

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

LCD Monitor

Model No.: W2242TQT

Serial No.: E08022106

FCC ID : BEJW2242TT

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

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Date of Test : Feb 26-27, 2008
Date of Report : Feb 28, 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. : W2242TQT
(B) Serial No. : E08022106
(C) Power Supply : 120V/60Hz

Test Procedure Used:

*FCC RULES AND REGULATIONS PART 15 SUBPART B CLASS B 2007.10
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: W2242TQT; S/N: E08022106) which was tested in 3m anechoic chamber on Feb 26-27, 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 : Feb 26-27, 2008

Prepared By:

Zeno Gu 2008.03.03
ZENO GU / Assistant

Reviewer:

Dio Yang 2008.3.3
DIO YANG / Supervisor

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

Approved Signatory:

Sammy Chen 2008.03.03
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 / Test Item	Test Standard	Results	Meets Limit
EMISSION			
Conducted Disturbance At main terminal	FCC RULES AND REGULATIONS PART 15 SUBPART B 2007.10 AND ANSI C63.4-2003	Pass	15.107(a) Class B
Radiated Disturbance	FCC RULES AND REGULATIONS PART 15 SUBPART B 2007.10 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.	:	W2242TQT
Serial No.	:	E08022106
Real Power	:	42.00W
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
Panel	:	Manufacturer: LG.PHILIPS LCD M/N : LM220WE1 (TL) (D1)
Max Resolution	:	1680*1050@60Hz.
D-Sub Cable	:	Shielded, Detachable, 1.85m, with two cores
DVI Cable	:	Shielded, Detachable, 1.90m, with two cores
Power Cord	:	Unshielded, Detachable, 1.80m

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

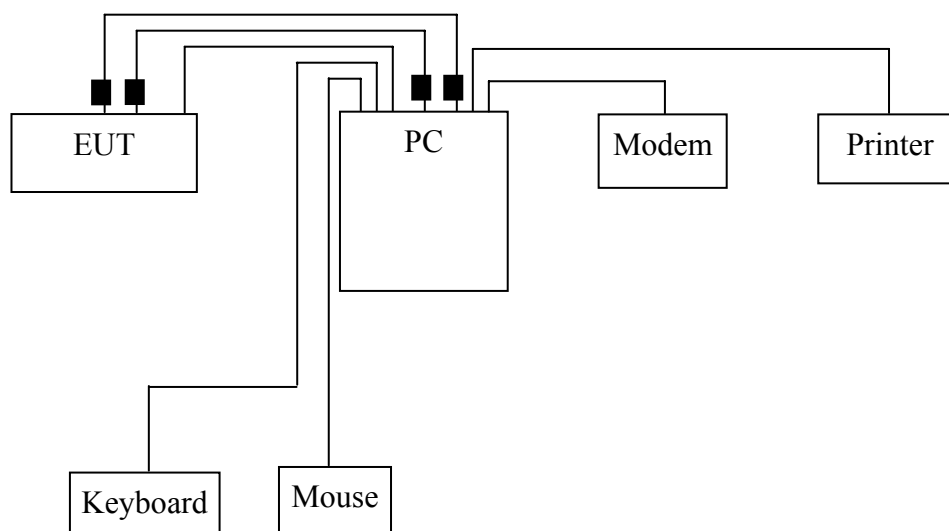
3.1 Test Equipment

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	Oct 26, 2007	Oct 26, 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	--	--

