

APPLICATION FOR CERTIFICATION

On Behalf of

Top Victory Electronics (Taiwan) Co., Ltd.

15" LCD Monitor

Model : D5063\*\*

FCC ID : ARSLM562H

Prepared for : Top Victory Electronics (Taiwan) Co., Ltd.  
18F, 738 Chung-Cheng Rd., Chung-Ho 235,  
Taipei Hsien, Taiwan, R.O.C.

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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 : ARSLM562H  
 EUT Description : 15" LCD Monitor  
     (A) MODEL NO. : D5063\*\*  
     (B) SERIAL NO. : N/A  
     (C) POWER SUPPLY : DC 12V, 2.5A  
                        (Test Voltage: AC 120V/60Hz)

**Measurement Procedure Used:**

FCC RULES AND CISPR 22 (DOCKET NO. 92-152, SEP. 1993) AND  
 FCC / ANSI C63.4-1992  
 (FCC CFR 47, Part 15 Subpart B/2001 and CISPR 22/1997 +A1/2000)

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, 2002

**Prepared By:** Cherry Wang Jan 16 2002  
 (Cherry Wang/Assistant Manager)

**Test Engineer:** Allen Wang Jan 17 2002  
 (Allen Wang/Deputy Manager)

**Approve & Authorized Signer:** Jackie Deng Jan 17 2002  
 (Jackie Deng/Assistant General Manager)

## 1. GENERAL INFORMATION

### 1.1. Description of Device (EUT)

Description : 15" LCD Monitor  
 Model Number : D5063\*\*  
 The symbols “\*\*” can be any alphanumeric character or blank for sale area and appearance type used.

Add Model Number: D5063M, D5063A.  
 The model no. D5063M is selected in the test and included in this report.

Item	D5063M	D5063A
Audio	Provided	Not Provided
Pedestal (Column & Base)	Type 1 (Tilt, Lift and Rotation)	Type 2 (Tilt Only)

FCC ID : ARSLM562H  
 Brand : HP  
 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  
 LCD Panel : Acer Display Technology, Inc.  
 M/N L150X3M  
 Data Cable (D-Sub) : Shielded, Detachable, 1.8m  
 Bonded two ferrite cores  
 Data Cable (DVI) : Shielded, Detachable, 1.8m  
 Bonded two ferrite cores

Audio Cable	:	Non-Shielded, Detachable, 1.2m
Power Cord for Audio Base (Optical)	:	Shielded, Undetachable, 0.2m Bonded a ferrite core
AC Adapter # 1	:	Delta, M/N ADP-40TB I/P: AC 100-240V~ 1.2A, 50-60Hz O/P: DC 12V, 3.33A Cord: Shielded, Undetachable, 1.8m Bonded a ferrite core
AC Adapter # 2	:	Delta, M/N ADP-50XB I/P: AC 100-240V~ 2.0A, 50-60Hz O/P: DC 12V-4.16A Cord: Shielded, Undetachable, 1.8m Bonded a ferrite core
AC Adapter # 3	:	LI Shin (LSE), M/N LSE9901B1250 (40W) BSMI ID No. 4882A180 I/P: AC 100-240V~ 50/60Hz, 1.5A O/P: DC 12V, 4.16A 50W MAX Cord: Non-Shielded, Undetachable, 1.8m Bonded a ferrite core
AC Adapter # 4	:	LI Shin (LSE), M/N LSE9901B1250 (50W) BSMI ID No. 4882A180 I/P: AC 100-240V~ 50/60Hz, 1.5A (1.5A) O/P: DC 12V, 4.16A MAX (4.16A) Cord: Non-Shielded, Undetachable, 1.8m Bonded a ferrite core
AC Power Cord	:	Non-Shielded, Detachable, 1.5m
Date of Receipt of Sample	:	Jan. 08, 2002
Date of Test	:	Jan. 09 ~ 12, 2002

## 1.2. Tested Supporting System Details

### 1.2.1. PERSONAL COMPUTER

Model Name	:	DTPC-16
Product Name	:	VECTRAVL410MT
Serial Number	:	SG1230045
FCC ID	:	By DoC
Manufacturer	:	HP
VGA Card	:	ATI, M/N: Radeon 7500 RV200
Power Cord	:	Non-Shielded, Detachable, 1.8m

### 1.2.2. KEYBOARD

Model Number	:	5121
Serial Number	:	J83300809
FCC ID	:	E5XKBM104M10UC
Manufacturer	:	BTC
Data Cable	:	Shielded, Undetachable, 1m

### 1.2.3. MOUSE (PS2)

Model Number	:	M-S34
Serial Number	:	LZE02450134
FCC ID	:	DZL211029
BSMI ID No.	:	4862A011
Manufacturer	:	Logitech
Data Cable	:	Non-Shielded, Undetachable, 1.8m

### 1.2.4. PRINTER

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

### 1.2.5. MODEM #1

Model Number	:	DM-1414
Serial Number	:	980034382
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. MODEM #2

Model Number	:	DM-1414
Serial Number	:	980034381
FCC ID	:	IFAXDM1414
Manufacturer	:	AcceX
Data Cable	:	Shielded, Detachable, 1.2m
Power Adapter	:	Amigo, M/N AM-91000A Non-Shielded, Undetachable, 1.8m

## 1.2.7. USB MOUSE #1

Model Number	:	CREUBB
Serial Number	:	N/A
FCC ID	:	NHM-CREUBE
BSMI ID No.	:	3872F083
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
BSMI ID No.	:	3872F083
Manufacturer	:	CRE Technology Co., Ltd.
Data Cable	:	Shielded, Undetachable, 1.8m

## 1.2.9. USB MOUSE #3

Model Number	:	CREUBB
Serial Number	:	N/A
FCC ID	:	NHM-CREUBE
BSMI ID No.	:	3872F083
Manufacturer	:	CRE Technology Co., Ltd.
Data Cable	:	Shielded, Undetachable, 1.8m

## 1.2.10. USB MOUSE #4

Model Number	:	CREUBB
Serial Number	:	N/A
FCC ID	:	NHM-CREUBE
BSMI ID No.	:	3872F083
Manufacturer	:	CRE Technology Co., Ltd.
Data Cable	:	Shielded, Undetachable, 1.8m

## 1.2.11. MICROPHONE (CONNECTED TO EUT)

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

#### 1.2.12. WALKMAN

Model Number	:	RQ-P35LT-K
Serial Number	:	HA08562
Manufacturer	:	Panasonic
Data Cable	:	Non-Shielded, Detachable, 1.8m

#### 1.2.13. EARPHONE (CONNECTED TO EUT)

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

#### 1.2.14. HUB

Model Number	:	8222-008
Serial Number	:	23-F4014
FCC ID	:	By DoC
Manufacturer	:	IBM
LAN Cable	:	Non-Shielded, Detachable, 1.5m
Power Cord	:	Non-Shielded, Detachable, 1.8m

### 1.3. Description of Test Facility

Site Description (No. 7 Open Site)	:	Dec. 02, 1999 File on Federal Communication Commission FCC Engineering Laboratory 7435 Oakland Mills Road Columbia, MD 21046, U.S.A. Registration Number: 96132
Name of Firm	:	Taiwan Tokin EMC Eng. Corp.
Site Location #1	:	No. 53-11, Tin-Fu Tsun, Lin-Kou, Taipei Hsien, Taiwan, R.O.C.
Site Location #2	:	No. 67-4, Tin-Fu Tsun, Lin-Kou, Taipei Hsien, Taiwan, R.O.C.
NVLAP Lab Code	:	200077-0
DAR- Registration No.	:	DAT-P-092/99-00e

#### 1.4. Measurement Uncertainty

Test Item	Frequency Range	Uncertainty (dB)
Conduction Test	150KHz~30MHz	±2.66dB
Radiation Test (Distance: 10m)	30MHz~300MHz	+4.5dB / -4.5dB
	300MHz~1000MHz	+3.88dB / -3.84dB

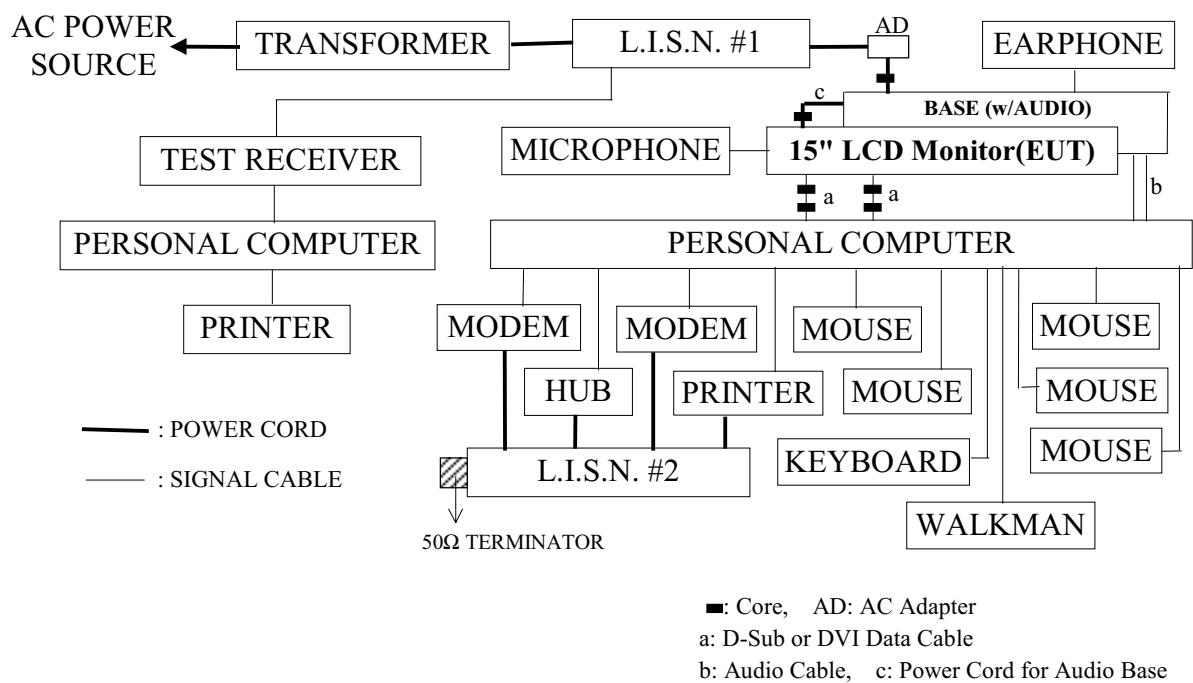
## 2. POWERLINE CONDUCTED TEST

### 2.1. Test Equipment

The following test equipment are used during the power line conducted tests :

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESCS 30	825442/020	Jun. 29, 01'	1 Year
2.	L.I.S.N. #1	Kyoritsu	KNW-407	8-1370-10	May 28, 01'	1 Year
3.	L.I.S.N. #2	Kyoritsu	KNW-407	8-1370-9	May 28, 01'	1 Year

