

APPLICATION FOR CERTIFICATION
Class II Permissive Change
On Behalf of
Philips Electronics Industries (Taiwan) Ltd.
15" Flat Panel Color Monitor

Model No.: E151FPp

FCC ID : A3KM108

Brand : Dell

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

Prepared By : Taiwan Tokin EMC Eng. Corp.
No. 53-11, Tin-Fu Tsun, Lin-Kou,
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File Number : ATM-G91455R1
Report Number : TTEMC-F91083
Date of Test : Jun. 12, 2002
Date of Report : Jun. 13, 2002

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APPENDIX I (Radiated Test Data for Anechoic Chamber)

TEST REPORT CERTIFICATION

(Class II Permissive Change)

Applicant : Philips Electronics Industries (Taiwan) Ltd.
 Manufacturer : Philips Electronics Industries (Taiwan) Ltd.
 FCC ID : A3KM108
 EUT Description : 15" Flat Panel Color Monitor
 (A) MODEL NO. : E151FPp
 (B) SERIAL NO. : N/A
 (C) BRAND : Dell
 (D) POWER SUPPLY : AC 100 – 240V ~, 60-50Hz

Measurement Procedure Used :

FCC RULES AND REGULATIONS PART 15 SUBPART B CLASS B MAY 2001 AND
 FCC / ANSI C63.4-1992

The device described above was tested by TAIWAN TOKIN EMC ENG. CORP. to determine the maximum emission levels emanating from the device. The maximum emission levels were compared to the FCC Part 15B Class B limits both radiated and conducted emissions.

The measurement results are contained in this test report and TAIWAN TOKIN EMC ENG. CORP. 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 Taiwan Tokin EMC Eng. corp.

Date of Test : Jun. 12, 2002

Prepared by : Julie Hsu Jun. 13, 2002
 (Julie Hsu/Assistant Officer)

Test Engineer : Ben Cheng 6/13/2002
 (Ben Cheng/Supervisor)

Approve & Authorized Signer : Jackie Deng 6/14/02
 (Jackie Deng/Assistant General Manager)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

Description	:	15" Flat Panel Color Monitor
Model Number	:	E151FPp
Brand	:	Dell
FCC ID	:	A3KM108
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.
LCD Panel	:	LG, M/N LS150X03
D-Sub Signal Cable	:	Shielded, Detachable, 1.8m Bonded two ferrite cores
Power Cord	:	Non-Shielded, Detachable, 1.5m
Date of Receipt of Sample	:	Jun. 12, 2002
Date of Test	:	Jun. 12, 2002

1.2. Tested Supporting System Details

1.2.1. PERSONAL COMPUTER

Model Number	:	DIMension 8200
Serial Number	:	GV8P21X
Main Board	:	Dell, S/N MY-07E598-12464-19H00XP S/N TH-01H315-65431-19P-0630
CPU	:	T4, 1G
RAM	:	256MB
FCC ID	:	by DoC
Manufacturer	:	Dell
S.P.S.	:	Dell, M/N HP-P2507F3P
Hard Disk Drive	:	IBM, M/N IC35L020AVER07-0 P/N 07N7402, BSMI ID No.3892I278
Floppy Disk Drive 3.5"	:	NEC, M/N FD1231T S/N DFAM194A1239 BSMI ID No.3892A700
Sound Card	:	Creative, M/N CT4780 S/N M4780130330024 BSMI ID No.3892B788, FCC by Doc
VGA Card	:	NVIDIA M/N P50, FCC by DoC
CD-ROM	:	LITE-ON, M/N LTN-486 S/N CN-0611WY-55081-19D-20JA BSMI ID No.3892B513, FCC by Doc
Power Cord	:	Non-Shielded, Detachable, 1.8m

1.2.2. KEYBOARD

Model Number	:	SK-8100
Serial Number	:	N/A
BSMI ID	:	3892D553
FCC ID	:	by DoC
Manufacturer	:	DELL
Data Cable	:	Non-Shielded, Undetachable, 1.8m

1.2.3. PRINTER

Model Number	:	KX-P2135
Serial Number	:	8DMCNC02116
BSMI ID	:	3872A371
FCC ID	:	ACJ5Z6KX-P2135
Manufacturer	:	Panasonic
Data Cable	:	Non-Shielded, Detachable, 1.8m
Power Cord	:	Non-Shielded, Undetachable, 1.8m

1.2.4. 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

1.2.5. MOUSE

Model Number	:	M-S34
Serial Number	:	LNA14011260
FCC ID	:	DZL211029
Manufacturer	:	DELL
Data Cable	:	Shielded, Undetachable, 1.8m

1.2.6. USB MOUSE #1

Model Number	:	CREUBB
Serial Number	:	N/A
FCC ID	:	NHM-CREUBE
Manufacturer	:	CRE Technology Co., Ltd.
Data Cable	:	Shielded, Undetachable, 1.8m

1.2.7. USB MOUSE #2

Model Number	:	CREUBB
Serial Number	:	N/A
FCC ID	:	NHM-CREUBE
Manufacturer	:	CRE Technology Co., Ltd.
Data Cable	:	Shielded, Undetachable, 1.8m

1.2.8. SPEAKER

Model Number	:	J-008
Serial Number	:	J80547833
Manufacturer	:	(J-S) JAZZ HIPSTER
Data Cable	:	Non-Shielded, Undetachable, 1m

1.2.9. MICROPHONE

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

1.2.10. WALKMAN

Model Number	:	RQ-P35LT-K
Serial Number	:	HA08465
Manufacturer	:	Panasonic
Data Cable	:	Non-Shielded, Detachable, 1.8m

1.2.11.EARPHONE #1

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

1.2.12.EARPHONE #2

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

1.2.13.GAME PAD

Model Number : JI-1073
 Serial Number : N/A
 Manufacturer : Supercobra
 Data Cable : Non-Shielded, Undetachable, 1.3m

1.3. Description of Test Facility

Site Description : Feb. 09, 2000 Re-File on
 (No. 3 Open Site) Federal Communication Commission
 Registration Number: 90996

Name of Firm : Taiwan Tokin EMC Eng. Corp.
 : 9th Fl., No. 38, Fushing N. Rd.,
 Taipei, Taiwan, R.O.C.

Site Location : No. 53-11, Tin-Fu Tsun, Lin-Kou,
 Taipei Hsien, Taiwan, R.O.C.

DAR-Registration No. : DAT-P-092/99-00e

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

DAR-Registration No. : DAT-P-092/99-00e

1.4. Measurement Uncertainty

Test Item	Frequency Range	Uncertainty (dB), (V/m)
Conduction Test	150KHz~30MHz	±2.66dB
Radiation Test (Distance: 3m)	30MHz~300MHz	+4.26dB / -4.22dB
	300MHz~1000MHz	+5.28dB / -4.0dB

Remark : Uncertainty = $K\mu c(y)$ or $=K\rho\mu c(y)$

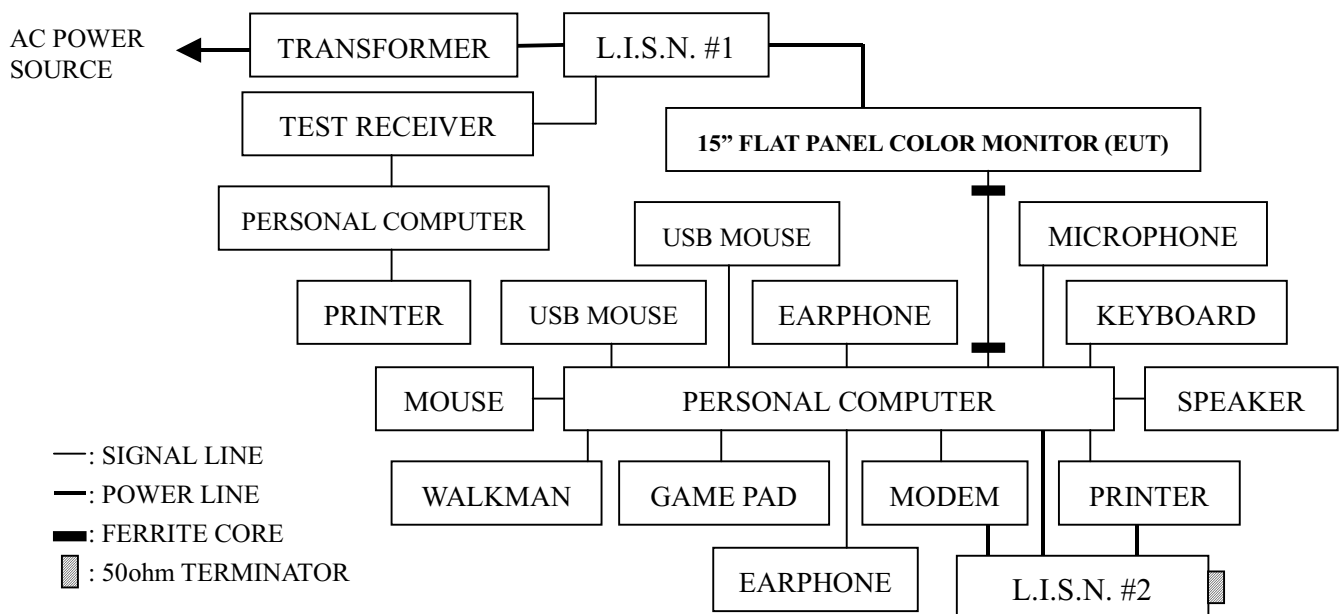
2. POWERLINE CONDUCTED TEST

2.1. Test Equipment

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

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESHS10	844591/015	Feb.27, 02'	1 Year
2.	L.I.S.N. # 1	Kyoritsu	KNW-407	8-1430-5	Nov.12, 01'	1 Year
3.	L.I.S.N. # 2	Kyoritsu	KNW-407	8-1430-6	Nov.12, 01'	1 Year

