



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.	: L1742PKU
FCC ID	: BEJL1742PKU
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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Trade Name	: LG

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 Sep 17, 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 :	L1742PKU
VGA Cable	Shielded, 1.8m, with two ferrite cores bonded	
VGA Cable	Shielded, 1.8m	
DVI Cable	Shielded, 1.8m, with two ferrite cores bonded	
DVI Cable	Shielded, 1.8m	
Audio Cable	Non-Shielded, 1.8m, with one ferrite core bonded	
Power Supply	Non-Shielded, 1.8m	
Note : The VGA cable and DVI Cable are alternative on selling.		

2.2. Test Manner

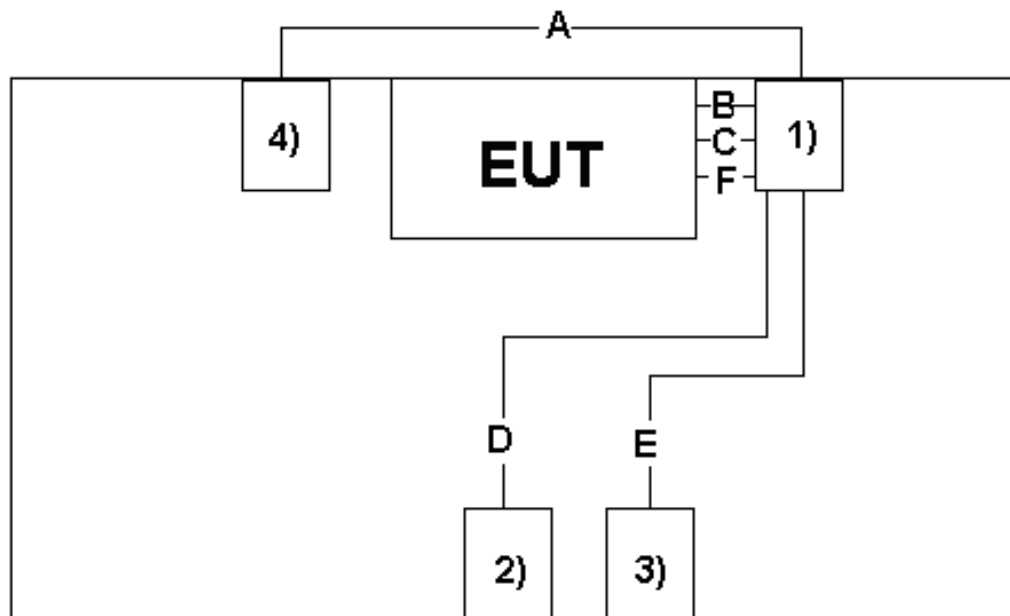
Test Software	
a	During testing, the interface cables and equipment positions were varied according to ANSI C63.4.
b	The complete test system included the PC, USB Keyboard, USB Mouse, Printer and EUT for EMI test.
c	During the test, Setup up the EUT and all system, turn on the power of all Equipments, 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 (DVI mode 1280*1024@60Hz)
	Test Mode 2: Full system (DVI mode 1024*768@75Hz)
	Test Mode 3: Full system (DVI mode 640*480@60Hz)
	Test Mode 4: Full system (VGA mode 1280*1024@75Hz)
	Test Mode 5: Full system (VGA mode 1024*768@75Hz)
	Test Mode 6: Full system (VGA mode 640*480@60Hz)
Select the worst case of the pre-test modes as the final test mode	
	Test Mode 1: Full system (DVI mode 1280*1024@60Hz)



2.3. Description of Test System

No	Device	Manufacturer	Model No.	Description
1	PC	Dell	DCSM	N/A
2	USB Keyboard	DELL	SK-8115	N/A
3	USB Mouse	DELL	G0K02XYK	N/A
4	Printer	Epson	EX3	N/A

2.4. Connection Diagram of Test System



No	Cable	Quantity	Description
A	Parallel Cable	1	Shielded, 1.8m
B	VGA Cable	1	Shielded, 1.8m
C	DVI Cable	1	Shielded, 1.8m
D	USB Cable	1	Shielded, 1.8m, with one ferrite core bonded
E	USB Cable	1	Shielded, 1.5m
F	Audio Cable	1	Non-Shielded, 1.8m, with one ferrite core bonded



