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

LCD Monitor

Model No.: E2541VX

Serial No.: E1103049-01/01

FCC ID : BEJE2541VX

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

Prepared By : Audix Technology (Shanghai) Co., Ltd.
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Report No. : ACI-F11039
Date of Test : Mar 15 - 22, 2011
Date of Report : Mar 29, 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. : E2541VX
	(B) Serial No. : E1103049-01/01
	(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: E2541VX; S/N: E1103049-01/01) which was tested in 3m anechoic chamber Mar 15 - 22, 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 : Mar 15 - 22, 2011 Date of Report : Mar 29, 2011

Producer : KATHY WANG / Assistant

Review : DIO YANG / Deputy Assistant Manager

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

Signatory : SAMMY CHEN / Deputy Manager
Authorized Signature EMC

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.	: E2541VX
Serial No.	: E1103049-01/01
Real Power	: 35.70W
Applicant	: LG Electronics U.S.A., Inc. 1000 Sylvan Avenue, Englewood Cliffs, NJ 07632, United States
Manufacturer	: LG Electronics Nanjing Display Co., Ltd. No.346, Yao Xin Road, Economic & Technical Development Zone, Nanjing, China
LCD Panel	: Manufacturer : LG Display M/N : LM250WF2 (TL)(A1)
Max Resolution	: 1920*1080@60Hz
D-Sub Cable #1	: Shielded, Detachable, 1.50m, with two cores on cable
D-Sub Cable #2	: Shielded, Detachable, 1.50m, with two cores in connector
DVI Cable #1	: Shielded, Detachable, 1.50m, with two cores on cable
DVI Cable #2	: Shielded, Detachable, 1.50m, with two cores in connector
Power Cord	: Unshielded, Detachable, 1.80m
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 Earphone Port
: Connected with Earphone
(4) One HDMI Port
: Connected with DVD
(5) 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	:	RT2300
Serial Number	:	7668200662248
Data Cable	:	Shielded, Undetachable, 1.8m
Certificate	:	CE/EMC, FCC DoC, VCCI, MIC, C-Tick, BSMI

2.2.4 Mouse

Manufacturer	:	Microsoft
Model Number	:	RT2300
Serial Number	:	6965712071551
Data Cable	:	Shielded, Undetachable, 1.8m.
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

2.2.6 DVD

Manufacturer	:	PHILIPS
Model Number	:	DVP3986K/93
Serial Number	:	KX1A0902120108
Data Cable	:	Shielded, Detachable, 1.8m
Certificate	:	FCC DoC, CE/EMC, CCC

2.2.7 Earphone

Manufacturer	:	SONY
Model Number	:	MDR-E808
Serial Number	:	1808030805305506

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 = 3.38 dB

Radiated Emission Expanded Uncertainty (30-200MHz):

U = 4.58 dB (horizontal)

U = 4.70 dB (vertical)

Radiated Emission Expanded Uncertainty (200M-1GHz):

U = 4.84 dB (horizontal)

U = 4.70 dB (vertical)

3 CONDUCTED EMISSION TEST

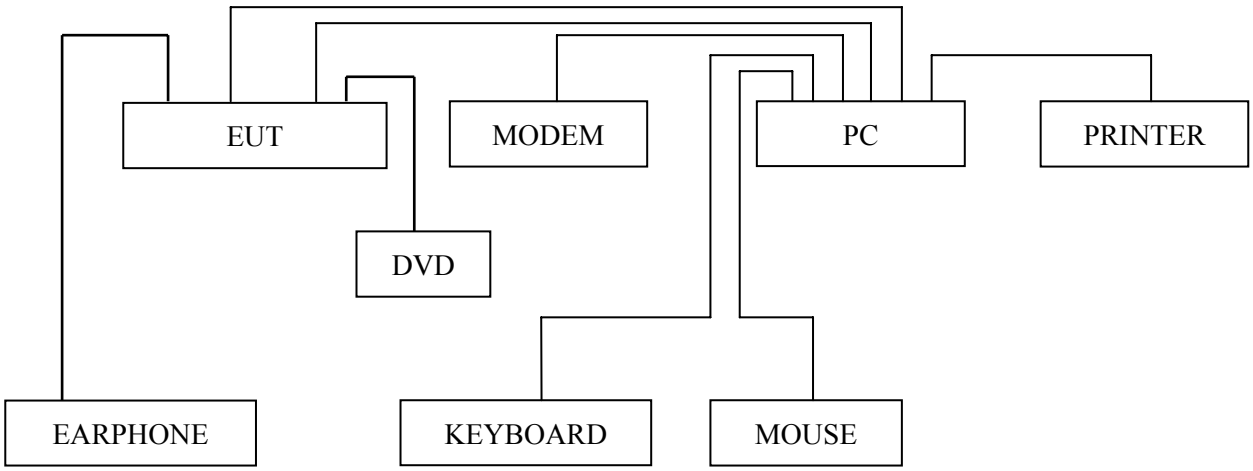
3.1 Test Equipment

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

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCI	100841	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.	50Ω Terminator	Anritsu	BNC	001	Apr 02, 2010	Apr 02, 2011
6.	Software	Audix	E3	SET00200 9804M592	--	--

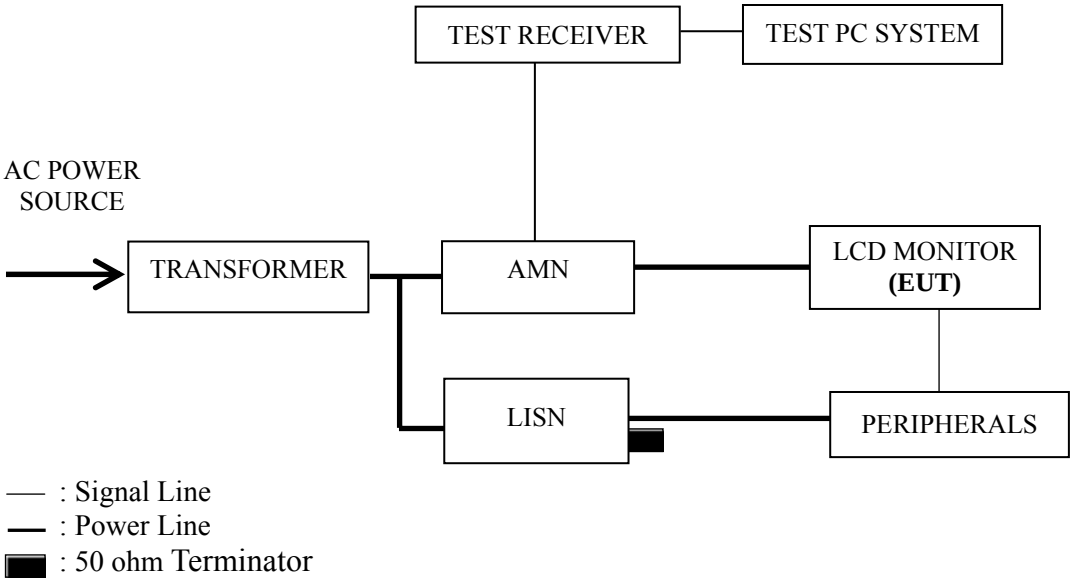
3.2 Block Diagram of Test Setup

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 (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, 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 DVD 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:

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
HDMI 480p
HDMI 720p
HDMI 1080p

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
HDMI 480p	P20
HDMI 720p	P21
HDMI 1080p	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 640*480@60Hz test mode. The worst emission is detected at 0.192 MHz (Quasi-Peak Value) with corrected signal level of 54.03 dB (μV) (limit is 63.93 dB (μV)), when the Neutral of the EUT is connected to AMN.

