

APPLICATION FOR CERTIFICATION
On Behalf of
Top Victory Electronics (Taiwan) Co., Ltd.
15" Color Monitor
Model : (1)5Glr+ (2)5Glr
FCC ID : ARSCM560S

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.
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Report Number : TTEMC-F20089
Date of Test : Jul. 26 ~ Aug. 17, 2000
Date of Report : Aug. 28, 2000

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TEST REPORT CERTIFICATION

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 : ARSCM560S
 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.

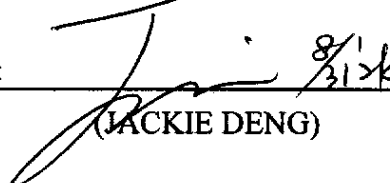
This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Taiwan Tokin EMC Eng. corp.

The test results in this test report are traceable to national or international standards.

Date of Test : Jul. 26 ~ Aug. 17, 2000

Prepared by : 
(KITTY NI)

Test Engineer : 
(ALLEN WANG)

Approve & Authorized Signer : 
(JACKIE DENG)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

Description	:	15" Color Monitor
Model Number	:	(1)5Glr+ (2)5Glr M/N 5Glr is MPR II Safety Version M/N 5Glr+ is TCO'95 Safety Version
Serial Number	:	N/A
FCC ID	:	ARSCM560S
Applicant	:	Top Victory Electronics (Taiwan) Co., Ltd. 18F, 738 Chung-Cheng Rd., Chung-Ho 235 Taiwan, R.O.C.
Manufacturer #1	:	Top Victory Electronics (Fujian) Co., Ltd. Yuan Hong Road, 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	:	Chunghwa, M/N M36AES83X46
Data Cable	:	Shielded, Undetachable, 1.2m Bonded a ferrite core
Power Cord	:	Non-Shielded, Detachable, 1.2m
Date of Receipt of Sample	:	Jul. 19, 2000
Date of Test	:	Jul. 26 ~ Aug. 17, 2000

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 W13562611
Floppy Driver 3.5"	:	Mitsumi, M/N D353M3
Hard Disk Driver	:	Seagate, M/N ST34321A S/N VTJ00534
VGA Card	:	ELSA, M/N Gloria-Synergy FCC ID KJGP2EASY
Power Cord	:	Non-Shielded, Detachable, 1.8m

1.2.2. KEYBOARD

Model Number	:	5121
Serial Number	:	J83300815
FCC ID	:	E5XKBM104M10UC
Manufacturer	:	Behavior Tech Computer Corp.
Data Cable	:	Shielded, Undetachable, 1.0m

1.2.3. PRINTER

Model Number	:	2225C+
Serial Number	:	3121S96627
FCC ID	:	DSI6XU2225
Manufacturer	:	Hewlett Packard
Power Adapter	:	Hewlett Packard, M/N 82241A Non-Shielded, Undetachable, 2.0m
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 : 980034384
 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. PS2 MOUSE

Model Number : M-S35
 Serial Number : LZA82103154
 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

1.3. 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

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

1.4. Measurement Uncertainty

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

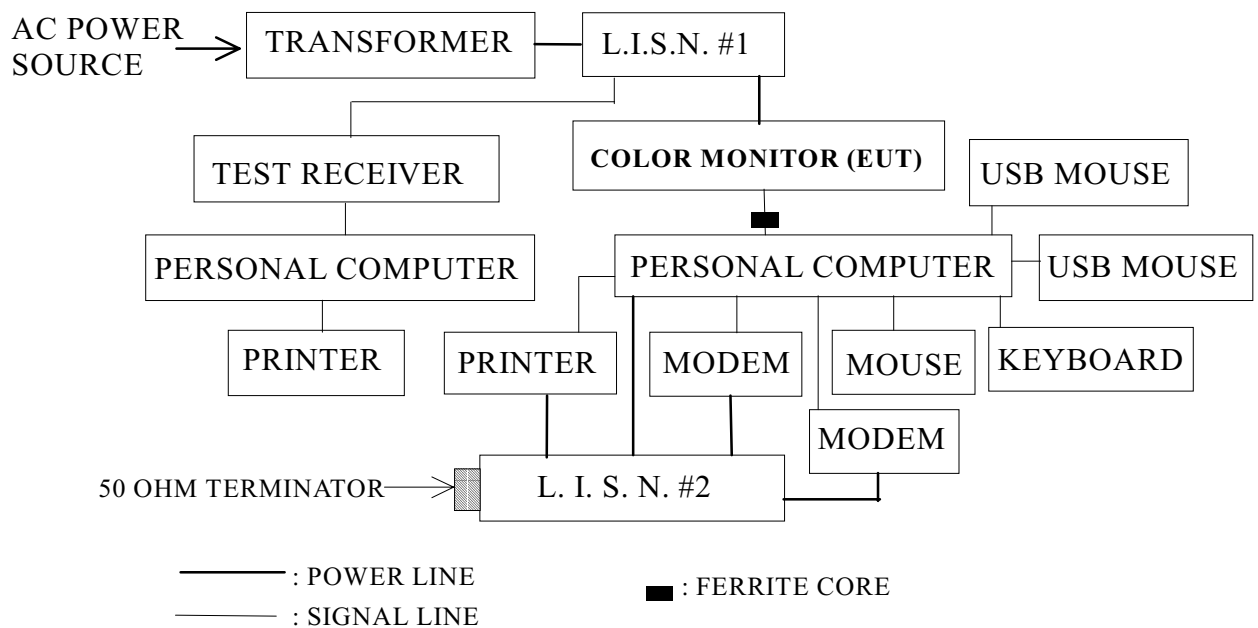
2. POWERLINE CONDUCTED TEST

2.1. Test Equipment

The following test equipment 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.15, 00'	1 Year
2.	L.I.S.N. # 1	Kyoritsu	KNW-407	8-1430-5	Nov.27, 99'	1 Year
3.	L.I.S.N. # 2	Kyoritsu	KNW-407	8-1430-6	Nov.27, 99'	1 Year
4.	Computer	DFI	IPV3120400	N/A	N/A	N/A
5.	Printer	HP	C6450A	PH96Q150GJ	N/A	N/A

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 equipment 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	:	5G1r+
Serial Number	:	N/A
FCC ID	:	ARSCM560S
Manufacturer #1	:	Top Victory Electronics (Fujian) Co., Ltd.
Manufacturer #2	:	Beijing Orient Top Victory Electronics Co., Ltd.
CRT	:	Chunghwa, M/N M36AES83X46
Data Cable	:	Shielded, Undetachable, 1.2m Bonded a ferrite core
Power Cord	:	Non-Shielded, Detachable, 1.2m

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. Turn on the power of all equipment.

