information technology equipment
Federal Communications Commission (FCC) Methods	
12/F01	FCC Method - 47 CFR Part 15 - Digital Devices
12/F01a	Conducted Emissions, Power Lines, 450 KHz to 30 MHz
12/F01b	Radiated Emissions
Australian Standards referred to by clauses in AUSTEL Technical Standards	
12/T51	AS/NZS 3548: Electromagnetic Interference - Limits and Methods of Measurement of Information Technology Equipment

December 31, 1999
(Effective through)

(For the National Institute of Standards and Technology)

NVLAP 01S (11-98)

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

ISO/IEC GUIDE 25:1990
ISO 9002:1987

Certificate of Accreditation

ADVANCE DATA TECHNOLOGY CORPORATION
TAIPEI HSIEN
TAIWAN

is recognized under the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria established in Title 15, Part 285 Code of Federal Regulations. These criteria encompass the requirements of ISO/IEC Guide 25 and the relevant requirements of ISO 9002 (ANSI/ASQC Q92-1987) as supplemented by additional specific test requirements established for specific services listed on the Scope of Accreditation for

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS
FCC

December 31, 1999
(Effective through)

(For the National Institute of Standards and Technology)

NVLAP Lab Code 200102-0

National Institute of Standards and Technology — NVLAP® — National Voluntary Laboratory Accreditation Program

ISO/IEC GUIDE 25:1990
ISO 9002:1987

Scope of Accreditation

Page 1 of 1

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

NVLAP LAB CODE 200376-0

ADVANCE DATA TECHNOLOGY CORPORATION HSIN CHU EMC LABORATORY
No. 81-1, Lu Liao Keng, 9 Ling, Wu Lung
Tsuen, Chuang Lin Hsiang
Hsin Chu Hsien
TAIWAN
Mr. Harris Lu
Phone: 886-2-26032180 Fax: 886-2-26022943
E-Mail: harrys@mail.sdr.com.tw

NVLAP Code	*Designation / Description*
International Special Committee on Radio Interference (CISPR) Methods	
12/CIS22	IEC/CISPR 22:1993: Limits and methods of measurement of radio disturbance characteristics of information technology equipment
Federal Communications Commission (FCC) Methods	
12/F01	FCC Method - 47 CFR Part 15 - Digital Devices
12/F01a	Conducted Emissions, Power Lines, 450 KHz to 30 MHz
12/F01b	Radiated Emissions
Australian Standards referred to by clauses in ACA Technical Standards	
12/T51	AS/NZS 3548: Electromagnetic Interference - Limits and Methods of Measurement of Information Technology Equipment

March 31, 2000
(Effective through)

(For the National Institute of Standards and Technology)

NVLAP 01S (11-98)

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

ISO/IEC GUIDE 25:1990
ISO 9002:1987

Certificate of Accreditation

ADVANCE DATA TECHNOLOGY CORPORATION HSIN CHU EMC LABORATORY
HSIN CHU HSIEN
TAIWAN

is recognized under the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria established in Title 15, Part 285 Code of Federal Regulations. These criteria encompass the requirements of ISO/IEC Guide 25 and the relevant requirements of ISO 9002 (ANSI/ASQC Q92-1987) as supplemented by additional specific test requirements established for specific services listed on the Scope of Accreditation for calibration or test results. Accreditation is awarded for specific services listed on the Scope of Accreditation for

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS
FCC

March 31, 2000
(Effective through)

(For the National Institute of Standards and Technology)

NVLAP Lab Code 200376-0

NVLAP 01E (11-98)

最速件

經濟部商品檢驗局（函）

中華民國[illegible]年[illegible]月[illegible]日
檢台(八十五)二字第 20823 號

附件如文

受文者：誠信科技股份有限公司

行文單位：正本：誠信科技股份有限公司

副本：本局第二組（二份）、第三組、秘書室（秘四科）、檢驗處、各分局（均無附件）

主旨：有關 貴公司電磁相容檢測實驗室申請本局電磁相容檢測領域認可案，業經實地評鑑結果，同意認可登錄，請 查照。

說明：

一、復 貴公司八五年十月四日未列字號函。

二、認可登錄範圍如下：

實驗室名稱：誠信科技股份有限公司電磁相容檢測實驗室
實驗室地址：台北縣林口鄉嘉寶村14鄰47號

認可領域代號	認可產品類別	報告簽署人
SL2-IN-E-03	(II) 資訊設備	楊輝煌
SL2-AI-E-03	(IV) 家庭用電器產品	楊輝煌
SL2-LI-E-03	(V) 燈具產品	楊輝煌

評鑑標準：ISO Guide 25（1990年版）

三、本案評鑑認可期限三年，自八五年十月二十二日起至八八年十月二十一日止，評核追查頻率每年乙次，得視需要增加稽查次數，惟首次追查作業於六個月內執行。

四、上開已認可領域如有變更事項，請於變更日起二週內函送相關資料至本局辦理。

五、貴中心執行本局指定之檢驗業務，依「商品檢驗法」第二十六條規定以執行公務論，且 貴中心應依規定履行相關之責任與義務。

六、檢送「商品電磁相容試驗室評鑑認可管理作業要點」乙份。

七、檢送「商品電磁相容型式試驗報告」格式乙份，請自行印製使用。

局長 許鵬翔

依照分層負責規定授權單位主管決行

最速件

經濟部商品檢驗局（函）

中華民國[illegible]年 [illegible]月 玖日
檢台(八十六)二字第 12954 號

受文者：誠信科技股份有限公司 附件如文

行文單位：正本：誠信科技股份有限公司

副本：本局第二組（二份）、第三組、資訊室（請刊登於網際網路）、秘書室（秘四科請刊登於檢驗雜誌）、檢驗處、各分局（無附件）

主旨：有關 貴公司電磁相容檢測實驗室申請本局電磁相容檢測領域增列認可案，業經實地評鑑結果，同意認可登錄，請 查照。

說明：

一、復 貴公司八十六年二月二十一日未列字號函。

二、認可登錄範圍如下：

實驗室名稱：誠信科技股份有限公司電磁相容檢測實驗室
實驗室地址：台北縣林口鄉嘉寶村14鄰47號

認可代號	認可產品類別	報告簽署人
SL2-R1-E-03	(III) 廣播接收機與相關產品（電視、錄放影機）	楊輝煌
SL2-R2-E-03	(III) 廣播接收機與相關產品（收音機）	楊輝煌

評鑑標準：ISO Guide 25（1990年版）

三、本案評鑑認可期限自八六年七月七日起至八八年十月二十一日止，評核追查頻率每年乙次，得視需要增加稽查次數，惟首次追查作業於六個月內執行。

四、上開已認可領域如有變更事項，請於變更日起二週內函送相關資料至本局辦理。

五、貴公司執行本局指定之檢驗業務，依「商品檢驗法」第二十六條規定以執行公務論，且 貴公司應依規定履行相關之責任與義務。

六、檢送「商品電磁相容型式試驗報告」格式乙份，請自行印製使用。

局長 陳佐鎮

依照分層負責規定授權單位主管決行

DNV

DET NORSKE VERITAS

STATEMENT OF RECOGNITION

STATEMENT No. 413 - 99 - LAB12
The statement consists of 3 pages

This is to confirm that the
EMC AND SAFETY LABORATORIES

within
ADT

The main office with legal identity
ADT Corporation, No. 47, 14 Ling, Chiapau Tsuen, Lin Kou Hsiang, Taipei Hsien, Taiwan, R.O.C.

has been found to comply with the requirements of DNV towards subcontractors of EMC and Safety testing services in conjunction with the EMC and Low Voltage Directives and in the voluntary field.

The acceptance is based on a formal Quality Audit and follow-ups according to relevant parts of EN 45001 and ISO/IEC Guide 25, in accordance with the requirements of the DNV Laboratory Quality Manual towards subcontractors.

Place and date	*This Statement is valid until*
Høvik, 23 February, 1999	23 February, 2000
for Det Norske Veritas AS	
(Notified Body no. 575/434)	
Amund Westin	Are Larsen Otterdal
Head of Section	*Lead Auditor*

DET NORSKE VERITAS 1864

Audit information

Initial audit:

- Date of Audit: 1998-11-18 and 1998-11-19
- Initial Audit Report: 1998-11-22
- Closing of Non-conformities: 99-02-12

Sites Audited

Lin Kou EMC Laboratory:
No. 47, 14 Ling, Chiapau Tsuen, Lin Kou Hsiang, Taipei Hsien, Taiwan, R.O.C.

Hsin Chu EMC Laboratory:
No. 81-1, Lu Liao Keng, 9 Ling, Wu Lung Tsuen, Chiung Lin Hsiang, Hsin Chu, Hsien, Taiwan, R.O.C.

Lin Kou Safety Laboratory:
No. 46, Lane 504, Chung Hsiao Road, Lin Kou Hsiang, Taipei, Taiwan, R.O.C.

