



FCC TEST REPORT

According to

47 CFR, Part 2, Part 15 and CISPR PUB. 22

Applicant	: LG Electronics USA
Address	: 1000 Sylvan Avenue Englewood Cliffs New Jersey United States
Manufacturer	: LG Electronics Nanjing Display Co., Ltd.
Address	: No.346,Yaoxin Road Economic & Technical Development Zone Nanjing China
Equipment	: LCD Monitor
Model No.	: W2363VV
FCC ID	: BEJW2363VV
Trade Name	: LG

- The test result refers exclusively to the test presented test model / sample.
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- The test report must not be used by the clients to claim product certification approval by **NVLAP** or any agency of the Government.



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I **HEREBY** CERTIFY THAT :

The measurements shown in this test report were made in accordance with the procedures given in **ANSI C63.4 – 2003** and the energy emitted by this equipment was **passed** **CISPR PUB. 22 and FCC Part 15** in both radiated and conducted emission class B limits. Testing was carried out on Jun 05, 2009 at **CerpPASS Technology Corp.**

Documented By:

Approved By:

Cathy Chen/ Administration

John Wang/ Technical director



1. Summary of Test Procedure and Test Result

Test Item	Normative References	Test Result
Conducted Emission	ANSI C63.4-2003 FCC Part 15 Subpart B	Pass
Radiated Emission	ANSI C63.4-2003 FCC Part 15 Subpart B	Pass



2. Test Configuration of Equipment under Test

2.1. Feature of Equipment under Test

LCD Monitor	Model No :	W2363VV
	Serial No :	N/A
VGA Cable	Shielded, 1.8m, with two ferrite cores bonded	
VGA Cable	Shielded, 1.8m	
Power Supply	Non-Shielded, 1.8m	
Note : The VGA cable is alternative on selling.		

2.2. Test Manner

Test Software	
a	During testing, the interface cables and equipment positions were varied according to ANSI C63.4.
b	The complete test system included the PC, Printer, USB Keyboard, USB Mouse , DVD, Earphone and EUT for EMI test.
c	During the test, Setup up the EUT and all system, turn on the power of all Equipment, run the test software "H", make the EUT at the test mode and it is normal operation, and then test.
The pre-test modes	
	Test Mode 1: Full system (VGA mode(1920*1080@60Hz))
	Test Mode 2: Full system (VGA mode(1024*768@60Hz))
	Test Mode 3: Full system (VGA mode(640*480@60Hz))
	Test Mode 4: Full system (DVI mode(1920*1080@60Hz))
	Test Mode 5: Full system (DVI mode(1024*768@60Hz))
	Test Mode 6: Full system (DVI mode(640*480@60Hz))
	Test Mode 7: Full system (Ypbpr)
	Test Mode 8: Full system (HDMI 11080P@60Hz)
	Test Mode 9: Full system (HDMI 1 480P@60Hz)
	Test Mode 10: Full system (HDMI 2 720P@60Hz)
Select the worst case of the pre-test modes as the final test mode	
	Test Mode 1: Full system (VGA mode(1920*1080@60Hz))

