

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

Model : (1)7ElrA (2)7ElrA+

FCC ID : ARSCM769D

Prepared for : Top Victory Electronics (Taiwan) Co., Ltd.
18F, 738 Chung-Cheng Rd., Chung-Ho 235,
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-G0191R1
Report Number : TTEMC-F01018
Date of Test : Jan. 09 ~ 12, 2001
Date of Report : Feb. 21, 2001

TABLE OF CONTENTS

Description	Page
Test Report Certification.....	3
1.GENERAL INFORMATION	4
1.1. Description of Device (EUT).....	4
1.2. Tested Supporting System Details	5
1.3. Description of Test Facility	7
1.4. Measurement Uncertainty.....	7
2.POWERLINE CONDUCTED TEST	8
2.1. Test Equipment	8
2.2. Block Diagram of Test Setup.....	8
2.3. Powerline Conducted Emission Limit (CLSPR 22 CLASS B)	8
2.4. EUT's Configuration during Compliance Measurement	9
2.5. Operating Condition of EUT	9
2.6. Test Procedure	10
2.7. Line Conducted RF Voltage Measurement Results.....	10
3.RADIATED EMISSION TEST	20
3.1. Test Equipment	20
3.2. Block Diagram of Test Setup.....	20
3.3. Radiation Limit (CLSPR 22 CLASS B)	21
3.4. EUT's Configuration during Compliance Measurement	21
3.5. Operating Condition of EUT	21
3.6. Test Procedure	21
3.7. Test Results	21
3.8. Radiated Emission Measurement Results	22
4.MODIFICATIONS TO EUT	28
5.DEVIATION TO TEST SPECIFICATIONS.....	29
6.PHOTOGRAPHS.....	30
6.1. Photos of Powerline Conducted Measurement.....	30
6.2. Photos of Radiated Measurement at Open Field Test Site	31

TEST REPORT CERTIFICATION (Class II Permissive Change)

Applicant : Top Victory Electronics (Taiwan) Co., Ltd.
 Manufacturer #1 : Top Victory Electronics (Fujian) Co., Ltd.
 Manufacturer #2 : Beijing Orient Top Victory Electronics Co., Ltd.
 FCC ID : ARSCM769D
 EUT Description : 17" Color Monitor
 (A) MODEL NO. : (1)7ElrA (2)7ElrA+
 (B) SERIAL NO. : N/A
 (C) 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 : Jan. 09 ~ 12, 2001

Prepared by : Monica Chang Mar. 12, 2001
(MONICA CHANG)

Test Engineer : Allen Wang Mar. 12, 2001
(ALLEN WANG)

Approve & Authorized Signer : Jackie Deng 3/12/01
(JACKIE DENG)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

Description	:	17" Color Monitor
Model Number	:	(1)7ElrA (2)7ElrA+
		(1)7ElrA is MPR-2 Safety Version (2)7ElrA+ is TCO Version
FCC ID	:	ARSCM769D
Applicant	:	Top Victory Electronics (Taiwan) Co., Ltd. 18F, 738 Chung-Cheng Rd., Chung-Ho 235, Taipei Hsien, Taiwan, R.O.C.
Manufacturer #1	:	Top Victory Electronics (Fujian) Co., Ltd. Yuan Hong Rd., Shang-Lu Fuqing City, Fujian, China.
Manufacturer #2	:	Beijing Orient Top Victory Electronics Co., Ltd. No. 10, Jiu Xian Qiao Rd., Chao Yang District, Beijing, China
CRT #1	:	Chunghwa, M/N M41AGE93X76C
CRT #2 (Additional)	:	Panasonic, M/N M41KXH320X22
Audio Cable (Additional)	:	Shielded, Undetachable, 0.5m Bonded a ferrite core
Data Cable #1	:	Shielded, Undetachable, 1.8m Bonded a ferrite core
Data Cable #2 (Additional)	:	Shielded, Undetachable, 1.4m Bonded a ferrite core
Power Cord	:	Non-Shielded, Detachable, 1.8m
Data of Receipt of Sample	:	Dec. 14, 2000

Date of Test : Jan. 09 ~ 12, 2001

Remark :

This EUT is a modified version of original FCC ID ARSCM769D.
The differences are to add a CRT (Panasonic, M//N M41KXH320X22), a data cable, an audio cable and an audio base.

1.2. Tested Supporting System Details

1.2.1. PERSONAL COMPUTER

Mother Board	:	ASUS, M/N P5A FCC By DoC
CPU	:	AMD K6-2 266MHz
Case	:	Enlight, M/N EN7105C
S.P.S.	:	SPI, M/N FSP250-61GT S/N W13562615
Floppy Driver 3.5"	:	Mitsumi, M/N D353M3
Hard Disk Driver	:	Seagate, M/N ST34321A S/N VTH20835
CD-ROM	:	Philips, M/N PCA123CD FCC ID IPLKTA S/N 157835
Sound Card	:	Dataexpert, M/N MED6617 FCC By DoC
VGA Card	:	Dataexpert, M/N CP765V2 FCC ID LUT-CP765
Power Cord	:	Non-Shielded, Detachable, 1.8m

1.2.2. KEYBOARD

Model Number	:	5121
Serial Number	:	J83300810
FCC ID	:	E5XKBM104M10UC
Manufacturer	:	Behavior Tech Computer Corp.
Data Cable	:	Shielded, Undetachable, 1.0m

1.2.3. PRINTER

Model Number	:	2225C
Serial Number	:	2526S40437
FCC ID	:	BS46XU2225C
Manufacturer	:	Hewlett Packard
Power Cord	:	Non-Shielded, Undetachable, 1.8m
Data Cable	:	Shielded, Detachable, 1.2m

1.2.4. MODEM #1

Model Number : DM-1414
 Serial Number : 980034398
 FCC ID : IFAXDM1414
 Manufacturer : Aceex
 Data Cable : Shielded, Detachable, 1.2m
 Power Adapter : Amigo, Model AM-91000A
 Non-Shielded, Undetachable, 1.8m

1.2.5. MODEM #2

Model Number : DM-1414
 Serial Number : 980034392
 FCC ID : IFAXDM1414
 Manufacturer : Aceex
 Data Cable : Shielded, Detachable, 1.2m
 Power Adapter : Amigo, Model AM-91000A
 Non-Shielded, Undetachable, 1.8m

1.2.6. MOUSE

Model Number : M-S35
 Serial Number : LZA82103139
 FCC ID : DZL211029
 Manufacturer : Logitech
 Data Cable : Non-Shielded, Undetachable, 1.8m

1.2.7. 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

1.2.8. 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

1.2.9. MICROPHONE

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

1.2.10. SPEAKER

Model Number : J-008
 Serial Number : J80547836
 Manufacturer : (J-S) JAZZ HIPSTER
 Data Cable : Non-Shielded, Undetachable, 1m

1.2.11. EARPHONE #1

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

1.2.12. EARPHONE #2

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

1.2.13. WALKMAN

Model Number : RQ-P35LT-K
 Serial Number : HA08697
 Manufacturer : Panasonic
 Data Cable : Non-Shielded, Detachable, 1.8m