Scope of recognition

EMC testing according to the following standards:

- EN 50081-1 / -2
- EN 50082-1 / -2
- EN 55011 / CISPR 11
- EN 55013 / CISPR 13
- EN 55014-1/-2 / CISPR 14-1/-2
- EN 55015 / CISPR 15
- EN 55022 / CISPR 22
- EN 61000-3-2 / IEC 1000-3-2 / EN 60555-2 / IEC 555-2
- EN 61000-3-3 / IEC 1000-3-3 / EN 60555-3 / IEC 555-3
- EN 61000-4-2 / IEC 1000-4-2 / IEC 801-2
- EN 61000-4-3 / IEC 1000-4-3 / ENV 50140 / IEC 801-3
- EN 61000-4-4 / IEC 1000-4-4 / IEC 801-4
- EN 61000-4-5 / IEC 1000-4-5 / ENV 50142
- EN 61000-4-6 / IEC 1000-4-6 / ENV 50141
- EN 61000-4-8 / IEC 1000-4-8
- EN 61000-4-11 / IEC 1000-4-11

Safety testing according to the following standards:

- EN 60065 / IEC 65
- EN 60950 / IEC 950

Application/Limitations

Testing of single- and three phase systems

COMMERCE
MINISTRY OF COMMERCE
Te Manatū Tauhokohoko

ENG 3/9
AJO

6th January 1999

Advance Data Technology Corporation
No. 47
14 Ling
Chia Pau Tsuen
Lin Kou Hsiang
Taiwan
R.O.C

Attention: Ms Sharon Hsiung

Dear Ms Hsiung

LABORATORY APPROVAL

Thank you for your submission of 5th January regarding the re-certification of your testing laboratory to the Ministry of Commerce's laboratory approval criteria.

I am pleased to advise that your submission has been successful and your approval has been extended until 30th June 1999. At this time, the Approved Laboratory scheme will cease operation with the implementation of the new radiocommunications regulations. Test reports from your laboratory will be accepted under the new framework. Please find enclosed a copy of the Ministry's discussion paper, DP10, outlining the proposed compliance process from 1 January 1999.

If you have any further questions on this matter please do not hesitate to contact me.

Yours faithfully

Brian Emmett

Technical Officer (Regulatory)
e-mail brian.emmett@moc.govt.nz

RADIO SPECTRUM MANAGEMENT GROUP

TÜV Rheinland

Technischer Überwachungs-Verein Rheinland

Certificate

of

Appointment

No. I-9763928-9707

The applicant :

Advance Data Technology (ADT) Corporation
No. 47, 14 Ling, Chia Pau Tsuen, Lin Kou Hsiang, Taipei Hsien, Taiwan, R.O.C.

has been authorized to carry out EMC tests by order and under supervision of TÜV Rheinland according to

CISPR16, EN 55 011:1991, EN 55 014:1993, EN 55 015:1993, EN 55 022:1994/A1, EN 55 104:1995, EN 60 555-2:1987, EN 61 000-3-2:1995, EN 61 000-3-3:1995, EN 50 081-1:1992, EN 50 082-1:1992, EN 50 081-2:1993, EN 50 082-2:1995, IEC 801-2:1991, IEC 801-3:1984, IEC 801-4:1988, IEC 801-5:1990, EN 61 000-4-2:1995, ENV 50 140:1993, ENV 50 141:1993, IEC 1 000-4-3:1995, EN 61 000-4-4:1995, EN 61 000-4-5:1995, EN 61 000-4-8:1993, EN 61 000-4-11:1994, EN 60 601-1-2:1993

An inspection of the facility was conducted according to the Document "Approval of Test Site" with reference to EN 45 001 by a TÜV Rheinland inspector.

Audit Report No. P 9763928E01, Rev. A

This certificate is valid until the next scheduled inspection or up to 15 month, at the discretion of TÜV Rheinland.

TÜV Rheinland Taiwan Ltd.
Taipei, 16.07.1997

Dipl.-Ing. G. Lübken
Vice General Manager
Product Safety Department

Dipl.-Ing. U. Meyer
Auditor

The conditions of the Testing and Certification Regulations are an integral part of this certificate.

TÜV Rheinland

Technischer Überwachungs-Verein Rheinland

Certificate

of

Appointment

No. I 9865711-9905

The applicant:

Advance Data Technology (ADT) Corporation
Hsin Chu EMC Laboratory
No. 81-1, Lu Liao Keng, 9 Ling, Wu Lung Tsuen, Chuang Lin Hsiang, Hsin Chu Hsien, Taiwan, R.O.C.

has been authorized to carry out EMC tests by order and under supervision of TÜV Rheinland according to

EN 55 011:1991, EN 55 014:1993, (*EN 55 015:1996*, with deviations, EN 55 022:1994/A1/A2 EN 55 014-2:1997, EN 60 555-2:1987, EN 61 000-3-2:1995, EN 61 000-3-3:1995 EN 50 081-1:1992, EN 50 082-1:1997, EN 50 082-2:1995, EN 50 082-2:1995 IEC 801-2:1984, IEC 801-2:1991, IEC 801-3:1984, IEC 801-4:1988, IEC 801-5:1990 EN 61 000-4-2:1995, ENV 50 140:1993, ENV 50 141:1993 ENV 50 204:1995, EN 61 000-4-3:1996, EN 61 000-4-4:1995, EN 61 000-4-5:1995 EN 61 000-4-8:1996, EN 61 000-4-11:1994, EN 60 601-1-2:1993

An inspection of the facility was conducted according to the Document "Approval of Test Site" with reference to EN 45 001 by a TÜV Rheinland inspector

Audit Report No. P 9865711E01, Rev.-

This certificate is valid until the next scheduled inspection or up to 15 month, at the discretion of TÜV Rheinland.