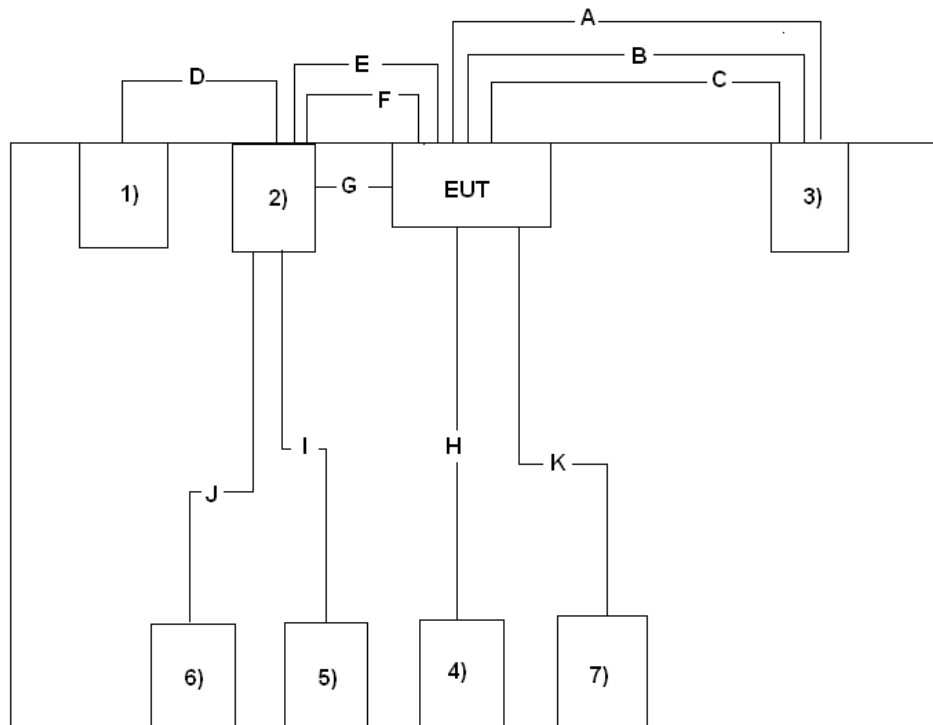


2.3. Description of Test System

No	Device	Manufacturer	Model No.	Description
1	Printer	Epson	C59	N/A
2	PC	Dell	Dimension4700C	N/A
3	DVD Player	PIONEER	DV-600AV-S	N/A
4	Microphone&Earphone	SALAR	N/A	N/A
5	USB Keyboard	DELL	SK-8115	shielding, 1.85m
6	USB Mouse	DELL	G0K02XYK	shielding, 1.85m
7	USB Mouse	DELL	G0K02XZQ	shielding, 1.85m
8	DVD Player	PIONEER	DV-989AV	N/A



2.4. Connection Diagram of Test System



No	Cable	Quantity	Description
A	Audio Cable	1	Shielded, 1.5m
B	Ypbpr Cable	1	Shielded, 1.5m
C	HDMI Cable	1	Shielded, 1.8, with two ferrite core bonded
D	Parallel Cable	1	Shielded, 1.5m
E	DVI Cable	1	Shielded, 1.5m
F	Audio Cable	1	Non-Shielded, 1.5m
G	VGA Cable	1	Shielded, 1.5m
H	Audio Cable	1	Non-Shielded, 3m
I	USB Cable	1	Shielded, 1.8m



2.5. General Information of Test

Test Site :	Cerpass Technology Corp.	
Performed Location	No.66, Tangzhuang Road, Suzhou Industrial Park, Jiangsu, China	
NVLAP LAB Code :	200814-0	
FCC Registration Number :	632249 (Taipei)	916572 (SuZhou)
IC Registration Number :	6597A-1 (Taipei)	7290A-1 (SuZhou)
VCCI Registration Number :	T-338 for Telecommunication Test (Taipei) C-2188 for Conducted emission test (Taipei) R-1902 for Radiated emission test (Taipei)	
	T-343 for Telecommunication Test (Suzhou) C-2919 for Conducted emission test (Suzhou) R-2670 for Radiated emission test (Suzhou)	
Test Voltage:	AC 120V/ 60Hz	
Test in Compliance with:	ANSI C63.4-2003 FCC Part 15 Subpart B	
Frequency Range Investigated :	Conducted: from 150kHz to 30 MHz Radiation: from 30 MHz to 1,000 MHz Radiation: from 1GHz to 18GHz	
Test Distance :	The test distance of radiated emission below 1GHz from antenna to EUT is 3 M. The test distance of radiated emission above 1GHz from antenna to EUT is 3 M.	

Laboratory accreditation



**2.6. Measurement Uncertainty**

Conducted Emission	
The measurement uncertainty is evaluated as ± 2.24 dB.	
Radiated Emission	
(30MHz -1000MHz)	The measurement uncertainty is evaluated as ± 2.98 dB.
(1G-18GHz)	The measurement uncertainty is evaluated as ± 2.15 dB.



3. Test of Conducted Emission

3.1. Test Limit

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 KHz on the 120 VAC power and return leads of the EUT according to the methods defined in ANSI C63.4-2003 Section 3.1. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane as shown in section 2.2. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

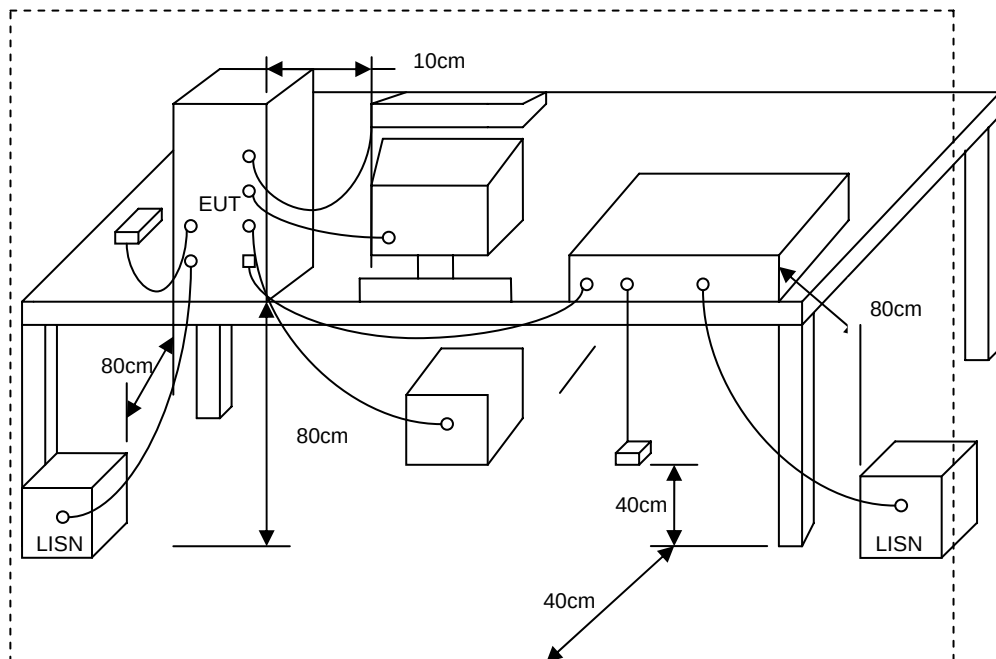
Frequency (MHz)	Quasi Peak (dB μ V)	Average (dB μ V)
0.15 – 0.5	66-56*	56-46*
0.5 – 5.0	56	46
5.0 – 30.0	60	50

