

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

LCD Monitor

Model No.: W2242TET

Serial No.: 807NDVW7D367

FCC ID : BEJW2242TET

Prepared For : LG Electronics U.S.A., Inc.
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NJ 07632, United States

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Report No. : ACI-F08058
Date of Test : Aug 05 – 08, 2008
Date of Report : Aug 11, 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. : W2242TET
(B) Serial No. : 807NDVW7D367
(C) Power Supply : 120V/60Hz

Test Procedure Used:

*FCC RULES AND REGULATIONS PART 15 SUBPART B CLASS B OCTOBER 2007
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: W2242TET; S/N: 807NDVW7D367) which was tested in 3m anechoic chamber on Aug 05 – 08, 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 : Aug 05 – 08, 2008

Prepared By: Zeno Gu 2008.08.12
ZENOU GU / Assistant

Reviewer: Dio Yang 2008.8.12
DIO YANG / Supervisor

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

Approved Signatory:

Sammy Chen 2008.08.12
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 Terminals	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2007 AND ANSI C63.4-2003	15.107(a) Class B	Pass
Radiated Disturbance	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2007 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.	:	W2242TET
Serial No.	:	807NDVW7D367
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 : 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

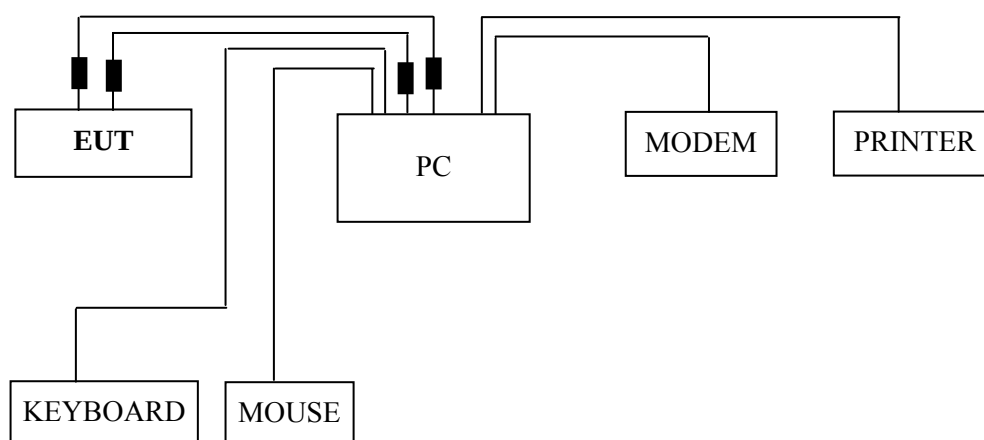
3.1 Test Equipment

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	Apr 02, 2008	Apr 02, 2009
2.	Artificial Mains Network (AMN)	R&S	ESH2-Z5	843890/011	Apr 02, 2008	Apr 02, 2009
3.	Line Impedance Stabilization Network (LISN)	Kyoritsu	KNW-407	8-1280-4	Apr 02, 2008	Apr 02, 2009
4.	50 Ω Coaxial Switch	Anritsu	MP59B	6200426389	Mar 19, 2008	Sep 19, 2008
5.	50 Ω Terminator	Anritsu	BNC	001	Apr 02, 2008	Apr 02, 2009
6.	Software	Audix	E3	SET00200 9804M592	--	--