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). 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 equipment and all of the interface cables were changed according to FCC ANSI C63.4-1992 requirement.

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

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

Three kinds of horizontal working frequency were done during conducted measurement and all the test results are listed in section 2.7..

2.7. Line Conducted RF Voltage Measurement Results

PASSED. Please refer to the following pages. (8 pages)

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

EUT : 15" Color Monitor Model No.: 5Glr+

Test Date : Aug. 17, 2000 Temperature : 28.6°C Humidity : 57%

Mode	Frequency Resolution	Reference Data #
1.	800*600/85Hz, 54KHz	# 138, # 137
2.	1280*1024/60Hz, 64KHz	# 139, # 140
3.	1024*768/85Hz, 69KHz	# 144 (145, 146), # 141 (142, 143)

Please refer to the next pages.

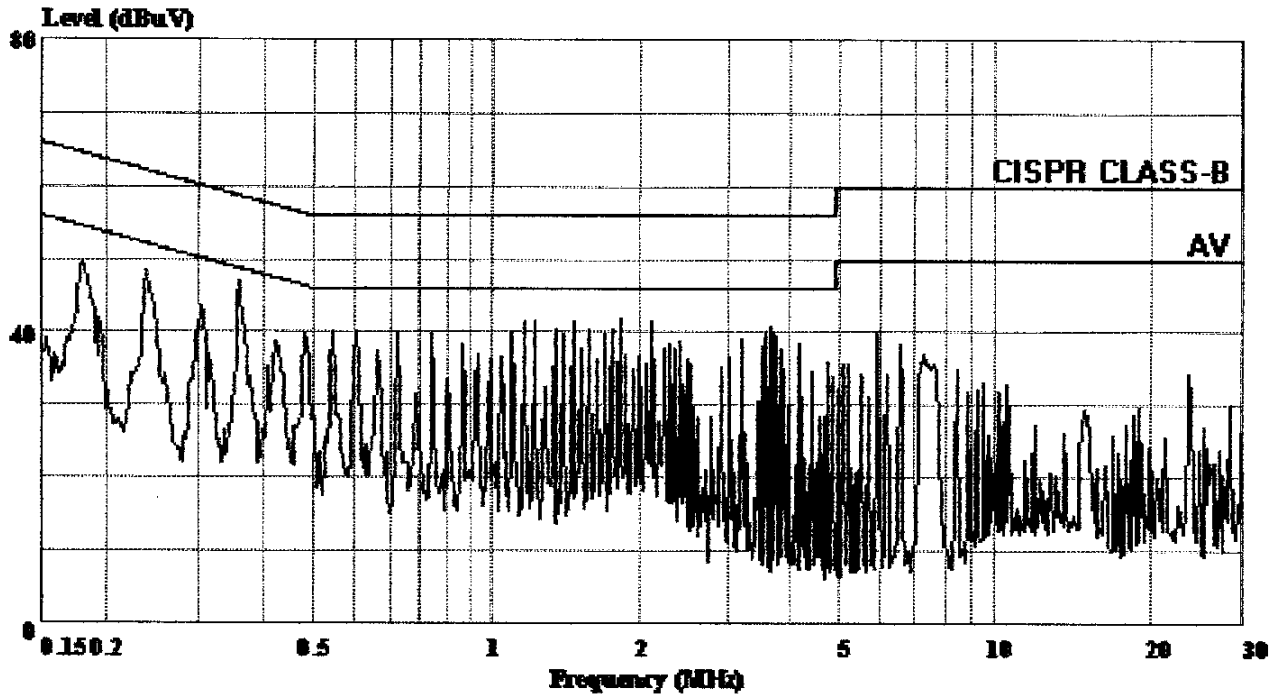
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No53-11, Tin-fu Tsun, Lin-kou Hsiang,
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 tel: 02-26092133
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TAIWAN TOKIN EMC ENG. CORP.

Data#: 138 File#: Aoc.emi

Date: 2000-08-17 Time: 15:59:55



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

Trace:

Ref Trace:

Condition: CISPR CLASS-B KNW-407 NEUTRAL
 out : 15" MONITOR M/N:5Glr+
 power: 120Vac/60Hz
 memo : 800*600;85Hz/54KHz

