



Philips Electronics Ind (Taiwan) Ltd - EMC L 5, Tze Chiang 1 Road, Chungli Industrial Part Chungli, Taoyuan, Tai Tel.: +886-3-454-9862 Fax.: +886-3-454-988' E-mail: ronnie.yang@j	Lab. k, wan 2 7	FCC Test Report	Report No.: TYR87-2049Date: 01 July, 2003Page: Page 1 of 37
Customer :	Philips El	ectronics Industries	
Address : Zip/City :	Mr. S.T. Hu 5, Tze Chia: Chungli Ind Chungli, Ta	ustrial Park,	
Equipment Under	Test (inclu	ding peripherals) :	
Model Name : Serial Number :	A3KM123 109B50 TY0304232 19" SXGA c	olor monitor, Max. resolution 1920)x1440/60Hz
EMC : Standards		t 15 of October 01,1999 Cl 3.4-1992	ass B
Result :	PASSED	the limits/test-levels in the standa	urds.
Note :	It is the ma	in this report apply only to the sam nufacturer's responsibility to assum of production models.	
Date of receipt of	EUT	: 24 Jun. 2003	
Date of performan	nce of test	: 25 Jun., 2003 to 26 Jun.	, 2003
C.C. Wu	- EMC Test	Engineer Romie	Yang - EMC Manager

Philips Electronics Industries (Taiwan) Ltd This report shall not be reproduce except in full, without written approval of the testing laboratory

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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.

109B50

2. General Information of EUT

The EUT, 19" color monitor :

Model No.	: 109 B 50
FCC ID	: A3KM123
Brand	: PHILIPS

The color monitor automatically scans horizontal frequencies between 30KHz and 97KHz, 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:

ltem	Resolution	Freq. V x H	Pixel rate(Mhz)	Remark
1	800x600	85(53.674k)	56.250	VESA
2	1024x768	75(60.000k)	78.750	VESA
3	1024x768	85(68.677k)	94.500	VESA
4	1152x864	85(77.100k)	121.500	VESA/P
5	1280x1024	75(79.976k)	135.000	VESA
6	1600x1200	75(93.750k)	202.500	VESA
7	1920x1440	60(90.000k)	234.000	VESA/P

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.

Test Equipment	Model No.	Serial No.	Last	Next
			Calibrate	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 Conducted Emissions Test:

- For Radiated Emissions Test:

Test Equipment	Model No.	Serial No.	Last	Next
			Calibrate	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

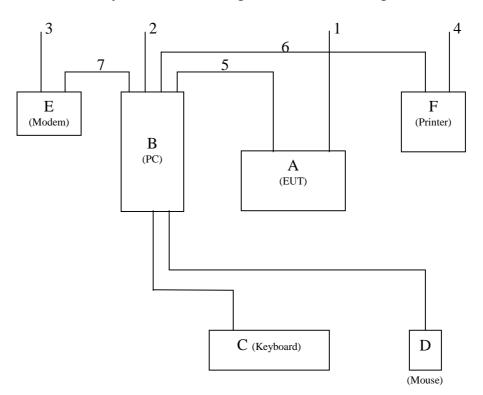
The system was configured for testing in a typical fashion (as a customer would normally use it) according to ANSI C63.4-1992, please see the photographs for detail. For system measurement, the EUT "109B50" were connected to:

	Description	Brand/ Model No.	Serial No.	FCC ID	Remark
Α	Monitor	Philips 109B50	TY0304232	A3KM123	EUT
В	PC	Compaq ENC P866	5K15FXHZ2013	FCC Logo	
С	Keyboard	Compaq KB-9963	B26950GGALP13Q	FCC Logo	
D	Mouse	Compaq M-S48a		JNZ201213	
Е	Modem	Hayes 231AA	A22231081770	BFJ9D9308US	
F	Printer	HP 2225C	2934\$55406	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: <u>ronnie.yang@philips.com</u>

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.

Test Item	File No.	Resolution	Frequencies	I/F Cable
Conducted	Conducted EMI03-028-C		93.8KHz/75Hz	D-sub
Conducted			90KHz/60Hz	D-sub
Radiated	EMI03-028-R	1600x1200	93.8KHz/75Hz	D-sub
Kadiated	EMI03-028-K	1920x1440	90KHz/60Hz	D-sub

Tested and reported modes as following:

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
wiisinaten	
System repeatability Uncertainty for Conducted Emissions	
System repeatability	
System repeatability Uncertainty for Conducted Emissions Source of Measurement	Test at 3 meters Test Site.
System repeatability Uncertainty for Conducted Emissions Source of Measurement	Test at 3 meters Test Site.
System repeatability Uncertainty for Conducted Emissions Source of Measurement Uncertainty	Test at 3 meters Test Site. Uncertainty/dB
System repeatability Uncertainty for Conducted Emissions Source of Measurement Uncertainty LISN specification	Test at 3 meters Test Site. Uncertainty/dB +/-2.0
System repeatability Uncertainty for Conducted Emissions Source of Measurement Uncertainty LISN specification Cable loss calibration	Test at 3 meters Test Site. Uncertainty/dB +/-2.0 +/-0.5
System repeatability Uncertainty for Conducted Emissions Source of Measurement Uncertainty LISN specification Cable loss calibration Receiver specification	Test at 3 meters Test Site. Uncertainty/dB +/-2.0 +/-0.5 +/-1.0
System repeatability Uncertainty for Conducted Emissions Source of Measurement Uncertainty LISN specification Cable loss calibration Receiver specification Pulse limiter Spec.	Test at 3 meters Test Site. Uncertainty/dB +/-2.0 +/-0.5 +/-1.0 +/-0.3

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 :

