

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

LCD Monitor

Model No.: E2211TX

Serial No.: 101NDRF9P222

FCC ID : BEJE2211TX

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

Prepared By : Audix Technology (Shanghai) Co., Ltd.
3F 34Bldg 680 Guiping Rd,
Caohejing Hi-Tech Park,
Shanghai 200233, China

Tel: +86-21-64955500
Fax: +86-21-64955491

Report No. : ACI-F11022
Date of Test : Feb 15-16, 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. : E2211TX
(B) Serial No. : 101NDRF9P222
(C) Power Supply : 120V/60Hz

Test Procedure Used:

*FCC RULES AND REGULATIONS PART 15 SUBPART B CLASS B OCTOBER 2009
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: E2211TX; S/N: 101NDRF9P222) which was tested in 3m anechoic chamber Feb 15-16, 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 : Feb 15-16, 2011 Date of Report : Mar 01, 2011

Producer : Alan He
ALAN HE / Assistant

Review : Dio Yang
DIO YANG / Deputy Assistant Manager

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

Signatory : Sammy Chen
Authorized Signature EMC SAMMY CHEN / Deputy 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 2009 AND ANSI C63.4-2003	15.107(a) Class B	Pass
Radiated Disturbance	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2009 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.	: E2211TX
Serial No.	: 101NDRF9P222
Real Power	: 21.10W
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: AU Optronics M/N : M215HW01
Max Resolution	: 1920*1080@60Hz
D-Sub Cable #1	: Shielded, Detachable, 1.85m, with two cores on cable
D-Sub Cable #2	: Shielded, Detachable, 1.85m, with two cores in connector
DVI Cable #1	: Shielded, Detachable, 1.85m, with two cores on cable
DVI Cable #2	: Shielded, Detachable, 1.85m, with two cores in connector
Power Cord	: Unshielded, Detachable, 1.80m
Note	: After evaluation, the D-Sub cable#1 and DVI cable#1 were used in the test for they will cause the maximum emission.

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 : dx7400MT
Serial Number : CNG8130K89
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 : KU-0459
Serial Number : 7691402450604
Data Cable : Shielded, Undetachable, 1.8m
Certificate : CE/EMC, FCC DoC, VCCI, MIC,
C-Tick, BSMI

2.2.4 Mouse

Manufacturer : DELL
Model Number : MO56UO
Serial Number : 443048231
Data Cable : Shielded, Undetachable, 1.8m.
Certificate : CE/EMC, FCC DoC, VCCI, MIC,
C-Tick, BSMI

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
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 = 1.26 dB
Radiated Emission Expanded Uncertainty : U = 3.02 dB

3 CONDUCTED EMISSION TEST

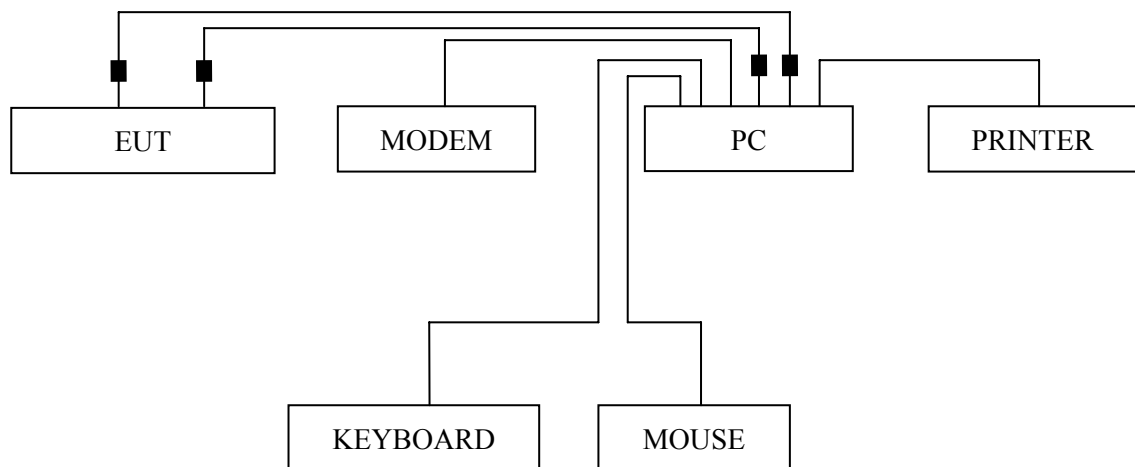
3.1 Test Equipment

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	ESCI	100841	Oct 15, 2010	Oct 15, 2011
2.	Artificial Mains Network (AMN)	R&S	ESH2-Z5	843890/011	Apr 02, 2010	Apr 02, 2011
3.	Line Impedance Stabilization Network (LISN)	Kyoritsu	KNW-407	8-1280-4	Apr 02, 2010	Apr 02, 2011
4.	50 Ω Coaxial Switch	Anritsu	MP59B	6200426389	Sep 19, 2010	Mar 19, 2011
5.	50 Ω Terminator	Anritsu	BNC	001	Apr 02, 2010	Apr 02, 2011
6.	Software	Audix	E3	SET00200 9804M592	--	--

