

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

LCD Monitor

Model No.: W2240VV

Serial No.: 912NDVWAP335

FCC ID : BEJW2240VV

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

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Date of Test : Jan 08-12, 2010
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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. : W2240VV
(B) Serial No. : 912NDVWAP335
(C) Power Supply : 120V/60Hz

Test Procedure Used:

*FCC RULES AND REGULATIONS PART 15 SUBPART B CLASS B OCTOBER 2008
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: W2240VV; S/N: 912NDVWAP335) which was tested in 3m anechoic chamber Jan 08-12, 2010 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 : Jan 08-12, 2010 Date of Report : Jan 15, 2010

Producer : Alan He
ALAN HE / Assistant

Review : Dio Yang
DIO YANG / Deputy Assistant Manager

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

Signatory : Sammy Chen
Authorized Signature EMC SAMMY CHEN / Assistant 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 2008 AND ANSI C63.4-2003	15.107(a) Class B	Pass
Radiated Disturbance	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2008 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.	: W2240VV
Serial No.	: 912NDVWAP335
Real Power	: 40.00W
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 : LM215WF1 (TL) (A1)
Max Resolution	: 1920*1080@60Hz
D-Sub Cable #1	: Shielded, Detachable, 1.85m, with two cores on cable
D-Sub Cable #2	: Shielded, Detachable, 1.85m, with two cores in connector
DVI Cable #1	: Shielded, Detachable, 1.85m, with two cores on cable
DVI Cable #2	: Shielded, Detachable, 1.85m, with two cores in connector
HDMI Cable	: Shielded, Detachable, 1.00m, without core
Power Cord	: Unshielded, Detachable, 1.80m
Note	: After evaluation, the D-Sub cable#1 and DVI cable#1 were used in the test for they will cause the maximum emission.

Remark:

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

- | | |
|-----------------------|---------------------------|
| (1) One D-Sub Port | : Connected with PC |
| (2) One DVI Port | : Connected with PC |
| (3) One 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, 1.85m.
Certificate	:	FCC DoC, VCCI, CE/EMC, MIC, GS

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 : Unshielded, Detachable, 1.8m

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

3 CONDUCTED EMISSION TEST

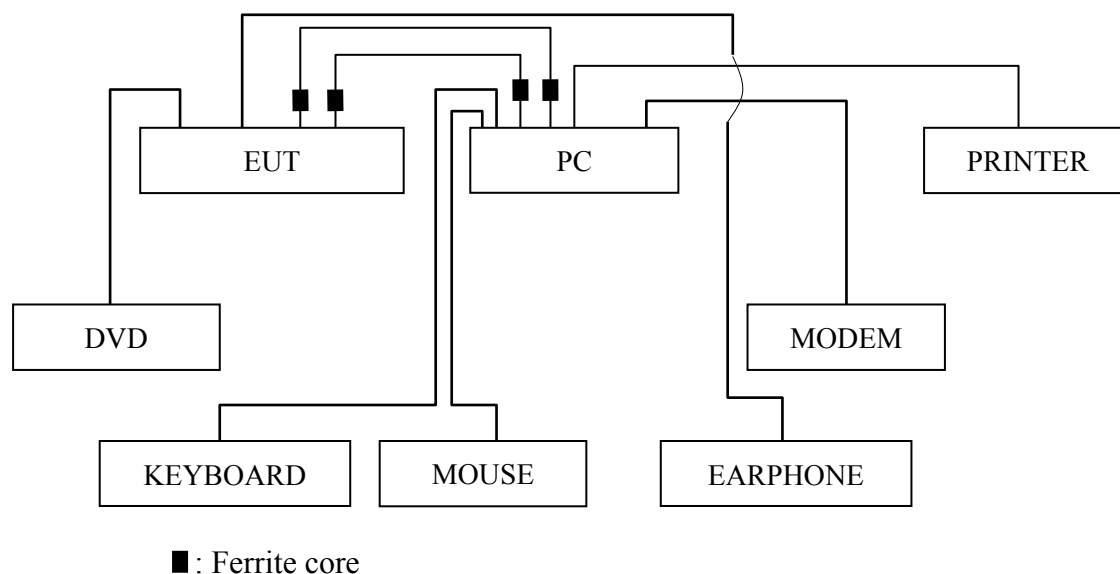
3.1 Test Equipment

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

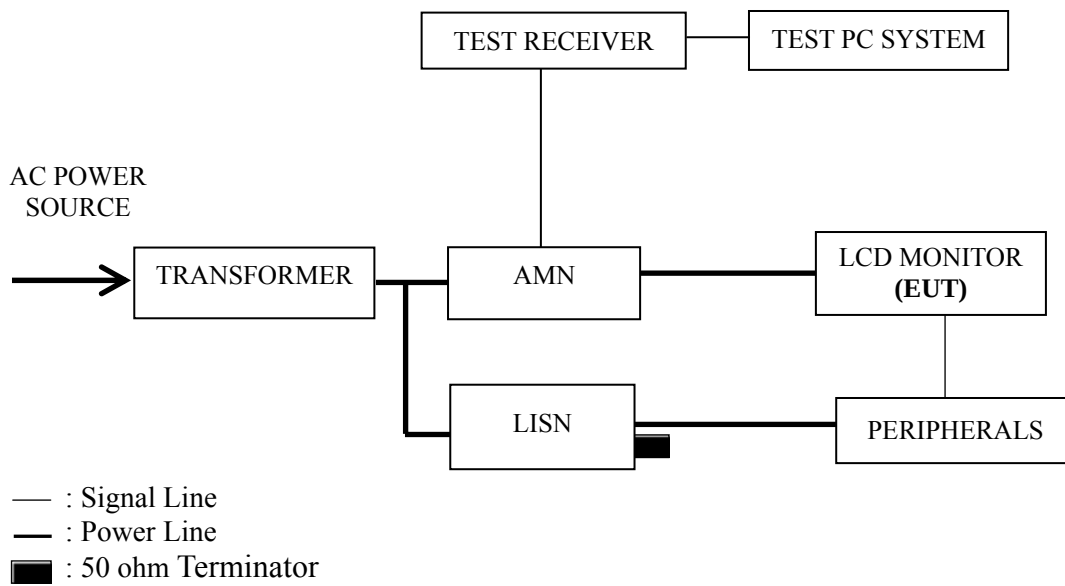
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCI	100841	Oct 15, 2009	Oct 15, 2010
2.	Artificial Mains Network (AMN)	R&S	ESH2-Z5	843890/011	Apr 02, 2009	Apr 02, 2010
3.	Line Impedance Stabilization Network (LISN)	Kyoritsu	KNW-407	8-1280-4	Apr 02, 2009	Apr 02, 2010
4.	50 Ω Coaxial Switch	Anritsu	MP59B	6200426389	Sep 19, 2009	Mar 19, 2010
5.	50 Ω Terminator	Anritsu	BNC	001	Apr 02, 2009	Apr 02, 2010
6.	Software	Audix	E3	SET00200 9804M592	--	--

