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.: TYR87-2054 Date : 27 August, 2003 Page : Page 1 of 34

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. : A3KM119
Model Name : E772-1
Serial Number : TY0304424
Description : 17” SXGA color monitor, Max. resolution 1280x1024/60Hz

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 : 22 Aug. 2003

Date of performance of test : 25 Aug., 2003 to 26 Aug., 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, 17" color monitor :

Model No. : E772-1
FCC ID : A3KM119
Brand : Fujitsu Siemens

The color monitor automatically scans horizontal frequencies between 30KHz and 72KHz , 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 1280x1024 pixels.

The monitor has 8 factory-preset modes as indicated in the following table:

	Resolution	H. freq.	V. freq.	H.	V.
1.	720 x 400	31.47 KHz	70Hz (VGA)	-	+
2.	640 x 480	31.47 KHz	60Hz (VGA)	-	-
3.	640 x 480	43.3 KHz	85Hz (VESA)	-	-
4.	800 x 600	46.9 KHz	75Hz (VESA)	+	+
5.	800 x 600	53.674KHz	85Hz (VESA)	+	+
6.	1024 x 768	60.0 KHz	75Hz (VESA)	+	+
7.	1024 x 768	68.7 KHz	85Hz (VESA)	+	+
8.	1280 x 1024	64.0 KHz	60Hz (VESA)	+	+

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	02/27/2003	02/27/2004
EMI Receiver	R & S ESVS30	841977/006	02/27/2003	02/27/2004
LISN	EMCO 3825/2	9311-2153	06/16/2003	06/16/2004
LISN	EMCO 3825/2	9311-2154	06/16/2003	06/16/2004
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	09/02/2002	09/02/2003
RF Preselector	HP85685A	2620A00338	09/02/2002	09/02/2003
QP Adapter	HP85650A	2811A01324	09/02/2002	09/02/2003
EMI Receiver	R & S ESVS30	841977/006	02/27/2003	02/27/2004
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

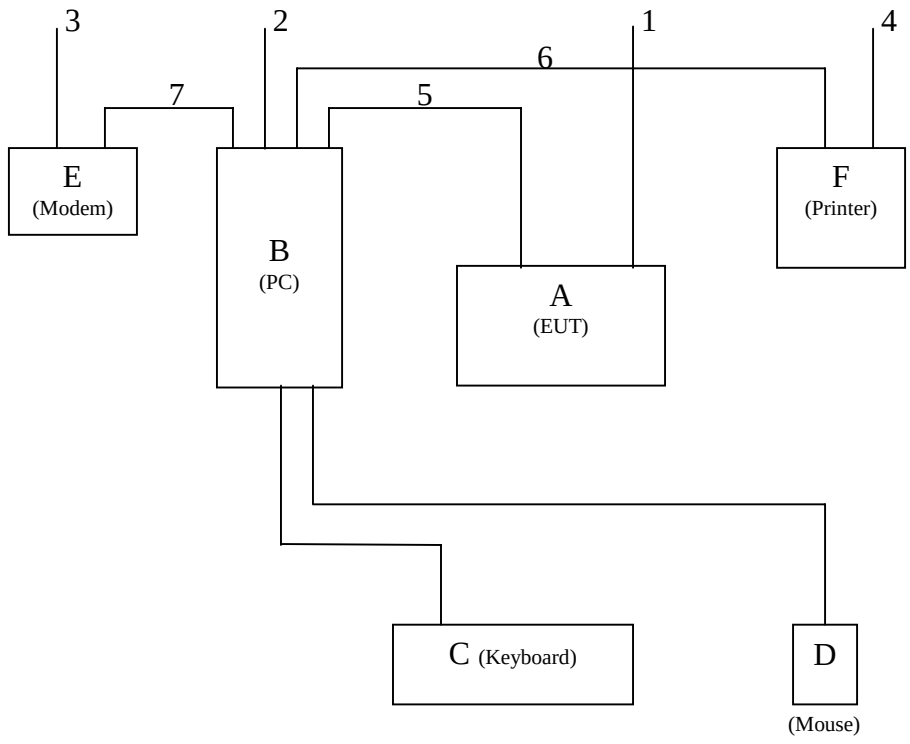
The system was configured for testing in a typical fashion (as a customer would normally use it) according to ANSI C63.4-1992, please see the photographs for detail. For system measurement, the EUT "E772-1" were connected to:

	Description	Brand/ Model No.	Serial No.	FCC ID	Remark
A	Monitor	Fujitsu Siemens E772-1	TY0304424	A3KM119	EUT
B	PC	Fujitsu Siemens MT8-D1387	YBSX459065	FCC logo	
C	Keyboard	Fujitsu Siemens S26381-K240-V110	YBKBO21111264507	HSS011A5TK240	
D	Mouse	Fujitsu Siemens M-S69	HCA23608284	JNZ211443	
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	EMI03-034-C	1024x768	68.7KHz/85Hz	D-sub
		1280x1024	64KHz/60Hz	D-sub
Radiated	EMI03-034-R	1024x768	68.7KHz/85Hz	D-sub
		1280x1024	64KHz/60Hz	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	: 25 Aug., 2003 to 26 Aug., 2003
Test Engineer	: C.C.Wu

For detail measurement results see next pages.

PHILIPS
Philips Electronics Inductries (Taiwan)., Ltd.
No.5, Tze Chiang 1 Road, Chungli Inductrial Park,
Chungli, Taiwan, R.O.C.
Tel:+886-3-4549862 Fax:+886-3-4549887

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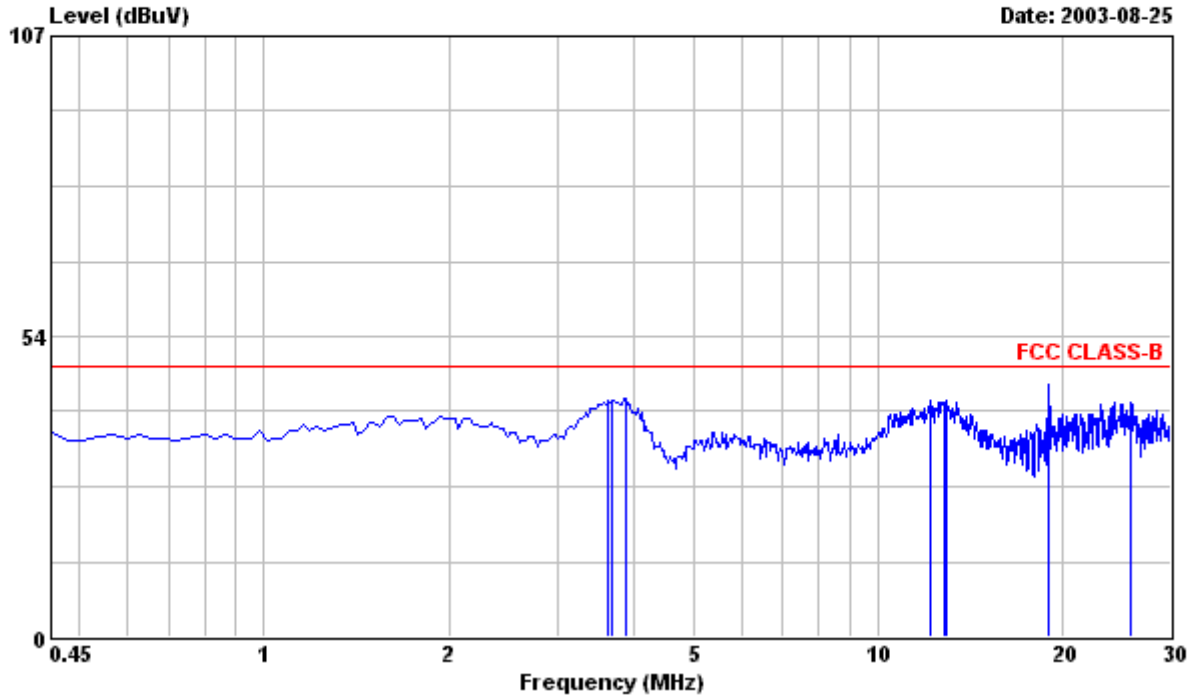

Site : PHILIPS EMI Shielding Room
Condition : FCC CLASS-B FCC_LCI_L1 LINE
EUT : FSC E772-1 Serial No:TY0304424
Power : 120VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. 2ND MODEL HF CRT,RUN FSC "H" PATTERN.
: 3. 1024x768/85Hz 68.7KHz MODE WITH FSC
: MT8-D1387 PC,VIDEO CARD ONBOARD
: WAS TESTED.

