

EXHIBIT 4

Test Report

Test Report

TTEMC-F99079

APPLICATION FOR CERTIFICATION
On Behalf of
Top Victory Electronics (Taiwan) Co., Ltd.
15" Color Monitor

Model : (1)5Glr (2)5Glr+

FCC ID : ARSCM569P

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,
Taipei Hsien, Taiwan, R.O.C.

Tel: (02) 2609-9301, 2609-2133

File Number : ATM-G99210
Report Number : TTEMC-F99079
Date of Test : May 19 / 24, 1999
Date of Report : Jun. 11, 1999

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TK99-008

TEST REPORT CERTIFICATION

Applicant : Top Victory Electronics (Taiwan) Co., Ltd.
 Manufacturer : Top Victory Electronics (Fujian) Co., Ltd.
 FCC ID : ARSCM569P
 EUT Description : 15" Color Monitor
 (A) MODEL NO. : (1)5Glr (2)5Glr+
 (B) SERIAL NO. : N/A
 (C) POWER SUPPLY : AC 120V / 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 : May 19 / 24, 1999

Prepared by : Julie Hsu 4/17/99
 (JULIE HSU)

Test Engineer : Allen Wang 6/17, '99
 (ALLEN WANG)

Approve & Authorized Signer : Jackie Deng 6/17 '99
 (JACKIE DENG)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

Description	:	15" Color Monitor
Model Number	:	(1)5Glr (MPR-2 Safety Version) (2)5Glr+ (TCO Safety Version)
FCC ID	:	ARSCM569P
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	:	Philips, M/N M36EDR323X131/6F01LT
Data Cable	:	Shielded, Undetachable, 1.2m Bonded a ferrite core
Power Cord	:	Shielded, Detachable, 1.5m
Data of Receipt of Sample	:	May 07, 1999
Date of Test	:	May 19 / 24, 1999

1.2. Tested Supporting System Details

1.2.1. PERSONAL COMPUTER

Model Number	:	D5250A
Serial Number	:	US72455810
FCC ID	:	by FCC DoC
Manufacturer	:	HP
CD-ROM	:	Goldstar, M/N CRD-8240B S/N 7054007048 FCC ID BEJCRD-8240B
VGA Card	:	Metabyte FCC ID I27MM-VS03A
Sound Card	:	Digitan Systems, M/N DSAC-300 S/N F/D O 625938
Lan Card	:	Digitan Systems, M/N DS560-450 S/N F/D O 630443
Telephone Line	:	Non-shielded, Detachable, 1.8m
Power Cord	:	Non-Shielded, Undetachable, 1.8m

1.2.2. KEYBOARD

Model Number	:	SK-2501
Serial Number	:	M970441461
FCC ID	:	GYUR38SK
Manufacturer	:	HP
Data Cable	:	Shielded, Undetachable, 1.8m Bonded a ferrite core

1.2.3. PRINTER

Model Number	:	2225C+
Serial Number	:	3121S96627
FCC ID	:	DSI6XU2225
Manufacturer	:	Hewlett Packard
Power Adapter	:	Hewlett Packard, M/N 82241A
Power Cord	:	Non-Shielded, Undetachable, 2.0m
Data Cable	:	Shielded, Detachable, 1.2m

1.2.4. MODEM

Model Number	:	DM-1414
Serial Number	:	980034386
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 : LZA65242531
 FCC ID : DZL211029
 Manufacturer : HP
 Data Cable : Shielded, Undetachable, 1.8m

1.2.6. USB MOUSE #1

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

1.2.7. USB MOUSE #2

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

1.2.8. SPEAKER

Model Number : J-008
 Serial Number : J80547825
 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 : HA08717
 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 : S-2300
Serial Number : N/A
Manufacturer : Super Cobra
Data Cable : Non-Shielded, Undetachable, 1.35m

1.2.14. TELEPHONE

Model Number : RS-802M
Serial Number : N/A
Manufacturer : Ju Tong
Data Cable : Non-Shielded, Detachable, 0.5m

1.3. Description of Test Facility

Site Description : May 14, 1997 Re-file on
(No. 4 Open Site) 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

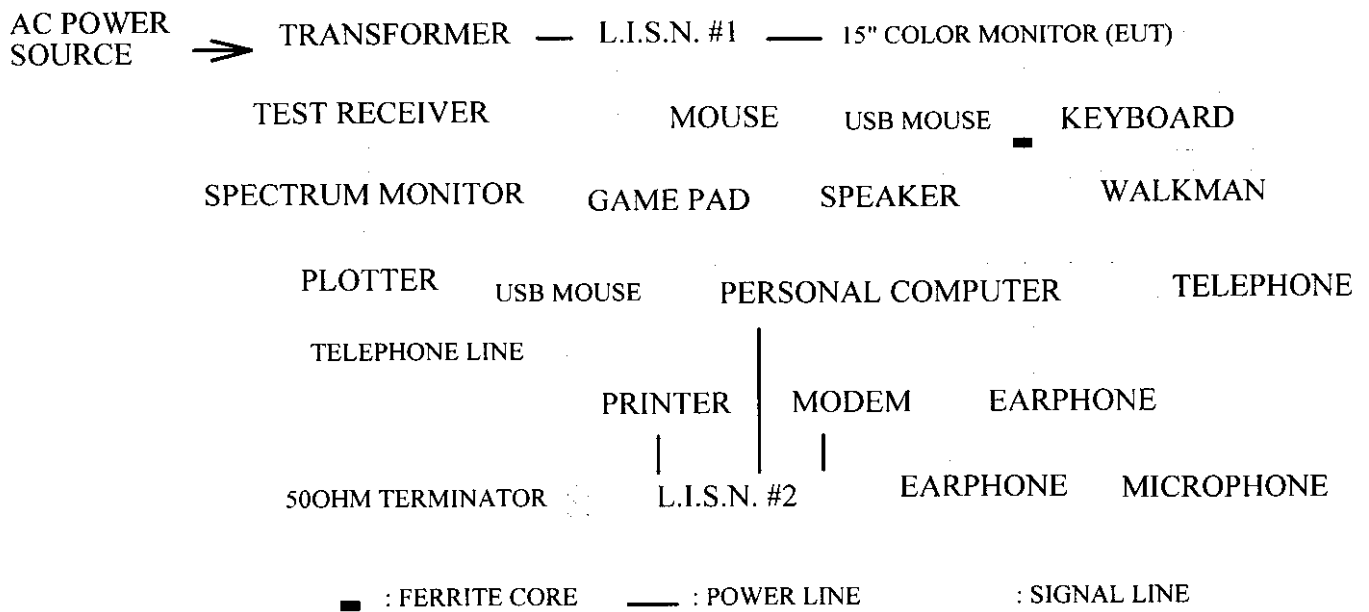
2. POWERLINE CONDUCTED TEST

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.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESHS 10	844591/015	Jan.30, 99'	1 Year
2.	L.I.S.N. # 1	Kyoritsu	KNW-407	8-1370-10	May 26, 99'	1 Year
3.	L.I.S.N. # 2	Kyoritsu	KNW-407	8-1370-9	May 26, 99'	1 Year

2.2. Block Diagram of Test Setup



2.3. Powerline Conducted Emission Limit (CLSPR 22 CLASS B)

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

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" Color Monitor (EUT)

Model Number	:	5Glr
FCC ID	:	ARSCM569P
Manufacturer	:	Top Victory Electronics (Fujian) Co., Ltd.
CRT	:	Philips, M/N M36EDR323X131/6F01LT
Data Cable	:	Shielded, Undetachable, 1.2m Bonded a ferrite core
Power Cord	:	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 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.

