

Application for FCC Certificate
On Behalf of
LG Electronics U.S.A., Inc.

LCD Monitor

Model No.: E1950TV

Serial No.: E2010010603

FCC ID : BEJE1950TV

Prepared For : LG Electronics U.S.A., Inc.
1000 Sylvan Avenue, Englewood Cliffs,
NJ 07632, United States

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Report No. : ACI-F10010
Date of Test : Jan 07 – 10, 2010
Date of Report : Jan 18, 2010

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TEST REPORT FOR FCC CERTIFICATE

Applicant : LG Electronics U.S.A., Inc.
Manufacturer : LG Electronics Nanjing Display Co., Ltd.
EUT Description : LCD Monitor
(A) Model No. : E1950TV
(B) Serial No. : E2010010603
(C) Power Supply : 120V/60Hz

Test Procedure Used:

*FCC RULES AND REGULATIONS PART 15 SUBPART B CLASS B OCTOBER 2008
AND ANSI C63.4-2003*

The device described above is tested by Audix Technology (Shanghai) Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart B (Class B) and ICES-003, Issue 4 February 2004 (CISPR 22:2002) limits both radiated and conducted emissions.

The test results are contained in this test report and Audix Technology (Shanghai) Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. This report shows that the EUT (M/N: E1950TV; S/N: E2010010603) which was tested in 3m anechoic chamber Jan 07 – 10, 2010 is technically compliance with the FCC official limits also.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Audix Technology (Shanghai) Co., Ltd.

This report contains data that are not covered by the NVLAP accreditation.

This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

Date of Test : Jan 07 – 10, 2010 Date of Report : Jan 18, 2010

Producer : Kathy Wang
KATHY WANG / Assistant

Review : Dio Yang
DIO YANG / Deputy Assistant Manager

AUDIX® For and on behalf of
Audix Technology (Shanghai) Co., Ltd.

Signatory : Sammy Chen
Authorized Signature EMC SAMMY CHEN / Assistant Manager

1 SUMMARY OF STANDARDS AND RESULTS

1.1 Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below:

Description of Test Item	Standard	Limits	Results
EMISSION			
Conducted Disturbance at the Mains Terminal	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2008 AND ANSI C63.4-2003	15.107(a) Class B	Pass
Radiated Disturbance	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2008 AND ANSI C63.4-2003	15.109(a) Class B	Pass

2 GENERAL INFORMATION

2.1 Description of Equipment Under Test

Description	:	LCD Monitor
Type of EUT	:	☒ Production ☐ Pre-product ☐ Pro-type
Model No.	:	E1950TV
Serial No.	:	E2010010603
Real Power	:	13.00W for Adapter: ADS-24NP-12 1 24 14.00W for Adapter: DSA-36W-12 1 24
Applicant	:	LG Electronics U.S.A., Inc. 1000 Sylvan Avenue, Englewood Cliffs, NJ 07632, United States
Manufacturer	:	LG Electronics Nanjing Display Co., Ltd. No.346, Yao Xin Road, Economic & Technical Development Zone, Nanjing, China
LCD Panel	:	Manufacturer : AU Optronics M/N : M185XW01
Adapter #1	:	Switching Adapter Manufacturer: HONOR ELECTRONIC CO., LTD. M/N : ADS-24NP-12-1 12024G Input : 100-240V ~ 50/60Hz, 0.7A Output : 12V $\overline{\text{---}}$ 2.0A Output Cable: Unshielded, Undetachable, 1.80m, with one core
Adapter #2	:	Switching Adapter Manufacturer: DEE VAN ELECTRONICS (SHENZHEN) CO., LTD. M/N : DSA-36W-12 1 24 Input : 100-240V ~ 50/60Hz, 1.0A Output : +12V $\overline{\text{---}}$ 2A Output Cable: Unshielded, Undetachable, 1.20m, without core
Max Resolution	:	1360*768@60Hz
D-Sub Cable #1	:	Shielded, Detachable, 1.85m, with two cores on cable
D-Sub Cable #2	:	Shielded, Detachable, 1.85m, with two cores in connector

DVI Cable #1	:	Shielded, Detachable, 1.85m, with two cores on cable
DVI Cable #2	:	Shielded, Detachable, 1.85m, with two cores in connector
Power Cord	:	Unshielded, Detachable, 1.80m
Note	:	After evaluation, the D-Sub cable#1 and DVI cable#1 were used in the test for they will cause the maximum emission.

Remark:

The EUT is a LCD Monitor which input/output ports as follows:

- | | |
|--------------------|--------------------------|
| (1) One D-Sub Port | : Connected with PC |
| (2) One DVI Port | : Connected with PC |
| (3) One DC In Port | : Connected with Adapter |

2.2 Peripherals

2.2.1 PC #1

Manufacturer	:	HP
Model Number	:	dx7200MT
Serial Number	:	CNG622017W
Power Cord	:	Unshielded, Detachable, 1.8m
Certificate	:	FCC DoC; CE/EMC; VCCI; C-Tick; UL BSMI (R33001) 3C (A000111) MIC (E-A011-04-2659(B))

2.2.2 PC #2

Manufacturer	:	HP
Model Number	:	dx7400MT
Serial Number	:	CNG8130K89
Power Cord	:	Unshielded, Detachable, 1.8m
Certificate	:	FCC DoC; CE/EMC; VCCI; C-Tick; UL BSMI (R33001) 3C (A000111) MIC (E-A011-04-2659(B))

2.2.3 Printer

Manufacturer	:	HP
Model Number	:	C3990A
Serial Number	:	JPZX020487
Data Cable	:	Shielded, Detachable, 1.5m
Certificate	:	GS, CE/EMC, C-Tick, FCC DoC

2.2.4 Keyboard

Manufacturer : Microsoft
Model Number : RT2300
Serial Number : 7668200662248
Data Cable : Shielded, Undetachable, 1.8m
Certificate : CE/EMC, FCC DoC, VCCI, MIC, C-Tick, BSMI

2.2.5 Mouse

Manufacturer : Microsoft
Model Number : RT2300
Serial Number : 6965712071551
Data Cable : Shielded, Undetachable, 1.85m.
Certificate : FCC DoC, VCCI, CE/EMC, MIC, GS

2.2.6 Modem

Manufacturer : TP-LINK
Model Number : TM-EC5658V
Serial Number : 07123301053
Data Cable : Shielded, Detachable, 1.8m
Certificate : FCC DoC, CE/EMC, CCC

Note: PC #2 was used in Radiated Emission test while PC #1 was used in Conducted Emission test.

2.3 Description of Test Facility

Site Description : Sept. 17, 1998 file on
(Semi-Anechoic Chamber) Apr 29, 2009 Renewed
Federal Communications Commission
FCC Engineering Laboratory
7435 Oakland Mills Road
Columbia, MD 21046, USA

Name of Firm : Audix Technology (Shanghai) Co., Ltd.

Site Location : 3F 34Bldg 680 Guiping Rd,
Caohejing Hi-Tech Park,
Shanghai 200233, China

NVLAP Lab Code : 200371-0

2.4 Measurement Uncertainty

Conducted Emission Expanded Uncertainty: U = 1.26 dB
Radiated Emission Expanded Uncertainty : U = 3.02 dB