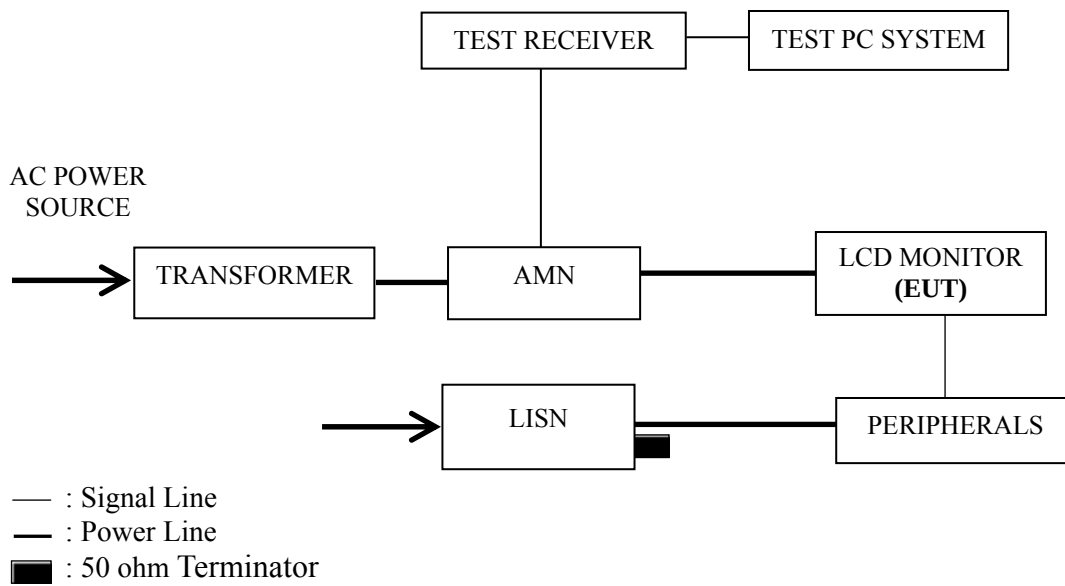
3.2 Block Diagram of Test Setup

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
D-Sub 640*480@60Hz
D-Sub 1024*768@60Hz
D-Sub 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
D-Sub 640*480@60Hz	P12
D-Sub 1024*768@60Hz	P13
D-Sub 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 D-Sub 640*480@60Hz test mode. The worst emission is detected at 0.197 MHz (Average Value) with corrected signal level of 41.66 dB (μV) (limit is 53.76 dB (μV)), when the Line of the EUT is connected to AMN.

EUT : LCD Monitor Temperature : 22°C

Model No. : W2242TET Humidity : 60%RH

Serial No. : 807NDVW7D367 Date of Test : Aug 08, 2008

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	0.197	49.51	0.15	49.66	63.76	14.10	QP
	0.262	40.87	0.15	41.02	61.38	20.36	
	0.325	36.20	0.15	36.35	59.57	23.22	
	7.810	39.91	0.31	40.22	60.00	19.78	
	17.291	41.80	0.60	42.40	60.00	17.60	
	21.147	45.72	0.70	46.42	60.00	13.58	
	0.197	41.51	0.15	41.66	53.76	12.10	AV
	0.262	32.87	0.15	33.02	51.38	18.36	
	0.325	27.20	0.15	27.35	49.57	22.22	
	7.810	32.91	0.31	33.22	50.00	16.78	
	17.291	33.80	0.60	34.40	50.00	15.60	
	21.147	32.72	0.70	33.42	50.00	16.58	
Neutral	0.197	50.23	0.15	50.38	63.76	13.38	QP
	0.264	41.69	0.15	41.84	61.29	19.45	
	0.327	37.88	0.15	38.03	59.53	21.50	
	7.606	40.98	0.27	41.25	60.00	18.75	
	17.849	43.08	0.45	43.53	60.00	16.47	
	21.830	45.82	0.54	46.36	60.00	13.64	
	0.197	40.23	0.15	40.38	53.76	13.38	AV
	0.264	29.69	0.15	29.84	51.29	21.45	
	0.327	27.88	0.15	28.03	49.53	21.50	
	7.606	29.98	0.27	30.25	50.00	19.75	
	17.849	34.08	0.45	34.53	50.00	15.47	
	21.830	33.82	0.54	34.36	50.00	15.64	