1.2.14. GAME PAD

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

1.3. Description of Test Facility

Site Description : Dec. 02, 1999 File on
 (No. 7 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

1.4. Measurement Uncertainty

- (1) Radiation Uncertainty $U_r = \pm 4.01\text{dB}$
 (2) Conduction Uncertainty $U_c = \pm 2.26\text{dB}$

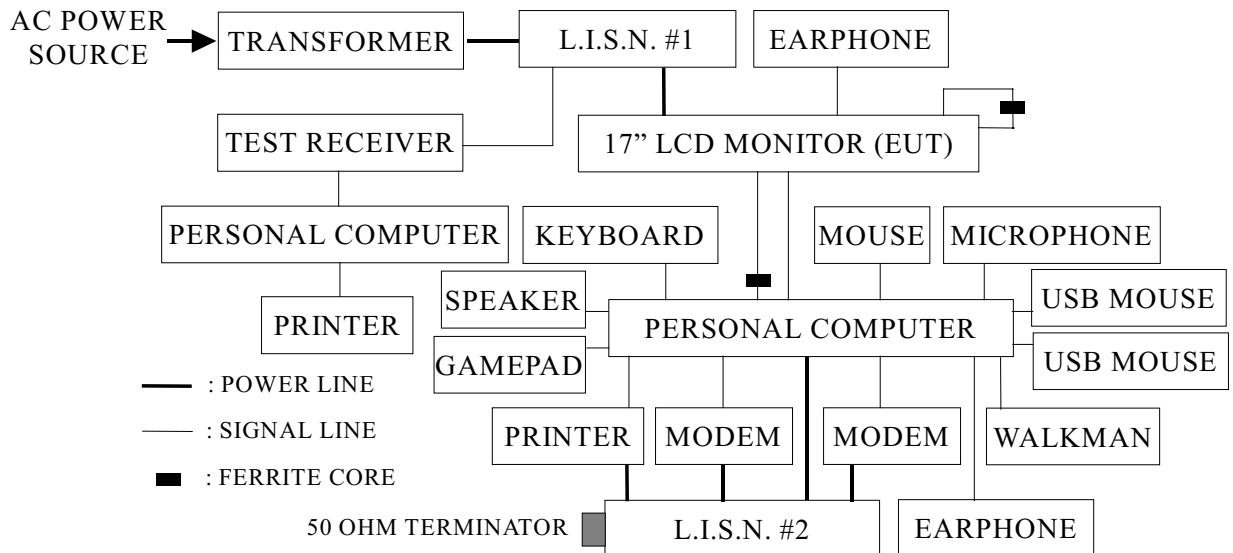
2. POWERLINE CONDUCTED TEST

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	ESHS10	844591/015	Feb. 15, 00'	1 Year
2.	L.I.S.N. #1	Kyoritsu	KNW-407	8-1430-5	Nov. 04, 00'	1 Year
3.	L.I.S.N. #2	Kyoritsu	KNW-407	8-1430-6	Nov. 04, 00'	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. 17" Color Monitor (EUT)

Model Number	:	(1)7ElrA (2)7ElrA+
Serial Number	:	N/A
Manufacturer #1	:	Top Victory Electronics (Fujian) Co., Ltd.
Manufacturer #2	:	Beijing Orient Top Victory Electronics Co., Ltd.
CRT	:	Panasonic, M/N M41KXH320X22
Audio Cable	:	Shielded, Undetachable, 0.5m Bonded a ferrite core
Data Cable	:	Shielded, Undetachable, 1.4m 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 "Hwin" by windows and sent "H" character to monitor (EUT) through VGA card, 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. Personal computer sent "H" character to printer, the printer printed "H" pattern.

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

2.5.8. Repeat the above procedures from 2.5.3 to 2.5.7.

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 ESHS10 was set at 10KHz.

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

2.7. Line Conducted RF Voltage Measurement Results

PASSED. Please refer to the following pages. (9 pages)

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

EUT : 17" Color Monitor Model No.: 7ElrA

Test Date : Jan. 12, 2001 Temperature : 22°C Humidity : 58%

Mode	Frequency Resolution	Reference Data #
1.	800*600/85Hz, 54KHz	# 201 (202, 203), # 198 (199, 200)
2.	1280*1024/60Hz, 64KHz	# 189 (190, 191), # 186 (187, 188)
3.	1024*768/85Hz, 69KHz	# 192 (193, 194), # 195 (196, 197)

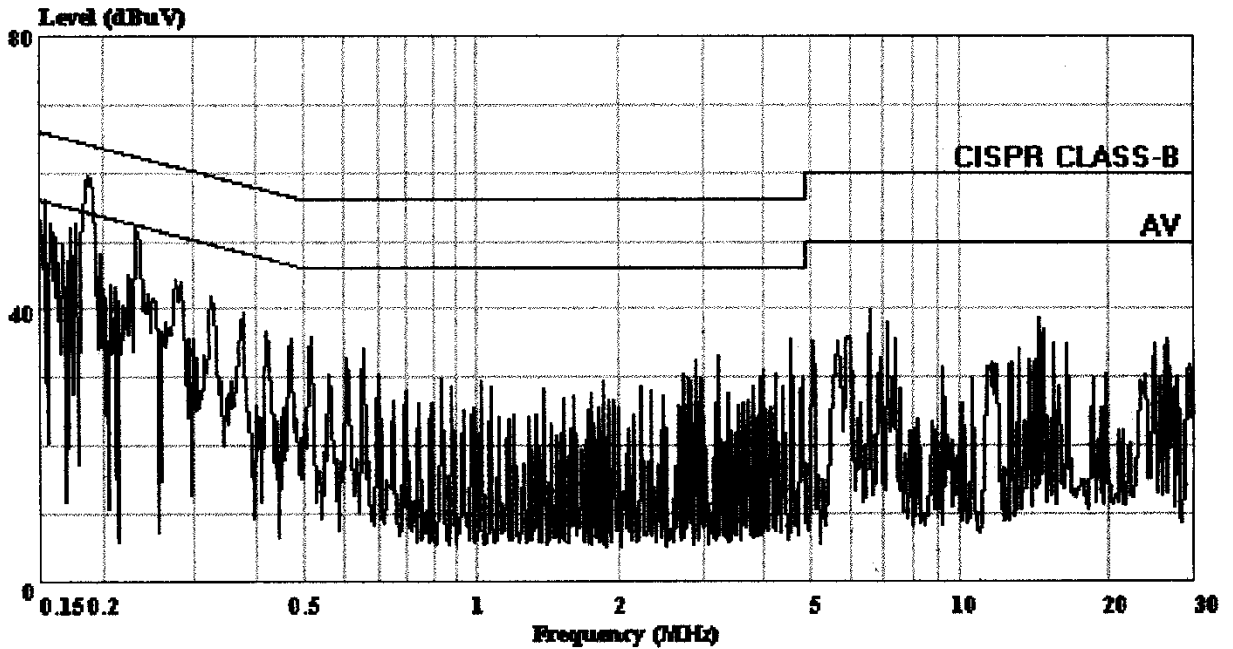
Please refer to the following pages.



