

APPLICATION FOR CERTIFICATION
(Class II Permissive Change)
On Behalf of
Philips Electronics Industries (Taiwan) Ltd.
Flat Panel Color Monitor
Model No. : 190B5
FCC ID: A3KM132
Brand : Philips

Prepared for : Philips Electronics Industries (Taiwan) Ltd.
5, Tze Chiang 1 Rd, Chungli Ind. Park,
Chungli, Taoyuan Hsien, Taiwan, R.O.C.

Prepared By : AUDIX Corporation
Technical Division EMC Department
No. 53-11, Tin-Fu Tsun, Lin-Kou,
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File Number : EM930140R1
Report Number : EM-F930058
Date of Test : Mar. 16 ~ 18, 2004
Date of Report : Mar. 29, 2004

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TEST REPORT CERTIFICATION

(Class II Permissive Change)

Applicant : Philips Electronics Industries (Taiwan) Ltd.
 Manufacturer : Philips Electronics Industries (Taiwan) Ltd.
 EUT Description : Flat Panel Color Monitor
 FCC ID : A3KM132
 (A) MODEL NO. : 190B5
 (B) SERIAL NO. : TY0404039
 (C) BRAND NAME : Philips
 (D) POWER SUPPLY : AC 100-240V~ 60-50Hz
 (Test Voltage: AC 120V/60Hz)

Measurement Standard Used:

FCC Part 15B / Dec. 2003 and CISPR 22/1997 and ANSI C63.4-2001

The device described above was tested by AUDIX Corporation determine the maximum emission levels emanating from the device. The maximum emission levels were compared to the CISPR 22 Class B radiated emission limit against the §15.109(g) of FCC Part 15 for 1GHz below, compared the FCC Part 15 subject B radiated limit for above 1GHz and the conducted emission limit of §15.107 (a) of FCC Part 15.

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

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of AUDIX Corporation.

Date of Test : Mar. 16 ~ 18, 2004

Prepared by : Julie Hsu Mar. 31, 2004
(Julie Hsu/Assistant Officer)

Test Engineer : Allen Wang Mar. 21, 2024
(Allen Wang/Deputy Manager)

Approved & Authorized Signer : Leon Liu Apr. 5 2004
(Leon Liu/Assistant General Manager)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

Description	:	Flat Panel Color Monitor
Model Number	:	190B5
Serial Number	:	TY0404039
FCC ID.	:	A3KM132
Brand	:	Philips
Applicant	:	Philips Electronics Industries (Taiwan) Ltd. 5, Tze Chiang 1 Rd, Chungli Ind. Park, Chungli, Taoyuan Hsien, Taiwan, R.O.C.
Manufacturer	:	Philips Electronics Industries (Taiwan) Ltd. 5, Tze Chiang 1 Rd, Chungli Ind. Park, Chungli, Taoyuan Hsien, Taiwan, R.O.C.
CRT	:	LG Philips, M/N LM190E02
Scanning Frequency	:	Horizontal: 30-80kHz Vertical: 56-75Hz
Max Resolution	:	1280*1024
D-Sub Data Cable	:	Shielded, Detachable, 1.8m Bonded two ferrite cores
DVI Data Cable	:	Shielded, Detachable, 2.0m Bonded two ferrite cores
Audio Cable	:	Non-Shielded, Detachable, 1.5m
Power Cord	:	Non-Shielded, Detachable, 1.8m (3 Pin)
Data of Receipt of Sample	:	Mar. 16, 2004
Date of Test	:	Mar. 16 ~ 18, 2004

Remark :

This EUT is a modified version of original FCC ID A3KM132, the differences are as follows:

- (1) to remove the light frame.
- (2) to change the Scaler IC form GM5120 into GM5321.
- (3) to add third source of LCD Panel (LG.Philips, LM190E02) and Power/Inverter Board (Ambit, T50P046.01).

1.2. Tested Supporting System Details

1.2.1. PERSONAL COMPUTER

Model Number	:	HP VECTRA XE320
Serial Number	:	SG21102006
FCC ID	:	By DoC
BSMI ID	:	3912A318
Brand	:	HP
Manufacturer	:	First International Computer, Inc.
VGA Card	:	ATI, M/N Radeon VE 32M BSMI ID.3902A986, FCC by DoC
Power Cord	:	Non-Shielded, Detachable, 1.8m

1.2.2. KEYBOARD

Model Number	:	SK-2502C
Serial Number	:	M020236402
BSMI ID	:	3872F107
FCC ID	:	by DoC
Manufacturer	:	Siltek (Brand: HP)
Data Cable	:	Shielded, Undetachable, 1.8m

1.2.3. MODEM

Model Number	:	DM-1414
Serial Number	:	980034395
FCC ID	:	IFAXDM1414
Manufacturer	:	Accex
Data Cable	:	Shielded, Detachable, 1.2m
Power Adapter	:	Amigo, M/N AM-91000A Non-Shielded, Undetachable, 1.8m

1.2.4. PS2 MOUSE

Model Number	:	M-S48a
Serial Number	:	LZE20501538
FCC ID	:	JNZ201213
BSMI ID	:	4882A001
Manufacturer	:	Logitech (Brand: HP)
Data Cable	:	Non-Shielded, Undetachable, 1.8m

1.2.5. DOT MATRIX PRINTER

Model Number	:	KX-P2135
Serial Number	:	8DMCNC02139
BSMI ID	:	3872A371
FCC ID	:	ACJ5Z6KX-P2135
Brand	:	Panasonic
Manufacturer	:	Matsushita
Data Cable	:	Non-Shielded, Detachable, 1.5m
Power Cord	:	Non-Shielded, Undetachable, 1.8m

1.2.6. MICROPHONE

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

1.2.7. WALKMAN

Model Number	:	RQ-P35LT-K
Serial Number	:	HA08473
Manufacturer	:	Panasonic
Data Cable	:	Non-Shielded, Detachable, 1.8m

1.2.8. MICRO VAULT

Model Number	:	USM64U2
Serial Number	:	N/A
FCC ID	:	By DoC
BSMI ID	:	D33021
Manufacturer	:	SONY
Data Cable	:	Non-Shielded, Detachable, 1.8m

1.2.9. EARPHONE

Model Number	:	N/A
Manufacturer	:	Panasonic
Earphone Cable	:	Non-Shielded, Undetachable, 1.1m

1.3. Test Facility

Name of Firm : Audix Corporation
 Technical Division EMC Department
 No. 53-11, Tin-Fu Tsun, Lin-Kou Hsiang,
 Taipei Hsien 24443, Taiwan, R.O.C.

Test Facility & Location : **No. 4 Shielded Room**
 (C4/R3/R5) No. 67-4, Tin-Fu Tsun, Lin-Kou Hsiang,
 Taipei Hsien 24443, Taiwan, R.O.C.

No. 3 Open Test Site
 No. 67-4, Tin-Fu Tsun, Lin-Kou Hsiang,
 Taipei Hsien 24443, Taiwan, R.O.C.
 Feb. 09, 2003 Re-File on
 Federal Communication Commission
 Registration Number: 90996

No. 5 Open Test Site
 No. 67-4, Tin-Fu Tsun, Lin-Kou Hsiang,
 Taipei Hsien 24443, Taiwan, R.O.C.
 Dec. 19, 2003 Re-File on
 Federal Communication Commission
 Registration Number: 90992

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

DAR-Registration No. : DAT-P-145/03-01

1.4. Measurement Uncertainty

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

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

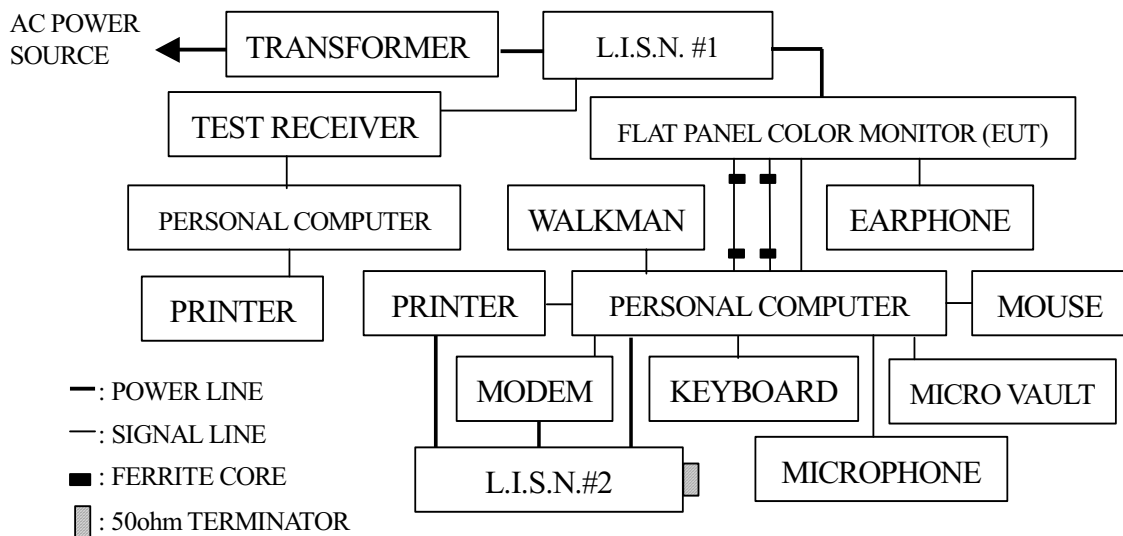
2. CONDUCTED DISTURBANCE MEASUREMENT

2.1. Test Equipment

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

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	Rohde & Schwarz	ESHS10	844591/015	Mar.04, 04'	Mar.03, 05'
2.	L.I.S.N. # 1	Kyoritsu	KNW-407	8-1430-5	Nov.20, 03'	Nov.19, 04'
3.	L.I.S.N. # 2	Kyoritsu	KNW-407	8-1430-6	Nov.20, 03'	Nov.19, 04'

2.2. Block Diagram of Test Setup



2.3. Powerline Conducted Emission Limit (15.107, Class B)

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level	Average Level
150kHz ~ 500kHz	66 ~ 56 dB μ V	56 ~ 46 dB μ V
500kHz ~ 5MHz	56 dB μ V	46 dB μ V
5MHz ~ 30MHz	60 dB μ V	50 dB μ V

- Remark: 1. If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with the average detector is unnecessary.
2. The lower limit applies at the band edges.

2.4. EUT's Configuration during Compliance Measurement

The following equipments were installed on RF LINE VOLTAGE measurement to meet the Commission requirement and operating in a manner which tended to maximize its emission characteristics in a normal application.