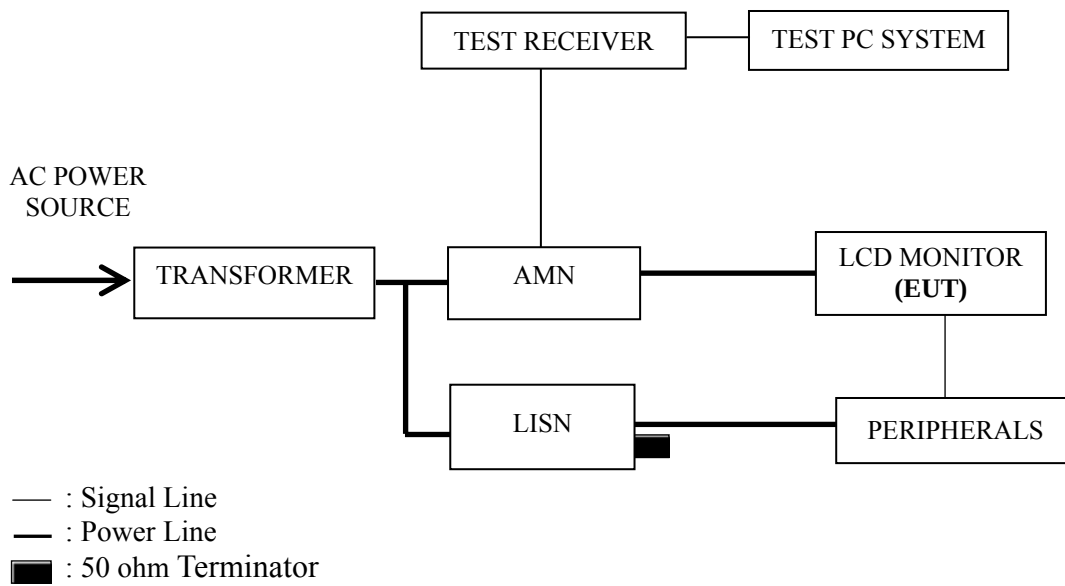
3.2 Block Diagram of Test Setup

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 1280*1024@75Hz
D-Sub 1680*1050@60Hz
D-Sub 1920*1080@60Hz
DVI 640*480@60Hz
DVI 1280*1024@75Hz
DVI 1680*1050@60Hz
DVI 1920*1080@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 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.

Test Mode	Page
D-Sub 640*480@60Hz	P12
D-Sub 1280*1024@75Hz	P13
D-Sub 1680*1050@60Hz	P14
D-Sub 1920*1080@60Hz	P15
DVI 640*480@60Hz	P16
DVI 1280*1024@75Hz	P17
DVI 1680*1050@60Hz	P18
DVI 1920*1080@60Hz	P19

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 1680*1050@60Hz test mode. The worst emission is detected at 25.055 MHz (Quasi-Peak Value) with corrected signal level of 42.22 dB (μV) (limit is 60.00 dB (μV)), when the Neutral of the EUT is connected to AMN.

EUT : LCD Monitor Temperature : 22°C

Model No. : E2211TX Humidity : 48%RH

Serial No. : 101NDRF9P222 Date of Test : Feb 15, 2011

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	0.192	43.09	0.38	43.47	63.93	20.46	QP
	0.249	34.43	0.42	34.85	61.78	26.93	
	0.389	31.29	0.48	31.77	58.08	26.31	
	0.524	27.79	0.52	28.31	56.00	27.69	
	2.594	28.90	0.67	29.57	56.00	26.43	
	25.055	38.55	1.80	40.35	60.00	19.65	
	0.192	32.40	0.38	32.78	53.93	21.15	AV
	0.249	23.59	0.42	24.01	51.78	27.77	
	0.389	20.60	0.48	21.08	48.08	27.00	
	0.524	16.40	0.52	16.92	46.00	29.08	
	2.594	17.60	0.67	18.27	46.00	27.73	
	25.055	27.30	1.80	29.10	50.00	20.90	
Neutral	0.194	43.38	0.31	43.69	63.84	20.15	QP
	0.230	33.94	0.33	34.27	62.44	28.17	
	0.389	32.66	0.44	33.10	58.08	24.98	
	0.579	29.55	0.49	30.04	56.00	25.96	
	10.072	36.53	1.03	37.56	60.00	22.44	
	24.529	40.23	1.87	42.10	60.00	17.90	
	0.194	31.19	0.31	31.50	53.84	22.34	AV
	0.230	22.40	0.33	22.73	52.44	29.71	
	0.389	21.69	0.44	22.13	48.08	25.95	
	0.579	18.30	0.49	18.79	46.00	27.21	
	10.072	25.30	1.03	26.33	50.00	23.67	
	24.529	29.39	1.87	31.26	50.00	18.74	

TEST ENGINEER: WENCY YANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2211TX Humidity : 48%RH

Serial No. : 101NDRF9P222 Date of Test : Feb 15, 2011

Test Mode : D-Sub 1280*1024@75Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.192	42.22	0.38	42.60	63.93	21.33	QP
	0.264	33.16	0.43	33.59	61.29	27.70	
	0.389	31.72	0.48	32.20	58.08	25.88	
	0.579	28.37	0.52	28.89	56.00	27.11	
	2.794	30.77	0.68	31.45	56.00	24.55	
	25.055	37.96	1.80	39.76	60.00	20.24	AV
	0.192	30.60	0.38	30.98	53.93	22.95	
	0.264	22.06	0.43	22.49	51.29	28.80	
	0.389	20.46	0.48	20.94	48.08	27.14	
	0.579	17.10	0.52	17.62	46.00	28.38	
Neutral	2.794	19.40	0.68	20.08	46.00	25.92	QP
	25.055	26.40	1.80	28.20	50.00	21.80	
	0.194	43.41	0.31	43.72	63.84	20.12	
	0.247	34.83	0.34	35.17	61.86	26.69	
	0.389	32.62	0.44	33.06	58.08	25.02	
	0.579	29.50	0.49	29.99	56.00	26.01	AV
	10.342	37.07	1.05	38.12	60.00	21.88	
	24.529	39.94	1.87	41.81	60.00	18.19	
	0.194	32.34	0.31	32.65	53.84	21.19	
	0.247	23.76	0.34	24.10	51.86	27.76	
	0.389	21.48	0.44	21.92	48.08	26.16	AV
	0.579	18.36	0.49	18.85	46.00	27.15	
	10.342	25.90	1.05	26.95	50.00	23.05	
	24.529	28.75	1.87	30.62	50.00	19.38	

TEST ENGINEER: WENCY YANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2211TX Humidity : 48%RH

Serial No. : 101NDRF9P222 Date of Test : Feb 15, 2011

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	0.190	42.35	0.38	42.73	64.02	21.29	QP
	0.262	34.44	0.42	34.86	61.38	26.52	
	0.389	31.58	0.48	32.06	58.08	26.02	
	0.579	28.16	0.52	28.68	56.00	27.32	
	2.261	28.71	0.64	29.35	56.00	26.65	
	25.055	38.49	1.80	40.29	60.00	19.71	
	0.190	31.60	0.38	31.98	54.02	22.04	AV
	0.262	23.60	0.42	24.02	51.38	27.36	
	0.389	20.62	0.48	21.10	48.08	26.98	
	0.579	16.94	0.52	17.46	46.00	28.54	
	2.261	17.49	0.64	18.13	46.00	27.87	
	25.055	27.56	1.80	29.36	50.00	20.64	
Neutral	0.194	43.21	0.31	43.52	63.84	20.32	QP
	0.270	34.69	0.36	35.05	61.12	26.07	
	0.389	32.76	0.44	33.20	58.08	24.88	
	0.579	29.20	0.49	29.69	56.00	26.31	
	10.342	36.63	1.05	37.68	60.00	22.32	
	25.055	40.35	1.87	42.22	60.00	17.78	
	0.194	32.39	0.31	32.70	53.84	21.14	AV
	0.270	23.46	0.36	23.82	51.12	27.30	
	0.389	21.66	0.44	22.10	48.08	25.98	
	0.579	18.43	0.49	18.92	46.00	27.08	
	10.342	25.50	1.05	26.55	50.00	23.45	
	25.055	29.43	1.87	31.30	50.00	18.70	