2.5. General Information of Test

Test Site :	CerpPASS Technology Corp.
Performed Location	No.66, Tangzhuang Road, Suzhou Industrial Park, Jiangsu, China
NVLAP LAB Code :	200814-0
FCC Registration Number :	916572
VCCI Registration Number :	T-343 for Telecommunication Test C-2919 for Conducted emission test R-2670 for Radiated emission test
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

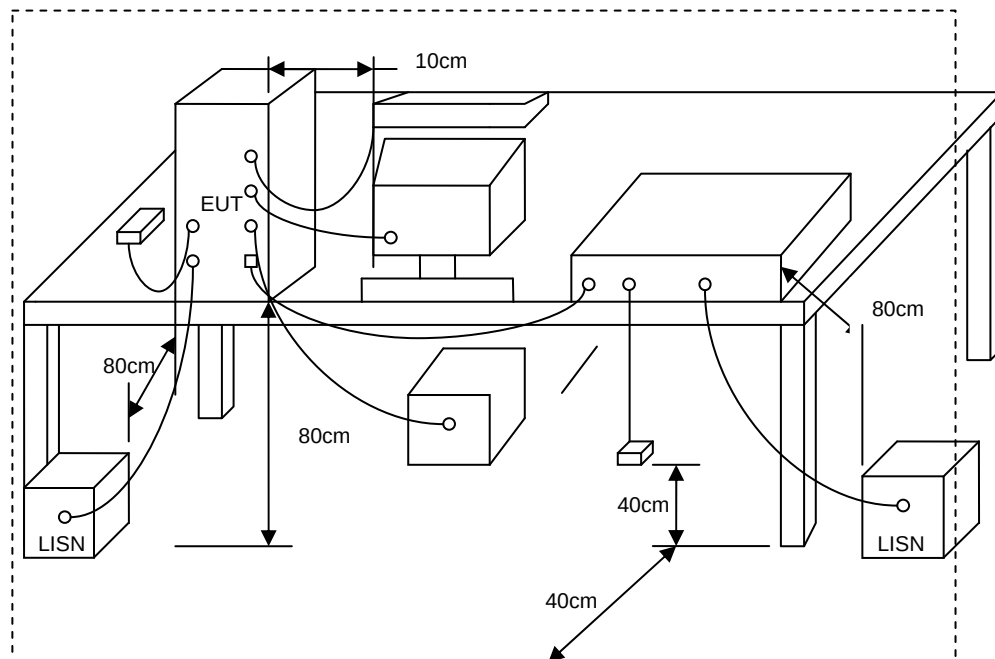
Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 KHz on the 120 VAC power and return leads of the EUT according to the methods defined in ANSI C63.4-2003 Section 3.1. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane as shown 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



