

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

LCD Monitor

Model No.: W2252TET

Serial No.: 805NDJXC8348

FCC ID : BEJW2252TET

Prepared For : LG Electronics U.S.A., Inc.
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Report No. : ACI-F08036
Date of Test : Jun 18, 2008
Date of Report : Jun 19, 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. : W2252TET
(B) Serial No. : 805NDJXC8348
(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: W2252TET; S/N: 805NDJXC8348) which was tested in 3m anechoic chamber on Jun 18, 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.

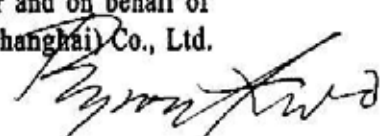
This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

Date of Test : Jun 18, 2008

Prepared By: Zeno Gu 2008.06.23
ZENOU GU / Assistant

Reviewer: Sammy Chen 2008.06.23
SAMMY CHEN / Assistant Manager

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

Approved Signatory: 
Authorized Signature EMC BYRON KWO / 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 Main Terminal	FCC RULES AND REGULATIONS PART 15 SUBPART B 2007.10 AND ANSI C63.4-2003	15.107(a) Class B	Pass
Radiated Disturbance	FCC RULES AND REGULATIONS PART 15 SUBPART B 2007.10 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.	:	W2252TET
Serial No.	:	805NDJXC8348
Real Power	:	24.00W
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.PHILIPS LCD M/N : LM220WE1 (TL) (K1)
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 Port | : Connected with PC |
| (2) One DVI Port | : Connected with PC |
| (3) 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 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 200233, China
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

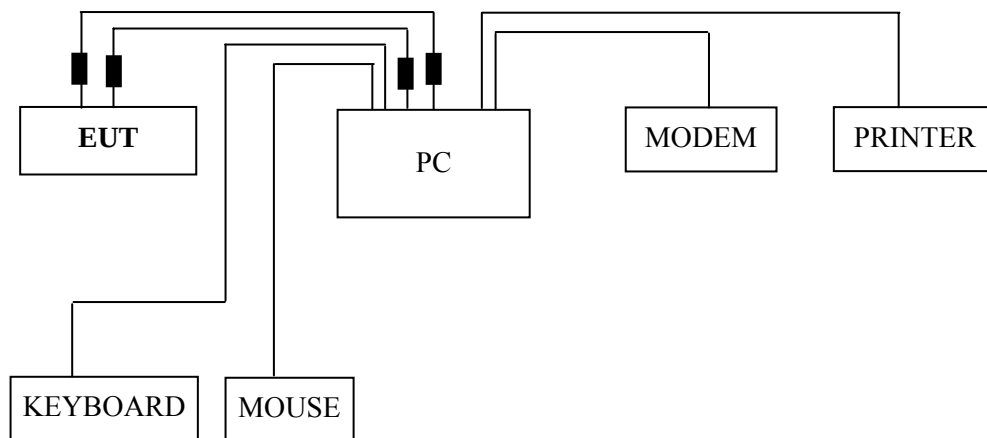
3.1 Test Equipment

The following test 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	ESHS10	830223/007	Oct 26, 2007	Oct 26, 2008
2.	Artificial Mains Network (AMN)	R&S	ESH2-Z5	843890/011	Apr 06, 2008	Apr 06, 2009
3.	Line Impedance Stabilization Network (LISN)	Kyoritsu	KNW-407	8-1280-4	Apr 06, 2008	Apr 06, 2009
4.	50 Ω Coaxial Switch	Anritsu	MP59B	6200426389	Mar 18, 2008	Sep 18, 2008
5.	50 Ω Terminator	Anritsu	BNC	001	Apr 06, 2008	Apr 06, 2009
6.	Software	Audix	E3	SET00200 9804M592	--	--

