

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

LCD Monitor

Model No.: IPS234VA

Serial No.: E12091133-01/01

FCC ID : BEJIPS234VA

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

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Report No. : ACI-F12040A1
Date of Test : Sep 20 – 28, 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. : IPS234VA
(B) Serial No. : E12091133-01/01
(C) Power Supply : 120V/60Hz

Test Procedure Used:

*FCC RULES AND REGULATIONS PART 15 SUBPART B CLASS B OCTOBER 2011
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: IPS234VA; S/N: E12091133-01/01) which was tested in 3m anechoic chamber Sep 20 – 28, 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 : Sep 20 – 28, 2012 Date of Report : Oct 17, 2012

Producer : Yenny Yu
YENNY YU / Assistant

Review : Dio Yang
DIO YANG / 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 2011 AND ANSI C63.4-2003	15.107(a) Class B	Pass
Radiated Disturbance	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2011 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. : IPS234VA

Serial No. : E12091133-01/01

Note #1 : The different list for all the models are as follows:

Report No.	Model No.	Rev. Summary	Edition No.	Data of Rev.
ACI-F12040	IPS234VA	Original Report	0	Mar 14, 2012
ACI-F12040A1	IPS234VA	To add six adapters. (see below)	Rev. A1	Oct 17, 2012

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-40FSG-19 19025G***-1
 (***) can be PG, PBR, PI, PCU, PB-2
 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

AC Adapter #3 : Manufacturer : LG
 Model Number : PSAB-L202*
 (* can be A, B, C, D,
 A, B, C, D stand for different AC plug type.
 PSAB-L202C 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, with one core

- AC Adapter #4 : 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 #5 : 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 #6 : Manufacturer : LG
 Model Number : PSAB-L203A
 Input : 100-240V~, 50-60Hz 1.0A
 Output : 19V $\overline{\text{---}}$ 1.3A
 Output Cable : Unshielded, Undetachable, 1.8m, with one core
- Note #2 : Adapter #1 and Adapter #4 are all the same except for different AC input type.
 Adapter #2 and Adapter #5 are all the same except for different AC input type.
 Adapter #3 and Adapter #6 are all the same except for different AC input type.
 We evaluated and selected the Adapter #1, Adapter #2 and Adapter #3 to test and record in the report.

Adapter :

Original Adapter	New Adapter
Manufacturer : LIEN CHANG M/N : LCAP21A	Manufacturer : LIEN CHANG M/N : LCAP21
Manufacturer : HONOR M/N : ADS-40SG-19-3 19032G	Manufacturer : HONOR M/N : ADS-40FSG-19 19025G***-1 (*** can be PG, PBR, PI, PCU)
Manufacturer : HONOR M/N : ADS-40FSG-19 19032G***-1 (*** can be PG, PBR, PI, PCU)	Manufacturer : LG M/N : PSAB-L202*
Manufacturer : LIEN CHANG M/N : LCAP26A-* (* can be A, E, I, B)	Manufacturer : LIEN CHANG M/N : LCAP26-*
--	Manufacturer : HONOR M/N : ADS-40SG-19-3 19025G
--	Manufacturer : LG M/N : PSAB-L203A

Applicant	: LG Electronics U.S.A., Inc. 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	: Manufacturer : LG Display M/N : LM230WF3
Max Resolution	: 1920*1080@60Hz
D-Sub Cable #1	: Shielded, Detachable, 1.85m, with two cores on cable
D-Sub Cable #2	: Shielded, Detachable, 1.50m, with two cores in connector
DVI Cable #1	: Shielded, Detachable, 1.85m, with two cores on cable
DVI Cable #2	: Shielded, Detachable, 1.50m, 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 DVD PLAYER / PC |
| (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

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 = 3.42 dB

Radiated Emission Expanded Uncertainty (30-200MHz):
U = 4.14 dB (Horizontal)
U = 4.28 dB (Vertical)

Radiated Emission Expanded Uncertainty (200M-1GHz):
U = 4.18 dB (Horizontal)
U = 4.26 dB (Vertical)

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

3 CONDUCTED EMISSION TEST

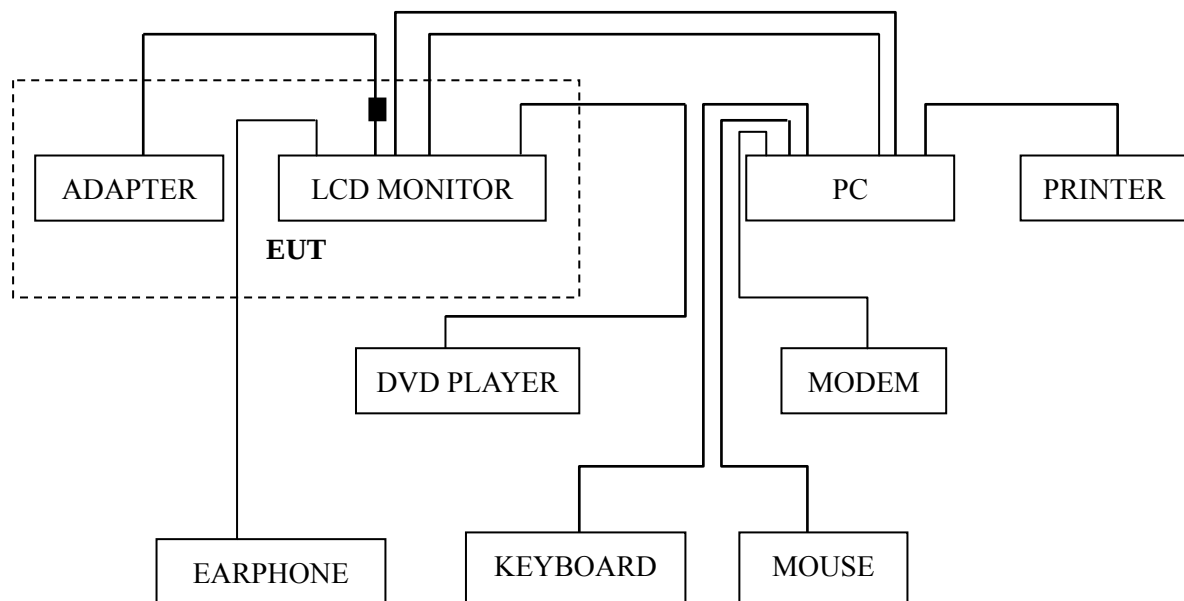
3.1 Test Equipment

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, 2012	Mar 22, 2013
2.	Artificial Mains Network (AMN #1)	R&S	ESH2-Z5	843890/011	Feb 13, 2012	Feb 13, 2013
3.	Artificial Mains Network (AMN #2)	R&S	ENV4200	100125	Mar 22, 2012	Mar 22, 2013
4.	50 Ω Coaxial Switch	Anritsu	MP59B	6200426389	Sep 18, 2012	Mar 18, 2013
5.	50 Ω Terminator	Anritsu	BNC	001	Mar 22, 2012	Mar 22, 2013
6.	Software	Audix	E3	SET00200 9804M592	--	--