TEST ENGINEER: TOM SI

EUT : LCD Monitor Temperature : 22°C

Model No. : W2242TET Humidity : 60%RH

Serial No. : 807NDVW7D367 Date of Test : Aug 08, 2008

Test Mode : D-Sub 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	48.89	0.15	49.04	63.76	14.72	QP
	0.260	41.45	0.15	41.60	61.42	19.82	
	0.325	35.96	0.15	36.11	59.57	23.46	
	7.810	39.39	0.31	39.70	60.00	20.30	
	17.291	42.28	0.60	42.88	60.00	17.12	
	21.260	45.19	0.70	45.89	60.00	14.11	
	0.197	37.89	0.15	38.04	53.76	15.72	AV
	0.260	29.45	0.15	29.60	51.42	21.82	
	0.325	26.96	0.15	27.11	49.57	22.46	
	7.810	32.39	0.31	32.70	50.00	17.30	
	17.291	33.28	0.60	33.88	50.00	16.12	
	21.260	35.10	0.70	35.80	50.00	14.20	
Neutral	0.197	48.91	0.15	49.06	63.76	14.70	QP
	0.262	40.37	0.15	40.52	61.38	20.86	
	0.327	36.82	0.15	36.97	59.53	22.56	
	7.852	39.93	0.28	40.21	60.00	19.79	
	16.839	42.64	0.44	43.08	60.00	16.92	
	20.924	44.99	0.51	45.50	60.00	14.50	
	0.197	37.91	0.15	38.06	53.76	15.70	AV
	0.262	31.37	0.15	31.52	51.38	19.86	
	0.327	28.82	0.15	28.97	49.53	20.56	
	7.852	31.93	0.28	32.21	50.00	17.79	
	16.839	31.64	0.44	32.08	50.00	17.92	
	20.924	32.99	0.51	33.50	50.00	16.50	

TEST ENGINEER: TOM SI

EUT : LCD Monitor Temperature : 22°C

Model No. : W2242TET Humidity : 60%RH

Serial No. : 807NDVW7D367 Date of Test : Aug 08, 2008

Test Mode : D-Sub 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	47.93	0.15	48.08	63.71	15.63	QP
	0.260	40.31	0.15	40.46	61.42	20.96	
	0.327	34.10	0.15	34.25	59.53	25.28	
	7.977	38.96	0.31	39.27	60.00	20.73	
	17.849	42.30	0.61	42.91	60.00	17.09	
	21.486	45.03	0.71	45.74	60.00	14.26	
	0.198	34.93	0.15	35.08	53.71	18.63	AV
	0.260	29.31	0.15	29.46	51.42	21.96	
	0.327	19.10	0.15	19.25	49.53	30.28	
	7.977	26.96	0.31	27.27	50.00	22.73	
	17.849	31.30	0.61	31.91	50.00	18.09	
	21.486	33.03	0.71	33.74	50.00	16.26	
Neutral	0.198	48.73	0.15	48.88	63.71	14.83	QP
	0.262	39.97	0.15	40.12	61.38	21.26	
	0.330	35.74	0.16	35.90	59.44	23.54	
	7.977	39.76	0.28	40.04	60.00	19.96	
	16.839	42.54	0.44	42.98	60.00	17.02	
	21.830	44.10	0.54	44.64	60.00	15.36	
	0.198	37.73	0.15	37.88	53.71	15.83	AV
	0.262	30.97	0.15	31.12	51.38	20.26	
	0.330	24.74	0.16	24.90	49.44	24.54	
	7.977	30.76	0.28	31.04	50.00	18.96	
	16.839	30.54	0.44	30.98	50.00	19.02	
	21.830	34.10	0.54	34.64	50.00	15.36	

