

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

LCD Monitor

Model No.: E2251SZ

Serial No.: 112NDFV1J171

FCC ID : BEJE2251SZ

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

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Report No. : ACI-F11184
Date of Test : Dec 21, 2011
Date of Report : Dec 28, 2011

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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. : E2251SZ
(B) Serial No. : 112NDFV1J171
(C) Power Supply : 120V/60Hz

Test Procedure Used:

*FCC RULES AND REGULATIONS PART 15 SUBPART B CLASS B OCTOBER 2010
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: E2251SZ; S/N: 112NDFV1J171) which was tested in 3m anechoic chamber Dec 21, 2011 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.

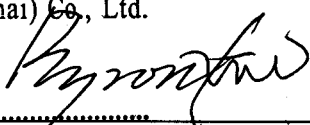
This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

Date of Test : Dec 21, 2011 Date of Report : Dec 28, 2011

Producer : Kathy Wang
KATHY WANG / Assistant

Review : Byron Wu
BYRON WU / Supervisor

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

Signatory : Byron Kwo
Authorized Signature  BYRON KWO / Senior Manager

1 SUMMARY OF STANDARDS AND RESULTS

1.1 Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below:

Description of Test Item	Standard	Limits	Results
EMISSION			
Conducted Disturbance at the Mains Terminal	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2010 AND ANSI C63.4-2003	15.107(a) Class B	Pass
Radiated Disturbance	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2010 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.	: E2251SZ
Serial No.	: 112NDFV1J171
Real Power	: 18.40W (Adapter #1) 18.40W (Adapter #2) 18.40W (Adapter #3) 18.60W (Adapter #4)
AC Adapter #1	: Manufacturer : LIEN CHANG Model Number : LCAP21A Input : 100-240V~, 50-60Hz 1.1A Output : 19V $\overline{\text{---}}$ 1.7A Output Cable : Unshielded, Undetachable, 1.8m, with one core
AC Adapter #2	: Manufacturer : LIEN CHANG Model Number : LCAP26A-* (* can be A, E, I, B, LCAP26A-A was selected as the test model.) Input : 100-240V~, 50-60Hz 1.1A Output : 19V $\overline{\text{---}}$ 1.7A Output Cable : Unshielded, Undetachable, 1.8m
AC Adapter #3	: Manufacturer : HONOR Model Number : ADS-40SG-19-3 19032G Input : 100-240V~, 50-60Hz 1.0A Output : 19V $\overline{\text{---}}$ 1.7A Output Cable : Unshielded, Undetachable, 1.8m
AC Adapter #4	: Manufacturer : HONOR Model Number : ADS-40FSG-19 19032G***-1 (*** can be PG, PBR, PI, PCU, ADS-40FSG-19 19032GPCU-1 was selected as the test model.) Input : 100-240V~, 50-60Hz 1.0A Output : 19V $\overline{\text{---}}$ 1.7A Output Cable : Unshielded, Undetachable, 1.8m

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: L&T Display Technology (Fujian) Ltd.
M/N : BM215WF4

Max Resolution : 1920*1080@60Hz

D-Sub Cable #1 : Shielded, Detachable, 1.50m, with two cores on cable

D-Sub Cable #2 : Shielded, Detachable, 1.80m, with two cores in connector

Power Cord : Unshielded, Detachable, 1.80m

Note : The D-Sub cable #2 was selected to be used in the test.

Remark:

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

- (1) One D-Sub In Port : Connected with PC
- (2) One DC In Port : Connected with Adapter

2.2 Peripherals

2.2.1 PC

Manufacturer : HP
Model Number : dx7200MT
Serial Number : CNG622017W
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 Graphics Card (Used in PC)

Manufacturer : Asus
Model Number : EAH6670
Output port : DVI, D-Sub, HDMI

2.2.3 Printer

Manufacturer : HP
Model Number : C3990A
Serial Number : JPZX020487
Data Cable : Shielded, Detachable, 1.5m
Certificate : GS, CE/EMC, C-Tick, FCC DoC

2.2.4 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

2.2.5 Mouse

Manufacturer : Microsoft
Model Number : RT2300
Serial Number : 6965712071551
Data Cable : Shielded, Undetachable, 1.8m.
Certificate : CE/EMC, FCC DoC, VCCI, MIC,
C-Tick, BSMI

2.2.6 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 : Sept. 17, 1998 file on
(Semi-Anechoic Chamber) Apr 29, 2009 Renewed
Federal Communications Commission
FCC Engineering Laboratory
7435 Oakland Mills Road
Columbia, MD 21046, USA

Name of Firm : Audix Technology (Shanghai) Co., Ltd.

Site Location : 3F 34Bldg 680 Guiping Rd,
Caohejing Hi-Tech Park,
Shanghai 200233, China

NVLAP Lab Code : 200371-0

2.4 Measurement Uncertainty

Conducted Emission Expanded Uncertainty: U = 3.38 dB
Radiated Emission Expanded Uncertainty (30-200MHz):
U = 4.58 dB (Horizontal)
U = 4.70 dB (Vertical)
Radiated Emission Expanded Uncertainty (200M-1GHz):
U = 4.84 dB (Horizontal)
U = 4.70 dB (Vertical)

3 CONDUCTED EMISSION TEST

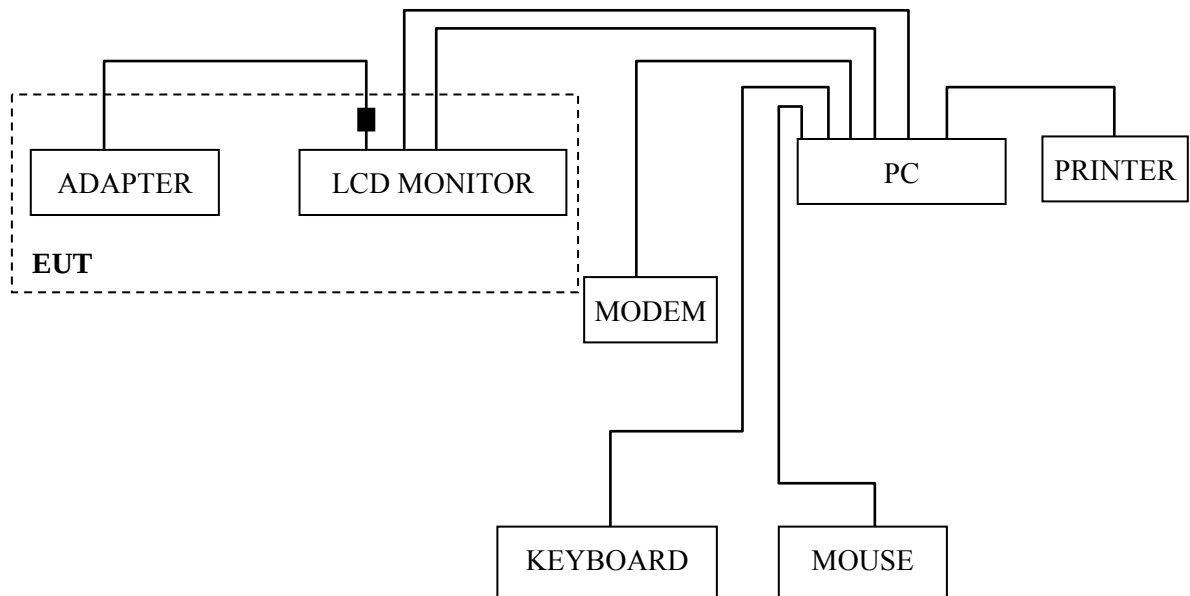
3.1 Test Equipment

The following test equipments are used during the conducted emission test in a shielded room:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCI	100841	Mar 22, 2011	Mar 22, 2012
2.	Artificial Mains Network (AMN)	R&S	ENV4200	100125	Mar 22, 2011	Mar 22, 2012
3.	Line Impedance Stabilization Network (LISN)	Kyoritsu	KNW-407	8-1280-4	Mar 22, 2011	Mar 22, 2012
4.	50 Ω Coaxial Switch	Anritsu	MP59B	6200426389	Sep 18, 2011	Mar 18, 2012
5.	50 Ω Terminator	Anritsu	BNC	001	Mar 22, 2011	Mar 22, 2012
6.	Software	Audix	E3	SET00200 9804M592	--	--