3.2 Block Diagram of Test Setup

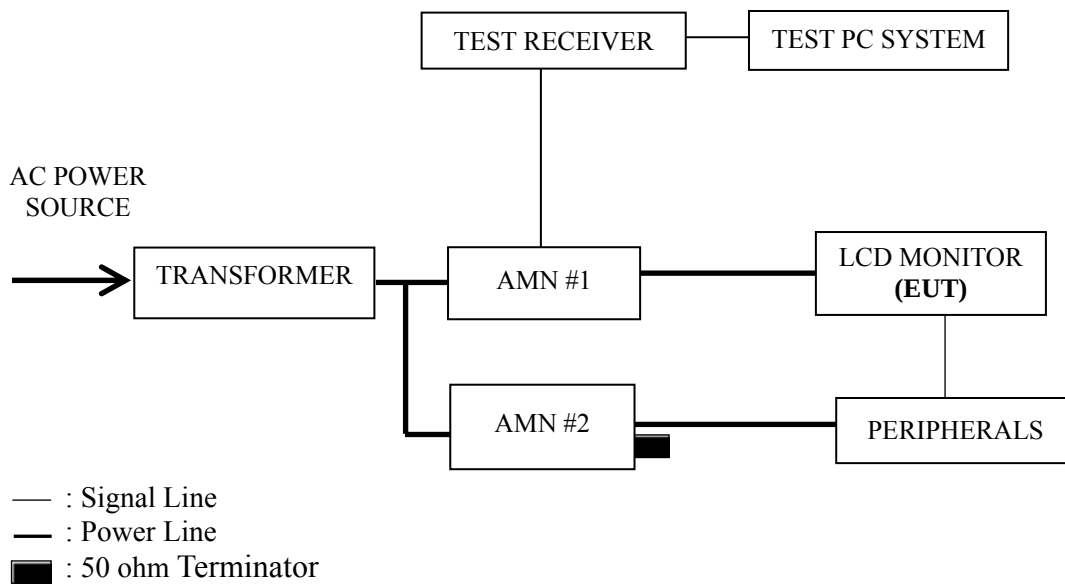
3.2.1 EUT & Peripherals



■ : Ferrite core

Note: Ferrite core only for Adapter #1, #3

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 (μV)	
	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 3.5.4 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
	DVI 1680*1050@60Hz
	DVI 1280*1024@75Hz
	DVI 640*480@60Hz
Adapter #2	DVI 640*480@60Hz
Adapter #3	DVI 640*480@60Hz

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

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	P14
	DVI 1920*1080@60Hz	P15
	HDMI 1920*1080@60Hz	P16
	HDMI 1080P	P17
	DVI 1680*1050@60Hz	P18
	DVI 1280*1024@75Hz	P19
	DVI 640*480@60Hz	P20
Adapter #2	DVI 640*480@60Hz	P21
Adapter #3	DVI 640*480@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 DVI 640*480@60Hz test mode (Adapter #1).
The worst emission is detected at 0.174 MHz (Average Value) with corrected signal level of 48.72 dB (μV) (limit is 54.77 dB (μV)), when the Neutral of the EUT is connected to AMN.

EUT : LCD Monitor Temperature : 22°C

Model No. : IPS234VA Humidity : 48%RH

Serial No. : E12091133-01/01 Date of Test : Sep 20, 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	0.170	55.29	0.24	55.53	64.94	9.41	QP
	0.249	44.93	0.25	45.18	61.78	16.60	
	0.561	32.36	0.32	32.68	56.00	23.32	
	4.721	34.12	0.50	34.62	56.00	21.38	
	6.352	30.90	0.61	31.51	60.00	28.49	
	18.426	30.22	0.91	31.13	60.00	28.87	
	0.170	45.20	0.24	45.44	54.94	9.50	AV
	0.249	34.60	0.25	34.85	51.78	16.93	
	0.561	22.30	0.32	22.62	46.00	23.38	
	4.721	23.90	0.50	24.40	46.00	21.60	
	6.352	20.60	0.61	21.21	50.00	28.79	
	18.426	20.30	0.91	21.21	50.00	28.79	
Neutral	0.169	54.69	0.12	54.81	64.99	10.18	QP
	0.252	43.28	0.11	43.39	61.69	18.30	
	0.561	29.68	0.17	29.85	56.00	26.15	
	4.315	33.87	0.40	34.27	56.00	21.73	
	6.285	29.56	0.53	30.09	60.00	29.91	
	16.055	29.79	0.74	30.53	60.00	29.47	
	0.169	44.45	0.12	44.57	54.99	10.42	AV
	0.252	33.11	0.11	33.22	51.69	18.47	
	0.561	19.61	0.17	19.78	46.00	26.22	
	4.315	23.60	0.40	24.00	46.00	22.00	
	6.285	18.90	0.53	19.43	50.00	30.57	
	16.055	19.20	0.74	19.94	50.00	30.06	

TEST ENGINEER: SAWEN LI

EUT : LCD Monitor Temperature : 22°C

Model No. : IPS234VA Humidity : 48%RH

Serial No. : E12091133-01/01 Date of Test : Sep 20, 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	0.168	56.14	0.24	56.38	65.08	8.70	QP
	0.249	45.76	0.25	46.01	61.78	15.77	
	0.564	31.83	0.31	32.14	56.00	23.86	
	4.672	35.36	0.50	35.86	56.00	20.14	
	6.488	29.40	0.62	30.02	60.00	29.98	
	18.622	29.84	0.91	30.75	60.00	29.25	
	0.168	46.80	0.24	47.04	55.08	8.04	AV
	0.249	35.60	0.25	35.85	51.78	15.93	
	0.564	21.61	0.31	21.92	46.00	24.08	
	4.672	25.20	0.50	25.70	46.00	20.30	
	6.488	19.20	0.62	19.82	50.00	30.18	
	18.622	18.90	0.91	19.81	50.00	30.19	
Neutral	0.166	56.38	0.13	56.51	65.16	8.65	QP
	0.256	44.76	0.11	44.87	61.56	16.69	
	0.579	29.30	0.18	29.48	56.00	26.52	
	4.574	34.06	0.42	34.48	56.00	21.52	
	6.488	28.25	0.55	28.80	60.00	31.20	
	15.226	30.90	0.73	31.63	60.00	28.37	
	0.166	47.38	0.13	47.51	55.16	7.65	AV
	0.256	34.61	0.11	34.72	51.56	16.84	
	0.579	18.60	0.18	18.78	46.00	27.22	
	4.574	23.59	0.42	24.01	46.00	21.99	
	6.488	18.20	0.55	18.75	50.00	31.25	
	15.226	20.60	0.73	21.33	50.00	28.67	