TEST ENGINEER: WENCY YANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2211TX Humidity : 48%RH

Serial No. : 101NDRF9P222 Date of Test : Feb 15, 2011

Test Mode : D-Sub 1920*1080@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.194	42.32	0.38	42.70	63.84	21.14	QP
	0.253	34.21	0.42	34.63	61.64	27.01	
	0.389	31.67	0.48	32.15	58.08	25.93	
	0.529	28.13	0.52	28.65	56.00	27.35	
	2.527	29.59	0.66	30.25	56.00	25.75	
	25.321	38.65	1.80	40.45	60.00	19.55	
	0.194	31.20	0.38	31.58	53.84	22.26	AV
	0.253	23.17	0.42	23.59	51.64	28.05	
	0.389	20.34	0.48	20.82	48.08	27.26	
	0.529	17.26	0.52	17.78	46.00	28.22	
	2.527	18.43	0.66	19.09	46.00	26.91	
	25.321	27.44	1.80	29.24	50.00	20.76	
Neutral	0.194	43.13	0.31	43.44	63.84	20.40	QP
	0.264	34.47	0.36	34.83	61.29	26.46	
	0.389	32.77	0.44	33.21	58.08	24.87	
	0.579	29.09	0.49	29.58	56.00	26.42	
	10.676	37.52	1.09	38.61	60.00	21.39	
	25.055	39.83	1.87	41.70	60.00	18.30	
	0.194	31.95	0.31	32.26	53.84	21.58	AV
	0.264	23.28	0.36	23.64	51.29	27.65	
	0.389	21.42	0.44	21.86	48.08	26.22	
	0.579	17.86	0.49	18.35	46.00	27.65	
	10.676	26.37	1.09	27.46	50.00	22.54	
	25.055	28.76	1.87	30.63	50.00	19.37	

TEST ENGINEER: WENCY YANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2211TX Humidity : 48%RH

Serial No. : 101NDRF9P222 Date of Test : Feb 15, 2011

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	0.190	42.83	0.38	43.21	64.02	20.81	QP
	0.264	34.86	0.43	35.29	61.29	26.00	
	0.385	31.76	0.47	32.23	58.17	25.94	
	0.579	27.81	0.52	28.33	56.00	27.67	
	2.809	29.04	0.68	29.72	56.00	26.28	
	25.055	38.83	1.80	40.63	60.00	19.37	
	0.190	31.94	0.38	32.32	54.02	21.70	AV
	0.264	23.66	0.43	24.09	51.29	27.20	
	0.385	20.93	0.47	21.40	48.17	26.77	
	0.579	16.79	0.52	17.31	46.00	28.69	
	2.809	18.16	0.68	18.84	46.00	27.16	
	25.055	27.69	1.80	29.49	50.00	20.51	
Neutral	0.194	43.74	0.31	44.05	63.84	19.79	QP
	0.264	35.06	0.36	35.42	61.29	25.87	
	0.389	33.42	0.44	33.86	58.08	24.22	
	0.529	29.79	0.49	30.28	56.00	25.72	
	10.564	35.75	1.08	36.83	60.00	23.17	
	25.591	39.76	1.87	41.63	60.00	18.37	
	0.194	32.66	0.31	32.97	53.84	20.87	AV
	0.264	24.31	0.36	24.67	51.29	26.62	
	0.389	22.67	0.44	23.11	48.08	24.97	
	0.529	18.67	0.49	19.16	46.00	26.84	
	10.564	24.81	1.08	25.89	50.00	24.11	
	25.591	28.69	1.87	30.56	50.00	19.44	

TEST ENGINEER: WENCY YANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2211TX Humidity : 48%RH

Serial No. : 101NDRF9P222 Date of Test : Feb 15, 2011

Test Mode : DVI 1280*1024@75Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.192	42.30	0.38	42.68	63.93	21.25	QP
	0.247	35.53	0.41	35.94	61.86	25.92	
	0.389	31.60	0.48	32.08	58.08	26.00	
	0.579	28.27	0.52	28.79	56.00	27.21	
	2.707	29.29	0.67	29.96	56.00	26.04	
	24.790	38.17	1.80	39.97	60.00	20.03	
	0.192	31.26	0.38	31.64	53.93	22.29	AV
	0.247	24.61	0.41	25.02	51.86	26.84	
	0.389	20.40	0.48	20.88	48.08	27.20	
	0.579	17.30	0.52	17.82	46.00	28.18	
	2.707	18.17	0.67	18.84	46.00	27.16	
	24.790	27.39	1.80	29.19	50.00	20.81	
Neutral	0.192	44.25	0.31	44.56	63.93	19.37	QP
	0.267	35.56	0.36	35.92	61.20	25.28	
	0.389	32.67	0.44	33.11	58.08	24.97	
	0.579	29.61	0.49	30.10	56.00	25.90	
	10.676	35.59	1.09	36.68	60.00	23.32	
	24.790	40.09	1.87	41.96	60.00	18.04	
	0.192	33.16	0.31	33.47	53.93	20.46	AV
	0.267	24.20	0.36	24.56	51.20	26.64	
	0.389	21.58	0.44	22.02	48.08	26.06	
	0.579	18.49	0.49	18.98	46.00	27.02	
	10.676	24.30	1.09	25.39	50.00	24.61	
	24.790	28.97	1.87	30.84	50.00	19.16	

TEST ENGINEER: WENCY YANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2211TX Humidity : 48%RH