3.2 Block Diagram of Test Setup

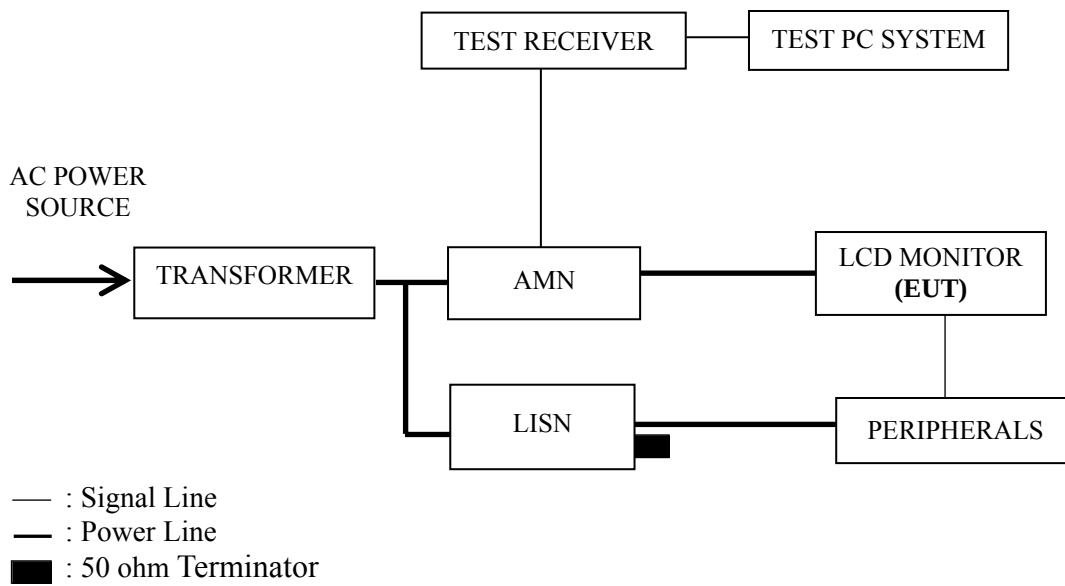
3.2.1 EUT & Peripherals



■ : Ferrite core

Note: Ferrite core only for Adapter #1

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 (we use white letters on a black background to represent all colors), the EUT's screen displayed and filled with "H" pattern by its resolution (Via D-Sub Input).

3.5.5 Repeat above procedure from 3.5.3 to 3.5.4 for difference test mode.

3.5.6 The other peripherals devices were driven and operated during the test.

3.5.7 The test modes are as follows:

Adapter	Test Mode
Adapter #1	D-Sub 640*480@60Hz
	D-Sub 1280*1024@75Hz
	D-Sub 1680*1050@60Hz
	D-Sub 1920*1080@60Hz
Adapter #2	D-Sub 1280*1024@75Hz
Adapter #3	D-Sub 1280*1024@75Hz
Adapter #4	D-Sub 1280*1024@75Hz

NOTE: We tested the EUT with adapter #1 and selected the worst test mode to perform test with adapter #2/#3/#4.

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 ESCI was set at 9 kHz.

The frequency range from 150 kHz to 30 MHz was checked.

The test modes were done on conducted disturbance test and all the test results are listed in Sec. 3.7.

3.7 Test Results

< PASS >

The frequency and amplitude of the highest conducted emission relative to the limit is reported. All emissions not reported below are too low against the prescribed limits.

Adaptor	Test Mode	Page
Adapter #1	D-Sub 640*480@60Hz	P12
	D-Sub 1280*1024@75Hz	P13
	D-Sub 1680*1050@60Hz	P14
	D-Sub 1920*1080@60Hz	P15
Adapter #2	D-Sub 1280*1024@75Hz	P16
Adapter #3	D-Sub 1280*1024@75Hz	P17
Adapter #4	D-Sub 1280*1024@75Hz	P18

NOTE 1 – The **bold test mode** listed above means the worst test mode.

NOTE 2 – Factor = Cable Loss + AMN Factor.

NOTE 3 – Emission Level = Meter Reading + Factor.

NOTE 4 – “QP” means “Quasi-Peak” values, “AV” means “Average” values.

NOTE 5 – The worst case is for D-Sub 1280*1024@75Hz test mode (Adaptor #2). The worst emission is detected at 0.157 MHz (Quasi-Peak Value) with corrected signal level of 56.22 dB (μV) (limit is 65.60 dB (μV)), when the Line of the EUT is connected to AMN.

EUT : LCD Monitor Temperature : 22°C

Model No. : E2251SZ Humidity : 48%RH

Serial No. : 112NDFV1J171 Date of Test : Dec 21, 2011

Test Mode : D-Sub 640*480@60Hz Adapter #1 : LCAP21A

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.166	44.73	9.88	54.61	65.16	10.55	QP
	0.221	35.69	9.78	45.47	62.79	17.32	
	0.447	28.88	9.75	38.63	56.93	18.30	
	4.158	30.44	10.07	40.51	56.00	15.49	
	6.488	24.24	10.17	34.41	60.00	25.59	
	17.383	29.76	10.27	40.03	60.00	19.97	
	0.166	33.90	9.88	43.78	55.16	11.38	AV
	0.221	25.40	9.78	35.18	52.79	17.61	
	0.447	18.10	9.75	27.85	46.93	19.08	
	4.158	19.90	10.07	29.97	46.00	16.03	
	6.488	14.29	10.17	24.46	50.00	25.54	
	17.383	19.59	10.27	29.86	50.00	20.14	
Neutral	0.150	41.88	10.18	52.06	66.00	13.94	QP
	0.313	31.40	9.75	41.15	59.88	18.73	
	0.444	29.24	9.75	38.99	56.98	17.99	
	4.315	30.27	10.19	40.46	56.00	15.54	
	6.488	25.33	10.32	35.65	60.00	24.35	
	17.568	28.75	10.15	38.90	60.00	21.10	
	0.150	31.70	10.18	41.88	56.00	14.12	AV
	0.313	20.90	9.75	30.65	49.88	19.23	
	0.444	19.10	9.75	28.85	46.98	18.13	
	4.315	20.71	10.19	30.90	46.00	15.10	
	6.488	15.30	10.32	25.62	50.00	24.38	
	17.568	18.20	10.15	28.35	50.00	21.65	

TEST ENGINEER: WENCY YANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2251SZ Humidity : 48%RH