2.4.1. Flat Panel Color Monitor (EUT)

Model Number	:	190B5
Serial Number	:	TY0404039
FCC ID	:	A3KM132
Manufacturer	:	Philips Electronics Industries (Taiwan) Ltd.
CRT	:	LG Philips, M/N LM190E02
Scanning Frequency	:	Horizontal: 30-80kHz Vertical: 56-75Hz
Max Resolution	:	1280*1024
D-Sub Data Cable	:	Shielded, Detachable, 1.8m Bonded two ferrite cores
DVI Data Cable	:	Shielded, Detachable, 2.0m Bonded two ferrite cores
Audio Cable	:	Non-Shielded, Detachable, 1.5m
Power Cord	:	Non-Shielded, Detachable, 1.8m (3 Pin)

2.4.2. Supporting System : As in Section 1.2

2.5. Operating Condition of EUT

2.5.1. Setup the EUT and simulator as shown on 2.2.

2.5.2. Turned on the power of all equipments.

2.5.3. Personal computer read data from disk.

2.5.4. Personal computer running the EMI self-test program "H-V1.8" and sent "H" character to Monitor (EUT), the screen of Monitor (EUT) displayed and filled with "H" pattern by EUT's resolution.

2.5.5. Personal Computer read data from FDD and then wrote data into FDD, same operation from HDD 、Modem.

2.5.6. The other peripheral devices were drove and operated in turn during all testing.

2.5.7. Repeat above procedure from 2.5.3 to 2.5.6.

2.6. Test Procedure

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

Both sides of A.C. line were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to FCC ANSI C63.4-2001 on conducted measurement.

The bandwidth of the R&S Test Receiver ESHS10 was set at 10kHz.

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

2.7. Test Results

PASSED. Please refer to the following pages.

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

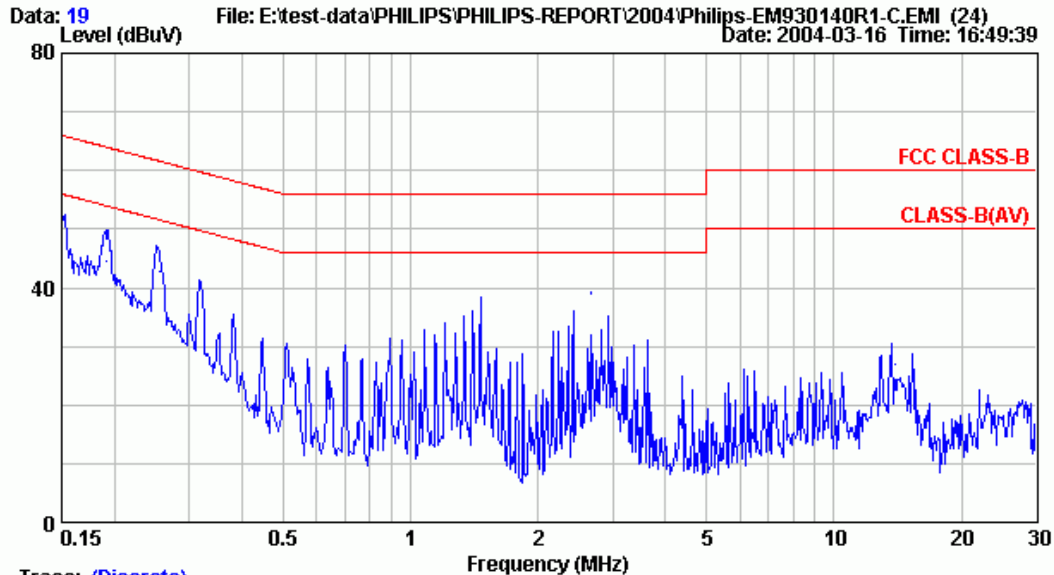
The EUT with following test modes and with AC 120V/60Hz supplying voltage were performed during conducted testing and all the test results are listed in next section.

Test Date : Mar. 16, 2004 Temperature : 22°C Humidity : 50%

No.	Frequency / Resolution.	Data Cable	Reference Test Data #
1.	640*480/60Hz, 31kHz	D-Sub	19, 20
2.	1024*768/75Hz, 60kHz		22, 21
3.	1280*1024/75Hz, 80kHz		23, 24
4.	640*480/60Hz, 31kHz	DVI	18, 17
5.	1024*768/75Hz, 60kHz		15, 16
6.	1280*1024/75Hz, 80kHz		14, 13



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Trace: (Discrete)

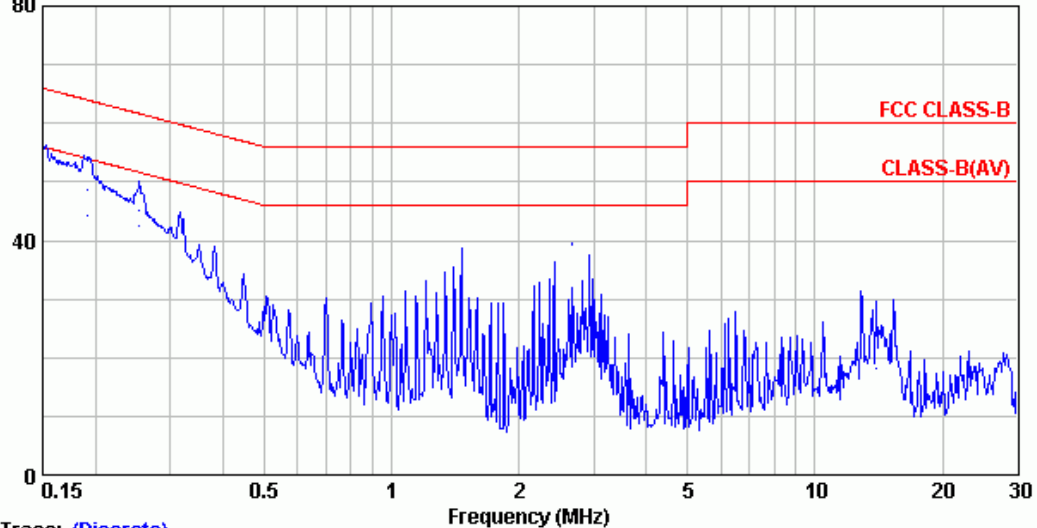
Site :No.4 Shielded room
Condition :FCC CLASS-B KNW-407 NEUTRAL
Env. / Ins. :ESHS10
Engineer :Alex_Huang
Eut :Flat Panel Color Monitor M/N:190B5
Power Rating:120Vac/60Hz (22°C/50%)
emo :640*480/60Hz ; 31KHz (D-SUB)
:S/N:TY0404039

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.150	48.03	-17.95	65.98	47.65	0.30	0.08	QP
2	0.150	47.63	-8.35	55.98	47.25	0.30	0.08	AVERAGE
3	0.191	48.42	-15.58	64.00	48.11	0.21	0.10	QP
4	0.191	44.53	-9.47	54.00	44.22	0.21	0.10	AVERAGE
5	0.255	44.48	-17.12	61.60	44.24	0.16	0.08	QP
6	0.255	42.75	-8.85	51.60	42.51	0.16	0.08	AVERAGE
7	1.466	37.74	-18.26	56.00	37.54	0.10	0.10	QP
8	1.466	37.26	-8.74	46.00	37.06	0.10	0.10	AVERAGE
9	2.678	39.29	-16.71	56.00	39.10	0.10	0.09	QP
10 @	2.678	38.95	-7.05	46.00	38.76	0.10	0.09	AVERAGE
11	13.921	27.09	-32.91	60.00	26.68	0.20	0.21	QP
12	13.921	26.91	-33.09	60.00	26.50	0.20	0.21	AVERAGE



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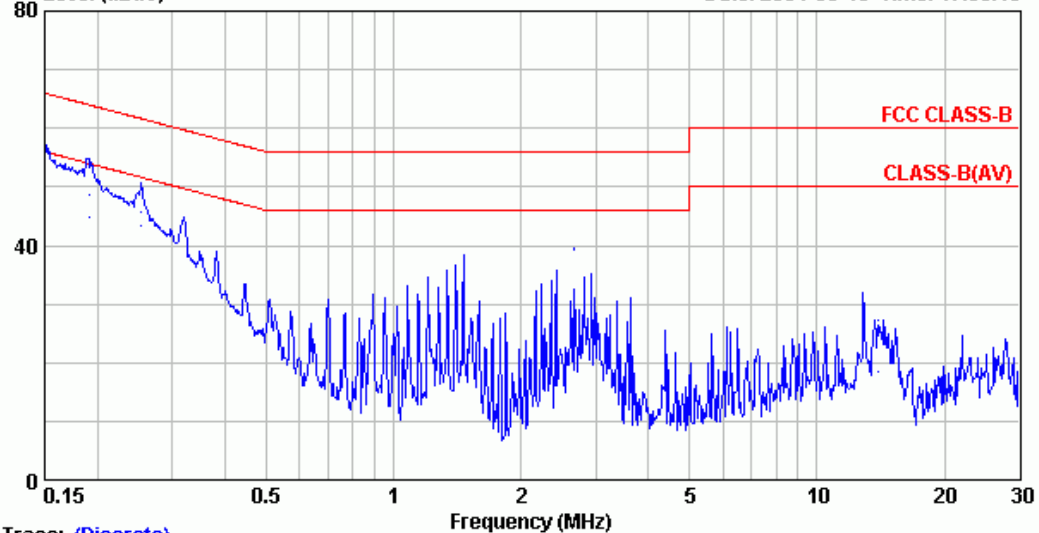
Site :No.4 Shielded room
Condition :FCC CLASS-B KMW-407 LINE
Env. / Ins. :ESHS10
Engineer :Alex Huang
Eut :Flat Panel Color Monitor M/N:190B5
Power Rating:120Vac/60Hz (22°C/50%)
emo :640*480/60Hz ; 31KHz (D-SUB)
:S/N:TY0404039

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.150	48.85	-17.13	65.98	48.47	0.30	0.08	QP
2	0.150	44.99	-10.99	55.98	44.61	0.30	0.08	AVERAGE
3	0.190	48.64	-15.37	64.02	48.33	0.22	0.10	QP
4	0.190	44.28	-9.73	54.02	43.97	0.22	0.10	AVERAGE
5	0.253	45.06	-16.60	61.66	44.82	0.17	0.08	QP
6	0.253	42.44	-9.22	51.66	42.20	0.17	0.08	AVERAGE
7	1.467	37.82	-18.18	56.00	37.62	0.10	0.10	QP
8	1.467	37.39	-8.61	46.00	37.19	0.10	0.10	AVERAGE
9	2.676	39.71	-16.29	56.00	39.52	0.10	0.09	QP
10 @	2.676	39.21	-6.79	46.00	39.02	0.10	0.09	AVERAGE
11	13.923	26.79	-33.21	60.00	26.40	0.18	0.21	QP
12	13.923	18.29	-31.71	50.00	17.90	0.18	0.21	AVERAGE



