Philips Electronics Industries (Taiwan) Ltd - EMC Lab. 5, Tze Chiang 1 Road, Chungli Industrial Park, Chungli, Taoyuan, Taiwan Tel.: +886-3-454-9862 Fax.: +886-3-454-9887 E-mail: ronnie.yang@philips.com	# FCC Test Report	Report No.: TYR87-2048 Date : 05 June, 2003 Page : Page 1 of 35

Customer : Philips Electronics Industries

Name : Mr. S.T. Huang – EE LCD
Address : 5, Tze Chiang 1 Road,
Zip/City : Chungli Industrial Park,
Country : Chungli, Taiwan, R.O.C.

Equipment Under Test (including peripherals) :

FCC ID. : A3KM123
Model Name : 109F51
Serial Number : TY0304253
Description : 19" XGA color monitor, Max. resolution 1920x1440/60Hz

EMC Standards : FCC Part 15 of October 01,1999 Class B
ANSI C63.4-1992

Result : PASSED the limits/test-levels in the standards.

Note : The results in this report apply only to the sample(s) and mode(s) tested. It is the manufacturer's responsibility to assume the continued EMC compliance of production models.

Date of receipt of EUT : 19 May 2003

Date of performance of test : 21 May, 2003 to 23 May, 2003

C.C. Wu - EMC Test Engineer

Ronnie Yang - EMC Manager

Table of contents

1. Summary of test results

Test	Standard	Result	Note
Emission, ANSI C63.4-1992			
Conducted emission	FCC Part 15	**Passed**	
Radiated emission	FCC Part 15	**Passed**	

Remark:

The test sample fully complies with the requirements set forth in : FCC Part 15 Class B.

2. General Information of EUT

The EUT, 19" color monitor :

Model No. : 109F51
FCC ID : A3KM123
Brand : PHILIPS

The color monitor automatically scans horizontal frequencies between 30KHz and 92KHz , and vertical frequencies between 50Hz and 160Hz. This color monitor displays sharp and brilliant images of text and graphics with a maximum resolution up to 1920x1440 pixels.

The monitor has 7 factory-preset modes as indicated in the following table:

	Resolution modes	H. freq.	V. freq.	H.	V.
1.	720 x 400	31.5 Khz	70 Hz (VESA)	-	+
2.	800 x 600	46.9 Khz	75 HZ(VESA)	Don't Care	
3.	800 x 600	53.7 Khz	85 HZ(VESA)	Don't Care	
4.	1024 x 768	60.0 Khz	75 HZ(VESA)	Don't Care	
5.	1024 x 768	68.7 Khz	85 HZ(VESA)	Don't Care	
6.	1280 x 1024	80.0 Khz	75 Hz (VESA)	Don't Care	
7.	1280 x 1024	91.2 Khz	85 Hz (VESA)	Don't Care	

3. Test Equipment

Test equipment used for line Conducted and Radiated emissions as following.
All equipment were calibrated according to ANSI C63.4-1992 and ISO-9000 requirement unless otherwise specified.
Traceability to R.O.C. and international standards is assured by using calibrated all equipment.

- For Conducted Emissions Test:

Test Equipment	Model No.	Serial No.	Last Calibrate	Next Calibrate
Spectrum	HP8568B	2928A04640	06/27/2002	06/27/2003
EMI Receiver	R & S ESVS30	841977/006	06/13/2002	06/13/2003
LISN	EMCO 3825/2	9311-2153	06/13/2002	06/13/2003
LISN	EMCO 3825/2	9311-2154	06/13/2002	06/13/2003
RF Cable	8-meter	N/A	09/15-2002	09/15/2003

- For Radiated Emissions Test:

Test Equipment	Model No.	Serial No.	Last Calibrate	Next Calibrate
Spectrum	HP8568B	2928A04640	06/27/2002	06/27/2003
RF Preselector	HP85685A	2620A00338	06/27/2002	06/27/2003
QP Adapter	HP85650A	2811A01324	06/27/2002	06/27/2003
EMI Receiver	R & S ESVS30	841977/006	06/13/2002	06/13/2003
Biconical Antenna	EMCO 3110B	3224	09/19/2002	09/19/2003
Log-Periodic Antenna	EMCO 3146A	1425	09/19/2002	09/19/2003
Turn Table	EMCO 1060	1068	09/15/2002	09/15/2003
Antenna Tower	EMCO 1050	1113	09/15/2002	09/15/2003
RF Cable	M17/75-RG214-NE	N/A	09/15/2002	09/15/2003

4. Test Configuration of EUT and Peripherals

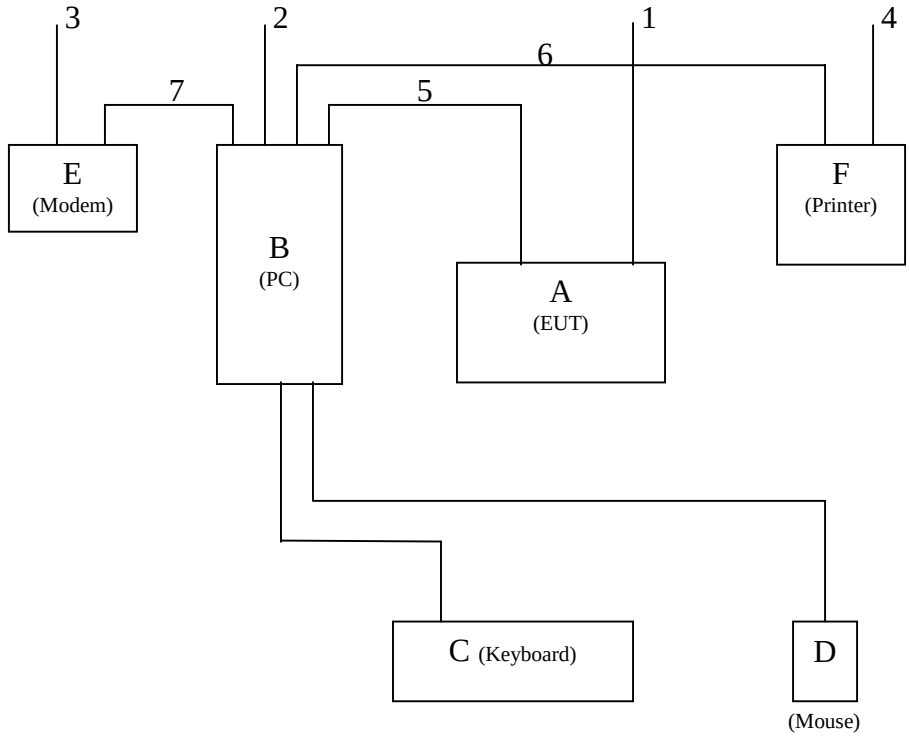
The system was configured for testing in a typical fashion (as a customer would normally use it) according to ANSI C63.4-1992, please see the photographs for detail. For system measurement, the EUT "109F51" were connected to:

	Description	Brand/ Model No.	Serial No.	FCC ID	Remark
A	Monitor	Philips 109F51	TY034253	A3KM123	EUT
B	PC	Compaq ENC P866	5K15FXHZ2013	FCC Logo	
C	Keyboard	Compaq KB-9963	B26950GGALP13Q	FCC Logo	
D	Mouse	Compaq M-S48a		JNZ201213	
E	Modem	Hayes 231AA	A22231081770	BFJ9D9308US	
F	Printer	HP 2225C	2934S55406	DSI6XU2225	

Connected Cables

No.	Description	Manufacturer	Length	Shielded	Remark
1	Power Cord	Long Shine	1.8 meters	No	for EUT
2	Power Cord	Acer	1.8 meters	No	for PC
3	Power Cord	Aceex	2.0 meters	No	for Modem
4	Power Cord	HP	1.8 meters	No	for Printer
5	Video Cable	Long Shine	1.5 meters	Yes	
6	Printer Cable	HP	1.8 meters	Yes	
7	Modem Cable	Aceex	1.5 meters	Yes	

System Block Diagram of Test Configuration



5. Test Procedure

Test was performed by:

PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.
CONSUMER ELECTRONICS DIVISION
- EMC LAB

5, Tze Chiang 1 Road, Chungli Industrial Park
P.O. Box 123, Chungli, Taoyuan, Taiwan
Tel : 886-3-4549862 Fax : 886-3-4549887
Internet: ronnie.yang@philips.com

The test was performed in accordance with ANSI C63.4-1992, "AMERICAN NATIONAL STANDARD FOR MEASUREMENT OF RADIO-NOISE EMISSION FROM LOW-VOLTAGE ELECTRICAL AND ELECTRONIC EQUIPMENT IN THE RANGE OF 9KHz TO 40GHz"

Both conducted and radiated testing were performed according to the procedure in ANSI C63.4-1992. Conducted testing was performed in screen room and radiated testing was performed in open site at an antenna to EUT distance of 3-meter on horizontal and vertical polarization.

First, pre-scan all modes in screen room then select 2 higher modes (worst case) were tested and reported.

The line conductive interference was tested with 110VAC and 220VAC receptively.

Unshielded power cord was used during test.
D-sub I/F cable with two ferrite cores was used.

Tested and reported modes as following:

Test Item	File No.	Resolution	Frequencies	I/F Cable
Conducted	EMI03-024-C	1280x1024	91KHz/85Hz	D-sub
		1280x1024	80KHz/75Hz	D-sub
Radiated	EMI03-024-R	1280x1024	91KHz/85Hz	D-sub
		1280x1024	80KHz/75Hz	D-sub

Set up the EUT and all peripherals as chapter 6 of ANSI C63.4-1992 for AC power line conducted emissions testing and radiated emissions testing.

Turn on the power of EUT and all peripherals, select an appropriate displaying mode using the "setup" software. Then run an EMI test program "HTEST.EMI" as a basic software to execute the EUT operating under test. A pattern of scrolling H's should be displayed on the monitor.

Step 1 : Run the "HTEST.EMI" on personal computer then sends "H" character to monitor continuously until full screen.

Step 2 : Personal computer sends a complete line of continuously repeating "H" to HP 2225C printer.

Step 3 : Personal computer sends a file of "H" pattern to floppy disk then read a file of "H" pattern from floppy disk.