Frequency	Peak Reading	QP Reading	Limit Line	Factor	Emission Lavel	Over Limit	Remark
3.641	41.70	---	48.00	0.40	42.10	-5.90	Peak
3.701	41.70	---	48.00	0.40	42.10	-5.90	Peak
3.878	42.10	---	48.00	0.40	42.50	-5.50	Peak
12.152	41.30	---	48.00	0.65	41.95	-6.05	Peak
12.802	41.10	---	48.00	0.66	41.76	-6.24	Peak
12.920	41.30	---	48.00	0.66	41.96	-6.04	Peak
19.007	44.10	---	48.00	0.78	44.88	-3.12	Peak
25.833	40.90	---	48.00	0.88	41.78	-6.22	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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Philips Electronics Inductries (Taiwan)., Ltd.
No.5, Tze Chiang 1 Road, Chungli Inductrial Park,
Chungli, Taiwan, R.O.C.
Tel:+886-3-4549862 Fax:+886-3-4549887

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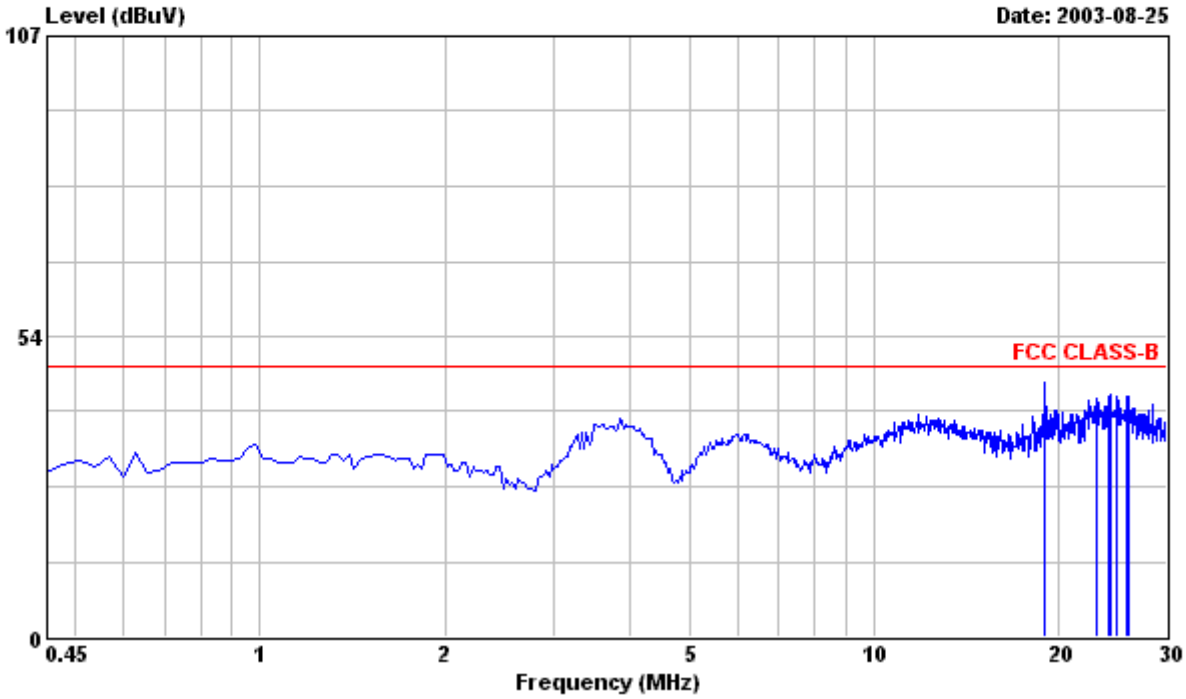

Site : PHILIPS EMI Shielding Room
Condition : FCC CLASS-B FCC_LCI_L2 NEUTRAL
EUT : FSC E772-1 Serial No:TY0304424
Power : 120VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. 2ND MODEL HF CRT,RUN FSC "H" PATTERN.
: 3. 1024x768/85Hz 68.7KHz MODE WITH FSC
: MT8-D1387 PC,VIDEO CARD ONBOARD
: WAS TESTED.

Frequency	Peak Reading	QP Reading	Limit	Factor	Emission Lavel NEUTRAL	Over Limit	Remark
19.007	44.51	---	48.00	0.86	45.37	-2.63	Peak
23.085	41.50	---	48.00	0.96	42.46	-5.54	Peak
24.090	41.40	---	48.00	0.98	42.38	-5.62	Peak
24.267	42.10	---	48.00	0.99	43.09	-4.91	Peak
24.326	41.60	---	48.00	0.99	42.59	-5.41	Peak
24.917	41.80	---	48.00	1.00	42.80	-5.20	Peak
25.893	41.70	---	48.00	0.98	42.68	-5.32	Peak
26.040	41.30	---	48.00	0.98	42.28	-5.72	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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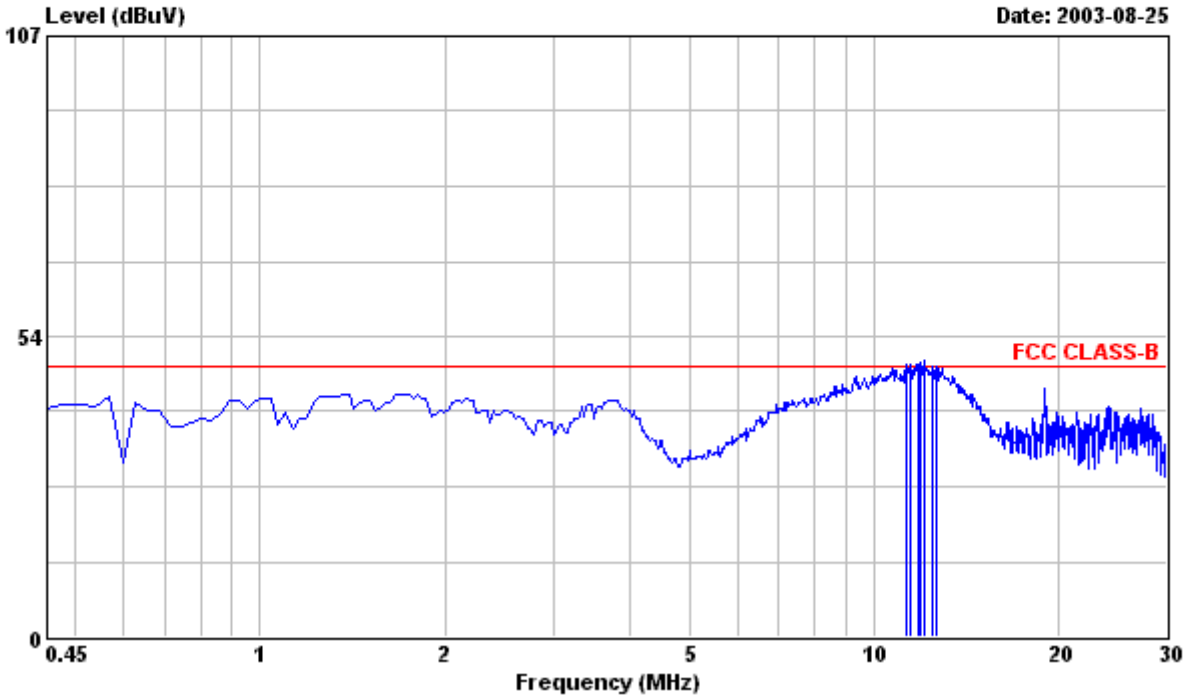

Site : PHILIPS EMI Shielding Room
Condition : FCC CLASS-B FCC_LCI_L1 LINE
EUT : FSC E772-1 Serial No:TY0304424
Power : 220VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. 2ND MODEL HF CRT,RUN FSC "H" PATTERN.
: 3. 1024x768/85Hz 68.7KHz MODE WITH FSC
: MT8-D1387 PC,VIDEO CARD ONBOARD
: WAS TESTED.