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Level (dBuV) Date: 2004-03-16 Time: 17:00:45



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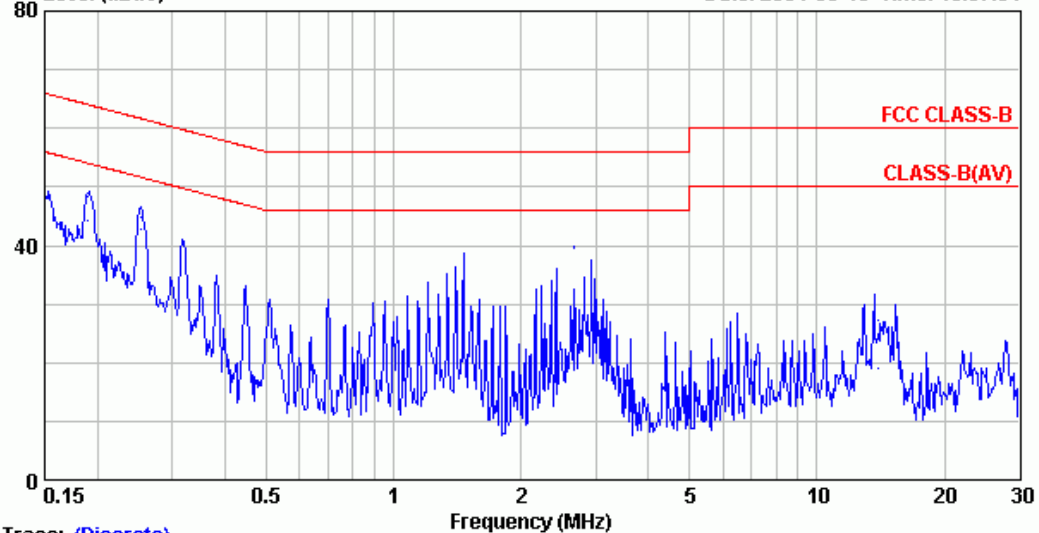
Site :No.4 Shielded room
Condition :FCC CLASS-B KMW-407 NEUTRAL
Env. / Ins. :ESHS10
Engineer :Alex Huang
Eut :Flat Panel Color Monitor M/N:190B5
Power Rating:120Vac/60Hz (22°C/50%)
emo :1024*768/75Hz ; 60KHz (D-SUB)
:S/N:TY0404039

	Freq	Level	Over	Limit	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.150	49.95	-16.04	65.99	49.57	0.30	0.08	QP
2	0.150	47.87	-8.12	55.99	47.49	0.30	0.08	AVERAGE
3	0.191	48.72	-15.27	63.99	48.41	0.21	0.10	QP
4	0.191	44.80	-9.19	53.99	44.49	0.21	0.10	AVERAGE
5	0.254	45.76	-15.87	61.64	45.52	0.17	0.08	QP
6	0.254	43.33	-8.30	51.64	43.09	0.17	0.08	AVERAGE
7	1.466	37.96	-18.04	56.00	37.76	0.10	0.10	QP
8	1.466	37.55	-8.45	46.00	37.35	0.10	0.10	AVERAGE
9	2.677	39.63	-16.37	56.00	39.44	0.10	0.09	QP
10 @	2.677	39.32	-6.68	46.00	39.13	0.10	0.09	AVERAGE
11	13.922	27.39	-32.61	60.00	26.98	0.20	0.21	QP
12	13.922	18.60	-31.40	50.00	18.19	0.20	0.21	AVERAGE



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Data: 21 File: E:\test-data\PHILIPS\PHILIPS-REPORT\2004\Philips-EM930140R1-C-EMI (24)
Level (dBuV) Date: 2004-03-16 Time: 16:57:31



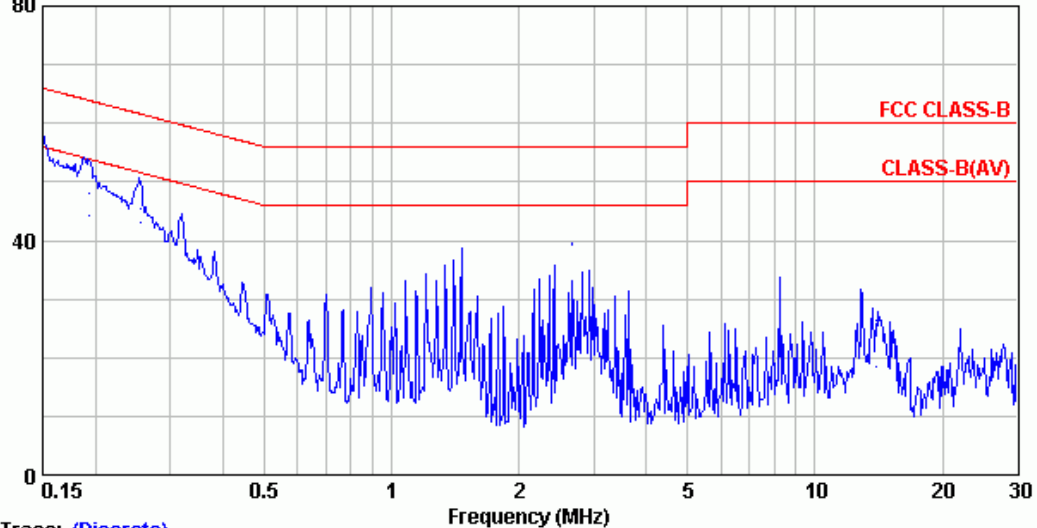
Trace: (Discrete)
Site :No.4 Shielded room
Condition :FCC CLASS-B KMW-407 LINE
Env. / Ins. :ESHS10
Engineer :Alex Huang
Eut :Flat Panel Color Monitor M/N:190B5
Power Rating:120Vac/60Hz (22°C/50%)
emo :1024*768/75Hz ; 60KHz (D-SUB)
:S/N:TY0404039

	Freq	Level	Over	Limit	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.150	45.46	-20.54	66.00	45.08	0.30	0.08	QP
2	0.150	44.95	-11.05	56.00	44.57	0.30	0.08	AVERAGE
3	0.190	48.46	-15.56	64.03	48.15	0.22	0.10	QP
4	0.190	44.21	-9.81	54.03	43.90	0.22	0.10	AVERAGE
5	0.254	44.96	-16.67	61.64	44.72	0.17	0.08	QP
6	0.254	42.85	-8.78	51.64	42.61	0.17	0.08	AVERAGE
7	1.468	37.48	-18.52	56.00	37.28	0.10	0.10	QP
8	1.468	36.89	-9.11	46.00	36.69	0.10	0.10	AVERAGE
9	2.677	39.95	-16.05	56.00	39.76	0.10	0.09	QP
10 @	2.677	39.59	-6.41	46.00	39.40	0.10	0.09	AVERAGE
11	13.922	27.25	-32.75	60.00	26.86	0.18	0.21	QP
12	13.922	19.19	-30.81	50.00	18.80	0.18	0.21	AVERAGE



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Data: 23 File: E:\test-data\PHILIPS\PHILIPS-REPORT\2004\Philips-EM930140R1-C-EMI (24)
Level (dBuV) Date: 2004-03-16 Time: 17:05:16



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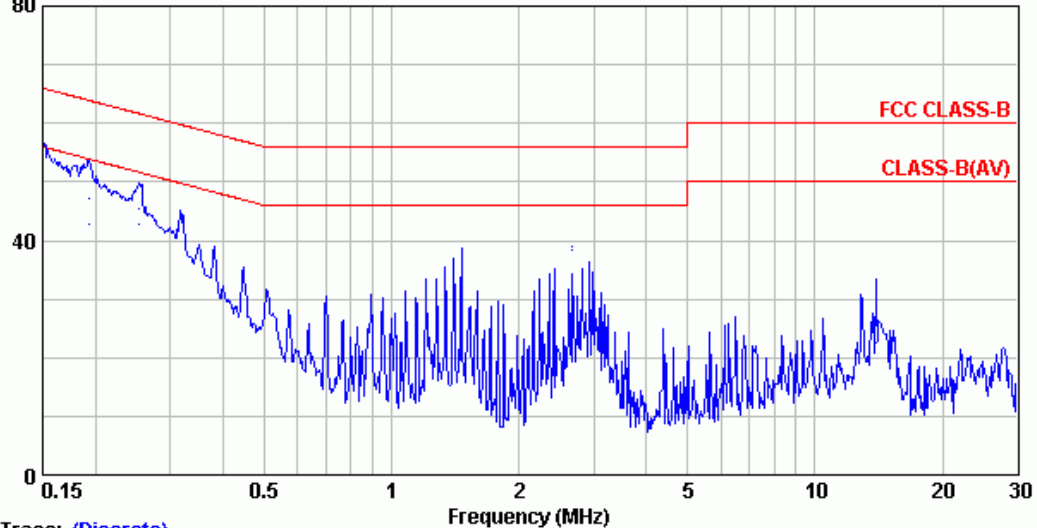
Site :No.4 Shielded room
Condition :FCC CLASS-B KMW-407 NEUTRAL
Env. / Ins. :ESHS10
Engineer :Alex Huang
Eut :Flat Panel Color Monitor M/N:190B5
Power Rating:120Vac/60Hz (22°C/50%)
emo :1280*1024/75Hz ; 80KHz (D-SUB)
:S/N:TY0404039

	Freq	Level	Over	Limit	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.150	50.27	-15.71	65.98	49.89	0.30	0.08	QP
2	0.150	47.71	-8.27	55.98	47.33	0.30	0.08	AVERAGE
3	0.192	48.20	-15.74	63.94	47.89	0.21	0.10	QP
4	0.192	44.28	-9.66	53.94	43.97	0.21	0.10	AVERAGE
5	0.254	45.36	-16.25	61.61	45.12	0.16	0.08	QP
6	0.254	43.20	-8.41	51.61	42.96	0.16	0.08	AVERAGE
7	1.467	37.92	-18.08	56.00	37.72	0.10	0.10	QP
8	1.467	37.41	-8.59	46.00	37.21	0.10	0.10	AVERAGE
9	2.678	39.51	-16.49	56.00	39.32	0.10	0.09	QP
10 @	2.678	39.17	-6.83	46.00	38.98	0.10	0.09	AVERAGE
11	13.920	26.45	-33.55	60.00	26.04	0.20	0.21	QP
12	13.920	18.52	-31.48	50.00	18.11	0.20	0.21	AVERAGE