3.2. Test Procedures

- The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- Connect EUT to the power mains through a line impedance stabilization network (LISN).
- All the support units are connecting to the other LISN.
- The LISN provides 50 ohm coupling impedance for the measuring instrument.
- The FCC states that a 50 ohm, 50 micro-Henry LISN should be used.
- Both sides of AC line were checked for maximum conducted interference.
- The frequency range from 150 kHz to 30 MHz was searched.
- Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.



3.3. Typical test Setup



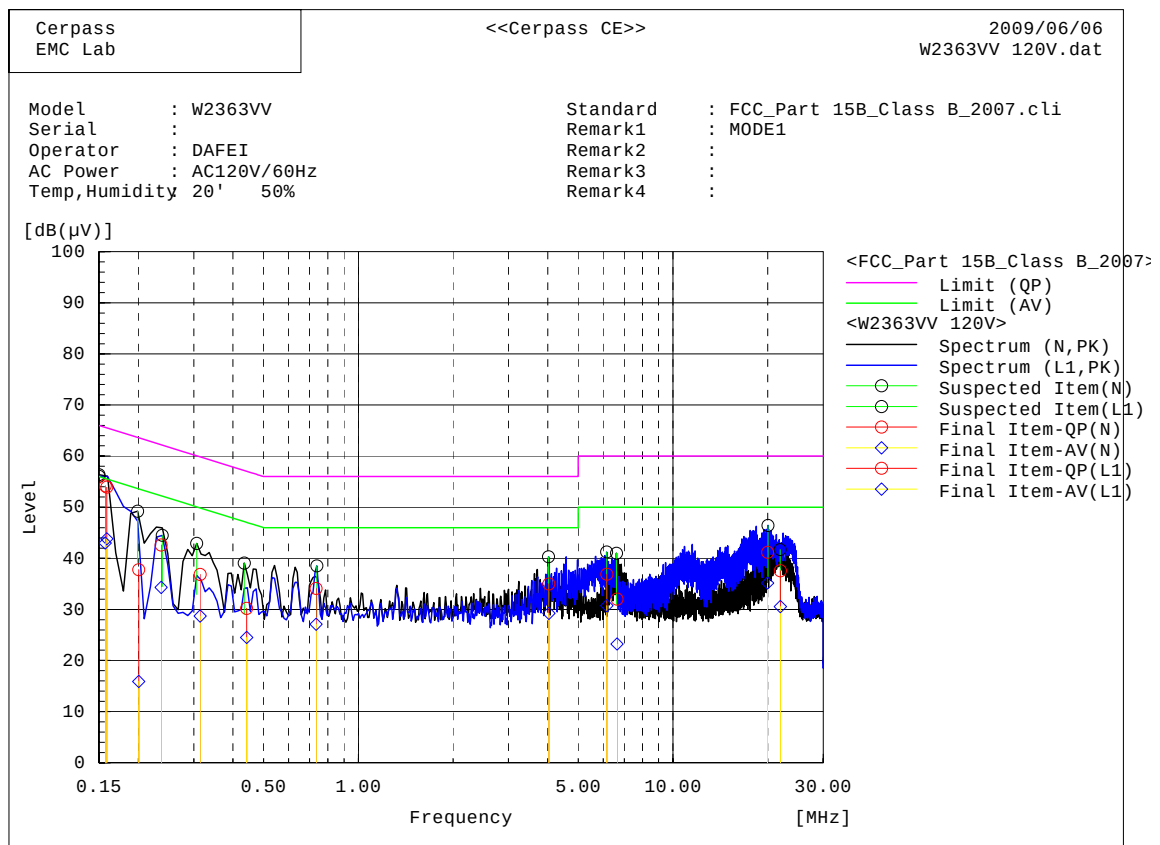
3.4. Measurement equipment

Instrument	Manufacturer	Model No.	Serial No.	Calibration Data
EMC Emission Tester	EMCPARTNER	Harmonics-1000	159	2008.06.30
Test Receiver	R&S	ESCI	100565	2008.06.30
AMN	R&S	ESH2-Z5	100182	2008.06.30
Two-Line V-Network	R&S	ENV216	100325	2008.06.30
ISN	FCC	FCC-TLISN-T2-02	20379	2008.06.30
ISN	FCC	FCC-TLISN-T4-02	20380	2008.06.30
ISN	FCC	FCC-TLISN-T8-02	20381	2008.06.30
Current Probe	R&S	EZ-17	100303	2008.06.30
Passive Voltage Probe	R&S	ESH2-Z3	100026	2008.06.30
Decoupling Clamp	LUTHI	FTC 40 X 15 E	5685	2008.11.01
Absorbing Clamp	Schwarzbeck	MDS21	3753	2008.11.01
Minimum Loss Pad	Agilent	11852B	61650	2008.06.30
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-004	2008.09.24



3.5. Test Result and Data

Standard	:	FCC_Part 15B_Class B_2007	Date/Time	:	2009.06.06
Model	:	W2363VV	Serial	:	N/A
Operator	:	DAFEI	AC Power	:	AC120V/60Hz
Temp	:	20'	Humidity	:	50%
Remark	:	Test Mode 1: Full system (VGA mode(1920*1080@60Hz))			





Final Data List

Frequency MHz	Line Phase	Reading dB(uV) QP	Reading dB(uV) AV	Factor dB	Level dB(uV) QP	Level dB(uV) AV	Limit dB(uV) QP	Limit dB(uV) AV	Margin dB QP	Margin dB AV	Pass/Fail
