



Product Service

FCC Test Report

Project Number : 4842009419600 Date of Issue: July 07, 2009

Model / Serial No. : W2753VCV

Product Type : LCD Monitor

Applicant : LG Electronics USA

Address : 1000 Sylvan Avenue Englewood Cliffs, NJ 07632

Manufacturer : LG Electronics Nanjing Display Co., Ltd.

Test Result : Positive Negative

Total pages : 28

Date of Test : June 25, 2009- July 01, 2009

Prepared by : Hui Tan

Approved by : Jun Bao



Product Service

TABLE OF CONTENTS

Description	Page
1. Test Facility	3
2. EUT Information.....	4-5
3. Test Summary.....	6
4. Conducted Emission.....	7-11
5. Radiated Emission.....	12-20
6. EUT Photograph.....	21-28



Product Service

1. Test Facility

Test Site: Jiangsu TUV Product Service Ltd.

10 Huaxia M. Road, Wuxi, Jiangsu, 214100, P.R. China

FCC Registration Number: 767285

Jiangsu TUV Product Service Ltd is an accredited test laboratory, whose measurement data is accepted in conjunction with applications for certifications under part 15 or 18 of the Commission's rules.

Ambient Condition in laboratory:

Items	Test	Required(IEC68-1)	Actual
Temperature(°C)	ANSI.C 63.4 CE	15-35	23
Humidity (%)		25-75	58
Atmospheric Pressure(mbar)		860-1060	1025
Temperature(°C)	ANSI.C 63.4 RE	15-35	24
Humidity (%)		25-75	56
Atmospheric Pressure(mbar)		860-1060	1030



2. EUT Information

2.1 EUT Description

FCC ID	:	BEJW2753HCV
Product Type	:	LCD Monitor
Model / Serial No.	:	W2753VCV
EUT Voltage	:	100-240VAC / 50/60Hz

2.2 EUT Configuration

W2753VCV	:	LCD Monitor
	:	
	:	

2.3 EUT Operating Mode

The equipment under test was operated under the following conditions during emissions testing:

- Standby
- Test Program (H - Pattern)
- Test Program (Color Bar)
- Test Program (Customer Specified)
- Normal Operating Mode



Product Service

- - Power on (VGA in)

2.4 Peripheral devices and interface cables were connected during the testing:

- | | |
|------------------------------|-----------------------------------|
| ■ - <u>AC Power line</u> | Type : <u>Unshielded</u> |
| ■ - <u>Notebook computer</u> | Type : <u>Dell LATITUDE E5500</u> |
| ■ - <u>VGA cable</u> | Type : <u>Shielded</u> |
| ■ - <u>DVI cable</u> | Type : <u>Shielded</u> |

2.5 EUT Exercise Software:

2.6 EUT Modification



Product Service

3. Test Summary

Test	Specification	Test Result	Remark
Conducted Emission	FCC part 15.107	Complied	Refer to page 7-11
Radiated Emission	FCC part 15.109	Complied	Refer to page 12-20

Remarks:

The highest frequency generated or used in the device or on which the device operates or tunes (MHz) is 135MHz (in the range of 108MHz – 500MHz); so the upper frequency of measurement range (MHz) is 2000MHz.



Product Service

4. Conducted Emission

4.1 Test Equipment

The following test Equipment are used :

	Model Number	Manufacturer	Description	Calibration Date	Interval(year)
■ -	ESHS30	Rohde & Schwarz	EMI Test Receiver	2009.05.30	1
■ -	NSLK8127	Schwarzbeck	LISN	2008.10.21	1
■ -	No.2	Jinlida	Shielding Room	N/A	N/A

N/A - Not Applicable

4.2 Test Specification

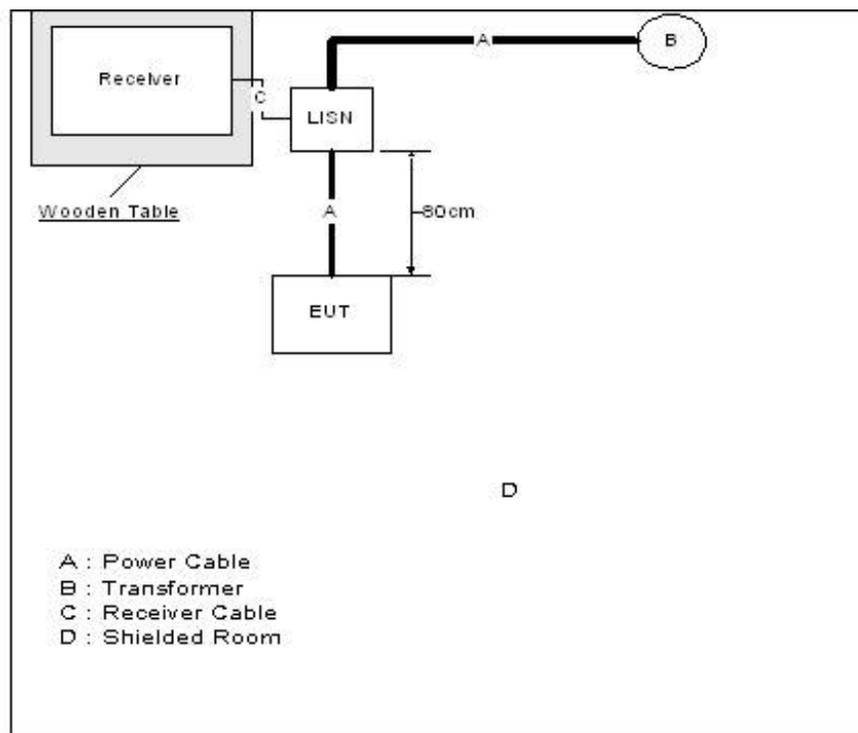
Tests are performed according to FCC part 15: 2007, subpart B. Limit as below:

FCC part 15 subpart B para. 15.107 Limits (dB μ V)				
Frequency (MHz)	Class A		Class B	
	QP	AV	QP	AV
0.15-0.5	79	66	66-56	56-46
0.5-5.0	73	60	56	46
5.0-30	73	60	60	50

4.3 Test Procedure

The test is performed in shield room. EUT is placed on the table which is 80cm above ground plane and connected to a Line Impedance Stabilization Network (LISN). The conducted emission is scanned over the frequency from 150KHz to 30MHz with peak detector. A final measurement is performed with quasi-peak detector and average detector. IF bandwidth is 10KHz.

4.4 Test Setup



4.5 Test Photo





Product Service

4.6 Test Result

150kHz-30MHz Conducted Emission Test W2753VCV

EUT: LCD Monitor
 Manuf: LG Electronics Nanjing Display Co., Ltd.
 Op Cond: Power on (VGA in, Run "H", 120V/60Hz)
 Operator: Hui Tan
 Test Spec: FCC Part 15 Class B
 Comment: Phase L

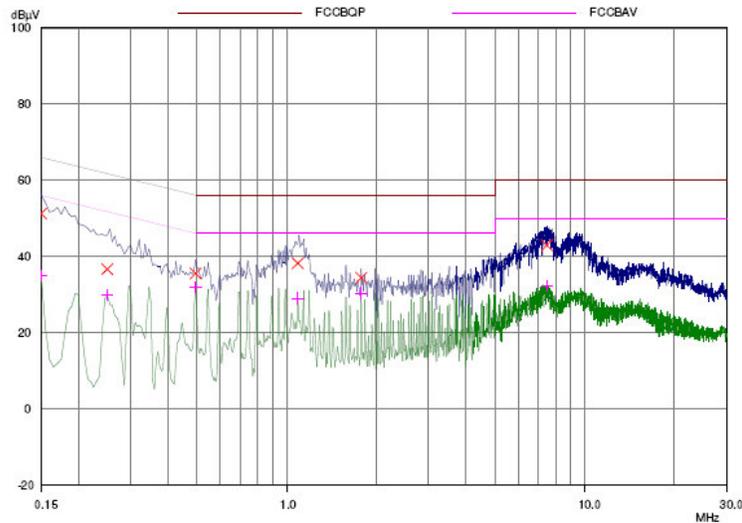
Result File: I1.dat : New Measurement

Scan Settings (2 Ranges)				Receiver Settings					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge	
150kHz	1000kHz	5kHz	10kHz	PK+AV	20msec	Auto	OFF	60dB	
1000kHz	30MHz	10kHz	10kHz	PK+AV	20msec	Auto	OFF	60dB	

Transducer	No.	Start	Stop	Name
	1	9kHz	30MHz	NSLK

Prescan Measurement:

Detectors:	X PK / + AV
Meas Time:	see scan settings
Subranges:	16
Acc Margin:	8 dB



Frequency (MHz)	Q-P Value (dBµV)	Q-P Margin (dB)	AV Value (dBµV)	AV Margin (dB)	Line
0.15	51.23	-14.77	34.93	-21.07	Live
0.25	36.61	-25.15	29.78	-21.98	Live
0.495	35.5	-20.58	31.89	-14.19	Live
1.09	38.16	-17.84	28.96	-17.04	Live
1.78	34.34	-21.66	30.25	-15.75	Live
7.47	42.93	-17.07	32.24	-17.76	Live



Product Service

150kHz-30MHz Conducted Emission Test
W2753VC

EUT: LCD Monitor
 Manuf: LG Electronics Nanjing Display Co., Ltd.
 Op Cond: Power on (VGA in, Run 'H', 100V/60Hz)
 Operator: Hui Tan
 Test Spec: FCC Part 15 Class B
 Comment: Phase N

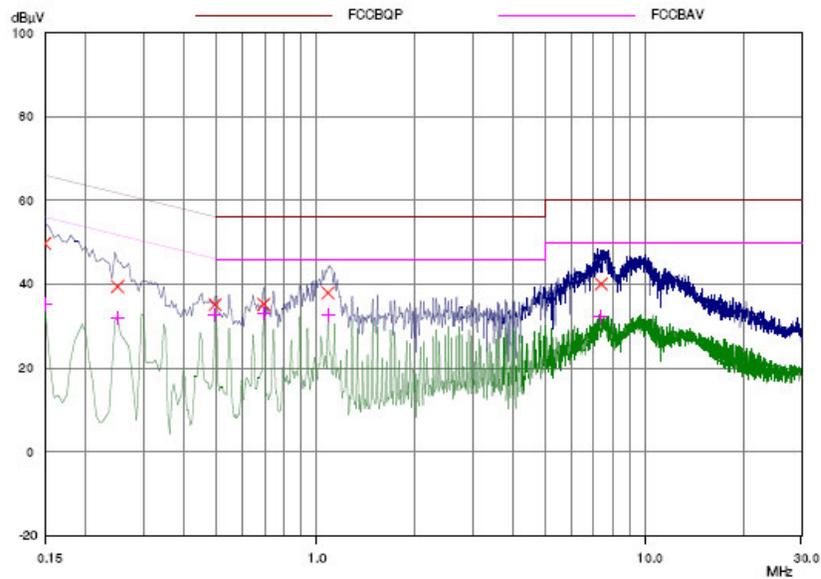
Result File: n1.dst : New Measurement

Scan Settings (2 Ranges)