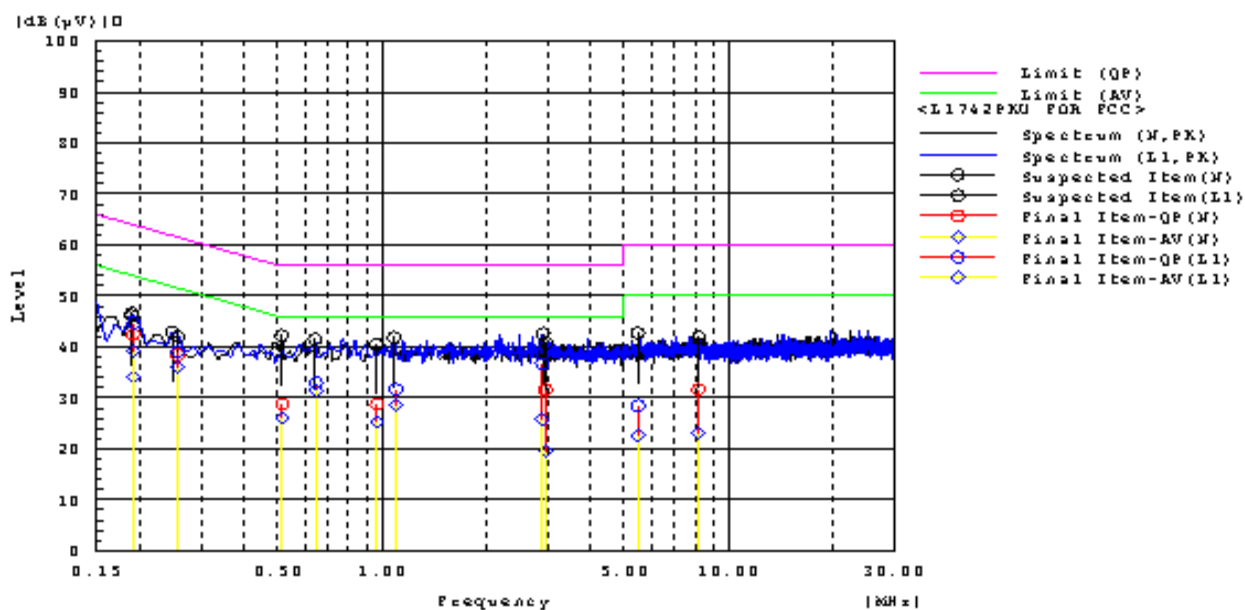
3.4. Measurement equipment

Instrument	Manufacturer	Model No.	Serial No.	Calibration Data
EMC Emission Tester	EMCPARTNER	Harmonics-1000	159	2009.06.23
Test Receiver	R&S	ESCI	100565	2009.06.30
AMN	R&S	ESH2-Z5	100182	2009.06.23
Two-Line V-Network	R&S	ENV216	100325	2009.06.23
ISN	FCC	FCC-TLISN-T2-02	20379	2009.06.23
ISN	FCC	FCC-TLISN-T4-02	20380	2009.06.23
ISN	FCC	FCC-TLISN-T8-02	20381	2009.06.23
Current Probe	R&S	EZ-17	100303	2009.06.23
Passive Voltage Probe	R&S	ESH2-Z3	100026	2009.06.30
Decoupling Clamp	LUTHI	FTC 40 X 15 E	5685	2008.11.01
Absorbing Clamp	Schwarzbeck	MDS21	3753	2008.11.01
Power Divider	Agilent	11636A	09523	2009.06.30
Minimum Loss Pad	Agilent	11852B	61650	2009.06.30
Attenuator	R&S	ESH3-Z2	100529	2009.01.12
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-004	2008.09.24



3.5. Test Result and Data

Test Mode :	Mode 1: Full system (DVI mode 1280*1024@60Hz)		
AC Power :	AC 120V/60HZ	Phase :	L&N
EUT :	LCD Monitor	Model No.	L1742PKU
Temperature :	22°C	Humidity	50%
Pressur(mbar) :	1002	Date:	2009/09/17



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
0.19229	L1	25.3	19.7	19.5	44.8	39.2	63.9	53.9	19.1	14.7	Pass
0.25699	L1	19.6	16.6	19.5	39.1	36.1	61.5	51.5	22.4	15.4	Pass
1.09546	L1	12.2	9.2	19.5	31.7	28.7	56.0	46.0	24.3	17.3	Pass
2.89801	L1	17.0	6.1	19.7	36.7	25.8	56.0	46.0	19.3	20.2	Pass
5.4758	L1	8.7	2.8	19.8	28.5	22.6	60.0	50.0	31.5	27.4	Pass
0.64392	L1	13.3	11.9	19.6	32.9	31.5	56.0	46.0	23.1	14.5	Pass
0.19113	N	22.6	14.3	19.8	42.4	34.1	64.0	54.0	21.6	19.9	Pass
0.51511	N	9.3	6.4	19.6	28.9	26.0	56.0	46.0	27.1	20.0	Pass
0.96519	N	9.3	5.7	19.5	28.8	25.2	56.0	46.0	27.2	20.8	Pass
2.96116	N	12.0	0.0	19.6	31.6	19.6	56.0	46.0	24.4	26.4	Pass
8.1724	N	11.6	3.1	20.0	31.6	23.1	60.0	50.0	28.4	26.9	Pass
0.25709	N	18.6	16.1	19.8	38.4	35.9	61.5	51.5	23.1	15.6	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

