

APPLICATION FOR CERTIFICATION
(FCC CFR47 PART 15 DIGITAL DEVICE)

On Behalf of

LG Electronics USA

60" Plasma Monitor

Model : MU-60PZ12

FCC ID : BEJMU60PZ12

Brand: LG

Prepared for : LG Electronics USA
6133 N River Rd., Suite 1100,
Rosemont IL US.

Prepared by : Taiwan Tokin EMC Eng. Corp.
No. 53-11, Tin-Fu Tsun, Lin-Kou,
Taipei Hsien, Taiwan, R.O.C.

Tel: (02) 2609-9301, 2609-2133
Fax: (02) 2609-9303

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Report Number : TTEMC-F91035
Date of Test : Mar. 05 ~19, 2002
Date of Report : Mar. 20, 2002

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TEST REPORT CERTIFICATION

Applicant : LG Electronics USA
 Manufacturer : LG Electronics Inc.
 FCC ID : BEJMU60PZ12
 EUT Description : 60" Plasma Monitor
 (A) MODEL NO. : MU-60PZ12
 (B) SERIAL NO. : N/A
 (C) BRAND : LG
 (D) POWER SUPPLY : AC 120V, 60Hz

Measurement Procedure Used:

FCC RULES AND CISPR 22 (DOCKET NO. 92-152, SEP. 1993) AND
 FCC / ANSI C63.4-1992
 (FCC CFR 47, Part 15 Subpart B/2001 and CISPR 22/1997 +A1/2000)

The device described above was tested by TAIWAN TOKIN EMC ENG. CORP. to determine the maximum emission levels emanating from the device. The maximum emission levels were compared to the CISPR 22 Class B limits both radiated and conducted emissions and above 1000MHz compared to the FCC Part 15 Subject B radiated limit.

The measurement results are contained in this test report and TAIWAN TOKIN EMC ENG. CORP. is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT to be technically compliance with the FCC official limits.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Taiwan Tokin EMC Eng. Corp.

(NOTE: These results are deemed satisfactory evidence of compliance with ICES-003 of the Canadian Interference-Causing Equipment Regulations.)

Date of Test : Mar. 05 ~19, 2002

Prepared By:

Cherry Wang
(Cherry Wang/Assistant Manager)

Test Engineer:

Allen Wang
(Allen Wang/Assistant Manager)

Approve & Authorized Signer:

Leon Liu
(Leon Liu/Manager)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

Description	:	60" Plasma Monitor
Model Number	:	MU-60PZ12
FCC ID	:	BEJMU60PZ12
Brand	:	LG
Applicant	:	LG Electronics USA 6133 N River Rd., Suite 1100, Rosemont IL US.
Manufacturer	:	LG Electronics Inc. (Kumi TV Plant.) Kumi TV Plant. 642, Jinpyung-dong, Kumi-City, Kyoungsang Buk-do, 730-360, Korea
Scanning Frequency	:	Horizontal : 31kHz-80kHz Vertical: 56Hz-120Hz
Maximum Resolution	:	1280x1024
Display Panel Module	:	LG, M/N PDP60WXDP4
Remote Control	:	LG, 6710V00049V
15 Pin D-Sub Cable (To PC)	:	Shielded, Detachable, 7m Bonded two ferrite cores
RS232C Cable (To PC, for Device Setup)	:	Shielded, Detachable, 1.8m With a ferrite core
Speaker w/Stand (L, R) (Optional)	:	Speaker: LG, AP-60SA10 Wires: Non-Shielded, Undetachable, 3.6m Bonded a ferrite core
Power Cord (AC IN)	:	Non-Shielded, Detachable, 2.8m
Date of Receipt of Sample	:	Feb. 27, 2002
Date of Test	:	Mar. 05 ~19, 2002

1.2. Tested Supporting System Details

1.2.1. PERSONAL COMPUTER

Mother Board	:	ASUS(VIA), M/N CUV4X, S/N 07Z7Y24103, FCC by DoC
CPU	:	Intel Pentium III 667MHz
RAM	:	128MB (PC-133)
PC Case	:	Enlight, M/N EN-7105A
S.P.S.	:	FSP, M/N FSP250-60PFN S/N S00769614, BSMI No. 3892B514
Floppy Disk Drive 3.5"	:	Mitsumi, M/N D353M3, S/N 0G07BR0709
Hard Disk Drive	:	Maxtor (10.2GB), M/N 91021U2 S/N 90526177
VGA Card	:	CP, M/N CM64A, S/N C01H011476 FCC by DoC
Sound Card	:	Dataexpert, M/N MED6617
Audio Cable (to EUT)	:	Non-Shielded, Detachable, 1.5m
Power Cord	:	Non-Shielded, Detachable, 1.8m

1.2.2. KEYBOARD

Model Number	:	5121
Serial Number	:	J83300803
FCC ID	:	E5XKBM104M10UC
Manufacturer	:	Behavior Tech Computer Corp.
Data Cable	:	Shielded, Undetachable, 1.0m

1.2.3. PRINTER

Model Number	:	2225C+
Serial Number	:	3123S97227
FCC ID	:	DSI6XU2225
Manufacturer	:	Hewlett Packard
Power Adapter	:	Kani, Model AD-09 Non-Shielded, Detachable, 2.0m
Data Cable	:	Shielded, Detachable, 1.2m

1.2.4. PS2 MOUSE

Model Number	:	M-S35
Serial Number	:	LZA82103129
FCC ID	:	DZL211029
BSMI ID No.	:	4862A011
Manufacturer	:	Logitech
Data Cable	:	Non-Shielded, Undetachable, 1.8m

1.2.5. USB MOUSE #1

Model Number	:	CREUBB
Serial Number	:	N/A
FCC ID	:	NHM-CREUBE
BSMI ID No.	:	3872F083
Manufacturer	:	CRE Technology Co., Ltd.
Data Cable	:	Shielded, Undetachable, 1.8m

1.2.6. USB MOUSE #2

Model Number	:	CREUBB
Serial Number	:	N/A
FCC ID	:	NHM-CREUBE
BSMI ID No.	:	3872F083
Manufacturer	:	CRE Technology Co., Ltd.
Data Cable	:	Shielded, Undetachable, 1.8m

1.2.7. MICROPHONE

Model Number	:	HD-303
Serial Number	:	N/A
Manufacturer	:	Multimedia Microphone System
Data Cable	:	Non-Shielded, Undetachable, 2.2m

1.2.8. SPEAKER

Model Number	:	J-008
Serial Number	:	J80547833
Manufacturer	:	(J-S) JAZZ HIPSTER
Data Cable	:	Non-Shielded, Undetachable, 1m

1.2.9. WALKMAN

Model Number	:	RQ-P35LT-K
Serial Number	:	HA08562
Manufacturer	:	Panasonic
Data Cable	:	Non-Shielded, Detachable, 1.8m

1.2.10. GAME PAD

Model Number	:	S-2300
Serial Number	:	N/A
Manufacturer	:	Super Cobra
Data Cable	:	Non-Shielded, Undetachable, 1.35m

1.2.11. DVD PLAYER

Model Number : DV-S6D
 Serial Number : TLKR003935TA
 Manufacturer : Pioneer
 Component Video Cable : Non-Shielded, Detachable, 1.8m (to EUT)
 A/V Cable : Non-Shielded, Detachable, 1.5m (to EUT)
 S-Video Cable : Non-Shielded, Detachable, 1.5m (to EUT)
 Power Cord : Non-Shielded, Detachable, 2m

1.3. Description of Test Facility

Site Description : Aug. 10, 2000 File on
 (No. 6 Open Site) Federal Communication Commission
 FCC Engineering Laboratory
 7435 Oakland Mills Road
 Columbia, MD 21046, U.S.A.
 Registration Number: 98448

Name of Firm : Taiwan Tokin EMC Eng. Corp.

Site Location #1 : No. 53-11, Tin-Fu Tsun, Lin-Kou,
 Taipei Hsien, Taiwan, R.O.C.

Site Location #2 : No. 67-4, Tin-Fu Tsun, Lin-Kou,
 Taipei Hsien, Taiwan, R.O.C.

NVLAP Lab Code : 200077-0
 (NVLAP is a NATA accredited body under Mutual Recognition Agreement)

DAR- Registration No. : DAT-P-092/99-00e

1.4. Measurement Uncertainty

Test Item	Frequency Range	Uncertainty (dB)
Conduction Test	150KHz~30MHz	±2.66dB
Radiation Test (Distance: 10m)	30MHz~300MHz	+4.5dB / -4.5dB
	300MHz~1000MHz	+3.88dB / -3.84dB
Radiation Test (Distance: 3m)	30MHz~300MHz	+4.26dB / -4.22dB
	300MHz~1000MHz	+5.28dB / -4.0dB

Remark : Uncertainty = $K_{uc}(y)$

2. POWERLINE CONDUCTED TEST

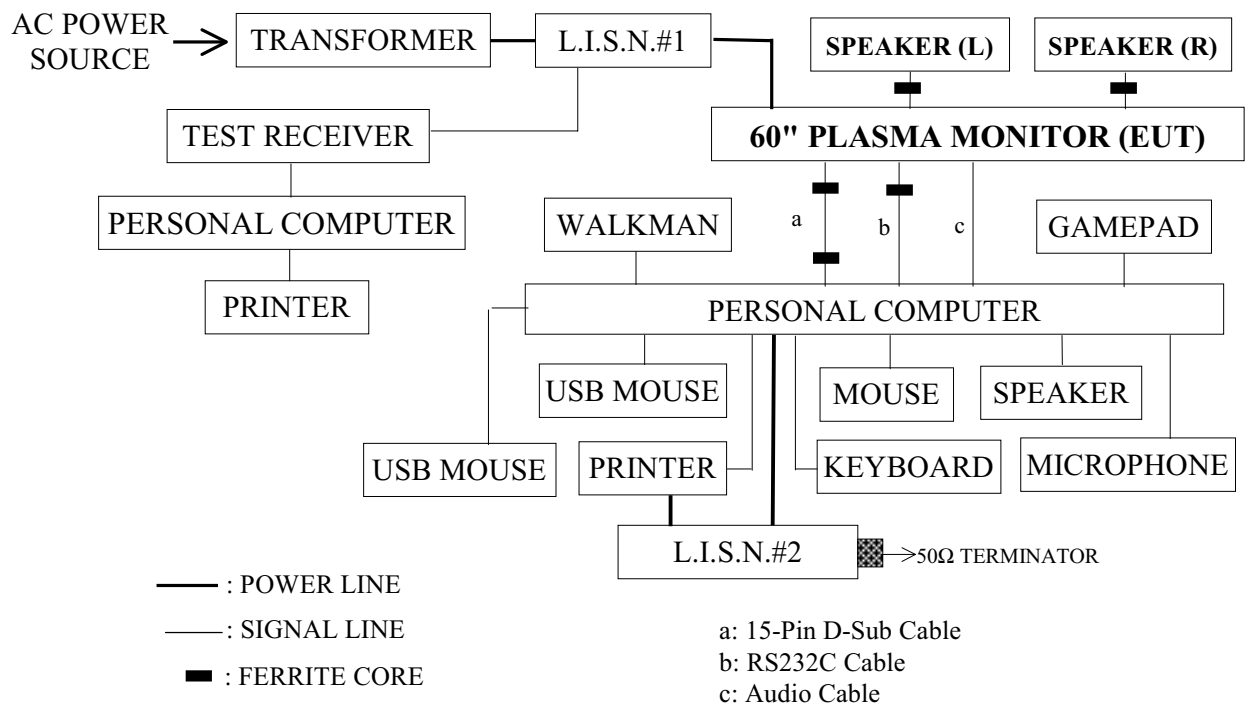
2.1. Test Equipment

The following test equipment are used during the power line conducted tests :

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESCS 30	825442/020	Jun. 29, 01'	1 Year
2.	L.I.S.N. #1	Kyoritsu	KNW-407	8-1370-10	May 28, 01'	1 Year
3.	L.I.S.N. #2	Kyoritsu	KNW-407	8-1370-9	May 28, 01'	1 Year

2.2. Block Diagram of Test Setup

2.2.1. For D-Sub Input



15 Pin D-Sub Cable (To PC)	:	Shielded, Detachable, 7m Bonded two ferrite cores
RS232C Cable (To PC)	:	Shielded, Detachable, 1.8m With a ferrite core
Speaker w/Stand (L, R) (Optional)	:	Speaker: AP-60SA10 Wires: Non-Shielded, Undetachable, 3.6m Bonded a ferrite core
Power Cord (AC IN)	:	Non-Shielded, Detachable, 2.8m

2.4.2. Supporting System : As in section 1.2

2.5. Operating Condition of EUT

- 2.5.1. Setup the EUT and simulator as shown on 2.2.
- 2.5.2. Turned on the power of all equipment.
- 2.5.3. Personal computer read data from disk.
- 2.5.4. Personal computer run the EMI self-test program “Hwin”, and sent “H” character to 60" Plasma Monitor(EUT), then the screen of Monitor displayed “H” pattern by EUT’s resolution via D-Sub input.
- 2.5.5. Personal computer played a MP3-music file and sent the sound to speakers of EUT.
- 2.5.6. DVD Player played a DVD-Disk and sent the image & sound to 60" Plasma Monitor (EUT) via A/V 、S-Video 、Component input.
- 2.5.7. Repeat the above procedures from 2.5.3 to 2.5.6.
- 2.5.8. The other peripheral devices were drove and operated in turn during all testing.