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 150KHz to 30MHz was checked.

Three kinds of horizontal working frequency and display pattern were investigated during pre-scanning and report the worst mode (3)(69KHz/1024*768) in the section 2.7., the others test data are attached within Appendix I. The detail of test modes are as follows :

- (1) 43.3KHz (640*480, 85Hz)
- (2) 54KHz (800*600, 85Hz)
- (3) 69KHz (1024*768, 85Hz)

2.7. Line Conducted RF Voltage Measurement Results

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

Test Date : May 24, 1999 Temperature : 23 °C Humidity : 60 %

Test Mode : 69KHz / 1024*768, 85Hz

Reference Data # : # 465 (466, 467), # 462 (463, 464)

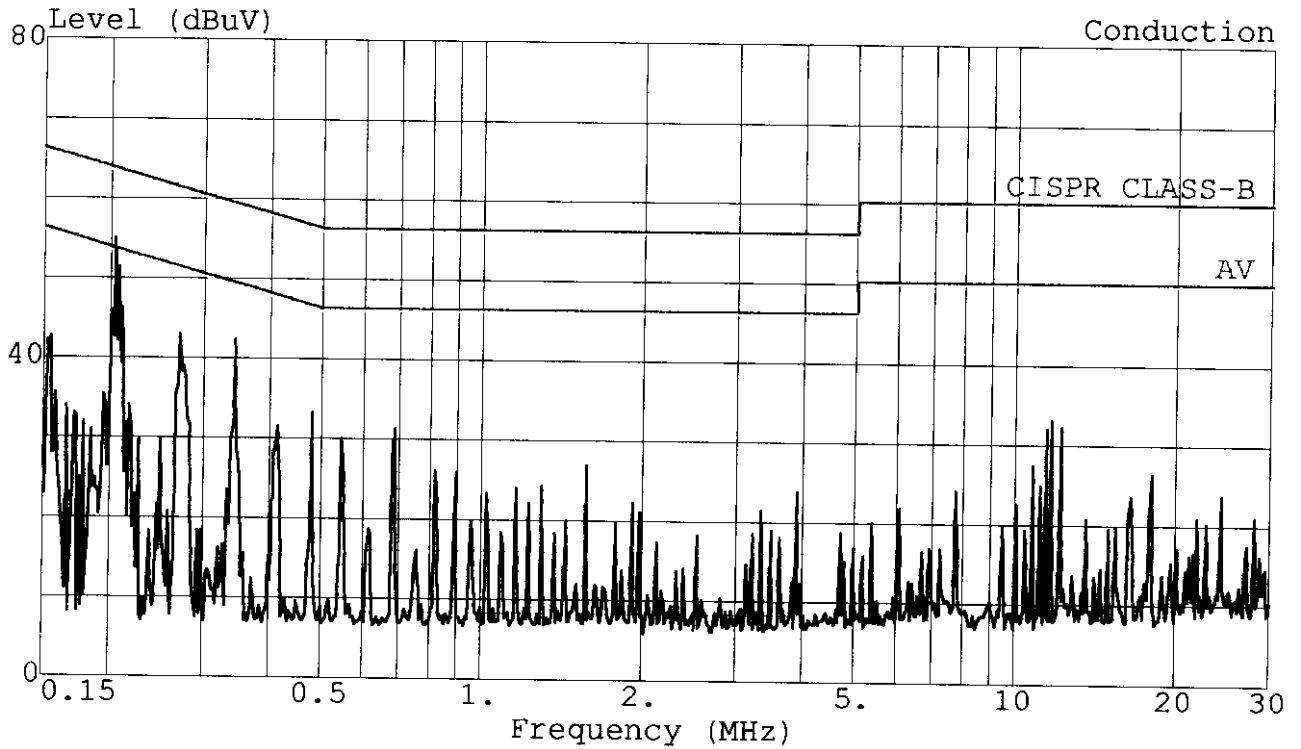
TOKIN

TAIWAN TOKIN EMC ENG. CORP.

FCC ID: ARSCM569P Page 11 of 29
Test Site:
#53-11 Tingfu Tsun, Linkou,
Taipei, Taiwan R.O.C.
Tel:02-26092133 Fax:02-26099303

Data#: 465 File#: TOP-VICT.EMI

Date: 1999-05-24 Time: 17:26:02



Trace: Ref Trace:
Limit: CISPR CLASS-B Probe: LISN(FCC)8-1370-10 NEUTRAL
EUT : 15" COLOR MONITOR. M/N:5Glr/5Glr+
Power: 120Vac/60Hz
Memo : 1024*768/85Hz;69KHz



Test Site:
#53-11 Tingfu Tsun, Linkou,
Taipei, Taiwan R.O.C.
Tel:02-26092133 Fax:02-26099303

TAIWAN TOKIN EMC ENG. CORP.

Data#: 466 File#: TOP-VICT.EMI Date: 1999-05-24 Time: 17:28:56
Conduction
Limit: CISPR CLASS-B Probe: LISN(FCC)8-1370-10 NEUTRAL
EUT : 15" COLOR MONITOR. M/N:5Glr/5Glr+
Power: 120Vac/60Hz
Memo : 1024*768/85Hz;69KHz

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark
	MHz	dB	dB	dB	dB	dB	dB	dB	
1	0.207	51.17	-12.16	63.33	50.95	0.19	0.03	0.00	QP
2	0.481	29.98	-26.34	56.32	29.83	0.10	0.04	0.00	QP
3	1.577	27.28	-28.72	56.00	27.13	0.10	0.05	0.00	QP
4	3.908	23.27	-32.73	56.00	23.12	0.10	0.05	0.00	QP
5	11.716	33.12	-26.88	60.00	32.88	0.17	0.07	0.00	QP
6	24.398	22.78	-37.22	60.00	22.16	0.42	0.20	0.00	QP

Data#: 467 File#: TOP-VICT.EMI Date: 1999-05-24 Time: 17:29:37
Conduction
Limit: CISPR-B (AV) Probe: LISN(FCC)8-1370-10 NEUTRAL
EUT : 15" COLOR MONITOR. M/N:5Glr/5Glr+
Power: 120Vac/60Hz
Memo : 1024*768/85Hz;69KHz

