

EXHIBIT 5

Test Report

APPLICATION FOR CERTIFICATION
On Behalf of
Matsushita Electric Industrial Co., Ltd.
15" Multi-Scan Color Monitor

Model : (1)TX-T5F73 (2)DC5F73

FCC ID : ACJ92512126

Prepared for : Matsushita Electric Industrial Co., Ltd.
One Panasonic Way, Panazip 4B-8
Secaucus, NJ 07094, U.S.A.

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

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1. GENERAL INFORMATION

1.1. Description of Device (EUT)

Description	:	15" Multi-Scan Color Monitor
Model Number	:	(1)TX-T5F73 (2)DC5F73 M/N TX-T5F73 is for Panasonic Brand and M/N DC5F73 is for OEM manufacturer.
Serial Number	:	TC8460005
Applicant	:	Matsushita Electric Industrial Co., Ltd. One Panasonic Way, Panazip 4B-8 Secaucus, NJ 07094, U.S.A.
Manufacturer	:	Matsushita Electric (Taiwan) Co., Ltd. 579 Yuan San Road, Chung-Ho, Taipei Hsien 23506, Taiwan, R.O.C.
Trade Name	:	(1) Panasonic, (2) No Brand
CRT	:	Chunghwa, M/N M36AES83X46 S/N B8313785974
Data Cable	:	Shielded, Undetachable, 1.5m Bonded a ferrite core
Power Cord	:	Non-Shielded, Detachable, 1.8m
Date of Receipt of Sample	:	Sep. 18, 1998
Date of Test	:	Sep. 18 ~ Oct. 08, 1998

1.2. Tested Supporting System Details

1.2.1. PERSONAL COMPUTER

Model Number	:	PC763
Serial Number	:	TA421U7881
FCC ID	:	AO9-PC76X
Manufacturer	:	Digital
Switching Power Supply	:	Astec M/N SA-201-3440
Floppy Driver	:	Teac Corp. 3.5" M/N FD-235HF
VGA Card	:	Sixgraph Computing Ltd. M/N Wiz 924 S/N 189477 FCC ID JYOWIZ01
Disk Ctrl Card	:	Within Mother Board
Serial/Parallel Card	:	Within Mother Board
Power Cord	:	Non-Shielded, Detachable, 1.8m

1.2.2. KEYBOARD

Model Number	:	BTC-5139
Serial Number	:	73B304241
FCC ID	:	E5XKBM111
Manufacturer	:	Behavior Tech Computer Corp.
Data Cable	:	Shielded, Undetachable, 1.2m

1.2.3. PRINTER

Model Number	:	2225C+
Serial Number	:	3007S68643
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	:	1414
Serial Number	:	970024520
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 : 1414
 Serial Number : 970024524
 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-S34
 Serial Number : LZA65201997
 FCC ID : DZL210472
 Manufacturer : Logitech
 Data Cable : Non-Shielded, Undetachable, 1.9m

1.3. Description of Test Facility

Site Description : Jul. 15, 1996 Re-file on
 (No. 2 Open Site) Federal Communication Commission
 FCC Engineering Laboratory
 7435 Oakland Mills Road
 Columbia, MD 21046, U.S.A.

Site Description : Aug. 22, 1997 Re-file on
 (Anechoic Chamber) Federal Communication Commission
 FCC Engineering Laboratory
 7435 Oakland Mills Road
 Columbia, MD 21046, U.S.A.

Name of Firm : Taiwan Tokin EMC Eng. Corp.

Site Location : No. 53-11, Tin-Fu Tsun, Lin-Kou,
 Taipei Hsien, Taiwan, R.O.C.

NVLAP lab. Code : 200077-0

2. Test System Details

2.1. Description of EUT

Applicant : Matsushita Electric Industrial Co., Ltd.

Manufacturer : Matsushita Electric (Taiwan) Co., Ltd.
579 Yuan San Road, Chung-Ho, Taipei Hsien, Taiwan, R. O. C.

Model Name : 15" Multi-scan Color Monitor

Model Number : TX-T5F73; DC5F73

Serial Number : TC8460005

FCC ID : ACJ92512126

CRT : CPT (Chunghwa)
Model: M36AES83X46

Data Cable : Shielded, Undetachable, 1.5m, Employed data cable is provided with bonded one ferrite core.