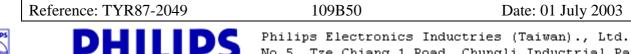
Passed FCC Class B Limits

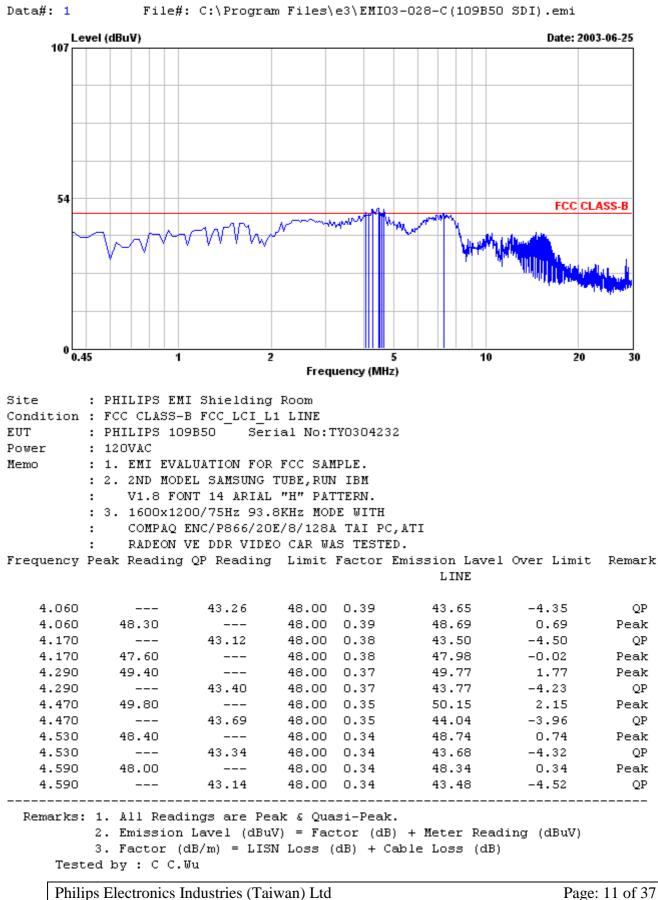
Option:

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 Jun., 2003 to 26 Jun., 2003
Test Engineer	: C.C.Wu
For detail measurement results see next page	S.



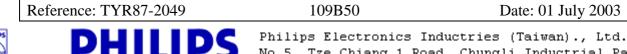


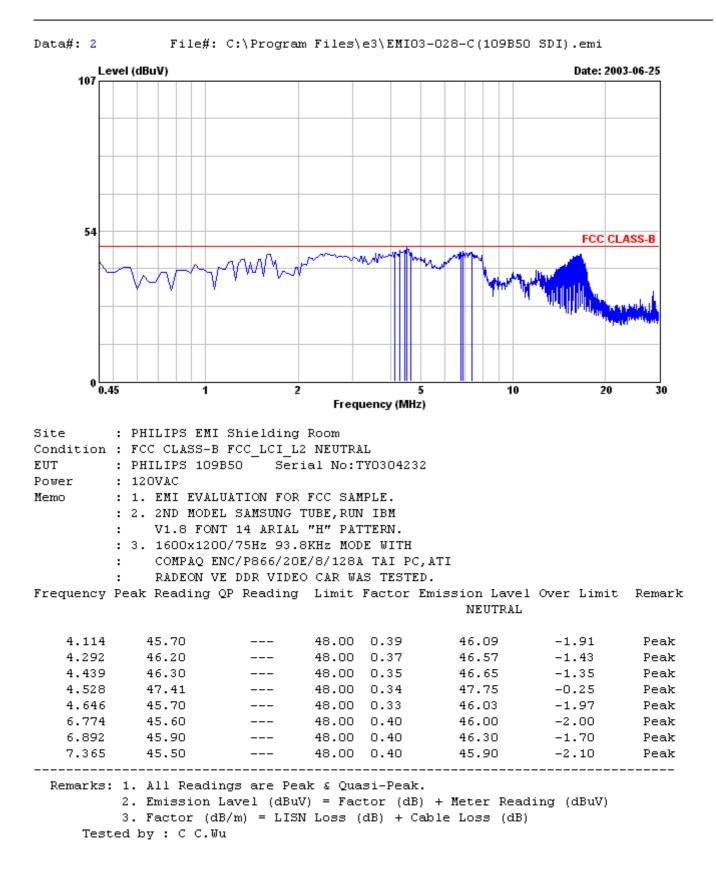
 Reference: TYR87-2049
 109B50
 Date: 01 July 2003

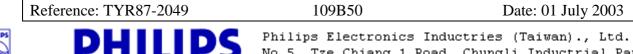
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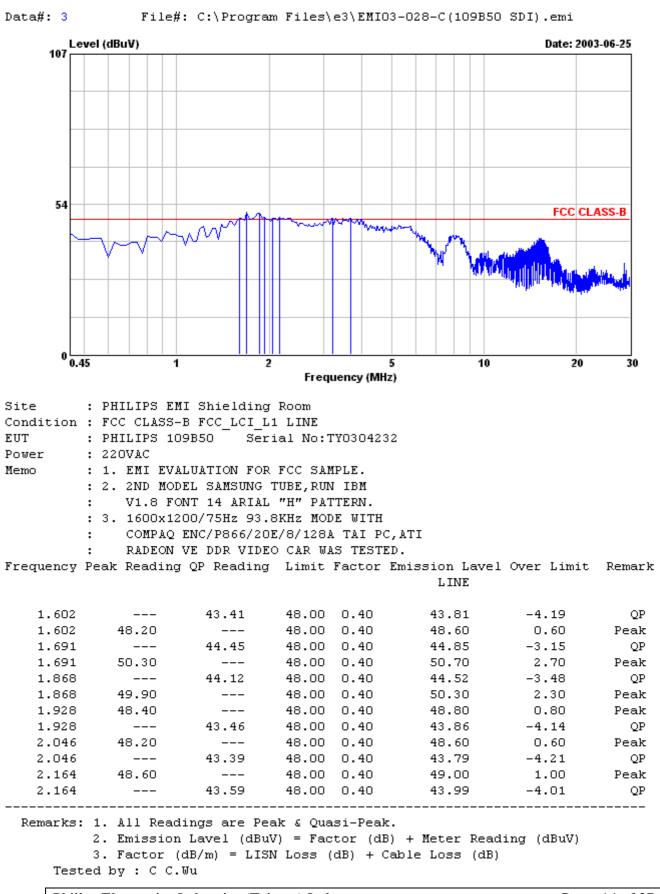
 No.5, Tze Chiang 1 Road, Chungli Inductrial Park, Chungli, Taiwan, R.O.C.
 Tel:+886-3-4549862

