

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

LCD Monitor

Model No.: E2050SV

Serial No.: E2009121403

FCC ID : BEJE2050SV

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

Prepared By : Audix Technology (Shanghai) Co., Ltd.
3F 34Bldg 680 Guiping Rd,
Caohejing Hi-Tech Park,
Shanghai 200233, China

Tel: +86-21-64955500
Fax: +86-21-64955491

Report No. : ACI-F09132
Date of Test : Dec 18 – 20, 2009
Date of Report : Dec 24, 2009

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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. : E2050SV
(B) Serial No. : E2009121403
(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: E2050SV; S/N: E2009121403) which was tested in 3m anechoic chamber Dec 18 – 20, 2009 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 : Dec 18 – 20, 2009 Date of Report : Dec 24, 2009

Producer : Zeno Gu
ZENOGU / Assistant

Review : Dio Yang
DIO YANG / Deputy Assistant Manager

 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. : E2050SV

Serial No. : E2009121403

Real Power : 21.00W

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 : LG Display
M/N : LM200WD3 (TL) (A1)

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: HONOR ELECTRONIC
CO., LTD.
M/N : ADS-24S-12 1224GPG
Input : 100-240V ~ 50/60Hz, 0.7A
Output : 12V $\overline{\text{---}}$ 2.0A
Output Cable: Unshielded, Undetachable, 1.80m,
with one core

Adapter #3 : 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

Adapter #4	:	I.T.E Power Supply Manufacturer: Jiangsu Lingxian Electron Co., Ltd. M/N : MU24-B120200-C5 Input : 100-240V ~ 50/60Hz, 1.0A Output : 12V $\overline{\text{---}}$ 2.0A Output Cable: Unshielded, Undetachable, 1.80m, with one core
Max Resolution	:	1600*900@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
Power Cord	:	Unshielded, Detachable, 1.80m
Note	:	After evaluation, the D-Sub cable#1 was 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 DC In Port | : Connected with Adapter |

2.2 Peripherals

2.2.1 PC

Manufacturer : HP
Model Number : dx6120MT
Serial Number : CNG53004J2
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 Printer

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

2.2.3 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

2.2.4 Mouse

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

2.2.5 Modem

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

2.3 Description of Test Facility

Site Description (Semi-Anechoic Chamber)	:	Sept. 17, 1998 file on 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

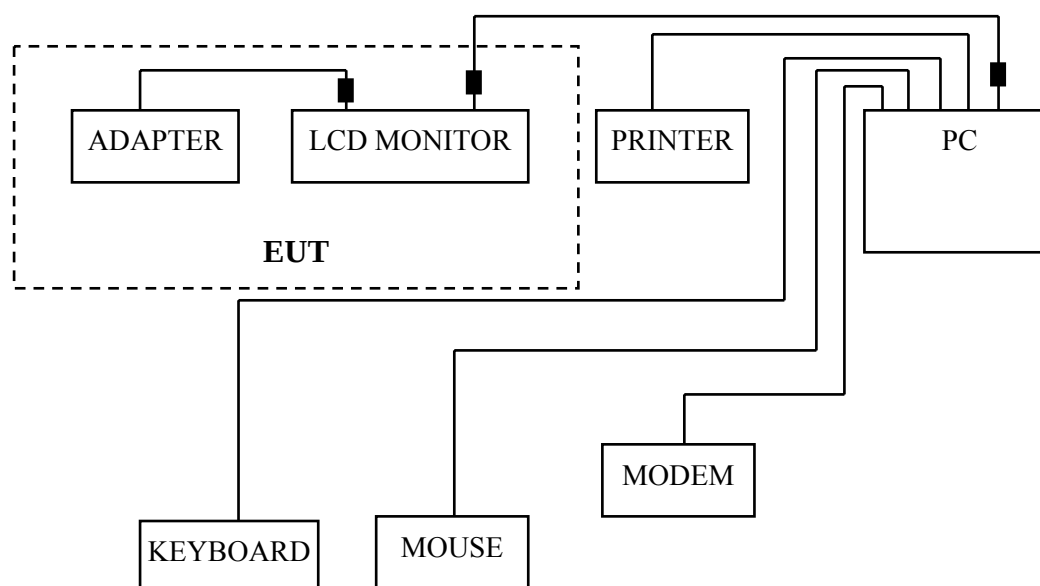
3.1.1 Test Equipment

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

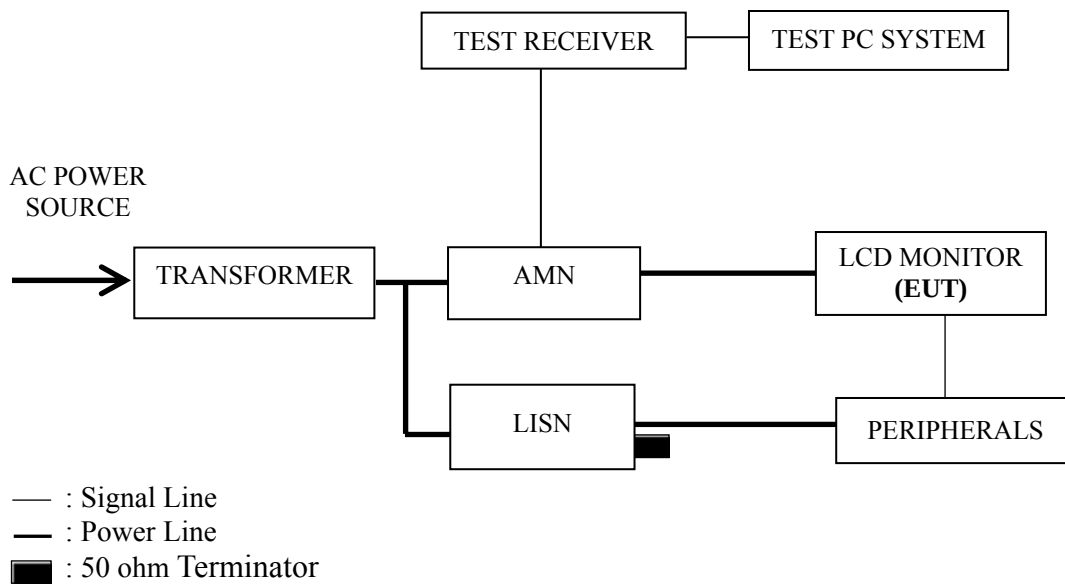
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCI	100841	Oct 15, 2009	Oct 15, 2010
2.	Artificial Mains Network (AMN)	R&S	ESH2-Z5	843890/011	Apr 02, 2009	Apr 02, 2010
3.	Line Impedance Stabilization Network (LISN)	Kyoritsu	KNW-407	8-1280-4	Apr 02, 2009	Apr 02, 2010
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