Frequencies			IF BW	Detector	Receiver Settings			
Start	Stop	Step	10kHz	PK+AV	M-Time	Atten	Preamp	OpRge
150kHz	100kHz	5kHz	10kHz	PK+AV	20msec	Auto	OFF	60dB
100kHz	30MHz	10kHz	10kHz	PK+AV	20msec	Auto	OFF	60dB

Transducer	No.	Start	Stop	Name
	1	9kHz	30MHz	NSLK

Prescan Measurement: Detectors: X PK / + AV
 Meas Time: see scan settings
 Subranges: 16
 Acc Margin: 8 dB



Frequency (MHz)	Q-P Value (dBµV)	Q-P Margin (dB)	AV Value (dBµV)	AV Margin (dB)	Line
0.15	49.68	-16.32	35.21	-20.79	Neutral
0.25	39.41	-22.35	31.84	-19.92	Neutral
0.495	35.11	-20.97	32.75	-13.33	Neutral
0.695	35.19	-20.81	32.90	-13.10	Neutral
1.09	37.90	-18.10	32.61	-13.39	Neutral
7.38	40.01	-19.99	32.22	-17.78	Neutral



5. Radiated Emission

5.1 Test Equipment

The following test Equipment are used :

	Model Number	Manufacturer	Description	Calibration Date	Interval(year)
■ -	ESIB 7	Rohde & Schwarz	EMI Receiver	2009.01.18	1
■ -	VULB9168	Schwarzbeck	Broadband Antenna	2008.12.27	2
■ -	BBHA9120D	Schwarzbeck	Horn Antenna	2008.11.21	2
■ -		TDK	10 Meter Anechoic Chamber	2009.02.16	1

5.2 Test Specification

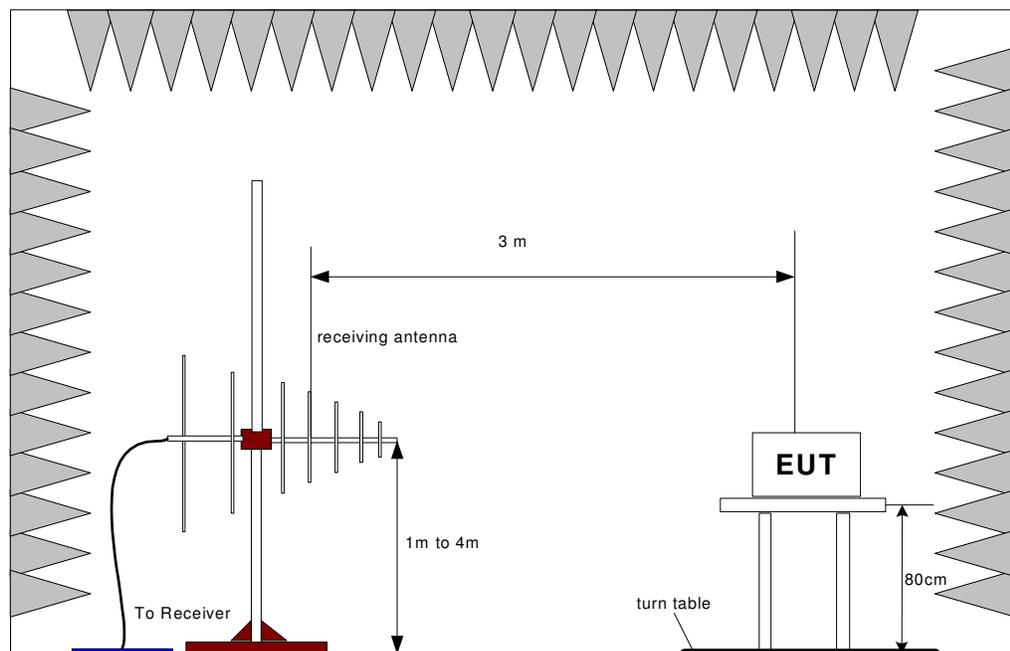
Tests are performed according to FCC part 15: 2007, subpart B. Limit as below:

FCC part 15 subpart B para. 15.109 Limits (dB μ V/m)				
Frequency (MHz)	Class A		Class B	
	Distance	QP	Distance	QP
30-88	10m	39	3m	40
88-216	10m	43.5	3m	43.5
216-960	10m	46.4	3m	46
Above 960	10m	49.5	3m	54