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Data: 24 File: E:\test-data\PHILIPS\PHILIPS-REPORT\2004\Philips-EM930140R1-C-EMI (24)
Level (dBuV) Date: 2004-03-16 Time: 17:07:41



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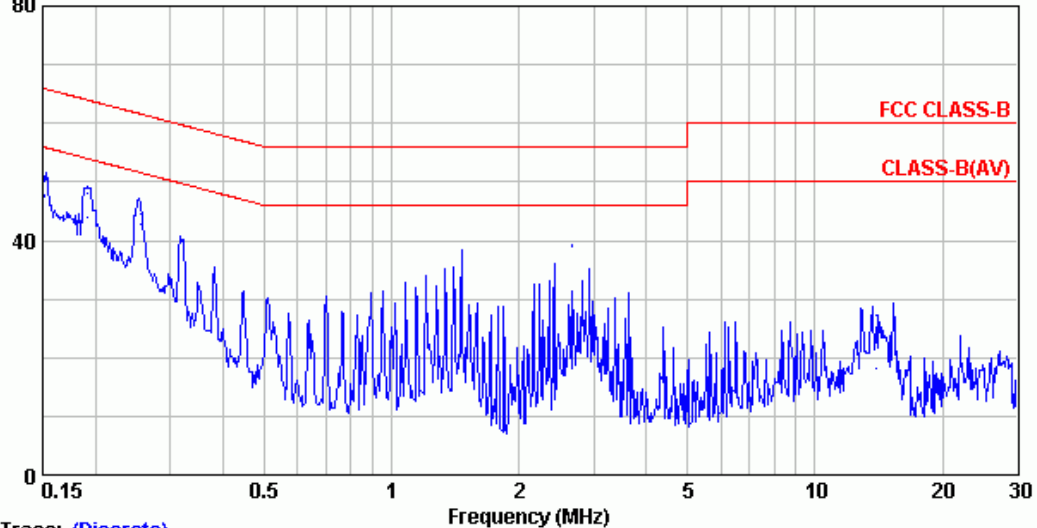
Site :No.4 Shielded room
Condition :FCC CLASS-B KMW-407 LINE
Env. / Ins. :ESHS10
Engineer :Alex Huang
Eut :Flat Panel Color Monitor M/N:190B5
Power Rating:120Vac/60Hz (22°C/50%)
emo :1280*1024/75Hz ; 80KHz (D-SUB)
:S/N:TY0404039

	Freq	Level	Over	Limit	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.151	49.89	-16.08	65.97	49.51	0.30	0.08	QP
2	0.151	44.88	-11.09	55.97	44.50	0.30	0.08	AVERAGE
3	0.194	47.26	-16.62	63.88	46.95	0.21	0.10	QP
4	0.194	42.87	-11.01	53.88	42.56	0.21	0.10	AVERAGE
5	0.253	45.34	-16.30	61.64	45.10	0.17	0.08	QP
6	0.253	42.89	-8.75	51.64	42.65	0.17	0.08	AVERAGE
7	1.466	38.20	-17.80	56.00	38.00	0.10	0.10	QP
8	1.466	37.71	-8.29	46.00	37.51	0.10	0.10	AVERAGE
9	2.675	38.99	-17.01	56.00	38.80	0.10	0.09	QP
10 @	2.675	38.53	-7.47	46.00	38.34	0.10	0.09	AVERAGE
11	13.920	27.39	-32.61	60.00	27.00	0.18	0.21	QP
12	13.920	22.53	-27.47	50.00	22.14	0.18	0.21	AVERAGE



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Data: 18 File: E:\test-data\PHILIPS\PHILIPS-REPORT\2004\Philips-EM930140R1-C-EMI (24)
Level (dBuV) Date: 2004-03-16 Time: 16:47:18



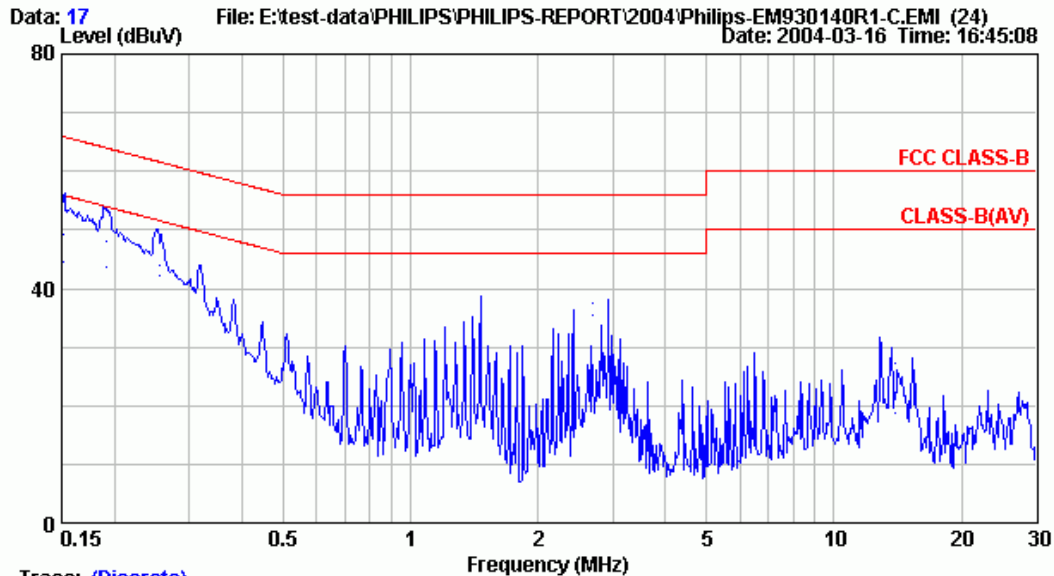
Trace: (Discrete)

Site :No.4 Shielded room
Condition :FCC CLASS-B KMW-407 NEUTRAL
Env. / Ins. :ESHS10
Engineer :Alex Huang
Eut :Flat Panel Color Monitor M/N:190B5
Power Rating:120Vac/60Hz (22°C/50%)
emo :640*480/60Hz ; 31KHz (DVI)
:S/N:TY0404039

	Freq	Level	Over	Limit	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.151	47.77	-18.18	65.95	47.39	0.30	0.08	QP
2	0.151	47.42	-8.53	55.95	47.04	0.30	0.08	AVERAGE
3	0.192	47.96	-15.99	63.95	47.65	0.21	0.10	QP
4	0.192	44.04	-9.91	53.95	43.73	0.21	0.10	AVERAGE
5	0.255	44.48	-17.12	61.60	44.24	0.16	0.08	QP
6	0.255	42.74	-8.86	51.60	42.50	0.16	0.08	AVERAGE
7	1.466	37.74	-18.26	56.00	37.54	0.10	0.10	QP
8	1.466	37.25	-8.75	46.00	37.05	0.10	0.10	AVERAGE
9	2.678	39.29	-16.71	56.00	39.10	0.10	0.09	QP
10 @	2.678	38.92	-7.08	46.00	38.73	0.10	0.09	AVERAGE
11	13.921	27.37	-32.63	60.00	26.96	0.20	0.21	QP
12	13.921	18.06	-31.94	50.00	17.65	0.20	0.21	AVERAGE



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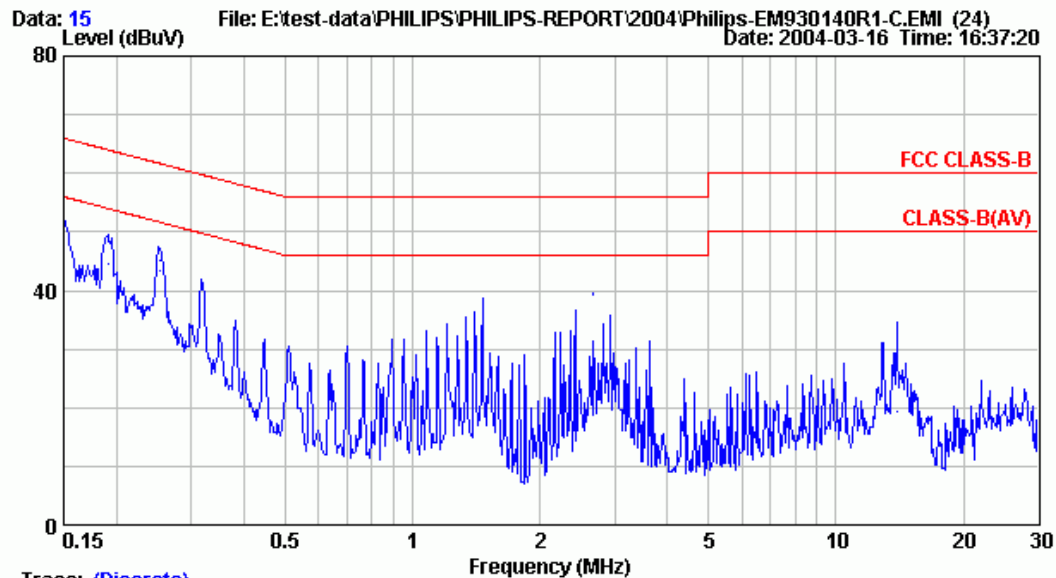


Site :No.4 Shielded room
Condition :FCC CLASS-B KMW-407 LINE
Env. / Ins. :ESHS10
Engineer :Alex Huang
Eut :Flat Panel Color Monitor M/N:190B5
Power Rating:120Vac/60Hz (22°C/50%)
emo :640*480/60Hz ; 31KHz (DVI)
:S/N:TY0404039

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.151	49.29	-16.66	65.95	48.91	0.30	0.08	QP
2	0.151	44.65	-11.30	55.95	44.27	0.30	0.08	AVERAGE
3	0.192	47.94	-16.01	63.95	47.63	0.21	0.10	QP
4	0.192	43.76	-10.19	53.95	43.45	0.21	0.10	AVERAGE
5	0.256	44.08	-17.49	61.57	43.84	0.16	0.08	QP
6	0.256	42.08	-9.49	51.57	41.84	0.16	0.08	AVERAGE
7	1.464	37.18	-18.82	56.00	36.98	0.10	0.10	QP
8	1.464	36.67	-9.33	46.00	36.47	0.10	0.10	AVERAGE
9	2.681	37.45	-18.55	56.00	37.26	0.10	0.09	QP
10	2.681	35.49	-10.51	46.00	35.30	0.10	0.09	Average
11	13.920	27.23	-32.77	60.00	26.84	0.18	0.21	QP
12	13.920	18.69	-31.31	50.00	18.30	0.18	0.21	AVERAGE