Power Cord : Non-shielded, Detachable, 1.8m

2.2. Personal Computer

Model Name : PC763

Serial Number : TA421U7881

FCC ID : AO9-PC76X

Manufacturer : Digital

VGA Card : Sixgraph Computing Ltd.
M/N Wizard 924, FCC ID: JYOWIZ01

2.3. Keyboard

Model Number : BTC-5139

Serial Number : 73B304241

FCC ID : E5XKBM111

Manufacturer : Behavior Tech Computer Corp.

2.4. Printer

Model Number : 2225C+

Serial Number : 3007S68643

FCC ID : DSI6XU2225

Manufacturer : Hewlett Packard

2.5. Modem #1

Model Number : 1414

Serial Number : 970024520

FCC ID : IFAXDM1414

Manufacturer : Aceex

2.6. Modem #2

Model Number : 1414

Serial Number : 970024524

FCC ID : IFAXDM1414

Manufacturer : Aceex

2.7. Mouse

Model Number : M-S34

Serial Number : LZA65201997

FCC ID : DZL210472

Manufacturer : Logitech

2. POWERLINE CONDUCTED TEST

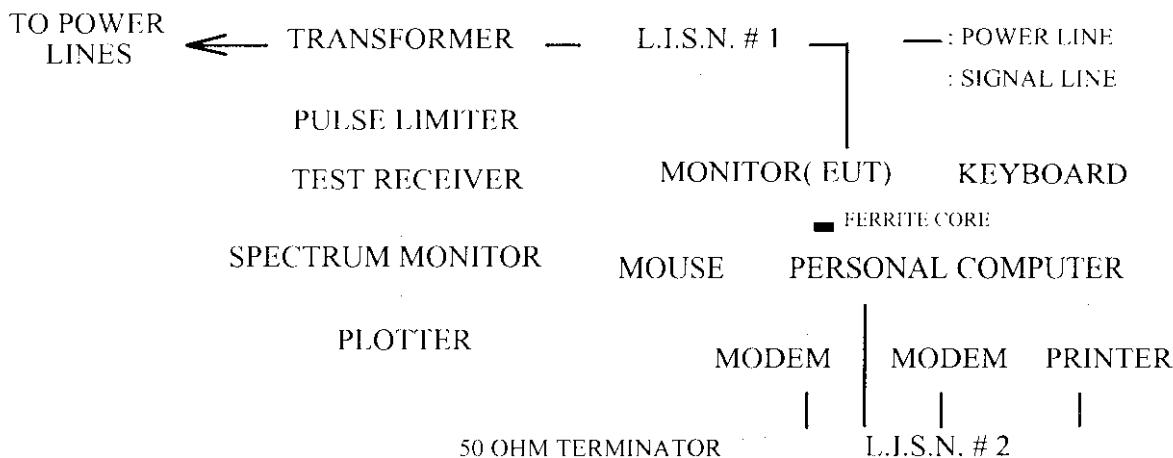
2.1. Test Equipment

The following test equipments were used during the power line conducted tests :

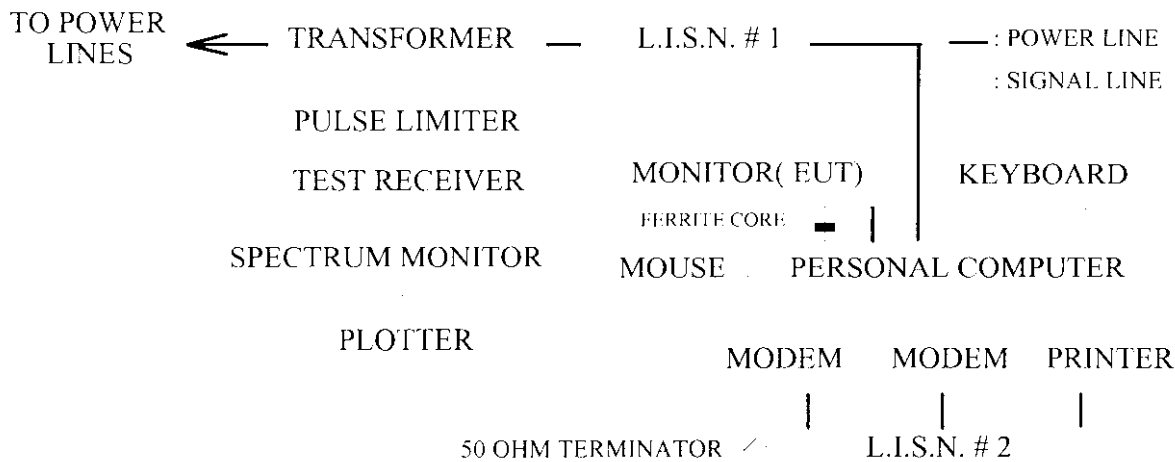
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESH3	880647/035	Jun.24, 98'	1 Year
2.	L.I.S.N. # 1	Kyoritsu	KNW-407	8-855-9	Apr.14, 98'	1 Year
3.	L.I.S.N. # 2	Kyoritsu	KNW-407	8-881-13	Apr.14, 98'	1 Year