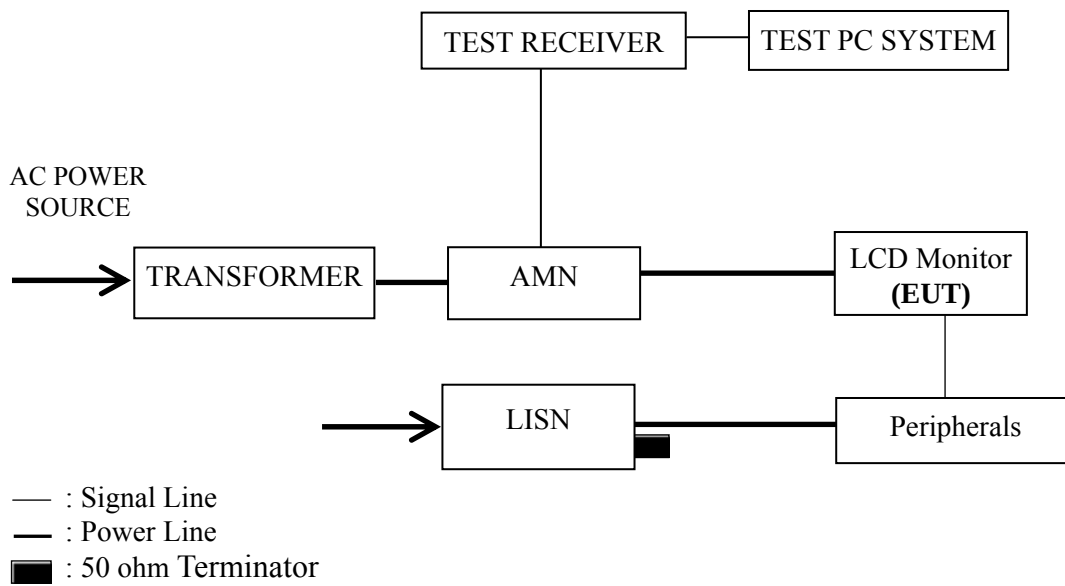
3.2 Block Diagram of Test Setup

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 (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 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 sent “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 1680*1050@60Hz
DVI 640*480@60Hz
DVI 1024*768@60Hz
DVI 1680*1050@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 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 1680*1050@60Hz	P14
DVI 640*480@60Hz	P15
DVI 1024*768@60Hz	P16
DVI 1680*1050@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 640*480@60Hz mode. The worst emission is detected at 0.216 MHz with corrected signal level of 42.66 (μV) (limit is 52.97 dB (μV)), when the Neutral (Average) of the EUT is connected to AMN.

EUT : LCD Monitor Temperature : 22°C

Model No. : W2242TQT Humidity : 60%

Serial No. : E08022106 Date of Test : Feb 26, 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	0.150	46.80	0.66	47.46	66.00	18.54	QP
	0.216	47.50	0.73	48.23	62.97	14.74	
	0.287	38.81	0.70	39.51	60.61	21.10	
	0.363	38.51	0.68	39.19	58.66	19.47	
	0.435	36.00	0.67	36.67	57.16	20.49	
	7.390	42.10	0.67	42.77	60.00	17.23	
	0.150	38.00	0.66	38.66	56.00	17.34	AV
	0.216	41.40	0.73	42.13	52.97	10.84	
	0.287	34.51	0.70	35.21	50.61	15.40	
	0.363	35.51	0.68	36.19	48.66	12.47	
	0.435	31.00	0.67	31.67	47.16	15.49	
	7.390	30.80	0.67	31.47	50.00	18.53	
Neutral	0.150	48.50	0.53	49.03	66.00	16.97	QP
	0.216	48.29	0.67	48.96	62.97	14.01	
	0.290	40.40	0.66	41.06	60.52	19.46	
	0.363	39.00	0.65	39.65	58.66	19.01	
	0.800	35.19	0.58	35.77	56.00	20.23	
	4.990	35.00	0.54	35.54	56.00	20.46	
	0.150	39.80	0.53	40.33	56.00	15.67	AV
	0.216	41.99	0.67	42.66	52.97	10.31	
	0.290	35.90	0.66	36.56	50.52	13.96	
	0.363	35.70	0.65	36.35	48.66	12.31	
	0.800	31.69	0.58	32.27	46.00	13.73	
	4.990	23.90	0.54	24.44	46.00	21.56	