EUT	:	LCD Monitor	Temperature :	22℃	
Model No.	:	E2541VX	Humidity	:	48%RH
Serial No.	:	E1103049-01/01	Date of Test	:	Mar 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	0.188	53.69	0.39	54.08	64.11	10.03	QP
	0.252	43.79	0.42	44.21	61.69	17.48	
	0.322	40.27	0.45	40.72	59.66	18.94	
	3.985	29.18	0.75	29.93	56.00	26.07	
	7.526	31.66	0.92	32.58	60.00	27.42	
	26.139	32.09	1.83	33.92	60.00	26.08	
	0.188	42.93	0.39	43.32	54.11	10.79	AV
	0.252	32.96	0.42	33.38	51.69	18.31	
	0.322	29.43	0.45	29.88	49.66	19.78	
	3.985	18.34	0.75	19.09	46.00	26.91	
	7.526	20.48	0.92	21.40	50.00	28.60	
	26.139	21.49	1.83	23.32	50.00	26.68	
Neutral	**0.192**	**53.72**	**0.31**	**54.03**	**63.93**	**9.90**	QP
	0.253	45.73	0.35	46.08	61.64	15.56	
	0.329	39.45	0.40	39.85	59.49	19.64	
	4.269	27.74	0.71	28.45	56.00	27.55	
	8.148	34.48	0.93	35.41	60.00	24.59	
	26.558	34.35	1.89	36.24	60.00	23.76	
	0.192	42.56	0.31	42.87	53.93	11.06	AV
	0.253	34.28	0.35	34.63	51.64	17.01	
	0.329	28.61	0.40	29.01	49.49	20.48	
	4.269	16.90	0.71	17.61	46.00	28.39	
	8.148	23.60	0.93	24.53	50.00	25.47	
	26.558	23.62	1.89	25.51	50.00	24.49	

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EUT	:	LCD Monitor	Temperature	:	22℃
Model No.	:	E2541VX	Humidity	:	48%RH
Serial No.	:	E1103049-01/01	Date of Test	:	Mar 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	**0.188**	**52.58**	**0.39**	**52.97**	**64.11**	**11.14**	QP
	0.253	45.69	0.42	46.11	61.64	15.53	
	0.313	40.02	0.46	40.48	59.88	19.40	
	3.840	30.12	0.74	30.86	56.00	25.14	
	7.606	31.13	0.93	32.06	60.00	27.94	
	25.321	33.09	1.80	34.89	60.00	25.11	
	0.188	41.35	0.39	41.74	54.11	12.37	AV
	0.253	34.72	0.42	35.14	51.64	16.50	
	0.313	29.83	0.46	30.29	49.88	19.59	
	3.840	19.34	0.74	20.08	46.00	25.92	
	7.606	20.60	0.93	21.53	50.00	28.47	
	25.321	22.17	1.80	23.97	50.00	26.03	
Neutral	0.188	52.32	0.31	52.63	64.11	11.48	QP
	0.267	45.46	0.36	45.82	61.20	15.38	
	0.329	37.68	0.40	38.08	59.49	21.41	
	4.269	27.08	0.71	27.79	56.00	28.21	
	7.606	32.93	0.90	33.83	60.00	26.17	
	26.139	33.98	1.89	35.87	60.00	24.13	
	0.188	41.60	0.31	41.91	54.11	12.20	AV
	0.267	34.61	0.36	34.97	51.20	16.23	
	0.329	26.45	0.40	26.85	49.49	22.64	
	4.269	16.20	0.71	16.91	46.00	29.09	
	7.606	21.79	0.90	22.69	50.00	27.31	
	26.139	22.85	1.89	24.74	50.00	25.26	

TEST ENGINEER: WENCY YANG

EUT	:	LCD Monitor	Temperature :	22℃	
Model No.	:	E2541VX	Humidity	:	48%RH
Serial No.	:	E1103049-01/01	Date of Test	:	Mar 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	**0.188**	**53.80**	**0.39**	**54.19**	**64.11**	**9.92**	QP
	0.252	43.60	0.42	44.02	61.69	17.67	
	0.317	38.74	0.45	39.19	59.80	20.61	
	4.070	30.14	0.76	30.90	56.00	25.10	
	7.935	31.59	0.95	32.54	60.00	27.46	
	26.139	32.26	1.83	34.09	60.00	25.91	
	0.188	42.93	0.39	43.32	54.11	10.79	AV
	0.252	32.81	0.42	33.23	51.69	18.46	
	0.317	27.62	0.45	28.07	49.80	21.73	
	4.070	19.87	0.76	20.63	46.00	25.37	
	7.935	20.62	0.95	21.57	50.00	28.43	
	26.139	21.42	1.83	23.25	50.00	26.75	
Neutral	0.188	53.01	0.31	53.32	64.11	10.79	QP
	0.253	44.72	0.35	45.07	61.64	16.57	
	0.325	39.61	0.40	40.01	59.57	19.56	
	3.173	27.77	0.66	28.43	56.00	27.57	
	7.977	32.95	0.92	33.87	60.00	26.13	
	25.864	34.50	1.89	36.39	60.00	23.61	
	0.188	42.40	0.31	42.71	54.11	11.40	AV
	0.253	33.85	0.35	34.20	51.64	17.44	
	0.325	28.77	0.40	29.17	49.57	20.40	
	3.173	16.82	0.66	17.48	46.00	28.52	
	7.977	21.78	0.92	22.70	50.00	27.30	
	25.864	23.67	1.89	25.56	50.00	24.44	

TEST ENGINEER: WENCY YANG

EUT	:	LCD Monitor	Temperature :	22℃	
Model No.	:	E2541VX	Humidity	:	48%RH
Serial No.	:	E1103049-01/01	Date of Test	:	Mar 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	0.188	52.76	0.39	53.15	64.11	10.96	QP
	0.259	44.42	0.42	44.84	61.47	16.63	
	0.317	38.55	0.45	39.00	59.80	20.80	
	4.027	30.43	0.75	31.18	56.00	24.82	
	7.977	32.77	0.95	33.72	60.00	26.28	
	26.139	33.20	1.83	35.03	60.00	24.97	
	0.188	41.68	0.39	42.07	54.11	12.04	AV
	0.259	33.64	0.42	34.06	51.47	17.41	
	0.317	27.64	0.45	28.09	49.80	21.71	
	4.027	19.62	0.75	20.37	46.00	25.63	
	7.977	21.64	0.95	22.59	50.00	27.41	
	26.139	22.63	1.83	24.46	50.00	25.54	
Neutral	**0.190**	**52.99**	**0.31**	**53.30**	**64.02**	**10.72**	QP
	0.252	46.50	0.35	46.85	61.69	14.84	
	0.320	40.70	0.40	41.10	59.71	18.61	
	4.027	27.04	0.70	27.74	56.00	28.26	
	7.687	33.18	0.90	34.08	60.00	25.92	
	26.139	34.24	1.89	36.13	60.00	23.87	
	0.190	41.67	0.31	41.98	54.02	12.04	AV
	0.252	35.61	0.35	35.96	51.69	15.73	
	0.320	29.76	0.40	30.16	49.71	19.55	
	4.027	16.37	0.70	17.07	46.00	28.93	
	7.687	22.34	0.90	23.24	50.00	26.76	
	26.139	23.35	1.89	25.24	50.00	24.76	

TEST ENGINEER: WENCY YANG

EUT	:	LCD Monitor	Temperature :	22℃	
Model No.	:	E2541VX	Humidity	:	48%RH
Serial No.	:	E1103049-01/01	Date of Test	:	Mar 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	0.188	50.66	0.39	51.05	64.11	13.06	QP
	0.262	41.72	0.42	42.14	61.38	19.24	
	0.320	35.93	0.45	36.38	59.71	23.33	
	3.840	29.64	0.74	30.38	56.00	25.62	
	7.446	31.79	0.92	32.71	60.00	27.29	
	25.864	32.47	1.82	34.29	60.00	25.71	
	0.188	39.81	0.39	40.20	54.11	13.91	AV
	0.262	30.60	0.42	31.02	51.38	20.36	
	0.320	24.78	0.45	25.23	49.71	24.48	
	3.840	18.49	0.74	19.23	46.00	26.77	
	7.446	20.64	0.92	21.56	50.00	28.44	
	25.864	21.62	1.82	23.44	50.00	26.56	
Neutral	**0.188**	**50.93**	**0.31**	**51.24**	**64.11**	**12.87**	QP
	0.256	41.59	0.35	41.94	61.56	19.62	
	0.310	36.60	0.39	36.99	59.97	22.98	
	3.207	27.19	0.66	27.85	56.00	28.15	
	7.852	32.82	0.92	33.74	60.00	26.26	
	25.864	34.30	1.89	36.19	60.00	23.81	
	0.188	39.64	0.31	39.95	54.11	14.16	AV
	0.256	30.64	0.35	30.99	51.56	20.57	
	0.310	25.84	0.39	26.23	49.97	23.74	
	3.207	16.92	0.66	17.58	46.00	28.42	
	7.852	21.66	0.92	22.58	50.00	27.42	
	25.864	23.50	1.89	25.39	50.00	24.61	