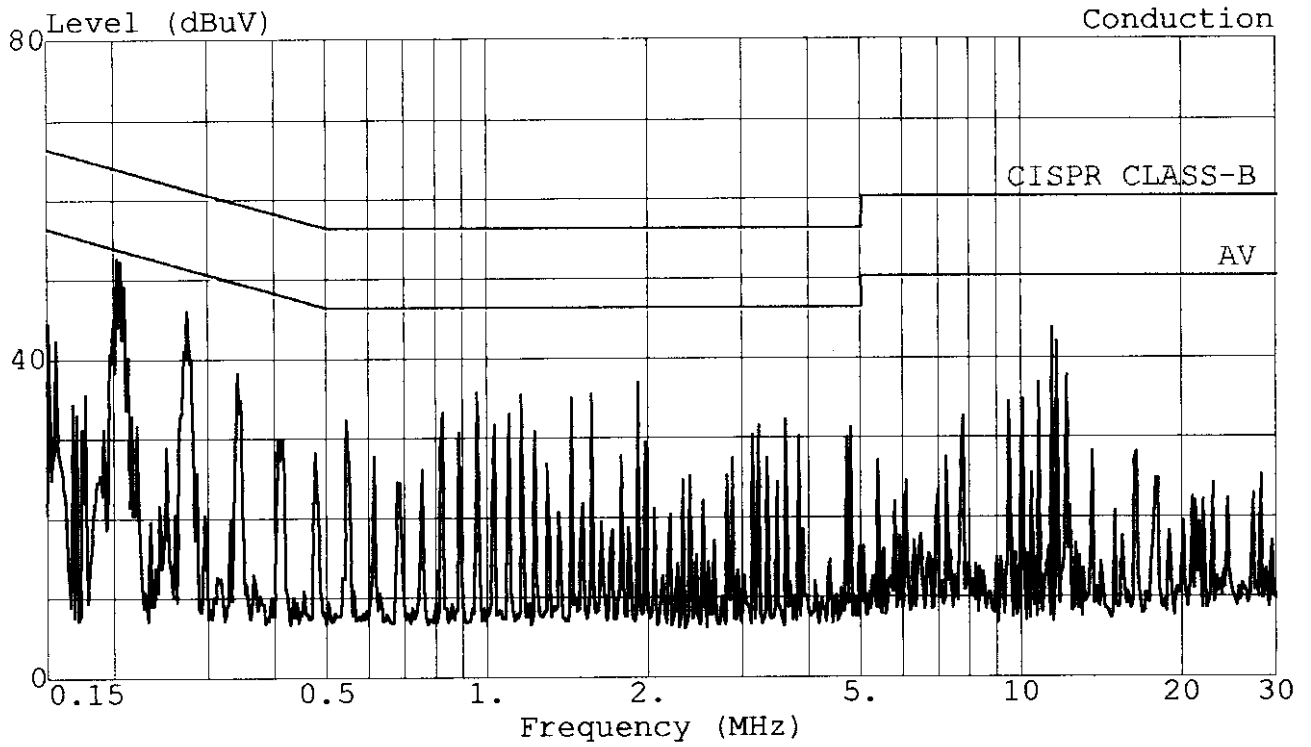
	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark
	MHz	dB	dB	dB	dB	dB	dB	dB	
1 !	0.207	46.60	-6.73	53.33	46.38	0.19	0.03	0.00	Average
2	0.481	20.50	-25.82	46.32	20.35	0.10	0.04	0.00	Average
3	1.577	20.39	-25.61	46.00	20.24	0.10	0.05	0.00	Average
4	3.908	16.90	-29.10	46.00	16.75	0.10	0.05	0.00	Average
5	11.716	24.01	-25.99	50.00	23.77	0.17	0.07	0.00	Average
6	24.398	18.94	-31.06	50.00	18.32	0.42	0.20	0.00	Average

TOKIN

Test Site:
#53-11 Tingfu Tsun, Linkou,
Taipei, Taiwan R.O.C.
Tel:02-26092133 Fax:02-26099303

TAIWAN TOKIN EMC ENG. CORP.

Data#: 462 File#: TOP-VICT.EMI Date: 1999-05-24 Time: 17:20:25



Trace: Ref Trace:
Limit: CISPR CLASS-B Probe: LISN(FCC)8-1370-10 LINE
EUT : 15" COLOR MONITOR. M/N:5Glr/5Glr+
Power: 120Vac/60Hz
Memo : 1024*768/85Hz;69KHz



Test Site:
#53-11 Tingfu Tsun, Linkou,
Taipei, Taiwan R.O.C.
Tel:02-26092133 Fax:02-26099303

TAIWAN TOKIN EMC ENG. CORP.

Data#: 463 File#: TOP-VICT.EMI Date: 1999-05-24 Time: 17:23:15
Conduction
Limit: CISPR CLASS-B Probe: LISN(FCC)8-1370-10 LINE
EUT : 15" COLOR MONITOR. M/N:5Glr/5Glr+
Power: 120Vac/60Hz
Memo : 1024*768/85Hz;69KHz

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	0.207	50.87	-12.44	63.31	50.65	0.19	0.03	0.00	QP
2	0.544	30.81	-25.19	56.00	30.67	0.10	0.04	0.00	QP
3	1.920	36.49	-19.51	56.00	36.34	0.10	0.05	0.00	QP
4	4.730	36.69	-19.31	56.00	36.54	0.10	0.05	0.00	QP
5	11.446	43.66	-16.34	60.00	43.43	0.17	0.07	0.00	QP
6	28.164	25.02	-34.98	60.00	24.34	0.48	0.20	0.00	QP

Data#: 464 File#: TOP-VICT.EMI Date: 1999-05-24 Time: 17:23:59
Conduction
Limit: CISPR-B (AV) Probe: LISN(FCC)8-1370-10 LINE
EUT : 15" COLOR MONITOR. M/N:5Glr/5Glr+
Power: 120Vac/60Hz
Memo : 1024*768/85Hz;69KHz

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 !	0.207	46.41	-6.90	53.31	46.19	0.19	0.03	0.00	Average
2	0.544	25.80	-20.20	46.00	25.66	0.10	0.04	0.00	Average
3	1.920	30.91	-15.09	46.00	30.76	0.10	0.05	0.00	Average
4	4.730	29.74	-16.26	46.00	29.59	0.10	0.05	0.00	Average
5	11.446	31.54	-18.46	50.00	31.31	0.17	0.07	0.00	Average
6	28.164	22.90	-27.10	50.00	22.22	0.48	0.20	0.00	Average

3. RADIATED EMISSION TEST

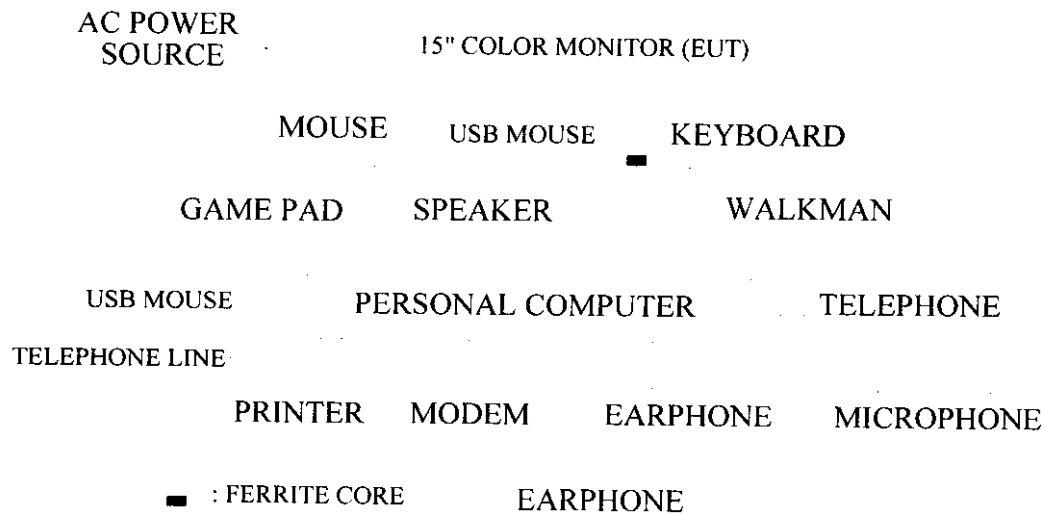
3.1. Test Equipment

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	ESVS10	845165/018	Mar.19, 99'	1 Year
2.	Broadband Antenna	Chase	VBA6106A	1263	Apr.02, 99'	1 Year
3.	Log Periodic Antenna	Chase	UPA6109	1061	Apr.02, 99'	1 Year

