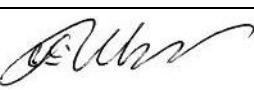




PHILIPS

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- 2062 Date : 15 January, 2004 Page : Page 1 of 31
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. : A3KM128 Model Name : 150S5 Serial Number : TY0304692 Description : 15" SVGA LCD monitor, Max. resolution 1024x768/75Hz		
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 : 23 Dec. 2003		
Date of performance of test : 25 Dec., 2003 to 26 Dec., 2003		
 C.C. Wu - EMC Test Engineer	 Ronny Yang - EMC Manager	

Philips Electronics Industries (Taiwan) Ltd

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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, 15" color monitor :

Model No. : 150S5
 FCC ID : A3KM128
 Brand : PHILIPS

The color monitor automatically scans horizontal frequencies between 31KHz and 61KHz , and vertical frequencies between 56Hz and 76Hz. This color monitor displays sharp and brilliant images of text and graphics with a maximum resolution up to 1024x768 pixels.

The monitor has 14 factory-preset modes as indicated in the following table:

Mode	Resolution	H. freq. / V. freq	Standard
1.	640 x 350	31.469Khz/70.087Hz	VGA
2.	720 x 400	31.469Khz/70.087Hz	VGA
3.	640 x 480	31.469Khz/59.940Hz	VGA
4.	640 x 480	35.000Khz/66.667Hz	Macintosh
5.	640 x 480	37.861Khz/72.809Hz	VESA
6.	640 x 480	37.500Khz/75.000Hz	VESA
7.	800 x 600	35.156Khz/56.250Hz	VESA
8.	800 x 600	37.879Khz/60.317Hz	VESA
9.	800 x 600	48.077Khz/72.188Hz	VESA
10.	800 x 600	46.875Khz/75.000Hz	VESA
11.	832 x 624	49.700Khz/75.000Hz	Macintosh
12.	1024 x 768	48.363Khz/60.004Hz	VESA
13.	1024 x 768	56.476Khz/70.069Hz	VESA
14.	1024 x 768	60.023Khz/75.029Hz	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	08/21/2003	08/21/2004

- For Radiated Emissions Test:

Test Equipment	Model No.	Serial No.	Last Calibrate	Next Calibrate
Spectrum	HP8568B	2928A04640	09/23/2003	09/23/2004
RF Preselector	HP85685A	2620A00338	09/23/2003	09/23/2004
QP Adapter	HP85650A	2811A01324	09/23/2003	09/23/2004
EMI Receiver	R & S ESVS30	841977/006	02/27/2003	02/27/2004
Biconical Antenna	EMCO 3110B	3224	08/21/2003	08/21/2004
Log-Periodic Antenna	EMCO 3146A	1425	08/21/2003	08/21/2004
Turn Table	EMCO 1060	1068	08/21/2003	08/21/2004
Antenna Tower	EMCO 1050	1113	08/21/2003	08/21/2004
RF Cable	M17/75-RG214-NE	N/A	08/21/2003	08/21/2004

4. Test Configuration of EUT and Peripherals

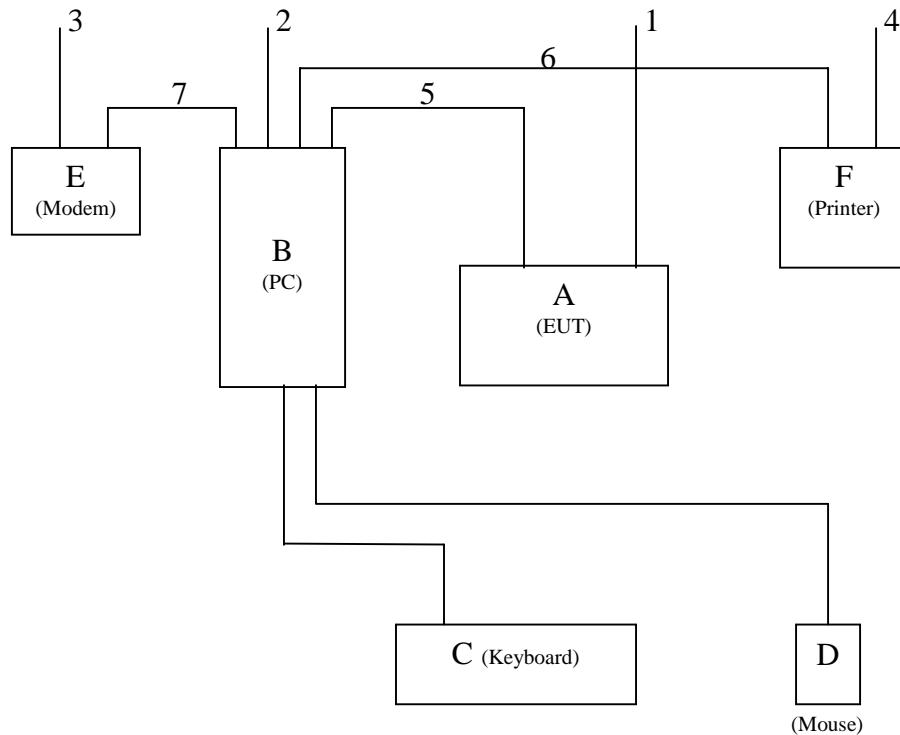
The system was configured for testing in a typical fashion (as a customer would normally use it) according to ANSI C63.4-1992, please see the photographs for detail. For system measurement, the EUT “150S5” were connected to:

	Description	Brand/ Model No.	Serial No.	FCC ID	Remark
A	Monitor	PHILIPS 150S5	TY0304692	A3KM128	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	EMI03-047-C	1024x768	60KHz/75Hz	D-sub
		800x600	47KHz/75Hz	D-sub
Radiated	EMI03-047-R	1024x768	60KHz/75Hz	D-sub
		800x600	47KHz/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” pattern 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 Dec., 2003 to 26 Dec., 2003

Test Engineer : C.C.Wu

For detail measurement results see next pages.