### 2.2. Block Diagram of Test Setup



### 2.3. Powerline Conducted Emission Limit (CISPR 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

## 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" LCD Monitor (EUT)

Model Number	:	D5063M
Serial Number	:	N/A
Manufacturer #1	:	Top Victory Electronics (Fujian) Co., Ltd.
Manufacturer #2	:	Beijing Orient Top Victory Electronics Co., Ltd.
LCD Panel	:	Acer Display Technology, Inc. M/N L150X3M
Data Cable (D-Sub)	:	Shielded, Detachable, 1.8m Bonded two ferrite cores
Data Cable (DVI)	:	Shielded, Detachable, 1.8m Bonded two ferrite cores
Audio Cable	:	Non-Shielded, Detachable, 1.2m
Power Cord for	:	Shielded, Undetachable, 0.2m
Audio Base (Optical)	:	Bonded a ferrite core
AC Adapter # 1	:	Delta, M/N ADP-40TB I/P: AC 100-240V~ 1.2A, 50-60Hz O/P: DC 12V, 3.33A Cord: Shielded, Undetachable, 1.8m Bonded a ferrite core
AC Adapter # 2	:	Delta, M/N ADP-50XB I/P: AC 100-240V~ 2.0A, 50-60Hz O/P: DC 12V-4.16A Cord: Shielded, Undetachable, 1.8m Bonded a ferrite core
AC Adapter # 3	:	LI Shin (LSE), M/N LSE9901B1250 (40W) BSMI ID No. 4882A180 I/P: AC 100-240V~ 50/60Hz, 1.5A O/P: DC 12V, 4.16A 50W MAX Cord: Non-Shielded, Undetachable, 1.8m Bonded a ferrite core
AC Adapter # 4	:	LI Shin (LSE), M/N LSE9901B1250 (50W) BSMI ID No. 4882A180 I/P: AC 100-240V~ 50/60Hz, 1.5A (1.5A) O/P: DC 12V, 4.16A MAX (4.16A) Cord: Non-Shielded, Undetachable, 1.8m Bonded a ferrite core
AC Power Cord	:	Non-Shielded, Detachable, 1.5m
2.4.2. Supporting System	:	As in section 1.2

## 2.5. Operating Condition of EUT

- 2.5.1. Setup the EUT and simulator as shown on 2.2.
- 2.5.2. Turned on the power of all equipment.
- 2.5.3. Personal Computer read data from disk.
- 2.5.4. Personal Computer running the self-test program “WINRFI” 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. The CD-ROM played a Music CD-Disk and sent sound to EUT and earphone.
- 2.5.6. The other peripheral devices were driven and operated in turn during all testing.
- 2.5.7. Repeat the above procedures from 2.5.3 to 2.5.6.

## 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 equipment 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 ESCS 30 was set at 9KHz.

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

The test voltage was AC 120V/60Hz via AC Adapter of EUT.

## 2.7. Line Conducted RF Voltage Measurement Results

**PASSED.** Please refer to the following pages.

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

The following test modes were done on conducted measurement, and selected the worst cases (※Mode 3~6) to read Q.P. & Average value, all the test results are attached in the next pages.

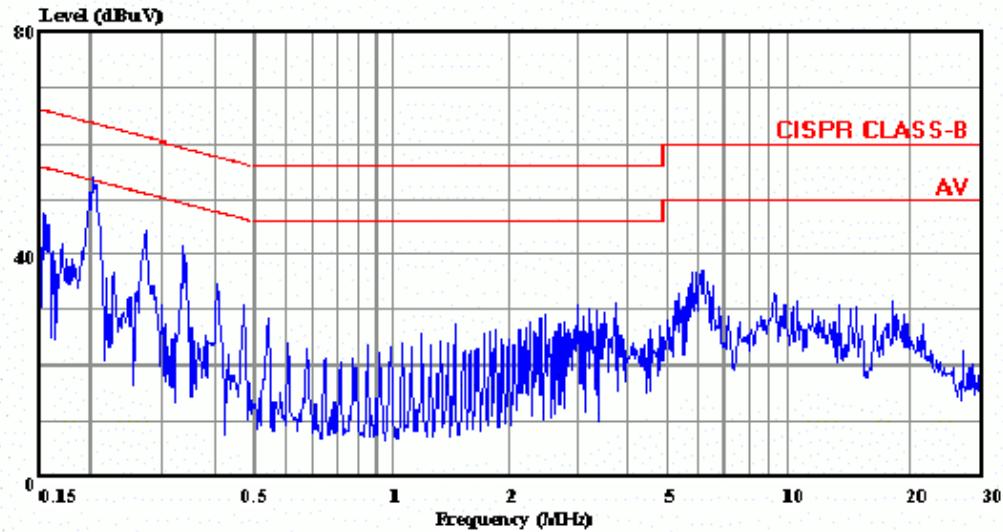
(Test Date: Jan. 11, 2002 Temperature: 17°C Humidity: 54 %)

(Test Date: Jan. 12, 2002 Temperature: 23°C Humidity: 45 %)

Mode	Cable	Frequency Resolution	AC Adapter	Angle	Reference Data #
1.	D-Sub	800*600/75Hz, 48kHz	Delta (40W)	0°	#95, #94.
2.	D-Sub	1024*768/75Hz, 60kHz	Delta (40W)	0°	#91, #90.
※ 3.	D-Sub	800*600/75Hz, 48kHz	Delta (40W)	90°	#96 (97, 98) ; #99 (100, 101).
※ 4.	D-Sub	800*600/75Hz, 48kHz	Delta (50W)	90°	#105 (106, 107) ; #102 (103, 104).
※ 5.	D-Sub	800*600/75Hz, 48kHz	LSE (40W)	90°	#108 (109, 110) ; #111 (112, 113).
※ 6.	D-Sub	800*600/75Hz, 48kHz	LSE (50W)	90°	#147 (148, 149) ; #150 (151, 152).
7.	DVI	800*600/75Hz, 48kHz	Delta (40W)	0°	#92, #93.
8.	DVI	1024*768/75Hz, 60kHz	Delta (40W)	0°	#88, #89.

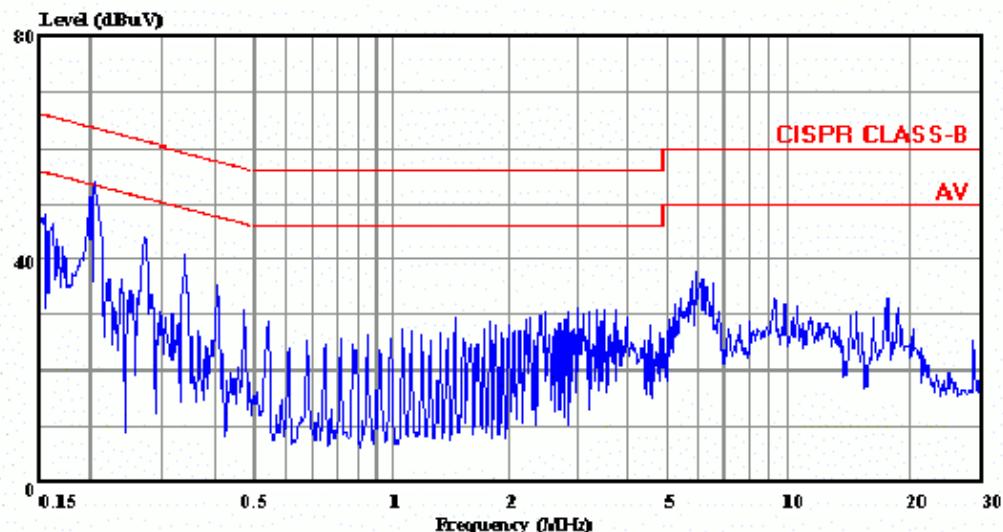
**TOKIN**TAIWAN TOKIN EMC ENG. CORP.  
台灣東金科技股份有限公司No.53-11, Tin-fu Tsun, Lin-kou Hsiang,  
Taipei Country, Taiwan, R.O.C.  
Tel:02-26092133 Fax:02-26099303  
Email:ttemc@ttemc.com.tw

Data#: 95 File#: TOP- VICTOR-1.EMI Date: 2002-01-12 Time: 09:25:15



Site : No.3 Shielded room  
 Condition: CISPR CLASS-B KNU-407 LINE  
 EUT : 15 " LCD MONITOR M/N:D5063\*\*  
 Power : 120Vac/60Hz  
 Memo : 800\*600 / 75Hz /48KHz (D-SUB) Delta40W

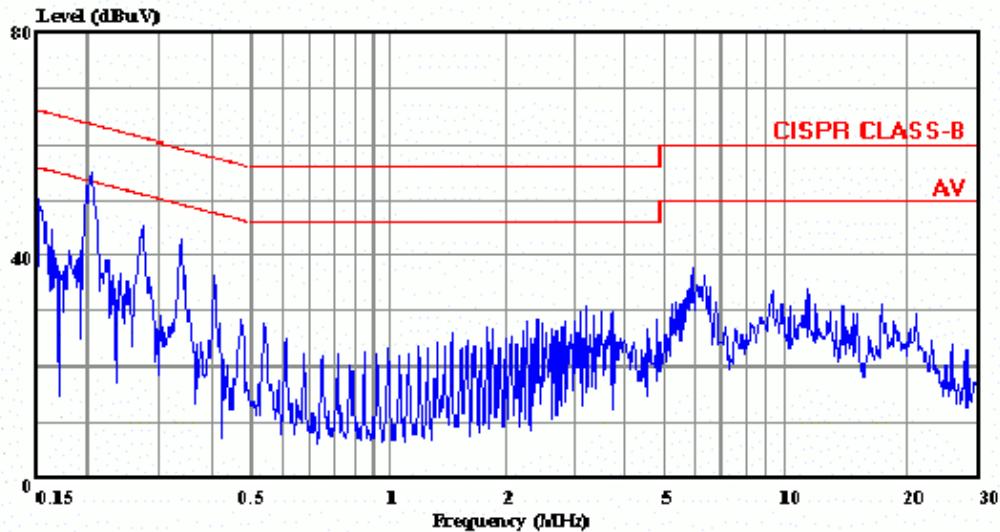
Data#: 94 File#: TOP- VICTOR-1.EMI Date: 2002-01-12 Time: 09:24:40



Site : No.3 Shielded room  
 Condition: CISPR CLASS-B KNU-407 NEUTRAL  
 EUT : 15 " LCD MONITOR M/N:D5063\*\*  
 Power : 120Vac/60Hz  
 Memo : 800\*600 / 75Hz /48KHz (D-SUB) Delta40W

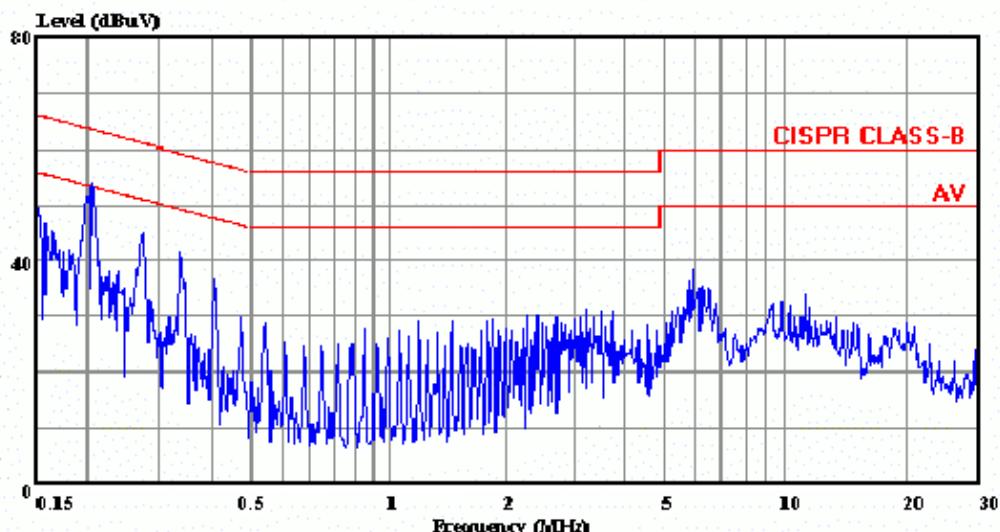
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Email:ttemc@ttemc.com.tw