2.6. Test Procedure

The EUT was connected to the power mains through a line impedance stabilization network (L.I.S.N. #1) and the other peripheral devices power cord were connected to the power mains through a line impedance stabilization network (L.I.S.N. #2) This provided a 50 ohm coupling impedance for the measuring equipment. (Please refer to the block diagram of the test setup and photographs.)

Both sides of A.C. line were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables were changed according to FCC ANSI C63.4-1992 on conducted measurement.

The bandwidth of the R&S Test Receiver ESCS 30 was set at 9KHz.

The frequency range from 150KHz to 30MHz was checked.

The test voltage was AC 120V/60Hz.

2.7. Line Conducted RF Voltage Measurement Results

PASSED. Please refer to the following pages.

All emissions not reported below are too low against the prescribed limits.

EUT with the following test modes were done on conducted measurement and all the test results are attached in the next pages.

(Test Date: Mar. 05, 2002 Temperature: 25.8°C Humidity: 45 %)

(Test Date: Mar. 19, 2002 Temperature: 23°C Humidity: 54 %)

No.	Input Port	Display of EUT	Reference Data #
1.	D-Sub	“H” Pattern, 640*480/120Hz, 64kHz	# 52 (# 53, 54) ; # 49 (# 50, 51).
2.	D-Sub	“H” Pattern, 1024*768/85Hz, 68.6kHz	# 43 (# 44, 45) ; # 46 (# 47, 48).
3.	D-Sub	“H” Pattern, 1280*1024/75Hz, 79.9kHz	# 40 (# 41, 42) ; # 37 (# 38, 39).
4.	A/V	“DVD-Disk” Image	# 64 (# 65, 66) ; # 61 (# 62, 63).
5.	S-Video	“DVD-Disk” Image	# 55 (# 56, 57) ; # 58 (# 59, 60).
6.	Component	“DVD-Disk” Image	# 70 (# 71, 72) ; # 67 (# 68, 69).

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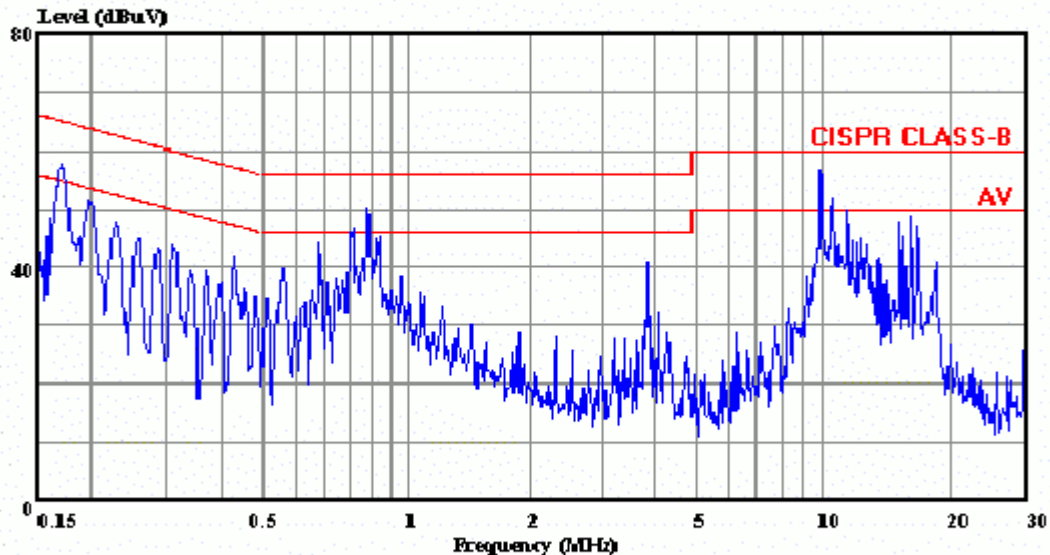
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台灣東金科技股份有限公司

No.53-11, Tin-fu Tsun, Lin-kou Hsiang,
Taipei Country, Taiwan, R.O.C.
Tel:02-26092133 Fax:02-26099303
Email:ttemc@ttemc.com.tw

Data#: 52

File#: LG-10.emi

Date: 2002-03-05 Time: 12:04:42



Site : No.3 Shielded room
Condition: CISPR CLASS-B KMW-407 LINE
EUT : 60" PLASMA MONITOR M/N:MU-60PZ12
Power : 120Vac/60Hz
Memo : 640*480/120Hz 64KHz

Data#: 53

File#: D:\LG-10.emi

Date: 2002-03-05 Time: 12:05:46

Site : No.3 Shielded room
Condition : CISPR CLASS-B KMW-407 LINE
EUT : 60" PLASMA MONITOR M/N:MU-60PZ12
Power : 120Vac/60Hz
Memo : 640*480/120Hz 64KHz

			Over	Limit	Read	Probe	Cable	Preamp	
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	dB	
1	0.169	57.04	-7.99	65.03	56.44	0.40	0.20	0.00	QP
2	0.201	50.42	-13.16	63.58	50.02	0.20	0.20	0.00	QP
3	0.310	43.92	-16.05	59.97	43.52	0.20	0.20	0.00	QP
4	0.880	50.19	-5.81	56.00	49.59	0.40	0.20	0.00	QP
5	3.964	40.97	-15.03	56.00	40.17	0.40	0.40	0.00	QP
6	10.072	56.16	-3.84	60.00	54.66	0.80	0.70	0.00	QP

Data#: 54

File#: D:\LG-10.emi

			Over	Limit	Read	Probe	Cable	Preamp	
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	dB	
1 ↓	0.169	50.04	-4.99	55.03	49.44	0.40	0.20	0.00	Average
2 ↓	0.201	45.42	-8.16	53.58	45.02	0.20	0.20	0.00	Average
3 ↓	0.310	40.92	-9.05	49.97	40.52	0.20	0.20	0.00	Average
4 ↓	0.880	40.19	-5.81	46.00	39.59	0.40	0.20	0.00	Average
5 ↓	3.964	37.97	-8.03	46.00	37.17	0.40	0.40	0.00	Average
6 ↓	10.072	45.16	-4.84	50.00	43.66	0.80	0.70	0.00	Average



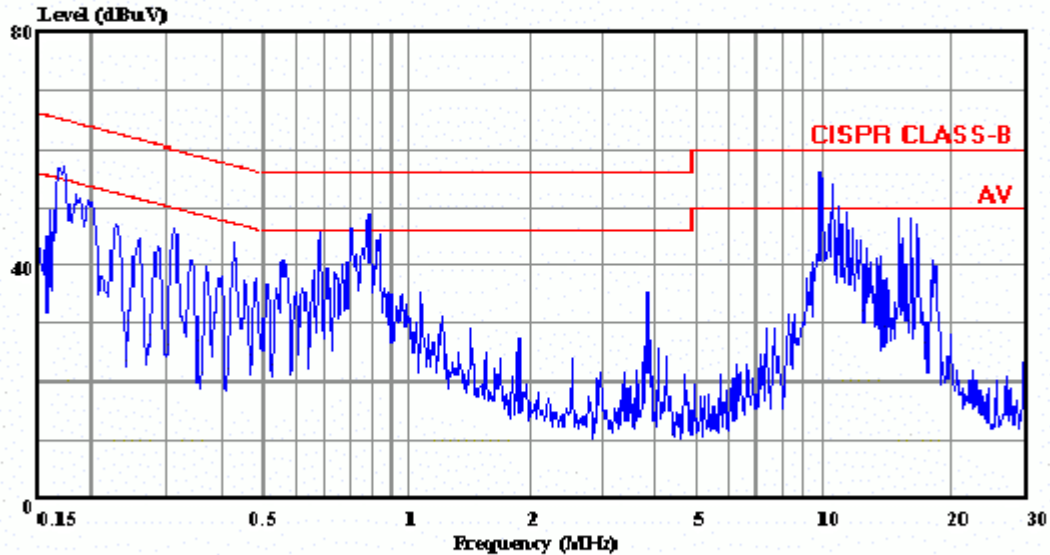
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台灣東金科技股份有限公司

No.53-11, Tin-fu Tsun, Lin-kou Hsiang,
Taipei Country, Taiwan, R.O.C.
Tel:02-26092133 Fax:02-26099303
Email:ttemc@ttemc.com.tw

Data#: 49

File#: LG-10.emi

Date: 2002-03-05 Time: 12:03:22



Site : No.3 Shielded room
Condition: CISPR CLASS-B KNW-407 NEUTRAL
EUT : 60" PLASMA MONITOR M/N:MU-60PZ12
Power : 120Vac/60Hz
Memo : 640*480/120Hz 64KHz

Data#: 50

File#: D:\LG-10.emi

Date: 2002-03-05 Time: 12:03:47

Site : No.3 Shielded room
Condition: CISPR CLASS-B KNW-407 NEUTRAL
EUT : 60" PLASMA MONITOR M/N:MU-60PZ12
Power : 120Vac/60Hz
Memo : 640*480/120Hz 64KHz

			Over	Limit	Read	Probe	Cable	Preamp	
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	dB	
1 ↓	0.168	56.88	-8.20	65.08	56.28	0.40	0.20	0.00	QP
2	0.230	46.53	-15.91	62.44	46.13	0.20	0.20	0.00	QP
3	0.313	45.97	-13.91	59.88	45.57	0.20	0.20	0.00	QP
4	0.431	42.87	-14.37	57.24	42.27	0.40	0.20	0.00	QP
5 ↓	0.885	48.79	-7.21	56.00	48.19	0.40	0.20	0.00	QP
6 ↓	10.072	55.16	-4.84	60.00	53.66	0.80	0.70	0.00	QP

Data#: 51

File#: D:\LG-10.emi

			Over	Limit	Read	Probe	Cable	Preamp	
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	dB	
1 ↓	0.168	45.88	-9.20	55.08	45.28	0.40	0.20	0.00	Average
2 ↓	0.230	42.53	-9.91	52.44	42.13	0.20	0.20	0.00	Average
3 ↓	0.313	40.97	-8.91	49.88	40.57	0.20	0.20	0.00	Average
4 ↓	0.431	38.87	-8.37	47.24	38.27	0.40	0.20	0.00	Average
5 ↓	0.885	39.79	-6.21	46.00	39.19	0.40	0.20	0.00	Average
6 ↓	10.072	45.16	-4.84	50.00	43.66	0.80	0.70	0.00	Average