TEST ENGINEER: TOM SI

EUT : LCD Monitor Temperature : 22°C

Model No. : W2242TQT Humidity : 60%

Serial No. : E08022106 Date of Test : Feb 26, 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	0.150	41.20	0.66	41.86	66.00	24.14	QP
	0.216	44.70	0.73	45.43	62.97	17.54	
	0.287	36.41	0.70	37.11	60.61	23.50	
	0.359	37.91	0.68	38.59	58.75	20.16	
	3.900	40.11	0.61	40.72	56.00	15.28	
	7.370	41.30	0.67	41.97	60.00	18.03	
	0.150	33.80	0.66	34.46	56.00	21.54	AV
	0.216	39.90	0.73	40.63	52.97	12.34	
	0.287	32.61	0.70	33.31	50.61	17.30	
	0.359	36.01	0.68	36.69	48.75	12.06	
	3.900	30.11	0.61	30.72	46.00	15.28	
	7.370	37.00	0.67	37.67	50.00	12.33	
Neutral	0.150	38.00	0.53	38.53	66.00	27.47	QP
	0.216	42.89	0.67	43.56	62.97	19.41	
	0.287	35.60	0.66	36.26	60.61	24.35	
	0.359	37.31	0.65	37.96	58.75	20.79	
	0.502	34.30	0.65	34.95	56.00	21.05	
	4.900	41.80	0.54	42.34	56.00	13.66	
	0.150	31.90	0.53	32.43	56.00	23.57	AV
	0.216	38.99	0.67	39.66	52.97	13.31	
	0.287	31.20	0.66	31.86	50.61	18.75	
	0.359	35.71	0.65	36.36	48.75	12.39	
	0.502	32.10	0.65	32.75	46.00	13.25	
	4.900	33.80	0.54	34.34	46.00	11.66	

TEST ENGINEER: TOM SI

EUT : LCD Monitor Temperature : 22°C

Model No. : W2242TQT Humidity : 60%

Serial No. : E08022106 Date of Test : Feb 26, 2008

Test Mode : VGA 1680*1050@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.150	37.90	0.66	38.56	66.00	27.44	QP
	0.216	43.70	0.73	44.43	62.97	18.54	
	0.286	35.21	0.70	35.91	60.64	24.73	
	0.359	38.01	0.68	38.69	58.75	20.06	
	0.502	36.90	0.66	37.56	56.00	18.44	
	3.960	41.10	0.62	41.72	56.00	14.28	
	0.150	32.00	0.66	32.66	56.00	23.34	AV
	0.216	39.60	0.73	40.33	52.97	12.64	
	0.286	31.71	0.70	32.41	50.64	18.23	
	0.359	36.91	0.68	37.59	48.75	11.16	
	0.502	35.00	0.66	35.66	46.00	10.34	
	3.960	31.80	0.62	32.42	46.00	13.58	
Neutral	0.150	38.30	0.53	38.83	66.00	27.17	QP
	0.216	42.79	0.67	43.46	62.97	19.51	
	0.287	35.20	0.66	35.86	60.61	24.75	
	0.359	37.21	0.65	37.86	58.75	20.89	
	0.502	34.70	0.65	35.35	56.00	20.65	
	4.690	40.00	0.54	40.54	56.00	15.46	
	0.150	32.00	0.53	32.53	56.00	23.47	AV
	0.216	38.89	0.67	39.56	52.97	13.41	
	0.287	31.00	0.66	31.66	50.61	18.95	
	0.359	35.91	0.65	36.56	48.75	12.19	
	0.502	32.50	0.65	33.15	46.00	12.85	
	4.690	33.10	0.54	33.64	46.00	12.36	