0.15698	L1	44.8	33.6	9.4	54.2	43.0	65.6	55.6	11.4	12.6	Pass
0.23623	L1	33.0	24.7	9.6	42.6	34.3	62.2	52.2	19.6	17.9	Pass
0.73413	L1	24.4	17.4	9.7	34.1	27.1	56.0	46.0	21.9	18.9	Pass
6.1588	L1	27.1	20.9	9.8	36.9	30.7	60.0	50.0	23.1	19.3	Pass
19.9848	L1	31.2	25.2	10.0	41.2	35.2	60.0	50.0	18.8	14.8	Pass
4.02893	L1	25.3	19.5	9.7	35.0	29.2	56.0	46.0	21.0	16.8	Pass
0.15883	N	44.6	34.5	9.3	53.9	43.8	65.5	55.5	11.6	11.7	Pass
0.20073	N	27.9	6.0	9.9	37.8	15.9	63.6	53.6	25.8	37.7	Pass
0.31432	N	27.0	18.9	9.8	36.8	28.7	59.9	49.9	23.1	21.2	Pass
0.44187	N	20.5	14.8	9.7	30.2	24.5	57.0	47.0	26.8	22.5	Pass
6.6403	N	22.2	13.4	9.8	32.0	23.2	60.0	50.0	28.0	26.8	Pass
21.9236	N	27.5	20.5	10.1	37.6	30.6	60.0	50.0	22.4	19.4	Pass

Note: Measurement Level = Reading Level + Correct Factor

Test engineer: dafer



4. Test of Radiated Emission

4.1. Test Limit

Radiated emissions from 30 MHz to 1,000 MHz were measured with a bandwidth of 120 kHz according to the methods defines in ANSI C63.4-2003. The EUT was placed on a nonmetallic stand in the open-field site, 0.8 meter above the ground plane, as shown in section 3.2. The interface cables and equipment positions were varied within limits of reasonable applications to determine the positions producing maximum radiated emissions.

For unintentional device, according to § 15.109(a), except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency (MHz)	Distance (m)	Level (dBuV/m)	Level (dBuV/m)
30 - 88	3	40(QP)	N/A
88 - 216	3	43(QP)	N/A
216-960	3	46(QP)	N/A
960-1000	3	54(QP)	N/A
1000-18000	3	74(PK)	54(AV)
18000-40000	1	84(PK)	64(AV)

For unintentional device, according to CISPR PUB.22, for Class B digital devices, the general requirement of field strength of radiated emissions from intentional radiators at a distance of 10 meters shall not exceed the below table.