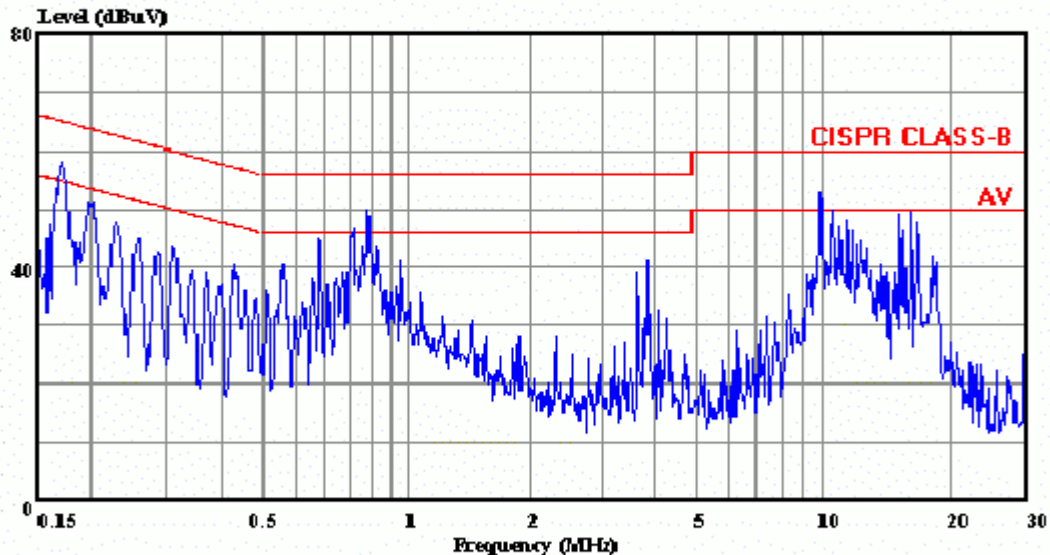
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台灣東金科技股份有限公司

No.53-11, Tin-fu Tsun, Lin-kou Hsiang,
Taipei Country, Taiwan, R.O.C.
Tel:02-26092133 Fax:02-26099303
Email:ttemc@ttemc.com.tw

Data#: 43

File#: LG-10.emi

Date: 2002-03-05 Time: 11:58:58



Site : No.3 Shielded room
Condition: CISPR CLASS-B KMW-407 LINE
EUT : 60" PLASMA MONITOR M/N:MU-60PZ12
Power : 120Vac/60Hz
Memo : 1024*768/85Hz 68.6KHz

Data#: 44

File#: D:\LG-10.emi

Date: 2002-03-05 Time: 11:59:52

Site : No.3 Shielded room
Condition : CISPR CLASS-B KMW-407 LINE
EUT : 60" PLASMA MONITOR M/N:MU-60PZ12
Power : 120Vac/60Hz
Memo : 1024*768/85Hz 68.6KHz

		Over	Limit	Read	Probe	Cable	Preamp	
	Freq	Level	Limit	Level	Factor	Loss	Factor	Remark
	MHz	dBuV	dB	dBuV	dB	dB	dB	
1 !	0.169	57.61	-7.38	64.99	57.01	0.40	0.20	0.00 QP
2	0.202	50.03	-13.51	63.54	49.63	0.20	0.20	0.00 QP
3	0.308	42.07	-17.95	60.02	41.67	0.20	0.20	0.00 QP
4	0.683	44.83	-11.17	56.00	44.23	0.40	0.20	0.00 QP
5 !	0.885	48.27	-7.73	56.00	47.67	0.40	0.20	0.00 QP
6 !	10.072	51.86	-8.14	60.00	50.36	0.80	0.70	0.00 QP

Data#: 45

File#: D:\LG-10.emi

		Over	Limit	Read	Probe	Cable	Preamp	
	Freq	Level	Limit	Level	Factor	Loss	Factor	Remark
	MHz	dBuV	dB	dBuV	dB	dB	dB	
1 !	0.169	49.62	-5.37	54.99	49.02	0.40	0.20	0.00 Average
2 !	0.202	45.03	-8.51	53.54	44.63	0.20	0.20	0.00 Average
3	0.308	39.07	-10.95	50.02	38.67	0.20	0.20	0.00 Average
4 !	0.683	38.83	-7.17	46.00	38.23	0.40	0.20	0.00 Average
5 !	0.885	39.27	-6.73	46.00	38.67	0.40	0.20	0.00 Average
6 !	10.072	42.86	-7.14	50.00	41.36	0.80	0.70	0.00 Average

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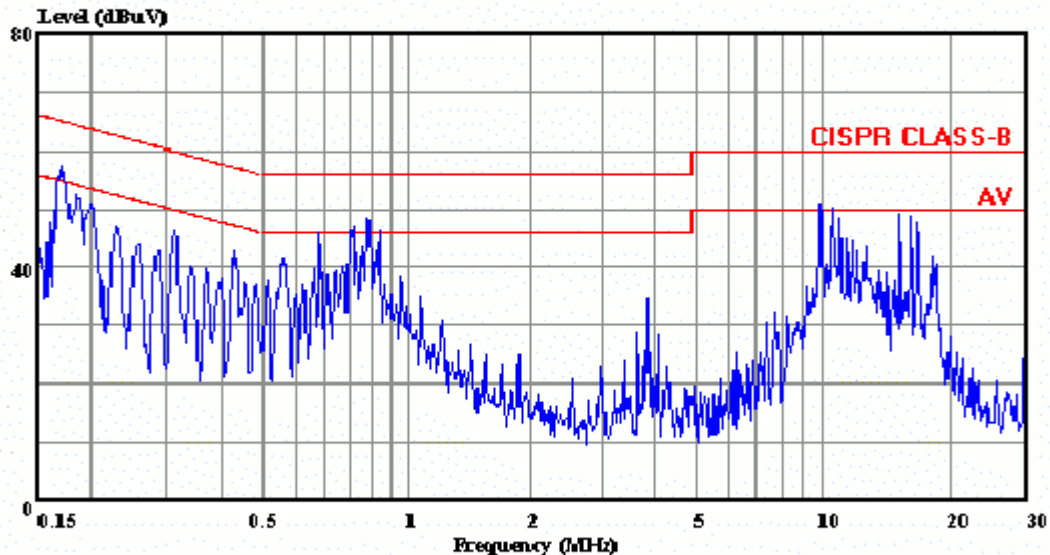
TAIWAN TOKIN EMC ENG. CORP.
台灣東金科技股份有限公司

No.53-11, Tin-fu Tsun, Lin-kou Hsiang,
Taipei Country, Taiwan, R.O.C.
Tel:02-26092133 Fax:02-26099303
Email:ttemc@ttemc.com.tw

Data#: 46

File#: LG-10.emi

Date: 2002-03-05 Time: 12:01:16



Site : No.3 Shielded room
Condition: CISPR CLASS-B KNW-407 NEUTRAL
EUT : 60" PLASMA MONITOR M/N:MU-60PZ12
Power : 120Vac/60Hz
Memo : 1024*768/85Hz 68.6KHz

Data#: 47

File#: D:\LG-10.emi

Date: 2002-03-05 Time: 12:01:54

Site : No.3 Shielded room
Condition : CISPR CLASS-B KNW-407 NEUTRAL
EUT : 60" PLASMA MONITOR M/N:MU-60PZ12
Power : 120Vac/60Hz
Memo : 1024*768/85Hz 68.6KHz

		Over	Limit	Read	Probe	Cable	Preamp	
Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark
MHz	dBuV	dB	dBuV	dBuV	dB	dB	dB	
1 !	0.167	55.16	-9.96	65.12	54.56	0.40	0.20	0.00 QP
2	0.202	49.09	-14.45	63.54	48.69	0.20	0.20	0.00 QP
3	0.308	43.13	-16.89	60.02	42.73	0.20	0.20	0.00 QP
4	0.428	40.45	-16.84	57.29	39.85	0.40	0.20	0.00 QP
5 !	0.885	48.13	-7.87	56.00	47.53	0.40	0.20	0.00 QP
6 !	10.019	50.66	-9.34	60.00	49.16	0.80	0.70	0.00 QP

Data#: 48

File#: D:\LG-10.emi

		Over	Limit	Read	Probe	Cable	Preamp	
Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark
MHz	dBuV	dB	dBuV	dBuV	dB	dB	dB	
1 !	0.167	48.16	-6.96	55.12	47.56	0.40	0.20	0.00 Average
2 !	0.202	46.09	-7.45	53.54	45.69	0.20	0.20	0.00 Average
3 !	0.308	41.13	-8.89	50.02	40.73	0.20	0.20	0.00 Average
4 !	0.428	37.45	-9.84	47.29	36.85	0.40	0.20	0.00 Average
5 !	0.885	39.13	-6.87	46.00	38.53	0.40	0.20	0.00 Average
6 !	10.019	43.66	-6.34	50.00	42.16	0.80	0.70	0.00 Average



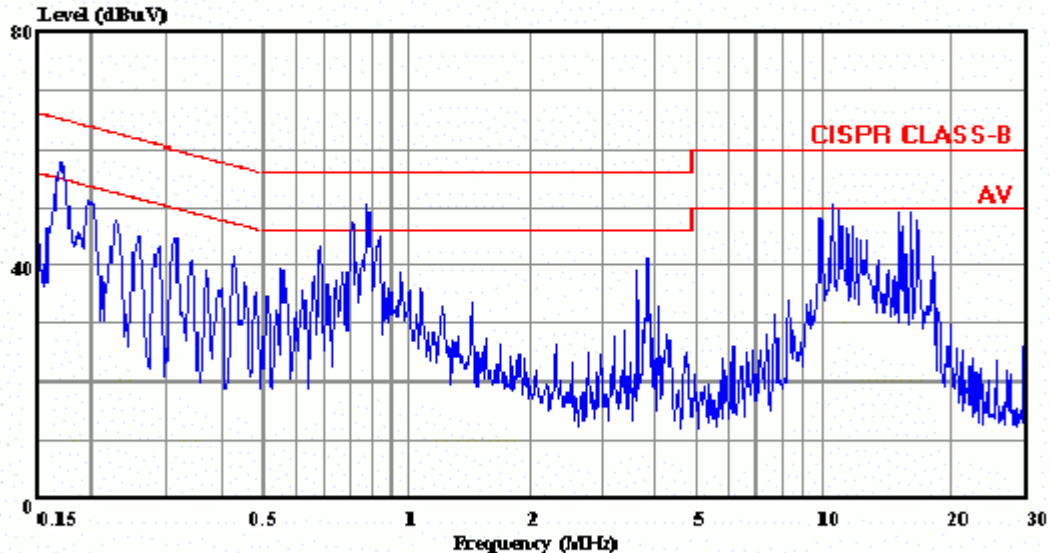
TAIWAN TOKIN EMC ENG. CORP.
台灣東金科技股份有限公司

No.53-11, Tin-fu Tsun, Lin-kou Hsiang,
Taipei Country, Taiwan, R.O.C.
Tel:02-26092133 Fax:02-26099303
Email:ttemc@ttemc.com.tw

Data#: 40

File#: LG-10.emi

Date: 2002-03-05 Time: 11:56:38



Site : No.3 Shielded room
Condition: CISPR CLASS-B KNW-407 LINE
EUT : 60" PLASMA MONITOR M/N:MU-60PZ12
Power : 120Vac/60Hz
Memo : 1280*1024/75Hz 79.9KHz

Data#: 41

File#: D:\LG-10.emi

Date: 2002-03-05 Time: 11:57:43

Site : No.3 Shielded room
Condition : CISPR CLASS-B KNW-407 LINE
EUT : 60" PLASMA MONITOR M/N:MU-60PZ12
Power : 120Vac/60Hz
Memo : 1280*1024/75Hz 79.9KHz

			Over	Limit	Read	Probe	Cable	Preamp	
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	dB	
1	0.169	57.87	-7.16	65.03	57.27	0.40	0.20	0.00	QP
2	0.195	49.77	-14.03	63.80	49.37	0.20	0.20	0.00	QP
3	0.313	44.58	-15.30	59.88	44.18	0.20	0.20	0.00	QP
4	0.813	47.27	-8.73	56.00	46.67	0.40	0.20	0.00	QP
5	3.964	41.20	-14.80	56.00	40.40	0.40	0.40	0.00	QP
6	10.733	50.73	-9.27	60.00	49.23	0.80	0.70	0.00	QP