TEST ENGINEER: TOM SI

EUT : LCD Monitor Temperature : 22°C

Model No. : W2242TQT Humidity : 60%

Serial No. : E08022106 Date of Test : Feb 26, 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	0.150	38.00	0.66	38.66	66.00	27.34	QP
	0.216	43.70	0.73	44.43	62.97	18.54	
	0.359	38.11	0.68	38.79	58.75	19.96	
	0.502	36.40	0.66	37.06	56.00	18.94	
	0.576	34.00	0.63	34.63	56.00	21.37	
	3.960	41.70	0.62	42.32	56.00	13.68	
	0.150	32.20	0.66	32.86	56.00	23.14	AV
	0.216	39.90	0.73	40.63	52.97	12.34	
	0.359	36.91	0.68	37.59	48.75	11.16	
	0.502	34.50	0.66	35.16	46.00	10.84	
	0.576	31.70	0.63	32.33	46.00	13.67	
	3.960	31.20	0.62	31.82	46.00	14.18	
Neutral	0.150	38.10	0.53	38.63	66.00	27.37	QP
	0.216	42.99	0.67	43.66	62.97	19.31	
	0.359	37.41	0.65	38.06	58.75	20.69	
	0.502	34.40	0.65	35.05	56.00	20.95	
	0.576	32.80	0.62	33.42	56.00	22.58	
	4.690	38.20	0.54	38.74	56.00	17.26	
	0.150	32.00	0.53	32.53	56.00	23.47	AV
	0.216	39.29	0.67	39.96	52.97	13.01	
	0.359	35.91	0.65	36.56	48.75	12.19	
	0.502	32.30	0.65	32.95	46.00	13.05	
	0.576	31.10	0.62	31.72	46.00	14.28	
	4.690	33.10	0.54	33.64	46.00	12.36	

TEST ENGINEER: TOM SI

EUT : LCD Monitor Temperature : 22°C

Model No. : W2242TQT Humidity : 60%

Serial No. : E08022106 Date of Test : Feb 26, 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	0.150	38.00	0.66	38.66	66.00	27.34	QP
	0.213	42.50	0.73	43.23	63.09	19.86	
	0.357	37.41	0.68	38.09	58.80	20.71	
	0.502	36.40	0.66	37.06	56.00	18.94	
	0.576	33.80	0.63	34.43	56.00	21.57	
	3.960	41.50	0.62	42.12	56.00	13.88	
	0.150	32.10	0.66	32.76	56.00	23.24	AV
	0.213	38.70	0.73	39.43	53.09	13.66	
	0.357	35.51	0.68	36.19	48.80	12.61	
	0.502	34.50	0.66	35.16	46.00	10.84	
	0.576	31.70	0.63	32.33	46.00	13.67	
	3.960	31.30	0.62	31.92	46.00	14.08	
Neutral	0.152	35.60	0.53	36.13	65.89	29.76	QP
	0.216	43.09	0.67	43.76	62.97	19.21	
	0.359	37.41	0.65	38.06	58.75	20.69	
	0.502	34.40	0.65	35.05	56.00	20.95	
	4.320	37.90	0.54	38.44	56.00	17.56	
	4.760	38.20	0.54	38.74	56.00	17.26	
	0.152	29.70	0.53	30.23	55.89	25.66	AV
	0.216	39.39	0.67	40.06	52.97	12.91	
	0.359	36.01	0.65	36.66	48.75	12.09	
	0.502	32.30	0.65	32.95	46.00	13.05	
	4.320	33.10	0.54	33.64	46.00	12.36	
	4.760	33.10	0.54	33.64	46.00	12.36	

