

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

LCD Monitor

Model No.: W2452TQT

Serial No.: 801NDRF7F054

FCC ID : BEJW2452TQT

Prepared For : LG Electronics U.S.A., Inc.
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Report No. : ACI-F08005
Date of Test : Jan 24-26, 2008
Date of Report : Jan 26, 2008

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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. : W2452TQT
(B) Serial No. : 801NDRF7F054
(C) Power Supply : 120V/60Hz

Test Procedure Used:

*FCC RULES AND REGULATIONS PART 15 SUBPART B CLASS B 2007.09
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: W2452TQT; S/N: 801NDRF7F054) which was tested in 3m anechoic chamber on Jan 24-26, 2008 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 24-26, 2008

Prepared By:

Zeno Gu 2008.01.28
ZENO GU / Assistant

Reviewer:

Sammy Chen 2008.01.28
SAMMY CHEN / Deputy Assistant Manager

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

Approved Signatory:

Sammy Chen 2008.1.28
Authorized Signature EMC IAN CHIEN / 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 / Test Item	Test Standard	Results	Meets Limit
EMISSION			
Conducted Disturbance At main terminal	FCC RULES AND REGULATIONS PART 15 SUBPART B 2007.09 AND ANSI C63.4-2003	Pass	15.107(a) Class B
Radiated Disturbance	FCC RULES AND REGULATIONS PART 15 SUBPART B 2007.09 AND ANSI C63.4-2003	Pass	15.109(a) Class B

2 GENERAL INFORMATION

2.1 Description of Equipment Under Test

Description	:	LCD Monitor
Type of EUT	:	☒ Production ☐ Pre-product ☐ Pro-type
Model No.	:	W2452TQT
Serial No.	:	801NDRF7F054
Real Power	:	88.6W
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
Panel	:	Manufacturer: AU Optronics M/N : M240UW04
Max Resolution	:	1920*1200@60Hz.
D-Sub Cable	:	Shielded, Detachable, 1.85m, with one core
DVI Cable	:	Shielded, Detachable, 1.90m, with two cores
Power Cord	:	Unshielded, Detachable, 1.80m, with no core

Remark:

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

- | | |
|--------------------------|------------------------|
| (1) One D-Sub Input Port | : Connected with PC |
| (2) One DVI Input Port | : Connected with PC |
| (3) 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 July 26, 2006 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, China 200233
NVLAP Lab Code	:	200371-0

2.4 Measurement Uncertainty

Conducted Emission Expanded Uncertainty:	U = 1.84 dB
Radiated Emission Expanded Uncertainty :	U = 2.96 dB

3 CONDUCTED EMISSION TEST

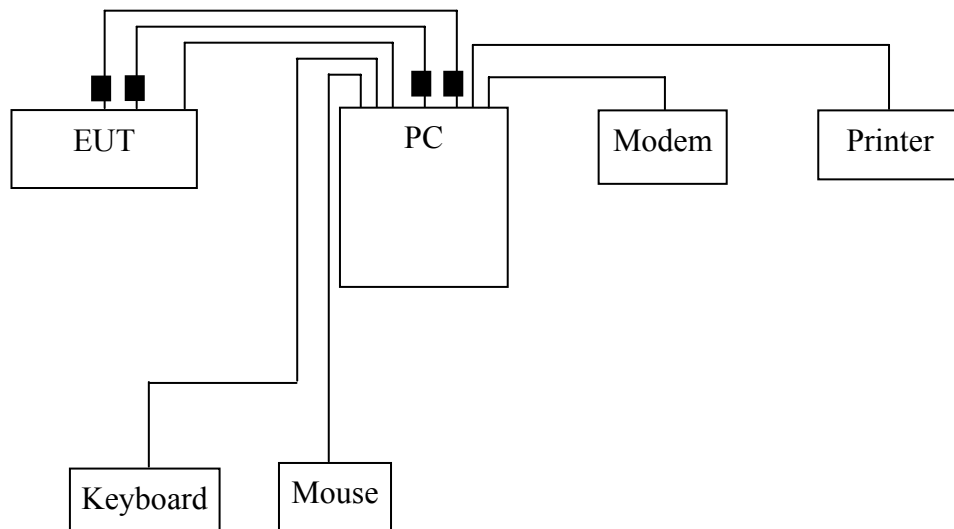
3.1 Test Equipment

The following test equipment 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	ESHS10	830223/007	Apr 08, 2007	Apr 08, 2008
2.	Artificial Mains Network (AMN)	R&S	ESH2-Z5	843890/011	Apr 06, 2007	Apr 06, 2008
3.	Line Impedance Stabilization Network (LISN)	Kyoritsu	KNW-407	8-1280-4	Apr 06, 2007	Apr 06, 2008
4.	50 Ω Coaxial Switch	Anritsu	MP59B	6200426389	Sep 18, 2007	Mar 18, 2008
5.	50 Ω Terminator	Anritsu	BNC	001	May 11, 2007	May 11, 2008
6.	Software	Audix	E3	SET00200 9804M592	--	--