No53-11, Tin-fu Tsun, Lin-kou Hsiang,
 Taipei, County, Taiwan R.O.C.
 TEL:02-2609-2133
 FAX:02-2609-9303

TAIWAN TOKIN EMC ENG. CORP.

Data#: 201 File#: TOP VICTORY.EMI Date: 2001-01-12 Time: 18:07:49



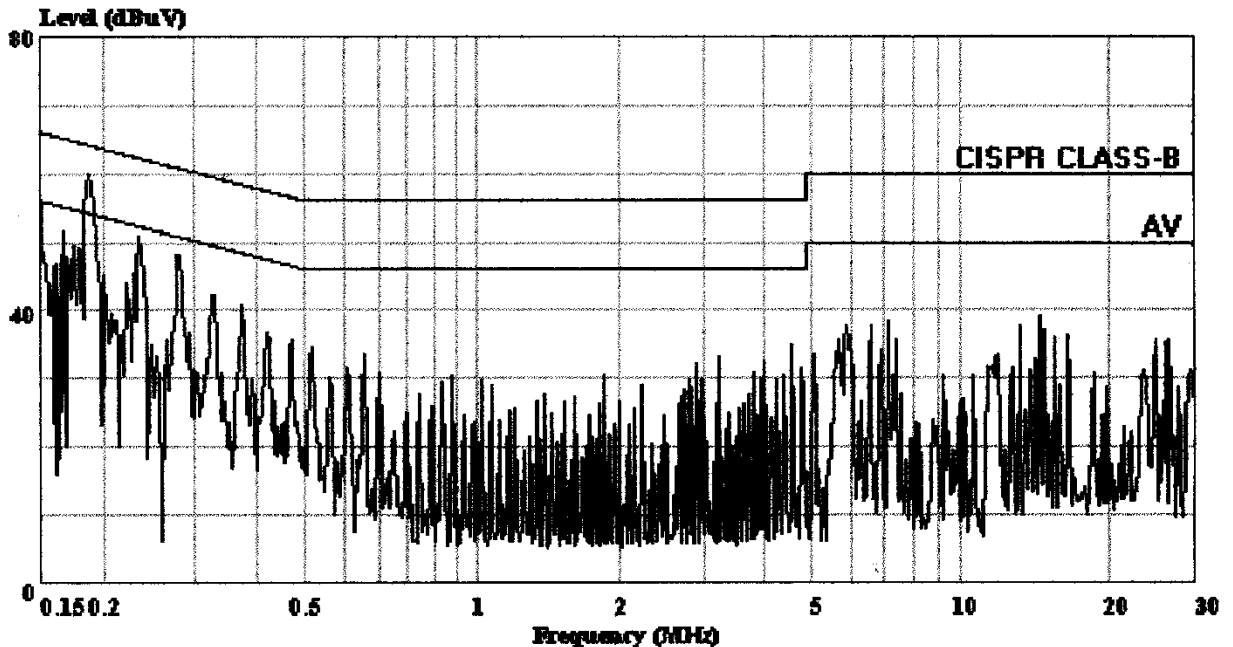
TAIWAN TOKIN EMC ENG. CORP. (No.4 Shielded room)

Trace:

Ref Trace:

Condition: CISPR CLASS-B KNW-407 NEUTRAL

Data#: 198 File#: TOP VICTORY.EMI Date: 2001-01-12 Time: 18:03:24



TAIWAN TOKIN EMC ENG. CORP. (No.4 Shielded room)

Trace:

Ref Trace:

Condition: CISPR CLASS-B KNW-407 LINE

EUT : 17" COLOR MONITOR M/N:7ElrA

POWER: 120Vac/60Hz

MEMO : 800*600/85Hz 54KHz



No53-11, Tin-fu Tsun, Lin-kou Hsiang,
 Taipei, County, Taiwan R.O.C.
 TEL:02-2609-2133
 FAX:02-2609-9303

TAIWAN TOKIN EMC ENG. CORP.

Data#: 202 File#: TOP VICTORY.EMI Date: 2001-01-12 Time: 18:09:45
 No.4 Shielded room

Condition: CISPR CLASS-B KNW-407 NEUTRAL
 EUT : 17" COLOR MONITOR M/N:7ElrA
 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	dBuV	dB	dBuV	dBuV	dB	dB	dB	
1 !	0.187	59.48	-4.70	64.18	59.08	0.30	0.10	0.00	QP
2	0.233	51.80	-10.56	62.36	51.40	0.20	0.20	0.00	QP
3	0.280	47.66	-13.14	60.80	47.26	0.20	0.20	0.00	QP
4	4.689	34.84	-21.16	56.00	34.14	0.10	0.60	0.00	QP
5	6.658	38.52	-21.48	60.00	37.82	0.10	0.60	0.00	QP
6	14.535	38.75	-21.25	60.00	37.85	0.20	0.70	0.00	QP

Data#: 203 File#: TOP VICTORY.EMI Date: 2001-01-12 Time: 18:10:09
 No.4 Shielded room

Condition: CISPR CLASS-B(AV) KNW-407 NEUTRAL
 EUT : 17" COLOR MONITOR M/N:7ElrA
 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	dBuV	dB	dBuV	dBuV	dB	dB	dB	
1 !	0.187	47.77	-6.41	54.18	47.37	0.30	0.10	0.00	Average
2	0.233	42.19	-10.17	52.36	41.79	0.20	0.20	0.00	Average
3 !	0.280	41.39	-9.41	50.80	40.99	0.20	0.20	0.00	Average
4	4.689	32.70	-13.30	46.00	32.00	0.10	0.60	0.00	Average
5	6.658	35.44	-14.56	50.00	34.74	0.10	0.60	0.00	Average
6	14.535	33.92	-16.08	50.00	33.02	0.20	0.70	0.00	Average



No53-11, Tin-fu Tsun, Lin-kou Hsiang,
 Taipei, County, Taiwan R.O.C.
 TEL:02-2609-2133
 FAX:02-2609-9303

TAIWAN TOKIN EMC ENG. CORP.

Data#: 199 File#: TOP VICTORY.EMI Date: 2001-01-12 Time: 18:06:35
 No.4 Shielded room

Condition: CISPR CLASS-B KNW-407 LINE
 EUT : 17" COLOR MONITOR M/N:7ElrA
 POWER: 120Vac/60Hz
 MEMO : 800*600/85Hz 54KHz

Page: 1

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamplifier	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	dB	
1 !	0.187	59.29	-4.86	64.15	58.89	0.30	0.10	0.00	QP
2	0.234	51.98	-10.34	62.32	51.58	0.20	0.20	0.00	QP
3	0.281	47.44	-13.34	60.78	47.04	0.20	0.20	0.00	QP
4	4.689	34.84	-21.16	56.00	34.14	0.10	0.60	0.00	QP
5	7.245	27.16	-32.84	60.00	26.46	0.10	0.60	0.00	QP
6	14.536	38.29	-21.71	60.00	37.39	0.20	0.70	0.00	QP

Data#: 200 File#: TOP VICTORY.EMI Date: 2001-01-12 Time: 18:06:58
 No.4 Shielded room

Condition: CISPR CLASS-B(AV) KNW-407 LINE
 EUT : 17" COLOR MONITOR M/N:7ElrA
 POWER: 120Vac/60Hz
 MEMO : 800*600/85Hz 54KHz