Data#: 91 File#: TOP- VICTOR-1.EMI Date: 2002-01-12 Time: 09:22:13



Site : No.3 Shielded room  
 Condition: CISPR CLASS-B KNU-407 LINE  
 EUT : 15 " LCD MONITOR M/N:D5063\*\*  
 Power : 120Vac/60Hz  
 Memo : 1024\*768 / 75Hz /60KHz (D-SUB) Delta40W

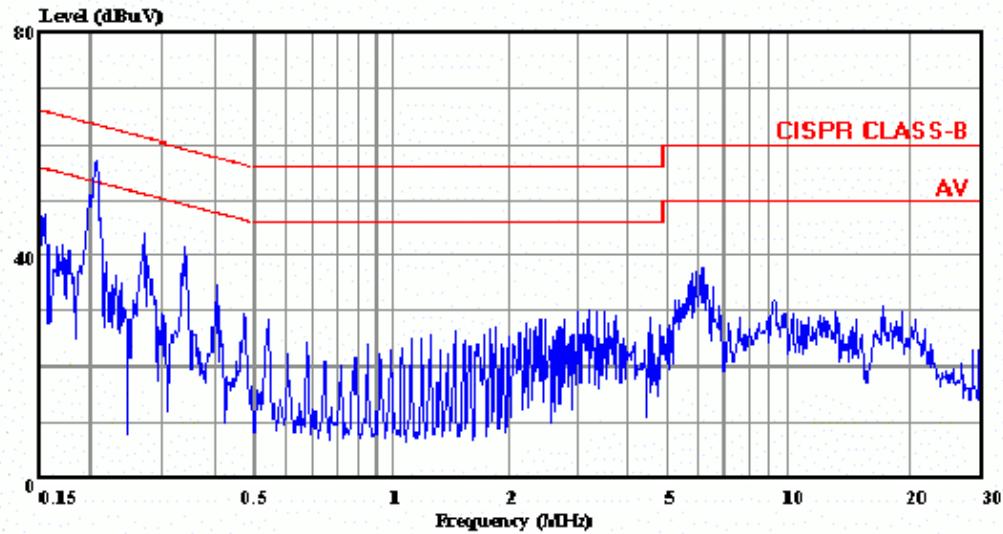
Data#: 90 File#: TOP- VICTOR-1.EMI Date: 2002-01-12 Time: 09:21:32



Site : No.3 Shielded room  
 Condition: CISPR CLASS-B KNU-407 NEUTRAL  
 EUT : 15 " LCD MONITOR M/N:D5063\*\*  
 Power : 120Vac/60Hz  
 Memo : 1024\*768 / 75Hz /60KHz (D-SUB) Delta40W

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Data#: 96 File#: TOP- VICTOR-1.EMI Date: 2002-01-12 Time: 09:26:16



Site : No.3 Shielded room  
 Condition: CISPR CLASS-B KNW-407 LINE  
 EUT : 15 " LCD MONITOR M/N:D5063\*\*  
 Power : 120Vac/60Hz (TURN 90\*)  
 Memo : 800\*600 / 75Hz / 48KHz (D-SUB) Delta40W

Data#: 97 File#: D:\TOP- VICTOR-1.EMI Date: 2002-01-12 Time: 09:28:53

Site : No.3 Shielded room  
 Condition : CISPR CLASS-B KNW-407 LINE  
 EUT : 15 " LCD MONITOR M/N:D5063\*\*  
 Power : 120Vac/60Hz (TURN 90\*)  
 Memo : 800\*600 / 75Hz / 48KHz (D-SUB) Delta40W

Freq	Level	Over Limit		Read Line	Probe Factor	Cable	
		MHz	dBuV	Limit	dB	Loss	Remark
1	0.206	51.04	-12.33	63.37	50.64	0.20	0.20 QP
2	0.271	41.58	-19.52	61.10	41.18	0.20	0.20 QP
3	0.338	39.60	-19.66	59.26	39.20	0.20	0.20 QP
4	2.510	26.57	-29.43	56.00	25.77	0.40	0.40 QP
5	6.045	36.44	-23.56	60.00	35.34	0.50	0.60 QP
6	9.308	30.30	-29.70	60.00	29.20	0.50	0.60 QP

Data#: 98 File#: D:\TOP- VICTOR-1.EMI

Freq	Level	Over Limit		Read Line	Probe Factor	Cable	
		MHz	dBuV	Limit	dB	Loss	Remark
1	0.206	39.30	-14.07	53.37	38.90	0.20	0.20 Average
2	0.271	32.11	-18.99	51.10	31.71	0.20	0.20 Average
3	0.338	32.22	-17.04	49.26	31.82	0.20	0.20 Average
4	2.510	25.03	-20.97	46.00	24.23	0.40	0.40 Average
5	6.045	34.01	-15.99	50.00	32.91	0.50	0.60 Average
6	9.308	25.32	-24.68	50.00	24.22	0.50	0.60 Average

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Tel:02-26092133 Fax:02-26099303  
Email:ttemc@ttemc.com.tw

Data#: 99 File#: TOP- VICTOR-1.EMI Date: 2002-01-12 Time: 09:30:56



Site : No.3 Shielded room  
 Condition: CISPR CLASS-B KNNW-407 NEUTRAL  
 EUT : 15 " LCD MONITOR M/N:D5063\*\*  
 Power : 120Vac/60Hz (TURN 90\*)  
 Memo : 800\*600 / 75Hz / 48KHz (D-SUB) Delta40W

Data#: 100 File#: D:\TOP- VICTOR-1.EMI Date: 2002-01-12 Time: 09:32:45

Site : No.3 Shielded room  
 Condition : CISPR CLASS-B KNNW-407 NEUTRAL  
 EUT : 15 " LCD MONITOR M/N:D5063\*\*  
 Power : 120Vac/60Hz (TURN 90\*)  
 Memo : 800\*600 / 75Hz / 48KHz (D-SUB) Delta40W

Freq	Level	Over Limit		Read Line	Probe Factor	Cable	
		MHz	dBuV	dB	dBuV	dB	dB
1	0.206	49.78	-13.59	63.37	49.38	0.20	0.20 QP
2	0.271	40.48	-20.62	61.10	40.08	0.20	0.20 QP
3	0.338	37.92	-21.34	59.26	37.52	0.20	0.20 QP
4	2.510	29.39	-26.61	56.00	28.59	0.40	0.40 QP
5	6.045	36.39	-23.61	60.00	35.29	0.50	0.60 QP
6	9.308	29.81	-30.19	60.00	28.71	0.50	0.60 QP

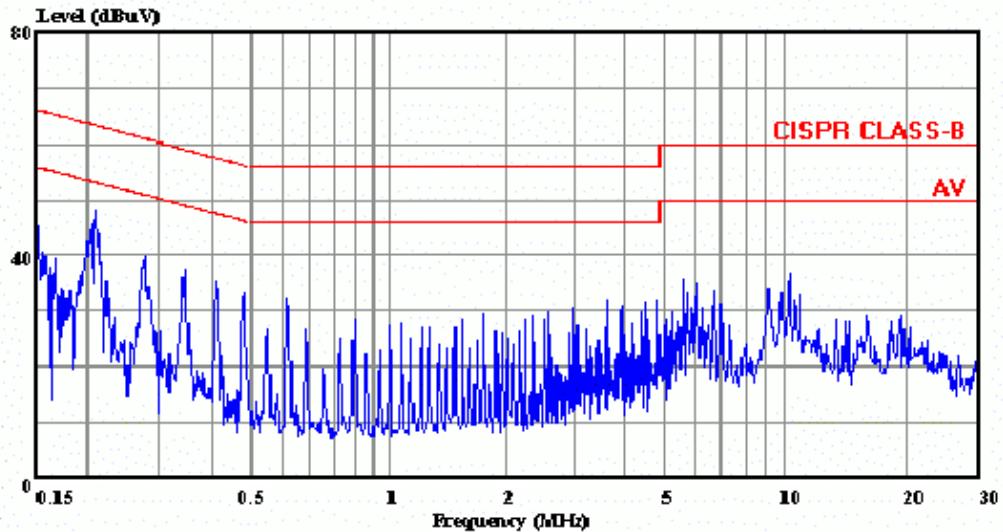
Data#: 101 File#: D:\TOP- VICTOR-1.EMI

Freq	Level	Over Limit		Read Line	Probe Factor	Cable	
		MHz	dBuV			dB	dBuV

1	0.206	37.62	-15.75	53.37	37.22	0.20	0.20 Average
2	0.271	31.82	-19.28	51.10	31.42	0.20	0.20 Average
3	0.338	32.24	-17.02	49.26	31.84	0.20	0.20 Average
4	2.510	28.48	-17.52	46.00	27.68	0.40	0.40 Average
5	6.045	32.99	-17.01	50.00	31.89	0.50	0.60 Average
6	9.308	23.15	-26.85	50.00	22.05	0.50	0.60 Average

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Tel:02-26092133 Fax:02-26099303  
Email:ttemc@ttemc.com.tw

Data#: 105 File#: TOP- VICTOR-1.EMI Date: 2002-01-12 Time: 09:41:46



Site : No.3 Shielded room  
 Condition: CISPR CLASS-B KNW-407 LINE  
 EUT : 15 " LCD MONITOR M/N:D5063\*\*  
 Power : 120Vac/60Hz (TURN 90\*)  
 Memo : 800\*600 / 75Hz / 48KHz (D-SUB) Delta50W

Data#: 106 File#: D:\TOP- VICTOR-1.EMI Date: 2002-01-12 Time: 09:42:31

Site : No.3 Shielded room  
 Condition : CISPR CLASS-B KNW-407 LINE  
 EUT : 15 " LCD MONITOR M/N:D5063\*\*  
 Power : 120Vac/60Hz (TURN 90\*)  
 Memo : 800\*600 / 75Hz / 48KHz (D-SUB) Delta50W

Freq	Level	Over Limit		Read Line	Probe Factor	Cable Loss		Remark
		MHz	dBuV	dB	dBuV	dB	dB	
1	0.205	49.04	-14.36	63.40	48.64	0.20	0.20	QP
2	0.277	38.81	-22.11	60.92	38.41	0.20	0.20	QP
3	0.344	36.89	-22.21	59.10	36.49	0.20	0.20	QP
4	1.859	28.56	-27.44	56.00	27.76	0.40	0.40	QP
5	5.855	35.94	-24.06	60.00	34.84	0.50	0.60	QP
6	9.993	31.89	-28.11	60.00	30.79	0.50	0.60	QP

Data#: 107 File#: D:\TOP- VICTOR-1.EMI

Freq	Level	Over Limit		Read Line	Probe Factor	Cable Loss		Remark
		MHz	dBuV			dB	dBuV	

