

EXHIBIT 3

Test Report

Test Report

TTEMC-F99053

APPLICATION FOR CERTIFICATION
Class II Permissive Change
On Behalf of
Top Victory Electronics (Taiwan) Co., Ltd.
14" Color Monitor

Model : (1)14E4220T (2)14E4220W

FCC ID : ARSCM3560

Brand : PHILIPS

Prepared for : Top Victory Electronics (Taiwan) Co., Ltd.
6F, 168, Lien Chen Road, Chung-Ho,
Taipei 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-G99005R(G98442/G98246)
Report Number : TTEMC-F99053
Date of Test : Apr. 21 ~ 22, 1999
Date of Report : Apr. 23, 1999

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Tok99-F004

TEST REPORT CERTIFICATION

(Class II Permissive Change)

Applicant : Top Victory Electronics (Taiwan) Co., Ltd.
 Manufacturer : Top Victory Electronics (Fujian) Co., Ltd.
 FCC ID : ARSCM3560
 EUT Description : 14" Color Monitor
 (A) MODEL NO. : (1)14E4220T (2)14E4220W
 (B) SERIAL NO. : N/A
 (C) BRAND : PHILIPS
 (D) POWER SUPPLY : 120V AC/60Hz

Measurement Procedure Used :

FCC RULES AND CISPR 22 (DOCKET NO. 92-152, SEP. 1993) 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 CISPR 22 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 : Apr. 21 ~ 22, 1999

Prepared by : Julie Hsu Apr. 27, 1999
 (JULIE HSU)

Test Engineer : Allen Wang 4/28/99
 (ALLEN WANG)

Approve & Authorized Signer :

Jackie Deng 4/28/99
 (JACKIE DENG)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

Description	:	14" Color Monitor
Model Number	:	(1)14E4220T (Non-MPR Safety Version) (2)14E4220W (MPR-2 Safety Version)
FCC ID	:	ARSCM3560
Brand	:	PHILIPS
Applicant	:	Top Victory Electronics (Taiwan) Co., Ltd. 6F, 168, Lien Chen Road, Chung-Ho, Taipei Hsien, Taiwan, R.O.C.
Manufacturer	:	Top Victory Electronics (Fujian) Co., Ltd. Yuan Hong Rd., Sung-Zheng, Hong-Lu, Fuding City, Fujian, China.
CRT #1	:	Philips, M/N M34EDC13X36/F04
CRT #2	:	Chunghwa, M/N M34AFA83X01 S/N 8AW-TPV-14AA35
Data Cable #1	:	Shielded, Undetachable, 1.2m Bonded a ferrite core
Data Cable #2	:	Shielded, Undetachable, 1.5m Bonded a ferrite core
Power Cord	:	Non-Shielded, Detachable, 1.8m
Data of Receipt of Sample	:	Apr. 13, 1999
Date of Test	:	Apr. 21 ~ 22, 1999

Remark :

This EUT is a modified version of original FCC ID ARSCM3560.

The details of difference list as follows:

1. to add a CRT (Chunghwa, M/N M34AFA83X01) and a data cable (Shielded, Undetachable, 1.5m with a ferrite core).
2. to re-layout main board.
3. to change the max. resolution from 800*600 (53.67KHz/85Hz) into 1024*768 (48.3KHz/60Hz).

1.2. Tested Supporting System Details

1.2.1. PERSONAL COMPUTER

Mother Board	:	ASUS, M/N P5A FCC ID. By DoC
CPU	:	AMD K6-2 266MHz
Case	:	Enlight, M/N EN7105C
S.P.S.	:	SPI, M/N FSP250-61GT S/N W13562650
Floppy Driver 3.5"	:	Mitsumi, M/N D353M3
Hard Disk Driver	:	Seagate, M/N ST34321A S/N VTH90436
VGA Card	:	Dataexpert, M/N CP765V2 S/N E700492317 FCC ID LUT-CP765
Power Cord	:	Nonshielded, Detachable, 1.8m

1.2.2. KEYBOARD

Model Number	:	5121
Serial Number	:	J83300811
FCC ID	:	E5XKBM104M10UC
Manufacturer	:	BTC
Data Cable	:	Shielded, Undetachable, 1m