3.2 Block Diagram of Test Setup

3.2.1 EUT & Peripherals



3.2.2 Conducted Disturbance Test Setup



3.3 Conducted Emission Limit [FCC Part 15 Subpart B 15.107(a)]

Frequency Range (MHz)	Limits dB (μ V)	
	Quasi-peak	Average
0.15 ~ 0.5	66~56	56~46
0.5 ~ 5	56	46
5 ~ 30	60	50
NOTE 1 – The lower limit shall apply at the transition frequencies. NOTE 2 – The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz~0.50 MHz		

3.4 Test Configuration

The EUT (listed in Sec.2.1) and the peripherals (listed in Sec 2.2) were installed as shown on Sec.3.2 to meet FCC requirement and operating in a manner that tends to maximize its emission level in a normal application.

3.5 Operating Condition of EUT

3.5.1 Setup the EUT and peripherals as shown in Sec. 3.2.

3.5.2 Turn on the power of all equipments and the EUT.

3.5.3 Set the contrast & brightness of EUT to maximum.

3.5.4 PC system ran the self-test program “EMC Test” by windows XP and sent “H” characters to EUT through graphic card, the EUT’s screen displayed and filled with “H” pattern by its resolution (Via D-Sub & DVI Input).

3.5.5 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 1024*768@60Hz
D-Sub 1680*1050@60Hz
D-Sub 1920*1080@60Hz
DVI 640*480@60Hz
DVI 1024*768@60Hz
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 1024*768@60Hz	P13
D-Sub 1680*1050@60Hz	P14
D-Sub 1920*1080@60Hz	P15
DVI 640*480@60Hz	P16
DVI 1024*768@60Hz	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 1024*768@60Hz test mode. The worst emission is detected at 25.055 MHz (Average Value) with corrected signal level of 36.92 dB (μV) (limit is 50.00 dB (μV)), when the Neutral the EUT is connected to AMN.

EUT : LCD Monitor Temperature : 22°C

Model No. : W2240VV Humidity : 48%RH

Serial No. : 912NDVWAP335 Date of Test : Jan 12, 2010

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	0.184	49.59	0.24	49.83	64.28	14.45	QP
	0.348	40.25	0.38	40.63	59.00	18.37	
	0.552	34.38	0.46	34.84	56.00	21.16	
	4.721	33.76	0.62	34.38	56.00	21.62	
	7.977	34.42	0.70	35.12	60.00	24.88	
	25.055	37.83	1.06	38.89	60.00	21.11	
	0.184	29.16	0.24	29.40	54.28	24.88	AV
	0.348	24.95	0.38	25.33	49.00	23.67	
	0.552	25.37	0.46	25.83	46.00	20.17	
	4.721	17.30	0.62	17.92	46.00	28.08	
	7.977	25.44	0.70	26.14	50.00	23.86	
	25.055	27.25	1.06	28.31	50.00	21.69	
Neutral	0.184	49.36	0.22	49.58	64.28	14.70	QP
	0.325	39.28	0.34	39.62	59.57	19.95	
	0.552	33.27	0.44	33.71	56.00	22.29	
	4.721	34.31	0.63	34.94	56.00	21.06	
	8.916	37.58	0.74	38.32	60.00	21.68	
	21.600	45.42	1.05	46.47	60.00	13.53	
	0.184	28.62	0.22	28.84	54.28	25.44	AV
	0.325	21.62	0.34	21.96	49.57	27.61	
	0.552	23.46	0.44	23.90	46.00	22.10	
	4.721	19.82	0.63	20.45	46.00	25.55	
	8.916	26.13	0.74	26.87	50.00	23.13	
	21.600	33.98	1.05	35.03	50.00	14.97	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : W2240VV Humidity : 48%RH

Serial No. : 912NDVWAP335 Date of Test : Jan 12, 2010

Test Mode : D-Sub 1024*768@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.184	50.62	0.24	50.86	64.28	13.42	QP
	0.348	40.38	0.38	40.76	59.00	18.24	
	0.552	36.21	0.46	36.67	56.00	19.33	
	3.840	33.48	0.60	34.08	56.00	21.92	
	7.977	35.19	0.70	35.89	60.00	24.11	
	25.321	37.26	1.06	38.32	60.00	21.68	
	0.184	30.02	0.24	30.26	54.28	24.02	AV
	0.348	25.13	0.38	25.51	49.00	23.49	
	0.552	25.58	0.46	26.04	46.00	19.96	
	3.840	26.72	0.60	27.32	46.00	18.68	
	7.977	25.54	0.70	26.24	50.00	23.76	
	25.321	25.68	1.06	26.74	50.00	23.26	
Neutral	0.184	49.35	0.22	49.57	64.28	14.71	QP
	0.307	38.17	0.34	38.51	60.06	21.55	
	0.552	32.25	0.44	32.69	56.00	23.31	
	4.721	34.93	0.63	35.56	56.00	20.44	
	8.916	37.76	0.74	38.50	60.00	21.50	
	25.055	44.81	0.99	45.80	60.00	14.20	
	0.184	29.88	0.22	30.10	54.28	24.18	AV
	0.307	17.36	0.34	17.70	50.06	32.36	
	0.552	23.48	0.44	23.92	46.00	22.08	
	4.721	19.78	0.63	20.41	46.00	25.59	
	8.916	26.18	0.74	26.92	50.00	23.08	
	25.055	35.93	0.99	36.92	50.00	13.08	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : W2240VV Humidity : 48%RH

