

CE MARK TECHNICAL FILE

AUSTRALIA EMC CONSTRUCTION FILE

of

Personal Computer

Model/ Type/ Machine Type

VT7200D

Contains:

1. Declaration of Conformity
2. EN55022/CISPR 22, AS/NZS 3548 Class B EMI test report
3. EN55024, AS/NZS 4252.1, EN61000-3-2, and EN61000-3-3 test report
4. Certificate of EN60950
5. Block Diagram and Schematics
6. User's manual



Date: 2001/11/20

ISL-01A105E

Declaration of Conformity

Name of Manufacturer: Acer Inc.
Address of Manufacturer: 7 Hsin Ann Rd., Science-Based
Industrial Park
Hsinchu 30077
Taiwan, R. O. C.
Declares that product: Personal Computer
Model/ Type/ Machine Type: VT7200D
Assembled by: Same as above
Address: Same as above

Conforms to the EMC Directive 89/336/EEC as attested by conformity with the following harmonized standards:

EN55022:1994 /A1:1995 /A2: 1997: Limits and Methods of Measurement of Radio Interference characteristics of Information Technology Equipment

EN55024: 1998: Information technology equipment--Immunity characteristics --Limits and methods of measurement

EN61000-3-2: 1995: A1:1998/A2:1998//A14: 2000: Limits for harmonics current emissions

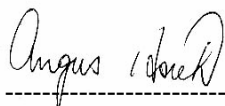
EN61000-3-3: 1995: Limits for voltage fluctuations and flicker in low-voltage supply systems

Conforms to the Low Voltage Directive 73/23/EEC as attested by conformity with the following harmonized standard:

EN60950:1992 /A1:1993, A2:1993 /A3:1995 /A4:1997 /A11:1997: Safety of Information Technology Equipment Including electrical business equipment

Conforms to the C-Tick Mark requirement as attested by conformity with the following standards:

AS/NZS 3548: 1995 /A1:1997 /A2:1997: Information technology equipment
AS/NZS 4252.1:1994: Generic Immunity



Angus Hsieh / Sr. Director
Acer Inc.

2001/11/19

Date

ISL-01A105E

EN55024 / AS/NZS 4252.1 / IMMUNITY
EN61000-3-2 / HARMONICS
EN61000-3-3 / VOLTAGE FLUCTUATIONS

TEST REPORT

of

Personal Computer

Model/ Type/ Machine Type

VT7200D

Applied by:

Acer Inc.
7 Hsin Ann Rd., Science-Based Industrial Park
Hsinchu 30077
Taiwan, R. O. C.

Test Performed by:

(NVLAP Lab. Code: 200234-0)
International Standards Laboratory
No. 21, Alley 37, Lane 122, Sec. 2
Hsiwan Rd. Hsichih
Taipei Hsien 22117
Taiwan, R.O.C.

Tel:(02)2646-2550
Fax:(02)2646-4641

Report Number: ISL-01A105E

Test Date: 2001/11/20

NVLAP Lab. Code: 200234-0; VCCI: R-341, C-354; NEMKO Aut. No: ELA 113; BSMI Lab. Code: SL2-IN-E-0013

Contents of Report

註解: 請記得COPY TEST
DATA FILES 到
C:\EMI\MODE?*.PRN

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1. General

1.1 Certification of Accuracy of Test Data

The immunity tests which this report describes were conducted by an independent electromagnetic compatibility consultant, International Standards Laboratory in accordance with the EN55024:1998 / AS/NZS 4252.1:1994 which include EN61000-4 series regulations, Harmonic Current Emissions EN61000-3-2: 1995: A1:1998/A2:1998/A14: 2000, and Voltage Fluctuations EN61000-3-3: 1995.

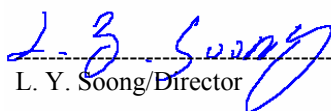
Equipment Tested: Personal Computer
Model/ Type/ Machine Type: VT7200D
Applied by Acer Inc.

Date of test: 2001/11/20

Test Engineer: W.H. Chang

Standard	Comment	Test Results
EN61000-3-2: 1995 A1:1998/A2:1998 /A14: 2000	Harmonic Current Emissions	Complies
EN61000-3-3: 1995	Voltage Fluctuations	Complies
EN61000-4-2: 1995	Electrostatic Discharge	Complies
EN61000-4-3: 1996	Radio-Frequency, Electromagnetic Field	Complies
EN61000-4-4: 1995	Electrical Fast Transient/Burst	Complies
EN61000-4-5: 1995	Surge	Complies
EN61000-4-6: 1996	Conductive Disturbance	Complies
EN61000-4-8: 1993	Power Frequency Magnetic Field	Complies
EN61000-4-11: 1994	Voltage Dips / Short Interruption and Voltage Variation	Complies

Approve & Signature


L. Y. Soong/Director

This test report accurately contains the test results of the above standards at the time of the test.

The results in this report apply only to the sample(s) tested.

This test report shall not be reproduced except in full, without the written approval of International Standards Laboratory.

International Standards Laboratory

Report Number: ISL-01A105E

NVLAP Lab. Code: 200234-0; VCCI: R-341, C-354; NEMKO Aut. No: ELA 113; BSMI Lab. Code: SL2-IN-E-0013

2. Summary

2.1.1 Applicant Information

Applicant: Acer Inc.
7 Hsin Ann Rd., Science-Based Industrial Park
Hsinchu 30077
Taiwan, R. O. C.

2.1.2 Operation Environment

Power supply : 230 Vac / 50 Hz

2.2 Description of Equipment Under Test

2.2.1 Description of Support Equipment

Support Unit 1.

Description:	Acer Digital Camera
Model:	DVC-VII
Serial Number:	N/A
Power Supply Type:	From PC USB Port
Power Cord:	N/A
FCC ID:	(Comply with FCC DOC)

Support Unit 2.

Description:	Microsoft Joy Stick
Model Number:	90873
Serial Number:	01151545
Power Supply Type:	N/A
Power Cord:	N/A
FCC ID:	C3KMGP1

Support Unit 3.

Description:	Andrea Headphone
Model Number:	NC-80
Serial Number:	N/A
Power Supply Type:	N/A
Power Cord:	N/A
FCC ID:	N/A

Support Unit 4.

Description:	Koka Headphone
Model Number:	ST-8
Serial Number:	N/A
Power Supply Type:	N/A
Power Cord:	N/A
FCC ID:	N/A

Support Unit 5.

Description:	KOKA Microphone
Model Number:	DM-510
Serial Number:	N/A
Power Supply Type:	N/A
Power Cord:	N/A
FCC ID:	N/A

Support Unit 6.

Description:	KOKA Microphone
Model Number:	DM-510
Serial Number:	N/A
Power Supply Type:	N/A
Power Cord:	N/A
FCC ID:	N/A

Support Unit 7.