3 CONDUCTED EMISSION TEST

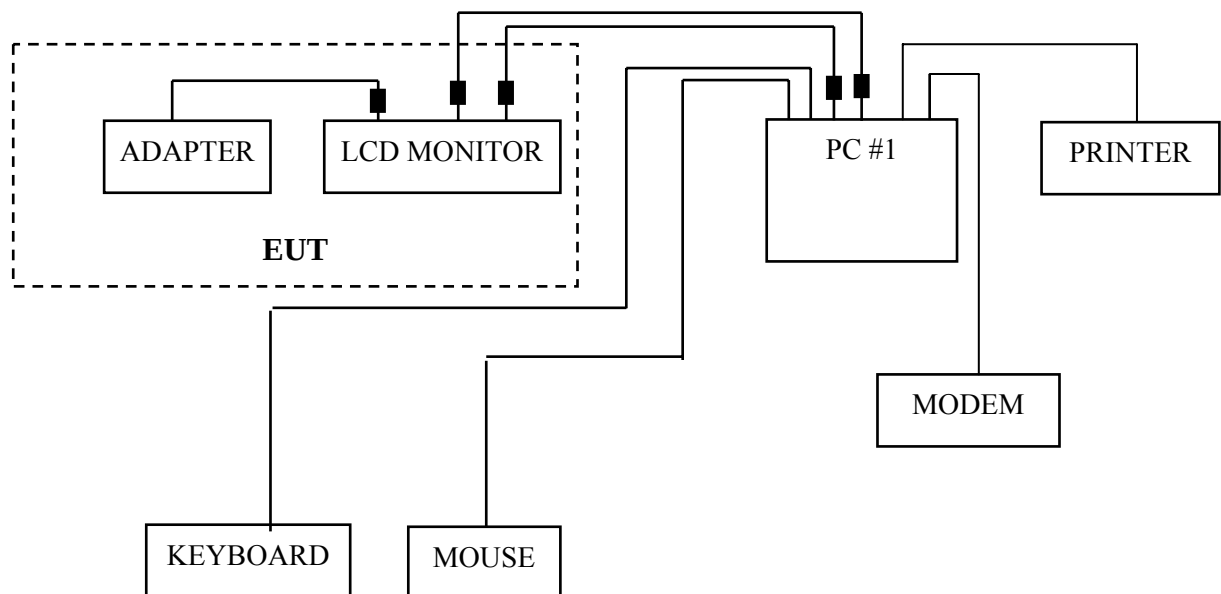
3.1.1 Test Equipment

The following test equipments are used during the conducted emission test in a shielded room:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCI	100841	Oct 15, 2009	Oct 15, 2010
2.	Artificial Mains Network (AMN)	R&S	ESH2-Z5	843890/011	Apr 02, 2009	Apr 02, 2010
3.	Line Impedance Stabilization Network (LISN)	Kyoritsu	KNW-407	8-1280-4	Apr 02, 2009	Apr 02, 2010
4.	50 Ω Coaxial Switch	Anritsu	MP59B	6200426389	Sep 19, 2009	Mar 19, 2010
5.	50 Ω Terminator	Anritsu	BNC	001	Apr 02, 2009	Apr 02, 2010
6.	Software	Audix	E3	SET00200 9804M592	--	--

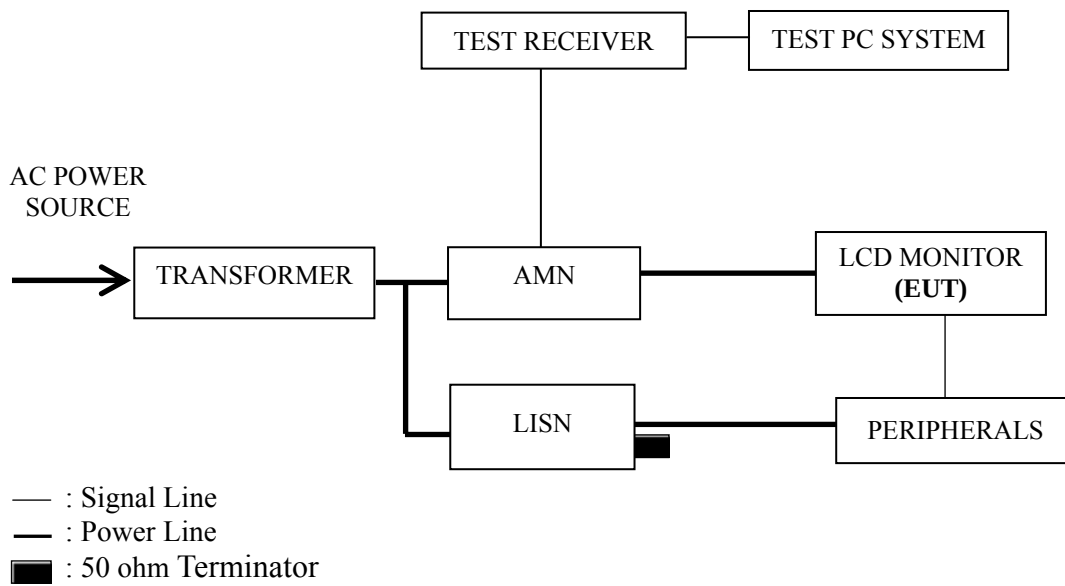
3.2 Block Diagram of Test Setup

3.2.1 EUT & Peripherals



■ : Ferrite core

3.2.2 Conducted Disturbance Test Setup



3.3 Conducted Emission Limit [FCC Part 15 Subpart B 15.107(a)]

Frequency Range (MHz)	Limits dB (μ V)	
	Quasi-peak	Average
0.15 ~ 0.5	66~56	56~46
0.5 ~ 5	56	46
5 ~ 30	60	50
NOTE 1 – The lower limit shall apply at the transition frequencies. NOTE 2 – The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz~0.50 MHz		

3.4 Test Configuration

The EUT (listed in Sec.2.1) and the peripherals (listed in Sec 2.2) were installed as shown on Sec.3.2 to meet FCC requirement and operating in a manner that tends to maximize its emission level in a normal application.

3.5 Operating Condition of EUT

3.5.1 Setup the EUT and peripherals as shown in Sec. 3.2.

3.5.2 Turn on the power of all equipments and the EUT.

3.5.3 Set the contrast & brightness of EUT to maximum.

3.5.4 PC system ran the self-test program “EMC Test” by windows XP and sent “H” characters to EUT through graphic card, the EUT’s screen displayed and filled with “H” pattern by its resolution (Via D-Sub or DVI Input).

3.5.5 Repeat above procedure from 3.5.3 to 3.5.4 for difference test mode.

3.5.6 The other peripherals devices were driven and operated during the test.

3.5.7 The test modes are as follows:

Adapter	Test Mode
ADS-24NP-12-1 12024G	D-Sub 640*480@60Hz
	D-Sub 1280*1024@75Hz
	D-Sub 1360*768@60Hz
	DVI 640*480@60Hz
	DVI 1280*1024@75Hz
	DVI 1360*768@60Hz
DSA-36W-12 1 24	D-Sub 640*480@60Hz
	D-Sub 1280*1024@75Hz
	D-Sub 1360*768@60Hz
	DVI 640*480@60Hz
	DVI 1280*1024@75Hz
	DVI 1360*768@60Hz

3.6 Test Procedures

The EUT and peripherals were connected to the power mains through an Artificial Mains Network (AMN). This provided a 50 ohm coupling impedance for the measuring equipment.

Both sides of AC line (Line & Neutral) 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 or manipulated according to ANSI C63.4:2003 during conducted emission test.

The bandwidth of R&S Test Receiver ESCI was set at 9 kHz.

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

The test modes were done on conducted disturbance test and all the test results are listed in Sec. 3.7.

3.7 Test Results

< PASS >

The frequency and amplitude of the highest conducted emission relative to the limit is reported. All emissions not reported below are too low against the prescribed limits.

Adapter	Test Mode	Data Page
ADS-24NP-12-1 12024G	D-Sub 640*480@60Hz	P12
	D-Sub 1280*1024@75Hz	P13
	D-Sub 1360*768@60Hz	P14
	DVI 640*480@60Hz	P15
	DVI 1280*1024@75Hz	P16
	DVI 1360*768@60Hz	P17
DSA-36W-12 1 24	D-Sub 640*480@60Hz	P18
	D-Sub 1280*1024@75Hz	P19
	D-Sub 1360*768@60Hz	P20
	DVI 640*480@60Hz	P21
	DVI 1280*1024@75Hz	P22
	DVI 1360*768@60Hz	P23

NOTE 1 – The **bold test mode** listed above means the worst test mode.

NOTE 2 – Factor = Cable Loss + AMN Factor.

NOTE 3 – Emission Level = Meter Reading + Factor.

NOTE 4 – “QP” means “Quasi-Peak” values, “AV” means “Average” values.

NOTE 5 – The worst case is for D-Sub 1360*768@60Hz test mode (Adapter: ADS-24NP-12 1 24). The worst emission is detected at 0.156 MHz (Quasi-Peak Value) with corrected signal level of 58.81 dB (μV) (limit is 65.66 dB (μV)), when the Line the EUT is connected to AMN.

