

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

LCD Monitor

Model No.: E2242VA

Serial No.: E1205589-01/01

FCC ID : BEJE2242VA

Prepared For : LG Electronics U.S.A., Inc.
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Report No. : ACI-F12048A1
Date of Test : May 17 – 18, 2012
Date of Report : May 22, 2012

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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. : E2242VA
(B) Serial No. : E1205589-01/01
(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: E2242VA; S/N: E1205589-01/01) which was tested in 3m anechoic chamber May 17 – 18, 2012 is technically compliance with the FCC official limits also.

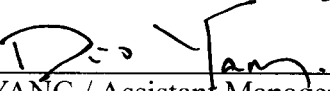
This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Audix Technology (Shanghai) Co., Ltd.

This report contains data that are not covered by the NVLAP accreditation.

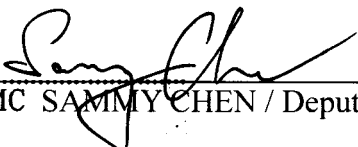
This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

Date of Test : May 17 – 18, 2012 Date of Report : May 22, 2012

Producer : 
KATHY WANG / Assistant

Review : 
DIO YANG / Assistant Manager

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

Signatory : 
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 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

Model No. : E2242VA

Serial No. : E1205589-01/01

Note : The different list for all the models are as follows:

Report No.	Model No.	Rev. Summary	Edition No.	Data of Rev.
ACI-F12048	E2242VA	Original Report	0	Mar 27, 2012
ACI-F12048A1	E2242VA	To add a new Panel.	Rev. A1	May 22, 2012

Real Power : 22.30W (Adapter #1)
23.10W (Adapter #2)
22.00W (Adapter #3)
22.80W (Adapter #4)

AC Adapter #1 : Manufacturer : LIEN CHANG
Model Number : LCAP21
Input : 100-240V~, 50-60Hz 1.1A
Output : 19V $\overline{\text{---}}$ 1.3A
Output Cable : Unshielded, Undetachable, 1.8m, with one core

AC Adapter #2 : Manufacturer : HONOR
Model Number : ADS-40SG-19-3 19025G
Input : 100-240V~, 50-60Hz 1.0A
Output : 19V $\overline{\text{---}}$ 1.3A
Output Cable : Unshielded, Undetachable, 1.8m

AC Adapter #3 : Manufacturer : LIEN CHANG
Model Number : LCAP26-*
(* can be A, E, I, B, LCAP26-A was selected as the test model.)
Input : 100-240V~, 50-60Hz 1.1A
Output : 19V $\overline{\text{---}}$ 1.3A
Output Cable : Unshielded, Undetachable, 1.8m

AC Adapter #4 : Manufacturer : HONOR
Model Number : ADS-40FSG-19 19025G***-1
(*** can be PG, PBR, PI, PCU, ADS-40FSG-19 19025GPCU-1 was selected as the test model.)
Input : 100-240V~, 50-60Hz 1.1A
Output : 19V $\overline{\text{---}}$ 1.3A
Output Cable : Unshielded, Undetachable, 1.8m

Applicant : LG Electronics Nanjing Display Co., Ltd.
No.346, YaoXin Road Economic&Technical Development Zone,
Nanjing, China

Manufacturer : LG Electronics Nanjing Display Co., Ltd.
No.346, YaoXin Road Economic&Technical Development Zone,
Nanjing, China

LCD Panel :	Original Panel	New Panel
	Manufacturer : AU Optronics M/N : M215HW03	Manufacturer : LG Display M/N : LM215WF4

Max Resolution : 1920*1080@60Hz

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

D-Sub Cable #2 : Shielded, Detachable, 1.85m, with two cores in connector

DVI Cable #1 : Shielded, Detachable, 1.50m, with two cores on cable

DVI Cable #2 : Shielded, Detachable, 1.85m, with two cores in connector

Power Cord : Unshielded, Detachable, 1.50m

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

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 HDMI Port : Connected with PC / DVD PLAYER
- (4) One Earphone Port : Connected with Earphone
- (5) 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

2.2.7 DVD PLAYER

Manufacturer : PHILIPS
Model Number : DVP3986K/93
Serial Number : KX1A0902120108
Data Cable : Shielded, Detachable, 1.80m
Certificate : FCC DoC, CE/EMC, CCC

2.2.8 Earphone

Manufacturer : SONY
Model Number : MDR-E808
Serial Number : 1808030805305506
Data Cable : Shielded, Detachable, 1.8m

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 = 3.43dB

Radiated Emission Expanded Uncertainty (30-200MHz):
U = 4.67dB (Horizontal)
U = 4.72dB (Vertical)

Radiated Emission Expanded Uncertainty (200M-1GHz):
U = 4.81dB (Horizontal)
U = 4.69dB (Vertical)

Radiated Emission Expanded Uncertainty (Above 1GHz):
U= 4.50 dB (Horizontal)
U= 4.16 dB (Vertical)

3 CONDUCTED EMISSION TEST

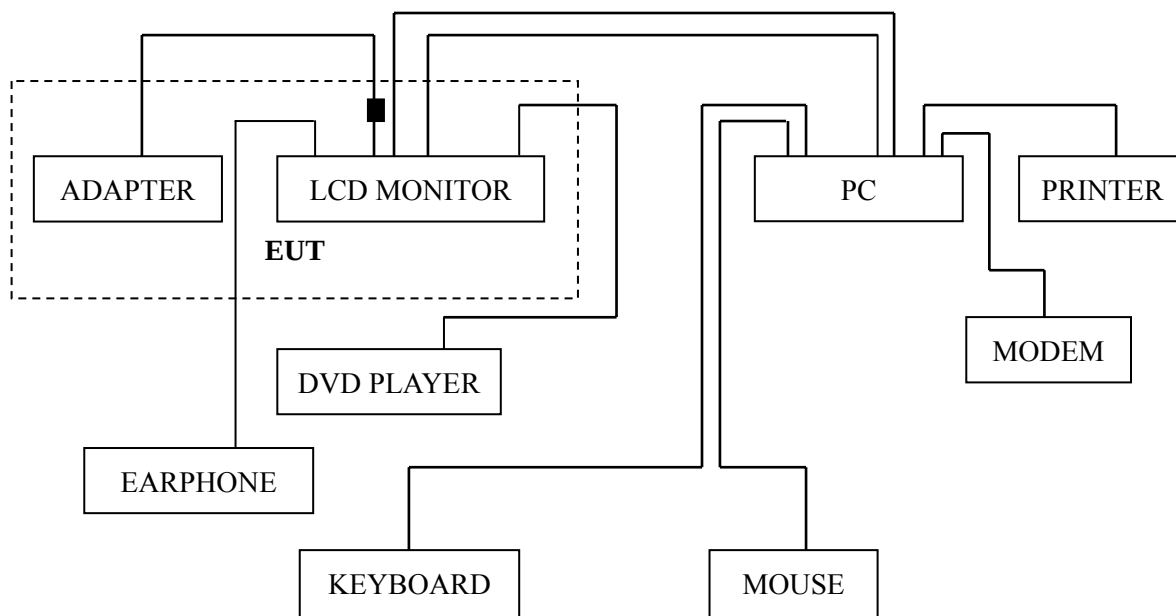
3.1 Test Equipment

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 #1)	R&S	ESH2-Z5	843890/011	Mar 22, 2011	Mar 22, 2012
3.	Artificial Mains Network (AMN #2)	R&S	ENV4200	100125	Mar 22, 2011	Mar 22, 2012
4.	50 Ω Coaxial Switch	Anritsu	MP59B	6200426389	Mar 18, 2012	Sep 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