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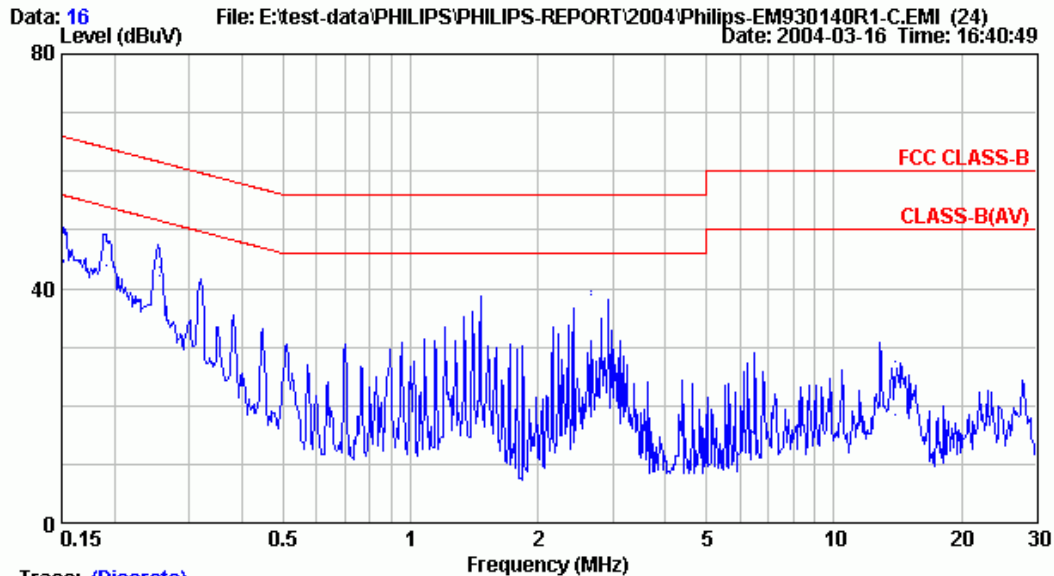


Site :No.4 Shielded room
Condition :FCC CLASS-B KMW-407 NEUTRAL
Env. / Ins. :ESHS10
Engineer :Alex Huang
Eut :Flat Panel Color Monitor M/N:190B5
Power Rating:120Vac/60Hz (22°C/50%)
emo :1024*768/75Hz ; 60KHz (DVI)
:S/N:TY0404039

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.151	47.83	-18.14	65.97	47.45	0.30	0.08	QP
2	0.151	47.47	-8.50	55.97	47.09	0.30	0.08	AVERAGE
3	0.191	48.38	-15.60	63.98	48.07	0.21	0.10	QP
4	0.191	44.47	-9.51	53.98	44.16	0.21	0.10	AVERAGE
5	0.254	45.22	-16.40	61.62	44.98	0.16	0.08	QP
6	0.254	43.23	-8.39	51.62	42.99	0.16	0.08	AVERAGE
7	1.465	38.00	-18.00	56.00	37.80	0.10	0.10	QP
8	1.465	37.56	-8.44	46.00	37.36	0.10	0.10	AVERAGE
9	2.677	39.55	-16.45	56.00	39.36	0.10	0.09	QP
10 @	2.677	39.20	-6.80	46.00	39.01	0.10	0.09	AVERAGE
11	13.923	26.85	-33.15	60.00	26.44	0.20	0.21	QP
12	13.923	19.25	-30.75	50.00	18.84	0.20	0.21	AVERAGE



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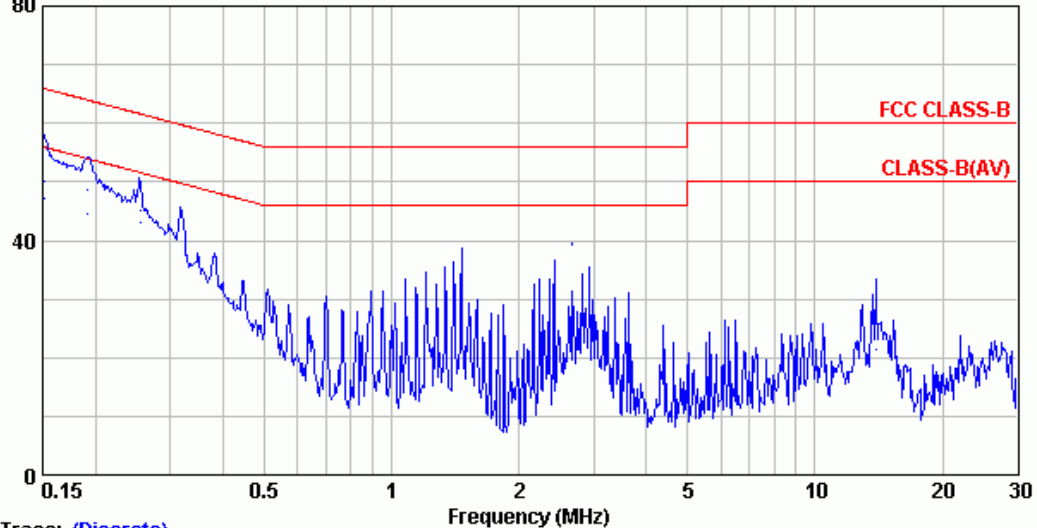
Site :No.4 Shielded room
Condition :FCC CLASS-B KMW-407 LINE
Env. / Ins. :ESHS10
Engineer :Alex Huang
Eut :Flat Panel Color Monitor M/N:190B5
Power Rating:120Vac/60Hz (22°C/50%)
emo :1024*768/75Hz ; 60KHz (DVI)
:S/N:TY0404039

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.151	44.90	-21.04	65.94	44.52	0.30	0.08	QP
2	0.151	44.41	-11.53	55.94	44.03	0.30	0.08	AVERAGE
3	0.191	48.20	-15.78	63.98	47.89	0.21	0.10	QP
4	0.191	43.87	-10.11	53.98	43.56	0.21	0.10	AVERAGE
5	0.256	43.78	-17.79	61.57	43.54	0.16	0.08	QP
6	0.256	42.23	-9.34	51.57	41.99	0.16	0.08	AVERAGE
7	1.466	38.02	-17.98	56.00	37.82	0.10	0.10	QP
8	1.466	37.50	-8.50	46.00	37.30	0.10	0.10	AVERAGE
9	2.678	39.49	-16.51	56.00	39.30	0.10	0.09	QP
10 @	2.678	39.04	-6.96	46.00	38.85	0.10	0.09	AVERAGE
11	13.921	27.68	-32.32	60.00	27.29	0.18	0.21	QP
12	13.921	18.42	-31.58	50.00	18.03	0.18	0.21	AVERAGE



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Data: 14 File: E:\test-data\PHILIPS\PHILIPS-REPORT\2004\Philips-EM930140R1-C-EMI (24)
Level (dBuV) Date: 2004-03-16 Time: 16:30:15



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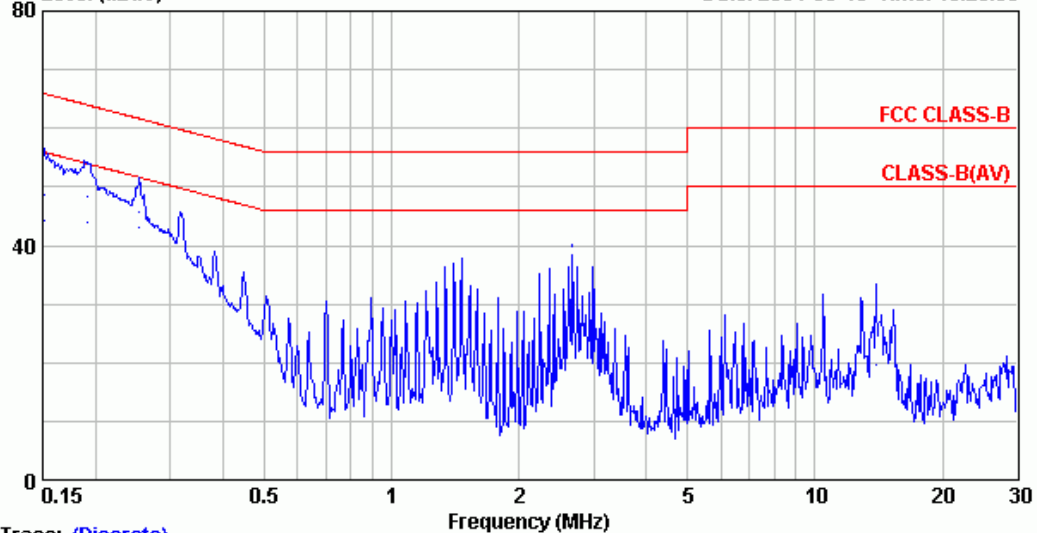
Site :No.4 Shielded room
Condition :FCC CLASS-B KMW-407 NEUTRAL
Env. / Ins. :ESHS10
Engineer :Alex Huang
Eut :Flat Panel Color Monitor M/N:190B5
Power Rating:120Vac/60Hz (22°C/50%)
emo :1280*1024/75Hz ; 80KHz (DVI)
:S/N:TY0404039

	Freq	Level	Over	Limit	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.151	50.17	-15.77	65.94	49.79	0.30	0.08	QP
2	0.151	47.19	-8.75	55.94	46.81	0.30	0.08	AVERAGE
3	0.192	48.52	-15.45	63.97	48.21	0.21	0.10	QP
4	0.192	44.54	-9.43	53.97	44.23	0.21	0.10	AVERAGE
5	0.255	45.22	-16.38	61.60	44.98	0.16	0.08	QP
6	0.255	43.12	-8.48	51.60	42.88	0.16	0.08	AVERAGE
7	1.466	38.02	-17.98	56.00	37.82	0.10	0.10	QP
8	1.466	37.63	-8.37	46.00	37.43	0.10	0.10	AVERAGE
9	2.676	39.57	-16.43	56.00	39.38	0.10	0.09	QP
10 @	2.676	39.19	-6.81	46.00	39.00	0.10	0.09	AVERAGE
11	13.921	27.72	-32.28	60.00	27.31	0.20	0.21	QP
12	13.921	21.48	-28.52	50.00	21.07	0.20	0.21	AVERAGE



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Data: 13 File: E:\test-data\PHILIPS\PHILIPS-REPORT\2004\Philips-EM930140R1-C-EMI (24)
Level (dBuV) Date: 2004-03-16 Time: 16:20:08



Trace: (Discrete)

Site :No.4 Shielded room
Condition :FCC CLASS-B KMW-407 LINE
Env. / Ins. :ESHS10
Engineer :Alex Huang
Eut :Flat Panel Color Monitor M/N:190B5
Power Rating:120Vac/60Hz (22°C/50%)
emo :1280*1024/75Hz ; 80KHz (DVI)
:S/N:TY0404039