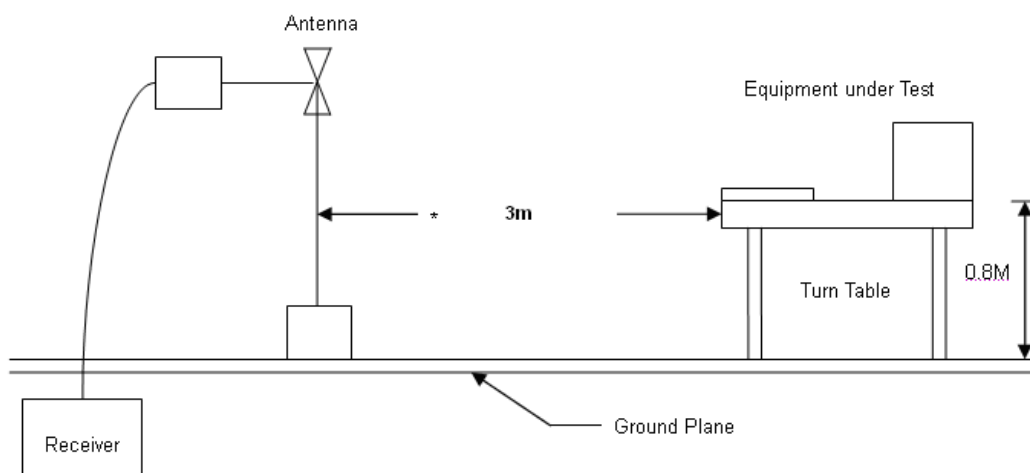


4.2. Test Procedures

- The EUT was placed on a Rota table top 0.8 meter above ground.
- 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.
- The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.
- 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.
- 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 .