Description:	SONY radio cassette player
Model Number:	WM-FX50
Serial Number:	N/A
Power Supply Type:	N/A
Power Cord:	N/A

Support Unit 8.

Description:	HP Printer (for parallel interface port)
Model Number:	2225C
Serial Number:	N/A
Power Supply Type:	Switching (AC to AC Xfmr, Wall Mounted Type)
Power Cord:	Nonshielded, Detachable With Grounding Pin
FCC ID:	DSI6XU2225

Support Unit 9.

Description:	Logitech Mouse
Model Number:	M-SAH
Serial Number:	LZB81251703
Power Supply Type:	N/A
Power Cord:	N/A
FCC ID:	DZL211029

Support Unit 10.

Description:	Aceex Modem (for serial interface port 1)
Model Number:	DM1414
Serial Number:	960063772
Power Supply Type:	Linear, Power Adapter (AC to AC Xfmr, Wall Mounted Type)
Power Cord:	Nonshielded, Without Grounding Pin
FCC ID:	IFAXDM1414

Support Unit 11.

Description:	Aceex Modem (for serial interface port 2)
Model Number:	DM1414
Serial Number:	960063771
Power Supply Type:	Linear, Power Adapter (AC to AC Xfmr, Wall Mounted Type)
Power Cord:	Nonshielded, Without Grounding Pin
FCC ID:	IFAXDM1414

Support Unit 12.

Description:	Acer Monitor
Model:	7377xe
Serial Number:	999027100501700055P644E1 P
Power Supply Type:	Switching
Power Cord:	Nonshielded, Detachable
FCC ID:	(Comply with FCC DOC)

Support Unit 13.

Description:	Acer Keyboard
Model Number:	6511-TW4C
Serial Number:	916600704C83D11076S00000
Power Supply Type:	N/A
Power Cord:	N/A
FCC ID:	JVPKBS-WIN

Support Unit 14.

Description:	Personal Computer
Model:	IBM 2170
Serial No.:	N/A
Power Supply Type :	Switching
	Delta (Model: DPS-145PB-80A)
Hard Disk Drive:	Maxtor (Model: 91303D6) 13.3GB
Floppy Driver:	Panasonic (Model: JU256A276P)
CD-ROM Drive:	AOpen (Model: CD-940E/TKU PRO)
ZIP Driver:	Iomega (Model: Z100ATAPI)
LAN Card	Accton (Model: EN1207D-TX1)
FDD/HDD Controller and	
VGA port/ Parallel/	
Serial port:	Built on Motherboard
VGA port:	one 15-pin
Parallel Port:	one 25-pin
Serial Port:	one 9-pin
Keyboard Connector:	6-pin
Mouse Connector:	6-pin
USB Connector:	two 4-pin
Game Port:	one 15-pin
Speaker Port:	one
Microphone Port:	one
Line In Port:	one
Power Cord:	Nonshielded, Detachable
FCC ID:	N/A (comply witch FCC DOC)

Support Unit 15.

Description:	Acer USB Keyboard
Model Number:	6511-UV
Serial Number:	N/A
Power Supply Type:	N/A
Power Cord:	N/A
FCC ID:	N/A (comply with FCC DOC)

Support Unit 16.

Description:	Acer USB Mouse
Model Number:	M-U48a
Serial Number:	LZE01267035
Power Supply Type:	N/A
Power Cord:	N/A
FCC ID:	JNZ211360

Support Unit 17.

Description:	Acer USB Speaker
Model Number:	V-1
Serial Number:	N/A
Power Supply Type:	N/A
Power Cord:	N/A
FCC ID:	(Comply with FCC DOC)

2.2.2 Software for Controlling Support Unit

A test program which generates a complete line of continuously repeating "H" pattern is used as the software test program. The program was executed as follows:

- A. Read and write to the disk drives.
- B. Send signal form EUT to server through Telephone port.
- C. Send audio signal to the speaker.
- D. Capture Video image from digital camera than playback to display.
- E. Send audio signal to the headphone.
- F. Send audio signal to the headphone.
- G. Receive audio signal from the microphone.
- H. Receive audio signal from the microphone.
- I. Receive audio signal from walkman.
- J. Send H pattern to the parallel port device (Printer).
- K. Send H pattern to the serial port device (Modem 1).
- L. Send H pattern to the serial port device (Modem 2).
- M. Send H pattern to the video port device (Monitor).
- N. Send signal form EUT to server through LAN port.
- O. Repeat the above steps.

	Filename	Issued Date
LAN	EMC.exe	11/22/1996
Monitor	HH.bat	8/20/1991
Modem 1	Hm.bat	8/20/1991
Modem 2	Hm.bat	8/20/1991
Printer1	Wordpad.exe	11/11/1999
Digital Camera	Acer Cap.exe	8/10/1998
Telephone	Hypertm.exe	06/08/200

2.2.3 I/O Cable Condition of EUT and Support Units

Description	Path	Cable Length	Cable Type	Connector Type
AC Power Cord	110V (~240V) to AC Power Cord Inlet (3-pin)	1.8M	Nonshielded, Detachable	Plastic Head Plastic Hood
Server Data Cable	Server to EUT LAN port	33 feet	Shielded, Detachable	RJ-45, with Metal Head, Metal Hood
Keyboard Data Cable	Keyboard to PC Keyboard port	1.8M	Shielded, Undetachable	Metal Head Plastic Hood
Monitor Data Cable	Monitor to PC VGA port	1.6M	Shielded, Detachable	Metal Head Plastic Hood
Modem Data Cable	Modem to PC COM 1 port	1.5M	Shielded, Detachable	Metal Head Metal Hood
Modem Data Cable	Modem to PC COM 2 port	1.5M	Shielded, Detachable	Metal Head Metal Hood
Mouse Data Cable	Mouse to PC Mouse port	1.8M	Shielded, Undetachable	Metal Head without Hood
Printer Data Cable	Printer to PC Parallel port	1.5M	Shielded, Detachable	Metal Head Plastic Hood
Audio-in Data Cable	Walkman to PC Audio-In Port	1.5M	Nonshielded, Detachable to PC	Metal Head Plastic Hood
Microphone Data Cable	Microphone to Mic Jack of PC	1.5M	Nonshielded, Undetachable	Metal Head Plastic Hood
Microphone Data Cable	Microphone to Mic Jack of PC	1.5M	Nonshielded, Undetachable	Metal Head Plastic Hood
Headphone Data Cable	Headphone to Line-out jack of PC	1.5M	Nonshielded, Undetachable	Metal Head without Hood
Headphone Data Cable	Headphone to Line-out jack of PC	1.5M	Nonshielded, Undetachable	Metal Head without Hood
Joy Stick Data Cable	Joystick to PC Joystick port	1.2M	Shielded, Undetachable	Metal Head without Hood