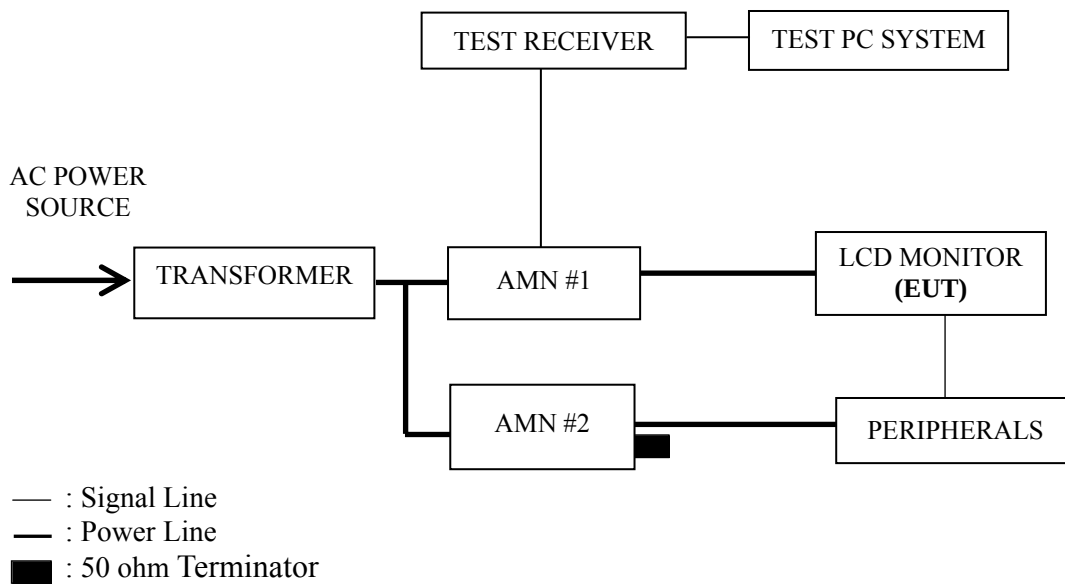
3.2.1 EUT & Peripherals



■ : 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/DVI Input).

3.5.5 In HDMI mode, the EUT connected to PC or DVD PLAYER through HDMI port.

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

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

3.5.8 The test modes are as follows:

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

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.

Adapter	Test Mode	Page
Adapter #1	D-Sub 1920*1080@60Hz	P13
	DVI 1920*1080@60Hz	P14
	HDMI 1920*1080@60Hz	P15
	HDMI 1080P	P16
	D-Sub 1680*1050@60Hz	P17
	D-Sub 1280*1024@75Hz	P18
	D-Sub 640*480@60Hz	P19
Adapter #2	D-Sub 1920*1080@60Hz	P20
Adapter #3	D-Sub 1920*1080@60Hz	P21
Adapter #4	D-Sub 1920*1080@60Hz	P22

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 1920*1080@60Hz test mode (Adapter #1). The worst emission is detected at 0.166 MHz (Quasi-Peak Value) with corrected signal level of 57.11 dB (μV) (limit is 65.16 dB (μV)), when the Line of the EUT is connected to AMN.

EUT : LCD Monitor Temperature : 22°C

Model No. : E2242VA Humidity : 48%RH

Serial No. : E1205589-01/01 Date of Test : May 17, 2012

Test Mode : D-Sub 1920*1080@60Hz Adapter #1 : LCAP21

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.166	56.87	0.24	57.11	65.16	8.05	QP
	0.356	41.61	0.31	41.92	58.83	16.91	
	0.914	28.89	0.31	29.20	56.00	26.80	
	4.361	34.78	0.49	35.27	56.00	20.73	
	6.285	32.33	0.60	32.93	60.00	27.07	
	17.849	33.96	0.90	34.86	60.00	25.14	
	0.166	44.60	0.24	44.84	55.16	10.32	AV
	0.356	29.51	0.31	29.82	48.83	19.01	
	0.914	16.60	0.31	16.91	46.00	29.09	
	4.361	22.90	0.49	23.39	46.00	22.61	
	6.285	21.60	0.60	22.20	50.00	27.80	
	17.849	22.20	0.90	23.10	50.00	26.90	
Neutral	0.172	56.51	0.12	56.63	64.86	8.23	QP
	0.346	40.12	0.14	40.26	59.05	18.79	
	1.662	26.93	0.17	27.10	56.00	28.90	
	5.005	34.41	0.42	34.83	60.00	25.17	
	6.557	32.01	0.56	32.57	60.00	27.43	
	17.849	36.25	0.79	37.04	60.00	22.96	
	0.172	43.80	0.12	43.92	54.86	10.94	AV
	0.346	28.60	0.14	28.74	49.05	20.31	
	1.662	15.70	0.17	15.87	46.00	30.13	
	5.005	23.30	0.42	23.72	50.00	26.28	
	6.557	21.70	0.56	22.26	50.00	27.74	
	17.849	25.51	0.79	26.30	50.00	23.70	

TEST ENGINEER: SAWEN LI

EUT : LCD Monitor Temperature : 22°C

Model No. : E2242VA Humidity : 48%RH

Serial No. : E1205589-01/01 Date of Test : May 17, 2012

Test Mode : DVI 1920*1080@60Hz Adapter #1 : LCAP21

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.164	55.73	0.24	55.97	65.25	9.28	QP
	0.346	41.38	0.31	41.69	59.05	17.36	
	1.141	28.88	0.32	29.20	56.00	26.80	
	4.224	35.86	0.49	36.35	56.00	19.65	
	6.252	32.45	0.60	33.05	60.00	26.95	
	17.849	35.21	0.90	36.11	60.00	23.89	
	0.164	43.50	0.24	43.74	55.25	11.51	AV
	0.346	30.40	0.31	30.71	49.05	18.34	
	1.141	18.31	0.32	18.63	46.00	27.37	
	4.224	23.60	0.49	24.09	46.00	21.91	
	6.252	21.30	0.60	21.90	50.00	28.10	
	17.849	23.20	0.90	24.10	50.00	25.90	
Neutral	0.157	55.72	0.13	55.85	65.60	9.75	QP
	0.339	39.69	0.14	39.83	59.22	19.39	
	1.071	27.68	0.22	27.90	56.00	28.10	
	3.943	33.93	0.39	34.32	56.00	21.68	
	6.285	32.32	0.53	32.85	60.00	27.15	
	18.232	33.63	0.80	34.43	60.00	25.57	
	0.157	43.60	0.13	43.73	55.60	11.87	AV
	0.339	28.60	0.14	28.74	49.22	20.48	
	1.071	16.60	0.22	16.82	46.00	29.18	
	3.943	21.30	0.39	21.69	46.00	24.31	
	6.285	22.20	0.53	22.73	50.00	27.27	
	18.232	22.40	0.80	23.20	50.00	26.80	