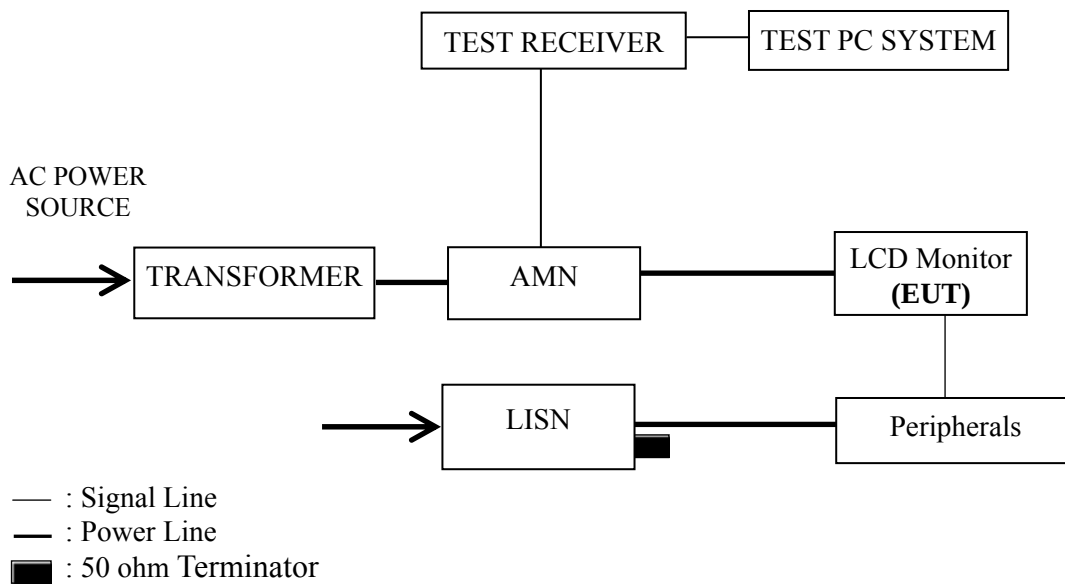
3.2 Block Diagram of Test Setup

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 (μV)	
	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 equipment 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 set “H” characters to EUT through graphic card, the EUT’s screen displayed and filled with “H” pattern by it’s 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:

Test Mode
VGA 640*480@60Hz
VGA 1024*768@60Hz
VGA 1920*1200@60Hz
DVI 640*480@60Hz
DVI 1024*768@60Hz
DVI 1920*1200@60Hz

3.6 Test Procedures

The EUT and peripherals were connected to the power mains through a 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 ESHS10 was set at 10 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
VGA 640*480@60Hz	P12
VGA 1024*768@60Hz	P13
VGA 1920*1200@60Hz	P14
DVI 640*480@60Hz	P15
DVI 1024*768@60Hz	P16
DVI 1920*1200@60Hz	P17

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 VGA 1024*768@60Hz mode. The worst emission is detected at 0.791 MHz with corrected signal level of 37.89 (μV) (limit is 46.00 dB (μV)), when the Line (Average value) of the EUT is connected to AMN.