TEST ENGINEER: WENCY YANG

EUT	:	LCD Monitor	Temperature :	22℃
Model No.	:	E2541VX	Humidity :	48%RH
Serial No.	:	E1103049-01/01	Date of Test :	Mar 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	0.190	52.05	0.38	52.43	64.02	11.59	QP
	0.259	42.59	0.42	43.01	61.47	18.46	
	0.329	36.79	0.45	37.24	59.49	22.25	
	3.901	29.52	0.74	30.26	56.00	25.74	
	8.412	33.15	0.98	34.13	60.00	25.87	
	25.591	31.55	1.81	33.36	60.00	26.64	
	0.190	41.60	0.38	41.98	54.02	12.04	AV
	0.259	31.62	0.42	32.04	51.47	19.43	
	0.329	25.95	0.45	26.40	49.49	23.09	
	3.901	18.68	0.74	19.42	46.00	26.58	
	8.412	22.42	0.98	23.40	50.00	26.60	
	25.591	20.64	1.81	22.45	50.00	27.55	
Neutral	**0.192**	**52.08**	**0.31**	**52.39**	**63.93**	**11.54**	QP
	0.256	44.26	0.35	44.61	61.56	16.95	
	0.310	37.88	0.39	38.27	59.97	21.70	
	4.027	28.59	0.70	29.29	56.00	26.71	
	8.323	33.44	0.94	34.38	60.00	25.62	
	25.321	34.61	1.87	36.48	60.00	23.52	
	0.192	41.62	0.31	41.93	53.93	12.00	AV
	0.256	33.62	0.35	33.97	51.56	17.59	
	0.310	26.94	0.39	27.33	49.97	22.64	
	4.027	17.62	0.70	18.32	46.00	27.68	
	8.323	22.61	0.94	23.55	50.00	26.45	
	25.321	23.84	1.87	25.71	50.00	24.29	

TEST ENGINEER: WENCY YANG

EUT	:	LCD Monitor	Temperature :	22℃	
Model No.	:	E2541VX	Humidity	:	48%RH
Serial No.	:	E1103049-01/01	Date of Test	:	Mar 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	0.188	51.20	0.39	51.59	64.11	12.52	QP
	0.267	42.02	0.43	42.45	61.20	18.75	
	0.322	36.21	0.45	36.66	59.66	23.00	
	3.547	29.59	0.73	30.32	56.00	25.68	
	8.412	31.70	0.98	32.68	60.00	27.32	
	26.418	32.84	1.83	34.67	60.00	25.33	
	0.188	40.33	0.39	40.72	54.11	13.39	AV
	0.267	31.45	0.43	31.88	51.20	19.32	
	0.322	25.67	0.45	26.12	49.66	23.54	
	3.547	18.72	0.73	19.45	46.00	26.55	
	8.412	20.46	0.98	21.44	50.00	28.56	
	26.418	21.64	1.83	23.47	50.00	26.53	
Neutral	**0.188**	**51.49**	**0.31**	**51.80**	**64.11**	**12.31**	QP
	0.252	41.80	0.35	42.15	61.69	19.54	
	0.317	38.22	0.40	38.62	59.80	21.18	
	4.027	28.45	0.70	29.15	56.00	26.85	
	8.323	33.39	0.94	34.33	60.00	25.67	
	25.321	33.57	1.87	35.44	60.00	24.56	
	0.188	40.96	0.31	41.27	54.11	12.84	AV
	0.252	30.67	0.35	31.02	51.69	20.67	
	0.317	27.16	0.40	27.56	49.80	22.24	
	4.027	17.62	0.70	18.32	46.00	27.68	
	8.323	22.61	0.94	23.55	50.00	26.45	
	25.321	22.43	1.87	24.30	50.00	25.70	

TEST ENGINEER: WENCY YANG

EUT	:	LCD Monitor	Temperature :	22℃	
Model No.	:	E2541VX	Humidity	:	48%RH
Serial No.	:	E1103049-01/01	Date of Test	:	Mar 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	0.188	51.42	0.39	51.81	64.11	12.30	QP
	0.262	42.79	0.42	43.21	61.38	18.17	
	0.329	36.86	0.45	37.31	59.49	22.18	
	4.202	29.73	0.77	30.50	56.00	25.50	
	7.687	32.08	0.93	33.01	60.00	26.99	
	26.418	32.33	1.83	34.16	60.00	25.84	
	0.188	40.63	0.39	41.02	54.11	13.09	AV
	0.262	31.68	0.42	32.10	51.38	19.28	
	0.329	28.41	0.45	28.86	49.49	20.63	
	4.202	18.68	0.77	19.45	46.00	26.55	
	7.687	21.47	0.93	22.40	50.00	27.60	
	26.418	21.50	1.83	23.33	50.00	26.67	
Neutral	**0.188**	**51.60**	**0.31**	**51.91**	**64.11**	**12.20**	QP
	0.252	43.41	0.35	43.76	61.69	17.93	
	0.336	37.40	0.40	37.80	59.31	21.51	
	3.107	27.66	0.66	28.32	56.00	27.68	
	7.687	32.49	0.90	33.39	60.00	26.61	
	26.418	33.74	1.89	35.63	60.00	24.37	
	0.188	40.52	0.31	40.83	54.11	13.28	AV
	0.252	32.70	0.35	33.05	51.69	18.64	
	0.336	26.49	0.40	26.89	49.31	22.42	
	3.107	16.82	0.66	17.48	46.00	28.52	
	7.687	21.61	0.90	22.51	50.00	27.49	
	26.418	22.49	1.89	24.38	50.00	25.62	

TEST ENGINEER: WENCY YANG

EUT	:	LCD Monitor	Temperature :	22℃	
Model No.	:	E2541VX	Humidity	:	48%RH
Serial No.	:	E1103049-01/01	Date of Test	:	Mar 15, 2011
Test Mode	:	HDMI 480p			

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	**0.188**	**49.70**	**0.39**	**50.09**	**64.11**	**14.02**	QP
	0.256	41.65	0.42	42.07	61.56	19.49	
	0.329	35.72	0.45	36.17	59.49	23.32	
	4.070	28.59	0.76	29.35	56.00	26.65	
	7.446	31.07	0.92	31.99	60.00	28.01	
	26.139	34.16	1.83	35.99	60.00	24.01	
	0.188	38.94	0.39	39.33	54.11	14.78	AV
	0.256	30.48	0.42	30.90	51.56	20.66	
	0.329	24.87	0.45	25.32	49.49	24.17	
	4.070	17.82	0.76	18.58	46.00	27.42	
	7.446	20.40	0.92	21.32	50.00	28.68	
	26.139	23.41	1.83	25.24	50.00	24.76	
Neutral	0.188	49.61	0.31	49.92	64.11	14.19	QP
	0.264	41.04	0.36	41.40	61.29	19.89	
	0.317	36.55	0.40	36.95	59.80	22.85	
	3.207	26.94	0.66	27.60	56.00	28.40	
	7.526	32.53	0.89	33.42	60.00	26.58	
	26.139	34.56	1.89	36.45	60.00	23.55	
	0.188	38.58	0.31	38.89	54.11	15.22	AV
	0.264	30.50	0.36	30.86	51.29	20.43	
	0.317	25.67	0.40	26.07	49.80	23.73	
	3.207	15.87	0.66	16.53	46.00	29.47	
	7.526	21.67	0.89	22.56	50.00	27.44	
	26.139	23.67	1.89	25.56	50.00	24.44	

