

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

LCD Monitor

Model No.: W1954SEV

Serial No.: E2009091002

FCC ID : BEJW1954SEV

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-F09084
Date of Test : Sep 11-12, 2009
Date of Report : Sep 21, 2009

TABLE OF CONTENTS

	Page
1 SUMMARY OF STANDARDS AND RESULTS.....	4
1.1 Description of Standards and Results.....	4
2 GENERAL INFORMATION.....	5
2.1 Description of Equipment Under Test.....	5
2.2 Peripherals.....	6
2.3 Description of Test Facility	7
2.4 Measurement Uncertainty	7
3 CONDUCTED EMISSION TEST	8
3.1 Test Equipment.....	8
3.2 Block Diagram of Test Setup	8
3.3 Conducted Emission Limit [FCC Part 15 Subpart B 15.107(a)].....	9
3.4 Test Configuration.....	9
3.5 Operating Condition of EUT	10
3.6 Test Procedures	10
3.7 Test Results	11
4 RADIATED EMISSION TEST	16
4.1 Test Equipment.....	16
4.2 Block Diagram of Test Setup	16
4.3 Radiated Emission Limit [FCC Part 15 Subpart B 15.109(a)].....	17
4.4 Test Configuration.....	17
4.5 Operating Condition of EUT	18
4.6 Test Procedures	18
4.7 Test Results	19
5 DEVIATION TO TEST SPECIFICATIONS	24
6 DEBUG DESCRIPTION	25

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. : W1954SEV
(B) Serial No. : E2009091002
(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: W1954SEV; S/N: E2009091002) which was tested in 3m anechoic chamber on Sep 11-12, 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 : Sep 11-12, 2009 Date of Report : Sep 21, 2009

Producer : Alan He
ALAN HE / 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.	:	W1954SEV
Serial No.	:	E2009091002
Real Power	:	23.00W
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 : LM190WX1 (TL) (L2)
Max Resolution	:	1440*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 AC In Port | : Connected with Power |

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

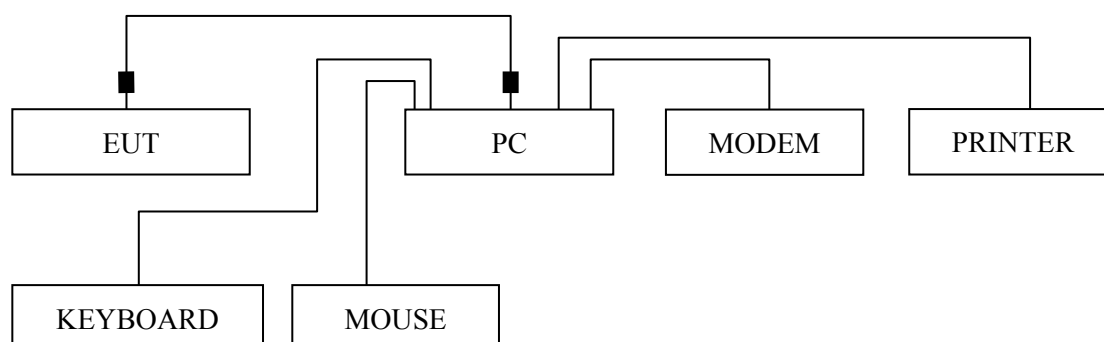
3.1 Test Equipment

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	Nov 21, 2008	Nov 21, 2009
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	--	--

