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<http://www.digitalemcc.com>

FCC Test Report

for

LCD TV Monitor

Applicant : LG Electronics Inc.

Model Number : 55LD650H-UA

Manufacturer : LG Electronics Inc.

ANSI C 63.4:2003

Test Standard : FCC Part 15 Subpart B

(Type of Device : Class B Computing Device Peripheral (JBP))

Date of Tests : August 26 ~ September 07, 2010

Date of Issue : September 10, 2010

Tested by : D.H.EUN/Assistant Manager

Reviewed by : Y.K.SHIN/Manager

A handwritten signature in blue ink, appearing to read 'D.H.EUN', written over a horizontal line.

A handwritten signature in blue ink, appearing to read 'Y.K.SHIN', written over a horizontal line.

This test result only responds to the tested sample.

It is not allowed to copy this report even partly without the allowance of the test laboratory.

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1. General Remarks

This Report describes the emission characteristics of the tested product.

If the product will be used with additional equipment other than those mentioned in this report or if the tested product will be used against the manufacture's specifications, the compliance with the relevant standards for the system has to be ensured.

2. Test Laboratory

Digital EMC Co., Ltd. has been accredited / filed / authorized by the agencies listed in the following table;

Certificate	Nation	Agency	Code	Mark
Accreditation	Korea	KOLAS	393	ISO/IEC 17025
Site Filing	USA	FCC	101842	Test Facility list & NSA Data
	Japan	VCCI	C-1427 R-1364, R-3385 T-1442	Test Facility list & NSA Data
Certification	Korea	KCC	KR0034	Test Facility list & NSA Data
	Germany	TUV	ROK0826C	ISO/IEC 17025

Quality control in the testing laboratory is implemented as per ISO/IEC 17025 which is the "General requirements for the competents of calibration and testing laboratory".

DIGITAL EMC CO., LTD.

Address: 683-3, Yubang-Dong, Yongin-Si, Kyunggi-Do, Korea. 449-080

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3. General Information of EUT

3.1 Product Information

Equipment under Test	LCD TV Monitor
Model No.	55LD650H-UA
Serial No	NONE
Type of Sample Tested	Pre-Production
Rating Power Supply	AC100-240V, 50/60Hz
High Frequency	667MHz,1920*1080(HDMI,D sub max resolution)
Supplied Power for Test	AC120V, 60Hz
Applicant	LG Electronics Inc. 19-1, Cheongho-ri, Jinwi-myeon, Pyeongtaek-si, Gyeonggi-do, Korea
Manufacturer	LG Electronics Inc. 19-1, Cheongho-ri, Jinwi-myeon, Pyeongtaek-si, Gyeonggi-do, Korea
Factory	LG Electronics Reynosa, Inc. LG Electronics USA, Inc_Reynosa 9801 South Cage Blvd. Suite 3F Pharr, TX. 78577
Date of Receipt of Sample	2010-08-26

< Product Specifications >

RGB-PC

Resolution	Horizontal Frequency(KHz)	Vertical Frequency(Hz)
720x400	31.469	70.08
640x480	31.469 37.861	59.94 72.80
800x600	37.879 48.077	60.31 72.18
1024x768	48.363 56.476	60.00 70.06
1280x768	47.776 60.289	59.870 74.893
1360x768	47.712	60.015
1280x1024	63.981 79.976	60.020 75.025
1920x1080	66.587	59.934

Depending on models

HDMI-PC

Resolution	Horizontal Frequency(KHz)	Vertical Frequency(Hz)
720x400	31.469	70.08
640x480	31.469	59.94
800x600	35.156 37.879	56.25 60.31
1024x768	48.363	60.00
1280x768	47.776	59.87
1360x768	47.712	60.015
1280x1024	63.981	60.02
1920x1080	67.50	60.00

Depending on models

4. Test Summary

4.1 Summary of tests

The applied standards to evaluate the compliance of requirements is 47CFR Part 15, Subpart B and the measurement procedures specified in ANSI C63.4 are performed.