2.2. Block Diagram of Test Setup



2.3. Powerline Conducted Emission Limit (CLASS B)

Frequency	Maximum RF Line Voltage	
	uV	dBuV
0.45MHz ~ 30MHz	250	48

REMARKS : RF LINE VOLTAGE (dBuV) = 20 log RF LINE VOLTAGE (uV)

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. 15" Flat Panel Color Monitor (EUT)

Model Number	:	E151FPp
Serial Number	:	N/A
Brand	:	Dell
FCC ID	:	A3KM108
Manufacturer	:	Philips Electronics Industries (Taiwan) Ltd.
LCD Panel	:	LG, M/N LS150X03
D-Sub Signal Cable	:	Shielded, Detachable, 1.8m
		Bonded two ferrite cores
Power Cord	:	Non-Shielded, Detachable, 1.5m

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 "Dell-H Pattern" 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. The CD-ROM was played a CD-Disk and sent the sound earphone.

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

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

2.5.8. Repeat above procedure from 2.5.3 to 2.5.7.

2.6. Test Procedure

The EUT was put on table which was above the ground by 80cm and its power cord 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 50 ohm 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 C63.4-1992 on conducted measurement.

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

The frequency range from 450KHz to 30MHz was checked.

2.7. Line Conducted RF Voltage Measurement Results

PASSED. The following test modes were done during conducted measurement and to read Q.P. value, All the test results are listed in following pages. (6 Pages)

Test Date : Jun. 12, 2002 Temperature : 26°C Humidity : 59%

The details of test modes are as follows :

Mode	Freq. / Resolution	Reference Data #
1.	31KHz, 640*480 / 60Hz	47 (48) 45 (46)
2.	47KHz, 800*600 / 75Hz	41 (42) 43 (44)
3.	60KHz, 1024*768 / 75Hz	39 (40) 37 (38)



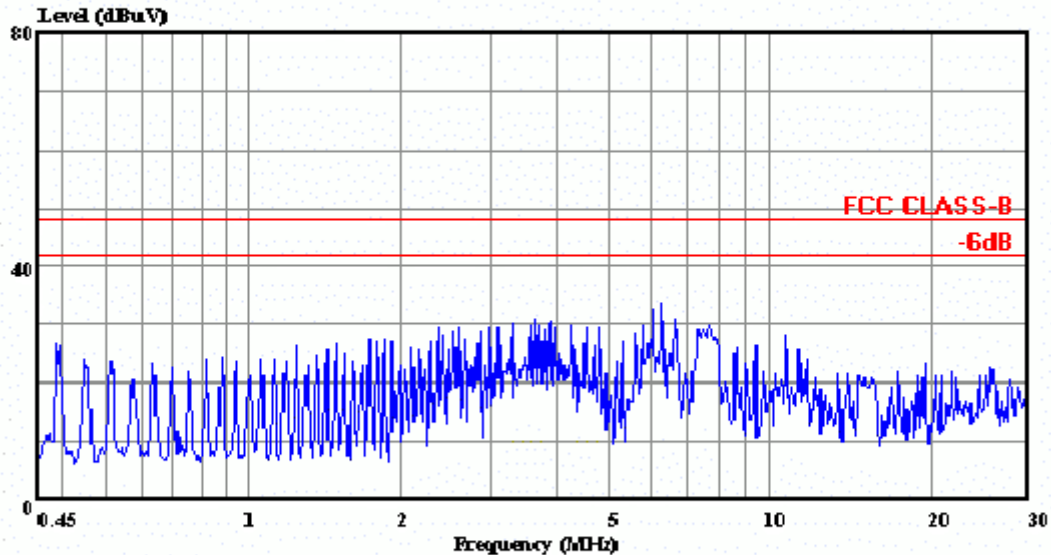
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Data#: 47

File#: PHILIPS-7.EMI

Date: 2002-06-12 Time: 20:28:22



Site : No.4 Shielded room
Condition: FCC CLASS-B KMW-407 NEUTRAL
EUT : 15"Flat panel Color Monitor M/N:E151FPp
POWER : 120Vac/60Hz (26°C/59%)
MEMO : 640*480/60Hz 31KHz

Data#: 48

File#: D:\PHILIPS-7.EMI

Date: 2002-06-12 Time: 20:29:41

Site : No.4 Shielded room
Condition : FCC CLASS-B KMW-407 NEUTRAL
EUT : 15"Flat panel Color Monitor M/N:E151FPp
POWER : 120Vac/60Hz (26°C/59%)
MEMO : 640*480/60Hz 31KHz

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.494	25.40	-22.60	48.00	25.10	0.10	0.20	QP
2	1.347	25.28	-22.72	48.00	24.78	0.10	0.40	QP
3	1.837	26.30	-21.70	48.00	25.80	0.10	0.40	QP
4	2.455	28.36	-19.64	48.00	27.86	0.10	0.40	QP
5	3.736	28.96	-19.04	48.00	28.46	0.10	0.40	QP
6	6.369	31.67	-16.33	48.00	30.92	0.15	0.60	QP



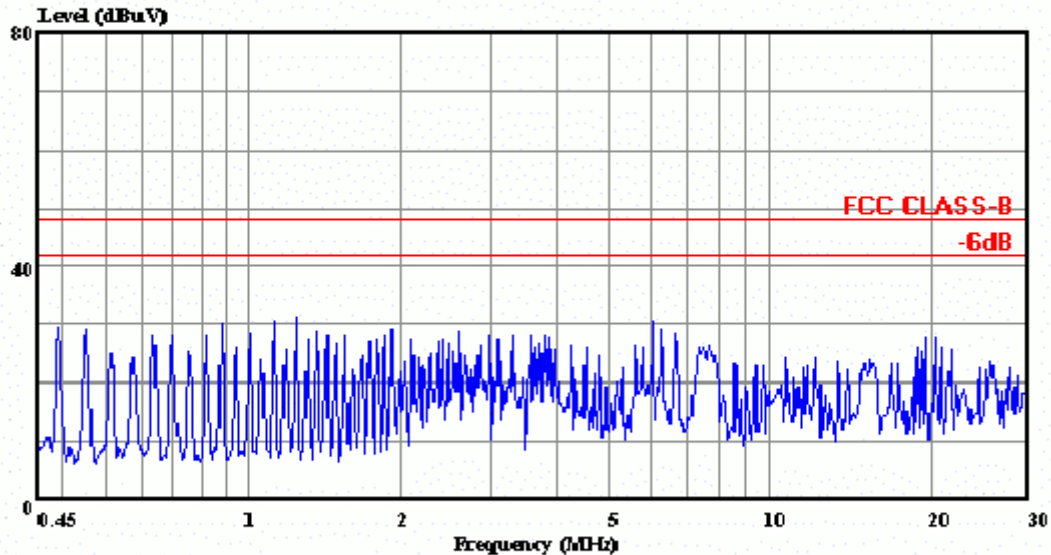
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Data#: 45

File#: PHILIPS-7.EMI

Date: 2002-06-12 Time: 20:26:37



Site : No.4 Shielded room
Condition: FCC CLASS-B KMW-407 LINE
EUT : 15"Flat panel Color Monitor M/N:E151FPp
POWER : 120Vac/60Hz (26°C/59%)
MEMO : 640*480/60Hz 31KHz

Data#: 46

File#: D:\PHILIPS-7.EMI

Date: 2002-06-12 Time: 20:27:23

Site : No.4 Shielded room
Condition : FCC CLASS-B KMW-407 LINE
EUT : 15"Flat panel Color Monitor M/N:E151FPp
POWER : 120Vac/60Hz (26°C/59%)
MEMO : 640*480/60Hz 31KHz