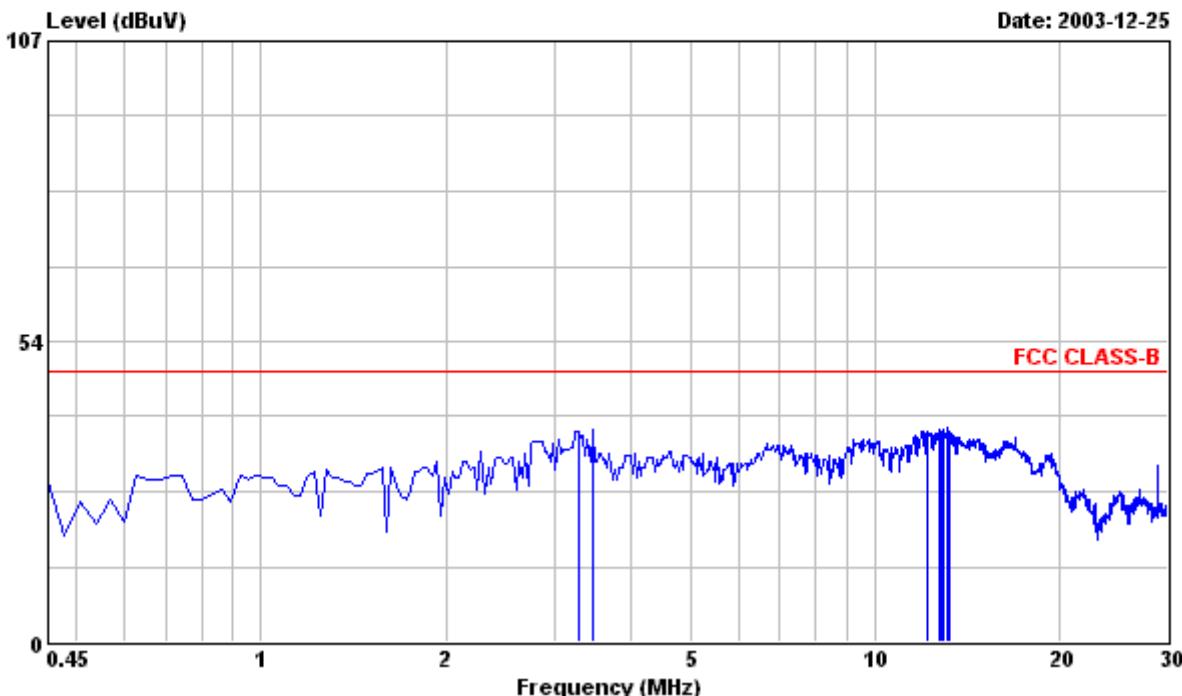


PHILIPS

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Data#: 1

File#: C:\Program Files\em3\EMI03-047-C(PHILIPS 150S5).emi



Site : PHILIPS EMI Shielding Room
 Condition : FCC CLASS-B FCC_LCI_L1 LINE
 EUT : PHILIPS 150S5 Serial No:TY0304692
 Power : 120VAC
 Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
 : 2. 2ND MODEL CPT TUBE, RUN IBM V1.8
 : FONT 14 ARIAL "H" PATTERN.
 : 3. 1024x768/75Hz 60KHz MODE WITH COMPAQ
 : ENC/P866/20E/8/128A TAI PC, ATI RADEON
 : VE DDR VIDEO CARD WAS TESTED.

Frequency	Peak Reading	QP Reading	Limit	Factor	Emission Level	Over Limit	Remark
-----------	--------------	------------	-------	--------	----------------	------------	--------

Frequency	Peak Reading	QP Reading	Limit	Factor	Emission Level	Over Limit	Remark
3.287	37.10	---	48.00	0.40	37.50	-10.50	Peak
3.464	37.30	---	48.00	0.40	37.70	-10.30	Peak
12.152	36.80	---	48.00	0.65	37.45	-10.55	Peak
12.743	37.00	---	48.00	0.66	37.66	-10.34	Peak
12.861	36.90	---	48.00	0.66	37.56	-10.44	Peak
12.979	37.10	---	48.00	0.66	37.76	-10.24	Peak
13.097	37.60	---	48.00	0.67	38.27	-9.73	Peak
13.216	36.90	---	48.00	0.67	37.57	-10.43	Peak

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

Tested by : C C.Wu

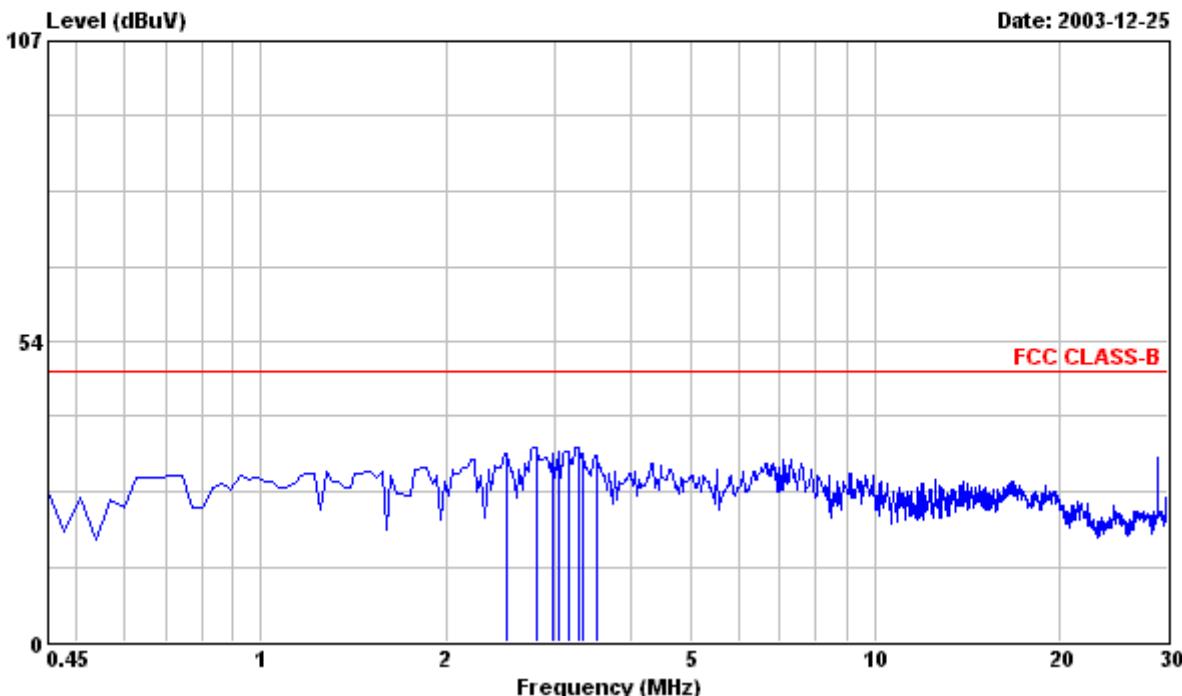


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Data#: 2

File#: C:\Program Files\em3\EMI03-047-C(PHILIPS 150S5).emi



Site : PHILIPS EMI Shielding Room
 Condition : FCC CLASS-B FCC_LCI_L2 NEUTRAL
 EUT : PHILIPS 150S5 Serial No:TY0304692
 Power : 120VAC
 Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
 : 2. 2ND MODEL CPT TUBE, RUN IBM V1.8
 : FONT 14 ARIAL "H" PATTERN.
 : 3. 1024x768/75Hz 60KHz MODE WITH COMPAQ
 : ENC/P866/20E/8/128A TAI PC, ATI RADEON
 : VE DDR VIDEO CARD WAS TESTED.