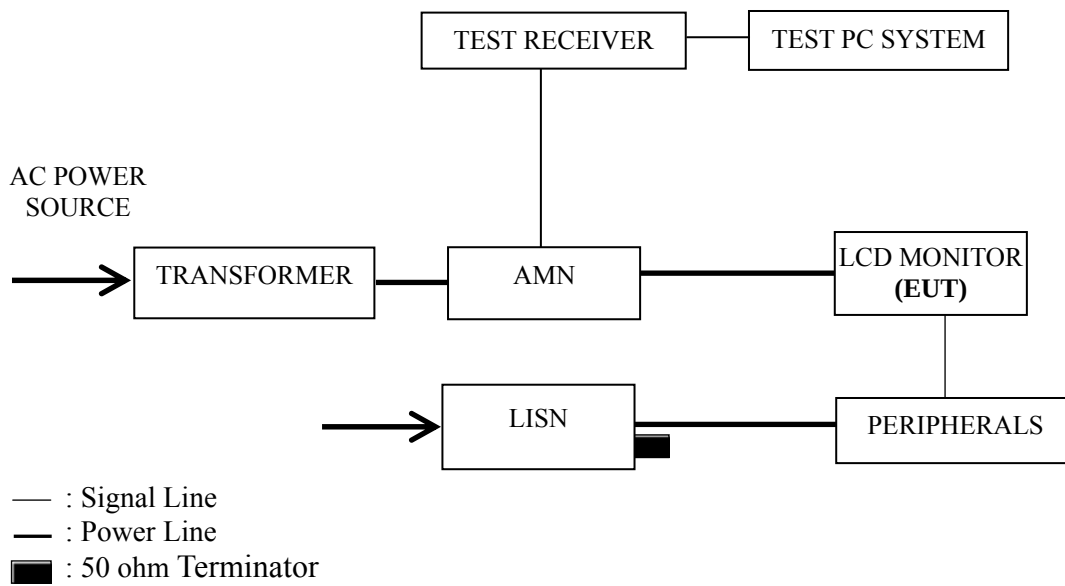
3.2 Block Diagram of Test Setup

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 & 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 1680*1050@60Hz test mode. The worst emission is detected at 0.193 MHz (Average Value) with corrected signal level of 47.03 dB (μV) (limit is 53.89 dB (μV)), when the Line of the EUT is connected to AMN.

EUT : LCD Monitor Temperature : 22°C

Model No. : W2252TET Humidity : 60%RH

Serial No. : 805NDJXC8348 Date of Test : Jun 18, 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	0.196	41.70	0.15	41.85	63.78	21.93	QP
	0.327	32.80	0.15	32.95	59.53	26.58	
	0.593	32.80	0.18	32.98	56.00	23.02	
	12.570	35.91	0.45	36.36	60.00	23.64	
	17.130	35.91	0.59	36.50	60.00	23.50	
	29.690	38.10	1.11	39.21	60.00	20.79	
	0.196	34.50	0.15	34.65	53.78	19.13	AV
	0.327	29.20	0.15	29.35	49.53	20.18	
	0.593	28.90	0.18	29.08	46.00	16.92	
	12.570	29.61	0.45	30.06	50.00	19.94	
	17.130	29.41	0.59	30.00	50.00	20.00	
	29.690	32.30	1.11	33.41	50.00	16.59	
Neutral	0.197	40.65	0.15	40.80	63.76	22.96	QP
	0.197	33.65	0.15	33.80	53.76	19.96	
	0.330	32.94	0.16	33.10	59.44	26.34	
	0.330	28.94	0.16	29.10	49.44	20.34	
	0.589	34.28	0.18	34.46	56.00	21.54	
	0.589	29.28	0.18	29.46	46.00	16.54	
	12.582	32.47	0.38	32.85	60.00	27.15	AV
	12.582	26.47	0.38	26.85	50.00	23.15	
	17.109	32.91	0.44	33.35	60.00	26.65	
	17.109	28.91	0.44	29.35	50.00	20.65	
	29.684	36.16	0.72	36.88	60.00	23.12	
	29.684	31.16	0.72	31.88	50.00	18.12	