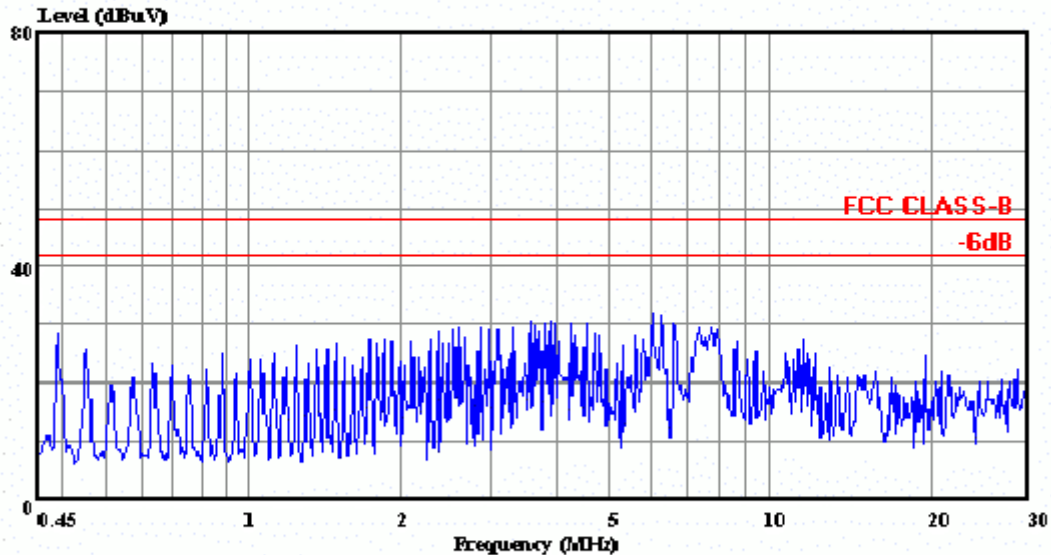
	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.551	27.87	-20.13	48.00	27.57	0.10	0.20	QP
2	0.982	27.83	-20.17	48.00	27.53	0.10	0.20	QP
3	1.351	28.60	-19.40	48.00	28.10	0.10	0.40	QP
4	2.026	28.34	-19.66	48.00	27.84	0.10	0.40	QP
5	6.390	26.20	-21.80	48.00	25.50	0.10	0.60	QP
6	11.425	23.31	-24.69	48.00	22.47	0.14	0.70	QP



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Data#: 41 File#: PHILIPS-7.EMI Date: 2002-06-12 Time: 20:22:20



Site : No.4 Shielded room
Condition: FCC CLASS-B KMW-407 NEUTRAL
EUT : 15"Flat panel Color Monitor M/N:E151FPp
POWER : 120Vac/60Hz (26°C/59%)
MEMO : 800*600/75Hz 47KHz

Data#: 42 File#: D:\PHILIPS-7.EMI Date: 2002-06-12 Time: 20:23:05

Site : No.4 Shielded room
Condition : FCC CLASS-B KMW-407 NEUTRAL
EUT : 15"Flat panel Color Monitor M/N:E151FPp
POWER : 120Vac/60Hz (26°C/59%)
MEMO : 800*600/75Hz 47KHz

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.553	23.52	-24.48	48.00	23.22	0.10	0.20	QP
2	0.983	22.95	-25.05	48.00	22.65	0.10	0.20	QP
3	1.352	24.29	-23.71	48.00	23.79	0.10	0.40	QP
4	2.027	25.52	-22.48	48.00	25.02	0.10	0.40	QP
5	6.393	30.55	-17.45	48.00	29.80	0.15	0.60	QP
6	11.427	23.73	-24.27	48.00	22.83	0.20	0.70	QP



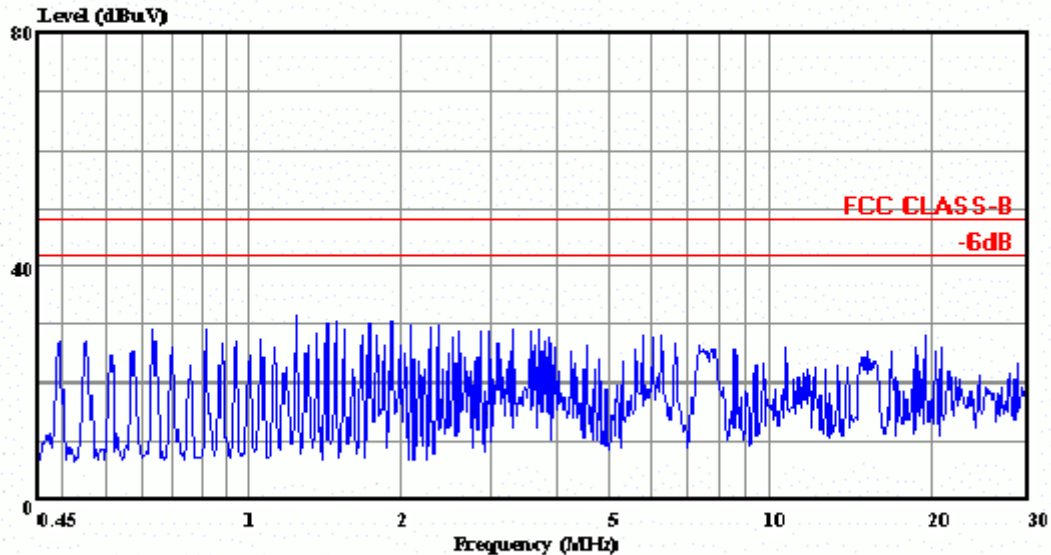
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Data#: 43

File#: PHILIPS-7.EMI

Date: 2002-06-12 Time: 20:23:59



Site : No.4 Shielded room
Condition: FCC CLASS-B KMW-407 LINE
EUT : 15"Flat panel Color Monitor M/N:E151FPp
POWER : 120Vac/60Hz (26°C/59%)
MEMO : 800*600/75Hz 47KHz

Data#: 44

File#: D:\PHILIPS-7.EMI

Date: 2002-06-12 Time: 20:24:53

Site : No.4 Shielded room
Condition : FCC CLASS-B KMW-407 LINE
EUT : 15"Flat panel Color Monitor M/N:E151FPp
POWER : 120Vac/60Hz (26°C/59%)
MEMO : 800*600/75Hz 47KHz

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.554	27.08	-20.92	48.00	26.78	0.10	0.20	QP
2	0.982	28.31	-19.69	48.00	28.01	0.10	0.20	QP
3	1.353	28.52	-19.48	48.00	28.02	0.10	0.40	QP
4	2.027	28.28	-19.72	48.00	27.78	0.10	0.40	QP
5	6.390	25.38	-22.62	48.00	24.68	0.10	0.60	QP
6	11.427	21.86	-26.14	48.00	21.02	0.14	0.70	QP



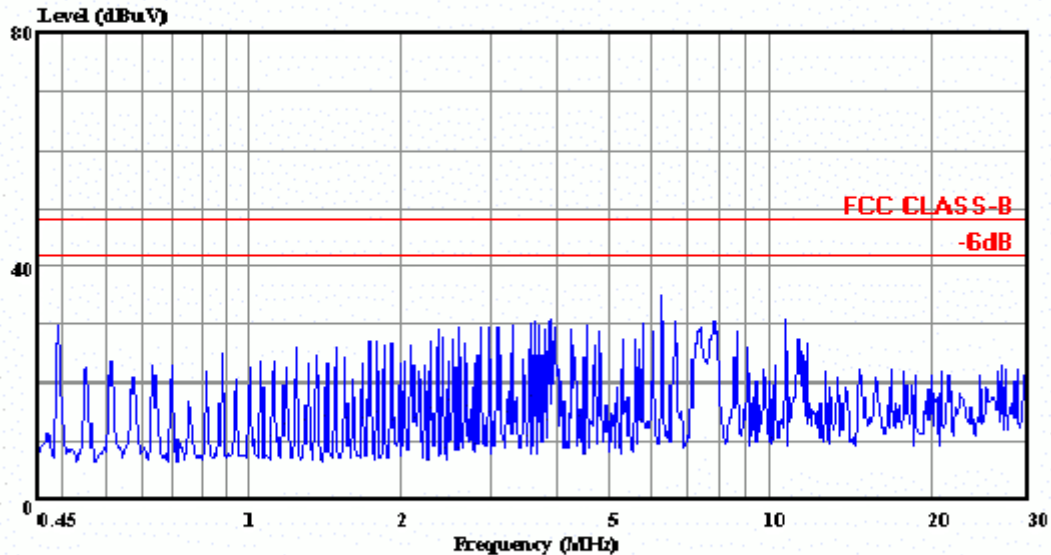
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Data#: 39

File#: PHILIPS-7.EMI

Date: 2002-06-12 Time: 20:18:09



Site : No.4 Shielded room
Condition: FCC CLASS-B KMW-407 NEUTRAL
EUT : 15"Flat panel Color Monitor M/N:E151FPp
POWER : 120Vac/60Hz (26°C/59%)
MEMO : 1024*768/75Hz 60KHz