Frequency (MHz)	Distance Meters	Radiated (dB μ V/ M)
30-230	10	30
230-1000	10	37



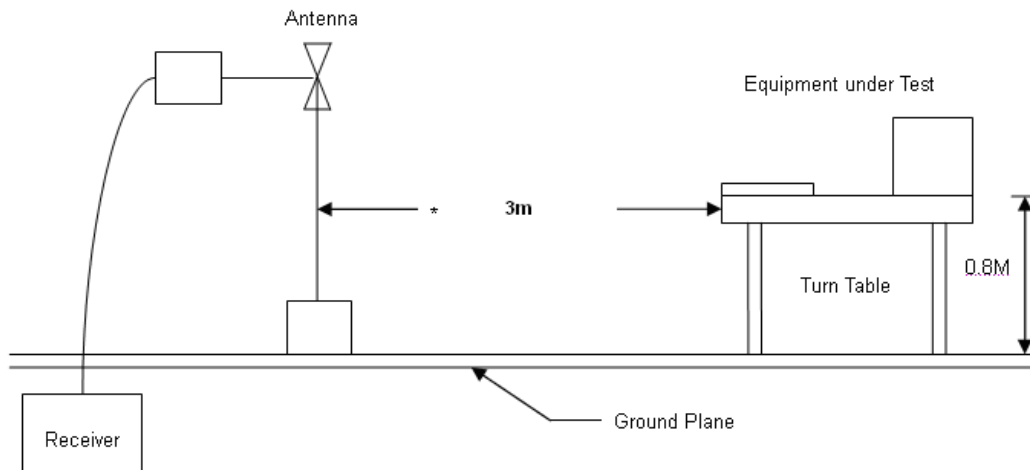
4.2. Test Procedures

- a. The EUT was placed on a Rota table top 0.8 meter above ground.
- b. The EUT and its simulators are placed on the ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters or 1 meter.
- c. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.
- d. Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated on radiated measurement.
- e. Radiated emissions were investigated over the frequency range from 30MHz to 1GHz using a receiver bandwidth of 120KHz and the frequency range from 1GHz to 18GHz using a receiver bandwidth of 1MHz. Radiated was performed at an antenna to EUT distance of 3 meters .

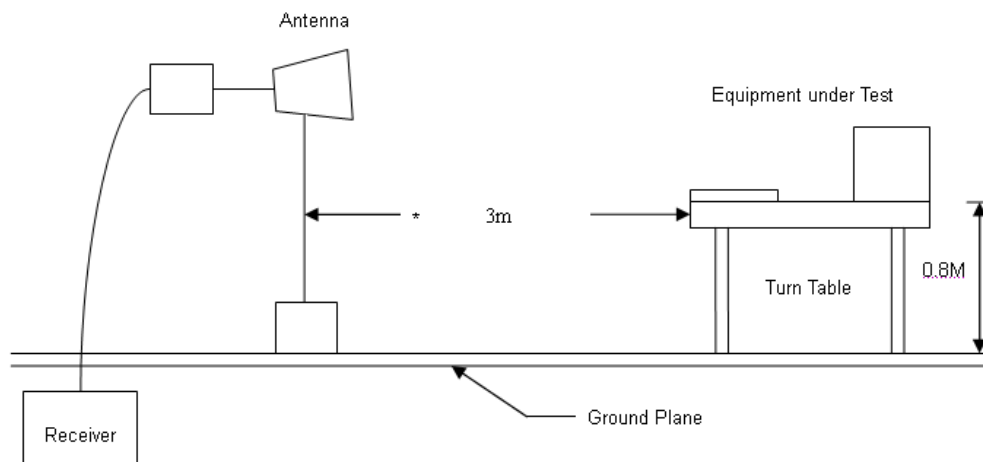


4.3. Typical test Setup

Below 1GHz Test Setup



Above 1GHz Test Setup





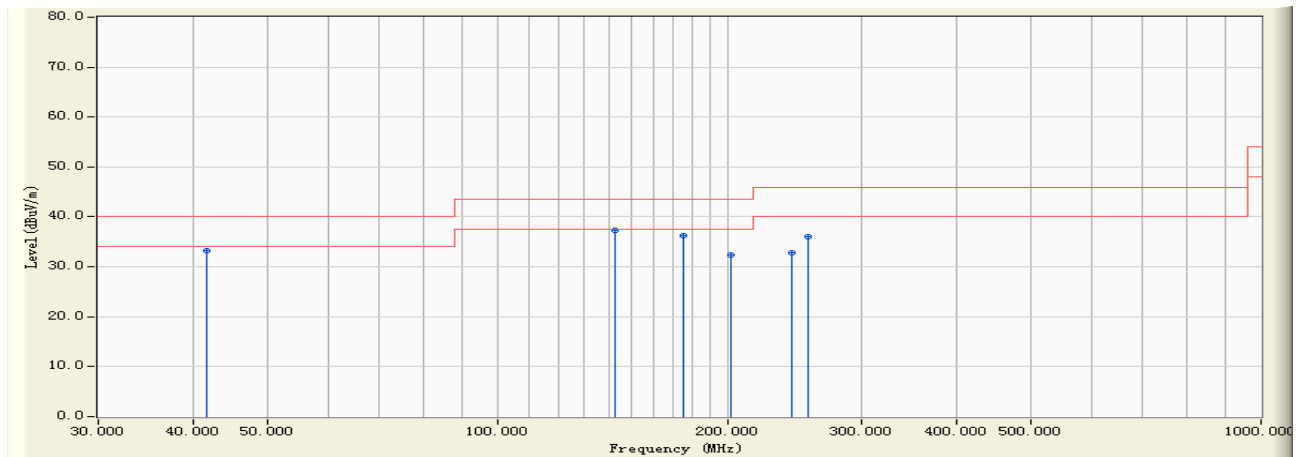
4.4. Measurement equipment

Instrument	Model No.	Manufacturer	Serial No.	Calibration Date
EMI Test Receiver	R&S	ESCI	100564	2008.06.30
Preamplifier	Agilent	87405B	My39500554	2008.11.04
Preamplifier	R&S	PR-AMP26	1248791	2008.06.30
Ultra Broadband Antenna	R&S	HL562	100362	2008.11.04
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	9120D-619	2008.09.26
Spectrum Analyzer	R&S	FSP40	100324	2008.09.28
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-001	2008.09.24