Serial No. : 112NDFV1J171 Date of Test : Dec 21, 2011

Test Mode : D-Sub 1280*1024@75Hz Adapter #1 : LCAP21A

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.162	45.27	9.89	55.16	65.34	10.18	QP
	0.223	35.58	9.78	45.36	62.70	17.34	
	0.466	28.64	9.75	38.39	56.58	18.19	
	4.158	30.99	10.07	41.06	56.00	14.94	
	6.769	23.88	10.19	34.07	60.00	25.93	
	17.755	27.93	10.26	38.19	60.00	21.81	
	0.162	34.89	9.89	44.78	55.34	10.56	AV
	0.223	24.90	9.78	34.68	52.70	18.02	
	0.466	18.20	9.75	27.95	46.58	18.63	
	4.158	20.70	10.07	30.77	46.00	15.23	
	6.769	13.80	10.19	23.99	50.00	26.01	
	17.755	18.10	10.26	28.36	50.00	21.64	
Neutral	0.164	45.09	9.88	54.97	65.25	10.28	QP
	0.230	35.36	9.76	45.12	62.44	17.32	
	0.452	29.57	9.75	39.32	56.85	17.53	
	3.985	28.04	10.19	38.23	56.00	17.77	
	6.488	24.85	10.32	35.17	60.00	24.83	
	17.568	25.16	10.15	35.31	60.00	24.69	
	0.164	35.20	9.88	45.08	55.25	10.17	AV
	0.230	24.70	9.76	34.46	52.44	17.98	
	0.452	20.10	9.75	29.85	46.85	17.00	
	3.985	17.80	10.19	27.99	46.00	18.01	
	6.488	14.10	10.32	24.42	50.00	25.58	
	17.568	14.40	10.15	24.55	50.00	25.45	

TEST ENGINEER: WENCY YANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2251SZ Humidity : 48%RH

Serial No. : 112NDFV1J171 Date of Test : Dec 21, 2011

Test Mode : D-Sub 1680*1050@60Hz Adapter #1 : LCAP21A

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.168	42.61	9.87	52.48	65.08	12.60	QP
	0.234	32.46	9.78	42.24	62.30	20.06	
	0.447	29.38	9.75	39.13	56.93	17.80	
	4.315	29.60	10.07	39.67	56.00	16.33	
	6.352	24.53	10.15	34.68	60.00	25.32	
	17.568	29.51	10.26	39.77	60.00	20.23	
	0.168	31.90	9.87	41.77	55.08	13.31	AV
	0.234	21.90	9.78	31.68	52.30	20.62	
	0.447	19.10	9.75	28.85	46.93	18.08	
	4.315	19.10	10.07	29.17	46.00	16.83	
	6.352	13.91	10.15	24.06	50.00	25.94	
	17.568	19.80	10.26	30.06	50.00	19.94	
Neutral	0.161	44.66	9.89	54.55	65.43	10.88	QP
	0.230	35.03	9.76	44.79	62.44	17.65	
	0.352	28.97	9.74	38.71	58.91	20.20	
	4.202	26.82	10.19	37.01	56.00	18.99	
	6.488	25.48	10.32	35.80	60.00	24.20	
	17.568	30.12	10.15	40.27	60.00	19.73	
	0.161	33.60	9.89	43.49	55.43	11.94	AV
	0.230	24.80	9.76	34.56	52.44	17.88	
	0.352	18.70	9.74	28.44	48.91	20.47	
	4.202	16.81	10.19	27.00	46.00	19.00	
	6.488	15.40	10.32	25.72	50.00	24.28	
	17.568	20.20	10.15	30.35	50.00	19.65	

TEST ENGINEER: WENCY YANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2251SZ Humidity : 48%RH

Serial No. : 112NDFV1J171 Date of Test : Dec 21, 2011

Test Mode : D-Sub 1920*1080@60Hz Adapter #1 : LCAP21A

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.150	41.74	10.18	51.92	66.00	14.08	QP
	0.221	31.70	9.78	41.48	62.79	21.31	
	0.447	29.98	9.75	39.73	56.93	17.20	
	4.114	30.68	10.07	40.75	56.00	15.25	
	6.769	24.35	10.19	34.54	60.00	25.46	
	17.568	29.25	10.26	39.51	60.00	20.49	
	0.150	31.10	10.18	41.28	56.00	14.72	AV
	0.221	21.10	9.78	30.88	52.79	21.91	
	0.447	20.40	9.75	30.15	46.93	16.78	
	4.114	20.40	10.07	30.47	46.00	15.53	
	6.769	14.30	10.19	24.49	50.00	25.51	
	17.568	19.60	10.26	29.86	50.00	20.14	
Neutral	0.166	44.56	9.88	54.44	65.16	10.72	QP
	0.221	35.65	9.76	45.41	62.79	17.38	
	0.461	28.33	9.75	38.08	56.67	18.59	
	4.114	29.20	10.19	39.39	56.00	16.61	
	6.488	26.14	10.32	36.46	60.00	23.54	
	15.226	25.84	10.20	36.04	60.00	23.96	
	0.166	34.20	9.88	44.08	55.16	11.08	AV
	0.221	25.20	9.76	34.96	52.79	17.83	
	0.461	18.40	9.75	28.15	46.67	18.52	
	4.114	19.70	10.19	29.89	46.00	16.11	
	6.488	16.30	10.32	26.62	50.00	23.38	
	15.226	15.10	10.20	25.30	50.00	24.70	

TEST ENGINEER: WENCY YANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2251SZ Humidity : 48%RH

Serial No. : 112NDFV1J171 Date of Test : Dec 21, 2011

Test Mode : D-Sub 1280*1024@75Hz Adapter #2 : LCAP26A-A

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.157	46.33	9.89	56.22	65.60	9.38	QP
	0.221	35.96	9.78	45.74	62.79	17.05	
	0.447	25.58	9.75	35.33	56.93	21.60	
	4.454	21.32	10.08	31.40	56.00	24.60	
	5.929	18.73	10.12	28.85	60.00	31.15	
	14.828	18.19	10.28	28.47	60.00	31.53	
	0.157	35.60	9.89	45.49	55.60	10.11	AV
	0.221	26.20	9.78	35.98	52.79	16.81	
	0.447	15.10	9.75	24.85	46.93	22.08	
	4.454	11.59	10.08	21.67	46.00	24.33	
	5.929	9.70	10.12	19.82	50.00	30.18	
	14.828	9.20	10.28	19.48	50.00	30.52	
Neutral	0.166	45.87	9.88	55.75	65.16	9.41	QP
	0.226	35.70	9.76	45.46	62.61	17.15	
	0.440	25.90	9.75	35.65	57.07	21.42	
	4.269	22.85	10.19	33.04	56.00	22.96	
	6.056	19.19	10.29	29.48	60.00	30.52	
	17.755	19.04	10.14	29.18	60.00	30.82	
	0.166	35.40	9.88	45.28	55.16	9.88	AV
	0.226	25.50	9.76	35.26	52.61	17.35	
	0.440	15.20	9.75	24.95	47.07	22.12	
	4.269	12.51	10.19	22.70	46.00	23.30	
	6.056	10.60	10.29	20.89	50.00	29.11	
	17.755	9.80	10.14	19.94	50.00	30.06	

TEST ENGINEER: WENCY YANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2251SZ Humidity : 48%RH