TEST ENGINEER: SAWEN LI

EUT : LCD Monitor Temperature : 22°C

Model No. : IPS234VA Humidity : 48%RH

Serial No. : E12091133-01/01 Date of Test : Sep 20, 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	0.169	55.69	0.24	55.93	64.99	9.06	QP
	0.249	45.26	0.25	45.51	61.78	16.27	
	0.567	31.59	0.31	31.90	56.00	24.10	
	4.407	32.91	0.49	33.40	56.00	22.60	
	6.420	30.40	0.62	31.02	60.00	28.98	
	14.986	29.65	0.84	30.49	60.00	29.51	
	0.169	46.01	0.24	46.25	54.99	8.74	AV
	0.249	35.30	0.25	35.55	51.78	16.23	
	0.567	21.30	0.31	21.61	46.00	24.39	
	4.407	22.60	0.49	23.09	46.00	22.91	
	6.420	20.09	0.62	20.71	50.00	29.29	
	14.986	19.50	0.84	20.34	50.00	29.66	
Neutral	0.169	55.76	0.12	55.88	64.99	9.11	QP
	0.249	44.92	0.11	45.03	61.78	16.75	
	0.561	30.53	0.17	30.70	56.00	25.30	
	4.361	34.16	0.40	34.56	56.00	21.44	
	6.352	29.22	0.54	29.76	60.00	30.24	
	18.232	30.37	0.80	31.17	60.00	28.83	
	0.169	44.98	0.12	45.10	54.99	9.89	AV
	0.249	34.61	0.11	34.72	51.78	17.06	
	0.561	20.31	0.17	20.48	46.00	25.52	
	4.361	23.61	0.40	24.01	46.00	21.99	
	6.352	18.90	0.54	19.44	50.00	30.56	
	18.232	20.30	0.80	21.10	50.00	28.90	

TEST ENGINEER: SAWEN LI

EUT : LCD Monitor Temperature : 22°C

Model No. : IPS234VA Humidity : 48%RH

Serial No. : E12091133-01/01 Date of Test : Sep 20, 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	0.170	54.09	0.24	54.33	64.94	10.61	QP
	0.256	43.99	0.25	44.24	61.56	17.32	
	0.567	31.91	0.31	32.22	56.00	23.78	
	4.224	32.25	0.49	32.74	56.00	23.26	
	6.252	30.99	0.60	31.59	60.00	28.41	
	19.950	29.59	0.92	30.51	60.00	29.49	
	0.170	44.25	0.24	44.49	54.94	10.45	AV
	0.256	33.60	0.25	33.85	51.56	17.71	
	0.567	21.60	0.31	21.91	46.00	24.09	
	4.224	22.10	0.49	22.59	46.00	23.41	
	6.252	20.60	0.60	21.20	50.00	28.80	
	19.950	19.40	0.92	20.32	50.00	29.68	
Neutral	0.168	53.87	0.13	54.00	65.08	11.08	QP
	0.249	43.66	0.11	43.77	61.78	18.01	
	0.564	29.47	0.17	29.64	56.00	26.36	
	4.315	34.76	0.40	35.16	56.00	20.84	
	6.252	30.37	0.53	30.90	60.00	29.10	
	17.755	30.36	0.79	31.15	60.00	28.85	
	0.168	43.97	0.13	44.10	55.08	10.98	AV
	0.249	33.61	0.11	33.72	51.78	18.06	
	0.564	19.41	0.17	19.58	46.00	26.42	
	4.315	24.60	0.40	25.00	46.00	21.00	
	6.252	20.30	0.53	20.83	50.00	29.17	
	17.755	20.10	0.79	20.89	50.00	29.11	

TEST ENGINEER: SAWEN LI

EUT : LCD Monitor Temperature : 22°C

Model No. : IPS234VA Humidity : 48%RH

Serial No. : E12091133-01/01 Date of Test : Sep 20, 2012

Test Mode : DVI 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	0.168	57.08	0.24	57.32	65.08	7.76	QP
	0.252	46.41	0.25	46.66	61.69	15.03	
	0.579	31.94	0.30	32.24	56.00	23.76	
	4.549	34.88	0.50	35.38	56.00	20.62	
	6.488	28.90	0.62	29.52	60.00	30.48	
	19.021	31.03	0.92	31.95	60.00	28.05	
	0.168	47.60	0.24	47.84	55.08	7.24	AV
	0.252	36.10	0.25	36.35	51.69	15.34	
	0.579	21.60	0.30	21.90	46.00	24.10	
	4.549	24.60	0.50	25.10	46.00	20.90	
	6.488	18.90	0.62	19.52	50.00	30.48	
	19.021	20.99	0.92	21.91	50.00	28.09	
Neutral	0.170	57.37	0.12	57.49	64.94	7.45	QP
	0.249	46.02	0.11	46.13	61.78	15.65	
	0.561	29.16	0.17	29.33	56.00	26.67	
	4.574	34.62	0.42	35.04	56.00	20.96	
	6.557	28.71	0.56	29.27	60.00	30.73	
	18.232	29.96	0.80	30.76	60.00	29.24	
	0.170	47.20	0.12	47.32	54.94	7.62	AV
	0.249	35.91	0.11	36.02	51.78	15.76	
	0.561	18.91	0.17	19.08	46.00	26.92	
	4.574	24.59	0.42	25.01	46.00	20.99	
	6.557	18.60	0.56	19.16	50.00	30.84	
	18.232	19.80	0.80	20.60	50.00	29.40	