EUT : LCD Monitor Temperature : 22°C

Model No. : W2452TQT Humidity : 60%

Serial No. : 801NDRF7F054 Date of Test : Jan 24, 2008

Test Mode : VGA 640*480@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.159	53.11	0.67	53.78	65.52	11.74	QP
	0.476	41.00	0.66	41.66	56.41	14.75	
	0.787	37.30	0.59	37.89	56.00	18.11	
	1.110	38.50	0.55	39.05	56.00	16.95	
	1.430	36.90	0.51	37.41	56.00	18.59	
	1.740	37.60	0.49	38.09	56.00	17.91	
	0.159	42.01	0.67	42.68	55.52	12.84	AV
	0.476	37.10	0.66	37.76	46.41	8.65	
	0.787	33.40	0.59	33.99	46.00	12.01	
	1.110	36.50	0.55	37.05	46.00	8.95	
	1.430	30.10	0.51	30.61	46.00	15.39	
	1.740	35.60	0.49	36.09	46.00	9.91	
Neutral	0.159	53.60	0.56	54.16	65.52	11.36	QP
	0.471	39.30	0.65	39.95	56.50	16.55	
	0.791	38.30	0.58	38.88	56.00	17.12	
	1.110	37.40	0.55	37.95	56.00	18.05	
	1.430	35.90	0.52	36.42	56.00	19.58	
	2.060	36.20	0.51	36.71	56.00	19.29	
	0.159	41.60	0.56	42.16	55.52	13.36	AV
	0.471	35.40	0.65	36.05	46.50	10.45	
	0.791	33.81	0.58	34.39	46.00	11.61	
	1.110	35.20	0.55	35.75	46.00	10.25	
	1.430	28.50	0.52	29.02	46.00	16.98	
	2.060	33.90	0.51	34.41	46.00	11.59	

TEST ENGINEER: TOM SI

EUT : LCD Monitor Temperature : 22°C

Model No. : W2452TQT Humidity : 60%

Serial No. : 801NDRF7F054 Date of Test : Jan 24, 2008

Test Mode : VGA 1024*768@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.160	53.00	0.68	53.68	65.46	11.78	QP
	0.389	41.70	0.68	42.38	58.09	15.71	
	0.791	39.20	0.59	39.79	56.00	16.21	
	1.110	38.40	0.55	38.95	56.00	17.05	
	1.430	37.10	0.51	37.61	56.00	18.39	
	1.740	37.80	0.49	38.29	56.00	17.71	
	0.160	42.20	0.68	42.88	55.46	12.58	AV
	0.389	26.40	0.68	27.08	48.09	21.01	
	0.791	37.30	0.59	37.89	46.00	8.11	
	1.110	36.20	0.55	36.75	46.00	9.25	
	1.430	30.50	0.51	31.01	46.00	14.99	
	1.740	35.50	0.49	35.99	46.00	10.01	
Neutral	0.157	53.20	0.55	53.75	65.62	11.87	QP
	0.402	40.79	0.66	41.45	57.81	16.36	
	0.788	37.80	0.58	38.38	56.00	17.62	
	1.110	37.40	0.55	37.95	56.00	18.05	
	1.430	36.50	0.52	37.02	56.00	18.98	
	1.740	36.20	0.51	36.71	56.00	19.29	
	0.157	40.70	0.55	41.25	55.62	14.37	AV
	0.402	25.89	0.66	26.55	47.81	21.26	
	0.788	34.50	0.58	35.08	46.00	10.92	
	1.110	35.40	0.55	35.95	46.00	10.05	
	1.430	29.70	0.52	30.22	46.00	15.78	
	1.740	33.80	0.51	34.31	46.00	11.69	

TEST ENGINEER: TOM SI

EUT : LCD Monitor Temperature : 22°C

Model No. : W2452TQT Humidity : 60%

Serial No. : 801NDRF7F054 Date of Test : Jan 24, 2008

Test Mode : VGA 1920*1200@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.155	52.80	0.67	53.47	65.73	12.26	QP
	0.472	41.09	0.67	41.76	56.48	14.72	
	0.792	39.20	0.59	39.79	56.00	16.21	
	1.110	38.50	0.55	39.05	56.00	16.95	
	1.430	37.60	0.51	38.11	56.00	17.89	
	2.050	37.11	0.48	37.59	56.00	18.41	
	0.155	40.70	0.67	41.37	55.73	14.36	AV
	0.472	36.69	0.67	37.36	46.48	9.12	
	0.792	37.20	0.59	37.79	46.00	8.21	
	1.110	36.50	0.55	37.05	46.00	8.95	
	1.430	31.80	0.51	32.31	46.00	13.69	
	2.050	35.01	0.48	35.49	46.00	10.51	
Neutral	0.158	53.80	0.55	54.35	65.57	11.22	QP
	0.471	39.10	0.65	39.75	56.50	16.75	
	0.789	38.20	0.58	38.78	56.00	17.22	
	1.110	37.60	0.55	38.15	56.00	17.85	
	1.430	36.60	0.52	37.12	56.00	18.88	
	2.050	36.10	0.51	36.61	56.00	19.39	
	0.158	42.40	0.55	42.95	55.57	12.62	AV
	0.471	32.50	0.65	33.15	46.50	13.35	
	0.789	35.40	0.58	35.98	46.00	10.02	
	1.110	35.50	0.55	36.05	46.00	9.95	
	1.430	30.20	0.52	30.72	46.00	15.28	
	2.050	33.70	0.51	34.21	46.00	11.79	