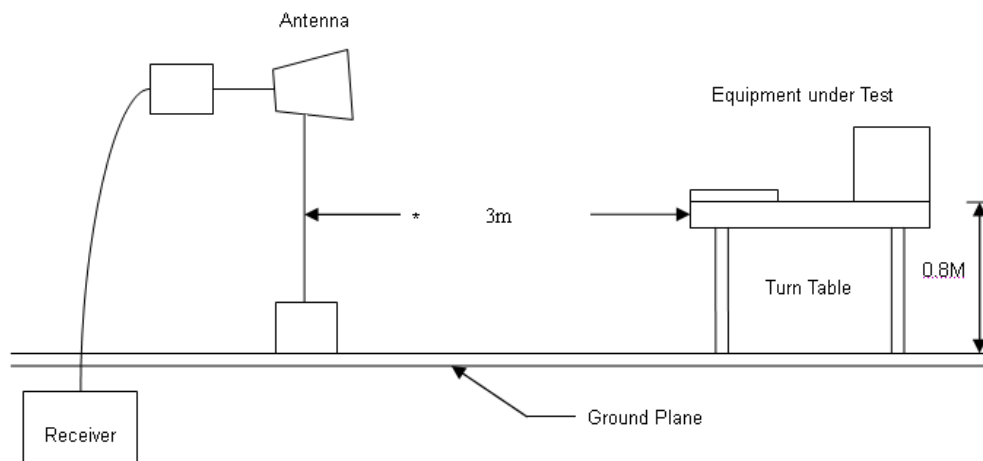
4.3. Typical test Setup

Below 1GHz Test Setup





Above 1GHz Test Setup



4.4. Measurement equipment

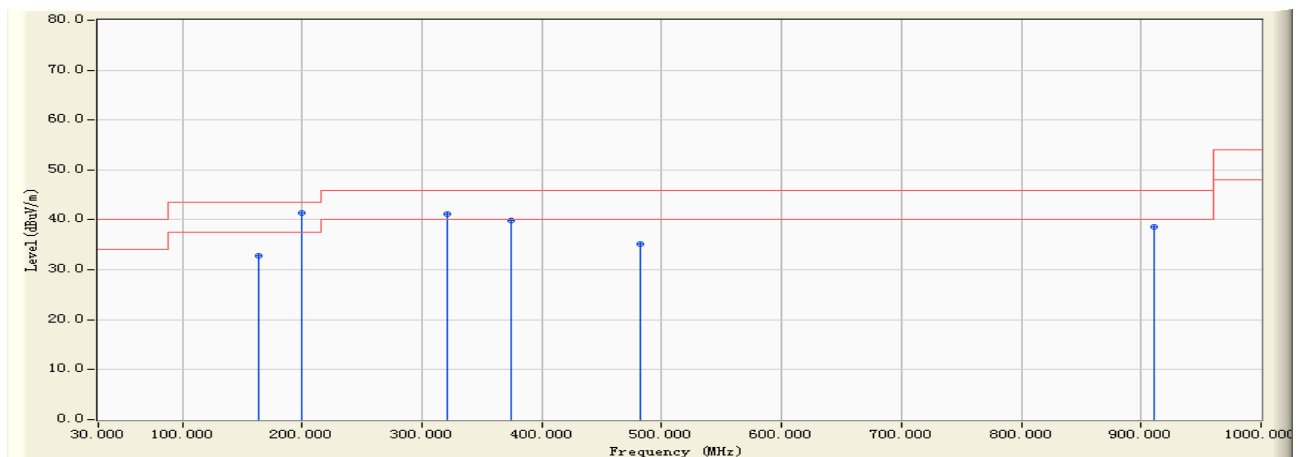
Instrument	Model No.	Manufacturer	Serial No.	Calibration Date
EMI Test Receiver	R&S	ESCI	100564	2009.06.23
Preamplifier	Agilent	87405B	My39500554	2008.11.04
Preamplifier	Agilent	8449B	ED-HE-EMI-077	2009.02.18
Ultra Broadband Antenna	R&S	HL562	100362	2008.11.04
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	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

Under 1G:

Engineer : Fred	
Site : EMC Lab AC 102	Time : 2009/09/21 - 14:47
Limit : FCC_CLASS_B_03M_QP	Margin : 6
EUT : LCD Monitor	Probe : (30-1000MHz) - HORIZONTAL
Power : AC 120V/60Hz	Note : Mode 1: Full system (DVI mode 1280*1024@60Hz)



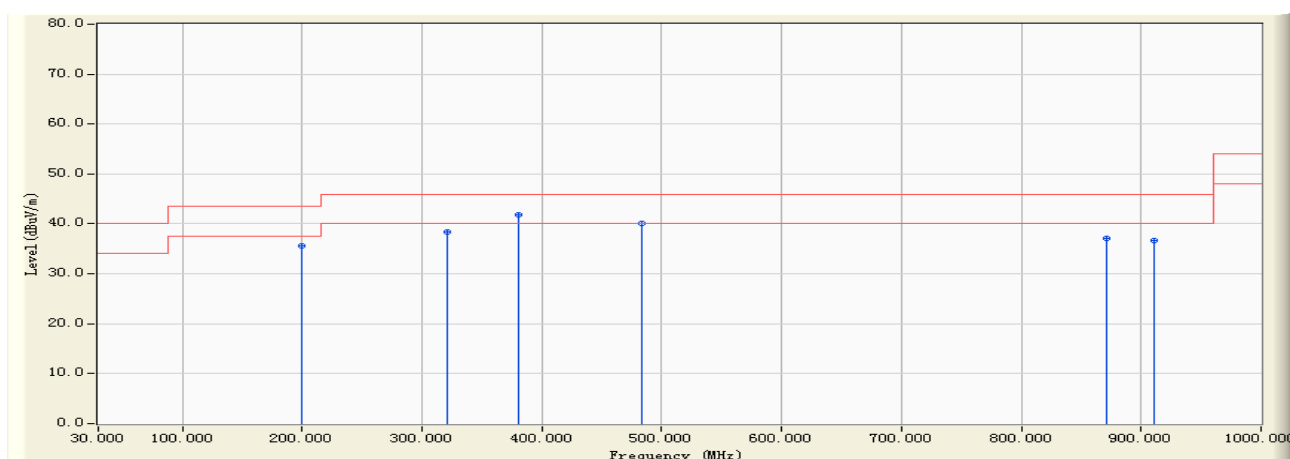
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type	Ant Pos (cm)	Table Pos (deg)
1		163.200	-15.461	48.300	32.840	-10.660	43.500	QUASIPeAK	200.000	0.000
2	*	199.790	-15.418	56.800	41.382	-2.118	43.500	QUASIPeAK	111.100	0.000
3		321.000	-10.062	51.220	41.158	-4.842	46.000	QUASIPeAK	130.300	300.200
4		374.500	-8.409	48.320	39.911	-6.089	46.000	QUASIPeAK	183.200	0.000
5		482.360	-5.223	40.320	35.096	-10.904	46.000	QUASIPeAK	200.000	180.300
6		911.200	3.315	35.360	38.674	-7.326	46.000	QUASIPeAK	168.500	320.000