TEST ENGINEER: WENCY YANG

EUT	:	LCD Monitor	Temperature :	22℃	
Model No.	:	E2541VX	Humidity	:	48%RH
Serial No.	:	E1103049-01/01	Date of Test	:	Mar 15, 2011
Test Mode	:	HDMI 720p			

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	**0.188**	**49.37**	**0.39**	**49.76**	**64.11**	**14.35**	QP
	0.259	42.25	0.42	42.67	61.47	18.80	
	0.310	35.31	0.45	35.76	59.97	24.21	
	3.881	28.55	0.74	29.29	56.00	26.71	
	7.526	31.92	0.92	32.84	60.00	27.16	
	26.139	35.55	1.83	37.38	60.00	22.62	
	0.188	38.45	0.39	38.84	54.11	15.27	AV
	0.259	31.60	0.42	32.02	51.47	19.45	
	0.310	24.53	0.45	24.98	49.97	24.99	
	3.881	17.73	0.74	18.47	46.00	27.53	
	7.526	20.76	0.92	21.68	50.00	28.32	
	26.139	24.71	1.83	26.54	50.00	23.46	
Neutral	0.188	49.43	0.31	49.74	64.11	14.37	QP
	0.262	41.58	0.35	41.93	61.38	19.45	
	0.325	37.03	0.40	37.43	59.57	22.14	
	3.074	27.01	0.66	27.67	56.00	28.33	
	7.526	32.46	0.89	33.35	60.00	26.65	
	26.139	35.64	1.89	37.53	60.00	22.47	
	0.188	38.60	0.31	38.91	54.11	15.20	AV
	0.262	30.63	0.35	30.98	51.38	20.40	
	0.325	26.10	0.40	26.50	49.57	23.07	
	3.074	15.97	0.66	16.63	46.00	29.37	
	7.526	21.60	0.89	22.49	50.00	27.51	
	26.139	24.47	1.89	26.36	50.00	23.64	

TEST ENGINEER: WENCY YANG

EUT	:	LCD Monitor	Temperature :	22℃	
Model No.	:	E2541VX	Humidity	:	48%RH
Serial No.	:	E1103049-01/01	Date of Test	:	Mar 15, 2011
Test Mode	:	HDMI 1080p			

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	**0.188**	**49.14**	**0.39**	**49.53**	**64.11**	**14.58**	QP
	0.253	39.88	0.42	40.30	61.64	21.34	
	0.329	34.71	0.45	35.16	59.49	24.33	
	4.027	30.27	0.75	31.02	56.00	24.98	
	7.606	31.15	0.93	32.08	60.00	27.92	
	26.139	33.83	1.83	35.66	60.00	24.34	
	0.188	38.75	0.39	39.14	54.11	14.97	AV
	0.253	28.67	0.42	29.09	51.64	22.55	
	0.329	23.65	0.45	24.10	49.49	25.39	
	4.027	19.82	0.75	20.57	46.00	25.43	
	7.606	20.34	0.93	21.27	50.00	28.73	
	26.139	22.96	1.83	24.79	50.00	25.21	
Neutral	0.188	49.15	0.31	49.46	64.11	14.65	QP
	0.267	40.73	0.36	41.09	61.20	20.11	
	0.325	35.70	0.40	36.10	59.57	23.47	
	3.173	27.25	0.66	27.91	56.00	28.09	
	7.446	32.69	0.89	33.58	60.00	26.42	
	26.139	35.14	1.89	37.03	60.00	22.97	
	0.188	38.20	0.31	38.51	54.11	15.60	AV
	0.267	29.46	0.36	29.82	51.20	21.38	
	0.325	24.85	0.40	25.25	49.57	24.32	
	3.173	16.38	0.66	17.04	46.00	28.96	
	7.446	21.82	0.89	22.71	50.00	27.29	
	26.139	24.30	1.89	26.19	50.00	23.81	

TEST ENGINEER: WENCY YANG

4 RADIATED EMISSION TEST

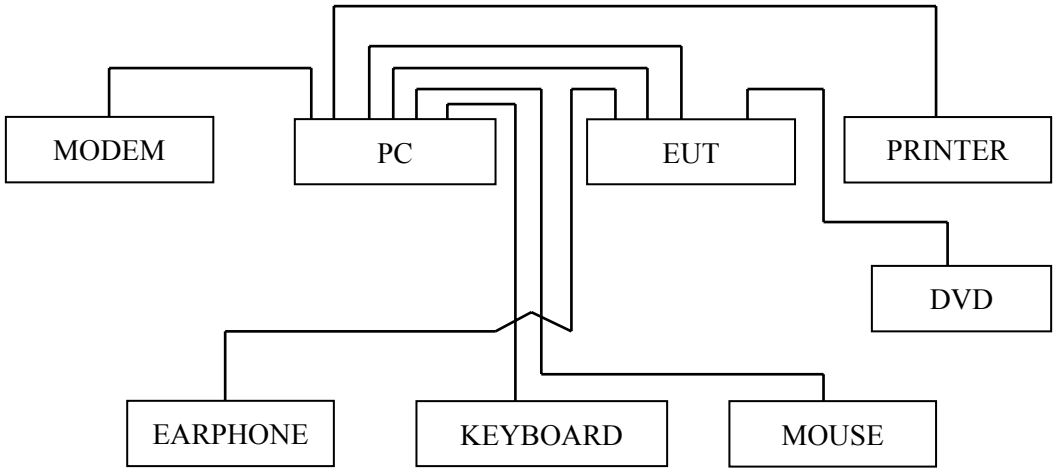
4.1 Test Equipment

The following test equipments are used during the radiated emission test in a semi-anechoic chamber:

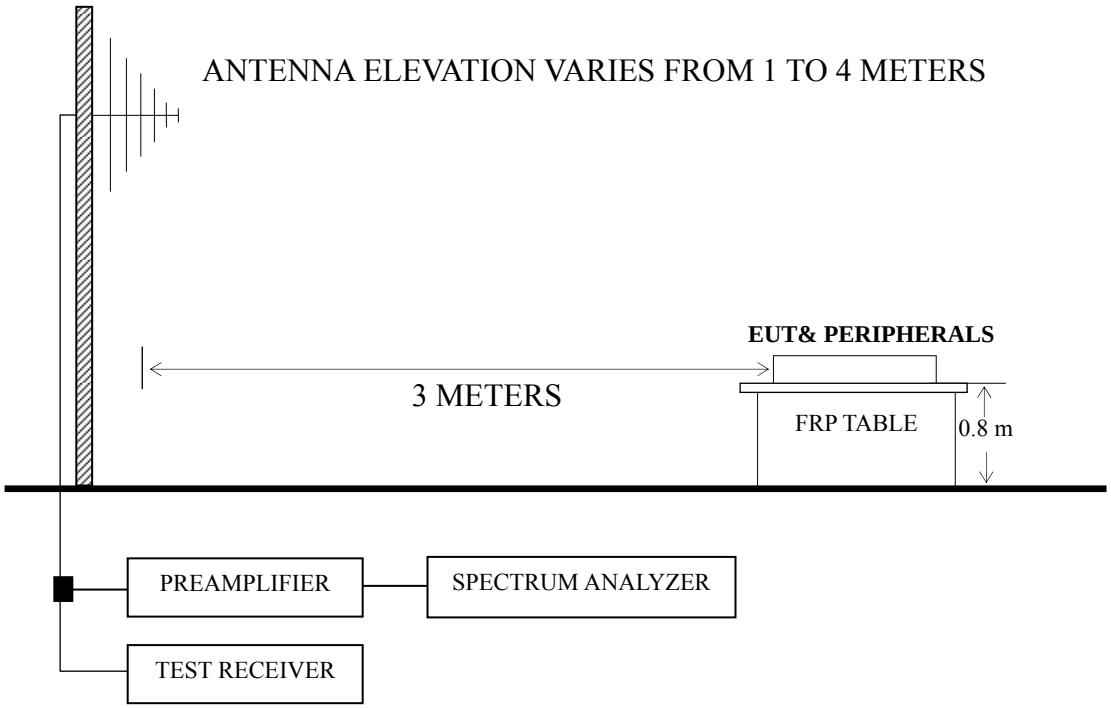
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESVS10	844594/001	Mar 07, 2011	Mar 07, 2012
2.	Preamplifier	Agilent	8447D	2944A10548	Mar 19, 2011	Sep 19, 2011
3.	Preamplifier	HP	8449B	3008A00864	Apr 29, 2010	Apr 29, 2011
4.	Bi-log Antenna	TESEQ	CBL6112D	23192	Dec 01, 2010	Dec 01, 2011
5.	Horn Antenna	EMCO	3115	9607-4878	May 13, 2010	May 13, 2011
6.	Spectrum	Agilent	E7405A	MY45106600	Mar 22, 2011	Mar 22, 2012
7.	50Ω Coaxial Switch	Anritsu	MP59B	6200426390	Mar 18, 2011	Sep 18, 2011
8.	Software	Audix	E3	SET00200 9912M295-2	--	--