TEST ENGINEER: TOM SI

EUT : LCD Monitor Temperature : 22°C

Model No. : W2452TQT Humidity : 60%

Serial No. : 801NDRF7F054 Date of Test : Jan 24, 2008

Test Mode : DVI 640*480@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.158	53.30	0.67	53.97	65.57	11.60	QP
	0.474	41.20	0.66	41.86	56.44	14.58	
	0.792	38.60	0.59	39.19	56.00	16.81	
	1.110	38.00	0.55	38.55	56.00	17.45	
	1.420	37.20	0.51	37.71	56.00	18.29	
	1.746	37.50	0.49	37.99	56.00	18.01	
	0.158	41.90	0.67	42.57	55.57	13.00	AV
	0.474	36.70	0.66	37.36	46.44	9.08	
	0.792	36.70	0.59	37.29	46.00	8.71	
	1.110	36.20	0.55	36.75	46.00	9.25	
	1.420	35.90	0.51	36.41	46.00	9.59	
	1.746	34.00	0.49	34.49	46.00	11.51	
Neutral	0.157	53.80	0.55	54.35	65.62	11.27	QP
	0.3811	41.30	0.65	41.95	58.26	16.31	
	0.476	39.40	0.65	40.05	56.41	16.36	
	0.792	37.50	0.58	38.08	56.00	17.92	
	2.860	35.01	0.53	35.54	56.00	20.46	
	29.50	36.89	1.07	37.96	60.00	22.04	
	0.157	41.60	0.55	42.15	55.62	13.47	AV
	0.3811	25.40	0.65	26.05	48.26	22.21	
	0.476	33.90	0.65	34.55	46.41	11.86	
	0.792	35.00	0.58	35.58	46.00	10.42	
	2.860	31.61	0.53	32.14	46.00	13.86	
	29.500	28.29	1.07	29.36	50.00	20.64	

TEST ENGINEER: TOM SI

EUT : LCD Monitor Temperature : 22°C

Model No. : W2452TQT Humidity : 60%

Serial No. : 801NDRF7F054 Date of Test : Jan 24, 2008

Test Mode : DVI 1024*768@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.159	53.21	0.67	53.88	65.52	11.64	QP
	0.471	39.99	0.67	40.66	56.50	15.84	
	0.792	38.60	0.59	39.19	56.00	16.81	
	1.110	38.20	0.55	38.75	56.00	17.25	
	1.420	37.30	0.51	37.81	56.00	18.19	
	1.740	36.90	0.49	37.39	56.00	18.61	
	0.159	42.21	0.67	42.88	55.52	12.64	AV
	0.471	33.79	0.67	34.46	46.50	12.04	
	0.792	36.80	0.59	37.39	46.00	8.61	
	1.110	36.10	0.55	36.65	46.00	9.35	
	1.420	36.10	0.51	36.61	46.00	9.39	
	1.740	33.40	0.49	33.89	46.00	12.11	
Neutral	0.159	53.20	0.56	53.76	65.52	11.76	QP
	0.474	39.80	0.65	40.45	56.44	15.99	
	0.633	35.60	0.60	36.20	56.00	19.80	
	0.789	37.30	0.58	37.88	56.00	18.12	
	1.110	37.00	0.55	37.55	56.00	18.45	
	2.850	35.21	0.53	35.74	56.00	20.26	
	0.159	40.40	0.56	40.96	55.52	14.56	AV
	0.474	34.50	0.65	35.15	46.44	11.29	
	0.633	28.00	0.60	28.60	46.00	17.40	
	0.789	33.90	0.58	34.48	46.00	11.52	
	1.110	35.40	0.55	35.95	46.00	10.05	
	2.850	29.41	0.53	29.94	46.00	16.06	