TEST ENGINEER: SAWEN LI

EUT : LCD Monitor Temperature : 22°C

Model No. : E2242VA Humidity : 48%RH

Serial No. : E1205589-01/01 Date of Test : May 17, 2012

Test Mode : HDMI 1920*1080@60Hz Adapter #1 : LCAP21

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.166	43.90	0.24	44.14	55.16	11.02	QP
	0.343	30.60	0.31	30.91	49.13	18.22	
	1.249	18.79	0.34	19.13	46.00	26.87	
	4.454	23.29	0.50	23.79	46.00	22.21	
	6.121	20.90	0.59	21.49	50.00	28.51	
	17.199	22.20	0.87	23.07	50.00	26.93	
	0.166	56.00	0.24	56.24	65.16	8.92	AV
	0.343	41.23	0.31	41.54	59.13	17.59	
	1.249	29.01	0.34	29.35	56.00	26.65	
	4.454	34.43	0.50	34.93	56.00	21.07	
	6.121	32.53	0.59	33.12	60.00	26.88	
	17.199	34.89	0.87	35.76	60.00	24.24	
Neutral	0.174	54.89	0.12	55.01	64.77	9.76	QP
	0.346	39.73	0.14	39.87	59.05	19.18	
	1.141	27.91	0.22	28.13	56.00	27.87	
	3.901	34.20	0.39	34.59	56.00	21.41	
	6.352	31.21	0.54	31.75	60.00	28.25	
	17.849	33.25	0.79	34.04	60.00	25.96	
	0.174	43.74	0.12	43.86	54.77	10.91	AV
	0.346	28.80	0.14	28.94	49.05	20.11	
	1.141	17.60	0.22	17.82	46.00	28.18	
	3.901	22.80	0.39	23.19	46.00	22.81	
	6.352	20.50	0.54	21.04	50.00	28.96	
	17.849	22.61	0.79	23.40	50.00	26.60	

TEST ENGINEER: SAWEN LI

EUT : LCD Monitor Temperature : 22°C

Model No. : E2242VA Humidity : 48%RH

Serial No. : E1205589-01/01 Date of Test : May 17, 2012

Test Mode : HDMI 1080P Adapter #1 : LCAP21

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.159	56.33	0.24	56.57	65.52	8.95	QP
	0.346	41.44	0.31	41.75	59.05	17.30	
	0.880	29.67	0.30	29.97	56.00	26.03	
	4.407	34.08	0.49	34.57	56.00	21.43	
	6.285	34.78	0.60	35.38	60.00	24.62	
	18.232	33.75	0.90	34.65	60.00	25.35	
	0.159	44.30	0.24	44.54	55.52	10.98	AV
	0.346	28.70	0.31	29.01	49.05	20.04	
	0.880	18.59	0.30	18.89	46.00	27.11	
	4.407	22.50	0.49	22.99	46.00	23.01	
	6.285	23.30	0.60	23.90	50.00	26.10	
	18.232	21.61	0.90	22.51	50.00	27.49	
Neutral	0.166	55.50	0.13	55.63	65.16	9.53	QP
	0.360	39.53	0.14	39.67	58.74	19.07	
	1.141	27.44	0.22	27.66	56.00	28.34	
	4.874	34.68	0.42	35.10	56.00	20.90	
	6.352	32.13	0.54	32.67	60.00	27.33	
	17.849	33.35	0.79	34.14	60.00	25.86	
	0.166	43.10	0.13	43.23	55.16	11.93	AV
	0.360	27.41	0.14	27.55	48.74	21.19	
	1.141	16.20	0.22	16.42	46.00	29.58	
	4.874	22.30	0.42	22.72	46.00	23.28	
	6.352	21.20	0.54	21.74	50.00	28.26	
	17.849	21.91	0.79	22.70	50.00	27.30	

TEST ENGINEER: SAWEN LI

EUT : LCD Monitor Temperature : 22°C

Model No. : E2242VA Humidity : 48%RH

Serial No. : E1205589-01/01 Date of Test : May 17, 2012

Test Mode : D-Sub 1680*1050@60Hz Adapter #1 : LCAP21

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.170	55.16	0.24	55.40	64.94	9.54	QP
	0.348	41.67	0.31	41.98	59.00	17.02	
	1.249	28.83	0.34	29.17	56.00	26.83	
	4.315	33.54	0.49	34.03	56.00	21.97	
	6.627	33.95	0.64	34.59	60.00	25.41	
	17.849	35.73	0.90	36.63	60.00	23.37	
	0.170	43.10	0.24	43.34	54.94	11.60	AV
	0.348	28.60	0.31	28.91	49.00	20.09	
	1.249	19.19	0.34	19.53	46.00	26.47	
	4.315	22.60	0.49	23.09	46.00	22.91	
	6.627	21.30	0.64	21.94	50.00	28.06	
	17.849	23.10	0.90	24.00	50.00	26.00	
Neutral	0.152	55.32	0.13	55.45	65.91	10.46	QP
	0.343	39.89	0.14	40.03	59.13	19.10	
	1.503	28.36	0.18	28.54	56.00	27.46	
	5.005	34.62	0.42	35.04	60.00	24.96	
	5.993	31.35	0.50	31.85	60.00	28.15	
	17.849	35.13	0.79	35.92	60.00	24.08	
	0.152	43.70	0.13	43.83	55.91	12.08	AV
	0.343	28.60	0.14	28.74	49.13	20.39	
	1.503	18.80	0.18	18.98	46.00	27.02	
	5.005	22.90	0.42	23.32	50.00	26.68	
	5.993	20.70	0.50	21.20	50.00	28.80	
	17.849	24.71	0.79	25.50	50.00	24.50	

TEST ENGINEER: SAWEN LI

EUT : LCD Monitor Temperature : 22°C

Model No. : E2242VA Humidity : 48%RH

Serial No. : E1205589-01/01 Date of Test : May 17, 2012

Test Mode : D-Sub 1280*1024@75Hz Adapter #1 : LCAP21

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.150	56.42	0.23	56.65	66.00	9.35	QP
	0.348	41.40	0.31	41.71	59.00	17.29	
	0.899	29.44	0.30	29.74	56.00	26.26	
	4.202	34.77	0.49	35.26	56.00	20.74	
	6.121	33.11	0.59	33.70	60.00	26.30	
	17.849	33.97	0.90	34.87	60.00	25.13	
	0.150	45.10	0.23	45.33	56.00	10.67	AV
	0.348	29.30	0.31	29.61	49.00	19.39	
	0.899	19.70	0.30	20.00	46.00	26.00	
	4.202	23.10	0.49	23.59	46.00	22.41	
	6.121	22.50	0.59	23.09	50.00	26.91	
	17.849	23.40	0.90	24.30	50.00	25.70	
Neutral	0.170	54.95	0.12	55.07	64.94	9.87	QP
	0.346	39.86	0.14	40.00	59.05	19.05	
	1.645	28.16	0.17	28.33	56.00	27.67	
	4.224	33.52	0.40	33.92	56.00	22.08	
	6.186	32.19	0.52	32.71	60.00	27.29	
	17.849	33.65	0.79	34.44	60.00	25.56	
	0.170	43.20	0.12	43.32	54.94	11.62	AV
	0.346	28.90	0.14	29.04	49.05	20.01	
	1.645	18.80	0.17	18.97	46.00	27.03	
	4.224	22.50	0.40	22.90	46.00	23.10	
	6.186	21.10	0.52	21.62	50.00	28.38	
	17.849	22.71	0.79	23.50	50.00	26.50	