Frequency	Peak Reading	QP Reading	Limit	Factor	Emission Level	Over Limit	Remark
							NEUTRAL

2.519	33.10	---	48.00	0.40	33.50	-14.50	Peak
2.814	34.10	---	48.00	0.40	34.50	-13.50	Peak
2.991	33.30	---	48.00	0.40	33.70	-14.30	Peak
3.050	33.40	---	48.00	0.40	33.80	-14.20	Peak
3.169	33.60	---	48.00	0.40	34.00	-14.00	Peak
3.287	34.10	---	48.00	0.40	34.50	-13.50	Peak
3.346	33.00	---	48.00	0.40	33.40	-14.60	Peak
3.523	32.80	---	48.00	0.40	33.20	-14.80	Peak

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

Tested by : C C.Wu

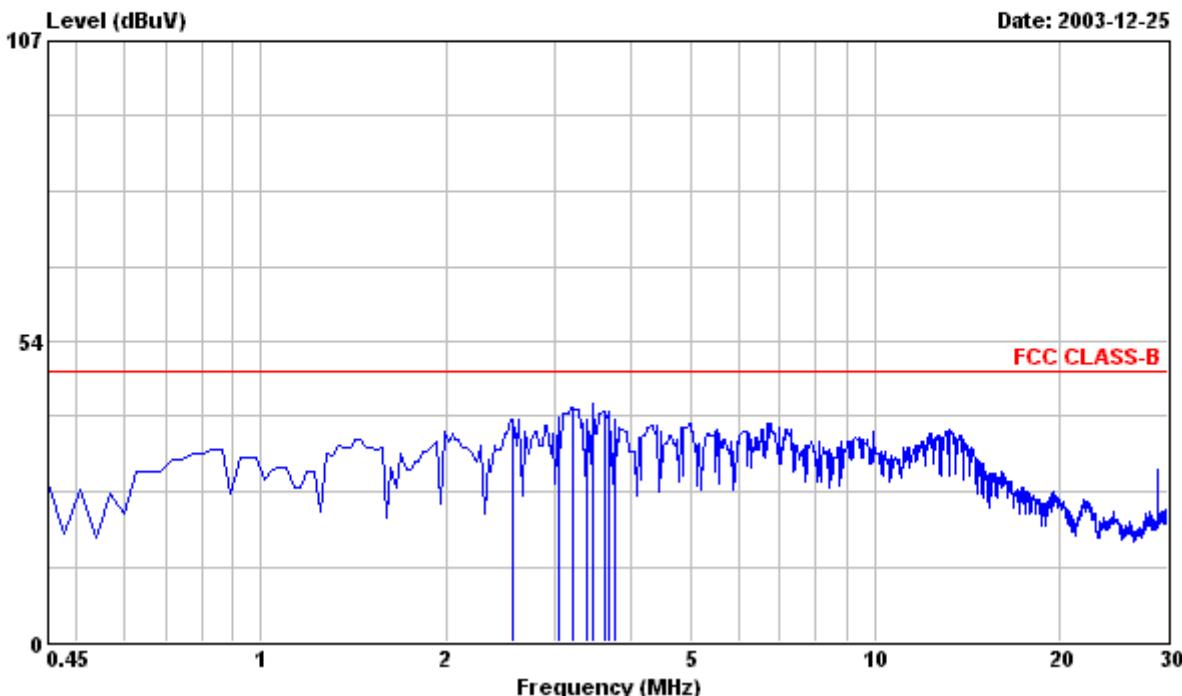


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Data#: 3

File#: C:\Program Files\em3\EMI03-047-C(PHILIPS 150S5).emi



Site : PHILIPS EMI Shielding Room
 Condition : FCC CLASS-B FCC_LCI_L1 LINE
 EUT : PHILIPS 150S5 Serial No:TY0304692
 Power : 220VAC
 Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
 : 2. 2ND MODEL CPT TUBE, RUN IBM V1.8
 : FONT 14 ARIAL "H" PATTERN.
 : 3. 1024x768/75Hz 60KHz MODE WITH COMPAQ
 : ENC/P866/20E/8/128A TAI PC, ATI RADEON
 : VE DDR VIDEO CARD WAS TESTED.

Frequency	Peak Reading	QP Reading	Limit	Factor	Emission Level	Over Limit	Remark
							LINE

2.578	39.30	---	48.00	0.40	39.70	-8.30	Peak
3.050	39.50	---	48.00	0.40	39.90	-8.10	Peak
3.228	41.20	---	48.00	0.40	41.60	-6.40	Peak
3.405	39.30	---	48.00	0.40	39.70	-8.30	Peak
3.464	41.90	---	48.00	0.40	42.30	-5.70	Peak
3.641	40.60	---	48.00	0.40	41.00	-7.00	Peak
3.701	40.50	---	48.00	0.40	40.90	-7.10	Peak
3.760	39.30	---	48.00	0.40	39.70	-8.30	Peak

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

Tested by : C.C.Wu

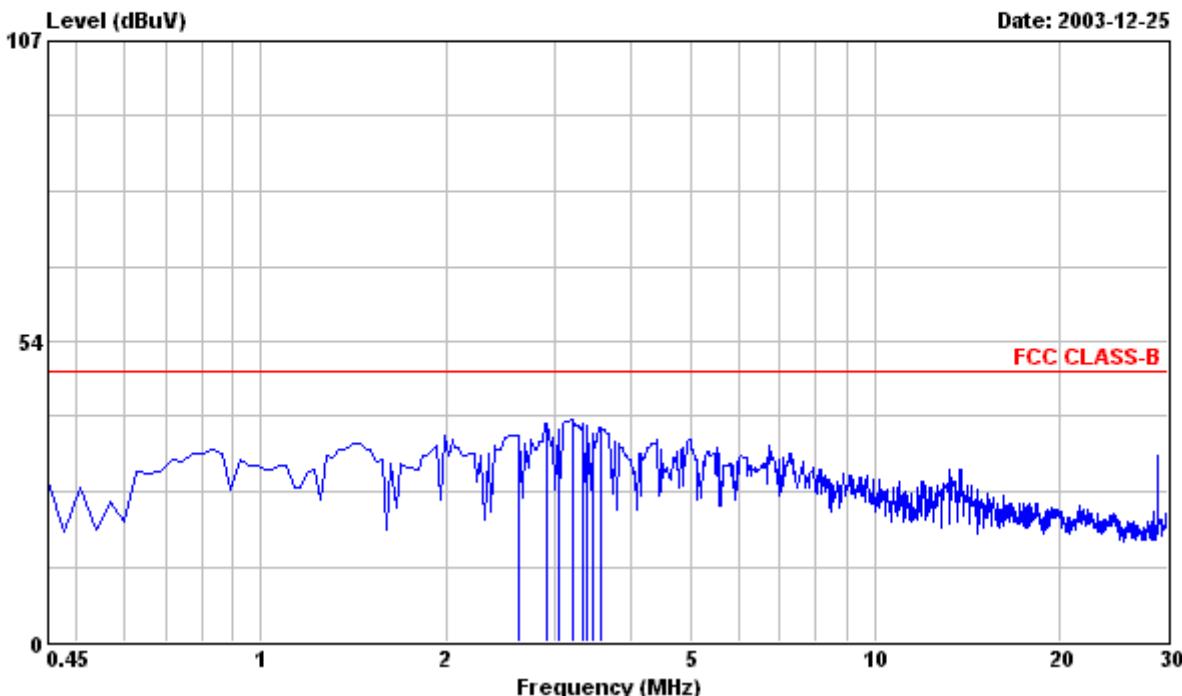


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Data#: 4

File#: C:\Program Files\em3\EMI03-047-C(PHILIPS 150S5).emi



Site : PHILIPS EMI Shielding Room
 Condition : FCC CLASS-B FCC_LCI_L2 NEUTRAL
 EUT : PHILIPS 150S5 Serial No:TY0304692
 Power : 220VAC
 Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
 : 2. 2ND MODEL CPT TUBE, RUN IBM V1.8
 : FONT 14 ARIAL "H" PATTERN.
 : 3. 1024x768/75Hz 60KHz MODE WITH COMPAQ
 : ENC/P866/20E/8/128A TAI PC, ATI RADEON
 : VE DDR VIDEO CARD WAS TESTED.