Frequency	Peak Reading	QP Reading	Limit LINE	Factor	Emission Lavel	Over Limit	Remark
11.265	---	41.50	48.00	0.63	42.13	-5.87	QP
11.265	48.00	---	48.00	0.63	48.63	0.63	Peak
11.443	47.20	---	48.00	0.63	47.83	-0.17	Peak
11.443	---	40.68	48.00	0.63	41.31	-6.69	QP
11.502	47.80	---	48.00	0.64	48.44	0.44	Peak
11.502	---	41.61	48.00	0.64	42.25	-5.75	QP
11.797	---	42.00	48.00	0.64	42.64	-5.36	QP
11.797	47.70	---	48.00	0.64	48.34	0.34	Peak
11.915	---	42.14	48.00	0.64	42.78	-5.22	QP
11.915	48.10	---	48.00	0.64	48.74	0.74	Peak
12.093	48.60	---	48.00	0.65	49.25	1.25	Peak
12.093	---	42.67	48.00	0.65	43.32	-4.68	QP
12.447	---	41.42	48.00	0.65	42.07	-5.93	QP

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)

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Frequency	Peak Reading	QP Reading	Limit LINE	Factor	Emission Lavel	Over Limit	Remark
12.447	47.60	---	48.00	0.65	48.25	0.25	Peak
12.684	47.40	---	48.00	0.66	48.06	0.06	Peak
12.684	---	40.90	48.00	0.66	41.56	-6.44	QP

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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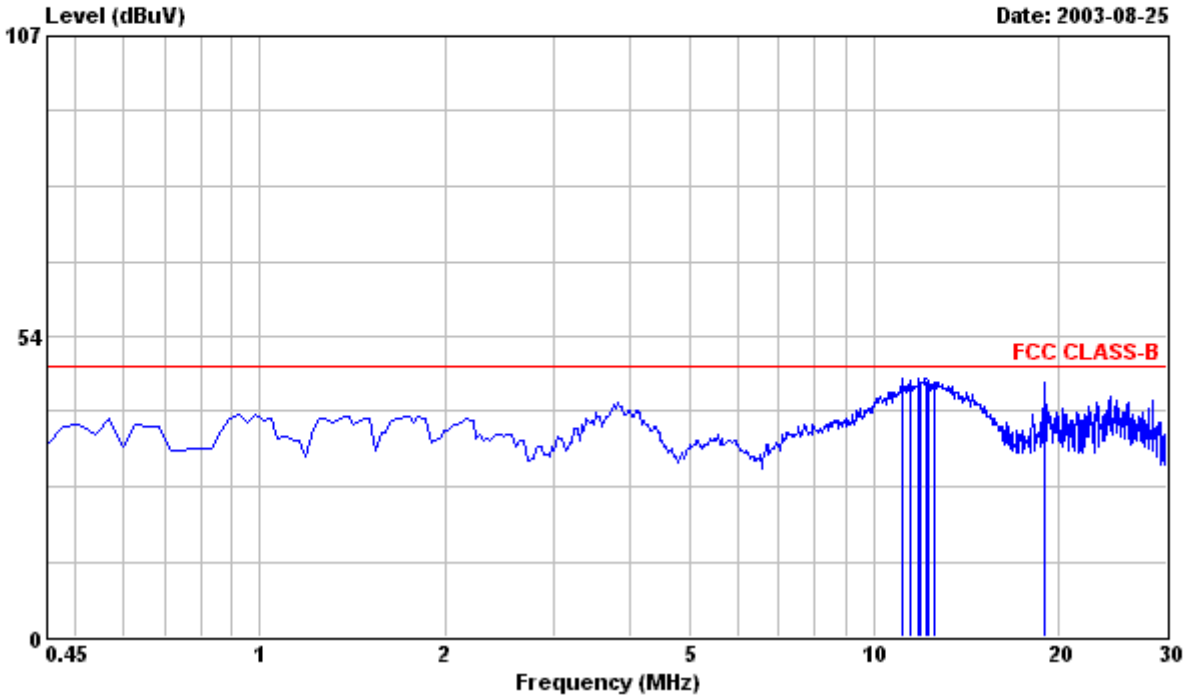

Site : PHILIPS EMI Shielding Room
Condition : FCC CLASS-B FCC_LCI_L2 NEUTRAL
EUT : FSC E772-1 Serial No:TY0304424
Power : 220VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. 2ND MODEL HF CRT,RUN FSC "H" PATTERN.
: 3. 1024x768/85Hz 68.7KHz MODE WITH FSC
: MT8-D1387 PC,VIDEO CARD ONBOARD
: WAS TESTED.

Frequency	Peak Reading	QP Reading	Limit	Factor	Emission Lavel NEUTRAL	Over Limit	Remark
11.147	45.30	---	48.00	0.63	45.93	-2.07	Peak
11.502	45.00	---	48.00	0.64	45.64	-2.36	Peak
11.856	45.40	---	48.00	0.64	46.04	-1.96	Peak
11.915	44.80	---	48.00	0.64	45.44	-2.56	Peak
12.211	45.40	---	48.00	0.65	46.05	-1.95	Peak
12.270	45.00	---	48.00	0.65	45.65	-2.35	Peak
12.566	44.70	---	48.00	0.66	45.36	-2.64	Peak
19.007	44.61	---	48.00	0.86	45.47	-2.53	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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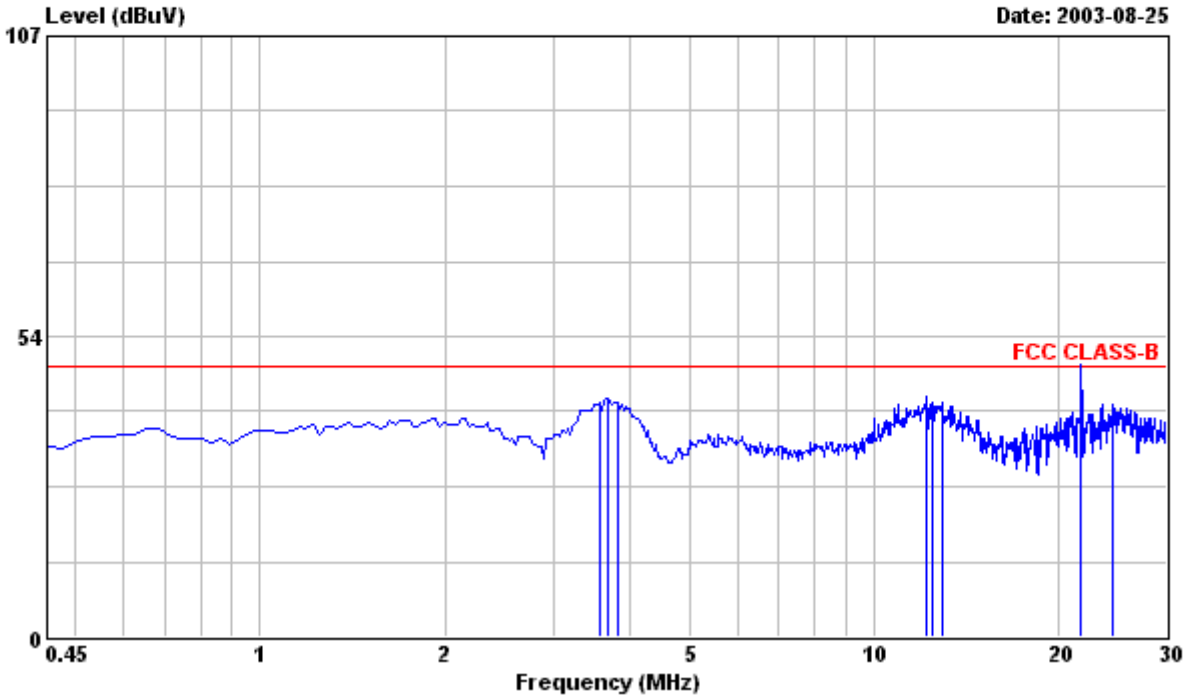