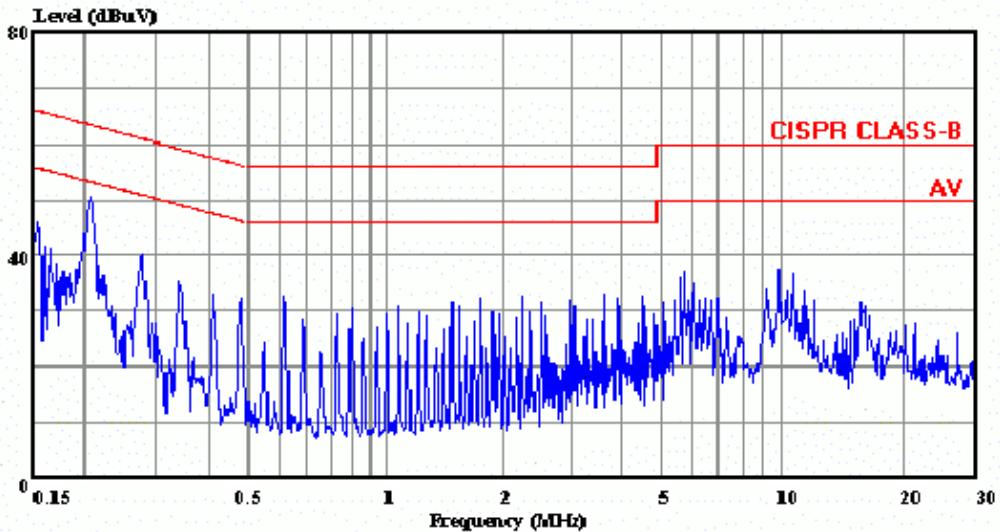
1	0.205	39.33	-14.07	53.40	38.93	0.20	0.20	Average
2	0.277	31.27	-19.65	50.92	30.87	0.20	0.20	Average
3	0.344	30.77	-18.33	49.10	30.37	0.20	0.20	Average
4	1.859	26.94	-19.06	46.00	26.14	0.40	0.40	Average
5	5.855	34.92	-15.08	50.00	33.82	0.50	0.60	Average
6	9.993	27.07	-22.93	50.00	25.97	0.50	0.60	Average



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Email:ttemc@ttemc.com.tw

Data#: 102 File#: TOP- VICTOR-1.EMI Date: 2002-01-12 Time: 09:38:08



Site : No.3 Shielded room  
Condition: CISPR CLASS-B KNW-407 NEUTRAL  
EUT : 15 " LCD MONITOR M/N:D5063\*\*  
Power : 120Vac/60Hz (TURN 90\*)  
Memo : 800\*600 / 75Hz /48KHz (D-SUB) Delta50W



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Data#: 103 File#: D:\TOP- VICTOR-1.EMI Date: 2002-01-12 Time: 09:40:20

Site : No.3 Shielded room  
Condition : CISPR CLASS-B KNW-407 NEUTRAL  
EUT : 15 " LCD MONITOR M/N:D5063\*\*  
Power : 120Vac/60Hz (TURN 90\*)  
Memo : 800\*600 / 75Hz /48KHz (D-SUB) Delta50W

Freq	Over Limit	Read Line	Probe Level	Cable Factor	Loss	Remark
MHz	dBuV	dB	dBuV	dBuV	dB	

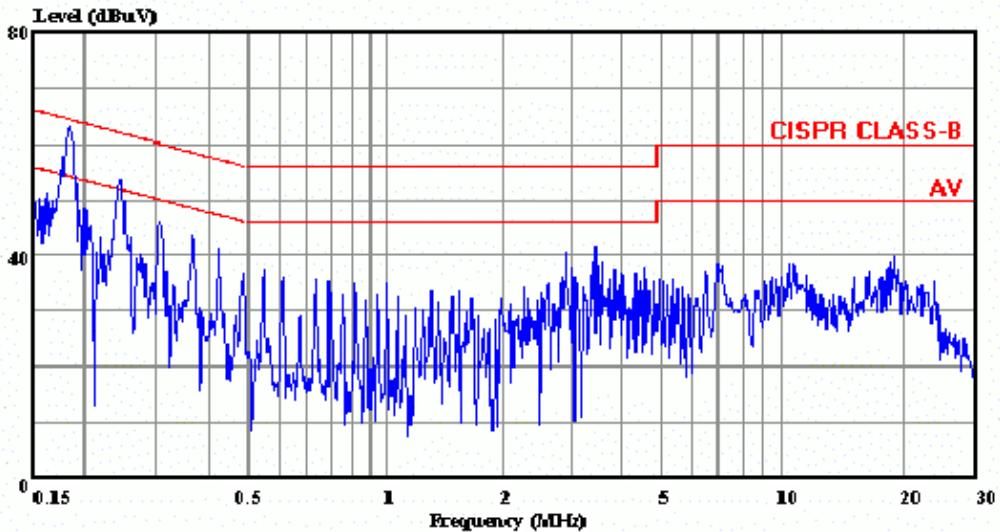
1	0.205	48.48	-14.92	63.40	48.08	0.20	0.20 QP
2	0.277	38.79	-22.13	60.92	38.39	0.20	0.20 QP
3	0.344	35.77	-23.33	59.10	35.37	0.20	0.20 QP
4	1.859	31.54	-24.46	56.00	30.74	0.40	0.40 QP
5	5.855	35.76	-24.24	60.00	34.66	0.50	0.60 QP
6	9.993	35.18	-24.82	60.00	34.08	0.50	0.60 QP

Data#: 104 File#: D:\TOP- VICTOR-1.EMI

Freq	Over Limit	Read Line	Probe Level	Cable Factor	Loss	Remark
MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.205	39.40	-14.00	53.40	39.00	0.20 0.20 Average
2	0.277	30.05	-20.87	50.92	29.65	0.20 0.20 Average
3	0.344	31.52	-17.58	49.10	31.12	0.20 0.20 Average
4	1.859	30.89	-15.11	46.00	30.09	0.40 0.40 Average
5	5.855	34.41	-15.59	50.00	33.31	0.50 0.60 Average
6	9.993	30.35	-19.65	50.00	29.25	0.50 0.60 Average

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Email:ttemc@ttemc.com.tw

Data#: 108 File#: TOP- VICTOR-1.EMI Date: 2002-01-12 Time: 09:46:12



Site : No.3 Shielded room  
 Condition: CISPR CLASS-B KNW-407 LINE  
 EUT : 15 " LCD MONITOR M/N:D5063\*\*  
 Power : 120Vac/60Hz (TURN 90\*)  
 Memo : 800\*600 / 75Hz /48KHz (D-SUB) LSE50W

Data#: 109 File#: D:\TOP- VICTOR-1.EMI Date: 2002-01-12 Time: 09:48:47

Site : No.3 Shielded room

Condition : CISPR CLASS-B KNW-407 LINE

EUT : 15 " LCD MONITOR M/N:D5063\*\*

Power : 120Vac/60Hz (TURN 90\*)

Memo : 800\*600 / 75Hz /48KHz (D-SUB) LSE50W

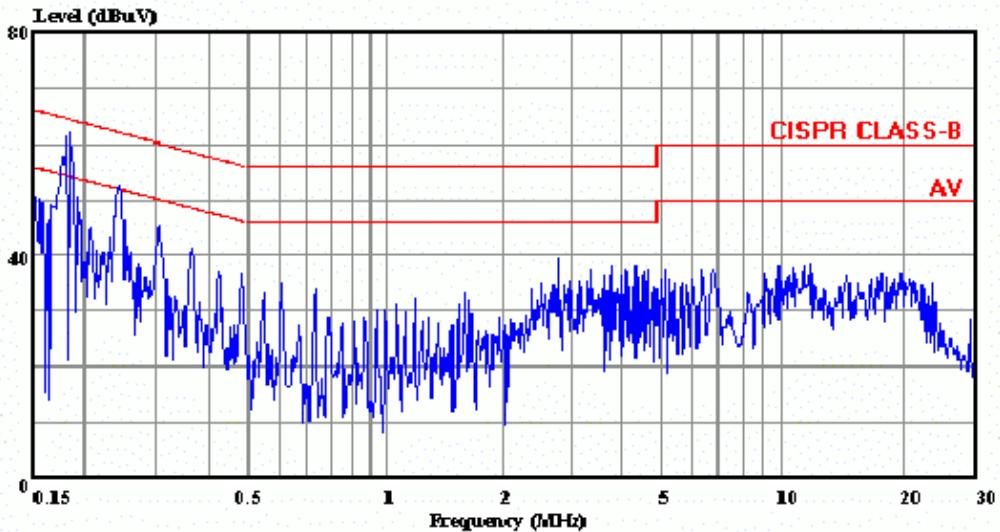
Freq	Level	Over Limit		Read Line	Probe Factor	Cable	
		MHz	dBuV	dB	dBuV	dB	dB
1 !	0.182	61.34	-3.06	64.40	60.74	0.40	0.20 QP
2	0.242	51.57	-10.47	62.04	51.17	0.20	0.20 QP
3	0.307	44.28	-15.78	60.06	43.88	0.20	0.20 QP
4	3.538	37.14	-18.86	56.00	36.34	0.40	0.40 QP
5	10.798	35.34	-24.66	60.00	33.84	0.80	0.70 QP
6	19.223	30.37	-29.63	60.00	28.77	0.90	0.70 QP

Data#: 110 File#: D:\TOP- VICTOR-1.EMI

Freq	Level	Over Limit		Read Line	Probe Factor	Cable	
		MHz	dBuV	dB	dBuV	dB	dB
1 !	0.181	49.59	-4.86	54.45	48.99	0.40	0.20 Average
2	0.241	40.07	-11.99	52.06	39.67	0.20	0.20 Average
3	0.306	36.24	-13.83	50.07	35.84	0.20	0.20 Average
4	3.538	26.91	-19.09	46.00	26.11	0.40	0.40 Average
5	10.798	25.81	-24.19	50.00	24.31	0.80	0.70 Average
6	19.241	26.89	-23.11	50.00	25.29	0.90	0.70 Average

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Data#: 111 File#: TOP- VICTOR-1.EMI Date: 2002-01-12 Time: 09:51:31



Site : No.3 Shielded room  
 Condition: CISPR CLASS-B KNW-407 NEUTRAL  
 EUT : 15 " LCD MONITOR M/N:D5063\*\*  
 Power : 120Vac/60Hz (TURN 90\*)  
 Memo : 800\*600 / 75Hz / 48KHz (D-SUB) LSE50W

Data#: 112 File#: D:\TOP- VICTOR-1.EMI Date: 2002-01-12 Time: 09:52:13

Site : No.3 Shielded room  
 Condition : CISPR CLASS-B KNW-407 NEUTRAL  
 EUT : 15 " LCD MONITOR M/N:D5063\*\*  
 Power : 120Vac/60Hz (TURN 90\*)  
 Memo : 800\*600 / 75Hz / 48KHz (D-SUB) LSE50W

Freq	Level	Over Limit		Read Line	Probe Factor	Cable	
		Limit	Line			Loss	Remark

1 !	0.182	60.82	-3.58	64.40	60.22	0.40	0.20 QP
2	0.242	51.33	-10.71	62.04	50.93	0.20	0.20 QP
3	0.307	42.05	-18.01	60.06	41.65	0.20	0.20 QP
4	3.538	27.30	-28.70	56.00	26.50	0.40	0.40 QP
5	10.798	30.09	-29.91	60.00	28.59	0.80	0.70 QP
6	19.223	32.29	-27.71	60.00	30.69	0.90	0.70 QP