3.2. Block Diagram of Test Setup

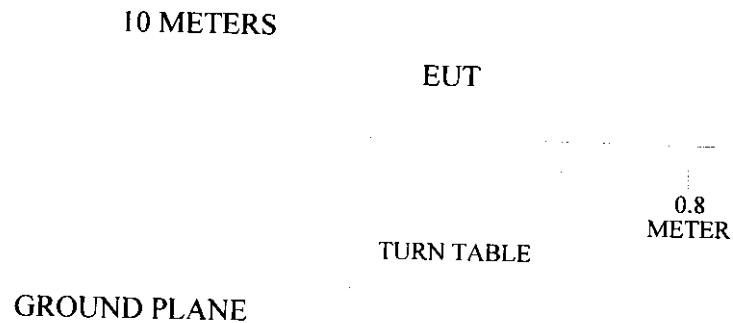
3.2.1. Block Diagram of connection between EUT and simulators



3.2.2. Open Field Test Site Setup Diagram

ANTENNA TOWER

ANTENNA ELEVATION VARIES FROM 1 METER TO 4 METERS



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 ESVS10 was set at 120KHz.

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

Three kinds of test modes were done during radiated measurement and all the test results are listed in section 3.8.

- (1) 43.3KHz (640*480, 85Hz)
- (2) 54KHz (800*600, 85Hz)
- (3) 69KHz (1024*768, 85Hz)

3.7. Test Results

PASSED. Please refer to 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 : May 19, 1999 Temperature : 23 °C
 EUT : 15" Color Monitor Humidity : 67 %
 Test Mode : 43.3KHz / 640*480, 85Hz

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading		Emission Level Horizontal dBuV/m	Limits dBuV/m	Margin dB
			Horizontal dBuV				
45.778	17.02	1.36	- 2.56		15.82	30.00	14.18
63.372	12.10	1.67	0.62		14.39	30.00	15.61
140.823	19.88	2.63	- 1.55		20.96	30.00	9.04
186.593	20.83	3.05	- 1.33		22.55	30.00	7.45
193.643	21.10	3.12	2.12		26.34	30.00	3.66
204.200	20.99	3.23	- 0.75		23.47	30.00	6.53
211.234	21.15	3.28	2.30		26.73	30.00	3.27
228.844	21.74	3.47	0.07		25.28	30.00	4.72
264.035	23.03	3.79	- 1.89		24.93	37.00	12.07
316.832	12.06	4.25	5.13		21.44	37.00	15.56
355.534	12.91	4.46	5.10		22.47	37.00	14.53
397.767	14.74	4.80	3.15		22.69	37.00	14.31
429.436	15.27	5.06	0.18		20.51	37.00	16.49
471.664	15.81	5.32	3.26		24.39	37.00	12.61
535.000	18.26	5.80	0.87		24.93	37.00	12.07

Remark : All readings are Quasi-Peak values.

Date of Test : May 19, 1999 Temperature : 23 °C
 EUT : 15" Color Monitor Humidity : 67 %
 Test Mode : 43.3KHz / 640*480, 85Hz

Frequency MHz	Antenna Cable		Meter Reading		Emission Level		Margin dB
	Factor dB/m	Loss dB	Vertical dBuV	Vertical dBuV/m	Limits dBuV/m		
42.257	18.28	1.34	2.61	22.23	30.00	7.77	
45.776	17.55	1.36	3.13	22.04	30.00	7.96	
59.852	14.08	1.61	7.13	22.82	30.00	7.18	
63.371	13.27	1.67	9.86	24.80	30.00	5.20	
140.823	20.19	2.63	- 1.54	21.28	30.00	8.72	
176.032	20.79	2.97	- 1.82	21.94	30.00	8.06	
193.627	20.70	3.12	- 1.78	22.04	30.00	7.96	
211.235	20.93	3.28	- 0.06	24.15	30.00	5.85	
316.819	13.62	4.25	4.18	22.05	37.00	14.95	
337.931	13.83	4.38	1.10	19.31	37.00	17.69	
366.076	15.06	4.48	2.10	21.64	37.00	15.36	
394.233	15.28	4.75	3.10	23.13	37.00	13.87	
436.460	16.09	5.12	1.15	22.36	37.00	14.64	
475.162	16.81	5.34	1.25	23.40	37.00	13.60	
524.427	17.85	5.66	1.14	24.65	37.00	12.35	

Remark : All readings are Quasi-Peak values.

Date of Test : May 19, 1999 Temperature : 23 °C
 EUT : 15" Color Monitor Humidity : 67 %
 Test Mode : 54KHz / 800*600, 85Hz

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading		Emission Level		Margin dB
			Horizontal dBuV	Horizontal dBuV/m	Horizontal dBuV/m	Limits dBuV/m	
45.107	17.45	1.36	- 0.16	18.65	30.00	11.35	
73.292	12.21	1.82	2.90	16.93	30.00	13.07	
84.585	14.64	2.00	3.25	19.89	30.00	10.11	
157.882	20.34	2.84	- 1.31	21.87	30.00	8.13	
186.078	20.92	3.05	0.43	24.40	30.00	5.60	
197.364	20.97	3.18	2.83	26.98	30.00	3.02	
208.651	21.03	3.27	- 0.30	24.00	30.00	6.00	
214.277	21.52	3.29	0.46	25.27	30.00	4.73	
242.464	21.97	3.60	1.34	26.91	37.00	10.09	
253.753	22.80	3.64	0.81	27.25	37.00	9.75	
321.409	12.85	4.21	4.16	21.22	37.00	15.78	
338.334	14.13	4.41	6.81	25.35	37.00	11.65	
394.723	14.61	4.75	2.43	21.79	37.00	15.21	
428.567	15.07	5.06	1.42	21.55	37.00	15.45	
451.123	16.11	5.19	1.57	22.87	37.00	14.13	
507.515	16.84	5.58	1.86	24.28	37.00	12.72	

Remark : All readings are Quasi-Peak values.