	Freq	Level	Over	Limit	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.151	48.61	-17.33	65.94	48.23	0.30	0.08	QP
2	0.151	44.14	-11.80	55.94	43.76	0.30	0.08	AVERAGE
3	0.192	48.34	-15.62	63.96	48.03	0.21	0.10	QP
4	0.192	44.02	-9.94	53.96	43.71	0.21	0.10	AVERAGE
5	0.253	45.62	-16.02	61.64	45.38	0.17	0.08	QP
6	0.253	43.03	-8.61	51.64	42.79	0.17	0.08	AVERAGE
7	1.467	37.70	-18.30	56.00	37.50	0.10	0.10	QP
8	1.467	37.25	-8.75	46.00	37.05	0.10	0.10	AVERAGE
9	2.677	40.09	-15.91	56.00	39.90	0.10	0.09	QP
10 @	2.677	39.72	-6.28	46.00	39.53	0.10	0.09	AVERAGE
11	13.923	27.54	-32.46	60.00	27.15	0.18	0.21	QP
12	13.923	19.65	-30.35	50.00	19.26	0.18	0.21	AVERAGE

3. RADIATED DISTURBANCE MEASUREMENT

3.1. Test Equipment

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

3.1.1. For 30MHz~1000MHz Frequency (At No. 3 Open Test Site)

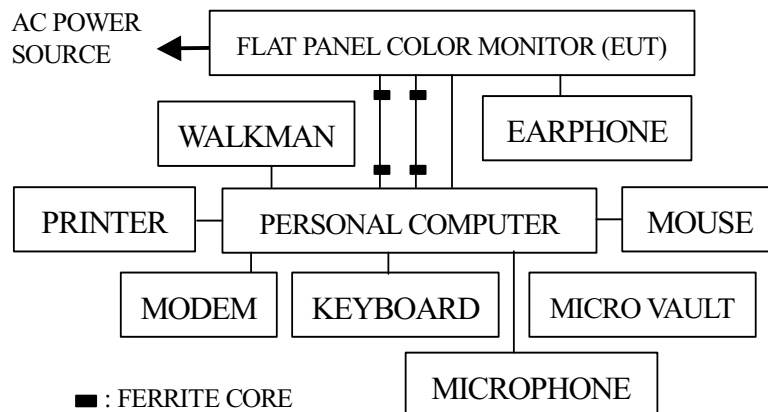
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	HP	8590L	3710A01838	N/A	N/A
2.	Test Receiver	Rohde & Schwarz	ESVS10	845165/002	Mar.10, 04'	Mar.09, 05'
3.	Amplifier	HP	8447D	2727A06154	N/A	N/A
4.	Broadband Antenna	Chase	VBA6106A	1231	Mar.17, 04'	Mar.16, 05'
5.	Log Periodic Antenna	Chase	UPA6109	1027	Mar.17, 04'	Mar.16, 05'

3.1.2. Above 1GHz Frequency (At No. 5 Open Test Site)

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	HP	8593EM	3826A00272	Jun.05, 03'	Jun.04, 04'
2.	Test Receiver	Rohde & Schwarz	ESVS10	849231/017	Feb.06, 04'	Feb.05, 05'
3.	Amplifier	HP	8447D	2944A07185	N/A	N/A
4.	Horn Antenna	EMCO	3115	9112-3775	Apr. 21, 03'	Apr. 20, 04'

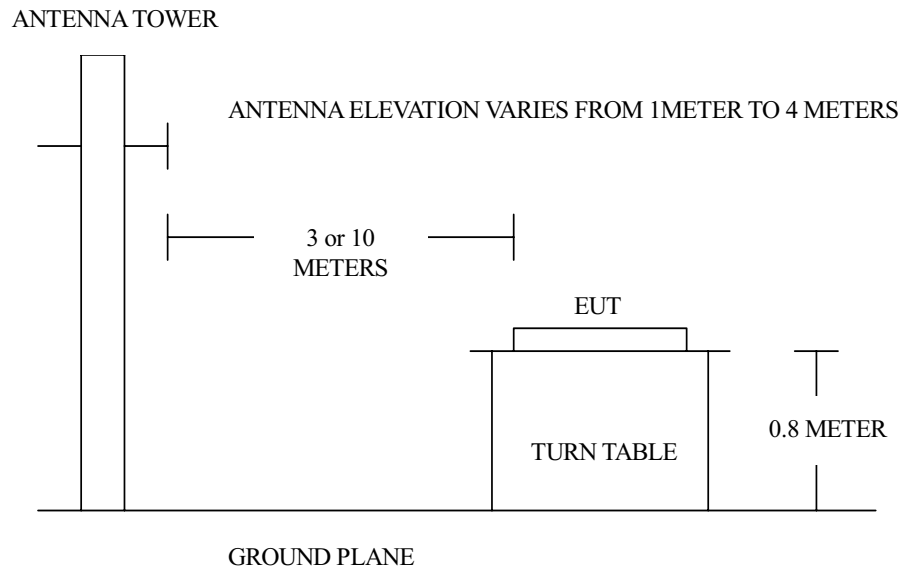
3.2. Block Diagram of Test Setup

3.2.1. Block Diagram of connection between EUT and simulators



3.2.2. Open Field Test Site Setup Diagram

(10m for 30-1000MHz, 3m for above 1GHz)



3.3. Radiation Limit (15.109/CISPR 22, Class B)

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

FREQUENCY (MHz)	DISTANCE (Meters)	FIELD STRENGTHS LIMITS (dB μ V/m)
30 ~ 230	10 (3)	30 (40)
230 ~ 1000	10 (3)	37 (47)
1000 ~ 2000	3	74.0 (Peak)

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

3.4. EUT's Configuration during Compliance Measurement

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

3.5. Operating Condition of EUT

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

3.6. Test Procedure

The EUT was placed on a turn table which was 0.8 meter above ground. The turn table rotate 360 degrees to determine the position of the maximum emission level. EUT was set 10 or 3 meters away from the receiving antenna which were mounted on a antenna tower. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated biconical and log periodical antenna) and dipole antenna were used as receiving antenna. Both horizontal and vertical polarization of the antenna were set on measurement. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.4-2001 on radiated measurement.

The bandwidth of the R&S Test Receiver ESVS10 was set at 120kHz and resolution bandwidth of spectrum analyzer 8593EM was set at 1MHz.

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

For 30~1000MHz frequency range, the EUT with following test modes and with AC 120V/60Hz supplying voltage were performed during radiated testing and all the test results are listed in section 3.7.1. (※ **mode for maximum detected emission**)

No.	Frequency / Resolution.	Data Cable
1.	640*480/60Hz, 31kHz	D-Sub
2.	1024*768/75Hz, 60kHz	
3.	1280*768/75Hz, 80kHz	
4.	640*480/60Hz, 31kHz	DVI
5.	1024*768/75Hz, 60kHz	
※ 6.	1280*768/75Hz, 80kHz	

For above 1GHz frequency range, the worst test mode [**Mode 6**] was selected testing (at No. 5 Open Field Test Site), the test results are listed in section 3.7.2.

3.7. Radiated Emission Measurement Results

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

3.7.1. 30MHz to 1000MHz frequency and 10 meters distance measurement.

Date of Test : Mar. 18, 2004 Temperature : 17°C
 EUT : Flat Panel Color Monitor Humidity : 70%
 Test Mode : 640*480/60Hz, 31kHz Data Cable : D-Sub

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading		Emission Level		Margin dB
			Horizontal dB μ V	Horizontal dB μ V/m	Limits dB μ V/m		
87.338	15.19	1.80	3.95	20.94	30.00		9.06
114.102	18.48	2.20	2.98	23.66	30.00		6.34
140.872	19.84	2.40	2.15	24.39	30.00		5.61
157.505	20.14	2.40	2.43	24.97	30.00		5.03
167.648	20.56	2.60	0.85	24.01	30.00		5.99
194.415	20.63	2.70	0.63	23.96	30.00		6.04
221.181	21.63	3.00	0.46	25.09	30.00		4.91
247.951	22.21	3.20	3.01	28.42	37.00		8.58
274.722	23.30	3.40	2.51	29.21	37.00		7.79
315.050	13.93	3.60	8.96	26.49	37.00		10.51
393.755	16.54	4.20	7.16	27.90	37.00		9.10
472.505	17.82	4.80	5.38	28.00	37.00		9.00
551.257	19.46	5.20	4.69	29.35	37.00		7.65
630.009	20.33	5.60	3.50	29.43	37.00		7.57
708.762	21.20	5.80	2.46	29.46	37.00		7.54
787.511	22.28	6.40	2.73	31.41	37.00		5.59
866.265	24.23	6.60	1.31	32.14	37.00		4.86
945.014	24.66	7.00	0.89	32.55	37.00		4.45

- Remark :
1. All reading are Quasi-Peak values.
 2. Emission Level= Antenna Factor + Cable Loss + Meter Reading.
 3. Measurement at No. 3 open field test site with test voltage of 120V/60Hz.

Date of Test : Mar. 18, 2004 Temperature : 17°C
 EUT : Flat Panel Color Monitor Humidity : 70%
 Test Mode : 640*480/60Hz, 31kHz Data Cable : D-Sub

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading Vertical dB μ V	Emission Level Vertical dB μ V/m	Limits dB μ V/m	Margin dB
60.583	13.26	1.40	7.49	22.15	30.00	7.85
87.336	15.73	1.80	5.83	23.36	30.00	6.64
114.099	18.68	2.20	4.08	24.96	30.00	5.04
140.871	19.24	2.40	1.93	23.57	30.00	6.43
157.501	19.63	2.40	3.09	25.12	30.00	4.88
167.644	19.83	2.60	2.75	25.18	30.00	4.82
194.402	22.00	2.70	0.53	25.23	30.00	4.77
221.168	21.40	3.00	0.44	24.84	30.00	5.16
247.942	21.53	3.20	2.92	27.65	37.00	9.35
274.705	23.45	3.40	2.59	29.44	37.00	7.56
315.005	14.06	3.60	8.93	26.59	37.00	10.41
393.755	17.07	4.20	7.16	28.43	37.00	8.57
472.506	18.50	4.80	4.23	27.53	37.00	9.47
551.259	19.36	5.20	4.61	29.17	37.00	7.83
630.009	20.15	5.60	3.59	29.34	37.00	7.66
708.762	21.53	5.80	2.96	30.29	37.00	6.71
787.511	22.23	6.40	3.48	32.11	37.00	4.89
866.263	24.10	6.60	0.69	31.39	37.00	5.61
945.014	24.57	7.00	0.79	32.36	37.00	4.64

- Remark : 1. All reading are Quasi-Peak values.
 2. Emission Level= Antenna Factor + Cable Loss + Meter Reading.
 3. Measurement at No. 3 open field test site with test voltage of 120V/60Hz.