Frequency	Peak Reading	QP Reading	Limit	Factor	Emission Level	Over Limit	Remark
							NEUTRAL

2.637	36.50	---	48.00	0.40	36.90	-11.10	Peak
2.932	38.30	---	48.00	0.40	38.70	-9.30	Peak
3.050	37.40	---	48.00	0.40	37.80	-10.20	Peak
3.228	39.20	---	48.00	0.40	39.60	-8.40	Peak
3.346	38.50	---	48.00	0.40	38.90	-9.10	Peak
3.405	38.10	---	48.00	0.40	38.50	-9.50	Peak
3.464	36.80	---	48.00	0.40	37.20	-10.80	Peak
3.582	37.80	---	48.00	0.40	38.20	-9.80	Peak

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

Tested by : C C.Wu

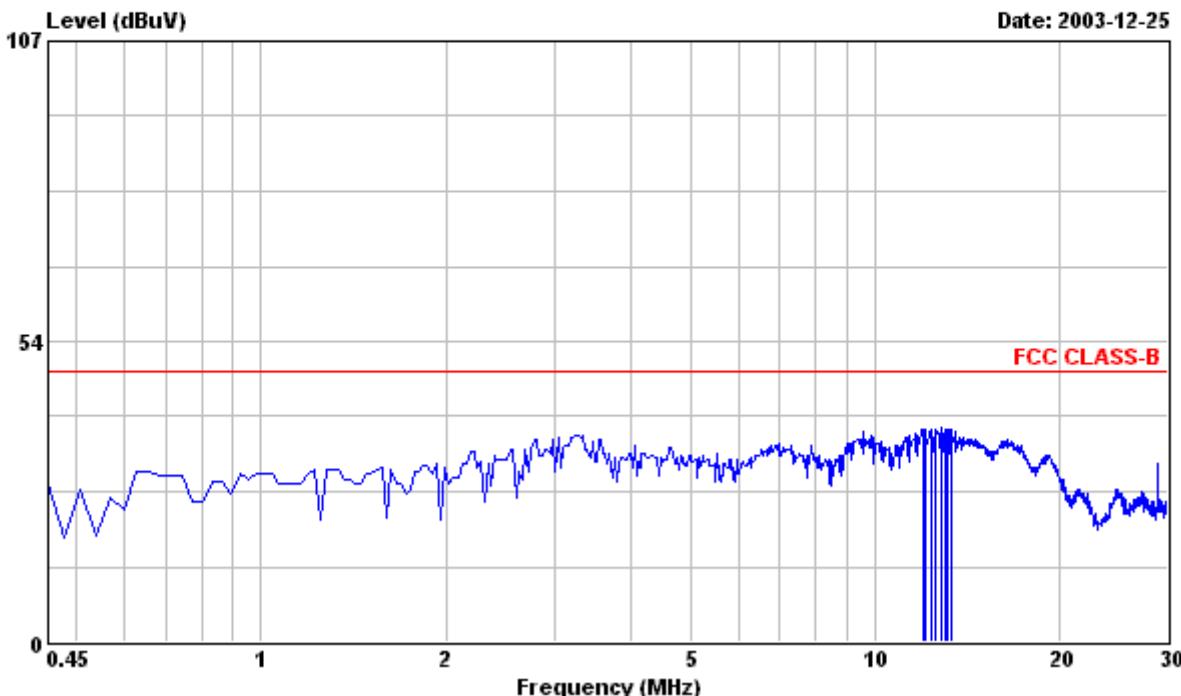


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Data#: 5

File#: C:\Program Files\em3\EMI03-047-C(PHILIPS 150S5).emi



Site : PHILIPS EMI Shielding Room
 Condition : FCC CLASS-B FCC_LCI_L1 LINE
 EUT : PHILIPS 150S5 Serial No:TY0304692
 Power : 120VAC
 Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
 : 2. 2ND MODEL CPT TUBE, RUN IBM V1.8
 : FONT 12 ARIAL "H" PATTERN.
 : 3. 800x600/75Hz 47KHz MODE WITH COMPAQ
 : ENC/P866/20E/8/128A TAI PC, ATI RADEON
 : VE DDR VIDEO CARD WAS TESTED.

Frequency	Peak Reading	QP Reading	Limit	Factor	Emission Level	Over Limit	Remark
							LINE

11.975	37.00	---	48.00	0.64	37.64	-10.36	Peak
12.093	37.20	---	48.00	0.65	37.85	-10.15	Peak
12.388	37.20	---	48.00	0.65	37.85	-10.15	Peak
12.506	37.00	---	48.00	0.66	37.66	-10.34	Peak
12.802	37.40	---	48.00	0.66	38.06	-9.94	Peak
13.038	37.20	---	48.00	0.67	37.87	-10.13	Peak
13.097	37.30	---	48.00	0.67	37.97	-10.03	Peak
13.334	37.00	---	48.00	0.67	37.67	-10.33	Peak

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

Tested by : C C.Wu

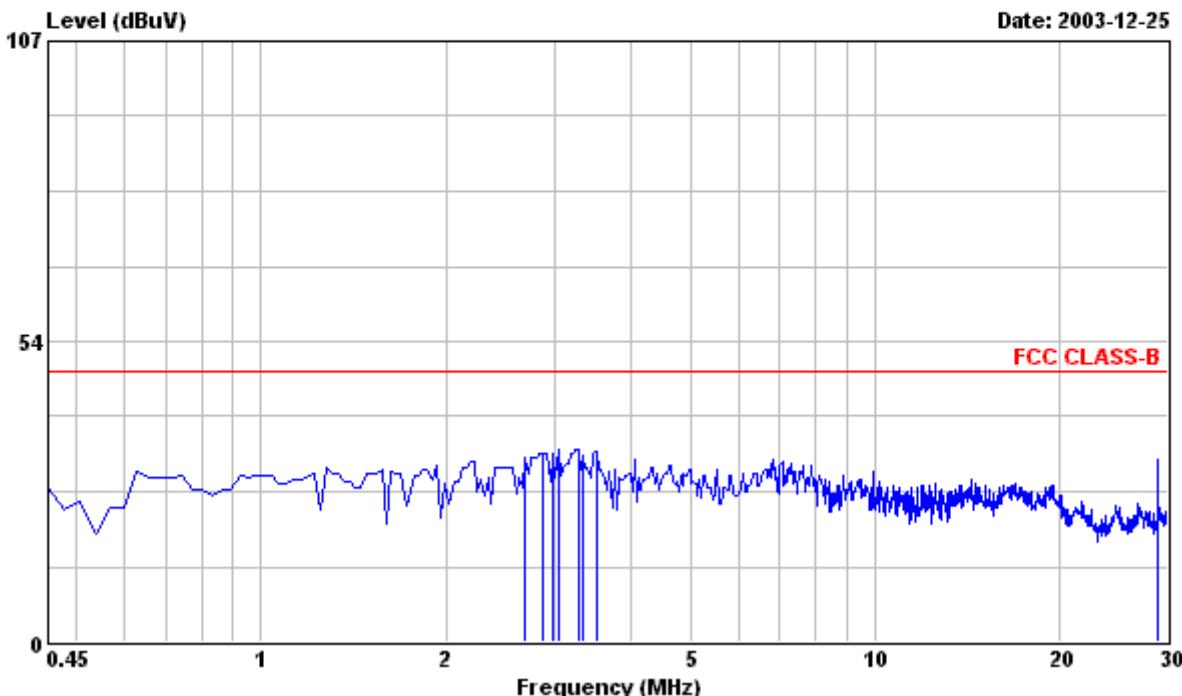


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Data#: 6

File#: C:\Program Files\em3\EMI03-047-C(PHILIPS 150S5).emi



Site : PHILIPS EMI Shielding Room
 Condition : FCC CLASS-B FCC_LCI_L2 NEUTRAL
 EUT : PHILIPS 150S5 Serial No:TY0304692
 Power : 120VAC
 Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
 : 2. 2ND MODEL CPT TUBE, RUN IBM V1.8
 : FONT 12 ARIAL "H" PATTERN.
 : 3. 800x600/75Hz 47KHz MODE WITH COMPAQ
 : ENC/P866/20E/8/128A TAI PC, ATI RADEON
 : VE DDR VIDEO CARD WAS TESTED.