Serial No. : 912NDVWAP335 Date of Test : Jan 12, 2010

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	0.183	49.11	0.24	49.35	64.33	14.98	QP
	0.348	40.37	0.38	40.75	59.00	18.25	
	0.552	35.10	0.46	35.56	56.00	20.44	
	4.721	33.60	0.62	34.22	56.00	21.78	
	5.333	32.48	0.63	33.11	60.00	26.89	
	25.055	36.54	1.06	37.60	60.00	22.40	
	0.183	28.54	0.24	28.78	54.33	25.55	AV
	0.348	25.24	0.38	25.62	49.00	23.38	
	0.552	25.39	0.46	25.85	46.00	20.15	
	4.721	16.66	0.62	17.28	46.00	28.72	
	5.333	23.64	0.63	24.27	50.00	25.73	
	25.055	27.10	1.06	28.16	50.00	21.84	
Neutral	0.184	49.47	0.22	49.69	64.28	14.59	QP
	0.348	39.26	0.36	39.62	59.00	19.38	
	0.552	32.22	0.44	32.66	56.00	23.34	
	5.005	33.24	0.63	33.87	60.00	26.13	
	8.916	37.80	0.74	38.54	60.00	21.46	
	25.321	45.02	0.99	46.01	60.00	13.99	
	0.184	34.00	0.22	34.22	54.28	20.06	AV
	0.348	28.60	0.36	28.96	49.00	20.04	
	0.552	21.50	0.44	21.94	46.00	24.06	
	5.005	21.60	0.63	22.23	50.00	27.77	
	8.916	24.50	0.74	25.24	50.00	24.76	
	25.321	31.60	0.99	32.59	50.00	17.41	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : W2240VV Humidity : 48%RH

Serial No. : 912NDVWAP335 Date of Test : Jan 12, 2010

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	0.184	48.79	0.24	49.03	64.28	15.25	QP
	0.348	40.09	0.38	40.47	59.00	18.53	
	0.647	34.29	0.45	34.74	56.00	21.26	
	3.840	32.76	0.60	33.36	56.00	22.64	
	7.446	32.06	0.69	32.75	60.00	27.25	
	25.055	36.55	1.06	37.61	60.00	22.39	
	0.184	36.41	0.24	36.65	54.28	17.63	AV
	0.348	19.46	0.38	19.84	49.00	29.16	
	0.647	23.41	0.45	23.86	46.00	22.14	
	3.840	21.41	0.60	22.01	46.00	23.99	
Neutral	7.446	19.80	0.69	20.49	50.00	29.51	
	25.055	24.10	1.06	25.16	50.00	24.84	
	0.184	48.53	0.22	48.75	64.28	15.53	QP
	0.348	38.51	0.36	38.87	59.00	20.13	
	0.552	32.21	0.44	32.65	56.00	23.35	
	5.005	33.02	0.63	33.65	60.00	26.35	
	8.916	36.76	0.74	37.50	60.00	22.50	
	25.321	44.93	0.99	45.92	60.00	14.08	AV
	0.184	28.60	0.22	28.82	54.28	25.46	
	0.348	27.40	0.36	27.76	49.00	21.24	
	0.552	21.40	0.44	21.84	46.00	24.16	
	5.005	21.60	0.63	22.23	50.00	27.77	
	8.916	24.50	0.74	25.24	50.00	24.76	
	25.321	31.40	0.99	32.39	50.00	17.61	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : W2240VV Humidity : 48%RH

Serial No. : 912NDVWAP335 Date of Test : Jan 12, 2010

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	0.184	49.28	0.24	49.52	64.28	14.76	QP
	0.307	39.81	0.36	40.17	60.06	19.89	
	0.552	34.84	0.46	35.30	56.00	20.70	
	3.328	31.84	0.59	32.43	56.00	23.57	
	6.121	31.00	0.66	31.66	60.00	28.34	
	25.321	36.54	1.06	37.60	60.00	22.40	
	0.184	35.61	0.24	35.85	54.28	18.43	AV
	0.307	28.60	0.36	28.96	50.06	21.10	
	0.552	25.60	0.46	26.06	46.00	19.94	
	3.328	20.39	0.59	20.98	46.00	25.02	
	6.121	20.70	0.66	21.36	50.00	28.64	
	25.321	24.50	1.06	25.56	50.00	24.44	
Neutral	0.183	48.58	0.22	48.80	64.33	15.53	QP
	0.348	38.49	0.36	38.85	59.00	20.15	
	0.552	31.74	0.44	32.18	56.00	23.82	
	4.721	32.99	0.63	33.62	56.00	22.38	
	6.121	35.40	0.67	36.07	60.00	23.93	
	22.063	44.16	1.05	45.21	60.00	14.79	
	0.183	36.50	0.22	36.72	54.33	17.61	AV
	0.348	26.70	0.36	27.06	49.00	21.94	
	0.552	20.60	0.44	21.04	46.00	24.96	
	4.721	21.90	0.63	22.53	46.00	23.47	
	6.121	24.50	0.67	25.17	50.00	24.83	
	22.063	23.49	1.05	24.54	50.00	25.46	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : W2240VV Humidity : 48%RH

Serial No. : 912NDVWAP335 Date of Test : Jan 12, 2010

Test Mode : DVI 1024*768@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.184	48.99	0.24	49.23	64.28	15.05	QP
	0.348	40.21	0.38	40.59	59.00	18.41	
	0.552	34.97	0.46	35.43	56.00	20.57	
	3.328	33.61	0.59	34.20	56.00	21.80	
	5.333	33.08	0.63	33.71	60.00	26.29	
	25.321	36.47	1.06	37.53	60.00	22.47	
	0.184	34.51	0.24	34.75	54.28	19.53	AV
	0.348	29.70	0.38	30.08	49.00	18.92	
	0.552	25.60	0.46	26.06	46.00	19.94	
	3.328	21.39	0.59	21.98	46.00	24.02	
	5.333	21.40	0.63	22.03	50.00	27.97	
	25.321	24.50	1.06	25.56	50.00	24.44	
Neutral	0.184	48.97	0.22	49.19	64.28	15.09	QP
	0.325	39.42	0.34	39.76	59.57	19.81	
	0.552	31.80	0.44	32.24	56.00	23.76	
	4.721	34.12	0.63	34.75	56.00	21.25	
	6.121	35.22	0.67	35.89	60.00	24.11	
	22.063	44.28	1.05	45.33	60.00	14.67	
	0.184	30.70	0.22	30.92	54.28	23.36	AV
	0.325	28.61	0.34	28.95	49.57	20.62	
	0.552	20.90	0.44	21.34	46.00	24.66	
	4.721	25.30	0.63	25.93	46.00	20.07	
	6.121	20.40	0.67	21.07	50.00	28.93	
	22.063	32.49	1.05	33.54	50.00	16.46	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : W2240VV Humidity : 48%RH