TEST ENGINEER: TOM SI

EUT : LCD Monitor Temperature : 22°C

Model No. : W2252TET Humidity : 60%RH

Serial No. : 805NDJXC8348 Date of Test : Jun 18, 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	0.197	40.33	0.15	40.48	63.76	23.28	QP
	0.327	31.55	0.15	31.70	59.53	27.83	
	0.589	30.75	0.18	30.93	56.00	25.07	
	12.582	35.51	0.45	35.96	60.00	24.04	
	17.568	36.61	0.61	37.22	60.00	22.78	
	29.684	34.23	1.11	35.34	60.00	24.66	
	0.197	35.33	0.15	35.48	53.76	18.28	AV
	0.327	25.55	0.15	25.70	49.53	23.83	
	0.589	24.75	0.18	24.93	46.00	21.07	
	12.582	27.51	0.45	27.96	50.00	22.04	
	17.568	29.61	0.61	30.22	50.00	19.78	
	29.216	27.28	1.08	28.36	50.00	21.64	
Neutral	0.196	42.90	0.15	43.05	63.78	20.73	QP
	0.327	34.10	0.15	34.25	59.53	25.28	
	0.592	34.40	0.18	34.58	56.00	21.42	
	12.580	34.10	0.38	34.48	60.00	25.52	
	17.390	31.30	0.45	31.75	60.00	28.25	
	28.900	35.20	0.70	35.90	60.00	24.10	
	0.196	37.60	0.15	37.75	53.78	16.03	AV
	0.327	30.80	0.15	30.95	49.53	18.58	
	0.592	31.00	0.18	31.18	46.00	14.82	
	12.580	26.30	0.38	26.68	50.00	23.32	
	17.390	23.60	0.45	24.05	50.00	25.95	
	28.900	28.90	0.70	29.60	50.00	20.40	

TEST ENGINEER: TOM SI

EUT : LCD Monitor Temperature : 22°C

Model No. : W2252TET Humidity : 60%RH

Serial No. : 805NDJXC8348 Date of Test : Jun 18, 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	0.193	47.88	0.15	48.03	63.89	15.86	QP
	0.247	41.23	0.15	41.38	61.86	20.48	
	0.327	37.22	0.15	37.37	59.53	22.16	
	0.589	31.67	0.18	31.85	56.00	24.15	
	11.870	36.36	0.42	36.78	60.00	23.22	
	16.839	37.13	0.59	37.72	60.00	22.28	
	0.193	46.88	0.15	47.03	53.89	6.86	AV
	0.247	40.23	0.15	40.38	51.86	11.48	
	0.327	35.22	0.15	35.37	49.53	14.16	
	0.589	29.67	0.18	29.85	46.00	16.15	
	11.870	34.36	0.42	34.78	50.00	15.22	
	16.839	34.13	0.59	34.72	50.00	15.28	
Neutral	0.196	43.00	0.15	43.15	63.78	20.63	QP
	0.262	32.60	0.15	32.75	61.37	28.62	
	0.329	34.10	0.16	34.26	59.48	25.22	
	0.590	34.00	0.18	34.18	56.00	21.82	
	12.590	33.30	0.38	33.68	60.00	26.32	
	29.720	35.30	0.72	36.02	60.00	23.98	
	0.196	37.70	0.15	37.85	53.78	15.93	AV
	0.262	26.60	0.15	26.75	51.37	24.62	
	0.329	30.90	0.16	31.06	49.48	18.42	
	0.590	31.20	0.18	31.38	46.00	14.62	
	12.590	27.00	0.38	27.38	50.00	22.62	
	29.720	29.30	0.72	30.02	50.00	19.98	