4.5. Test Result and Data

Engineer : FRED	
Site : EMC Lab AC 102	Time : 2009/06/08- 08:30
Limit : FCC_CLASS_B_03M_QP	Margin : 6
EUT : LCD MONITOR	Probe : HL562(30-1000MHz) - HORIZONTAL
Power : AC120/60Hz	Test Mode 1: Full system (VGA mode(1920*1080@60Hz))



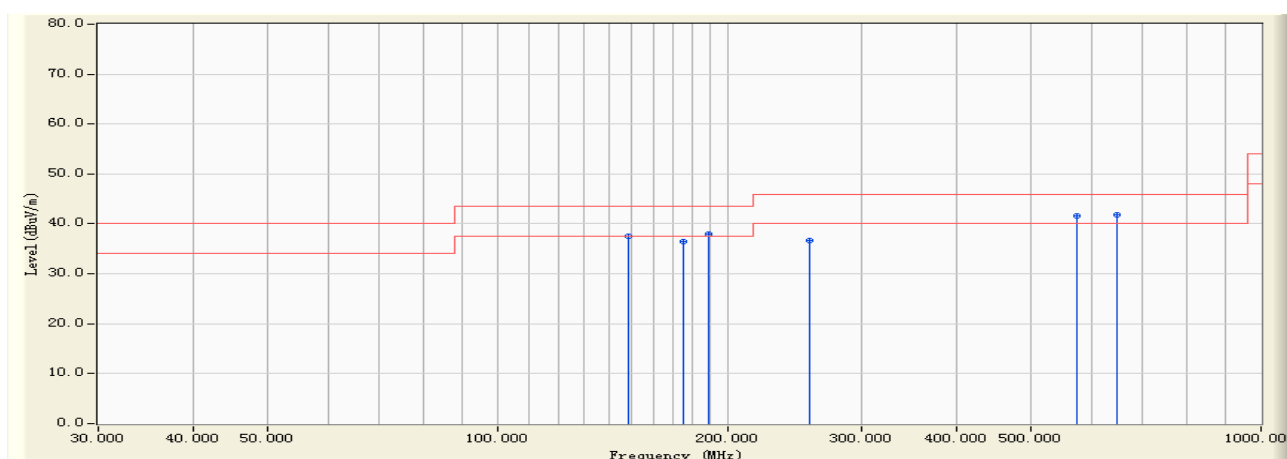
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		41.617	-11.299	44.591	33.291	-6.709	40.000	QUASIPeAK
2	*	142.295	-15.019	52.311	37.292	-6.208	43.500	QUASIPeAK
3		175.210	-14.839	51.038	36.199	-7.301	43.500	QUASIPeAK
4		202.315	-15.335	47.673	32.339	-11.161	43.500	QUASIPeAK
5		242.974	-13.005	45.846	32.840	-13.160	46.000	QUASIPeAK
6		254.591	-12.591	48.682	36.091	-9.909	46.000	QUASIPeAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor



Engineer : FRED	
Site : EMC Lab AC 102	Time : 2009/06/08- 08:31
Limit : FCC_CLASS_B_03M_QP	Margin : 6
EUT : LCD MONITOR	Probe : HL562(30-1000MHz) - VERTICAL
Power : AC120/60Hz	Test Mode 1: Full system (VGA mode(1920*1080@60Hz))