4.2 Block Diagram of Test Setup

4.2.1 EUT and Peripherals



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	
		(μV/m)	dB (μV/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 (μV/m) = 20 log Emission Level (μV/m)
NOTE 2 - The tighter limit applies at the band edges.
NOTE 3 - Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
NOTE 4 - The limits shown are based on Quasi-peak value detector below or equal to 1GHz and Average value detector above 1GHz.
NOTE 5 - Above 1 GHz, the limit on peak emission is 20 dB above the maximum permitted average emission limit applicable to the EUT.

4.4 Test Configuration

The configuration of the EUT and peripherals are same as those used in conducted emission test.

Please refer to Sec.3.4.

4.5 Operating Condition of EUT

Same as conducted emission test which is listed in Sec.3.5, except for the test setup replaced by Sec.4.2.

4.6 Test Procedures

The EUT and peripherals were placed on a FRP turntable that is 0.8 meter above ground. The FRP turntable rotated 360 degrees to determine the position of the maximum emission level. The EUT was set 3 meters away from the receiving antenna, which was mounted on an antenna tower. Broadband antenna (Calibrated Bilog Antenna) or Horn Antenna was used as receiving antenna. The antenna moved up and down between 1 meter and 4 meters to find out the maximum emission level. Both horizontal and vertical polarizations of the antenna were set on measurement. In order to find the maximum emission, all of the interference cables were manipulated according to ANSI C63.4:2003 requirements during radiated emission test.

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

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

The frequency range from 1 GHz to 2 GHz was checked for D-Sub/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	P27
D-Sub 1280*1024@75Hz	P28 – P29
D-Sub 1680*1050@60Hz	P30 – P31
D-Sub 1920*1080@60Hz	P32 – P33
DVI 640*480@60Hz	**P34**
DVI 1280*1024@75Hz	P35 – P36
DVI 1680*1050@60Hz	P37 – P38
DVI 1920*1080@60Hz	P39 – P40
HDMI 480p	P41
HDMI 720p	P42
HDMI 1080p	P43

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 640*480@60Hz test mode. The worst emission at horizontal polarization was detected at 385.990 MHz with corrected signal level of 42.31 dB (μV/m) (limit is 46.00 dB (μV/m)), when the antenna was 1.00 m height and the turntable was at 70°. The worst emission at vertical polarization was detected at 742.500 MHz with corrected signal level of 42.86 dB (μV/m) (limit is 46.00 dB (μV/m)), when the antenna was 1.00 m height and the turntable was at 340°.

EUT	:	LCD Monitor	Temperature :	22℃
Model No.	:	E2541VX	Humidity :	60%RH
Serial No.	:	E1103049-01/01	Date of Test :	Mar 22, 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	**48.430**	**24.47**	**9.02**	**0.77**	**34.26**	**40.00**	**5.74**
	84.320	19.49	10.75	0.96	31.20	40.00	8.80
	163.860	18.23	10.20	1.30	29.73	43.50	13.77
	289.960	21.65	13.42	1.73	36.80	46.00	9.20
	353.010	18.11	15.21	1.93	35.25	46.00	10.75
	635.280	14.58	18.67	2.54	35.79	46.00	10.21
Vertical	48.430	13.60	9.02	0.77	23.39	40.00	16.61
	84.320	15.49	10.75	0.96	27.20	40.00	12.80
	120.210	11.62	11.00	1.13	23.75	43.50	19.75
	212.360	19.09	10.29	1.49	30.87	43.50	12.63
	282.200	21.34	13.21	1.72	36.27	46.00	9.73
	461.650	**19.60**	**17.14**	**2.20**	**38.94**	**46.00**	**7.06**

TEST ENGINEER: RAVEN JIN

EUT	:	LCD Monitor	Temperature :	22℃
Model No.	:	E2541VX	Humidity :	60%RH
Serial No.	:	E1103049-01/01	Date of Test :	Mar 22, 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	31.940	13.82	17.29	0.65	--	31.76	40.00	8.24	QP
	71.710	19.91	9.99	0.90	--	30.80	40.00	9.20	
	86.700	21.29	10.87	0.98	--	33.14	40.00	6.86	
	279.300	20.31	13.09	1.70	--	35.10	46.00	10.90	
	407.330	16.02	16.39	2.08	--	34.49	46.00	11.51	
	870.990	**14.86**	**20.38**	**2.98**	--	**38.22**	**46.00**	**7.78**	
	1013.000	54.19	22.49	4.49	37.38	43.79	74.00	30.21	PK
	1201.000	52.87	23.74	4.51	37.00	44.12	74.00	29.88	
	1334.000	52.86	24.78	4.53	36.71	45.46	74.00	28.54	
	1467.000	52.89	25.60	4.55	36.36	46.68	74.00	27.32	
	1716.000	52.00	26.71	4.57	35.92	47.36	74.00	26.64	
	1944.000	49.18	27.76	4.75	35.65	46.04	74.00	27.96	
	1013.000	40.19	22.49	4.49	37.38	29.79	54.00	24.21	AV
	1201.000	37.87	23.74	4.51	37.00	29.12	54.00	24.88	
	1334.000	36.86	24.78	4.53	36.71	29.46	54.00	24.54	
	1467.000	38.89	25.60	4.55	36.36	32.68	54.00	21.32	
	1716.000	39.00	26.71	4.57	35.92	34.36	54.00	19.64	
	1944.000	34.18	27.76	4.75	35.65	31.04	54.00	22.96	

TEST ENGINEER: RAVEN JIN

EUT	:	LCD Monitor	Temperature :	22℃
Model No.	:	E2541VX	Humidity :	60%RH
Serial No.	:	E1103049-01/01	Date of Test :	Mar 22, 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	87.230	21.33	10.88	0.98	--	33.19	40.00	6.81	QP
	203.630	22.00	9.94	1.46	--	33.40	43.50	10.10	
	272.000	21.00	12.86	1.68	--	35.54	46.00	10.46	
	347.190	22.30	15.04	1.91	--	39.25	46.00	6.75	
	619.760	17.46	18.46	2.50	--	38.42	46.00	7.58	
	681.840	**18.41**	**19.30**	**2.63**	--	**40.34**	**46.00**	**5.66**	
	1044.000	56.62	22.69	4.49	37.32	46.48	74.00	27.52	PK
	1200.000	55.51	23.70	4.51	37.00	46.72	74.00	27.28	
	1286.000	50.80	24.40	4.53	36.82	42.91	74.00	31.09	
	1600.000	53.50	26.40	4.56	36.10	48.36	74.00	25.64	
	1799.000	50.35	26.90	4.58	35.81	46.02	74.00	27.98	
	1997.000	48.35	28.10	4.78	35.61	45.62	74.00	28.38	
	1044.000	46.62	22.69	4.49	37.32	36.48	54.00	17.52	AV
	1200.000	40.51	23.70	4.51	37.00	31.72	54.00	22.28	
	1286.000	35.80	24.40	4.53	36.82	27.91	54.00	26.09	
	1600.000	37.50	26.40	4.56	36.10	32.36	54.00	21.64	
	1799.000	39.35	26.90	4.58	35.81	35.02	54.00	18.98	
	1997.000	35.35	28.10	4.78	35.61	32.62	54.00	21.38	