Data#: 40

File#: D:\PHILIPS-7.EMI

Date: 2002-06-12 Time: 20:19:53

Site : No.4 Shielded room
Condition : FCC CLASS-B KMW-407 NEUTRAL
EUT : 15"Flat panel Color Monitor M/N:E151FPp
POWER : 120Vac/60Hz (26°C/59%)
MEMO : 1024*768/75Hz 60KHz

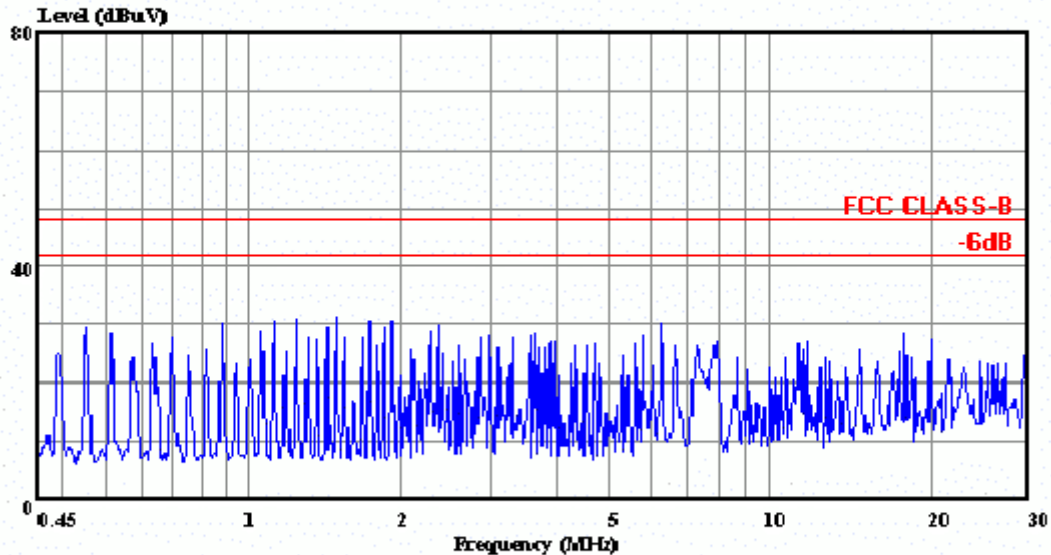
	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.552	24.00	-24.00	48.00	23.70	0.10	0.20	QP
2	0.985	22.39	-25.61	48.00	22.09	0.10	0.20	QP
3	1.350	24.49	-23.51	48.00	23.99	0.10	0.40	QP
4	2.026	25.70	-22.30	48.00	25.20	0.10	0.40	QP
5	6.390	32.51	-15.49	48.00	31.76	0.15	0.60	QP
6	11.428	27.38	-20.62	48.00	26.48	0.20	0.70	QP



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Data#: 37 File#: PHILIPS-7.EMI Date: 2002-06-12 Time: 20:15:10



Site : No.4 Shielded room
Condition: FCC CLASS-B KMW-407 LINE
EUT : 15"Flat panel Color Monitor M/N:E151FPp
POWER : 120Vac/60Hz (26°C/59%)
MEMO : 1024*768/75Hz 60KHz

Data#: 38 File#: D:\PHILIPS-7.EMI Date: 2002-06-12 Time: 20:17:37

Site : No.4 Shielded room
Condition : FCC CLASS-B KMW-407 LINE
EUT : 15"Flat panel Color Monitor M/N:E151FPp
POWER : 120Vac/60Hz (26°C/59%)
MEMO : 1024*768/75Hz 60KHz

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.552	27.85	-20.15	48.00	27.55	0.10	0.20	QP
2	0.983	28.72	-19.28	48.00	28.42	0.10	0.20	QP
3	1.351	29.47	-18.53	48.00	28.97	0.10	0.40	QP
4	2.028	29.17	-18.83	48.00	28.67	0.10	0.40	QP
5	6.390	27.92	-20.08	48.00	27.22	0.10	0.60	QP
6	11.429	24.64	-23.36	48.00	23.80	0.14	0.70	QP

3. RADIATED EMISSION TEST

3.1. Test Equipment

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

3.1.1. For Anechoic Chamber

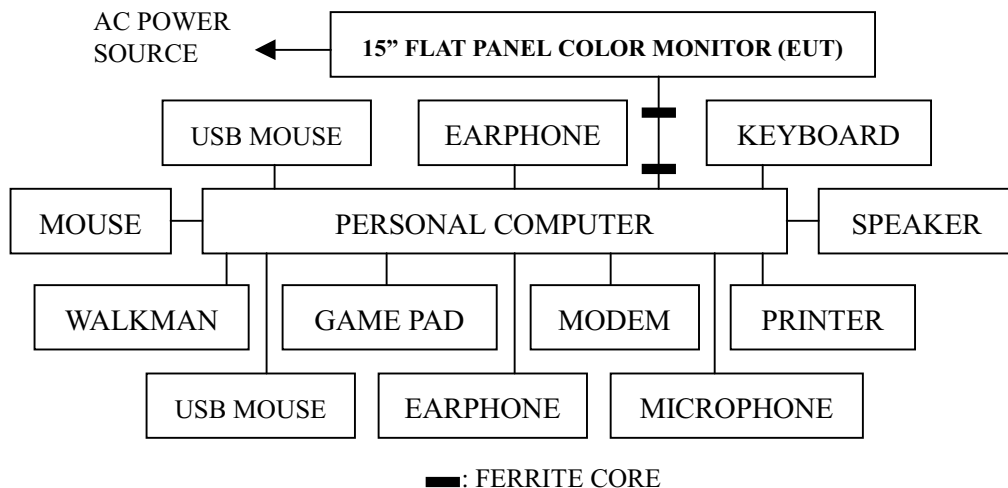
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	HP	8593EM	3826A00248	Sep.04, 01'	1 Year
2.	Pre-Amplifier	HP	8447D	2944A06305	Mar.05, 02'	1 Year
3.	Antenna Turn Table Controller	Tokin	5906	N/A	N/A	N/A
4.	Antenna Turn Table Driver	Tokin	5907	88Y465	N/A	N/A
5.	Broadband Antenna	Schwarzbeck	BBA 9106	A3L	Feb.24, 02'	1 Year
6.	Broadband Antenna	Schwarzbeck	UHALP 9108-A	0139	Feb.24, 02'	1 Year

3.1.2. For No. 3 Open Field Site

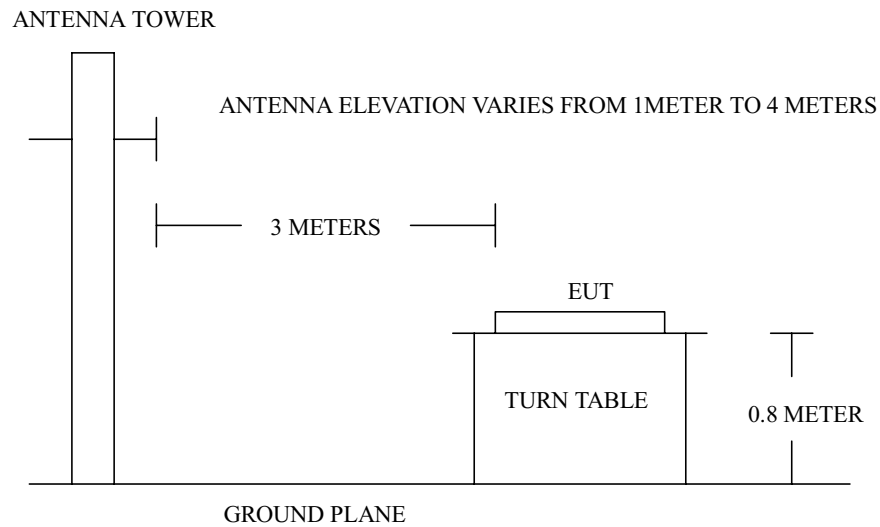
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	HP	8590L	3710A01838	Aug.06, 01'	N/A
2.	Test Receiver	Rohde & Schwarz	ESVS10	845165/002	Dec.12, 01'	1 Year
3.	Amplifier	HP	8447D	2727A06154	N/A	N/A
4.	Broadband Antenna	Chase	VBA6106A	1231	Mar.16, 02'	1 Year
5.	Log Periodic Antenna	Chase	UPA6109	1027	Mar.16, 02'	1 Year

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



3.3. Radiation Limit (CLASS B)

FREQUENCY	DISTANCE	FIELD STRENGTHS LIMITS	
MHz	Meters	uV/M	dBuV/M
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0

- Remark :
- (1) Emission level (dBuV/M) = 20 log Emission level (uV/M)
 - (2) The tighter limit applies at the edge between two frequency bands.
 - (3) Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

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 and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3 meters away from the receiving antenna which is 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 are used as receiving antenna. Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4-1992 on radiated measurement.

The bandwidth of R&S Test Receiver ESVS10 was set at 120KHz.