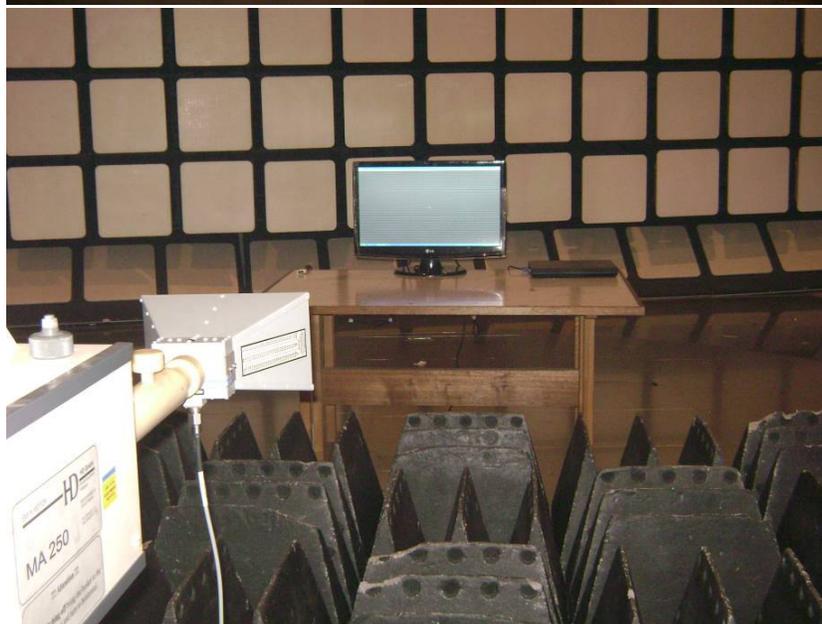
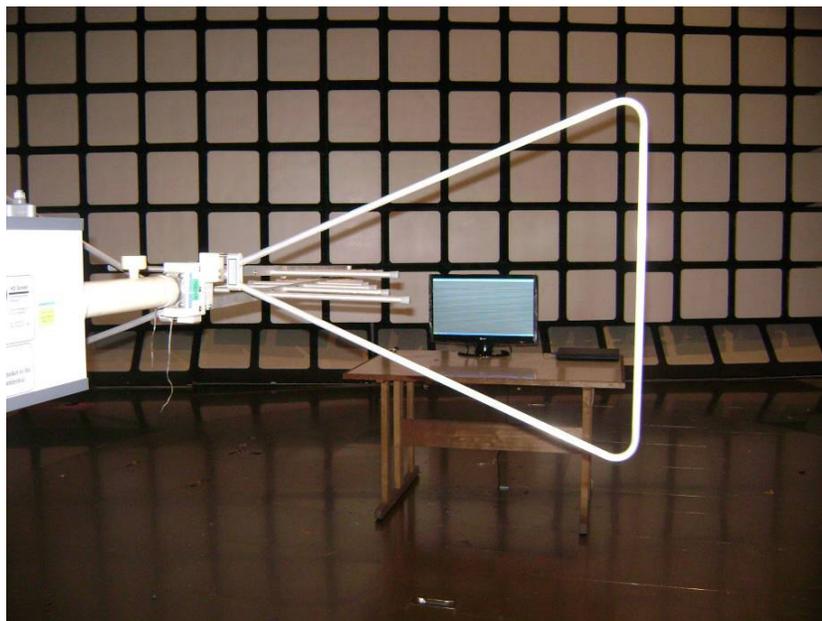
5.3 Test Procedure

The EUT is placed on a turntable which is 80cm above ground plane. The turntable rotates 360 degrees and antenna moves up and down between 1m and 4 m to find maximum emission. Both horizontal and vertical polarizations of antenna are set in the measurement. For class A equipment, the EUT is positioned at 10m away from antenna and for class B equipment, the EUT is positioned at 3m away from antenna.

5.4 Test Setup



5.5 Test Photo





Product Service

5.6 Test Result

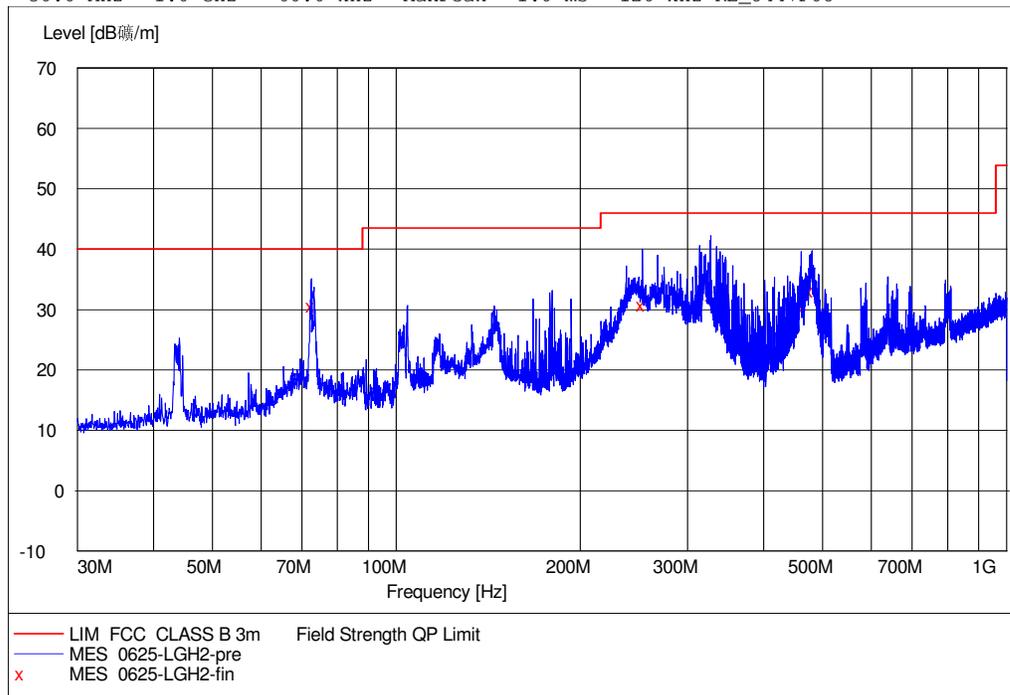
30MHz-1000MHz Radiated Emission Test

W2753VCV

EUT: LCD Monitor
Manufacturer: LG Electronics Nanjing Display Co., Ltd.
Operating Condition: Power on(VGA in, Run "H", 120V/60Hz)
Standard: FCC Part 15 class B
Operator: Hui Tan
Comment: Horizontal

SCAN TABLE: "FCC part15"

Start Frequency	Stop Frequency	Step Frequency Width	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	60.0 kHz	MaxPeak	1.0 ms	120 kHz	RE_8447F08