Serial No. : 912NDVWAP335 Date of Test : Jan 12, 2010

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	0.184	48.96	0.24	49.20	64.28	15.08	QP
	0.307	39.65	0.36	40.01	60.06	20.05	
	0.552	34.96	0.46	35.42	56.00	20.58	
	3.840	33.13	0.60	33.73	56.00	22.27	
	5.333	31.17	0.63	31.80	60.00	28.20	
	25.321	36.24	1.06	37.30	60.00	22.70	
	0.184	36.71	0.24	36.95	54.28	17.33	AV
	0.307	28.60	0.36	28.96	50.06	21.10	
	0.552	26.50	0.46	26.96	46.00	19.04	
	3.840	21.41	0.60	22.01	46.00	23.99	
	5.333	20.40	0.63	21.03	50.00	28.97	
	25.321	25.40	1.06	26.46	50.00	23.54	
Neutral	0.184	48.76	0.22	48.98	64.28	15.30	QP
	0.325	39.38	0.34	39.72	59.57	19.85	
	0.552	31.99	0.44	32.43	56.00	23.57	
	4.114	31.94	0.62	32.56	56.00	23.44	
	9.204	36.99	0.74	37.73	60.00	22.27	
	22.535	42.94	1.04	43.98	60.00	16.02	
	0.184	34.50	0.22	34.72	54.28	19.56	AV
	0.325	28.41	0.34	28.75	49.57	20.82	
	0.552	23.40	0.44	23.84	46.00	22.16	
	4.114	20.90	0.62	21.52	46.00	24.48	
	9.204	24.80	0.74	25.54	50.00	24.46	
	22.535	31.50	1.04	32.54	50.00	17.46	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : W2240VV Humidity : 48%RH

Serial No. : 912NDVWAP335 Date of Test : Jan 12, 2010

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	0.183	48.19	0.24	48.43	64.33	15.90	QP
	0.310	40.40	0.36	40.76	59.97	19.21	
	0.552	36.00	0.46	36.46	56.00	19.54	
	4.721	33.40	0.62	34.02	56.00	21.98	
	5.333	31.95	0.63	32.58	60.00	27.42	
	25.321	36.61	1.06	37.67	60.00	22.33	
	0.183	34.11	0.24	34.35	54.33	19.98	AV
	0.310	24.51	0.36	24.87	49.97	25.10	
	0.552	24.60	0.46	25.06	46.00	20.94	
	4.721	21.60	0.62	22.22	46.00	23.78	
	5.333	24.50	0.63	25.13	50.00	24.87	
	25.321	25.40	1.06	26.46	50.00	23.54	
Neutral	0.184	48.65	0.22	48.87	64.28	15.41	QP
	0.310	38.08	0.34	38.42	59.97	21.55	
	0.552	32.00	0.44	32.44	56.00	23.56	
	4.721	32.34	0.63	32.97	56.00	23.03	
	8.822	35.34	0.74	36.08	60.00	23.92	
	21.373	45.05	1.06	46.11	60.00	13.89	
	0.184	34.50	0.22	34.72	54.28	19.56	AV
	0.310	24.60	0.34	24.94	49.97	25.03	
	0.552	24.30	0.44	24.74	46.00	21.26	
	4.721	21.40	0.63	22.03	46.00	23.97	
	8.822	24.09	0.74	24.83	50.00	25.17	
	21.373	31.40	1.06	32.46	50.00	17.54	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : W2240VV Humidity : 48%RH

Serial No. : 912NDVWAP335 Date of Test : Jan 12, 2010

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	0.184	49.41	0.24	49.65	64.28	14.63	QP
	0.307	38.70	0.36	39.06	60.06	21.00	
	0.552	34.54	0.46	35.00	56.00	21.00	
	4.027	32.14	0.61	32.75	56.00	23.25	
	5.333	31.45	0.63	32.08	60.00	27.92	
	25.321	36.31	1.06	37.37	60.00	22.63	
	0.184	34.51	0.24	34.75	54.28	19.53	AV
	0.307	27.60	0.36	27.96	50.06	22.10	
	0.552	26.40	0.46	26.86	46.00	19.14	
	4.027	21.60	0.61	22.21	46.00	23.79	
	5.333	20.90	0.63	21.53	50.00	28.47	
	25.321	25.40	1.06	26.46	50.00	23.54	
Neutral	0.184	49.45	0.22	49.67	64.28	14.61	QP
	0.307	37.54	0.34	37.88	60.06	22.18	
	0.552	31.26	0.44	31.70	56.00	24.30	
	4.721	31.55	0.63	32.18	56.00	23.82	
	6.121	35.38	0.67	36.05	60.00	23.95	
	22.063	44.15	1.05	45.20	60.00	14.80	
	0.184	36.40	0.22	36.62	54.28	17.66	AV
	0.307	26.50	0.34	26.84	50.06	23.22	
	0.552	20.40	0.44	20.84	46.00	25.16	
	4.721	20.10	0.63	20.73	46.00	25.27	
	6.121	24.50	0.67	25.17	50.00	24.83	
	22.063	30.29	1.05	31.34	50.00	18.66	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : W2240VV Humidity : 48%RH

Serial No. : 912NDVWAP335 Date of Test : Jan 12, 2010

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	0.184	49.79	0.24	50.03	64.28	14.25	QP
	0.310	39.61	0.36	39.97	59.97	20.00	
	0.552	34.51	0.46	34.97	56.00	21.03	
	4.027	34.71	0.61	35.32	56.00	20.68	
	6.121	30.19	0.66	30.85	60.00	29.15	
	24.790	35.15	1.07	36.22	60.00	23.78	
	0.184	38.41	0.24	38.65	54.28	15.63	AV
	0.310	28.61	0.36	28.97	49.97	21.00	
	0.552	26.40	0.46	26.86	46.00	19.14	
	4.027	24.60	0.61	25.21	46.00	20.79	
	6.121	20.40	0.66	21.06	50.00	28.94	
	24.790	24.10	1.07	25.17	50.00	24.83	
Neutral	0.183	49.17	0.22	49.39	64.33	14.94	QP
	0.307	38.57	0.34	38.91	60.06	21.15	
	0.552	30.42	0.44	30.86	56.00	25.14	
	4.721	32.15	0.63	32.78	56.00	23.22	
	6.121	35.74	0.67	36.41	60.00	23.59	
	25.055	43.49	0.99	44.48	60.00	15.52	
	0.183	30.40	0.22	30.62	54.33	23.71	AV
	0.307	28.54	0.34	28.88	50.06	21.18	
	0.552	19.50	0.44	19.94	46.00	26.06	
	4.721	20.40	0.63	21.03	46.00	24.97	
	6.121	24.50	0.67	25.17	50.00	24.83	
	25.055	23.40	0.99	24.39	50.00	25.61	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : W2240VV Humidity : 48%RH