TEST ENGINEER: SAWEN LI

EUT : LCD Monitor Temperature : 22°C

Model No. : IPS234VA Humidity : 48%RH

Serial No. : E12091133-01/01 Date of Test : Sep 20, 2012

Test Mode : DVI 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	0.172	56.51	0.24	56.75	64.86	8.11	QP
	0.252	46.08	0.25	46.33	61.69	15.36	
	0.561	31.18	0.32	31.50	56.00	24.50	
	4.672	34.76	0.50	35.26	56.00	20.74	
	6.627	31.84	0.64	32.48	60.00	27.52	
	17.755	29.62	0.89	30.51	60.00	29.49	
	0.172	47.01	0.24	47.25	54.86	7.61	AV
	0.252	36.00	0.25	36.25	51.69	15.44	
	0.561	21.20	0.32	21.52	46.00	24.48	
	4.672	24.10	0.50	24.60	46.00	21.40	
	6.627	21.60	0.64	22.24	50.00	27.76	
	17.755	18.91	0.89	19.80	50.00	30.20	
Neutral	0.170	57.10	0.12	57.22	64.94	7.72	QP
	0.252	45.42	0.11	45.53	61.69	16.16	
	0.592	28.96	0.18	29.14	56.00	26.86	
	4.361	34.68	0.40	35.08	56.00	20.92	
	6.420	29.71	0.55	30.26	60.00	29.74	
	18.820	29.73	0.81	30.54	60.00	29.46	
	0.170	47.20	0.12	47.32	54.94	7.62	AV
	0.252	34.91	0.11	35.02	51.69	16.67	
	0.592	18.60	0.18	18.78	46.00	27.22	
	4.361	24.61	0.40	25.01	46.00	20.99	
	6.420	18.89	0.55	19.44	50.00	30.56	
	18.820	18.60	0.81	19.41	50.00	30.59	

TEST ENGINEER: SAWEN LI

EUT : LCD Monitor Temperature : 22°C

Model No. : IPS234VA Humidity : 48%RH

Serial No. : E12091133-01/01 Date of Test : Sep 20, 2012

Test Mode : DVI 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	57.36	0.24	57.60	64.94	7.34	QP
	0.252	46.75	0.25	47.00	61.69	14.69	
	0.579	31.24	0.30	31.54	56.00	24.46	
	4.672	34.21	0.50	34.71	56.00	21.29	
	6.488	29.85	0.62	30.47	60.00	29.53	
	20.814	29.55	0.94	30.49	60.00	29.51	
	0.170	48.10	0.24	48.34	54.94	6.60	AV
	0.252	36.50	0.25	36.75	51.69	14.94	
	0.579	21.14	0.30	21.44	46.00	24.56	
	4.672	24.20	0.50	24.70	46.00	21.30	
	6.488	19.50	0.62	20.12	50.00	29.88	
	20.814	19.60	0.94	20.54	50.00	29.46	
Neutral	0.174	57.59	0.12	57.71	64.77	7.06	QP
	0.249	46.63	0.11	46.74	61.78	15.04	
	0.564	30.95	0.17	31.12	56.00	24.88	
	4.407	33.85	0.40	34.25	56.00	21.75	
	6.186	29.15	0.52	29.67	60.00	30.33	
	26.841	29.95	1.08	31.03	60.00	28.97	
	0.174	48.60	0.12	48.72	54.77	6.05	AV
	0.249	36.21	0.11	36.32	51.78	15.46	
	0.564	20.61	0.17	20.78	46.00	25.22	
	4.407	22.91	0.40	23.31	46.00	22.69	
	6.186	18.90	0.52	19.42	50.00	30.58	
	26.841	19.50	1.08	20.58	50.00	29.42	

TEST ENGINEER: SAWEN LI

EUT : LCD Monitor Temperature : 22°C

Model No. : IPS234VA Humidity : 48%RH

Serial No. : E12091133-01/01 Date of Test : Sep 20, 2012

Test Mode : DVI 640*480@60Hz Adapter #2 : 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	0.168	48.78	0.24	49.02	65.08	16.06	QP
	0.230	38.96	0.24	39.20	62.44	23.24	
	0.751	27.47	0.21	27.68	56.00	28.32	
	2.155	25.30	0.39	25.69	56.00	30.31	
	9.011	29.33	0.72	30.05	60.00	29.95	
	26.841	28.93	1.20	30.13	60.00	29.87	
	0.168	38.30	0.24	38.54	55.08	16.54	AV
	0.230	28.61	0.24	28.85	52.44	23.59	
	0.751	17.30	0.21	17.51	46.00	28.49	
	2.155	15.10	0.39	15.49	46.00	30.51	
	9.011	18.60	0.72	19.32	50.00	30.68	
	26.841	18.60	1.20	19.80	50.00	30.20	
Neutral	0.170	49.29	0.12	49.41	64.94	15.53	QP
	0.223	41.04	0.11	41.15	62.70	21.55	
	0.779	29.56	0.21	29.77	56.00	26.23	
	1.698	28.20	0.17	28.37	56.00	27.63	
	8.822	28.99	0.51	29.50	60.00	30.50	
	30.000	29.03	1.14	30.17	60.00	29.83	
	0.170	38.90	0.12	39.02	54.94	15.92	AV
	0.223	31.00	0.11	31.11	52.70	21.59	
	0.779	19.40	0.21	19.61	46.00	26.39	
	1.698	18.30	0.17	18.47	46.00	27.53	
	8.822	18.60	0.51	19.11	50.00	30.89	
	30.000	18.60	1.14	19.74	50.00	30.26	

TEST ENGINEER: SAWEN LI

EUT : LCD Monitor Temperature : 22°C

Model No. : IPS234VA Humidity : 48%RH

Serial No. : E12091133-01/01 Date of Test : Sep 20, 2012

Test Mode : DVI 640*480@60Hz Adapter #3 : PSAB-L202C

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.192	51.16	0.25	51.41	63.93	12.52	QP
	0.252	42.24	0.25	42.49	61.69	19.20	
	0.579	35.89	0.30	36.19	56.00	19.81	
	3.173	27.27	0.42	27.69	56.00	28.31	
	10.905	35.35	0.74	36.09	60.00	23.91	
	15.146	35.29	0.84	36.13	60.00	23.87	
	0.192	42.50	0.25	42.75	53.93	11.18	AV
	0.252	32.10	0.25	32.35	51.69	19.34	
	0.579	25.60	0.30	25.90	46.00	20.10	
	3.173	17.11	0.42	17.53	46.00	28.47	
	10.905	25.20	0.74	25.94	50.00	24.06	
	15.146	25.10	0.84	25.94	50.00	24.06	
Neutral	0.188	51.66	0.12	51.78	64.11	12.33	QP
	0.253	42.02	0.11	42.13	61.64	19.51	
	0.573	35.25	0.18	35.43	56.00	20.57	
	4.269	27.79	0.40	28.19	56.00	27.81	
	10.233	36.98	0.48	37.46	60.00	22.54	
	25.321	32.80	1.06	33.86	60.00	26.14	
	0.188	41.77	0.12	41.89	54.11	12.22	AV
	0.253	32.01	0.11	32.12	51.64	19.52	
	0.573	25.10	0.18	25.28	46.00	20.72	
	4.269	17.60	0.40	18.00	46.00	28.00	
	10.233	26.40	0.48	26.88	50.00	23.12	
	25.321	22.40	1.06	23.46	50.00	26.54	