Date of Test : Mar. 18, 2004 Temperature : 17°C
 EUT : Flat Panel Color Monitor Humidity : 70%
 Test Mode : 1024*768/75Hz, 60kHz Data Cable : D-Sub

Frequency MHz	Antenna	Cable	Meter Reading	Emission Level		Margin dB
	Factor dB/m	Loss dB	Horizontal dB μ V	Horizontal dB μ V/m	Limits dB μ V/m	
87.346	15.19	1.80	4.25	21.24	30.00	8.76
114.106	18.48	2.20	3.37	24.05	30.00	5.95
140.876	19.84	2.40	1.98	24.22	30.00	5.78
157.503	20.14	2.40	2.31	24.85	30.00	5.15
167.644	20.56	2.60	0.87	24.03	30.00	5.97
194.422	20.63	2.70	0.55	23.88	30.00	6.12
221.181	21.63	3.00	0.17	24.80	30.00	5.20
247.955	22.21	3.20	3.83	29.24	37.00	7.76
274.722	23.30	3.40	1.74	28.44	37.00	8.56
315.006	13.93	3.60	7.91	25.44	37.00	11.56
393.756	16.54	4.20	7.31	28.05	37.00	8.95
472.505	17.82	4.80	4.90	27.52	37.00	9.48
551.257	19.46	5.20	4.68	29.34	37.00	7.66
630.011	20.33	5.60	3.44	29.37	37.00	7.63
708.760	21.20	5.80	2.56	29.56	37.00	7.44
787.511	22.28	6.40	2.35	31.03	37.00	5.97
866.264	24.23	6.60	0.94	31.77	37.00	5.23
945.014	24.66	7.00	0.71	32.37	37.00	4.63

- Remark :
1. All reading are Quasi-Peak values.
 2. Emission Level= Antenna Factor + Cable Loss + Meter Reading.
 3. Measurement at No. 3 open field test site with test voltage of 120V/60Hz.

Date of Test : Mar. 18, 2004 Temperature : 17°C

EUT : Flat Panel Color Monitor Humidity : 70%

Test Mode : 1024*768/75Hz, 60kHz Data Cable : D-Sub

Frequency MHz	Antenna	Cable	Meter Reading	Emission Level		Margin dB
	Factor dB/m	Loss dB	Vertical dBμV	Vertical dBμV/m	Limits dBμV/m	
60.569	13.26	1.40	7.38	22.04	30.00	7.96
87.331	15.73	1.80	5.91	23.44	30.00	6.56
114.102	18.68	2.20	3.55	24.43	30.00	5.57
140.872	19.24	2.40	1.89	23.53	30.00	6.47
157.505	19.63	2.40	3.49	25.52	30.00	4.48
167.643	19.83	2.60	2.96	25.39	30.00	4.61
194.405	22.00	2.70	0.71	25.41	30.00	4.59
221.168	21.40	3.00	0.24	24.64	30.00	5.36
247.944	21.53	3.20	3.56	28.29	37.00	8.71
274.701	23.45	3.40	2.27	29.12	37.00	7.88
315.005	14.06	3.60	9.27	26.93	37.00	10.07
393.755	17.07	4.20	7.81	29.08	37.00	7.92
472.508	18.50	4.80	4.61	27.91	37.00	9.09
551.259	19.36	5.20	4.93	29.49	37.00	7.51
630.011	20.15	5.60	3.52	29.27	37.00	7.73
708.762	21.53	5.80	2.93	30.26	37.00	6.74
787.511	22.23	6.40	3.27	31.90	37.00	5.10
866.265	24.10	6.60	0.61	31.31	37.00	5.69
945.015	24.57	7.00	1.19	32.76	37.00	4.24

- Remark :
1. All reading are Quasi-Peak values.
 2. Emission Level= Antenna Factor + Cable Loss + Meter Reading.
 3. Measurement at No. 3 open field test site with test voltage of 120V/60Hz.

Date of Test : Mar. 18, 2004 Temperature : 17°C
 EUT : Flat Panel Color Monitor Humidity : 70%
 Test Mode : 1280*1024/75Hz, 80kHz Data Cable : D-Sub

Frequency MHz	Antenna	Cable	Meter Reading	Emission Level		Margin dB
	Factor dB/m	Loss dB	Horizontal dB μ V	Horizontal dB μ V/m	Limits dB μ V/m	
87.336	15.19	1.80	2.24	19.23	30.00	10.77
114.105	18.48	2.20	2.50	23.18	30.00	6.82
140.873	19.84	2.40	0.26	22.50	30.00	7.50
167.640	20.56	2.60	- 0.53	22.63	30.00	7.37
194.404	20.63	2.70	0.51	23.84	30.00	6.16
221.171	21.63	3.00	- 0.42	24.21	30.00	5.79
247.940	22.21	3.20	3.45	28.86	37.00	8.14
274.706	23.30	3.40	2.48	29.18	37.00	7.82
354.998	14.92	4.00	8.66	27.58	37.00	9.42
435.295	16.60	4.40	5.78	26.78	37.00	10.22
515.593	18.88	5.00	5.40	29.28	37.00	7.72
595.890	20.51	5.40	3.07	28.98	37.00	8.02
676.187	21.30	5.60	1.66	28.56	37.00	8.44
756.484	22.42	6.30	0.89	29.61	37.00	7.39
836.782	23.81	6.60	0.57	30.98	37.00	6.02
917.082	23.22	7.00	0.72	30.94	37.00	6.06

- Remark : 1. All reading are Quasi-Peak values.
 2. Emission Level= Antenna Factor + Cable Loss + Meter Reading.
 3. Measurement at No. 3 open field test site with test voltage of 120V/60Hz.

Date of Test : Mar. 18, 2004 Temperature : 17°C
 EUT : Flat Panel Color Monitor Humidity : 70%
 Test Mode : 1280*1024/75Hz, 80kHz Data Cable : D-Sub

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading Vertical dB μ V	Emission Level Vertical dB μ V/m	Limits dB μ V/m	Margin dB
60.575	13.26	1.40	7.00	21.66	30.00	8.34
87.343	15.73	1.80	4.61	22.14	30.00	7.86
118.906	19.49	2.10	4.11	25.70	30.00	4.30
140.875	19.24	2.40	2.99	24.63	30.00	5.37
156.632	19.86	2.40	3.13	25.39	30.00	4.61
168.049	19.90	2.60	3.77	26.27	30.00	3.73
182.452	21.23	2.60	0.60	24.43	30.00	5.57
194.400	22.00	2.70	- 0.69	24.01	30.00	5.99
221.168	21.40	3.00	- 0.10	24.30	30.00	5.70
247.935	21.53	3.20	4.62	29.35	37.00	7.65
274.704	23.45	3.40	1.46	28.31	37.00	8.69
355.008	15.87	4.00	6.74	26.61	37.00	10.39
435.302	17.28	4.40	5.42	27.10	37.00	9.90
515.599	19.21	5.00	5.34	29.55	37.00	7.45
595.895	20.48	5.40	2.93	28.81	37.00	8.19
676.189	21.39	5.60	1.73	28.72	37.00	8.28
756.487	22.17	6.30	1.00	29.47	37.00	7.53
836.780	23.44	6.60	0.81	30.85	37.00	6.15
917.078	23.16	7.00	0.62	30.78	37.00	6.22

- Remark : 1. All reading are Quasi-Peak values.
 2. Emission Level= Antenna Factor + Cable Loss + Meter Reading.
 3. Measurement at No. 3 open field test site with test voltage of 120V/60Hz.

Date of Test : Mar. 18, 2004 Temperature : 17°C
 EUT : Flat Panel Color Monitor Humidity : 70%
 Test Mode : 640*480/60Hz, 31kHz Data Cable : DVI

Frequency MHz	Antenna	Cable	Meter Reading	Emission Level		Margin dB
	Factor dB/m	Loss dB	Horizontal dB μ V	Horizontal dB μ V/m	Limits dB μ V/m	
87.358	15.19	1.80	4.51	21.50	30.00	8.50
114.112	18.48	2.20	3.66	24.34	30.00	5.66
135.002	19.84	2.20	1.79	23.83	30.00	6.17
167.651	20.56	2.60	0.51	23.67	30.00	6.33
194.418	20.63	2.70	0.32	23.65	30.00	6.35
221.186	21.63	3.00	0.01	24.64	30.00	5.36
247.955	22.21	3.20	3.28	28.69	37.00	8.31
270.005	23.18	3.40	2.41	28.99	37.00	8.01
337.505	14.60	3.80	8.69	27.09	37.00	9.91
405.006	16.44	4.20	7.11	27.75	37.00	9.25
472.509	17.82	4.80	3.92	26.54	37.00	10.46
540.009	19.26	5.20	5.73	30.19	37.00	6.81
607.511	20.39	5.40	3.02	28.81	37.00	8.19
675.012	20.99	5.80	4.81	31.60	37.00	5.40
742.514	21.56	6.00	2.33	29.89	37.00	7.11
810.015	22.71	6.40	1.36	30.47	37.00	6.53
945.018	24.66	7.00	1.39	33.05	37.00	3.95

- Remark :
1. All reading are Quasi-Peak values.
 2. Emission Level= Antenna Factor + Cable Loss + Meter Reading.
 3. Measurement at No. 3 open field test site with test voltage of 120V/60Hz.

Date of Test : Mar. 18, 2004 Temperature : 17°C
 EUT : Flat Panel Color Monitor Humidity : 70%
 Test Mode : 640*480/60Hz, 31kHz Data Cable : DVI

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading Vertical dBμV	Emission Level Vertical dBμV/m	Limits dBμV/m	Margin dB
60.593	13.26	1.40	7.38	22.04	30.00	7.96
87.346	15.73	1.80	5.29	22.82	30.00	7.18
114.102	18.68	2.20	3.75	24.63	30.00	5.37
135.003	19.22	2.20	2.67	24.09	30.00	5.91
157.501	19.63	2.40	3.41	25.44	30.00	4.56
167.641	19.83	2.60	3.29	25.72	30.00	4.28
194.402	22.00	2.70	0.53	25.23	30.00	4.77
221.171	21.40	3.00	0.23	24.63	30.00	5.37
247.935	21.53	3.20	3.19	27.92	37.00	9.08
270.005	23.00	3.40	2.74	29.14	37.00	7.86
337.505	14.85	3.80	8.06	26.71	37.00	10.29
405.006	16.81	4.20	7.19	28.20	37.00	8.80
472.508	18.50	4.80	3.86	27.16	37.00	9.84
540.009	19.13	5.20	4.65	28.98	37.00	8.02
607.511	20.39	5.40	3.24	29.03	37.00	7.97
742.514	21.89	6.00	2.09	29.98	37.00	7.02
810.015	22.70	6.40	2.77	31.87	37.00	5.13
945.018	24.57	7.00	1.51	33.08	37.00	3.92

- Remark : 1. All reading are Quasi-Peak values.
 2. Emission Level= Antenna Factor + Cable Loss + Meter Reading.
 3. Measurement at No. 3 open field test site with test voltage of 120V/60Hz.