Date of Test : May 19, 1999 Temperature : 23 °C
 EUT : 15" Color Monitor Humidity : 67 %
 Test Mode : 54KHz / 800*600, 85Hz

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading		Limits dBuV/m	Margin dB
			Vertical dBuV	Vertical dBuV/m		
45.114	17.27	1.36	2.67	21.30	30.00	8.70
67.657	12.67	1.70	9.03	23.40	30.00	6.60
84.588	13.61	2.00	9.35	24.96	30.00	5.04
152.256	21.29	2.76	- 1.68	22.37	30.00	7.63
198.044	20.45	3.18	3.22	26.85	30.00	3.15
214.266	20.66	3.29	0.94	24.89	30.00	5.11
225.544	20.83	3.42	2.34	26.59	30.00	3.41
236.841	21.47	3.48	0.08	25.03	37.00	11.97
310.137	13.30	4.20	3.34	20.84	37.00	16.16
321.418	13.78	4.21	5.82	23.81	37.00	13.19
327.047	13.80	4.33	5.27	23.40	37.00	13.60
338.327	13.83	4.41	9.09	27.33	37.00	9.67
366.505	15.12	4.48	- 0.46	19.14	37.00	17.86
394.720	15.53	4.75	- 0.74	19.54	37.00	17.46
451.107	16.47	5.19	- 1.35	20.31	37.00	16.69
507.497	17.11	5.58	- 0.42	22.27	37.00	14.73

Remark : All readings are Quasi-Peak values.

Date of Test : May 18, 1999 Temperature : 22 °C
 EUT : 15" Color Monitor Humidity : 70 %
 Test Mode : 69KHz / 1024*768, 85Hz

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading		Emission Level		Margin dB
			Horizontal dBuV	Horizontal dBuV/m	Horizontal dBuV/m	Limits dBuV/m	
62.373	12.02	1.62	6.67	20.31	30.00	9.69	
71.284	12.22	1.79	1.76	15.77	30.00	14.23	
80.195	13.44	1.91	3.00	18.35	30.00	11.65	
160.392	20.26	2.89	-0.52	22.63	30.00	7.37	
204.946	21.07	3.28	3.52	27.87	30.00	2.13	
213.850	21.35	3.29	0.69	25.33	30.00	4.67	
* 222.760	21.40	3.38	2.75	27.53	30.00	2.47	
240.589	22.11	3.57	1.44	27.12	37.00	9.88	
267.321	23.09	3.80	-0.08	26.81	37.00	10.19	
311.877	11.67	4.18	5.00	20.85	37.00	16.15	
329.698	13.63	4.35	4.04	22.02	37.00	14.98	
338.609	13.62	4.41	5.01	23.04	37.00	13.96	
356.431	13.11	4.46	4.89	22.46	37.00	14.54	
374.252	13.28	4.66	5.77	23.71	37.00	13.29	
445.539	15.66	5.14	4.18	24.98	37.00	12.02	
552.468	18.96	5.91	1.59	26.46	37.00	10.54	

- Remark :
1. All readings are Quasi-Peak values.
 2. The worst emission was detected at 222.760MHz with corrected signal level of 27.53dBuV/m (limit is 30dBuV/m) when the antenna was at horizontal polarization and was at 4m high and the turn table was at 90 ° .
 3. 0 ° was the table front facing the antenna. Degree is calculated from 0 ° clockwise facing the antenna.

Date of Test : May 18, 1999 Temperature : 22 °C
 EUT : 15" Color Monitor Humidity : 70 %
 Test Mode : 69KHz / 1024*768, 85Hz

Frequency MHz	Antenna		Cable Meter Reading		Emission Level		Margin dB
	Factor dB/m	Loss dB	Vertical dBuV	Vertical dBuV/m	Limits dBuV/m		
62.378	13.70	1.62	8.48	23.80	30.00	6.20	
71.289	12.54	1.79	11.16	25.49	30.00	4.51	
142.575	20.25	2.64	- 1.70	21.19	30.00	8.81	
151.486	21.17	2.77	- 1.29	22.65	30.00	7.35	
196.040	20.45	3.15	- 1.07	22.53	30.00	7.47	
* 204.938	20.78	3.28	2.57	26.63	30.00	3.37	
222.772	20.39	3.38	2.56	26.33	30.00	3.67	
249.505	23.08	3.61	1.46	28.15	37.00	8.85	
258.416	23.13	3.73	- 0.90	25.96	37.00	11.04	
276.237	23.76	3.92	0.09	27.77	37.00	9.23	
320.786	13.74	4.20	2.99	20.93	37.00	16.07	
356.429	15.02	4.46	0.81	20.29	37.00	16.71	
374.251	14.81	4.66	2.32	21.79	37.00	15.21	
400.983	15.39	4.83	2.00	22.22	37.00	14.78	
445.537	16.09	5.14	2.22	23.45	37.00	13.55	
499.002	17.03	5.51	0.06	22.60	37.00	14.40	
561.378	18.54	5.97	0.71	25.22	37.00	11.78	

- Remark : 1. All readings are Quasi-Peak values.
 2. The worst emission was detected at 204.938MHz with corrected signal level of 26.63dBuV/m (limit is 30dBuV/m) when the antenna was at vertical polarization and was at 1m high and the turn table was at 85 ° .
 3. 0 ° was the table front facing the antenna. Degree is calculated from 0 ° clockwise facing the antenna.

4. MEDIFICATION TO EUT

1. External signal cable add two ferrite core one on video board input the other on the signal cable outside.
2. Focus & G2 add one ferrite core.
3. Video board with metal shielding case.
4. Form CRT arcing wire (right & left side) to video board shielding case add ground wire.
5. From video shielding case on the rear side (right, left & middle side) to mother board add three ground wires.

5. DEVIATION TO TEST SPECIFICATIONS

【 NONE 】

APPENDIX (Conducted Test Data)