The frequency range from 30MHz to 1000MHz was checked.

The following three test modes were measured within Anechoic Chamber and all the scanning wave form were attached within Appendix I. The details of test modes are as follows :

Mode	Freq. / Resolution
1.	31KHz, 640*480 / 60Hz
2.	47KHz, 800*600 / 75Hz
3.	60KHz, 1024*768 / 75Hz

Finally, re-measured the worst mode (3)(60KHz, 1024*768 / 75Hz) at No. 3 Open Field Test Site and the entire test results are listed in section 3.8.

3.7. Test Results

PASSED. Please refer to the following pages.

3.8. Radiated Emission Measurement Results

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

Date of Test : Jun. 12, 2002 Temperature : 23°C

EUT : 15" Flat Panel Color Monitor Humidity : 64%

Test Mode : 60KHz/1024*768, 75Hz

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading		Emission Level		Margin dB
			Horizontal dBuV		Horizontal dBuV/m	Limits dBuV/m	
* 46.280	17.58	1.00	12.41		30.99	40.00	9.01
53.211	14.72	1.20	9.46		25.38	40.00	14.62
79.755	14.01	1.52	15.12		30.65	40.00	9.35
121.033	19.36	1.60	9.49		30.45	43.50	13.05
148.675	20.09	1.80	7.06		28.95	43.50	14.55
184.378	20.92	2.20	3.98		27.10	43.50	16.40
231.555	22.73	2.40	8.69		33.82	46.00	12.18
336.988	15.20	2.90	7.49		25.59	46.00	20.41
385.265	16.68	3.10	4.50		24.28	46.00	21.72
423.165	16.68	3.40	4.39		24.47	46.00	21.53
525.562	18.79	3.80	4.53		27.12	46.00	18.88
658.960	20.84	4.40	4.66		29.90	46.00	16.10
725.433	21.10	4.60	4.47		30.17	46.00	15.83

- Remark :
1. All readings are Quasi-Peak values.
 2. The worst emission was detected at 46.280MHz with corrected signal level of 30.99dBuV/m (limit is 40dBuV/m) when the antenna was at horizontal polarization and was at 2.5m high and the turn table was at 325° .
 3. 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

Date of Test : Jun. 12, 2002 Temperature : 23°C

EUT : 15" Flat Panel Color Monitor Humidity : 64%

Test Mode : 60KHz/1024*768, 75Hz

Frequency MHz	Antenna	Cable	Meter Reading		Emission Level		Margin dB
	Factor dB/m	Loss dB	Vertical dBuV	Vertical dBuV/m	Limits dBuV/m	dBuV/m	
39.573	18.94	1.00	9.61	29.55	40.00		10.45
* 46.296	16.92	1.00	17.09	35.01	40.00		4.99
63.133	13.09	1.20	11.33	25.62	40.00		14.38
79.736	14.20	1.52	14.32	30.04	40.00		9.96
113.213	19.66	1.80	5.71	27.17	43.50		16.33
121.031	20.96	1.60	4.25	26.81	43.50		16.69
132.510	19.82	1.80	4.55	26.17	43.50		17.33
153.148	18.78	2.00	3.36	24.14	43.50		19.36
233.788	23.95	2.40	4.75	31.10	46.00		14.90
306.088	14.43	2.80	10.10	27.33	46.00		18.67
327.470	14.89	2.87	10.13	27.89	46.00		18.11
423.831	16.30	3.40	4.97	24.67	46.00		21.33
525.543	19.00	3.80	4.88	27.68	46.00		18.32
653.692	20.58	4.40	1.36	26.34	46.00		19.66
723.244	20.59	4.60	3.75	28.94	46.00		17.06

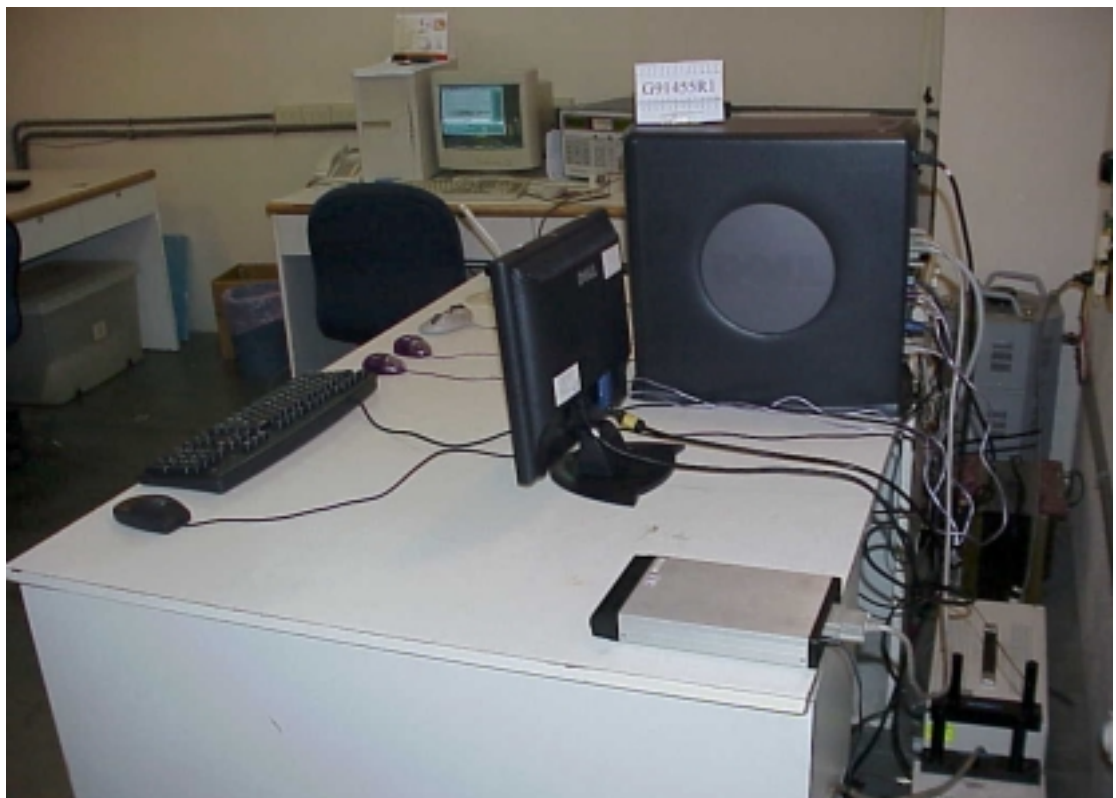
- Remark :
1. All readings are Quasi-Peak values.
 2. The worst emission was detected at 46.296MHz with corrected signal level of 35.01dBuV/m (limit is 40dBuV/m) when the antenna was at horizontal polarization and was at 1m high and the turn table was at 250° .
 3. 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

4. PHOTOGRAPHS

4.1. Photos of Powerline Conducted Measurement



FRONT VIEW OF CONDUCTED TEST



BACK VIEW OF CONDUCTED TEST

4.2. Photos of Radiated Measurement at Anechoic Chamber



FRONT VIEW OF RADIATED TEST



BACK VIEW OF RADIATED TEST

4.3. Photos of Radiated Measurement at Open Field Test Site

60KHz, 1024*768/75Hz



FRONT VIEW OF RADIATED TEST



BACK VIEW OF RADIATED TEST



SETUP WITH MAXIMUM DETECTED EMISSION AT HORIZONTAL POLARIZATION



SETUP WITH MAXIMUM DETECTED EMISSION AT VERTICAL POLARIZATION

APPENDIX I

(Radiated Test Data for Anechoic Chamber)

Total Page : 6



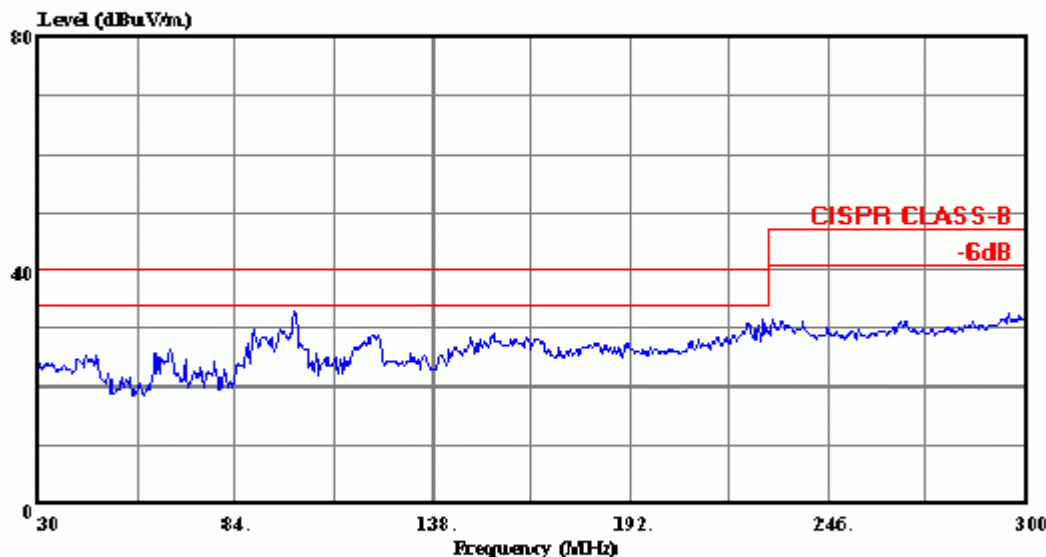
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台灣東金科技股份有限公司