TÜV Rheinland Taiwan Ltd.
Taipei, 25. May 1999

Dipl.-Ing. A. Klinker

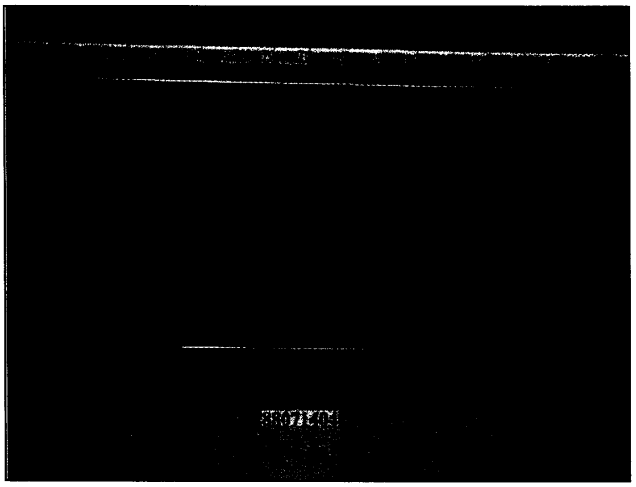
Dipl.-Ing. R. Charton
Auditor

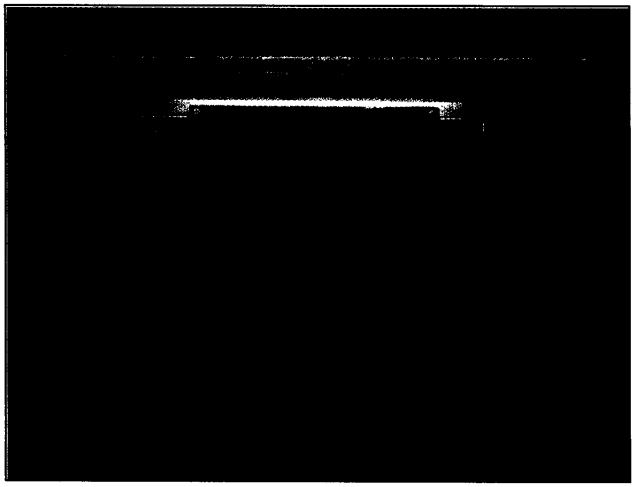
EXHIBIT 3

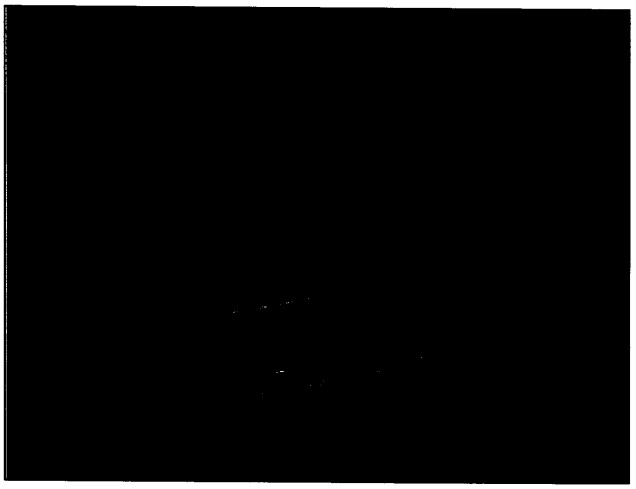
CONSTRUCTION PHOTOS OF EUT

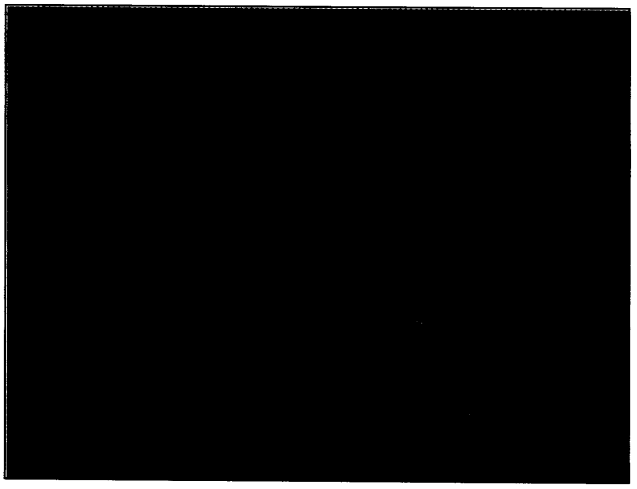
CONSTRUCTION PHOTOS OF EUT

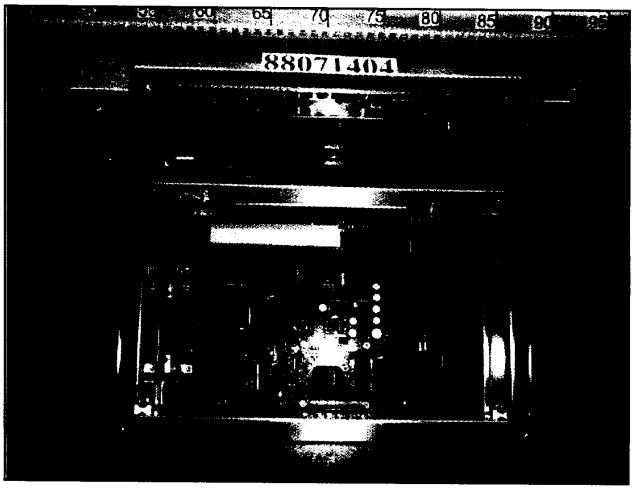
MODEL: T2-15AI







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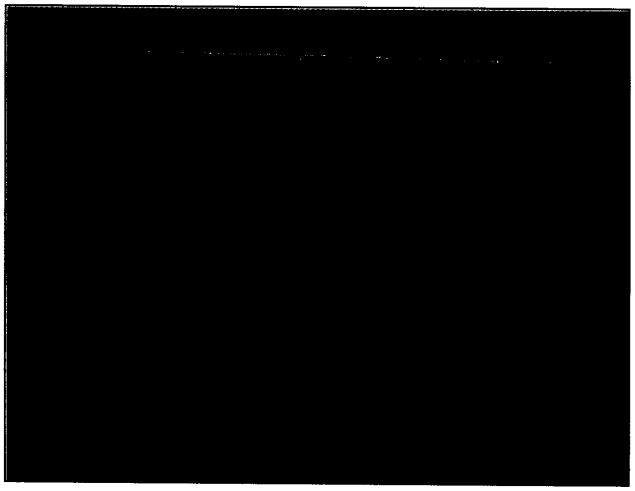