Product Service

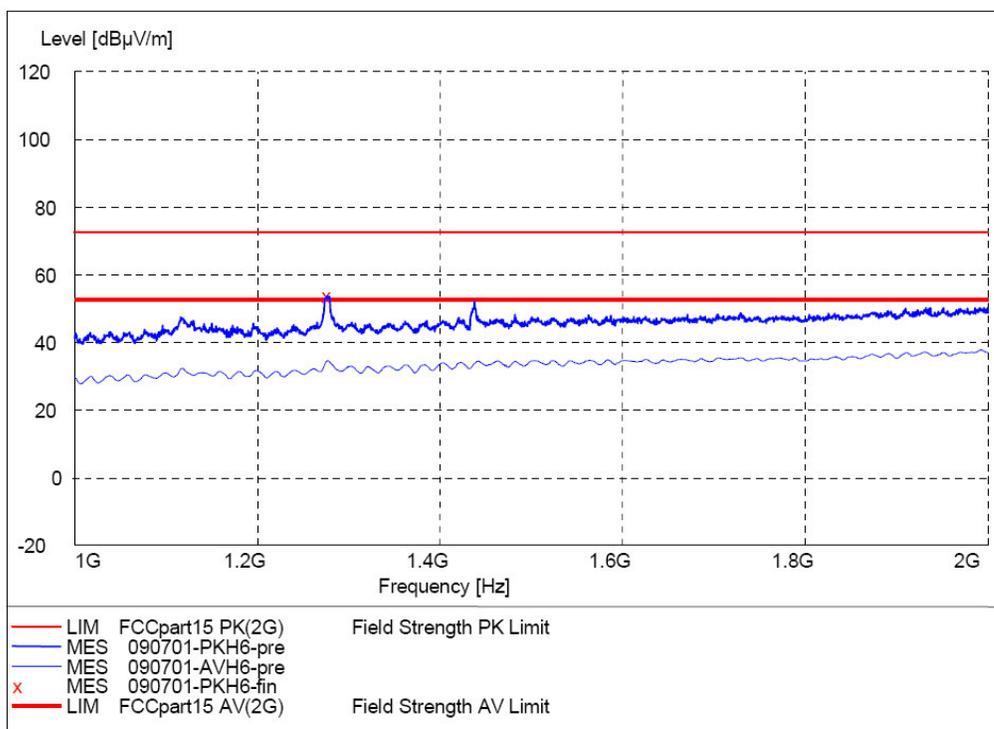
1000MHz-2000MHz Radiated Emission Test

W2753VCV

EUT: LCD Monitor
Manufacturer: LG Electronics Nanjing Display Co., Ltd.
Operating Condition: Power on(VGA in, Run "H", 120V/60Hz)
Standard: FCC Part 15 class B
Operator: Hui Tan
Comment: Horizontal

SCAN TABLE: "FCC Part15 (2G) "

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
1.0 GHz	2.0 GHz	500.0 kHz	MaxPeak Average	10.0 ms	1 MHz	RE (3m2G)





Product Service

Frequency (MHz)	Q-P Value (dB μ V/ m)	Q-P Margin (dB)	Peak Value (dB μ V/ m)	Peak Margin (dB)	AV Value (dB μ V/ m)	AV Margin (dB)	Azimuth (Degrees)	Height (cm)	Polarisation (H/V)
72.54	30.62	-9.38	--	--	--	--	95	231	H
252.96	30.86	-15.14	--	--	--	--	300	120	H
319.08	35.02	-10.98	--	--	--	--	265	100	H
327.36	32.42	-13.58	--	--	--	--	273	100	H
461.16	30.45	-15.55	--	--	--	--	276	100	H
477.54	33.15	-12.85	--	--	--	--	281	100	H
1277	--	--	53.94	-20.06	--	--	5	100	H



Product Service

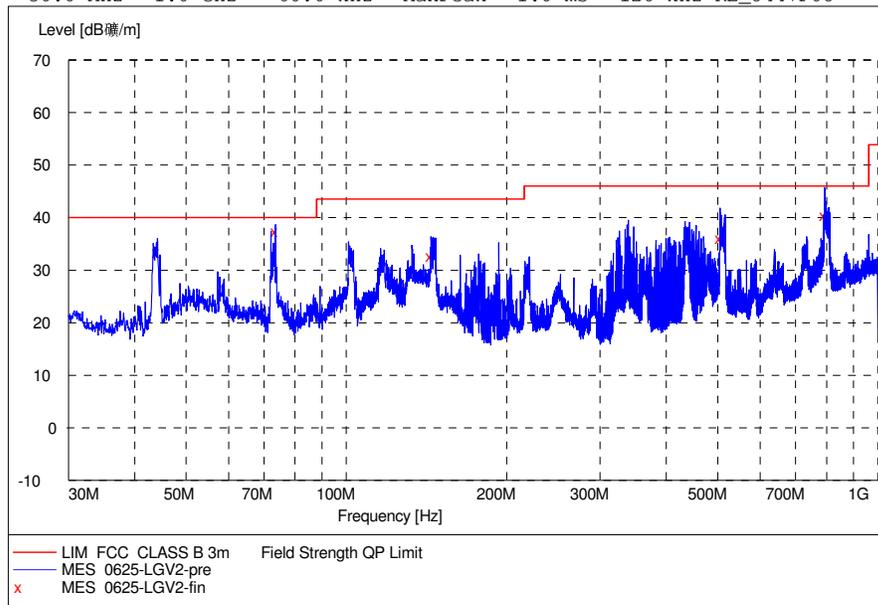
30MHz-1000MHz Radiated Emission Test

W2753VCV

EUT: LCD Monitor
 Manufacturer: LG Electronics Nanjing Display Co., Ltd.
 Operating Condition: Power on(VGA in, Run "H", 120V/60Hz)
 Standard: FCC Part 15 class B
 Operator: Hui Tan
 Comment: Vertical