No.53-11, Tin-fu Tsun, Lin-kou Hsiang,
Taipei Country, Taiwan, R.O.C.
Tel:02-26092133 Fax:02-26099303
Email:ttemc@ttemc.com.tw

Data#: 6

File#: Philips.emi

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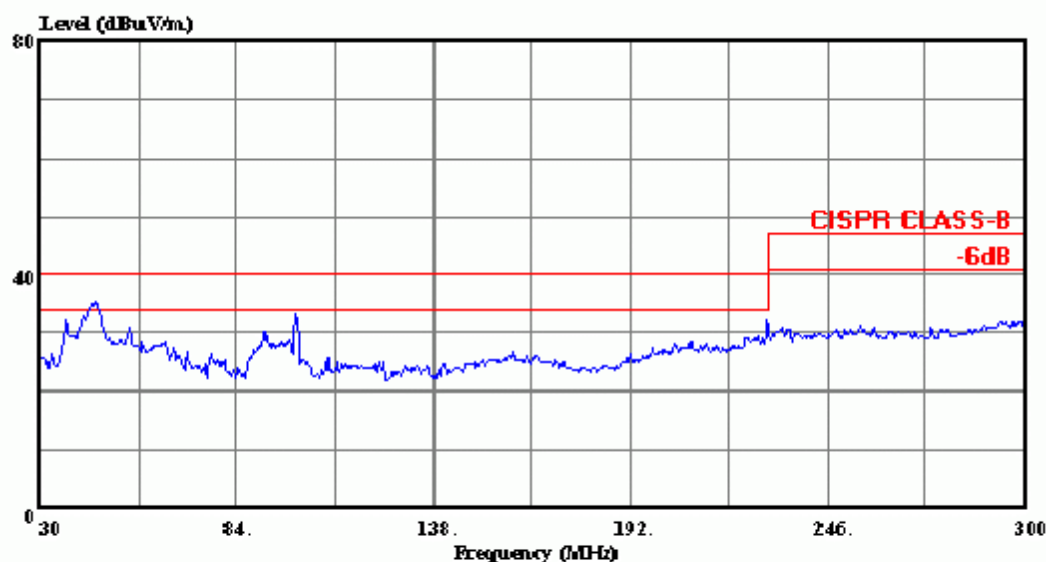


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Condition : CISPR CLASS-B 3m BBA9106B(1209) HORIZONTAL
ENVIRONMENT: 22°C / 63%
EUT : 15"Flat panel color monitor M/N:E151FPp
POWER : 110Vac / 60Hz
MEMO : 640*480 /60Hz 31KHz

Data#: 5

File#: Philips.emi

Date: 2002-06-12 Time: 18:50:43



Site : Anechoic Chamber
Condition : CISPR CLASS-B 3m BBA9106B(1209) VERTICAL
ENVIRONMENT: 22°C / 63%
EUT : 15"Flat panel color monitor M/N:E151FPp
POWER : 110Vac / 60Hz
MEMO : 640*480 /60Hz 31KHz



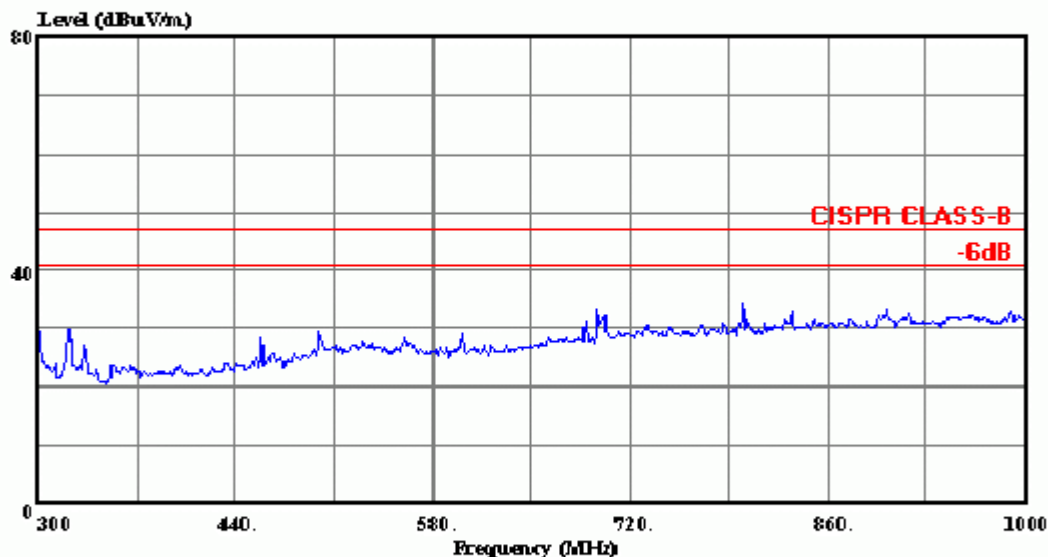
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Email:ttemc@ttemc.com.tw

Data#: 7

File#: Philips.emi

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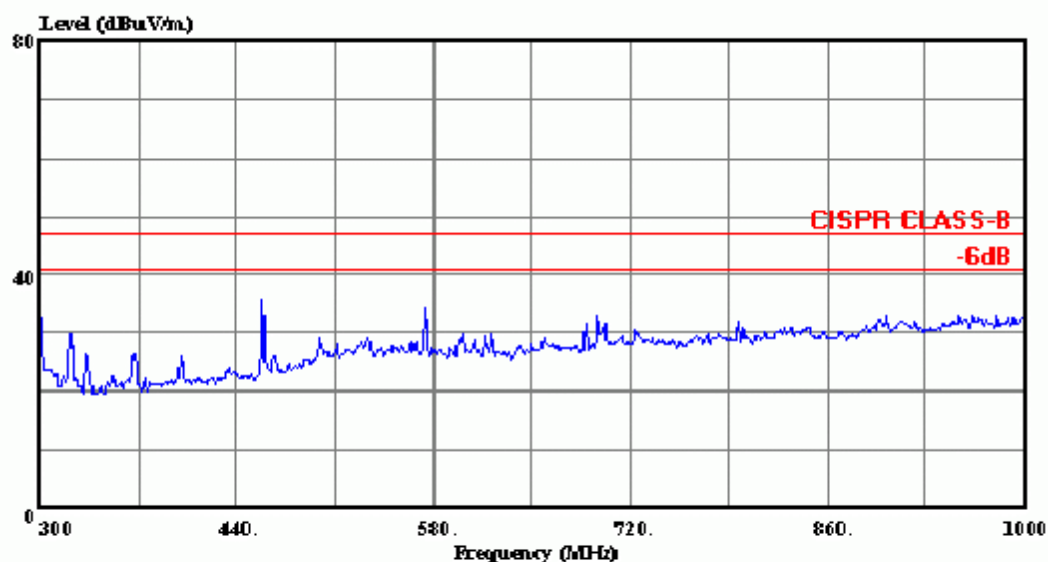


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Condition : CISPR CLASS-B 3m UHALP 9108-A 0139 HORIZONTAL
ENVIRONMENT: 22°C / 63%
EUT : 15"Flat panel color monitor M/N:E151FPp
POWER : 110Vac / 60Hz
MEMO : 640*480 /60Hz 31KHz