Test Items	Applied Standards	Status
Emission		
Conducted Emission	FCC Part 15 Subpart B	C
Radiated Emission	FCC Part 15 Subpart B	C
Note 1: C=Conform NC=Not Conform NT=Not Tested NA=Not Applicable		

5. Test Set-up and operation mode

5.1 Principle of Configuration Selection

Emission : The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

5.2 Test Operation Mode

- DSUB mode : Resolution 1920*1080 MAX, "H" character scroll
- HDMI mode : Resolution 1920*1080 MAX, "H" character scroll
- USB mode : USB file play

EUT is the following operational conditions apply:

- a) Set the contrast control to maximum.
- b) Set the brightness control to maximum or at raster extinction if raster extinction occurs at less than maximum brightness.
- c) For color monitors, use white letters on a black background to represent all colors.
- d) Select the worse case of positive or negative video if both alternatives are available.
- e) Set character size and number of characters per line so that the typical maximum number of characters per screen is displayed.
- f) For a monitor that has no graphics capabilities, regardless of the video card used, a pattern consisting of random text shall be displayed. For a monitor with graphics capability, even though another videocard may be needed to accomplish a graphic display, a screen pattern consisting of lines of scrolling H's should be displayed. For a monitor that has no text capabilities, use a typical display. That pattern should be used for the remainder of the tests.

5.3 Support Equipment Used

Unit	Model No.	Serial No.	Manufacturer	CABLE			Backshell	FCC ID
				Connect type	Length (m)	shield		
Notebook	LGT28	003QTAF063488	LG	DSUB HDMI	1.8 1.8	Non-shield Shield	Plastic Plastic	DOC
USB Memory	U1	N/A	AXXEN	USB	-	Non-shield	Plastic	DOC

NOTE

- See "APPENDIX 1 Photographs" for actual system test setup

6. Test Results : Emission

6.1 Conducted Emission

RESULT : COMPLY

6.1.1 Measurement Procedure

In the range of 0.15MHz to 30MHz, the conducted emission was measured and set-up was made accordance with **ANSI C63.4:2003**.

If the EUT is table top equipment, it was placed on a wooden table with a height of 0.8m above the reference ground plane and 0.4m from the conducting wall of the shielded room.

Also if the EUT is floor-standing equipment, it was placed on a non-conducted support with a height up to 0.15m above the reference ground plane.

Connect the EUT's power source lines to the appropriate power mains / peripherals through the LISN. All the other peripherals are connected to the 2nd LISN, if any.

Unused measuring port of the LISN was resistively terminated by 50 ohm terminator.

The measuring port of the LISN for EUT was connected to spectrum analyzer.

Using TOYO conducted emission test software, the emissions were scanned from 150KHz to 30MHz with peak detector mode.

After scanning over the frequency range, suspected emissions were selected to perform final measurement. When performing final measurement, the receiver was used which has Quasi-Peak detector and Average detector.

By varying the configuration of the test sample and the cable routing it was attempted to maximize the emission.

For further description of the configuration refer to the picture of the test set-up.

6.1.2 List of Test and Measurement Instruments

Name of Instrument	Model No.	Serial No.	Manufacturer	Cal. Date	Next Cal. Date
EMI Test Receiver	ESCI	100364	R&S	2010.05.12	2011.05.12
Spectrum Analyzer	8594E	39911A05752	AGILENT	2009.10.06	2010.10.06
LISN	LISN1600	197204	TTI	2010.07.02	2011.07.02
LISN(EUT)	ESH2-Z5	828739/006	R&S	2009.10.01	2010.10.01
50 ohm Terminator	CT-01	N/A	TME	2010.01.12	2011.01.12

6.1.3 Limit for Conducted Emission

(1) Conducted Emission at mains ports of class A

Frequency range (MHz)	Limits dB(μ V)	
	Quasi-peak	Average
0.15 to 0.50	79	66
0.50 to 30	73	60
Note The lower limit shall apply at the transition frequencies.		