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 : 2009/09/21 - 14:41
Limit : FCC_CLASS_B_03M_QP	Margin : 6
EUT : LCD Monitor	Probe : (30-1000MHz) - VERTICAL
Power : AC 120V/60Hz	Note : Mode 1: Full system (DVI mode 1280*1024@60Hz)



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type	Ant Pos (cm)	Table Pos (deg)
1		199.360	-15.432	51.000	35.568	-7.932	43.500	QUASIPeAK	100.000	263.100
2		321.320	-10.055	48.360	38.305	-7.695	46.000	QUASIPeAK	100.000	280.300
3	*	380.760	-8.144	50.000	41.856	-4.144	46.000	QUASIPeAK	100.000	14.100
4		483.200	-5.196	45.260	40.063	-5.937	46.000	QUASIPeAK	100.000	360.000
5		871.680	2.473	34.600	37.073	-8.927	46.000	QUASIPeAK	100.000	360.000
6		910.600	3.293	33.400	36.693	-9.307	46.000	QUASIPeAK	100.000	360.000

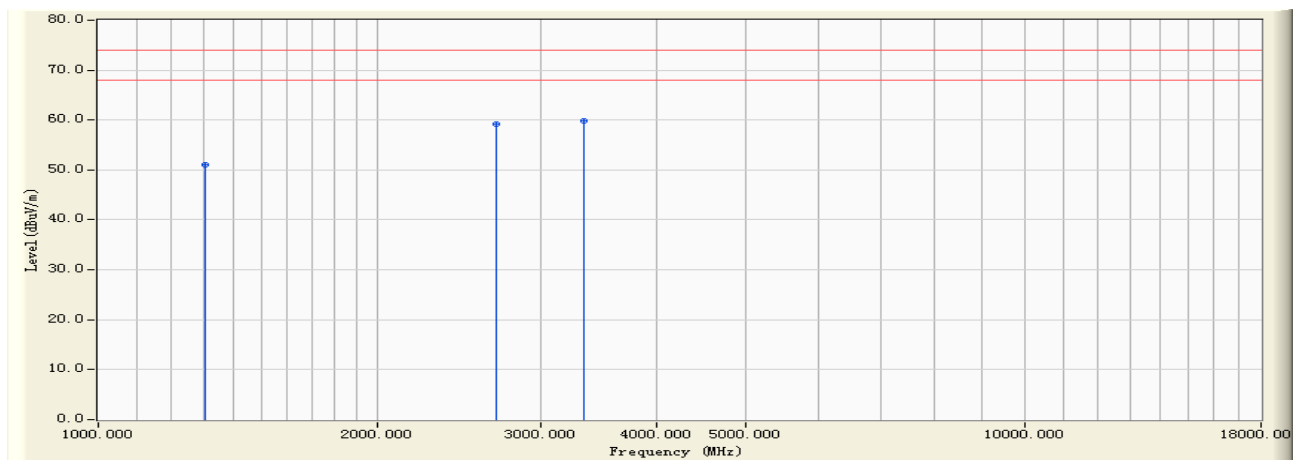
Note:

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2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor



Above 1G:

Engineer : Fred	
Site : EMC Lab AC 102	Time : 2009/09/21 - 11:36
Limit : FCC_15_03M_PK	Margin : 6
EUT : LCD Monitor	Probe : (1-18GHz) - HORIZONTAL
Power : AC 120V/60Hz	Note : Mode 1: Full system (DVI mode 1280*1024@60Hz)