TEST ENGINEER: RAVEN JIN

EUT	:	LCD Monitor	Temperature :		22℃
Model No.	:	E2541VX	Humidity	:	60%RH
Serial No.	:	E1103049-01/01	Date of Test	:	Mar 22, 2011
Test Mode	:	D-Sub 1680*1050@60Hz			

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	87.230	17.84	10.88	0.98	--	29.70	40.00	10.30	QP
	209.450	21.16	10.18	1.48	--	32.82	43.50	10.68	
	271.530	**25.65**	**12.86**	**1.68**	--	**40.19**	**46.00**	**5.81**	
	349.130	16.15	15.09	1.91	--	33.15	46.00	12.85	
	678.930	15.16	19.26	2.63	--	37.05	46.00	8.95	
	870.990	11.06	20.38	2.98	--	34.42	46.00	11.58	
	1053.000	53.63	22.76	4.49	37.30	43.58	74.00	30.42	PK
	1201.000	53.87	23.74	4.51	37.00	45.12	74.00	28.88	
	1334.000	53.86	24.78	4.53	36.71	46.46	74.00	27.54	
	1467.000	51.89	25.60	4.55	36.36	45.68	74.00	28.32	
	1600.000	53.16	26.40	4.56	36.10	48.02	74.00	25.98	
	1716.000	51.00	26.71	4.57	35.92	46.36	74.00	27.64	
	1053.000	46.63	22.76	4.49	37.30	36.58	54.00	17.42	AV
	1201.000	37.87	23.74	4.51	37.00	29.12	54.00	24.88	
	1334.000	39.86	24.78	4.53	36.71	32.46	54.00	21.54	
	1467.000	36.89	25.60	4.55	36.36	30.68	54.00	23.32	
	1600.000	42.16	26.40	4.56	36.10	37.02	54.00	16.98	
	1716.000	38.00	26.71	4.57	35.92	33.36	54.00	20.64	

TEST ENGINEER: RAVEN JIN

EUT	:	LCD Monitor	Temperature :	22℃	
Model No.	:	E2541VX	Humidity :	60%RH	
Serial No.	:	E1103049-01/01	Date of Test :	Mar 22, 2011	
Test Mode	:	D-Sub 1680*1050@60Hz			

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	24.68	9.02	0.77	--	34.47	40.00	5.53	QP
	86.700	23.09	10.87	0.98	--	34.94	40.00	5.06	
	203.630	20.67	9.94	1.46	--	32.07	43.50	11.43	
	279.290	23.59	13.09	1.70	--	38.38	46.00	7.62	
	475.230	16.36	17.32	2.22	--	35.90	46.00	10.10	
	679.900	**19.88**	**19.26**	**2.63**	**--**	**41.77**	**46.00**	**4.23**	
	1078.000	52.01	22.95	4.50	37.25	42.21	74.00	31.79	PK
	1200.000	54.51	23.70	4.51	37.00	45.72	74.00	28.28	
	1396.000	49.57	25.16	4.54	36.55	42.72	74.00	31.28	
	1498.000	52.44	25.80	4.55	36.30	46.49	74.00	27.51	
	1600.000	51.50	26.40	4.56	36.10	46.36	74.00	27.64	
	1798.000	47.23	26.90	4.58	35.81	42.90	74.00	31.10	
	1078.000	44.01	22.95	4.50	37.25	34.21	54.00	19.79	AV
	1200.000	40.51	23.70	4.51	37.00	31.72	54.00	22.28	
	1396.000	34.57	25.16	4.54	36.55	27.72	54.00	26.28	
	1498.000	38.44	25.80	4.55	36.30	32.49	54.00	21.51	
	1600.000	41.50	26.40	4.56	36.10	36.36	54.00	17.64	
	1798.000	35.23	26.90	4.58	35.81	30.90	54.00	23.10	

TEST ENGINEER: RAVEN JIN

EUT	:	LCD Monitor	Temperature :	22℃	
Model No.	:	E2541VX	Humidity :	60%RH	
Serial No.	:	E1103049-01/01	Date of Test :	Mar 22, 2011	
Test Mode	:	D-Sub 1920*1080@60Hz			

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	48.430	22.54	9.02	0.77	--	32.33	40.00	7.67	QP
	86.700	**23.79**	**10.87**	**0.98**	**--**	**35.64**	**40.00**	**4.36**	
	163.860	18.92	10.20	1.30	--	30.42	43.50	13.08	
	279.290	25.03	13.09	1.70	--	39.82	46.00	6.18	
	487.840	15.61	17.46	2.24	--	35.31	46.00	10.69	
	677.960	18.95	19.22	2.63	--	40.80	46.00	5.20	
	1041.000	53.32	22.69	4.49	37.33	43.17	74.00	30.83	PK
	1101.000	52.11	23.11	4.50	37.20	42.52	74.00	31.48	
	1201.000	52.87	23.74	4.51	37.00	44.12	74.00	29.88	
	1334.000	52.86	24.78	4.53	36.71	45.46	74.00	28.54	
	1467.000	52.89	25.60	4.55	36.36	46.68	74.00	27.32	
	1600.000	54.16	26.40	4.56	36.10	49.02	74.00	24.98	
	1041.000	46.32	22.69	4.49	37.33	36.17	54.00	17.83	AV
	1101.000	39.11	23.11	4.50	37.20	29.52	54.00	24.48	
	1201.000	38.87	23.74	4.51	37.00	30.12	54.00	23.88	
	1334.000	38.86	24.78	4.53	36.71	31.46	54.00	22.54	
	1467.000	42.89	25.60	4.55	36.36	36.68	54.00	17.32	
	1600.000	43.16	26.40	4.56	36.10	38.02	54.00	15.98	

TEST ENGINEER: RAVEN JIN

EUT	:	LCD Monitor	Temperature :		22℃
Model No.	:	E2541VX	Humidity	:	60%RH
Serial No.	:	E1103049-01/01	Date of Test	:	Mar 22, 2011
Test Mode	:	D-Sub 1920*1080@60Hz			

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	**86.700**	**23.79**	**10.87**	**0.98**	--	**35.64**	**40.00**	**4.36**	QP
	122.150	23.47	10.97	1.14	--	35.58	43.50	7.92	
	182.290	23.05	9.97	1.38	--	34.40	43.50	9.10	
	270.560	23.38	12.82	1.68	--	37.88	46.00	8.12	
	488.810	15.94	17.49	2.24	--	35.67	46.00	10.33	
	582.900	18.48	18.11	2.43	--	39.02	46.00	6.98	
	1031.000	49.82	22.60	4.49	37.34	39.57	74.00	34.43	PK
	1125.000	49.35	23.27	4.50	37.16	39.96	74.00	34.04	
	1286.000	47.80	24.40	4.53	36.82	39.91	74.00	34.09	
	1396.000	46.57	25.16	4.54	36.55	39.72	74.00	34.28	
	1498.000	51.44	25.80	4.55	36.30	45.49	74.00	28.51	
	1600.000	50.50	26.40	4.56	36.10	45.36	74.00	28.64	
	1031.000	43.82	22.60	4.49	37.34	33.57	54.00	20.43	AV
	1125.000	34.35	23.27	4.50	37.16	24.96	54.00	29.04	
	1286.000	35.80	24.40	4.53	36.82	27.91	54.00	26.09	
	1396.000	32.57	25.16	4.54	36.55	25.72	54.00	28.28	
	1498.000	44.44	25.80	4.55	36.30	38.49	54.00	15.51	
	1600.000	39.50	26.40	4.56	36.10	34.36	54.00	19.64	