TEST ENGINEER: SAWEN LI

4 RADIATED EMISSION TEST

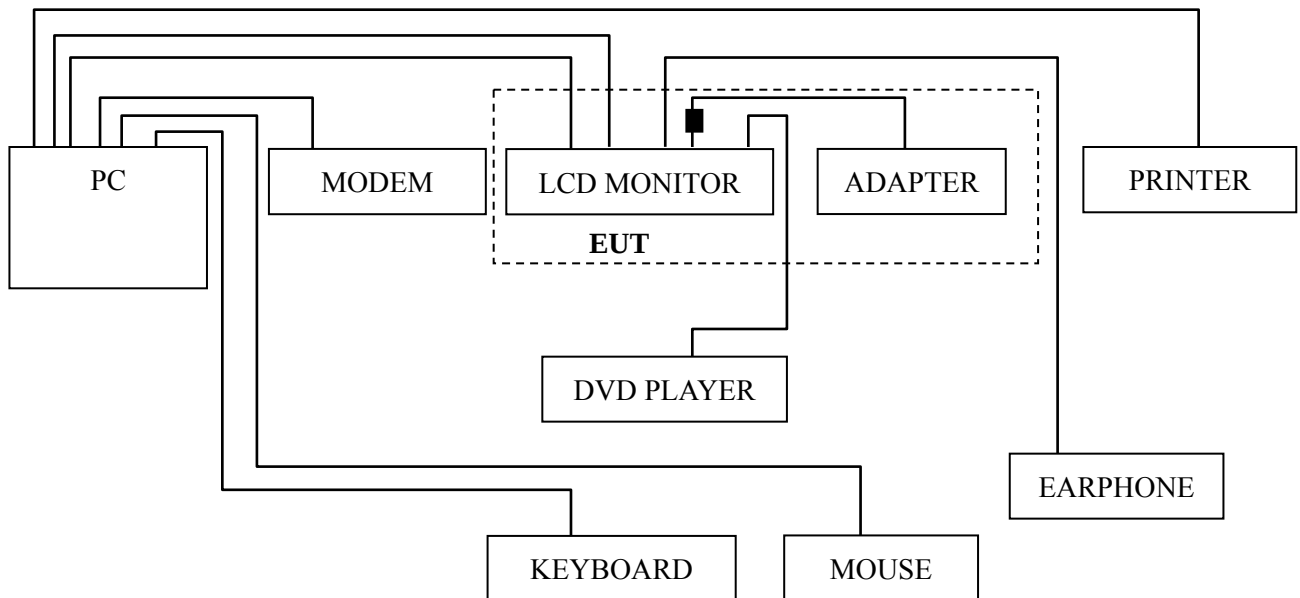
4.1 Test Equipment

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	Sep 18, 2012	Mar 18, 2013
3.	Preamplifier	HP	8449B	3008A00864	Mar 22, 2012	Mar 22, 2013
4.	Bi-log Antenna	TESEQ	CBL6112D	23193	May 03, 2012	May 03, 2013
5.	Horn Antenna	EMCO	3115	9607-4878	May 03, 2012	May 03, 2013
6.	Spectrum	Agilent	E7405A	MY45106600	Mar 22, 2012	Mar 22, 2013
7.	50Ω Coaxial Switch	Anritsu	MP59B	6200426390	Sep 18, 2012	Mar 18, 2013
8.	Software	Audix	E3	SET00200 9912M295-2	--	--