2.2. Block Diagram of Test Setup

2.2.1. EUT Power Connects to L.I.S.N. Directly



2.2.2. EUT Power connects to PC AC Outlet then PC power connects to L.I.S.N.



2.3. Powerline Conducted Emission Limit (CLASS B)

Frequency	Maximum RF Line Voltage	
	uV	dBuV
0.45MHz ~ 30Mhz	250	48

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 tend to maximize its emission characteristics in a normal application.

2.4.1. 15" Multi-Scan Color Monitor (EUT)

Model Number : (1)TX-T5F73 (2)DC5F73
 Serial Number : TC8460005
 Manufacturer : Matsushita Electronic (Taiwan) Co., Ltd.
 CRT : Chunghwa, M/N M36AES83X46
 S/N B8313785974
 Data Cable : Shielded, Undetachable, 1.5m
 Bonded a ferrite core
 Power Cord : Non-Shielded, Detachable, 1.8m

2.4.2. Supporting System : As in Section 1.2

2.5. Operating Condition of EUT

- 2.5.1. Setup the EUT and simulator as shown on 2.2.
- 2.5.2. Turn on the power of all equipments.
- 2.5.3. Personal Computer read data from disk.
- 2.5.4. Personal Computer sent "H" character to monitor (EUT) and the screen displayed and full with "H" pattern.
- 2.5.5. The other peripheral devices were drove and operated in turn during all testing.

2.6. Test Procedure

The EUT was connected to the power mains through a line impedance stabilization network (L.I.S.N.# 1). The EUT is also connected to PC power outlet then the PC power cord 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 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 ESH3 was set at 10KHz.

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

The following test modes were done during conducted measurement and reported the each worst test mode (8) (66KHz/1280*1024, EUT power connected to L.I.S.N.) in the next pages, the others test data are attached within Appendix I.

- (1) 31.5KHz/640*480
- (2) 37.9KHz/640*480
- (3) 37.9KHz/800*600
- (4) 48.1KHz/800*600
- (5) 48.4KHz/1024*768
- (6) 58KHz/1024*768
- (7) 61.6KHz/1280*960
- (8) 66KHz/1280*1024

2.7. Test Results

PASSED. Please refer to the following pages.