Page: 1

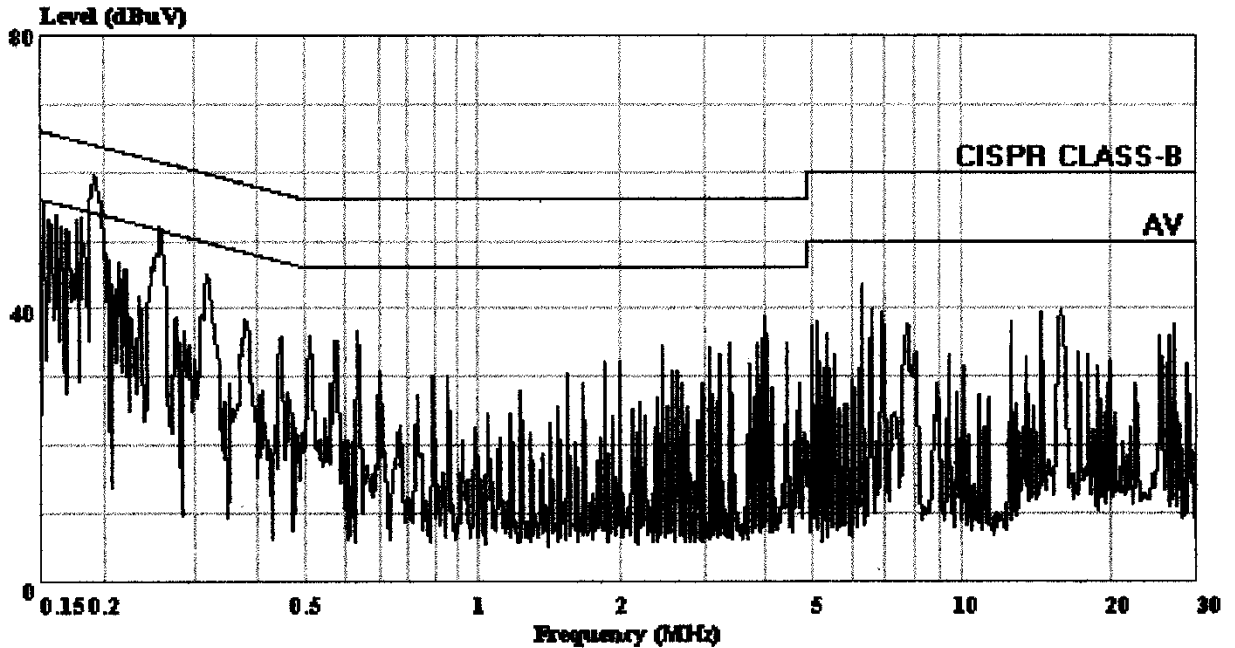
	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamplifier	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	dB	
1 !	0.187	47.71	-6.44	54.15	47.31	0.30	0.10	0.00	Average
2 !	0.234	42.33	-9.99	52.32	41.93	0.20	0.20	0.00	Average
3 !	0.281	41.26	-9.52	50.78	40.86	0.20	0.20	0.00	Average
4	4.689	32.40	-13.60	46.00	31.70	0.10	0.60	0.00	Average
5	7.245	25.50	-24.50	50.00	24.80	0.10	0.60	0.00	Average
6	14.536	34.05	-15.95	50.00	33.15	0.20	0.70	0.00	Average

TOKIN

No53-11, Tin-fu Tsun, Lin-kou Hsiang,
 Taipei, County, Taiwan R.O.C.
 TEL: 02-2609-2133
 FAX: 02-2609-9303

TAIWAN TOKIN EMC ENG. CORP.

Data#: 189 File#: TOP VICTORY.EMI Date: 2001-01-12 Time: 17:48:03



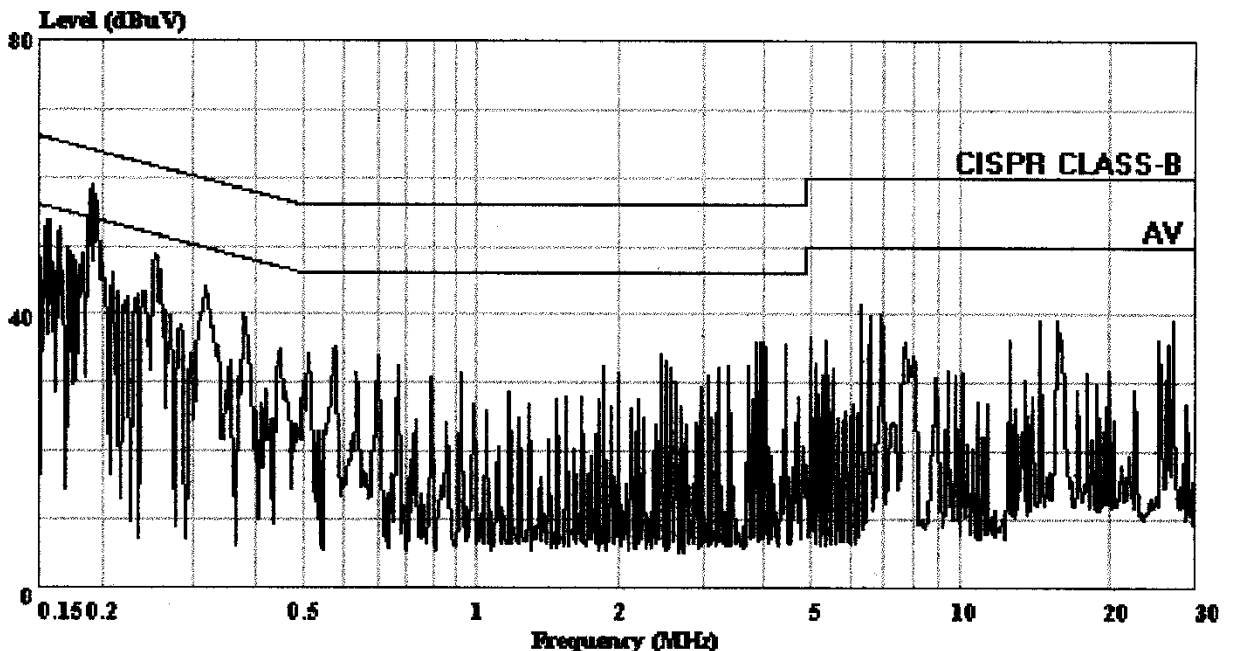
TAIWAN TOKIN EMC ENG. CORP. (No.4 Shielded room)

Trace:

Ref Trace:

Condition: CISPR CLASS-B KNW-407 NEUTRAL

Data#: 186 File#: TOP VICTORY.EMI Date: 2001-01-12 Time: 17:44:47



TAIWAN TOKIN EMC ENG. CORP. (No.4 Shielded room)

Trace:

Ref Trace:

Condition: CISPR CLASS-B KNW-407 LINE

EUT : 17" COLOR MONITOR M/N:7ElrA

POWER: 120Vac/60Hz

MEMO : 1280*1024/60Hz 64KHz



No53-11, Tin-fu Tsun, Lin-kou Hsiang,
 Taipei, County, Taiwan R.O.C.
 TEL:02-2609-2133
 FAX:02-2609-9303

TAIWAN TOKIN EMC ENG. CORP.