TEST ENGINEER: TOM SI

EUT : LCD Monitor Temperature : 22°C

Model No. : W2242TQT Humidity : 60%

Serial No. : E08022106 Date of Test : Feb 26, 2008

Test Mode : DVI 1680*1050@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.150	37.90	0.66	38.56	66.00	27.44	QP
	0.213	42.30	0.73	43.03	63.09	20.06	
	0.359	38.01	0.68	38.69	58.75	20.06	
	0.502	36.60	0.66	37.26	56.00	18.74	
	0.647	33.70	0.61	34.31	56.00	21.69	
	3.960	42.50	0.62	43.12	56.00	12.88	
	0.150	32.00	0.66	32.66	56.00	23.34	AV
	0.213	38.50	0.73	39.23	53.09	13.86	
	0.359	36.81	0.68	37.49	48.75	11.26	
	0.502	34.70	0.66	35.36	46.00	10.64	
	0.647	32.70	0.61	33.31	46.00	12.69	
	3.960	31.00	0.62	31.62	46.00	14.38	
Neutral	0.150	38.00	0.53	38.53	66.00	27.47	QP
	0.216	42.69	0.67	43.36	62.97	19.61	
	0.359	37.31	0.65	37.96	58.75	20.79	
	0.502	34.50	0.65	35.15	56.00	20.85	
	0.578	31.30	0.62	31.92	56.00	24.08	
	4.680	42.40	0.54	42.94	56.00	13.06	
	0.150	32.00	0.53	32.53	56.00	23.47	AV
	0.216	38.99	0.67	39.66	52.97	13.31	
	0.359	35.81	0.65	36.46	48.75	12.29	
	0.502	32.40	0.65	33.05	46.00	12.95	
	0.578	29.80	0.62	30.42	46.00	15.58	
	4.680	34.10	0.54	34.64	46.00	11.36	

TEST ENGINEER: TOM SI

4 RADIATED EMISSION TEST

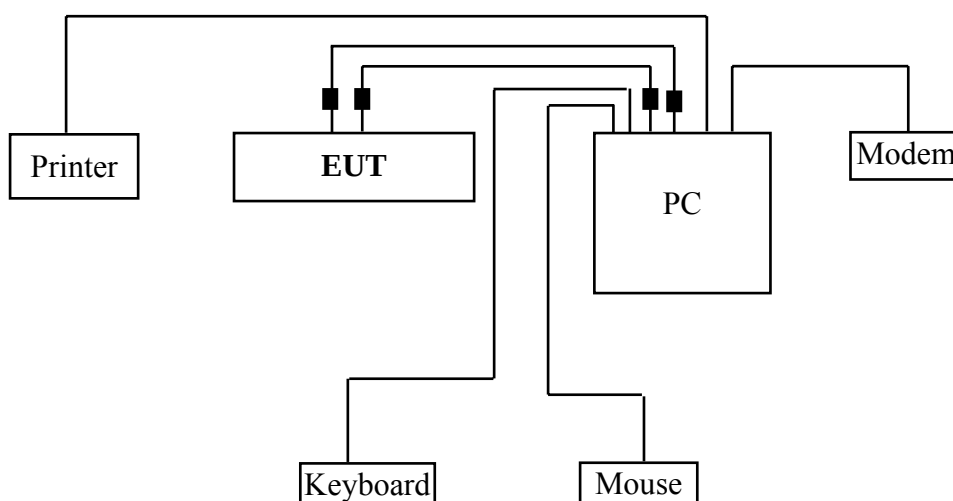
4.1 Test Equipment

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	Oct 26, 2007	Oct 26, 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	--	--