Frequency	Peak Reading	QP Reading	Limit	Factor	Emission Lavel LINE	Over Limit	Remark
4.650		43.69	48.00	0.33	44.02	-3.98	QP
4.650	49.60		48.00	0.33	49.93	1.93	Peak
7.310	48.00		48.00	0.40	48.40	0.40	Peak
7.310		43.06	48.00	0.40	43.46	-4.54	QP
Remarks:		Lavel (dBuV	') = Fac	ctor (d)	k. B) + Meter Read Cable Loss (dB)	ing (dBuV)	









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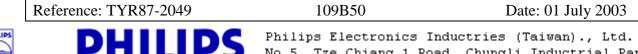
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 109B50
 Date: 01 July 2003

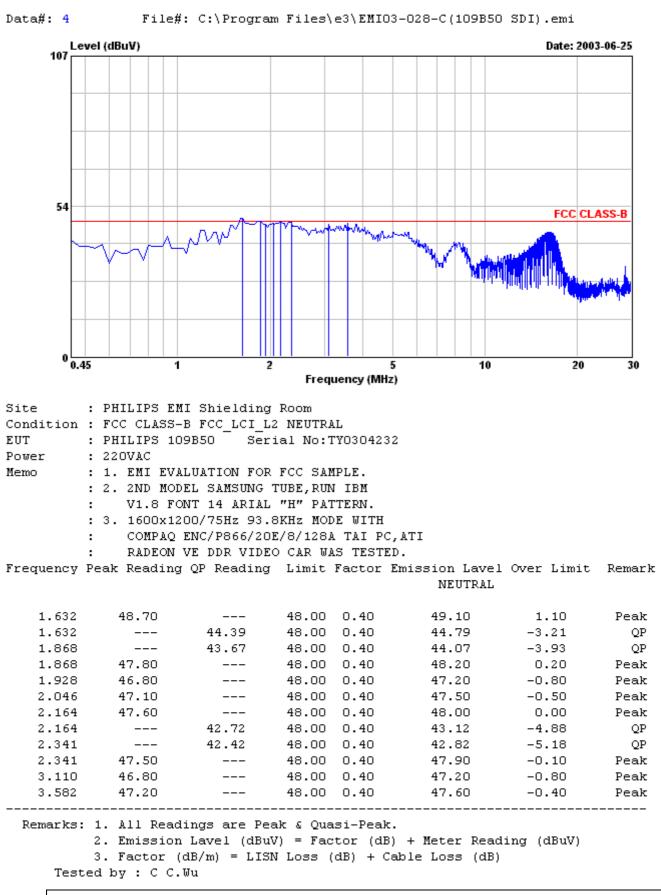
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 Road,
 Chungli
 Inductrial
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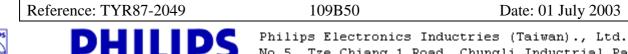
Philips Electronics Inductries (Taiwan)., Ltd. No.5, Tze Chiang 1 Road, Chungli Inductrial Park, Chungli, Taiwan, R.O.C. Tel:+886-3-4549862 Fax:+886-3-4549887

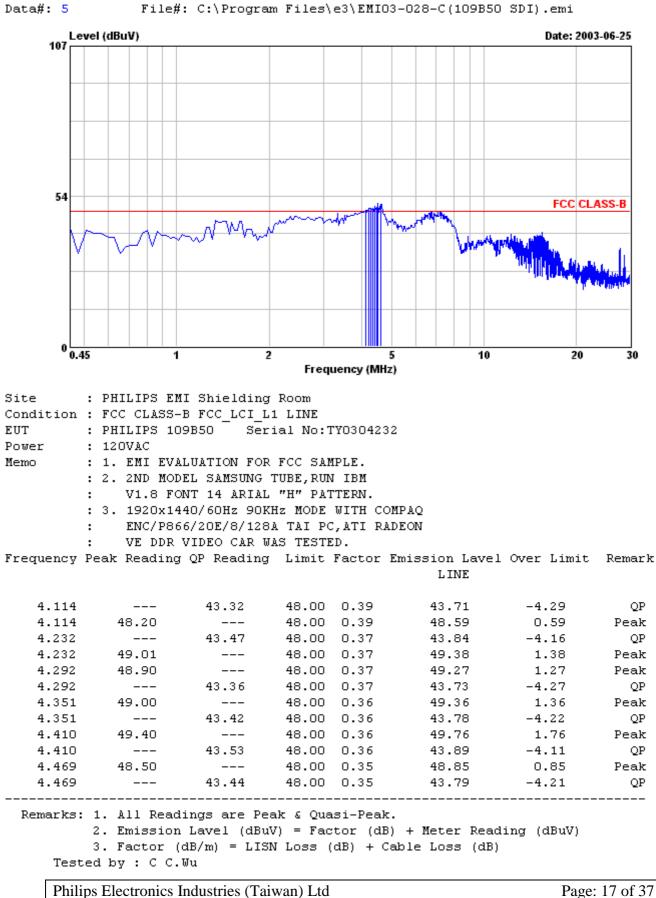
Frequency	Peak Reading	QP Reading	Limit	Factor	Emission Lavel LINE	Over Limit	Remark
3.228	48.10		48.00	0.40	48.50	0.50	Peak
3.228		43.39	48.00	0.40	43.79	-4.21	QP
3.701	48.20		48.00	0.40	48.60	0.60	Peak
3.701		43.40	48.00	0.40	43.80	-4.20	QP
Remarks:		Lavel (dBuV	') = Fac	tor (d)	k. K. B) + Meter Read Cable Loss (dB)	ing (dBuV)	





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 Reference: TYR87-2049
 109B50
 Date: 01 July 2003

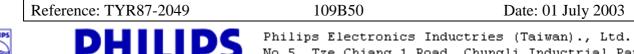
 PHILIPS
 Philips Electronics Inductries (Taiwan)., Ltd.