TEST ENGINEER: TOM SI

EUT : LCD Monitor Temperature : 22°C

Model No. : W2252TET Humidity : 60%RH

Serial No. : 805NDJXC8348 Date of Test : Jun 18, 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	0.197	40.41	0.15	40.56	63.76	23.20	QP
	0.327	31.67	0.15	31.82	59.53	27.71	
	0.589	31.27	0.18	31.45	56.00	24.55	
	12.582	37.10	0.45	37.55	60.00	22.45	
	17.568	36.51	0.61	37.12	60.00	22.88	
	29.684	40.04	1.11	41.15	60.00	18.85	
	0.198	35.11	0.15	35.26	53.71	18.45	AV
	0.329	29.49	0.16	29.65	49.49	19.84	
	0.589	25.27	0.18	25.45	46.00	20.55	
	12.582	28.10	0.45	28.55	50.00	21.45	
	17.568	30.51	0.61	31.12	50.00	18.88	
	29.841	34.49	1.11	35.60	50.00	14.40	
Neutral	0.198	42.60	0.15	42.75	63.69	20.94	QP
	0.329	33.80	0.16	33.96	59.48	25.52	
	12.590	34.10	0.38	34.48	60.00	25.52	
	17.280	30.78	0.45	31.23	60.00	28.77	
	29.690	37.60	0.72	38.32	60.00	21.68	
	0.198	37.50	0.15	37.65	53.69	16.04	AV
	0.329	30.60	0.16	30.76	49.48	18.72	
	12.590	28.90	0.38	29.28	50.00	20.72	
	17.280	21.10	0.45	21.55	50.00	28.45	
	29.690	31.30	0.72	32.02	50.00	17.98	
	0.198	42.60	0.15	42.75	63.69	20.94	
	0.329	33.80	0.16	33.96	59.48	25.52	

TEST ENGINEER: TOM SI

EUT : LCD Monitor Temperature : 22°C

Model No. : W2252TET Humidity : 60%RH

Serial No. : 805NDJXC8348 Date of Test : Jun 18, 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	0.196	41.80	0.15	41.95	63.78	21.83	QP
	0.328	32.60	0.15	32.75	59.50	26.75	
	0.590	31.50	0.18	31.68	56.00	24.32	
	13.060	33.90	0.48	34.38	60.00	25.62	
	17.290	32.30	0.60	32.90	60.00	27.10	
	29.560	37.59	1.10	38.69	60.00	21.31	
	0.196	34.60	0.15	34.75	53.78	19.03	AV
	0.328	29.30	0.15	29.45	49.50	20.05	
	0.590	29.20	0.18	29.38	46.00	16.62	
	13.060	25.60	0.48	26.08	50.00	23.92	
	17.290	27.80	0.60	28.40	50.00	21.60	
	29.560	32.69	1.10	33.79	50.00	16.21	
Neutral	0.198	41.61	0.15	41.76	63.71	21.95	QP
	0.330	33.02	0.16	33.18	59.44	26.26	
	0.589	33.80	0.18	33.98	56.00	22.02	
	11.683	33.36	0.36	33.72	60.00	26.28	
	17.568	31.00	0.45	31.45	60.00	28.55	
	29.216	38.19	0.70	38.89	60.00	21.11	
	0.198	34.61	0.15	34.76	53.71	18.95	AV
	0.330	26.02	0.16	26.18	49.44	23.26	
	0.589	25.80	0.18	25.98	46.00	20.02	
	11.683	25.36	0.36	25.72	50.00	24.28	
	17.568	26.00	0.45	26.45	50.00	23.55	
	29.216	33.51	0.70	34.21	50.00	15.79	