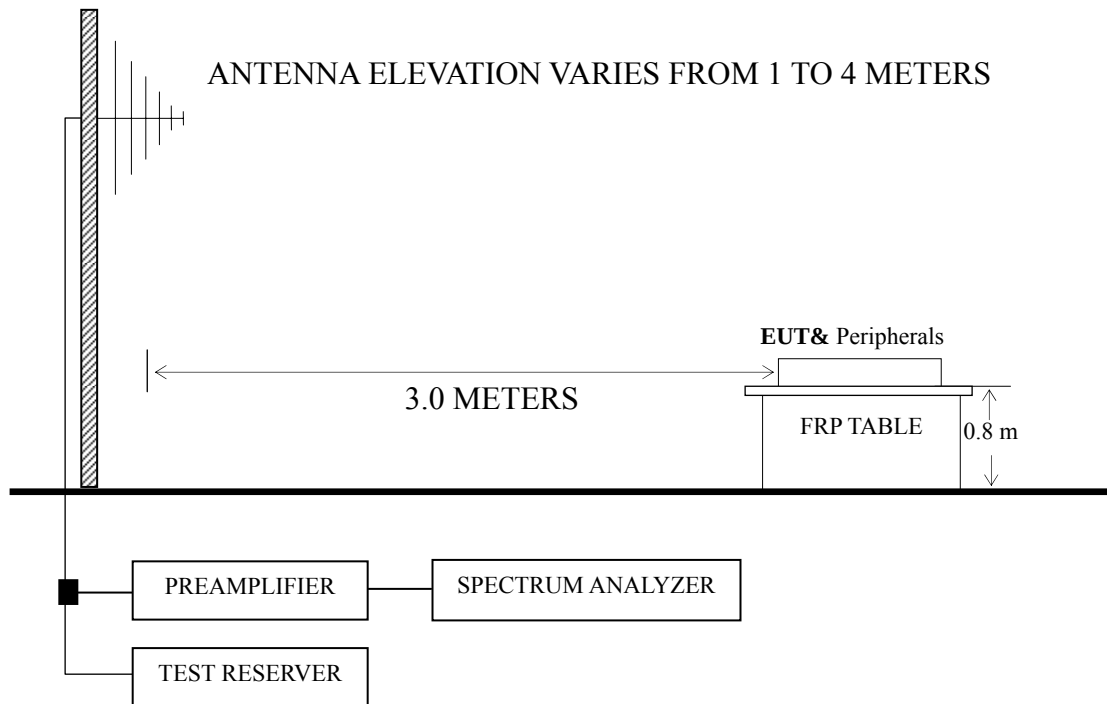
4.2 Block Diagram of Test Setup

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 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 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 VGA 1680*1050@60Hz and DVI 1680*1050@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 1680*1050@60Hz	P24
DVI 640*480@60Hz	P25
DVI 1024*768@60Hz	P26
DVI 1680*1050@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 264.74 MHz with corrected signal level of 41.68 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 220° . The worst emission at vertical polarization was detected at 529.55 MHz with corrected signal level of 42.94 dB ($\mu\text{V/m}$) (limit is 46.00 dB ($\mu\text{V/m}$)), when the antenna was 1.00 m height and the turntable was at 120° .

EUT : LCD Monitor Temperature : 22°C

Model No. : W2242TQT Humidity : 60%

Serial No. : E08022106 Date of Test : Feb 27, 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	117.30	24.52	11.25	1.84	37.61	43.50	5.89
	133.79	21.55	11.10	1.97	34.62	43.50	8.88
	223.03	29.59	8.65	2.56	40.80	46.00	5.20
	301.60	21.85	12.90	3.13	37.88	46.00	8.12
	503.36	21.39	17.40	4.00	42.79	46.00	3.21
	612.00	17.29	19.01	4.30	40.60	46.00	5.40
Vertical	30.97	18.07	17.55	0.91	36.53	40.00	3.47
	101.78	22.86	10.39	1.71	34.96	43.50	8.54
	142.52	22.58	10.35	2.03	34.96	43.50	8.54
	249.22	21.88	11.93	2.79	36.60	46.00	9.40
	387.93	19.50	15.20	3.55	38.25	46.00	7.75
	530.52	20.07	17.85	4.07	41.99	46.00	4.01