Total Page : 8

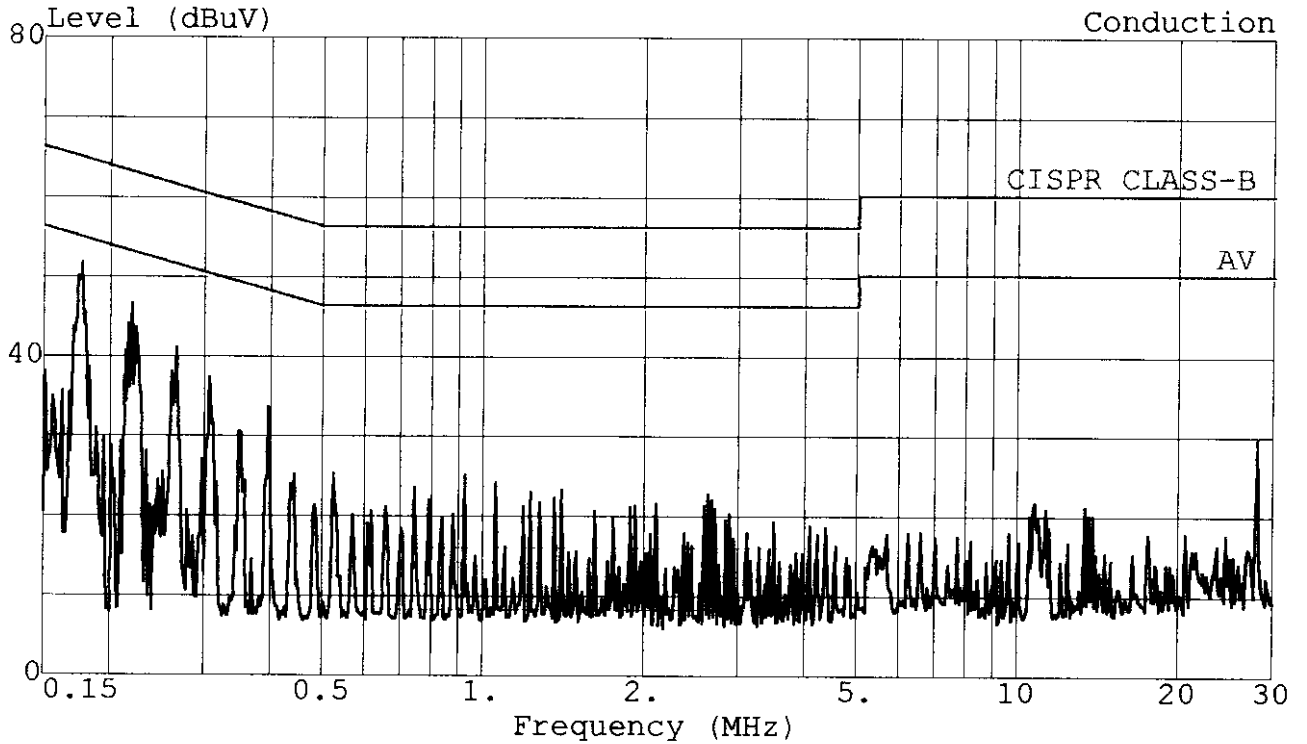
TOKIN

TAIWAN TOKIN EMC ENG. CORP.

Test Site:
#53-11 Tingfu Tsun, Linkou,
Taipei, Taiwan R.O.C.
Tel:02-26092133 Fax:02-26099303

Data#: 477 File#: TOP-VICT.EMI

Date: 1999-05-24 Time: 17:48:59



Trace: Limit: CISPR CLASS-B Probe: LISN(FCC)8-1370-10 NEUTRAL Ref Trace:
EUT : 15" COLOR MONITOR. M/N:5G1r/5G1r+
Power: 120Vac/60Hz
Memo : 640*480/85Hz;43.3KHz

TOKIN

TAIWAN TOKIN EMC ENG. CORP.

Test Site:
 #53-11 Tingfu Tsun, Linkou,
 Taipei, Taiwan R.O.C.
 Tel:02-26092133 Fax:02-26099303

Data#: 478 File#: TOP-VICT.EMI Date: 1999-05-24 Time: 17:50:59
 Conduction

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

EUT : 15" COLOR MONITOR. M/N:5Glr/5Glr+

Power: 120Vac/60Hz

Memo : 640*480/85Hz;43.3KHz

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	0.177	51.70	-12.92	64.63	51.45	0.22	0.03	0.00	QP
2	0.396	32.57	-25.36	57.94	32.39	0.14	0.04	0.00	QP
3	0.923	23.72	-32.28	56.00	23.57	0.10	0.05	0.00	QP
4	2.640	20.64	-35.36	56.00	20.49	0.10	0.05	0.00	QP
5	10.781	19.31	-40.69	60.00	19.09	0.16	0.06	0.00	QP
6	28.165	28.84	-31.16	60.00	28.16	0.48	0.20	0.00	QP

Data#: 479 File#: TOP-VICT.EMI Date: 1999-05-24 Time: 17:51:36
 Conduction

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

EUT : 15" COLOR MONITOR. M/N:5Glr/5Glr+

Power: 120Vac/60Hz

Memo : 640*480/85Hz;43.3KHz

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 !	0.177	45.88	-8.74	54.63	45.63	0.22	0.03	0.00	Average
2	0.396	26.46	-21.47	47.94	26.28	0.14	0.04	0.00	Average
3	0.923	17.74	-28.26	46.00	17.59	0.10	0.05	0.00	Average
4	2.640	13.90	-32.10	46.00	13.75	0.10	0.05	0.00	Average
5	10.781	13.84	-36.16	50.00	13.62	0.16	0.06	0.00	Average
6	28.165	25.10	-24.90	50.00	24.42	0.48	0.20	0.00	Average

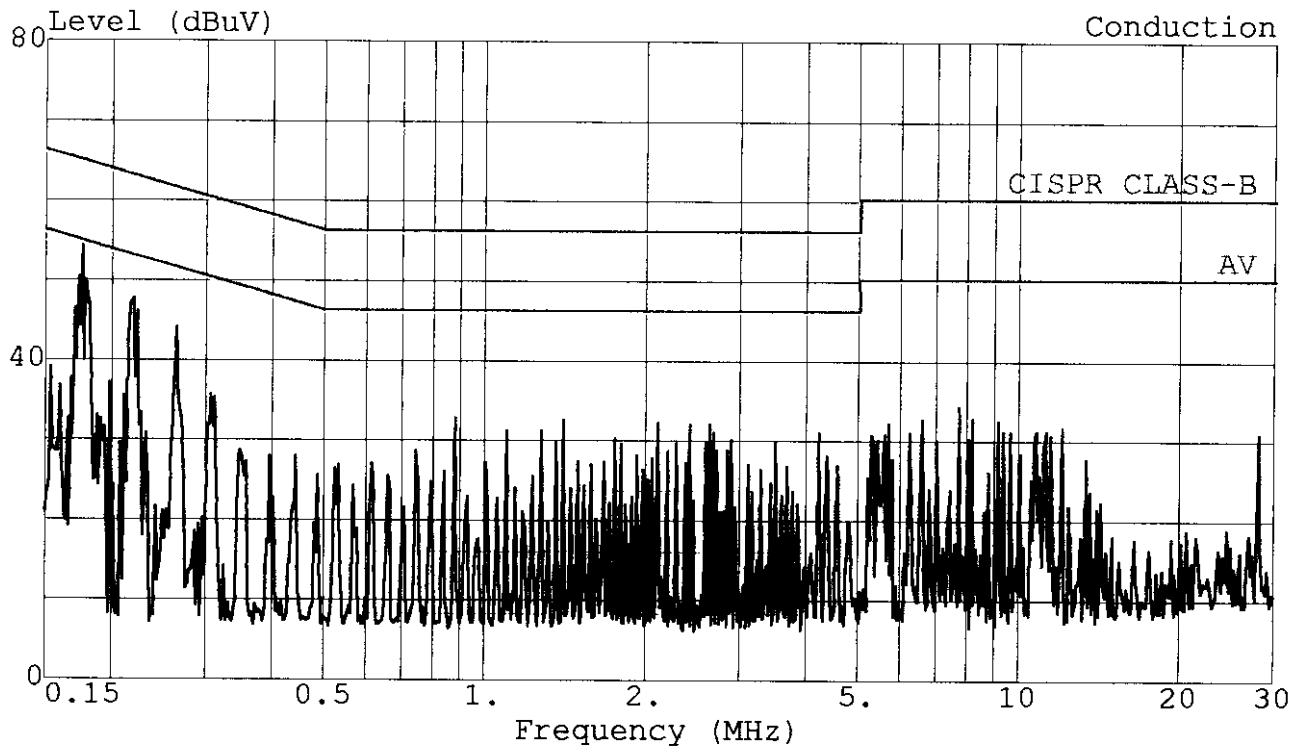
TOKIN

TAIWAN TOKIN EMC ENG. CORP.