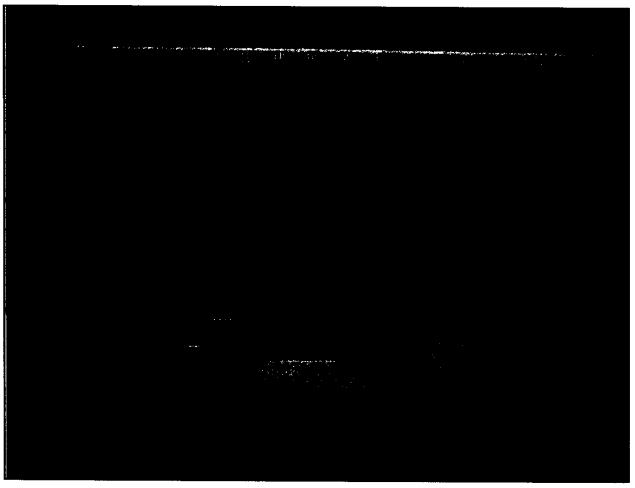

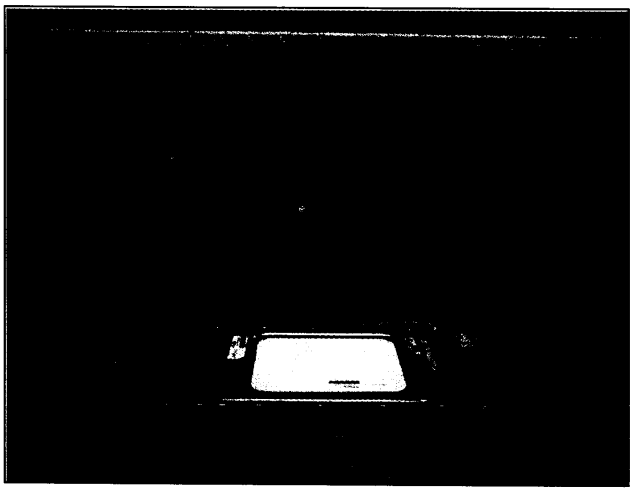

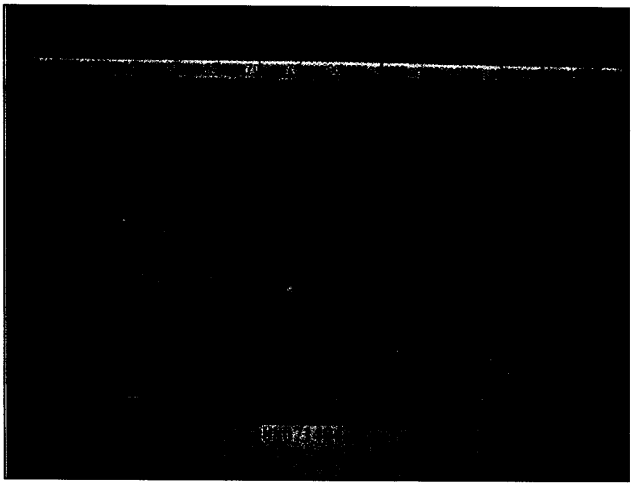

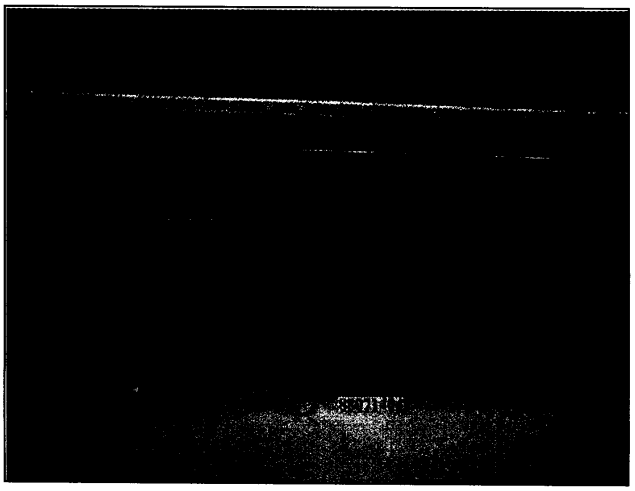

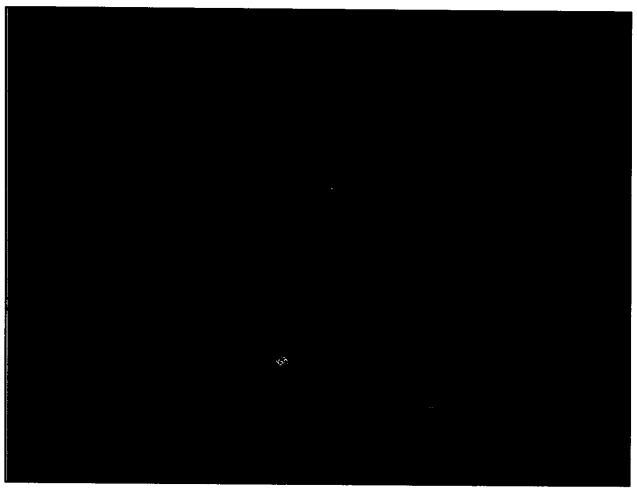

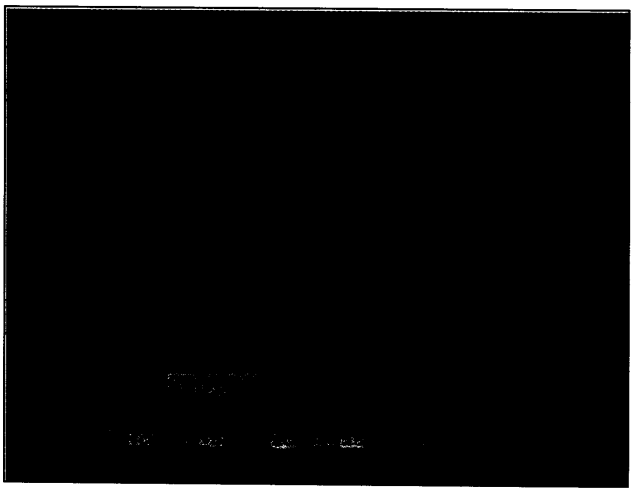

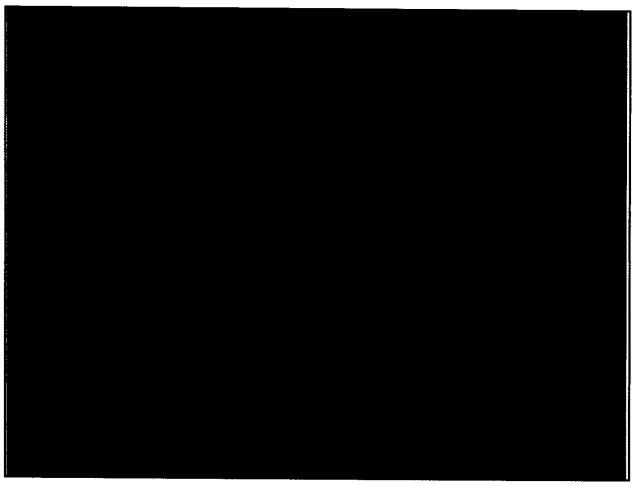

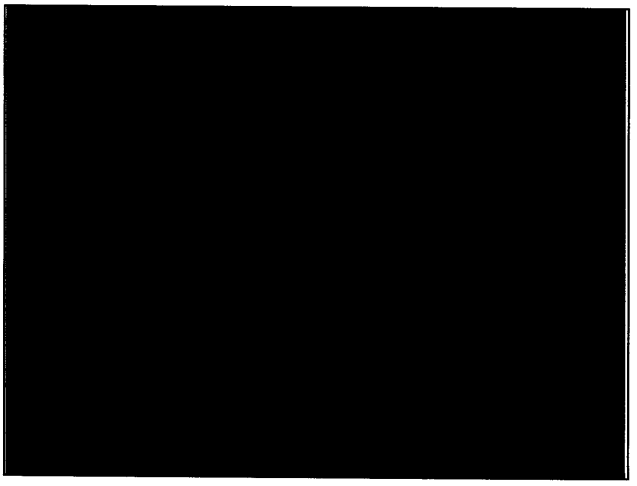

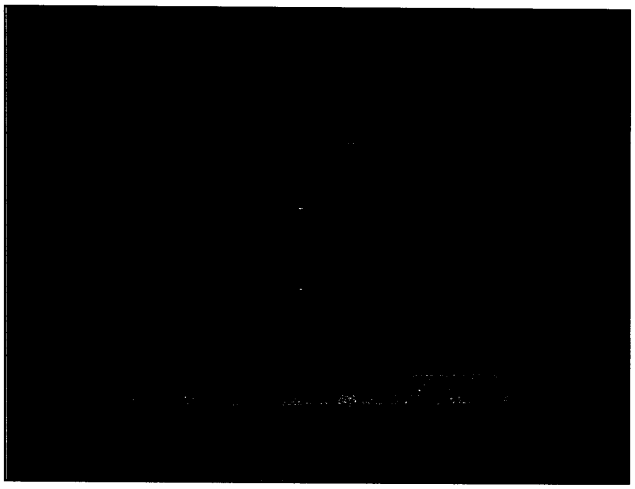

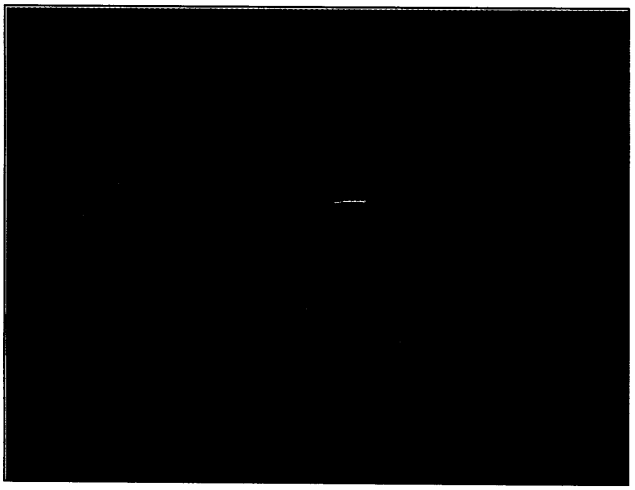

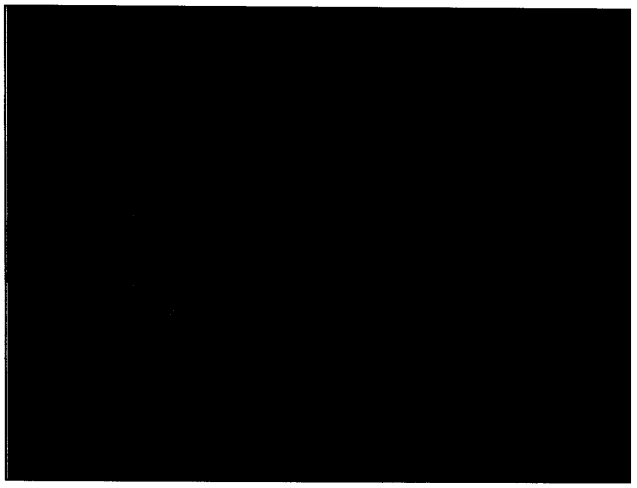

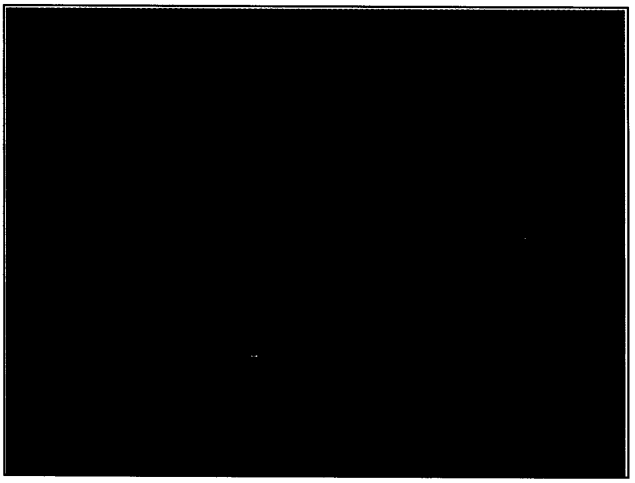

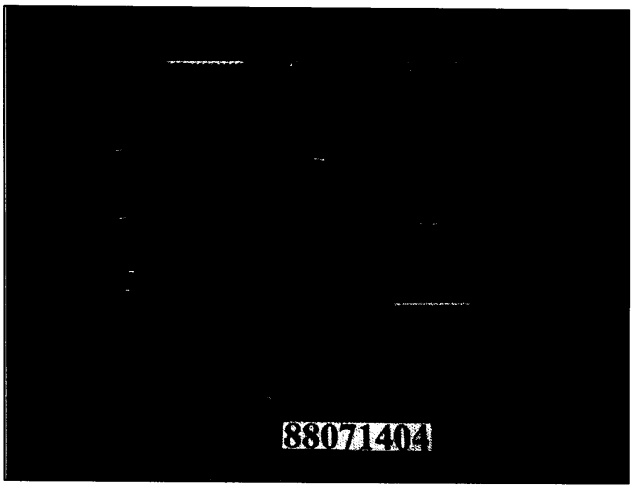
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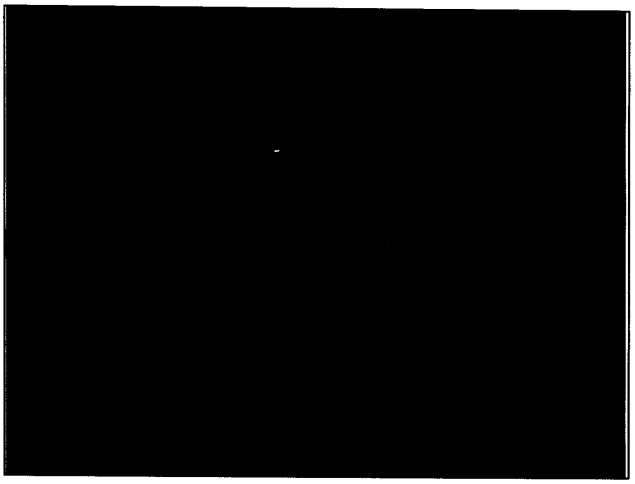