EUT : LCD Monitor Temperature : 22°C

Model No. : E1950TV Humidity : 48%RH

Serial No. : E2010010603 Date of Test : Jan 10, 2010

Test Mode : D-Sub 640*480@60Hz Adapter : ADS-24NP-12-1
12024G

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.155	56.72	0.24	56.96	65.74	8.78	QP
	0.200	51.27	0.26	51.53	63.62	12.09	
	1.106	22.08	0.48	22.56	56.00	33.44	
	4.549	26.68	0.62	27.30	56.00	28.70	
	8.323	25.96	0.71	26.67	60.00	33.33	
	10.676	26.16	0.75	26.91	60.00	33.09	
	0.155	39.23	0.24	39.47	55.74	16.27	AV
	0.200	40.00	0.26	40.26	53.62	13.36	
	1.106	11.00	0.48	11.48	46.00	34.52	
	4.549	15.00	0.62	15.62	46.00	30.38	
	8.323	14.00	0.71	14.71	50.00	35.29	
	10.676	15.30	0.75	16.05	50.00	33.95	
Neutral	0.153	54.63	0.21	54.84	65.82	10.98	QP
	0.200	49.66	0.24	49.90	63.62	13.72	
	0.499	27.65	0.44	28.09	56.01	27.92	
	4.315	24.32	0.62	24.94	56.00	31.06	
	9.654	26.58	0.75	27.33	60.00	32.67	
	10.790	23.80	0.76	24.56	60.00	35.44	
	0.153	35.17	0.21	35.38	55.82	20.44	AV
	0.200	38.00	0.24	38.24	53.62	15.38	
	0.499	16.30	0.44	16.74	46.01	29.27	
	4.315	12.60	0.62	13.22	46.00	32.78	
	9.654	12.30	0.75	13.05	50.00	36.95	
	10.790	16.00	0.76	16.76	50.00	33.24	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E1950TV Humidity : 48%RH

Serial No. : E2010010603 Date of Test : Jan 10, 2010

Test Mode : D-Sub 1280*1024@75Hz Adapter : ADS-24NP-12-1
12024G

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.156	57.14	0.24	57.38	65.65	8.27	QP
	0.200	51.10	0.26	51.36	63.62	12.26	
	0.499	26.37	0.47	26.84	56.01	29.17	
	4.454	26.82	0.62	27.44	56.00	28.56	
	8.501	26.12	0.71	26.83	60.00	33.17	
	10.452	26.44	0.74	27.18	60.00	32.82	
	0.156	40.13	0.24	40.37	55.65	15.28	AV
	0.200	40.00	0.26	40.26	53.62	13.36	
	0.499	15.00	0.47	15.47	46.01	30.54	
	4.454	15.00	0.62	15.62	46.00	30.38	
	8.501	14.80	0.71	15.51	50.00	34.49	
	10.452	15.30	0.74	16.04	50.00	33.96	
Neutral	0.156	57.85	0.21	58.06	65.65	7.59	QP
	0.200	50.65	0.24	50.89	63.62	12.73	
	0.505	29.63	0.44	30.07	56.00	25.93	
	3.985	27.33	0.62	27.95	56.00	28.05	
	8.412	26.83	0.72	27.55	60.00	32.45	
	11.080	27.16	0.77	27.93	60.00	32.07	
	0.156	43.26	0.21	43.47	55.65	12.18	AV
	0.200	40.00	0.24	40.24	53.62	13.38	
	0.505	18.00	0.44	18.44	46.00	27.56	
	3.985	16.30	0.62	16.92	46.00	29.08	
	8.412	15.60	0.72	16.32	50.00	33.68	
	11.080	16.30	0.77	17.07	50.00	32.93	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E1950TV Humidity : 48%RH

Serial No. : E2010010603 Date of Test : Jan 10, 2010

Test Mode : D-Sub 1360*768@60Hz Adapter : ADS-24NP-12-1
12024G

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.156	58.57	0.24	58.81	65.66	6.85	QP
	0.200	50.75	0.26	51.01	63.62	12.61	
	0.505	24.65	0.47	25.12	56.00	30.88	
	4.574	24.21	0.62	24.83	56.00	31.17	
	9.011	24.26	0.72	24.98	60.00	35.02	
	10.676	24.76	0.75	25.51	60.00	34.49	
	0.156	45.06	0.24	45.30	55.66	10.36	AV
	0.200	39.00	0.26	39.26	53.62	14.36	
	0.505	16.50	0.47	16.97	46.00	29.03	
	4.574	16.00	0.62	16.62	46.00	29.38	
	9.011	16.00	0.72	16.72	50.00	33.28	
	10.676	16.00	0.75	16.75	50.00	33.25	
Neutral	0.156	57.94	0.21	58.15	65.65	7.50	QP
	0.200	51.78	0.24	52.02	63.62	11.60	
	0.499	29.61	0.44	30.05	56.01	25.96	
	4.672	27.48	0.63	28.11	56.00	27.89	
	9.861	27.09	0.75	27.84	60.00	32.16	
	10.790	27.61	0.76	28.37	60.00	31.63	
	0.156	42.09	0.21	42.30	55.65	13.35	AV
	0.200	39.00	0.24	39.24	53.62	14.38	
	0.499	17.50	0.44	17.94	46.01	28.07	
	4.672	16.00	0.63	16.63	46.00	29.37	
	9.861	16.50	0.75	17.25	50.00	32.75	
	10.790	16.00	0.76	16.76	50.00	33.24	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E1950TV Humidity : 48%RH

Serial No. : E2010010603 Date of Test : Jan 10, 2010

Test Mode : DVI 640*480@60Hz Adapter : ADS-24NP-12-1
12024G

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.155	55.70	0.24	55.94	65.74	9.80	QP
	0.200	50.61	0.26	50.87	63.62	12.75	
	0.505	27.31	0.47	27.78	56.00	28.22	
	4.407	26.02	0.62	26.64	56.00	29.36	
	9.654	27.37	0.73	28.10	60.00	31.90	
	10.676	26.89	0.75	27.64	60.00	32.36	
	0.155	35.99	0.24	36.23	55.74	19.51	AV
	0.200	43.00	0.26	43.26	53.62	10.36	
	0.505	16.30	0.47	16.77	46.00	29.23	
	4.407	15.29	0.62	15.91	46.00	30.09	
	9.654	16.30	0.73	17.03	50.00	32.97	
	10.676	15.30	0.75	16.05	50.00	33.95	
Neutral	0.155	56.01	0.21	56.22	65.74	9.52	QP
	0.200	50.51	0.24	50.75	63.62	12.87	
	0.499	28.70	0.44	29.14	56.01	26.87	
	4.158	27.13	0.62	27.75	56.00	28.25	
	8.729	26.63	0.74	27.37	60.00	32.63	
	10.125	26.20	0.75	26.95	60.00	33.05	
	0.155	37.73	0.21	37.94	55.74	17.80	AV
	0.200	39.00	0.24	39.24	53.62	14.38	
	0.499	17.00	0.44	17.44	46.01	28.57	
	4.158	16.00	0.62	16.62	46.00	29.38	
	8.729	15.29	0.74	16.03	50.00	33.97	
	10.125	15.30	0.75	16.05	50.00	33.95	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E1950TV Humidity : 48%RH

Serial No. : E2010010603 Date of Test : Jan 10, 2010

Test Mode : DVI 1280*1024@75Hz Adapter : ADS-24NP-12-1
12024G

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.156	55.47	0.24	55.71	65.65	9.94	QP
	0.200	49.34	0.26	49.60	63.62	14.02	
	0.499	25.27	0.47	25.74	56.01	30.27	
	4.721	24.00	0.62	24.62	56.00	31.38	
	9.204	25.38	0.72	26.10	60.00	33.90	
	12.516	26.70	0.83	27.53	60.00	32.47	
	0.156	43.32	0.24	43.56	55.65	12.09	AV
	0.200	39.00	0.26	39.26	53.62	14.36	
	0.499	14.00	0.47	14.47	46.01	31.54	
	4.721	18.00	0.62	18.62	46.00	27.38	
	9.204	14.00	0.72	14.72	50.00	35.28	
	12.516	15.30	0.83	16.13	50.00	33.87	
Neutral	0.155	54.96	0.21	55.17	65.74	10.57	QP
	0.200	50.26	0.24	50.50	63.62	13.12	
	0.499	28.40	0.44	28.84	56.01	27.17	
	4.224	27.00	0.62	27.62	56.00	28.38	
	8.916	25.33	0.74	26.07	60.00	33.93	
	10.790	25.84	0.76	26.60	60.00	33.40	
	0.155	35.08	0.21	35.29	55.74	20.45	AV
	0.200	36.80	0.24	37.04	53.62	16.58	
	0.499	17.30	0.44	17.74	46.01	28.27	
	4.224	14.30	0.62	14.92	46.00	31.08	
	8.916	14.50	0.74	15.24	50.00	34.76	
	10.790	14.50	0.76	15.26	50.00	34.74	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E1950TV Humidity : 48%RH