Step 4 : Personal computer sends a file of "H" pattern to hard disk then read a file of "H" pattern from hard disk.

Step 5 : Personal computer sends a file of "H" patter to USRobotics 268 modem.

Step 6 : Return to step 1

All data in this report are "PEAK" value within 15dB margin unless otherwise noted.

6. Measurement Uncertainty

The system uncertainty listed below are based on the instrument absolute specifications, and do not include uncertainties of the equipment under test.

Uncertainty for Radiated Emissions Test at 3 meters Test Site.

Source of Measurement Uncertainty	Uncertainty/dB
Antenna factor calibration	+/-2.0
Cable loss calibration	+/-0.5
Receiver specification	+/-1.0
Antenna position ver.	+/-2.0
Measurement distance ver.	+/-0.5
Site imperfections	+/-2.0
Mismatch	+/-1.1
System repeatability	+/-0.5

Uncertainty for Conducted Emissions Test at 3 meters Test Site.

Source of Measurement Uncertainty	Uncertainty/dB
LISN specification	+/-2.0
Cable loss calibration	+/-0.5
Receiver specification	+/-1.0
Pulse limiter Spec.	+/-0.3
Measurement distance ver.	+/-0.5
Site imperfections	+/-2.0
System repeatability	+/-0.5

7. Conducted Emissions Test

Conducted Emissions

FCC Part 15

Operating conditions EUT:

EUT powered on with scrolling "H" pattern.

Limits:

Frequency range (MHz)	Class A (dBuv) QP	Class B (dBuv) QP
0.45 – 1.705	60.0	48.0
1.705 – 30.0	69.5	48.0

Test Result :

Passed FCC Class B Limits

Option:

The following option may be employed if the conducted emissions exceed the limits, as appropriate, when measured using instrumentation employing a quasi-peak detector function: If the level of the emission measured using the quasi-peak instrumentation is 6dB, or, more higher than the level of the same emission measured with instrumentation having an average detector and a 9KHz minimum bandwidth, that emission is considered broadband and the level obtained with the quasi-peak detector may be reduced by 13dB for comparison to the limits.

Remark:

Date of Test	: 21 May, 2003 to 23 May, 2003
Test Engineer	: C.C.Wu

For detail measurement results see next pages.

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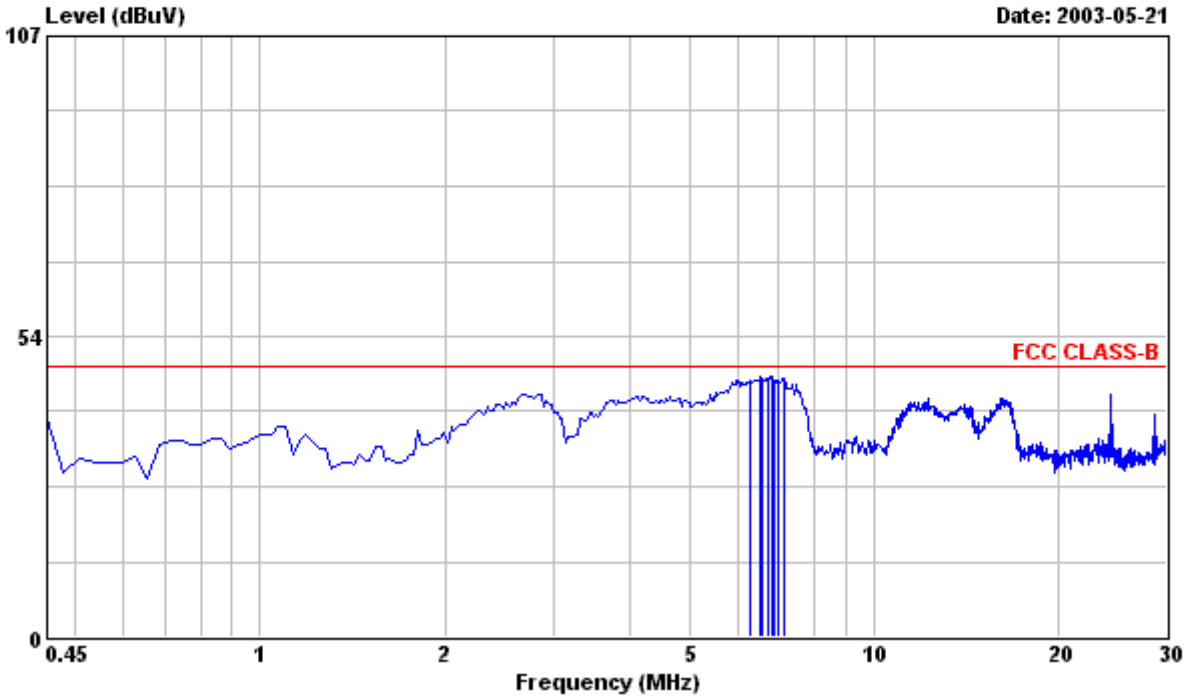

Site : PHILIPS EMI Shielding Room
Condition : FCC CLASS-B FCC_LCI_L1 LINE
EUT : PHILIPS 109F51 Serial No:TY0304253
Power : 120VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. 2ND MODEL LG PHILIPS CRT,RUN IBM
: V1.8 FONT 14 ARIAL "H" PATTERN.
: 3. 1280x1024/85Hz 91KHz MODE WITH COMPAQ
: ENC/P866/20E/8/128A TAI PC,ATI RADEON
: VE DDR VIDEO CAR WAS TESTED.

Frequency	Peak Reading	QP Reading	Limit Line	Factor	Emission Lavel	Over Limit	Remark
6.301	45.20	---	48.00	0.40	45.60	-2.40	Peak
6.537	45.90	---	48.00	0.40	46.30	-1.70	Peak
6.596	45.60	---	48.00	0.40	46.00	-2.00	Peak
6.715	45.50	---	48.00	0.40	45.90	-2.10	Peak
6.833	46.10	---	48.00	0.40	46.50	-1.50	Peak
6.892	45.30	---	48.00	0.40	45.70	-2.30	Peak
7.010	45.40	---	48.00	0.40	45.80	-2.20	Peak
7.128	45.70	---	48.00	0.40	46.10	-1.90	Peak

Remarks: 1. All Readings are Peak & Quasi-Peak Values.
2. Emission Lavel (dBuV) = Factor (dB) + Meter Reading (dBuV)
3. Factor (dB/m) = LISN Loss (dB) + Cable Loss (dB)

Tested by : C C.Wu

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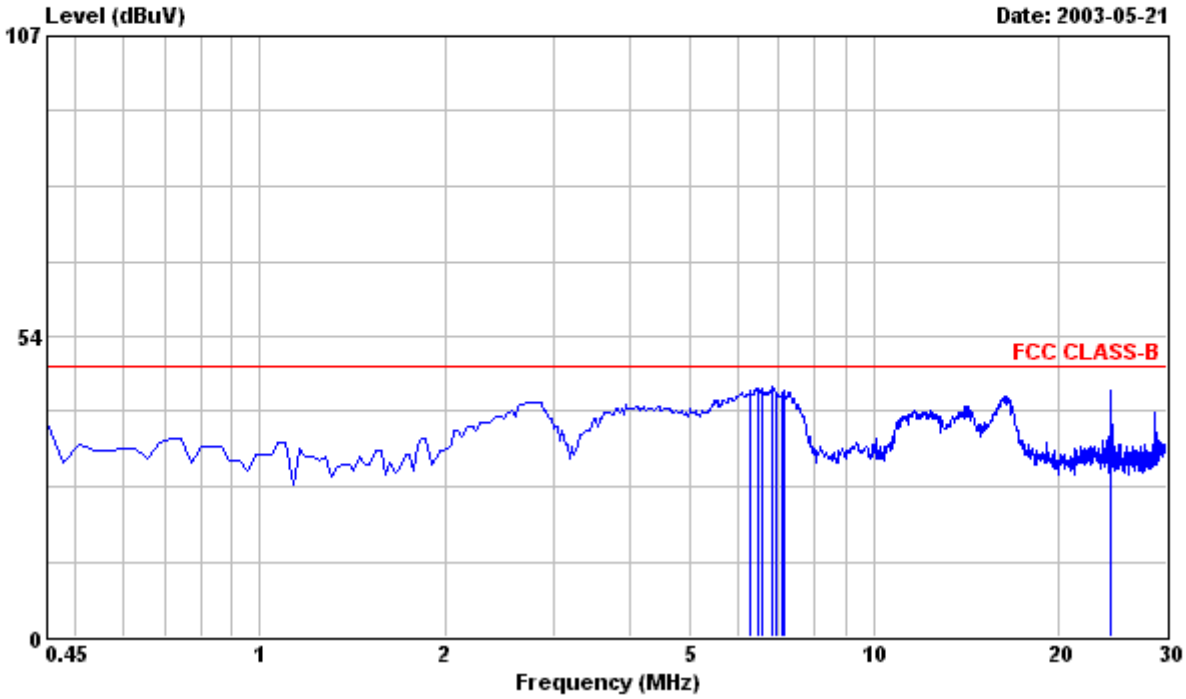

Site : PHILIPS EMI Shielding Room
Condition : FCC CLASS-B FCC_LCI_L2 NEUTRAL
EUT : PHILIPS 109F51 Serial No:TY0304253
Power : 120VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. 2ND MODEL LG PHILIPS CRT,RUN IBM
: V1.8 FONT 14 ARIAL "H" PATTERN.
: 3. 1280x1024/85Hz 91KHz MODE WITH COMPAQ
: ENC/P866/20E/8/128A TAI PC,ATI RADEON
: VE DDR VIDEO CAR WAS TESTED.