Serial No. : 101NDRF9P222 Date of Test : Feb 15, 2011

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	0.194	42.69	0.38	43.07	63.84	20.77	QP
	0.253	34.42	0.42	34.84	61.64	26.80	
	0.385	32.28	0.47	32.75	58.17	25.42	
	0.579	28.79	0.52	29.31	56.00	26.69	
	2.707	29.12	0.67	29.79	56.00	26.21	
	25.864	38.38	1.82	40.20	60.00	19.80	
	0.194	31.81	0.38	32.19	53.84	21.65	AV
	0.253	23.58	0.42	24.00	51.64	27.64	
	0.385	21.40	0.47	21.87	48.17	26.30	
	0.579	17.92	0.52	18.44	46.00	27.56	
	2.707	18.61	0.67	19.28	46.00	26.72	
	25.864	27.64	1.82	29.46	50.00	20.54	
Neutral	0.197	43.73	0.30	44.03	63.76	19.73	QP
	0.252	35.08	0.35	35.43	61.69	26.26	
	0.389	32.51	0.44	32.95	58.08	25.13	
	0.579	31.42	0.49	31.91	56.00	24.09	
	10.676	37.17	1.09	38.26	60.00	21.74	
	24.790	40.22	1.87	42.09	60.00	17.91	
	0.197	32.94	0.30	33.24	53.76	20.52	AV
	0.252	24.16	0.35	24.51	51.69	27.18	
	0.389	21.82	0.44	22.26	48.08	25.82	
	0.579	20.60	0.49	21.09	46.00	24.91	
	10.676	26.43	1.09	27.52	50.00	22.48	
	24.790	29.34	1.87	31.21	50.00	18.79	

TEST ENGINEER: WENCY YANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2211TX Humidity : 48%RH

Serial No. : 101NDRF9P222 Date of Test : Feb 15, 2011

Test Mode : DVI 1920*1080@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.192	42.42	0.38	42.80	63.93	21.13	QP
	0.253	33.91	0.42	34.33	61.64	27.31	
	0.389	31.45	0.48	31.93	58.08	26.15	
	0.579	28.28	0.52	28.80	56.00	27.20	
	2.794	29.53	0.68	30.21	56.00	25.79	
	24.529	38.81	1.79	40.60	60.00	19.40	
	0.192	31.80	0.38	32.18	53.93	21.75	AV
	0.253	22.47	0.42	22.89	51.64	28.75	
	0.389	20.67	0.48	21.15	48.08	26.93	
	0.579	17.16	0.52	17.68	46.00	28.32	
	2.794	18.40	0.68	19.08	46.00	26.92	
	24.529	27.63	1.79	29.42	50.00	20.58	
Neutral	0.192	43.52	0.31	43.83	63.93	20.10	QP
	0.253	36.43	0.35	36.78	61.64	24.86	
	0.389	32.69	0.44	33.13	58.08	24.95	
	0.579	30.28	0.49	30.77	56.00	25.23	
	10.676	37.12	1.09	38.21	60.00	21.79	
	25.055	40.07	1.87	41.94	60.00	18.06	
	0.192	32.46	0.31	32.77	53.93	21.16	AV
	0.253	25.76	0.35	26.11	51.64	25.53	
	0.389	21.97	0.44	22.41	48.08	25.67	
	0.579	19.16	0.49	19.65	46.00	26.35	
	10.676	26.30	1.09	27.39	50.00	22.61	
	25.055	29.40	1.87	31.27	50.00	18.73	

TEST ENGINEER: WENCY YANG

4 RADIATED EMISSION TEST

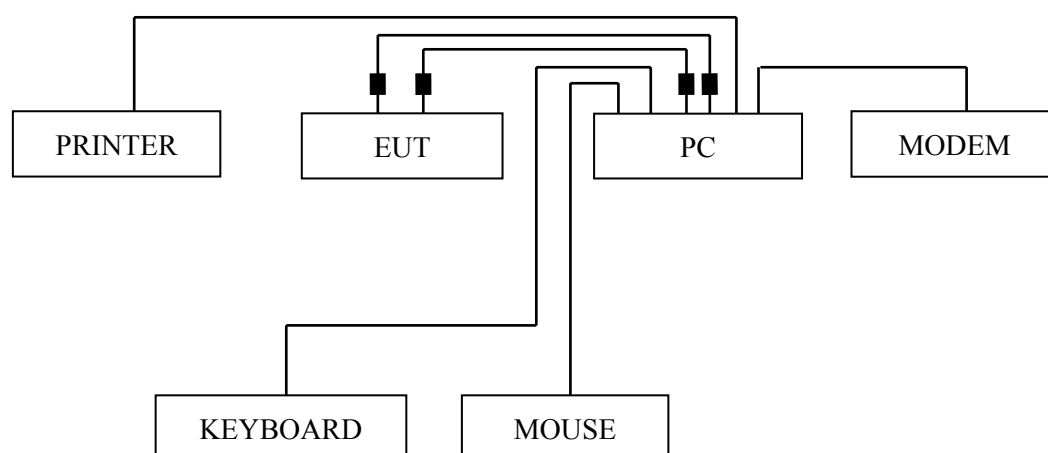
4.1 Test Equipment

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 07, 2010	Mar 07, 2011
2.	Preamplifier	Agilent	8447D	2944A10548	Sep 19, 2010	Mar 19, 2011
3.	Preamplifier	HP	8449B	3008A00864	Apr 29, 2010	Apr 29, 2011
4.	Bi-log Antenna	TESEQ	CBL6112D	23192	Dec 01, 2010	Dec 01, 2011
5.	Spectrum	Agilent	E7405A	MY45106600	May 19, 2010	May 19, 2011
6.	Software	Audix	E3	SET00200 9912M295-2	--	--