TEST ENGINEER: SAWEN LI

EUT : LCD Monitor Temperature : 22°C

Model No. : E2242VA Humidity : 48%RH

Serial No. : E1205589-01/01 Date of Test : May 17, 2012

Test Mode : D-Sub 640*480@60Hz Adapter #1 : LCAP21

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.170	55.29	0.24	55.53	64.94	9.41	QP
	0.343	41.41	0.31	41.72	59.13	17.41	
	0.880	29.70	0.30	30.00	56.00	26.00	
	4.158	36.43	0.49	36.92	56.00	19.08	
	6.186	33.25	0.59	33.84	60.00	26.16	
	17.849	34.49	0.90	35.39	60.00	24.61	
	0.170	43.30	0.24	43.54	54.94	11.40	AV
	0.343	28.40	0.31	28.71	49.13	20.42	
	0.880	18.19	0.30	18.49	46.00	27.51	
	4.158	24.60	0.49	25.09	46.00	20.91	
	6.186	21.70	0.59	22.29	50.00	27.71	
	17.849	24.50	0.90	25.40	50.00	24.60	
Neutral	0.172	54.83	0.12	54.95	64.86	9.91	QP
	0.172	43.40	0.12	43.52	64.86	21.34	
	0.346	39.76	0.14	39.90	59.05	19.15	
	1.662	28.75	0.17	28.92	56.00	27.08	
	4.027	33.79	0.40	34.19	56.00	21.81	
	6.352	34.13	0.54	34.67	60.00	25.33	
	18.232	33.66	0.80	34.46	60.00	25.54	AV
	0.346	28.50	0.14	28.64	49.05	20.41	
	1.662	17.10	0.17	17.27	46.00	28.73	
	4.027	22.09	0.40	22.49	46.00	23.51	
	6.352	22.90	0.54	23.44	50.00	26.56	
	18.232	21.70	0.80	22.50	50.00	27.50	

TEST ENGINEER: SAWEN LI

EUT : LCD Monitor Temperature : 22°C

Model No. : E2242VA Humidity : 48%RH

Serial No. : E1205589-01/01 Date of Test : May 17, 2012

Test Mode : D-Sub 1920*1080@60Hz Adapter #2 : ADS-40SG-19-3
19025G

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.170	55.18	0.24	55.42	64.94	9.52	QP
	0.343	41.41	0.31	41.72	59.13	17.41	
	0.880	30.07	0.30	30.37	56.00	25.63	
	5.058	34.74	0.50	35.24	60.00	24.76	
	5.867	32.06	0.56	32.62	60.00	27.38	
	17.849	34.09	0.90	34.99	60.00	25.01	
	0.170	43.10	0.24	43.34	54.94	11.60	AV
	0.343	28.40	0.31	28.71	49.13	20.42	
	0.880	18.49	0.30	18.79	46.00	27.21	
	5.058	22.80	0.50	23.30	50.00	26.70	
	5.867	20.90	0.56	21.46	50.00	28.54	
	17.849	22.30	0.90	23.20	50.00	26.80	
Neutral	0.174	54.47	0.12	54.59	64.77	10.18	QP
	0.356	39.51	0.14	39.65	58.83	19.18	
	1.503	28.25	0.18	28.43	56.00	27.57	
	3.901	34.84	0.39	35.23	56.00	20.77	
	6.420	32.42	0.55	32.97	60.00	27.03	
	17.849	35.10	0.79	35.89	60.00	24.11	
	0.174	43.30	0.12	43.42	54.77	11.35	AV
	0.356	28.61	0.14	28.75	48.83	20.08	
	1.503	17.40	0.18	17.58	46.00	28.42	
	3.901	22.70	0.39	23.09	46.00	22.91	
	6.420	20.59	0.55	21.14	50.00	28.86	
	17.849	24.51	0.79	25.30	50.00	24.70	

TEST ENGINEER: SAWEN LI

EUT : LCD Monitor Temperature : 22°C

Model No. : E2242VA Humidity : 48%RH

Serial No. : E1205589-01/01 Date of Test : May 17, 2012

Test Mode : D-Sub 1920*1080@60Hz Adapter #3 : LCAP26-A

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.168	55.60	0.24	55.84	65.08	9.24	QP
	0.343	41.43	0.31	41.74	59.13	17.39	
	1.262	29.26	0.34	29.60	56.00	26.40	
	4.361	36.50	0.49	36.99	56.00	19.01	
	6.186	32.20	0.59	32.79	60.00	27.21	
	15.885	34.43	0.85	35.28	60.00	24.72	
	0.168	43.30	0.24	43.54	55.08	11.54	AV
	0.343	28.90	0.31	29.21	49.13	19.92	
	1.262	18.89	0.34	19.23	46.00	26.77	
	4.361	25.10	0.49	25.59	46.00	20.41	
	6.186	21.70	0.59	22.29	50.00	27.71	
	15.885	22.90	0.85	23.75	50.00	26.25	
Neutral	0.168	55.32	0.13	55.45	65.08	9.63	QP
	0.356	39.88	0.14	40.02	58.83	18.81	
	1.082	28.35	0.22	28.57	56.00	27.43	
	4.269	33.83	0.40	34.23	56.00	21.77	
	6.420	32.01	0.55	32.56	60.00	27.44	
	17.849	33.74	0.79	34.53	60.00	25.47	
	0.168	43.59	0.13	43.72	55.08	11.36	AV
	0.356	28.11	0.14	28.25	48.83	20.58	
	1.082	17.90	0.22	18.12	46.00	27.88	
	4.269	22.20	0.40	22.60	46.00	23.40	
	6.420	21.49	0.55	22.04	50.00	27.96	
	17.849	21.71	0.79	22.50	50.00	27.50	

TEST ENGINEER: SAWEN LI

EUT : LCD Monitor Temperature : 22°C

Model No. : E2242VA Humidity : 48%RH

Serial No. : E1205589-01/01 Date of Test : May 17, 2012

Test Mode : D-Sub 1920*1080@60Hz Adapter #4 : ADS-40FSG-19
19025GPCU-1

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.169	55.18	0.24	55.42	64.99	9.57	QP
	0.348	41.58	0.31	41.89	59.00	17.11	
	0.880	29.68	0.30	29.98	56.00	26.02	
	4.315	35.12	0.49	35.61	56.00	20.39	
	6.627	33.30	0.64	33.94	60.00	26.06	
	18.232	33.60	0.90	34.50	60.00	25.50	
	0.169	42.30	0.24	42.54	54.99	12.45	AV
	0.348	28.30	0.31	28.61	49.00	20.39	
	0.880	17.39	0.30	17.69	46.00	28.31	
	4.315	23.90	0.49	24.39	46.00	21.61	
	6.627	21.60	0.64	22.24	50.00	27.76	
	18.232	21.51	0.90	22.41	50.00	27.59	
Neutral	0.178	53.98	0.12	54.10	64.59	10.49	QP
	0.336	39.28	0.14	39.42	59.31	19.89	
	1.519	28.45	0.18	28.63	56.00	27.37	
	4.027	32.97	0.40	33.37	56.00	22.63	
	6.420	32.38	0.55	32.93	60.00	27.07	
	17.849	33.74	0.79	34.53	60.00	25.47	
	0.178	41.60	0.12	41.72	54.59	12.87	AV
	0.336	26.50	0.14	26.64	49.31	22.67	
	1.519	17.60	0.18	17.78	46.00	28.22	
	4.027	21.69	0.40	22.09	46.00	23.91	
	6.420	21.59	0.55	22.14	50.00	27.86	
	17.849	21.71	0.79	22.50	50.00	27.50	