Description	Path	Cable Length	Cable Type	Connector Type
USB CCD Data Cable	Digital camera to PC USB port	1.6M	Shielded, Detachable	Metal Head Plastic Hood
USB Keyboard Data Cable	USB Keyboard to PC USB port	1.8M	Shielded, Undetachable	Metal Head Plastic Hood
USB Mouse Data Cable	USB Mouse to PC USB port	1.8M	Shielded, Undetachable	Metal Head without Hood
USB Speaker Data Cable	USB Speaker to PC USB port	1.5M	Nonshielded, Undetachable	Metal Head without Hood
USB Speaker Data Cable	USB Speaker to PC line-out port	1.5M	Nonshielded, Undetachable	Metal Head without Hood
Telephone Line	Server to EUT RJ 11 Connector	1.2M	Nonshielded, Detachable to PC	Plastic Head Plastic Hood
Telephone Line	with 600 Ω dummy load	1.2M	Nonshielded, Detachable to PC	Plastic Head Plastic Hood

2.3 Description of Equipment Under Test

EUT

Description:	Personal Computer
Condition:	Pre-Production
Model:	VT7200D
Serial Number:	N/A
Power Supply Type:	Switching High Power (Model: SI-X200P3) 200W or Delta (Model: DPS-200PB-112 A) 200W
Hard Disk Driver:	Seagate (Model: ST340810A) 40GB
Floppy Driver:	Panasonic (Model: JU-256A046P)
DVD-ROM Driver:	Pioneer (Model: DVD-116)
VGA Card:	LEADTEK (Model: Winfast Geforce 2 MX)
Modem Card:	ASKEY (Model: 1456VQH20E)
FDD/HDD Controller and Parallel/Serial ports:	Built on Motherboard
Parallel Port:	one 25-pin
Serial Port:	two 9-pin
LAN Port:	one 8-pin
Keyboard Connector:	one 6-pin
Mouse Connector:	one 6-pin
USB Connector:	four 4-pin
Game Port:	one 15-pin
Speaker Port:	two
Microphone Port:	two
Line In Port:	one
Power Cord:	Non-shielded, Detachable
Display:	CRT
Maximum Resolution:	1280X1024

Speed and CPU
100MHz

Pentium 4 1.4, 1.5, 1.7, 1.8, 1.9, 2.0 2.2 GHz

All types of CPU and switching power supplies, above have been tested, we only present the worst case test data in the report. The test configuration is listed below:

CPU:	Pentium 4 2.2 GHz
Power supply:	High Power (Model: SI-X200P3) 200W
Hard disk driver:	Seagate (Model: ST340810A) 40GB
VGA Card:	LEADTEK (Model: Winfast Geforce 2 MX)
Maximum Resolution:	1280X1024

EMI Noise Source:

Crystal: 25 MHz (X1), 14.318 MHz (X2), 32.768 KHz (X3), 24.576 MHz (X4)

Clock Generator: U8

EMI Solution:

1. Eight spring fingers were added between add-on card bracket and metal enclosure

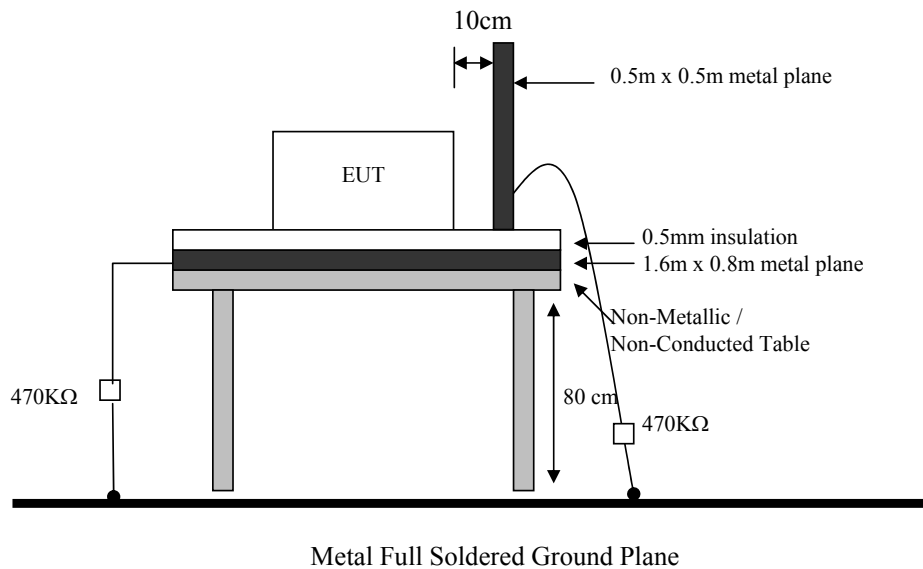
3. Electrostatic discharge (ESD) immunity

3.1 Electrostatic discharge (ESD) immunity test

Port:	Enclosure
Basic Standard:	EN61000-4-2
Requirements:	Air +/- 8 kV
	Contact +/- 4 kV
Criteria:	B
Temperature:	17 degree C
Humidity:	60%

Test Setup

EUT is 1m from the wall and other metallic structure.



Test Result

Performance of EUT complies with the given specification.

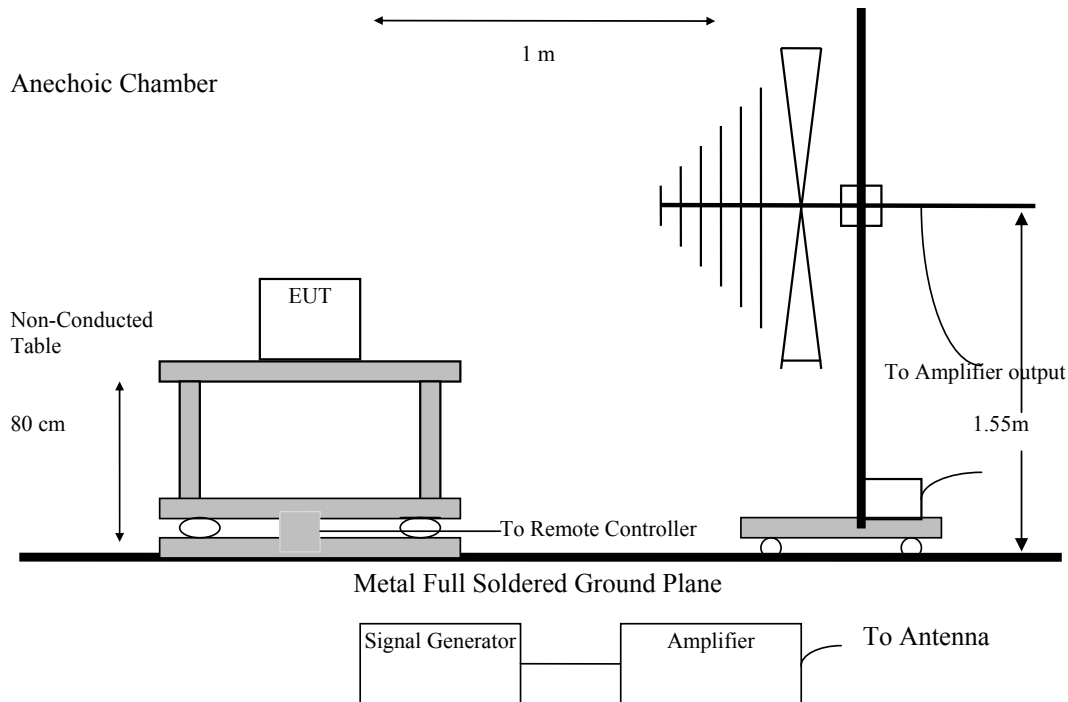
4. Radio-Frequency, Electromagnetic Field immunity