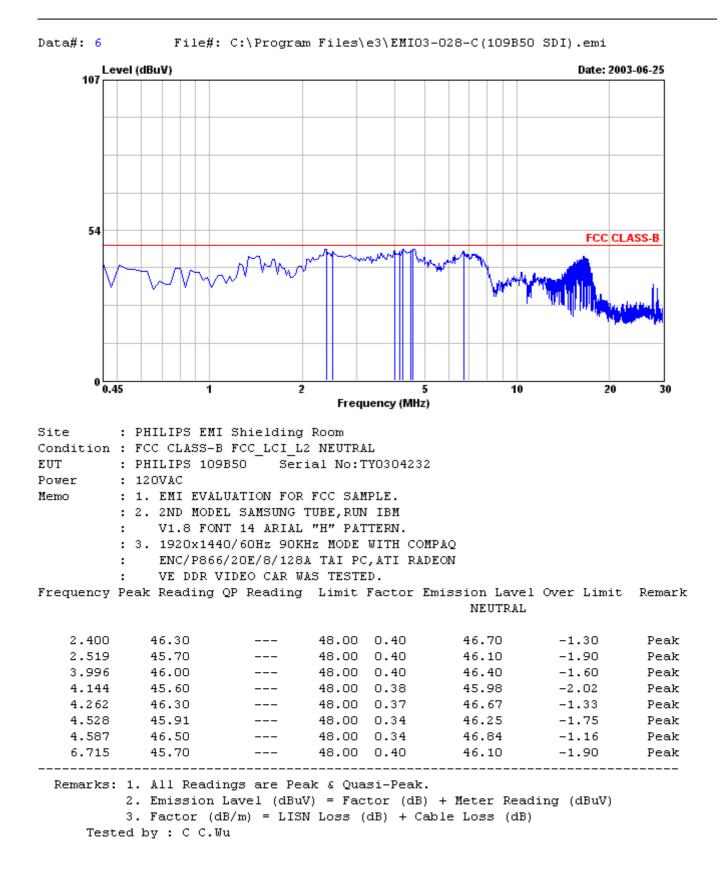
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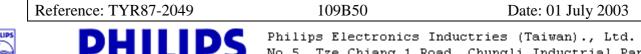
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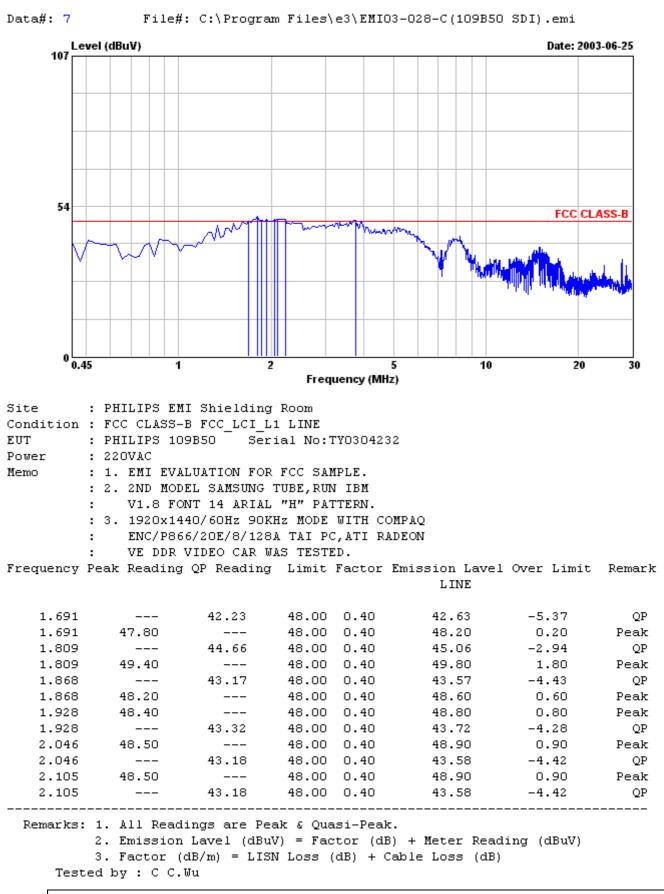
 Tel:+886-3-4549862

Frequency	Peak Reading	QP Reading	Limit	Factor	Emission Lavel LINE	Over Limit	Remark
4.528	50.51		48.00	0.34	50.85	2.85	Peak
4.528		43.63	48.00	0.34	43.97	-4.03	QP
4.617	50.40		48.00	0.34	50.74	2.74	Peak
4.617		43.55	48.00	0.34	43.89	-4.11	QP
Remarks:		Lavel (dBuV	') = Fac	tor (d)	k. B) + Meter Read Cable Loss (dB)	ing (dBuV)	





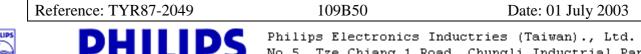


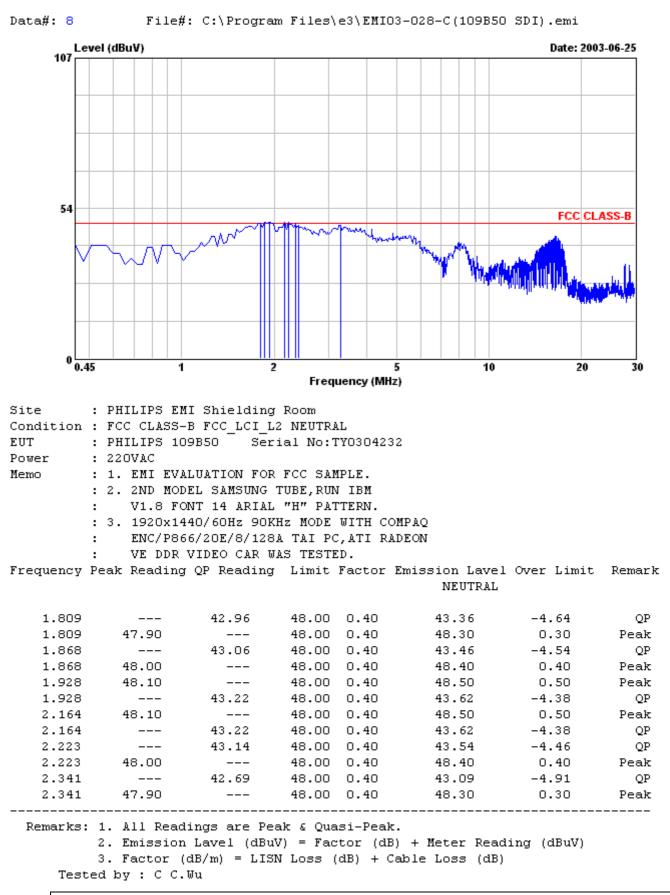


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Tel:+886-3-4549862Fax:+886-3-4549887