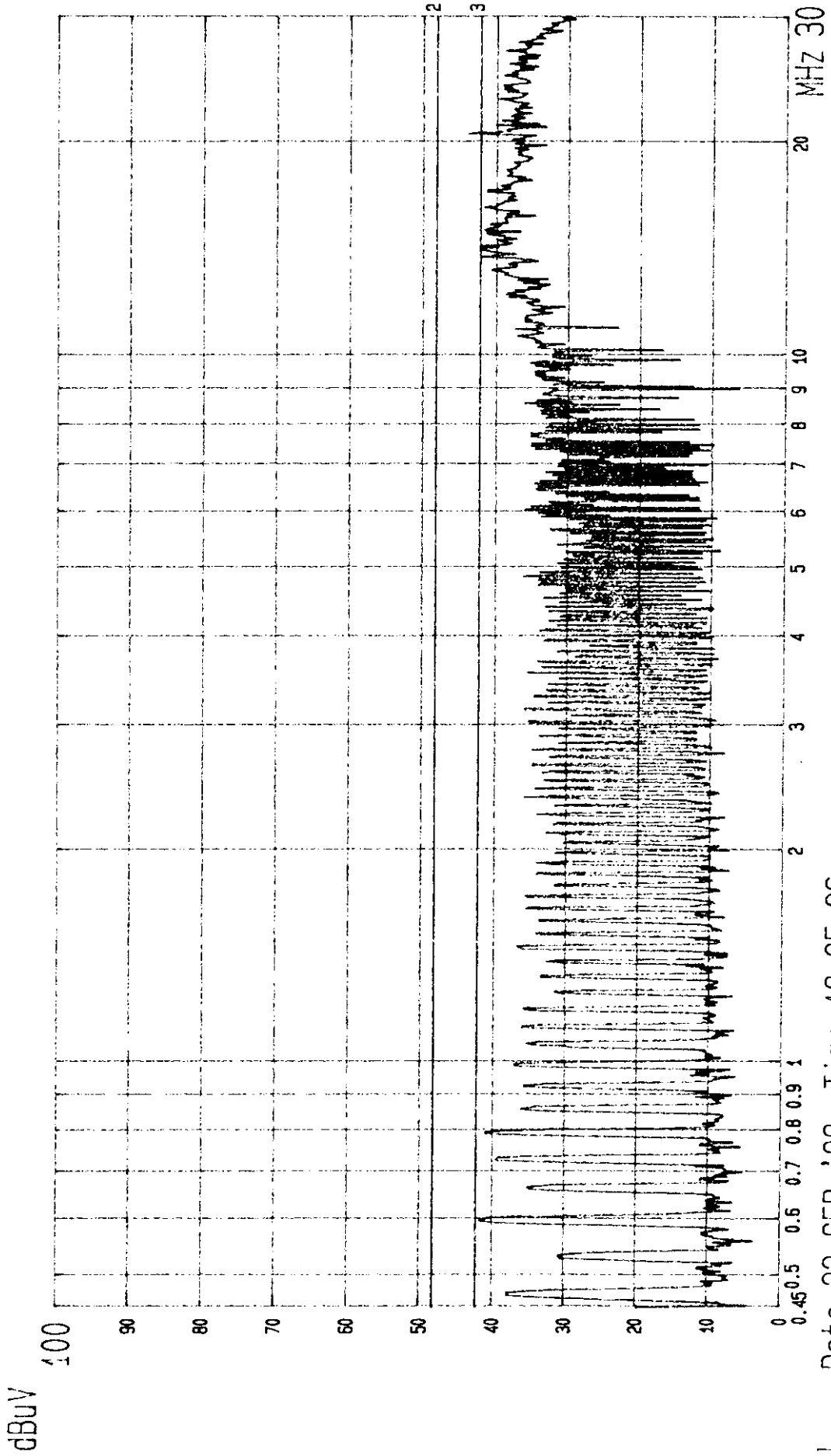
2.8. Line Conducted RF Voltage Measurement Results

The frequency range from 450KHz to 30 MHz was investigated.
All emissions not report below are too low against the prescribed limits.

Date of Test : Sep. 23, 1998 Temperature : 23 °C
EUT : 15" Multi-Scan Color Monitor Humidity : 48 %

Frequency (MHz)	Factor dB	Measurement (dBuV)		Reading (dBuV)		Limits (dBuV)	Margin (dBuV)	
		VA	VB	VA	VB		VA	VB
0.4613	0.5	35.1	*	35.6	*	48.0	12.4	*
0.5931	0.5	*	41.1	*	41.6	48.0	*	6.4
0.7906	0.5	*	41.2	*	41.7	48.0	*	6.3
0.7907	0.5	41.6	*	42.1	*	48.0	5.9	*
1.5154	0.5	33.3	*	33.8	*	48.0	14.2	*
1.5155	0.5	*	37.1	*	37.6	48.0	*	10.4
4.8757	0.8	*	34.3	*	35.1	48.0	*	12.9
6.2593	0.8	32.7	*	33.5	*	48.0	14.5	*
13.7708	1.0	*	39.3	*	40.3	48.0	*	7.7
20.5569	1.1	*	38.5	*	39.6	48.0	*	8.4
20.5573	1.1	39.1	*	40.2	*	48.0	7.8	*
22.5993	1.1	37.6	*	38.7	*	48.0	9.3	*