4.1 Radio-Frequency, Electromagnetic Field immunity test

Port:	Enclosure
Basic Standard:	EN61000-4-3
Modulation	AM 1KHz 80%
Requirements:	3 V/m
Frequency range:	80 MHz~1 GHz
Step:	1% of last step frequency
Step time:	800 ms
Polarization:	Vertical and Horizontal
Criteria:	A
Temperature:	22 degree C
Humidity:	41%

Test Setup

The field sensor is placed at one calibration grid point to check the intensity of the established fields on both polarizations. EUT is adjust to have each side of EUT face coincident with the calibration plane. A CCD camera is used to monitor the condition of EUT for the performance judgment.



Test Result

Performance of EUT complies with the given specification.

5. Electrical Fast transients/burst immunity

5.1 Electrical Fast transient/burst immunity test

Port: AC mains
Basic Standard: EN61000-4-4
Requirements: 1 KV
Criteria: B
Rise Time: 5ns
Hold Time: 50ns
Repetition Frequency: 5KHz
Temperature: 17 degree C
Humidity: 60%

Test Procedure

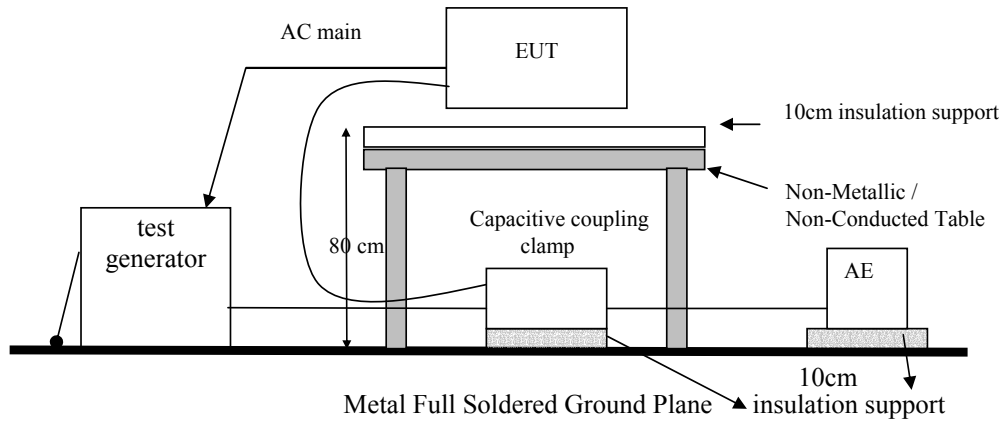
The EUT was setup on a nonconductive table 0.8 m above a reference ground plane.

Voltage		1 KV	
Test Points	Polarity	Result	Comment
Line	+	N	60 sec
	-	N	60 sec
Neutral	+	N	60 sec
	-	N	60 sec
Ground	+	N	60 sec
	-	N	60 sec
Line to Neutral	+	N	60 sec
	-	N	60 sec
Line to Ground	+	N	60 sec
	-	N	60 sec
Neutral to Ground	+	N	60 sec
	-	N	60 sec
Line to Neutral to Ground	+	N	60 sec
	-	N	60 sec

Note: 'N' means normal, the EUT function is correct during the test.

Test Setup

EUT is at least 50cm from the conductive structure .



Test Result

Performance of EUT complies with the given specification.

5.2 Electrical Fast transient/burst immunity test for I/O cable

Port:	phone, twisted pairs LAN port
Basic Standard:	EN61000-4-4
Requirements:	0.5 kV
Criteria:	B
Rise Time:	5ns
Hold Time:	50ns
Repetition Frequency:	5KHz
Temperature:	17 degree C
Humidity:	60%

Test Result

Performance of EUT complies with the given specification.

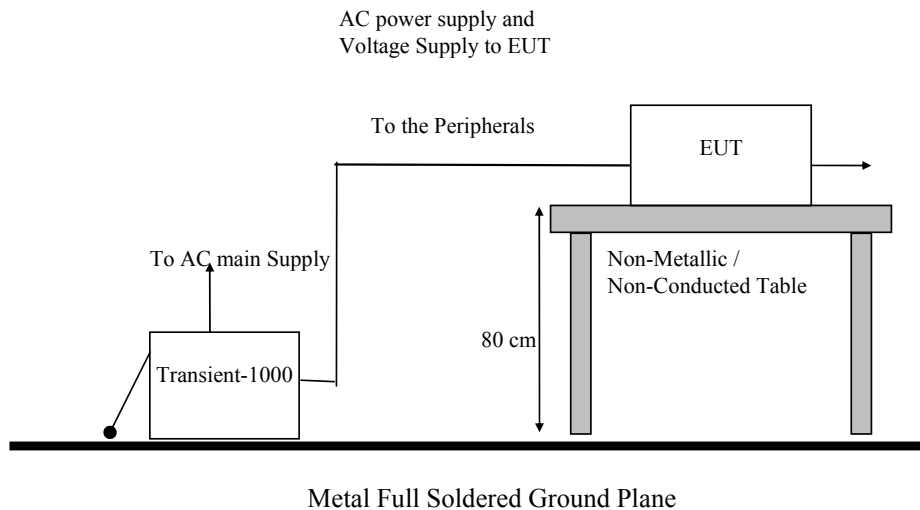
6. Surge Immunity

6.1 Surge immunity test

Port: AC mains and Telephone Line
Basic Standard: EN61000-4-5
Criteria: B
Rise Time: 1.2us
Hold Time: 50us
Temperature: 17 degree C
Humidity: 60%
Test Level: AC Power Port: 1 kV (line to line), 2kV (line to earth)
Telephone Line: 1kV (line to ground)

Repetition Rate: ☒ 30 second
Angle: ☒ 0°
☒ 90°
☒ 270°
Polarity: ☒ positive ☒ negative°

Test Setup



Test Result

Performance of EUT complies with the given specification.