Serial No. : E2010010603 Date of Test : Jan 10, 2010

Test Mode : DVI 1360*768@60Hz Adapter : ADS-24NP-12-1
12024G

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.153	54.14	0.24	54.38	65.82	11.44	QP
	0.200	50.08	0.26	50.34	63.62	13.28	
	0.499	26.98	0.47	27.45	56.01	28.56	
	4.772	24.98	0.62	25.60	56.00	30.40	
	8.148	26.45	0.70	27.15	60.00	32.85	
	10.790	27.78	0.75	28.53	60.00	31.47	
	0.153	36.94	0.24	37.18	55.82	18.64	AV
	0.200	37.60	0.26	37.86	53.62	15.76	
	0.499	15.70	0.47	16.17	46.01	29.84	
	4.772	14.60	0.62	15.22	46.00	30.78	
	8.148	15.70	0.70	16.40	50.00	33.60	
	10.790	16.80	0.75	17.55	50.00	32.45	
Neutral	0.155	55.08	0.21	55.29	65.74	10.45	QP
	0.200	50.20	0.24	50.44	63.62	13.18	
	0.505	31.65	0.44	32.09	56.00	23.91	
	3.985	25.36	0.62	25.98	56.00	30.02	
	9.352	26.10	0.74	26.84	60.00	33.16	
	12.384	26.69	0.81	27.50	60.00	32.50	
	0.155	43.42	0.21	43.63	55.74	12.11	AV
	0.200	35.60	0.24	35.84	53.62	17.78	
	0.505	22.30	0.44	22.74	46.00	23.26	
	3.985	14.30	0.62	14.92	46.00	31.08	
	9.352	17.30	0.74	18.04	50.00	31.96	
	12.384	15.30	0.81	16.11	50.00	33.89	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E1950TV Humidity : 48%RH

Serial No. : E2010010603 Date of Test : Jan 10, 2010

Test Mode : D-Sub 640*480@60Hz Adapter : DSA-36W-12 1 24

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.150	55.18	0.24	55.42	66.00	10.58	QP
	0.375	42.74	0.40	43.14	58.39	15.25	
	0.614	34.00	0.46	34.46	56.00	21.54	
	1.071	35.97	0.48	36.45	56.00	19.55	
	2.678	34.00	0.57	34.57	56.00	21.43	
	29.684	31.41	1.18	32.59	60.00	27.41	
	0.150	42.97	0.24	43.21	66.00	22.79	AV
	0.375	30.00	0.40	30.40	58.39	27.99	
	0.614	23.00	0.46	23.46	56.00	32.54	
	1.071	25.00	0.48	25.48	56.00	30.52	
	2.678	24.00	0.57	24.57	56.00	31.43	
	29.684	18.50	1.18	19.68	60.00	40.32	
Neutral	0.153	56.67	0.21	56.88	65.85	8.97	QP
	0.385	44.33	0.38	44.71	58.17	13.46	
	1.066	34.77	0.48	35.25	56.00	20.75	
	2.511	33.32	0.57	33.89	56.00	22.11	
	6.878	26.99	0.69	27.68	60.00	32.32	
	29.684	32.91	1.09	34.00	60.00	26.00	
	0.153	41.98	0.21	42.19	55.85	13.66	AV
	0.385	34.15	0.38	34.53	48.17	13.64	
	1.066	23.62	0.48	24.10	46.00	21.90	
	2.527	25.64	0.57	26.21	46.00	19.79	
	6.878	21.79	0.69	22.48	50.00	27.52	
	29.684	25.73	1.09	26.82	50.00	23.18	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E1950TV Humidity : 48%RH

Serial No. : E2010010603 Date of Test : Jan 10, 2010

Test Mode : D-Sub 1280*1024@75Hz Adapter : DSA-36W-12 1 24

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.151	55.31	0.24	55.55	65.94	10.39	QP
	0.200	46.48	0.26	46.74	63.62	16.88	
	0.614	35.61	0.46	36.07	56.00	19.93	
	2.474	34.39	0.57	34.96	56.00	21.04	
	5.058	29.64	0.62	30.26	60.00	29.74	
	29.684	30.50	1.18	31.68	60.00	28.32	
	0.151	44.04	0.24	44.28	55.94	11.66	AV
	0.200	33.00	0.26	33.26	53.62	20.36	
	0.614	23.00	0.46	23.46	46.00	22.54	
	2.474	23.00	0.57	23.57	46.00	22.43	
	5.058	20.00	0.62	20.62	50.00	29.38	
	29.684	21.00	1.18	22.18	50.00	27.82	
Neutral	0.151	54.95	0.21	55.16	65.94	10.78	QP
	0.200	43.44	0.24	43.68	63.62	19.94	
	1.082	34.77	0.48	35.25	56.00	20.75	
	2.678	33.23	0.57	33.80	56.00	22.20	
	5.333	27.80	0.64	28.44	60.00	31.56	
	29.061	28.43	1.08	29.51	60.00	30.49	
	0.151	41.97	0.21	42.18	55.94	13.76	AV
	0.200	31.00	0.24	31.24	53.62	22.38	
	1.082	26.00	0.48	26.48	46.00	19.52	
	2.678	20.00	0.57	20.57	46.00	25.43	
	5.333	18.00	0.64	18.64	50.00	31.36	
	29.061	19.50	1.08	20.58	50.00	29.42	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E1950TV Humidity : 48%RH

Serial No. : E2010010603 Date of Test : Jan 10, 2010

Test Mode : D-Sub 1360*768@60Hz Adapter : DSA-36W-12 1 24

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.151	52.61	0.24	52.85	65.94	13.09	QP
	0.202	45.59	0.26	45.85	63.54	17.69	
	0.614	35.74	0.46	36.20	56.00	19.80	
	2.422	34.36	0.57	34.93	56.00	21.07	
	5.166	28.60	0.62	29.22	60.00	30.78	
	29.684	30.08	1.18	31.26	60.00	28.74	
	0.151	42.00	0.24	42.24	55.94	13.70	AV
	0.202	32.00	0.26	32.26	53.54	21.28	
	0.614	22.00	0.46	22.46	46.00	23.54	
	2.422	22.99	0.57	23.56	46.00	22.44	
	5.166	19.00	0.62	19.62	50.00	30.38	
	29.684	20.00	1.18	21.18	50.00	28.82	
Neutral	0.151	52.06	0.21	52.27	65.94	13.67	QP
	0.200	45.57	0.24	45.81	63.62	17.81	
	0.621	34.82	0.45	35.27	56.00	20.73	
	2.707	32.11	0.57	32.68	56.00	23.32	
	5.112	27.73	0.63	28.36	60.00	31.64	
	29.684	28.46	1.09	29.55	60.00	30.45	
	0.151	39.00	0.21	39.21	55.94	16.73	AV
	0.200	31.00	0.24	31.24	53.62	22.38	
	0.621	23.00	0.45	23.45	46.00	22.55	
	2.707	21.00	0.57	21.57	46.00	24.43	
	5.112	19.50	0.63	20.13	50.00	29.87	
	29.684	19.60	1.09	20.69	50.00	29.31	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E1950TV Humidity : 48%RH