TEST ENGINEER: TOM SI

EUT : LCD Monitor Temperature : 22°C

Model No. : W2242TET Humidity : 60%RH

Serial No. : 807NDVW7D367 Date of Test : Aug 08, 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	46.95	0.15	47.10	63.76	16.66	QP
	0.262	38.71	0.15	38.86	61.38	22.52	
	0.325	33.76	0.15	33.91	59.57	25.66	
	7.368	38.97	0.30	39.27	60.00	20.73	
	17.568	44.18	0.61	44.79	60.00	15.21	
	21.147	42.44	0.70	43.14	60.00	16.86	
	0.197	35.95	0.15	36.10	53.76	17.66	AV
	0.262	27.71	0.15	27.86	51.38	23.52	
	0.325	22.76	0.15	22.91	49.57	26.66	
	7.368	27.97	0.30	28.27	50.00	21.73	
	17.568	34.16	0.61	34.77	50.00	15.23	
	21.147	30.44	0.70	31.14	50.00	18.86	
Neutral	0.197	46.85	0.15	47.00	63.76	16.76	QP
	0.262	37.23	0.15	37.38	61.38	24.00	
	0.325	35.08	0.15	35.23	59.57	24.34	
	7.446	39.20	0.25	39.45	60.00	20.55	
	17.568	43.32	0.45	43.77	60.00	16.23	
	28.152	42.10	0.69	42.79	60.00	17.21	
	0.197	34.85	0.15	35.00	53.76	18.76	AV
	0.262	27.23	0.15	27.38	51.38	24.00	
	0.325	24.08	0.15	24.23	49.57	25.34	
	7.446	29.20	0.25	29.45	50.00	20.55	
	17.568	34.32	0.45	34.77	50.00	15.23	
	28.152	29.10	0.69	29.79	50.00	20.21	

TEST ENGINEER: TOM SI

EUT : LCD Monitor Temperature : 22°C

Model No. : W2242TET Humidity : 60%RH

Serial No. : 807NDVW7D367 Date of Test : Aug 08, 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	0.197	47.23	0.15	47.38	63.76	16.38	QP
	0.260	39.01	0.15	39.16	61.42	22.26	
	0.325	34.34	0.15	34.49	59.57	25.08	
	7.329	39.09	0.29	39.38	60.00	20.62	
	17.755	43.24	0.61	43.85	60.00	16.15	
	27.708	41.49	0.99	42.48	60.00	17.52	
	0.197	35.23	0.15	35.38	53.76	18.38	AV
	0.260	27.01	0.15	27.16	51.42	24.26	
	0.325	20.34	0.15	20.49	49.57	29.08	
	7.329	26.09	0.29	26.38	50.00	23.62	
	17.755	35.24	0.61	35.85	50.00	14.15	
	27.708	30.49	0.99	31.48	50.00	18.52	
Neutral	0.197	47.43	0.15	47.58	63.76	16.18	QP
	0.262	38.51	0.15	38.66	61.38	22.72	
	0.327	34.76	0.15	34.91	59.53	24.62	
	7.368	39.54	0.25	39.79	60.00	20.21	
	17.755	42.82	0.45	43.27	60.00	16.73	
	28.755	42.17	0.70	42.87	60.00	17.13	
	0.197	37.43	0.15	37.58	53.76	16.18	AV
	0.262	29.51	0.15	29.66	51.38	21.72	
	0.327	23.76	0.15	23.91	49.53	25.62	
	7.368	30.54	0.25	30.79	50.00	19.21	
	17.755	32.82	0.45	33.27	50.00	16.73	
	28.755	31.17	0.70	31.87	50.00	18.13	