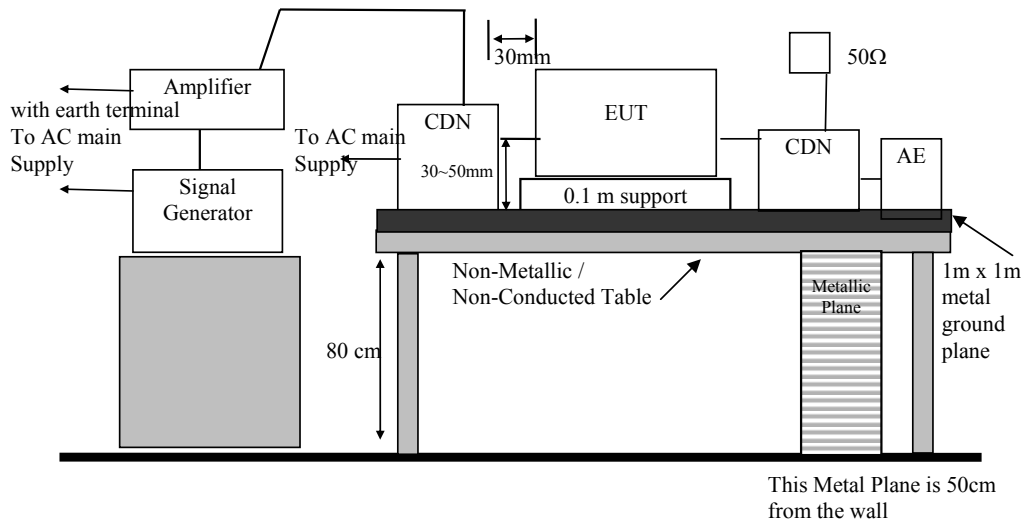
7. Immunity to Conductive Disturbance

7.1 Immunity to Conductive Disturbance

Port: AC mains & Telephone ports & LAN port
Basic Standard: EN61000-4-6
Test Level: 3 V
Modulation: AM 1KHz 80%
Criteria: A

Frequency range: 0.15 MHz - 80MHz
Step: 1% of last Frequency
Step time: 1000 mS
Temperature: 17 degree C
Humidity: 60%

Test Setup



Metal Full Soldered Ground Plane

Test Result

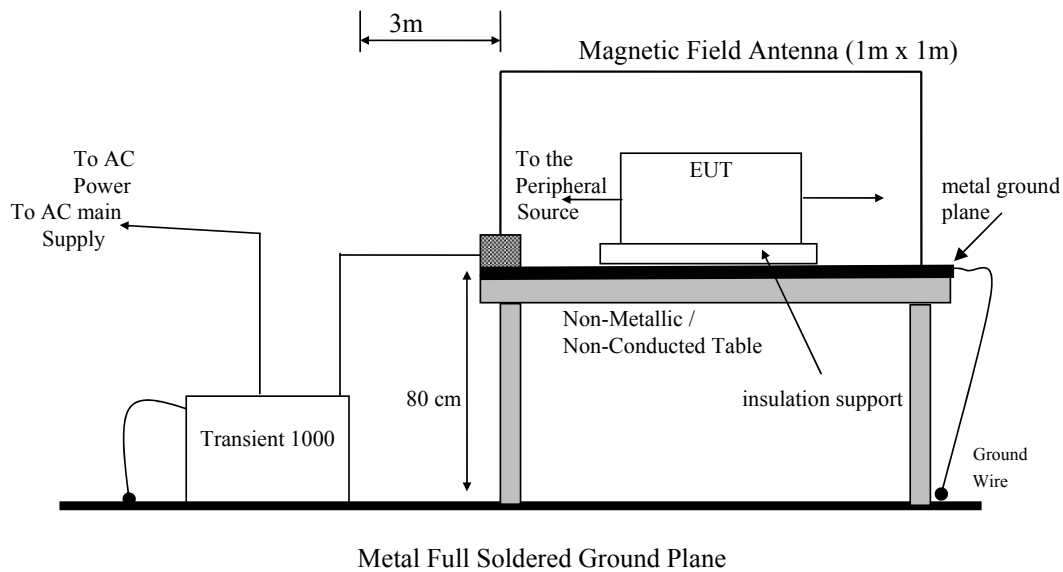
Performance of EUT complies with the given specification.

8. Power Frequency Magnetic Field immunity

8.1 Power Frequency Magnetic field immunity test

Port:	Enclosure
Basic Standard:	EN61000-4-8
Requirements:	1 A/m
Criteria:	A
Orientation:	X, Y, Z
Temperature:	17 degree C
Humidity:	60%

Test Setup



Test Result

Performance of EUT complies with the given specification.

9. Voltage Dips, Short Interruption and Voltage Variation immunity

9.1 Voltage Dips, Short Interruption and Voltage Variation immunity test

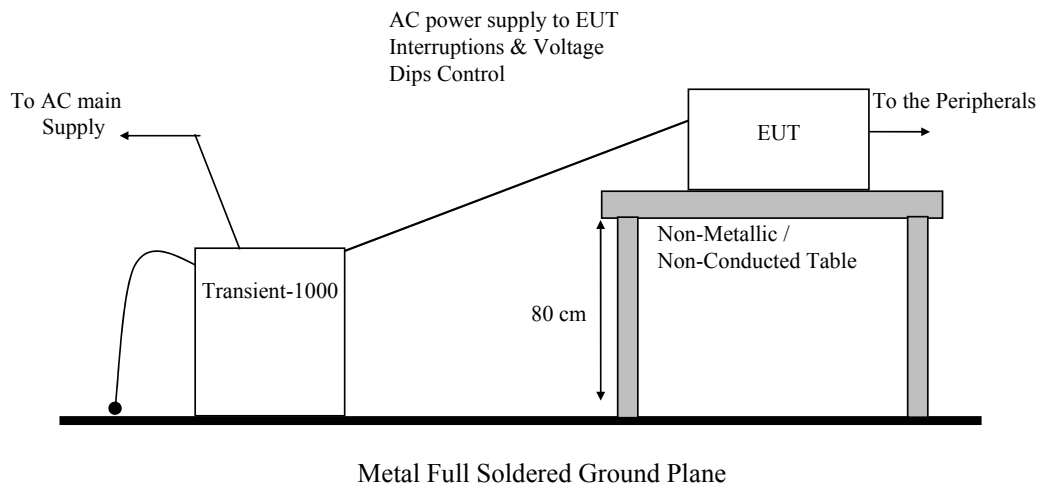
Port: AC mains
Basic Standard: EN61000-4-11
Phase: 0°
Test intervals: 3 times with 10s each

Voltage Dips: >95% in 0.5 period
Criteria: B

Voltage Dips: 30% in 25 period
Criteria: C

Voltage Interruption: >95% in 250 period
Criteria: C

Test Setup



Test Result

Performance of EUT complies with the given specification.

10. Harmonics

10.1 Harmonics test

Port:	AC mains
Active Input Power:	>75W
Basic Standard:	EN61000-3-2
Test Duration:	3min.
Class:	D

Test Procedure

The EUT is supplied in series with shunts or current transformers from a source having the same nominal voltage and frequency as the rated supply voltage and frequency of the EUT. The EUT is configured to its rated current with additional resistive load when the testing is performed.