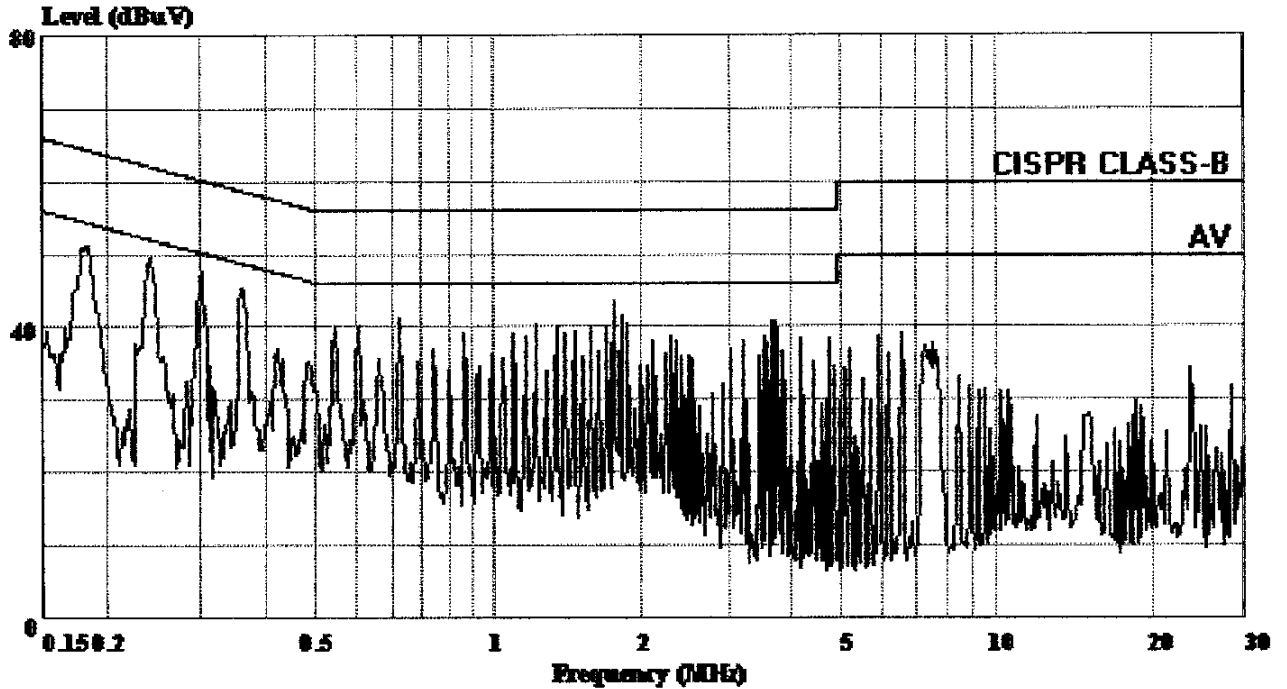
TOKIN

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 tel: 02-26092133
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TAIWAN TOKIN EMC ENG. CORP.

Data#: 137 File#: Aoc.emi

Date: 2000-08-17 Time: 15:57:47



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

Trace:

Ref Trace:

Condition: CISPR CLASS-B KNW-407 LINE
 eut : 15" MONITOR M/N:5Glr+
 power: 120Vac/60Hz
 memo : 800*600;85Hz/54KHz

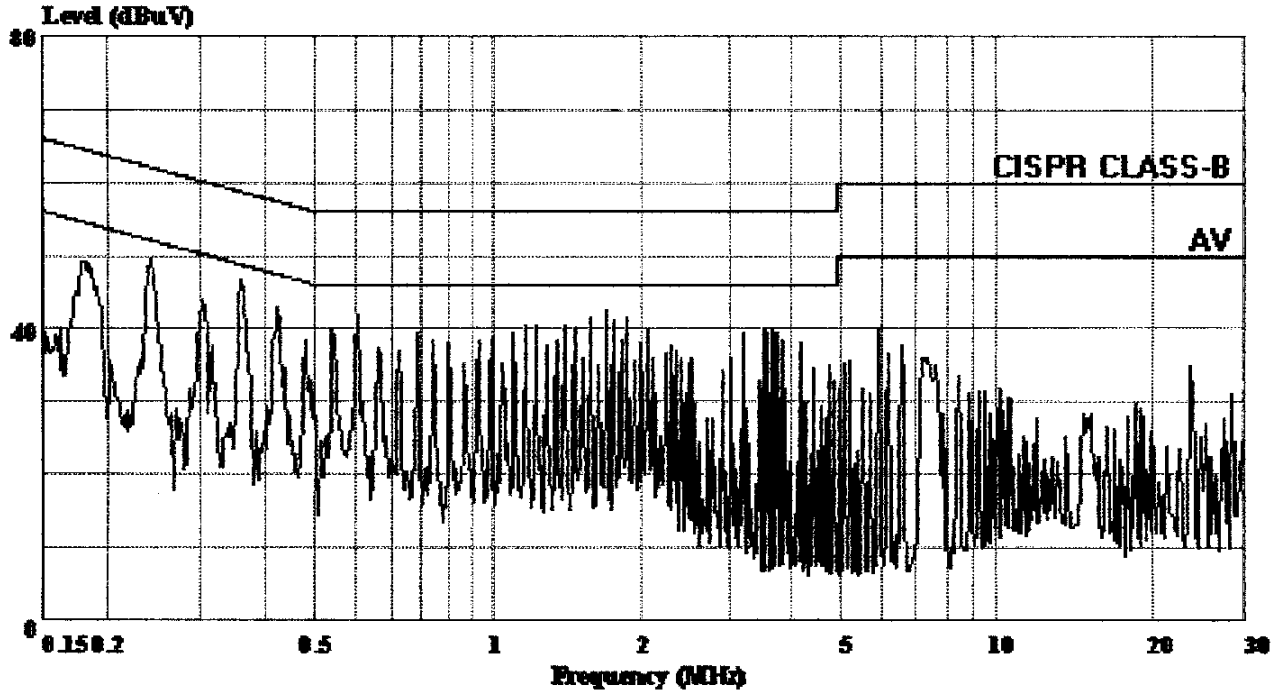
TOKIN

No53-11, Tin-fu Tsun, Lin-kou Hsiang,
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TAIWAN TOKIN EMC ENG. CORP.