Site : PHILIPS EMI Shielding Room
Condition : FCC CLASS-B FCC_LCI_L1 LINE
EUT : FSC E772-1 Serial No:TY0304424
Power : 120VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. 2ND MODEL HF CRT,RUN FSC "H" PATTERN.
: 3. 1280x1024/60Hz 64KHz MODE WITH FSC
: MT8-D1387 PC,VIDEO CARD ONBOARD
: WAS TESTED.

Frequency	Peak Reading	QP Reading	Limit	Factor	Emission Lavel LINE	Over Limit	Remark
3.582	41.20	---	48.00	0.40	41.60	-6.40	Peak
3.701	42.10	---	48.00	0.40	42.50	-5.50	Peak
3.819	41.50	---	48.00	0.40	41.90	-6.10	Peak
12.211	42.00	---	48.00	0.65	42.65	-5.35	Peak
12.477	40.91	---	48.00	0.65	41.56	-6.44	Peak
12.920	41.10	---	48.00	0.66	41.76	-6.24	Peak
21.785	---	45.60	48.00	0.84	46.44	-1.56	QP
21.785	47.50	---	48.00	0.84	48.34	0.34	Peak
24.563	40.60	---	48.00	0.89	41.49	-6.51	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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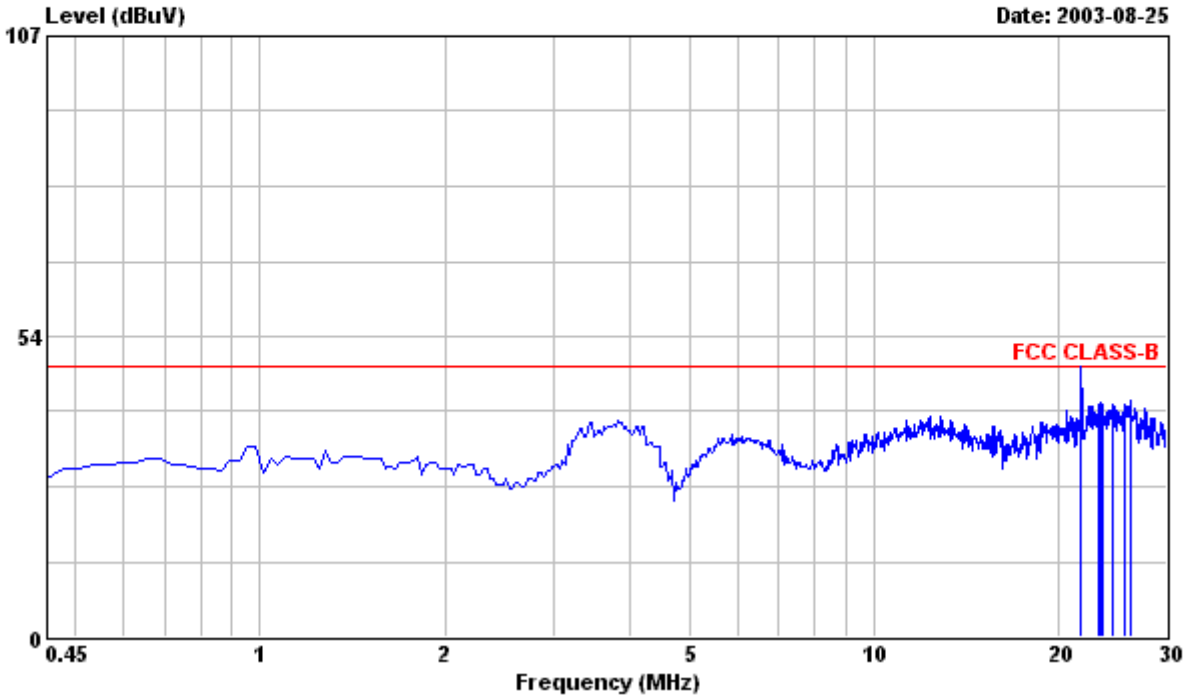

Site : PHILIPS EMI Shielding Room
Condition : FCC CLASS-B FCC_LCI_L2 NEUTRAL
EUT : FSC E772-1 Serial No:TY0304424
Power : 120VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. 2ND MODEL HF CRT,RUN FSC "H" PATTERN.
: 3. 1280x1024/60Hz 64KHz MODE WITH FSC
: MT8-D1387 PC,VIDEO CARD ONBOARD
: WAS TESTED.

Frequency	Peak Reading	QP Reading	Limit	Factor	Emission Lavel NEUTRAL	Over Limit	Remark
21.785	---	45.21	48.00	0.94	46.15	-1.85	QP
21.785	47.10	---	48.00	0.94	48.04	0.04	Peak
23.204	40.40	---	48.00	0.97	41.37	-6.63	Peak
23.440	40.30	---	48.00	0.97	41.27	-6.73	Peak
23.499	40.90	---	48.00	0.97	41.87	-6.13	Peak
23.558	40.50	---	48.00	0.97	41.47	-6.53	Peak
24.445	40.50	---	48.00	0.99	41.49	-6.51	Peak
25.627	40.50	---	48.00	0.99	41.49	-6.51	Peak
26.159	41.09	---	48.00	0.98	42.07	-5.93	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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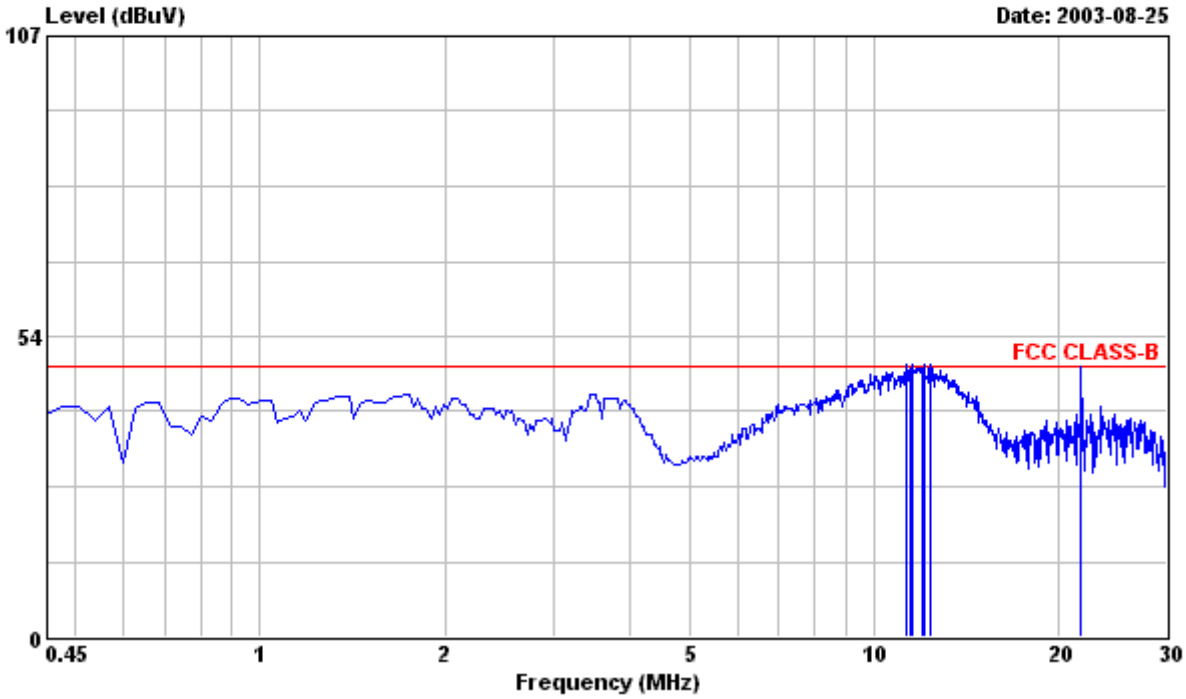
Tel:+886-3-4549862 Fax:+886-3-4549887