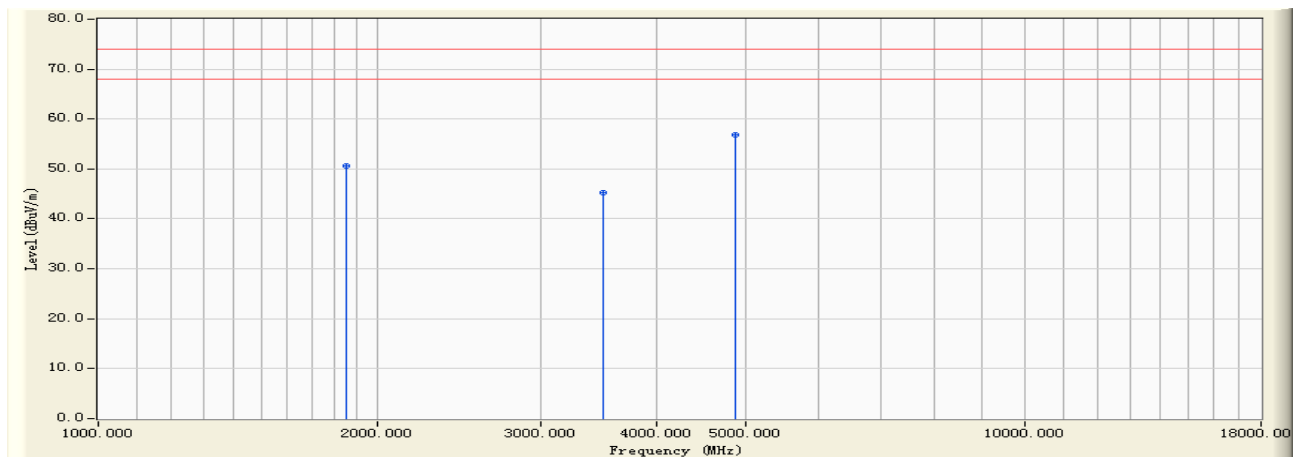
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		148.104	-15.300	52.740	37.440	-6.060	43.500	QUASIPeAK
2		175.210	-14.839	51.270	36.431	-7.069	43.500	QUASIPeAK
3	*	188.762	-15.338	53.355	38.017	-5.483	43.500	QUASIPeAK
4		256.527	-12.527	49.097	36.569	-9.431	46.000	QUASIPeAK
5		574.052	-3.192	44.812	41.621	-4.379	46.000	QUASIPeAK
6	*	647.625	-1.504	43.365	41.861	-4.139	46.000	QUASIPeAK

Note:

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Engineer : FRED	
Site : EMC Lab AC 102	Time : 2009/06/08- 08:58
Limit : FCC_15_03M_PK	Margin : 6
EUT : LCD MONITOR	Probe : BBHA9120D(1-18GHz) - HORIZONTAL
Power : AC120/60Hz	Test Mode 1: Full system (VGA mode(1920*1080@60Hz))



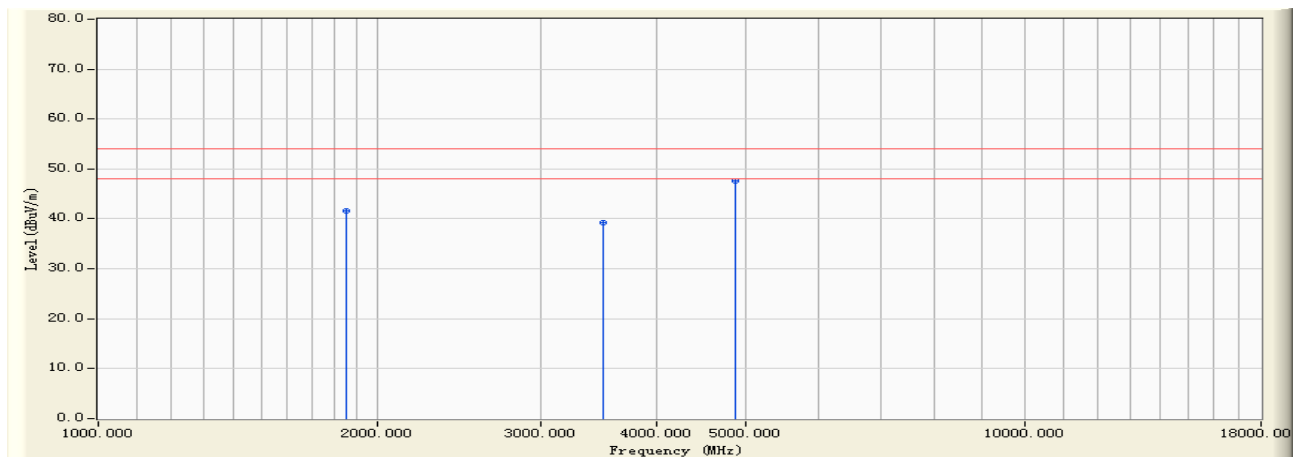
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		1854.000	-7.522	58.200	50.678	-23.322	74.000	PEAK
2		3514.000	-3.953	49.200	45.247	-28.753	74.000	PEAK
3	*	4874.000	0.778	56.100	56.877	-17.123	74.000	PEAK

Note:

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Engineer : FRED	
Site : EMC Lab AC 102	Time : 2009/06/08- 08:58
Limit : FCC_15_03M_AV	Margin : 6
EUT : LCD MONITOR	Probe : BBHA9120D(1-18GHz) - HORIZONTAL
Power : AC120/60Hz	Test Mode 1: Full system (VGA mode(1920*1080@60Hz))