Serial No. : 912NDVWAP335 Date of Test : Jan 12, 2010

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	0.184	49.98	0.24	50.22	64.28	14.06	QP
	0.307	40.90	0.36	41.26	60.06	18.80	
	0.552	34.35	0.46	34.81	56.00	21.19	
	4.027	33.14	0.61	33.75	56.00	22.25	
	5.333	32.90	0.63	33.53	60.00	26.47	
	25.591	36.72	1.07	37.79	60.00	22.21	
	0.184	38.41	0.24	38.65	54.28	15.63	AV
	0.307	30.10	0.36	30.46	50.06	19.60	
	0.552	20.40	0.46	20.86	46.00	25.14	
	4.027	20.40	0.61	21.01	46.00	24.99	
	5.333	20.40	0.63	21.03	50.00	28.97	
	25.591	25.40	1.07	26.47	50.00	23.53	
Neutral	0.184	49.12	0.22	49.34	64.28	14.94	QP
	0.307	36.62	0.34	36.96	60.06	23.10	
	0.552	29.10	0.44	29.54	56.00	26.46	
	4.158	31.23	0.62	31.85	56.00	24.15	
	6.627	37.83	0.69	38.52	60.00	21.48	
	22.535	42.46	1.04	43.50	60.00	16.50	
	0.184	28.50	0.22	28.72	54.28	25.56	AV
	0.307	24.60	0.34	24.94	50.06	25.12	
	0.552	19.80	0.44	20.24	46.00	25.76	
	4.158	20.40	0.62	21.02	46.00	24.98	
	6.627	24.59	0.69	25.28	50.00	24.72	
	22.535	30.50	1.04	31.54	50.00	18.46	

TEST ENGINEER: HUGH HUANG

4 RADIATED EMISSION TEST

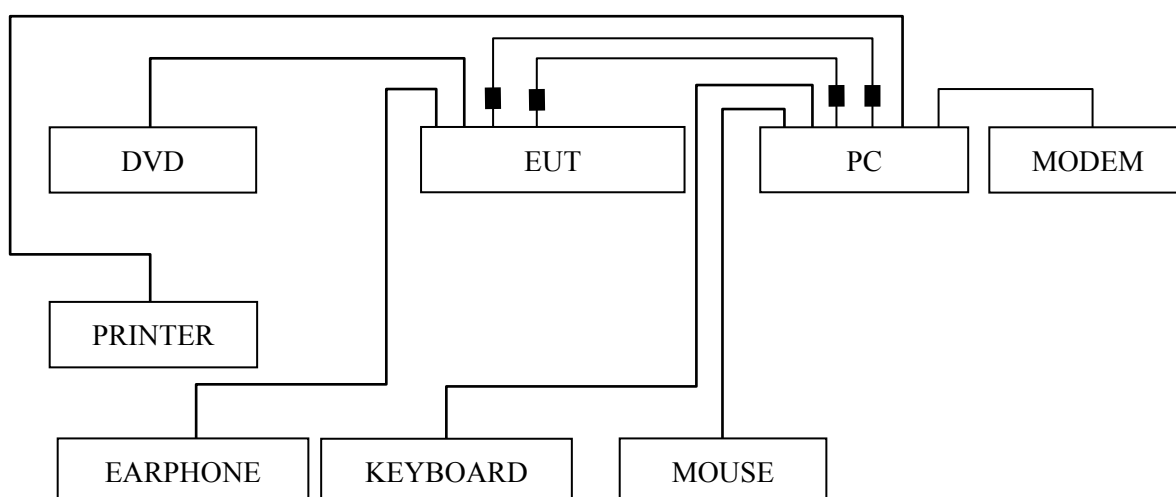
4.1 Test Equipment

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, 2009	Mar 07, 2010
2.	Preamplifier	Agilent	8447D	2944A10548	Sep 19, 2009	Mar 19, 2010
3.	Preamplifier	HP	8449B	3008A00864	Apr 29, 2009	Apr 29, 2010
4.	Bi-log Antenna	TESEQ	CBL6112D	23193	May 14, 2008	May 14, 2010
5.	Spectrum	Agilent	E7405A	MY45106600	May 19, 2009	May 19, 2010
6.	Software	Audix	E3	SET00200 9912M295-2	--	--