Frequency	Peak Reading	QP Reading	Limit	Factor	Emission Lavel NEUTRAL	Over Limit	Remark
6.301	43.30	---	48.00	0.40	43.70	-4.30	Peak
6.478	43.70	---	48.00	0.40	44.10	-3.90	Peak
6.596	43.70	---	48.00	0.40	44.10	-3.90	Peak
6.833	44.10	---	48.00	0.40	44.50	-3.50	Peak
6.951	43.20	---	48.00	0.40	43.60	-4.40	Peak
7.069	43.20	---	48.00	0.40	43.60	-4.40	Peak
7.128	43.60	---	48.00	0.40	44.00	-4.00	Peak
24.386	42.90	---	48.00	0.99	43.89	-4.11	Peak

Remarks: 1. All Readings are Peak & Quasi-Peak Values.
2. Emission Lavel (dBuV) = Factor (dB) + Meter Reading (dBuV)
3. Factor (dB/m) = LISN Loss (dB) + Cable Loss (dB)

Tested by : C C.Wu

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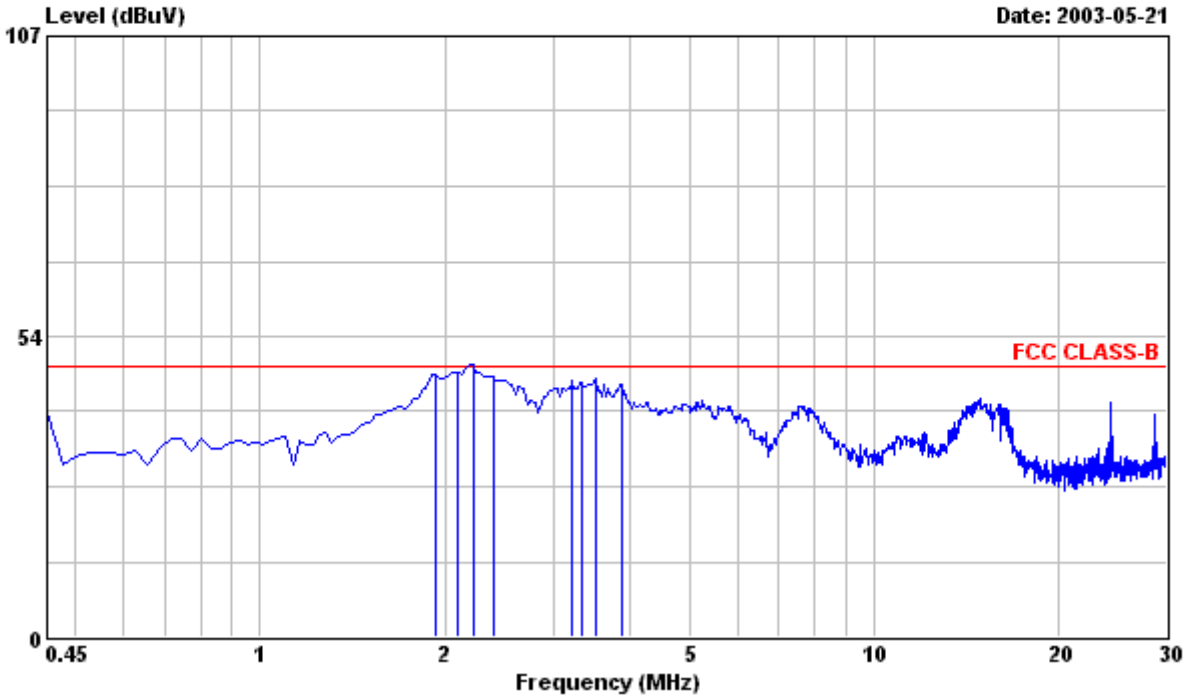

Site : PHILIPS EMI Shielding Room
Condition : FCC CLASS-B FCC_LCI_L1 LINE
EUT : PHILIPS 109F51 Serial No:TY0304253
Power : 220VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. 2ND MODEL LG PHILIPS CRT,RUN IBM
: V1.8 FONT 14 ARIAL "H" PATTERN.
: 3. 1280x1024/85Hz 91KHz MODE WITH COMPAQ
: ENC/P866/20E/8/128A TAI PC,ATI RADEON
: VE DDR VIDEO CAR WAS TESTED.

Frequency	Peak Reading	QP Reading	Limit LINE	Factor	Emission Lavel	Over Limit	Remark
1.928	46.30	---	48.00	0.40	46.70	-1.30	Peak
2.105	46.80	---	48.00	0.40	47.20	-0.80	Peak
2.223	---	41.83	48.00	0.40	42.23	-5.77	QP
2.223	48.10	---	48.00	0.40	48.50	0.50	Peak
2.400	46.10	---	48.00	0.40	46.50	-1.50	Peak
3.228	45.10	---	48.00	0.40	45.50	-2.50	Peak
3.346	44.90	---	48.00	0.40	45.30	-2.70	Peak
3.523	45.70	---	48.00	0.40	46.10	-1.90	Peak
3.878	44.50	---	48.00	0.40	44.90	-3.10	Peak

Remarks: 1. All Readings are Peak & Quasi-Peak Values.
2. Emission Lavel (dBuV) = Factor (dB) + Meter Reading (dBuV)
3. Factor (dB/m) = LISN Loss (dB) + Cable Loss (dB)

Tested by : C C.Wu

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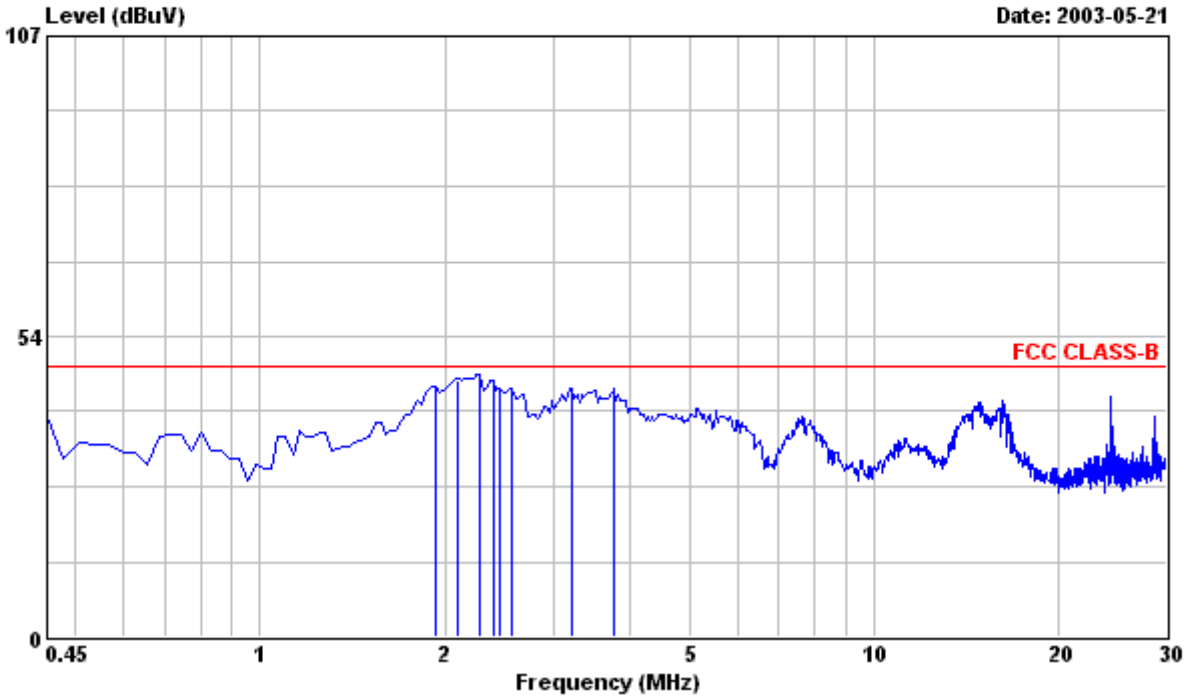

Site : PHILIPS EMI Shielding Room
Condition : FCC CLASS-B FCC_LCI_L2 NEUTRAL
EUT : PHILIPS 109F51 Serial No:TY0304253
Power : 220VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. 2ND MODEL LG PHILIPS CRT,RUN IBM
: V1.8 FONT 14 ARIAL "H" PATTERN.
: 3. 1280x1024/85Hz 91KHz MODE WITH COMPAQ
: ENC/P866/20E/8/128A TAI PC,ATI RADEON
: VE DDR VIDEO CAR WAS TESTED.

Frequency	Peak Reading	QP Reading	Limit	Factor	Emission Lavel NEUTRAL	Over Limit	Remark
1.928	44.20	---	48.00	0.40	44.60	-3.40	Peak
2.105	45.70	---	48.00	0.40	46.10	-1.90	Peak
2.282	46.40	---	48.00	0.40	46.80	-1.20	Peak
2.400	45.40	---	48.00	0.40	45.80	-2.20	Peak
2.459	43.90	---	48.00	0.40	44.30	-3.70	Peak
2.578	43.70	---	48.00	0.40	44.10	-3.90	Peak
3.228	43.70	---	48.00	0.40	44.10	-3.90	Peak
3.760	43.90	---	48.00	0.40	44.30	-3.70	Peak

Remarks: 1. All Readings are Peak & Quasi-Peak Values.
2. Emission Lavel (dBuV) = Factor (dB) + Meter Reading (dBuV)
3. Factor (dB/m) = LISN Loss (dB) + Cable Loss (dB)