Serial No. : E2010010603 Date of Test : Jan 10, 2010

Test Mode : DVI 640*480@60Hz Adapter : DSA-36W-12 1 24

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.155	51.54	0.24	51.78	65.74	13.96	QP
	0.200	43.58	0.26	43.84	63.62	19.78	
	0.989	34.51	0.48	34.99	56.00	21.01	
	2.809	34.40	0.57	34.97	56.00	21.03	
	5.594	28.74	0.65	29.39	60.00	30.61	
	30.000	30.15	1.18	31.33	60.00	28.67	
	0.155	40.00	0.24	40.24	55.74	15.50	AV
	0.200	30.00	0.26	30.26	53.62	23.36	
	0.989	21.00	0.48	21.48	46.00	24.52	
	2.809	23.00	0.57	23.57	46.00	22.43	
	5.594	19.00	0.65	19.65	50.00	30.35	
	30.000	19.60	1.18	20.78	50.00	29.22	
Neutral	0.152	49.19	0.21	49.40	65.91	16.51	QP
	0.367	43.42	0.37	43.79	58.56	14.77	
	0.611	34.23	0.45	34.68	56.00	21.32	
	2.794	32.52	0.57	33.09	56.00	22.91	
	5.058	27.53	0.63	28.16	60.00	31.84	
	30.000	28.24	1.09	29.33	60.00	30.67	
	0.152	35.00	0.21	35.21	55.91	20.70	AV
	0.367	30.00	0.37	30.37	48.56	18.19	
	0.611	26.00	0.45	26.45	46.00	19.55	
	2.794	20.01	0.57	20.58	46.00	25.42	
	5.058	19.30	0.63	19.93	50.00	30.07	
	30.000	19.60	1.09	20.69	50.00	29.31	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E1950TV Humidity : 48%RH

Serial No. : E2010010603 Date of Test : Jan 10, 2010

Test Mode : DVI 1280*1024@75Hz Adapter : DSA-36W-12 1 24

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.200	43.60	0.26	43.86	63.62	19.76	QP
	0.371	41.76	0.40	42.16	58.47	16.31	
	0.611	33.98	0.46	34.44	56.00	21.56	
	2.622	33.40	0.57	33.97	56.00	22.03	
	5.535	28.82	0.65	29.47	60.00	30.53	
	30.000	28.98	1.18	30.16	60.00	29.84	
	0.200	31.00	0.26	31.26	53.62	22.36	AV
	0.371	30.00	0.40	30.40	48.47	18.07	
	0.611	21.00	0.46	21.46	46.00	24.54	
	2.622	21.00	0.57	21.57	46.00	24.43	
	5.535	17.50	0.65	18.15	50.00	31.85	
	30.000	19.50	1.18	20.68	50.00	29.32	
Neutral	0.150	50.59	0.21	50.80	66.00	15.20	QP
	0.367	44.30	0.37	44.67	58.56	13.89	
	0.614	36.32	0.45	36.77	56.00	19.23	
	2.581	36.43	0.57	37.00	56.00	19.00	
	5.112	29.08	0.63	29.71	60.00	30.29	
	30.000	30.23	1.09	31.32	60.00	28.68	
	0.150	40.00	0.21	40.21	56.00	15.79	AV
	0.367	32.00	0.37	32.37	48.56	16.19	
	0.614	23.00	0.45	23.45	46.00	22.55	
	2.581	23.00	0.57	23.57	46.00	22.43	
	5.112	19.50	0.63	20.13	50.00	29.87	
	30.000	20.00	1.09	21.09	50.00	28.91	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E1950TV Humidity : 48%RH

Serial No. : E2010010603 Date of Test : Jan 10, 2010

Test Mode : DVI 1360*768@60Hz Adapter : DSA-36W-12 1 24

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.153	52.94	0.24	53.18	65.82	12.64	QP
	0.200	45.91	0.26	46.17	63.62	17.45	
	1.043	35.39	0.48	35.87	56.00	20.13	
	2.678	33.46	0.57	34.03	56.00	21.97	
	5.333	28.34	0.63	28.97	60.00	31.03	
	30.000	30.07	1.18	31.25	60.00	28.75	
	0.153	40.00	0.24	40.24	55.82	15.58	AV
	0.200	32.00	0.26	32.26	53.62	21.36	
	1.043	23.00	0.48	23.48	46.00	22.52	
	2.678	22.00	0.57	22.57	46.00	23.43	
	5.333	19.00	0.63	19.63	50.00	30.37	
	30.000	20.00	1.18	21.18	50.00	28.82	
Neutral	0.153	51.06	0.21	51.27	65.82	14.55	QP
	0.200	44.90	0.24	45.14	63.62	18.48	
	0.611	35.54	0.45	35.99	56.00	20.01	
	2.384	33.99	0.57	34.56	56.00	21.44	
	5.112	29.32	0.63	29.95	60.00	30.05	
	30.000	30.44	1.09	31.53	60.00	28.47	
	0.153	38.00	0.21	38.21	55.82	17.61	AV
	0.200	32.00	0.24	32.24	53.62	21.38	
	0.611	23.00	0.45	23.45	46.00	22.55	
	2.384	22.99	0.57	23.56	46.00	22.44	
	5.112	19.50	0.63	20.13	50.00	29.87	
	30.000	20.00	1.09	21.09	50.00	28.91	

TEST ENGINEER: HUGH HUANG

4 RADIATED EMISSION TEST

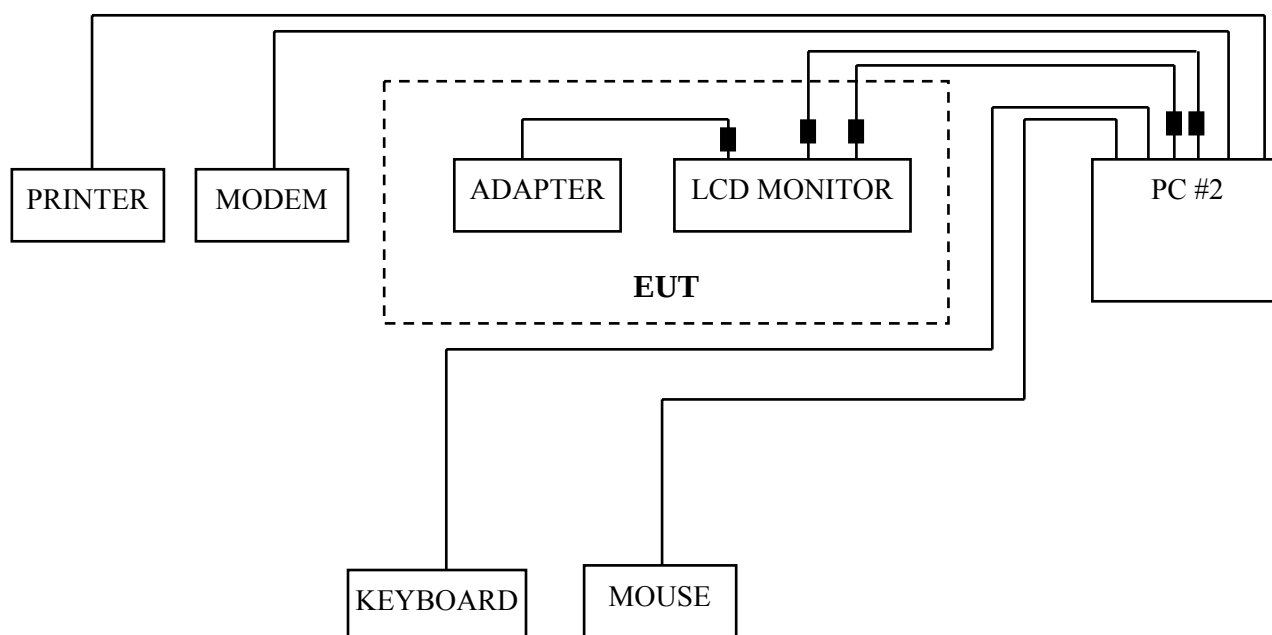
4.1 Test Equipment

The following test equipments are used during the radiated emission test in a semi-anechoic chamber:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESVS10	844594/001	Mar 07, 2009	Mar 07, 2010
2.	Preamplifier	Agilent	8447D	2944A10548	Sep 19, 2009	Mar 19, 2010
3.	Preamplifier	HP	8449B	3008A00864	Apr 29, 2009	Apr 29, 2010
4.	Bi-log Antenna	TESEQ	CBL6112D	23193	May 14, 2008	May 14, 2010
5.	Spectrum	Agilent	E7405A	MY45106600	May 19, 2009	May 19, 2010
6.	Software	Audix	E3	SET00200 9912M295-2	--	--