TEST ENGINEER: SAWEN LI

4 RADIATED EMISSION TEST

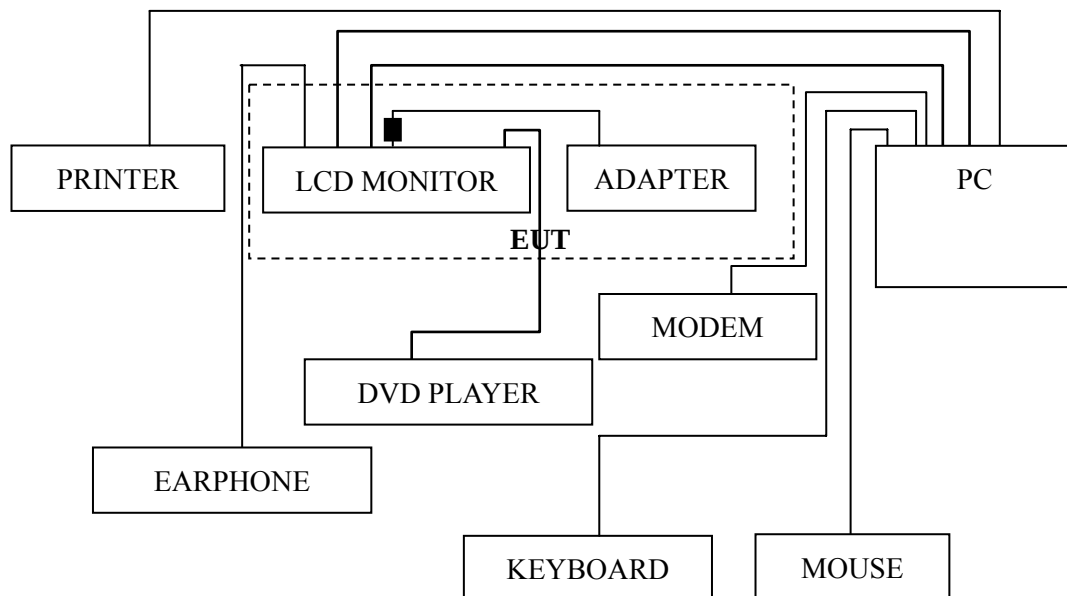
4.1 Test Equipment

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, 2012	Mar 22, 2013
2.	Preamplifier	Agilent	8447D	2944A10548	Mar 18, 2012	Sep 18, 2012
3.	Preamplifier	HP	8449B	3008A00864	Mar 22, 2012	Mar 22, 2013
4.	Bi-log Antenna	TESEQ	CBL6112D	23192	Dec 01, 2011	Dec 01, 2012
5.	Horn Antenna	EMCO	3115	9607-4878	May 06, 2012	May 06, 2013
6.	Spectrum	Agilent	E7405A	MY45106600	Mar 22, 2012	Mar 22, 2013
7.	50 Ω Coaxial Switch	Anritsu	MP59B	6200426390	Mar 18, 2012	Sep 18, 2012
8.	Software	Audix	E3	SET00200 9912M295-2	--	--

4.2 Block Diagram of Test Setup

4.2.1 EUT and Peripherals

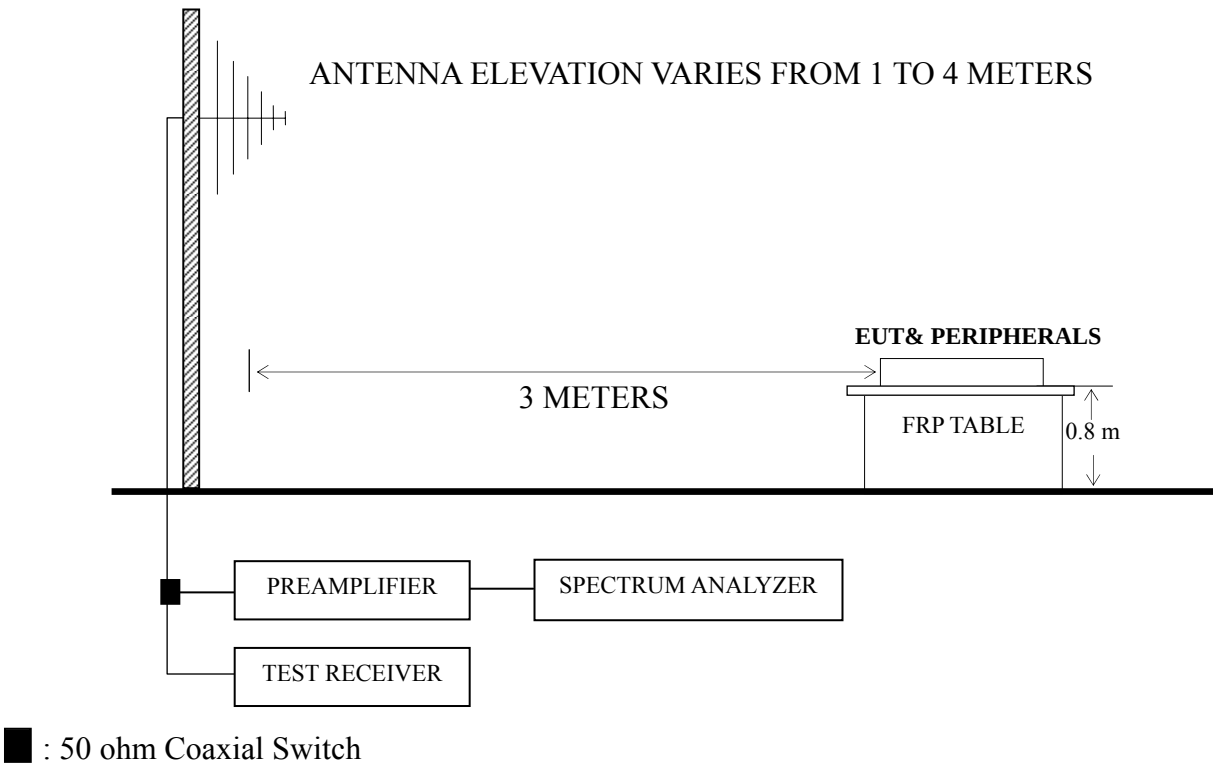


■ : Ferrite core

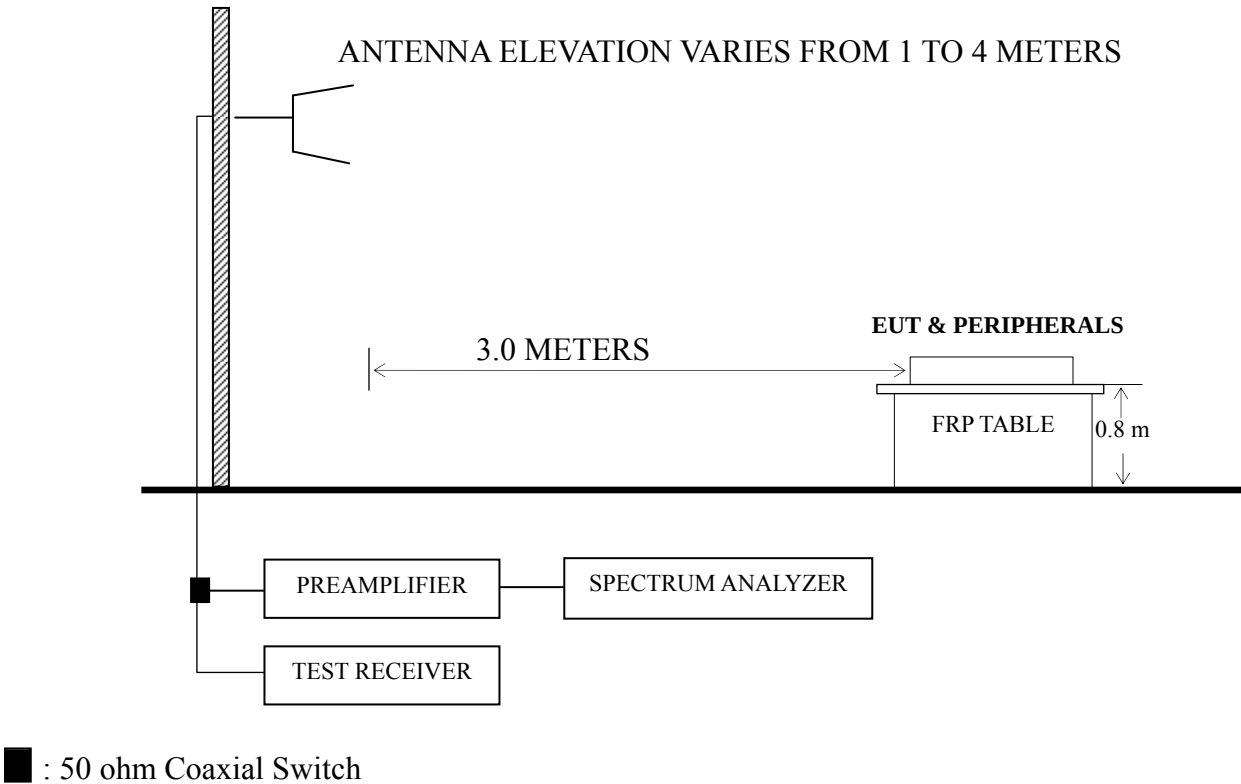
Note: Ferrite core only for Adapter #1

4.2.2 Radiated emission test setup

4.2.2.1 Below 1GHz



4.2.2.2 Above 1GHz



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 worst test mode in 30 – 1000 MHz test.