4.2 Block Diagram of Test Setup

4.2.1 EUT and Peripherals

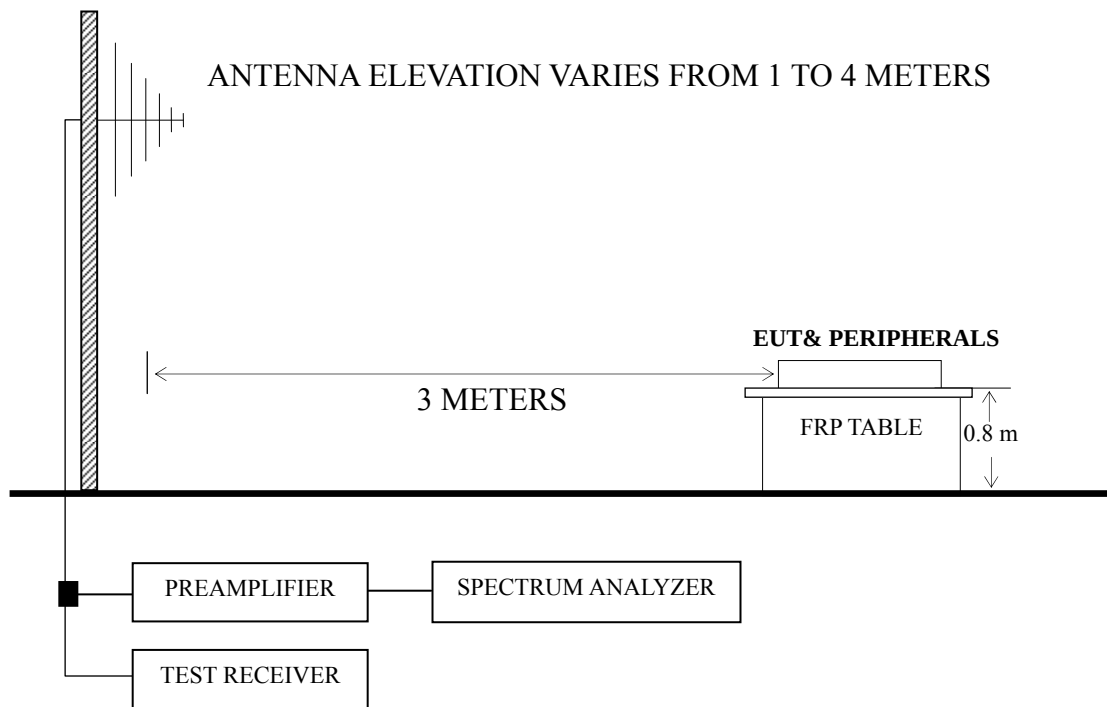


■ : Ferrite core

Note: Ferrite core only for Adapter #1, #3

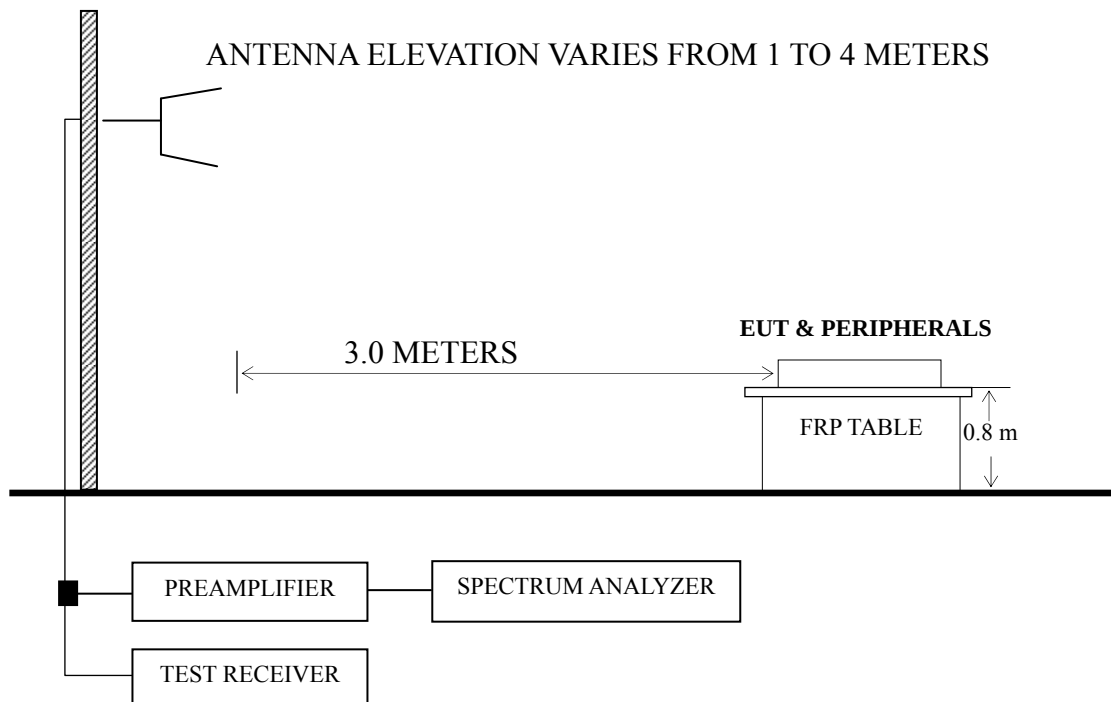
4.2.2 Radiated emission test setup

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 maximum resolution test 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	Page
Adapter #3	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 #1	DVI 1920*1080@60Hz	P36 – P37
Adapter #2	DVI 1920*1080@60Hz	P38 – P39

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 #3 and selected the worst test mode to perform test with adapter #1/#2.

NOTE 8 – The worst case is for DVI 640*480@60Hz test mode (Adapter #3). The worst emission at horizontal polarization was detected at 218.180 MHz with corrected signal level of 34.93 dB ($\mu\text{V/m}$) (limit is 46.00 dB ($\mu\text{V/m}$)), when the antenna was 1.70 m height and the turntable was at 62° . The worst emission at vertical polarization was detected at 145.430 MHz with corrected signal level of 41.81 dB ($\mu\text{V/m}$) (limit is 43.50 dB ($\mu\text{V/m}$)), when the antenna was 1.50 m height and the turntable was at 158° .

EUT : LCD Monitor Temperature : 22°C

Model No. : IPS234VA Humidity : 60%RH

Serial No. : E12091133-01/01 Date of Test : Oct 28, 2012

Test Mode : D-Sub 1920*1080@60Hz Adapter #3 : PSAB-L202C

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	48.430	22.15	9.02	0.52	31.69	40.00	8.31
	70.740	22.26	9.93	0.69	32.88	40.00	7.12
	138.640	22.62	10.65	1.00	34.27	43.50	9.23
	211.390	23.85	10.26	1.12	35.23	43.50	8.27
	276.380	16.37	13.02	1.22	30.61	46.00	15.39
	528.580	11.99	17.77	1.85	31.61	46.00	14.39
Vertical	70.740	14.16	9.93	0.69	24.78	40.00	15.22
	135.730	17.98	10.71	1.00	29.69	43.50	13.81
	138.640	24.92	10.65	1.00	36.57	43.50	6.93
	218.180	19.70	10.52	1.13	31.35	46.00	14.65
	276.380	21.07	13.02	1.22	35.31	46.00	10.69
	344.280	15.37	14.96	1.36	31.69	46.00	14.31

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : IPS234VA Humidity : 60%RH

Serial No. : E12091133-01/01 Date of Test : Oct 28, 2012

Test Mode : DVI 1920*1080@60Hz Adapter #3 : PSAB-L202C

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	8.27	17.29	0.39	--	25.95	40.00	14.05	QP
	70.740	15.49	9.93	0.69	--	26.11	40.00	13.89	
	87.230	11.75	10.88	0.84	--	23.47	40.00	16.53	
	104.690	7.85	11.27	0.95	--	20.07	43.50	23.43	
	158.040	15.78	10.28	1.04	--	27.10	43.50	16.40	
	288.990	22.97	13.39	1.25	--	37.61	46.00	8.39	
	1020.000	47.57	24.98	5.22	38.16	39.61	74.00	34.39	PK
	1135.000	47.31	25.49	5.32	37.91	40.21	74.00	33.79	
	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	
	1665.000	44.24	27.14	6.03	36.64	40.77	74.00	33.23	
	1020.000	27.57	24.98	5.22	38.16	19.61	54.00	34.39	AV
	1135.000	33.31	25.49	5.32	37.91	26.21	54.00	27.79	
	1365.000	34.64	26.59	5.55	37.33	29.45	54.00	24.55	
	1465.000	30.41	26.90	5.72	37.06	25.97	54.00	28.03	
	1595.000	31.05	27.08	5.93	36.77	27.29	54.00	26.71	
	1665.000	26.24	27.14	6.03	36.64	22.77	54.00	31.23	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : IPS234VA Humidity : 60%RH