Equipment having more than one rated voltage shall be tested at the rated voltage producing the highest harmonics as compared with the limits.

Result

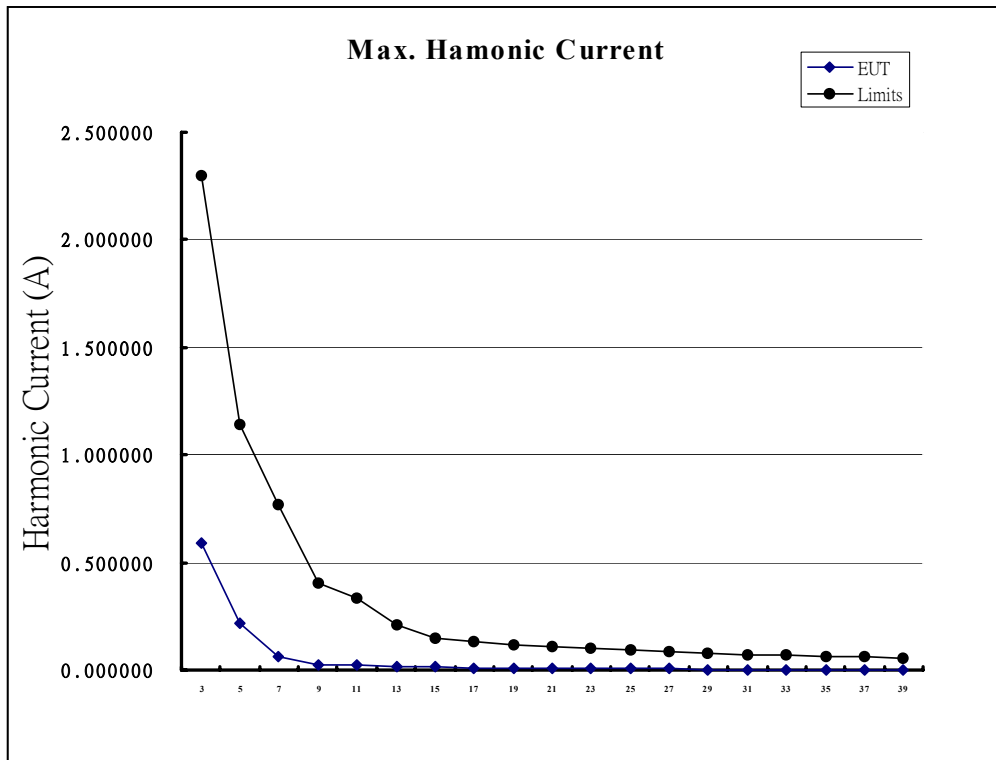
Performance of EUT complies with the given specification.

Test Data

Power (W)	Power Factor	Power Voltage	Power Current
196.033	0.759	228.562	0.933

Maximum permissible harmonic current (A)

Order	Data	Order	Data	Order	Data
3	0.5876	17	0.0077	31	0.0031
5	0.2147	19	0.0073	33	0.0028
7	0.0631	21	0.0059	35	0.0025
9	0.0203	23	0.0059	37	0.0024
11	0.0205	25	0.0053	39	0.0018
13	0.0119	27	0.0045		
15	0.0117	29	0.0036		

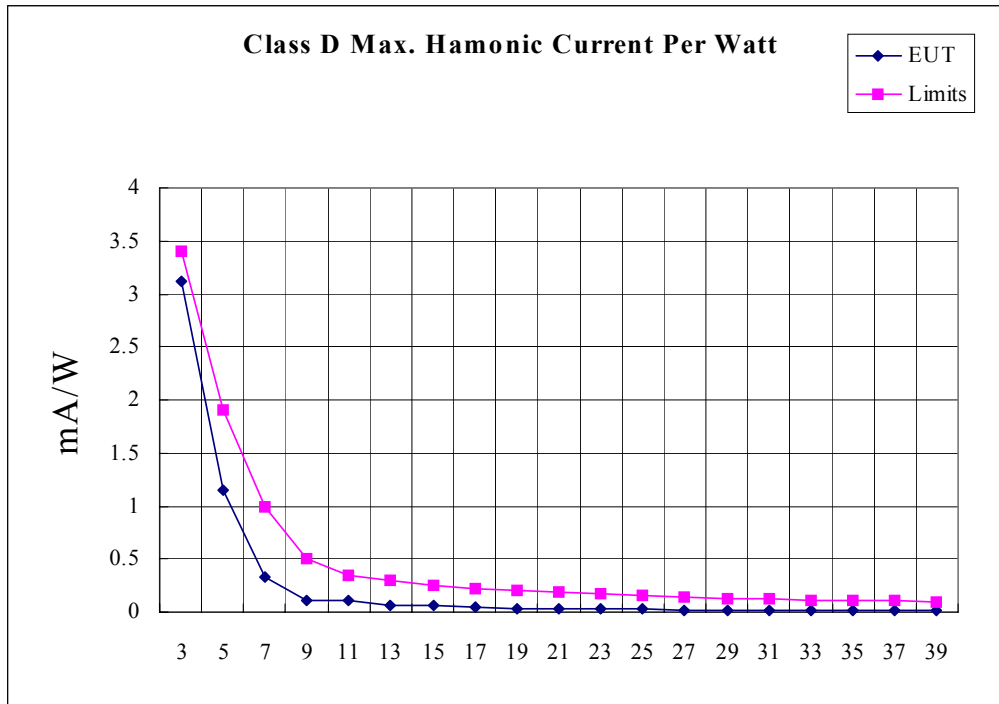


Test Data

Power (W)	Power Factor	Power Voltage	Power Current
196.033	0.759	228.562	0.933

Maximum permissible harmonic current per watt (mA/W)

Order	Data	Order	Data	Order	Data
3	3.1152	17	0.0413	31	0.0163
5	1.1424	19	0.0390	33	0.0146
7	0.3365	21	0.0309	35	0.0131
9	0.1087	23	0.0312	37	0.0125
11	0.1088	25	0.0278	39	0.0096
13	0.0636	27	0.0236		
15	0.0627	29	0.0184		



Voltage Fluctuations

10.2 Voltage Fluctuations test

Port:	AC mains
Basic Standard:	EN61000-3-3
Observation period:	For Pst 10min For Plt 2 hours

Test Procedure

The EUT is supplied in series with reference impedance from a power source with the voltage and frequency as the nominal supply voltage and frequency of the EUT.

Result

Performance of EUT complies with the given specification.