Serial No. : 112NDFV1J171 Date of Test : Dec 21, 2011

Test Mode : D-Sub 1280*1024@75Hz Adapter #3 : ADS-40SG-19-3
19032G

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.166	41.80	9.88	51.68	65.16	13.48	QP
	0.223	30.88	9.78	40.66	62.70	22.04	
	0.389	32.82	9.75	42.57	58.08	15.51	
	4.874	28.55	10.07	38.62	56.00	17.38	
	8.729	27.78	10.19	37.97	60.00	22.03	
	11.080	24.90	10.19	35.09	60.00	24.91	
	0.166	31.50	9.88	41.38	55.16	13.78	AV
	0.223	20.80	9.78	30.58	52.70	22.12	
	0.389	22.60	9.75	32.35	48.08	15.73	
	4.874	18.60	10.07	28.67	46.00	17.33	
	8.729	17.10	10.19	27.29	50.00	22.71	
	11.080	14.90	10.19	25.09	50.00	24.91	
Neutral	0.162	42.58	9.88	52.46	65.34	12.88	QP
	0.226	31.14	9.76	40.90	62.61	21.71	
	0.385	32.41	9.74	42.15	58.17	16.02	
	4.874	28.68	10.21	38.89	56.00	17.11	
	8.501	28.76	10.36	39.12	60.00	20.88	
	11.021	25.23	10.34	35.57	60.00	24.43	
	0.162	32.30	9.88	42.18	55.34	13.16	AV
	0.226	21.10	9.76	30.86	52.61	21.75	
	0.385	22.40	9.74	32.14	48.17	16.03	
	4.874	18.30	10.21	28.51	46.00	17.49	
	8.501	18.40	10.36	28.76	50.00	21.24	
	11.021	15.60	10.34	25.94	50.00	24.06	

TEST ENGINEER: WENCY YANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2251SZ Humidity : 48%RH

Serial No. : 112NDFV1J171 Date of Test : Dec 21, 2011

Test Mode : D-Sub 1280*1024@75Hz Adapter #4 : ADS-40FSG-19
19032GPCU-1

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.162	42.23	9.89	52.12	65.34	13.22	QP
	0.220	29.97	9.78	39.75	62.83	23.08	
	0.402	27.77	9.74	37.51	57.81	20.30	
	2.261	22.26	10.14	32.40	56.00	23.60	
	7.935	19.58	10.20	29.78	60.00	30.22	
	29.061	24.05	10.40	34.45	60.00	25.55	
	0.162	31.39	9.89	41.28	55.34	14.06	AV
	0.220	19.70	9.78	29.48	52.83	23.35	
	0.402	17.51	9.74	27.25	47.81	20.56	
	2.261	11.60	10.14	21.74	46.00	24.26	
	7.935	10.20	10.20	20.40	50.00	29.60	
	29.061	14.20	10.40	24.60	50.00	25.40	
Neutral	0.164	41.82	9.88	51.70	65.25	13.55	QP
	0.226	28.26	9.76	38.02	62.61	24.59	
	0.398	27.94	9.74	37.68	57.90	20.22	
	3.943	21.54	10.19	31.73	56.00	24.27	
	8.323	17.57	10.36	27.93	60.00	32.07	
	29.900	22.59	10.33	32.92	60.00	27.08	
	0.164	31.30	9.88	41.18	55.25	14.07	AV
	0.226	18.10	9.76	27.86	52.61	24.75	
	0.398	17.31	9.74	27.05	47.90	20.85	
	3.943	10.90	10.19	21.09	46.00	24.91	
	8.323	10.10	10.36	20.46	50.00	29.54	
	29.900	12.30	10.33	22.63	50.00	27.37	

TEST ENGINEER: WENCY YANG

4 RADIATED EMISSION TEST

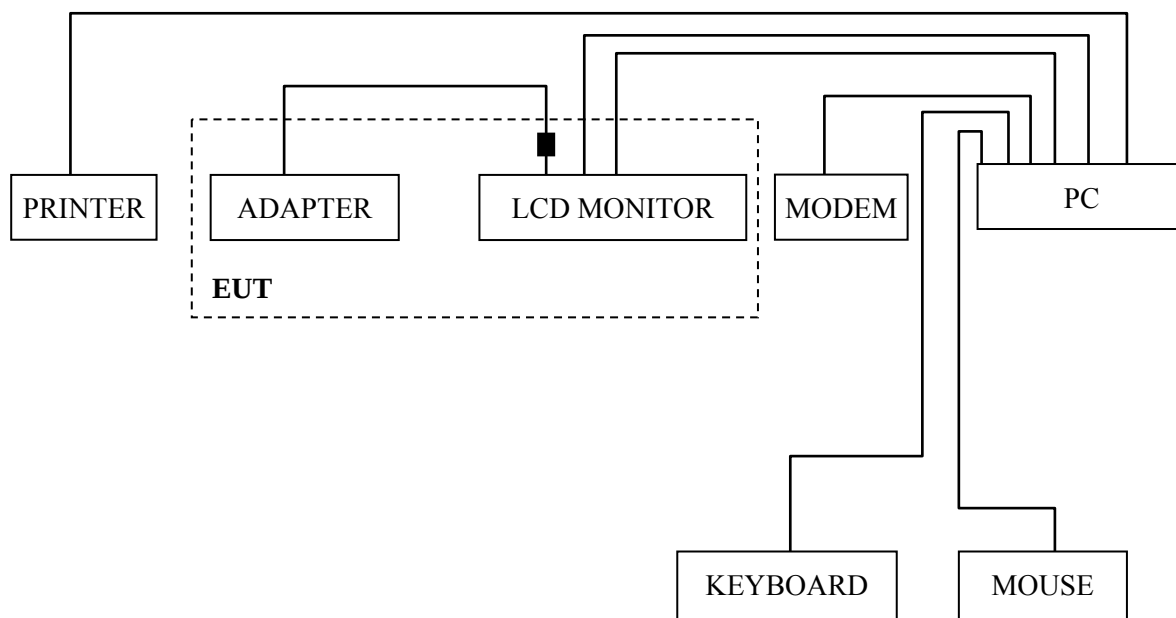
4.1 Test Equipment

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 22, 2011	Mar 22, 2012
2.	Preamplifier	Agilent	8447D	2944A10548	Sep 18, 2011	Mar 18, 2012
3.	Preamplifier	HP	8449B	3008A00864	Mar 22, 2011	Mar 22, 2012
4.	Bi-log Antenna	TESEQ	CBL6112D	23192	Dec 01, 2011	Dec 01, 2012
5.	Horn Antenna	EMCO	3115	9607-4878	May 06, 2011	May 06, 2012
6.	Spectrum	Agilent	E7405A	MY45106600	Mar 22, 2011	Mar 22, 2012
7.	50 Ω Coaxial Switch	Anritsu	MP59B	6200426390	Sep 18, 2011	Mar 18, 2012
8.	Software	Audix	E3	SET00200 9912M295-2	--	--