TEST ENGINEER: TOM SI

EUT : LCD Monitor Temperature : 22°C

Model No. : W2242TET Humidity : 60%RH

Serial No. : 807NDVW7D367 Date of Test : Aug 08, 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	0.197	47.69	0.15	47.84	63.76	15.92	QP
	0.262	39.63	0.15	39.78	61.38	21.60	
	0.330	34.94	0.16	35.10	59.44	24.34	
	7.252	38.21	0.29	38.50	60.00	21.50	
	17.755	42.22	0.61	42.83	60.00	17.17	
	20.594	42.26	0.67	42.93	60.00	17.07	
	0.197	35.69	0.15	35.84	53.76	17.92	AV
	0.262	27.63	0.15	27.78	51.38	23.60	
	0.330	23.94	0.16	24.10	49.44	25.34	
	7.252	27.21	0.29	27.50	50.00	22.50	
	17.755	31.22	0.61	31.83	50.00	18.17	
	20.594	28.26	0.67	28.93	50.00	21.07	
Neutral	0.194	47.73	0.15	47.88	63.84	15.96	QP
	0.262	39.81	0.15	39.96	61.38	21.42	
	0.327	34.88	0.15	35.03	59.53	24.50	
	7.252	38.90	0.25	39.15	60.00	20.85	
	17.568	41.84	0.45	42.29	60.00	17.71	
	25.321	42.43	0.63	43.06	60.00	16.94	
	0.194	36.73	0.15	36.88	53.84	16.96	AV
	0.262	28.81	0.15	28.96	51.38	22.42	
	0.327	22.88	0.15	23.03	49.53	26.50	
	7.252	25.90	0.25	26.15	50.00	23.85	
	17.568	29.84	0.45	30.29	50.00	19.71	
	25.321	31.43	0.63	32.06	50.00	17.94	

TEST ENGINEER: TOM SI

4 RADIATED EMISSION TEST

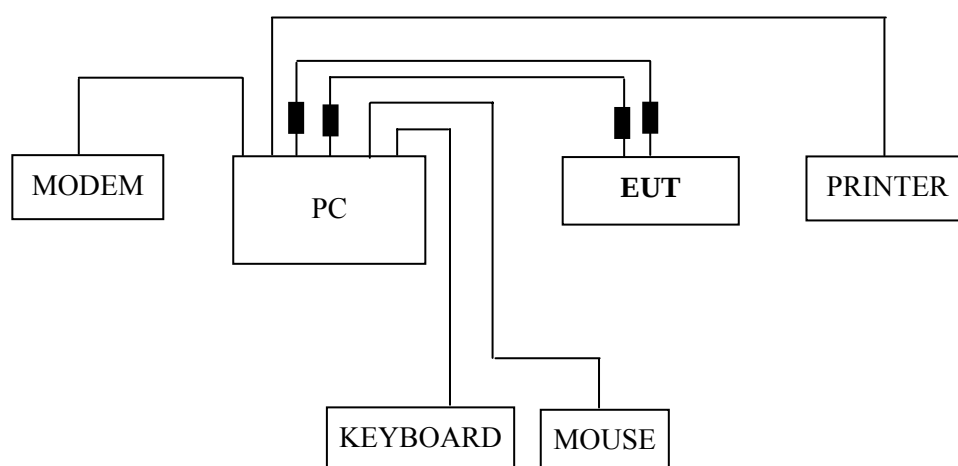
4.1 Test Equipment

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	Mar 07, 2008	Mar 07, 2009
2.	Preamplifier	Agilent	8447D	2944A10548	Mar 19, 2008	Sep 19, 2008
3.	Preamplifier	HP	8449B	3008A00864	May 19, 2008	May 19, 2009
4.	Bi-log Antenna	TESEQ	CBL6112D	23193	May 14, 2008	May 14, 2009
5.	Spectrum	Agilent	E7405A	MY45106600	May 19, 2008	May 19, 2009
6.	Software	Audix	E3	SET00200 9912M295-2	--	--