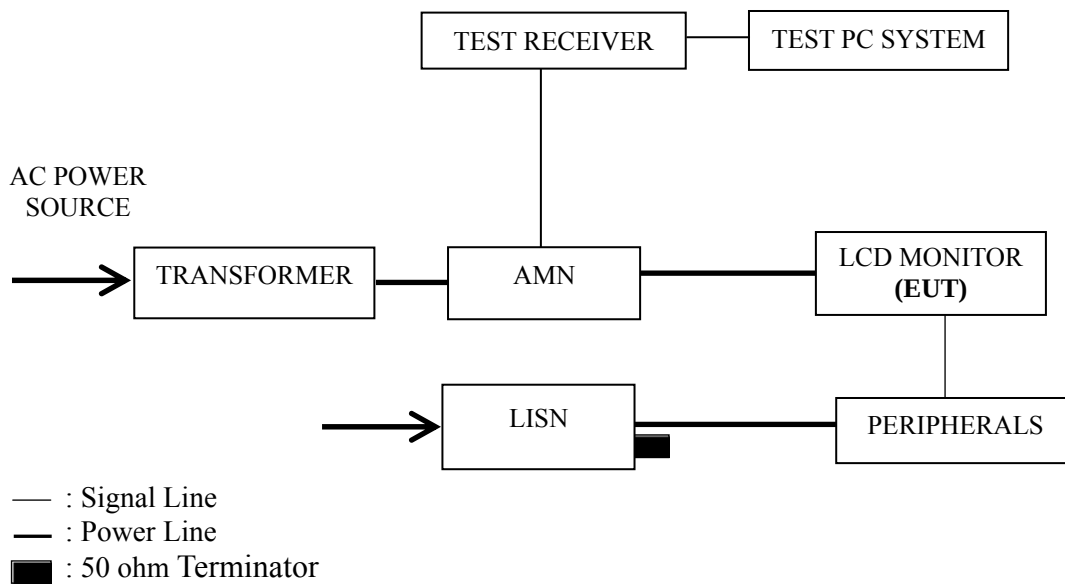
3.2 Block Diagram of Test Setup

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 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:

Test Mode
D-Sub 640*480@60Hz
D-Sub 800*600@60Hz
D-Sub 1280*1024@75Hz
D-Sub 1440*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 I.F. 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.

Test Mode	Data Page
D-Sub 640*480@60Hz	P12
D-Sub 800*600@60Hz	P13
D-Sub 1280*1024@75Hz	P14
D-Sub 1440*900@60Hz	P15

NOTE 1 – Factor = Cable Loss + AMN Factor.

NOTE 2 – Emission Level = Meter Reading + Factor.

NOTE 3 – “QP” means “Quasi-Peak” values, “AV” means “Average” values.

NOTE 4 – The worst case is for D-Sub 1280*1024@75Hz test mode. The worst emission is detected at 0.190 MHz (Average value) with corrected signal level of 47.02 dB (μV) (limit is 54.02 dB (μV)), when the Neutral of the EUT is connected to AMN.

EUT : LCD Monitor Temperature : 21°C

Model No. : W1954SEV Humidity : 50%RH

Serial No. : E2009091002 Date of Test : Sep 11, 2009

Test Mode : D-Sub 640*480@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.190	50.53	0.22	50.75	64.02	13.27	QP
	0.322	34.95	0.26	35.21	59.66	24.45	
	0.552	32.63	0.28	32.91	56.00	23.09	
	4.622	29.85	0.44	30.29	56.00	25.71	
	7.852	35.87	0.48	36.35	60.00	23.65	
	25.055	40.39	0.80	41.19	60.00	18.81	
	0.190	45.02	0.22	45.24	54.02	8.78	AV
	0.322	24.68	0.26	24.94	49.66	24.72	
	0.552	28.93	0.28	29.21	46.00	16.79	
	4.622	20.91	0.44	21.35	46.00	24.65	
	7.852	27.07	0.48	27.55	50.00	22.45	
	25.055	30.74	0.80	31.54	50.00	18.46	
Neutral	0.192	50.20	0.20	50.40	63.93	13.53	QP
	0.320	37.55	0.23	37.78	59.71	21.93	
	0.505	27.33	0.26	27.59	56.00	28.41	
	4.622	29.33	0.45	29.78	56.00	26.22	
	7.852	34.89	0.49	35.38	60.00	24.62	
	25.055	39.07	0.73	39.80	60.00	20.20	
	0.192	41.25	0.20	41.45	53.93	12.48	AV
	0.320	30.87	0.23	31.10	49.71	18.61	
	0.505	18.10	0.26	18.36	46.00	27.64	
	4.622	22.78	0.45	23.23	46.00	22.77	
	7.852	24.47	0.49	24.96	50.00	25.04	
	25.055	28.72	0.73	29.45	50.00	20.55	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 21°C