Frequency	Peak Reading	QP Reading	Limit	Factor	Emission Level	Lavel	Over Limit	Remark
								NEUTRAL

2.696	32.40	---	48.00	0.40	32.80		-15.20	Peak
2.873	33.10	---	48.00	0.40	33.50		-14.50	Peak
2.991	33.20	---	48.00	0.40	33.60		-14.40	Peak
3.050	33.70	---	48.00	0.40	34.10		-13.90	Peak
3.287	33.80	---	48.00	0.40	34.20		-13.80	Peak
3.346	32.80	---	48.00	0.40	33.20		-14.80	Peak
3.523	33.40	---	48.00	0.40	33.80		-14.20	Peak
28.818	31.70	---	48.00	0.92	32.62		-15.38	Peak

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

Tested by : C C.Wu

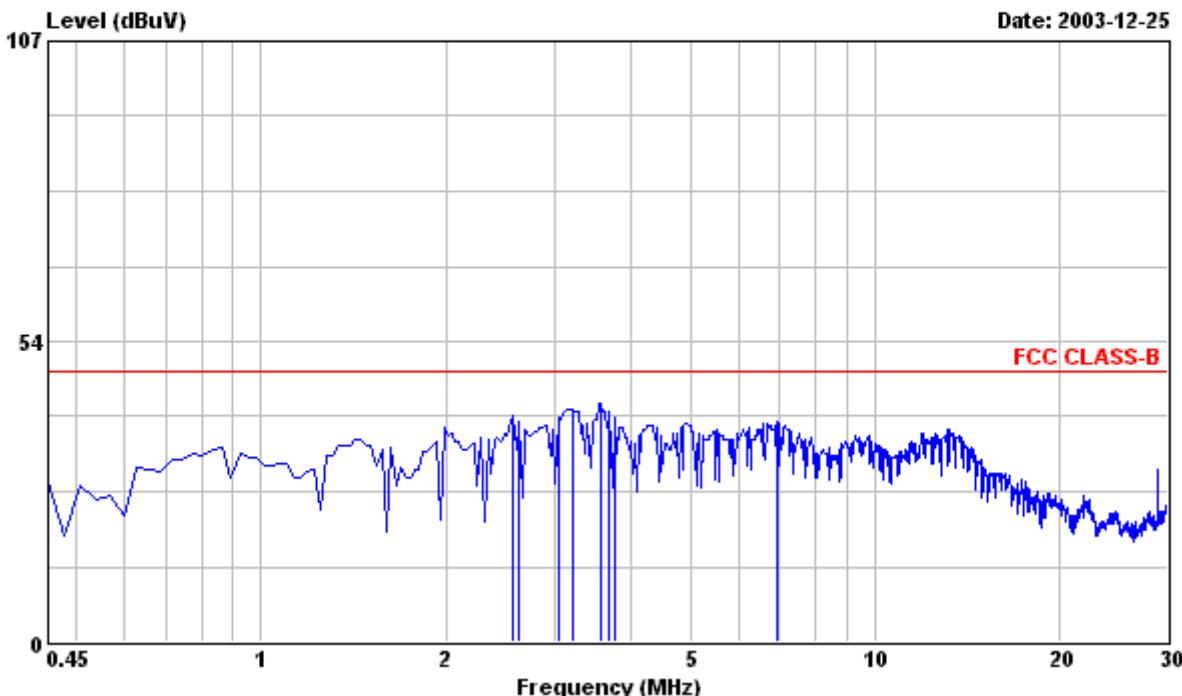


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Data#: 7

File#: C:\Program Files\em3\EMI03-047-C(PHILIPS 150S5).emi



Site : PHILIPS EMI Shielding Room
 Condition : FCC CLASS-B FCC_LCI_L1 LINE
 EUT : PHILIPS 150S5 Serial No:TY0304692
 Power : 220VAC
 Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
 : 2. 2ND MODEL CPT TUBE, RUN IBM V1.8
 : FONT 12 ARIAL "H" PATTERN.
 : 3. 800x600/75Hz 47KHz MODE WITH COMPAQ
 : ENC/P866/20E/8/128A TAI PC, ATI RADEON
 : VE DDR VIDEO CARD WAS TESTED.

Frequency	Peak Reading	QP Reading	Limit	Factor	Emission Level	Over Limit	Remark
							LINE

2.578	39.80	---	48.00	0.40	40.20	-7.80	Peak
2.637	38.90	---	48.00	0.40	39.30	-8.70	Peak
3.050	39.50	---	48.00	0.40	39.90	-8.10	Peak
3.228	41.10	---	48.00	0.40	41.50	-6.50	Peak
3.582	41.90	---	48.00	0.40	42.30	-5.70	Peak
3.701	40.50	---	48.00	0.40	40.90	-7.10	Peak
3.760	39.60	---	48.00	0.40	40.00	-8.00	Peak
6.951	38.80	---	48.00	0.40	39.20	-8.80	Peak