Data#: 42

File#: D:\LG-10.emi

			Over	Limit	Read	Probe	Cable	Preamp	
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	dB	
1 ↓	0.169	50.87	-4.16	55.03	50.27	0.40	0.20	0.00	Average
2 ↓	0.195	46.77	-7.03	53.80	46.37	0.20	0.20	0.00	Average
3 ↓	0.313	40.58	-9.30	49.88	40.18	0.20	0.20	0.00	Average
4 ↓	0.813	39.27	-6.73	46.00	38.67	0.40	0.20	0.00	Average
5 ↓	3.964	37.20	-8.80	46.00	36.40	0.40	0.40	0.00	Average
6 ↓	10.733	43.73	-6.27	50.00	42.23	0.80	0.70	0.00	Average

TOKIN

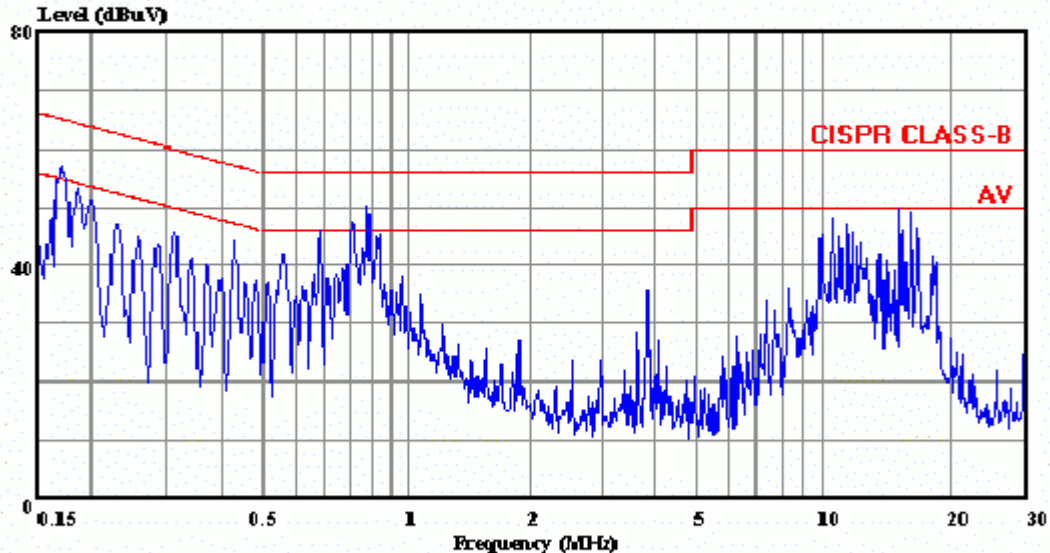
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台灣東金科技股份有限公司

No.53-11, Tin-fu Tsun, Lin-kou Hsiang,
Taipei Country, Taiwan, R.O.C.
Tel:02-26092133 Fax:02-26099303
Email:ttemc@ttemc.com.tw

Data#: 37

File#: LG-10.emi

Date: 2002-03-05 Time: 11:54:27



Site : No.3 Shielded room
Condition: CISPR CLASS-B KNW-407 NEUTRAL
EUT : 60" PLASMA MONITOR M/N:MU-60PZ12
Power : 120Vac/60Hz
Memo : 1280*1024/75Hz 79.9KHz

Data#: 38

File#: D:\LG-10.emi

Date: 2002-03-05 Time: 11:55:53

Site : No.3 Shielded room
Condition: CISPR CLASS-B KNW-407 NEUTRAL
EUT : 60" PLASMA MONITOR M/N:MU-60PZ12
Power : 120Vac/60Hz
Memo : 1280*1024/75Hz 79.9KHz

		Over	Limit	Read	Probe	Cable	Preamp	
Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark
MHz	dBuV	dB	dBuV	dBuV	dB	dB	dB	
1 !	0.169	56.30	-8.73	65.03	55.70	0.40	0.20	0.00 QP
2	0.201	49.79	-13.79	63.58	49.39	0.20	0.20	0.00 QP
3	0.312	45.64	-14.29	59.93	45.24	0.20	0.20	0.00 QP
4	0.683	45.21	-10.79	56.00	44.61	0.40	0.20	0.00 QP
5 !	0.880	50.09	-5.91	56.00	49.49	0.40	0.20	0.00 QP
6	15.307	49.83	-10.17	60.00	48.23	0.90	0.70	0.00 QP

Data#: 39

File#: D:\LG-10.emi

		Over	Limit	Read	Probe	Cable	Preamp	
Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark
MHz	dBuV	dB	dBuV	dBuV	dB	dB	dB	
1 !	0.169	49.30	-5.73	55.03	48.70	0.40	0.20	0.00 Average
2 !	0.201	45.79	-7.79	53.58	45.39	0.20	0.20	0.00 Average
3 !	0.312	41.64	-8.29	49.93	41.24	0.20	0.20	0.00 Average
4 !	0.683	39.21	-6.79	46.00	38.61	0.40	0.20	0.00 Average
5 !	0.880	39.09	-6.91	46.00	38.49	0.40	0.20	0.00 Average
6 !	15.307	45.83	-4.17	50.00	44.23	0.90	0.70	0.00 Average



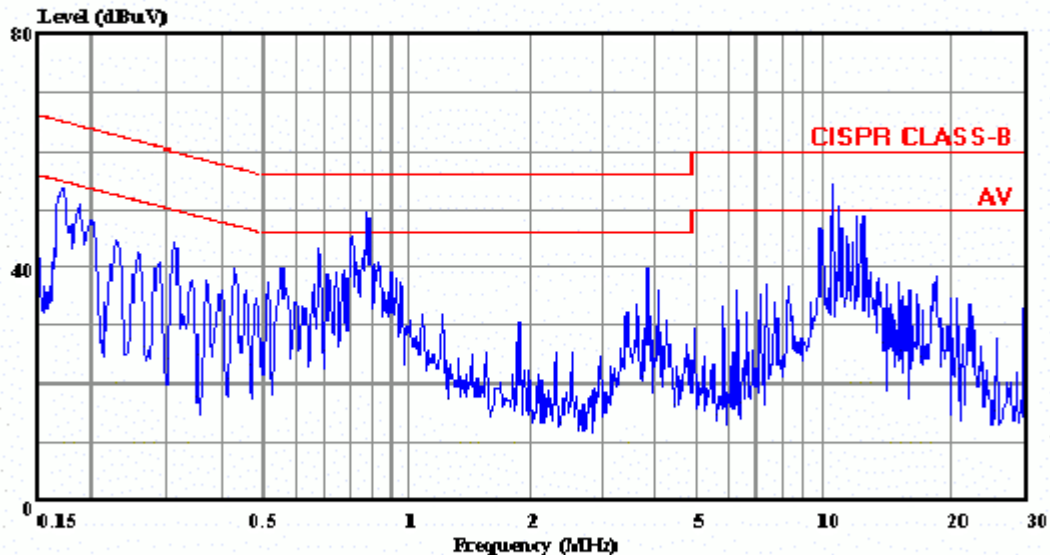
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台灣東金科技股份有限公司

No.53-11, Tin-fu Tsun, Lin-kou Hsiang,
Taipei Country, Taiwan, R.O.C.
Tel:02-26092133 Fax:02-26099303
Email:ttemc@ttemc.com.tw

Data#: 64

File#: LG-10.emi

Date: 2002-03-19 Time: 17:59:57



Site : No.3 Shielded room
Condition: CISPR CLASS-B KNW-407 LINE
EUT : 60" PLASMA MONITOR M/N:MU-60PZ12
Power : 120Vac/60Hz
Memo : AV IN

Data#: 65

File#: D:\LG-10.emi

Date: 2002-03-19 Time: 18:01:31

Site : No.3 Shielded room
Condition : CISPR CLASS-B KNW-407 LINE
EUT : 60" PLASMA MONITOR M/N:MU-60PZ12
Power : 120Vac/60Hz
Memo : AV IN

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.151	39.84	-26.10	65.94	39.24	0.40	0.20	QP
2	0.172	52.54	-12.35	64.89	51.94	0.40	0.20	QP
3	0.202	45.32	-18.23	63.55	44.92	0.20	0.20	QP
4	0.316	40.39	-19.43	59.82	39.99	0.20	0.20	QP
5	0.889	39.87	-16.13	56.00	39.27	0.40	0.20	QP
6	10.739	51.10	-8.90	60.00	49.60	0.80	0.70	QP

Data#: 66

File#: D:\LG-10.emi

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.151	34.71	-21.23	55.94	34.11	0.40	0.20	Average
2	0.172	49.88	-5.01	54.89	49.28	0.40	0.20	Average
3	0.202	41.62	-11.93	53.55	41.22	0.20	0.20	Average
4	0.316	35.22	-14.60	49.82	34.82	0.20	0.20	Average
5	0.889	32.97	-13.03	46.00	32.37	0.40	0.20	Average
6	10.739	34.27	-15.73	50.00	32.77	0.80	0.70	Average



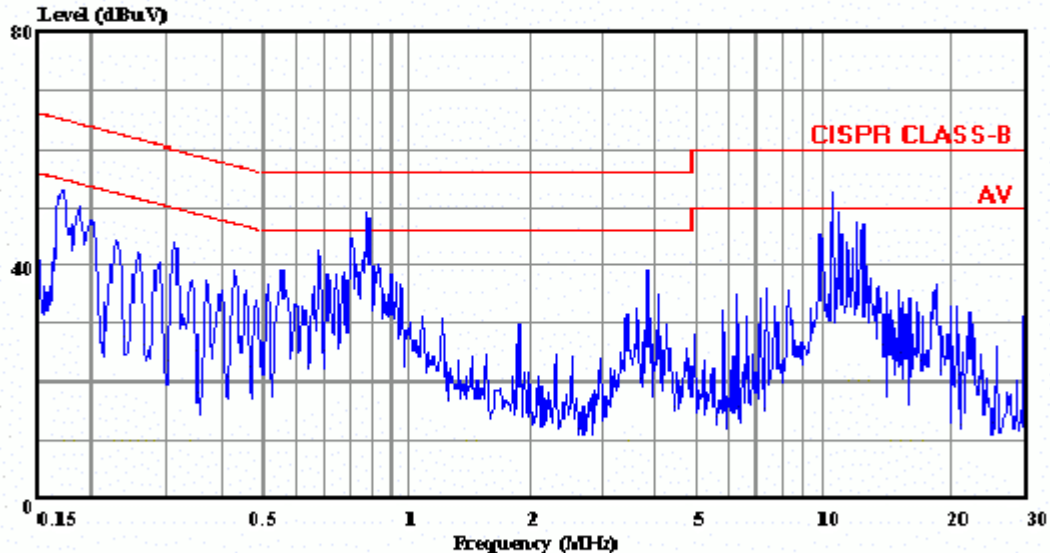
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台灣東金科技股份有限公司

No.53-11, Tin-fu Tsun, Lin-kou Hsiang,
Taipei Country, Taiwan, R.O.C.
Tel:02-26092133 Fax:02-26099303
Email:ttemc@ttemc.com.tw

Data#: 61

File#: LG-10.emi

Date: 2002-03-19 Time: 17:56:06



Site : No.3 Shielded room
Condition: CISPR CLASS-B KNW-407 NEUTRAL
EUT : 60" PLASMA MONITOR M/N:MU-60PZ12
Power : 120Vac/60Hz
Memo : AV IN

Data#: 62

File#: D:\LG-10.emi

Date: 2002-03-19 Time: 17:58:22

Site : No.3 Shielded room
Condition : CISPR CLASS-B KNW-407 NEUTRAL
EUT : 60" PLASMA MONITOR M/N:MU-60PZ12
Power : 120Vac/60Hz
Memo : AV IN

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.151	40.60	-25.34	65.94	40.00	0.40	0.20	QP
2	0.172	51.27	-13.59	64.86	50.67	0.40	0.20	QP
3	0.202	45.50	-18.04	63.54	45.10	0.20	0.20	QP
4	0.315	40.31	-19.54	59.85	39.91	0.20	0.20	QP
5	0.889	38.86	-17.14	56.00	38.26	0.40	0.20	QP
6	10.743	44.33	-15.67	60.00	42.83	0.80	0.70	QP