Data#: 7 File#: C:\Program Files\e3\EMI03-034-C(FCS E772-1).emi



Site : PHILIPS EMI Shielding Room
Condition : FCC CLASS-B FCC_LCI_L1 LINE
EUT : FSC E772-1 Serial No:TY0304424
Power : 220VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. 2ND MODEL HF CRT,RUN FSC "H" PATTERN.
: 3. 1280x1024/60Hz 64KHz MODE WITH FSC
: MT8-D1387 PC,VIDEO CARD ONBOARD
: WAS TESTED.

Frequency	Peak Reading	QP Reading	Limit	Factor	Emission Lavel LINE	Over Limit	Remark
11.265	---	41.88	48.00	0.63	42.51	-5.49	QP
11.265	47.70	---	48.00	0.63	48.33	0.33	Peak
11.502	47.20	---	48.00	0.64	47.84	-0.16	Peak
11.502	---	40.83	48.00	0.64	41.47	-6.53	QP
11.561	47.90	---	48.00	0.64	48.54	0.54	Peak
11.561	---	41.92	48.00	0.64	42.56	-5.44	QP
11.975	47.30	---	48.00	0.64	47.94	-0.06	Peak
11.975	---	40.90	48.00	0.64	41.54	-6.46	QP
12.093	48.00	---	48.00	0.65	48.65	0.65	Peak
12.093	---	41.93	48.00	0.65	42.58	-5.42	QP
12.329	---	40.91	48.00	0.65	41.56	-6.44	QP
12.329	47.30	---	48.00	0.65	47.95	-0.05	Peak
12.388	---	41.87	48.00	0.65	42.52	-5.48	QP

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)

PHILIPS

Philips Electronics Inductries (Taiwan)., Ltd.
No.5, Tze Chiang 1 Road, Chungli Inductrial Park,
Chungli, Taiwan, R.O.C.
Tel:+886-3-4549862 Fax:+886-3-4549887

Frequency	Peak Reading	QP Reading	Limit	Factor	Emission Lavel LINE	Over Limit	Remark
12.388	47.80	---	48.00	0.65	48.45	0.45	Peak
21.785	---	45.46	48.00	0.84	46.30	-1.70	QP
21.785	47.40	---	48.00	0.84	48.24	0.24	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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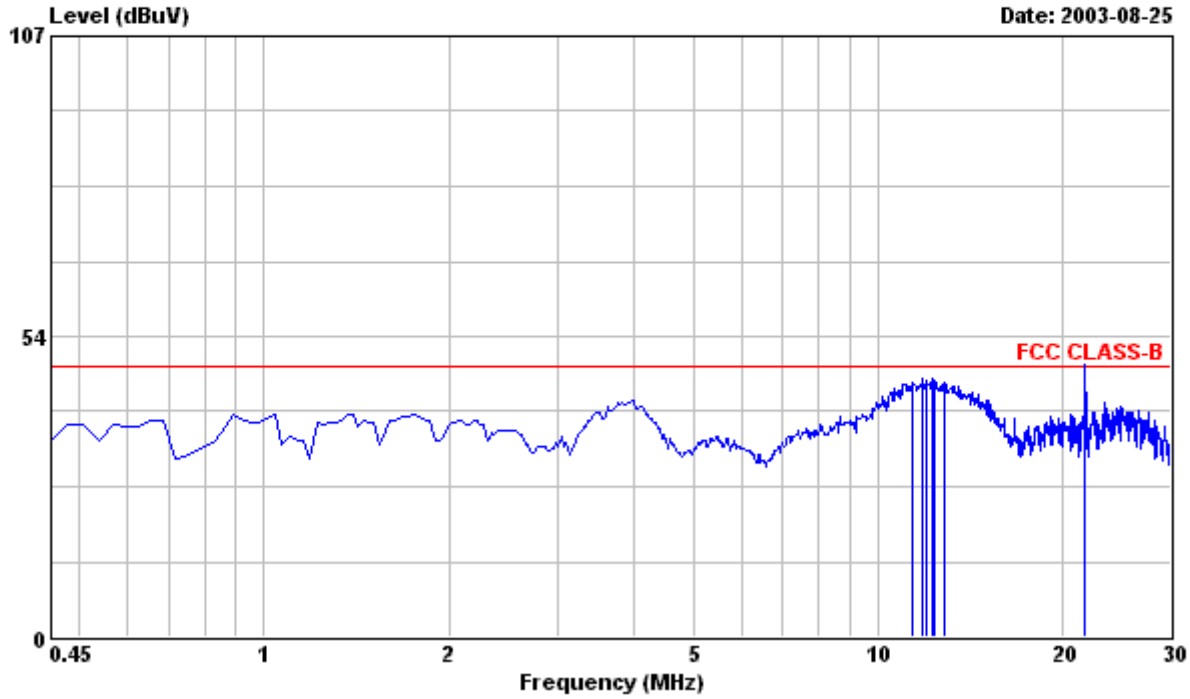
Chungli, Taiwan, R.O.C.
Tel:+886-3-4549862 Fax:+886-3-4549887

Data#: 8 File#: C:\Program Files\e3\EMI03-034-C(FCS E772-1).emi



Site : PHILIPS EMI Shielding Room
Condition : FCC CLASS-B FCC_LCI_L2 NEUTRAL
EUT : FSC E772-1 Serial No:TY0304424
Power : 220VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. 2ND MODEL HF CRT,RUN FSC "H" PATTERN.
: 3. 1280x1024/60Hz 64KHz MODE WITH FSC
: MT8-D1387 PC,VIDEO CARD ONBOARD
: WAS TESTED.

Frequency	Peak Reading	QP Reading	Limit	Factor	Emission Lavel NEUTRAL	Over Limit	Remark
11.384	44.80	---	48.00	0.63	45.43	-2.57	Peak
11.856	45.30	---	48.00	0.64	45.94	-2.06	Peak
12.034	45.00	---	48.00	0.65	45.65	-2.35	Peak
12.270	45.30	---	48.00	0.65	45.95	-2.05	Peak
12.329	45.00	---	48.00	0.65	45.65	-2.35	Peak
12.388	44.80	---	48.00	0.65	45.45	-2.55	Peak
12.802	44.50	---	48.00	0.66	45.16	-2.84	Peak
21.785	---	45.58	48.00	0.94	46.52	-1.48	QP
21.785	47.50	---	48.00	0.94	48.44	0.44	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	: 25 Aug., 2003 to 26 Aug., 2003
Test Engineer	: C.C.Wu

For detail measurement results see next pages.