Model No. : W1954SEV Humidity : 50%RH

Serial No. : E2009091002 Date of Test : Sep 11, 2009

Test Mode : D-Sub 800*600@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.192	50.25	0.22	50.47	63.93	13.46	QP
	0.320	34.66	0.26	34.92	59.71	24.79	
	0.598	31.17	0.28	31.45	56.00	24.55	
	4.622	29.42	0.44	29.86	56.00	26.14	
	7.935	34.24	0.48	34.72	60.00	25.28	
	24.790	38.80	0.81	39.61	60.00	20.39	
	0.192	44.62	0.22	44.84	53.93	9.09	AV
	0.320	28.64	0.26	28.90	49.71	20.81	
	0.598	28.41	0.28	28.69	46.00	17.31	
	4.622	24.29	0.44	24.73	46.00	21.27	
	7.935	25.89	0.48	26.37	50.00	23.63	
	24.790	28.42	0.81	29.23	50.00	20.77	
Neutral	0.190	51.26	0.20	51.46	64.02	12.56	QP
	0.320	37.95	0.23	38.18	59.71	21.53	
	0.598	32.02	0.27	32.29	56.00	23.71	
	3.985	29.58	0.43	30.01	56.00	25.99	
	7.935	35.39	0.49	35.88	60.00	24.12	
	25.055	38.01	0.73	38.74	60.00	21.26	
	0.190	43.37	0.20	43.57	54.02	10.45	AV
	0.320	30.96	0.23	31.19	49.71	18.52	
	0.598	27.24	0.27	27.51	46.00	18.49	
	3.985	18.00	0.43	18.43	46.00	27.57	
	7.935	23.60	0.49	24.09	50.00	25.91	
	25.055	28.70	0.73	29.43	50.00	20.57	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 21°C

Model No. : W1954SEV Humidity : 50%RH

Serial No. : E2009091002 Date of Test : Sep 11, 2009

Test Mode : D-Sub 1280*1024@75Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.190	51.63	0.22	51.85	64.02	12.17	QP
	0.325	37.06	0.26	37.32	59.57	22.25	
	0.552	32.46	0.28	32.74	56.00	23.26	
	3.985	29.09	0.42	29.51	56.00	26.49	
	7.852	35.33	0.48	35.81	60.00	24.19	
	24.142	37.49	0.82	38.31	60.00	21.69	
	0.190	46.10	0.22	46.32	54.02	7.70	AV
	0.325	29.03	0.26	29.29	49.57	20.28	
	0.552	28.70	0.28	28.98	46.00	17.02	
	3.985	18.59	0.42	19.01	46.00	26.99	
	7.852	26.14	0.48	26.62	50.00	23.38	
	24.142	31.78	0.82	32.60	50.00	17.40	
Neutral	0.190	52.21	0.20	52.41	64.02	11.61	QP
	0.317	36.97	0.23	37.20	59.80	22.60	
	0.641	30.36	0.27	30.63	56.00	25.37	
	3.985	27.79	0.43	28.22	56.00	27.78	
	7.769	32.78	0.49	33.27	60.00	26.73	
	25.864	38.72	0.75	39.47	60.00	20.53	
	0.190	46.82	0.20	47.02	54.02	7.00	AV
	0.317	30.73	0.23	30.96	49.80	18.84	
	0.641	27.04	0.27	27.31	46.00	18.69	
	3.985	19.98	0.43	20.41	46.00	25.59	
	7.769	25.49	0.49	25.98	50.00	24.02	
	25.864	29.22	0.75	29.97	50.00	20.03	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 21°C

Model No. : W1954SEV Humidity : 50%RH

Serial No. : E2009091002 Date of Test : Sep 11, 2009

Test Mode : D-Sub 1440*900@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.190	51.39	0.22	51.61	64.02	12.41	QP
	0.317	37.10	0.26	37.36	59.80	22.44	
	0.641	31.12	0.28	31.40	56.00	24.60	
	3.985	28.63	0.42	29.05	56.00	26.95	
	7.852	35.25	0.48	35.73	60.00	24.27	
	25.055	38.61	0.80	39.41	60.00	20.59	
	0.190	42.63	0.22	42.85	54.02	11.17	AV
	0.317	26.95	0.26	27.21	49.80	22.59	
	0.641	27.23	0.28	27.51	46.00	18.49	
	3.985	20.47	0.42	20.89	46.00	25.11	
	7.852	27.36	0.48	27.84	50.00	22.16	
	25.055	32.49	0.80	33.29	50.00	16.71	
Neutral	0.190	51.48	0.20	51.68	64.02	12.34	QP
	0.322	36.06	0.23	36.29	59.66	23.37	
	0.552	31.61	0.26	31.87	56.00	24.13	
	3.985	28.91	0.43	29.34	56.00	26.66	
	7.852	34.99	0.49	35.48	60.00	24.52	
	25.055	39.36	0.73	40.09	60.00	19.91	
	0.190	43.56	0.20	43.76	54.02	10.26	AV
	0.322	28.08	0.23	28.31	49.66	21.35	
	0.552	28.88	0.26	29.14	46.00	16.86	
	3.985	20.39	0.43	20.82	46.00	25.18	
	7.852	28.65	0.49	29.14	50.00	20.86	
	25.055	28.13	0.73	28.86	50.00	21.14	