(2) Conducted Emission at mains ports of class B

Frequency range (MHz)	Limits dB(μ V)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 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 0.15MHz to 0.5MHz.		

6.1.4 Test Result

Test date	August 26, 2010
Ambient Temperature	25
Relative Humidity	58 % R.H.

Result : For the measurement data, see next page.

Note) 1. Emission Level = Reading Value + Correction Factor.

2. Correction Factor = Cable Loss + Insertion Loss of LISN

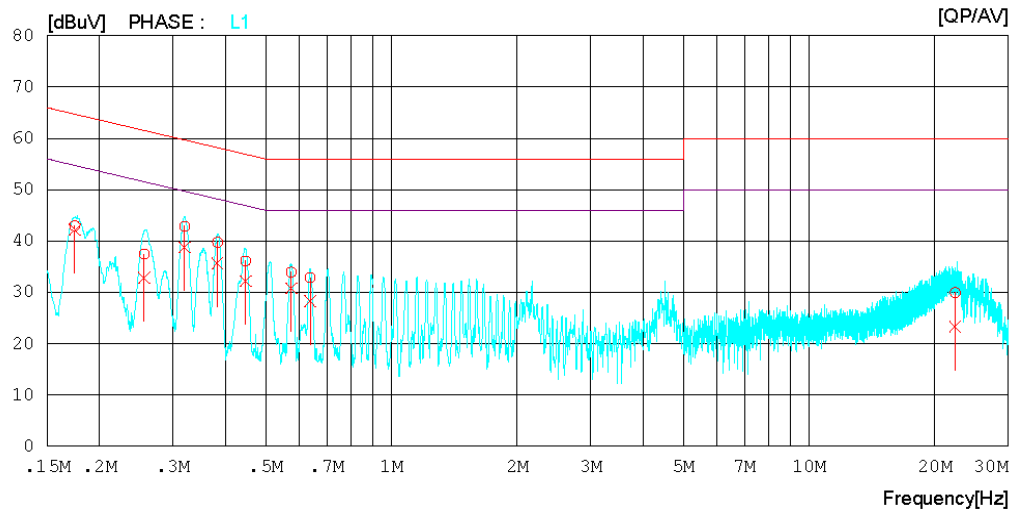
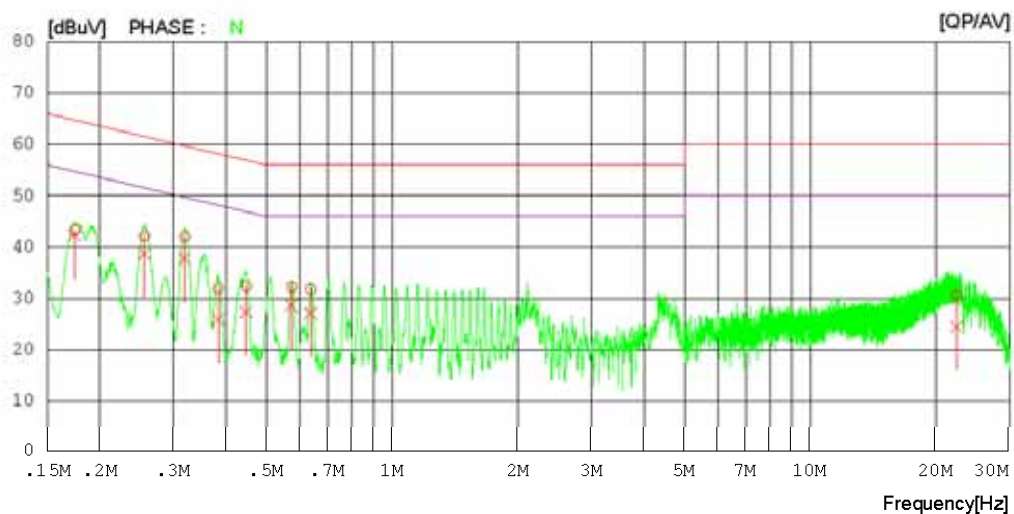
3. Margin = Limit - Emission level