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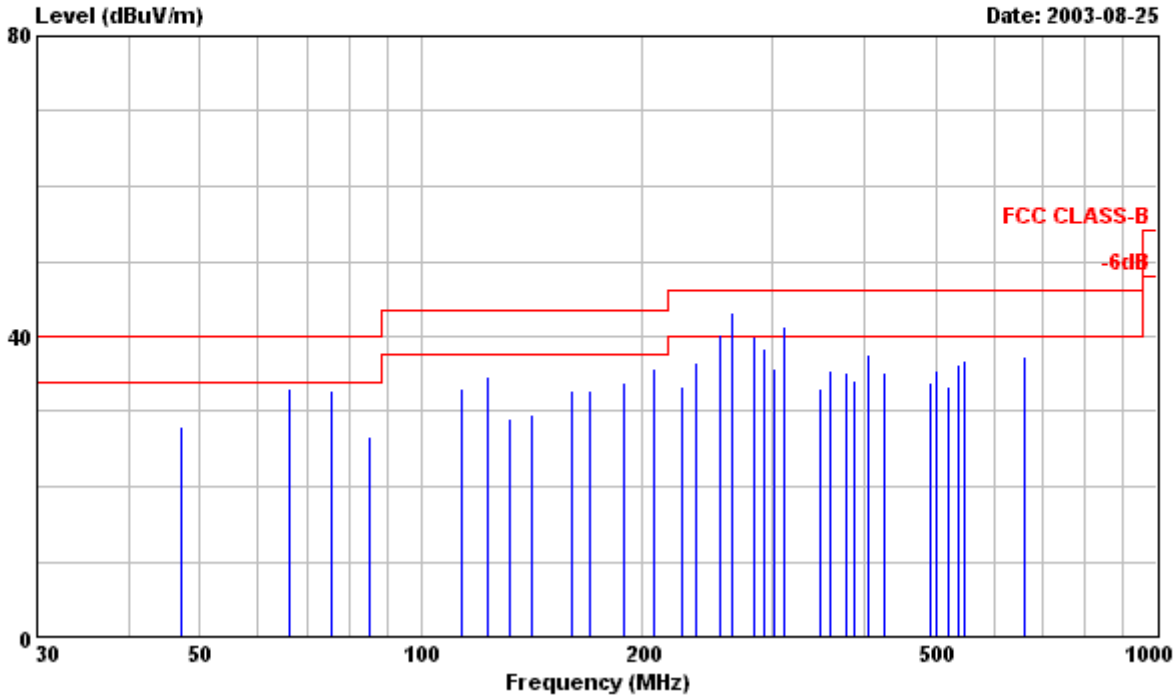
Chungli, Taiwan, R.O.C.
Tel:+886-3-4549862 Fax:+886-3-4549887

Data#: 1 File#: C:\Program Files\e3\EMI03-034-R.emi



Site : PHILIPS EMI 3M open site
Condition : FCC CLASS-B 3m FCC-3M-FACTOR HORIZONTAL
EUT : FSC E772-1 Serial No:TY0304424
Power : 120-240VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. 2ND MODEL HF CRT,RUN FSC "H" PATTERN.
: 3. 1024x768/85Hz 68.7KHz MODE WITH FSC
: MT8-D1387 PC,VIDEO CARD ONBOARD
: WAS TESTED.

Frequency	Peak Reading	QP reading	Limit	Factor	Emission Lavel	Over Limit	Remark
					HORIZONTAL		
MHz	dBuV	dBuV	dBuV/m	dB/m	dBuV/m	dBuV/m	
47.210	16.70	---	40.00	11.20	27.90	-12.10	Peak
66.090	23.20	---	40.00	9.96	33.16	-6.84	Peak
75.550	22.60	---	40.00	10.22	32.82	-7.18	Peak
84.980	15.90	---	40.00	10.66	26.56	-13.44	Peak
113.310	20.90	---	43.50	12.08	32.98	-10.52	Peak
122.760	22.20	---	43.50	12.45	34.65	-8.85	Peak
132.200	16.40	---	43.50	12.78	29.18	-14.32	Peak
141.640	16.60	---	43.50	13.13	29.73	-13.77	Peak
160.530	19.20	---	43.50	13.71	32.91	-10.59	Peak
169.960	18.80	---	43.50	13.97	32.77	-10.73	Peak
188.850	18.60	---	43.50	15.29	33.89	-9.61	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	
207.730	18.60	---	43.50	17.02	35.62	-7.88	Peak
226.620	14.70	---	46.00	18.66	33.36	-12.64	Peak
236.060	17.20	---	46.00	19.38	36.58	-9.42	Peak
254.940	---	17.22	46.00	20.76	37.98	-8.02	QP
! 254.940	19.40	---	46.00	20.76	40.16	-5.84	Peak
! 264.380	---	19.77	46.00	21.33	41.10	-4.90	QP
! 264.380	21.80	---	46.00	21.33	43.13	-2.87	Peak
283.260	---	15.73	46.00	22.32	38.05	-7.95	QP
! 283.260	17.80	---	46.00	22.32	40.12	-5.88	Peak
292.710	15.60	---	46.00	22.84	38.44	-7.56	Peak
302.140	19.20	---	46.00	16.52	35.72	-10.28	Peak
! 311.590	24.70	---	46.00	16.71	41.41	-4.59	Peak
! 311.590	---	23.49	46.00	16.71	40.20	-5.80	QP
349.350	15.70	---	46.00	17.49	33.19	-12.81	Peak
358.800	17.70	---	46.00	17.67	35.37	-10.63	Peak
377.680	17.30	---	46.00	18.00	35.30	-10.70	Peak
387.120	15.90	---	46.00	18.17	34.07	-11.93	Peak
406.000	19.10	---	46.00	18.48	37.58	-8.42	Peak
424.890	16.40	---	46.00	18.75	35.15	-10.85	Peak
490.980	14.20	---	46.00	19.60	33.80	-12.20	Peak
500.420	15.70	---	46.00	19.73	35.43	-10.57	Peak
519.300	13.20	---	46.00	20.02	33.22	-12.78	Peak
538.180	15.90	---	46.00	20.31	36.21	-9.79	Peak
547.630	16.30	---	46.00	20.45	36.75	-9.25	Peak
660.920	14.70	---	46.00	22.66	37.36	-8.64	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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Philips Electronics Inductries (Taiwan)., Ltd.
No.5, Tze Chiang 1 Road, Chungli Inductrial Park,
Chungli, Taiwan, R.O.C.
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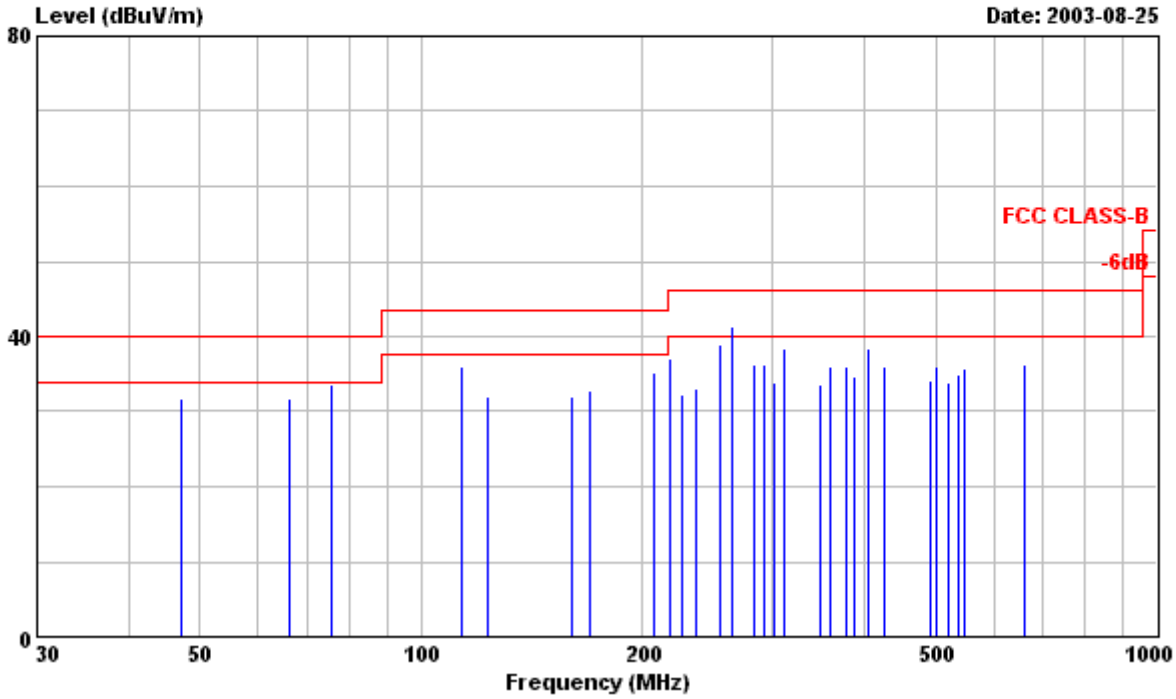
Data#: 2 File#: C:\Program Files\e3\EMI03-034-R.emi