Data#: 139 File#: Aoc.emi

Date: 2000-08-17 Time: 16:00:55



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

Trace:

Ref Trace:

Condition: CISPR CLASS-B KNW-407 NEUTRAL
 eut : 15" MONITOR M/N:5Glr+
 power: 120Vac/60Hz
 memo : 1280*1024;60Hz/64KHz

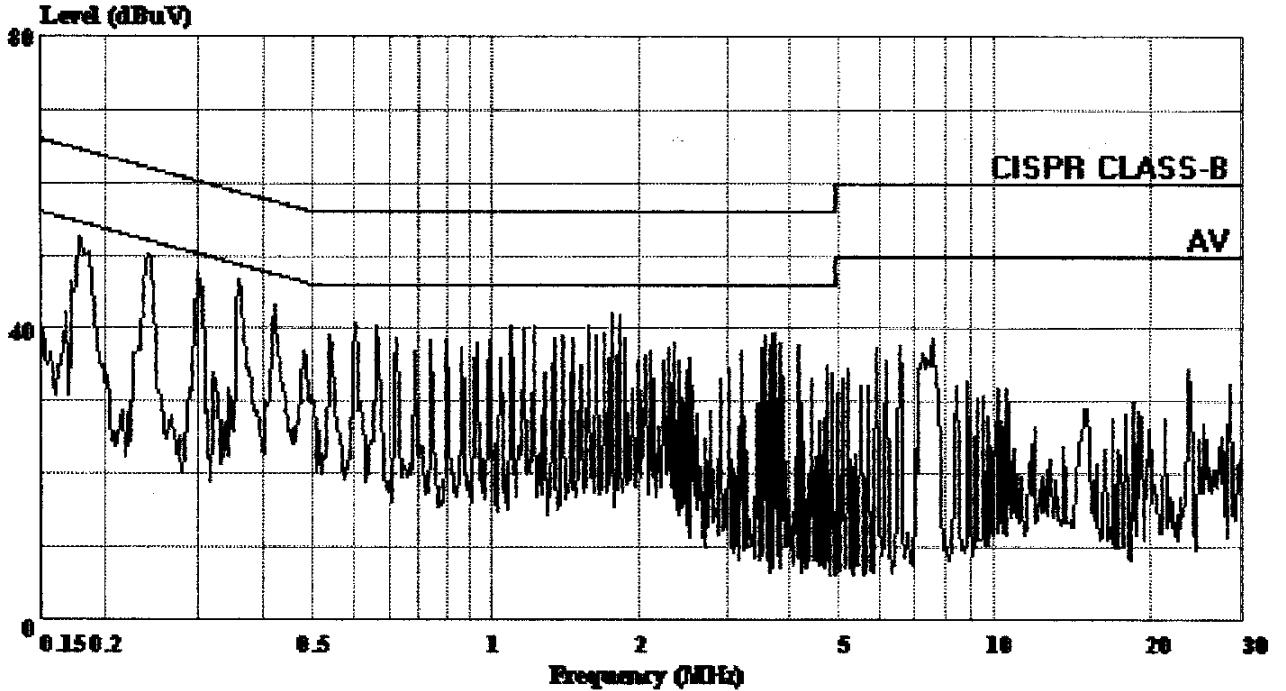
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TAIWAN TOKIN EMC ENG. CORP.

Data#: 140 File#: Aoc.emi

Date: 2000-08-17 Time: 16:01:37



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

Trace:

Ref Trace:

Condition: CISPR CLASS-B KNW-407 LINE
cut : 15" MONITOR M/N:5Glr+
power: 120Vac/60Hz
memo : 1280*1024;60Hz/64KHz

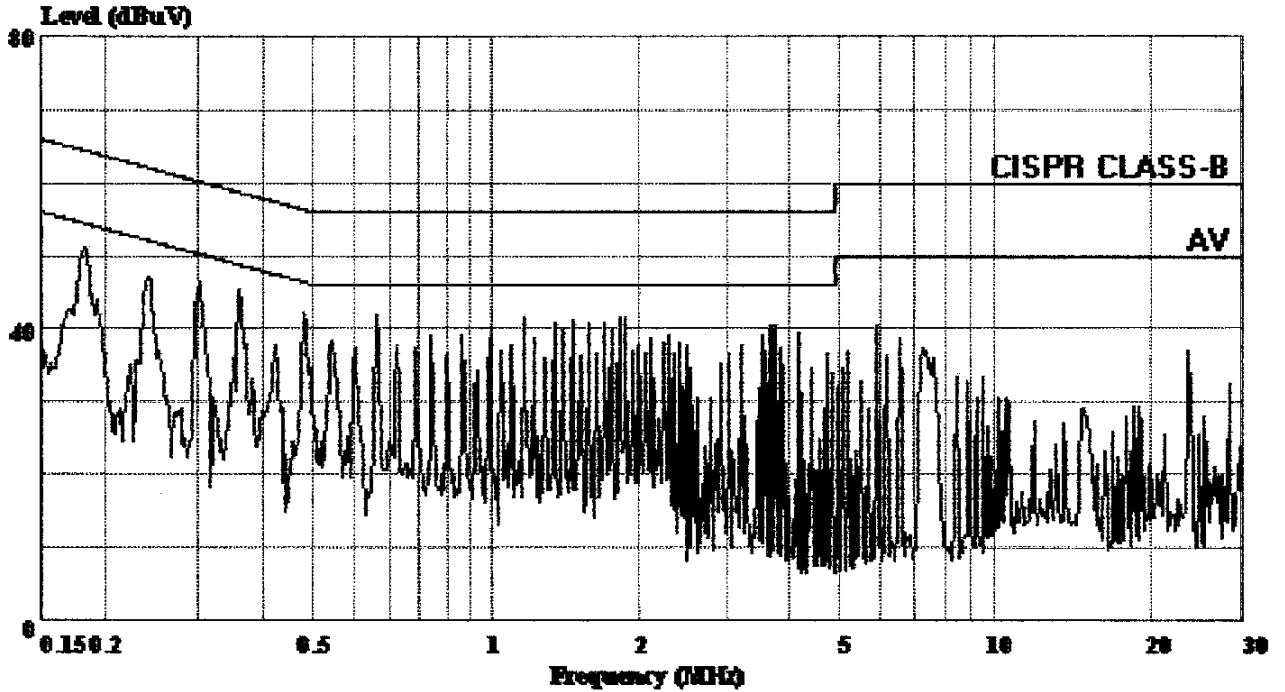
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 Taipei, County, Taiwan R.O.C.
 tel:02-26092133
 fax:02-26099303

TAIWAN TOKIN EMC ENG. CORP.