Data#: 63

File#: D:\LG-10.emi

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.151	34.83	-21.11	55.94	34.23	0.40	0.20	Average
2	0.172	48.76	-6.10	54.86	48.16	0.40	0.20	Average
3	0.202	40.84	-12.70	53.54	40.44	0.20	0.20	Average
4	0.315	36.40	-13.45	49.85	36.00	0.20	0.20	Average
5	0.889	32.82	-13.18	46.00	32.22	0.40	0.20	Average
6	10.743	34.82	-15.18	50.00	33.32	0.80	0.70	Average



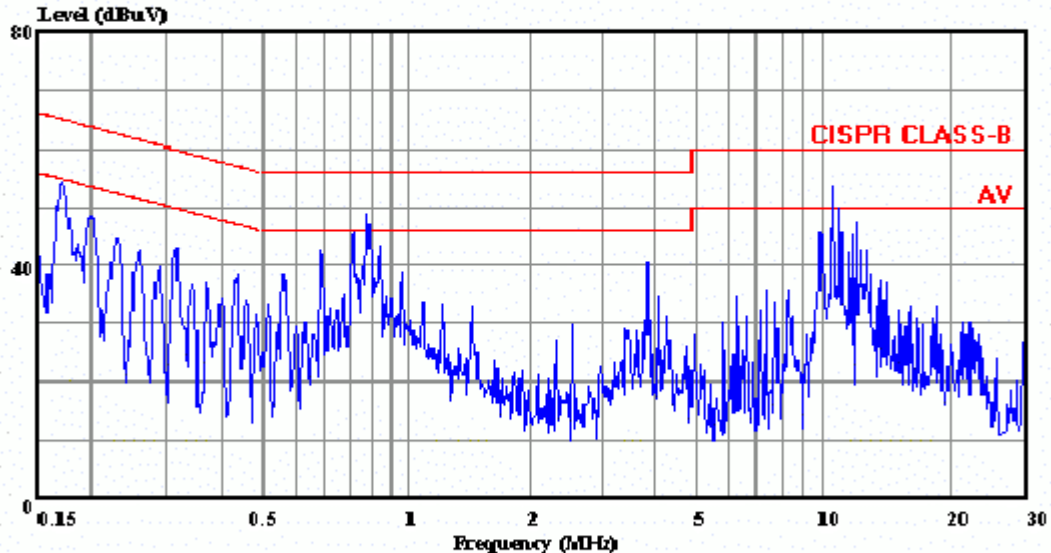
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台灣東金科技股份有限公司

No.53-11, Tin-fu Tsun, Lin-kou Hsiang,
Taipei Country, Taiwan, R.O.C.
Tel:02-26092133 Fax:02-26099303
Email:ttemc@ttemc.com.tw

Data#: 55

File#: LG-10.emi

Date: 2002-03-19 Time: 17:50:19



Site : No.3 Shielded room
Condition: CISPR CLASS-B KNW-407 LINE
EUT : 60" PLASMA MONITOR M/N:MU-60PZ12
Power : 120Vac/60Hz
Memo : S IN

Data#: 56

File#: D:\LG-10.emi

Date: 2002-03-19 Time: 17:51:37

Site : No.3 Shielded room
Condition : CISPR CLASS-B KNW-407 LINE
EUT : 60" PLASMA MONITOR M/N:MU-60PZ12
Power : 120Vac/60Hz
Memo : S IN

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.172	52.21	-12.67	64.88	51.61	0.40	0.20	QP
2	0.200	46.84	-16.76	63.60	46.44	0.20	0.20	QP
3	0.259	41.11	-20.37	61.48	40.71	0.20	0.20	QP
4	0.318	36.35	-23.40	59.75	35.95	0.20	0.20	QP
5	0.888	42.58	-13.42	56.00	41.98	0.40	0.20	QP
6 !	10.740	51.10	-8.90	60.00	49.60	0.80	0.70	QP

Data#: 57

File#: D:\LG-10.emi

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1 !	0.172	49.47	-5.41	54.88	48.87	0.40	0.20	Average
2	0.200	42.44	-11.16	53.60	42.04	0.20	0.20	Average
3	0.259	38.54	-12.94	51.48	38.14	0.20	0.20	Average
4	0.318	31.37	-18.38	49.75	30.97	0.20	0.20	Average
5	0.888	35.26	-10.74	46.00	34.66	0.40	0.20	Average
6 !	10.740	40.76	-9.24	50.00	39.26	0.80	0.70	Average



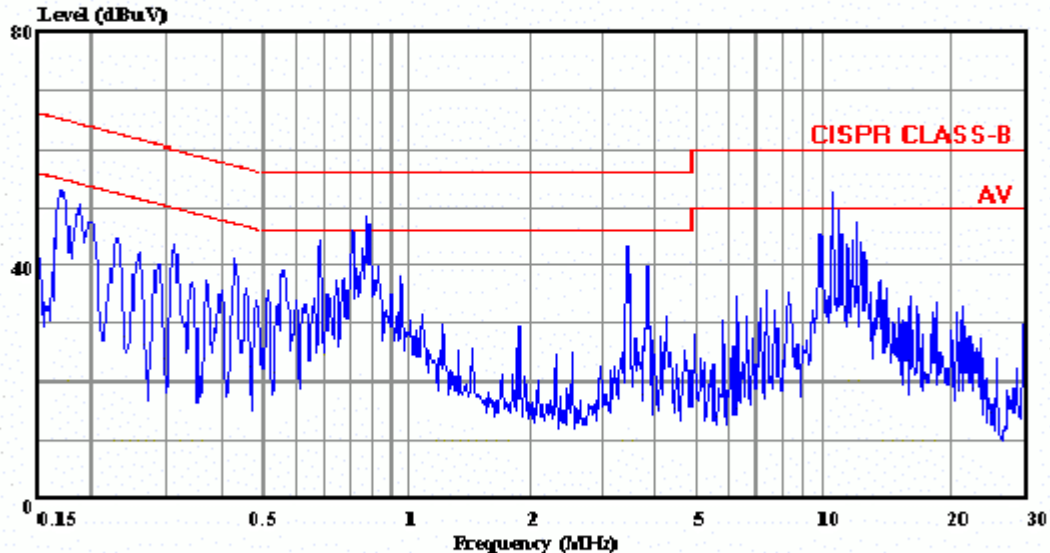
TAIWAN TOKIN EMC ENG. CORP.
台灣東金科技股份有限公司

No.53-11, Tin-fu Tsun, Lin-kou Hsiang,
Taipei Country, Taiwan, R.O.C.
Tel:02-26092133 Fax:02-26099303
Email:ttemc@ttemc.com.tw

Data#: 58

File#: LG-10.emi

Date: 2002-03-19 Time: 17:53:04



Site : No.3 Shielded room
Condition: CISPR CLASS-B KNW-407 NEUTRAL
EUT : 60" PLASMA MONITOR M/N:MU-60PZ12
Power : 120Vac/60Hz
Memo : S IN

Data#: 59

File#: D:\LG-10.emi

Date: 2002-03-19 Time: 17:55:08

Site : No.3 Shielded room
Condition : CISPR CLASS-B KNW-407 NEUTRAL
EUT : 60" PLASMA MONITOR M/N:MU-60PZ12
Power : 120Vac/60Hz
Memo : S IN

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.172	51.31	-13.58	64.89	50.71	0.40	0.20	QP
2	0.201	45.76	-17.80	63.56	45.36	0.20	0.20	QP
3	0.231	41.57	-20.83	62.40	41.17	0.20	0.20	QP
4	0.313	42.10	-17.80	59.90	41.70	0.20	0.20	QP
5	0.884	47.35	-8.65	56.00	46.75	0.40	0.20	QP
6	10.741	48.21	-11.79	60.00	46.71	0.80	0.70	QP

Data#: 60

File#: D:\LG-10.emi

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.172	48.65	-6.24	54.89	48.05	0.40	0.20	Average
2	0.201	40.91	-12.65	53.56	40.51	0.20	0.20	Average
3	0.231	38.41	-13.99	52.40	38.01	0.20	0.20	Average
4	0.313	36.68	-13.22	49.90	36.28	0.20	0.20	Average
5	0.884	38.66	-7.34	46.00	38.06	0.40	0.20	Average
6	10.741	37.05	-12.95	50.00	35.55	0.80	0.70	Average



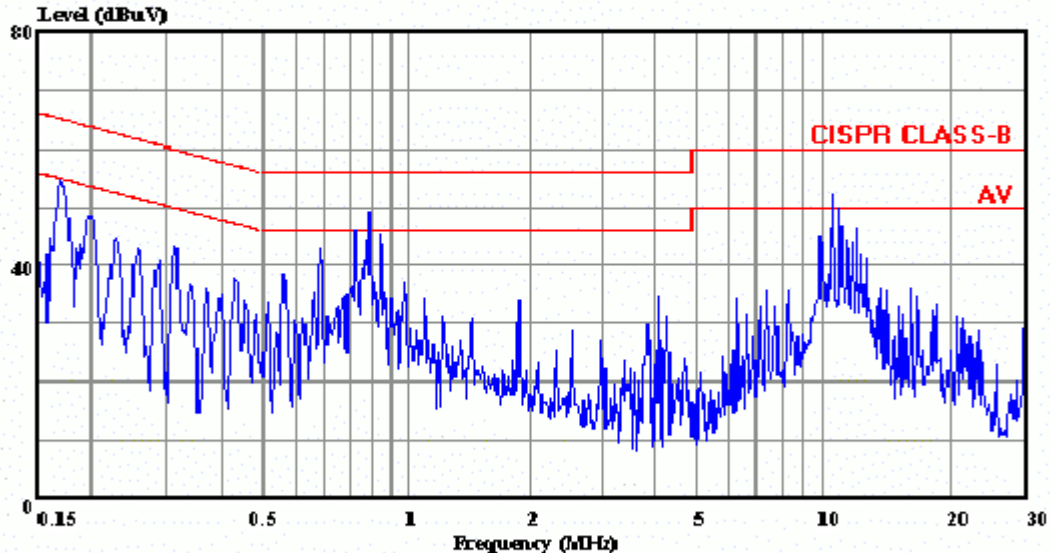
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No.53-11, Tin-fu Tsun, Lin-kou Hsiang,
Taipei Country, Taiwan, R.O.C.
Tel:02-26092133 Fax:02-26099303
Email:ttemc@ttemc.com.tw

Data#: 70

File#: LG-10.emi

Date: 2002-03-19 Time: 18:05:10



Site : No.3 Shielded room
Condition: CISPR CLASS-B KNW-407 LINE
EUT : 60" PLASMA MONITOR M/N:MU-60PZ12
Power : 120Vac/60Hz
Memo : DVD PLAY

Data#: 71

File#: D:\LG-10.emi

Date: 2002-03-19 Time: 18:06:52

Site : No.3 Shielded room
Condition : CISPR CLASS-B KNW-407 LINE
EUT : 60" PLASMA MONITOR M/N:MU-60PZ12
Power : 120Vac/60Hz
Memo : DVD PLAY

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.172	52.60	-12.29	64.89	52.00	0.40	0.20	QP
2	0.202	45.56	-17.96	63.52	45.16	0.20	0.20	QP
3	0.256	40.93	-20.62	61.55	40.53	0.20	0.20	QP
4	0.313	40.77	-19.12	59.89	40.37	0.20	0.20	QP
5	0.886	45.27	-10.73	56.00	44.67	0.40	0.20	QP
6 !	10.739	50.35	-9.65	60.00	48.85	0.80	0.70	QP

Data#: 72

File#: D:\LG-10.emi

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1 !	0.172	49.94	-4.95	54.89	49.34	0.40	0.20	Average
2	0.202	40.42	-13.10	53.52	40.02	0.20	0.20	Average
3	0.256	38.28	-13.27	51.55	37.88	0.20	0.20	Average
4	0.313	37.64	-12.25	49.89	37.24	0.20	0.20	Average
5 !	0.886	36.28	-9.72	46.00	35.68	0.40	0.20	Average
6 !	10.739	40.84	-9.16	50.00	39.34	0.80	0.70	Average