Site : PHILIPS EMI 3M open site
Condition : FCC CLASS-B 3m FCC-3M-FACTOR VERTICAL
EUT : FSC E772-1 Serial No:TY0304424
Power : 120-240VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. 2ND MODEL HF CRT,RUN FSC "H" PATTERN.
: 3. 1024x768/85Hz 68.7KHz MODE WITH FSC
: MT8-D1387 PC,VIDEO CARD ONBOARD
: 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	
47.210	20.50	---	40.00	11.20	31.70	-8.30	Peak
66.090	21.70	---	40.00	9.96	31.66	-8.34	Peak
75.550	23.40	---	40.00	10.22	33.62	-6.38	Peak
113.310	23.90	---	43.50	12.08	35.98	-7.52	Peak
122.760	19.50	---	43.50	12.45	31.95	-11.55	Peak
160.530	18.30	---	43.50	13.71	32.01	-11.49	Peak
169.960	18.80	---	43.50	13.97	32.77	-10.73	Peak
207.730	18.20	---	43.50	17.02	35.22	-8.28	Peak
217.190	19.29	---	46.00	17.88	37.17	-8.83	Peak
226.620	13.50	---	46.00	18.66	32.16	-13.84	Peak
236.060	13.80	---	46.00	19.38	33.18	-12.82	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 MHz	Peak Reading dBuV	QP reading dBuV	Limit dBuV/m	Factor dB/m	Emission Lavel VERTICAL dBuV/m	Over Limit dBuV/m	Remark
254.940	18.20	---	46.00	20.76	38.96	-7.04	Peak
! 264.380	19.90	---	46.00	21.33	41.23	-4.77	Peak
264.380	---	17.60	46.00	21.33	38.93	-7.07	QP
283.250	13.90	---	46.00	22.32	36.22	-9.78	Peak
292.710	13.40	---	46.00	22.84	36.24	-9.76	Peak
302.140	17.30	---	46.00	16.52	33.82	-12.18	Peak
311.590	21.80	---	46.00	16.71	38.51	-7.49	Peak
349.350	16.10	---	46.00	17.49	33.59	-12.41	Peak
358.800	18.40	---	46.00	17.67	36.07	-9.93	Peak
377.680	18.10	---	46.00	18.00	36.10	-9.90	Peak
387.120	16.60	---	46.00	18.17	34.77	-11.23	Peak
406.000	19.80	---	46.00	18.48	38.28	-7.72	Peak
424.890	17.30	---	46.00	18.75	36.05	-9.95	Peak
490.980	14.80	---	46.00	19.60	34.40	-11.60	Peak
500.420	16.40	---	46.00	19.73	36.13	-9.87	Peak
519.300	13.90	---	46.00	20.02	33.92	-12.08	Peak
538.180	14.60	---	46.00	20.31	34.91	-11.09	Peak
547.630	15.20	---	46.00	20.45	35.65	-10.35	Peak
660.920	13.70	---	46.00	22.66	36.36	-9.64	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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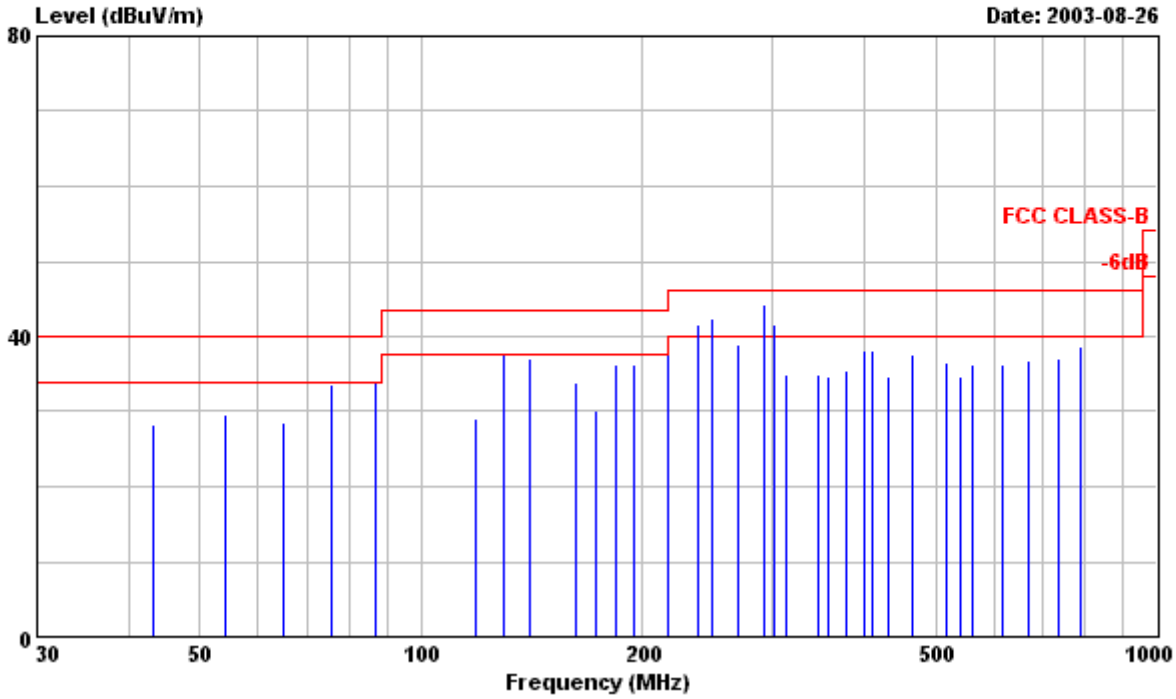

Site : PHILIPS EMI 3M open site
Condition : FCC CLASS-B 3m FCC-3M-FACTOR HORIZONTAL
EUT : FSC E772-1 Serial No:TY0304424
Power : 120-240VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. 2ND MODEL HF CRT,RUN FSC "H" PATTERN.
: 3. 1280x1024/60Hz 64KHz MODE WITH FSC
: MT8-D1387 PC,VIDEO CARD ONBOARD
: WAS TESTED.

Frequency	Peak Reading	QP reading	Limit	Factor	Emission Lavel	Over Limit	Remark
					HORIZONTAL		
MHz	dBuV	dBuV	dBuV/m	dB/m	dBuV/m	dBuV/m	
43.210	16.60	---	40.00	11.71	28.31	-11.69	Peak
54.020	19.20	---	40.00	10.42	29.62	-10.38	Peak
64.830	18.50	---	40.00	9.95	28.45	-11.55	Peak
75.630	23.40	---	40.00	10.23	33.63	-6.37	Peak
86.430	23.10	---	40.00	10.73	33.83	-6.17	Peak
118.830	16.60	---	43.50	12.34	28.94	-14.56	Peak
129.640	24.79	---	43.50	12.68	37.47	-6.03	Peak
140.440	24.00	---	43.50	13.08	37.08	-6.42	Peak
162.050	20.20	---	43.50	13.76	33.96	-9.54	Peak
172.850	16.20	---	43.50	14.04	30.24	-13.26	Peak
183.650	21.50	---	43.50	14.78	36.28	-7.22	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)