Serial No. : E12091133-01/01 Date of Test : Oct 28, 2012

Test Mode : DVI 1920*1080@60Hz Adapter #3 : PSAB-L202C

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	18.98	16.26	0.40	--	35.64	40.00	4.36	QP
	58.130	19.71	9.02	0.59	--	29.32	40.00	10.68	
	140.580	16.27	10.60	1.01	--	27.88	43.50	15.62	
	218.180	21.00	10.52	1.13	--	32.65	46.00	13.35	
	279.290	13.97	13.09	1.23	--	28.29	46.00	17.71	
	487.840	9.83	17.46	1.73	--	29.02	46.00	16.98	
	1025.000	43.68	25.01	5.22	38.15	35.76	74.00	38.24	PK
	1100.000	41.69	25.33	5.28	37.99	34.31	74.00	39.69	
	1315.000	45.98	26.39	5.51	37.48	40.40	74.00	33.60	
	1365.000	40.87	26.59	5.55	37.33	35.68	74.00	38.32	
	1465.000	38.47	26.90	5.72	37.06	34.03	74.00	39.97	
	1600.000	41.84	27.08	5.93	36.76	38.09	74.00	35.91	
	1025.000	28.68	25.01	5.22	38.15	20.76	54.00	33.24	AV
	1100.000	29.69	25.33	5.28	37.99	22.31	54.00	31.69	
	1315.000	32.98	26.39	5.51	37.48	27.40	54.00	26.60	
	1365.000	29.87	26.59	5.55	37.33	24.68	54.00	29.32	
	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	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : IPS234VA Humidity : 60%RH

Serial No. : E12091133-01/01 Date of Test : Oct 28, 2012

Test Mode : HDMI 1920*1080@60Hz Adapter #3 : PSAB-L202C

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	99.840	7.57	11.34	0.94	19.85	43.50	23.65
	140.580	20.31	10.60	1.01	31.92	43.50	11.58
	274.440	17.26	12.94	1.22	31.42	46.00	14.58
	342.340	16.14	14.91	1.36	32.41	46.00	13.59
	633.340	8.05	18.63	2.21	28.89	46.00	17.11
	800.180	11.65	20.60	2.52	34.77	46.00	11.23
Vertical	43.580	11.33	10.86	0.48	22.67	40.00	17.33
	99.840	9.99	11.34	0.94	22.27	43.50	21.23
	138.640	21.78	10.65	1.00	33.43	43.50	10.07
	208.480	16.67	10.15	1.12	27.94	43.50	15.56
	274.440	14.63	12.94	1.22	28.79	46.00	17.21
	478.140	10.81	17.34	1.70	29.85	46.00	16.15

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : IPS234VA Humidity : 60%RH

Serial No. : E12091133-01/01 Date of Test : Oct 28, 2012

Test Mode : HDMI 1080P Adapter #3 : PSAB-L202C

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	72.680	11.08	10.08	0.71	21.87	40.00	18.13
	148.340	19.10	10.44	1.02	30.56	43.50	12.94
	218.180	22.28	10.52	1.13	33.93	46.00	12.07
	293.840	21.02	13.53	1.26	35.81	46.00	10.19
	366.590	15.82	15.57	1.40	32.79	46.00	13.21
	431.580	8.60	16.72	1.53	26.85	46.00	19.15
Vertical	72.680	19.80	10.08	0.71	30.59	40.00	9.41
	87.230	18.46	10.88	0.84	30.18	40.00	9.82
	145.430	24.29	10.50	1.02	35.81	43.50	7.69
	218.180	24.81	10.52	1.13	36.46	46.00	9.54
	293.840	16.58	13.53	1.26	31.37	46.00	14.63
	361.740	12.93	15.45	1.39	29.77	46.00	16.23

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : IPS234VA Humidity : 60%RH

Serial No. : E12091133-01/01 Date of Test : Oct 28, 2012

Test Mode : DVI 1680*1050@60Hz Adapter #3 : PSAB-L202C

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	70.740	17.67	9.93	0.69	28.29	40.00	11.71
	87.230	17.14	10.88	0.84	28.86	40.00	11.14
	126.030	14.91	10.89	0.98	26.78	43.50	16.72
	140.580	19.66	10.60	1.01	31.27	43.50	12.23
	208.480	20.67	10.15	1.12	31.94	43.50	11.56
	276.380	15.39	13.02	1.22	29.63	46.00	16.37
Vertical	140.580	21.50	10.60	1.01	33.11	43.50	10.39
	206.540	23.38	10.04	1.12	34.54	43.50	8.96
	276.380	15.38	13.02	1.22	29.62	46.00	16.38
	342.340	13.57	14.91	1.36	29.84	46.00	16.16
	686.690	5.23	19.33	2.43	26.99	46.00	19.01
	800.180	14.64	20.60	2.52	37.76	46.00	8.24

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : IPS234VA Humidity : 60%RH

Serial No. : E12091133-01/01 Date of Test : Oct 28, 2012

Test Mode : DVI 1280*1024@75Hz Adapter #3 : PSAB-L202C

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	87.230	22.95	10.88	0.84	34.67	40.00	5.33
	145.430	16.78	10.50	1.02	28.30	43.50	15.20
	172.590	23.05	10.08	1.07	34.20	43.50	9.30
	259.890	15.78	12.40	1.19	29.37	46.00	16.63
	349.130	10.21	15.09	1.37	26.67	46.00	19.33
	436.430	11.13	16.79	1.55	29.47	46.00	16.53
Vertical	30.970	17.93	17.78	0.38	36.09	40.00	3.91
	87.230	22.61	10.88	0.84	34.33	40.00	5.67
	135.730	19.62	10.71	1.00	31.33	43.50	12.17
	174.530	20.36	10.06	1.07	31.49	43.50	12.01
	261.830	21.81	12.49	1.20	35.50	46.00	10.50
	349.130	17.21	15.09	1.37	33.67	46.00	12.33

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : IPS234VA Humidity : 60%RH

Serial No. : E12091133-01/01 Date of Test : Oct 28, 2012

Test Mode : DVI 640*480@60Hz Adapter #3 : PSAB-L202C

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	72.680	12.08	10.08	0.71	22.87	40.00	17.13
	133.790	10.63	10.74	1.00	22.37	43.50	21.13
	148.340	18.10	10.44	1.02	29.56	43.50	13.94
	218.180	23.28	10.52	1.13	34.93	46.00	11.07
	293.840	20.02	13.53	1.26	34.81	46.00	11.19
	366.590	14.82	15.57	1.40	31.79	46.00	14.21
Vertical	53.280	26.61	8.70	0.55	35.86	40.00	4.14
	72.680	25.80	10.08	0.71	36.59	40.00	3.41
	87.230	24.46	10.88	0.84	36.18	40.00	3.82
	145.430	30.29	10.50	1.02	41.81	43.50	1.69
	221.090	29.92	10.68	1.14	41.74	46.00	4.26
	293.840	22.58	13.53	1.26	37.37	46.00	8.63