Tested by : C C.Wu

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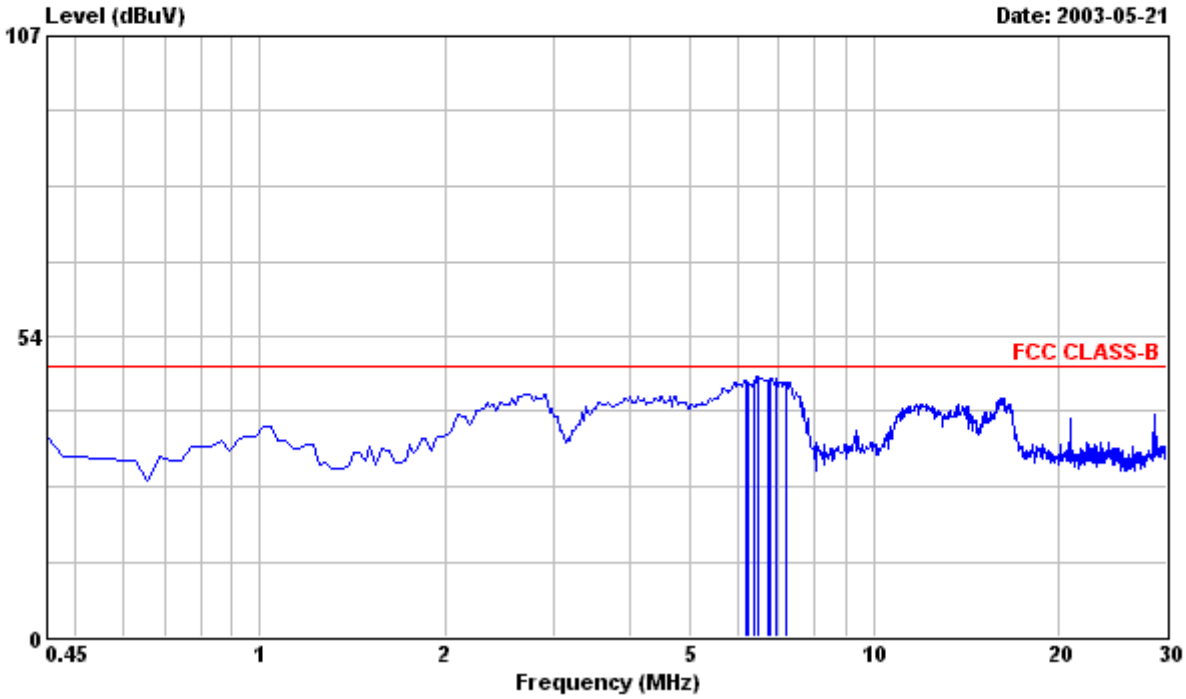

Site : PHILIPS EMI Shielding Room
Condition : FCC CLASS-B FCC_LCI_L1 LINE
EUT : PHILIPS 109F51 Serial No:TY0304253
Power : 120VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. 2ND MODEL LG PHILIPS CRT,RUN IBM
: V1.8 FONT 14 ARIAL "H" PATTERN.
: 3. 1280x1024/75Hz 80KHz MODE WITH COMPAQ
: ENC/P866/20E/8/128A TAI PC,ATI RADEON
: VE DDR VIDEO CAR WAS TESTED.

Frequency	Peak Reading	QP Reading	Limit LINE	Factor	Emission Lavel	Over Limit	Remark
6.183	45.20	---	48.00	0.40	45.60	-2.40	Peak
6.242	45.00	---	48.00	0.40	45.40	-2.60	Peak
6.360	45.30	---	48.00	0.40	45.70	-2.30	Peak
6.478	46.00	---	48.00	0.40	46.40	-1.60	Peak
6.715	45.30	---	48.00	0.40	45.70	-2.30	Peak
6.774	45.60	---	48.00	0.40	46.00	-2.00	Peak
6.951	45.50	---	48.00	0.40	45.90	-2.10	Peak
7.187	45.00	---	48.00	0.40	45.40	-2.60	Peak

Remarks: 1. All Readings are Peak & Quasi-Peak Values.
2. Emission Lavel (dBuV) = Factor (dB) + Meter Reading (dBuV)
3. Factor (dB/m) = LISN Loss (dB) + Cable Loss (dB)

Tested by : C C.Wu

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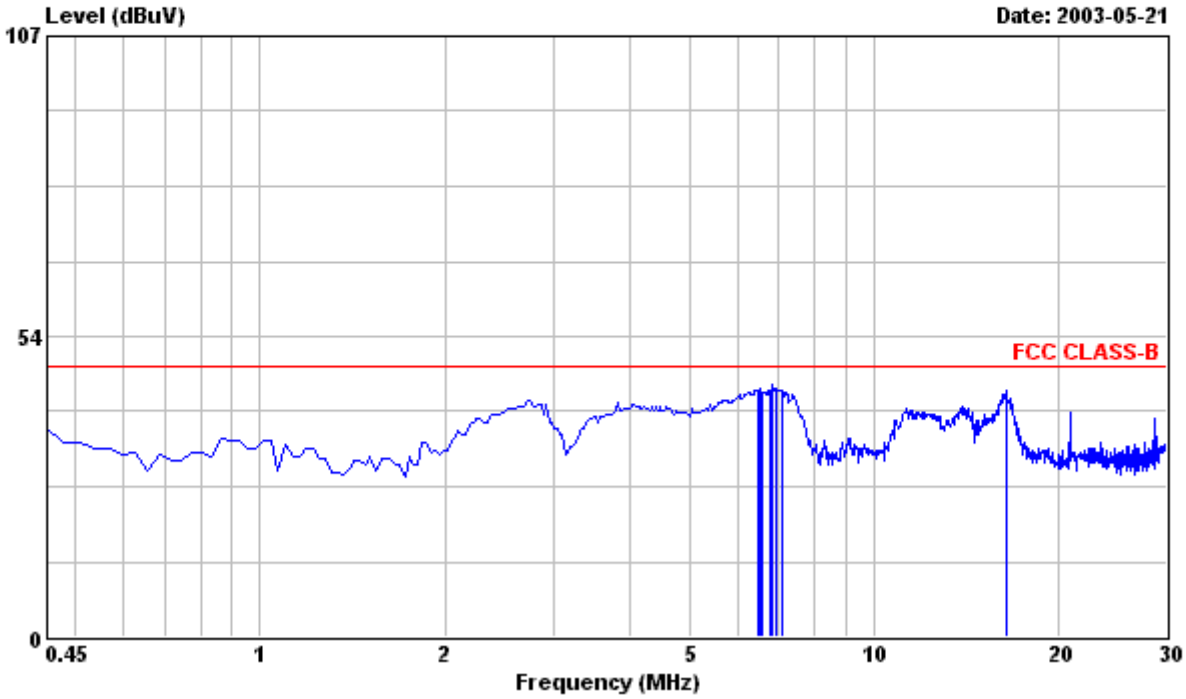

Site : PHILIPS EMI Shielding Room
Condition : FCC CLASS-B FCC_LCI_L2 NEUTRAL
EUT : PHILIPS 109F51 Serial No:TY0304253
Power : 120VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. 2ND MODEL LG PHILIPS CRT,RUN IBM
: V1.8 FONT 14 ARIAL "H" PATTERN.
: 3. 1280x1024/75Hz 80KHz MODE WITH COMPAQ
: ENC/P866/20E/8/128A TAI PC,ATI RADEON
: VE DDR VIDEO CAR WAS TESTED.

Frequency	Peak Reading	QP Reading	Limit	Factor	Emission Lavel NEUTRAL	Over Limit	Remark
6.478	43.50	---	48.00	0.40	43.90	-4.10	Peak
6.537	43.70	---	48.00	0.40	44.10	-3.90	Peak
6.596	43.20	---	48.00	0.40	43.60	-4.40	Peak
6.774	43.50	---	48.00	0.40	43.90	-4.10	Peak
6.833	44.50	---	48.00	0.40	44.90	-3.10	Peak
6.951	43.90	---	48.00	0.40	44.30	-3.70	Peak
7.069	43.60	---	48.00	0.40	44.00	-4.00	Peak
16.466	43.01	---	48.00	0.76	43.77	-4.23	Peak

Remarks: 1. All Readings are Peak & Quasi-Peak Values.
2. Emission Lavel (dBuV) = Factor (dB) + Meter Reading (dBuV)
3. Factor (dB/m) = LISN Loss (dB) + Cable Loss (dB)

Tested by : C C.Wu

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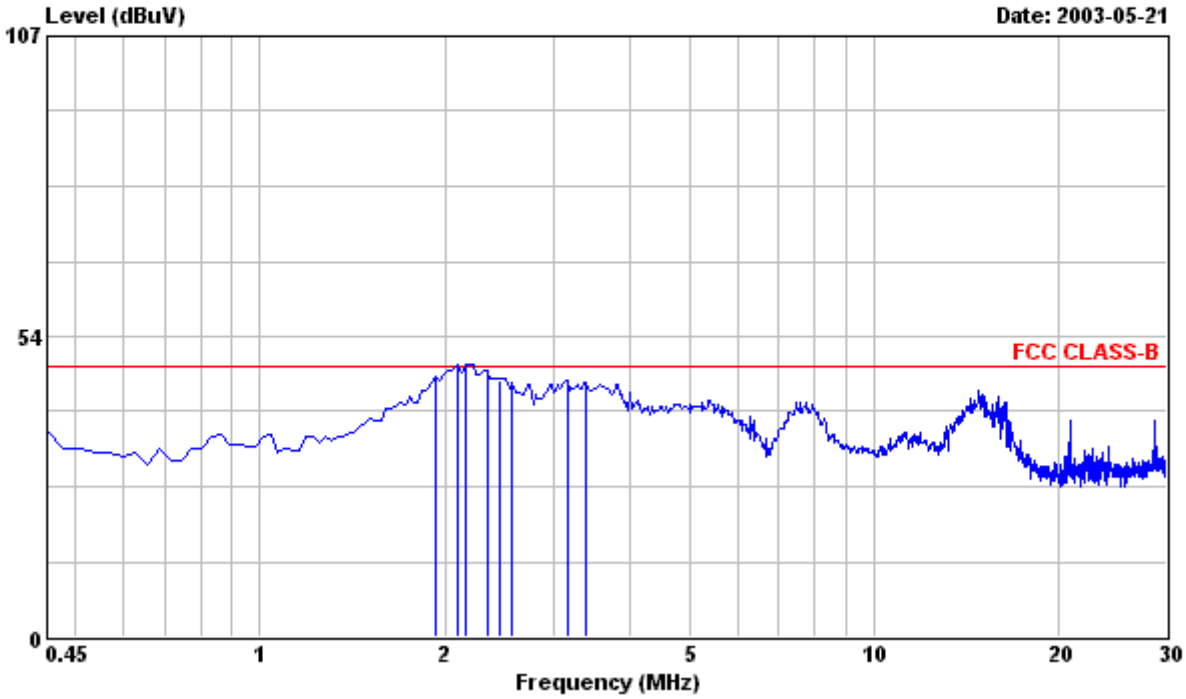

Site : PHILIPS EMI Shielding Room
Condition : FCC CLASS-B FCC_LCI_L1 LINE
EUT : PHILIPS 109F51 Serial No:TY0304253
Power : 220VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. 2ND MODEL LG PHILIPS CRT,RUN IBM
: V1.8 FONT 14 ARIAL "H" PATTERN.
: 3. 1280x1024/75Hz 80KHz MODE WITH COMPAQ
: ENC/P866/20E/8/128A TAI PC,ATI RADEON
: VE DDR VIDEO CAR WAS TESTED.