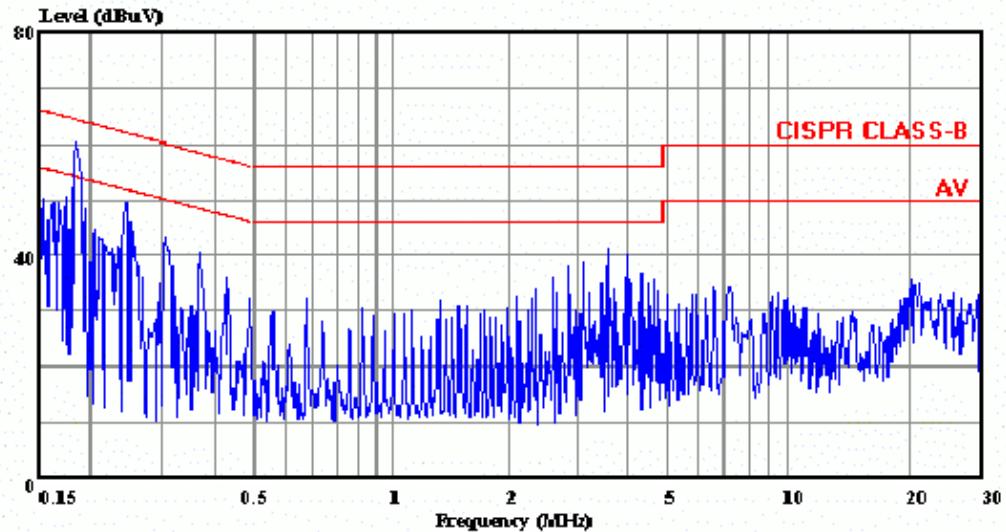
Data#: 113 File#: D:\TOP- VICTOR-1.EMI

Freq	Level	Over Limit		Read Line	Probe Factor	Cable	
		Limit	Line			Loss	Remark

1 !	0.182	49.30	-5.08	54.38	48.70	0.40	0.20 Average
2	0.242	40.32	-11.72	52.04	39.92	0.20	0.20 Average
3	0.302	33.24	-16.94	50.18	32.84	0.20	0.20 Average
4	3.521	30.85	-15.15	46.00	30.05	0.40	0.40 Average
5	10.809	29.92	-20.08	50.00	28.42	0.80	0.70 Average
6	19.240	27.13	-22.87	50.00	25.53	0.90	0.70 Average

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Email:ttemc@ttemc.com.tw

Data#: 147 File#: TOP- VICTOR-1.EMI Date: 2002-01-12 Time: 13:39:51



Site : No.3 Shielded room  
 Condition: CISPR CLASS-B KNNW-407 LINE  
 EUT : 15 " LCD MONITOR M/N:D5063\*\*  
 Power : 120Vac/60Hz (TURN 90\*)  
 Memo : 800\*600 / 75Hz /48KHz (D-SUB) LSE40W

Data#: 148 File#: D:\TOP- VICTOR-1.EMI Date: 2002-01-12 Time: 13:40:22

Site : No.3 Shielded room  
 Condition : CISPR CLASS-B KNNW-407 LINE  
 EUT : 15 " LCD MONITOR M/N:D5063\*\*  
 Power : 120Vac/60Hz (TURN 90\*)  
 Memo : 800\*600 / 75Hz /48KHz (D-SUB) LSE40W

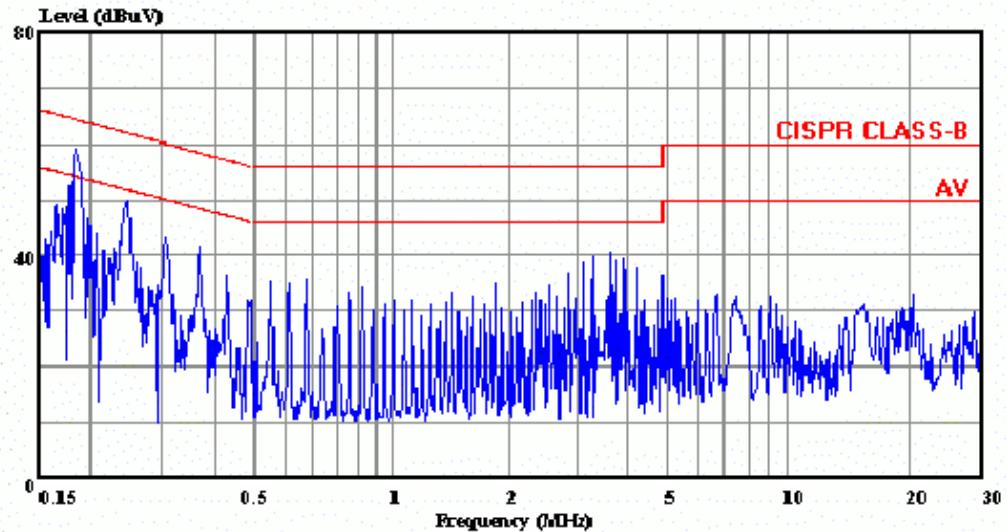
Freq	Level	Over Limit		Read Line	Probe Factor	Cable	
		MHz	dBuV	dB	dBuV	dB	dB
1 !	0.186	57.58	-6.64	64.22	56.98	0.40	0.20 QP
2	0.244	48.29	-13.65	61.94	47.89	0.20	0.20 QP
3	0.307	42.70	-17.34	60.04	42.30	0.20	0.20 QP
4	0.371	37.80	-20.67	58.47	37.40	0.20	0.20 QP
5	3.936	38.71	-17.29	56.00	37.91	0.40	0.40 QP
6	7.449	30.35	-29.65	60.00	29.25	0.50	0.60 QP

Data#: 149 File#: D:\TOP- VICTOR-1.EMI

Freq	Level	Over Limit		Read Line	Probe Factor	Cable	
		MHz	dBuV	dB	dBuV	dB	dB
1 !	0.186	45.25	-8.97	54.22	44.65	0.40	0.20 Average
2	0.244	36.15	-15.79	51.94	35.75	0.20	0.20 Average
3	0.307	32.93	-17.11	50.04	32.53	0.20	0.20 Average
4	0.371	28.20	-20.27	48.47	27.80	0.20	0.20 Average
5	3.936	31.94	-14.06	46.00	31.14	0.40	0.40 Average
6	7.449	22.43	-27.57	50.00	21.33	0.50	0.60 Average

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Data#: 150 File#: TOP- VICTOR-1.EMI Date: 2002-01-12 Time: 13:42:25



Site : No.3 Shielded room  
 Condition: CISPR CLASS-B KNW-407 NEUTRAL  
 EUT : 15 " LCD MONITOR M/N:D5063\*\*  
 Power : 120Vac/60Hz (TURN 90\*)  
 Memo : 800\*600 / 75Hz /48KHz (D-SUB) LSE40W

Data#: 151 File#: D:\TOP- VICTOR-1.EMI Date: 2002-01-12 Time: 13:42:56

Site : No.3 Shielded room  
 Condition : CISPR CLASS-B KNW-407 NEUTRAL  
 EUT : 15 " LCD MONITOR M/N:D5063\*\*  
 Power : 120Vac/60Hz (TURN 90\*)  
 Memo : 800\*600 / 75Hz /48KHz (D-SUB) LSE40W

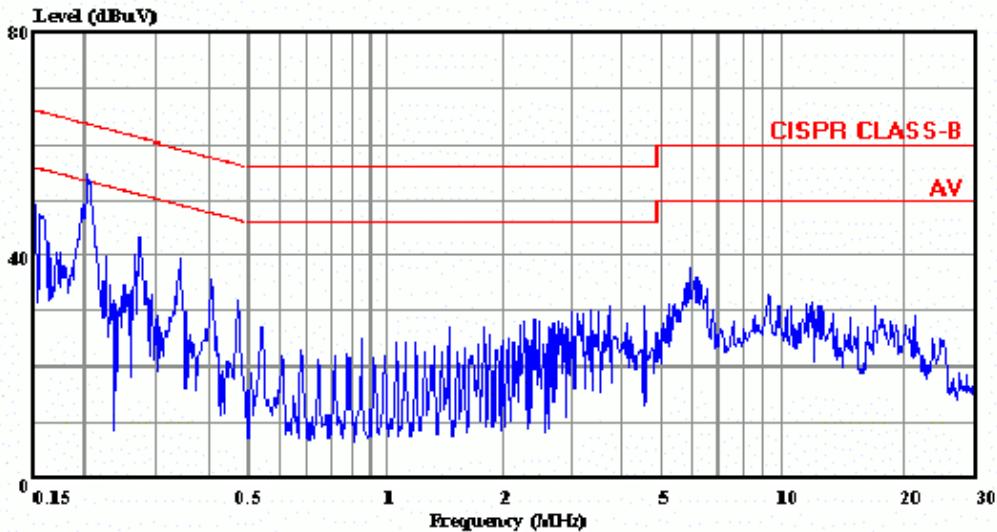
Freq	Level	Over Limit		Read Line	Probe Factor	Cable	
		MHz	dBuV			dB	dB
1 !	0.183	57.52	-6.82	64.34	56.92	0.40	0.20 QP
2	0.244	47.96	-14.00	61.96	47.56	0.20	0.20 QP
3	0.305	41.51	-18.60	60.11	41.11	0.20	0.20 QP
4	0.369	39.30	-19.23	58.53	38.90	0.20	0.20 QP
5	3.935	33.23	-22.77	56.00	32.43	0.40	0.40 QP
6	7.429	29.93	-30.07	60.00	28.83	0.50	0.60 QP

Data#: 152 File#: D:\TOP- VICTOR-1.EMI

Freq	Level	Over Limit		Read Line	Probe Factor	Cable	
		MHz	dBuV			dB	dB
1 !	0.183	45.83	-8.51	54.34	45.23	0.40	0.20 Average
2	0.244	36.70	-15.26	51.96	36.30	0.20	0.20 Average
3	0.305	33.93	-16.18	50.11	33.53	0.20	0.20 Average
4	0.369	33.75	-14.78	48.53	33.35	0.20	0.20 Average
5	3.935	19.56	-26.44	46.00	18.76	0.40	0.40 Average
6	7.429	29.13	-20.87	50.00	28.03	0.50	0.60 Average

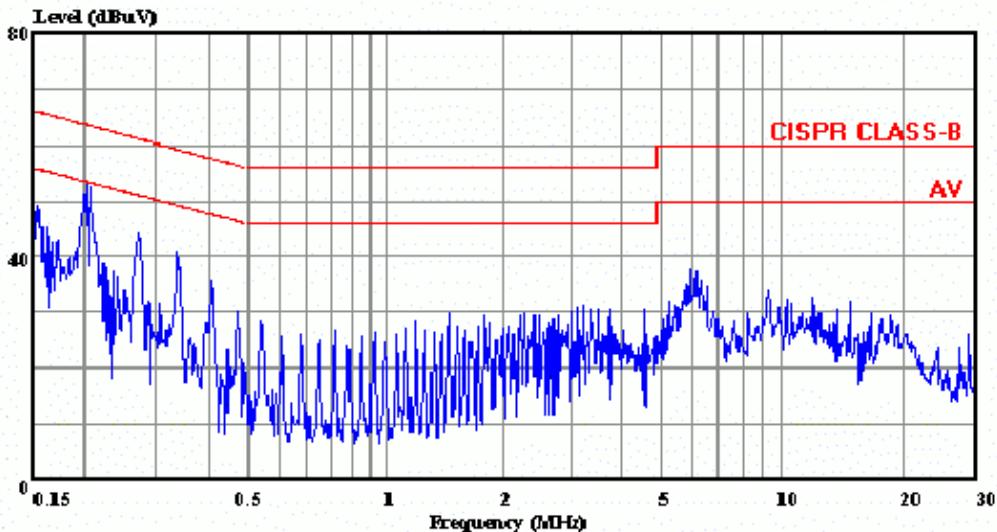
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Data#: 92 File#: TOP- VICTOR-1.EMI Date: 2002-01-12 Time: 09:23:11



Site : No.3 Shielded room  
 Condition: CISPR CLASS-B KNU-407 LINE  
 EUT : 15 " LCD MONITOR M/N:D5063\*\*  
 Power : 120Vac/60Hz  
 Memo : 800\*600 / 75Hz / 48KHz (DVI) Delta40W