Test Result

< DSUB MODE >

**Results of Conducted Emission**Digital EMC
Date : 2010/08/26Model No. : 55LD650H-UA
Type :
Serial No. :
Test Condition : DSUBReference No. :
Power Supply : 120V 60Hz
Temp/Humi. : 25 °C 58 % R.H.
Operator :

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV



Results of Conducted Emission

Digital EMC
Date : 2010/08/26

Model No. : 55LD650H-UA
Type :
Serial No. :
Test Condition : DSUB

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi. : 25 °C 58 % R.H.
Operator :

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV

NO	FREQ [MHz]	READING		C.FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	
1	0.17419	43.1	42.2	0.2	43.3	42.4	64.8	54.8	21.5	12.4	N
2	0.25565	42.0	38.5	0.2	42.2	38.7	61.6	51.6	19.4	12.9	N
3	0.31924	41.8	37.5	0.3	42.1	37.8	59.7	49.7	17.6	11.9	N
4	0.38388	31.7	25.6	0.3	32.0	25.9	58.2	48.2	26.2	22.3	N
5	0.44769	32.2	27.1	0.3	32.5	27.4	56.9	46.9	24.4	19.5	N
6	0.57505	32.0	28.4	0.2	32.2	28.6	56.0	46.0	23.8	17.4	N
7	0.63819	31.7	26.9	0.2	31.9	27.1	56.0	46.0	24.1	18.9	N
8	22.35800	29.6	23.4	1.1	30.7	24.5	60.0	50.0	29.3	25.5	N
9	0.17443	42.8	42.0	0.2	43.0	42.2	64.7	54.7	21.7	12.5	L1
10	0.25571	37.2	32.6	0.2	37.4	32.8	61.6	51.6	24.2	18.8	L1
11	0.31958	42.6	38.5	0.3	42.9	38.8	59.7	49.7	16.8	10.9	L1
12	0.38319	39.5	35.4	0.3	39.8	35.7	58.2	48.2	18.4	12.5	L1
13	0.44740	35.8	32.0	0.3	36.1	32.3	56.9	46.9	20.8	14.6	L1
14	0.57529	33.8	30.6	0.2	34.0	30.8	56.0	46.0	22.0	15.2	L1
15	0.63831	32.7	28.1	0.2	32.9	28.3	56.0	46.0	23.1	17.7	L1
16	22.36400	28.9	22.2	1.1	30.0	23.3	60.0	50.0	30.0	26.7	L1