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 1920*1080@60Hz	P28
	DVI 1920*1080@60Hz	P29 – P30
	HDMI 1920*1080@60Hz	P31
	HDMI 1080P	P32
	DVI 1680*1050@60Hz	P33
	DVI 1280*1024@75Hz	P34
	DVI 640*480@60Hz	P35
Adapter #2	DVI 1920*1080@60Hz	P36 – P37
Adapter #3	DVI 1920*1080@60Hz	P38 – P39
Adapter #4	DVI 1920*1080@60Hz	P40 – P41

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

NOTE 2 – Emission Level = Antenna Factor + Cable Loss + Meter Reading.($< 1\text{GHz}$)

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

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

NOTE 8 – The worst case is for DVI 1920*1080@60Hz test mode (Adapter #1). The worst emission at horizontal polarization was detected at 526.640 MHz with corrected signal level of 37.99 dB ($\mu\text{V/m}$) (limit is 46.00 dB ($\mu\text{V/m}$)), when the antenna was 1.00 m height and the turntable was at 255° . The worst emission at vertical polarization was detected at 322.940 MHz with corrected signal level of 32.54 dB ($\mu\text{V/m}$) (limit is 46.00 dB ($\mu\text{V/m}$)), when the antenna was 1.00 m height and the turntable was at 70° .

EUT : LCD Monitor Temperature : 22°C

Model No. : E2242VA Humidity : 60%RH

Serial No. : E1205589-01/01 Date of Test : May 18, 2012

Test Mode : D-Sub 1920*1080@60Hz Adapter #1 : LCAP21

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	1.92	17.78	0.81	20.51	40.00	19.49
	51.340	8.53	8.58	0.95	18.06	40.00	21.94
	140.580	11.89	10.60	2.18	24.67	43.50	18.83
	242.430	11.93	11.65	2.58	26.16	46.00	19.84
	315.180	14.65	14.12	2.79	31.56	46.00	14.44
	591.630	4.97	18.16	3.45	26.58	46.00	19.42
Vertical	31.940	11.55	17.29	0.82	29.66	40.00	10.34
	51.340	20.89	8.58	0.95	30.42	40.00	9.58
	140.580	14.48	10.60	2.18	27.26	43.50	16.24
	198.780	17.77	9.81	2.42	30.00	43.50	13.50
	478.140	9.18	17.34	3.21	29.73	46.00	16.27
	657.590	4.28	18.97	3.60	26.85	46.00	19.15

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2242VA Humidity : 60%RH

Serial No. : E1205589-01/01 Date of Test : May 18, 2012

Test Mode : DVI 1920*1080@60Hz Adapter #1 : LCAP21

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	51.340	21.22	8.58	0.95	--	30.75	40.00	9.25	QP
	143.490	14.68	10.54	2.19	--	27.41	43.50	16.09	
	193.930	18.52	9.86	2.41	--	30.79	43.50	12.71	
	322.940	15.71	14.34	2.82	--	32.87	46.00	13.13	
	526.640	16.90	17.76	3.33	--	37.99	46.00	8.01	
	591.630	8.88	18.16	3.45	--	30.49	46.00	15.51	
	1075.000	48.88	22.16	5.27	38.04	38.27	74.00	35.73	PK
	1250.000	43.46	24.05	5.42	37.65	35.28	74.00	38.72	
	1365.000	44.43	24.80	5.55	37.33	37.45	74.00	36.55	
	1465.000	39.20	26.11	5.72	37.06	33.97	74.00	40.03	
	1595.000	40.72	26.41	5.93	36.77	36.29	74.00	37.71	
	1760.000	43.18	26.96	6.17	36.49	39.82	74.00	34.18	
	1075.000	40.88	22.16	5.27	38.04	30.27	54.00	23.73	AV
	1250.000	32.46	24.05	5.42	37.65	24.28	54.00	29.72	
	1365.000	30.43	24.80	5.55	37.33	23.45	54.00	30.55	
	1465.000	26.20	26.11	5.72	37.06	20.97	54.00	33.03	
	1595.000	28.72	26.41	5.93	36.77	24.29	54.00	29.71	
	1760.000	29.18	26.96	6.17	36.49	25.82	54.00	28.18	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2242VA Humidity : 60%RH

Serial No. : E1205589-01/01 Date of Test : May 18, 2012

Test Mode : DVI 1920*1080@60Hz Adapter #1 : LCAP21

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	30.970	1.28	17.78	0.81	--	19.87	40.00	20.13	QP
	72.680	6.33	10.08	1.47	--	17.88	40.00	22.12	
	140.580	12.63	10.60	2.18	--	25.41	43.50	18.09	
	322.940	15.38	14.34	2.82	--	32.54	46.00	13.46	
	356.890	10.19	15.33	2.90	--	28.42	46.00	17.58	
	591.630	5.22	18.16	3.45	--	26.83	46.00	19.17	
	1080.000	43.24	22.24	5.27	38.03	32.72	74.00	41.28	PK
	1275.000	40.65	24.25	5.47	37.57	32.80	74.00	41.20	
	1365.000	40.66	24.80	5.55	37.33	33.68	74.00	40.32	
	1465.000	38.26	26.11	5.72	37.06	33.03	74.00	40.97	
	1600.000	41.52	26.40	5.93	36.76	37.09	74.00	36.91	
	1760.000	43.08	26.96	6.17	36.49	39.72	74.00	34.28	
	1080.000	32.24	22.24	5.27	38.03	21.72	54.00	32.28	AV
	1275.000	29.65	24.25	5.47	37.57	21.80	54.00	32.20	
	1365.000	28.66	24.80	5.55	37.33	21.68	54.00	32.32	
	1465.000	22.26	26.11	5.72	37.06	17.03	54.00	36.97	
	1600.000	29.52	26.40	5.93	36.76	25.09	54.00	28.91	
	1760.000	30.08	26.96	6.17	36.49	26.72	54.00	27.28	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2242VA Humidity : 60%RH

Serial No. : E1205589-01/01 Date of Test : May 18, 2012

Test Mode : HDMI 1920*1080@60Hz Adapter #1 : LCAP21

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	51.340	21.62	8.58	0.95	31.15	40.00	8.85
	140.580	14.71	10.60	2.18	27.49	43.50	16.01
	193.930	17.90	9.86	2.41	30.17	43.50	13.33
	322.940	14.97	14.34	2.82	32.13	46.00	13.87
	478.140	8.27	17.34	3.21	28.82	46.00	17.18
	698.330	3.05	19.47	3.68	26.20	46.00	19.80
Vertical	30.970	2.06	17.78	0.81	20.65	40.00	19.35
	51.340	8.25	8.58	0.95	17.78	40.00	22.22
	142.520	11.56	10.56	2.18	24.30	43.50	19.20
	213.330	13.54	10.33	2.47	26.34	43.50	17.16
	390.840	5.34	16.10	2.97	24.41	46.00	21.59
	591.630	5.50	18.16	3.45	27.11	46.00	18.89