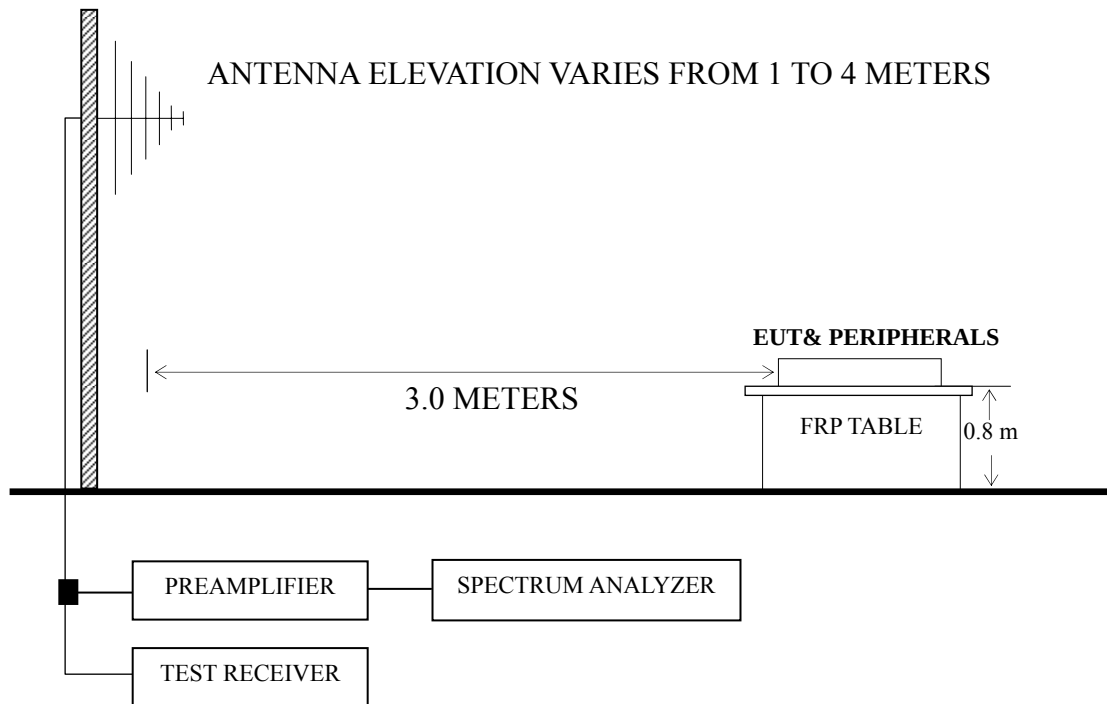
4.2 Block Diagram of Test Setup

4.2.1 EUT and Peripherals



■ : Ferrite core

4.2.2 Radiated emission test setup



■ : 50 ohm Coaxial Switch

4.3 Radiated Emission Limit [FCC Part 15 Subpart B 15.109(a)]

Frequency (MHz)	Distance (m)	Field strength limits	
		($\mu\text{V/m}$)	dB ($\mu\text{V/m}$)
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
Above 960	3	500	54.0

NOTE 1 - Emission Level dB ($\mu\text{V/m}$) = 20 log Emission Level ($\mu\text{V/m}$)

NOTE 2 - The tighter limit applies at the band edges.

NOTE 3 - Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

NOTE 4 - The limits shown are based on Quasi-peak value detector below or equal to 1GHz and Average value detector above 1GHz.

NOTE 5 - Above 1 GHz, the limit on peak emission is 20 dB above the maximum permitted average emission limit applicable to the EUT.

4.4 Test Configuration

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

Please refer to Sec.3.4.

4.5 Operating Condition of EUT

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

4.6 Test Procedures

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

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

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

The frequency range from 1 GHz to 2 GHz was checked for D-Sub/DVI 1680*1050@60Hz and D-Sub/DVI 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 1024*768@60Hz	P28
D-Sub 1680*1050@60Hz	P29
D-Sub 1920*1080@60Hz	P30
DVI 640*480@60Hz	P31
DVI 1024*768@60Hz	P32
DVI 1680*1050@60Hz	P33
DVI 1920*1080@60Hz	P34
HDMI 480P	P35
HDMI 720P	P36
HDMI 1080P	P37

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

NOTE 5 – 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

NOTE 6 – The worst case is for HDMI 720P test mode. The worst emission at horizontal polarization was detected at 206.540 MHz with corrected signal level of 39.98 dB ($\mu\text{V/m}$) (limit is 43.50dB ($\mu\text{V/m}$)), when the antenna was 1.10 m height and the turntable was at 110° . The worst emission at vertical polarization was detected at 929.190MHz with corrected signal level of 42.91 dB ($\mu\text{V/m}$) (limit is 46.00 dB ($\mu\text{V/m}$)), when the antenna was 1.20 m height and the turntable was at 70° .

EUT : LCD Monitor Temperature : 22°C

Model No. : W2240VV Humidity : 60%RH

Serial No. : 912NDVWAP335 Date of Test : Jan 08, 2010

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	72.680	12.64	6.85	0.90	20.39	40.00	19.61
	149.310	21.53	11.35	1.23	34.11	43.50	9.39
	216.240	27.48	11.43	1.49	40.40	46.00	5.60
	281.230	14.12	13.57	1.70	29.39	46.00	16.61
	517.910	11.34	18.12	2.30	31.76	46.00	14.24
	730.340	10.87	20.00	2.75	33.62	46.00	12.38
Vertical	30.000	13.45	19.60	0.62	33.67	40.00	6.33
	70.740	19.82	6.58	0.89	27.29	40.00	12.71
	115.360	19.13	12.71	1.11	32.95	43.50	10.55
	235.640	24.14	12.36	1.56	38.06	46.00	7.94
	290.930	21.67	13.75	1.74	37.16	46.00	8.84
	519.850	18.45	18.15	2.31	38.91	46.00	7.09

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : W2240VV Humidity : 60%RH

Serial No. : 912NDVWAP335 Date of Test : Jan 08, 2010

Test Mode : D-Sub 1024*768@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	71.710	14.09	6.69	0.89	21.67	40.00	18.33
	150.280	20.27	11.25	1.23	32.75	43.50	10.75
	214.300	26.78	11.35	1.49	39.62	43.50	3.88
	288.020	17.73	13.71	1.72	33.16	46.00	12.84
	414.120	15.16	16.69	2.02	33.87	46.00	12.13
	730.340	13.08	20.00	2.75	35.83	46.00	10.17
Vertical	30.970	12.94	19.03	0.63	32.60	40.00	7.40
	70.740	20.67	6.58	0.89	28.14	40.00	11.86
	115.360	18.75	12.71	1.11	32.57	43.50	10.93
	214.300	23.61	11.35	1.49	36.45	43.50	7.05
	290.930	21.49	13.75	1.74	36.98	46.00	9.02
	500.450	16.44	17.90	2.27	36.61	46.00	9.39

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : W2240VV Humidity : 60%RH

Serial No. : 912NDVWAP335 Date of Test : Jan 08, 2010

Test Mode : D-Sub 1680*1050@60Hz

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	70.740	16.96	6.58	0.89	--	24.43	40.00	15.57	QP
	151.250	20.39	11.19	1.24	--	32.82	43.50	10.68	
	212.360	27.33	11.26	1.47	--	40.06	43.50	3.44	
	287.050	18.95	13.68	1.72	--	34.35	46.00	11.65	
	494.630	11.09	17.83	2.25	--	31.17	46.00	14.83	
	730.340	11.64	20.00	2.75	--	34.39	46.00	11.61	
	1057.000	48.82	22.79	3.26	34.10	40.77	74.00	33.23	PK
	1200.000	48.81	23.70	3.35	34.12	41.74	74.00	32.26	
	1296.000	47.21	24.49	3.49	34.13	41.06	74.00	32.94	
	1466.000	49.98	25.60	3.72	34.15	45.15	74.00	28.85	
	1600.000	49.66	26.40	3.93	34.16	45.83	74.00	28.17	
	1800.000	50.47	26.90	4.20	34.18	47.39	74.00	26.61	
Vertical	71.710	21.21	6.69	0.89	--	28.79	40.00	11.21	QP
	115.360	17.70	12.71	1.11	--	31.52	43.50	11.98	
	180.350	24.30	9.90	1.36	--	35.56	43.50	7.94	
	235.640	23.58	12.36	1.56	--	37.50	46.00	8.50	
	288.990	21.43	13.71	1.72	--	36.86	46.00	9.14	
	494.630	16.47	17.83	2.25	--	36.55	46.00	9.45	
	1040.000	53.55	22.66	3.23	34.10	45.34	74.00	28.66	PK
	1127.000	52.77	23.27	3.30	34.11	45.23	74.00	28.77	
	1200.000	52.52	23.70	3.35	34.12	45.45	74.00	28.55	
	1333.000	51.40	24.74	3.53	34.13	45.54	74.00	28.46	
	1466.000	53.78	25.60	3.72	34.15	48.95	74.00	25.05	
	1600.000	51.00	26.40	3.93	34.16	47.17	74.00	26.83	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : W2240VV Humidity : 60%RH