Test Site:
#53-11 Tingfu Tsun, Linkou,
Taipei, Taiwan R.O.C.
Tel:02-26092133 Fax:02-26099303

Data#: 474 File#: TOP-VICT.EMI

Date: 1999-05-24 Time: 17:44:29



Trace: Limit: CISPR CLASS-B Probe: LISN(FCC)8-1370-10 LINE Ref Trace:
EUT : 15" COLOR MONITOR. M/N:5Glr/5Glr+
Power: 120Vac/60Hz
Memo : 640*480/85Hz;43.3KHz



TAIWAN TOKIN EMC ENG. CORP.

Test Site:
#53-11 Tingfu Tsun, Linkou,
Taipei, Taiwan R.O.C.
Tel:02-26092133 Fax:02-26099303

Data#: 475 File#: TOP-VICT.EMI Date: 1999-05-24 Time: 17:46:51
Conduction
Limit: CISPR CLASS-B Probe: LISN(FCC)8-1370-10 LINE
EUT : 15" COLOR MONITOR. M/N:5Glr/5Glr+
Power: 120Vac/60Hz
Memo : 640*480/85Hz;43.3KHz

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	0.176	52.69	-11.96	64.65	52.44	0.22	0.03	0.00	QP
2	0.351	34.10	-24.84	58.94	33.91	0.15	0.04	0.00	QP
3	0.880	32.29	-23.71	56.00	32.14	0.10	0.05	0.00	QP
4	2.420	31.44	-24.56	56.00	31.29	0.10	0.05	0.00	QP
5	6.601	32.59	-27.41	60.00	32.43	0.11	0.05	0.00	QP
6	13.421	26.20	-33.80	60.00	25.93	0.19	0.09	0.00	QP

Data#: 476 File#: TOP-VICT.EMI Date: 1999-05-24 Time: 17:47:27
Conduction
Limit: CISPR-B (AV) Probe: LISN(FCC)8-1370-10 LINE
EUT : 15" COLOR MONITOR. M/N:5Glr/5Glr+
Power: 120Vac/60Hz
Memo : 640*480/85Hz;43.3KHz

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 !	0.176	45.82	-8.83	54.65	45.57	0.22	0.03	0.00	Average
2	0.351	27.49	-21.45	48.94	27.30	0.15	0.04	0.00	Average
3	0.880	28.16	-17.84	46.00	28.01	0.10	0.05	0.00	Average
4	2.420	24.06	-21.94	46.00	23.91	0.10	0.05	0.00	Average
5	6.601	23.98	-26.02	50.00	23.82	0.11	0.05	0.00	Average
6	13.421	22.79	-27.21	50.00	22.52	0.19	0.09	0.00	Average

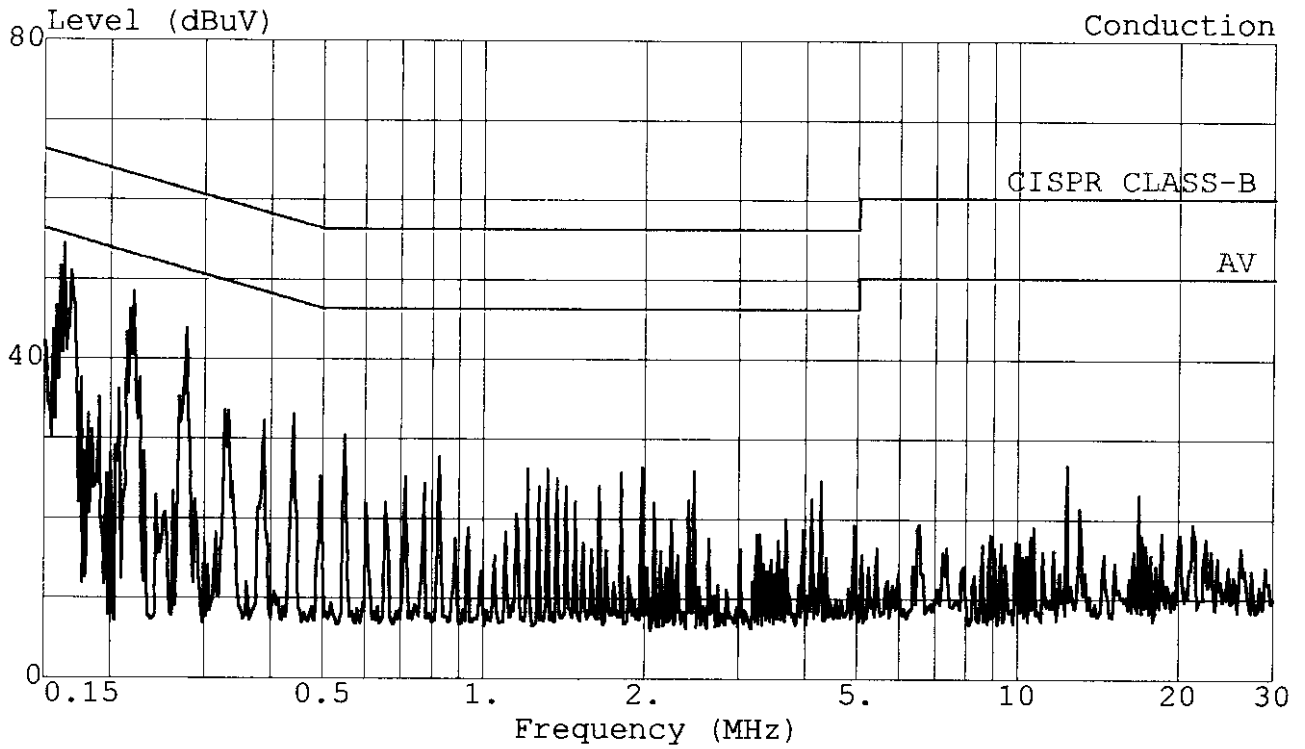
TOKIN

TAIWAN TOKIN EMC ENG. CORP.

Test Site:
#53-11 Tingfu Tsun, Linkou,
Taipei, Taiwan R.O.C.
Tel:02-26092133 Fax:02-26099303

Data#: 468 File#: TOP-VICT.EMI

Date: 1999-05-24 Time: 17:33:26



Trace: Limit: CISPR CLASS-B Probe: LISN(FCC)8-1370-10 NEUTRAL Ref Trace:
EUT : 15" COLOR MONITOR. M/N:5Glr/5Glr+
Power: 120Vac/60Hz
Memo : 800*600/85Hz;54KHz

TOKIN

TAIWAN TOKIN EMC ENG. CORP.