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 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 1024*768@60Hz
	D-Sub 1600*900@60Hz
ADS-24S-12 1224GPG	D-Sub 640*480@60Hz
	D-Sub 1024*768@60Hz
	D-Sub 1600*900@60Hz
DSA-36W-12 1 24	D-Sub 640*480@60Hz
	D-Sub 1024*768@60Hz
	D-Sub 1600*900@60Hz
MU24-B120200-C5	D-Sub 640*480@60Hz
	D-Sub 1024*768@60Hz
	D-Sub 1600*900@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	P13
	D-Sub 1024*768@60Hz	P14
	D-Sub 1600*900@60Hz	P15
ADS-24S-12 1224GPG	D-Sub 640*480@60Hz	P16
	D-Sub 1024*768@60Hz	P17
	D-Sub 1600*900@60Hz	P18
DSA-36W-12 1 24	D-Sub 640*480@60Hz	P19
	D-Sub 1024*768@60Hz	P20
	D-Sub 1600*900@60Hz	P21
MU24-B120200-C5	D-Sub 640*480@60Hz	P22
	D-Sub 1024*768@60Hz	P23
	D-Sub 1600*900@60Hz	P24

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 1600*900@60Hz test mode (Adapter: MU24-B120200-C5). The worst emission is detected at 0.180 MHz (Quasi-Peak Value) with corrected signal level of 57.73 dB (μV) (limit is 64.49 dB (μV)), when the Line the EUT is connected to AMN.

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050SV Humidity : 48%RH

Serial No. : E2009121403 Date of Test : Dec 18, 2009

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	0.176	55.30	0.22	55.52	64.68	9.16	QP
	0.303	39.42	0.25	39.67	60.15	20.48	
	0.505	30.51	0.29	30.80	56.00	25.20	
	4.672	27.91	0.44	28.35	56.00	27.65	
	9.861	29.16	0.49	29.65	60.00	30.35	
	11.317	30.60	0.55	31.15	60.00	28.85	
	0.176	39.51	0.22	39.73	54.68	14.95	AV
	0.303	25.16	0.25	25.41	50.15	24.74	
	0.505	16.77	0.29	17.06	46.00	28.94	
	4.672	18.19	0.44	18.63	46.00	27.37	
	9.861	24.00	0.49	24.49	50.00	25.51	
	11.317	25.56	0.55	26.11	50.00	23.89	
Neutral	0.174	54.48	0.20	54.68	64.77	10.09	QP
	0.310	40.09	0.23	40.32	59.97	19.65	
	0.505	28.84	0.26	29.10	56.00	26.90	
	4.672	27.67	0.45	28.12	56.00	27.88	
	9.352	28.74	0.50	29.24	60.00	30.76	
	11.021	31.26	0.54	31.80	60.00	28.20	
	0.174	38.01	0.20	38.21	54.77	16.56	AV
	0.310	25.48	0.23	25.71	49.97	24.26	
	0.505	16.50	0.26	16.76	46.00	29.24	
	4.672	18.33	0.45	18.78	46.00	27.22	
	9.352	23.40	0.50	23.90	50.00	26.10	
	11.021	25.16	0.54	25.70	50.00	24.30	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050SV Humidity : 48%RH

Serial No. : E2009121403 Date of Test : Dec 18, 2009

Test Mode : D-Sub 1024*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	0.176	55.48	0.22	55.70	64.68	8.98	QP
	0.307	40.67	0.25	40.92	60.06	19.14	
	0.505	30.48	0.29	30.77	56.00	25.23	
	3.293	27.85	0.41	28.26	56.00	27.74	
	5.774	28.41	0.45	28.86	60.00	31.14	
	10.905	31.24	0.53	31.77	60.00	28.23	
	0.176	39.85	0.22	40.07	54.68	14.61	AV
	0.307	27.41	0.25	27.66	50.06	22.40	
	0.505	16.62	0.29	16.91	46.00	29.09	
	3.293	18.07	0.41	18.48	46.00	27.52	
	5.774	20.79	0.45	21.24	50.00	28.76	
	10.905	24.73	0.53	25.26	50.00	24.74	
Neutral	0.178	55.75	0.20	55.95	64.59	8.64	QP
	0.303	38.72	0.23	38.95	60.15	21.20	
	0.499	29.99	0.26	30.25	56.01	25.76	
	3.509	28.10	0.42	28.52	56.00	27.48	
	5.333	28.87	0.45	29.32	60.00	30.68	
	10.676	31.09	0.53	31.62	60.00	28.38	
	0.178	44.36	0.20	44.56	54.59	10.03	AV
	0.303	20.98	0.23	21.21	50.15	28.94	
	0.499	18.07	0.26	18.33	46.01	27.68	
	3.509	18.58	0.42	19.00	46.00	27.00	
	5.333	21.53	0.45	21.98	50.00	28.02	
	10.676	25.54	0.53	26.07	50.00	23.93	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050SV Humidity : 48%RH

Serial No. : E2009121403 Date of Test : Dec 18, 2009

Test Mode : D-Sub 1600*900@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	0.178	57.23	0.22	57.45	64.59	7.14	QP
	0.310	41.63	0.25	41.88	59.97	18.09	
	0.510	30.56	0.29	30.85	56.00	25.15	
	3.472	33.45	0.41	33.86	56.00	22.14	
	5.333	32.87	0.44	33.31	60.00	26.69	
	11.080	33.49	0.54	34.03	60.00	25.97	
	0.178	41.14	0.22	41.36	54.59	13.23	AV
	0.310	28.55	0.25	28.80	49.97	21.17	
	0.510	12.30	0.29	12.59	46.00	33.41	
	3.472	22.00	0.41	22.41	46.00	23.59	
	5.333	22.02	0.44	22.46	50.00	27.54	
	11.080	25.45	0.54	25.99	50.00	24.01	
Neutral	0.176	57.55	0.20	57.75	64.68	6.93	QP
	0.307	41.99	0.23	42.22	60.06	17.84	
	0.505	31.91	0.26	32.17	56.00	23.83	
	3.364	31.89	0.41	32.30	56.00	23.70	
	6.121	31.31	0.46	31.77	60.00	28.23	
	11.317	32.83	0.56	33.39	60.00	26.61	
	0.176	42.43	0.20	42.63	54.68	12.05	AV
	0.307	25.66	0.23	25.89	50.06	24.17	
	0.505	18.54	0.26	18.80	46.00	27.20	
	3.364	20.89	0.41	21.30	46.00	24.70	
	6.121	22.66	0.46	23.12	50.00	26.88	
	11.317	25.52	0.56	26.08	50.00	23.92	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050SV Humidity : 48%RH