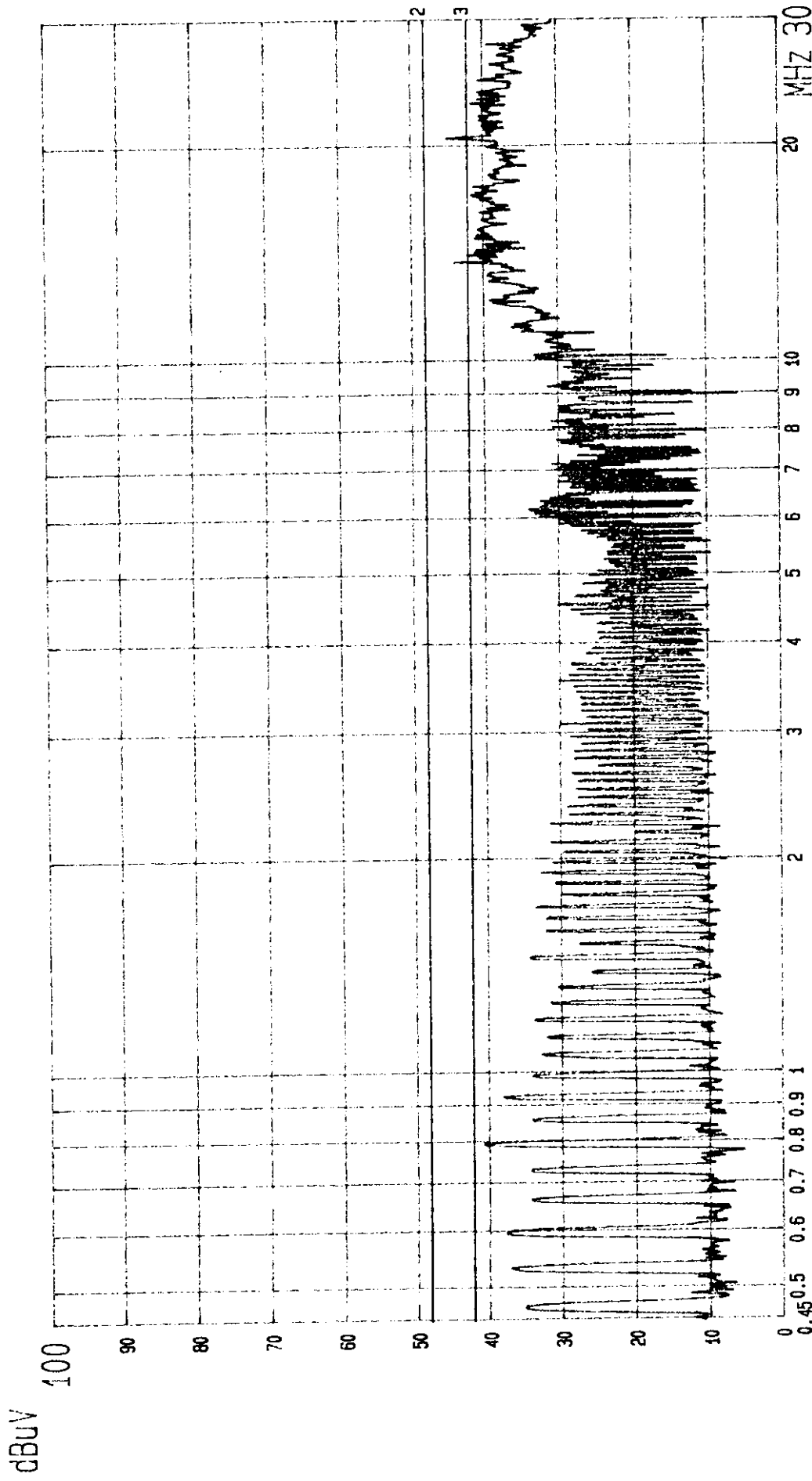
- Remark :
1. All readings are Quasi-Peak values.
 2. Factor = Insertion Loss + Cable Loss
 3. The worst emission was detected at 0.7907MHz with corrected signal level of 42.1dBuV (limit is 48dBuV) when the VA side of the EUT was connected to L.I.S.N.



--- Date 22.SEP '98 Time 19:25:26
Matsushita EUT: 15" Monitor
LINE: VB. MEMO: 66KHZ (1280X1024)

M/N: TX-T5F73/DC5F73

PAGE: 005.
(PEAK VALUE) TTEMC.



--- Date 22.SEP '98 Time 19:27:20
Matsushita EUT:15"MONITOR
LINE: VA. MEMO: 66KHZ (1280X1024)

M/N: TX-T5F73/DC5F73

PAGE: 006.
(PEAK VALUE) ITEM C.

3. RADIATED EMISSION TEST

3.1. Test Equipment

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

3.1.1. For Anechoic Chamber :

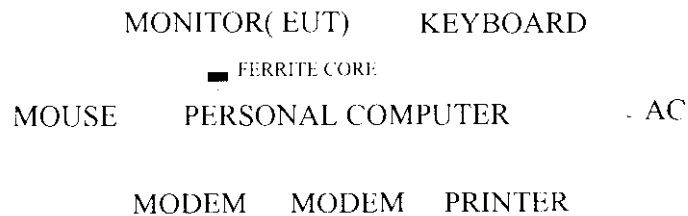
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	HP	8593A	3212A01727	Jul.25, 98'	1 Year
2.	Pre-Amplifier	HP	8447D	2944A06305	May.13,98'	1 Year
3.	Broadband Antenna	Schwarzbeck	BBA 9106	A3L	Dec.24, 97'	1 Year
4.	Broadband Antenna	Schwarzbeck	UHALP9107	A3H	Dec.24, 97'	1 Year