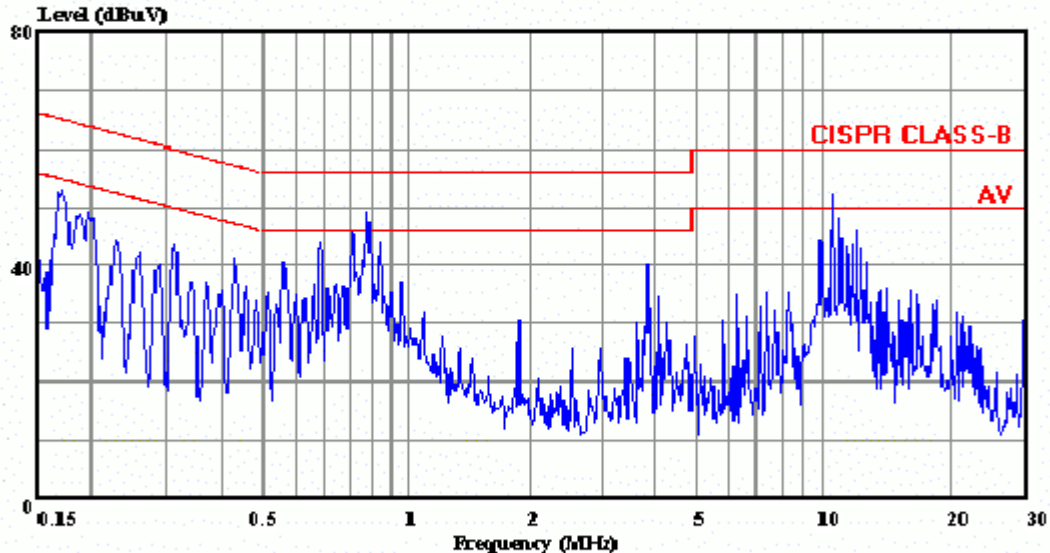
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台灣東金科技股份有限公司

No.53-11, Tin-fu Tsun, Lin-kou Hsiang,
Taipei Country, Taiwan, R.O.C.
Tel:02-26092133 Fax:02-26099303
Email:ttemc@ttemc.com.tw

Data#: 67

File#: LG-10.emi

Date: 2002-03-19 Time: 18:02:42



Site : No.3 Shielded room
Condition: CISPR CLASS-B KNW-407 NEUTRAL
EUT : 60" PLASMA MONITOR M/N:MU-60PZ12
Power : 120Vac/60Hz
Memo : DVD PLAY

Data#: 68

File#: D:\LG-10.emi

Date: 2002-03-19 Time: 18:04:24

Site : No.3 Shielded room
Condition: CISPR CLASS-B KNW-407 NEUTRAL
EUT : 60" PLASMA MONITOR M/N:MU-60PZ12
Power : 120Vac/60Hz
Memo : DVD PLAY

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.151	39.72	-26.22	65.94	39.12	0.40	0.20	QP
2	0.172	51.47	-13.42	64.89	50.87	0.40	0.20	QP
3	0.229	43.11	-19.38	62.49	42.71	0.20	0.20	QP
4	0.312	42.52	-17.38	59.90	42.12	0.20	0.20	QP
5	0.886	44.89	-11.11	56.00	44.29	0.40	0.20	QP
6 !	10.737	50.75	-9.25	60.00	49.25	0.80	0.70	QP

Data#: 69

File#: D:\LG-10.emi

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.151	34.17	-21.77	55.94	33.57	0.40	0.20	Average
2 !	0.172	49.06	-5.83	54.89	48.46	0.40	0.20	Average
3	0.229	40.35	-12.14	52.49	39.95	0.20	0.20	Average
4	0.312	39.01	-10.89	49.90	38.61	0.20	0.20	Average
5 !	0.886	36.68	-9.32	46.00	36.08	0.40	0.20	Average
6	10.737	39.26	-10.74	50.00	37.76	0.80	0.70	Average

3. RADIATED EMISSION TEST

3.1. Test Equipment

The following test equipment are used during the radiated emission tests :

3.1.1. No. 6 Open Test Site (For 30MHz~1000MHz)

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Anritsu	MS2601B	MT73069	Jul.31, 01'	1 Year
2.	Test Receiver	R&S	ESVP	879691/036	Jul.01, 01'	1 Year
3.	Biconical Antenna	Chase	VBA6106A	1262	Nov.21, 01'	1 Year
4.	Log Periodic Antenna	Chase	UPA6109	1063	Nov.21, 01'	1 Year

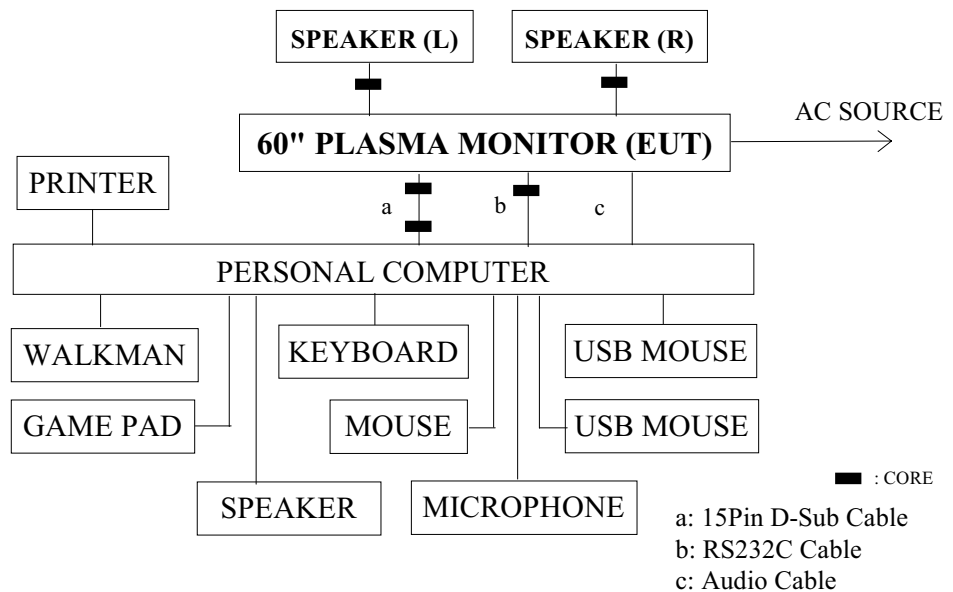
3.1.2. No. 6 Open Test Site (For 1GHz~2GHz)

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	HP	8595E	3829A03489	Jan. 24, 02'	1 Year
2.	Amplifier	HP	8449B	3008A00529	Jan.05, 02'	1 Year
3.	Horn Antenna	EMCO	3115	9112-3775	Apr.17, 01'	1 Year

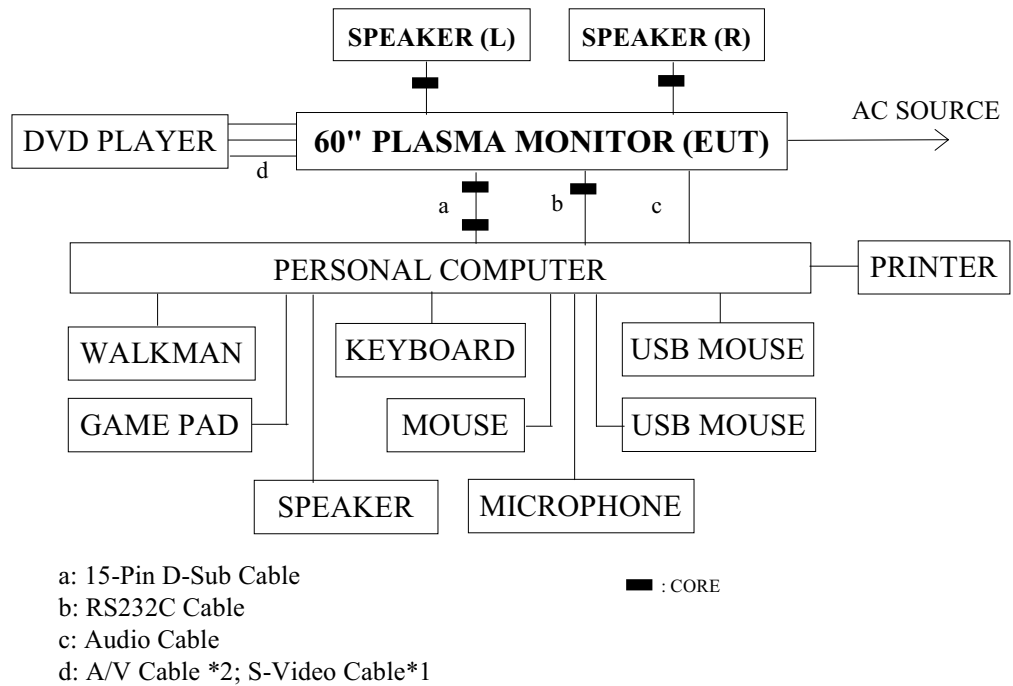
3.2. Block Diagram of Test Setup

3.2.1. Block Diagram of connection between EUT and simulators

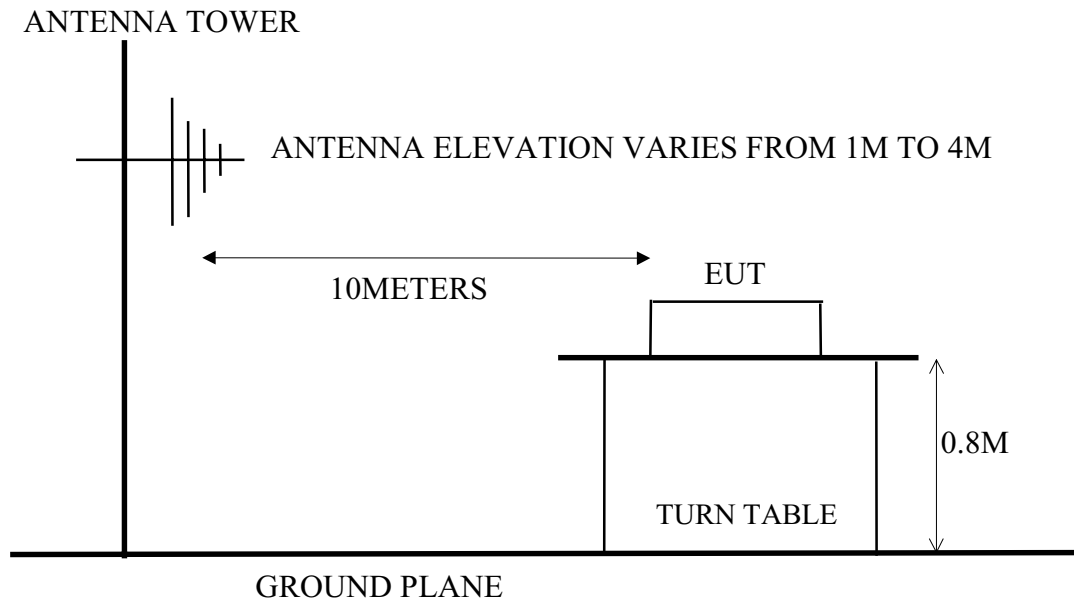
3.2.1.1. Test Mode: For D-Sub Input



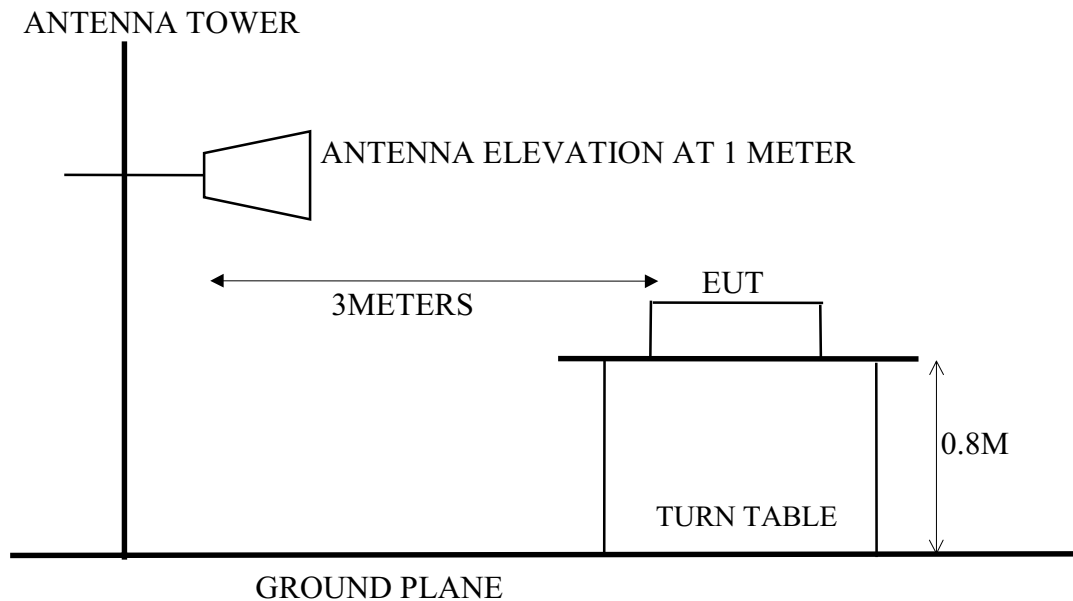
3.2.1.2. Test Mode: For A/V 、S-Video 、Component Input