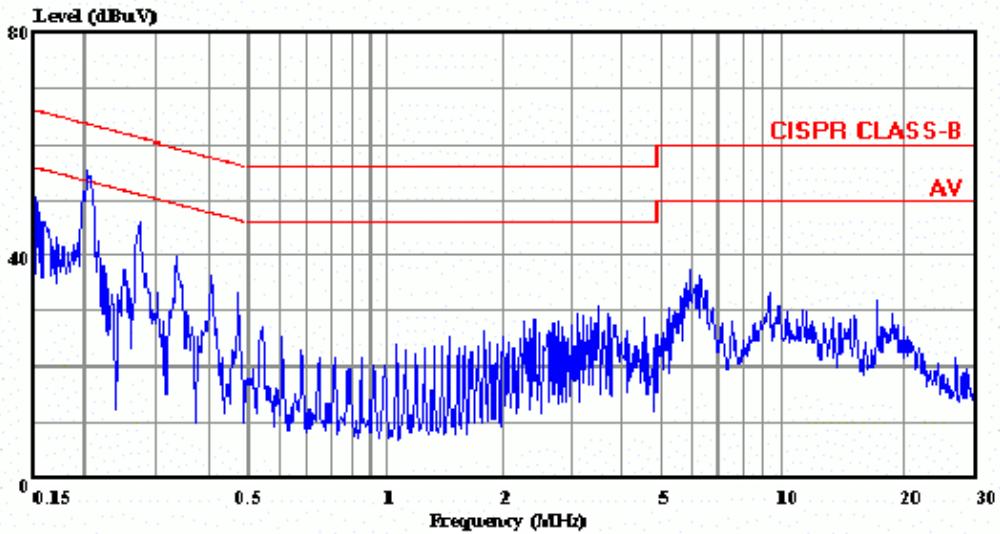
Data#: 93 File#: TOP- VICTOR-1.EMI Date: 2002-01-12 Time: 09:23:45



Site : No.3 Shielded room  
 Condition: CISPR CLASS-B KNU-407 NEUTRAL  
 EUT : 15 " LCD MONITOR M/N:D5063\*\*  
 Power : 120Vac/60Hz  
 Memo : 800\*600 / 75Hz / 48KHz (DVI) Delta40W

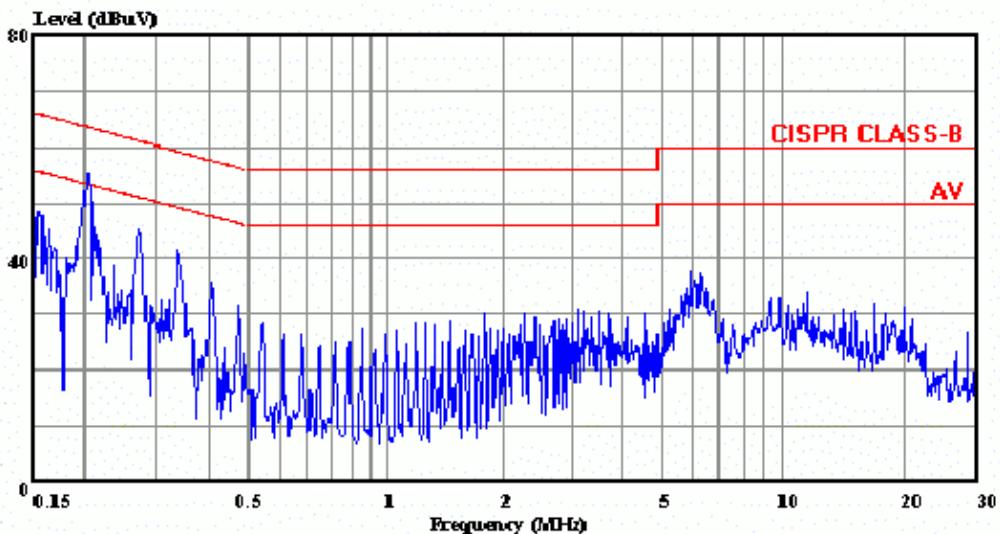
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Data#: 88 File#: TOP- VICTOR-1.EMI Date: 2002-01-12 Time: 09:17:56



Site : No.3 Shielded room  
 Condition: CISPR CLASS-B KNU-407 LINE  
 EUT : 15 " LCD MONITOR M/N:D5063\*\*  
 Power : 120Vac/60Hz  
 Memo : 1024\*768 / 75Hz /60KHz (DVI) Delta40W

Data#: 89 File#: TOP- VICTOR-1.EMI Date: 2002-01-12 Time: 09:20:39



Site : No.3 Shielded room  
 Condition: CISPR CLASS-B KNU-407 NEUTRAL  
 EUT : 15 " LCD MONITOR M/N:D5063\*\*  
 Power : 120Vac/60Hz  
 Memo : 1024\*768 / 75Hz /60KHz (DVI) Delta40W

### 3. RADIATED EMISSION TEST

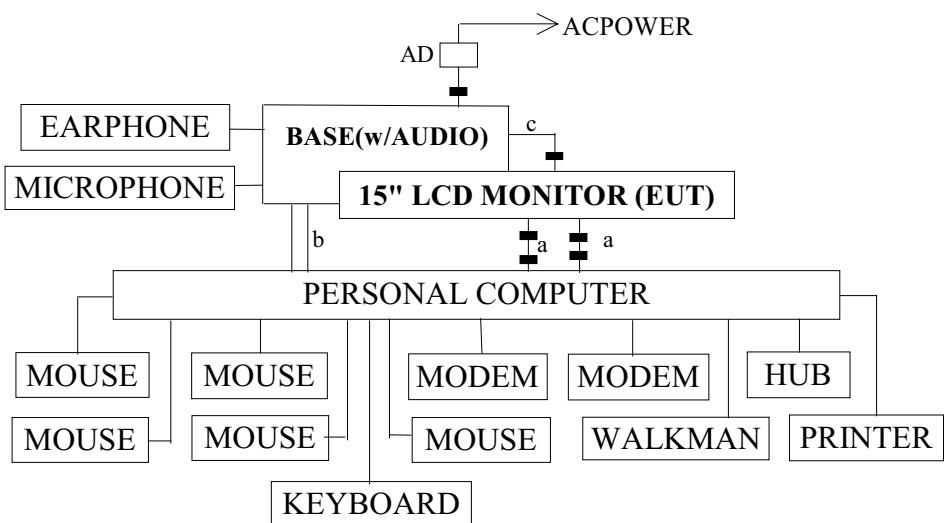
#### 3.1. Test Equipment

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	8590L	3710A01828	Apr.27, 01'	1 Year
2.	Test Receiver	R&S	ESVS10	826148/005	May 02, 01'	1 Year
3.	Biconical Antenna	Chase	VBA6106A	1258	Apr.16, 01'	1 Year
4.	Log Periodic Antenna	Chase	UPA6109	1064	Apr.16, 01'	1 Year

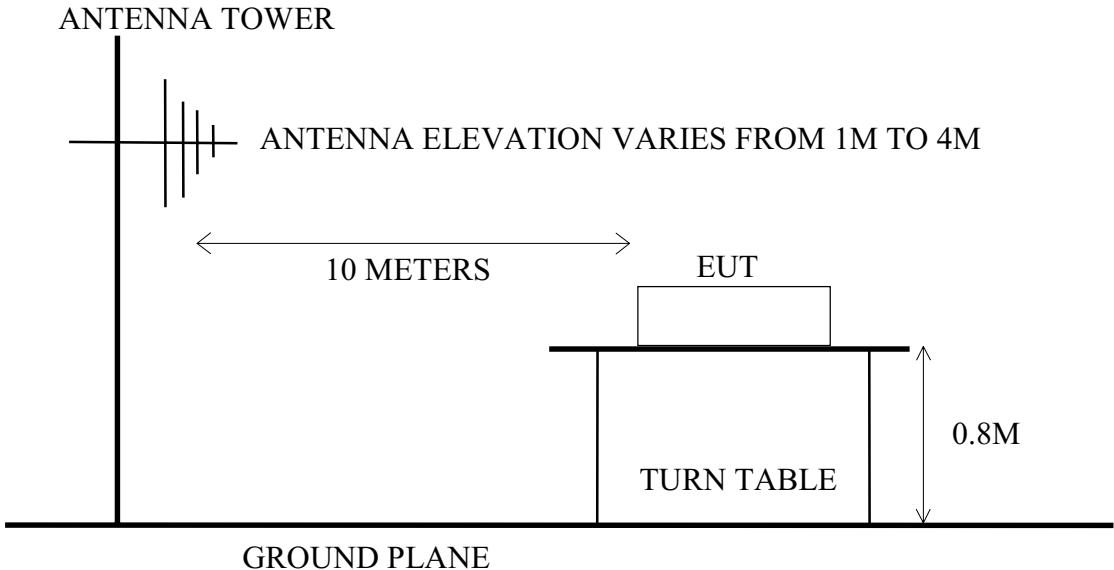
#### 3.2. Block Diagram of Test Setup

##### 3.2.1. Block Diagram of connection between EUT and simulators



■: Core, AD: AC Adapter  
 a: D-Sub or DVI Data Cable  
 b: Audio Cable, c: Power Cord for Audio Base

### 3.2.2. Open Field Test Site (10M) Setup Diagram



### 3.3. Radiation Limit (CISPR 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 (dB $\mu$ V/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 was listed in 2.5. except the test set up replaced by section 3.2.

### 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.

The test voltage was AC 120V/60Hz via AC Adapter of EUT.

The following test modes were done during radiated measurement and all the test results are listed in section 3.8. (※worst case)

Mode	Cable	Frequency Resolution	AC Adapter	Panel Angle
1.	D-Sub	800*600/75Hz, 48kHz	Delta (40W)	0°
2.	D-Sub	1024*768/75Hz, 60kHz	Delta (40W)	0°
※ 3.	DVI	800*600/75Hz, 48kHz	Delta (40W)	0°
4.	DVI	1024*768/75Hz, 60kHz	Delta (40W)	0°
※ 5.	DVI	800*600/75Hz, 48kHz	Delta (40W)	90°
6.	DVI	800*600/75Hz, 48kHz	Delta (50W)	90°
7.	DVI	800*600/75Hz, 48kHz	LSE (40W)	90°
8.	DVI	800*600/75Hz, 48kHz	LSE (50W)	90°

### 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 limits.

Date of Test : Jan. 09, 2002 Temperature : 19.5°C

EUT : 15" LCD Monitor Humidity : 57%

Test Mode 1 : 800\*600/75Hz, 48kHz (Cable: D-Sub, Adapter: Delta(40W), Panel Angle:0°

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading Horizontal dBuV	Emission Level Horizontal dBuV/m	Limits dBuV/m	Margin dB
42.311	19.87	1.50	- 1.17	20.20	30.00	9.80
73.814	13.59	1.98	- 2.28	13.29	30.00	16.71
105.314	18.52	2.36	- 2.90	17.98	30.00	12.02
126.331	19.90	2.69	- 2.40	20.19	30.00	9.81
178.869	22.39	3.19	- 2.80	22.78	30.00	7.22
220.818	22.90	3.61	- 2.95	23.56	30.00	6.44
273.316	26.33	4.01	- 1.63	28.71	37.00	8.29
336.003	14.64	4.59	5.03	24.26	37.00	12.74
346.503	15.02	4.69	3.13	22.84	37.00	14.16
446.393	16.26	5.75	5.99	28.00	37.00	9.00
458.168	16.44	5.91	6.29	28.64	37.00	8.36
503.993	17.77	6.21	0.01	23.99	37.00	13.01
546.003	19.09	6.37	- 0.55	24.91	37.00	12.09
672.016	20.43	8.42	0.35	29.20	37.00	7.80

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading Vertical dBuV	Emission Level Vertical dBuV/m	Limits dBuV/m	Margin dB
42.203	19.65	1.50	- 1.68	19.47	30.00	10.53
73.717	14.16	1.98	1.09	17.23	30.00	12.77
126.216	19.39	2.69	- 2.22	19.86	30.00	10.14
168.217	22.62	3.11	- 2.67	23.06	30.00	6.94
189.215	23.01	3.28	- 2.51	23.78	30.00	6.22
241.717	22.80	3.83	- 1.15	25.48	37.00	11.52
336.015	16.47	4.59	3.22	24.28	37.00	12.72
346.003	16.55	4.68	2.38	23.61	37.00	13.39
458.168	17.94	5.91	6.67	30.52	37.00	6.48
472.018	18.06	5.93	1.20	25.19	37.00	11.81
503.993	18.28	6.21	1.08	25.57	37.00	11.43
520.536	18.60	6.33	- 0.17	24.76	37.00	12.24
672.016	20.54	8.42	- 1.30	27.66	37.00	9.34

Remark : 1. All reading are Quasi-Peak values.