Data#: 190 File#: TOP VICTORY.EMI Date: 2001-01-12 Time: 17:51:36
 No.4 Shielded room

Condition: CISPR CLASS-B KNW-407 NEUTRAL
 EUT : 17" COLOR MONITOR M/N:7ElrA
 POWER: 120Vac/60Hz
 MEMO : 1280*1024/60Hz 64KHz

Page: 1

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	dB	
1 !	0.191	61.36	-2.64	64.00	60.96	0.20	0.20	0.00	QP
2 !	0.256	52.12	-9.43	61.55	51.72	0.20	0.20	0.00	QP
3	0.639	35.53	-20.47	56.00	35.03	0.10	0.40	0.00	QP
4	4.092	38.34	-17.66	56.00	37.64	0.10	0.60	0.00	QP
5	6.396	43.94	-16.06	60.00	43.24	0.10	0.60	0.00	QP
6	15.992	40.81	-19.19	60.00	39.81	0.30	0.70	0.00	QP

Data#: 191 File#: TOP VICTORY.EMI Date: 2001-01-12 Time: 17:52:02
 No.4 Shielded room

Condition: CISPR CLASS-B(AV) KNW-407 NEUTRAL
 EUT : 17" COLOR MONITOR M/N:7ElrA
 POWER: 120Vac/60Hz
 MEMO : 1280*1024/60Hz 64KHz

Page: 1

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	dB	
1 !	0.191	50.86	-3.14	54.00	50.46	0.20	0.20	0.00	Average
2 !	0.256	43.89	-7.66	51.55	43.49	0.20	0.20	0.00	Average
3	0.639	34.48	-11.52	46.00	33.98	0.10	0.40	0.00	Average
4 !	4.092	36.21	-9.79	46.00	35.51	0.10	0.60	0.00	Average
5 !	6.396	41.50	-8.50	50.00	40.80	0.10	0.60	0.00	Average
6	15.992	35.79	-14.21	50.00	34.79	0.30	0.70	0.00	Average



No53-11, Tin-fu Tsun, Lin-kou Hsiang,
 Taipei, County, Taiwan R.O.C.
 TEL: 02-2609-2133
 FAX: 02-2609-9303

TAIWAN TOKIN EMC ENG. CORP.

Data#: 187 File#: TOP VICTORY.EMI Date: 2001-01-12 Time: 17:46:59
 No.4 Shielded room

Condition: CISPR CLASS-B KNW-407 LINE
 EUT : 17" COLOR MONITOR M/N:7ElrA
 POWER: 120Vac/60Hz
 MEMO : 1280*1024/60Hz 64KHz

Page: 1

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	dB	
1 !	0.191	61.78	-2.20	63.98	61.38	0.20	0.20	0.00	QP
2 !	0.256	52.18	-9.39	61.57	51.78	0.20	0.20	0.00	QP
3	0.575	34.90	-21.10	56.00	34.40	0.10	0.40	0.00	QP
4	3.965	35.62	-20.38	56.00	35.12	0.10	0.40	0.00	QP
5	6.396	42.88	-17.12	60.00	42.18	0.10	0.60	0.00	QP
6	7.037	41.32	-18.68	60.00	40.62	0.10	0.60	0.00	QP

Data#: 188 File#: TOP VICTORY.EMI Date: 2001-01-12 Time: 17:47:33
 No.4 Shielded room

Condition: CISPR CLASS-B(AV) KNW-407 LINE
 EUT : 17" COLOR MONITOR M/N:7ElrA
 POWER: 120Vac/60Hz
 MEMO : 1280*1024/60Hz 64KHz

Page: 1

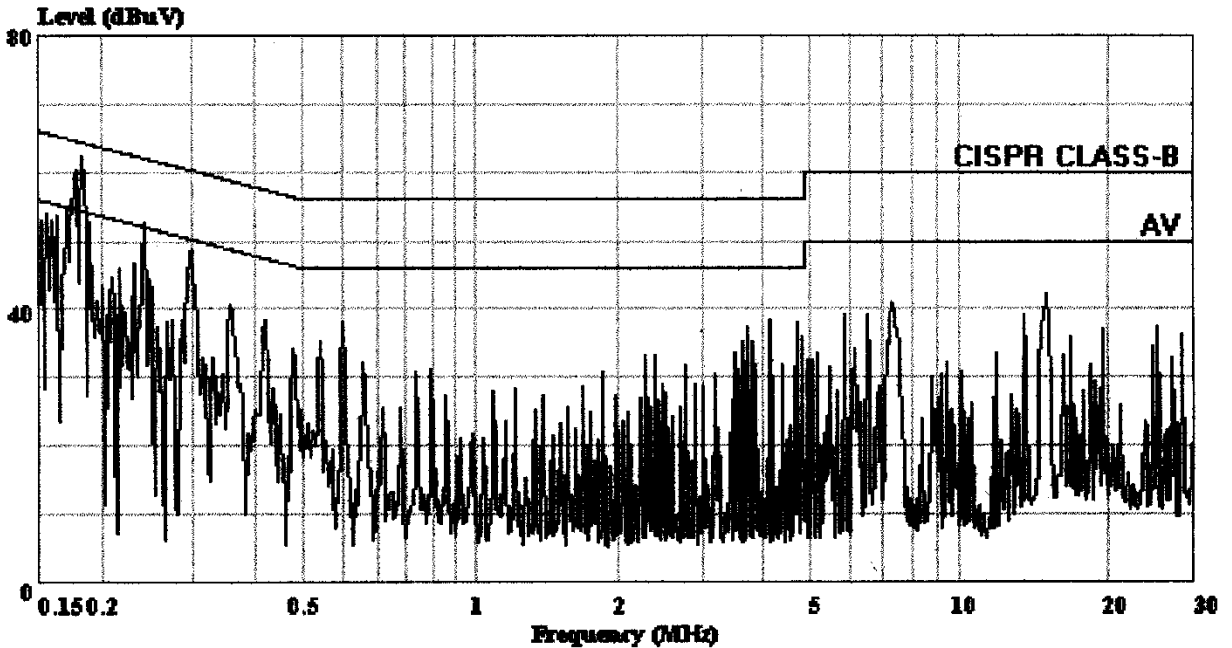
	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	dB	
1 !	0.191	51.17	-2.81	53.98	50.77	0.20	0.20	0.00	Average
2 !	0.256	43.69	-7.88	51.57	43.29	0.20	0.20	0.00	Average
3	0.575	33.47	-12.53	46.00	32.97	0.10	0.40	0.00	Average
4	3.965	34.48	-11.52	46.00	33.98	0.10	0.40	0.00	Average
5 !	6.396	40.78	-9.22	50.00	40.08	0.10	0.60	0.00	Average
6	7.037	37.18	-12.82	50.00	36.48	0.10	0.60	0.00	Average

TOKIN

No53-11, Tin-fu Tsun, Lin-kou Hsiang,
 Taipei, County, Taiwan R.O.C.
 TEL:02-2609-2133
 FAX:02-2609-9303

TAIWAN TOKIN EMC ENG. CORP.