1.2.3. PRINTER

Model Number	:	2225C+
Serial Number	:	3123S97227
FCC ID	:	DSI6XU2225
Manufacturer	:	Hewlett Packard
Power Adapter	:	KANI, Model AD-09
Power Cord	:	Non-Shielded, Detachable, 2.0m
Data Cable	:	Shielded, Detachable, 1.2m

1.2.4. MODEM #1

Model Number	:	DM-1414
Serial Number	:	980034384
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. MODEM #2

Model Number	:	DM-1414
Serial Number	:	980034383
FCC ID	:	IFAXDM1414
Manufacturer	:	Accex
Data Cable	:	Shielded, Detachable, 1.2m
Power Adapter	:	Amigo, M/N AM-91000A Non-Shielded, Undetachable, 1.8m

1.2.6. MOUSE

Model Number	:	M-S35
Serial Number	:	LZA82103197
FCC ID	:	DZL211029
Manufacturer	:	Logitech
Data Cable	:	Non-Shielded, Undetachable, 1.8m

1.2.7. USB MOUSE #1

Model Number	:	M-UB48
Serial Number	:	LZB81900208
FCC ID	:	DZL211137
Manufacturer	:	Logitech
Data Cable	:	Shielded, Undetachable, 1.8m

1.2.8. USB MOUSE #2

Model Number	:	M-UB48
Serial Number	:	LZB81900219
FCC ID	:	DZL211137
Manufacturer	:	Logitech
Data Cable	:	Shielded, Undetachable, 1.8m

1.3. Description of Test Facility

Site Description (No. 5 Open Site)	:	Feb. 13, 1998 Re-file on Federal Communication Commission FCC Engineering Laboratory 7435 Oakland Mills Road Columbia, MD 21046, U.S.A.
Name of Firm	:	Taiwan Tokin EMC Eng. Corp.
Site Location	:	No. 53-11, Tin-Fu Tsun, Lin-Kou, Taipei Hsien, Taiwan, R.O.C
NVLAP Lab Code	:	200077-0

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. 14" Color Monitor (EUT)

Model Number	:	14E4220T
FCC ID	:	ARSCM3560
Brand	:	PHILIPS
Manufacturer	:	Top Victory Electronics (Fujian) Co., Ltd.
CRT	:	Chunghwa, M/N M34AFA83X01 S/N 8AW-TPV-14AA35
Data Cable	:	Shielded, Undetachable, 1.5m Bonded a ferrite core
Power Cord	:	Non-Shielded, Detachable, 1.8m

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 self-test program "Win-Test" by windows and sent "H" character to monitor (EUT) through VGA card and the screen displayed and filled with "H" pattern by EUT's resolution 1024*768.

2.5.5. Personal Computer read data from floppy disk 、 Modem and then wrote the data into floppy disk 、 Modem.

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

2.6. Test Procedure

The EUT was connected to the power mains through a line impedance stabilization network (L.I.S.N. #1) and the other peripheral devices power cord were 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 the R&S Test Receiver ESHS 10 was set at 10KHz.

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

All the test results are listed in section 2.7.

2.7. Line Conducted RF Voltage Measurement Results

PASSED. All the test results are listed in the following pages.

Test Date : Apr. 21, 1999 Temperature : 21 °C Humidity : 80 %

Test Mode : 48.3KHz / 1024*768, 60Hz

Reference Data # : # 398 (399, 400), # 395 (396, 397)

TOKIN

TAIWAN TOKIN EMC ENG. CORP.

Test Site:

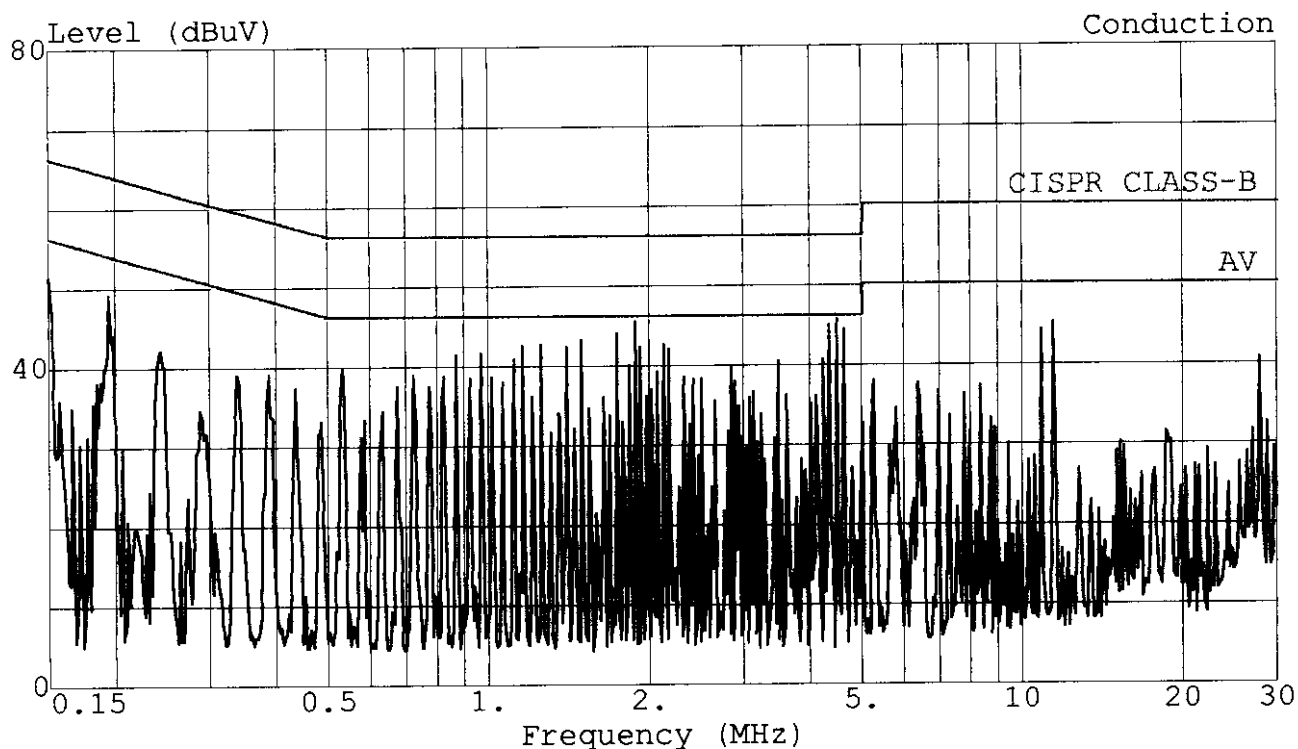
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#53-11 Tingfu Tsun, Linkou,
Taipei, Taiwan R.O.C.

Tel:02-26092133 Fax:02-2609930

Data#: 398 File#: TOP-VICT.EMI

Date: 1999-04-21 Time: 17:32:54



Trace:

Limit: CISPR CLASS-B

Probe: LISN(FCC)8-1370-10 NEUTRAL

Ref Trace:

EUT : MONITOR. M/N:14E4220T/14E4220W

Power: 120Vac/60Hz

Memo : 48.3KHz(1024X768);60Hz

Data#: 399 File#: TOP-VICT.EMI Date: 1999-04-21 Time: 17:33:16
 Conduction
 Limit: CISPR CLASS-B Probe: LISN(FCC)8-1370-10 NEUTRAL
 EUT : MONITOR. M/N:14E4220T/14E4220W
 Power: 120Vac/60Hz
 Memo : 48.3KHz(1024X768);60Hz

Page: 1

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark
	MHz	dB	dB	dB	dB	dB	dB	dB	
1	0.150	49.45	-16.54	65.99	49.12	0.30	0.03	0.00	QP
2	0.194	48.94	-14.92	63.86	48.71	0.20	0.03	0.00	QP
3	0.532	40.99	-15.01	56.00	40.85	0.10	0.04	0.00	QP
4	1.890	44.08	-11.92	56.00	43.93	0.10	0.05	0.00	QP
5	4.511	44.45	-11.55	56.00	44.30	0.10	0.05	0.00	QP
6	11.396	43.56	-16.44	60.00	43.33	0.17	0.07	0.00	QP