SCAN TABLE: "FCC part15"

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	60.0 kHz	MaxPeak	1.0 ms	120 kHz	RE_8447F08



MEASUREMENT RESULT: "0625-LGV2-fin"

Frequency MHz	Level dBµV/m
44.100000	33.29
73.560000	37.37
144.360000	32.70
504.600000	36.10
792.900000	40.45



Product Service

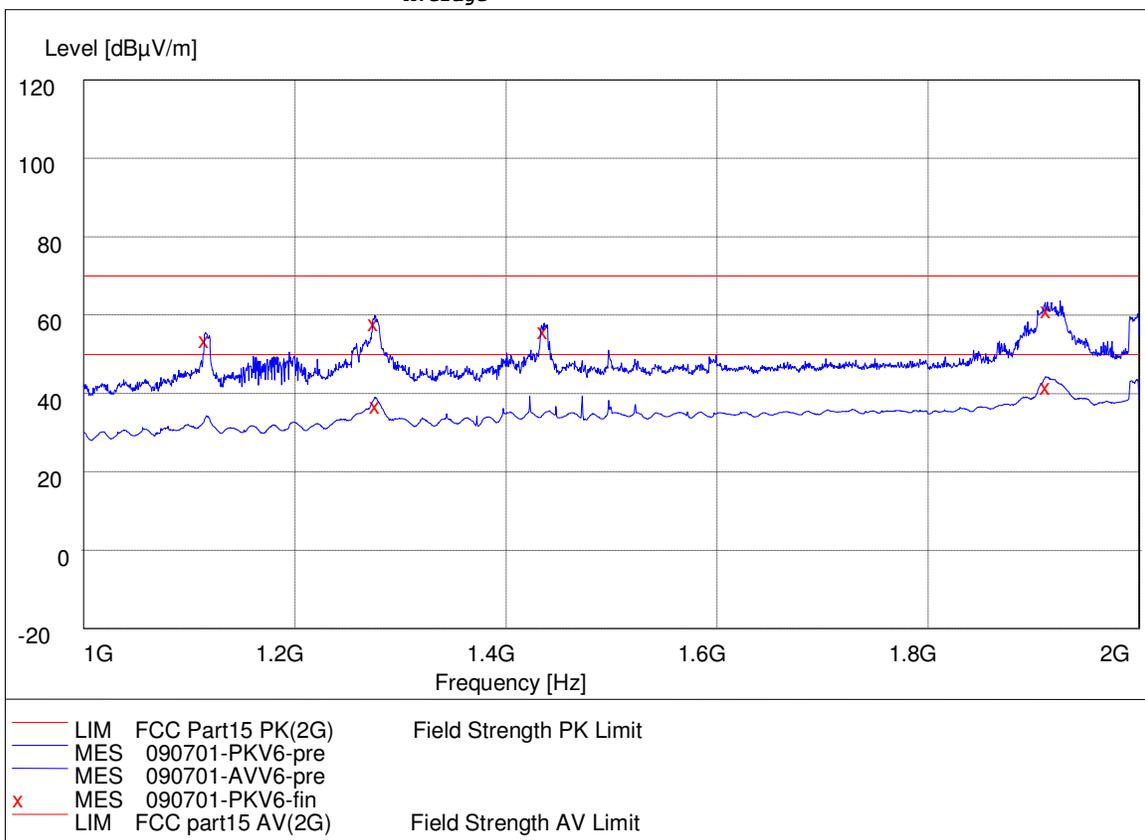
1000MHz-2000MHz Radiated Emission Test

W2753VCV

EUT: LCD Monitor
 Manufacturer: LG Electronics Nanjing Display Co., Ltd.
 Operating Condition: Power on(VGA in, Run "H", 120V/60Hz)
 Standard: FCC Part 15 class B
 Operator: Hui Tan
 Comment: Vertical

SCAN TABLE: " FCC Part15(2G) "

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
1.0 GHz	2.0 GHz	500.0 kHz	MaxPeak Average	10.0 ms	1 MHz	RE (3m2G)



MEASUREMENT RESULT: "090701-PKV6-fin"

Frequency MHz	Level dBµV/m
1912.500000	43.72 (AV)
1913.000000	63.19 (PK)



Product Service

Frequency (MHz)	Q-P Value (dB μ V/ m)	Q-P Margin (dB)	Peak Value (dB μ V/ m)	Peak Margin (dB)	AV Value (dB μ V/ m)	AV Margin (dB)	Azimuth (Degrees)	Height (cm)	Polarisation (H/V)
44.10	33.29	-6.71	--	--	--	--	76	112	H
73.56	37.37	-2.63	--	--	--	--	92	225	H
144.36	32.70	-10.8	--	--	--	--	235	100	H
504.60	36.10	-9.90	--	--	--	--	345	100	H
1115.50	--	--	55.63	-18.37	--	--	5	100	H
1275.50	--	--	59.90	-14.10	--	--	90	100	H
1277.00	--	--	--	--	38.84	-15.16	90	100	H
1436.50	--	--	57.94	-16.06	--	--	56	100	H
1912.50	--	--	--	--	43.72	-10.28	355	100	H
1913.00	--	--	63.19	-10.81	--	--	355	100	H