Data#: 192 File#: TOP VICTORY.EMI Date: 2001-01-12 Time: 17:52:49



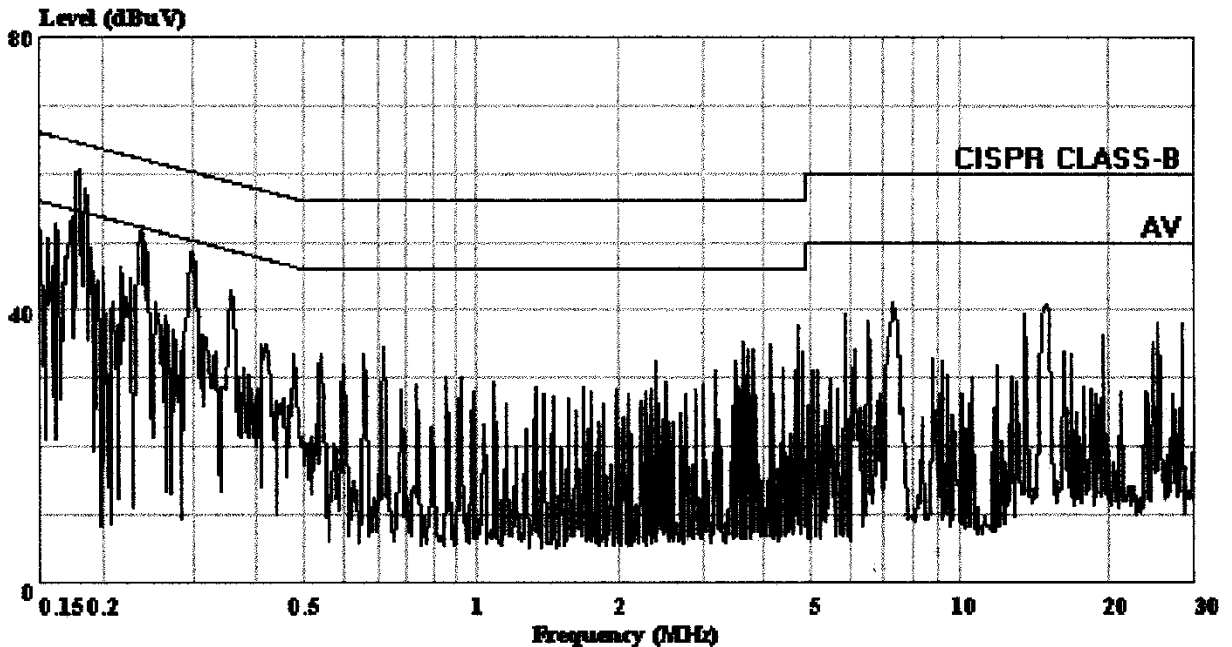
TAIWAN TOKIN EMC ENG. CORP. (No.4 Shielded room)

Trace:

Ref Trace:

Condition: CISPR CLASS-B KNW-407 NEUTRAL

Data#: 195 File#: TOP VICTORY.EMI Date: 2001-01-12 Time: 18:00:42



TAIWAN TOKIN EMC ENG. CORP. (No.4 Shielded room)

Trace:

Ref Trace:

Condition: CISPR CLASS-B KNW-407 LINE

EUT : 17" COLOR MONITOR M/N:7ElrA

POWER: 120Vac/60Hz

MEMO : 1024*768/85Hz 69KHz



No53-11, Tin-fu Tsun, Lin-kou Hsiang,
 Taipei, County, Taiwan R.O.C.
 TEL:02-2609-2133
 FAX:02-2609-9303

TAIWAN TOKIN EMC ENG. CORP.

Data#: 193 File#: TOP VICTORY.EMI Date: 2001-01-12 Time: 17:59:47
 No.4 Shielded room

Condition: CISPR CLASS-B KNW-407 NEUTRAL
 EUT : 17" COLOR MONITOR M/N:7ElrA
 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	dBuV	dB	dBuV	dBuV	dB	dB	dB	
1 !	0.180	62.46	-2.04	64.50	62.06	0.30	0.10	0.00	QP
2 !	0.240	53.55	-8.55	62.10	53.15	0.20	0.20	0.00	QP
3	0.300	48.84	-11.42	60.26	48.44	0.20	0.20	0.00	QP
4	4.262	37.75	-18.25	56.00	37.05	0.10	0.60	0.00	QP
5	7.441	41.40	-18.60	60.00	40.70	0.10	0.60	0.00	QP
6	15.064	40.94	-19.06	60.00	39.94	0.30	0.70	0.00	QP

Data#: 194 File#: TOP VICTORY.EMI Date: 2001-01-12 Time: 18:00:12
 No.4 Shielded room

Condition: CISPR CLASS-B(AV) KNW-407 NEUTRAL
 EUT : 17" COLOR MONITOR M/N:7ElrA
 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	dBuV	dB	dBuV	dBuV	dB	dB	dB	
1 !	0.180	51.05	-3.45	54.50	50.65	0.30	0.10	0.00	Average
2 !	0.240	43.82	-8.28	52.10	43.42	0.20	0.20	0.00	Average
3 !	0.300	44.01	-6.25	50.26	43.61	0.20	0.20	0.00	Average
4	4.262	35.06	-10.94	46.00	34.36	0.10	0.60	0.00	Average
5	7.441	37.79	-12.21	50.00	37.09	0.10	0.60	0.00	Average
6	15.064	37.15	-12.85	50.00	36.15	0.30	0.70	0.00	Average



No53-11, Tin-fu Tsun, Lin-kou Hsiang,
 Taipei, County, Taiwan R.O.C.
 TEL:02-2609-2133
 FAX:02-2609-9303

TAIWAN TOKIN EMC ENG. CORP.

Data#: 196 File#: TOP VICTORY.EMI Date: 2001-01-12 Time: 18:02:14
 No.4 Shielded room

Condition: CISPR CLASS-B KNW-407 LINE
 EUT : 17" COLOR MONITOR M/N:7ElrA
 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	dBuV	dB	dBuV	dBuV	dB	dB	dB	
1 !	0.179	62.82	-1.72	64.54	62.42	0.30	0.10	0.00	QP
2 !	0.240	53.21	-8.90	62.11	52.81	0.20	0.20	0.00	QP
3	0.299	48.42	-11.86	60.28	48.02	0.20	0.20	0.00	QP
4	4.261	35.43	-20.57	56.00	34.73	0.10	0.60	0.00	QP
5	7.442	41.03	-18.97	60.00	40.33	0.10	0.60	0.00	QP
6	15.064	40.18	-19.82	60.00	39.18	0.30	0.70	0.00	QP

Data#: 197 File#: TOP VICTORY.EMI Date: 2001-01-12 Time: 18:02:41
 No.4 Shielded room