Data#: 8

File#: Philips.emi

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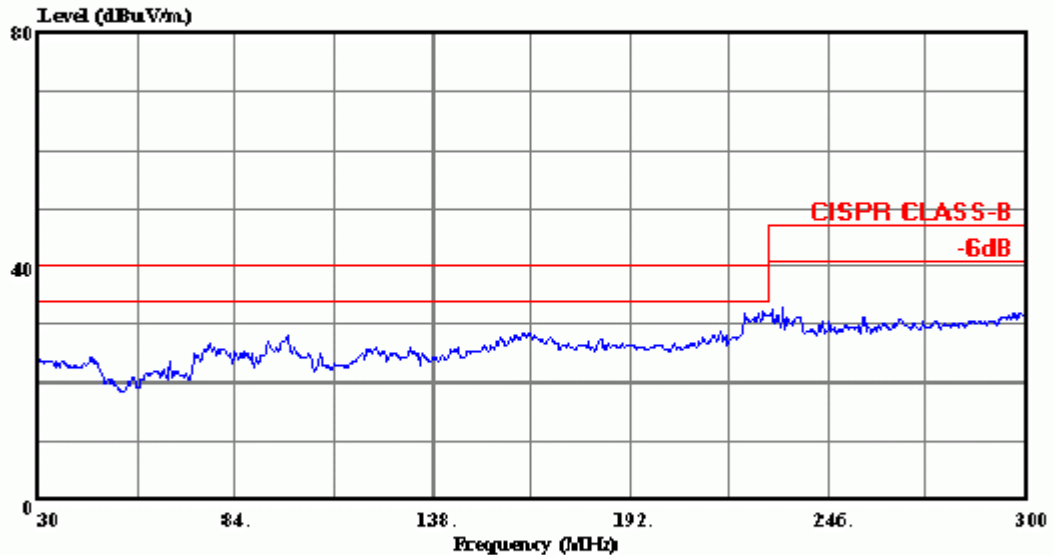
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Condition : CISPR CLASS-B 3m UHALP 9108-A 0139 VERTICAL
ENVIRONMENT: 22°C / 63%
EUT : 15"Flat panel color monitor M/N:E151FPp
POWER : 110Vac / 60Hz
MEMO : 640*480 /60Hz 31KHz



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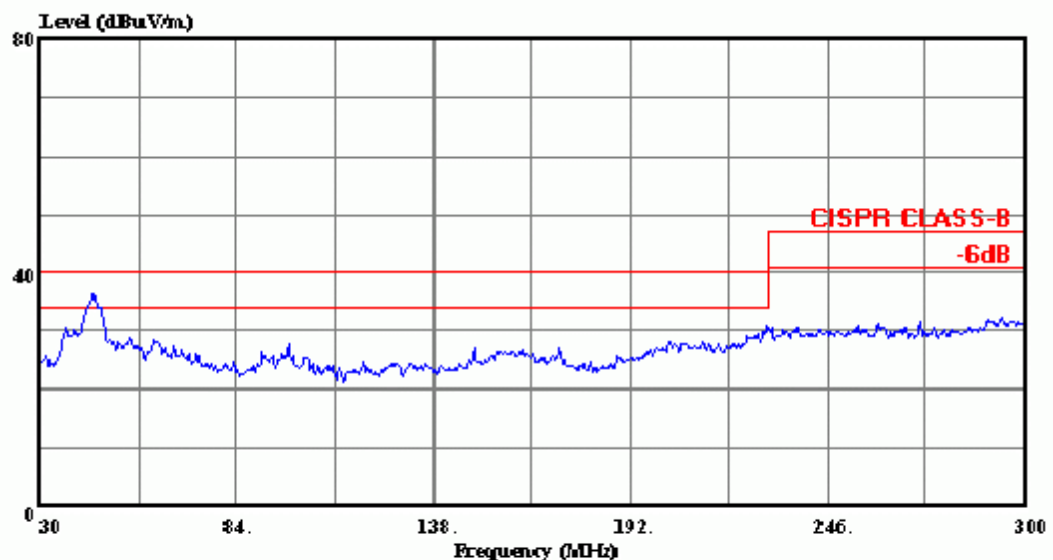
No.53-11, Tin-fu Tsun, Lin-kou Hsiang,
Taipei Country, Taiwan, R.O.C.
Tel:02-26092133 Fax:02-26099303
Email:ttemc@ttemc.com.tw

Data#: 3 File#: Philips.emi Date: 2002-06-12 Time: 18:44:15



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Condition : CISPR CLASS-B 3m BBA9106B(1209) HORIZONTAL
ENVIRONMENT: 22°C / 63%
EUT : 15"Flat panel color monitor M/N:E151FPp
POWER : 110Vac / 60Hz
MEMO : 800*600 /75Hz 47KHz

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Condition : CISPR CLASS-B 3m BBA9106B(1209) VERTICAL
ENVIRONMENT: 22°C / 63%
EUT : 15"Flat panel color monitor M/N:E151FPp
POWER : 110Vac / 60Hz
MEMO : 800*600 /75Hz 47KHz



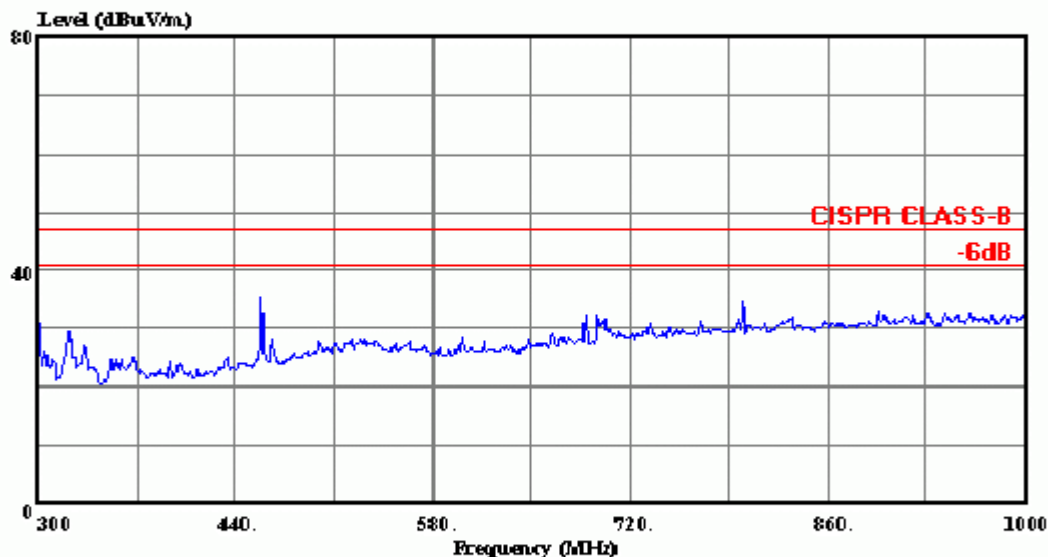
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Data#: 10

File#: Philips.emi

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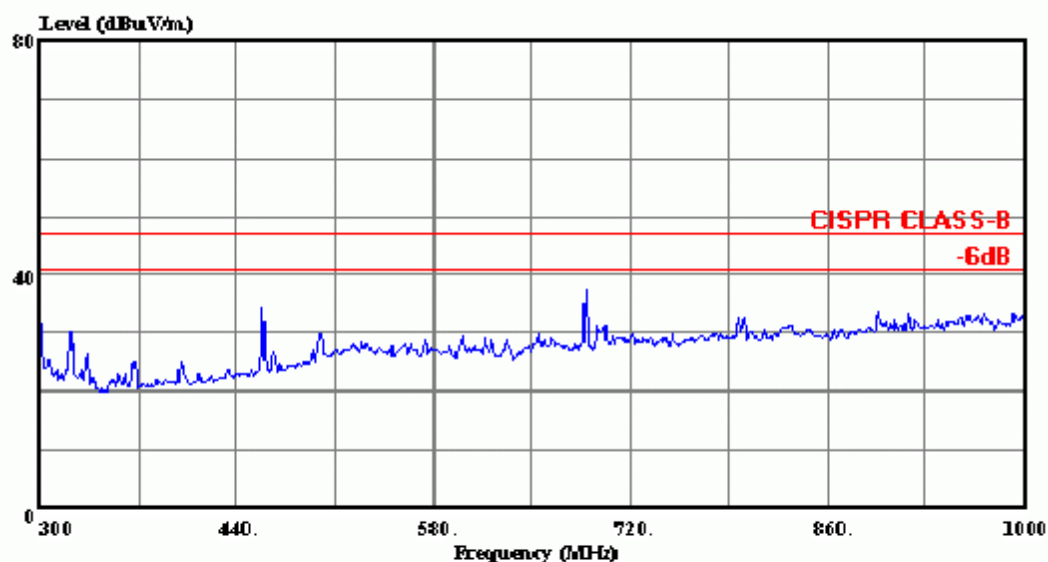


Site : Anechoic Chamber
Condition : CISPR CLASS-B 3m UHALP 9108-A 0139 HORIZONTAL
ENVIRONMENT: 22°C / 63%
EUT : 15"Flat panel color monitor M/N:E151FPp
POWER : 110Vac / 60Hz
MEMO : 800*600 /75Hz 47KHz

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File#: Philips.emi

Date: 2002-06-12 Time: 19:00:59



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Condition : CISPR CLASS-B 3m UHALP 9108-A 0139 VERTICAL
ENVIRONMENT: 22°C / 63%
EUT : 15"Flat panel color monitor M/N:E151FPp
POWER : 110Vac / 60Hz
MEMO : 800*600 /75Hz 47KHz