Test Data

Observation period: Short Time (10min)

Type	EUT (Maximum)		Limit	
Ut	229.22			
Plt	0.21		0.65	
Pst	0.64	ms	1	
dt	0.26	%	3	%
dmax	1.84	%	4	%
dc	0.35	%	3	%
	STATUS		PASS	

Observation period: Long Time (2 hours)

Type	EUT (Maximum)		Limit	
Ut	228.54			
Plt	0.34		0.65	
Pst	0.7	ms	1	
dt	0.13	%	3	%
dmax	0.9	%	4	%
dc	0.03	%	3	%
	STATUS		PASS	

11. Test Equipment List

Location Remark	Equipment	Brand	Model	Start Service Date	Last Cal. Date	Next Cal. Date
2,4,5,8,11	Test Generator	PRECISION	TRA1000-126 S/N: TRA1H01B	6/30/1994	8/6/2001	8/5/2002
3,6	Power meter	HP	438A S/N: 3513U06187	10/23/1997	***	***
3,6	Power Sensor	HP	8482A S/N: 3318A29614	10/23/1997	1/03/2001	1/03/2002
3	Signal Generator	HP	8648B S/N: 3642U01040	6/30/1997	3/13/2001	3/13/2003
3	BILOG Antenna	CHASE	CBL6112 S/N: 2077	10/20/1998	1/10/2001	1/09/2002
3	Power Amplifier	Amplifier Research	100W1000M1 S/N:	3/31/1996	N/A	N/A
3	Field Strength Sensor	Amplifier Research	FP2000 S/N: 15397	3/31/1996	05/11/2001	05/11/2002
3	Field Strength Meter	Amplifier Research	FM2000 S/N: A285000011	3/31/1996	05/11/2001	05/11/2002
3	Thermo-hygrometer	CRECER	S/N: ISL-C-003	11/26/1999	1/12/2001	1/11/2002
4	Clamp	Precision	1604242 S/N: CNEFT1000-103	6/30/1994	N/A	N/A
5,6	CDN	FCC Inc.	FCC-801-T2 S/N:9720	6/30/1994	1/11/2001	1/10/2002
6	CDN	FCC Inc.	FCC-801-T4 S/N: 9721	6/30/1994	1/11/2001	1/10/2002
6	CDN	FCC Inc.	FCC-801-M3-25A S/N: 2032	6/30/1994	1/11/2001	1/10/2002
6	Signal Generator	HP	8656B S/N: 2635A04675	6/30/1992	08/03/2001	08/03/2002
6	Power Amplifier	Amplifier Research	150A100 S/N: 1-1-R-02157	3/1/1996	N/A	N/A
6	Passive Impedance Adapter	FCC Inc.	FCC-801-150-50-CDN S/N: 9758 & 9759	3/1/1996	N/A	N/A
6	50 ohms load	Weinschel Corp	1429-4 S/N: DB3318	3/1/1996	N/A	N/A
6	6dB Attenuator	Weinschel Corp	33-6-34 S/N: BC5975	3/1/1996	N/A	N/A
8	Magnetic Field Antenna	Precision	TRAIZ44B S/N: MF1000-23	8/30/1997	N/A	N/A
8	Clamp Meter	TES	3090 S/N: 990900322	5/09/2001	5/09/2001	5/09/2002
*2, *3	3-Channel Power Analysis System	Xitron Technologies	2503AH S/N: 25015940001	6/30/1994	2/09/2001	2/09/2002
*2, *3	Frequency Converter	Extech Electronics	CFC-110	6/30/1994	N/A	N/A
2,4,5,6,8,11	Thermo-hygrometer	MICROLIFE	S/N: ISL-C-004	11/26/1999	1/12/2001	1/12/2002

Note: ***: The equipment is sent for calibration.

Location Remark List:

2: EN61000-4-2 3: EN61000-4-3 4: EN61000-4-4 5: EN61000-4-5
6: EN61000-4-6 8: EN61000-4-8 11: EN61000-4-11
*2: EN61000-3-2 *3: EN61000-3-3

International Standards Laboratory

Report Number: ISL-01A105E

NVLAP Lab. Code: 200234-0; VCCI: R-341, C-354; NEMKO Aut. No: ELA 113; BSMI Lab. Code: SL2-IN-E-0013

11.1 Software for Controlling Spectrum/Receiver and Calculating Test Data

Radiation/Conduction	Filename	Version
EN61000-3-2	IEC1000.EXE	1.0F
EN61000-3-3	IEC1000.EXE	1.0F
EN61000-4-3	Tile.Exe	1.12.E
EN61000-4-6	Tile.Exe	1.11.J
EN61000-4-2	Tracs.Exe	2.0
EN61000-4-4	Tracs.Exe	2.0
EN61000-4-5	Tracs.Exe	2.0
EN61000-4-8	Tracs.Exe	2.0
EN61000-4-11	Tracs.Exe	2.0