Serial No. : E2009121403 Date of Test : Dec 18, 2009

Test Mode : D-Sub 640*480@60Hz Adapter : ADS-24S-12
1224GPG

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.172	53.84	0.22	54.06	64.86	10.80	QP
	0.300	41.16	0.25	41.41	60.24	18.83	
	0.541	30.33	0.29	30.62	56.00	25.38	
	3.565	39.20	0.42	39.62	56.00	16.38	
	5.594	34.58	0.45	35.03	60.00	24.97	
	10.125	33.52	0.49	34.01	60.00	25.99	
	0.172	38.61	0.22	38.83	54.86	16.03	AV
	0.300	32.18	0.25	32.43	50.24	17.81	
	0.541	19.83	0.29	20.12	46.00	25.88	
	3.565	30.79	0.42	31.21	46.00	14.79	
	5.594	23.90	0.45	24.35	50.00	25.65	
	10.125	26.28	0.49	26.77	50.00	23.23	
Neutral	0.166	54.73	0.20	54.93	65.16	10.23	QP
	0.208	49.83	0.20	50.03	63.27	13.24	
	0.296	40.78	0.23	41.01	60.37	19.36	
	3.603	39.29	0.43	39.72	56.00	16.28	
	5.867	34.99	0.46	35.45	60.00	24.55	
	9.966	31.58	0.51	32.09	60.00	27.91	
	0.166	39.72	0.20	39.92	55.16	15.24	AV
	0.208	35.14	0.20	35.34	53.27	17.93	
	0.296	31.57	0.23	31.80	50.37	18.57	
	3.603	31.73	0.43	32.16	46.00	13.84	
	5.867	25.30	0.46	25.76	50.00	24.24	
	9.966	23.17	0.51	23.68	50.00	26.32	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050SV Humidity : 48%RH

Serial No. : E2009121403 Date of Test : Dec 18, 2009

Test Mode : D-Sub 1024*768@60Hz Adapter : ADS-24S-12
1224GPG

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.174	53.83	0.22	54.05	64.77	10.72	QP
	0.307	40.74	0.25	40.99	60.06	19.07	
	0.546	30.13	0.29	30.42	56.00	25.58	
	3.509	39.41	0.41	39.82	56.00	16.18	
	5.713	35.05	0.45	35.50	60.00	24.50	
	10.342	32.74	0.51	33.25	60.00	26.75	
	0.174	42.91	0.22	43.13	54.77	11.64	AV
	0.307	30.88	0.25	31.13	50.06	18.93	
	0.546	20.71	0.29	21.00	46.00	25.00	
	3.509	32.21	0.41	32.62	46.00	13.38	
	5.713	24.07	0.45	24.52	50.00	25.48	
	10.342	25.83	0.51	26.34	50.00	23.66	
Neutral	0.174	53.84	0.20	54.04	64.77	10.73	QP
	0.307	40.78	0.23	41.01	60.06	19.05	
	0.546	30.20	0.26	30.46	56.00	25.54	
	3.509	39.42	0.42	39.84	56.00	16.16	
	5.713	34.92	0.46	35.38	60.00	24.62	
	10.342	32.51	0.52	33.03	60.00	26.97	
	0.174	42.39	0.20	42.59	54.77	12.18	AV
	0.307	31.94	0.23	32.17	50.06	17.89	
	0.546	20.21	0.26	20.47	46.00	25.53	
	3.509	31.74	0.42	32.16	46.00	13.84	
	5.713	25.15	0.46	25.61	50.00	24.39	
	10.342	24.58	0.52	25.10	50.00	24.90	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050SV Humidity : 48%RH

Serial No. : E2009121403 Date of Test : Dec 18, 2009

Test Mode : D-Sub 1600*900@60Hz Adapter : ADS-24S-12
1224GPG

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.178	53.11	0.22	53.33	64.59	11.26	QP
	0.303	41.36	0.25	41.61	60.15	18.54	
	0.564	30.03	0.28	30.31	56.00	25.69	
	3.799	39.23	0.42	39.65	56.00	16.35	
	5.653	35.21	0.45	35.66	60.00	24.34	
	10.019	33.35	0.49	33.84	60.00	26.16	
	0.178	41.52	0.22	41.74	54.59	12.85	AV
	0.303	31.93	0.25	32.18	50.15	17.97	
	0.564	16.75	0.28	17.03	46.00	28.97	
	3.799	30.25	0.42	30.67	46.00	15.33	
	5.653	25.90	0.45	26.35	50.00	23.65	
	10.019	26.52	0.49	27.01	50.00	22.99	
Neutral	0.166	54.13	0.20	54.33	65.16	10.83	QP
	0.310	40.38	0.23	40.61	59.97	19.36	
	0.541	32.75	0.26	33.01	56.00	22.99	
	3.840	40.14	0.43	40.57	56.00	15.43	
	5.005	36.69	0.45	37.14	60.00	22.86	
	10.072	32.02	0.51	32.53	60.00	27.47	
	0.166	41.66	0.20	41.86	55.16	13.30	AV
	0.310	28.94	0.23	29.17	49.97	20.80	
	0.541	19.52	0.26	19.78	46.00	26.22	
	3.840	32.95	0.43	33.38	46.00	12.62	
	5.005	27.40	0.45	27.85	50.00	22.15	
	10.072	25.09	0.51	25.60	50.00	24.40	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050SV Humidity : 48%RH

Serial No. : E2009121403 Date of Test : Dec 18, 2009

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	0.162	51.83	0.23	52.06	65.34	13.28	QP
	0.325	40.94	0.26	41.20	59.57	18.37	
	0.694	37.26	0.27	37.53	56.00	18.47	
	2.309	34.40	0.37	34.77	56.00	21.23	
	5.362	31.27	0.44	31.71	60.00	28.29	
	11.438	30.44	0.56	31.00	60.00	29.00	
	0.162	37.33	0.23	37.56	55.34	17.78	AV
	0.325	28.61	0.26	28.87	49.57	20.70	
	0.694	28.68	0.27	28.95	46.00	17.05	
	2.309	24.27	0.37	24.64	46.00	21.36	
	5.362	21.00	0.44	21.44	50.00	28.56	
	11.438	23.45	0.56	24.01	50.00	25.99	
Neutral	0.162	52.46	0.20	52.66	65.34	12.68	QP
	0.332	41.26	0.23	41.49	59.40	17.91	
	0.521	36.83	0.26	37.09	56.00	18.91	
	2.334	32.82	0.38	33.20	56.00	22.80	
	5.333	30.51	0.45	30.96	60.00	29.04	
	19.021	28.07	0.83	28.90	60.00	31.10	
	0.162	35.69	0.20	35.89	55.34	19.45	AV
	0.332	32.29	0.23	32.52	49.40	16.88	
	0.521	22.10	0.26	22.36	46.00	23.64	
	2.334	19.16	0.38	19.54	46.00	26.46	
	5.333	21.10	0.45	21.55	50.00	28.45	
	19.021	21.29	0.83	22.12	50.00	27.88	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050SV Humidity : 48%RH