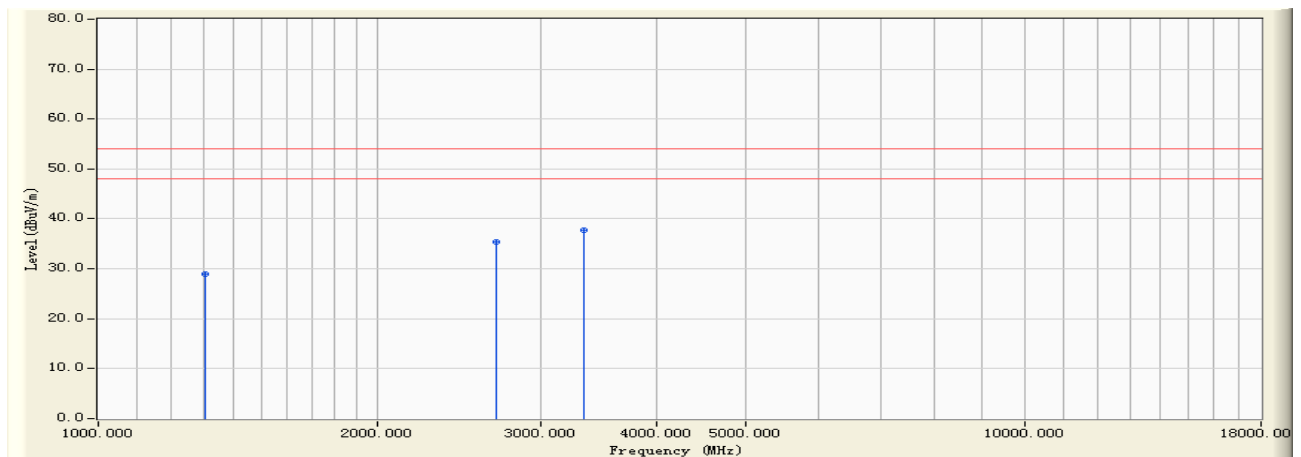
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type	Ant Pos (cm)	Table Pos (deg)
1		1302.200	4.734	46.350	51.084	-22.916	74.000	PEAK	103.200	265.300
2		2687.250	9.066	50.130	59.196	-14.804	74.000	PEAK	120.300	324.300
3	*	3345.200	9.549	50.230	59.778	-14.222	74.000	PEAK	100.000	336.200

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 : 2009/09/21 - 11:36
Limit : FCC_15_03M_AV	Margin : 6
EUT : LCD Monitor	Probe : (1-18GHz) - HORIZONTAL
Power : AC 120V/60Hz	Note : Mode 1: Full system (DVI mode 1280*1024@60Hz)



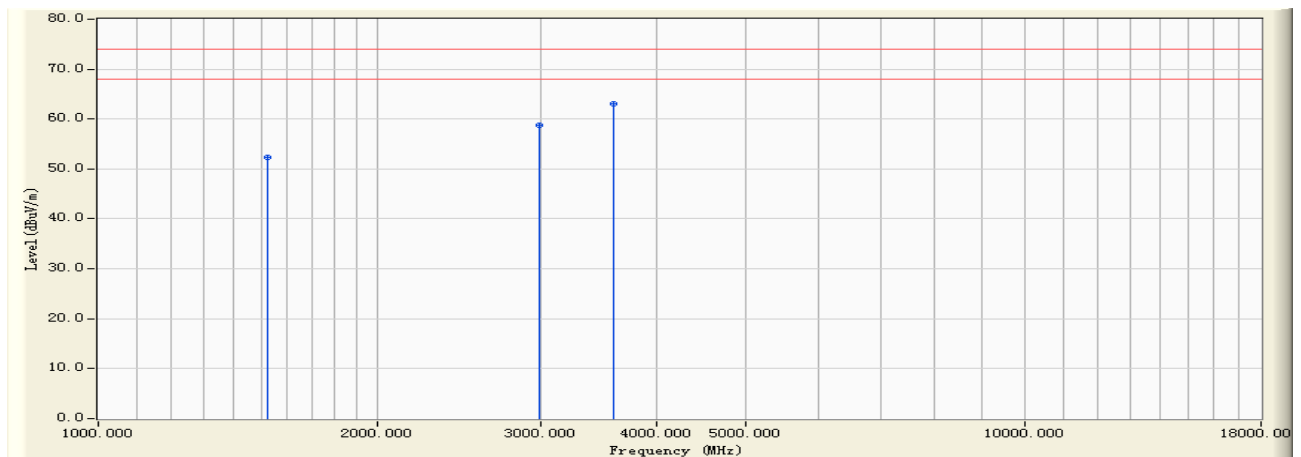
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type	Ant Pos (cm)	Table Pos (deg)
1		1302.200	4.734	24.310	29.044	-24.956	54.000	AVERAGE	103.200	265.300
2		2687.250	9.066	26.300	35.366	-18.634	54.000	AVERAGE	120.300	324.300
3	*	3345.200	9.549	28.130	37.678	-16.322	54.000	AVERAGE	100.000	336.200