Test Site:
#53-11 Tingfu Tsun, Linkou,
Taipei, Taiwan R.O.C.
Tel:02-26092133 Fax:02-26099303

Data#: 469 File#: TOP-VICT.EMI Date: 1999-05-24 Time: 17:35:33
Conduction
Limit: CISPR CLASS-B Probe: LISN(FCC)8-1370-10 NEUTRAL
EUT : 15" COLOR MONITOR. M/N:5Glr/5Glr+
Power: 120Vac/60Hz
Memo : 800*600/85Hz;54KHz

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	0.167	54.14	-10.99	65.13	53.87	0.24	0.03	0.00	QP
2	0.387	34.08	-24.05	58.13	33.89	0.15	0.04	0.00	QP
3	1.210	24.17	-31.83	56.00	24.02	0.10	0.05	0.00	QP
4	4.294	22.76	-33.24	56.00	22.61	0.10	0.05	0.00	QP
5	12.392	25.21	-34.79	60.00	24.96	0.18	0.08	0.00	QP
6	26.158	15.21	-44.79	60.00	14.55	0.46	0.20	0.00	QP

Data#: 470 File#: TOP-VICT.EMI Date: 1999-05-24 Time: 17:36:09
Conduction
Limit: CISPR-B (AV) Probe: LISN(FCC)8-1370-10 NEUTRAL
EUT : 15" COLOR MONITOR. M/N:5Glr/5Glr+
Power: 120Vac/60Hz
Memo : 800*600/85Hz;54KHz

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 !	0.167	49.10	-6.03	55.13	48.83	0.24	0.03	0.00	Average
2	0.387	27.19	-20.94	48.13	27.00	0.15	0.04	0.00	Average
3	1.210	16.36	-29.64	46.00	16.21	0.10	0.05	0.00	Average
4	4.294	18.71	-27.29	46.00	18.56	0.10	0.05	0.00	Average
5	12.392	16.99	-33.01	50.00	16.74	0.18	0.08	0.00	Average
6	26.158	10.32	-39.68	50.00	9.66	0.46	0.20	0.00	Average

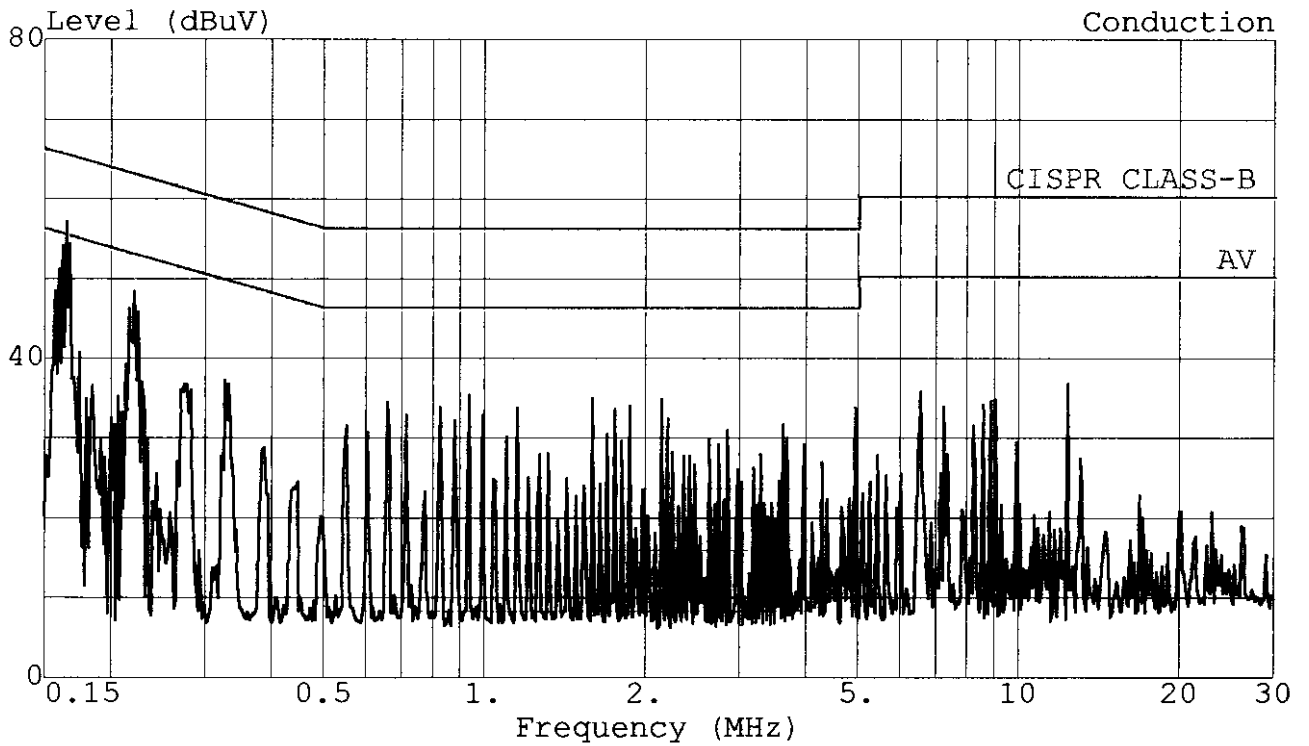
TOKIN

TAIWAN TOKIN EMC ENG. CORP.

Test Site:
#53-11 Tingfu Tsun, Linkou,
Taipei, Taiwan R.O.C.
Tel:02-26092133 Fax:02-26099303

Data#: 471 File#: TOP-VICT.EMI

Date: 1999-05-24 Time: 17:37:36



Trace: Ref Trace:
Limit: CISPR CLASS-B Probe: LISN(FCC)8-1370-10 LINE
EUT : 15" COLOR MONITOR. M/N:5Glr/5Glr+
Power: 120Vac/60Hz
Memo : 800*600/85Hz;54KHz

TOKIN

TAIWAN TOKIN EMC ENG. CORP.

Test Site:
#53-11 Tingfu Tsun, Linkou,
Taipei, Taiwan R.O.C.
Tel:02-26092133 Fax:02-26099303

Data#: 472 File#: TOP-VICT.EMI Date: 1999-05-24 Time: 17:40:34
Conduction
Limit: CISPR CLASS-B Probe: LISN(FCC)8-1370-10 LINE
EUT : 15" COLOR MONITOR. M/N:5Glr/5Glr+
Power: 120Vac/60Hz
Memo : 800*600/85Hz;54KHz

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 !	0.166	55.76	-9.39	65.15	55.49	0.24	0.03	0.00	QP
2	0.332	36.97	-22.44	59.41	36.78	0.15	0.04	0.00	QP
3	0.938	33.93	-22.07	56.00	33.78	0.10	0.05	0.00	QP
4	2.865	31.97	-24.03	56.00	31.82	0.10	0.05	0.00	QP
5	6.552	33.93	-26.07	60.00	33.77	0.11	0.05	0.00	QP
6	16.851	18.30	-41.70	60.00	17.94	0.22	0.14	0.00	QP

Data#: 473 File#: TOP-VICT.EMI Date: 1999-05-24 Time: 17:41:11
Conduction
Limit: CISPR-B (AV) Probe: LISN(FCC)8-1370-10 LINE
EUT : 15" COLOR MONITOR. M/N:5Glr/5Glr+
Power: 120Vac/60Hz
Memo : 800*600/85Hz;54KHz

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 !	0.166	49.56	-5.59	55.15	49.29	0.24	0.03	0.00	Average
2	0.332	33.29	-16.12	49.41	33.10	0.15	0.04	0.00	Average
3	0.938	29.80	-16.20	46.00	29.65	0.10	0.05	0.00	Average
4	2.865	25.74	-20.26	46.00	25.59	0.10	0.05	0.00	Average
5	6.552	25.65	-24.35	50.00	25.49	0.11	0.05	0.00	Average
6	16.851	15.03	-34.97	50.00	14.67	0.22	0.14	0.00	Average