Frequency	Peak Reading	QP Reading	Limit	Factor	Emission Lavel LINE	Over Limit	Remark
2.223	48.60		48.00	0.40	49.00	1.00	Peak
2.223		44.15	48.00	0.40	44.55	-3.45	QP
3.760	48.00		48.00	0.40	48.40	0.40	Peak
3.760		42.49	48.00	0.40	42.89	-5.11	QP
Remarks:		Lavel (dBuV	') = Fac	ctor (d)	k. B) + Meter Read Cable Loss (dB)	ing (dBuV)	





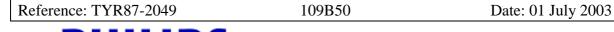
Philips Electronics Industries (Taiwan) Ltd

Reference: TYR87-2049109B50Date: 01 July 2003PHILIPSPhilips Electronics Inductries (Taiwan)., Ltd.
No.5, Tze Chiang 1 Road, Chungli Inductrial Park,
Chungli, Taiwan, R.O.C.
Tel:+886-3-4549862Fax:+886-3-4549887

Frequency 1	Peak Reading QF	9 Reading	Limit	Factor	Emission Lavel NEUTRAL	Over Limit	Remark
2.400	46.90		48.00	0.40	47.30	-0.70	Peak
3.287	47.00		48.00	0.40	47.40	-0.60	Peak
		vel (dBuV	') = Fac	tor (d)	k. B) + Meter Read Cable Loss (dB)	ing (dBuV)	

8. .Radiated Emission Test

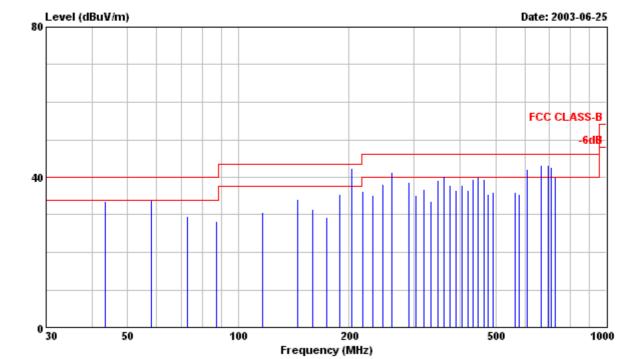
	Radiated Emission	8
	FCC Part 15	
Operating conditions E	UT:	
EUT powered on with scrollir	ng "H" pattern.	
Limits:		
Frequency range (MHz)	Class A at 10m (dBuv) QP	Class B at 3m (dBuv) QP
30.0 - 88.0	39.0	40.0
88.0 - 216.0	43.5	43.5
216.0 - 960.0	46.5	46.0
960.0 - 1000.0	49.5	54.0
Above 1000.0	49.5	54.0 Average
	Passed FCC Class B Limi	its
Test Result : Remark:	Passed FCC Class B Limi	its



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Data#: 1 File#: C:\Program Files\e3\EMIO3-O28-R.emi



Site :	PHILIPS	EMI 3M	open	site	
--------	---------	--------	------	------	--

Condition : FCC CLASS-B 3m FCC-3M-FACTOR HORIZONTAL

EUT : PHILIPS 109B50 Serial No:TY0304232

Power : 120-240VAC

Memo

- : 1. EMI EVALUATION FOR FCC SAMPLE.
 - : 2. 2ND MODEL SAMSUNG TUBE, RUN IBM
 - : V1.8 FONT 16 ARIAL "H" PATTERN.
 - : 3. 1600x1200/75Hz 93.8KHz 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 Over Limit Remark

					HORIZONTAL		
MHz	dBuV	dBuV	dBuV/m	dB/m	dBuV/m	dBuV/m	
43.500	21.80		40.00	11.68	33.48	-6.52	Peak
57.980	23.90		40.00	10.07	33.97	-6.03	Peak
72.500	19.60		40.00	10.11	29.71	-10.29	Peak
86.980	17.50		40.00	10.76	28.26	-11.74	Peak
115.980	18.40		43.50	12.21	30.61	-12.89	Peak
145.000	20.90		43.50	13.24	34.14	-9.36	Peak
159.480	17.80		43.50	13.68	31.48	-12.02	Peak
173.970	15.20		43.50	14.07	29.27	-14.23	Peak
188.470	20.30		43.50	15.22	35.52	-7.98	Peak
! 202.970	25.80		43.50	16.56	42.36	-1.14	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)

Reference: TYR87-2049

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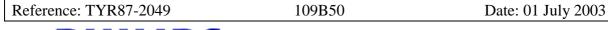
Frequency Peak Reading QP reading Limit Factor Emission Lavel Over Limit Remark

-	1]		1			HORIZONTAL		
	MHz	dBuV	dBuV	dBuV/m	dB/m	dBuV/m	dBuV/m	
!	202.970		24.20	43.50	16.56	40.76	-2.74	QP
	217.470	18.29		46.00	17.88	36.17	-9.83	Peak
	231.970	16.20		46.00	19.06	35.26	-10.74	Peak
	246.470	17.90		46.00	20.24	38.14	-7.86	Peak
!	260.950	20.10		46.00	21.12	41.22	-4.78	Peak
	260.950		18.13	46.00	21.12	39.25	-6.75	QP
	289.950	15.90		46.00	22.68	38.58	-7.42	Peak
	304.450	18.70		46.00	16.57	35.27	-10.73	Peak
	318.930	19.90		46.00	16.88	36.78	-9.22	Peak
	333.430	16.30		46.00	17.18	33.48	-12.52	Peak
	347.930	21.70		46.00	17.46	39.16	-6.84	Peak
	362.430		21.00	46.00	17.74	38.74	-7.26	QP
!	362.430	22.40		46.00	17.74	40.14	-5.86	Peak
	376.930	19.80		46.00	18.00	37.80	-8.20	Peak
	391.430	18.20		46.00	18.26	36.46	-9.54	Peak
	405.920	19.40		46.00	18.48	37.88	-8.12	Peak
	420.390	17.80		46.00	18.69	36.49	-9.51	Peak
	434.900	20.70		46.00	18.90	39.60	-6.40	Peak
	449.400		19.85	46.00	19.08	38.93	-7.07	QP
!	449.400	21.00		46.00	19.08	40.08	-5.92	Peak
	463.900	20.20		46.00	19.27	39.47	-6.53	Peak
	478.400	16.10		46.00	19.45	35.55	-10.45	Peak
	492.900	16.40		46.00	19.62	36.02	-9.98	Peak
	565.390	15.30		46.00	20.71	36.01	-9.99	Peak
	579.890	14.60		46.00	20.94	35.54	-10.46	Peak
!	608.870		19.08	46.00	21.46	40.54	-5.46	QP
!	608.870	20.60		46.00	21.46	42.06	-3.94	Peak
!	666.850	20.30		46.00	22.77	43.07	-2.93	Peak
!	666.850		17.87	46.00	22.77	40.64	-5.36	QP
!	695.850	19.70		46.00	23.45	43.15	-2.85	Peak
!	695.850		18.00	46.00	23.45	41.45	-4.55	QP
!	710.350	19.40		46.00	23.64	43.04	-2.96	Peak
!	710.350		17.43	46.00	23.64	41.07	-4.93	QP
ļ	724.850	16.20		46.00	23.84	40.04	-5.96	Peak
-								