Frequency	Peak Reading	QP Reading	Limit	Factor	Emission Lavel LINE	Over Limit	Remark
1.928	45.80	---	48.00	0.40	46.20	-1.80	Peak
2.105	---	41.81	48.00	0.40	42.21	-5.79	QP
2.105	48.10	---	48.00	0.40	48.50	0.50	Peak
2.164	48.20	---	48.00	0.40	48.60	0.60	Peak
2.164	---	41.87	48.00	0.40	42.27	-5.73	QP
2.341	47.10	---	48.00	0.40	47.50	-0.50	Peak
2.459	45.70	---	48.00	0.40	46.10	-1.90	Peak
2.578	45.00	---	48.00	0.40	45.40	-2.60	Peak
3.169	45.10	---	48.00	0.40	45.50	-2.50	Peak
3.405	44.80	---	48.00	0.40	45.20	-2.80	Peak

Remarks: 1. All Readings are Peak & Quasi-Peak Values.
2. Emission Lavel (dBuV) = Factor (dB) + Meter Reading (dBuV)
3. Factor (dB/m) = LISN Loss (dB) + Cable Loss (dB)

Tested by : C C.Wu

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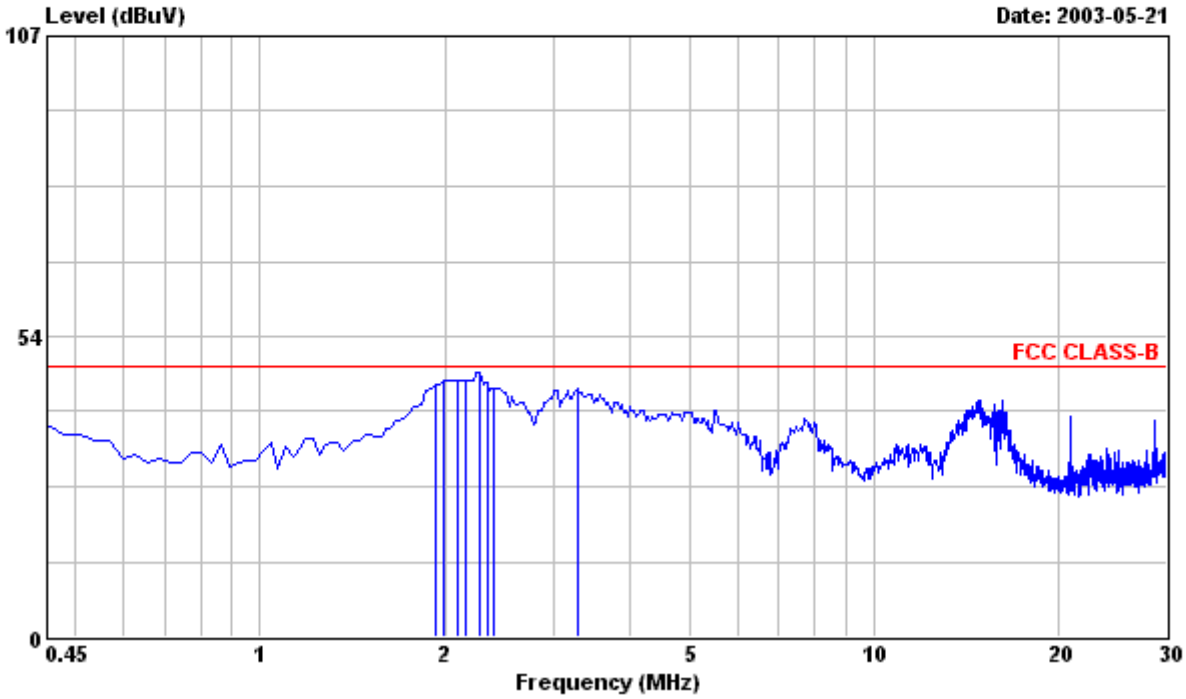
Data#: 8 File#: C:\Program Files\e3\EMI03-024-C(109F51 LG).emi



Site : PHILIPS EMI Shielding Room
Condition : FCC CLASS-B FCC_LCI_L2 NEUTRAL
EUT : PHILIPS 109F51 Serial No:TY0304253
Power : 220VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. 2ND MODEL LG PHILIPS CRT,RUN IBM
: V1.8 FONT 14 ARIAL "H" PATTERN.
: 3. 1280x1024/75Hz 80KHz MODE WITH COMPAQ
: ENC/P866/20E/8/128A TAI PC,ATI RADEON
: VE DDR VIDEO CAR WAS TESTED.

Frequency	Peak Reading	QP Reading	Limit	Factor	Emission Lavel NEUTRAL	Over Limit	Remark
1.928	44.50	---	48.00	0.40	44.90	-3.10	Peak
1.987	45.30	---	48.00	0.40	45.70	-2.30	Peak
2.105	45.40	---	48.00	0.40	45.80	-2.20	Peak
2.164	45.30	---	48.00	0.40	45.70	-2.30	Peak
2.282	46.80	---	48.00	0.40	47.20	-0.80	Peak
2.341	44.90	---	48.00	0.40	45.30	-2.70	Peak
2.400	44.00	---	48.00	0.40	44.40	-3.60	Peak
3.287	43.70	---	48.00	0.40	44.10	-3.90	Peak

Remarks: 1. All Readings are Peak & Quasi-Peak Values.
2. Emission Lavel (dBuV) = Factor (dB) + Meter Reading (dBuV)
3. Factor (dB/m) = LISN Loss (dB) + Cable Loss (dB)

Tested by : C C.Wu

8. .Radiated Emission Test

Radiated Emissions

FCC Part 15

Operating conditions EUT:

EUT powered on with scrolling “H” pattern.

Limits:

Frequency range (MHz)	Class A at 10m (dBuv) QP	Class B at 3m (dBuv) QP
30.0 – 88.0	39.0	40.0
88.0 – 216.0	43.5	43.5
216.0 – 960.0	46.5	46.0
960.0 – 1000.0	49.5	54.0
Above 1000.0	49.5	54.0 Average

Test Result :

Passed FCC Class B Limits

Remark:

Date of Test	: 21 May, 2003 to 23 May, 2003
Test Engineer	: C.C.Wu

For detail measurement results see next pages.

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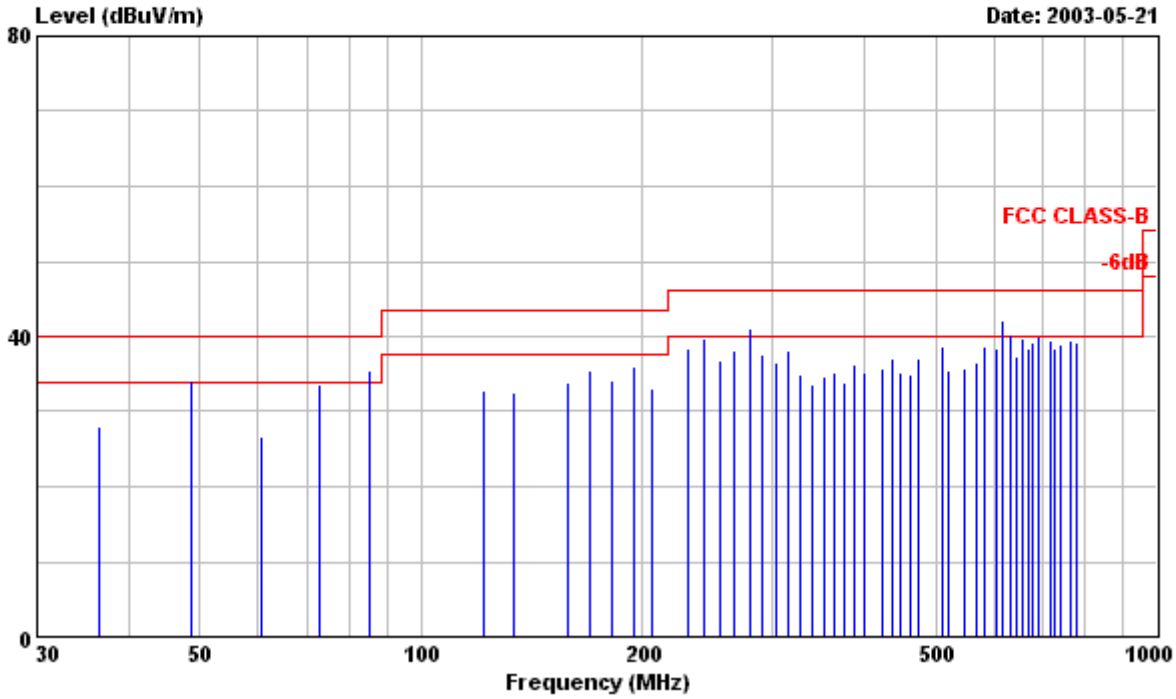

Site : PHILIPS EMI 3M open site
Condition : FCC CLASS-B 3m FCC-3M-FACTOR HORIZONTAL
EUT : PHILIPS 109F51 Serial No:TY0304253
Power : 120-240VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. 2ND MODEL LG PHILIPS CRT,RUN IBM
: V1.8 FONT 14 ARIAL "H" PATTERN.
: 3. 1280x1024/85Hz 91KHz MODE WITH COMPAQ
: ENC/P866/20E/8/128A TAI PC,ATI RADEON
: VE DDR VIDEO CAR WAS TESTED.