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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	
	194.450	20.40	---	43.50	15.79	36.19	-7.31	Peak
	216.050	19.80	---	46.00	17.74	37.54	-8.46	Peak
!	237.650	22.00	---	46.00	19.52	41.52	-4.48	Peak
	237.650	---	20.12	46.00	19.52	39.64	-6.36	QP
!	248.450	21.90	---	46.00	20.37	42.27	-3.73	Peak
!	248.450	---	20.48	46.00	20.37	40.85	-5.15	QP
	270.060	17.40	---	46.00	21.64	39.04	-6.96	Peak
!	291.660	21.50	---	46.00	22.78	44.28	-1.72	Peak
!	291.660	---	20.18	46.00	22.78	42.96	-3.04	QP
!	302.470	25.20	---	46.00	16.52	41.72	-4.28	Peak
!	302.470	---	23.80	46.00	16.52	40.32	-5.68	QP
	313.250	18.10	---	46.00	16.76	34.86	-11.14	Peak
	345.670	17.40	---	46.00	17.41	34.81	-11.19	Peak
	356.470	17.10	---	46.00	17.63	34.73	-11.27	Peak
	378.080	17.50	---	46.00	18.02	35.52	-10.48	Peak
	399.680	19.80	---	46.00	18.38	38.18	-7.82	Peak
	410.480	19.70	---	46.00	18.54	38.24	-7.76	Peak
	432.090	15.90	---	46.00	18.85	34.75	-11.25	Peak
	464.490	18.40	---	46.00	19.27	37.67	-8.33	Peak
	518.500	16.50	---	46.00	20.02	36.52	-9.48	Peak
	540.100	14.30	---	46.00	20.33	34.63	-11.37	Peak
	561.710	15.50	---	46.00	20.68	36.18	-9.82	Peak
	615.720	14.60	---	46.00	21.62	36.22	-9.78	Peak
	669.720	13.90	---	46.00	22.87	36.77	-9.23	Peak
	734.520	13.20	---	46.00	23.98	37.18	-8.82	Peak
	788.530	14.10	---	46.00	24.66	38.76	-7.24	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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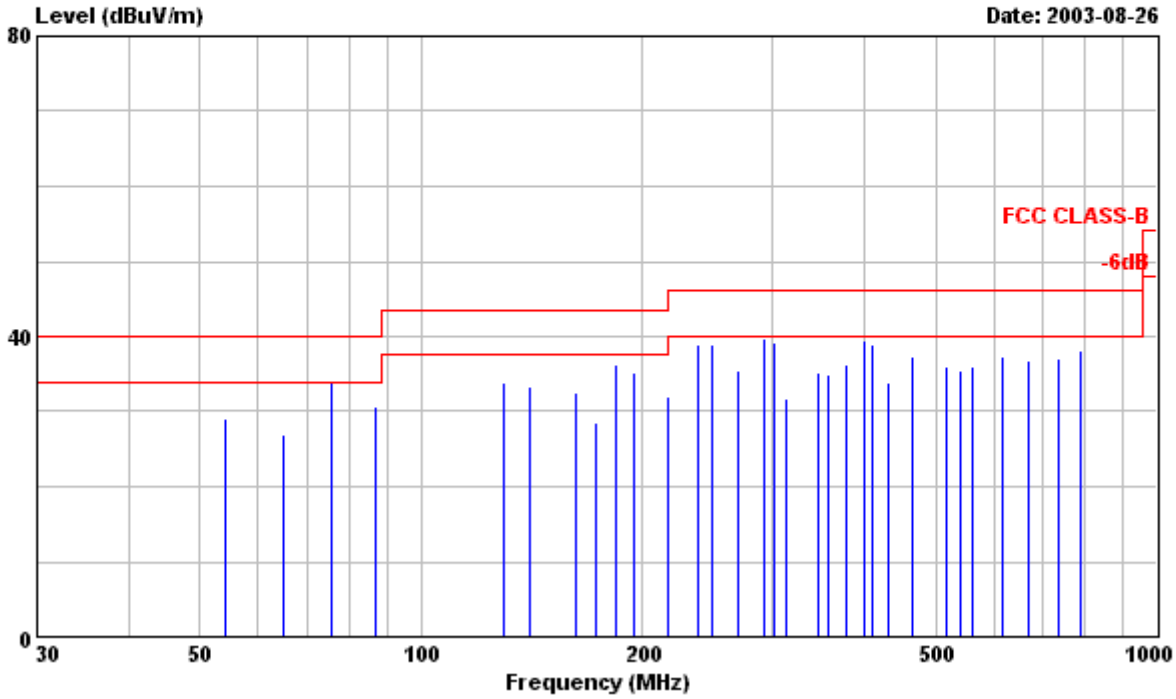
Data#: 4 File#: C:\Program Files\e3\EMI03-034-R.emi



Site : PHILIPS EMI 3M open site
Condition : FCC CLASS-B 3m FCC-3M-FACTOR VERTICAL
EUT : FSC E772-1 Serial No:TY0304424
Power : 120-240VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. 2ND MODEL HF CRT,RUN FSC "H" PATTERN.
: 3. 1280x1024/60Hz 64KHz MODE WITH FSC
: MT8-D1387 PC,VIDEO CARD ONBOARD
: 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	
54.020	18.70	---	40.00	10.42	29.12	-10.88	Peak
64.830	17.10	---	40.00	9.95	27.05	-12.95	Peak
75.630	23.60	---	40.00	10.23	33.83	-6.17	Peak
86.430	19.80	---	40.00	10.73	30.53	-9.47	Peak
129.640	21.10	---	43.50	12.68	33.78	-9.72	Peak
140.440	20.30	---	43.50	13.08	33.38	-10.12	Peak
162.050	18.80	---	43.50	13.76	32.56	-10.94	Peak
172.850	14.60	---	43.50	14.04	28.64	-14.86	Peak
183.650	21.40	---	43.50	14.78	36.18	-7.32	Peak
194.450	19.30	---	43.50	15.79	35.09	-8.41	Peak
216.050	14.30	---	46.00	17.74	32.04	-13.96	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)

PHILIPS

Philips Electronics Industries (Taiwan)., Ltd.
No.5, Tze Chiang 1 Road, Chungli Inductrial Park,
Chungli, Taiwan, R.O.C.
Tel:+886-3-4549862 Fax:+886-3-4549887

Frequency	Peak Reading	QP reading	Limit	Factor	Emission Lavel	Over Limit	Remark
					VERTICAL		
MHz	dBuV	dBuV	dBuV/m	dB/m	dBuV/m	dBuV/m	
237.650	19.40	---	46.00	19.52	38.92	-7.08	Peak
248.450	18.60	---	46.00	20.37	38.97	-7.03	Peak
270.060	13.70	---	46.00	21.64	35.34	-10.66	Peak
291.660	16.90	---	46.00	22.78	39.68	-6.32	Peak
302.470	22.70	---	46.00	16.52	39.22	-6.78	Peak
313.250	14.90	---	46.00	16.76	31.66	-14.34	Peak
345.670	17.70	---	46.00	17.41	35.11	-10.89	Peak
356.470	17.40	---	46.00	17.63	35.03	-10.97	Peak
378.080	18.30	---	46.00	18.02	36.32	-9.68	Peak
399.680	21.20	---	46.00	18.38	39.58	-6.42	Peak
410.480	20.30	---	46.00	18.54	38.84	-7.16	Peak
432.090	15.10	---	46.00	18.85	33.95	-12.05	Peak
464.490	18.00	---	46.00	19.27	37.27	-8.73	Peak
518.500	15.90	---	46.00	20.02	35.92	-10.08	Peak
540.100	15.10	---	46.00	20.33	35.43	-10.57	Peak
561.710	15.30	---	46.00	20.68	35.98	-10.02	Peak
615.720	15.80	---	46.00	21.62	37.42	-8.58	Peak
669.720	13.90	---	46.00	22.87	36.77	-9.23	Peak
734.520	13.20	---	46.00	23.98	37.18	-8.82	Peak
788.530	13.60	---	46.00	24.66	38.26	-7.74	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