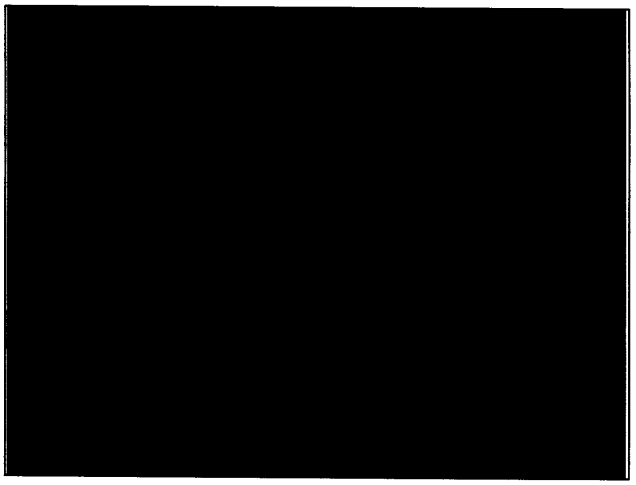

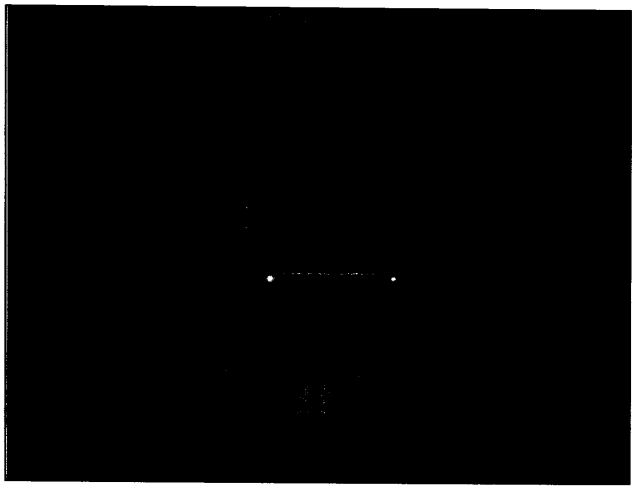

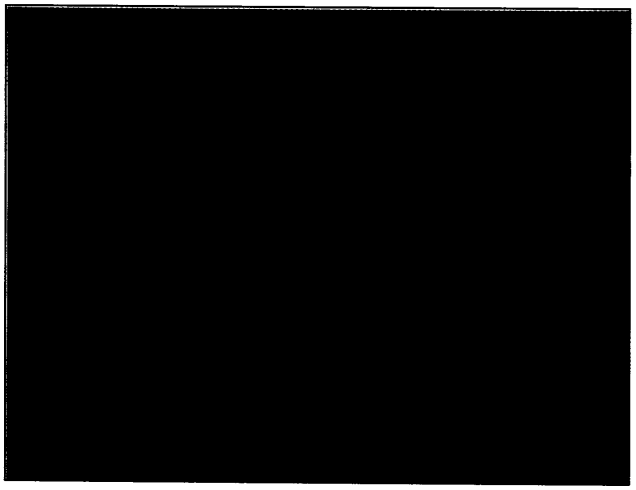

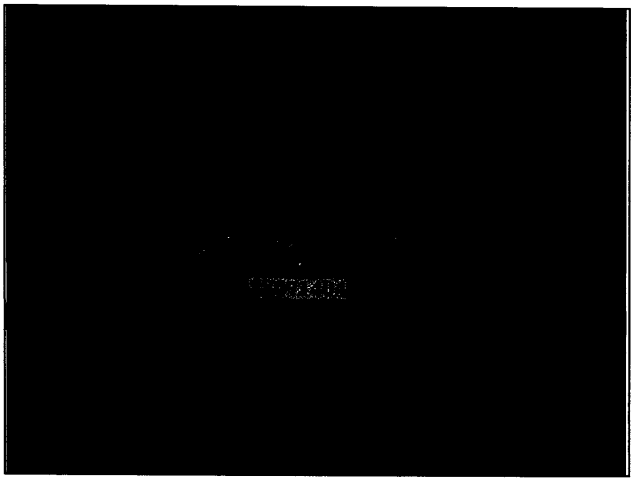

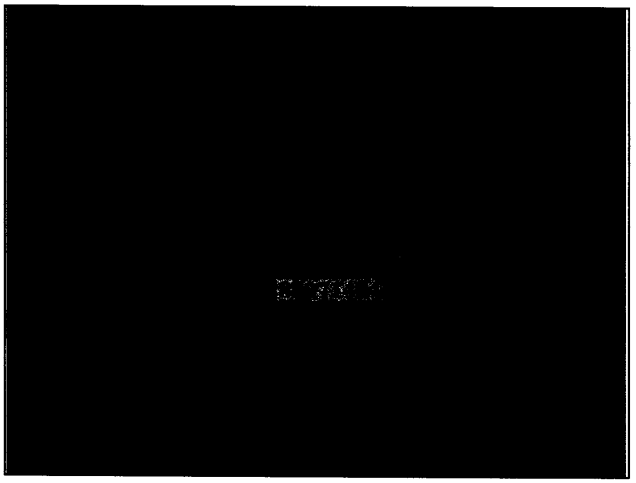

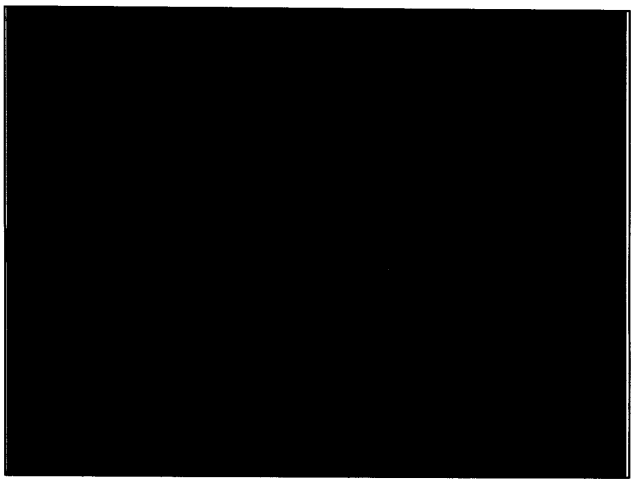

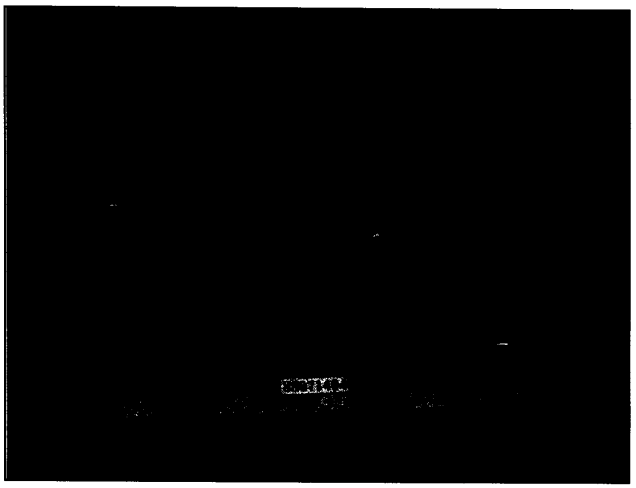

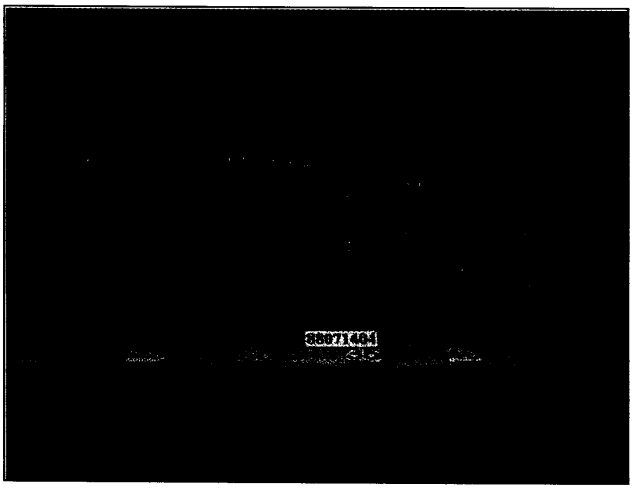

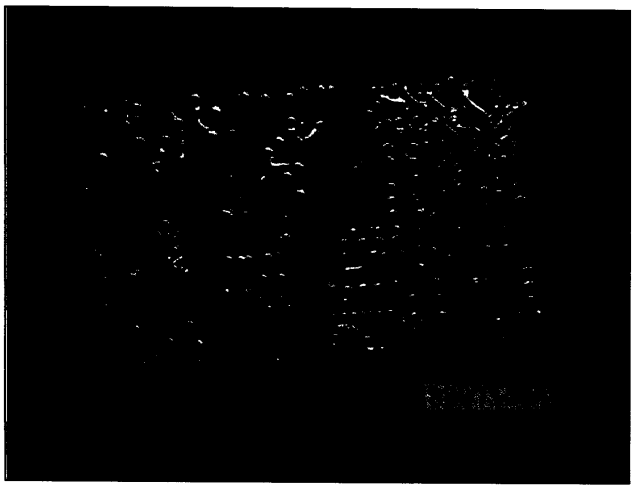

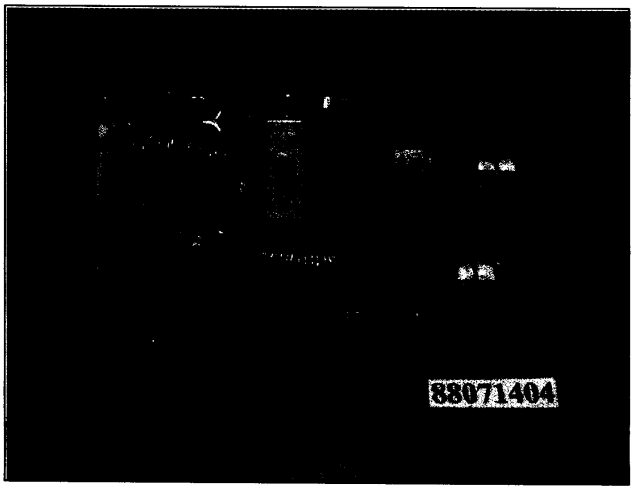
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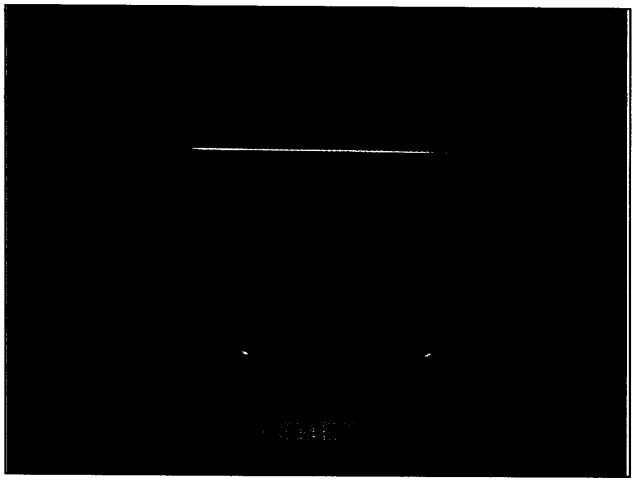