4.2 Block Diagram of Test Setup

4.2.1 EUT and Peripherals

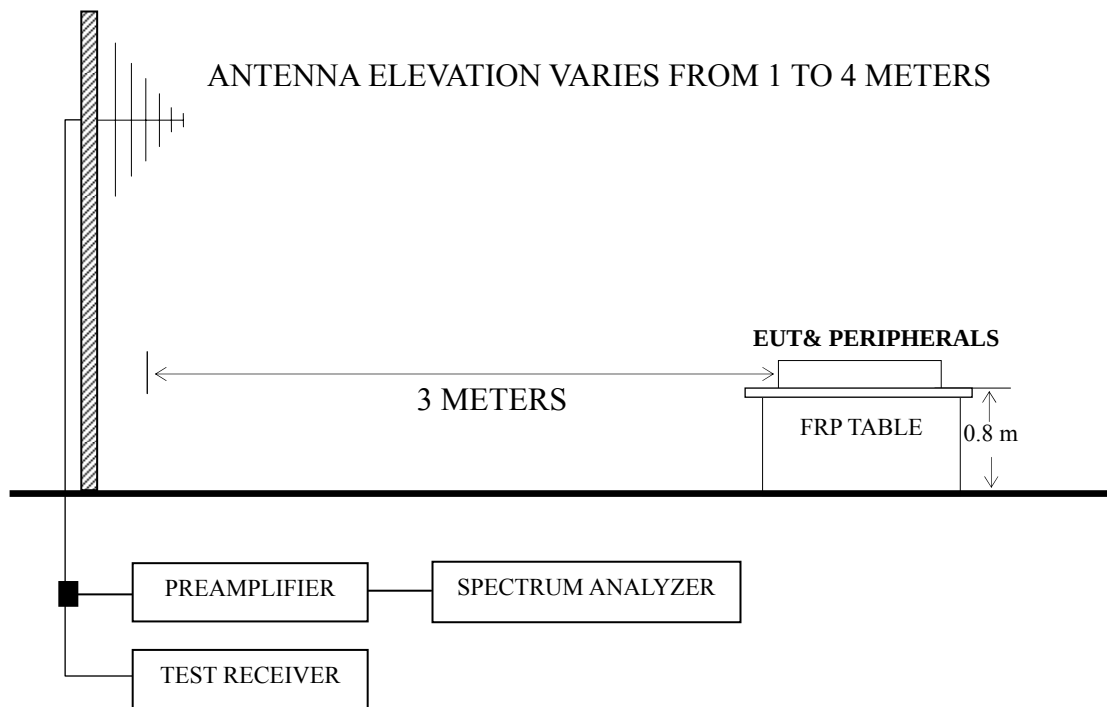


■ : Ferrite core

Note: Ferrite core only for Adapter #1

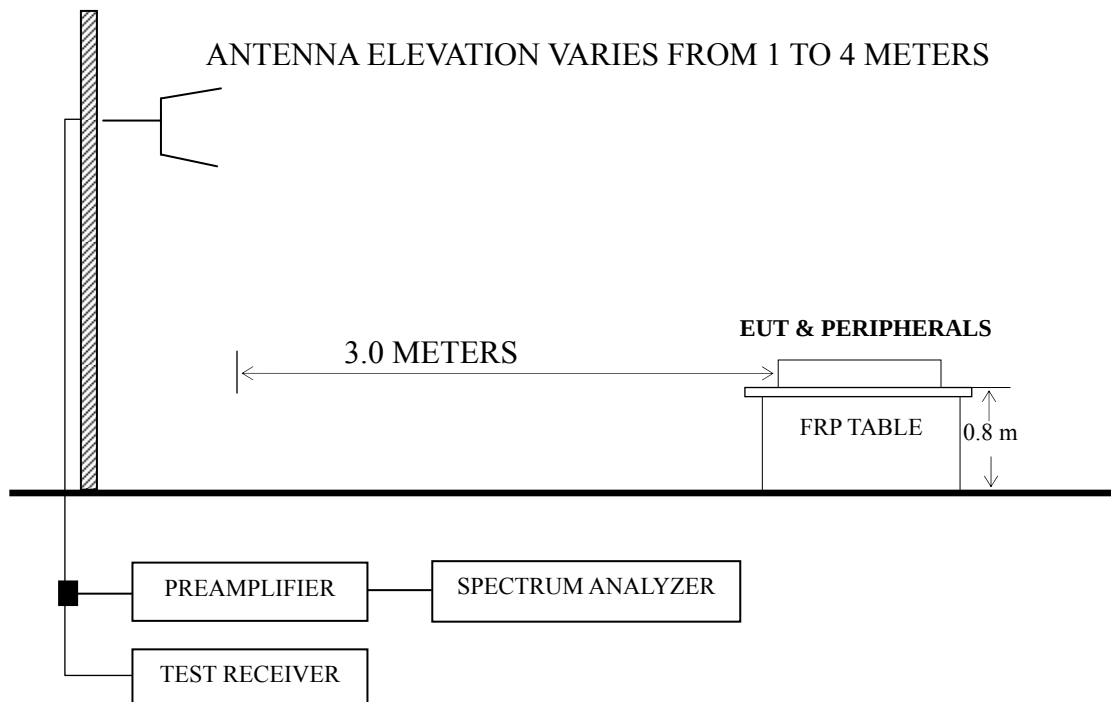
4.2.2 Radiated emission test setup

4.2.2.1 Below 1GHz



■ : 50 ohm Coaxial Switch

4.2.2.2 Above 1GHz



■ : 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) or Horn Antenna was used as receiving antenna. The antenna moved up and down between 1 meter and 4 meters to find out the maximum emission level. Both horizontal and vertical polarizations of the antenna were set on measurement. In order to find the maximum emission, all of the interference cables were manipulated according to ANSI C63.4:2003 requirements during radiated emission test.

The I.F. bandwidth of Test Receiver R&S ESVS10 was set at 120 kHz below 1GHz and The Spectrum Agilent E7405A was set at 1MHz above 1GHz.

The frequency range from 30 MHz to 1000MHz was checked for all test modes.

The frequency range from 1 GHz to 2 GHz was checked for D-Sub 1280*1024@75Hz, 1680*1050@60Hz and 1920*1080@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.

Adapter	Test Mode	Data Page
Adapter #1	D-Sub 640*480@60Hz	P24
	D-Sub 1280*1024@75Hz	P25 – P26
	D-Sub 1680*1050@60Hz	P27 – P28
	D-Sub 1920*1080@60Hz	P29 – P30
Adapter #2	D-Sub 1920*1080@60Hz	P31 – P32
Adapter #3	D-Sub 1920*1080@60Hz	P33 – P34
Adapter #4	D-Sub 1920*1080@60Hz	P35 – P36

NOTE 1 – **The bold test mode** listed above means the worst test mode.

NOTE 2 – Emission Level = Antenna Factor + Cable Loss + Meter Reading.(< 1GHz)

NOTE 3 – Emission Level = Antenna Factor + Cable Loss – Preamp Factor + Meter Reading.(> 1GHz)

NOTE 4 – All readings are Quasi-Peak values below or equal to 1GHz, Peak and Average values above 1GHz.

NOTE 5 – The emission levels that are 20dB below the official limit are not reported.

NOTE 6 – 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

NOTE 7 – The worst case is for D-Sub 1920*1080@60Hz test mode (Adapter #4). The worst emission at horizontal polarization was detected at 257.950 MHz with corrected signal level of 42.61 dB (μV/m) (limit is 46.00 dB (μV/m)), when the antenna was 1.00 m height and the turntable was at 250°. The worst emission at vertical polarization was detected at 83.350 MHz with corrected signal level of 37.87 dB (μV/m) (limit is 40.00 dB (μV/m)), when the antenna was 1.00 m height and the turntable was at 120°.