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2242VA Humidity : 60%RH

Serial No. : E1205589-01/01 Date of Test : May 18, 2012

Test Mode : HDMI 1080P Adapter #1 : LCAP21

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	11.64	17.78	0.81	30.23	40.00	9.77
	51.340	18.32	8.58	0.95	27.85	40.00	12.15
	114.390	12.90	11.10	1.97	25.97	43.50	17.53
	138.640	14.42	10.65	2.16	27.23	43.50	16.27
	281.230	12.05	13.17	2.70	27.92	46.00	18.08
	715.790	2.28	19.66	3.73	25.67	46.00	20.33
Vertical	31.940	2.65	17.29	0.82	20.76	40.00	19.24
	51.340	7.43	8.58	0.95	16.96	40.00	23.04
	72.680	9.94	10.08	1.47	21.49	40.00	18.51
	114.390	7.47	11.10	1.97	20.54	43.50	22.96
	135.730	10.27	10.71	2.14	23.12	43.50	20.38
	526.640	5.57	17.76	3.33	26.66	46.00	19.34

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2242VA Humidity : 60%RH

Serial No. : E1205589-01/01 Date of Test : May 18, 2012

Test Mode : DVI 1680*1050@60Hz Adapter #1 : LCAP21

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	1.95	17.78	0.81	20.54	40.00	19.46
	111.480	7.37	11.15	1.96	20.48	43.50	23.02
	143.490	11.16	10.54	2.19	23.89	43.50	19.61
	223.030	11.36	10.76	2.51	24.63	46.00	21.37
	429.640	5.45	16.69	3.08	25.22	46.00	20.78
	754.590	2.72	20.12	3.80	26.64	46.00	19.36
Vertical	32.910	10.19	16.79	0.82	27.80	40.00	12.20
	43.580	16.05	10.86	0.89	27.80	40.00	12.20
	114.390	12.63	11.10	1.97	25.70	43.50	17.80
	143.490	13.75	10.54	2.19	26.48	43.50	17.02
	211.390	14.57	10.26	2.47	27.30	43.50	16.20
	290.930	9.99	13.46	2.74	26.19	46.00	19.81

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2242VA Humidity : 60%RH

Serial No. : E1205589-01/01 Date of Test : May 18, 2012

Test Mode : DVI 1280*1024@75Hz Adapter #1 : LCAP21

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	36.790	12.26	14.57	0.85	27.68	40.00	12.32
	48.430	16.86	9.02	0.90	26.78	40.00	13.22
	70.740	12.37	9.93	1.43	23.73	40.00	16.27
	140.580	12.24	10.60	2.18	25.02	43.50	18.48
	281.230	14.26	13.17	2.70	30.13	46.00	15.87
	793.390	2.46	20.54	3.88	26.88	46.00	19.12
Vertical	30.970	1.95	17.78	0.81	20.54	40.00	19.46
	51.340	7.43	8.58	0.95	16.96	40.00	23.04
	87.230	5.32	10.88	1.70	17.90	40.00	22.10
	140.580	11.99	10.60	2.18	24.77	43.50	18.73
	281.230	11.60	13.17	2.70	27.47	46.00	18.53
	591.630	6.70	18.16	3.45	28.31	46.00	17.69

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2242VA Humidity : 60%RH

Serial No. : E1205589-01/01 Date of Test : May 18, 2012

Test Mode : DVI 640*480@60Hz Adapter #1 : LCAP21

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	33.880	11.54	16.26	0.83	28.63	40.00	11.37
	48.430	18.32	9.02	0.90	28.24	40.00	11.76
	114.390	12.56	11.10	1.97	25.63	43.50	17.87
	143.490	12.43	10.54	2.19	25.16	43.50	18.34
	298.690	14.31	13.67	2.75	30.73	46.00	15.27
	761.380	2.88	20.20	3.82	26.90	46.00	19.10
Vertical	31.940	2.67	17.29	0.82	20.78	40.00	19.22
	72.680	6.12	10.08	1.47	17.67	40.00	22.33
	111.480	7.70	11.15	1.96	20.81	43.50	22.69
	250.190	13.09	11.99	2.61	27.69	46.00	18.31
	281.230	11.83	13.17	2.70	27.70	46.00	18.30
	764.290	2.62	20.23	3.82	26.67	46.00	19.33

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2242VA Humidity : 60%RH

Serial No. : E1205589-01/01 Date of Test : May 18, 2012

Test Mode : DVI 1920*1080@60Hz Adapter #2 : ADS-40SG-19-3
19025G

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	31.940	11.27	17.29	0.82	--	29.38	40.00	10.62	QP
	48.430	18.62	9.02	0.90	--	28.54	40.00	11.46	
	75.590	12.84	10.27	1.53	--	24.64	40.00	15.36	
	148.340	13.46	10.44	2.22	--	26.12	43.50	17.38	
	218.180	17.04	10.52	2.50	--	30.06	46.00	15.94	
	288.990	14.09	13.39	2.72	--	30.20	46.00	15.80	
	1075.000	55.88	22.16	5.27	38.04	45.27	74.00	28.73	PK
	1250.000	50.46	24.05	5.42	37.65	42.28	74.00	31.72	
	1365.000	51.43	24.80	5.55	37.33	44.45	74.00	29.55	
	1465.000	46.20	26.11	5.72	37.06	40.97	74.00	33.03	
	1595.000	47.72	26.41	5.93	36.77	43.29	74.00	30.71	
	1760.000	50.18	26.96	6.17	36.49	46.82	74.00	27.18	
	1075.000	44.88	22.16	5.27	38.04	34.27	54.00	19.73	AV
	1250.000	35.46	24.05	5.42	37.65	27.28	54.00	26.72	
	1365.000	38.43	24.80	5.55	37.33	31.45	54.00	22.55	
	1465.000	35.20	26.11	5.72	37.06	29.97	54.00	24.03	
	1595.000	38.72	26.41	5.93	36.77	34.29	54.00	19.71	
	1760.000	36.18	26.96	6.17	36.49	32.82	54.00	21.18	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2242VA Humidity : 60%RH

Serial No. : E1205589-01/01 Date of Test : May 18, 2012

Test Mode : DVI 1920*1080@60Hz Adapter #2 : ADS-40SG-19-3
19025G

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	31.940	3.53	17.29	0.82	--	21.64	40.00	18.36	QP
	75.590	6.96	10.27	1.53	--	18.76	40.00	21.24	
	116.330	8.73	11.07	2.00	--	21.80	43.50	21.70	
	148.340	12.46	10.44	2.22	--	25.12	43.50	18.38	
	216.240	18.28	10.45	2.49	--	31.22	46.00	14.78	
	429.640	6.82	16.69	3.08	--	26.59	46.00	19.41	
	1080.000	46.24	22.24	5.27	38.03	35.72	74.00	38.28	PK
	1170.000	44.47	23.38	5.34	37.83	35.36	74.00	38.64	
	1315.000	46.87	24.50	5.51	37.48	39.40	74.00	34.60	
	1465.000	41.26	26.11	5.72	37.06	36.03	74.00	37.97	
	1600.000	44.52	26.40	5.93	36.76	40.09	74.00	33.91	
	1760.000	46.08	26.96	6.17	36.49	42.72	74.00	31.28	
	1080.000	37.24	22.24	5.27	38.03	26.72	54.00	27.28	AV
	1170.000	29.47	23.38	5.34	37.83	20.36	54.00	33.64	
	1315.000	35.87	24.50	5.51	37.48	28.40	54.00	25.60	
	1465.000	27.26	26.11	5.72	37.06	22.03	54.00	31.97	
	1600.000	33.52	26.40	5.93	36.76	29.09	54.00	24.91	
	1760.000	30.08	26.96	6.17	36.49	26.72	54.00	27.28	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2242VA Humidity : 60%RH