Remarks: 1. All Readings are Peak & Quasi-peak values.

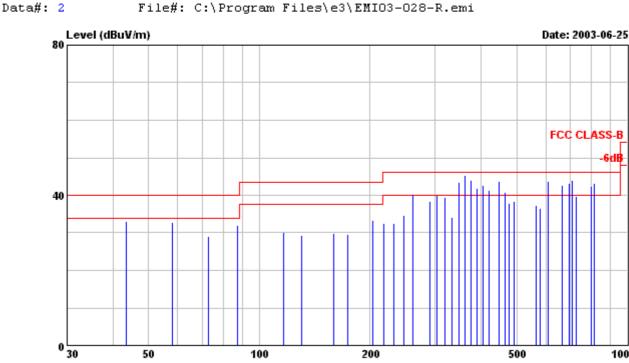
2. Emission Lavel (dBuV/m) = Factor (dB/m) + Meter Reading (dBuV/m)

3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)









Frequency (MHz)

: PHILIPS EMI 3M open site Site

Condition : FCC CLASS-B 3m FCC-3M-FACTOR VERTICAL

EUT : PHILIPS 109B50 Serial No:TY0304232

: 120-240VAC Power

Memo

- : 1. EMI EVALUATION FOR FCC SAMPLE.
 - : 2. 2ND MODEL SAMSUNG TUBE, RUN IBM
 - V1.8 FONT 16 ARIAL "H" PATTERN. :
 - : 3. 1600x1200/75Hz 93.8KHz 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 Over Limit Remark

					VERTICAL		
MHz	dBuV	dBuV	dBuV/m	dB/m	dBuV/m	dBuV/m	
43.500	21.30		40.00	11.68	32.98	-7.02	Peak
57.980	22.80		40.00	10.07	32.87	-7.13	Peak
72.500	18.90		40.00	10.11	29.01	-10.99	Peak
86.980	21.30		40.00	10.76	32.06	-7.94	Peak
115.980	17.90		43.50	12.21	30.11	-13.39	Peak
130.480	16.70		43.50	12.71	29.41	-14.09	Peak
159.480	16.20		43.50	13.68	29.88	-13.62	Peak
173.970	15.60		43.50	14.07	29.67	-13.83	Peak
202.970	16.70		43.50	16.56	33.26	-10.24	Peak
217.470	14.70		46.00	17.88	32.58	-13.42	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)

1000

Reference: TYR87-2049

109B50



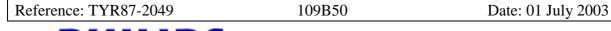
Philips Electronics Inductries (Taiwan)., Ltd. No.5, Tze Chiang 1 Road, Chungli Inductrial Park, Chungli, Taiwan, R.O.C. Tel:+886-3-4549862 Fax:+886-3-4549887

Frequency Peak Reading QP reading Limit Factor Emission Lavel Over Limit Remark VERTICAL MHz dBuV dBuV dBuV/m dB/m dBuV/m dBuV/m 231.970 13.60 ___ 46.00 19.06 32.66 -13.34Peak 14.40 20.24 246.470 ___ 46.00 34.64 -11.36 Peak 46.00 ! 260.950 19.20 ___ 21.12 40.32 -5.68 Peak 260.950 17.45 38.57 -7.43 ___ 46.00 21.12 QP 289.950 15.60 ____ 46.00 22.68 38.28 -7.72 Peak 304.450 23.40 ___ 46.00 16.57 39.97 -6.03 Peak 22.70 318.930 ___ 46.00 16.88 -6.42 39.58 Peak ____ 333.430 17.30 46.00 17.18 34.48 -11.52Peak ____ ! 347.930 24.74 46.00 17.46 42.20 -3.80 OP ! 347.930 26.10 46.00 17.46 43.56 -2.44____ Peak 26.28 ! 362.430 ___ 46.00 17.74 44.02 -1.98 QP ! 362.430 27.70 ___ 46.00 17.74 45.44 -0.56 Peak ____ ! 376.930 25.90 46.00 18.00 43.90 -2.10Peak ! 376.930 ____ 24.07 46.00 18.00 42.07 -3.93 QP ! 391.430 18.26 23.50 ____ 46.00 41.76 -4.24 Peak 39.79 391.430 ___ 21.53 46.00 18.26 -6.21 OP ! 405.920 24.10 ___ 46.00 18.48 42.58 -3.42 Peak ! 405.920 22.19 -5.33 ____ 46.00 18.48 40.67 QP 420.390 ____ 20.85 46.00 18.69 39.54 -6.46QP ! 420.390 22.70 ____ 46.00 18.69 41.39 -4.61Peak ! 449.400 24.60 ____ 46.00 19.08 -2.32 43.68 Peak ! 449.400 22.78 ___ 46.00 19.08 -4.1441.86 QP ! 463.900 21.50 ___ 46.00 19.27 40.77 -5.23 Peak 463.900 ____ 20.38 46.00 19.27 39.65 -6.35 QP -8.25 478.400 18.30 46.00 19.45 37.75 ___ Peak 492.900 18.70 ___ 46.00 19.62 38.32 -7.68 Peak 565.390 ___ 46.00 20.71 16.60 37.31 -8.69 Peak 579.890 15.70 ____ 46.00 20.94 -9.36 36.64 Peak 20.30 46.00 ! 608.870 ___ 21.46 41.76 -4.24 QP 21.46 ! 608.870 22.30 ____ 46.00 43.76 -2.24 Peak ! 666.850 19.80 ___ 46.00 22.77 42.57 -3.43 Peak ! 666.850 17.50 ___ 46.00 22.77 40.27 -5.73 QP ! 695.850 19.70 ___ 46.00 23.45 43.15 -2.85 Peak ! 695.850 17.84 46.00 23.45 41.29 -4.71____ OP ! 710.350 ___ 18.19 46.00 23.64 41.83 -4.17QP ! 710.350 46.00 23.64 20.30 ___ 43.94 -2.06 Peak 23.84 724.850 15.80 ___ 46.00 39.64 -6.36 Peak 14.83 797.340 ____ 46.00 24.77 39.60 -6.40 QP ! 797.340 17.60 ____ 46.00 24.77 42.37 -3.63 Peak 18.30 46.00 ! 811.830 ___ 25.02 43.32 -2.68 Peak ____ 16.38 46.00 25.02 41.40 -4.60! 811.830 OP _____