TEST ENGINEER: TOM SI

EUT : LCD Monitor Temperature : 22°C

Model No. : W2252TET Humidity : 60%RH

Serial No. : 805NDJXC8348 Date of Test : Jun 18, 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	0.198	40.29	0.15	40.44	63.71	23.27	QP
	0.330	31.39	0.16	31.55	59.44	27.89	
	0.589	29.92	0.18	30.10	56.00	25.90	
	12.852	37.41	0.47	37.88	60.00	22.12	
	17.849	34.60	0.61	35.21	60.00	24.79	
	29.684	40.46	1.11	41.57	60.00	18.43	
	0.198	35.29	0.15	35.44	53.71	18.27	AV
	0.330	28.39	0.16	28.55	49.44	20.89	
	0.589	26.92	0.18	27.10	46.00	18.90	
	12.852	30.41	0.47	30.88	50.00	19.12	
	17.849	29.60	0.61	30.21	50.00	19.79	
	29.841	35.92	1.11	37.03	50.00	12.97	
Neutral	0.198	42.70	0.15	42.85	63.69	20.84	QP
	0.328	34.20	0.15	34.35	59.50	25.15	
	0.591	34.50	0.18	34.68	56.00	21.32	
	12.780	32.49	0.39	32.88	60.00	27.12	
	17.560	27.30	0.45	27.75	60.00	32.25	
	29.840	36.50	0.72	37.22	60.00	22.78	
	0.198	37.50	0.15	37.65	53.69	16.04	AV
	0.328	31.10	0.15	31.25	49.50	18.25	
	0.591	31.50	0.18	31.68	46.00	14.32	
	12.780	28.19	0.39	28.58	50.00	21.42	
	17.560	22.00	0.45	22.45	50.00	27.55	
	29.840	31.00	0.72	31.72	50.00	18.28	

TEST ENGINEER: TOM SI

4 RADIATED EMISSION TEST

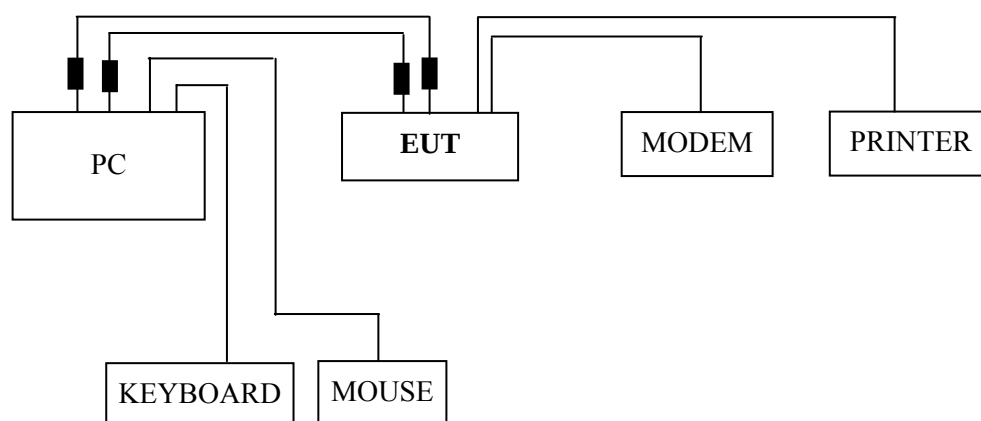
4.1 Test Equipment

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	Oct 26, 2007	Oct 26, 2008
2.	Preamplifier	Agilent	8447D	2944A10548	Mar 19, 2008	Sep 19, 2008
3.	Preamplifier	HP	8449B	3008A00864	Apr 06, 2008	Apr 06, 2009
4.	Bi-log Antenna	TESEQ	CBL6112D	23193	Aug 16, 2007	Aug 16, 2008
5.	Spectrum	Agilent	E7405A	MY45106600	Apr 06, 2008	Apr 06, 2009
6.	Software	Audix	E3	SET00200 9912M295-2	--	--