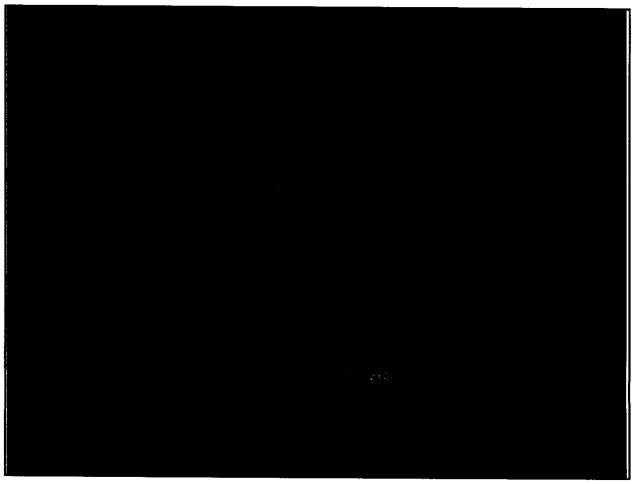

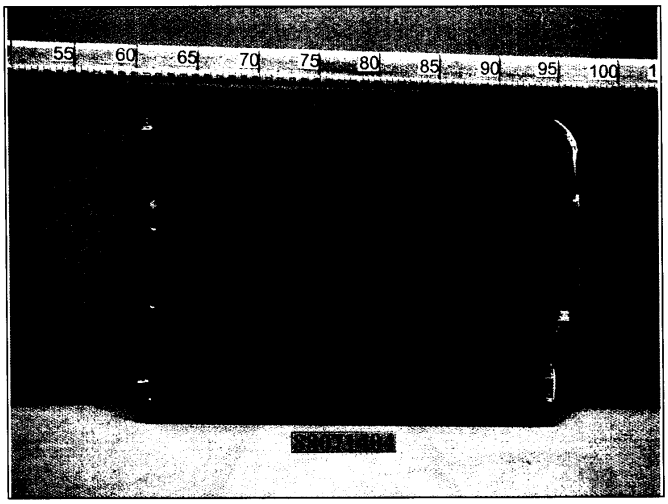
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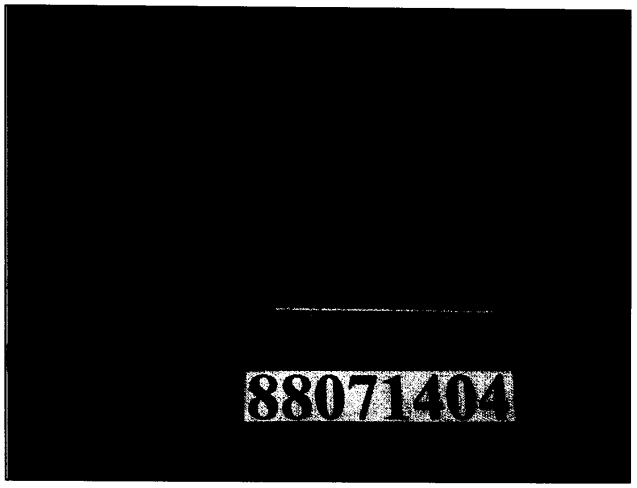
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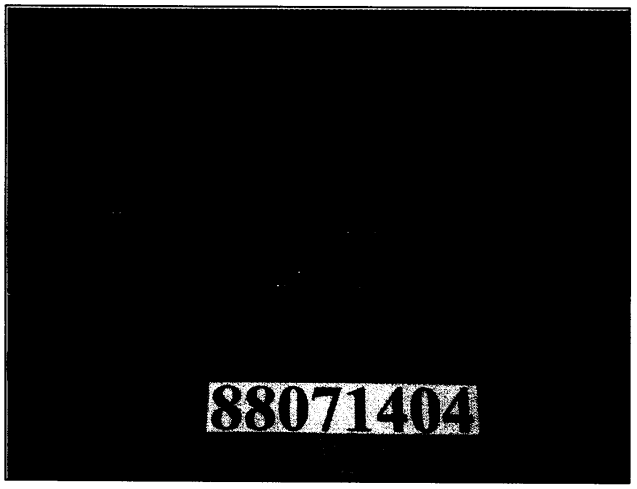
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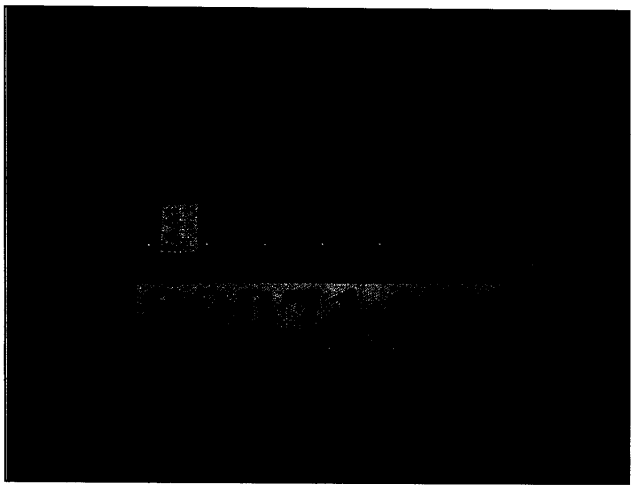

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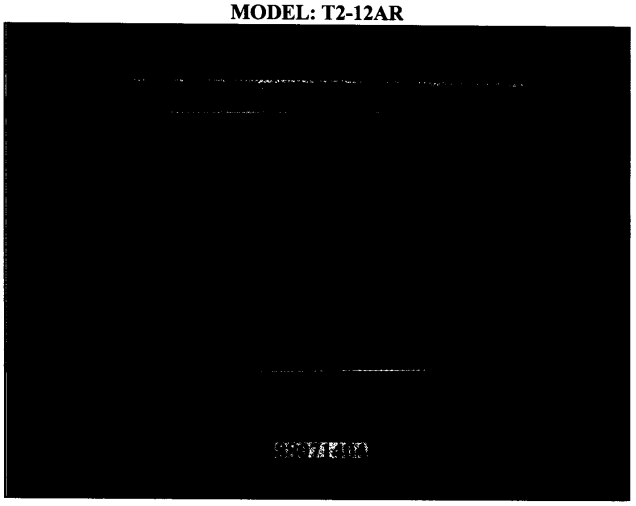