Serial No. : 912NDVWAP335 Date of Test : Jan 08, 2010

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

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	71.710	16.72	6.69	0.89	--	24.30	40.00	15.70	QP
	150.280	21.15	11.25	1.23	--	33.63	43.50	9.87	
	205.570	25.12	10.93	1.45	--	37.50	43.50	6.00	
	288.990	17.02	13.71	1.72	--	32.45	46.00	13.55	
	478.140	10.24	17.62	2.21	--	30.07	46.00	15.93	
	730.340	9.72	20.00	2.75	--	32.47	46.00	13.53	
	1135.000	48.97	23.33	3.32	34.11	41.51	74.00	32.49	PK
	1272.000	46.49	24.27	3.45	34.13	40.08	74.00	33.92	
	1394.000	48.13	25.16	3.59	34.14	42.74	74.00	31.26	
	1467.000	50.35	25.60	3.72	34.15	45.52	74.00	28.48	
	1600.000	48.33	26.40	3.93	34.16	44.50	74.00	29.50	
	1800.000	47.58	26.90	4.20	34.18	44.50	74.00	29.50	
Vertical	30.970	13.00	19.03	0.63	--	32.66	40.00	7.34	QP
	70.740	20.53	6.58	0.89	--	28.00	40.00	12.00	
	115.360	18.96	12.71	1.11	--	32.78	43.50	10.72	
	180.350	23.75	9.90	1.36	--	35.01	43.50	8.49	
	288.990	21.80	13.71	1.72	--	37.23	46.00	8.77	
	918.520	16.10	21.84	3.05	--	40.99	46.00	5.01	
	1041.000	55.61	22.69	3.24	34.10	47.44	74.00	26.56	PK
	1125.000	53.91	23.27	3.30	34.11	46.37	74.00	27.63	
	1264.000	54.24	24.23	3.45	34.13	47.79	74.00	26.21	
	1334.000	54.82	24.78	3.53	34.13	49.00	74.00	25.00	
	1466.000	50.37	25.60	3.72	34.15	45.54	74.00	28.46	
	1600.000	51.10	26.40	3.93	34.16	47.27	74.00	26.73	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : W2240VV Humidity : 60%RH

Serial No. : 912NDVWAP335 Date of Test : Jan 08, 2010

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	72.680	15.64	6.85	0.90	23.39	40.00	16.61
	149.310	19.53	11.35	1.23	32.11	43.50	11.39
	222.060	25.56	11.75	1.51	38.82	46.00	7.18
	281.230	15.12	13.57	1.70	30.39	46.00	15.61
	517.910	11.34	18.12	2.30	31.76	46.00	14.24
	730.340	10.87	20.00	2.75	33.62	46.00	12.38
Vertical	39.700	12.48	14.08	0.70	27.26	40.00	12.74
	70.740	21.82	6.58	0.89	29.29	40.00	10.71
	115.360	19.13	12.71	1.11	32.95	43.50	10.55
	235.640	21.14	12.36	1.56	35.06	46.00	10.94
	292.870	20.53	13.79	1.74	36.06	46.00	9.94
	519.850	19.45	18.15	2.31	39.91	46.00	6.09

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : W2240VV Humidity : 60%RH

Serial No. : 912NDVWAP335 Date of Test : Jan 08, 2010

Test Mode : DVI 1024*768@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	71.710	16.09	6.69	0.89	23.67	40.00	16.33
	150.280	20.27	11.25	1.23	32.75	43.50	10.75
	206.540	25.82	10.97	1.45	38.24	43.50	5.26
	288.020	16.73	13.71	1.72	32.16	46.00	13.84
	623.640	12.35	19.33	2.51	34.19	46.00	11.81
	730.340	14.08	20.00	2.75	36.83	46.00	9.17
Vertical	70.740	22.67	6.58	0.89	30.14	40.00	9.86
	115.360	16.75	12.71	1.11	30.57	43.50	12.93
	239.520	26.27	12.52	1.57	40.36	46.00	5.64
	290.930	21.49	13.75	1.74	36.98	46.00	9.02
	500.450	14.44	17.90	2.27	34.61	46.00	11.39
	921.430	13.37	21.84	3.05	38.26	46.00	7.74

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : W2240VV Humidity : 60%RH

Serial No. : 912NDVWAP335 Date of Test : Jan 08, 2010

Test Mode : DVI 1680*1050@60Hz

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	70.740	21.96	6.58	0.89	--	29.43	40.00	10.57	QP
	151.250	20.39	11.19	1.24	--	32.82	43.50	10.68	
	212.360	26.33	11.26	1.47	--	39.06	43.50	4.44	
	287.050	19.95	13.68	1.72	--	35.35	46.00	10.65	
	494.630	14.09	17.83	2.25	--	34.17	46.00	11.83	
	730.340	14.64	20.00	2.75	--	37.39	46.00	8.61	
	1031.000	47.68	22.60	3.23	34.10	39.41	74.00	34.59	PK
	1201.000	46.88	23.74	3.35	34.12	39.85	74.00	34.15	
	1270.000	47.38	24.27	3.45	34.13	40.97	74.00	33.03	
	1466.000	49.40	25.60	3.72	34.15	44.57	74.00	29.43	
	1601.000	47.56	26.40	3.93	34.16	43.73	74.00	30.27	
	1795.000	47.14	26.88	4.20	34.18	44.04	74.00	29.96	
Vertical	35.820	14.62	16.45	0.67	--	31.74	40.00	8.26	QP
	71.710	19.21	6.69	0.89	--	26.79	40.00	13.21	
	115.360	20.70	12.71	1.11	--	34.52	43.50	8.98	
	204.600	26.90	10.89	1.44	--	39.23	43.50	4.27	
	288.990	23.43	13.71	1.72	--	38.86	46.00	7.14	
	353.010	22.48	15.41	1.89	--	39.78	46.00	6.22	
	1124.000	53.16	23.27	3.30	34.11	45.62	74.00	28.38	PK
	1200.000	52.88	23.70	3.35	34.12	45.81	74.00	28.19	
	1334.000	52.23	24.78	3.53	34.13	46.41	74.00	27.59	
	1467.000	52.01	25.60	3.72	34.15	47.18	74.00	26.82	
	1601.000	50.96	26.40	3.93	34.16	47.13	74.00	26.87	
	1799.000	49.34	26.90	4.20	34.18	46.26	74.00	27.74	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : W2240VV Humidity : 60%RH