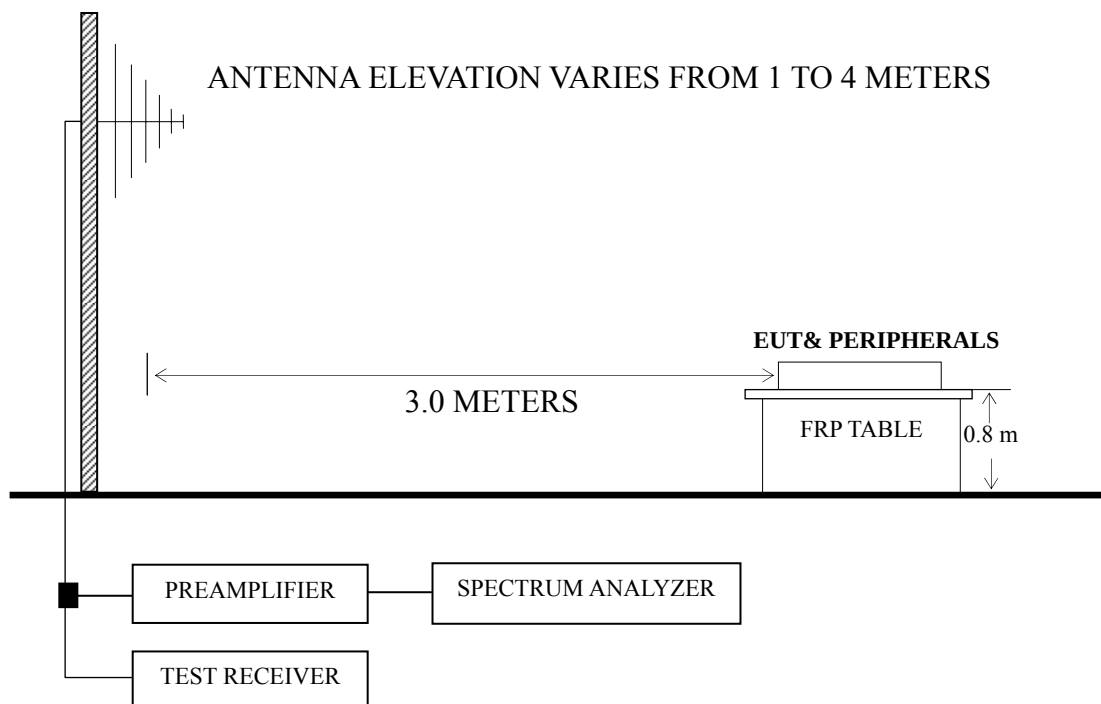
4.2 Block Diagram of Test Setup

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 D-Sub/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
D-Sub 640*480@60Hz	P22
D-Sub 1024*768@60Hz	P23
D-Sub 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. 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 DVI 1680*1050@60Hz test mode. The worst emission at horizontal polarization was detected at 627.520 MHz with corrected signal level of 32.84 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 155° . The worst emission at vertical polarization was detected at 55.220 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 295° .

EUT : LCD Monitor Temperature : 22°C

Model No. : W2242TET Humidity : 60%RH

Serial No. : 807NDVW7D367 Date of Test : Aug 05, 2008

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	32.910	7.63	17.95	0.92	26.50	40.00	13.50
	85.290	20.10	8.66	1.57	30.33	40.00	9.67
	146.400	17.37	11.61	2.05	31.03	43.50	12.47
	218.180	19.83	11.52	2.52	33.87	46.00	12.13
	250.190	22.21	12.90	2.81	37.92	46.00	8.08
	470.380	11.34	17.52	3.89	32.75	46.00	13.25
Vertical	39.700	19.97	14.08	0.95	35.00	40.00	5.00
	84.320	25.91	8.48	1.56	35.95	40.00	4.05
	188.110	24.33	10.20	2.28	36.81	43.50	6.69
	250.190	20.66	12.90	2.81	36.37	46.00	9.63
	438.370	16.83	17.06	3.77	37.66	46.00	8.34
	509.180	15.99	18.01	4.02	38.02	46.00	7.98