TEST ENGINEER: TOM SI

EUT : LCD Monitor Temperature : 22°C

Model No. : W2452TQT Humidity : 60%

Serial No. : 801NDRF7F054 Date of Test : Jan 24, 2008

Test Mode : DVI 1920*1200@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.159	53.21	0.67	53.88	65.52	11.64	QP
	0.474	41.20	0.66	41.86	56.44	14.58	
	0.79	38.80	0.59	39.39	56.00	16.61	
	1.110	38.30	0.55	38.85	56.00	17.15	
	1.430	37.30	0.51	37.81	56.00	18.19	
	1.740	37.30	0.49	37.79	56.00	18.21	
	0.159	42.21	0.67	42.88	55.52	12.64	AV
	0.474	37.20	0.66	37.86	46.44	8.58	
	0.79	36.70	0.59	37.29	46.00	8.71	
	1.110	36.40	0.55	36.95	46.00	9.05	
	1.430	31.10	0.51	31.61	46.00	14.39	
	1.740	34.70	0.49	35.19	46.00	10.81	
Neutral	0.158	53.50	0.55	54.05	65.57	11.52	QP
	0.471	39.80	0.65	40.45	56.50	16.05	
	0.792	38.00	0.58	38.58	56.00	17.42	
	1.110	37.40	0.55	37.95	56.00	18.05	
	1.420	36.80	0.52	37.32	56.00	18.68	
	1.740	36.10	0.51	36.61	56.00	19.39	
	0.158	41.60	0.55	42.15	55.57	13.42	AV
	0.471	33.40	0.65	34.05	46.50	12.45	
	0.792	35.70	0.58	36.28	46.00	9.72	
	1.110	35.50	0.55	36.05	46.00	9.95	
	1.420	33.30	0.52	33.82	46.00	12.18	
	1.740	34.40	0.51	34.91	46.00	11.09	

TEST ENGINEER: TOM SI

4 RADIATED EMISSION TEST

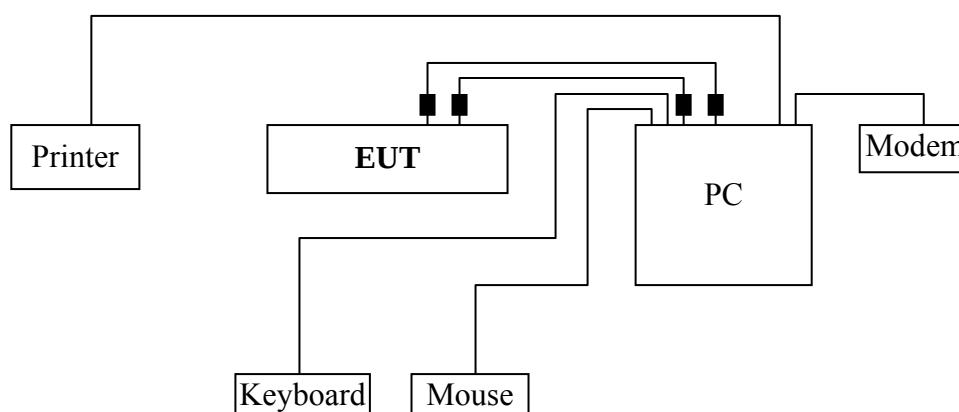
4.1 Test Equipment

The following test equipment 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	Apr 06, 2007	Apr 06, 2008
2.	Preamplifier	Agilent	8447D	2944A10548	Sep 19, 2007	Mar 19, 2008
3.	Preamplifier	HP	8449B	3008A00864	Apr 06, 2007	Apr 06, 2008
4.	Bi-log Antenna	TESEQ	CBL6112D	23193	Aug 16, 2007	Aug 16, 2008
5.	Spectrum	Agilent	E7405A	MY45106600	Apr 06, 2007	Apr 06, 2008
6.	Software	Audix	E3	SET00200 9912M295-2	--	--