Data#: 144 File#: Aoc.emi

Date: 2000-08-17 Time: 16:05:48



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

Trace:

Ref Trace:

Condition: CISPR CLASS-B KNW-407 NEUTRAL
 eut : 15" MONITOR M/N:5Glr+
 power: 120Vac/60Hz
 memo : 1024*768;85Hz/69KHz



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 Taipei, County, Taiwan R.O.C.
 tel: 02-26092133
 fax: 02-26099303

TAIWAN TOKIN EMC ENG. CORP.

Data#: 145 File#: Aoc.emi
 No.4 Shielded room

Date: 2000-08-17 Time: 16:07:30

Condition: CISPR CLASS-B KNW-407 NEUTRAL
 aut : 15" MONITOR M/N: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	dBuV	dB	dBuV	dBuV	dB	dB	dB	
1	0.181	48.56	-15.90	64.46	48.29	0.24	0.03	0.00	QP
2	0.300	44.08	-16.17	60.25	43.90	0.14	0.04	0.00	QP
3	0.539	39.34	-16.66	56.00	39.20	0.10	0.04	0.00	QP
4	1.259	41.05	-14.95	56.00	40.90	0.10	0.05	0.00	QP
5	3.721	40.55	-15.45	56.00	40.40	0.10	0.05	0.00	QP
6	6.000	39.78	-20.22	60.00	39.63	0.10	0.05	0.00	QP

Data#: 146 File#: Aoc.emi
 No.4 Shielded room

Date: 2000-08-17 Time: 16:07:56

Condition: CISPR CLASS-B(AV) KNW-407 NEUTRAL
 aut : 15" MONITOR M/N: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	dBuV	dB	dBuV	dBuV	dB	dB	dB	
1 !	0.181	46.11	-8.35	54.46	45.84	0.24	0.03	0.00	Average
2 !	0.300	41.41	-8.84	50.25	41.23	0.14	0.04	0.00	Average
3 !	0.539	37.67	-8.33	46.00	37.53	0.10	0.04	0.00	Average
4 !	1.259	38.90	-7.10	46.00	38.75	0.10	0.05	0.00	Average
5 !	3.721	36.79	-9.21	46.00	36.64	0.10	0.05	0.00	Average
6	6.000	35.46	-14.54	50.00	35.31	0.10	0.05	0.00	Average

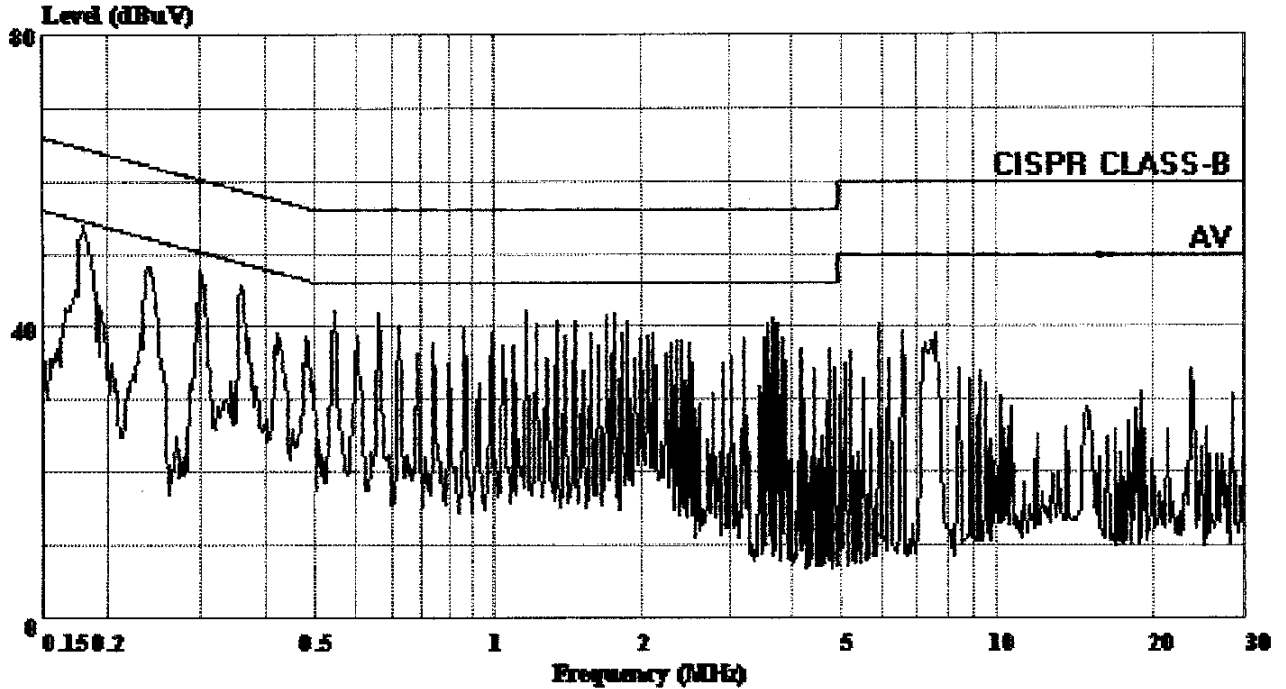
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TAIWAN TOKIN EMC ENG. CORP.

Data#: 141 File#: Aoc.emi

Date: 2000-08-17 Time: 16:02:35



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

Trace:

Ref Trace:

Condition: CISPR CLASS-B KNW-407 LINE
cut : 15" MONITOR M/N:5Glr+
power: 120Vac/60Hz
memo : 1024*768;85Hz/69KHz



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TAIWAN TOKIN EMC ENG. CORP.