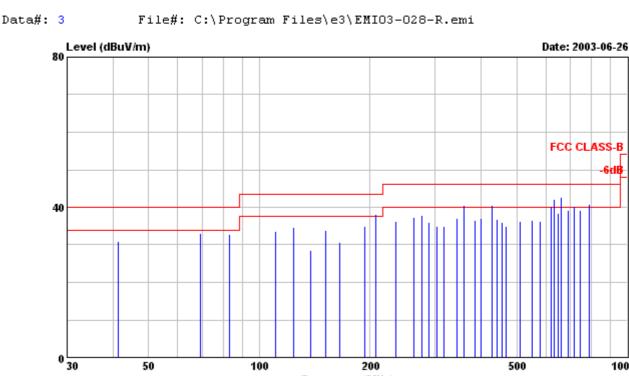
Remarks: 1. All Readings are Peak & Quasi-peak values.

2. Emission Lavel (dBuV/m) = Factor (dB/m) + Meter Reading (dBuV/m)

3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)







Frequency (MHz)

: PHILIPS EMI 3M open site Site

Condition : FCC CLASS-B 3m FCC-3M-FACTOR HORIZONTAL

EUT : PHILIPS 109B50 Serial No:TY0304232

: 120-240VAC Power

Memo

: 1. EMI EVALUATION FOR FCC SAMPLE.

- : 2. 2ND MODEL SAMSUNG TUBE, RUN IBM
- V1.8 FONT 18 ARIAL "H" PATTERN. :
- : 3. 1920x1440/60Hz 90KHz 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 Over Limit Remark

					HORIZONTAL		
MHz	dBuV	dBuV	dBuV/m	dB/m	dBuV/m	dBuV/m	
							- .
41.370	19.00		40.00	11.92	30.92	-9.08	Peak
68.970	23.10		40.00	9.99	33.09	-6.91	Peak
82.760	22.30		40.00	10.54	32.84	-7.16	Peak
110.340	21.70		43.50	11.93	33.63	-9.87	Peak
124.120	22.10		43.50	12.48	34.58	-8.92	Peak
137.910	15.60		43.50	12.99	28.59	-14.91	Peak
151.720	20.50		43.50	13.46	33.96	-9.54	Peak
165.510	16.80		43.50	13.85	30.65	-12.85	Peak
193.080	19.40		43.50	15.67	35.07	-8.43	Peak
! 206.870	21.10		43.50	16.96	38.06	-5.44	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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Reference: TYR87-2049

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LIDS

109B50

Date: 01 July 2003



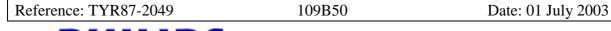
Philips Electronics Inductries (Taiwan)., Ltd. No.5, Tze Chiang 1 Road, Chungli Inductrial Park, Chungli, Taiwan, R.O.C. Tel:+886-3-4549862 Fax:+886-3-4549887

Frequency Peak Reading QP reading Limit Factor Emission Lavel Over Limit Remark

			_			HORIZON	TAL	
	MHz	dBuV	dBuV	dBuV/m	dB/m	dBuV/m	dBuV/m	
	206.870		19.94	43.50	16.96	36.90	-6.60	QP
	234.460	17.10		46.00	19.25	36.35	-9.65	Peak
	262.060	16.10		46.00	21.17	37.27	-8.73	Peak
	275.850	15.80		46.00	21.95	37.75	-8.25	Peak
	289.640	13.20		46.00	22.68	35.88	-10.12	Peak
	303.420	18.50		46.00	16.55	35.05	-10.95	Peak
	317.210	18.10		46.00	16.85	34.95	-11.05	Peak
	344.790	19.80		46.00	17.39	37.19	-8.81	Peak
	358.590		21.07	46.00	17.67	38.74	-7.26	QP
!	358.590	22.90		46.00	17.67	40.57	-5.43	Peak
	386.170	18.30		46.00	18.17	36.47	-9.53	Peak
	399.980	18.70		46.00	18.40	37.10	-8.90	Peak
!	427.540	21.80		46.00	18.79	40.59	-5.41	Peak
	427.540		20.03	46.00	18.79	38.82	-7.18	QP
	441.330	17.70		46.00	18.98	36.68	-9.32	Peak
	455.120	16.80		46.00	19.16	35.96	-10.04	Peak
	468.910	15.70		46.00	19.33	35.03	-10.97	Peak
	510.310	16.40		46.00	19.87	36.27	-9.73	Peak
	551.680	16.10		46.00	20.51	36.61	-9.39	Peak
	579.250	15.40		46.00	20.91	36.31	-9.69	Peak
	620.620		16.28	46.00	21.72	38.00	-8.00	QP
!	620.620	18.50		46.00	21.72	40.22	-5.78	Peak
	634.410		17.26	46.00	22.04	39.30	-6.70	QP
!	634.410	20.00		46.00	22.04	42.04	-3.96	Peak
	648.210	16.10		46.00	22.35	38.45	-7.55	Peak
!	662.000	20.30		46.00	22.66	42.96	-3.04	Peak
!	662.000		17.52	46.00	22.66	40.18	-5.82	QP
	689.580	15.90		46.00	23.29	39.19	-6.81	Peak
!	717.170	16.60		46.00	23.74	40.34	-5.66	Peak
	717.170		14.31	46.00	23.74	38.05	-7.95	QP
	744.750	15.10		46.00	24.12	39.22	-6.78	Peak
!	786.120	16.20		46.00	24.63	40.83	-5.17	Peak
	786.120		12.82	46.00	24.63	37.45	-8.55	QP

Remarks: 1. All Readings are Peak & Quasi-peak values.