Serial No. : E2009121403 Date of Test : Dec 18, 2009

Test Mode : D-Sub 1024*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	0.161	50.08	0.23	50.31	65.43	15.12	QP
	0.322	39.49	0.26	39.75	59.66	19.91	
	0.694	37.24	0.27	37.51	56.00	18.49	
	2.448	34.23	0.39	34.62	56.00	21.38	
	5.653	31.46	0.45	31.91	60.00	28.09	
	13.551	30.45	0.66	31.11	60.00	28.89	
	0.161	35.56	0.23	35.79	55.43	19.64	AV
	0.322	24.31	0.26	24.57	49.66	25.09	
	0.694	27.29	0.27	27.56	46.00	18.44	
	2.448	20.94	0.39	21.33	46.00	24.67	
	5.653	22.04	0.45	22.49	50.00	27.51	
	13.551	23.60	0.66	24.26	50.00	25.74	
Neutral	0.162	50.48	0.20	50.68	65.34	14.66	QP
	0.325	41.02	0.23	41.25	59.57	18.32	
	0.694	37.28	0.27	37.55	56.00	18.45	
	2.213	33.17	0.37	33.54	56.00	22.46	
	5.112	30.57	0.45	31.02	60.00	28.98	
	12.988	30.35	0.62	30.97	60.00	29.03	
	0.162	30.90	0.20	31.10	55.34	24.24	AV
	0.325	32.02	0.23	32.25	49.57	17.32	
	0.694	26.02	0.27	26.29	46.00	19.71	
	2.213	21.65	0.37	22.02	46.00	23.98	
	5.112	19.86	0.45	20.31	50.00	29.69	
	12.988	24.19	0.62	24.81	50.00	25.19	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050SV Humidity : 48%RH

Serial No. : E2009121403 Date of Test : Dec 18, 2009

Test Mode : D-Sub 1600*900@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	0.162	48.97	0.23	49.20	65.34	16.14	QP
	0.322	39.86	0.26	40.12	59.66	19.54	
	0.694	37.19	0.27	37.46	56.00	18.54	
	2.358	33.56	0.37	33.93	56.00	22.07	
	5.166	31.61	0.44	32.05	60.00	27.95	
	12.920	30.13	0.63	30.76	60.00	29.24	
	0.162	32.69	0.23	32.92	55.34	22.42	AV
	0.322	30.17	0.26	30.43	49.66	19.23	
	0.694	27.62	0.27	27.89	46.00	18.11	
	2.358	23.54	0.37	23.91	46.00	22.09	
	5.166	19.96	0.44	20.40	50.00	29.60	
	12.920	23.50	0.63	24.13	50.00	25.87	
Neutral	0.162	49.69	0.20	49.89	65.34	15.45	QP
	0.332	41.52	0.23	41.75	59.40	17.65	
	0.694	37.24	0.27	37.51	56.00	18.49	
	2.384	33.26	0.39	33.65	56.00	22.35	
	5.005	31.61	0.45	32.06	60.00	27.94	
	13.989	31.17	0.64	31.81	60.00	28.19	
	0.162	38.43	0.20	38.63	55.34	16.71	AV
	0.332	33.84	0.23	34.07	49.40	15.33	
	0.694	27.53	0.27	27.80	46.00	18.20	
	2.384	21.68	0.39	22.07	46.00	23.93	
	5.005	21.72	0.45	22.17	50.00	27.83	
	13.989	25.50	0.64	26.14	50.00	23.86	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050SV Humidity : 48%RH

Serial No. : E2009121403 Date of Test : Dec 18, 2009

Test Mode : D-Sub 640*480@60Hz Adapter : MU24-B120200-C5

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.179	54.24	0.22	54.46	64.53	10.07	QP
	0.241	48.74	0.24	48.98	62.08	13.10	
	0.363	39.00	0.26	39.26	58.65	19.39	
	1.705	32.93	0.34	33.27	56.00	22.73	
	4.263	31.13	0.43	31.56	56.00	24.44	
	11.950	34.48	0.58	35.06	60.00	24.94	
	0.179	34.13	0.22	34.35	54.53	20.18	AV
	0.241	40.10	0.24	40.34	52.08	11.74	
	0.363	23.97	0.26	24.23	48.65	24.42	
	1.705	18.60	0.34	18.94	46.00	27.06	
	4.263	15.68	0.43	16.11	46.00	29.89	
	11.950	27.96	0.58	28.54	50.00	21.46	
Neutral	0.183	53.85	0.20	54.05	64.37	10.32	QP
	0.240	48.55	0.22	48.77	62.11	13.34	
	0.370	38.78	0.24	39.02	58.50	19.48	
	2.106	31.53	0.36	31.89	56.00	24.11	
	4.273	30.82	0.43	31.25	56.00	24.75	
	11.920	38.28	0.57	38.85	60.00	21.15	
	0.183	37.62	0.20	37.82	54.37	16.55	AV
	0.240	29.64	0.22	29.86	52.11	22.25	
	0.370	24.04	0.24	24.28	48.50	24.22	
	2.106	14.86	0.36	15.22	46.00	30.78	
	4.273	16.71	0.43	17.14	46.00	28.86	
	11.920	30.92	0.57	31.49	50.00	18.51	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050SV Humidity : 48%RH

Serial No. : E2009121403 Date of Test : Dec 18, 2009

Test Mode : D-Sub 1024*768@60Hz Adapter : MU24-B120200-C5

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.182	54.66	0.22	54.88	64.40	9.52	QP
	0.241	49.05	0.24	49.29	62.05	12.76	
	0.362	39.14	0.26	39.40	58.68	19.28	
	1.327	32.46	0.32	32.78	56.00	23.22	
	4.232	30.43	0.43	30.86	56.00	25.14	
	11.980	34.67	0.58	35.25	60.00	24.75	
	0.182	39.03	0.22	39.25	54.40	15.15	AV
	0.241	36.56	0.24	36.80	52.05	15.25	
	0.362	26.63	0.26	26.89	48.68	21.79	
	1.327	17.59	0.32	17.91	46.00	28.09	
	4.232	16.20	0.43	16.63	46.00	29.37	
	11.980	26.07	0.58	26.65	50.00	23.35	
Neutral	0.180	55.87	0.20	56.07	64.49	8.42	QP
	0.240	49.86	0.22	50.08	62.10	12.02	
	0.299	41.82	0.23	42.05	60.27	18.22	
	1.915	30.65	0.36	31.01	56.00	24.99	
	4.314	30.28	0.43	30.71	56.00	25.29	
	11.900	38.42	0.57	38.99	60.00	21.01	
	0.180	30.27	0.20	30.47	54.49	24.02	AV
	0.240	33.31	0.22	33.53	52.10	18.57	
	0.299	23.23	0.23	23.46	50.27	26.81	
	1.915	16.39	0.36	16.75	46.00	29.25	
	4.314	14.92	0.43	15.35	46.00	30.65	
	11.900	32.71	0.57	33.28	50.00	16.72	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050SV Humidity : 48%RH