EUT : LCD Monitor Temperature : 22°C

Model No. : E2251SZ Humidity : 60%RH

Serial No. : 112NDFV1J171 Date of Test : Dec 21, 2011

Test Mode : D-Sub 640*480@60Hz Adapter #1 : LCAP21A

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	83.350	16.70	10.70	0.96	28.36	40.00	11.64
	98.870	15.14	11.31	1.03	27.48	43.50	16.02
	197.810	22.34	9.82	1.44	33.60	43.50	9.90
	215.270	18.89	10.41	1.50	30.80	43.50	12.70
	345.250	16.67	15.00	1.90	33.57	46.00	12.43
	687.660	6.01	19.36	2.65	28.02	46.00	17.98
Vertical	35.820	16.27	15.19	0.68	32.14	40.00	7.86
	65.890	22.03	9.55	0.87	32.45	40.00	7.55
	83.350	25.37	10.70	0.96	37.03	40.00	2.97
	98.870	22.53	11.31	1.03	34.87	43.50	8.63
	209.450	18.20	10.18	1.48	29.86	43.50	13.64
	594.540	16.93	18.17	2.44	37.54	46.00	8.46

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2251SZ Humidity : 60%RH

Serial No. : 112NDFV1J171 Date of Test : Dec 21, 2011

Test Mode : D-Sub 1280*1024@75Hz Adapter #1 : LCAP21A

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	83.350	17.15	10.70	0.96	--	28.81	40.00	11.19	QP
	98.870	16.82	11.31	1.03	--	29.16	43.50	14.34	
	142.520	15.66	10.56	1.21	--	27.43	43.50	16.07	
	200.720	24.05	9.83	1.45	--	35.33	43.50	8.17	
	338.460	22.10	14.78	1.88	--	38.76	46.00	7.24	
	719.670	5.24	19.73	2.72	--	27.69	46.00	18.31	
	1020.000	41.57	24.98	5.22	38.16	33.61	74.00	40.39	PK
	1180.000	43.13	25.71	5.34	37.81	36.37	74.00	37.63	
	1280.000	43.93	26.23	5.47	37.56	38.07	74.00	35.93	
	1370.000	40.32	26.60	5.55	37.32	35.15	74.00	38.85	
	1575.000	38.76	27.06	5.90	36.81	34.91	74.00	39.09	
	1720.000	40.57	27.19	6.10	36.55	37.31	74.00	36.69	
	1020.000	30.57	24.98	5.22	38.16	22.61	54.00	31.39	AV
	1180.000	26.13	25.71	5.34	37.81	19.37	54.00	34.63	
	1280.000	25.93	26.23	5.47	37.56	20.07	54.00	33.93	
	1370.000	26.32	26.60	5.55	37.32	21.15	54.00	32.85	
	1575.000	27.76	27.06	5.90	36.81	23.91	54.00	30.09	
	1720.000	25.57	27.19	6.10	36.55	22.31	54.00	31.69	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2251SZ Humidity : 60%RH

Serial No. : 112NDFV1J171 Date of Test : Dec 21, 2011

Test Mode : D-Sub 1280*1024@75Hz Adapter #1 : LCAP21A

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
Vertical	32.910	14.52	16.79	0.66	--	31.97	40.00	8.03	QP
	65.890	21.40	9.55	0.87	--	31.82	40.00	8.18	
	83.350	25.10	10.70	0.96	--	36.76	40.00	3.24	
	159.980	18.31	10.25	1.28	--	29.84	43.50	13.66	
	257.950	17.86	12.31	1.62	--	31.79	46.00	14.21	
	594.540	15.24	18.17	2.44	--	35.85	46.00	10.15	
	1080.000	46.01	25.24	4.50	38.03	37.72	74.00	36.28	PK
	1170.000	45.02	25.66	4.51	37.83	37.36	74.00	36.64	
	1315.000	47.96	26.39	4.53	37.48	41.40	74.00	32.60	
	1465.000	43.64	26.90	4.55	37.06	38.03	74.00	35.97	
	1600.000	47.21	27.08	4.56	36.76	42.09	74.00	31.91	
	1670.000	45.61	27.14	4.57	36.63	40.69	74.00	33.31	
	1080.000	36.01	25.24	4.50	38.03	27.72	54.00	26.28	AV
	1170.000	32.02	25.66	4.51	37.83	24.36	54.00	29.64	
	1315.000	33.96	26.39	4.53	37.48	27.40	54.00	26.60	
	1465.000	31.64	26.90	4.55	37.06	26.03	54.00	27.97	
	1600.000	38.21	27.08	4.56	36.76	33.09	54.00	20.91	
	1670.000	32.61	27.14	4.57	36.63	27.69	54.00	26.31	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2251SZ Humidity : 60%RH

Serial No. : 112NDFV1J171 Date of Test : Dec 21, 2011

Test Mode : D-Sub 1680*1050@60Hz Adapter #1 : LCAP21A

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	83.350	18.35	10.70	0.96	--	30.01	40.00	9.99	QP
	200.720	24.20	9.83	1.45	--	35.48	43.50	8.02	
	278.320	20.83	13.05	1.70	--	35.58	46.00	10.42	
	302.570	21.46	13.77	1.77	--	37.00	46.00	9.00	
	338.460	23.30	14.78	1.88	--	39.96	46.00	6.04	
	392.780	21.84	16.14	2.03	--	40.01	46.00	5.99	
	1075.000	52.83	25.21	5.27	38.04	45.27	74.00	28.73	PK
	1250.000	48.43	26.08	5.42	37.65	42.28	74.00	31.72	
	1465.000	45.41	26.90	5.72	37.06	40.97	74.00	33.03	
	1595.000	47.05	27.08	5.93	36.77	43.29	74.00	30.71	
	1760.000	49.91	27.23	6.17	36.49	46.82	74.00	27.18	
	1850.000	43.84	27.30	6.26	36.37	41.03	74.00	32.97	
	1075.000	43.83	25.21	5.27	38.04	36.27	54.00	17.73	AV
	1250.000	33.43	26.08	5.42	37.65	27.28	54.00	26.72	
	1465.000	30.41	26.90	5.72	37.06	25.97	54.00	28.03	
	1595.000	34.05	27.08	5.93	36.77	30.29	54.00	23.71	
	1760.000	39.91	27.23	6.17	36.49	36.82	54.00	17.18	
	1850.000	33.84	27.30	6.26	36.37	31.03	54.00	22.97	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2251SZ Humidity : 60%RH

Serial No. : 112NDFV1J171 Date of Test : Dec 21, 2011

Test Mode : D-Sub 1680*1050@60Hz Adapter #1 : LCAP21A

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
Vertical	32.910	13.35	16.79	0.66	--	30.80	40.00	9.20	QP
	65.890	20.13	9.55	0.87	--	30.55	40.00	9.45	
	83.350	25.34	10.70	0.96	--	37.00	40.00	3.00	
	98.870	20.99	11.31	1.03	--	33.33	43.50	10.17	
	159.980	18.78	10.25	1.28	--	30.31	43.50	13.19	
	594.540	15.46	18.17	2.44	--	36.07	46.00	9.93	
	1080.000	50.01	25.24	4.50	38.03	41.72	74.00	32.28	PK
	1170.000	49.02	25.66	4.51	37.83	41.36	74.00	32.64	
	1315.000	51.96	26.39	4.53	37.48	45.40	74.00	28.60	
	1465.000	47.64	26.90	4.55	37.06	42.03	74.00	31.97	
	1600.000	51.21	27.08	4.56	36.76	46.09	74.00	27.91	
	1850.000	35.84	27.30	4.64	36.37	31.41	74.00	42.59	
	1080.000	37.01	25.24	4.50	38.03	28.72	54.00	25.28	AV
	1170.000	28.02	25.66	4.51	37.83	20.36	54.00	33.64	
	1315.000	36.96	26.39	4.53	37.48	30.40	54.00	23.60	
	1465.000	33.64	26.90	4.55	37.06	28.03	54.00	25.97	
	1600.000	35.21	27.08	4.56	36.76	30.09	54.00	23.91	
	1850.000	46.84	27.30	4.64	36.37	42.41	54.00	11.59	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2251SZ Humidity : 60%RH