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

Tested by : C.C.Wu

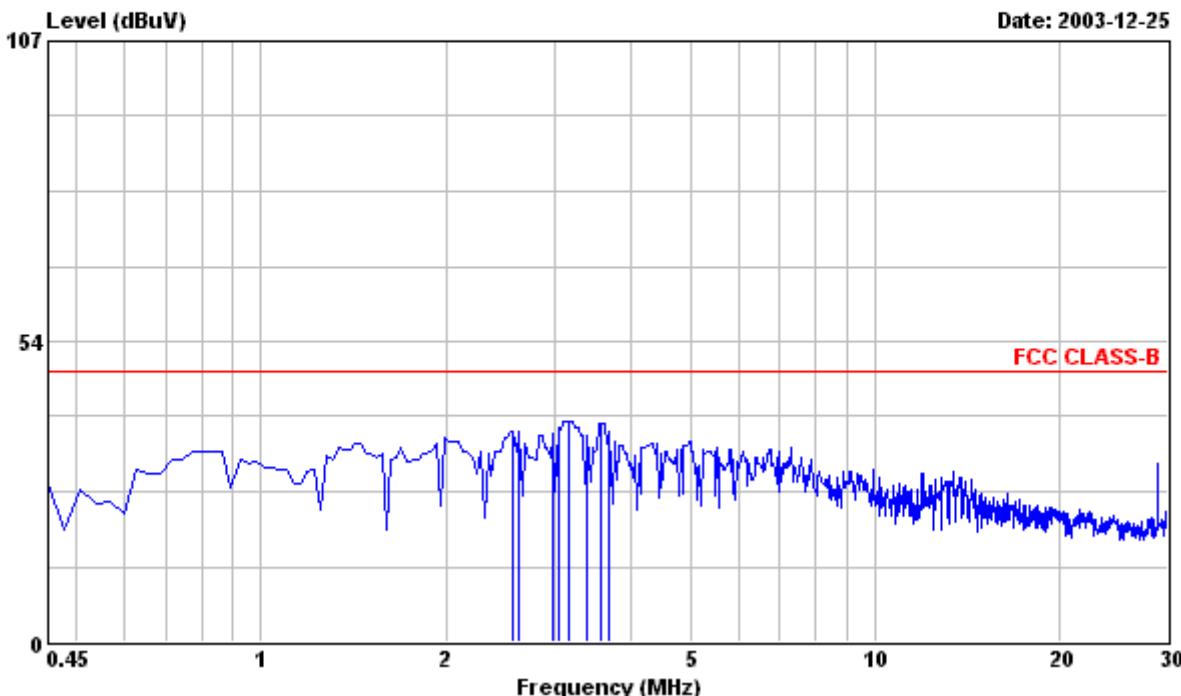


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Data#: 8

File#: C:\Program Files\em3\EMI03-047-C(PHILIPS 150S5).emi



Site : PHILIPS EMI Shielding Room
 Condition : FCC CLASS-B FCC_LCI_L2 NEUTRAL
 EUT : PHILIPS 150S5 Serial No:TY0304692
 Power : 220VAC
 Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
 : 2. 2ND MODEL CPT TUBE, RUN IBM V1.8
 : FONT 12 ARIAL "H" PATTERN.
 : 3. 800x600/75Hz 47KHz MODE WITH COMPAQ
 : ENC/P866/20E/8/128A TAI PC, ATI RADEON
 : VE DDR VIDEO CARD WAS TESTED.

Frequency	Peak Reading	QP Reading	Limit	Factor	Emission Level	Over Limit	Remark
							NEUTRAL

2.578	37.00	---	48.00	0.40	37.40	-10.60	Peak
2.637	36.90	---	48.00	0.40	37.30	-10.70	Peak
2.991	36.60	---	48.00	0.40	37.00	-11.00	Peak
3.050	37.70	---	48.00	0.40	38.10	-9.90	Peak
3.169	39.00	---	48.00	0.40	39.40	-8.60	Peak
3.405	36.30	---	48.00	0.40	36.70	-11.30	Peak
3.582	38.50	---	48.00	0.40	38.90	-9.10	Peak
3.701	37.00	---	48.00	0.40	37.40	-10.60	Peak

Remarks: 1. All Readings are Peak & Quasi-Peak Values.
 2. Emission Level (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 Dec., 2003 to 26 Dec., 2003	
Test Engineer	: C.C.Wu	
For detail measurement results see next pages.		

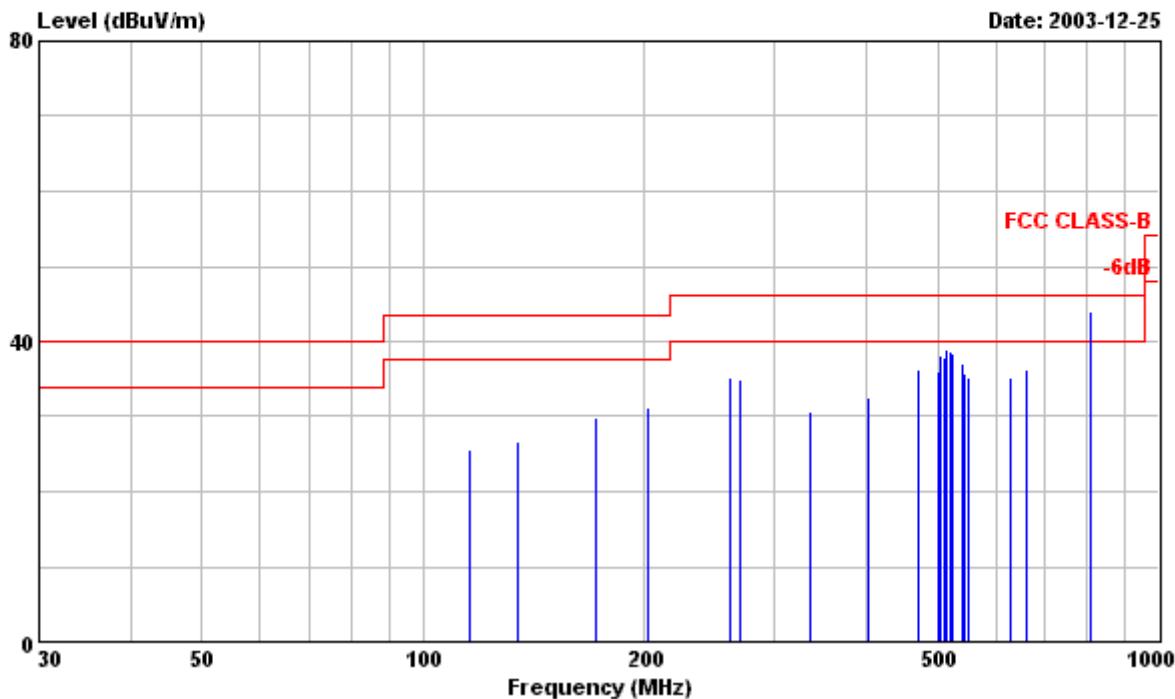


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Data#: 1

File#: C:\Program Files\em3\EMI03-047-R(PHILIPS 150S5).emi



Site : PHILIPS EMI 3M open site
 Condition : FCC CLASS-B 3m FCC-3M-FACTOR HORIZONTAL
 EUT : PHILIPS 150S5 Serial No: TY0304692
 Power : 120-240VAC
 Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
 : 2. 2ND MODEL CPT PANEL, RUN IBM V1.8
 : FONT 14 "H" ARIAL PATTERN.
 : 3. 1024x768/75Hz 60KHz MODE WITH COMPAQ
 : ENC/P866/20E/8/128A TAI PC, ATI RADEON
 : VE DDR VIDEO CARD WAS TESTED.

Frequency MHz	Peak dBuV	Reading dBuV	QP reading dBuV	Limit dBuV/m	Factor dB/m	Emission Level dBuV/m	Lavel dBuV/m	Over Limit	Remark
115.560	13.50	---	43.50	12.19	25.69	-17.81	Peak		
134.370	13.70	---	43.50	12.87	26.57	-16.93	Peak		
171.820	15.90	---	43.50	14.02	29.92	-13.58	Peak		
201.940	14.80	---	43.50	16.50	31.30	-12.20	Peak		
260.870	14.20	---	46.00	21.12	35.32	-10.68	Peak		
269.970	13.40	---	46.00	21.64	35.04	-10.96	Peak		
335.780	13.50	---	46.00	17.23	30.73	-15.27	Peak		
402.920	14.10	---	46.00	18.44	32.54	-13.46	Peak		
472.500	16.90	---	46.00	19.37	36.27	-9.73	Peak		
501.060	16.20	---	46.00	19.73	35.93	-10.07	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
505.980	17.90	---	46.00	19.82	37.72	-8.28 Peak
505.980	18.20	---	46.00	19.82	38.02	-7.98 Peak
510.900	18.00	---	46.00	19.87	37.87	-8.13 Peak
515.850	18.90	---	46.00	19.96	38.86	-7.14 Peak
520.760	18.60	---	46.00	20.05	38.65	-7.35 Peak
525.700	18.20	---	46.00	20.13	38.33	-7.67 Peak
540.480	16.70	---	46.00	20.36	37.06	-8.94 Peak
544.890	15.40	---	46.00	20.42	35.82	-10.18 Peak
550.940	14.80	---	46.00	20.51	35.31	-10.69 Peak
630.010	13.20	---	46.00	21.93	35.13	-10.87 Peak
661.100	13.60	---	46.00	22.66	36.26	-9.74 Peak
! 810.070	19.10	---	46.00	24.98	44.08	-1.92 Peak
! 810.070	---	15.84	46.00	24.98	40.82	-5.18 QP