Serial No. : E2009121403 Date of Test : Dec 18, 2009

Test Mode : D-Sub 1600*900@60Hz Adapter : MU24-B120200-C5

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.180	57.51	0.22	57.73	64.49	6.76	QP
	0.239	51.48	0.24	51.72	62.13	10.41	
	0.360	40.19	0.26	40.45	58.72	18.27	
	1.566	32.02	0.34	32.36	56.00	23.64	
	4.511	29.33	0.44	29.77	56.00	26.23	
	12.060	34.86	0.59	35.45	60.00	24.55	
	0.180	44.86	0.22	45.08	54.49	9.41	AV
	0.239	28.99	0.24	29.23	52.13	22.90	
	0.360	21.93	0.26	22.19	48.72	26.53	
	1.566	15.99	0.34	16.33	46.00	29.67	
	4.511	13.92	0.44	14.36	46.00	31.64	
	12.060	28.30	0.59	28.89	50.00	21.11	
Neutral	0.181	56.64	0.20	56.84	64.44	7.60	QP
	0.240	50.45	0.22	50.67	62.09	11.42	
	0.360	39.74	0.24	39.98	58.73	18.75	
	1.992	30.74	0.36	31.10	56.00	24.90	
	4.425	29.31	0.45	29.76	56.00	26.24	
	11.840	38.14	0.57	38.71	60.00	21.29	
	0.181	35.43	0.20	35.63	54.44	18.81	AV
	0.240	34.04	0.22	34.26	52.09	17.83	
	0.360	23.80	0.24	24.04	48.73	24.69	
	1.992	14.59	0.36	14.95	46.00	31.05	
	4.425	14.51	0.45	14.96	46.00	31.04	
	11.840	32.22	0.57	32.79	50.00	17.21	