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 : 2009/09/21 - 11:39
Limit : FCC_15_03M_PK	Margin : 6
EUT : LCD Monitor	Probe : (1-18GHz) - VERTICAL
Power : AC 120V/60Hz	Note : Mode 1: Full system (DVI mode 1280*1024@60Hz)



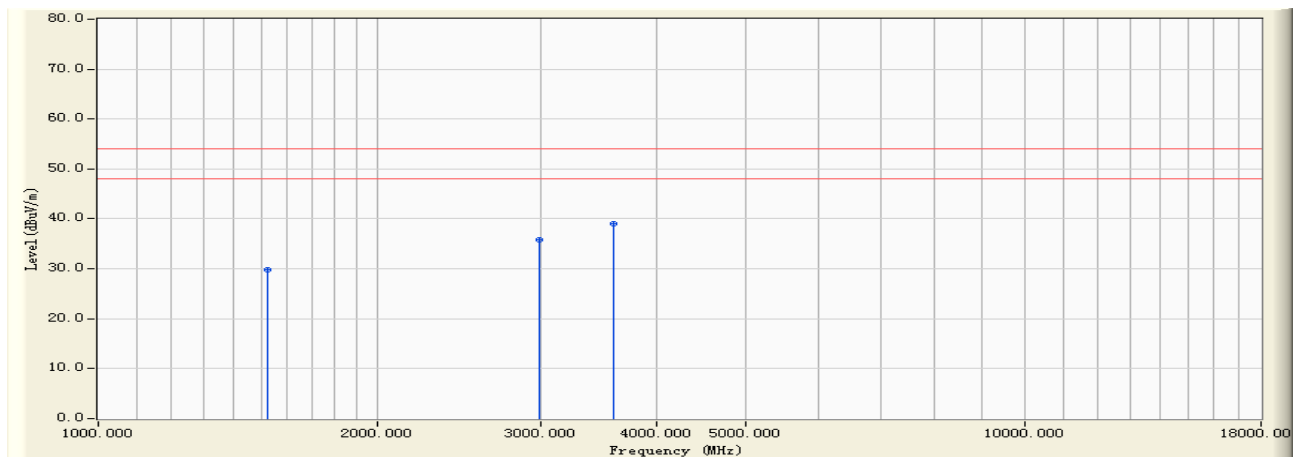
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type	Ant Pos (cm)	Table Pos (deg)
1		1523.600	5.113	47.230	52.343	-21.657	74.000	PEAK	100.000	321.500
2		2988.200	9.538	49.320	58.858	-15.142	74.000	PEAK	100.000	230.600
3	*	3596.210	10.770	52.300	63.070	-10.930	74.000	PEAK	100.000	125.000

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 : 2009/09/21 - 11:39
Limit : FCC_15_03M_AV	Margin : 6
EUT : LCD Monitor	Probe : (1-18GHz) - VERTICAL
Power : AC 120V/60Hz	Note : Mode 1: Full system (DVI mode 1280*1024@60Hz)



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type	Ant Pos (cm)	Table Pos (deg)
1		1523.600	5.113	24.600	29.713	-24.287	54.000	AVERAGE	100.000	321.500
2		2988.200	9.538	26.380	35.918	-18.082	54.000	AVERAGE	100.000	230.600
3	*	3596.210	10.770	28.360	39.130	-14.870	54.000	AVERAGE	100.000	125.000

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

Fred Guo

Test engineer:_____