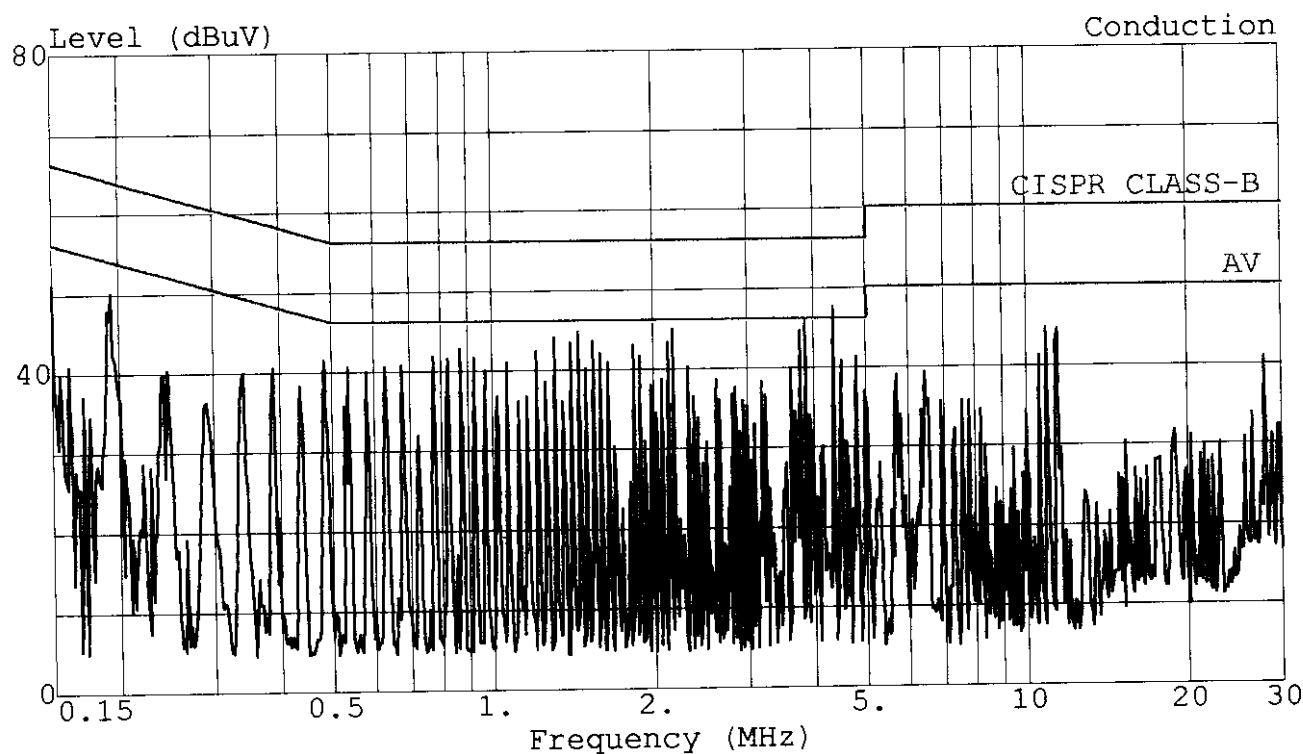
Data#: 400 File#: TOP-VICT.EMI Date: 1999-04-21 Time: 17:34:38
 Conduction
 Limit: CISPR-B (AV) Probe: LISN(FCC)8-1370-10 NEUTRAL
 EUT : MONITOR. M/N:14E4220T/14E4220W
 Power: 120Vac/60Hz
 Memo : 48.3KHz(1024X768);60Hz

Page: 1

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark
	MHz	dB	dB	dB	dB	dB	dB	dB	
1	0.150	41.31	-14.68	55.99	40.98	0.30	0.03	0.00	Average
2	0.194	41.89	-11.97	53.86	41.66	0.20	0.03	0.00	Average
3 !	0.532	37.16	-8.84	46.00	37.02	0.10	0.04	0.00	Average
4 !	1.890	37.02	-8.98	46.00	36.87	0.10	0.05	0.00	Average
5 !	4.511	36.81	-9.19	46.00	36.66	0.10	0.05	0.00	Average
6	11.396	30.87	-19.13	50.00	30.64	0.17	0.07	0.00	Average

Data#: 395 File#: TOP-VICT.EMI

Date: 1999-04-21 Time: 17:28:24



Trace:

Limit: CISPR CLASS-B Probe: LISN(FCC)8-1370-10 LINE

EUT : MONITOR. M/N:14E4220T/14E4220W

Power: 120Vac/60Hz

Memo : 48.3KHz(1024X768);60Hz

Ref Trace:

Data#: 396 File#: TOP-VICT.EMI

Date: 1999-04-21 Time: 17:29:15

Conduction

Limit: CISPR CLASS-B Probe: LISN(FCC)8-1370-10 LINE

EUT : MONITOR. M/N:14E4220T/14E4220W

Power: 120Vac/60Hz

Memo : 48.3KHz(1024X768);60Hz

Page: 1

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark
	MHz	dB	dB	dB	dB	dB	dB	dB	
1	0.150	50.77	-15.23	66.00	50.44	0.30	0.03	0.00	QP
2	0.193	49.93	-13.97	63.91	49.70	0.20	0.03	0.00	QP
3	0.485	40.76	-15.49	56.25	40.61	0.10	0.04	0.00	QP
4	2.183	43.71	-12.29	56.00	43.56	0.10	0.05	0.00	QP
5 !	4.364	47.34	-8.66	56.00	47.19	0.10	0.05	0.00	QP
6	10.914	43.20	-16.80	60.00	42.98	0.16	0.06	0.00	QP

Data#: 397 File#: TOP-VICT.EMI

Date: 1999-04-21 Time: 17:30:22

Conduction

Limit: CISPR-B (AV) Probe: LISN(FCC)8-1370-10 LINE

EUT : MONITOR. M/N:14E4220T/14E4220W

Power: 120Vac/60Hz

Memo : 48.3KHz(1024X768);60Hz

Page: 1

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark
	MHz	dB	dB	dB	dB	dB	dB	dB	
1	0.150	44.31	-11.69	56.00	43.98	0.30	0.03	0.00	Average
2	0.193	43.55	-10.35	53.91	43.32	0.20	0.03	0.00	Average
3	0.485	34.73	-11.52	46.25	34.58	0.10	0.04	0.00	Average
4	2.183	35.69	-10.31	46.00	35.54	0.10	0.05	0.00	Average
5 !	4.364	39.90	-6.10	46.00	39.75	0.10	0.05	0.00	Average
6	10.914	27.95	-22.05	50.00	27.73	0.16	0.06	0.00	Average

3. RADIATED EMISSION TEST

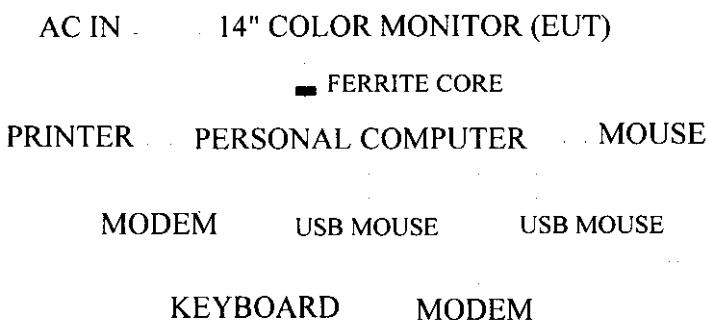
3.1. Test Equipment

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

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESVP	861190/011	Dec.21, 98'	1 Year
2.	Amplifier	HP	8447D	2944A07185	Jul.23, 98'	1 Year
3.	Broadband Antenna	Chase	VBA6106A	1245	Jul.23, 98'	1 Year
4.	Log Periodic Antenna	Chase	UPA6109	1035	Jul.23, 98'	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

ANTENNA TOWER

ANTENNA ELEVATION VARIES FROM 1METER TO 4 METERS

10 METERS

EUT

0.8
METER

TURN TABLE

GROUND PLANE

3.3. Radiation Limit (CLSPR 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 (dBuV/m)
30 ~ 230	10	30
230 ~ 1000	10	37

Note : (1) The tighter limit shall apply 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..

3.4. EUT's Configuration during Compliance Measurement

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

3.5. Operating Condition of EUT

Same as conducted measurement which is listed in 2.5.

3.6. Test Procedure

The EUT and its simulators were placed on a turn table which is 0.8 meter above ground. The turn table rotated 360 degrees to determine the position of the maximum emission level. EUT is set 10 meters away from the receiving antenna which was mounted on a antenna tower. The antenna moved 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 C63.4-1992 on radiated measurement.

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

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

One test mode (48.3KHz/1024*768, 60Hz) was done during radiated measured and all the test results were listed in section 3.8.

3.7. Test Results

PASSED. All the test results are listed in the following pages.