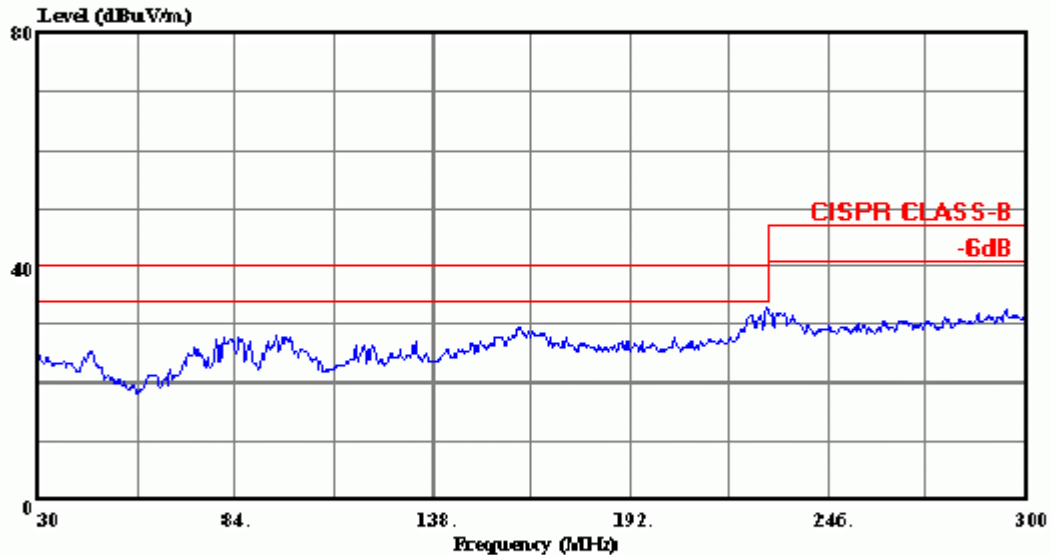
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File#: Philips.emi

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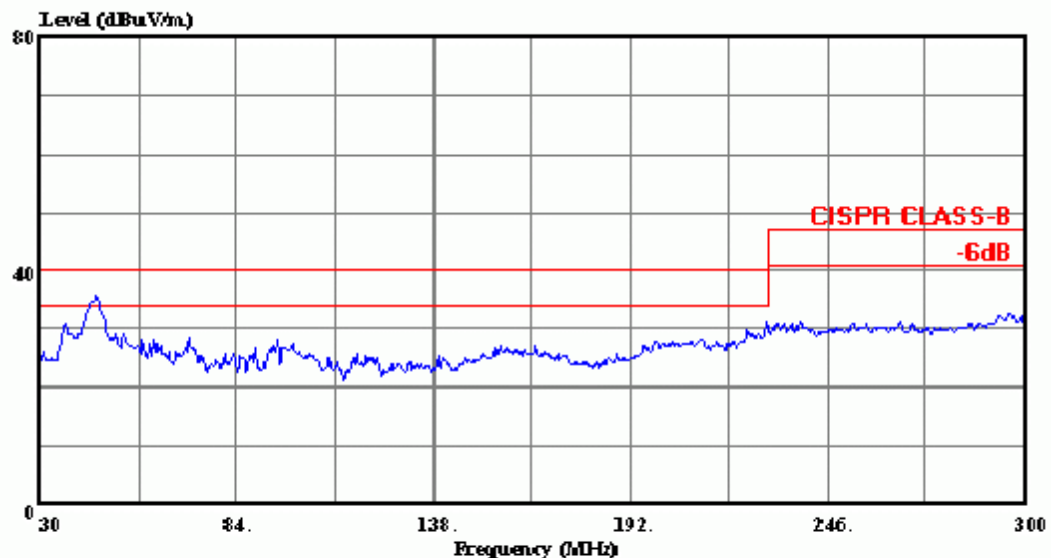


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Condition : CISPR CLASS-B 3m BBA9106B(1209) HORIZONTAL
ENVIRONMENT: 22°C / 63%
EUT : 15"Flat panel color monitor M/N:E151FPp
POWER : 110Vac / 60Hz
MEMO : 1024*768 /75Hz 60KHz

Data#: 1

File#: Philips.emi

Date: 2002-06-12 Time: 18:38:11



Site : Anechoic Chamber
Condition : CISPR CLASS-B 3m BBA9106B(1209) VERTICAL
ENVIRONMENT: 22°C / 63%
EUT : 15"Flat panel color monitor M/N:E151FPp
POWER : 110Vac / 60Hz
MEMO : 1024*768 /75Hz 60KHz



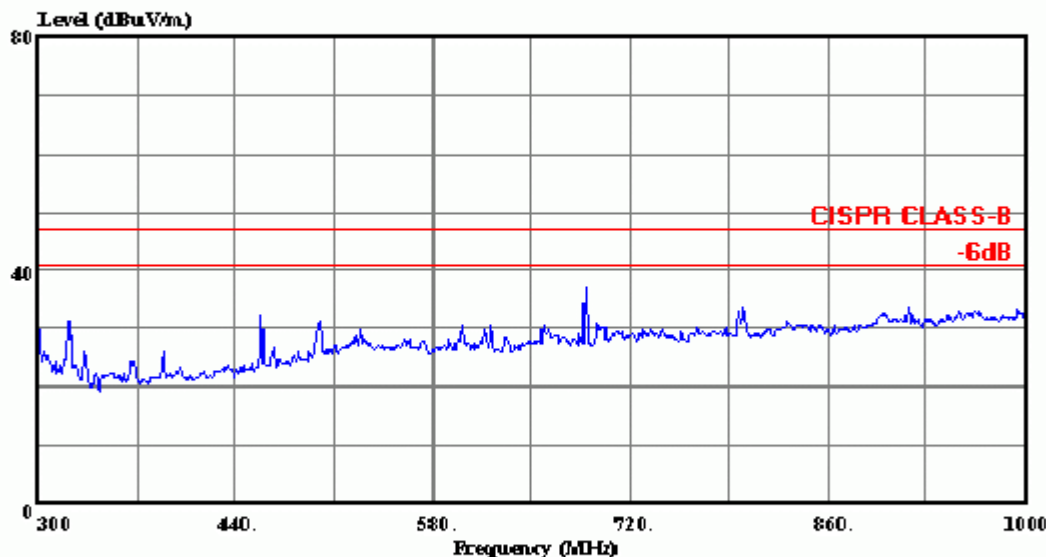
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File#: Philips.emi

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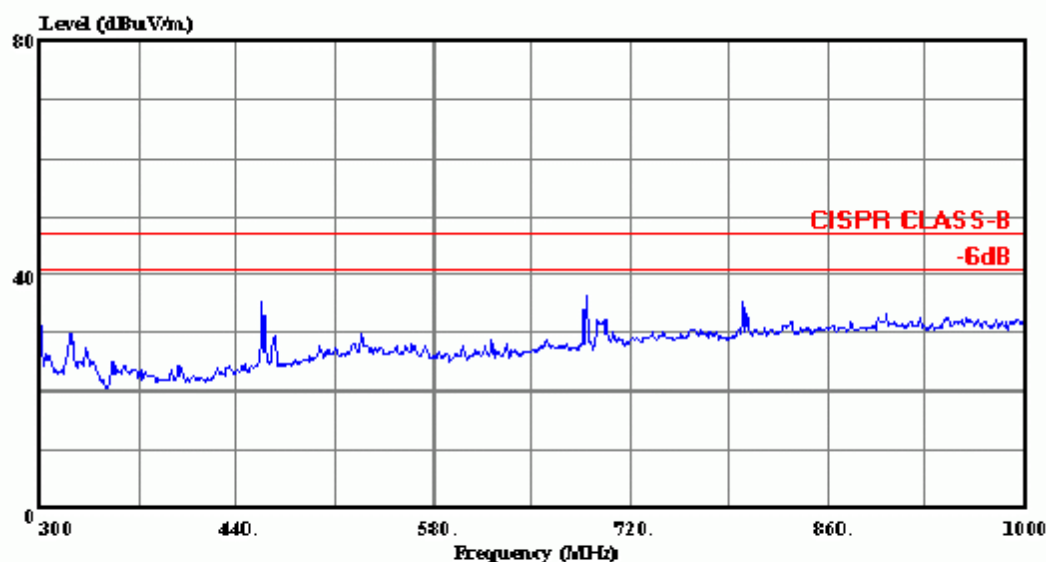


Site : Anechoic Chamber
Condition : CISPR CLASS-B 3m UHALP 9108-A 0139 HORIZONTAL
ENVIRONMENT: 22°C / 63%
EUT : 15"Flat panel color monitor M/N:E151FPp
POWER : 110Vac / 60Hz
MEMO : 1024*768 /75Hz 60KHz

Data#: 11

File#: Philips.emi

Date: 2002-06-12 Time: 19:06:28



Site : Anechoic Chamber
Condition : CISPR CLASS-B 3m UHALP 9108-A 0139 VERTICAL
ENVIRONMENT: 22°C / 63%
EUT : 15"Flat panel color monitor M/N:E151FPp
POWER : 110Vac / 60Hz
MEMO : 1024*768 /75Hz 60KHz