	Frequency	Peak Reading	QP reading	Limit	Factor	Emission Lavel HORIZONTAL	Over Limit	Remark
	MHz	dBuV	dBuV	dBuV/m	dB/m	dBuV/m	dBuV/m	
	36.420	14.90	---	40.00	13.09	27.99	-12.01	Peak
	48.530	---	21.79	40.00	11.01	32.80	-7.20	QP
!	48.530	23.30	---	40.00	11.01	34.31	-5.69	Peak
	60.670	16.70	---	40.00	9.91	26.61	-13.39	Peak
	72.800	23.40	---	40.00	10.12	33.52	-6.48	Peak
!	84.940	24.70	---	40.00	10.66	35.36	-4.64	Peak
!	84.940	---	23.53	40.00	10.66	34.19	-5.81	QP
	121.320	20.30	---	43.50	12.41	32.71	-10.79	Peak
	133.460	19.60	---	43.50	12.83	32.43	-11.07	Peak
	157.740	20.30	---	43.50	13.63	33.93	-9.57	Peak

Remarks: 1. All Readings are Peak & Quasi-peak values.
2. Emission Lavel (dBuV/m) = Factor (dB/m) + Meter Reading (dBuV/m)
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)

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	Frequency	Peak Reading	QP reading	Limit	Factor	Emission Lavel	Over Limit	Remark
						HORIZONTAL		
	MHz	dBuV	dBuV	dBuV/m	dB/m	dBuV/m	dBuV/m	
	169.870	21.40	---	43.50	13.96	35.36	-8.14	Peak
	182.010	19.70	---	43.50	14.59	34.29	-9.21	Peak
	194.150	20.10	---	43.50	15.79	35.89	-7.61	Peak
	206.300	16.30	---	43.50	16.89	33.19	-10.31	Peak
	230.520	19.40	---	46.00	18.99	38.39	-7.61	Peak
	242.670	19.80	---	46.00	19.91	39.71	-6.29	Peak
	254.810	16.10	---	46.00	20.76	36.86	-9.14	Peak
	266.940	16.80	---	46.00	21.43	38.23	-7.77	Peak
!	279.070	19.00	---	46.00	22.11	41.11	-4.89	Peak
	279.070	---	17.71	46.00	22.11	39.82	-6.18	QP
	291.210	14.80	---	46.00	22.73	37.53	-8.47	Peak
	303.320	19.90	---	46.00	16.55	36.45	-9.55	Peak
	315.470	21.40	---	46.00	16.80	38.20	-7.80	Peak
	327.610	18.00	---	46.00	17.06	35.06	-10.94	Peak
	339.750	16.40	---	46.00	17.30	33.70	-12.30	Peak
	351.890	17.20	---	46.00	17.53	34.73	-11.27	Peak
	364.010	17.50	---	46.00	17.77	35.27	-10.73	Peak
	376.150	15.90	---	46.00	17.98	33.88	-12.12	Peak
	388.280	18.20	---	46.00	18.19	36.39	-9.61	Peak
	400.420	16.90	---	46.00	18.40	35.30	-10.70	Peak
	424.670	17.10	---	46.00	18.75	35.85	-10.15	Peak
	436.800	18.10	---	46.00	18.92	37.02	-8.98	Peak
	448.940	16.00	---	46.00	19.08	35.08	-10.92	Peak
	461.070	15.60	---	46.00	19.23	34.83	-11.17	Peak
	473.210	17.60	---	46.00	19.39	36.99	-9.01	Peak
	509.600	18.70	---	46.00	19.87	38.57	-7.43	Peak
	521.730	15.50	---	46.00	20.05	35.55	-10.45	Peak
	546.000	15.40	---	46.00	20.42	35.82	-10.18	Peak
	570.280	15.80	---	46.00	20.80	36.60	-9.40	Peak
	582.400	17.80	---	46.00	20.97	38.77	-7.23	Peak
	606.670	17.10	---	46.00	21.36	38.46	-7.54	Peak
	618.780	---	18.20	46.00	21.67	39.87	-6.13	QP
!	618.780	20.40	---	46.00	21.67	42.07	-3.93	Peak
	630.920	---	17.22	46.00	21.98	39.20	-6.80	QP
!	630.920	18.30	---	46.00	21.98	40.28	-5.72	Peak
	643.060	15.20	---	46.00	22.25	37.45	-8.55	Peak
	655.200	---	14.52	46.00	22.51	37.03	-8.97	QP
	655.200	17.30	---	46.00	22.51	39.81	-6.19	Peak
	667.340	15.70	---	46.00	22.82	38.52	-7.48	Peak
	679.460	16.00	---	46.00	23.08	39.08	-6.92	Peak
	691.600	16.60	---	46.00	23.34	39.94	-6.06	Peak
	715.850	15.80	---	46.00	23.74	39.54	-6.46	Peak
	728.000	14.60	---	46.00	23.88	38.48	-7.52	Peak
	740.110	14.90	---	46.00	24.05	38.95	-7.05	Peak

Remarks: 1. All Readings are Peak & Quasi-peak values.
2. Emission Lavel (dBuV/m) = Factor (dB/m) + Meter Reading (dBuV/m)
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)

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Frequency MHz	Peak Reading dBuV	QP reading dBuV	Limit dBuV/m	Factor dB/m	Emission Lavel HORIZONTAL dBuV/m	Over Limit dBuV/m	Remark
764.370	15.10	---	46.00	24.36	39.46	-6.54	Peak
776.510	14.80	---	46.00	24.53	39.33	-6.67	Peak

Remarks: 1. All Readings are Peak & Quasi-peak values.
2. Emission Lavel (dBuV/m) = Factor (dB/m) + Meter Reading (dBuV/m)
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)

Tested by : C C.Wu

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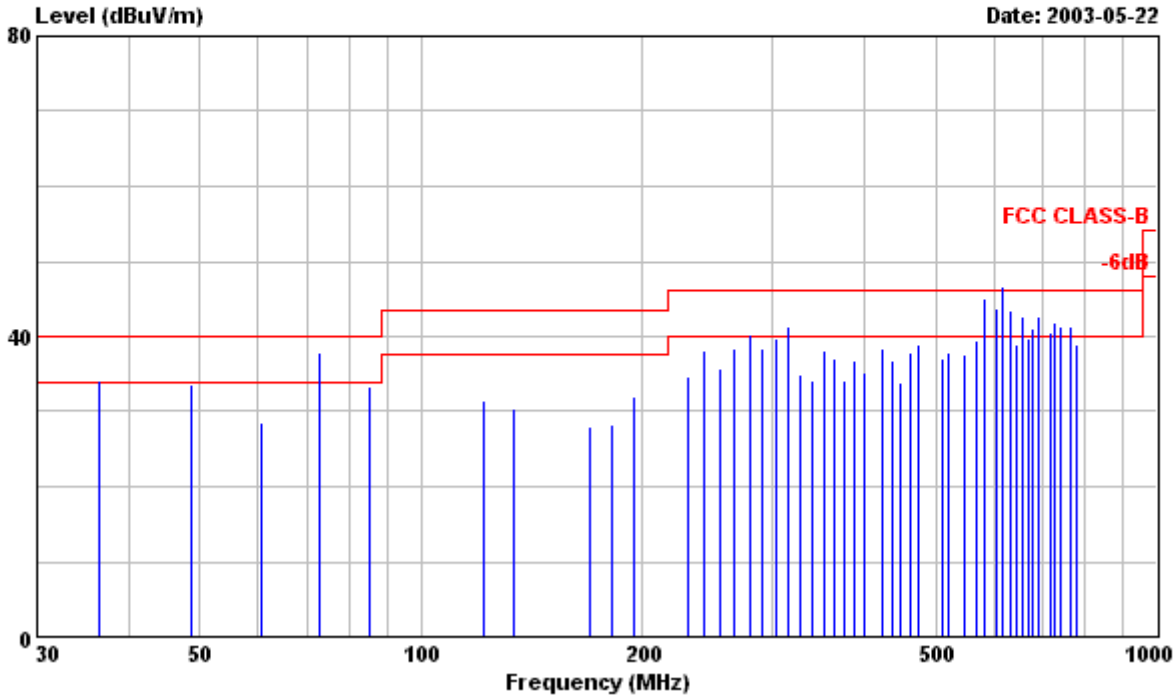

Site : PHILIPS EMI 3M open site
Condition : FCC CLASS-B 3m FCC-3M-FACTOR VERTICAL
EUT : PHILIPS 109F51 Serial No:TY0304253
Power : 120-240VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. 2ND MODEL LG PHILIPS CRT,RUN IBM
: V1.8 FONT 14 ARIAL "H" PATTERN.
: 3. 1280x1024/85Hz 91KHz MODE WITH COMPAQ
: ENC/P866/20E/8/128A TAI PC,ATI RADEON
: VE DDR VIDEO CAR WAS TESTED.

	Frequency	Peak Reading	QP reading	Limit	Factor	Emission Lavel VERTICAL	Over Limit	Remark
	MHz	dBuV	dBuV	dBuV/m	dB/m	dBuV/m	dBuV/m	
	36.420	---	19.50	40.00	13.09	32.59	-7.41	QP
!	36.420	21.20	---	40.00	13.09	34.29	-5.71	Peak
	48.530	22.50	---	40.00	11.01	33.51	-6.49	Peak
	60.670	18.70	---	40.00	9.91	28.61	-11.39	Peak
!	72.800	---	26.50	40.00	10.12	36.62	-3.38	QP
!	72.800	27.70	---	40.00	10.12	37.82	-2.18	Peak
	84.940	22.60	---	40.00	10.66	33.26	-6.74	Peak
	121.320	19.00	---	43.50	12.41	31.41	-12.09	Peak
	133.460	17.50	---	43.50	12.83	30.33	-13.17	Peak
	169.870	14.10	---	43.50	13.96	28.06	-15.44	Peak

Remarks: 1. All Readings are Peak & Quasi-peak values.
2. Emission Lavel (dBuV/m) = Factor (dB/m) + Meter Reading (dBuV/m)
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)