Data#: 142 File#: Aoc.emi
 No.4 Shielded room

Date: 2000-08-17 Time: 16:04:56

Condition: CISPR CLASS-B KNW-407 LINE
 eut : 15" MONITOR M/N: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	dBuV	dB	dBuV	dBuV	dB	dB	dB	
1	0.180	51.05	-13.44	64.49	50.78	0.24	0.03	0.00	QP
2	0.300	45.50	-14.74	60.24	45.32	0.14	0.04	0.00	QP
3	0.540	39.66	-16.34	56.00	39.52	0.10	0.04	0.00	QP
4	1.260	40.71	-15.29	56.00	40.56	0.10	0.05	0.00	QP
5	3.720	40.34	-15.66	56.00	40.19	0.10	0.05	0.00	QP
6	6.002	39.18	-20.82	60.00	39.03	0.10	0.05	0.00	QP

Data#: 143 File#: Aoc.emi
 No.4 Shielded room

Date: 2000-08-17 Time: 16:05:18

Condition: CISPR CLASS-B(AV) KNW-407 LINE
 eut : 15" MONITOR M/N: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	dBuV	dB	dBuV	dBuV	dB	dB	dB	
1 !	0.180	48.82	-5.67	54.49	48.55	0.24	0.03	0.00	Average
2 !	0.300	44.12	-6.12	50.24	43.94	0.14	0.04	0.00	Average
3 !	0.540	38.34	-7.66	46.00	38.20	0.10	0.04	0.00	Average
4 !	1.260	38.47	-7.53	46.00	38.32	0.10	0.05	0.00	Average
5 !	3.720	36.66	-9.34	46.00	36.51	0.10	0.05	0.00	Average
6	6.002	34.12	-15.88	50.00	33.97	0.10	0.05	0.00	Average

3. RADIATED EMISSION TEST

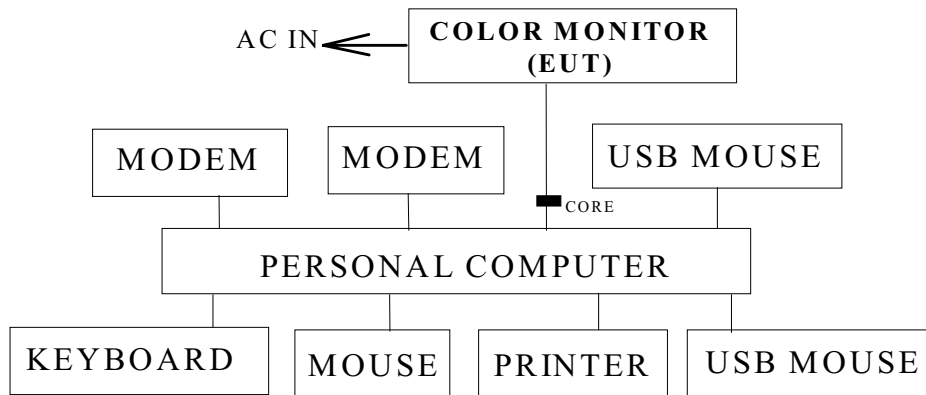
3.1. Test Equipment

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

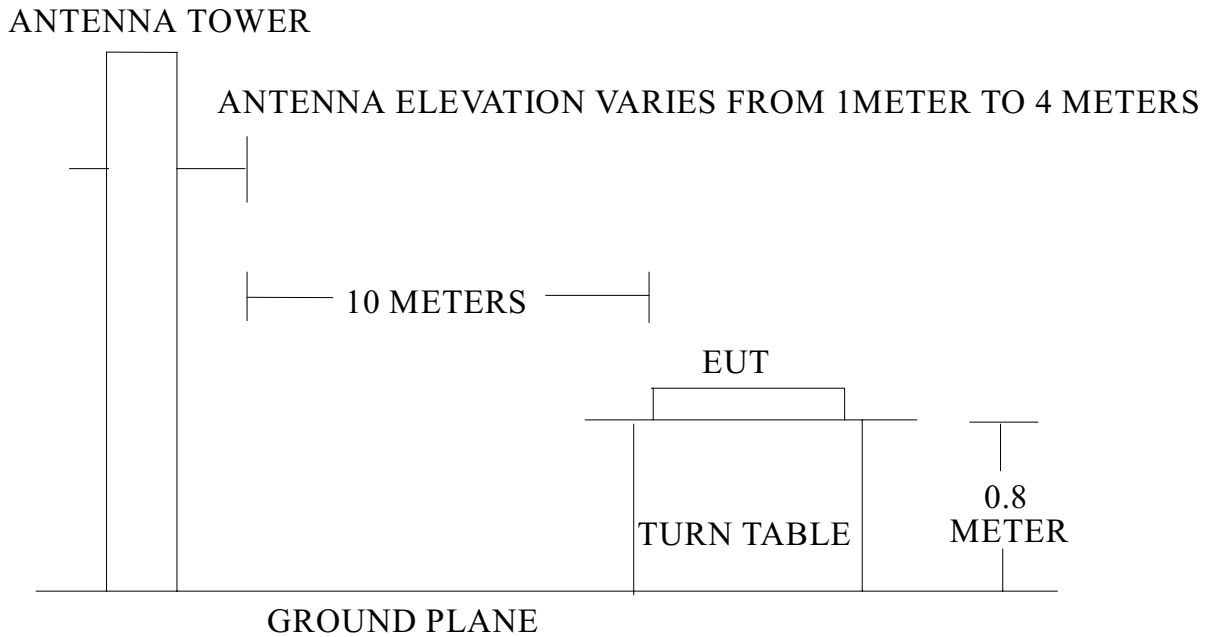
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	HP	8595E	3829A03489	Oct.13, 99'	1 Year
2.	Test Receiver	Rohde & Schwarz	ESVS10	826148/005	May 06, 00'	1 Year
3.	Computer	TOKIN	586PC	N/A	N/A	NA
4.	Printer	HP	C6450A	TH96Q121ZC	N/A	N/A
5.	Amplifier	HP	8447D	2944A06891	N/A	N/A
6.	Broadband Antenna	Chase	VBA6106A	1240	Jul. 05, 00'	1 Year
7.	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 (CISPR 22 Class B)

FREQUENCY	DISTANCE	FIELD STRENGTHS LIMITS
MHz	Meters	dBuV/m
30 ~ 230	10	30
230 ~ 1000	10	37

- Remark :
- (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 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 is listed in Section 2.5.