TEST ENGINEER: HUGH HUANG

4 RADIATED EMISSION TEST

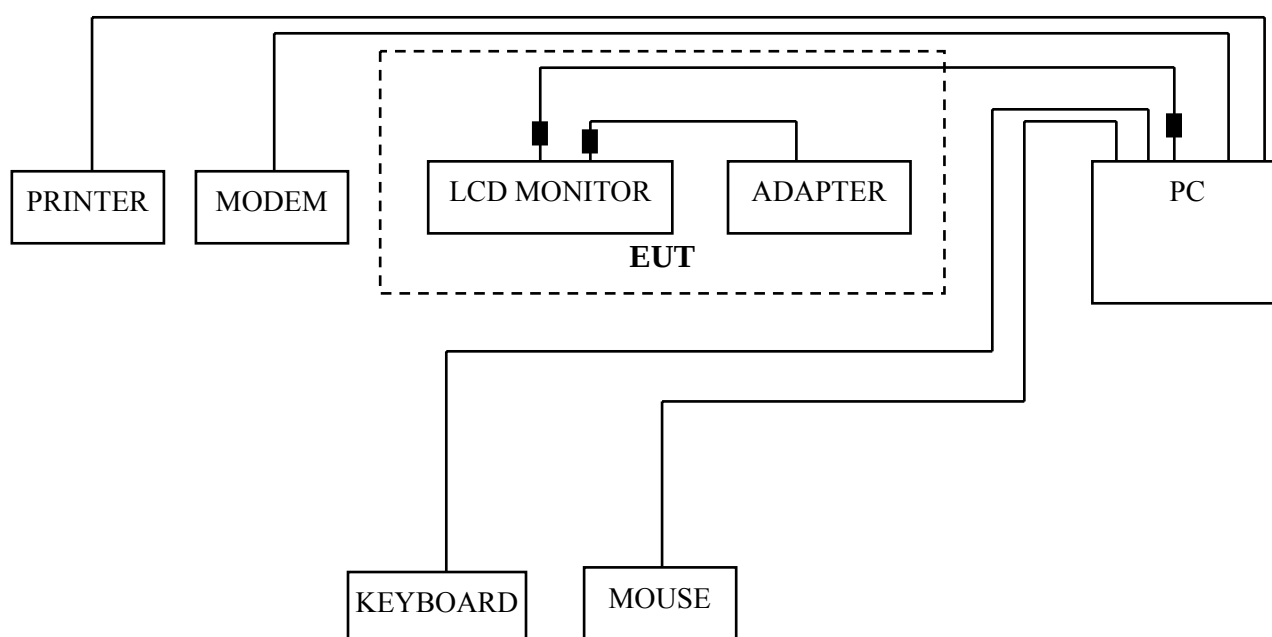
4.1 Test Equipment

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	--	--

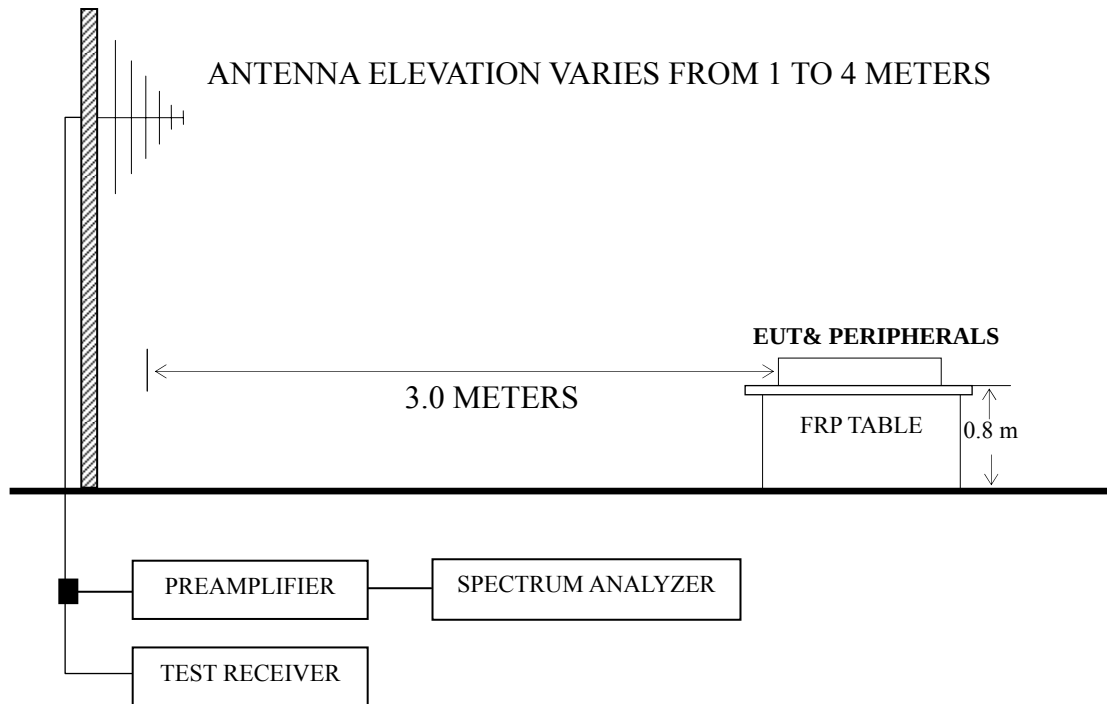
4.2 Block Diagram of Test Setup

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 bandwidth of Test Receiver R&S ESVS10 was set at 120 kHz

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 1600*900@60Hz mode.

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 12024G	D-Sub 640*480@60Hz	P29
	D-Sub 1024*768@60Hz	P30
	D-Sub 1600*900@60Hz	P31
ADS-24S-12 1224GPG	D-Sub 640*480@60Hz	P32
	D-Sub 1024*768@60Hz	P33
	D-Sub 1600*900@60Hz	P34
DSA-36W-12 1 24	D-Sub 640*480@60Hz	P35
	D-Sub 1024*768@60Hz	P36
	D-Sub 1600*900@60Hz	P37
MU24-B120200-C5	D-Sub 640*480@60Hz	P38
	D-Sub 1024*768@60Hz	P39
	D-Sub 1600*900@60Hz	P40

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

NOTE 2 – Emission Level = Antenna Factor + Cable Loss + Meter Reading.(< 1GHz)

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

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 D-Sub 640*480@60Hz test mode (Adapter: ADS-24S-12 1224GPG). The worst emission at horizontal polarization was detected at 179.380 MHz with corrected signal level of 38.72 dB (μV/m) (limit is 43.50dB (μV/m)), when the antenna was 1.50 m height and the turntable was at 130°. The worst emission at vertical polarization was detected at 890.390 MHz with corrected signal level of 42.81 dB (μV/m) (limit is 46.00 dB (μV/m)), when the antenna was 1.30 m height and the turntable was at 295°.

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050SV Humidity : 60%RH

Serial No. : E2009121403 Date of Test : Dec 20, 2009

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	30.000	1.19	19.60	0.62	21.41	40.00	18.59
	179.380	28.15	9.92	1.36	39.43	43.50	4.07
	241.460	25.45	12.60	1.58	39.63	46.00	6.37
	457.770	11.74	17.35	2.15	31.24	46.00	14.76
	565.440	7.27	18.78	2.41	28.46	46.00	17.54
	749.740	14.05	20.20	2.79	37.04	46.00	8.96
Vertical	32.910	13.84	17.95	0.62	32.41	40.00	7.59
	155.130	18.56	10.89	1.28	30.73	43.50	12.77
	306.450	21.82	14.07	1.77	37.66	46.00	8.34
	457.770	17.02	17.35	2.15	36.52	46.00	9.48
	565.440	11.71	18.78	2.41	32.90	46.00	13.10
	856.440	10.08	21.28	2.98	34.34	46.00	11.66

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050SV Humidity : 60%RH

Serial No. : E2009121403 Date of Test : Dec 20, 2009

Test Mode : D-Sub 1024*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	30.000	0.66	19.60	0.62	20.88	40.00	19.12
	178.410	28.77	9.94	1.37	40.08	43.50	3.42
	237.580	26.00	12.44	1.57	40.01	46.00	5.99
	493.660	7.81	17.83	2.24	27.88	46.00	18.12
	591.630	8.06	19.11	2.45	29.62	46.00	16.38
	999.030	4.26	22.40	3.21	29.87	54.00	24.13
Vertical	32.910	14.20	17.95	0.62	32.77	40.00	7.23
	148.340	18.18	11.41	1.24	30.83	43.50	12.67
	306.450	22.41	14.07	1.77	38.25	46.00	7.75
	457.770	17.53	17.35	2.15	37.03	46.00	8.97
	576.110	10.75	18.94	2.42	32.11	46.00	13.89
	856.440	11.56	21.28	2.98	35.82	46.00	10.18

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050SV Humidity : 60%RH

Serial No. : E2009121403 Date of Test : Dec 20, 2009

Test Mode : D-Sub 1600*900@60Hz 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	30.000	0.68	19.60	0.62	--	20.90	40.00	19.10	QP
	179.380	28.64	9.92	1.36	--	39.92	43.50	3.58	
	238.550	26.15	12.48	1.57	--	40.20	46.00	5.80	
	494.630	11.58	17.83	2.24	--	31.65	46.00	14.35	
	494.630	8.15	17.83	2.24	--	28.22	46.00	17.78	
	733.250	12.35	20.04	2.75	--	35.14	46.00	10.86	
	1076.000	47.61	22.92	3.89	34.11	40.31	74.00	33.69	PK
	1200.000	51.14	23.70	4.20	34.12	44.92	74.00	29.08	
	1427.000	47.82	25.38	4.66	34.14	43.72	74.00	30.28	
	1543.000	50.57	26.07	4.88	34.16	47.36	74.00	26.64	
	1664.000	48.58	26.56	5.12	34.17	46.09	74.00	27.91	
	1944.000	44.33	27.76	5.55	34.20	43.44	74.00	30.56	
Vertical	32.910	13.01	17.95	0.62	--	31.58	40.00	8.42	QP
	156.100	19.55	10.79	1.28	--	31.62	43.50	11.88	
	306.450	19.81	14.07	1.77	--	35.65	46.00	10.35	
	457.770	18.00	17.35	2.15	--	37.50	46.00	8.50	
	576.110	11.30	18.94	2.42	--	32.66	46.00	13.34	
	859.350	9.92	21.31	2.98	--	34.21	46.00	11.79	
	1155.000	50.40	23.45	4.10	34.11	43.84	74.00	30.16	PK
	1263.000	52.93	24.23	4.33	34.13	47.36	74.00	26.64	
	1400.000	47.65	25.20	4.60	34.14	43.31	74.00	30.69	
	1538.000	45.84	26.04	4.87	34.16	42.59	74.00	31.41	
	1655.000	46.85	26.54	5.10	34.17	44.32	74.00	29.68	
	1846.000	46.15	27.17	5.45	34.19	44.58	74.00	29.42	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050SV Humidity : 60%RH