3.2.2. Open Field Test Site Setup Diagram (30MHz~1000MHz, 10m)



3.2.3. Open Field Test Site Setup Diagram (1GHz~2GHz, 3m)



3.3. Radiation Limit (CISPR 22, Class B)

All emanations from a class B computing devices or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified below:

FREQUENCY (MHz)	DISTANCE (Meters)	FIELD STRENGTHS LIMITS (dB μ V/m)
30 ~ 230	10	30
230 ~ 1000	10	37
1000 ~ 2000	3	74.0 (Peak)

- Note :
- (1) The tighter limit applies at the edge between two frequency bands.
 - (2) Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the E.U.T.
 - (3) There is no over 1GHz limits in CISPR 22 standard. Therefor, a FCC limit is used based on CFR 47 Part 15.35 (b) and Part 15.109 (g).
 - (4) The 3M limit apply relation: $L2 = L1(d1/d2)$

3.4. EUT's Configuration during Compliance Measurement

The configuration of EUT and its simulators were the same as those used in conducted measurement. Please refer to 2.4.

3.5. Operating Condition of EUT

Same as conducted measurement which was listed in 2.5. except the test set up replaced by section 3.2.

3.6. Test Procedure

The EUT and its simulators were placed on a turn table which was 0.8 meter above the ground. The turn table rotated 360 degrees to determine the position of the maximum emission level. For 30MHz to 1000MHz frequency range, EUT was set 10 meters and for 1GHz to 2GHz frequency range, EUT was set at 3 meters away from the receiving antenna which was mounted on a antenna tower. The antenna moved up and down between 1 to 4 meters for 30MHz to 1000MHz frequency range or fixed at 1 meter high above the ground for 1GHz to 2GHz frequency range to find out the maximum emission level. Broadband antenna such as calibrated biconical and log- periodical antenna or horn antenna were used as a receiving antenna. Both horizontal and vertical polarization of the antenna were set on measurement. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.4-1992 regulation.

The bandwidth of the R&S Test Receiver ESVP was set at 120KHz.

The bandwidth of the HP Spectrum Analyzer 8595E was set at 1MHz.

The test voltage was AC 120V/60Hz.

The frequency range from 30MHz to 2GHz was checked.

EUT with the following test modes were done during radiated measurement and all the test results are listed in section 3.8.1.

No.	Input Port	Display of EUT
1.	D-Sub	“H” Pattern, 640*480/120Hz, 64kHz
2.	D-Sub	“H” Pattern, 1024*768/85Hz, 68.6kHz
※ 3.	D-Sub	“H” Pattern, 1280*1024/75Hz, 80kHz
4.	A/V	“DVD-Disk” Image
5.	S-Video	“DVD-Disk” Image
※ 6.	Component	“DVD-Disk” Image

The worst test mode [Mode 3] was selected in 1GHz~2GHz test and the test results are listed in section 3.8.2.

3.7. Test Results

PASSED. Please refer to the following pages.

3.8. Radiated Emission Measurement Results

3.8.1. 30MHz to 1000MHz Frequency Range Measurement Results

Distance: 10Meters

The emissions not report below are too low against the prescribed limits.

Date of Test : Mar. 07, 2002 Temperature : 17°C

EUT : 60" Plasma Monitor Humidity : 55%

Test Mode : D-Sub Input, "H" Pattern (640*480/120Hz, 64kHz)

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading		Emission Level		Margin dB
			Horizontal dBμV		Horizontal dBμV/m	Limits dBμV/m	
66.747	12.30	1.66	4.50		18.46	30.00	11.54
115.985	19.92	2.26	- 1.30		20.88	30.00	9.12
158.383	20.81	2.69	- 2.10		21.40	30.00	8.60
186.653	21.20	2.92	- 3.50		20.62	30.00	9.38
229.066	21.76	3.30	- 2.80		22.26	30.00	7.74
243.201	22.41	3.39	1.70		27.50	37.00	9.50
266.987	23.32	3.57	2.40		29.29	37.00	7.71
332.942	13.98	3.90	7.70		25.58	37.00	11.42
458.136	16.25	4.64	2.80		23.69	37.00	13.31
554.904	18.63	5.21	7.30		31.14	37.00	5.86
665.875	20.42	5.81	- 1.20		25.03	37.00	11.97
776.861	21.55	6.45	- 0.31		27.69	37.00	9.31
887.841	22.30	6.98	0.20		29.48	37.00	7.52

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading		Emission Level		Margin dB
			Vertical dBμV		Vertical dBμV/m	Limits dBμV/m	
47.169	16.12	1.39	3.90		21.41	30.00	8.59
66.747	12.66	1.66	11.19		25.51	30.00	4.49
115.983	18.59	2.26	- 1.50		19.35	30.00	10.65
158.378	19.56	2.69	- 3.40		18.85	30.00	11.15
186.658	21.92	2.92	- 4.20		20.64	30.00	9.36
229.068	20.96	3.30	0.30		24.56	30.00	5.44
243.204	21.94	3.39	1.50		26.83	37.00	10.17
266.988	23.01	3.57	2.60		29.18	37.00	7.82
332.942	14.93	3.90	6.10		24.93	37.00	12.07
458.136	16.84	4.64	5.30		26.78	37.00	10.22
554.906	18.59	5.21	10.70		34.50	37.00	2.50
665.883	20.02	5.81	3.50		29.33	37.00	7.67
776.863	21.56	6.45	0.10		28.11	37.00	8.89
887.841	22.69	6.98	0.30		29.97	37.00	7.03

Remark : 1. All reading are Quasi-Peak values.

Date of Test : Mar. 07, 2002 Temperature : 17°C

EUT : 60" Plasma Monitor Humidity : 55%

Test Mode : D-Sub Input, "H" Pattern (1024*768/85Hz, 68.6kHz)

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading		Emission Level		Margin dB
			Horizontal dBμV		Horizontal dBμV/m	Limits dBμV/m	
66.745	12.30	1.66	3.00		16.96	30.00	13.04
115.982	19.92	2.26	- 0.60		21.58	30.00	8.42
158.381	20.81	2.69	- 2.70		20.80	30.00	9.20
186.655	21.20	2.92	- 3.40		20.72	30.00	9.28
229.068	21.76	3.30	- 3.50		21.56	30.00	8.44
243.202	22.41	3.39	1.90		27.70	37.00	9.30
266.988	23.32	3.57	2.60		29.49	37.00	7.51
332.942	13.98	3.90	8.10		25.98	37.00	11.02
458.134	16.25	4.64	2.20		23.09	37.00	13.91
554.903	18.63	5.21	6.10		29.94	37.00	7.06
665.878	20.42	5.81	- 2.30		23.93	37.00	13.07
776.862	21.55	6.45	- 1.31		26.69	37.00	10.31
887.845	22.30	6.98	- 0.40		28.88	37.00	8.12

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading		Emission Level		Margin dB
			Vertical dBμV		Vertical dBμV/m	Limits dBμV/m	
47.150	16.12	1.39	3.40		20.91	30.00	9.09
66.749	12.66	1.66	11.89		26.21	30.00	3.79
115.980	18.59	2.26	- 1.20		19.65	30.00	10.35
158.381	19.56	2.69	- 3.10		19.15	30.00	10.85
186.657	21.92	2.92	- 4.80		20.04	30.00	9.96
229.067	20.96	3.30	0.80		25.06	30.00	4.94
243.203	21.94	3.39	1.30		26.63	37.00	10.37
266.988	23.01	3.57	2.30		28.88	37.00	8.12
332.942	14.93	3.90	6.70		25.53	37.00	11.47
458.136	16.84	4.64	4.50		25.98	37.00	11.02
554.906	18.59	5.21	11.30		35.10	37.00	1.90
665.881	20.02	5.81	3.90		29.73	37.00	7.27
776.865	21.56	6.45	0.50		28.51	37.00	8.49
887.842	22.69	6.98	- 0.10		29.57	37.00	7.43

Remark : 1. All reading are Quasi-Peak values.

Date of Test : Mar. 07, 2002 Temperature : 17°C

EUT : 60" Plasma Monitor Humidity : 55%

Test Mode : D-Sub Input, "H" Pattern (1280*1024/75Hz, 80kHz)

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading		Emission Level		Margin dB
			Horizontal dBμV		Horizontal dBμV/m	Limits dBμV/m	
67.744	12.36	1.67	6.90		20.93	30.00	9.07
80.639	14.54	1.84	2.10		18.48	30.00	11.52
115.978	19.92	2.26	- 1.70		20.48	30.00	9.52
158.384	20.81	2.69	- 3.40		20.10	30.00	9.90
186.658	21.20	2.92	- 5.80		18.32	30.00	11.68
* 229.067	21.76	3.30	0.40		25.46	30.00	4.54
243.204	22.41	3.39	0.60		26.40	37.00	10.60
266.989	23.32	3.57	1.80		28.69	37.00	8.31
332.941	13.98	3.90	8.90		26.78	37.00	10.22
443.922	15.87	4.55	3.10		23.52	37.00	13.48
481.414	16.82	4.87	4.90		26.59	37.00	10.41
517.408	17.04	5.08	3.40		25.52	37.00	11.48
554.902	18.63	5.21	6.90		30.74	37.00	6.26
665.881	20.42	5.81	3.10		29.33	37.00	7.67
776.865	21.55	6.45	0.09		28.09	37.00	8.91
887.842	22.30	6.98	- 0.80		28.48	37.00	8.52

- Remark :
1. All reading are Quasi-Peak values.
 2. '*' The worst emission was detected at 229.067MHz with corrected signal level of 26.46dBμV/m (limit was 30dBμV/m) when the antenna was at horizontal polarization and was at 3.7m high and the turn table was at 225° .
 3. 0° is the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

Date of Test : Mar. 07, 2002 Temperature : 17°C

EUT : 60" Plasma Monitor Humidity : 55%

Test Mode : D-Sub Input, "H" Pattern (1280*1024/75Hz, 80kHz)

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading		Emission Level		Margin dB
			Vertical dBμV		Vertical dBμV/m	Limits dBμV/m	
45.289	17.39	1.32	2.00		20.71	30.00	9.29
66.746	12.66	1.66	9.99		24.31	30.00	5.69
80.638	13.82	1.84	3.50		19.16	30.00	10.84
115.979	18.59	2.26	- 2.00		18.85	30.00	11.15
158.384	19.56	2.69	- 3.70		18.55	30.00	11.45
186.658	21.92	2.92	- 5.30		19.54	30.00	10.46
229.067	20.96	3.30	0.50		24.76	30.00	5.24
243.203	21.94	3.39	- 0.40		24.93	37.00	12.07
266.988	23.01	3.57	2.10		28.68	37.00	8.32
332.945	14.93	3.90	8.20		27.03	37.00	9.97
443.922	16.76	4.55	3.60		24.91	37.00	12.09
481.415	17.27	4.87	5.30		27.44	37.00	9.56
* 554.903	18.59	5.21	11.40		35.20	37.00	1.80
591.615	19.29	5.40	3.90		28.59	37.00	8.41
665.882	20.02	5.81	4.30		30.13	37.00	6.87
776.866	21.56	6.45	- 0.70		27.31	37.00	9.69
887.843	22.69	6.98	- 0.80		28.87	37.00	8.13