3.6. Test Procedure

The EUT and its simulators were placed on a turn table which was 0.8 meter above ground. The turn table rotate 360 degrees to determine the position of the maximum emission level. EUT was set 10 meters away from the receiving antenna which were mounted on a antenna tower. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated biconical and log periodical antenna) and dipole antenna were used as receiving antenna. Both horizontal and vertical polarization of the antenna were set on measurement. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.4-1992 requirement.

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 3.7..

Test Mode :

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

3.7. Radiated Emission Measurement Results

PASSED.

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

Date of Test :	Jul. 26, 2000	Temperature :	30.1°C
EUT :	15" Color Monitor	Humidity :	42%
Test Mode :	54KHz/800*600/85Hz		

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading		Emission Level Horizontal dBuV/m	Limits dBuV/m	Margin dB
			Horizontal dBuV	Horizontal dBuV/m			
35.057	18.36	1.09	0.69	20.14	30.00	9.86	
53.700	13.49	1.36	1.55	16.40	30.00	13.60	
70.112	12.20	1.62	3.82	17.64	30.00	12.36	
80.560	13.98	1.68	3.35	19.01	30.00	10.99	
133.215	19.89	2.19	- 0.54	21.54	30.00	8.46	
147.238	20.18	2.29	- 2.47	20.00	30.00	10.00	
182.307	20.87	2.58	- 2.84	20.61	30.00	9.39	
* 201.410	20.95	2.68	1.95	25.58	30.00	4.42	
224.365	21.96	2.84	- 2.55	22.25	30.00	7.75	
280.451	24.18	3.23	0.69	28.10	37.00	8.90	
315.506	14.17	3.61	1.14	18.92	37.00	18.08	
357.575	14.98	3.83	- 0.66	18.15	37.00	18.85	
427.685	16.19	4.24	4.04	24.47	37.00	12.53	
448.720	16.63	4.35	1.93	22.91	37.00	14.09	
539.908	19.59	4.81	- 3.02	21.38	37.00	15.62	
560.953	20.03	4.84	- 2.76	22.11	37.00	14.89	
610.058	19.88	5.13	- 3.16	21.85	37.00	15.15	

- Remark :
1. All reading are Quasi-Peak values.
 2. The worst emission was detected at 201.410MHz with corrected signal level of 25.58dBuV/m (limit was 30.0dBuV/m) when the antenna was at horizontal polarization and was at 4m high and the turn table was at 165° .
 3. 0° is the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

Date of Test : Jul. 26, 2000 Temperature : 30.1°C
 EUT : 15" Color Monitor Humidity : 42%
 Test Mode : 54KHz/800*600/85Hz

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading		Emission Level Vertical dBμV/m	Limits dBμV/m	Margin dB
			Vertical dBμV				
35.057	18.85	1.09	2.52		22.46	30.00	7.54
42.069	19.19	1.22	- 2.19		18.22	30.00	11.78
55.540	14.16	1.39	0.00		15.55	30.00	14.45
80.680	15.06	1.69	4.14		20.89	30.00	9.11
115.540	17.90	2.10	- 0.92		19.08	30.00	10.92
133.214	19.02	2.19	- 1.83		19.38	30.00	10.62
168.271	20.77	2.53	- 1.13		22.17	30.00	7.83
259.414	22.93	3.03	- 1.33		24.63	37.00	12.37
280.448	21.73	3.23	3.11		28.07	37.00	8.93
315.506	14.70	3.61	4.23		22.54	37.00	14.46
357.572	15.71	3.83	2.12		21.66	37.00	15.34
427.684	16.75	4.24	2.23		23.22	37.00	13.78
504.812	18.65	4.59	- 1.19		22.05	37.00	14.95
561.877	19.78	4.89	- 2.98		21.69	37.00	15.31
633.036	19.92	5.26	- 2.87		22.31	37.00	14.69
650.826	20.38	5.56	- 2.82		23.12	37.00	13.88

Remark : All reading are Quasi-Peak values.

Date of Test : Jul. 26, 2000 Temperature : 30.1°C
 EUT : 15" Color Monitor Humidity : 42%
 Test Mode : 64KHz/1280*1024/60Hz

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			
40.817	17.55	1.21	- 0.65		18.11	30.00	11.89
68.024	12.02	1.62	4.76		18.40	30.00	11.60
74.823	12.67	1.65	2.43		16.75	30.00	13.25
118.820	19.05	2.13	3.64		24.82	30.00	5.18
149.653	20.22	2.29	- 1.00		21.51	30.00	8.49
163.262	20.86	2.43	- 0.81		22.48	30.00	7.52
176.863	20.79	2.50	1.83		25.12	30.00	4.88
190.470	20.92	2.72	1.56		25.20	30.00	4.80
217.676	21.67	2.88	- 1.87		22.68	30.00	7.32
299.305	24.75	3.41	1.94		30.10	37.00	6.90
394.539	16.09	4.03	9.81		29.93	37.00	7.07
408.145	15.91	4.04	11.58		31.53	37.00	5.47
421.750	16.13	4.25	7.81		28.19	37.00	8.81
435.347	16.34	4.19	9.85		30.38	37.00	6.62
516.982	18.83	4.70	- 1.43		22.10	37.00	14.90
632.559	19.99	5.31	- 2.73		22.57	37.00	14.43
686.961	21.43	5.71	- 2.86		24.28	37.00	12.72

Remark : All reading are Quasi-Peak values.