Serial No. : 112NDFV1J171 Date of Test : Dec 21, 2011

Test Mode : D-Sub 1920*1080@60Hz Adapter #1 : LCAP21A

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	83.350	17.92	10.70	0.96	--	29.58	40.00	10.42	QP
	109.540	22.33	11.19	1.08	--	34.60	43.50	8.90	
	133.790	21.70	10.74	1.18	--	33.62	43.50	9.88	
	197.810	23.81	9.82	1.44	--	35.07	43.50	8.43	
	336.520	20.36	14.74	1.88	--	36.98	46.00	9.02	
	800.180	15.50	20.60	2.89	--	38.99	46.00	7.01	
	1020.000	49.57	24.98	5.22	38.16	41.61	74.00	32.39	PK
	1180.000	51.13	25.71	5.34	37.81	44.37	74.00	29.63	
	1250.000	52.43	26.08	5.42	37.65	46.28	74.00	27.72	
	1280.000	51.93	26.23	5.47	37.56	46.07	74.00	27.93	
	1520.000	48.05	27.02	5.83	36.92	43.98	74.00	30.02	
	1620.000	49.17	27.10	5.96	36.72	45.51	74.00	28.49	
	1020.000	40.57	24.98	5.22	38.16	32.61	54.00	21.39	AV
	1180.000	36.13	25.71	5.34	37.81	29.37	54.00	24.63	
	1250.000	39.43	26.08	5.42	37.65	33.28	54.00	20.72	
	1280.000	37.93	26.23	5.47	37.56	32.07	54.00	21.93	
	1520.000	37.05	27.02	5.83	36.92	32.98	54.00	21.02	
	1620.000	34.17	27.10	5.96	36.72	30.51	54.00	23.49	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2251SZ Humidity : 60%RH

Serial No. : 112NDFV1J171 Date of Test : Dec 21, 2011

Test Mode : D-Sub 1920*1080@60Hz Adapter #1 : LCAP21A

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
Vertical	50.370	22.11	8.51	0.78	--	31.40	40.00	8.60	QP
	83.350	25.88	10.70	0.96	--	37.54	40.00	2.46	
	98.870	22.33	11.31	1.03	--	34.67	43.50	8.83	
	159.980	17.24	10.25	1.28	--	28.77	43.50	14.73	
	257.950	14.19	12.31	1.62	--	28.12	46.00	17.88	
	594.540	16.24	18.17	2.44	--	36.85	46.00	9.15	
	1080.000	50.01	25.24	4.50	38.03	41.72	74.00	32.28	PK
	1170.000	49.02	25.66	4.51	37.83	41.36	74.00	32.64	
	1315.000	51.96	26.39	4.53	37.48	45.40	74.00	28.60	
	1465.000	47.64	26.90	4.55	37.06	42.03	74.00	31.97	
	1600.000	52.21	27.08	4.56	36.76	47.09	74.00	26.91	
	1850.000	47.84	27.30	4.64	36.37	43.41	74.00	30.59	
	1080.000	38.01	25.24	4.50	38.03	29.72	54.00	24.28	AV
	1170.000	35.02	25.66	4.51	37.83	27.36	54.00	26.64	
	1315.000	37.96	26.39	4.53	37.48	31.40	54.00	22.60	
	1465.000	34.64	26.90	4.55	37.06	29.03	54.00	24.97	
	1600.000	43.21	27.08	4.56	36.76	38.09	54.00	15.91	
	1850.000	34.84	27.30	4.64	36.37	30.41	54.00	23.59	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2251SZ Humidity : 60%RH

Serial No. : 112NDFV1J171 Date of Test : Dec 21, 2011

Test Mode : D-Sub 1920*1080@60Hz Adapter #3 : LCAP26A-A

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	83.350	17.73	10.70	0.96	--	29.39	40.00	10.61	QP
	159.010	18.84	10.27	1.28	--	30.39	43.50	13.11	
	197.810	23.79	9.82	1.44	--	35.05	43.50	8.45	
	315.180	22.40	14.12	1.81	--	38.33	46.00	7.67	
	336.520	22.12	14.74	1.88	--	38.74	46.00	7.26	
	800.180	16.14	20.60	2.89	--	39.63	46.00	6.37	
	1075.000	51.83	25.21	5.27	38.04	44.27	74.00	29.73	PK
	1180.000	46.13	25.71	5.34	37.81	39.37	74.00	34.63	
	1280.000	46.93	26.23	5.47	37.56	41.07	74.00	32.93	
	1430.000	43.84	26.80	5.63	37.15	39.12	74.00	34.88	
	1595.000	47.05	27.08	5.93	36.77	43.29	74.00	30.71	
	1760.000	49.91	27.23	6.17	36.49	46.82	74.00	27.18	
	1075.000	39.83	25.21	5.27	38.04	32.27	54.00	21.73	AV
	1180.000	32.13	25.71	5.34	37.81	25.37	54.00	28.63	
	1280.000	32.93	26.23	5.47	37.56	27.07	54.00	26.93	
	1430.000	32.84	26.80	5.63	37.15	28.12	54.00	25.88	
	1595.000	38.05	27.08	5.93	36.77	34.29	54.00	19.71	
	1760.000	37.91	27.23	6.17	36.49	34.82	54.00	19.18	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2251SZ Humidity : 60%RH

Serial No. : 112NDFV1J171 Date of Test : Dec 21, 2011

Test Mode : D-Sub 1920*1080@60Hz Adapter #4 : LCAP26A-A

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
Vertical	34.850	17.94	15.70	0.68	--	34.32	40.00	5.68	QP
	83.350	27.03	10.70	0.96	--	38.69	40.00	1.31	
	98.870	24.64	11.31	1.03	--	36.98	43.50	6.52	
	159.980	23.25	10.25	1.28	--	34.78	43.50	8.72	
	257.950	19.10	12.31	1.62	--	33.03	46.00	12.97	
	594.540	17.49	18.17	2.44	--	38.10	46.00	7.90	
	1025.000	48.41	25.01	4.49	38.15	39.76	74.00	34.24	PK
	1170.000	48.02	25.66	4.51	37.83	40.36	74.00	33.64	
	1365.000	47.88	26.59	4.54	37.33	41.68	74.00	32.32	
	1520.000	45.30	27.02	4.55	36.92	39.95	74.00	34.05	
	1600.000	50.21	27.08	4.56	36.76	45.09	74.00	28.91	
	1850.000	45.84	27.30	4.64	36.37	41.41	74.00	32.59	
	1025.000	36.41	25.01	4.49	38.15	27.76	54.00	26.24	AV
	1170.000	34.02	25.66	4.51	37.83	26.36	54.00	27.64	
	1365.000	32.88	26.59	4.54	37.33	26.68	54.00	27.32	
	1520.000	32.30	27.02	4.55	36.92	26.95	54.00	27.05	
	1600.000	40.21	27.08	4.56	36.76	35.09	54.00	18.91	
	1850.000	33.84	27.30	4.64	36.37	29.41	54.00	24.59	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2251SZ Humidity : 60%RH