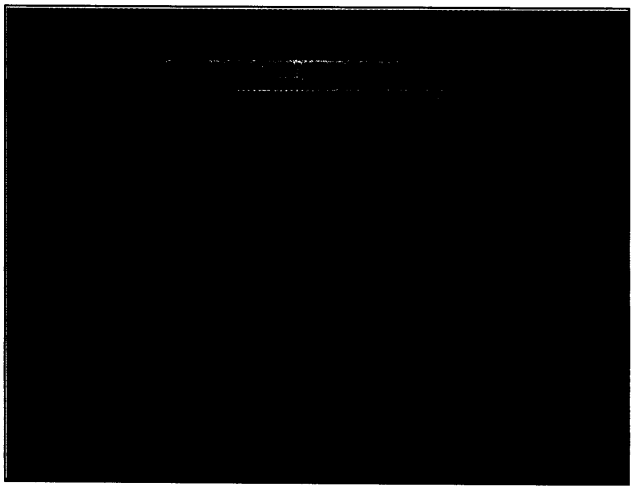

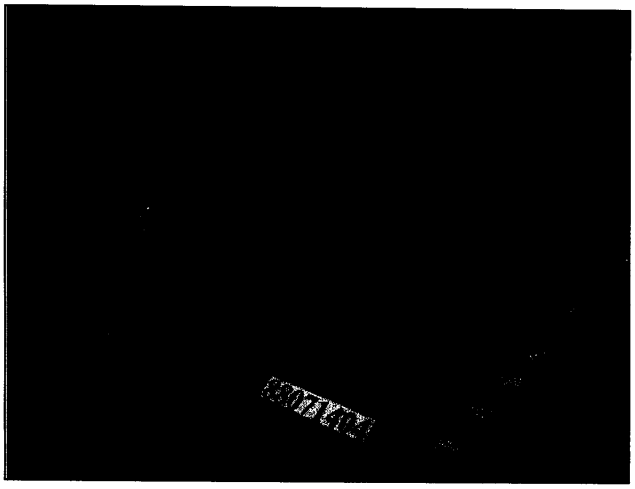

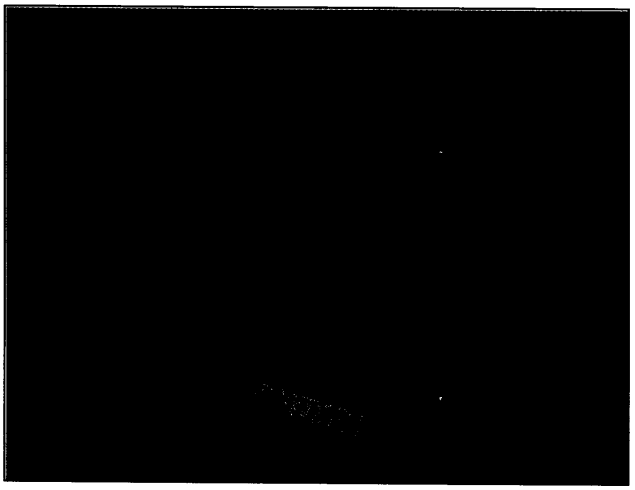

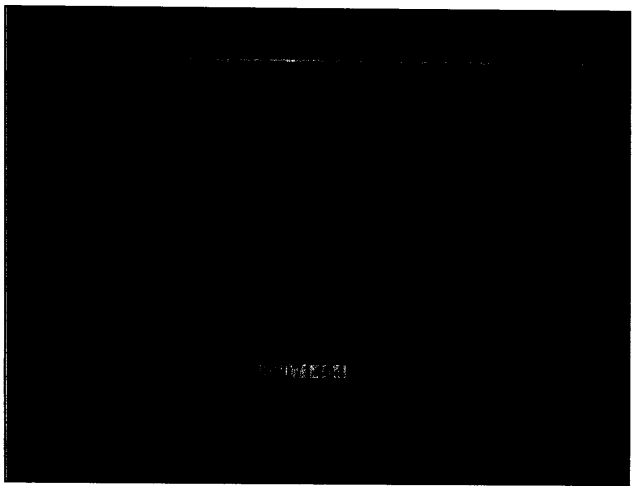

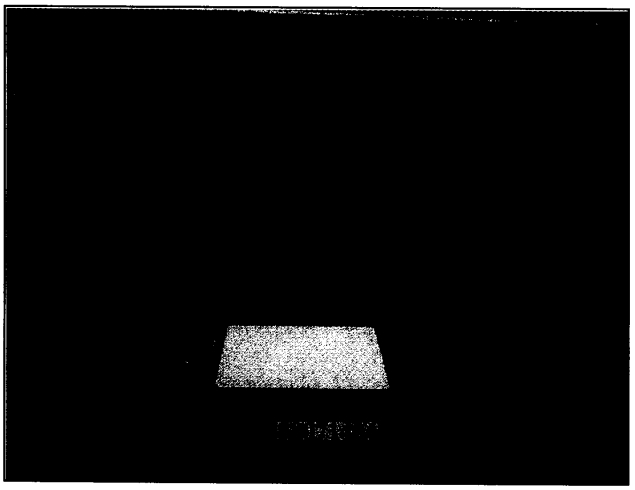

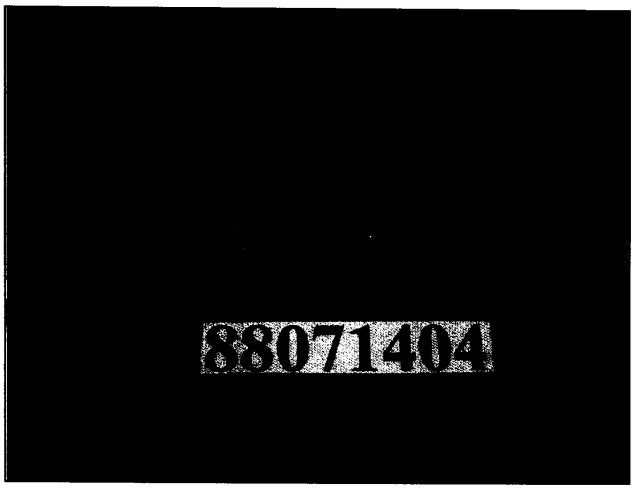
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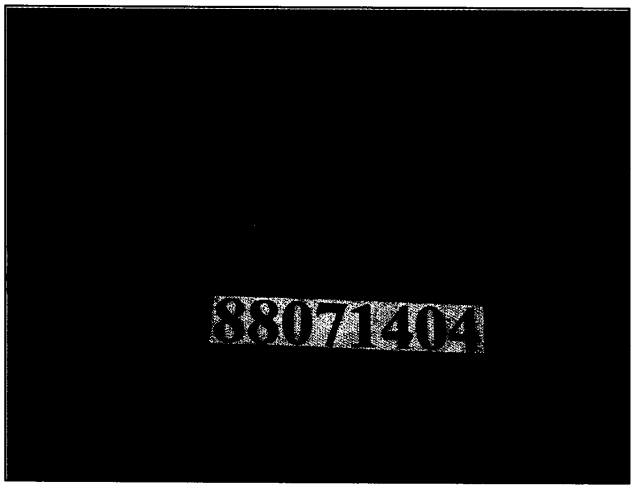
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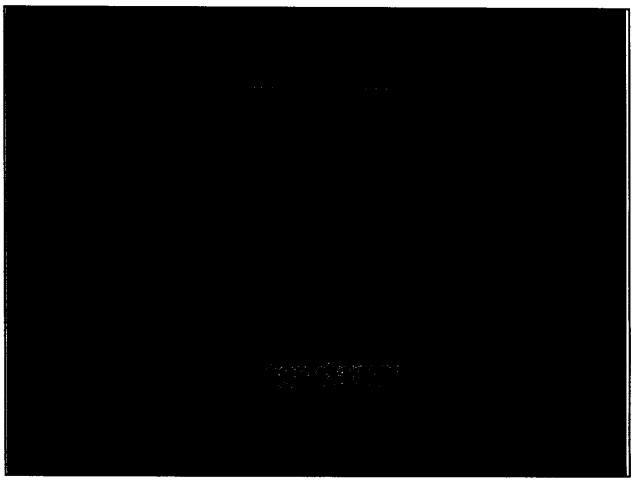

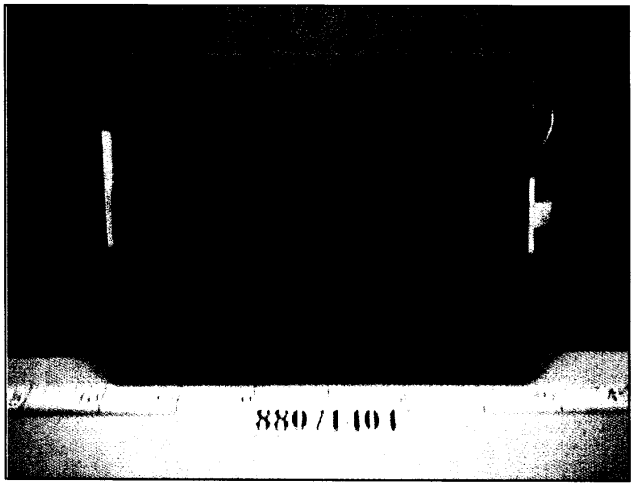
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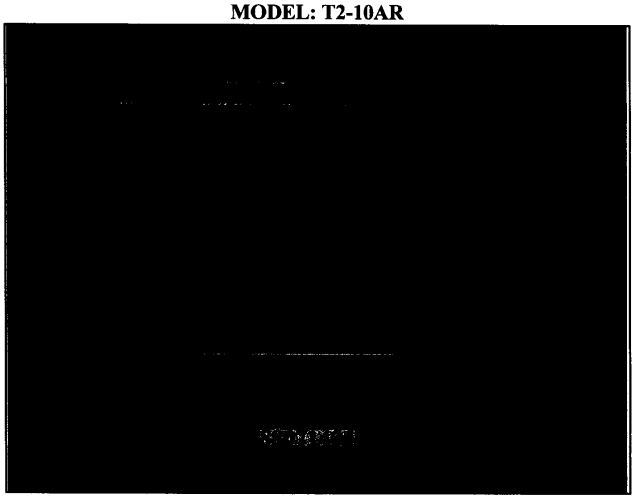