TEST ENGINEER: HUGH HUANG

4 RADIATED EMISSION TEST

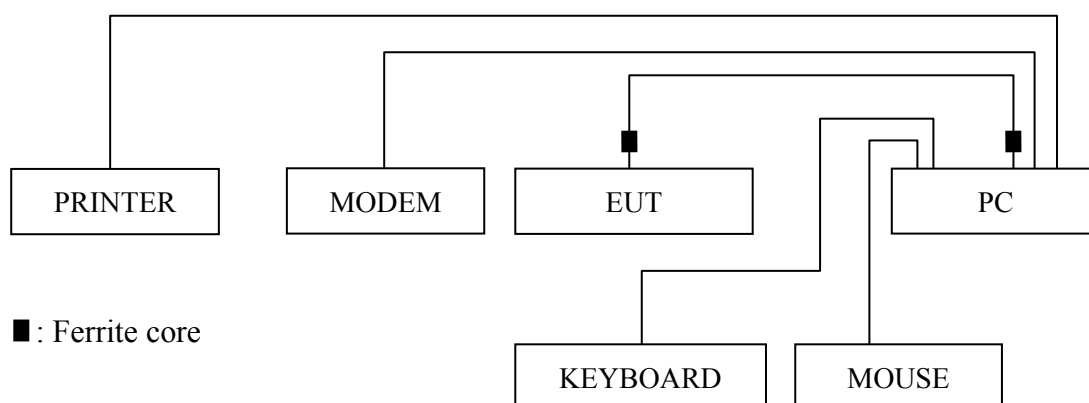
4.1 Test Equipment

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

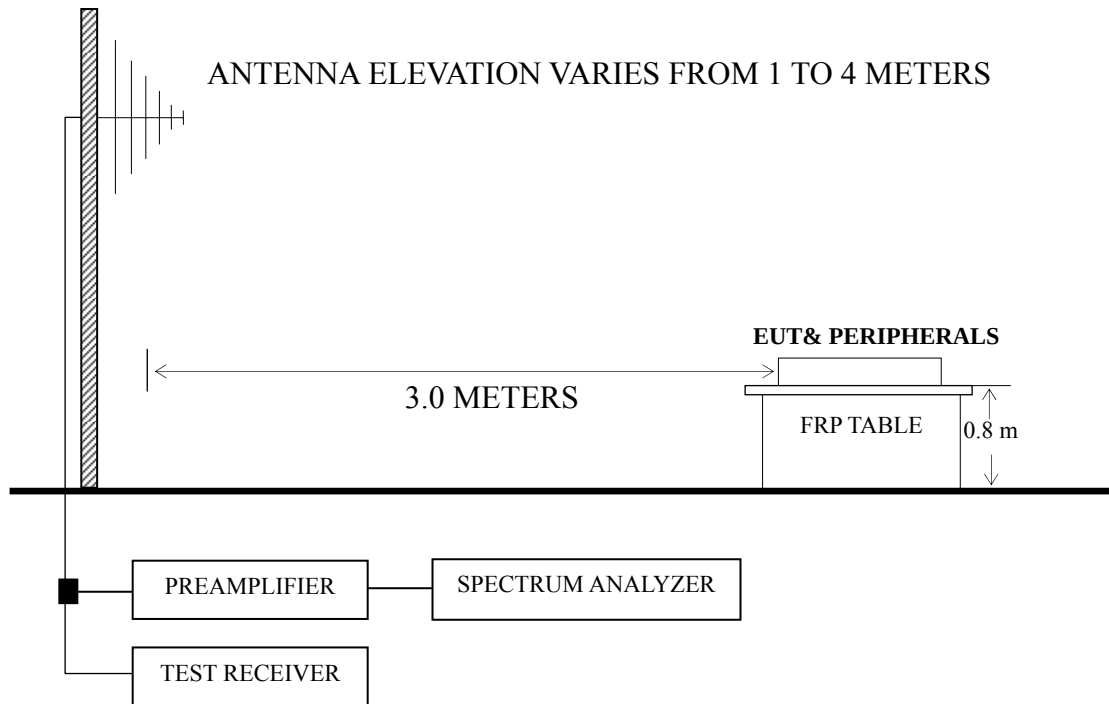
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESVS10	844594/001	Mar 07, 2009	Mar 07, 2010
2.	Preamplifier	Agilent	8447D	2944A10548	Sep 19, 2009	Mar 19, 2010
3.	Preamplifier	HP	8449B	3008A00864	May 19, 2009	May 19, 2010
4.	Bi-log Antenna	TESEQ	CBL6112D	23193	May 14, 2009	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



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 1280*1024@75Hz & D-Sub 1440*900@60Hz 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.