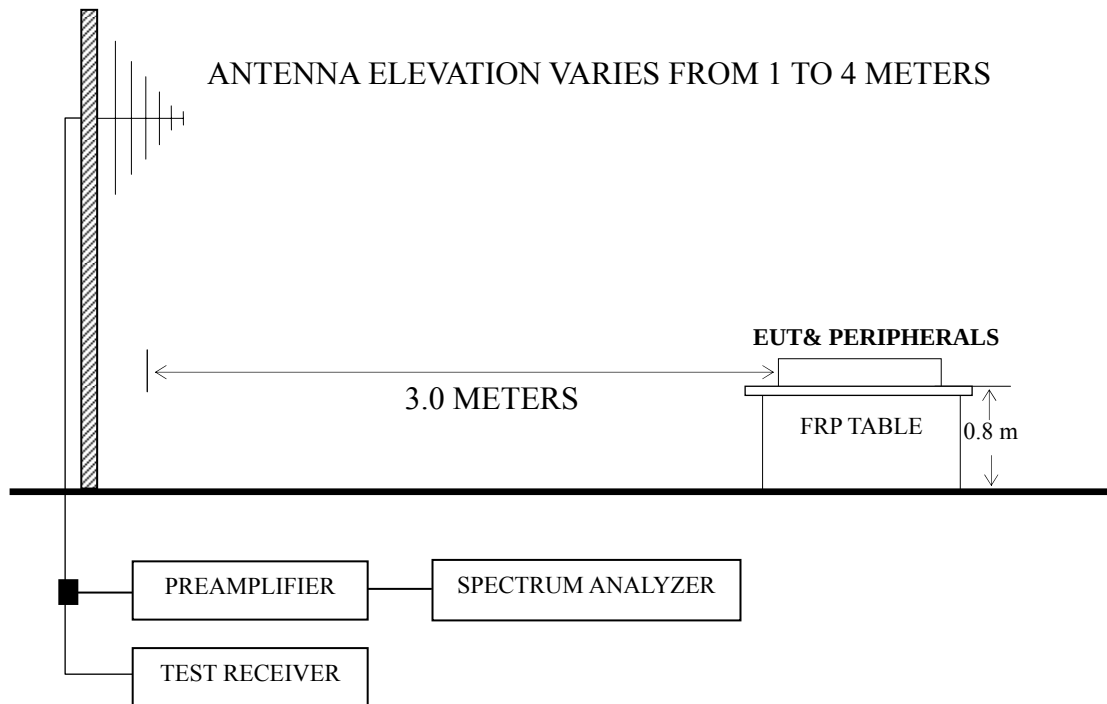
4.2 Block Diagram of Test Setup

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 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/DVI 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.

Test Mode	Page
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
DVI 640*480@60Hz	P31
DVI 1280*1024@75Hz	P32 – P33
DVI 1680*1050@60Hz	P34 – P35
DVI 1920*1080@60Hz	P36 – P37

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 DVI 1680*1050@60Hz test mode. The worst emission at horizontal polarization was detected at 372.410 MHz with corrected signal level of 38.10 dB (μV/m) (limit is 46.00 dB (μV/m)), when the antenna was 1.00 m height and the turntable was at 30°. The worst emission at vertical polarization was detected at 49.400 MHz with corrected signal level of 36.37 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. : E2211TX Humidity : 60%RH

Serial No. : 101NDRF9P222 Date of Test : Feb 16, 2011

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	98.870	10.70	11.31	1.03	23.04	43.50	20.46
	221.090	16.26	10.68	1.52	28.46	46.00	17.54
	258.920	14.08	12.36	1.64	28.08	46.00	17.92
	419.940	7.82	16.55	2.10	26.47	46.00	19.53
	832.190	4.00	20.51	2.93	27.44	46.00	18.56
	899.120	7.49	20.30	3.02	30.81	46.00	15.19
Vertical	49.400	24.16	8.69	0.78	33.63	40.00	6.37
	98.870	21.43	11.31	1.03	33.77	43.50	9.73
	141.550	19.44	10.59	1.21	31.24	43.50	12.26
	220.120	24.66	10.64	1.51	36.81	46.00	9.19
	252.130	24.64	12.09	1.61	38.34	46.00	7.66
	431.580	18.08	16.72	2.13	36.93	46.00	9.07

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2211TX Humidity : 60%RH

Serial No. : 101NDRF9P222 Date of Test : Feb 16, 2011

Test Mode : D-Sub 1280*1024@75Hz

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	144.460	13.82	10.52	1.22	--	25.56	43.50	17.94	QP
	221.090	19.25	10.68	1.52	--	31.45	46.00	14.55	
	280.260	20.16	13.13	1.70	--	34.99	46.00	11.01	
	431.580	9.90	16.72	2.13	--	28.75	46.00	17.25	
	662.440	5.10	19.04	2.59	--	26.73	46.00	19.27	
	899.120	7.99	20.30	3.02	--	31.31	46.00	14.69	
	1075.000	53.82	25.21	4.50	37.26	46.27	74.00	27.73	PK
	1250.000	51.58	26.08	4.52	36.90	45.28	74.00	28.72	
	1365.000	52.94	26.59	4.54	36.62	47.45	74.00	26.55	
	1595.000	49.76	27.08	4.56	36.11	45.29	74.00	28.71	
	1720.000	47.47	27.19	4.57	35.92	43.31	74.00	30.69	
	1850.000	46.84	27.30	4.64	35.75	43.03	74.00	30.97	
	1075.000	47.82	25.21	4.50	37.26	40.27	54.00	13.73	AV
	1250.000	36.58	26.08	4.52	36.90	30.28	54.00	23.72	
	1365.000	36.94	26.59	4.54	36.62	31.45	54.00	22.55	
	1595.000	37.76	27.08	4.56	36.11	33.29	54.00	20.71	
	1720.000	37.47	27.19	4.57	35.92	33.31	54.00	20.69	
	1850.000	36.84	27.30	4.64	35.75	33.03	54.00	20.97	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2211TX Humidity : 60%RH

Serial No. : 101NDRF9P222 Date of Test : Feb 16, 2011

Test Mode : D-Sub 1280*1024@75Hz

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Vertical	49.400	25.17	8.69	0.78	--	34.64	40.00	5.36	QP
	98.870	23.42	11.31	1.03	--	35.76	43.50	7.74	
	142.520	21.36	10.56	1.21	--	33.13	43.50	10.37	
	258.920	23.73	12.36	1.64	--	37.73	46.00	8.27	
	431.580	18.61	16.72	2.13	--	37.46	46.00	8.54	
	872.930	16.21	20.37	2.98	--	39.56	46.00	6.44	
	1080.000	49.23	25.24	4.50	37.25	41.72	74.00	32.28	PK
	1185.000	49.36	25.74	4.51	37.04	42.57	74.00	31.43	
	1315.000	52.23	26.39	4.53	36.75	46.40	74.00	27.60	
	1520.000	43.62	27.02	4.55	36.24	38.95	74.00	35.05	
	1600.000	48.55	27.08	4.56	36.10	44.09	74.00	29.91	
	1760.000	51.77	27.23	4.58	35.86	47.72	74.00	26.28	
	1080.000	45.23	25.24	4.50	37.25	37.72	54.00	16.28	AV
	1185.000	37.36	25.74	4.51	37.04	30.57	54.00	23.43	
	1315.000	39.23	26.39	4.53	36.75	33.40	54.00	20.60	
	1520.000	32.62	27.02	4.55	36.24	27.95	54.00	26.05	
	1600.000	38.55	27.08	4.56	36.10	34.09	54.00	19.91	
	1760.000	39.77	27.23	4.58	35.86	35.72	54.00	18.28	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2211TX Humidity : 60%RH