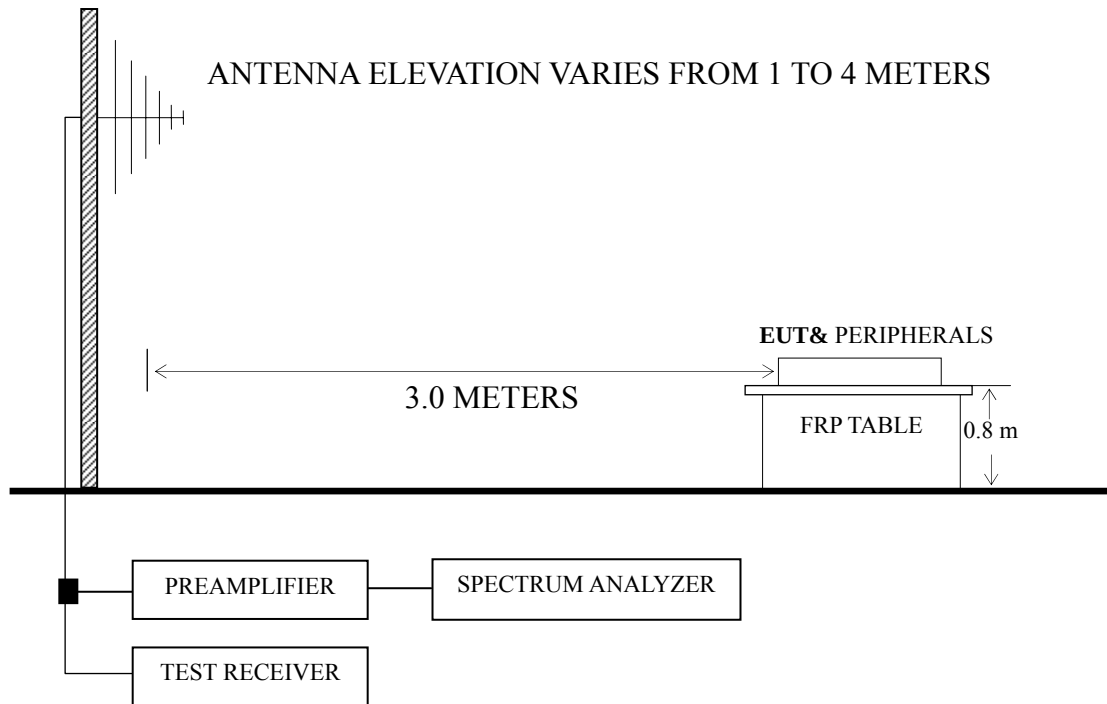
4.2 Block Diagram of Test Setup

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/DVI 1680*1050@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
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 VGA 1024*768@60Hz test mode. The worst emission at horizontal polarization was detected at 80.440 MHz with corrected signal level of 32.12 dB ($\mu\text{V/m}$) (limit is 40.00 dB ($\mu\text{V/m}$)), when the antenna was 1.10 m height and the turntable was at 160° . The worst emission at vertical polarization was detected at 77.530 MHz with corrected signal level of 36.42 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 240° .

EUT : LCD Monitor Temperature : 22°C

Model No. : W2252TET Humidity : 60%RH

Serial No. : 805NDJXC8348 Date of Test : Jun 18, 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	50.370	15.50	7.51	0.99	24.00	40.00	16.00
	77.530	24.56	6.43	1.50	32.49	40.00	7.51
	135.730	23.39	10.95	1.98	36.32	43.50	7.18
	167.740	23.69	8.98	2.17	34.84	43.50	8.66
	227.880	18.76	9.35	2.60	30.71	46.00	15.29
	439.340	17.01	16.35	3.77	37.13	46.00	8.87
Vertical	51.340	25.74	7.11	1.02	33.87	40.00	6.13
	77.530	26.18	6.43	1.50	34.11	40.00	5.89
	135.730	25.78	10.95	1.98	38.71	43.50	4.79
	162.890	24.88	9.18	2.15	36.21	43.50	7.29
	441.280	17.02	16.34	3.77	37.13	46.00	8.87
	565.440	13.17	18.45	4.15	35.77	46.00	10.23