Condition: CISPR CLASS-B(AV) KNW-407 LINE
 EUT : 17" COLOR MONITOR M/N:7ElrA
 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	dBuV	dB	dBuV	dBuV	dB	dB	dB	
1 !	0.179	51.54	-3.00	54.54	51.14	0.30	0.10	0.00	Average
2 !	0.240	43.50	-8.61	52.11	43.10	0.20	0.20	0.00	Average
3 !	0.299	43.17	-7.11	50.28	42.77	0.20	0.20	0.00	Average
4	4.261	33.65	-12.35	46.00	32.95	0.10	0.60	0.00	Average
5	7.442	37.74	-12.26	50.00	37.04	0.10	0.60	0.00	Average
6	15.064	36.42	-13.58	50.00	35.42	0.30	0.70	0.00	Average

3. RADIATED EMISSION TEST

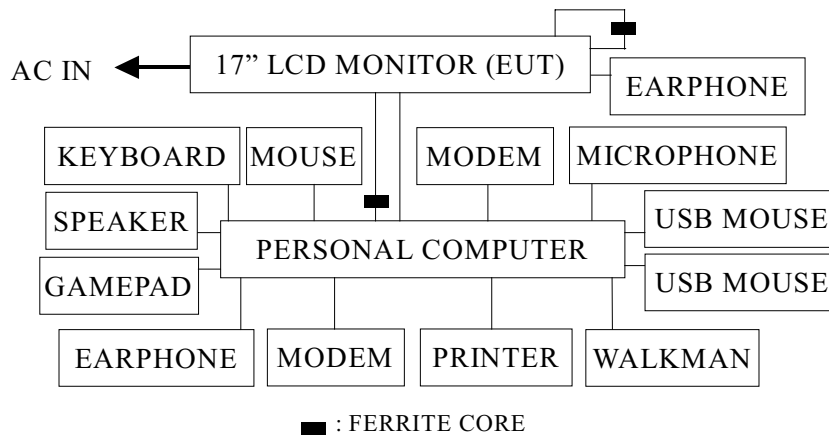
3.1. Test Equipment

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

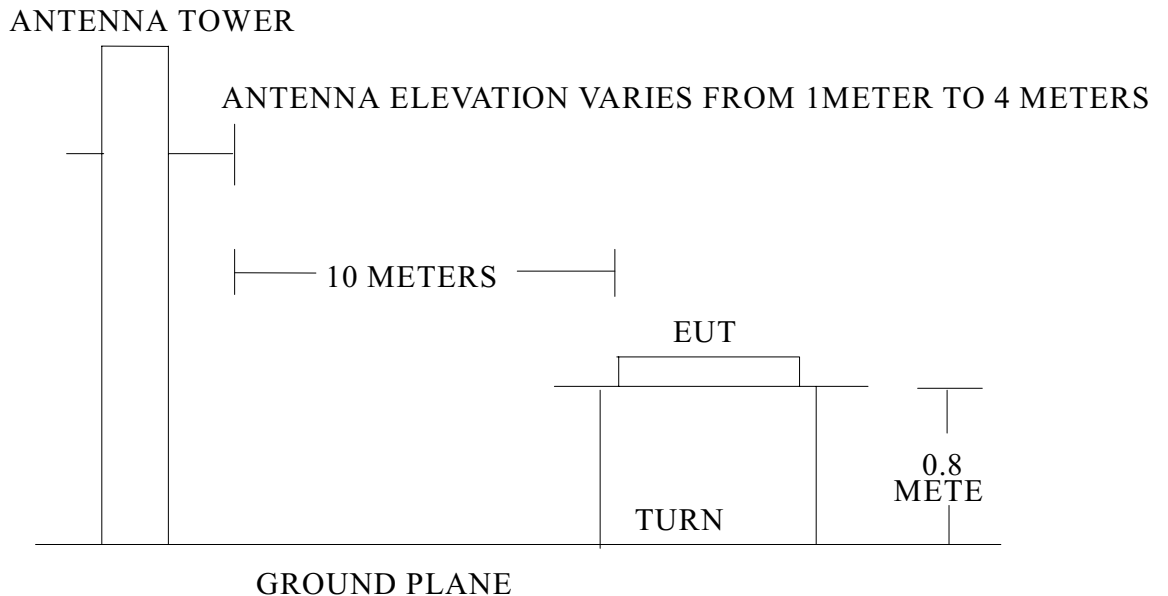
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	HP	8595E	3829A03489	Oct. 30, 00'	1 Year
2.	Test Receiver	Rohde & Schwarz	ESVS10	826148/005	May 06, 00'	1 Year
3.	Broadband Antenna	Chase	VBA6106A	1258	Jul. 05, 00'	1 Year
4.	Log Periodic Antenna	Chase	UPA6109	1064	Jul. 05, 00'	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 (10M) Setup Diagram



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 horizontal working frequency were done during radiated measurement and all the test results are listed in section 3.8.

Test Modes :

- (1) 800*600/85Hz, 54KHz
- (2) 1280*1024/60Hz, 64KHz
- (3) 1024*768/85Hz, 69KHz

3.7. Test Results

PASSED. Please refer to the following pages.

3.8. Radiated Emission Measurement Results

The frequency spectrum from 30 MHz to 1000MHz is investigated. All the emissions not report below are too low against the CISPR 22 Class B limit.

Date of Test :	Jan. 09, 2001	Temperature :	21°C
EUT :	17" Color Monitor	Humidity :	67%
Test Mode :	800*600/85Hz, 54KHz		

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading		Emission Level Horizontal dBμV/m	Limits dBμV/m	Margin dB
			Horizontal dBμV				
39.267	17.91	1.16	2.34		21.41	30.00	8.59
50.140	15.04	1.31	2.19		18.54	30.00	11.46
56.094	12.95	1.42	2.79		17.16	30.00	12.84
67.279	11.98	1.59	6.44		20.01	30.00	9.99
134.606	20.05	2.21	-1.00		21.26	30.00	8.74
* 207.539	21.74	2.68	-0.16		24.26	30.00	5.74
224.366	21.96	2.84	-0.70		24.10	30.00	5.90
263.644	22.86	3.17	1.11		27.14	37.00	9.86
319.715	14.24	3.66	5.67		23.57	37.00	13.43
347.760	14.86	3.81	4.59		23.26	37.00	13.74
370.197	15.11	3.99	3.38		22.48	37.00	14.52
387.024	15.76	3.96	1.81		21.53	37.00	15.47
426.288	16.18	4.21	3.69		24.08	37.00	12.92
471.161	17.55	4.47	1.65		23.67	37.00	13.33
510.424	18.76	4.59	0.83		24.18	37.00	12.82

- Remarks :
1. All reading are Quasi-Peak values.
 2. The worst emission was detected at 207.539MHz with corrected signal level of 24.26dBμV/m (limit was 30dBμV/m) when the antenna was at horizontal polarization and was at 4m high and the turn table was at 224° .
 3. 0° is the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

Date of Test : Jan. 09, 2001 Temperature : 21°C
 EUT : 17" Color Monitor Humidity : 67%
 Test Mode : 800*600/85Hz, 54KHz

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading		Emission Level Vertical dBµV/m	Limits dBµV/m	Margin dB
			Vertical dBµV				
34.260	18.62	1.08	5.14		24.84	30.00	5.16
42.174	19.19	1.22	5.77		26.18	30.00	3.82
56.089	14.07	1.42	6.75		22.24	30.00	7.76
66.140	12.87	1.56	7.02		21.45	30.00	8.55
112.181	17.33	2.03	-0.69		18.67	30.00	11.33
134.605	19.03	2.21	-0.71		20.53	30.00	9.47
157.053	20.90	2.37	-2.00		21.27	30.00	8.73
190.707	23.18	2.72	-1.96		23.94	30.00	6.06
207.554	22.08	2.68	0.23		24.99	30.00	5.01
263.645	22.71	3.17	0.33		26.21	37.00	10.79
314.107	14.79	3.56	4.68		23.03	37.00	13.97
370.198	15.69	3.99	2.71		22.39	37.00	14.61
409.461	16.43	4.03	0.59		21.05	37.00	15.95
443.110	17.18	4.30	1.04		22.52	37.00	14.48
487.988	17.87	4.52	0.35		22.74	37.00	14.26
521.643	18.99	4.76	-0.46		23.29	37.00	13.71

Remarks : All reading are Quasi-Peak values.