Date of Test : Jan. 09, 2002 Temperature : 19.5°C  
 EUT : 15" LCD Monitor Humidity : 57%  
 Test Mode 2 : 1024\*768/75Hz, 60kHz (Cable: D-Sub, Adapter: Delta (40W), Panel Angle:0°)

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading Horizontal dBuV	Emission Level Horizontal dBuV/m	Limits dBuV/m	Margin dB
59.368	13.37	1.79	- 0.01	15.15	30.00	14.85
72.463	13.32	1.96	- 0.85	14.43	30.00	15.57
131.390	20.25	2.75	- 2.00	21.00	30.00	9.00
170.675	22.70	3.13	- 2.66	23.17	30.00	6.83
209.960	22.94	3.51	- 2.40	24.05	30.00	5.95
236.150	22.98	3.77	- 0.06	26.69	37.00	10.31
268.888	26.16	3.98	- 1.70	28.44	37.00	8.56
275.435	26.50	4.02	- 0.90	29.62	37.00	7.38
379.102	15.35	4.96	2.90	23.21	37.00	13.79
425.767	15.93	5.55	1.26	22.74	37.00	14.26
472.432	16.81	5.93	2.79	25.53	37.00	11.47
487.987	17.37	6.05	6.92	30.34	37.00	6.66
519.097	17.97	6.33	- 0.89	23.41	37.00	13.59
565.762	19.48	6.54	- 0.86	25.16	37.00	11.84
659.092	20.39	8.05	- 1.16	27.28	37.00	9.72

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading Vertical dBuV	Emission Level Vertical dBuV/m	Limits dBuV/m	Margin dB
60.167	13.23	1.80	- 0.09	14.94	30.00	15.06
92.732	16.17	2.19	- 1.82	16.54	30.00	13.46
144.836	20.75	2.88	- 2.75	20.88	30.00	9.12
177.401	23.31	3.18	- 3.01	23.48	30.00	6.52
209.967	23.52	3.51	- 2.07	24.96	30.00	5.04
216.480	23.38	3.57	- 2.99	23.96	30.00	6.04
275.096	24.28	4.02	- 0.95	27.35	37.00	9.65
332.370	16.37	4.55	2.51	23.43	37.00	13.57
440.477	17.68	5.65	0.24	23.57	37.00	13.43
472.365	18.06	5.93	- 0.89	23.10	37.00	13.90
487.920	17.97	6.05	- 1.04	22.98	37.00	14.02
550.613	19.32	6.39	- 1.39	24.32	37.00	12.68
571.103	19.76	6.60	- 1.30	25.06	37.00	11.94
721.245	21.25	8.59	- 0.93	28.91	37.00	8.09

Remark : 1. All reading are Quasi-Peak values.

Date of Test : Jan. 09, 2002 Temperature : 19.5°C  
 EUT : 15" LCD Monitor Humidity : 57%  
 Test Mode 3 : 800\*600/75Hz, 48kHz (Cable: DVI, Adapter: Delta(40W), Panel Angle:0°)

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading Horizontal dBuV	Emission Level Horizontal dBuV/m	Limits dBuV/m	Margin dB
42.067	20.01	1.49	- 0.58	20.92	30.00	9.08
52.529	15.13	1.69	4.58	21.40	30.00	8.60
94.616	17.17	2.21	3.27	22.65	30.00	7.35
136.567	20.74	2.80	- 2.82	20.72	30.00	9.28
157.567	22.30	3.01	- 2.77	22.54	30.00	7.46
199.503	22.23	3.40	- 2.78	22.85	30.00	7.15
252.003	24.66	3.88	- 1.55	26.99	37.00	10.01
335.990	14.64	4.59	6.57	25.80	37.00	11.20
446.393	16.26	5.75	4.67	26.68	37.00	10.32
458.168	16.44	5.91	8.86	31.21	37.00	5.79
495.008	17.60	6.12	8.95	32.67	37.00	4.33
520.793	17.99	6.33	1.45	25.77	37.00	11.23
672.005	20.43	8.42	- 0.58	28.27	37.00	8.73
801.000	22.78	8.40	1.45	32.63	37.00	4.37
* <b>891.000</b>	<b>22.61</b>	<b>8.50</b>	<b>2.24</b>	<b>33.35</b>	<b>37.00</b>	<b>3.65</b>

Remark : 1. All reading are Quasi-Peak values.  
 2. “\*” The worst emission was detected at 891.000MHz with corrected signal level of 33.35dBuV/m (limit was 37dBuV/m) when the antenna was at horizontal polarization and was at 1m high and the turn table was at 225° .  
 3. 0° is the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

Date of Test : Jan. 09, 2002 Temperature : 19.5°C  
 EUT : 15" LCD Monitor Humidity : 57%  
 Test Mode 3 : 800\*600/75Hz, 48kHz (Cable: DVI, Adapter: Delta(40W), Panel Angle:0°)

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading Vertical dBuV	Emission Level Vertical dBuV/m	Limits dBuV/m	Margin dB
42.177	19.69	1.50	- 1.39	19.80	30.00	10.20
52.654	15.41	1.70	4.49	21.60	30.00	8.40
84.155	15.52	2.08	- 0.58	17.02	30.00	12.98
126.155	19.39	2.69	- 2.19	19.89	30.00	10.11
178.653	23.24	3.19	- 3.03	23.40	30.00	6.60
220.652	23.14	3.61	- 2.99	23.76	30.00	6.24
283.652	25.18	4.09	- 1.16	28.11	37.00	8.89
335.990	16.47	4.59	3.74	24.80	37.00	12.20
446.393	17.78	5.75	5.15	28.68	37.00	8.32
458.168	17.94	5.91	9.36	33.21	37.00	3.79
* <b>495.008</b>	<b>17.87</b>	<b>6.12</b>	<b>9.68</b>	<b>33.67</b>	<b>37.00</b>	<b>3.33</b>
520.793	18.59	6.33	1.85	26.77	37.00	10.23
672.005	20.54	8.42	0.31	29.27	37.00	7.73
801.000	22.72	8.40	1.03	32.15	37.00	4.85
891.000	24.08	8.50	0.80	33.38	37.00	3.62

Remark : 1. All reading are Quasi-Peak values.  
 2. “\*” The worst emission was detected at 495.008MHz with corrected signal level of 33.67dBuV/m (limit was 37dBuV/m) when the antenna was at vertical polarization and was at 3.3m high and the turn table was at 210° .  
 3. 0° is the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

Date of Test : Jan. 09, 2002 Temperature : 19.5°C  
 EUT : 15" LCD Monitor Humidity : 57%  
 Test Mode 4 : 1024\*768/75Hz, 60kHz (Cable: DVI, Adapter: Delta (40W), Panel Angle:0°)

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading Horizontal dBuV	Emission Level Horizontal dBuV/m	Limits dBuV/m	Margin dB
73.814	13.59	1.98	- 0.65	14.92	30.00	15.08
114.319	19.14	2.50	- 3.33	18.31	30.00	11.69
134.572	20.55	2.78	- 2.88	20.45	30.00	9.55
154.824	22.08	2.98	- 3.00	22.06	30.00	7.94
178.970	22.39	3.19	- 2.11	23.47	30.00	6.53
208.830	22.87	3.50	- 2.91	23.46	30.00	6.54
229.083	23.13	3.69	- 2.92	23.90	30.00	6.10
249.335	24.24	3.87	- 1.83	26.28	37.00	10.72
276.338	26.66	4.04	- 1.20	29.50	37.00	7.50
336.000	14.64	4.59	4.48	23.71	37.00	13.29
393.758	15.73	5.03	6.40	27.16	37.00	9.84
472.508	16.81	5.93	2.73	25.47	37.00	11.53
630.008	20.33	7.18	0.18	27.69	37.00	9.31
787.506	22.24	8.55	2.27	33.06	37.00	3.94
801.004	22.78	8.40	1.84	33.02	37.00	3.98
866.259	23.41	8.33	- 1.38	30.36	37.00	6.64
945.003	24.06	8.62	- 1.10	31.58	37.00	5.42

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading Vertical dBuV	Emission Level Vertical dBuV/m	Limits dBuV/m	Margin dB
73.814	14.18	1.98	0.95	17.11	30.00	12.89
114.319	17.33	2.50	0.84	20.67	30.00	9.33
134.571	20.38	2.78	- 2.54	20.62	30.00	9.38
154.824	22.11	2.98	- 2.71	22.38	30.00	7.62
178.970	23.21	3.19	- 0.96	25.44	30.00	4.56
208.830	23.50	3.50	- 2.98	24.02	30.00	5.98
229.083	23.10	3.69	- 2.79	24.00	30.00	6.00
249.335	22.93	3.87	- 0.99	25.81	37.00	11.19
276.338	24.32	4.04	- 1.22	27.14	37.00	9.86
393.758	16.89	5.03	5.18	27.10	37.00	9.90
459.334	17.96	5.92	- 0.38	23.50	37.00	13.50
630.013	20.60	7.18	1.71	29.49	37.00	7.51
787.522	22.15	8.55	1.55	32.25	37.00	4.75
801.004	22.72	8.40	0.98	32.10	37.00	4.90
866.259	23.56	8.33	1.04	32.93	37.00	4.07
945.013	24.54	8.62	- 0.63	32.53	37.00	4.47

Remark : 1. All reading are Quasi-Peak values.