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : IPS234VA Humidity : 60%RH

Serial No. : E12091133-01/01 Date of Test : Oct 28, 2012

Test Mode : DVI 1920*1080@60Hz Adapter #2 : 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	72.680	19.80	10.08	0.71	--	30.59	40.00	9.41	QP
	145.430	24.29	10.50	1.02	--	35.81	43.50	7.69	
	221.090	23.92	10.68	1.14	--	35.74	46.00	10.26	
	293.840	16.58	13.53	1.26	--	31.37	46.00	14.63	
	361.740	13.93	15.45	1.39	--	30.77	46.00	15.23	
	504.330	11.86	17.62	1.78	--	31.26	46.00	14.74	
	1075.000	44.83	25.21	5.27	38.04	37.27	74.00	36.73	PK
	1250.000	40.43	26.08	5.42	37.65	34.28	74.00	39.72	
	1365.000	41.64	26.59	5.55	37.33	36.45	74.00	37.55	
	1465.000	37.41	26.90	5.72	37.06	32.97	74.00	41.03	
	1595.000	39.05	27.08	5.93	36.77	35.29	74.00	38.71	
	1760.000	41.91	27.23	6.17	36.49	38.82	74.00	35.18	
	1075.000	29.83	25.21	5.27	38.04	22.27	54.00	31.73	AV
	1250.000	28.43	26.08	5.42	37.65	22.28	54.00	31.72	
	1365.000	27.64	26.59	5.55	37.33	22.45	54.00	31.55	
	1465.000	25.41	26.90	5.72	37.06	20.97	54.00	33.03	
	1595.000	29.05	27.08	5.93	36.77	25.29	54.00	28.71	
	1760.000	25.91	27.23	6.17	36.49	22.82	54.00	31.18	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : IPS234VA Humidity : 60%RH

Serial No. : E12091133-01/01 Date of Test : Oct 28, 2012

Test Mode : DVI 1920*1080@60Hz Adapter #2 : 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	48.430	23.15	9.02	0.52	--	32.69	40.00	7.31	QP
	70.740	23.26	9.93	0.69	--	33.88	40.00	6.12	
	87.230	14.01	10.88	0.84	--	25.73	40.00	14.27	
	138.640	23.62	10.65	1.00	--	35.27	43.50	8.23	
	211.390	24.85	10.26	1.12	--	36.23	43.50	7.27	
	276.380	17.37	13.02	1.22	--	31.61	46.00	14.39	
	1080.000	38.24	25.24	5.27	38.03	30.72	74.00	43.28	PK
	1170.000	37.19	25.66	5.34	37.83	30.36	74.00	43.64	
	1315.000	39.98	26.39	5.51	37.48	34.40	74.00	39.60	
	1520.000	34.02	27.02	5.83	36.92	29.95	74.00	44.05	
	1600.000	38.84	27.08	5.93	36.76	35.09	74.00	38.91	
	1760.000	40.81	27.23	6.17	36.49	37.72	74.00	36.28	
	1080.000	24.24	25.24	5.27	38.03	16.72	54.00	37.28	AV
	1170.000	25.19	25.66	5.34	37.83	18.36	54.00	35.64	
	1315.000	25.98	26.39	5.51	37.48	20.40	54.00	33.60	
	1520.000	21.02	27.02	5.83	36.92	16.95	54.00	37.05	
	1600.000	24.84	27.08	5.93	36.76	21.09	54.00	32.91	
	1760.000	24.81	27.23	6.17	36.49	21.72	54.00	32.28	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : IPS234VA Humidity : 60%RH

Serial No. : E12091133-01/01 Date of Test : Oct 28, 2012

Test Mode : DVI 1920*1080@60Hz Adapter #3 : 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	48.430	17.15	9.02	0.52	--	26.69	40.00	13.31	QP
	70.740	17.26	9.93	0.69	--	27.88	40.00	12.12	
	138.640	17.62	10.65	1.00	--	29.27	43.50	14.23	
	211.390	18.85	10.26	1.12	--	30.23	43.50	13.27	
	276.380	11.37	13.02	1.22	--	25.61	46.00	20.39	
	487.840	6.63	17.46	1.73	--	25.82	46.00	20.18	
	1120.000	45.89	25.42	5.30	37.94	38.67	74.00	35.33	PK
	1250.000	45.43	26.08	5.42	37.65	39.28	74.00	34.72	
	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	45.05	27.08	5.93	36.77	41.29	74.00	32.71	
	1665.000	45.24	27.14	6.03	36.64	41.77	74.00	32.23	
	1120.000	29.89	25.42	5.30	37.94	22.67	54.00	31.33	AV
	1250.000	29.43	26.08	5.42	37.65	23.28	54.00	30.72	
	1365.000	30.64	26.59	5.55	37.33	25.45	54.00	28.55	
	1465.000	25.41	26.90	5.72	37.06	20.97	54.00	33.03	
	1595.000	33.05	27.08	5.93	36.77	29.29	54.00	24.71	
	1665.000	28.24	27.14	6.03	36.64	24.77	54.00	29.23	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : IPS234VA Humidity : 60%RH

Serial No. : E12091133-01/01 Date of Test : Oct 28, 2012

Test Mode : DVI 1920*1080@60Hz Adapter #3 : 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	70.740	20.16	9.93	0.69	--	30.78	40.00	9.22	QP
	138.640	22.92	10.65	1.00	--	34.57	43.50	8.93	
	218.180	16.70	10.52	1.13	--	28.35	46.00	17.65	
	276.380	17.07	13.02	1.22	--	31.31	46.00	14.69	
	344.280	11.37	14.96	1.36	--	27.69	46.00	18.31	
	397.630	8.70	16.24	1.44	--	26.38	46.00	19.62	
	1025.000	53.68	25.01	5.22	38.15	45.76	74.00	28.24	PK
	1080.000	52.24	25.24	5.27	38.03	44.72	74.00	29.28	
	1275.000	49.69	26.21	5.47	37.57	43.80	74.00	30.20	
	1365.000	43.87	26.59	5.55	37.33	38.68	74.00	35.32	
	1600.000	45.84	27.08	5.93	36.76	42.09	74.00	31.91	
	1670.000	45.15	27.14	6.03	36.63	41.69	74.00	32.31	
	1025.000	38.68	25.01	5.22	38.15	30.76	54.00	23.24	AV
	1080.000	33.24	25.24	5.27	38.03	25.72	54.00	28.28	
	1275.000	35.69	26.21	5.47	37.57	29.80	54.00	24.20	
	1365.000	30.87	26.59	5.55	37.33	25.68	54.00	28.32	
	1600.000	32.84	27.08	5.93	36.76	29.09	54.00	24.91	
	1670.000	29.15	27.14	6.03	36.63	25.69	54.00	28.31	

TEST ENGINEER: RAVEN JIN

5 DEVIATION TO TEST SPECIFICATIONS

None.