TEST ENGINEER: JACKY CHEN

EUT : LCD Monitor Temperature : 22°C

Model No. : W2252TET Humidity : 60%RH

Serial No. : 805NDJXC8348 Date of Test : Jun 18, 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	80.440	23.80	6.80	1.52	32.12	40.00	7.88
	138.640	22.81	10.72	2.00	35.53	43.50	7.97
	167.740	24.20	8.98	2.17	35.35	43.50	8.15
	184.230	22.66	8.00	2.26	32.92	43.50	10.58
	344.280	19.54	14.19	3.35	37.08	46.00	8.92
	424.790	16.83	16.53	3.70	37.06	46.00	8.94
Vertical	48.430	26.11	8.44	0.98	35.53	40.00	4.47
	77.530	28.49	6.43	1.50	36.42	40.00	3.58
	138.640	25.00	10.72	2.00	37.72	43.50	5.78
	164.830	22.39	9.05	2.16	33.60	43.50	9.90
	378.230	17.09	14.93	3.52	35.54	46.00	10.46
	424.790	16.36	16.53	3.70	36.59	46.00	9.41

TEST ENGINEER: JACKY CHEN

EUT : LCD Monitor Temperature : 22°C

Model No. : W2252TET Humidity : 60%RH

Serial No. : 805NDJXC8348 Date of Test : Jun 18, 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	80.440	22.58	6.80	1.52	--	30.90	40.00	9.10	QP
	135.730	20.96	10.95	1.98	--	33.89	43.50	9.61	
	162.890	22.49	9.18	2.15	--	33.82	43.50	9.68	
	184.230	25.27	8.00	2.26	--	35.53	43.50	7.97	
	240.490	19.66	11.01	2.73	--	33.40	46.00	12.60	
	303.540	18.43	12.95	3.13	--	34.51	46.00	11.49	
	1169.000	48.67	23.00	6.67	37.25	41.09	74.00	32.91	PK
	1550.000	48.27	25.17	7.48	36.44	44.48	74.00	29.52	
	1639.000	46.07	25.65	7.94	36.27	43.39	74.00	30.61	
	1670.000	46.06	25.92	8.12	36.22	43.88	74.00	30.12	
	1789.000	49.73	25.85	8.58	36.02	48.14	74.00	25.86	
	1908.000	49.48	27.18	8.98	35.83	49.81	74.00	24.19	
Vertical	48.430	24.46	8.44	0.98	--	33.88	40.00	6.12	QP
	77.530	26.78	6.43	1.50	--	34.71	40.00	5.29	
	135.730	25.21	10.95	1.98	--	38.14	43.50	5.36	
	162.890	25.51	9.18	2.15	--	36.84	43.50	6.66	
	347.190	24.02	14.33	3.37	--	41.72	46.00	4.28	
	407.330	17.70	16.27	3.64	--	37.61	46.00	8.39	
	1152.000	47.37	22.51	6.59	37.29	39.18	74.00	34.82	PK
	1219.000	47.31	22.95	6.80	37.13	39.93	74.00	34.07	
	1550.000	44.82	25.17	7.48	36.44	41.03	74.00	32.97	
	1616.000	45.42	25.45	7.85	36.31	42.41	74.00	31.59	
	1789.000	45.84	25.85	8.58	36.02	44.25	74.00	29.75	
	1915.000	44.63	27.31	8.98	35.82	45.10	74.00	28.90	

TEST ENGINEER: JACKY CHEN

EUT : LCD Monitor Temperature : 22°C

Model No. : W2252TET Humidity : 60%RH

Serial No. : 805NDJXC8348 Date of Test : Jun 18, 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	77.530	24.46	6.43	1.50	32.39	40.00	7.61
	135.730	19.15	10.95	1.98	32.08	43.50	11.42
	164.830	23.34	9.05	2.16	34.55	43.50	8.95
	232.730	19.96	9.93	2.64	32.53	46.00	13.47
	439.340	15.45	16.35	3.77	35.57	46.00	10.43
	562.530	10.35	18.45	4.15	32.95	46.00	13.05
Vertical	48.430	23.08	8.44	0.98	32.50	40.00	7.50
	75.590	27.56	6.03	1.47	35.06	40.00	4.94
	135.730	20.62	10.95	1.98	33.55	43.50	9.95
	159.980	23.43	9.40	2.13	34.96	43.50	8.54
	230.790	17.46	9.71	2.64	29.81	46.00	16.19
	441.280	12.98	16.34	3.77	33.09	46.00	12.91