Test Mode	Data Page
D-Sub 640*480@60Hz	P20
D-Sub 800*600@60Hz	P21
D-Sub 1280*1024@75Hz	P22
D-Sub 1440*900@60Hz	P23

- NOTE 1 – Emission Level = Antenna Factor + Cable Loss + Meter Reading. (< 1GHz)
- NOTE 2 – Emission Level = Antenna Factor + Cable Loss – Preamp Factor + Meter Reading. (> 1GHz)
- NOTE 3 – The emission levels that are 20dB below the official limit are not reported.
- NOTE 4 – 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.
- NOTE 5 – All reading are Quasi-Peak values below or equal to 1GHz and Peak values above 1GHz. For measurements above 1 GHz, the peak measured value complies with the average limit, it is unnecessary to perform an average measurement.
- NOTE 6 – The worst case is for D-Sub 640*480@60Hz test mode. The worst emission at horizontal polarization was detected at 763.320 MHz with corrected signal level of 42.80 dB (μV/m) (limit is 46.00 dB (μV/m)), when the antenna was 1.00 m height and the turntable was at 30°. The worst emission at vertical polarization was detected at 762.350 MHz with corrected signal level of 40.15 dB (μV/m) (limit is 46.00 dB (μV/m)), when the antenna was 1.00 m height and the turntable was at 95°.

EUT : LCD Monitor Temperature : 22°C

Model No. : W1954SEV Humidity : 60%RH

Serial No. : E2009091002 Date of Test : Sep 12, 2009

Test Mode : D-Sub 640*480@60Hz

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	33.500	17.90	17.65	0.64	36.19	40.00	3.81
	85.290	17.62	8.66	0.99	27.27	40.00	12.73
	187.140	21.30	10.17	1.47	32.94	43.50	10.56
	372.410	19.06	15.92	2.12	37.10	46.00	8.90
	763.320	19.32	20.36	3.12	42.80	46.00	3.20
	896.210	9.36	21.67	3.42	34.45	46.00	11.55
Vertical	30.000	7.20	19.60	0.63	27.43	40.00	12.57
	81.410	9.94	8.02	0.95	18.91	40.00	21.09
	198.780	21.01	10.64	1.54	33.19	43.50	10.31
	372.410	14.79	15.92	2.12	32.83	46.00	13.17
	762.350	16.70	20.33	3.12	40.15	46.00	5.85
	849.650	9.26	21.20	3.32	33.78	46.00	12.22

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : W1954SEV Humidity : 60%RH

Serial No. : E2009091002 Date of Test : Sep 12, 2009

Test Mode : D-Sub 800*600@60Hz

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	33.400	18.40	17.65	0.64	36.69	40.00	3.31
	39.700	21.09	14.08	0.67	35.84	40.00	4.16
	80.440	15.02	7.85	0.95	23.82	40.00	16.18
	196.840	17.36	10.57	1.53	29.46	43.50	14.04
	379.200	17.45	16.06	2.15	35.66	46.00	10.34
	734.220	16.76	20.04	3.04	39.84	46.00	6.16
Vertical	32.910	4.92	17.95	0.64	23.51	40.00	16.49
	173.560	16.25	10.09	1.38	27.72	43.50	15.78
	195.870	18.74	10.54	1.53	30.81	43.50	12.69
	372.410	13.98	15.92	2.12	32.02	46.00	13.98
	733.250	12.73	20.04	3.04	35.81	46.00	10.19
	840.920	7.29	21.12	3.29	31.70	46.00	14.30