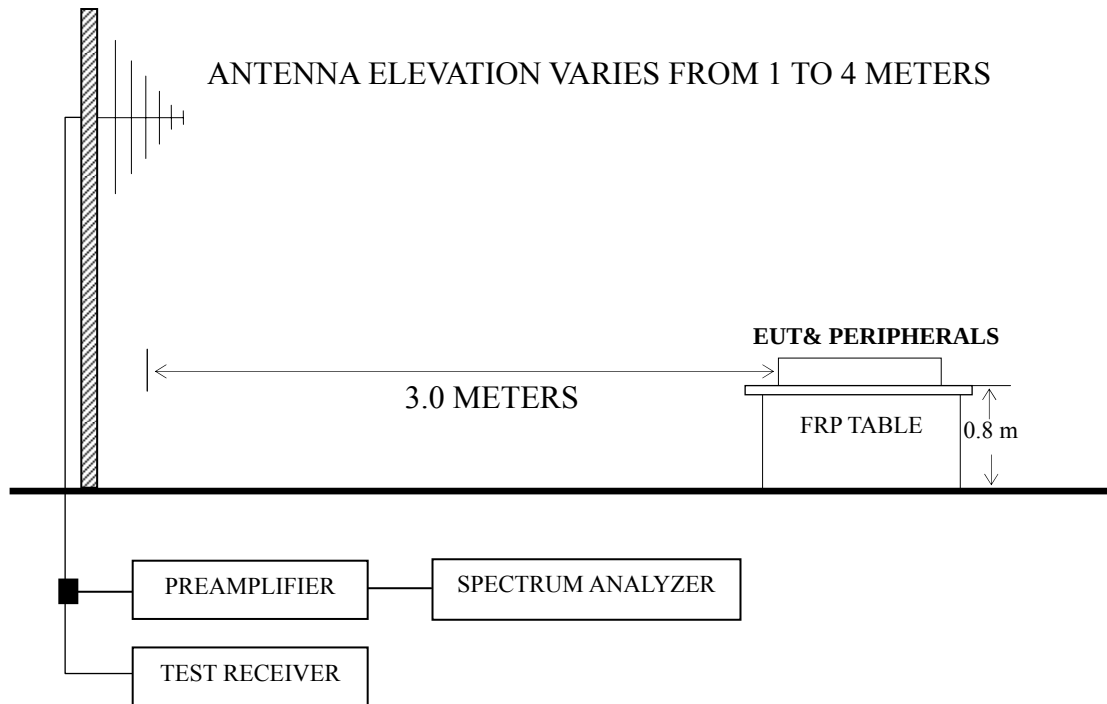
4.2 Block Diagram of Test Setup

4.2.1 EUT and Peripherals



■ : Ferrite core

4.2.2 Radiated emission test setup



■ : 50 ohm Coaxial Switch

4.3 Radiated Emission Limit [FCC Part 15 Subpart B 15.109(a)]

Frequency (MHz)	Distance (m)	Field strength limits	
		($\mu\text{V/m}$)	dB ($\mu\text{V/m}$)
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
Above 960	3	500	54.0

NOTE 1 - Emission Level dB ($\mu\text{V/m}$) = 20 log Emission Level ($\mu\text{V/m}$)

NOTE 2 - The tighter limit applies at the band edges.

NOTE 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.

NOTE 4 - The limits shown are based on Quasi-peak value detector below or equal to 1GHz and Average value detector above 1GHz.

NOTE 5 - Above 1 GHz, the limit on peak emission is 20 dB above the maximum permitted average emission limit applicable to the EUT.

4.4 Test Configuration

The configuration of the EUT and peripherals are same as those used in conducted emission test.

Please refer to Sec.3.4.

4.5 Operating Condition of EUT

Same as conducted emission test which is listed in Sec.3.5, except for the test setup replaced by Sec.4.2.

4.6 Test Procedures

The EUT and peripherals were placed on a FRP turntable that is 0.8 meter above ground. The FRP turntable rotated 360 degrees to determine the position of the maximum emission level. The EUT was set 3 meters away from the receiving antenna, which was mounted on an antenna tower. Broadband antenna (Calibrated Bilog Antenna) was used as receiving antenna. The antenna moved up and down between 1 meter and 4 meters to find out the maximum emission level. Both horizontal and vertical polarizations of the antenna were set on measurement. In order to find the maximum emission, all of the interference cables were manipulated according to ANSI C63.4:2003 requirements during radiated emission test.

The I.F. bandwidth of Test Receiver R&S ESVS10 was set at 120 kHz below 1GHz and The Spectrum Agilent E7405A was set at 1MHz above 1GHz.

The frequency range from 30 MHz to 1000MHz was checked for all test modes.

The frequency range from 1 GHz to 2 GHz was checked for D-Sub/DVI 1280*1024@75Hz modes.

The test modes were done on radiated disturbance test and all the test results are listed in Sec.4.7.

4.7 Test Results

<PASS>

The frequency and amplitude of the highest radiated emission relative the limit is reported. All the emissions not reported below are too low against the FCC limit.

Adapter	Test Mode	Data Page
ADS-24NP-12 1 24	D-Sub 640*480@60Hz	P28
	D-Sub 1280*1024@75Hz	P29
	D-Sub 1360*768@60Hz	P30
	DVI 640*480@60Hz	P31
	DVI 1280*1024@75Hz	P32
	DVI 1360*768@60Hz	P33
DSA-36W-12 1 24	D-Sub 640*480@60Hz	P34
	D-Sub 1280*1024@75Hz	P35
	D-Sub 1360*768@60Hz	P36
	DVI 640*480@60Hz	P37
	DVI 1280*1024@75Hz	P38
	DVI 1360*768@60Hz	P39

NOTE 1 – **The bold test mode** listed above means the worst test mode.

NOTE 2 – Emission Level = Antenna Factor + Cable Loss + Meter Reading.($< 1\text{GHz}$)

NOTE 3 – Emission Level = Antenna Factor + Cable Loss – Preamp Factor + Meter Reading.($> 1\text{GHz}$)

NOTE 4 – The emission levels that are 20dB below the official limit are not reported.

NOTE 5 – 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

NOTE 6 – The worst case is for DVI 640*480@60Hz test mode (Adapter: ADS-24NP-12 1 24). The worst emission at horizontal polarization was detected at 730.340 MHz with corrected signal level of 40.36 dB ($\mu\text{V/m}$) (limit is 46.00dB ($\mu\text{V/m}$)), when the antenna was 1.64 m height and the turntable was at 75° . The worst emission at vertical polarization was detected at 40.670MHz with corrected signal level of 36.37 dB ($\mu\text{V/m}$) (limit is 40.00 dB ($\mu\text{V/m}$)), when the antenna was 1.05 m height and the turntable was at 175° .

EUT : LCD Monitor Temperature : 22°C

Model No. : E1950TV Humidity : 60%RH

Serial No. : E2010010603 Date of Test : Jan 07, 2010

Test Mode : D-Sub 640*480@60Hz Adapter : ADS-24NP-12-1
12024G

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	55.220	18.03	7.69	0.80	26.52	40.00	13.48
	124.090	18.52	12.81	1.15	32.48	43.50	11.02
	192.960	18.66	10.40	1.40	30.46	43.50	13.04
	234.670	17.70	12.32	1.56	31.58	46.00	14.42
	630.430	9.22	19.35	2.53	31.10	46.00	14.90
	730.340	13.61	20.00	2.75	36.36	46.00	9.64
Vertical	40.670	20.04	13.62	0.71	34.37	40.00	5.63
	55.220	22.57	7.69	0.80	31.06	40.00	8.94
	66.860	24.89	6.53	0.87	32.29	40.00	7.71
	124.090	17.61	12.81	1.15	31.57	43.50	11.93
	281.230	17.20	13.57	1.70	32.47	46.00	13.53
	851.590	7.62	21.24	2.95	31.81	46.00	14.19