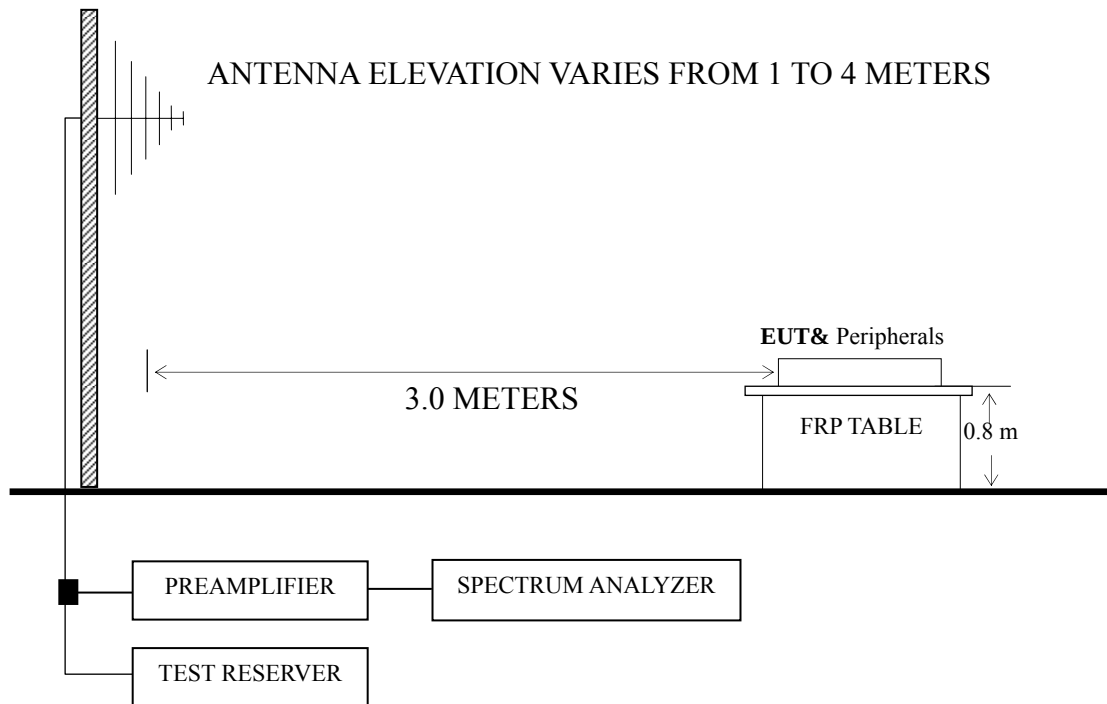
4.2 Block Diagram of Test Setup

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 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 below 1GHz and The Spectrum Agilent E7405A was set at 1MHz above 1GHz.

The frequency range from 30 MHz to 2000 MHz was checked.

The frequency range from 1 GHz to 2 GHz was checked for VGA 1920*1200@60Hz and DVI 1920*1200@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.

Test Mode	Data Page
VGA 640*480@60Hz	P22
VGA 1024*768@60Hz	P23
VGA 1920*1200@60Hz	P24
DVI 640*480@60Hz	P25
DVI 1024*768@60Hz	P26
DVI 1920*1200@60Hz	P27

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

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

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.

NOTE 6 – The worst case is for DVI 640*480@60Hz. The worst emission at horizontal polarization was detected at 599.39 MHz with corrected signal level of 39.02 dB ($\mu\text{V/m}$) (limit is 46.00 dB ($\mu\text{V/m}$)), when the antenna was 1.20 m height and the turntable was at 60° . The worst emission at vertical polarization was detected at 30.97 MHz with corrected signal level of 36.85 dB ($\mu\text{V/m}$) (limit is 40.00 dB ($\mu\text{V/m}$)), when the antenna was 1.00 m height and the turntable was at 260° .

EUT : LCD Monitor Temperature : 22°C

Model No. : W2452TQT Humidity : 60%

Serial No. : 801NDRF7F054 Date of Test : Jan 26, 2008

Test Mode : VGA 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	68.80	22.65	5.35	1.39	29.39	40.00	10.61
	132.82	14.76	11.20	1.97	27.93	43.50	15.57
	185.20	19.79	8.00	2.26	30.05	43.50	13.45
	335.55	16.93	13.91	3.30	34.14	46.00	11.86
	381.14	15.68	15.00	3.52	34.20	46.00	11.80
	552.83	15.15	18.45	4.12	37.72	46.00	8.28
Vertical	38.73	19.55	13.09	0.95	33.59	40.00	6.41
	72.68	26.47	5.71	1.44	33.62	40.00	6.38
	83.35	24.24	7.30	1.55	33.09	40.00	6.91
	132.82	15.82	11.20	1.97	28.99	43.50	14.51
	328.76	16.77	13.73	3.27	33.77	46.00	12.23
	457.77	15.78	16.53	3.84	36.15	46.00	9.85