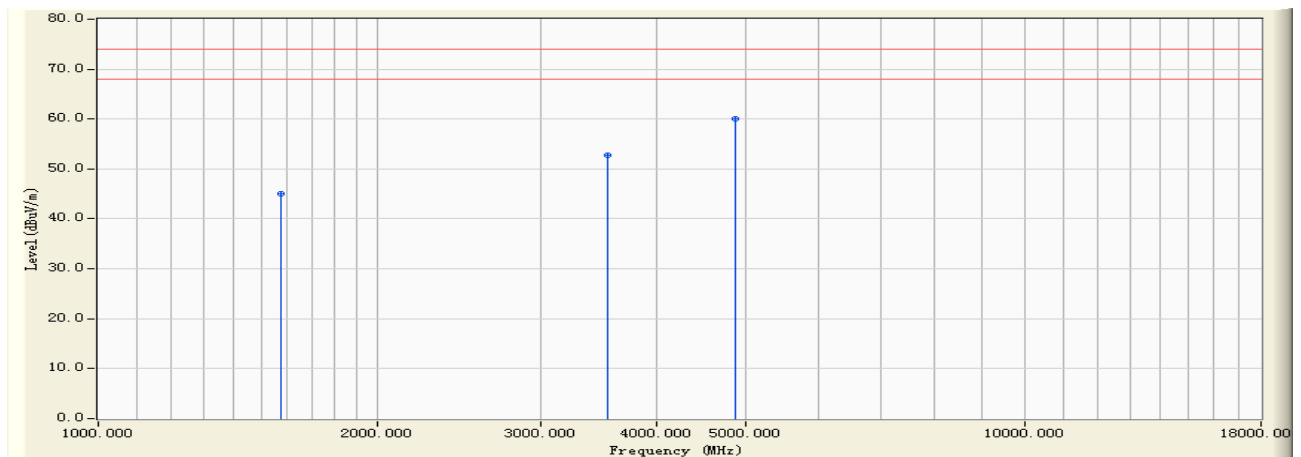
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		1854.000	-7.522	49.200	41.678	-12.322	54.000	AVERAGE
2		3514.000	-3.953	43.200	39.247	-14.753	54.000	AVERAGE
3	*	4874.000	0.778	46.800	47.577	-6.423	54.000	AVERAGE

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EUT : LCD MONITOR	Probe : BBHA9120D(1-18GHz) - VERTICAL
Power : AC120/60Hz	Test Mode 1: Full system (VGA mode(1920*1080@60Hz))



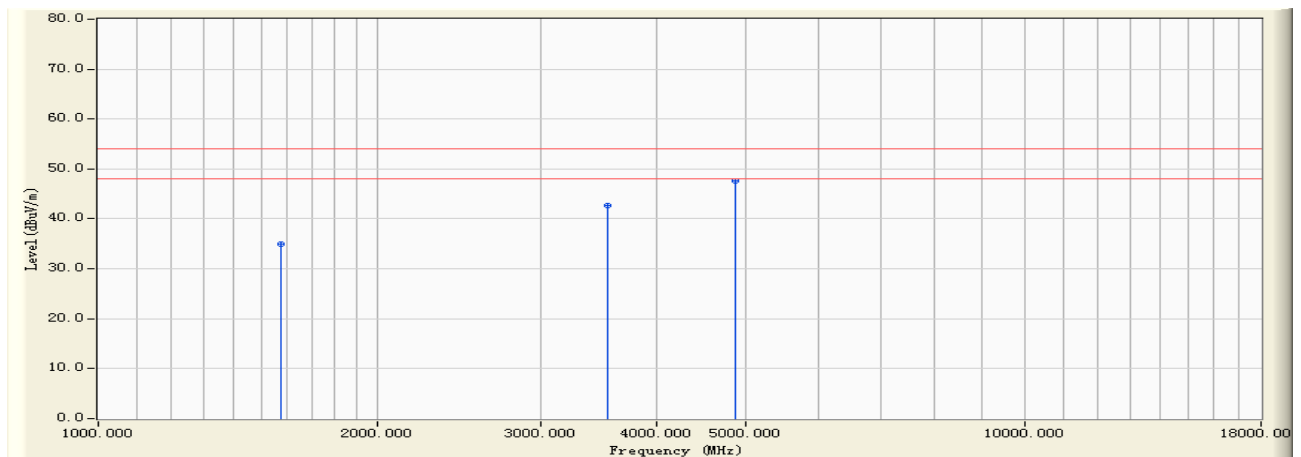
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		1574.000	-11.291	56.300	45.009	-28.991	74.000	PEAK
2		3547.000	-3.758	56.500	52.742	-21.258	74.000	PEAK
3	*	4874.000	0.778	59.200	59.977	-14.023	74.000	PEAK

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Limit : FCC_15_03M_AV	Margin : 6
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Power : AC120/60Hz	Test Mode 1: Full system (VGA mode(1920*1080@60Hz))



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		1574.000	-11.291	46.200	34.909	-19.091	54.000	AVERAGE
2		3547.000	-3.758	46.500	42.742	-11.258	54.000	AVERAGE
3	*	4874.000	0.778	46.800	47.577	-6.423	54.000	AVERAGE

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3. Measurement Level = Reading Level + Correct Factor

Fred Guo

Test engineer:_____