Serial No. : 912NDVWAP335 Date of Test : Jan 08, 2010

Test Mode : DVI 1920*1080@60Hz

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	45.520	15.78	10.94	0.74	--	27.46	40.00	12.54	QP
	71.710	17.72	6.69	0.89	--	25.30	40.00	14.70	
	150.280	26.15	11.25	1.23	--	38.63	43.50	4.87	
	205.570	25.12	10.93	1.45	--	37.50	43.50	6.00	
	288.990	19.02	13.71	1.72	--	34.45	46.00	11.55	
	730.340	11.72	20.00	2.75	--	34.47	46.00	11.53	
	1095.000	47.33	23.08	3.28	34.11	39.58	74.00	34.42	PK
	1215.000	46.64	23.82	3.37	34.12	39.71	74.00	34.29	
	1333.000	47.54	24.74	3.53	34.13	41.68	74.00	32.32	
	1466.000	48.59	25.60	3.72	34.15	43.76	74.00	30.24	
	1600.000	48.38	26.40	3.93	34.16	44.55	74.00	29.45	
	1724.000	47.38	26.72	4.10	34.17	44.03	74.00	29.97	
Vertical	30.970	14.00	19.03	0.63	--	33.66	40.00	6.34	QP
	115.360	18.96	12.71	1.11	--	32.78	43.50	10.72	
	180.350	25.75	9.90	1.36	--	37.01	43.50	6.49	
	234.670	26.03	12.32	1.56	--	39.91	46.00	6.09	
	288.990	23.80	13.71	1.72	--	39.23	46.00	6.77	
	457.770	18.13	17.35	2.15	--	37.63	46.00	8.37	
	1041.000	52.18	22.69	3.24	34.10	44.01	74.00	29.99	PK
	1196.000	51.68	23.70	3.35	34.12	44.61	74.00	29.39	
	1334.000	52.65	24.78	3.53	34.13	46.83	74.00	27.17	
	1467.000	50.42	25.60	3.72	34.15	45.59	74.00	28.41	
	1600.000	49.84	26.40	3.93	34.16	46.01	74.00	27.99	
	1799.000	48.18	26.90	4.20	34.18	45.10	74.00	28.90	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : W2240VV Humidity : 60%RH

Serial No. : 912NDVWAP335 Date of Test : Jan 08, 2010

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	152.220	21.31	11.09	1.24	33.64	43.50	9.86
	206.540	26.11	10.97	1.45	38.53	43.50	4.97
	288.990	18.19	13.71	1.72	33.62	46.00	12.38
	414.120	12.73	16.69	2.02	31.44	46.00	14.56
	730.340	13.18	20.00	2.75	35.93	46.00	10.07
	829.280	8.67	20.98	2.92	32.57	46.00	13.43
Vertical	40.670	13.19	13.62	0.71	27.52	40.00	12.48
	70.740	20.74	6.58	0.89	28.21	40.00	11.79
	115.360	19.09	12.71	1.11	32.91	43.50	10.59
	206.540	25.13	10.97	1.45	37.55	43.50	5.95
	291.900	21.51	13.77	1.74	37.02	46.00	8.98
	501.420	15.31	17.93	2.27	35.51	46.00	10.49

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : W2240VV Humidity : 60%RH

Serial No. : 912NDVWAP335 Date of Test : Jan 08, 2010

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	71.710	14.24	6.69	0.89	21.82	40.00	18.18
	149.310	22.46	11.35	1.23	35.04	43.50	8.46
	206.540	27.56	10.97	1.45	39.98	43.50	3.52
	235.640	20.50	12.36	1.56	34.42	46.00	11.58
	290.930	14.37	13.75	1.74	29.86	46.00	16.14
	730.340	11.56	20.00	2.75	34.31	46.00	11.69
Vertical	30.970	12.10	19.03	0.63	31.76	40.00	8.24
	115.360	17.56	12.71	1.11	31.38	43.50	12.12
	235.640	23.83	12.36	1.56	37.75	46.00	8.25
	290.930	22.09	13.75	1.74	37.58	46.00	8.42
	500.450	18.10	17.90	2.27	38.27	46.00	7.73
	929.190	17.94	21.90	3.07	42.91	46.00	3.09

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : W2240VV Humidity : 60%RH

Serial No. : 912NDVWAP335 Date of Test : Jan 08, 2010

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	71.710	18.21	6.69	0.89	25.79	40.00	14.21
	94.020	10.65	10.27	1.02	21.94	43.50	21.56
	149.310	20.91	11.35	1.23	33.49	43.50	10.01
	213.330	25.03	11.30	1.47	37.80	43.50	5.70
	239.520	16.79	12.52	1.57	30.88	46.00	15.12
	730.340	10.78	20.00	2.75	33.53	46.00	12.47
Vertical	39.700	13.66	14.08	0.70	28.44	40.00	11.56
	71.710	20.67	6.69	0.89	28.25	40.00	11.75
	115.360	18.48	12.71	1.11	32.30	43.50	11.20
	215.270	25.34	11.39	1.49	38.22	43.50	5.28
	290.930	21.44	13.75	1.74	36.93	46.00	9.07
	500.450	16.98	17.90	2.27	37.15	46.00	8.85

TEST ENGINEER: RAVEN JIN

5 DEVIATION TO TEST SPECIFICATIONS

None.

6 DEBUG DESCRIPTION

The following components are used during the countermeasure procedures:

Name	M/N	Specifications (mm)	Manufacturer	Location
Aluminum foil	T-308	50*30	DAEHUNG SUBSIDIARY MATERIALS.	See Internal Photo Figure 13
Gasket	MCQ57884406	10*2T/25*10*6	EXPAN	See Internal Photo Figure 14
Adhesive Tape	7250CP0005S	12*25	EXPAN	See Internal Photo Figure 15

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)