Serial No. : 101NDRF9P222 Date of Test : Feb 16, 2011

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	47.460	5.81	9.37	0.77	--	15.95	40.00	24.05	QP
	141.550	16.14	10.59	1.21	--	27.94	43.50	15.56	
	221.090	18.15	10.68	1.52	--	30.35	46.00	15.65	
	257.950	15.88	12.31	1.62	--	29.81	46.00	16.19	
	431.580	9.24	16.72	2.13	--	28.09	46.00	17.91	
	899.120	5.91	20.30	3.02	--	29.23	46.00	16.77	
	1075.000	47.82	25.21	4.50	37.26	40.27	74.00	33.73	PK
	1250.000	44.58	26.08	4.52	36.90	38.28	74.00	35.72	
	1365.000	43.94	26.59	4.54	36.62	38.45	74.00	35.55	
	1520.000	35.65	27.02	4.55	36.24	30.98	74.00	43.02	
	1665.000	38.06	27.14	4.57	36.00	33.77	74.00	40.23	
	1760.000	39.87	27.23	4.58	35.86	35.82	74.00	38.18	
	1075.000	41.82	25.21	4.50	37.26	34.27	54.00	19.73	AV
	1250.000	32.58	26.08	4.52	36.90	26.28	54.00	27.72	
	1365.000	27.94	26.59	4.54	36.62	22.45	54.00	31.55	
	1520.000	21.65	27.02	4.55	36.24	16.98	54.00	37.02	
	1665.000	27.06	27.14	4.57	36.00	22.77	54.00	31.23	
	1760.000	29.87	27.23	4.58	35.86	25.82	54.00	28.18	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2211TX Humidity : 60%RH

Serial No. : 101NDRF9P222 Date of Test : Feb 16, 2011

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
Vertical	50.370	25.46	8.51	0.78	--	34.75	40.00	5.25	QP
	98.870	23.82	11.31	1.03	--	36.16	43.50	7.34	
	142.520	21.54	10.56	1.21	--	33.31	43.50	10.19	
	256.010	23.89	12.27	1.62	--	37.78	46.00	8.22	
	431.580	22.23	16.72	2.13	--	41.08	46.00	4.92	
	782.720	12.43	20.44	2.87	--	35.74	46.00	10.26	
	1080.000	50.23	25.24	4.50	37.25	42.72	74.00	31.28	PK
	1185.000	49.36	25.74	4.51	37.04	42.57	74.00	31.43	
	1315.000	49.23	26.39	4.53	36.75	43.40	74.00	30.60	
	1500.000	45.93	27.00	4.55	36.30	41.18	74.00	32.82	
	1600.000	51.55	27.08	4.56	36.10	47.09	74.00	26.91	
	1760.000	52.77	27.23	4.58	35.86	48.72	74.00	25.28	
	1080.000	40.23	25.24	4.50	37.25	32.72	54.00	21.28	AV
	1185.000	35.36	25.74	4.51	37.04	28.57	54.00	25.43	
	1315.000	37.23	26.39	4.53	36.75	31.40	54.00	22.60	
	1500.000	36.93	27.00	4.55	36.30	32.18	54.00	21.82	
	1600.000	38.55	27.08	4.56	36.10	34.09	54.00	19.91	
	1760.000	44.77	27.23	4.58	35.86	40.72	54.00	13.28	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2211TX Humidity : 60%RH

Serial No. : 101NDRF9P222 Date of Test : Feb 16, 2011

Test Mode : D-Sub 1920*1080@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	50.370	11.94	8.51	0.78	--	21.23	40.00	18.77	QP
	98.870	15.89	11.31	1.03	--	28.23	43.50	15.27	
	142.520	20.20	10.56	1.21	--	31.97	43.50	11.53	
	197.810	22.40	9.82	1.44	--	33.66	43.50	9.84	
	256.980	23.89	12.27	1.62	--	37.78	46.00	8.22	
	372.410	17.54	15.72	1.99	--	35.25	46.00	10.75	
	1075.000	50.82	25.21	4.50	37.26	43.27	74.00	30.73	PK
	1180.000	50.20	25.71	4.51	37.05	43.37	74.00	30.63	
	1365.000	50.94	26.59	4.54	36.62	45.45	74.00	28.55	
	1465.000	45.89	26.90	4.55	36.37	40.97	74.00	33.03	
	1665.000	45.06	27.14	4.57	36.00	40.77	74.00	33.23	
	1760.000	47.87	27.23	4.58	35.86	43.82	74.00	30.18	
	1075.000	45.82	25.21	4.50	37.26	38.27	54.00	15.73	AV
	1180.000	37.20	25.71	4.51	37.05	30.37	54.00	23.63	
	1365.000	37.94	26.59	4.54	36.62	32.45	54.00	21.55	
	1465.000	28.89	26.90	4.55	36.37	23.97	54.00	30.03	
	1665.000	37.06	27.14	4.57	36.00	32.77	54.00	21.23	
	1760.000	36.87	27.23	4.58	35.86	32.82	54.00	21.18	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2211TX Humidity : 60%RH

Serial No. : 101NDRF9P222 Date of Test : Feb 16, 2011

Test Mode : D-Sub 1920*1080@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
Vertical	50.370	26.70	8.51	0.78	--	35.99	40.00	4.01	QP
	83.350	21.59	10.70	0.96	--	33.25	40.00	6.75	
	98.870	21.73	11.31	1.03	--	34.07	43.50	9.43	
	256.980	21.60	12.27	1.62	--	35.49	46.00	10.51	
	372.410	18.29	15.72	1.99	--	36.00	46.00	10.00	
	871.960	15.75	20.38	2.98	--	39.11	46.00	6.89	
	1080.000	53.23	25.24	4.50	37.25	45.72	74.00	28.28	PK
	1185.000	54.36	25.74	4.51	37.04	47.57	74.00	26.43	
	1315.000	50.23	26.39	4.53	36.75	44.40	74.00	29.60	
	1600.000	48.55	27.08	4.56	36.10	44.09	74.00	29.91	
	1760.000	46.77	27.23	4.58	35.86	42.72	74.00	31.28	
	1985.000	39.32	27.39	4.78	35.62	35.87	74.00	38.13	
	1080.000	47.23	25.24	4.50	37.25	39.72	54.00	14.28	AV
	1185.000	40.36	25.74	4.51	37.04	33.57	54.00	20.43	
	1315.000	33.23	26.39	4.53	36.75	27.40	54.00	26.60	
	1600.000	34.55	27.08	4.56	36.10	30.09	54.00	23.91	
	1760.000	32.77	27.23	4.58	35.86	28.72	54.00	25.28	
	1985.000	30.32	27.39	4.78	35.62	26.87	54.00	27.13	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2211TX Humidity : 60%RH