3.1.2. For No. 2 Open Site :

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde&Schwarz	ESVP	893202/001	Jul.24, 98'	1 Year
2.	Broadband Antenna	Chase	VBA6106A	1240	Jul. 15, 98'	1 Year
3.	Broadband Antenna	Chase	UPA6109	1048	Jul. 15, 98'	1 Year

3.2. Block Diagram of Test Setup

3.2.1. Block Diagram of connection between EUT and simulators



3.2.2. Anechoic Chamber & Open Field Test Site Setup Diagram

ANTENNA TOWER

ANTENNA ELEVATION VARIES FROM 1METER TO 4 METERS

3 METERS

EUT

0.8
METER

TURN TABLE

GROUND PLANE

3.3. Radiation Limit (CLASS B)

FREQUENCY	DISTANCE	FIELD STRENGTHS LIMITS	
		uV/M	dBuV/M
MHz	Meters		
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0

- Remark :
- (1) Emission level (dBuV/M) = 20 log Emission level (uV/M)
 - (2) The tighter limit applies at the edge between two frequency bands.
 - (3) 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 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 was 0.8 meter above ground. The turn table rotate 360 degrees to determine the position of the maximum emission level. EUT was set 3 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 on radiated measurement.

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

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

The following operating conditions were measured within Anechoic Chamber and all the scanning waveform were attached within Appendix II, which include :

- (1) 31.5KHz/640*480
- (2) 37.9KHz/640*480
- (3) 37.9KHz/800*600
- (4) 48.1KHz/800*600
- (5) 48.4KHz/1024*768
- (6) 58KHz/1024*768
- (7) 61.6KHz/1280*960
- (8) 66KHz/1280*1024

Finally, re-measured the each worst operating situation (66KHz/1280*1024) at No. 2 Open Field Test Site and all the test results are listed in section 3.8.

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 was investigated. All the emissions not reported below were too low against the FCC CLASS B limit.

Date of Test :	Sep. 30, 1998	Temperature :	29 °C
EUT :	15" Multi-Scan Color Monitor	Humidity :	74 %
Test Mode :	66KHz/1280*1024		

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading		Emission Level Horizontal dBuV/m	Limits dBuV/m	Margin dBuV/m
			Horizontal dBuV	Horizontal dBuV/m			
67.795	11.46	2.85	3.60	17.91	40.00	22.09	
112.848	18.32	3.68	5.10	27.10	43.50	16.40	
135.421	20.19	4.09	0.20	24.48	43.50	19.02	
157.990	20.56	4.42	-0.20	24.78	43.50	18.72	
180.559	21.57	4.77	-0.40	25.94	43.50	17.56	
* 203.128	21.05	5.06	4.90	31.01	43.50	12.49	
214.412	21.78	5.24	-1.50	25.52	43.50	17.98	
225.698	22.63	5.40	3.40	31.43	46.00	14.57	
248.268	22.53	5.69	2.90	31.12	46.00	14.88	
270.837	23.69	5.94	2.50	32.13	46.00	13.87	
282.122	23.89	6.08	-1.70	28.27	46.00	17.73	
315.975	13.99	6.53	8.90	29.42	46.00	16.58	
327.260	14.46	6.68	3.90	25.04	46.00	20.96	
344.262	15.35	6.90	2.20	24.45	46.00	21.55	
372.399	15.55	7.21	5.20	27.96	46.00	18.04	
383.688	16.43	7.35	0.30	24.08	46.00	21.92	
394.971	16.82	7.46	1.70	25.98	46.00	20.02	
406.227	16.63	7.59	4.30	28.52	46.00	17.48	
434.491	16.90	7.89	-2.80	21.99	46.00	24.01	

- Remark :
1. All reading were Quasi-Peak values.
 2. The worst emission was detected at 203.128MHz with corrected signal level of 31.01dBuV/m (limit was 43.5dBuV/m) when the antenna was at horizontal polarization and was at 1.2m high and the turn table was at 195 ° .
 3. 0 ° is the table front facing the antenna. Degree was calculated from 0 ° clockwise facing the antenna.

4. DEVIATIONS TO TEST SPECIFICATIONS

[NONE]