TEST ENGINEER: JACKY CHEN

EUT : LCD Monitor Temperature : 22°C

Model No. : W2242TQT Humidity : 60%

Serial No. : E08022106 Date of Test : Feb 27, 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	150.28	18.19	9.76	2.08	30.03	43.50	13.47
	200.72	22.96	8.68	2.33	33.97	43.50	9.53
	224.00	30.39	8.75	2.58	41.72	46.00	4.28
	298.69	20.49	12.79	3.11	36.39	46.00	9.61
	378.23	16.54	14.93	3.52	34.99	46.00	11.01
	449.04	15.45	16.31	3.80	35.56	46.00	10.44
Vertical	30.97	15.77	17.55	0.91	34.23	40.00	5.77
	102.75	22.03	10.50	1.72	34.25	43.50	9.25
	224.00	25.96	8.75	2.58	37.29	46.00	8.71
	303.54	20.66	12.95	3.13	36.74	46.00	9.26
	454.86	17.64	16.40	3.82	37.86	46.00	8.14
	528.58	18.15	17.78	4.07	40.00	46.00	6.00

TEST ENGINEER: JACKY CHEN

EUT : LCD Monitor Temperature : 22°C

Model No. : W2242TQT Humidity : 60%

Serial No. : E08022106 Date of Test : Feb 27, 2008

Test Mode : VGA 1680*1050@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	177.44	22.84	8.31	2.23	--	33.38	43.50	10.12	QP
	200.72	22.97	8.68	2.33	--	33.98	43.50	9.52	
	234.67	26.16	10.25	2.66	--	39.07	46.00	6.93	
	321.97	22.14	13.62	3.23	--	38.99	46.00	7.01	
	441.28	18.23	16.34	3.77	--	38.34	46.00	7.66	
	588.72	12.57	18.70	4.20	--	35.47	46.00	10.53	
	1083.00	55.89	22.50	6.34	37.47	47.26	74.00	26.74	PK
	1217.00	54.48	22.95	6.80	37.13	47.10	74.00	26.90	
	1394.00	51.86	24.25	7.01	36.74	46.38	74.00	27.62	
	1592.00	49.18	25.42	7.66	36.36	45.90	74.00	28.10	
	1767.00	48.94	25.94	8.53	36.05	47.36	74.00	26.64	
	1864.00	47.80	26.72	8.81	35.90	47.43	74.00	26.57	
Vertical	30.97	17.24	17.55	0.91	--	35.70	40.00	4.30	QP
	95.96	25.62	9.60	1.66	--	36.88	43.50	6.62	
	179.38	24.86	8.08	2.24	--	35.18	43.50	8.32	
	441.28	19.36	16.34	3.77	--	39.47	46.00	6.53	
	501.42	18.97	17.40	3.99	--	40.36	46.00	5.64	
	859.35	13.94	20.39	5.57	--	39.90	46.00	6.10	
	1085.00	57.68	22.50	6.34	37.47	49.05	74.00	24.95	PK
	1227.00	52.33	23.05	6.82	37.11	45.09	74.00	28.91	
	1431.00	53.07	24.94	7.05	36.66	48.40	74.00	25.60	
	1572.00	52.00	25.36	7.57	36.39	48.54	74.00	25.46	
	1740.00	48.67	25.94	8.41	36.10	46.92	74.00	27.08	
	1867.00	48.73	26.76	8.81	35.90	48.40	74.00	25.60	

TEST ENGINEER: JACKY CHEN

EUT : LCD Monitor Temperature : 22°C

Model No. : W2242TQT Humidity : 60%

Serial No. : E08022106 Date of Test : Feb 27, 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	196.84	26.83	8.60	2.31	37.74	43.50	5.76
	222.06	29.99	8.55	2.56	41.10	46.00	4.90
	264.74	26.24	12.55	2.89	41.68	46.00	4.32
	295.78	22.05	12.76	3.10	37.91	46.00	8.09
	377.26	17.75	14.93	3.50	36.18	46.00	9.82
	482.99	19.41	17.23	3.92	40.56	46.00	5.44
Vertical	30.97	15.88	17.55	0.91	34.34	40.00	5.66
	144.46	21.97	10.16	2.04	34.17	43.50	9.33
	222.06	25.18	8.55	2.56	36.29	46.00	9.71
	260.86	24.08	12.81	2.88	39.77	46.00	6.23
	453.89	18.57	16.40	3.82	38.79	46.00	7.21
	529.55	21.02	17.85	4.07	42.94	46.00	3.06