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E1950TV Humidity : 60%RH

Serial No. : E2010010603 Date of Test : Jan 07, 2010

Test Mode : D-Sub 1280*1024@75Hz Adapter : ADS-24NP-12-1
12024G

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	54.250	16.55	7.92	0.79	--	25.26	40.00	14.74	QP
	124.090	15.19	12.81	1.15	--	29.15	43.50	14.35	
	158.040	16.09	10.64	1.27	--	28.00	43.50	15.50	
	233.700	17.69	12.28	1.56	--	31.53	46.00	14.47	
	598.420	8.68	19.20	2.45	--	30.33	46.00	15.67	
	730.340	10.03	20.00	2.75	--	32.78	46.00	13.22	
	1041.000	48.47	22.69	3.24	34.10	40.30	74.00	33.70	PK
	1135.000	47.65	23.33	3.32	34.11	40.19	74.00	33.81	
	1230.000	47.56	23.94	3.40	34.12	40.78	74.00	33.22	
	1394.000	47.67	25.16	3.59	34.14	42.28	74.00	31.72	
	1600.000	50.91	26.40	3.93	34.16	47.08	74.00	26.92	
	1729.000	48.99	26.72	4.13	34.17	45.67	74.00	28.33	
Vertical	40.670	20.88	13.62	0.71	--	35.21	40.00	4.79	QP
	54.250	23.43	7.92	0.79	--	32.14	40.00	7.86	
	124.090	16.34	12.81	1.15	--	30.30	43.50	13.20	
	281.230	17.56	13.57	1.70	--	32.83	46.00	13.17	
	436.430	12.79	17.03	2.09	--	31.91	46.00	14.09	
	630.430	13.25	19.35	2.53	--	35.13	46.00	10.87	
	1057.000	53.70	22.79	3.26	34.10	45.65	74.00	28.35	PK
	1265.000	52.39	24.23	3.45	34.13	45.94	74.00	28.06	
	1334.000	54.28	24.78	3.53	34.13	48.46	74.00	25.54	
	1468.000	51.17	25.60	3.72	34.15	46.34	74.00	27.66	
	1600.000	53.92	26.40	3.93	34.16	50.09	74.00	23.91	
	1800.000	49.17	26.90	4.20	34.18	46.09	74.00	27.91	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E1950TV Humidity : 60%RH

Serial No. : E2010010603 Date of Test : Jan 07, 2010

Test Mode : D-Sub 1360*768@60Hz Adapter : ADS-24NP-12-1
12024G

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	59.100	17.92	6.80	0.82	25.54	40.00	14.46
	124.090	16.36	12.81	1.15	30.32	43.50	13.18
	158.040	16.65	10.64	1.27	28.56	43.50	14.94
	233.700	15.10	12.28	1.56	28.94	46.00	17.06
	600.360	7.59	19.20	2.47	29.26	46.00	16.74
	730.340	8.22	20.00	2.75	30.97	46.00	15.03
Vertical	40.670	20.09	13.62	0.71	34.42	40.00	5.58
	54.250	25.70	7.92	0.79	34.41	40.00	5.59
	124.090	15.34	12.81	1.15	29.30	43.50	14.20
	281.230	17.68	13.57	1.70	32.95	46.00	13.05
	457.770	12.44	17.35	2.15	31.94	46.00	14.06
	630.430	12.62	19.35	2.53	34.50	46.00	11.50

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E1950TV Humidity : 60%RH

Serial No. : E2010010603 Date of Test : Jan 07, 2010

Test Mode : DVI 640*480@60Hz Adapter : ADS-24NP-12-1
12024G

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	54.250	18.22	7.92	0.79	26.93	40.00	13.07
	124.090	20.52	12.81	1.15	34.48	43.50	9.02
	234.670	20.70	12.32	1.56	34.58	46.00	11.42
	344.280	12.89	15.16	1.86	29.91	46.00	16.09
	630.430	13.22	19.35	2.53	35.10	46.00	10.90
	730.340	17.61	20.00	2.75	40.36	46.00	5.64
Vertical	40.670	22.04	13.62	0.71	36.37	40.00	3.63
	56.190	24.80	7.46	0.80	33.06	40.00	6.94
	93.050	19.27	10.09	1.02	30.38	43.50	13.12
	185.200	18.32	10.08	1.38	29.78	43.50	13.72
	281.230	21.20	13.57	1.70	36.47	46.00	9.53
	457.770	11.85	17.35	2.15	31.35	46.00	14.65

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E1950TV Humidity : 60%RH

Serial No. : E2010010603 Date of Test : Jan 07, 2010

Test Mode : DVI 1280*1024@75Hz Adapter : ADS-24NP-12-1
12024G

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	53.280	17.58	8.14	0.79	--	26.51	40.00	13.49	QP
	124.090	19.19	12.81	1.15	--	33.15	43.50	10.35	
	158.040	21.09	10.64	1.27	--	33.00	43.50	10.50	
	233.700	18.69	12.28	1.56	--	32.53	46.00	13.47	
	598.420	11.68	19.20	2.45	--	33.33	46.00	12.67	
	730.340	13.03	20.00	2.75	--	35.78	46.00	10.22	
	1135.000	47.65	23.33	3.32	34.11	40.19	74.00	33.81	PK
	1230.000	47.56	23.94	3.40	34.12	40.78	74.00	33.22	
	1333.000	47.35	24.74	3.53	34.13	41.49	74.00	32.51	
	1498.000	49.81	25.80	3.79	34.15	45.25	74.00	28.75	
	1600.000	50.91	26.40	3.93	34.16	47.08	74.00	26.92	
	1800.000	49.07	26.90	4.20	34.18	45.99	74.00	28.01	
Vertical	40.670	21.88	13.62	0.71	--	36.21	40.00	3.79	QP
	54.250	25.43	7.92	0.79	--	34.14	40.00	5.86	
	124.090	20.34	12.81	1.15	--	34.30	43.50	9.20	
	198.780	21.56	10.64	1.42	--	33.62	43.50	9.88	
	281.230	22.56	13.57	1.70	--	37.83	46.00	8.17	
	630.430	15.25	19.35	2.53	--	37.13	46.00	8.87	
	1057.000	53.70	22.79	3.26	34.10	45.65	74.00	28.35	PK
	1200.000	52.57	23.70	3.35	34.12	45.50	74.00	28.50	
	1334.000	54.28	24.78	3.53	34.13	48.46	74.00	25.54	
	1468.000	51.17	25.60	3.72	34.15	46.34	74.00	27.66	
	1600.000	53.92	26.40	3.93	34.16	50.09	74.00	23.91	
	1800.000	49.17	26.90	4.20	34.18	46.09	74.00	27.91	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E1950TV Humidity : 60%RH

Serial No. : E2010010603 Date of Test : Jan 07, 2010

Test Mode : DVI 1360*768@60Hz Adapter : ADS-24NP-12-1
12024G

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	40.670	10.18	13.62	0.71	24.51	40.00	15.49
	59.100	19.92	6.80	0.82	27.54	40.00	12.46
	122.150	16.32	12.91	1.14	30.37	43.50	13.13
	165.800	20.19	10.33	1.30	31.82	43.50	11.68
	200.720	17.42	10.74	1.43	29.59	43.50	13.91
	730.340	11.22	20.00	2.75	33.97	46.00	12.03
Vertical	40.670	21.25	13.62	0.71	35.58	40.00	4.42
	54.250	25.70	7.92	0.79	34.41	40.00	5.59
	124.090	16.34	12.81	1.15	30.30	43.50	13.20
	165.800	17.81	10.33	1.30	29.44	43.50	14.06
	281.230	18.68	13.57	1.70	33.95	46.00	12.05
	630.430	14.62	19.35	2.53	36.50	46.00	9.50

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E1950TV Humidity : 60%RH

Serial No. : E2010010603 Date of Test : Jan 07, 2010

Test Mode : D-Sub 640*480@60Hz Adapter : DSA-36W-12 1 24

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	30.970	0.60	19.03	0.63	20.26	40.00	19.74
	124.090	13.50	12.81	1.15	27.46	43.50	16.04
	233.700	16.29	12.28	1.56	30.13	46.00	15.87
	457.770	6.47	17.35	2.15	25.97	46.00	20.03
	630.430	13.28	19.35	2.53	35.16	46.00	10.84
	730.340	11.96	20.00	2.75	34.71	46.00	11.29
Vertical	37.760	16.78	15.20	0.69	32.67	40.00	7.33
	115.360	16.77	12.71	1.11	30.59	43.50	12.91
	281.230	18.06	13.57	1.70	33.33	46.00	12.67
	457.770	12.81	17.35	2.15	32.31	46.00	13.69
	630.430	12.55	19.35	2.53	34.43	46.00	11.57
	859.350	11.56	21.31	2.95	35.82	46.00	10.18