TEST ENGINEER: JACKY CHEN

EUT : LCD Monitor Temperature : 22°C

Model No. : W2242TET Humidity : 60%RH

Serial No. : 807NDVW7D367 Date of Test : Aug 05, 2008

Test Mode : D-Sub 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	30.970	5.64	19.03	0.91	25.58	40.00	14.42
	86.260	18.62	8.78	1.58	28.98	40.00	11.02
	146.400	16.11	11.61	2.05	29.77	43.50	13.73
	238.550	17.04	12.48	2.71	32.23	46.00	13.77
	445.160	15.37	17.14	3.79	36.30	46.00	9.70
	851.590	7.99	21.24	5.55	34.78	46.00	11.22
Vertical	38.730	20.44	14.62	0.95	36.01	40.00	3.99
	72.680	24.12	6.85	1.44	32.41	40.00	7.59
	125.060	12.93	12.76	1.90	27.59	43.50	15.91
	188.110	20.45	10.20	2.28	32.93	43.50	10.57
	250.190	22.69	12.90	2.81	38.40	46.00	7.60
	437.100	19.80	17.03	3.75	40.58	46.00	5.42

TEST ENGINEER: JACKY CHEN

EUT : LCD Monitor Temperature : 22°C

Model No. : W2242TET Humidity : 60%RH

Serial No. : 807NDVW7D367 Date of Test : Aug 05, 2008

Test Mode : D-Sub 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	37.760	7.36	15.20	0.95	--	23.51	40.00	16.49	QP
	85.290	19.50	8.66	1.57	--	29.73	40.00	10.27	
	159.010	19.15	10.59	2.13	--	31.87	43.50	11.63	
	238.550	27.11	12.48	2.71	--	42.30	46.00	3.70	
	411.210	7.89	16.64	3.65	--	28.18	46.00	17.82	
	509.180	8.52	18.01	4.02	--	30.55	46.00	15.45	
	1171.000	51.99	23.56	6.67	37.24	44.98	74.00	29.02	PK
	1289.000	51.31	24.40	6.89	36.96	45.64	74.00	28.36	
	1386.000	50.59	25.13	7.00	36.76	45.96	74.00	28.04	
	1558.000	51.75	26.19	7.48	36.42	49.00	74.00	25.00	
	1638.000	49.94	26.49	7.94	36.27	48.10	74.00	25.90	
	1849.000	52.40	27.17	8.76	35.93	52.40	74.00	21.60	
Vertical	39.700	17.72	14.08	0.95	--	32.75	40.00	7.25	QP
	71.710	24.26	6.69	1.43	--	32.38	40.00	7.62	
	159.010	19.50	10.59	2.13	--	32.22	43.50	11.28	
	238.550	27.10	12.48	2.71	--	42.29	46.00	3.71	
	410.240	14.90	16.64	3.65	--	35.19	46.00	10.81	
	509.180	12.71	18.01	4.02	--	34.74	46.00	11.26	
	1080.000	50.98	22.95	6.34	37.47	42.80	74.00	31.20	PK
	1200.000	51.36	23.70	6.79	37.17	44.68	74.00	29.32	
	1259.000	50.43	24.19	6.85	37.03	44.44	74.00	29.56	
	1448.000	53.20	25.49	7.07	36.63	49.13	74.00	24.87	
	1516.000	54.06	25.92	7.21	36.50	50.69	74.00	23.31	
	1677.000	53.23	26.59	8.21	36.20	51.83	74.00	22.17	

TEST ENGINEER: JACKY CHEN

EUT : LCD Monitor Temperature : 22°C

Model No. : W2242TET Humidity : 60%RH

Serial No. : 807NDVW7D367 Date of Test : Aug 05, 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	30.000	8.46	19.60	0.91	28.97	40.00	11.03
	86.260	17.41	8.78	1.58	27.77	40.00	12.23
	146.400	16.53	11.61	2.05	30.19	43.50	13.31
	250.190	22.17	12.90	2.81	37.88	46.00	8.12
	365.620	17.15	15.73	3.45	36.33	46.00	9.67
	509.180	8.74	18.01	4.02	30.77	46.00	15.23
Vertical	39.700	20.31	14.08	0.95	35.34	40.00	4.66
	85.290	24.40	8.66	1.57	34.63	40.00	5.37
	126.030	17.90	12.71	1.91	32.52	43.50	10.98
	254.070	20.63	12.99	2.83	36.45	46.00	9.55
	437.400	17.25	17.03	3.75	38.03	46.00	7.97
	509.180	15.47	18.01	4.02	37.50	46.00	8.50