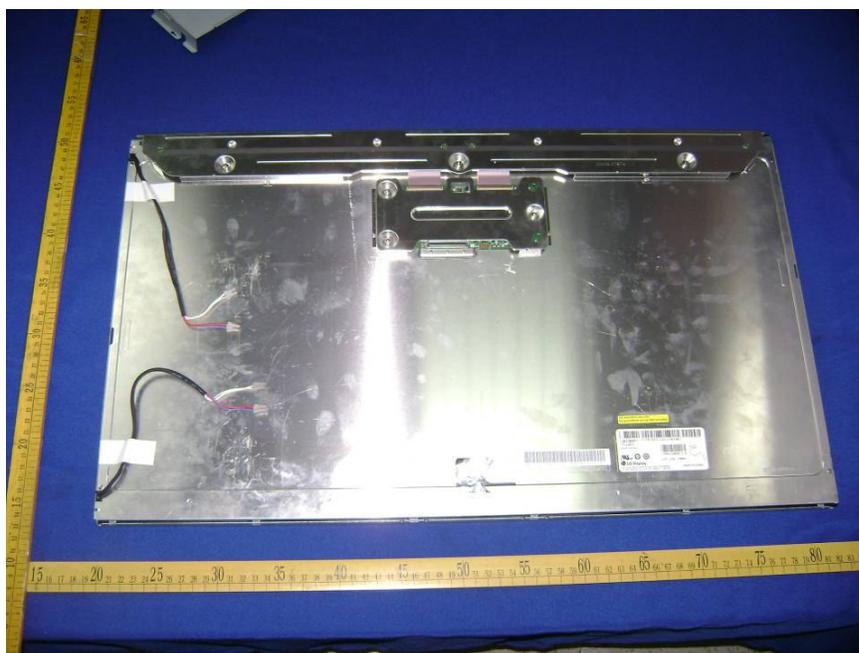
6. EUT Photograph

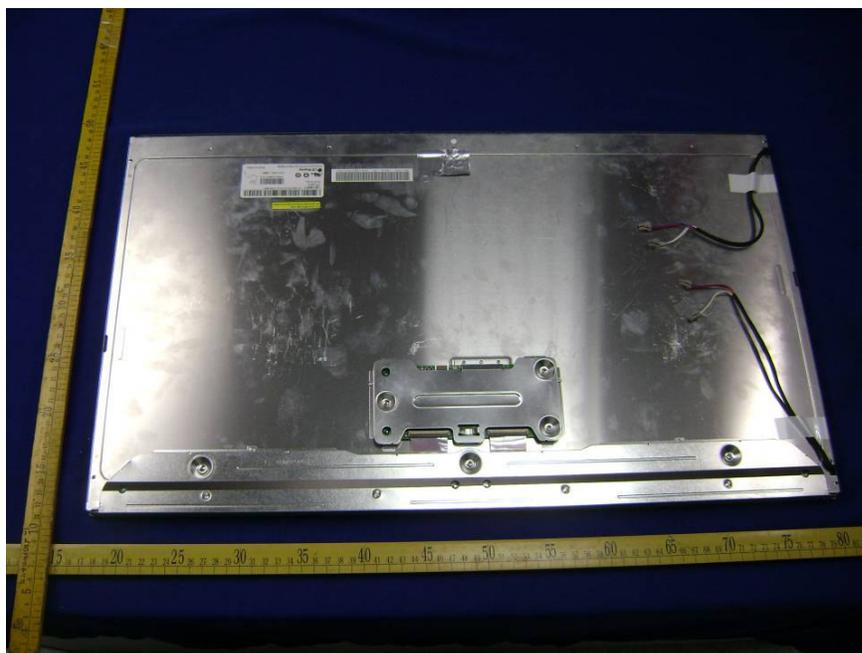


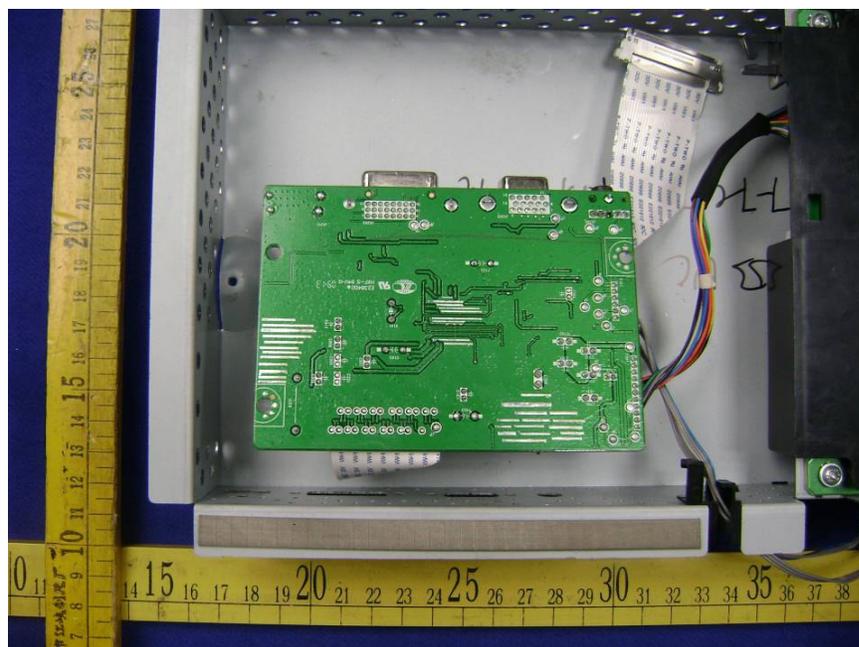
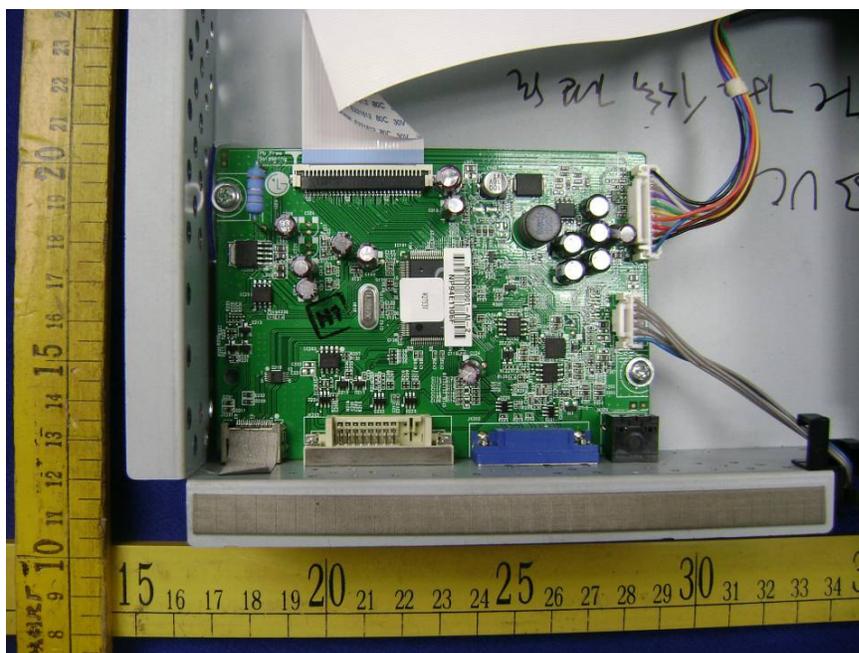