Date of Test : Jan. 09, 2001 Temperature : 21°C
 EUT : 17" Color Monitor Humidity : 67%
 Test Mode : 1280*1024/60Hz, 64KHz

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading		Emission Level Horizontal dB μ V/m	Limits dB μ V/m	Margin dB
			Horizontal dB μ V	Horizontal dB μ V/m			
43.555	16.78	1.23	3.84	21.85	30.00	8.15	
65.326	11.86	1.55	6.54	19.95	30.00	10.05	
141.499	19.97	2.29	-0.55	21.71	30.00	8.29	
185.015	20.90	2.63	-0.18	23.35	30.00	6.65	
228.552	22.14	2.85	-1.44	23.55	30.00	6.45	
315.748	14.17	3.62	2.81	20.60	37.00	16.40	
326.513	14.58	3.63	5.55	23.76	37.00	13.24	
359.150	14.95	3.75	3.29	21.99	37.00	15.01	
370.029	15.11	3.99	2.02	21.12	37.00	15.88	
413.545	15.97	4.16	1.69	21.82	37.00	15.18	
446.182	16.54	4.33	1.71	22.58	37.00	14.42	
478.819	17.63	4.49	1.42	23.54	37.00	13.46	
511.570	18.69	4.65	-0.49	22.85	37.00	14.15	
565.966	20.02	4.98	0.06	25.06	37.00	11.94	

Remark : All reading are Quasi-Peak values.

Date of Test : Jan. 09, 2001 Temperature : 21°C
 EUT : 17" Color Monitor Humidity : 67%
 Test Mode : 1280*1024/60Hz, 64KHz

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading		Emission Level Vertical dBµV/m	Limits dBµV/m	Margin dB
			Vertical dBµV				
33.530	18.78	1.07	4.71		24.56	30.00	5.44
42.410	19.17	1.22	5.99		26.38	30.00	3.62
65.297	12.87	1.55	11.31		25.73	30.00	4.27
66.910	12.91	1.57	9.08		23.56	30.00	6.44
78.410	15.02	1.67	8.07		24.76	30.00	5.24
141.199	19.45	2.29	-1.83		19.91	30.00	10.09
174.137	20.93	2.52	0.35		23.80	30.00	6.20
185.012	22.33	2.63	-1.13		23.83	30.00	6.17
206.796	22.16	2.67	-1.94		22.89	30.00	7.11
282.968	21.25	3.22	0.43		24.90	37.00	12.10
326.527	14.91	3.63	4.39		22.93	37.00	14.07
370.052	15.69	3.99	1.27		20.95	37.00	16.05
413.596	16.37	4.16	2.54		23.07	37.00	13.93
468.008	18.01	4.42	1.36		23.79	37.00	13.21
565.967	19.76	4.98	0.26		25.00	37.00	12.00

Remark : All reading are Quasi-Peak values.

Date of Test : Jan. 09, 2001 Temperature : 21°C
 EUT : 17" Color Monitor Humidity : 67%
 Test Mode : 1024*768/85Hz, 69KHz

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading Horizontal dB μ V	Emission Level Horizontal dB μ V/m	Limits dB μ V/m	Margin dB
37.971	17.92	1.13	-1.81	17.24	30.00	12.76
56.949	12.54	1.42	0.61	14.57	30.00	15.43
66.405	11.93	1.57	4.11	17.61	30.00	12.39
79.130	13.87	1.67	5.42	20.96	30.00	9.04
123.352	19.14	2.13	-0.84	20.43	30.00	9.57
161.275	20.67	2.44	0.60	23.71	30.00	6.29
227.707	22.14	2.83	-0.80	24.17	30.00	5.83
313.152	14.21	3.54	5.90	23.65	37.00	13.35
332.130	14.67	3.63	4.96	23.26	37.00	13.74
379.575	15.52	3.98	4.67	24.17	37.00	12.83
408.042	15.91	4.04	2.93	22.88	37.00	14.12
445.998	16.54	4.33	1.99	22.86	37.00	14.14
521.910	18.90	4.76	-0.47	23.19	37.00	13.81
540.888	19.58	4.82	-1.04	23.36	37.00	13.64

Remark : All reading are Quasi-Peak values.

Date of Test : Jan. 09, 2001 Temperature : 21°C
 EUT : 17" Color Monitor Humidity : 67%
 Test Mode : 1024*768/85Hz, 69KHz

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading		Emission Level Vertical dBµV/m	Limits dBµV/m	Margin dB
			Vertical dBµV	Vertical dBµV/m			
34.320	18.60	1.08	3.62	23.30	30.00	6.70	
41.530	19.18	1.22	6.08	26.48	30.00	3.52	
42.943	19.11	1.23	3.55	23.89	30.00	6.11	
47.420	16.75	1.28	5.73	23.76	30.00	6.24	
56.909	13.74	1.42	4.46	19.62	30.00	10.38	
64.630	12.88	1.55	8.86	23.29	30.00	6.71	
* 79.190	15.19	1.67	10.88	27.74	30.00	2.26	
151.800	20.30	2.36	-2.01	20.65	30.00	9.35	
161.278	21.40	2.44	0.86	24.70	30.00	5.30	
227.715	22.32	2.83	-2.08	23.07	30.00	6.93	
322.641	14.83	3.63	6.04	24.50	37.00	12.50	
379.575	16.24	3.98	1.68	21.90	37.00	15.10	
455.487	17.46	4.35	0.83	22.64	37.00	14.36	
483.954	17.97	4.46	0.41	22.84	37.00	14.16	
521.910	18.99	4.76	0.49	24.24	37.00	12.76	

- Remarks :
1. All reading are Quasi-Peak values.
 2. The worst emission was detected at 79.190MHz with corrected signal level of 27.74dBµV/m (limit was 30dBµV/m) when the antenna was at vertical polarization and was at 1m high and the turn table was at 115° .
 3. 0° is the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

4. MODIFICATIONS TO EUT

1. Added a ferrite core on the ground wire of the AC socket.
2. Added a ferrite core on the signal cable (from the video board to the main board).
3. Added a ferrite core on the audio cable.

5. DEVIATION TO TEST SPECIFICATIONS

【NONE】