Serial No. : E2009121403 Date of Test : Dec 20, 2009

Test Mode : D-Sub 640*480@60Hz Adapter : ADS-24S-12
1224GPG

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	2.40	19.03	0.62	22.05	40.00	17.95
	179.380	27.44	9.92	1.36	38.72	43.50	4.78
	234.670	26.77	12.32	1.57	40.66	46.00	5.34
	457.770	11.97	17.35	2.15	31.47	46.00	14.53
	515.000	8.77	18.09	2.31	29.17	46.00	16.83
	702.210	12.97	19.73	2.71	35.41	46.00	10.59
Vertical	36.790	16.38	15.80	0.66	32.84	40.00	7.16
	100.810	20.90	11.57	1.05	33.52	43.50	9.98
	306.450	19.25	14.07	1.77	35.09	46.00	10.91
	457.770	16.24	17.35	2.15	35.74	46.00	10.26
	566.410	11.66	18.81	2.41	32.88	46.00	13.12
	890.390	18.18	21.60	3.03	42.81	46.00	3.19

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050SV Humidity : 60%RH

Serial No. : E2009121403 Date of Test : Dec 20, 2009

Test Mode : D-Sub 1024*768@60Hz Adapter : ADS-24S-12
1224GPG

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	33.880	3.71	17.44	0.64	21.79	40.00	18.21
	179.380	28.14	9.92	1.36	39.42	43.50	4.08
	236.610	25.85	12.40	1.57	39.82	46.00	6.18
	417.030	10.10	16.74	2.07	28.91	46.00	17.09
	591.630	7.96	19.11	2.45	29.52	46.00	16.48
	816.670	6.89	20.87	2.91	30.67	46.00	15.33
Vertical	30.970	13.47	19.03	0.62	33.12	40.00	6.88
	148.340	18.65	11.41	1.24	31.30	43.50	12.20
	306.450	17.28	14.07	1.77	33.12	46.00	12.88
	457.770	18.34	17.35	2.15	37.84	46.00	8.16
	576.110	10.32	18.94	2.42	31.68	46.00	14.32
	859.350	10.92	21.31	2.98	35.21	46.00	10.79

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050SV Humidity : 60%RH

Serial No. : E2009121403 Date of Test : Dec 20, 2009

Test Mode : D-Sub 1600*900@60Hz Adapter : ADS-24S-12
1224GPG

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	30.970	1.69	19.03	0.62	--	21.34	40.00	18.66	QP
	179.380	27.71	9.92	1.36	--	38.99	43.50	4.51	
	236.610	25.38	12.40	1.57	--	39.35	46.00	6.65	
	457.770	9.95	17.35	2.15	--	29.45	46.00	16.55	
	522.760	7.37	18.21	2.32	--	27.90	46.00	18.10	
	892.330	8.30	21.63	3.02	--	32.95	46.00	13.05	
	1078.000	41.70	22.95	3.90	34.11	34.44	74.00	39.56	PK
	1157.000	48.37	23.48	4.10	34.11	41.84	74.00	32.16	
	1254.000	48.92	24.14	4.31	34.12	43.25	74.00	30.75	
	1409.000	39.82	25.27	4.62	34.14	35.57	74.00	38.43	
	1504.000	41.29	25.84	4.81	34.15	37.79	74.00	36.21	
	1683.000	45.40	26.61	5.16	34.17	43.00	74.00	31.00	
Vertical	31.940	13.68	18.49	0.62	--	32.79	40.00	7.21	QP
	101.780	19.48	11.63	1.05	--	32.16	43.50	11.34	
	306.450	20.35	14.07	1.77	--	36.19	46.00	9.81	
	457.770	18.04	17.35	2.15	--	37.54	46.00	8.46	
	573.200	9.02	18.88	2.42	--	30.32	46.00	15.68	
	856.440	11.24	21.28	2.98	--	35.50	46.00	10.50	
	1153.000	46.05	23.45	4.10	34.11	39.49	74.00	34.51	PK
	1255.000	49.77	24.14	4.31	34.12	44.10	74.00	29.90	
	1461.000	45.18	25.56	4.73	34.14	41.33	74.00	32.67	
	1564.000	43.43	26.19	4.93	34.16	40.39	74.00	33.61	
	1742.000	38.69	26.76	5.28	34.18	36.55	74.00	37.45	
	1857.000	42.48	27.21	5.46	34.19	40.96	74.00	33.04	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050SV Humidity : 60%RH

Serial No. : E2009121403 Date of Test : Dec 20, 2009

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	44.550	12.18	11.38	0.71	24.27	40.00	15.73
	178.410	28.41	9.94	1.37	39.72	43.50	3.78
	238.550	25.89	12.48	1.57	39.94	46.00	6.06
	457.770	11.31	17.35	2.15	30.81	46.00	15.19
	565.440	8.58	18.78	2.41	29.77	46.00	16.23
	702.210	13.48	19.73	2.71	35.92	46.00	10.08
Vertical	38.730	21.04	14.62	0.66	36.32	40.00	3.68
	155.130	23.03	10.89	1.28	35.20	43.50	8.30
	306.450	19.60	14.07	1.77	35.44	46.00	10.56
	457.770	18.44	17.35	2.15	37.94	46.00	8.06
	565.440	11.71	18.78	2.41	32.90	46.00	13.10
	859.350	9.83	21.31	2.98	34.12	46.00	11.88

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050SV Humidity : 60%RH

Serial No. : E2009121403 Date of Test : Dec 20, 2009

Test Mode : D-Sub 1024*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	44.550	17.37	11.38	0.71	29.46	40.00	10.54
	178.410	27.43	9.94	1.37	38.74	43.50	4.76
	238.550	24.81	12.48	1.57	38.86	46.00	7.14
	457.770	11.60	17.35	2.15	31.10	46.00	14.90
	591.630	8.22	19.11	2.45	29.78	46.00	16.22
	702.210	10.16	19.73	2.71	32.60	46.00	13.40
Vertical	43.580	24.21	11.88	0.69	36.78	40.00	3.22
	155.130	23.81	10.89	1.28	35.98	43.50	7.52
	306.450	24.48	14.07	1.77	40.32	46.00	5.68
	457.770	16.57	17.35	2.15	36.07	46.00	9.93
	592.600	11.24	19.11	2.46	32.81	46.00	13.19
	859.350	11.32	21.31	2.98	35.61	46.00	10.39