TEST ENGINEER: JACKY CHEN

EUT : LCD Monitor Temperature : 22°C

Model No. : W2242TQT Humidity : 60%

Serial No. : E08022106 Date of Test : Feb 27, 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	126.03	24.35	11.48	1.91	37.74	43.50	5.76
	200.72	25.75	8.68	2.33	36.76	43.50	6.74
	226.91	29.67	9.23	2.60	41.50	46.00	4.50
	326.82	25.61	13.70	3.27	42.58	46.00	3.42
	373.38	23.76	14.85	3.48	42.09	46.00	3.91
	482.99	19.44	17.23	3.92	40.59	46.00	5.41
Vertical	31.94	17.27	16.90	0.92	35.09	40.00	4.91
	149.31	22.78	9.84	2.07	34.69	43.50	8.81
	226.91	24.35	9.23	2.60	36.18	46.00	9.82
	277.35	21.23	12.32	2.98	36.53	46.00	9.47
	473.29	20.25	17.07	3.89	41.21	46.00	4.79
	530.52	20.28	17.85	4.07	42.20	46.00	3.80

TEST ENGINEER: JACKY CHEN

EUT : LCD Monitor Temperature : 22°C

Model No. : W2242TQT Humidity : 60%

Serial No. : E08022106 Date of Test : Feb 27, 2008

Test Mode : DVI 1680*1050@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	200.72	24.78	8.68	2.33	--	35.79	43.50	7.71	QP
	242.43	27.12	11.23	2.75	--	41.10	46.00	4.90	
	437.40	21.07	16.37	3.75	--	41.19	46.00	4.81	
	477.17	20.38	17.15	3.91	--	41.44	46.00	4.56	
	595.51	17.80	18.78	4.23	--	40.81	46.00	5.19	
	817.64	14.13	20.45	5.45	--	40.03	46.00	5.97	
	1112.00	58.02	22.33	6.47	37.40	49.42	74.00	24.58	PK
	1225.00	57.13	23.00	6.82	37.11	49.84	74.00	24.16	
	1344.00	56.32	23.81	6.95	36.84	50.24	74.00	23.76	
	1470.00	53.20	25.28	7.09	36.58	48.99	74.00	25.01	
	1633.00	51.02	25.58	7.94	36.28	48.26	74.00	25.74	
	1781.00	52.19	25.85	8.58	36.03	50.59	74.00	23.41	
Vertical	30.97	18.21	17.55	0.91	--	36.67	40.00	3.33	QP
	175.50	27.07	8.44	2.22	--	37.73	43.50	5.77	
	233.70	24.45	10.09	2.66	--	37.20	46.00	8.80	
	516.94	20.63	17.51	4.03	--	42.17	46.00	3.83	
	596.48	19.45	18.78	4.23	--	42.46	46.00	3.54	
	835.10	16.33	20.50	5.50	--	42.33	46.00	3.67	
	1080.00	56.00	22.55	6.34	37.47	47.42	74.00	26.58	PK
	1192.00	54.97	22.92	6.75	37.19	47.45	74.00	26.55	
	1254.00	53.91	23.34	6.85	37.04	47.06	74.00	26.94	
	1422.00	54.07	24.89	7.05	36.68	49.33	74.00	24.67	
	1554.00	52.10	25.27	7.48	36.43	48.42	74.00	25.58	
	1797.00	46.17	25.85	8.64	36.00	44.66	74.00	29.34	

TEST ENGINEER: JACKY CHEN

5 DEVIATION TO TEST SPECIFICATIONS

None.

6 DEBUG DESCRIPTION

Name	M/N	Specifications (mm)	Manufacturer	Location
Aluminum foil	T-308	50*30	DAEHUNG SUBSIDIARY MATERIALS.	See Internal Photo Figure 17