Serial No. : 101NDRF9P222 Date of Test : Feb 16, 2011

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	127.970	23.59	10.86	1.16	35.61	43.50	7.89
	158.040	25.84	10.28	1.28	37.40	43.50	6.10
	221.090	24.71	10.68	1.52	36.91	46.00	9.09
	258.920	21.14	12.36	1.64	35.14	46.00	10.86
	372.410	21.31	15.72	1.99	39.02	46.00	6.98
	522.760	19.34	17.74	2.30	39.38	46.00	6.62
Vertical	47.460	26.22	9.37	0.77	36.36	40.00	3.64
	140.580	21.27	10.60	1.21	33.08	43.50	10.42
	221.090	24.48	10.68	1.52	36.68	46.00	9.32
	257.950	22.04	12.31	1.62	35.97	46.00	10.03
	418.000	18.80	16.52	2.10	37.42	46.00	8.58
	872.930	15.66	20.37	2.98	39.01	46.00	6.99

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2211TX Humidity : 60%RH

Serial No. : 101NDRF9P222 Date of Test : Feb 16, 2011

Test Mode : DVI 1280*1024@75Hz

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	144.460	14.54	10.52	1.22	--	26.28	43.50	17.22	QP
	190.050	20.83	9.89	1.41	--	32.13	43.50	11.37	
	221.090	24.27	10.68	1.52	--	36.47	46.00	9.53	
	257.950	18.02	12.31	1.62	--	31.95	46.00	14.05	
	372.410	16.33	15.72	1.99	--	34.04	46.00	11.96	
	785.630	8.50	20.47	2.87	--	31.84	46.00	14.16	
	1075.000	48.16	25.21	4.50	37.26	40.61	74.00	33.39	PK
	1180.000	43.20	25.71	4.51	37.05	36.37	74.00	37.63	
	1250.000	47.58	26.08	4.52	36.90	41.28	74.00	32.72	
	1365.000	43.94	26.59	4.54	36.62	38.45	74.00	35.55	
	1465.000	38.89	26.90	4.55	36.37	33.97	74.00	40.03	
	1595.000	41.76	27.08	4.56	36.11	37.29	74.00	36.71	
	1075.000	38.16	25.21	4.50	37.26	30.61	54.00	23.39	AV
	1180.000	29.20	25.71	4.51	37.05	22.37	54.00	31.63	
	1250.000	32.58	26.08	4.52	36.90	26.28	54.00	27.72	
	1365.000	31.94	26.59	4.54	36.62	26.45	54.00	27.55	
	1465.000	30.89	26.90	4.55	36.37	25.97	54.00	28.03	
	1595.000	30.76	27.08	4.56	36.11	26.29	54.00	27.71	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2211TX Humidity : 60%RH

Serial No. : 101NDRF9P222 Date of Test : Feb 16, 2011

Test Mode : DVI 1280*1024@75Hz

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Vertical	48.430	23.78	9.02	0.77	--	33.57	40.00	6.43	QP
	152.220	19.47	10.37	1.25	--	31.09	43.50	12.41	
	220.120	24.33	10.64	1.51	--	36.48	46.00	9.52	
	262.800	21.74	12.53	1.65	--	35.92	46.00	10.08	
	418.970	16.72	16.55	2.10	--	35.37	46.00	10.63	
	872.930	15.79	20.37	2.98	--	39.14	46.00	6.86	
	1080.000	45.23	25.24	4.50	37.25	37.72	74.00	36.28	PK
	1275.000	40.90	26.21	4.53	36.84	34.80	74.00	39.20	
	1365.000	40.17	26.59	4.54	36.62	34.68	74.00	39.32	
	1465.000	38.95	26.90	4.55	36.37	34.03	74.00	39.97	
	1670.000	39.97	27.14	4.57	35.99	35.69	74.00	38.31	
	1760.000	40.77	27.23	4.58	35.86	36.72	74.00	37.28	
	1080.000	37.23	25.24	4.50	37.25	29.72	54.00	24.28	AV
	1275.000	21.90	26.21	4.53	36.84	15.80	54.00	38.20	
	1365.000	33.17	26.59	4.54	36.62	27.68	54.00	26.32	
	1465.000	24.95	26.90	4.55	36.37	20.03	54.00	33.97	
	1670.000	31.97	27.14	4.57	35.99	27.69	54.00	26.31	
	1760.000	25.77	27.23	4.58	35.86	21.72	54.00	32.28	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2211TX Humidity : 60%RH

Serial No. : 101NDRF9P222 Date of Test : Feb 16, 2011

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	142.520	17.80	10.56	1.21	--	29.57	43.50	13.93	QP
	221.090	25.35	10.68	1.52	--	37.55	46.00	8.45	
	257.950	21.17	12.31	1.62	--	35.10	46.00	10.90	
	372.410	20.39	15.72	1.99	--	38.10	46.00	7.90	
	593.570	12.10	18.17	2.44	--	32.71	46.00	13.29	
	787.570	9.59	20.47	2.87	--	32.93	46.00	13.07	
	1180.000	49.20	25.71	4.51	37.05	42.37	74.00	31.63	PK
	1430.000	44.23	26.80	4.54	36.45	39.12	74.00	34.88	
	1595.000	44.76	27.08	4.56	36.11	40.29	74.00	33.71	
	1665.000	46.06	27.14	4.57	36.00	41.77	74.00	32.23	
	1820.000	43.39	27.28	4.61	35.79	39.49	74.00	34.51	
	1995.000	41.93	27.40	4.78	35.61	38.50	74.00	35.50	
	1180.000	43.20	25.71	4.51	37.05	36.37	54.00	17.63	AV
	1430.000	30.23	26.80	4.54	36.45	25.12	54.00	28.88	
	1595.000	26.76	27.08	4.56	36.11	22.29	54.00	31.71	
	1665.000	32.06	27.14	4.57	36.00	27.77	54.00	26.23	
	1820.000	34.39	27.28	4.61	35.79	30.49	54.00	23.51	
	1995.000	28.93	27.40	4.78	35.61	25.50	54.00	28.50	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2211TX Humidity : 60%RH