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050SV Humidity : 60%RH

Serial No. : E2009121403 Date of Test : Dec 20, 2009

Test Mode : D-Sub 1600*900@60Hz 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	43.580	13.41	11.88	0.69	--	25.98	40.00	14.02	QP
	178.410	27.41	9.94	1.37	--	38.72	43.50	4.78	
	241.460	24.72	12.60	1.58	--	38.90	46.00	7.10	
	457.770	11.07	17.35	2.15	--	30.57	46.00	15.43	
	522.760	7.62	18.21	2.32	--	28.15	46.00	17.85	
	731.310	13.94	20.00	2.74	--	36.68	46.00	9.32	
	1076.000	44.61	22.92	3.89	34.11	37.31	74.00	36.69	PK
	1144.000	46.65	23.39	4.08	34.11	40.01	74.00	33.99	
	1276.000	50.61	24.32	4.35	34.13	45.15	74.00	28.85	
	1460.000	46.00	25.56	4.73	34.14	42.15	74.00	31.85	
	1598.000	45.93	26.40	4.99	34.16	43.16	74.00	30.84	
	1750.000	45.00	26.78	5.30	34.18	42.90	74.00	31.10	
Vertical	44.550	24.51	11.38	0.71	--	36.60	40.00	3.40	QP
	156.100	27.31	10.79	1.28	--	39.38	43.50	4.12	
	291.900	19.16	13.77	1.73	--	34.66	46.00	11.34	
	457.770	16.20	17.35	2.15	--	35.70	46.00	10.30	
	575.140	9.71	18.91	2.42	--	31.04	46.00	14.96	
	702.210	13.61	19.73	2.71	--	36.05	46.00	9.95	
	1003.000	47.28	22.43	3.71	34.10	39.32	74.00	34.68	PK
	1155.000	51.40	23.45	4.10	34.11	44.84	74.00	29.16	
	1212.000	49.61	23.82	4.23	34.12	43.54	74.00	30.46	
	1303.000	47.49	24.54	4.42	34.13	42.32	74.00	31.68	
	1391.000	47.85	25.16	4.59	34.14	43.46	74.00	30.54	
	1558.000	45.95	26.19	4.91	34.16	42.89	74.00	31.11	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050SV Humidity : 60%RH

Serial No. : E2009121403 Date of Test : Dec 20, 2009

Test Mode : D-Sub 640*480@60Hz Adapter : MU24-B120200-C5

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	45.520	10.85	10.94	0.72	22.51	40.00	17.49
	81.410	27.59	8.02	0.98	36.59	40.00	3.41
	236.610	24.96	12.40	1.57	38.93	46.00	7.07
	400.540	18.78	16.50	1.99	37.27	46.00	8.73
	565.440	7.99	18.78	2.41	29.18	46.00	6.82
	778.840	13.78	20.49	2.84	37.11	46.00	8.89
Vertical	38.730	20.64	14.62	0.66	35.92	40.00	4.08
	159.980	26.26	10.50	1.30	38.06	43.50	5.44
	306.450	21.93	14.07	1.77	37.77	46.00	8.23
	457.770	15.97	17.35	2.15	35.47	46.00	10.53
	559.620	10.61	18.72	2.39	31.72	46.00	14.28
	797.270	12.25	20.67	2.87	35.79	46.00	10.21

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050SV Humidity : 60%RH

Serial No. : E2009121403 Date of Test : Dec 20, 2009

Test Mode : D-Sub 1024*768@60Hz Adapter : MU24-B120200-C5

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	3.43	19.60	0.62	23.65	40.00	16.35
	179.380	26.66	9.92	1.36	37.94	43.50	5.56
	235.640	25.56	12.36	1.57	39.49	46.00	6.51
	457.770	11.70	17.35	2.15	31.20	46.00	14.80
	592.600	7.63	19.11	2.46	29.20	46.00	16.80
	702.210	11.42	19.73	2.71	33.86	46.00	12.14
Vertical	36.790	20.05	15.80	0.66	36.51	40.00	3.49
	158.040	26.37	10.64	1.29	38.30	43.50	5.20
	306.450	20.91	14.07	1.77	36.75	46.00	9.25
	457.770	15.71	17.35	2.15	35.21	46.00	10.79
	577.080	10.07	18.94	2.42	31.43	46.00	14.57
	859.350	10.82	21.31	2.98	35.11	46.00	10.89

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050SV Humidity : 60%RH

Serial No. : E2009121403 Date of Test : Dec 20, 2009

Test Mode : D-Sub 1600*900@60Hz Adapter : MU24-B120200-C5

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	30.000	2.35	19.60	0.62	--	22.57	40.00	17.43	QP
	179.380	27.24	9.92	1.36	--	38.52	43.50	4.98	
	236.610	25.99	12.40	1.57	--	39.96	46.00	6.04	
	457.770	9.77	17.35	2.15	--	29.27	46.00	16.73	
	522.760	8.07	18.21	2.32	--	28.60	46.00	17.40	
	713.850	13.65	19.85	2.72	--	36.22	46.00	9.78	
	1072.000	46.45	22.92	3.88	34.11	39.14	74.00	34.86	PK
	1255.000	50.77	24.14	4.31	34.12	45.10	74.00	28.90	
	1426.000	48.19	25.34	4.66	34.14	44.05	74.00	29.95	
	1564.000	45.43	26.19	4.93	34.16	42.39	74.00	31.61	
	1742.000	44.69	26.76	5.28	34.18	42.55	74.00	31.45	
	1857.000	44.48	27.21	5.46	34.19	42.96	74.00	31.04	
Vertical	45.520	24.38	10.94	0.72	--	36.04	40.00	3.96	QP
	157.070	26.76	10.74	1.29	--	38.79	43.50	4.71	
	306.450	24.50	14.07	1.77	--	40.34	46.00	5.66	
	457.770	20.60	17.35	2.15	--	40.10	46.00	5.90	
	576.110	8.57	18.94	2.42	--	29.93	46.00	16.07	
	856.440	11.61	21.28	2.98	--	35.87	46.00	10.13	
	1145.000	51.30	23.39	4.08	34.11	44.66	74.00	29.34	PK
	1230.000	48.66	23.94	4.26	34.12	42.74	74.00	31.26	
	1300.000	52.28	24.49	4.41	34.13	47.05	74.00	26.95	
	1424.000	46.33	25.34	4.65	34.14	42.18	74.00	31.82	
	1616.000	43.65	26.43	5.03	34.16	40.95	74.00	33.05	
	1846.000	45.40	27.17	5.45	34.19	43.83	74.00	30.17	

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
Adhesive Tape	T-308	50*60	DAEHUNG SUBSIDIARY MATERIALS.	See Internal Photo Figure 10
Gasket	T-308	100*9mm*1T	DAEHUNG SUBSIDIARY MATERIALS.	See Appendix II Figure 11
Gasket	T-308	110*9mm*1T	DAEHUNG SUBSIDIARY MATERIALS.	See Appendix II Figure 11

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)