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)

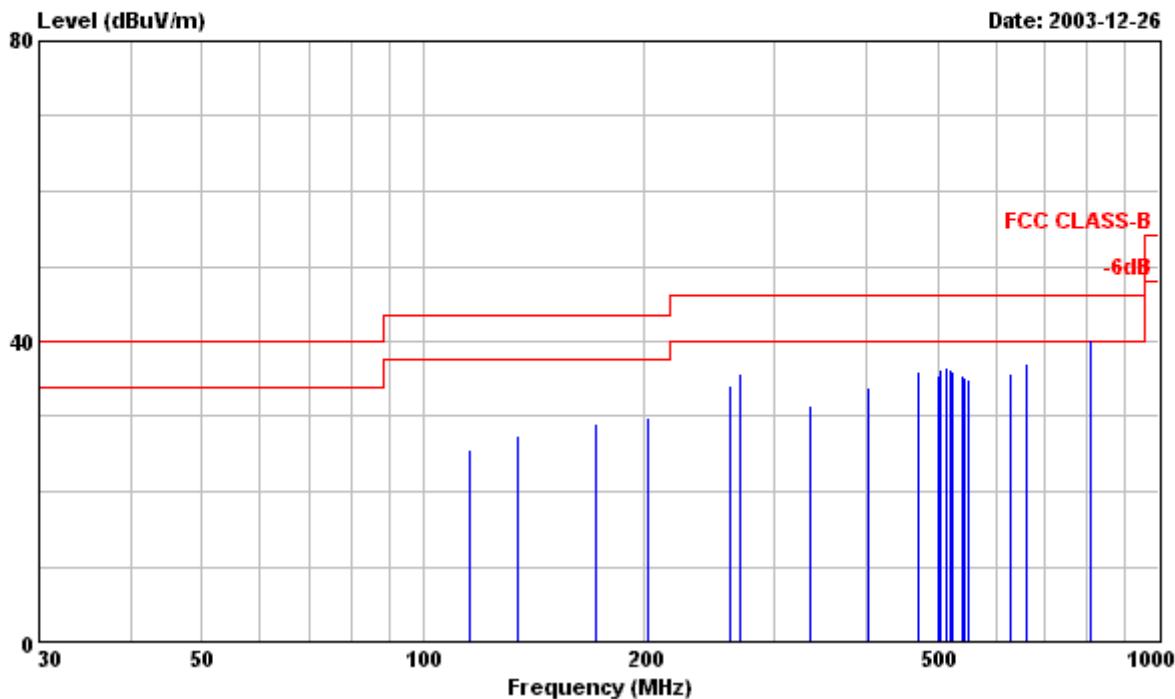
Tested by : C.C.Wu

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Data#: 2

File#: C:\Program Files\em3\EMI03-047-R(PHILIPS 150S5).emi



Site : PHILIPS EMI 3M open site
 Condition : FCC CLASS-B 3m FCC-3M-FACTOR VERTICAL
 EUT : PHILIPS 150S5 Serial No: TY0304692
 Power : 120-240VAC
 Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
 : 2. 2ND MODEL CPT PANEL, RUN IBM V1.8
 : FONT 14 "H" ARIAL PATTERN.
 : 3. 1024x768/75Hz 60KHz MODE WITH COMPAQ
 : ENC/P866/20E/8/128A TAI PC, ATI RADEON
 : VE DDR VIDEO CARD WAS TESTED.

Frequency MHz	Peak dBuV	Reading dBuV	QP reading dBuV	Limit dB/m	Factor dB/m	Emission Level		Over Limit Remark
						VERTICAL		
115.560	13.30	---	43.50	12.19	25.49	-18.01	Peak	
134.370	14.50	---	43.50	12.87	27.37	-16.13	Peak	
171.820	15.10	---	43.50	14.02	29.12	-14.38	Peak	
201.940	13.40	---	43.50	16.50	29.90	-13.60	Peak	
260.870	13.00	---	46.00	21.12	34.12	-11.88	Peak	
269.970	14.20	---	46.00	21.64	35.84	-10.16	Peak	
335.780	14.20	---	46.00	17.23	31.43	-14.57	Peak	
402.920	15.40	---	46.00	18.44	33.84	-12.16	Peak	
472.500	16.60	---	46.00	19.37	35.97	-10.03	Peak	
501.060	15.80	---	46.00	19.73	35.53	-10.47	Peak	

Remarks: 1. All Readings are Peak & Quasi-peak values.
 2. Emission Level (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
MHz	dBuV	dBuV	dBuV/m	dB/m	dBuV/m	dBuV/m	VERTICAL
505.980	16.40	---	46.00	19.82	36.22	-9.78	Peak
515.850	16.70	---	46.00	19.96	36.66	-9.34	Peak
520.760	16.20	---	46.00	20.05	36.25	-9.75	Peak
525.700	15.90	---	46.00	20.13	36.03	-9.97	Peak
540.480	15.10	---	46.00	20.36	35.46	-10.54	Peak
544.890	14.70	---	46.00	20.42	35.12	-10.88	Peak
550.940	14.30	---	46.00	20.51	34.81	-11.19	Peak
630.010	13.90	---	46.00	21.93	35.83	-10.17	Peak
661.100	14.30	---	46.00	22.66	36.96	-9.04	Peak
! 810.070	15.20	---	46.00	24.98	40.18	-5.82	Peak
810.070	---	12.06	46.00	24.98	37.04	-8.96	QP