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	Frequency MHz	Peak Reading dBuV	QP reading dBuV	Limit dBuV/m	Factor dB/m	Emission Lavel VERTICAL dBuV/m	Over Limit dBuV/m	Remark
	182.010	13.70	---	43.50	14.59	28.29	-15.21	Peak
	194.150	16.10	---	43.50	15.79	31.89	-11.61	Peak
	230.520	15.70	---	46.00	18.99	34.69	-11.31	Peak
	242.670	18.20	---	46.00	19.91	38.11	-7.89	Peak
	254.810	15.10	---	46.00	20.76	35.86	-10.14	Peak
	266.940	17.00	---	46.00	21.43	38.43	-7.57	Peak
	279.070	---	16.70	46.00	22.11	38.81	-7.19	QP
!	279.070	18.10	---	46.00	22.11	40.21	-5.79	Peak
	291.210	15.60	---	46.00	22.73	38.33	-7.67	Peak
	303.320	23.30	---	46.00	16.55	39.85	-6.15	Peak
!	315.470	---	23.35	46.00	16.80	40.15	-5.85	QP
!	315.470	24.50	---	46.00	16.80	41.30	-4.70	Peak
	327.610	17.90	---	46.00	17.06	34.96	-11.04	Peak
	339.750	16.80	---	46.00	17.30	34.10	-11.90	Peak
	351.890	20.70	---	46.00	17.53	38.23	-7.77	Peak
	364.010	19.40	---	46.00	17.77	37.17	-8.83	Peak
	376.150	16.30	---	46.00	17.98	34.28	-11.72	Peak
	388.280	18.70	---	46.00	18.19	36.89	-9.11	Peak
	400.420	16.90	---	46.00	18.40	35.30	-10.70	Peak
	424.670	19.60	---	46.00	18.75	38.35	-7.65	Peak
	436.800	17.80	---	46.00	18.92	36.72	-9.28	Peak
	448.940	14.90	---	46.00	19.08	33.98	-12.02	Peak
	461.070	18.60	---	46.00	19.23	37.83	-8.17	Peak
	473.210	19.50	---	46.00	19.39	38.89	-7.11	Peak
	509.600	17.30	---	46.00	19.87	37.17	-8.83	Peak
	521.730	17.80	---	46.00	20.05	37.85	-8.15	Peak
	546.000	17.20	---	46.00	20.42	37.62	-8.38	Peak
	570.280	18.70	---	46.00	20.80	39.50	-6.50	Peak
!	582.400	24.20	---	46.00	20.97	45.17	-0.83	Peak
!	582.400	---	22.07	46.00	20.97	43.04	-2.96	QP
!	606.670	22.40	---	46.00	21.36	43.76	-2.24	Peak
!	606.670	---	19.27	46.00	21.36	40.63	-5.37	QP
!	618.780	---	22.43	46.00	21.67	44.10	-1.90	QP
X	618.780	25.10	---	46.00	21.67	46.77	0.77	Peak
!	630.920	21.50	---	46.00	21.98	43.48	-2.52	Peak
!	630.920	---	19.09	46.00	21.98	41.07	-4.93	QP
	643.060	16.70	---	46.00	22.25	38.95	-7.05	Peak
!	655.200	20.20	---	46.00	22.51	42.71	-3.29	Peak
	655.200	---	17.46	46.00	22.51	39.97	-6.03	QP
	667.340	16.90	---	46.00	22.82	39.72	-6.28	Peak
	679.460	---	15.00	46.00	23.08	38.08	-7.92	QP
!	679.460	18.10	---	46.00	23.08	41.18	-4.82	Peak
	691.600	---	16.48	46.00	23.34	39.82	-6.18	QP
!	691.600	19.30	---	46.00	23.34	42.64	-3.36	Peak

Remarks: 1. All Readings are Peak & Quasi-peak values.
2. Emission Lavel (dBuV/m) = Factor (dB/m) + Meter Reading (dBuV/m)
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)

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Frequency MHz	Peak Reading dBuV	QP reading dBuV	Limit dBuV/m	Factor dB/m	Emission Lavel VERTICAL dBuV/m	Over Limit dBuV/m	Remark
715.850	---	12.91	46.00	23.74	36.65	-9.35	QP
! 715.850	16.80	---	46.00	23.74	40.54	-5.46	Peak
728.000	---	14.54	46.00	23.88	38.42	-7.58	QP
! 728.000	17.90	---	46.00	23.88	41.78	-4.22	Peak
! 740.110	17.20	---	46.00	24.05	41.25	-4.75	Peak
740.110	---	14.20	46.00	24.05	38.25	-7.75	QP
764.370	---	12.98	46.00	24.36	37.34	-8.66	QP
! 764.370	16.90	---	46.00	24.36	41.26	-4.74	Peak
776.510	14.50	---	46.00	24.53	39.03	-6.97	Peak

Remarks: 1. All Readings are Peak & Quasi-peak values.
2. Emission Lavel (dBuV/m) = Factor (dB/m) + Meter Reading (dBuV/m)
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)

Tested by : C C.Wu

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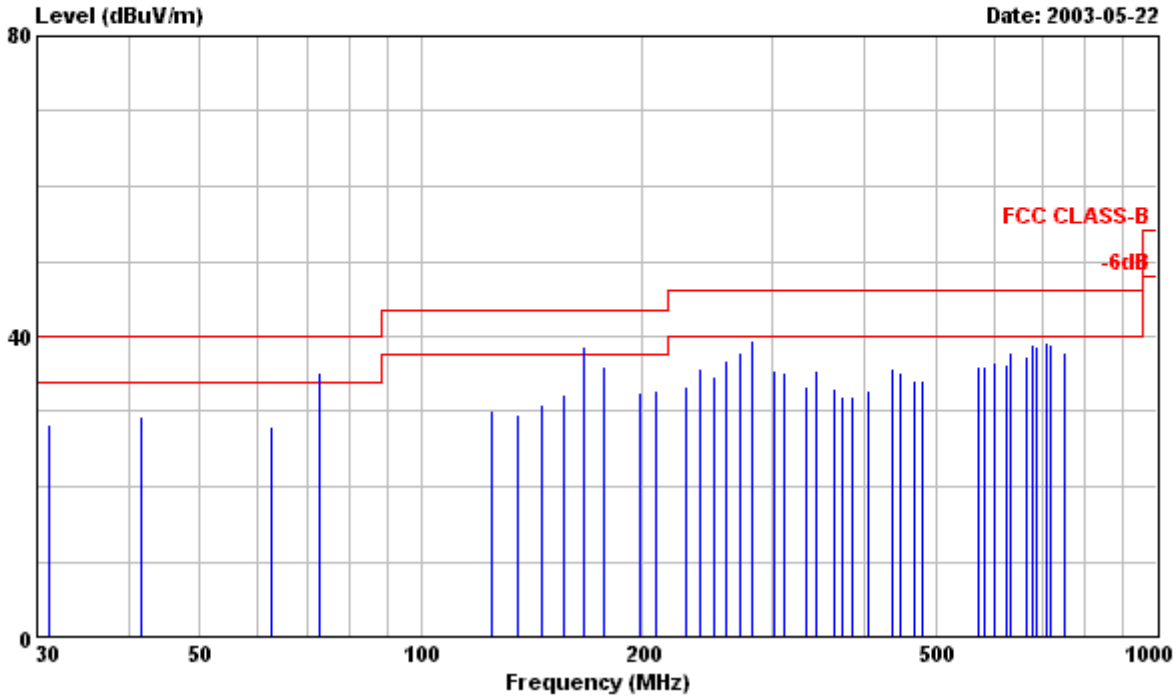
Data#: 3 File#: C:\Program Files\e3\EMI03-024-R.emi



Site : PHILIPS EMI 3M open site
Condition : FCC CLASS-B 3m FCC-3M-FACTOR HORIZONTAL
EUT : PHILIPS 109F51 Serial No:TY0304253
Power : 120-240VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. 2ND MODEL LG PHILIPS CRT,RUN IBM
: V1.8 FONT 14 ARIAL "H" PATTERN.
: 3. 1280x1024/75Hz 80KHz MODE WITH COMPAQ
: ENC/P866/20E/8/128A TAI PC,ATI RADEON
: VE DDR VIDEO CAR WAS TESTED.

	Frequency	Peak Reading	QP reading	Limit	Factor	Emission Lavel HORIZONTAL	Over Limit	Remark
	MHz	dBuV	dBuV	dBuV/m	dB/m	dBuV/m	dBuV/m	
	31.190	13.79	---	40.00	14.48	28.27	-11.73	Peak
	41.610	17.30	---	40.00	11.91	29.21	-10.79	Peak
	62.440	18.19	---	40.00	9.93	28.12	-11.88	Peak
	72.830	---	23.60	40.00	10.12	33.72	-6.28	QP
!	72.830	25.00	---	40.00	10.12	35.12	-4.88	Peak
	124.830	17.60	---	43.50	12.50	30.10	-13.40	Peak
	135.240	16.79	---	43.50	12.89	29.68	-13.82	Peak
	145.650	17.70	---	43.50	13.27	30.97	-12.53	Peak
	156.070	18.60	---	43.50	13.58	32.18	-11.32	Peak
!	166.460	24.90	---	43.50	13.88	38.78	-4.72	Peak

Remarks: 1. All Readings are Peak & Quasi-peak values.
2. Emission Lavel (dBuV/m) = Factor (dB/m) + Meter Reading (dBuV/m)
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)

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Frequency MHz	Peak Reading dBuV	QP reading dBuV	Limit dBuV/m	Factor dB/m	Emission Lavel HORIZONTAL dBuV/m	Over Limit dBuV/m	Remark
166.460	---	23.41	43.50	13.88	37.29	-6.21	QP
176.870	21.90	---	43.50	14.21	36.11	-7.39	Peak
197.670	16.30	---	43.50	16.11	32.41	-11.09	Peak
208.060	15.90	---	43.50	17.02	32.92	-10.58	Peak
228.860	14.60	---	46.00	18.79	33.39	-12.61	Peak
239.260	16.00	---	46.00	19.65	35.65	-10.35	Peak
249.670	14.20	---	46.00	20.43	34.63	-11.37	Peak
260.070	15.80	---	46.00	21.07	36.87	-9.13	Peak
270.470	16.10	---	46.00	21.64	37.74	-8.26	Peak
280.880	17.20	---	46.00	22.21	39.41	-6.59	Peak
301.670	19.10	---	46.00	16.50	35.60	-10.40	Peak
312.080	18.50	---	46.00	16.73	35.23	-10.77	Peak
332.880	16.10	---	46.00	17.16	33.26	-12.74	Peak
343.280	18.00	---	46.00	17.37	35.37	-10.63	Peak
364.080	15.40	---	46.00	17.77	33.17	-12.83	Peak
374.500	14.10	---	46.00	17.95	32.05	-13.95	Peak
384.900	13.80	---	46.00	18.14	31.94	-14.06	Peak
405.700	14.30	---	46.00	18.48	32.78	-13.22	Peak
436.910	16.90	---	46.00	18.92	35.82	-10.18	Peak
447.320	16.10	---	46.00	19.06	35.16	-10.84	Peak
468.110	14.70	---	46.00	19.33	34.03	-11.97	Peak
478.520	15.00	---	46.00	19.45	34.45	-11.55	Peak
572.150	15.29	---	46.00	20.83	36.12	-9.88	Peak
582.530	14.90	---	46.00	20.97	35.87	-10.13	Peak
603.340	15.30	---	46.00	21.30	36.60	-9.40	Peak
624.130	14.40	---	46.00	21.83	36.23	-9.77	Peak
634.550	15.70	---	46.00	22.04	37.74	-8.26	Peak
665.750	14.60	---	46.00	22.77	37.37	-8.63	Peak
676.150	15.90	---	46.00	22.98	38.88	-7.12	Peak
686.550	15.30	---	46.00	23.24	38.54	-7.46	Peak
707.360	15.70	---	46.00	23.60	39.30	-6.70	Peak
717.760	15.20	---	46.00	23.74	38.94	-7.06	Peak
748.970	13.60	---	46.00	24.18	37.78	-8.22	Peak