TEST ENGINEER: JACKY CHEN

EUT : LCD Monitor Temperature : 22°C

Model No. : W2242TET Humidity : 60%RH

Serial No. : 807NDVW7D367 Date of Test : Aug 05, 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	30.000	8.08	19.60	0.91	28.59	40.00	11.41
	84.320	18.37	8.48	1.56	28.41	40.00	11.59
	146.400	17.83	11.61	2.05	31.49	43.50	12.01
	239.520	26.21	12.52	2.71	41.44	46.00	4.56
	519.850	10.93	18.15	4.04	33.12	46.00	12.88
	859.350	8.38	21.31	5.57	35.26	46.00	10.74
Vertical	39.700	20.02	14.08	0.95	35.05	40.00	4.95
	85.290	24.66	8.66	1.57	34.89	40.00	5.11
	180.350	20.84	9.90	2.24	32.98	43.50	10.52
	239.520	26.57	12.52	2.71	41.80	46.00	4.20
	426.730	17.05	16.87	3.72	37.64	46.00	8.36
	851.590	12.43	21.24	5.55	39.22	46.00	6.78

TEST ENGINEER: JACKY CHEN

EUT : LCD Monitor Temperature : 22°C

Model No. : W2242TET Humidity : 60%RH

Serial No. : 807NDVW7D367 Date of Test : Aug 05, 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	55.220	17.22	7.69	1.12	--	26.03	40.00	13.97	QP
	72.680	18.39	6.85	1.44	--	26.68	40.00	13.32	
	136.700	15.30	12.23	1.98	--	29.51	43.50	13.99	
	314.210	12.95	14.28	3.20	--	30.43	46.00	15.57	
	504.330	5.91	17.95	4.00	--	27.86	46.00	18.14	
	627.520	9.09	19.34	4.41	--	32.84	46.00	13.16	PK
	1122.000	52.34	23.24	6.51	37.37	44.72	74.00	29.28	
	1313.000	50.88	24.62	6.92	36.91	45.51	74.00	28.49	
	1437.000	53.16	25.41	7.06	36.65	48.98	74.00	25.02	
	1557.000	53.75	26.15	7.48	36.42	50.96	74.00	23.04	
	1722.000	47.81	26.71	8.36	36.13	46.75	74.00	27.25	
	1845.000	52.81	27.17	8.76	35.93	52.81	74.00	21.19	
Vertical	30.970	14.17	19.03	0.91	--	34.11	40.00	5.89	QP
	55.220	27.61	7.69	1.12	--	36.42	40.00	3.58	
	72.680	20.88	6.85	1.44	--	29.17	40.00	10.83	
	136.700	19.76	12.23	1.98	--	33.97	43.50	9.53	
	313.240	16.33	14.28	3.20	--	33.81	46.00	12.19	
	702.210	7.59	19.73	4.82	--	32.14	46.00	13.86	
	1055.000	57.80	22.79	6.26	37.54	49.31	74.00	24.69	PK
	1139.000	56.40	23.36	6.55	37.33	48.98	74.00	25.02	
	1278.000	52.06	24.32	6.88	36.99	46.27	74.00	27.73	
	1386.000	54.00	25.13	7.00	36.76	49.37	74.00	24.63	
	1578.000	54.74	26.29	7.57	36.38	52.22	74.00	21.78	
	1849.000	50.62	27.17	8.76	35.93	50.62	74.00	23.38	

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	T-308	50*30	DAEHUNG SUBSIDIARY MATERIALS.	See Internal Photo Figure 16, 17
Gasket	3940TKK09	45*80*0.5	EXPAN	See Internal Photo Figure 18