Serial No. : E1205589-01/01 Date of Test : May 18, 2012

Test Mode : DVI 1920*1080@60Hz Adapter #3 : LCAP26-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	31.940	10.44	17.29	0.82	--	28.55	40.00	11.45	QP
	51.340	18.67	8.58	0.95	--	28.20	40.00	11.80	
	61.040	15.13	9.21	1.21	--	25.55	40.00	14.45	
	111.480	13.25	11.15	1.96	--	26.36	43.50	17.14	
	138.640	13.56	10.65	2.16	--	26.37	43.50	17.13	
	591.630	4.99	18.16	3.45	--	26.60	46.00	19.40	
	1020.000	38.57	24.98	5.22	38.16	30.61	74.00	43.39	PK
	1250.000	41.43	26.08	5.42	37.65	35.28	74.00	38.72	
	1365.000	42.64	26.59	5.55	37.33	37.45	74.00	36.55	
	1465.000	38.41	26.90	5.72	37.06	33.97	74.00	40.03	
	1595.000	40.05	27.08	5.93	36.77	36.29	74.00	37.71	
	1760.000	42.91	27.23	6.17	36.49	39.82	74.00	34.18	
	1020.000	30.57	24.98	5.22	38.16	22.61	54.00	31.39	AV
	1250.000	30.43	26.08	5.42	37.65	24.28	54.00	29.72	
	1365.000	29.64	26.59	5.55	37.33	24.45	54.00	29.55	
	1465.000	26.41	26.90	5.72	37.06	21.97	54.00	32.03	
	1595.000	27.05	27.08	5.93	36.77	23.29	54.00	30.71	
	1760.000	31.91	27.23	6.17	36.49	28.82	54.00	25.18	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2242VA Humidity : 60%RH

Serial No. : E1205589-01/01 Date of Test : May 18, 2012

Test Mode : DVI 1920*1080@60Hz Adapter #3 : LCAP26-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	31.940	3.02	17.29	0.82	--	21.13	40.00	18.87	QP
	70.740	10.98	9.93	1.43	--	22.34	40.00	17.66	
	135.730	10.08	10.71	2.14	--	22.93	43.50	20.57	
	281.230	10.10	13.17	2.70	--	25.97	46.00	20.03	
	458.740	3.29	17.09	3.15	--	23.53	46.00	22.47	
	764.290	2.80	20.23	3.82	--	26.85	46.00	19.15	
	1080.000	39.24	25.24	5.27	38.03	31.72	74.00	42.28	PK
	1275.000	37.69	26.21	5.47	37.57	31.80	74.00	42.20	
	1315.000	40.98	26.39	5.51	37.48	35.40	74.00	38.60	
	1465.000	36.47	26.90	5.72	37.06	32.03	74.00	41.97	
	1600.000	39.84	27.08	5.93	36.76	36.09	74.00	37.91	
	1760.000	41.81	27.23	6.17	36.49	38.72	74.00	35.28	
	1080.000	31.24	25.24	5.27	38.03	23.72	54.00	30.28	AV
	1275.000	27.69	26.21	5.47	37.57	21.80	54.00	32.20	
	1315.000	26.98	26.39	5.51	37.48	21.40	54.00	32.60	
	1465.000	26.47	26.90	5.72	37.06	22.03	54.00	31.97	
	1600.000	25.84	27.08	5.93	36.76	22.09	54.00	31.91	
	1760.000	27.81	27.23	6.17	36.49	24.72	54.00	29.28	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2242VA Humidity : 60%RH

Serial No. : E1205589-01/01 Date of Test : May 18, 2012

Test Mode : DVI 1920*1080@60Hz Adapter #4 : ADS-40FSG-19
19025GPCU-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	33.880	11.88	16.26	0.83	--	28.97	40.00	11.03	QP
	48.430	19.61	9.02	0.90	--	29.53	40.00	10.47	
	114.390	11.49	11.10	1.97	--	24.56	43.50	18.94	
	140.580	11.60	10.60	2.18	--	24.38	43.50	19.12	
	281.230	15.26	13.17	2.70	--	31.13	46.00	14.87	
	761.380	2.50	20.20	3.82	--	26.52	46.00	19.48	
	1075.000	45.83	25.21	5.27	38.04	38.27	74.00	35.73	PK
	1250.000	41.43	26.08	5.42	37.65	35.28	74.00	38.72	
	1365.000	42.64	26.59	5.55	37.33	37.45	74.00	36.55	
	1465.000	38.41	26.90	5.72	37.06	33.97	74.00	40.03	
	1595.000	40.05	27.08	5.93	36.77	36.29	74.00	37.71	
	1760.000	42.91	27.23	6.17	36.49	39.82	74.00	34.18	
	1075.000	36.83	25.21	5.27	38.04	29.27	54.00	24.73	AV
	1250.000	26.43	26.08	5.42	37.65	20.28	54.00	33.72	
	1365.000	29.64	26.59	5.55	37.33	24.45	54.00	29.55	
	1465.000	28.41	26.90	5.72	37.06	23.97	54.00	30.03	
	1595.000	31.05	27.08	5.93	36.77	27.29	54.00	26.71	
	1760.000	29.91	27.23	6.17	36.49	26.82	54.00	27.18	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2242VA Humidity : 60%RH

Serial No. : E1205589-01/01 Date of Test : May 18, 2012

Test Mode : DVI 1920*1080@60Hz Adapter #4 : ADS-40FSG-19
19025GPCU-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	33.880	3.24	16.26	0.83	--	20.33	40.00	19.67	QP
	70.740	9.54	9.93	1.43	--	20.90	40.00	19.10	
	111.480	8.36	11.15	1.96	--	21.47	43.50	22.03	
	138.640	8.97	10.65	2.16	--	21.78	43.50	21.72	
	281.230	10.26	13.17	2.70	--	26.13	46.00	19.87	
	761.380	3.02	20.20	3.82	--	27.04	46.00	18.96	
	1080.000	44.24	25.24	5.27	38.03	36.72	74.00	37.28	PK
	1170.000	43.19	25.66	5.34	37.83	36.36	74.00	37.64	
	1315.000	45.98	26.39	5.51	37.48	40.40	74.00	33.60	
	1465.000	41.47	26.90	5.72	37.06	37.03	74.00	36.97	
	1600.000	44.84	27.08	5.93	36.76	41.09	74.00	32.91	
	1760.000	40.81	27.23	6.17	36.49	37.72	74.00	36.28	
	1080.000	37.24	25.24	5.27	38.03	29.72	54.00	24.28	AV
	1170.000	30.19	25.66	5.34	37.83	23.36	54.00	30.64	
	1315.000	33.98	26.39	5.51	37.48	28.40	54.00	25.60	
	1465.000	28.47	26.90	5.72	37.06	24.03	54.00	29.97	
	1600.000	30.84	27.08	5.93	36.76	27.09	54.00	26.91	
	1760.000	29.81	27.23	6.17	36.49	26.72	54.00	27.28	

TEST ENGINEER: RAVEN JIN

5 DEVIATION TO TEST SPECIFICATIONS

None.