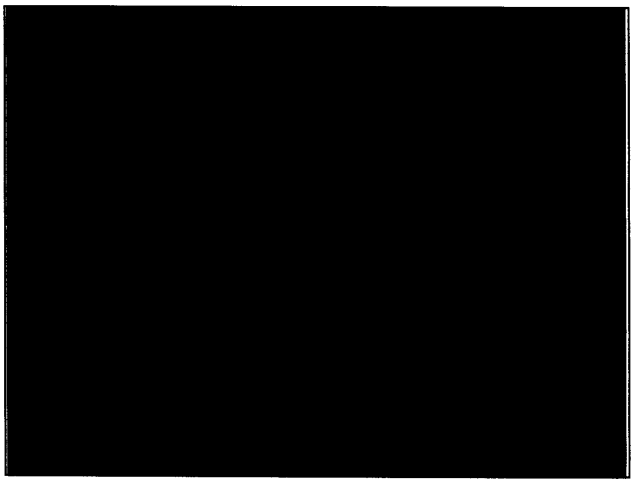

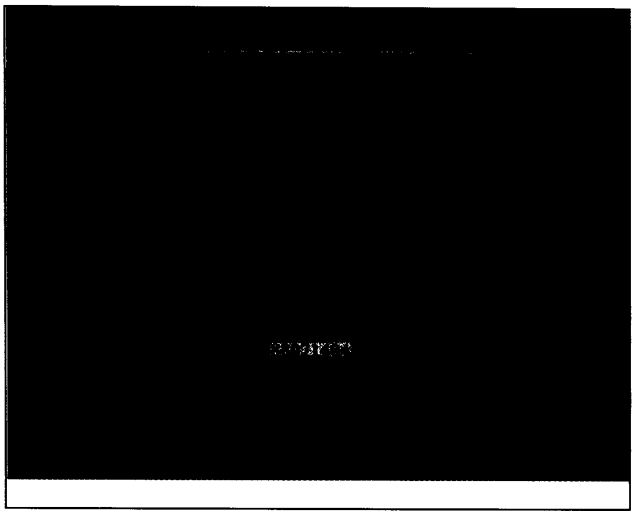

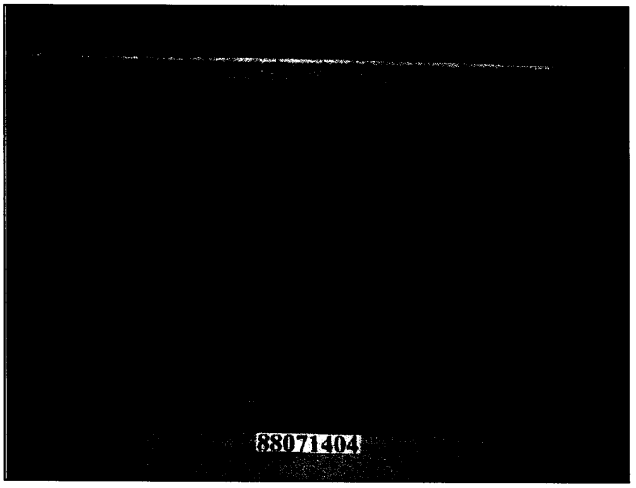
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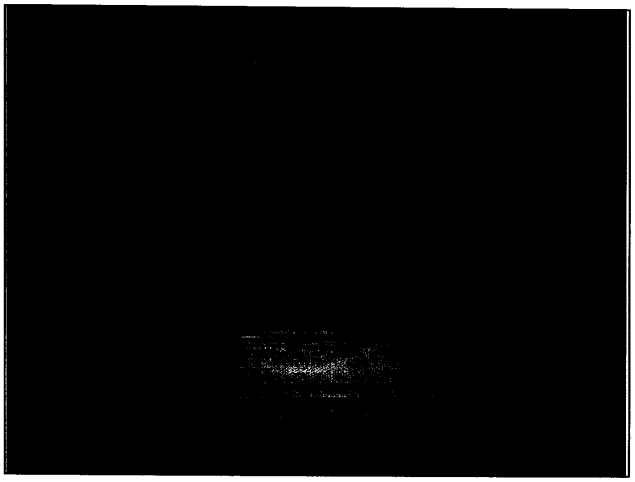

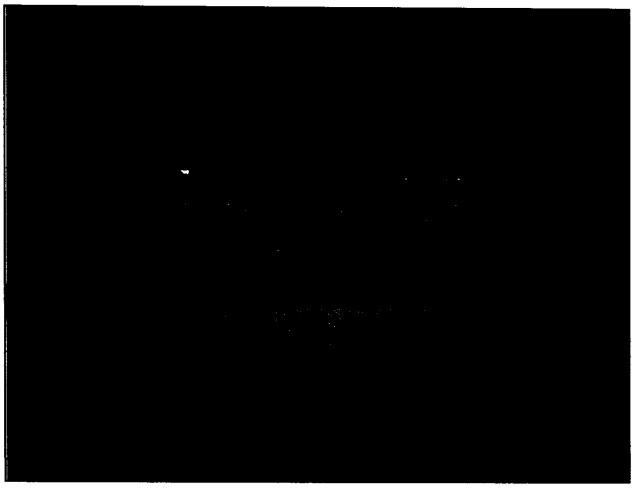

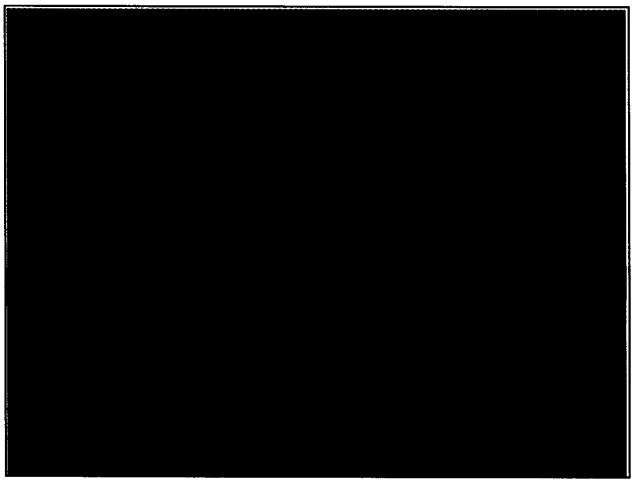

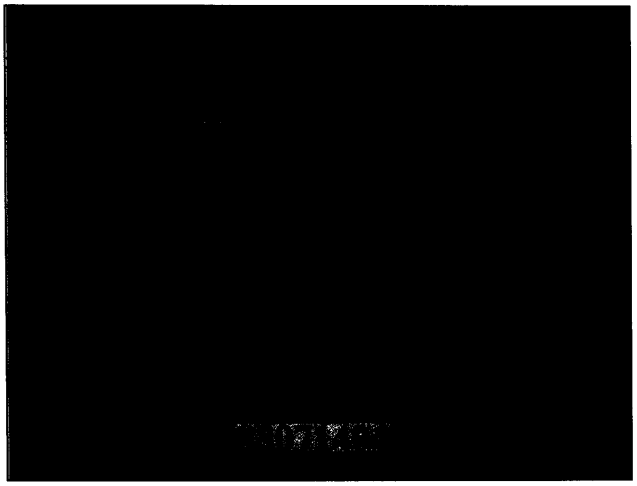

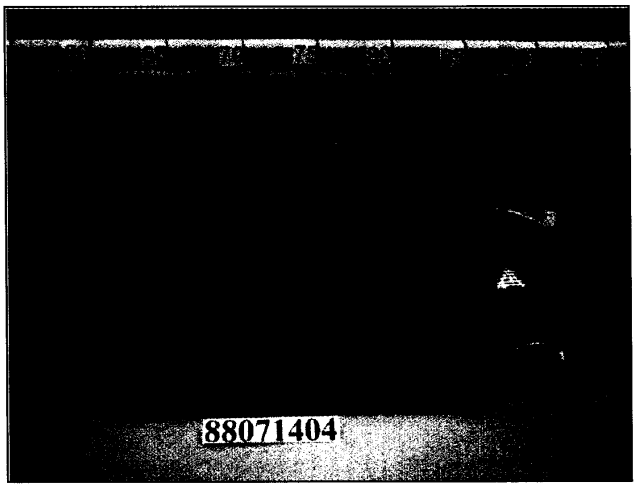
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EXHIBIT 4

ORIGINAL DESIGN DRAWING AND SPECIFICATIONS INCLUDING SCHEMATIC AND BLOCK DIAGRAM, USER'S MANUAL OR SERVICE MANUAL

EXHIBIT 5

ALL MODIFICATIONS THAT MAY AFFECT COMPLIANCE WITH THE EMI REQUIREMENTS AND NECESSARY TEST DATA