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : W1954SEV Humidity : 60%RH

Serial No. : E2009091002 Date of Test : Sep 12, 2009

Test Mode : D-Sub 1280*1024@75Hz

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	32.910	5.14	17.95	0.64	--	23.73	40.00	16.27	QP
	139.610	11.15	12.12	1.20	--	24.47	43.50	19.03	
	196.840	19.91	10.57	1.53	--	32.01	43.50	11.49	
	372.410	12.90	15.92	2.12	--	30.94	46.00	15.06	
	503.360	9.36	17.95	2.44	--	29.75	46.00	16.25	
	773.020	9.61	20.46	3.14	--	33.21	46.00	12.79	
	1349.000	49.80	24.86	4.51	34.13	45.04	74.00	28.96	PK
	1361.000	49.52	24.94	4.54	34.13	44.87	74.00	29.13	
	1498.000	48.13	25.80	4.80	34.15	44.58	74.00	29.42	
	1600.000	46.91	26.40	5.00	34.16	44.15	74.00	29.85	
	1674.000	46.70	26.59	5.14	34.17	44.26	74.00	29.74	
	1759.000	49.91	26.80	5.31	34.18	47.84	74.00	26.16	
Vertical	33.890	18.00	17.44	0.64	--	36.08	40.00	3.92	QP
	127.000	12.66	12.66	1.16	--	26.48	43.50	17.02	
	185.200	18.10	10.08	1.45	--	29.63	43.50	13.87	
	354.950	18.14	15.45	2.06	--	35.65	46.00	10.35	
	773.020	10.28	20.46	3.14	--	33.88	46.00	12.12	
	903.970	11.45	21.73	3.44	--	36.62	46.00	9.38	
	1339.000	51.37	24.78	4.49	34.13	46.51	74.00	27.49	PK
	1420.000	49.57	25.31	4.64	34.14	45.38	74.00	28.62	
	1549.000	46.82	26.11	4.89	34.16	43.66	74.00	30.34	
	1652.000	46.26	26.52	5.10	34.17	43.71	74.00	30.29	
	1746.000	47.07	26.78	5.29	34.18	44.96	74.00	29.04	
	1797.000	48.21	26.90	5.40	34.18	46.33	74.00	27.67	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : W1954SEV Humidity : 60%RH

Serial No. : E2009091002 Date of Test : Sep 12, 2009

Test Mode : D-Sub 1440*900@60Hz

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	87.230	19.53	8.96	1.00	--	29.49	40.00	10.51	QP
	122.150	16.23	12.91	1.15	--	30.29	43.50	13.21	
	221.090	16.25	11.71	1.61	--	29.57	46.00	16.43	
	288.020	13.89	13.71	1.84	--	29.44	46.00	16.56	
	543.130	9.63	18.49	2.58	--	30.70	46.00	15.30	
	800.180	7.91	20.70	3.19	--	31.80	46.00	14.20	
	1349.000	51.80	24.86	4.51	34.13	47.04	74.00	26.96	PK
	1361.000	51.52	24.94	4.54	34.13	46.87	74.00	27.13	
	1498.000	50.13	25.80	4.80	34.15	46.58	74.00	27.42	
	1600.000	48.91	26.40	5.00	34.16	46.15	74.00	27.85	
	1674.000	48.70	26.59	5.14	34.17	46.26	74.00	27.74	
	1759.000	51.91	26.80	5.31	34.18	49.84	74.00	24.16	
Vertical	30.000	13.79	19.60	0.63	--	34.02	40.00	5.98	QP
	123.120	19.59	12.86	1.15	--	33.60	43.50	9.90	
	138.640	20.21	12.17	1.19	--	33.57	43.50	9.93	
	171.620	24.08	10.15	1.37	--	35.60	43.50	7.90	
	221.090	17.73	11.71	1.61	--	31.05	46.00	14.95	
	533.430	13.58	18.33	2.56	--	34.47	46.00	11.53	
	1339.000	55.37	24.78	4.49	34.13	50.51	74.00	23.49	PK
	1420.000	53.57	25.31	4.64	34.14	49.38	74.00	24.62	
	1466.000	51.45	25.60	4.73	34.15	47.63	74.00	26.37	
	1658.000	50.83	26.54	5.11	34.17	48.31	74.00	25.69	
	1746.000	51.07	26.78	5.29	34.18	48.96	74.00	25.04	
	1797.000	52.21	26.90	5.40	34.18	50.33	74.00	23.67	

TEST ENGINEER: RAVEN JIN

5 DEVIATION TO TEST SPECIFICATIONS

None.

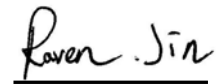
6 DEBUG DESCRIPTION

The following components are used during the countermeasure procedures:

Name	M/N	Specifications (mm)	Manufacturer	Location
Tape	--	95*10*4T	EXPAN	See Internal Photo Figure 13
Tape	--	290*10*4T	EXPAN	See Internal Photo Figure 13

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)