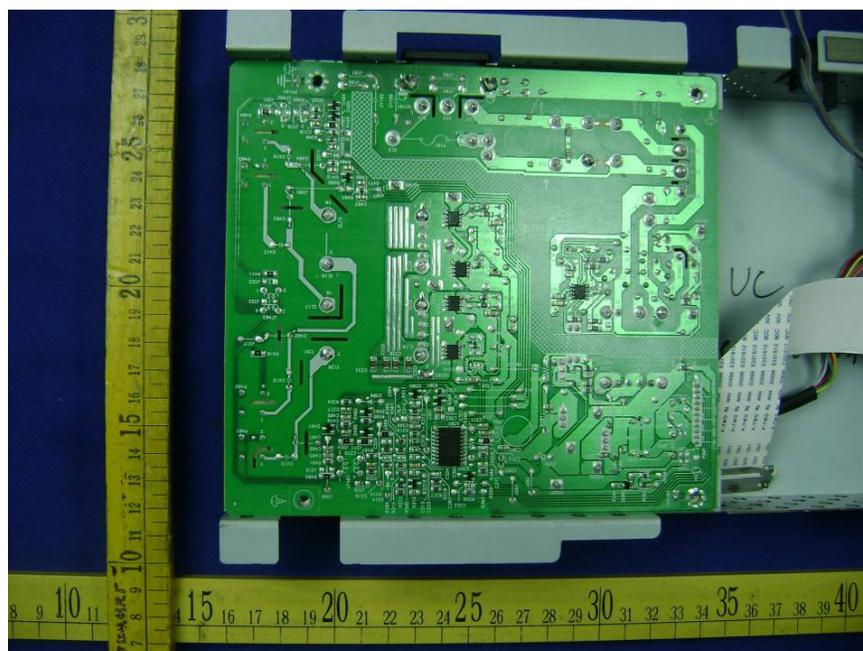
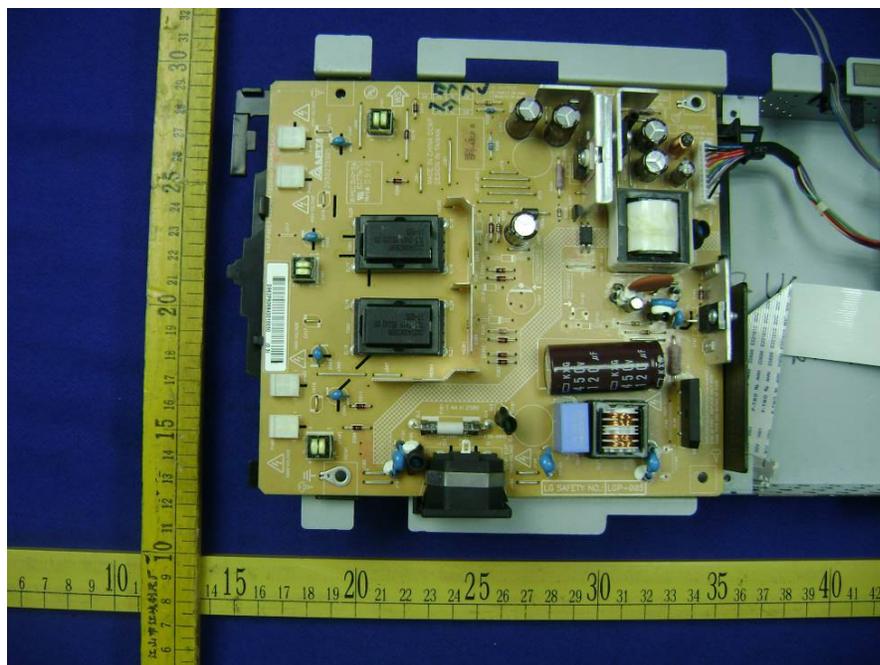


Product Service











Product Service