TEST ENGINEER: JACKY CHEN

EUT : LCD Monitor Temperature : 22°C

Model No. : W2252TET Humidity : 60%RH

Serial No. : 805NDJXC8348 Date of Test : Jun 18, 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	51.340	14.98	7.11	1.02	23.11	40.00	16.89
	135.730	20.36	10.95	1.98	33.29	43.50	10.21
	162.890	21.81	9.18	2.15	33.14	43.50	10.36
	240.490	17.47	11.01	2.73	31.21	46.00	14.79
	358.830	21.43	14.59	3.42	39.44	46.00	6.56
	596.480	19.32	18.78	4.23	42.33	46.00	3.67
Vertical	77.530	27.35	6.43	1.50	35.28	40.00	4.72
	135.730	25.23	10.95	1.98	38.16	43.50	5.34
	162.890	23.42	9.18	2.15	34.75	43.50	8.75
	358.830	23.06	14.59	3.42	41.07	46.00	4.93
	478.140	19.09	17.15	3.91	40.15	46.00	5.85
	596.480	17.07	18.78	4.23	40.08	46.00	5.92

TEST ENGINEER: JACKY CHEN

EUT : LCD Monitor Temperature : 22°C

Model No. : W2252TET Humidity : 60%RH

Serial No. : 805NDJXC8348 Date of Test : Jun 18, 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	80.440	23.26	6.80	1.52	--	31.58	40.00	8.42	QP
	133.790	19.81	11.10	1.97	--	32.88	43.50	10.62	
	164.830	23.92	9.05	2.16	--	35.13	43.50	8.37	
	315.180	19.08	13.40	3.20	--	35.68	46.00	10.32	
	395.690	16.21	15.60	3.59	--	35.40	46.00	10.60	
	473.290	15.82	17.07	3.89	--	36.78	46.00	9.22	
	1164.000	48.27	22.77	6.67	37.26	40.45	74.00	33.55	PK
	1229.000	51.86	23.05	6.82	37.10	44.63	74.00	29.37	
	1550.000	48.59	25.17	7.48	36.44	44.80	74.00	29.20	
	1696.000	46.57	26.20	8.30	36.18	44.89	74.00	29.11	
	1789.000	49.94	25.85	8.58	36.02	48.35	74.00	25.65	
	1908.000	49.24	27.18	8.98	35.83	49.57	74.00	24.43	
Vertical	51.340	25.79	7.11	1.02	--	33.92	40.00	6.08	QP
	77.530	27.85	6.43	1.50	--	35.78	40.00	4.22	
	135.730	24.62	10.95	1.98	--	37.55	43.50	5.95	
	164.830	26.66	9.05	2.16	--	37.87	43.50	5.63	
	395.690	19.72	15.60	3.59	--	38.91	46.00	7.09	
	754.590	12.04	19.91	5.15	--	37.10	46.00	8.90	
	1154.000	48.92	22.51	6.63	37.28	40.78	74.00	33.22	PK
	1206.000	48.91	22.85	6.79	37.15	41.40	74.00	32.60	
	1222.000	48.12	23.00	6.80	37.12	40.80	74.00	33.20	
	1622.000	46.60	25.45	7.85	36.31	43.59	74.00	30.41	
	1789.000	47.78	25.85	8.58	36.02	46.19	74.00	27.81	
	1915.000	45.45	27.31	8.98	35.82	45.92	74.00	28.08	

TEST ENGINEER: JACKY CHEN

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
Aluminum foil	7250TZZ002B	20mm*40mm	EXPAN	See Internal Photo Figure 21
Gasket	7250CP0005J	50mm*60mm	EXPAN	See Internal Photo Figure 22
Gasket	3940TKK084A	--	EXPAN	See Internal Photo Figure 23
Sponge	3940TKK041E	70mm*9mm*3mm	EXPAN	See Internal Photo Figure 24