TEST ENGINEER: RAVEN JIN

EUT	:	LCD Monitor	Temperature :	22℃
Model No.	:	E2541VX	Humidity :	60%RH
Serial No.	:	E1103049-01/01	Date of Test :	Mar 22, 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	30.000	12.90	18.30	0.63	31.83	40.00	8.17
	59.400	24.10	9.11	0.83	34.04	40.00	5.96
	98.870	26.43	11.31	1.03	38.77	43.50	4.73
	148.500	22.30	10.44	1.23	33.97	43.50	9.53
	324.880	25.45	14.38	1.84	41.67	46.00	4.33
	385.990	**24.29**	**16.00**	**2.02**	**42.31**	**46.00**	**3.69**
Vertical	60.070	21.74	9.14	0.84	31.72	40.00	8.28
	89.170	18.67	10.96	0.99	30.62	43.50	12.88
	149.310	25.01	10.43	1.24	36.68	43.50	6.82
	274.440	22.91	12.94	1.69	37.54	46.00	8.46
	446.130	18.96	16.92	2.16	38.04	46.00	7.96
	742.500	**20.10**	**19.98**	**2.78**	**42.86**	**46.00**	**3.14**

TEST ENGINEER: RAVEN JIN

EUT	:	LCD Monitor	Temperature :	22℃
Model No.	:	E2541VX	Humidity :	60%RH
Serial No.	:	E1103049-01/01	Date of Test :	Mar 22, 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
Horizontal	30.000	14.60	18.30	0.63	--	33.53	40.00	6.47	QP
	59.300	23.51	9.09	0.83	--	33.43	40.00	6.57	
	148.500	24.90	10.44	1.23	--	36.57	43.50	6.93	
	201.690	23.04	9.87	1.45	--	34.36	43.50	9.14	
	346.220	22.19	15.00	1.91	--	39.10	46.00	6.90	
	594.100	**19.51**	**18.17**	**2.44**	--	**40.12**	**46.00**	**5.88**	
	1013.000	41.19	22.49	4.49	37.38	30.79	74.00	43.21	PK
	1264.000	37.32	24.23	4.52	36.86	29.21	74.00	44.79	
	1393.000	38.61	25.16	4.54	36.55	31.76	74.00	42.24	
	1500.000	39.44	25.80	4.55	36.30	33.49	74.00	40.51	
	1600.000	42.16	26.40	4.56	36.10	37.02	74.00	36.98	
	1716.000	41.00	26.71	4.57	35.92	36.36	74.00	37.64	
	1013.000	27.19	22.49	4.49	37.38	16.79	54.00	37.21	AV
	1264.000	20.32	24.23	4.52	36.86	12.21	54.00	41.79	
	1393.000	18.61	25.16	4.54	36.55	11.76	54.00	42.24	
	1500.000	22.44	25.80	4.55	36.30	16.49	54.00	37.51	
	1600.000	28.16	26.40	4.56	36.10	23.02	54.00	30.98	
	1716.000	29.00	26.71	4.57	35.92	24.36	54.00	29.64	

TEST ENGINEER: RAVEN JIN

EUT	:	LCD Monitor	Temperature :	22℃
Model No.	:	E2541VX	Humidity :	60%RH
Serial No.	:	E1103049-01/01	Date of Test :	Mar 22, 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	89.170	19.84	10.96	0.99	--	31.79	43.50	11.71	QP
	149.310	25.86	10.43	1.24	--	37.53	43.50	5.97	
	268.620	23.99	12.74	1.66	--	38.39	46.00	7.61	
	446.130	20.80	16.92	2.16	--	39.88	46.00	6.12	
	594.000	19.61	18.17	2.44	--	40.22	46.00	5.78	
	742.950	**17.85**	**19.98**	**2.78**	--	**40.61**	**46.00**	**5.39**	
	1044.000	54.62	22.69	4.49	37.32	44.48	74.00	29.52	PK
	1125.000	55.35	23.27	4.50	37.16	45.96	74.00	28.04	
	1197.000	50.64	23.70	4.51	37.01	41.84	74.00	32.16	
	1333.000	47.06	24.74	4.53	36.71	39.62	74.00	34.38	
	1466.000	48.94	25.60	4.55	36.37	42.72	74.00	31.28	
	1600.000	50.50	26.40	4.56	36.10	45.36	74.00	28.64	
	1044.000	41.62	22.69	4.49	37.32	31.48	54.00	22.52	AV
	1125.000	40.35	23.27	4.50	37.16	30.96	54.00	23.04	
	1197.000	36.64	23.70	4.51	37.01	27.84	54.00	26.16	
	1333.000	32.06	24.74	4.53	36.71	24.62	54.00	29.38	
	1466.000	37.94	25.60	4.55	36.37	31.72	54.00	22.28	
	1600.000	39.50	26.40	4.56	36.10	34.36	54.00	19.64	

TEST ENGINEER: RAVEN JIN

EUT	:	LCD Monitor	Temperature :	22℃	
Model No.	:	E2541VX	Humidity :	60%RH	
Serial No.	:	E1103049-01/01	Date of Test :	Mar 22, 2011	
Test Mode	:	DVI 1680*1050@60Hz			

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	59.400	24.10	9.11	0.83	--	34.04	40.00	5.96	QP
	149.310	25.08	10.43	1.24	--	36.75	43.50	6.75	
	268.620	26.29	12.74	1.66	--	40.69	46.00	5.31	
	345.250	24.44	15.00	1.90	--	41.34	46.00	4.66	
	593.570	**21.02**	**18.17**	**2.44**	**--**	**41.63**	**46.00**	**4.37**	
	742.500	17.40	19.98	2.78	--	40.16	46.00	5.84	
	1041.000	52.32	22.69	4.49	37.33	42.17	74.00	31.83	PK
	1201.000	48.87	23.74	4.51	37.00	40.12	74.00	33.88	
	1334.000	47.86	24.78	4.53	36.71	40.46	74.00	33.54	
	1393.000	48.61	25.16	4.54	36.55	41.76	74.00	32.24	
	1467.000	48.89	25.60	4.55	36.36	42.68	74.00	31.32	
	1600.000	48.16	26.40	4.56	36.10	43.02	74.00	30.98	
	1041.000	38.32	22.69	4.49	37.33	28.17	54.00	25.83	AV
	1201.000	32.87	23.74	4.51	37.00	24.12	54.00	29.88	
	1334.000	31.86	24.78	4.53	36.71	24.46	54.00	29.54	
	1393.000	32.61	25.16	4.54	36.55	25.76	54.00	28.24	
	1467.000	37.89	25.60	4.55	36.36	31.68	54.00	22.32	
	1600.000	38.16	26.40	4.56	36.10	33.02	54.00	20.98	

TEST ENGINEER: RAVEN JIN

EUT	:	LCD Monitor	Temperature :	22℃
Model No.	:	E2541VX	Humidity :	60%RH
Serial No.	:	E1103049-01/01	Date of Test :	Mar 22, 2011
Test Mode	:	DVI 1680*1050@60Hz		

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	**60.070**	**25.57**	**9.14**	**0.84**	--	**35.55**	**40.00**	**4.45**	QP
	89.170	23.36	10.96	0.99	--	35.31	43.50	8.19	
	149.310	24.83	10.43	1.24	--	36.50	43.50	7.00	
	269.590	23.19	12.78	1.66	--	37.63	46.00	8.37	
	593.570	20.36	18.17	2.44	--	40.97	46.00	5.03	
	742.000	18.00	19.98	2.78	--	40.76	46.00	5.24	
	1044.000	50.62	22.69	4.49	37.32	40.48	74.00	33.52	PK
	1125.000	52.35	23.27	4.50	37.16	42.96	74.00	31.04	
	1197.000	50.64	23.70	4.51	37.01	41.84	74.00	32.16	
	1333.000	48.06	24.74	4.53	36.71	40.62	74.00	33.38	
	1498.000	51.44	25.80	4.55	36.30	45.49	74.00	28.51	
	1600.000	50.50	26.40	4.56	36.10	45.36	74.00	28.64	
	1044.000	38.62	22.69	4.49	37.32	28.48	54.00	25.52	AV
	1125.000	36.35	23.27	4.50	37.16	26.96	54.00	27.04	
	1197.000	34.64	23.70	4.51	37.01	25.84	54.00	28.16	
	1333.000	33.06	24.74	4.53	36.71	25.62	54.00	28.38	
	1498.000	41.44	25.80	4.55	36.30	35.49	54.00	18.51	
	1600.000	40.50	26.40	4.56	36.10	35.36	54.00	18.64	