Date of Test : Mar. 18, 2004 Temperature : 17°C
 EUT : Flat Panel Color Monitor Humidity : 70%
 Test Mode : 1024*768/75Hz, 60kHz Data Cable : DVI

Frequency MHz	Antenna	Cable	Meter Reading	Emission Level		Margin dB
	Factor dB/m	Loss dB	Horizontal dB μ V	Horizontal dB μ V/m	Limits dB μ V/m	
87.339	15.19	1.80	3.46	20.45	30.00	9.55
114.100	18.48	2.20	3.14	23.82	30.00	6.18
140.873	19.84	2.40	1.61	23.85	30.00	6.15
157.502	20.14	2.40	2.13	24.67	30.00	5.33
167.645	20.56	2.60	0.16	23.32	30.00	6.68
194.417	20.63	2.70	0.34	23.67	30.00	6.33
221.180	21.63	3.00	- 0.03	24.60	30.00	5.40
247.952	22.21	3.20	3.44	28.85	37.00	8.15
274.723	23.30	3.40	2.09	28.79	37.00	8.21
315.004	13.93	3.60	8.60	26.13	37.00	10.87
393.756	16.54	4.20	6.65	27.39	37.00	9.61
472.507	17.82	4.80	4.35	26.97	37.00	10.03
551.258	19.46	5.20	4.30	28.96	37.00	8.04
630.010	20.33	5.60	3.27	29.20	37.00	7.80
708.761	21.20	5.80	2.35	29.35	37.00	7.65
787.512	22.28	6.40	3.85	32.53	37.00	4.47
866.264	24.23	6.60	0.68	31.51	37.00	5.49
945.015	24.66	7.00	0.55	32.21	37.00	4.79

- Remark : 1. All reading are Quasi-Peak values.
 2. Emission Level= Antenna Factor + Cable Loss + Meter Reading.
 3. Measurement at No. 3 open field test site with test voltage of 120V/60Hz.

Date of Test : Mar. 18, 2004 Temperature : 17°C
 EUT : Flat Panel Color Monitor Humidity : 70%
 Test Mode : 1024*768/75Hz, 60kHz Data Cable : DVI

Frequency MHz	Antenna	Cable	Meter Reading	Emission Level		Margin dB
	Factor dB/m	Loss dB	Vertical dBμV	Vertical dBμV/m	Limits dBμV/m	
60.564	13.26	1.40	6.76	21.42	30.00	8.58
87.327	15.73	1.80	5.29	22.82	30.00	7.18
114.098	18.68	2.20	3.94	24.82	30.00	5.18
140.869	19.24	2.40	1.63	23.27	30.00	6.73
156.029	20.09	2.40	3.12	25.61	30.00	4.39
167.641	19.83	2.60	3.29	25.72	30.00	4.28
194.403	22.00	2.70	- 0.18	24.52	30.00	5.48
221.169	21.40	3.00	- 0.13	24.27	30.00	5.73
247.941	21.53	3.20	3.29	28.02	37.00	8.98
274.706	23.45	3.40	1.13	27.98	37.00	9.02
315.004	14.06	3.60	8.36	26.02	37.00	10.98
393.756	17.07	4.20	7.41	28.68	37.00	8.32
472.507	18.50	4.80	3.81	27.11	37.00	9.89
551.258	19.36	5.20	4.10	28.66	37.00	8.34
630.010	20.15	5.60	3.63	29.38	37.00	7.62
708.761	21.53	5.80	2.14	29.47	37.00	7.53
787.512	22.23	6.40	5.31	33.94	37.00	3.06
866.264	24.10	6.60	- 0.14	30.56	37.00	6.44
945.015	24.57	7.00	1.37	32.94	37.00	4.06

- Remark : 1. All reading are Quasi-Peak values.
 2. Emission Level= Antenna Factor + Cable Loss + Meter Reading.
 3. Measurement at No. 3 open field test site with test voltage of 120V/60Hz.

Date of Test : Mar. 18, 2004 Temperature : 17°C
 EUT : Flat Panel Color Monitor Humidity : 70%
 Test Mode : 1280*1024/75Hz, 80kHz Data Cable : DVI

Frequency MHz	Antenna	Cable	Meter Reading	Emission Level		Margin dB
	Factor dB/m	Loss dB	Horizontal dB μ V	Horizontal dB μ V/m	Limits dB μ V/m	
87.340	15.19	1.80	3.44	20.43	30.00	9.57
114.109	18.48	2.20	3.18	23.86	30.00	6.14
135.002	19.84	2.20	1.28	23.32	30.00	6.68
140.878	19.84	2.40	0.75	22.99	30.00	7.01
167.649	20.56	2.60	0.05	23.21	30.00	6.79
194.417	20.63	2.70	0.47	23.80	30.00	6.20
221.185	21.63	3.00	- 0.36	24.27	30.00	5.73
247.955	22.21	3.20	3.87	29.28	37.00	7.72
270.005	23.18	3.40	2.16	28.74	37.00	8.26
337.504	14.60	3.80	9.43	27.83	37.00	9.17
405.006	16.44	4.20	8.30	28.94	37.00	8.06
472.508	17.82	4.80	3.29	25.91	37.00	11.09
540.009	19.26	5.20	6.25	30.71	37.00	6.29
607.510	20.39	5.40	2.74	28.53	37.00	8.47
675.012	20.99	5.80	5.53	32.32	37.00	4.68
742.513	21.56	6.00	2.15	29.71	37.00	7.29
810.015	22.71	6.40	1.23	30.34	37.00	6.66
* 945.018	24.66	7.00	2.08	33.74	37.00	3.26

- Remark :
1. All reading are Quasi-Peak values.
 2. Emission Level= Antenna Factor + Cable Loss + Meter Reading.
 3. The worst emission was detected at 945.018MHz with corrected signal level of 33.74dB μ V/m (limit was 37dB μ V/m) when the antenna was at horizontal polarization and was at 1m high and the turn table was at 210°.
 4. 0° is the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.
 5. Measurement at No. 3 open field test site with test voltage of 120V/60Hz.

Date of Test : Mar. 18, 2004 Temperature : 17°C

EUT : Flat Panel Color Monitor Humidity : 70%

Test Mode : 1280*1024/75Hz, 80kHz Data Cable : DVI

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading Vertical dBμV	Emission Level Vertical dBμV/m	Limits dBμV/m	Margin dB
60.583	13.26	1.40	6.59	21.25	30.00	8.75
87.343	15.73	1.80	4.57	22.10	30.00	7.90
114.104	18.68	2.20	4.28	25.16	30.00	4.84
135.002	19.22	2.20	2.10	23.52	30.00	6.48
156.647	19.86	2.40	2.97	25.23	30.00	4.77
167.639	19.83	2.60	4.11	26.54	30.00	3.46
194.401	22.00	2.70	- 0.39	24.31	30.00	5.69
221.169	21.40	3.00	- 0.03	24.37	30.00	5.63
247.936	21.53	3.20	3.78	28.51	37.00	8.49
270.005	23.00	3.40	2.40	28.80	37.00	8.20
337.504	14.85	3.80	8.53	27.18	37.00	9.82
405.006	16.81	4.20	7.69	28.70	37.00	8.30
472.508	18.50	4.80	3.11	26.41	37.00	10.59
540.009	19.13	5.20	5.20	29.53	37.00	7.47
607.510	20.39	5.40	2.69	28.48	37.00	8.52
675.012	21.09	5.80	4.81	31.70	37.00	5.30
742.513	21.89	6.00	2.13	30.02	37.00	6.98
810.015	22.70	6.40	3.82	32.92	37.00	4.08
* 945.018	24.57	7.00	2.89	34.46	37.00	2.54

- Remark :
1. All reading are Quasi-Peak values.
 2. Emission Level= Antenna Factor + Cable Loss + Meter Reading.
 3. The worst emission was detected at 945.018MHz with corrected signal level of 34.46dBμV/m (limit was 30dBμV/m) when the antenna was at vertical polarization and was at 2.1m high and the turn table was at 45°.
 4. 0° is the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.
 5. Measurement at No. 3 open field test site with test voltage of 120V/60Hz.

3.7.2. Above 1GHz frequency and 3 meters distance measurement.

Date of Test :	Mar. 17, 2004	Temperature :	25°C
EUT :	Flat Panel Color Monitor	Humidity :	40%
Test Mode :	1280*1024/75Hz, 80kHz	Data Cable :	DVI

Frequency MHz	Antenna	Cable	Meter Reading	Emission Level (Peak)		
	Factor dB/m	Loss dB	Horizontal dBμV	Horizontal dBμV/m	Limits dBμV/m	Margin dB
1080.00	24.85	4.25	21.51	50.61	74.00	23.39
1215.00	25.21	4.45	23.59	53.25	74.00	20.75
1350.00	25.55	4.63	24.67	54.85	74.00	19.15
1485.00	25.86	4.79	18.73	49.38	74.00	24.62
1620.00	26.13	5.13	20.79	52.06	74.00	21.94
1755.00	26.39	5.48	21.85	53.72	74.00	20.28
1890.00	26.62	5.79	18.90	51.31	74.00	22.69

Frequency MHz	Antenna	Cable	Meter Reading	Emission Level (Peak)		
	Factor dB/m	Loss dB	Vertical dBμV	Vertical dBμV/m	Limits dBμV/m	Margin dB
1080.00	24.85	4.25	23.51	52.61	74.00	21.39
1215.00	25.21	4.45	25.59	55.25	74.00	18.75
1350.00	25.55	4.63	29.31	59.49	74.00	14.51
1485.00	25.86	4.79	27.23	57.88	74.00	16.12
1620.00	26.13	5.13	26.79	58.06	74.00	15.94
1755.00	26.39	5.48	22.85	54.72	74.00	19.28
1890.00	26.62	5.79	24.90	57.31	74.00	16.69

- Remark :
1. All reading are Quasi-Peak values.
 2. Emission Level= Antenna Factor + Cable Loss + Meter Reading.
 3. Measurement at No. 5 open field test site with test voltage of 120V/60Hz.

4. DEVIATION TO TEST SPECIFICATIONS

【NONE】