Date of Test : Jan. 11, 2002 Temperature : 25.2°C  
 EUT : 15" LCD Monitor Humidity : 55%  
 Test Mode 5 : 800\*600/75Hz, 48kHz (Cable: DVI, Adapter: Delta (40W), Panel Angle:90°

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading Horizontal dBuV	Emission Level Horizontal dBuV/m	Limits dBuV/m	Margin dB
83.201	15.53	2.08	- 1.17	16.44	30.00	13.56
121.382	19.59	2.61	- 2.15	20.05	30.00	9.95
150.018	21.74	2.94	- 2.89	21.79	30.00	8.21
178.654	22.42	3.19	- 1.92	23.69	30.00	6.31
216.835	22.96	3.58	- 2.87	23.67	30.00	6.33
245.471	23.68	3.85	- 1.63	25.90	37.00	11.10
283.652	27.44	4.09	- 1.14	30.39	37.00	6.61
336.060	14.64	4.59	4.41	23.64	37.00	13.36
446.393	16.26	5.75	4.13	26.14	37.00	10.86
458.175	16.44	5.91	8.92	31.27	37.00	5.73
* <b>494.999</b>	<b>17.60</b>	<b>6.12</b>	<b>10.02</b>	<b>33.74</b>	<b>37.00</b>	<b>3.26</b>
544.497	19.05	6.37	0.27	25.69	37.00	11.31
643.499	20.34	7.56	1.30	29.20	37.00	7.80
801.000	22.78	8.40	1.38	32.56	37.00	4.44
891.000	22.61	8.50	1.33	32.44	37.00	4.56

Remark : 1. All reading are Quasi-Peak values.  
 2. “\*” The worst emission was detected at 494.999MHz with corrected signal level of 33.74dBuV/m (limit was 37dBuV/m) when the antenna was at horizontal polarization and was at 1.5m high and the turn table was at 300° .  
 3. 0° is the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

Date of Test : Jan. 11, 2002 Temperature : 25.2°C  
 EUT : 15" LCD Monitor Humidity : 55%  
 Test Mode 5 : 800\*600/75Hz, 48kHz (Cable: DVI, Adapter: Delta (40W), Panel Angle:90°

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading Vertical dBuV	Emission Level Vertical dBuV/m	Limits dBuV/m	Margin dB
54.565	14.65	1.72	2.94	19.31	30.00	10.69
83.201	15.42	2.08	- 0.13	17.37	30.00	12.63
121.382	18.41	2.61	- 1.23	19.79	30.00	10.21
150.018	21.34	2.94	- 1.98	22.30	30.00	7.70
178.653	23.24	3.19	- 1.78	24.65	30.00	5.35
216.835	23.34	3.58	- 2.95	23.97	30.00	6.03
245.471	22.87	3.85	- 1.73	24.99	37.00	12.01
283.652	25.18	4.09	- 1.13	28.14	37.00	8.86
336.060	16.47	4.59	4.58	25.64	37.00	11.36
446.393	17.78	5.75	1.61	25.14	37.00	11.86
458.175	17.94	5.91	6.73	30.58	37.00	6.42
494.999	17.87	6.12	8.49	32.48	37.00	4.52
544.497	19.19	6.37	0.13	25.69	37.00	11.31
643.499	20.54	7.56	0.10	28.20	37.00	8.80
801.000	22.72	8.40	1.34	32.46	37.00	4.54
* <b>891.000</b>	<b>24.08</b>	<b>8.50</b>	<b>0.36</b>	<b>32.94</b>	<b>37.00</b>	<b>4.06</b>

- Remark :
1. All reading are Quasi-Peak values.
  2. “\*” The worst emission was detected at 891.000MHz with corrected signal level of 32.94dBuV/m (limit was 37dBuV/m) when the antenna was at vertical polarization and was at 2m high and the turn table was at 45° .
  3. 0° is the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

Date of Test : Jan. 11, 2002 Temperature : 25.2°C  
 EUT : 15" LCD Monitor Humidity : 55%  
 Test Mode 6 : 800\*600/75Hz, 48kHz (Cable: DVI, Adapter: Delta (50W), Panel Angle:90°

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading Horizontal dBuV	Emission Level Horizontal dBuV/m	Limits dBuV/m	Margin dB
54.565	14.55	1.72	1.30	17.57	30.00	12.43
83.201	15.53	2.08	- 1.46	16.15	30.00	13.85
121.381	19.59	2.61	- 2.23	19.97	30.00	10.03
150.018	21.74	2.94	- 2.25	22.43	30.00	7.57
178.654	22.42	3.19	- 2.38	23.23	30.00	6.77
216.834	22.96	3.58	- 2.93	23.61	30.00	6.39
245.470	23.68	3.85	- 1.94	25.59	37.00	11.41
283.652	27.44	4.09	- 1.77	29.76	37.00	7.24
336.060	14.64	4.59	3.94	23.17	37.00	13.83
446.394	16.26	5.75	5.18	27.19	37.00	9.81
458.175	16.44	5.91	8.47	30.82	37.00	6.18
494.999	17.60	6.12	9.53	33.25	37.00	3.75
544.498	19.05	6.37	0.66	26.08	37.00	10.92
643.500	20.34	7.56	0.89	28.79	37.00	8.21
801.001	22.78	8.40	1.16	32.34	37.00	4.66
890.999	22.61	8.50	1.00	32.11	37.00	4.89

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading Vertical dBuV	Emission Level Vertical dBuV/m	Limits dBuV/m	Margin dB
54.565	14.65	1.72	3.32	19.69	30.00	10.31
83.201	15.42	2.08	1.47	18.97	30.00	11.03
121.381	18.41	2.61	- 1.51	19.51	30.00	10.49
150.017	21.34	2.94	- 1.83	22.45	30.00	7.55
178.654	23.24	3.19	- 1.89	24.54	30.00	5.46
216.835	23.34	3.58	- 2.79	24.13	30.00	5.87
245.471	22.87	3.85	- 2.17	24.55	37.00	12.45
283.652	25.18	4.09	- 1.20	28.07	37.00	8.93
336.060	16.47	4.59	4.98	26.04	37.00	10.96
446.394	17.78	5.75	0.84	24.37	37.00	12.63
458.175	17.94	5.91	7.21	31.06	37.00	5.94
495.000	17.87	6.12	8.91	32.90	37.00	4.10
544.498	19.19	6.37	0.54	26.10	37.00	10.90
643.499	20.54	7.56	0.69	28.79	37.00	8.21
801.000	22.72	8.40	1.02	32.14	37.00	4.86
891.001	24.08	8.50	0.42	33.00	37.00	4.00

Remark : 1. All reading are Quasi-Peak values.

Date of Test : Jan. 11, 2002 Temperature : 25.2°C  
 EUT : 15" LCD Monitor Humidity : 55%  
 Test Mode 7 : 800\*600/75Hz, 48kHz (Cable: DVI, Adapter: LSE (40W), Panel Angle:90°

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading Horizontal dBuV	Emission Level Horizontal dBuV/m	Limits dBuV/m	Margin dB
54.565	14.55	1.72	0.05	16.32	30.00	13.68
54.565	14.65	1.72	4.08	20.45	30.00	9.55
83.200	15.53	2.08	-1.24	16.37	30.00	13.63
83.201	15.42	2.08	0.29	17.79	30.00	12.21
121.382	19.59	2.61	-1.41	20.79	30.00	9.21
121.382	18.41	2.61	-0.34	20.68	30.00	9.32
150.018	21.74	2.94	-2.55	22.13	30.00	7.87
150.018	21.34	2.94	-2.82	21.46	30.00	8.54
178.654	22.42	3.19	-2.13	23.48	30.00	6.52
178.654	23.24	3.19	-1.54	24.89	30.00	5.11
216.835	22.96	3.58	-2.65	23.89	30.00	6.11
216.835	23.34	3.58	-3.35	23.57	30.00	6.43
245.471	23.68	3.85	-0.89	26.64	37.00	10.36
245.471	22.87	3.85	-1.25	25.47	37.00	11.53
283.652	27.44	4.09	-1.08	30.45	37.00	6.55
283.652	25.18	4.09	-0.76	28.51	37.00	8.49

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading Vertical dBuV	Emission Level Vertical dBuV/m	Limits dBuV/m	Margin dB
54.565	14.65	1.72	4.08	20.45	30.00	9.55
83.201	15.42	2.08	0.29	17.79	30.00	12.21
121.382	18.41	2.61	-0.34	20.68	30.00	9.32
150.018	21.34	2.94	-2.82	21.46	30.00	8.54
178.654	23.24	3.19	-1.54	24.89	30.00	5.11
216.835	23.34	3.58	-3.35	23.57	30.00	6.43
245.471	22.87	3.85	-1.25	25.47	37.00	11.53
283.652	25.18	4.09	-0.76	28.51	37.00	8.49
336.060	16.47	4.59	4.71	25.77	37.00	11.23
446.394	17.78	5.75	1.81	25.34	37.00	11.66
458.175	17.94	5.91	6.64	30.49	37.00	6.51
494.999	17.87	6.12	8.74	32.73	37.00	4.27
544.498	19.19	6.37	-0.28	25.28	37.00	11.72
643.499	20.54	7.56	0.59	28.69	37.00	8.31
801.001	22.72	8.40	0.69	31.81	37.00	5.19
890.999	24.08	8.50	0.66	33.24	37.00	3.76

Remark : 1. All reading are Quasi-Peak values.

Date of Test : Jan. 11, 2002 Temperature : 25.2°C  
 EUT : 15" LCD Monitor Humidity : 55%  
 Test Mode 8 : 800\*600/75Hz, 48kHz (Cable: DVI, Adapter: LSE (50W), Panel Angle:90°

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading Horizontal dBuV	Emission Level Horizontal dBuV/m	Limits dBuV/m	Margin dB
54.564	14.55	1.72	0.07	16.34	30.00	13.66
83.201	15.53	2.08	- 0.68	16.93	30.00	13.07
121.382	19.59	2.61	- 1.41	20.79	30.00	9.21
150.018	21.74	2.94	- 2.83	21.85	30.00	8.15
178.653	22.42	3.19	- 2.13	23.48	30.00	6.52
216.835	22.96	3.58	- 2.59	23.95	30.00	6.05
245.471	23.68	3.85	- 1.90	25.63	37.00	11.37
283.651	27.44	4.09	- 1.16	30.37	37.00	6.63
336.060	14.64	4.59	5.03	24.26	37.00	12.74
446.394	16.26	5.75	3.79	25.80	37.00	11.20
458.175	16.44	5.91	8.23	30.58	37.00	6.42
495.000	17.60	6.12	9.34	33.06	37.00	3.94
544.499	19.05	6.37	0.57	25.99	37.00	11.01
643.500	20.34	7.56	1.46	29.36	37.00	7.64
801.000	22.78	8.40	1.12	32.30	37.00	4.70
891.001	22.61	8.50	0.87	31.98	37.00	5.02

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading Vertical dBuV	Emission Level Vertical dBuV/m	Limits dBuV/m	Margin dB
54.565	14.65	1.72	4.24	20.61	30.00	9.39
83.201	15.42	2.08	1.72	19.22	30.00	10.78
121.382	18.41	2.61	- 1.34	19.68	30.00	10.32
150.018	21.34	2.94	- 1.89	22.39	30.00	7.61
178.654	23.24	3.19	- 1.49	24.94	30.00	5.06
216.835	23.34	3.58	- 2.72	24.20	30.00	5.80
245.471	22.87	3.85	- 2.01	24.71	37.00	12.29
283.651	25.18	4.09	- 1.19	28.08	37.00	8.92
336.060	16.47	4.59	4.68	25.74	37.00	11.26
446.394	17.78	5.75	2.18	25.71	37.00	11.29
458.175	17.94	5.91	6.63	30.48	37.00	6.52
494.999	17.87	6.12	8.85	32.84	37.00	4.16
544.498	19.19	6.37	0.31	25.87	37.00	11.13
643.499	20.54	7.56	0.00	28.10	37.00	8.90
801.000	22.72	8.40	1.13	32.25	37.00	4.75
891.000	24.08	8.50	0.64	33.22	37.00	3.78

Remark : 1. All reading are Quasi-Peak values.

#### 4. MODIFICATIONS TO EUT

1. Added 2pcs ferrite cores on the D-Sub signal cable.
2. Added 2pcs ferrite cores on the DVI signal cable.
3. Added a ferrite core on the DC power cord of Audio Base.
4. Added a ferrite core on the cable of OSD control board.
5. Added a ferrite core on the LVDS cable of LCD Panel.

## 5. DEVIATION TO TEST SPECIFICATIONS

【NONE】