TEST ENGINEER: RAVEN JIN

EUT	:	LCD Monitor	Temperature :	22℃
Model No.	:	E2541VX	Humidity :	60%RH
Serial No.	:	E1103049-01/01	Date of Test :	Mar 22, 2011
Test Mode	:	DVI 1920*1080@60Hz		

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	89.170	17.65	10.96	0.99	--	29.60	43.50	13.90	QP
	149.310	22.35	10.43	1.24	--	34.02	43.50	9.48	
	207.510	25.20	10.11	1.47	--	36.78	43.50	6.72	
	269.590	26.59	12.78	1.66	--	41.03	46.00	4.97	
	593.570	**20.53**	**18.17**	**2.44**	**--**	**41.14**	**46.00**	**4.86**	
	742.500	17.50	19.98	2.78	--	40.26	46.00	5.74	
	1053.000	53.63	22.76	4.49	37.30	43.58	74.00	30.42	PK
	1264.000	51.32	24.23	4.52	36.86	43.21	74.00	30.79	
	1467.000	50.89	25.60	4.55	36.36	44.68	74.00	29.32	
	1600.000	53.16	26.40	4.56	36.10	48.02	74.00	25.98	
	1797.000	49.70	26.90	4.58	35.81	45.37	74.00	28.63	
	1989.000	47.02	28.05	4.78	35.61	44.24	74.00	29.76	
	1053.000	38.63	22.76	4.49	37.30	28.58	54.00	25.42	AV
	1264.000	39.32	24.23	4.52	36.86	31.21	54.00	22.79	
	1467.000	34.89	25.60	4.55	36.36	28.68	54.00	25.32	
	1600.000	37.16	26.40	4.56	36.10	32.02	54.00	21.98	
	1797.000	36.70	26.90	4.58	35.81	32.37	54.00	21.63	
	1989.000	30.02	28.05	4.78	35.61	27.24	54.00	26.76	

TEST ENGINEER: RAVEN JIN

EUT	:	LCD Monitor	Temperature :		22℃
Model No.	:	E2541VX	Humidity	:	60%RH
Serial No.	:	E1103049-01/01	Date of Test	:	Mar 22 2011
Test Mode	:	DVI 1920*1080@60Hz			

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	**66.100**	**26.00**	**9.57**	**0.88**	--	**36.45**	**40.00**	**3.55**	QP
	98.870	24.60	11.31	1.03	--	36.94	43.50	6.56	
	149.310	25.14	10.43	1.24	--	36.81	43.50	6.69	
	276.800	19.50	13.02	1.69	--	34.21	46.00	11.79	
	439.340	19.60	16.82	2.14	--	38.56	46.00	7.44	
	672.400	15.10	19.15	2.61	--	36.86	46.00	9.14	
	1017.000	51.51	22.51	4.49	37.37	41.14	74.00	32.86	PK
	1200.000	54.51	23.70	4.51	37.00	45.72	74.00	28.28	
	1600.000	50.50	26.40	4.56	36.10	45.36	74.00	28.64	
	1676.000	50.05	26.59	4.57	35.97	45.24	74.00	28.76	
	1799.000	49.35	26.90	4.58	35.81	45.02	74.00	28.98	
	1944.000	46.35	27.76	4.75	35.65	43.21	74.00	30.79	
	1017.000	31.51	22.51	4.49	37.37	21.14	54.00	32.86	AV
	1200.000	33.51	23.70	4.51	37.00	24.72	54.00	29.28	
	1600.000	35.50	26.40	4.56	36.10	30.36	54.00	23.64	
	1676.000	36.05	26.59	4.57	35.97	31.24	54.00	22.76	
	1799.000	37.35	26.90	4.58	35.81	33.02	54.00	20.98	
	1944.000	31.35	27.76	4.75	35.65	28.21	54.00	25.79	

TEST ENGINEER: RAVEN JIN

EUT	:	LCD Monitor	Temperature :	22℃
Model No.	:	E2541VX	Humidity :	60%RH
Serial No.	:	E1103049-01/01	Date of Test :	Mar 22, 2011
Test Mode	:	HDMI 480p		

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	17.84	10.88	0.98	29.70	40.00	10.30
	209.450	21.16	10.18	1.48	32.82	43.50	10.68
	272.000	21.00	12.86	1.68	35.54	46.00	10.46
	347.190	**22.30**	**15.04**	**1.91**	**39.25**	**46.00**	**6.75**
	619.760	17.46	18.46	2.50	38.42	46.00	7.58
	635.280	14.58	18.67	2.54	35.79	46.00	10.21
Vertical	48.430	13.60	9.02	0.77	23.39	40.00	16.61
	84.320	15.49	10.75	0.96	27.20	40.00	12.80
	163.860	18.92	10.20	1.30	30.42	43.50	13.08
	279.290	**25.03**	**13.09**	**1.70**	**39.82**	**46.00**	**6.18**
	487.840	15.61	17.46	2.24	35.31	46.00	10.69
	461.650	19.60	17.14	2.20	38.94	46.00	7.06

TEST ENGINEER: RAVEN JIN

EUT	:	LCD Monitor	Temperature :	22℃
Model No.	:	E2541VX	Humidity :	60%RH
Serial No.	:	E1103049-01/01	Date of Test :	Mar 22, 2011
Test Mode	:	HDMI 720p		

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	**30.000**	**14.60**	**18.30**	**0.63**	**33.53**	**40.00**	**6.47**
	59.300	23.51	9.09	0.83	33.43	40.00	6.57
	148.500	24.90	10.44	1.23	36.57	43.50	6.93
	349.130	16.15	15.09	1.91	33.15	46.00	12.85
	678.930	15.16	19.26	2.63	37.05	46.00	8.95
	870.990	11.06	20.38	2.98	34.42	46.00	11.58
Vertical	48.430	24.68	9.02	0.77	34.47	40.00	5.53
	86.700	**23.09**	**10.87**	**0.98**	**34.94**	**40.00**	**5.06**
	203.630	20.67	9.94	1.46	32.07	43.50	11.43
	446.130	20.80	16.92	2.16	39.88	46.00	6.12
	594.000	19.61	18.17	2.44	40.22	46.00	5.78
	742.950	17.85	19.98	2.78	40.61	46.00	5.39

TEST ENGINEER: RAVEN JIN

EUT	:	LCD Monitor	Temperature :	22℃
Model No.	:	E2541VX	Humidity :	60%RH
Serial No.	:	E1103049-01/01	Date of Test :	Mar 22, 2011
Test Mode	:	HDMI 1080p		

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	31.940	13.82	17.29	0.65	31.76	40.00	8.24
	98.870	**24.60**	**11.31**	**1.03**	**36.94**	**43.50**	**6.56**
	149.310	25.14	10.43	1.24	36.81	43.50	6.69
	276.800	19.50	13.02	1.69	34.21	46.00	11.79
	407.330	16.02	16.39	2.08	34.49	46.00	11.51
	870.990	14.86	20.38	2.98	38.22	46.00	7.78
Vertical	87.230	21.33	10.88	0.98	33.19	40.00	6.81
	203.630	22.00	9.94	1.46	33.40	43.50	10.10
	163.860	18.92	10.20	1.30	30.42	43.50	13.08
	279.290	25.03	13.09	1.70	39.82	46.00	6.18
	487.840	15.61	17.46	2.24	35.31	46.00	10.69
	677.960	**18.95**	**19.22**	**2.63**	**40.80**	**46.00**	**5.20**

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
SPONGE	LG END 3940TKK043C	90*10*2	EXPAN Elactronics SUZHOU Co., Ltd.	See Internal Photos 12
Gasket	LG END 3940TKK043C	5*10*10	EXPAN Elactronics SUZHOU Co., Ltd.	See Internal Photos 3
EMI Conductive Tape	--	10*20	EXPAN Elactronics SUZHOU Co., Ltd.	See Internal Photos 11
DVI EMI sponge	--	36*21*1	EXPAN Elactronics SUZHOU Co., Ltd.	See Internal Photos 11

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

(RAVEN JIN)