Serial No. : 101NDRF9P222 Date of Test : Feb 16, 2011

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
Vertical	49.400	26.90	8.69	0.78	--	36.37	40.00	3.63	QP
	80.440	15.29	10.56	0.95	--	26.80	40.00	13.20	
	142.520	20.27	10.56	1.21	--	32.04	43.50	11.46	
	221.090	25.70	10.68	1.52	--	37.90	46.00	8.10	
	418.000	17.89	16.52	2.10	--	36.51	46.00	9.49	
	877.780	13.70	20.36	3.00	--	37.06	46.00	8.94	
	1080.000	48.23	25.24	4.50	37.25	40.72	74.00	33.28	PK
	1205.000	50.63	25.85	4.51	37.00	43.99	74.00	30.01	
	1405.000	49.02	26.73	4.54	36.52	43.77	74.00	30.23	
	1490.000	45.52	26.98	4.55	36.32	40.73	74.00	33.27	
	1670.000	47.97	27.14	4.57	35.99	43.69	74.00	30.31	
	1930.000	46.36	27.36	4.72	35.67	42.77	74.00	31.23	
	1080.000	40.23	25.24	4.50	37.25	32.72	54.00	21.28	AV
	1205.000	39.63	25.85	4.51	37.00	32.99	54.00	21.01	
	1405.000	39.02	26.73	4.54	36.52	33.77	54.00	20.23	
	1490.000	36.52	26.98	4.55	36.32	31.73	54.00	22.27	
	1670.000	36.97	27.14	4.57	35.99	32.69	54.00	21.31	
	1930.000	37.36	27.36	4.72	35.67	33.77	54.00	20.23	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2211TX Humidity : 60%RH

Serial No. : 101NDRF9P222 Date of Test : Feb 16, 2011

Test Mode : DVI 1920*1080@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	148.340	18.75	10.44	1.23	--	30.42	43.50	13.08	QP
	191.020	21.99	9.88	1.42	--	33.29	43.50	10.21	
	221.090	24.24	10.68	1.52	--	36.44	46.00	9.56	
	261.830	21.93	12.49	1.64	--	36.06	46.00	9.94	
	372.410	21.94	15.72	1.99	--	39.65	46.00	6.35	
	960.230	12.59	20.61	3.76	--	36.96	54.00	17.04	
	1020.000	53.50	24.98	4.49	37.36	45.61	74.00	28.39	PK
	1135.000	49.35	25.49	4.51	37.14	42.21	74.00	31.79	
	1430.000	49.23	26.80	4.54	36.45	44.12	74.00	29.88	
	1595.000	44.76	27.08	4.56	36.11	40.29	74.00	33.71	
	1665.000	49.06	27.14	4.57	36.00	44.77	74.00	29.23	
	1720.000	46.47	27.19	4.57	35.92	42.31	74.00	31.69	
	1020.000	47.50	24.98	4.49	37.36	39.61	54.00	14.39	AV
	1135.000	35.35	25.49	4.51	37.14	28.21	54.00	25.79	
	1430.000	36.23	26.80	4.54	36.45	31.12	54.00	22.88	
	1595.000	27.76	27.08	4.56	36.11	23.29	54.00	30.71	
	1665.000	40.06	27.14	4.57	36.00	35.77	54.00	18.23	
	1720.000	39.47	27.19	4.57	35.92	35.31	54.00	18.69	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2211TX Humidity : 60%RH

Serial No. : 101NDRF9P222 Date of Test : Feb 16, 2011

Test Mode : DVI 1920*1080@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
Vertical	48.430	25.45	9.02	0.77	--	35.24	40.00	4.76	QP
	83.350	16.78	10.70	0.96	--	28.44	40.00	11.56	
	150.280	18.67	10.41	1.24	--	30.32	43.50	13.18	
	255.040	24.75	12.22	1.62	--	38.59	46.00	7.41	
	372.410	17.40	15.72	1.99	--	35.11	46.00	10.89	
	573.200	11.25	18.05	2.39	--	31.69	46.00	14.31	
	1080.000	53.23	25.24	4.50	37.25	45.72	74.00	28.28	PK
	1275.000	45.90	26.21	4.53	36.84	39.80	74.00	34.20	
	1430.000	49.00	26.80	4.54	36.45	43.89	74.00	30.11	
	1670.000	49.97	27.14	4.57	35.99	45.69	74.00	28.31	
	1800.000	44.81	27.26	4.58	35.81	40.84	74.00	33.16	
	1930.000	44.36	27.36	4.72	35.67	40.77	74.00	33.23	
	1080.000	47.23	25.24	4.50	37.25	39.72	54.00	14.28	AV
	1275.000	29.90	26.21	4.53	36.84	23.80	54.00	30.20	
	1430.000	34.00	26.80	4.54	36.45	28.89	54.00	25.11	
	1670.000	36.97	27.14	4.57	35.99	32.69	54.00	21.31	
	1800.000	29.81	27.26	4.58	35.81	25.84	54.00	28.16	
	1930.000	36.36	27.36	4.72	35.67	32.77	54.00	21.23	

TEST ENGINEER: RAVEN JIN

5 DEVIATION TO TEST SPECIFICATIONS

None.

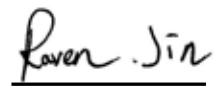
6 DEBUG DESCRIPTION

The following components are used during the countermeasure procedures:

Name	M/N	Specifications (mm)	Manufacturer	Location
Aluminum Tape	T-308	50*30	DAEHUNG SUBSIDIARY MATERIALS.	See Internal Photos Figure 12
Gasket	LG END 3940TKK043C	28*10*1	EXPAN Electronics SUZHOU Co., Ltd.	See Internal Photos Figure 13
Gasket	LG END 3940TKK043C	120*10*1	EXPAN Electronics SUZHOU Co., Ltd.	See Internal Photos Figure 13
Gasket	LG END 3940TKK043C	295*10*1	EXPAN Electronics SUZHOU Co., Ltd.	See Internal Photos Figure 13
Gasket	LG END 3940TKK043C	155*10*1	EXPAN Electronics SUZHOU Co., Ltd.	See Internal Photos Figure 13
Gasket	LG END 3940TKK043C	120*10*1	EXPAN Electronics SUZHOU Co., Ltd.	See Internal Photos Figure 13

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)