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E1950TV Humidity : 60%RH

Serial No. : E2010010603 Date of Test : Jan 07, 2010

Test Mode : D-Sub 1280*1024@75Hz Adapter : DSA-36W-12 1 24

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	124.090	16.21	12.81	1.15	--	30.17	43.50	13.33	QP
	150.280	13.28	11.25	1.23	--	25.76	43.50	17.74	
	233.700	15.14	12.28	1.56	--	28.98	46.00	17.02	
	457.770	6.77	17.35	2.15	--	26.27	46.00	19.73	
	630.430	9.60	19.35	2.53	--	31.48	46.00	14.52	
	730.340	11.08	20.00	2.75	--	33.83	46.00	12.17	
	1071.000	47.82	22.88	3.27	34.11	39.86	74.00	34.14	PK
	1125.000	51.24	23.27	3.30	34.11	43.70	74.00	30.30	
	1230.000	48.35	23.94	3.40	34.12	41.57	74.00	32.43	
	1396.000	48.62	25.16	3.59	34.14	43.23	74.00	30.77	
	1498.000	50.15	25.80	3.79	34.15	45.59	74.00	28.41	
	1600.000	50.88	26.40	3.93	34.16	47.05	74.00	26.95	
Vertical	39.700	17.34	14.08	0.70	--	32.12	40.00	7.88	QP
	115.360	16.93	12.71	1.11	--	30.75	43.50	12.75	
	233.700	19.22	12.28	1.56	--	33.06	46.00	12.94	
	457.770	12.55	17.35	2.15	--	32.05	46.00	13.95	
	630.430	12.26	19.35	2.53	--	34.14	46.00	11.86	
	859.350	12.90	21.31	2.95	--	37.16	46.00	8.84	
	1040.000	50.04	22.66	3.23	34.10	41.83	74.00	32.17	PK
	1200.000	52.26	23.70	3.35	34.12	45.19	74.00	28.81	
	1333.000	51.38	24.74	3.53	34.13	45.52	74.00	28.48	
	1466.000	52.21	25.60	3.72	34.15	47.38	74.00	26.62	
	1600.000	50.58	26.40	3.93	34.16	46.75	74.00	27.25	
	1794.000	47.27	26.88	4.20	34.18	44.17	74.00	29.83	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E1950TV Humidity : 60%RH

Serial No. : E2010010603 Date of Test : Jan 07, 2010

Test Mode : D-Sub 1360*768@60Hz Adapter : DSA-36W-12 1 24

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	124.090	11.17	12.81	1.15	25.13	43.50	18.37
	150.280	13.05	11.25	1.23	25.53	43.50	17.97
	233.700	18.07	12.28	1.56	31.91	46.00	14.09
	281.230	10.23	13.57	1.70	25.50	46.00	20.50
	598.420	9.61	19.20	2.45	31.26	46.00	14.74
	730.340	12.16	20.00	2.75	34.91	46.00	11.09
Vertical	37.760	15.92	15.20	0.69	31.81	40.00	8.19
	115.360	15.96	12.71	1.11	29.78	43.50	13.72
	233.700	18.53	12.28	1.56	32.37	46.00	13.63
	281.230	18.81	13.57	1.70	34.08	46.00	11.92
	457.770	10.45	17.35	2.15	29.95	46.00	16.05
	630.430	9.38	19.35	2.53	31.26	46.00	14.74

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E1950TV Humidity : 60%RH

Serial No. : E2010010603 Date of Test : Jan 07, 2010

Test Mode : DVI 640*480@60Hz Adapter : DSA-36W-12 1 24

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	32.910	0.32	17.95	0.64	18.91	40.00	21.09
	150.280	11.96	11.25	1.23	24.44	43.50	19.06
	233.700	16.29	12.28	1.56	30.13	46.00	15.87
	281.230	12.51	13.57	1.70	27.78	46.00	18.22
	630.430	12.69	19.35	2.53	34.57	46.00	11.43
	730.340	12.55	20.00	2.75	35.30	46.00	10.70
Vertical	37.760	15.23	15.20	0.69	31.12	40.00	8.88
	114.260	14.21	12.61	1.11	27.93	43.50	15.57
	282.340	18.06	13.59	1.71	33.36	46.00	12.64
	457.770	13.81	17.35	2.15	33.31	46.00	12.69
	629.260	14.55	19.35	2.53	36.43	46.00	9.57
	859.430	12.56	21.31	2.95	36.82	46.00	9.18

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E1950TV Humidity : 60%RH

Serial No. : E2010010603 Date of Test : Jan 07, 2010

Test Mode : DVI 1280*1024@75Hz Adapter : DSA-36W-12 1 24

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	31.940	2.46	18.49	0.63	--	21.58	40.00	18.42	QP
	124.090	18.21	12.81	1.15	--	32.17	43.50	11.33	
	233.700	17.14	12.28	1.56	--	30.98	46.00	15.02	
	457.770	9.77	17.35	2.15	--	29.27	46.00	16.73	
	630.430	12.60	19.35	2.53	--	34.48	46.00	11.52	
	730.340	14.08	20.00	2.75	--	36.83	46.00	9.17	
	1125.000	51.34	23.27	3.30	34.11	43.80	74.00	30.20	PK
	1232.000	46.70	23.98	3.40	34.12	39.96	74.00	34.04	
	1333.000	47.46	24.74	3.53	34.13	41.60	74.00	32.40	
	1430.000	46.00	25.38	3.63	34.14	40.87	74.00	33.13	
	1513.000	46.30	25.92	3.79	34.15	41.86	74.00	32.14	
	1600.000	49.89	26.40	3.93	34.16	46.06	74.00	27.94	
Vertical	37.760	15.17	15.20	0.69	--	31.06	40.00	8.94	QP
	71.710	17.33	6.69	0.89	--	24.91	40.00	15.09	
	117.300	14.73	12.84	1.12	--	28.69	43.50	14.81	
	457.770	14.55	17.35	2.15	--	34.05	46.00	11.95	
	630.430	14.26	19.35	2.53	--	36.14	46.00	9.86	
	859.350	13.90	21.31	2.95	--	38.16	46.00	7.84	
	1069.000	51.29	22.88	3.26	34.11	43.32	74.00	30.68	PK
	1125.000	52.25	23.27	3.30	34.11	44.71	74.00	29.29	
	1200.000	52.83	23.70	3.35	34.12	45.76	74.00	28.24	
	1500.000	51.87	25.80	3.79	34.15	47.31	74.00	26.69	
	1600.000	53.25	26.40	3.93	34.16	49.42	74.00	24.58	
	1799.000	49.33	26.90	4.20	34.18	46.25	74.00	27.75	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E1950TV Humidity : 60%RH

Serial No. : E2010010603 Date of Test : Jan 07, 2010

Test Mode : DVI 1360*768@60Hz Adapter : DSA-36W-12 1 24

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	30.000	1.10	19.60	0.62	21.32	40.00	18.68
	115.360	11.43	12.71	1.11	25.25	43.50	18.25
	150.280	16.05	11.25	1.23	28.53	43.50	14.97
	233.700	20.07	12.28	1.56	33.91	46.00	12.09
	576.110	7.26	18.94	2.42	28.62	46.00	17.38
	730.340	15.16	20.00	2.75	37.91	46.00	8.09
Vertical	37.760	16.92	15.20	0.69	32.81	40.00	7.19
	92.080	17.37	9.82	1.01	28.20	43.50	15.30
	124.090	21.36	12.81	1.15	35.32	43.50	8.18
	233.700	21.53	12.28	1.56	35.37	46.00	10.63
	281.230	23.81	13.57	1.70	39.08	46.00	6.92
	630.430	13.38	19.35	2.53	35.26	46.00	10.74

TEST ENGINEER: RAVEN JIN

5 DEVIATION TO TEST SPECIFICATIONS

None.

6 DEBUG DESCRIPTION

The following components are used during the countermeasure procedures:

Name	M/N	Specifications (mm)	Manufacturer	Location
Gasket	MCQ57884403 2EA	102*9*1T	DAEHUNG SUBSIDIARY MATERIALS.	See Appendix II Figure 11-1, 11-3
Gasket	3940TKK041S 2EA	114*10*1T	DAEHUNG SUBSIDIARY MATERIALS.	See Appendix II Figure 11-2, 11-4
Gasket	3940TKK043D 1EA	70*9*2T	DAEHUNG SUBSIDIARY MATERIALS.	See Appendix II Figure 11-5

Note: We had required the applicant and manufacturer that all electrical and mechanical devices employed for spurious radiation suppression, including any modifications made during certification testing, must be incorporated in each unit marked

TEST ENGINEER:



(RAVEN JIN)