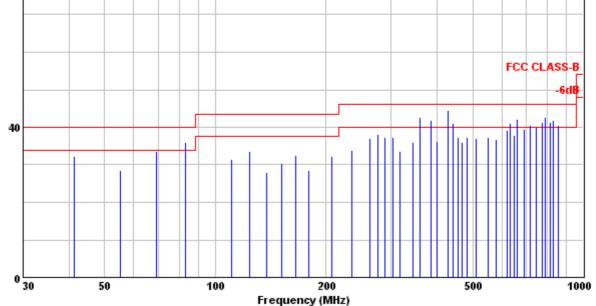
2. Emission Lavel (dBuV/m) = Factor (dB/m) + Meter Reading (dBuV/m) 3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)







Date: 2003-06-26



Site : PHILIPS EMI 3M open site

Condition : FCC CLASS-B 3m FCC-3M-FACTOR VERTICAL

EUT : PHILIPS 109B50 Serial No:TY0304232

Power : 120-240VAC

Memo

- : 1. EMI EVALUATION FOR FCC SAMPLE.
 - : 2. 2ND MODEL SAMSUNG TUBE, RUN IBM
 - : V1.8 FONT 18 ARIAL "H" PATTERN.
 - : 3. 1920x1440/60Hz 90KHz 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 Over Limit Remark

						VERTICAL		
	MHz	dBuV	dBuV	dBuV/m	dB/m	dBuV/m	dBuV/m	
	41.370	20.30		40.00	11.92	32.22	-7.78	Peak
	55.160	18.30		40.00	10.32	28.62	-11.38	Peak
	68.970	23.70		40.00	9.99	33.69	-6.31	Peak
!	82.760	25.50		40.00	10.54	36.04	-3.96	Peak
!	82.760		23.88	40.00	10.54	34.42	-5.58	QP
	110.340	19.50		43.50	11.93	31.43	-12.07	Peak
	124.120	21.20		43.50	12.48	33.68	-9.82	Peak
	137.910	15.00		43.50	12.99	27.99	-15.51	Peak
	151.720	16.90		43.50	13.46	30.36	-13.14	Peak
	165.510	18.70		43.50	13.85	32.55	-10.95	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)

Reference: TYR87-2049

109B50

Frequency Peak Reading QP reading Limit Factor Emission Lavel Over Limit Remark



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

VERTICAL MHz dBuV dBuV dBuV/m dB/m dBuV/m dBuV/m 179.280 14.30 ___ 43.50 14.36 28.66 -14.84Peak 206.870 15.20 ___ 43.50 16.96 32.16 -11.34Peak 14.70 46.00 234.460 19.25 33.95 -12.05___ Peak 262.060 15.80 36.97 ___ 46.00 21.17 -9.03 Peak 275.850 16.20 ___ 46.00 21.95 38.15 -7.85 Peak 289.640 14.60 ___ 46.00 22.68 37.28 -8.72 Peak 303.420 ___ 46.00 16.55 -8.65 20.80 37.35 Peak 317.210 16.70 ___ 46.00 16.85 33.55 -12.45 Peak 344.780 18.70 ___ 46.00 17.39 36.09 -9.91 Peak ! 358.590 ____ 23.62 46.00 17.67 41.29 -4.71OP 25.30 ! 358.590 ___ 46.00 17.67 42.97 -3.03 Peak ! 386.170 23.70 ___ 46.00 18.17 41.87 -4.13Peak 21.75 386.170 ____ 46.00 18.17 39.92 -6.08 QP 399.980 17.90 ____ 46.00 18.40 36.30 -9.70 Peak ! 427.540 18.79 ___ 25.70 46.00 44.49 -1.51Peak ! 427.540 ___ 24.44 46.00 18.79 43.23 -2.77OP ! 441.330 22.10 46.00 18.98 41.08 -4.92 ___ Peak -8.74 455.120 18.10 ____ 46.00 19.16 37.26 Peak 468.910 16.80 ___ 46.00 19.33 36.13 -9.87 Peak ____ 482.720 17.90 46.00 19.49 37.39 -8.61Peak ____ 510.310 17.2046.00 19.87 37.07 -8.93Peak 46.00 20.51 ___ -8.79 551.680 16.70 37.21 Peak 579.250 15.80 ___ 46.00 20.91 36.71 -9.29 Peak 620.620 17.60 46.00 21.72 39.32 -6.68 Peak ___ 634.410 38.09 -7.9116.05 46.00 22.04 ___ QP ! 634.410 18.90 ___ 46.00 22.04 40.94 -5.06 Peak ___ 46.00 22.35 37.95 -8.05 648.210 15.60 Peak 662.000 ____ 16.83 46.00 22.66 39.49 -6.51OP ! 662.000 19.40 ___ 46.00 22.66 42.06 -3.94 Peak 689.580 16.30 ___ 46.00 23.29 39.59 -6.41Peak 717.170 ____ 14.67 46.00 23.74 38.41 -7.59 QP 16.90 ! 717.170 46.00 23.74 40.64 -5.36 Peak ___ 744.750 15.80 ___ 46.00 24.12 39.92 -6.08 Peak ! 772.330 16.90 ___ 46.00 24.46 41.36 -4.64 Peak 772.330 13.07 46.00 24.46 37.53 -8.47QP ____ 786.120 46.00 24.63 ___ 15.24 39.87 -6.13QP ! 786.120 18.30 ____ 46.00 24.63 42.93 -3.07Peak ! 813.700 16.20 ____ 46.00 25.02 41.22 -4.78Peak 813.700 ____ 12.07 46.00 25.02 37.09 -8.91QP 827.490 12.85 46.00 25.24 38.09 -7.91QP ___ ! 827.490 16.70 ___ 46.00 25.24 41.94 -4.06Peak ! 855.070 14.90 ___ 46.00 25.64 40.54 -5.46Peak 855.070 10.96 46.00 25.64 36.60 -9.40OP ___

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)