12. Photographs

12.1 Photos of ESD measurement



12.2 Photos of RF Field Strength Susceptibility Measurement

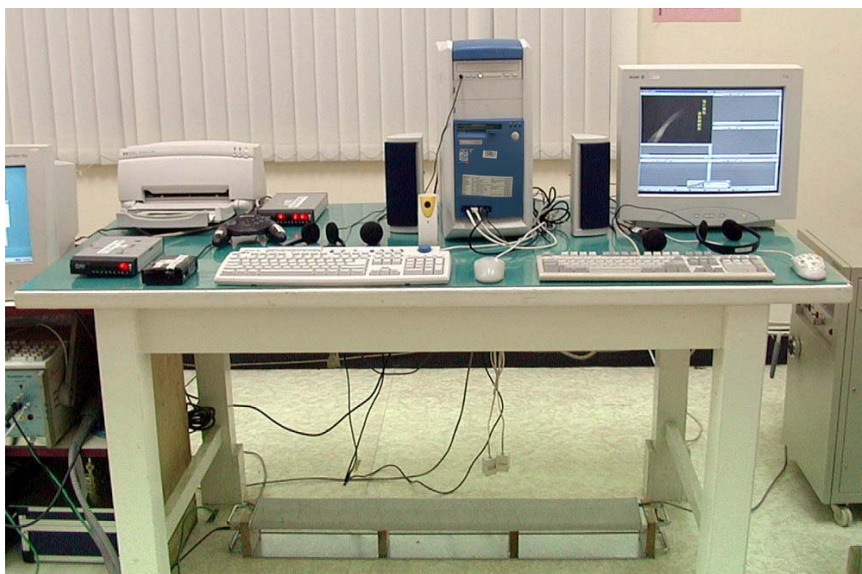


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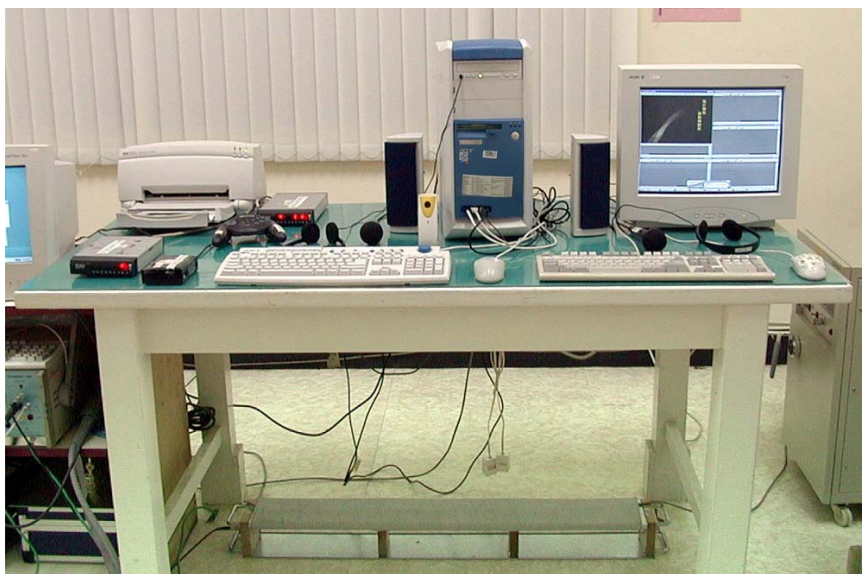
Report Number: ISL-01A105E

NVLAP Lab. Code: 200234-0; VCCI: R-341, C-354; NEMKO Aut. No: ELA 113; BSMI Lab. Code: SL2-IN-E-0013

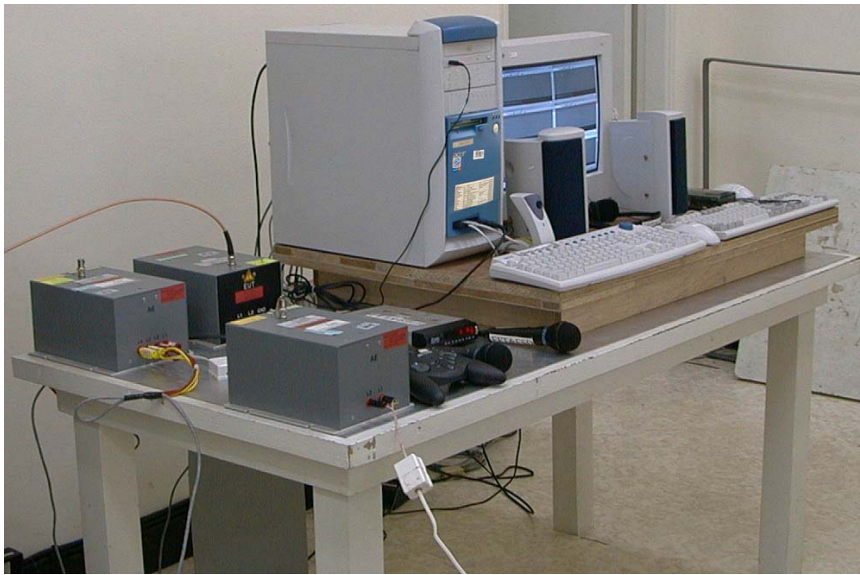
12.3 Photos of Electrical Fast Transient/Burst measurement



12.4 Photos of Surge measurement



12.5 Photo of Conductive Measurement



12.6 Photo of Magnetic field measurement

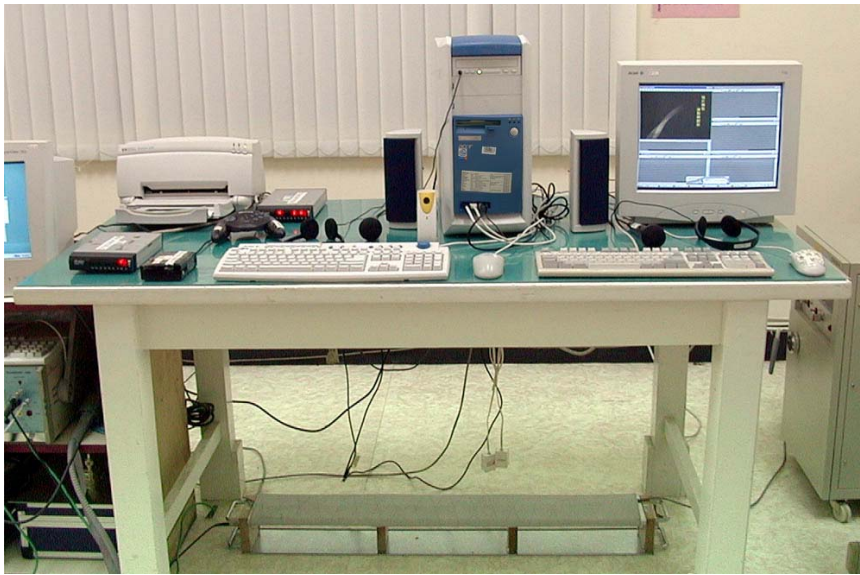


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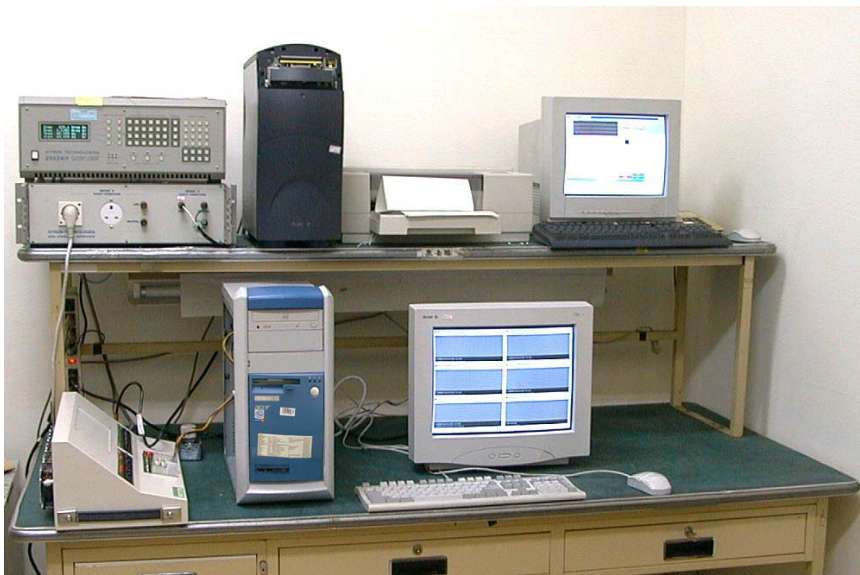
Report Number: ISL-01A105E

NVLAP Lab. Code: 200234-0; VCCI: R-341, C-354; NEMKO Aut. No: ELA 113; BSMI Lab. Code: SL2-IN-E-0013

12.7 Photos of Voltage Dips measurement



12.8 Photos of Harmonics and Voltage Fluctuations



12.9 Appendix: Photographs of EUT

Please find this appendix in the File of **ISL-01A105P**