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

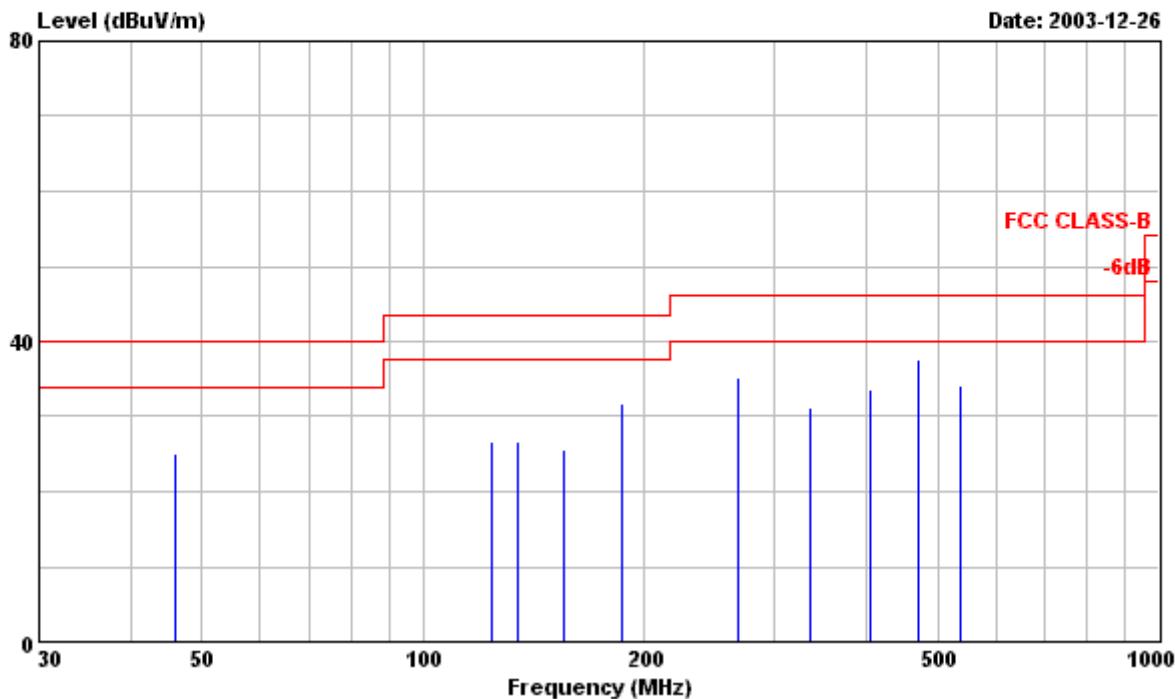


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Data#: 3

File#: C:\Program Files\em3\EMI03-047-R(PHILIPS 150S5).emi



Site : PHILIPS EMI 3M open site
 Condition : FCC CLASS-B 3m FCC-3M-FACTOR HORIZONTAL
 EUT : PHILIPS 150S5 Serial No:TY0304692
 Power : 120-240VAC
 Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
 : 2. 2ND MODEL CPT PANEL, RUN IBM V1.8
 : FONT 12 "H" ARIAL PATTERN.
 : 3. 800x600/75Hz 47KHz MODE WITH COMPAQ
 : ENC/P866/20E/8/128A TAI PC, ATI RADEON
 : VE DDR VIDEO CARD WAS TESTED.

Frequency MHz	Peak dBuV	Reading dBuV	QP reading dBuV	Limit dB/m	Factor dB/m	Emission Lavel		Over Limit Remark
						HORIZONTAL		
45.820	13.80	---	40.00	11.38	25.18	-14.82	Peak	
124.120	14.10	---	43.50	12.48	26.58	-16.92	Peak	
134.320	13.70	---	43.50	12.85	26.55	-16.95	Peak	
154.810	12.10	---	43.50	13.55	25.65	-17.85	Peak	
186.470	16.80	---	43.50	15.03	31.83	-11.67	Peak	
268.560	13.60	---	46.00	21.54	35.14	-10.86	Peak	
336.070	13.90	---	46.00	17.23	31.13	-14.87	Peak	
404.570	15.10	---	46.00	18.46	33.56	-12.44	Peak	
472.370	18.20	---	46.00	19.37	37.57	-8.43	Peak	
536.980	14.20	---	46.00	20.31	34.51	-11.49	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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Remarks: 1. All Readings are Peak & Quasi-peak values.
2. Emission Level (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

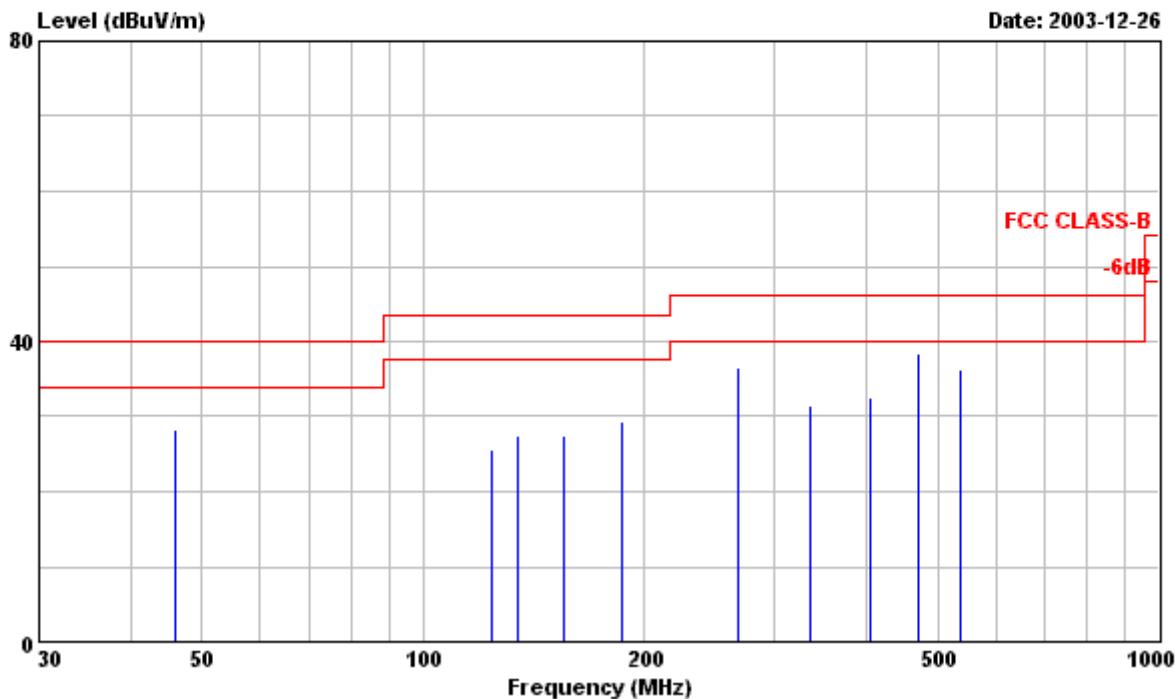


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Data#: 4

File#: C:\Program Files\em3\EMI03-047-R(PHILIPS 150S5).emi



Site : PHILIPS EMI 3M open site
 Condition : FCC CLASS-B 3m FCC-3M-FACTOR VERTICAL
 EUT : PHILIPS 150S5 Serial No:TY0304692
 Power : 120-240VAC
 Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
 : 2. 2ND MODEL CPT PANEL, RUN IBM V1.8
 : FONT 12 "H" ARIAL PATTERN.
 : 3. 800x600/75Hz 47KHz MODE WITH COMPAQ
 : ENC/P866/20E/8/128A TAI PC, ATI RADEON
 : VE DDR VIDEO CARD WAS TESTED.

Frequency MHz	Peak dBuV	Reading dBuV	QP reading dBuV	Limit dBuV/m	Factor dB/m	Emission Lavel		Over Limit dBuV/m	Remark
						VERTICAL			
45.820	16.80	---	40.00	11.38	28.18		-11.82	Peak	
124.120	13.50	---	43.50	12.48	25.98		-17.52	Peak	
134.320	14.70	---	43.50	12.85	27.55		-15.95	Peak	
154.810	13.80	---	43.50	13.55	27.35		-16.15	Peak	
186.470	14.30	---	43.50	15.03	29.33		-14.17	Peak	
268.560	14.90	---	46.00	21.54	36.44		-9.56	Peak	
336.070	14.30	---	46.00	17.23	31.53		-14.47	Peak	
404.570	14.00	---	46.00	18.46	32.46		-13.54	Peak	
472.370	19.10	---	46.00	19.37	38.47		-7.53	Peak	
536.980	16.00	---	46.00	20.31	36.31		-9.69	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)