Serial No. : 112NDFV1J171 Date of Test : Dec 21, 2011

Test Mode : D-Sub 1920*1080@60Hz Adapter #4 : ADS-40SG-19-3
19032G

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	83.350	18.92	10.70	0.96	--	30.58	40.00	9.42	QP
	197.810	23.91	9.82	1.44	--	35.17	43.50	8.33	
	252.130	29.12	12.09	1.61	--	42.82	46.00	3.18	
	315.180	24.58	14.12	1.81	--	40.51	46.00	5.49	
	336.520	25.09	14.74	1.88	--	41.71	46.00	4.29	
	610.060	8.67	18.33	2.48	--	29.48	46.00	16.52	
	1075.000	50.83	25.21	5.27	38.04	43.27	74.00	30.73	PK
	1180.000	45.13	25.71	5.34	37.81	38.37	74.00	35.63	
	1365.000	47.64	26.59	5.55	37.33	42.45	74.00	31.55	
	1465.000	43.41	26.90	5.72	37.06	38.97	74.00	35.03	
	1595.000	45.05	27.08	5.93	36.77	41.29	74.00	32.71	
	1760.000	47.91	27.23	6.17	36.49	44.82	74.00	29.18	
	1075.000	40.83	25.21	5.27	38.04	33.27	54.00	20.73	AV
	1180.000	33.13	25.71	5.34	37.81	26.37	54.00	27.63	
	1365.000	36.64	26.59	5.55	37.33	31.45	54.00	22.55	
	1465.000	33.41	26.90	5.72	37.06	28.97	54.00	25.03	
	1595.000	36.05	27.08	5.93	36.77	32.29	54.00	21.71	
	1760.000	33.91	27.23	6.17	36.49	30.82	54.00	23.18	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2251SZ Humidity : 60%RH

Serial No. : 112NDFV1J171 Date of Test : Dec 21, 2011

Test Mode : D-Sub 1920*1080@60Hz Adapter #4 : ADS-40SG-19-3
19032G

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
Vertical	34.850	16.94	15.70	0.68	--	33.32	40.00	6.68	QP
	65.890	22.40	9.55	0.87	--	32.82	40.00	7.18	
	83.350	26.21	10.70	0.96	--	37.87	40.00	2.13	
	98.870	23.39	11.31	1.03	--	35.73	43.50	7.77	
	195.870	23.01	9.84	1.43	--	34.28	43.50	9.22	
	594.540	16.94	18.17	2.44	--	37.55	46.00	8.45	
	1080.000	44.01	25.24	4.50	38.03	35.72	74.00	38.28	PK
	1170.000	42.02	25.66	4.51	37.83	34.36	74.00	39.64	
	1315.000	44.96	26.39	4.53	37.48	38.40	74.00	35.60	
	1465.000	40.64	26.90	4.55	37.06	35.03	74.00	38.97	
	1600.000	44.21	27.08	4.56	36.76	39.09	74.00	34.91	
	1760.000	46.40	27.23	4.58	36.49	41.72	74.00	32.28	
	1080.000	30.01	25.24	4.50	38.03	21.72	54.00	32.28	AV
	1170.000	28.02	25.66	4.51	37.83	20.36	54.00	33.64	
	1315.000	30.96	26.39	4.53	37.48	24.40	54.00	29.60	
	1465.000	28.64	26.90	4.55	37.06	23.03	54.00	30.97	
	1600.000	34.21	27.08	4.56	36.76	29.09	54.00	24.91	
	1760.000	30.40	27.23	4.58	36.49	25.72	54.00	28.28	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2251SZ Humidity : 60%RH

Serial No. : 112NDFV1J171 Date of Test : Dec 21, 2011

Test Mode : D-Sub 1920*1080@60Hz Adapter #2 : ADS-40FSG-19
19032GPCU-1

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	88.200	19.06	10.93	0.98	--	30.97	43.50	12.53	QP
	142.520	18.60	10.56	1.21	--	30.37	43.50	13.13	
	248.250	22.98	11.90	1.60	--	36.48	46.00	9.52	
	257.950	28.68	12.31	1.62	--	42.61	46.00	3.39	
	315.180	18.77	14.12	1.81	--	34.70	46.00	11.30	
	545.070	11.93	17.87	2.35	--	32.15	46.00	13.85	
	1075.000	49.83	25.21	5.27	38.04	42.27	74.00	31.73	PK
	1180.000	44.13	25.71	5.34	37.81	37.37	74.00	36.63	
	1365.000	46.64	26.59	5.55	37.33	41.45	74.00	32.55	
	1465.000	42.41	26.90	5.72	37.06	37.97	74.00	36.03	
	1595.000	44.05	27.08	5.93	36.77	40.29	74.00	33.71	
	1760.000	46.91	27.23	6.17	36.49	43.82	74.00	30.18	
	1075.000	35.83	25.21	5.27	38.04	28.27	54.00	25.73	AV
	1180.000	32.13	25.71	5.34	37.81	25.37	54.00	28.63	
	1365.000	32.64	26.59	5.55	37.33	27.45	54.00	26.55	
	1465.000	30.41	26.90	5.72	37.06	25.97	54.00	28.03	
	1595.000	35.05	27.08	5.93	36.77	31.29	54.00	22.71	
	1760.000	32.91	27.23	6.17	36.49	29.82	54.00	24.18	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2251SZ Humidity : 60%RH

Serial No. : 112NDFV1J171 Date of Test : Dec 21, 2011

Test Mode : D-Sub 1920*1080@60Hz Adapter #2 : ADS-40FSG-19
19032GPCU-1

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
Vertical	34.850	16.68	15.70	0.68	--	33.06	40.00	6.94	QP
	83.350	26.21	10.70	0.96	--	37.87	40.00	2.13	
	98.870	22.20	11.31	1.03	--	34.54	43.50	8.96	
	159.980	22.67	10.25	1.28	--	34.20	43.50	9.30	
	209.450	18.94	10.18	1.48	--	30.60	43.50	12.90	
	431.580	11.73	16.72	2.13	--	30.58	46.00	15.42	
	1080.000	46.01	25.24	4.50	38.03	37.72	74.00	36.28	PK
	1315.000	46.96	26.39	4.53	37.48	40.40	74.00	33.60	
	1465.000	42.64	26.90	4.55	37.06	37.03	74.00	36.97	
	1600.000	46.21	27.08	4.56	36.76	41.09	74.00	32.91	
	1760.000	48.40	27.23	4.58	36.49	43.72	74.00	30.28	
	1850.000	41.84	27.30	4.64	36.37	37.41	74.00	36.59	
	1080.000	36.01	25.24	4.50	38.03	27.72	54.00	26.28	AV
	1315.000	31.96	26.39	4.53	37.48	25.40	54.00	28.60	
	1465.000	28.64	26.90	4.55	37.06	23.03	54.00	30.97	
	1600.000	32.21	27.08	4.56	36.76	27.09	54.00	26.91	
	1760.000	40.40	27.23	4.58	36.49	35.72	54.00	18.28	
	1850.000	29.84	27.30	4.64	36.37	25.41	54.00	28.59	

TEST ENGINEER: RAVEN JIN

5 DEVIATION TO TEST SPECIFICATIONS

None.

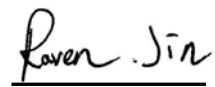
6 DEBUG DESCRIPTION

The following components are used during the countermeasure procedures:

Name	Specifications (mm)	Manufacturer	Location
EMI Sponge	140mm*1T	EXPANElectronics SUZHOU Co., Ltd.	See Internal Photos Figure 10

Note: We had required the applicant and manufacturer that all electrical and mechanical devices employed for spurious radiation suppression, including any modifications made during certification testing, must be incorporated in each unit marked

TEST ENGINEER:



(RAVEN JIN)