Remarks: 1. All Readings are Peak & Quasi-peak values.
2. Emission Lavel (dBuV/m) = Factor (dB/m) + Meter Reading (dBuV/m)
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)

Tested by : C C.Wu

PHILIPS
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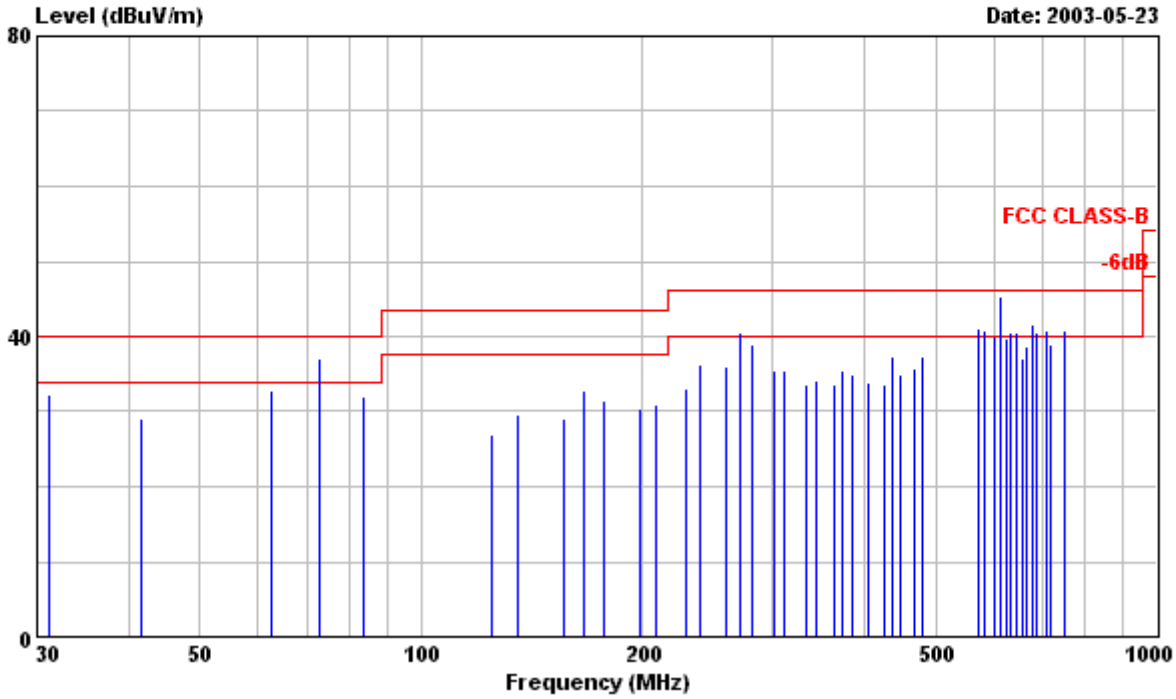
Data#: 4 File#: C:\Program Files\e3\EMI03-024-R.emi



Site : PHILIPS EMI 3M open site
Condition : FCC CLASS-B 3m FCC-3M-FACTOR VERTICAL
EUT : PHILIPS 109F51 Serial No:TY0304253
Power : 120-240VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. 2ND MODEL LG PHILIPS CRT,RUN IBM
: V1.8 FONT 14 ARIAL "H" PATTERN.
: 3. 1280x1024/75Hz 80KHz MODE WITH COMPAQ
: ENC/P866/20E/8/128A TAI PC,ATI RADEON
: VE DDR VIDEO CAR WAS TESTED.

	Frequency	Peak Reading	QP reading	Limit	Factor	Emission Lavel VERTICAL	Over Limit	Remark
	MHz	dBuV	dBuV	dBuV/m	dB/m	dBuV/m	dBuV/m	
	31.190	17.70	---	40.00	14.48	32.18	-7.82	Peak
	41.610	17.10	---	40.00	11.91	29.01	-10.99	Peak
	62.440	22.99	---	40.00	9.93	32.92	-7.08	Peak
!	72.830	---	25.94	40.00	10.12	36.06	-3.94	QP
!	72.830	27.00	---	40.00	10.12	37.12	-2.88	Peak
	83.240	21.40	---	40.00	10.57	31.97	-8.03	Peak
	124.830	14.50	---	43.50	12.50	27.00	-16.50	Peak
	135.240	16.70	---	43.50	12.89	29.59	-13.91	Peak
	156.070	15.40	---	43.50	13.58	28.98	-14.52	Peak
	166.460	18.80	---	43.50	13.88	32.68	-10.82	Peak

Remarks: 1. All Readings are Peak & Quasi-peak values.
2. Emission Lavel (dBuV/m) = Factor (dB/m) + Meter Reading (dBuV/m)
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)

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	Frequency	Peak Reading	QP reading	Limit	Factor	Emission Lavel	Over Limit	Remark
						VERTICAL		
	MHz	dBuV	dBuV	dBuV/m	dB/m	dBuV/m	dBuV/m	
	176.870	17.20	---	43.50	14.21	31.41	-12.09	Peak
	197.670	14.20	---	43.50	16.11	30.31	-13.19	Peak
	208.060	13.90	---	43.50	17.02	30.92	-12.58	Peak
	228.860	14.30	---	46.00	18.79	33.09	-12.91	Peak
	239.260	16.70	---	46.00	19.65	36.35	-9.65	Peak
	260.070	14.80	---	46.00	21.07	35.87	-10.13	Peak
!	270.470	18.90	---	46.00	21.64	40.54	-5.46	Peak
	270.470	---	16.85	46.00	21.64	38.49	-7.51	QP
	280.880	16.70	---	46.00	22.21	38.91	-7.09	Peak
	301.670	19.10	---	46.00	16.50	35.60	-10.40	Peak
	312.080	18.70	---	46.00	16.73	35.43	-10.57	Peak
	332.880	16.50	---	46.00	17.16	33.66	-12.34	Peak
	343.280	16.70	---	46.00	17.37	34.07	-11.93	Peak
	364.080	15.90	---	46.00	17.77	33.67	-12.33	Peak
	374.500	17.40	---	46.00	17.95	35.35	-10.65	Peak
	384.910	16.90	---	46.00	18.14	35.04	-10.96	Peak
	405.700	15.50	---	46.00	18.48	33.98	-12.02	Peak
	426.500	14.70	---	46.00	18.77	33.47	-12.53	Peak
	436.910	18.40	---	46.00	18.92	37.32	-8.68	Peak
	447.320	15.90	---	46.00	19.06	34.96	-11.04	Peak
	468.110	16.30	---	46.00	19.33	35.63	-10.37	Peak
	478.520	17.90	---	46.00	19.45	37.35	-8.65	Peak
	572.150	---	17.84	46.00	20.83	38.67	-7.33	QP
!	572.150	20.29	---	46.00	20.83	41.12	-4.88	Peak
!	582.530	19.90	---	46.00	20.97	40.87	-5.13	Peak
	582.530	---	17.02	46.00	20.97	37.99	-8.01	QP
	603.340	18.60	---	46.00	21.30	39.90	-6.10	Peak
	603.340	---	16.17	46.00	21.30	37.47	-8.53	QP
!	613.750	23.70	---	46.00	21.57	45.27	-0.73	Peak
!	613.750	---	22.29	46.00	21.57	43.86	-2.14	QP
	624.130	17.80	---	46.00	21.83	39.63	-6.37	Peak
!	634.550	18.60	---	46.00	22.04	40.64	-5.36	Peak
	634.550	---	15.92	46.00	22.04	37.96	-8.04	QP
	644.950	---	15.60	46.00	22.30	37.90	-8.10	QP
!	644.950	18.20	---	46.00	22.30	40.50	-5.50	Peak
	655.350	14.60	---	46.00	22.51	37.11	-8.89	Peak
	665.750	15.90	---	46.00	22.77	38.67	-7.33	Peak
	676.150	---	15.97	46.00	22.98	38.95	-7.05	QP
!	676.150	18.70	---	46.00	22.98	41.68	-4.32	Peak
!	686.550	17.40	---	46.00	23.24	40.64	-5.36	Peak
	686.550	---	14.08	46.00	23.24	37.32	-8.68	QP
	707.360	---	14.80	46.00	23.60	38.40	-7.60	QP
!	707.360	17.20	---	46.00	23.60	40.80	-5.20	Peak
	717.760	15.20	---	46.00	23.74	38.94	-7.06	Peak

Remarks: 1. All Readings are Peak & Quasi-peak values.
2. Emission Lavel (dBuV/m) = Factor (dB/m) + Meter Reading (dBuV/m)
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)

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Frequency	Peak Reading	QP reading	Limit	Factor	Emission Lavel VERTICAL	Over Limit	Remark
MHz	dBuV	dBuV	dBuV/m	dB/m	dBuV/m	dBuV/m	
748.970	---	13.25	46.00	24.18	37.43	-8.57	QP
! 748.970	16.70	---	46.00	24.18	40.88	-5.12	Peak

Remarks: 1. All Readings are Peak & Quasi-peak values.
2. Emission Lavel (dBuV/m) = Factor (dB/m) + Meter Reading (dBuV/m)
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)

Tested by : C C.Wu