TEST ENGINEER: KEN XU

EUT : LCD Monitor Temperature : 22°C

Model No. : W2452TQT Humidity : 60%

Serial No. : 801NDRF7F054 Date of Test : Jan 26, 2008

Test Mode : VGA 1024*768@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	69.77	25.29	5.39	1.41	32.09	40.00	7.91
	132.82	14.48	11.20	1.97	27.65	43.50	15.85
	186.17	25.37	8.08	2.27	35.72	43.50	7.78
	338.46	14.93	13.97	3.32	32.22	46.00	13.78
	507.24	16.66	17.40	4.00	38.06	46.00	7.94
	599.39	14.42	18.80	4.23	37.45	46.00	8.55
Vertical	38.73	20.71	13.09	0.95	34.75	40.00	5.25
	72.68	25.33	5.71	1.44	32.48	40.00	7.52
	133.79	17.38	11.10	1.97	30.45	43.50	13.05
	339.43	15.30	14.00	3.33	32.63	46.00	13.37
	457.77	13.34	16.53	3.84	33.71	46.00	12.29
	599.39	11.26	18.80	4.23	34.29	46.00	11.71

TEST ENGINEER: KEN XU

EUT : LCD Monitor Temperature : 22°C

Model No. : W2452TQT Humidity : 60%

Serial No. : 801NDRF7F054 Date of Test : Jan 26, 2008

Test Mode : VGA 1920*1200@60Hz

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	67.83	25.22	5.27	1.37	--	31.86	40.00	8.14	QP
	178.41	22.72	8.17	2.23	--	33.12	43.50	10.38	
	277.35	19.07	12.32	2.98	--	34.37	46.00	11.63	
	336.52	19.77	13.94	3.32	--	37.03	46.00	8.97	
	460.68	18.87	16.60	3.86	--	39.33	46.00	6.67	
	599.39	16.20	18.80	4.23	--	39.23	46.00	6.77	
	1043.00	47.50	22.39	6.18	37.58	38.49	74.00	35.51	PK
	1186.00	47.34	23.10	6.71	37.21	39.94	74.00	34.06	
	1270.00	46.65	23.42	6.86	37.01	39.92	74.00	34.08	
	1378.00	46.79	24.13	7	36.77	41.15	74.00	32.85	
	1497.00	47.03	25.35	7.12	36.53	42.97	74.00	31.03	
	1744.00	46.04	25.94	8.41	36.09	44.3	74.00	29.70	
Vertical	30.97	17.8	17.55	0.91	--	36.26	40.00	3.74	QP
	38.73	19.66	13.09	0.95	--	33.7	40.00	6.30	
	70.74	29.23	5.47	1.43	--	36.13	40.00	3.87	
	131.85	17.11	11.24	1.96	--	30.31	43.50	13.19	
	343.31	16.35	14.12	3.35	--	33.82	46.00	12.18	
	539.25	16.04	18.50	4.10	--	38.64	46.00	7.36	
	1065.00	53.65	22.51	6.30	37.52	44.94	74.00	29.06	PK
	1139.00	47.37	22.40	6.55	37.33	38.99	74.00	35.01	
	1234.00	47.46	23.10	6.82	37.09	40.29	74.00	33.71	
	1351.00	46.4	23.97	6.97	36.83	40.51	74.00	33.49	
	1494.00	46.59	25.35	7.12	36.54	42.52	74.00	31.48	
	1926.00	45.78	27.23	9.04	35.80	46.25	74.00	27.75	

TEST ENGINEER: KEN XU

EUT : LCD Monitor Temperature : 22°C

Model No. : W2452TQT Humidity : 60%

Serial No. : 801NDRF7F054 Date of Test : Jan 26, 2008

Test Mode : DVI 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	68.8	25.49	5.35	1.39	32.23	40.00	7.77
	126.03	16.08	11.48	1.91	29.47	43.50	14.03
	185.2	23.41	8.00	2.26	33.67	43.50	9.83
	277.35	17.67	12.32	2.98	32.97	46.00	13.03
	415.09	14.63	16.53	3.67	34.83	46.00	11.17
	599.39	15.99	18.80	4.23	39.02	46.00	6.98
Vertical	30.97	18.39	17.55	0.91	36.85	40.00	3.15
	38.73	21.73	13.09	0.95	35.77	40.00	4.23
	72.68	25.93	5.71	1.44	33.08	40.00	6.92
	132.82	19.28	11.20	1.97	32.45	43.50	11.05
	309.36	17.37	13.20	3.16	33.73	46.00	12.27
	532.46	16.60	18.01	4.07	38.68	46.00	7.32