Date of Test : Jul. 26, 2000 Temperature : 30.1°C
 EUT : 15" Color Monitor Humidity : 42%
 Test Mode : 64KHz/1280*1024/60Hz

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading		Emission Level Vertical dB μ V/m	Limits dB μ V/m	Margin dB
			Vertical dB μ V				
* 40.816	19.12	1.21	5.18		25.51	30.00	4.49
59.500	13.25	1.43	10.29		24.97	30.00	5.03
68.025	13.04	1.62	9.47		24.13	30.00	5.87
81.632	15.35	1.70	5.01		22.06	30.00	7.94
149.654	20.12	2.29	- 0.48		21.93	30.00	8.07
176.865	20.90	2.50	1.19		24.59	30.00	5.41
217.683	21.51	2.88	- 1.66		22.73	30.00	7.27
258.492	22.94	3.02	1.95		27.91	37.00	9.09
299.306	23.64	3.41	0.59		27.64	37.00	9.36
326.513	14.91	3.63	3.57		22.11	37.00	14.89
353.722	15.77	3.83	1.68		21.28	37.00	15.72
394.538	16.56	4.03	7.06		27.65	37.00	9.35
408.143	16.38	4.04	3.93		24.35	37.00	12.65
435.351	16.98	4.19	6.94		28.11	37.00	8.89
476.163	18.28	4.46	- 0.78		21.96	37.00	15.04
530.580	18.93	4.75	- 2.31		21.37	37.00	15.63
544.155	19.43	4.90	- 1.60		22.73	37.00	14.27

- Remark :
1. All reading are Quasi-Peak values.
 2. The worst emission was detected at 40.816MHz with corrected signal level of 25.51dB μ V/m (limit was 30dB μ V/m) when the antenna was at vertical polarization and was at 1m high and the turn table was at 275° .
 3. 0° is the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna

Date of Test : Jul. 26, 2000 Temperature : 30.1°C
 EUT : 15" Color Monitor Humidity : 42%
 Test Mode : 69KHz/1024*768/85Hz

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading		Emission Level Horizontal dBuV/m	Limits dBuV/m	Margin dB
			Horizontal dBuV	Horizontal dBuV/m			
35.520	18.26	1.10	1.42	20.78	30.00	9.22	
59.298	12.19	1.42	5.89	19.50	30.00	10.50	
65.228	11.86	1.55	6.18	19.59	30.00	10.41	
71.157	12.31	1.63	7.84	21.78	30.00	8.22	
80.610	14.01	1.69	5.80	21.50	30.00	8.50	
130.454	19.69	2.18	0.28	22.15	30.00	7.85	
166.035	20.86	2.52	- 2.04	21.34	30.00	8.66	
177.890	20.74	2.55	- 1.78	21.51	30.00	8.49	
225.326	22.03	2.84	- 2.19	22.68	30.00	7.32	
249.044	22.03	3.05	- 1.15	23.93	37.00	13.07	
260.906	22.73	3.11	- 2.29	23.55	37.00	13.45	
391.368	15.97	3.99	3.20	23.16	37.00	13.84	
438.759	16.40	4.24	9.83	30.47	37.00	6.53	
450.656	16.68	4.35	6.35	27.38	37.00	9.62	
498.108	18.18	4.63	- 2.04	20.77	37.00	16.23	
545.531	19.72	4.94	- 1.79	22.87	37.00	14.13	
581.080	19.92	5.01	- 2.04	22.89	37.00	14.11	

Remark : All reading are Quasi-Peak values.

Date of Test : Jul. 26, 2000 Temperature : 30.1°C
 EUT : 15" Color Monitor Humidity : 42%
 Test Mode : 69KHz/1024*768/85Hz

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading		Emission Level Vertical dBuV/m	Limits dBuV/m	Margin dB
			Vertical dBuV				
36.497	19.04	1.10	5.29		25.43	30.00	4.57
41.362	19.18	1.22	4.51		24.91	30.00	5.09
52.968	14.65	1.35	6.72		22.72	30.00	7.28
71.160	13.54	1.63	5.54		20.71	30.00	9.29
83.018	15.71	1.72	3.54		20.97	30.00	9.03
130.457	18.33	2.18	1.50		22.01	30.00	7.99
166.034	20.73	2.52	0.65		23.90	30.00	6.10
189.752	23.06	2.73	- 3.38		22.41	30.00	7.59
225.329	21.50	2.84	- 0.95		23.39	30.00	6.61
249.047	22.56	3.05	0.73		26.34	37.00	10.66
343.923	15.59	3.76	3.15		22.50	37.00	14.50
415.077	16.45	4.17	1.10		21.72	37.00	15.28
438.795	17.08	4.24	7.06		28.38	37.00	8.62
474.372	18.21	4.45	0.35		23.01	37.00	13.99
527.753	18.89	4.78	- 2.55		21.12	37.00	15.88
551.472	19.85	4.90	- 2.31		22.44	37.00	14.56
604.843	20.01	5.23	- 2.70		22.54	37.00	14.46

Remark : All reading are Quasi-Peak values.

4. DEVIATION TO TEST SPECIFICATIONS

【NONE】

5. MODIFICATIONS TO EUT

1. Added a ferrite core on the signal cable of video board input.
2. Added a ferrite core on the signal cable (outside).
3. Added a ferrite core on Focus & G2.
4. Video board with metal shielding case.
5. Added two ground wires from CRT arcing wire (right & left side) to video board shielding case.
6. Added two ground wires from the rear side of video shielding case (right & left side) to mother board.

6. PHOTOGRAPHS

6.1. Photos of Powerline Conducted Measurement



FRONT VIEW OF CONDUCTED TEST



BACK VIEW OF CONDUCTED TEST

6.2. Photos of Radiated Measurement at Open Field Test Site



FRONT VIEW OF RADIATED TEST



BACK VIEW OF RADIATED TEST

Test Mode: 54KHz/800*600/85Hz



SETUP WITH MAXIMUM DETECTED EMISSION AT HORIZONTAL POLARIZATION

Test Mode: 64KHz/1280*1024/60Hz



SETUP WITH MAXIMUM DETECTED EMISSION AT VERTICAL POLARIZATION