- Remark :
1. All reading are Quasi-Peak values.
 1. "*" The worst emission was detected at 554.903MHz with corrected signal level of 35.20dBμV/m (limit was 37dBμV/m) when the antenna was at vertical polarization and was at 3m high and the turn table was at 270° .
 2. 0° is the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

Date of Test : Mar. 19, 2002 Temperature : 22°C

EUT : 60" Plasma Monitor Humidity : 63%

Test Mode : A/V Input (DVD-Disk Image)

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading		Emission Level		Margin dB
			Horizontal dBμV		Horizontal dBμV/m	Limits dBμV/m	
45.975	18.21	1.35	1.19		20.75	30.00	9.25
66.751	12.30	1.66	1.60		15.56	30.00	14.44
115.348	19.68	2.26	- 3.10		18.84	30.00	11.16
153.277	20.75	2.62	- 3.90		19.47	30.00	10.53
191.196	21.13	2.97	- 4.00		20.10	30.00	9.90
229.066	21.76	3.30	- 0.50		24.56	30.00	5.44
266.967	23.32	3.57	- 1.20		25.69	37.00	11.31
342.829	14.20	4.00	2.50		20.70	37.00	16.30
418.595	15.17	4.42	2.10		21.69	37.00	15.31
494.420	17.06	4.91	1.60		23.57	37.00	13.43
570.527	19.17	5.35	- 0.70		23.82	37.00	13.18
645.906	20.44	5.79	- 0.70		25.53	37.00	11.47
721.847	21.06	6.08	- 1.40		25.74	37.00	11.26
798.019	21.70	6.48	- 1.60		26.58	37.00	10.42

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading		Emission Level		Margin dB
			Vertical dBμV		Vertical dBμV/m	Limits dBμV/m	
46.194	16.68	1.35	2.81		20.84	30.00	9.16
66.748	12.66	1.66	10.09		24.41	30.00	5.59
115.351	18.61	2.26	- 2.10		18.77	30.00	11.23
153.272	19.55	2.62	- 4.10		18.07	30.00	11.93
191.195	21.65	2.97	- 4.30		20.32	30.00	9.68
229.067	20.96	3.30	3.20		27.46	30.00	2.54
266.989	23.01	3.57	1.10		27.68	37.00	9.32
342.834	14.99	4.00	1.70		20.69	37.00	16.31
418.587	16.49	4.42	1.20		22.11	37.00	14.89
494.417	17.25	4.91	0.90		23.06	37.00	13.94
570.524	18.88	5.35	- 0.70		23.53	37.00	13.47
645.911	19.78	5.79	- 1.00		24.57	37.00	12.43
721.852	20.91	6.08	- 1.30		25.69	37.00	11.31
798.025	22.10	6.48	- 0.80		27.78	37.00	9.22

Remark : 1. All reading are Quasi-Peak values.

Date of Test : Mar. 19, 2002 Temperature : 22°C

EUT : 60" Plasma Monitor Humidity : 63%

Test Mode : S-Video Input (DVD-Disk Image)

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading		Emission Level		Margin dB
			Horizontal dBμV		Horizontal dBμV/m	Limits dBμV/m	
46.118	18.15	1.35	- 0.20		19.30	30.00	10.70
66.750	12.30	1.66	2.70		16.66	30.00	13.34
115.348	19.68	2.26	- 3.10		18.84	30.00	11.16
153.277	20.75	2.62	- 5.20		18.17	30.00	11.83
191.197	21.13	2.97	- 4.50		19.60	30.00	10.40
229.067	21.76	3.30	- 0.60		24.46	30.00	5.54
266.966	23.32	3.57	- 1.30		25.59	37.00	11.41
342.832	14.20	4.00	2.30		20.50	37.00	16.50
418.586	15.17	4.42	2.20		21.79	37.00	15.21
494.418	17.06	4.91	0.70		22.67	37.00	14.33
570.525	19.17	5.35	- 1.40		23.12	37.00	13.88
645.911	20.44	5.79	- 2.10		24.13	37.00	12.87
721.852	21.06	6.08	- 1.80		25.34	37.00	11.66
798.017	21.70	6.48	- 1.80		26.38	37.00	10.62

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading		Emission Level		Margin dB
			Vertical dBμV		Vertical dBμV/m	Limits dBμV/m	
46.177	16.68	1.35	3.91		21.94	30.00	8.06
66.747	12.66	1.66	10.29		24.61	30.00	5.39
115.349	18.61	2.26	- 1.30		19.57	30.00	10.43
153.271	19.55	2.62	- 4.80		17.37	30.00	12.63
191.193	21.65	2.97	-5.20		19.42	30.00	10.58
229.067	20.96	3.30	2.40		26.66	30.00	3.34
266.989	23.01	3.57	0.80		27.38	37.00	9.62
342.833	14.99	4.00	0.50		19.49	37.00	17.51
418.586	16.49	4.42	1.00		21.91	37.00	15.09
494.416	17.25	4.91	0.70		22.86	37.00	14.14
570.523	18.88	5.35	- 0.30		23.93	37.00	13.07
645.910	19.78	5.79	- 1.20		24.37	37.00	12.63
721.850	20.91	6.08	- 1.80		25.19	37.00	11.81
798.022	22.10	6.48	- 1.80		26.78	37.00	10.22

Remark : 1. All reading are Quasi-Peak values.

Date of Test : Mar. 19, 2002 Temperature : 22°C

EUT : 60" Plasma Monitor Humidity : 63%

Test Mode : Component Input (DVD-Disk Image)

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading		Emission Level		Margin dB
			Horizontal dBμV		Horizontal dBμV/m	Limits dBμV/m	
45.993	18.21	1.35	0.89		20.45	30.00	9.55
66.750	12.30	1.66	1.20		15.16	30.00	14.84
115.347	19.68	2.26	- 3.30		18.64	30.00	11.36
153.278	20.75	2.62	- 4.30		19.07	30.00	10.93
191.195	21.13	2.97	- 3.90		20.20	30.00	9.80
* 229.067	21.76	3.30	- 0.70		24.36	30.00	5.64
266.965	23.32	3.57	- 1.60		25.29	37.00	11.71
342.832	14.20	4.00	2.80		21.00	37.00	16.00
418.594	15.17	4.42	2.60		22.19	37.00	14.81
494.419	17.06	4.91	1.20		23.17	37.00	13.83
570.528	19.17	5.35	- 1.00		23.52	37.00	13.48
645.909	20.44	5.79	- 1.60		24.63	37.00	12.37
721.847	21.06	6.08	- 1.70		25.44	37.00	11.56
798.018	21.70	6.48	- 1.90		26.28	37.00	10.72

- Remark :
1. All reading are Quasi-Peak values.
 2. “*” The worst emission was detected at 229.067MHz with corrected signal level of 24.36dBμV/m (limit was 30dBμV/m) when the antenna was at horizontal polarization and was at 3.6m high and the turn table was at 225° .
 3. 0° is the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

Date of Test : Mar. 19, 2002 Temperature : 22°C

EUT : 60" Plasma Monitor Humidity : 63%

Test Mode : Component Input (DVD-Disk Image)

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading Vertical dBμV	Emission Level Vertical dBμV/m	Limits dBμV/m	Margin dB
46.164	16.68	1.35	3.01	21.04	30.00	8.96
66.749	12.66	1.66	10.19	24.51	30.00	5.49
115.349	18.61	2.26	- 1.80	19.07	30.00	10.93
153.271	19.55	2.62	- 4.40	17.77	30.00	12.23
191.194	21.65	2.97	- 4.70	19.92	30.00	10.08
* 229.067	20.96	3.30	3.60	27.86	30.00	2.14
266.988	23.01	3.57	1.50	28.08	37.00	8.92
342.831	14.99	4.00	3.00	21.99	37.00	15.01
418.587	16.49	4.42	1.10	22.01	37.00	14.99
494.417	17.25	4.91	0.70	22.86	37.00	14.14
570.524	18.88	5.35	- 0.40	23.83	37.00	13.17
645.912	19.78	5.79	- 1.20	24.37	37.00	12.63
721.854	20.91	6.08	- 1.70	25.29	37.00	11.71
798.018	22.10	6.48	- 2.70	25.88	37.00	11.12

- Remark :
1. All reading are Quasi-Peak values.
 2. “*” The worst emission was detected at 229.067MHz with corrected signal level of 27.86dBμV/m (limit was 30dBμV/m) when the antenna was at vertical polarization and was at 1m high and the turn table was at 315° .
 3. 0° is the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

3.8.2. 1GHz to 2GHz Frequency Range Measurement Results

Distance: 3Meters

The emissions not report below are too low against the prescribed limits.

Date of Test : Mar. 12, 2002 Temperature : 21°C

EUT : 60" Plasma Monitor Humidity : 69%

Test Mode : D-Sub Input, "H" Pattern (1280*1024/75Hz, 80kHz)

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading Horizontal dBμV	Emission Level Horizontal dBμV/m	(Peak) Limits dBμV/m	Margin dB
1000.029	25.20	2.00	18.41	45.61	74.00	28.39
1100.009	25.25	2.00	16.21	43.46	74.00	30.54
1200.020	25.29	2.00	14.77	42.06	74.00	31.94
1300.004	25.33	2.00	11.39	38.72	74.00	35.28
1400.007	25.37	2.00	10.72	38.09	74.00	35.91
1500.009	25.40	2.00	9.24	36.64	74.00	37.36
1600.005	25.94	2.10	10.98	39.02	74.00	34.98
1700.003	26.44	2.10	13.31	41.85	74.00	32.15
1800.004	26.92	2.20	12.91	42.03	74.00	31.97
1900.020	27.37	2.20	14.17	43.74	74.00	30.26
2000.000	27.80	2.20	10.95	40.95	74.00	33.05

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading Vertical dBμV	Emission Level Vertical dBμV/m	(Peak) Limits dBμV/m	Margin dB
1000.310	25.20	2.00	18.12	45.32	74.00	28.68
1100.300	25.25	2.00	15.06	42.31	74.00	31.69
1200.300	25.29	2.00	10.94	38.23	74.00	35.77
1300.008	25.33	2.00	9.57	36.90	74.00	37.10
1400.028	25.37	2.00	10.07	37.44	74.00	36.56
1500.009	25.40	2.00	12.42	39.82	74.00	34.18
1600.032	25.94	2.10	11.29	39.33	74.00	34.67
1700.005	26.44	2.10	10.75	39.29	74.00	34.71
1800.010	26.92	2.20	13.14	42.26	74.00	31.74
1900.010	27.37	2.20	9.90	39.47	74.00	34.53
2000.000	27.80	2.20	10.65	40.65	74.00	33.35

Remark : 1. All readings are Peak values.

4. MODIFICATIONS TO EUT

1. Bonded two ferrite cores on the 15-Pin D-Sub cable.
2. Added a ferrite core on the RS232C cable with 2 turns.
3. Added a ferrite core on the signal control wire.
4. Added a ferrite core on the control wire of speaker board.
5. Added a ferrite core on the signal control wire with 2 turns.
6. Added conductive gaskets on the holder of machinery.
7. Added conductive fabric tape on the flat cable.
8. Bonded a ferrite core on the speaker's cable.
9. Added conductive fabric tape on the bracket of A/V and component jacks.

5. DEVIATION TO TEST SPECIFICATIONS

During 1GHz to 2GHz frequency range measurement, due to low loss cable length limitation, the horn antenna couldn't move up and down between 1 to 4 meters. But the test result was not affected due to the worst receiving condition of horn antenna should be at 1 meter high for above 1GHz radiation measurement.