TEST ENGINEER: KEN XU

EUT : LCD Monitor Temperature : 22°C

Model No. : W2452TQT Humidity : 60%

Serial No. : 801NDRF7F054 Date of Test : Jan 26, 2008

Test Mode : DVI 1024*768@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	68.80	21.24	5.35	1.39	27.98	40.00	12.02
	129.91	16.42	11.40	1.94	29.76	43.50	13.74
	187.14	28.37	8.12	2.27	38.76	43.50	4.74
	382.11	17.81	15.05	3.53	36.39	46.00	9.61
	460.68	18.71	16.60	3.86	39.17	46.00	6.83
	552.83	15.81	18.45	4.12	38.38	46.00	7.62
Vertical	37.76	21.53	13.64	0.95	36.12	40.00	3.88
	71.71	28.34	5.57	1.43	35.34	40.00	4.66
	82.38	23.87	7.20	1.54	32.61	40.00	7.39
	183.26	23.46	8.00	2.25	33.71	43.50	9.79
	334.58	20.02	13.88	3.30	37.20	46.00	8.80
	599.39	11.65	18.80	4.23	34.68	46.00	11.32

TEST ENGINEER: KEN XU

EUT : LCD Monitor Temperature : 22°C

Model No. : W2452TQT Humidity : 60%

Serial No. : 801NDRF7F054 Date of Test : Jan 26, 2008

Test Mode : DVI 1920*1200@60Hz

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	70.74	25.70	5.47	1.43	--	32.60	40.00	7.40	QP
	133.79	16.13	11.10	1.97	--	29.20	43.50	14.30	
	183.26	22.51	8.00	2.25	--	32.76	43.50	10.74	
	277.35	17.01	12.32	2.98	--	32.31	46.00	13.69	
	378.23	19.88	14.93	3.52	--	38.33	46.00	7.67	
	507.24	19.00	17.40	4.00	--	40.40	46.00	5.60	
	1112.00	51.23	22.33	6.47	37.40	42.63	74.00	31.37	PK
	1158.00	49.84	22.55	6.63	37.28	41.74	74.00	32.26	
	1202.00	46.89	22.80	6.79	37.17	39.31	74.00	34.69	
	1360.00	48.31	24.05	6.97	36.81	42.52	74.00	31.48	
	1495.00	51.33	25.35	7.12	36.54	47.26	74.00	26.74	
	1597.00	48.61	25.42	7.76	36.35	45.44	74.00	28.56	
Vertical	34.85	20.35	15.15	0.93	--	36.43	40.00	3.57	QP
	41.64	21.07	11.61	0.96	--	33.64	40.00	6.36	
	69.77	27.96	5.39	1.41	--	34.76	40.00	5.24	
	183.26	19.91	8.00	2.25	--	30.16	43.50	13.34	
	452.92	22.35	16.35	3.82	--	42.52	46.00	3.48	
	755.56	16.12	19.91	5.15	--	41.18	46.00	4.82	
	1056.00	53.68	22.48	6.26	37.54	44.88	74.00	29.12	PK
	1085.00	58.52	22.50	6.34	37.47	49.89	74.00	24.11	
	1162.00	49.08	22.77	6.63	37.27	41.21	74.00	32.79	
	1360.00	48.18	24.05	6.97	36.81	42.39	74.00	31.61	
	1506.00	46.73	25.30	7.21	36.51	42.73	74.00	31.27	
	1621.00	46.80	25.45	7.85	36.31	43.79	74.00	30.21	

TEST ENGINEER: KEN XU

5 DEVIATION TO TEST SPECIFICATIONS

None.

6 DEBUG DESCRIPTION

Name	M/N	Specifications (mm)	Manufacturer	Location
Aluminum foil	T-308	30mm*50mm	DAEHUNG SUBSIDIARY MATERIALS.	See Intpho Figure 21, 22-1
Aluminum foil	--	40mm*80mm	DAEHUNG SUBSIDIARY MATERIALS.	See Intpho Figure 22-2
Gasket	--	60mm*9mm*2T	EXPAN	See Intpho Figure 23-1
Gasket	--	180mm*9mm*2T	EXPAN	See Intpho Figure 23-2
Gasket	--	95mm*9mm*2T	EXPAN	See Intpho Figure 23-3
Gasket	3940TKK 084A	45.2*23mm	EXPAN	See Intpho Figure 24