3.8. Radiated Emission Measurement Results

The frequency spectrum from 30 MHz to 1000 MHz was investigated. All the emissions not reported below are too low against the FCC CLASS B limit..

Date of Test : Apr. 22, 1999 Temperature : 23.5 °C
 EUT : 14" Color Monitor Humidity : 44 %
 Test Mode : 48.3KHz / 1024*768, 60Hz

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading		Emission Level	
			Horizontal dBuV	Horizontal dBuV/m	Limits dBuV/m	Margin dBuV/m
46.540	16.39	1.49	- 0.99	16.89	30.00	13.11
65.158	12.03	1.77	1.80	15.60	30.00	14.40
83.775	14.44	2.04	3.76	20.24	30.00	9.76
111.701	18.61	2.36	2.60	23.57	30.00	6.43
130.318	19.80	2.56	1.75	24.11	30.00	5.89
148.936	20.11	2.74	1.70	24.55	30.00	5.45
158.245	20.29	2.85	3.30	26.44	30.00	3.56
176.862	20.89	3.00	2.62	26.51	30.00	3.49
204.788	21.06	3.28	0.26	24.60	30.00	5.40
* 214.097	21.32	3.38	2.32	27.02	30.00	2.98
232.714	22.26	3.49	5.72	31.47	37.00	5.53
269.949	22.95	3.81	1.52	28.28	37.00	8.72
307.158	13.66	4.09	9.46	27.21	37.00	9.79
335.084	14.79	4.32	5.28	24.39	37.00	12.61
372.319	15.28	4.60	8.03	27.91	37.00	9.09
446.789	16.94	5.07	0.86	22.87	37.00	14.13
484.023	17.88	5.30	4.72	27.90	37.00	9.10
558.493	19.99	5.78	1.41	27.18	37.00	9.82
605.037	19.98	6.11	- 0.58	25.51	37.00	11.49

- Remark :
1. All readings are Quasi-Peak values.
 2. The worst emission was detected at 214.097MHz with corrected signal level of 27.02dBuV/m (limit is 30dBuV/m) when the antenna was at horizontal polarization and was at 3.8m high and the turn table was at 105 ° .
 3. 0 ° was the table front facing the antenna. Degree is calculated from 0 ° clockwise facing the antenna.

Date of Test : Apr. 22, 1999 Temperature : 23.5 °C
 EUT : 14" Color Monitor Humidity : 44 %
 Test Mode : 48.3KHz / 1024*768, 60Hz

	Antenna	Cable	Meter Reading	Emission Level		
Frequency	Factor	Loss	Vertical	Vertical	Limits	Margin
MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dBuV/m
37.235	20.12	1.33	1.35	22.80	30.00	7.20
46.544	16.75	1.49	2.35	20.59	30.00	9.41
65.161	12.50	1.77	7.46	21.73	30.00	8.27
83.779	14.11	2.04	9.38	25.53	30.00	4.47
111.705	18.79	2.36	5.10	26.25	30.00	3.75
130.322	19.15	2.56	2.65	24.36	30.00	5.64
167.557	21.73	2.95	2.28	26.96	30.00	3.04
186.175	19.92	3.12	- 0.42	22.62	30.00	7.38
214.101	22.67	3.38	0.52	26.57	30.00	3.43
* 232.718	22.39	3.49	8.09	33.97	37.00	3.03
269.953	21.92	3.81	4.30	30.03	37.00	6.97
307.184	14.69	4.09	11.84	30.62	37.00	6.38
335.110	14.04	4.32	9.24	27.60	37.00	9.40
372.345	16.01	4.60	10.86	31.47	37.00	5.53
428.197	16.79	4.93	6.78	28.50	37.00	8.50
511.975	18.02	5.45	7.67	31.14	37.00	5.86
605.062	19.79	6.11	2.14	28.04	37.00	8.96

- Remark :
1. All readings are Quasi-Peak values.
 2. The worst emission was detected at 232.718MHz with corrected signal level of 33.97dBuV/m (limit is 37dBuV/m) when the antenna was at vertical polarization and was at 1m high and the turn table was at 175 ° .
 3. 0 ° was the table front facing the antenna. Degree is calculated from 0 ° clockwise facing the antenna.

4. DEVIATION TO TEST SPECIFICATIONS

【 NONE 】