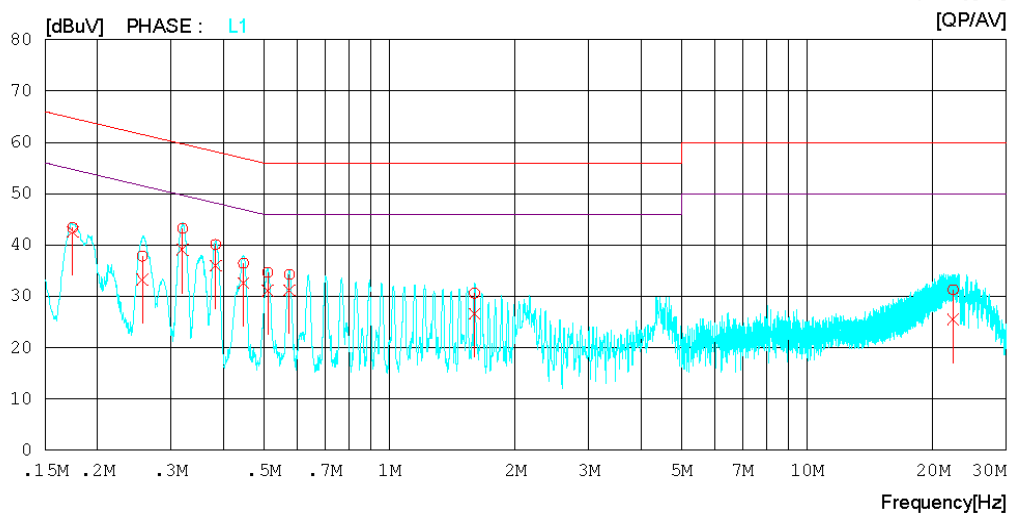
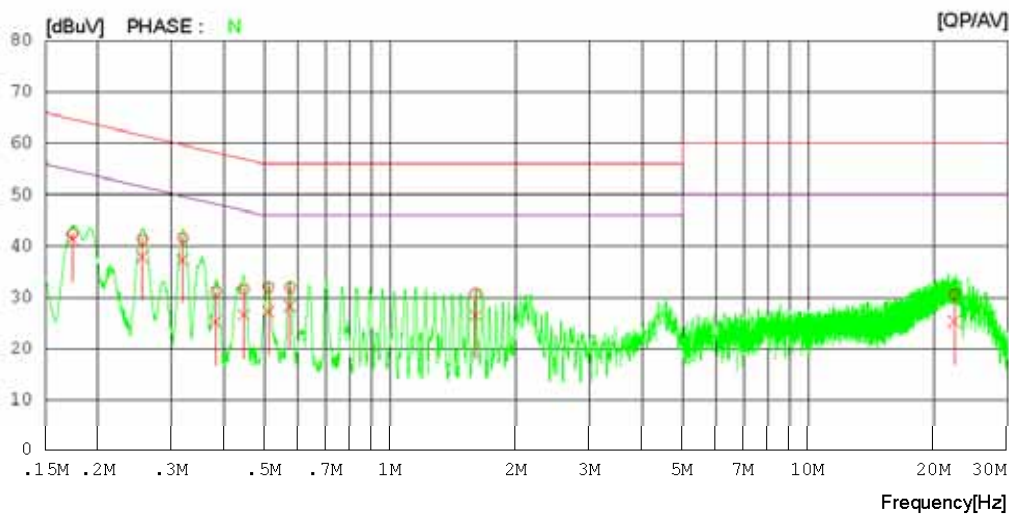
< HDMI MODE >



Results of Conducted Emission

Digital EMC
Date : 2010/08/26

Model No.	: 55LD650H-UA	Reference No.	:
Type	:	Power Supply	: 120V 60Hz
Serial No.	:	Temp/Humi.	: 25 °C 58 % R.H.
Test Condition	: HDMI	Operator	:
Memo	:		
LIMIT : CISPR22_B QP			
CISPR22_B AV			





Results of Conducted Emission

Digital EMC
Date : 2010/08/26

Model No. : 55LD650H-UA
Type :
Serial No. :
Test Condition : HDMI

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi. : 25 °C 58 % R.H.
Operator :

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV

NO	FREQ [MHz]	READING		C.FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	
1	0.17390	42.2	41.2	0.2	42.4	41.4	64.8	54.8	22.4	13.4	N
2	0.25560	41.2	37.7	0.2	41.4	37.9	61.6	51.6	20.2	13.7	N
3	0.31918	41.3	37.0	0.3	41.6	37.3	59.7	49.7	18.1	12.4	N
4	0.38296	30.9	24.9	0.3	31.2	25.2	58.2	48.2	27.0	23.0	N
5	0.44690	31.3	26.3	0.3	31.6	26.6	56.9	46.9	25.3	20.3	N
6	0.51170	31.7	27.0	0.3	32.0	27.3	56.0	46.0	24.0	19.7	N
7	0.57541	31.8	28.1	0.2	32.0	28.3	56.0	46.0	24.0	17.7	N
8	1.59800	30.4	26.2	0.3	30.7	26.5	56.0	46.0	25.3	19.5	N
9	22.29400	29.5	24.2	1.1	30.6	25.3	60.0	50.0	29.4	24.7	N
10	0.17426	43.2	42.4	0.2	43.4	42.6	64.8	54.8	21.4	12.2	L1
11	0.25583	37.6	33.1	0.2	37.8	33.3	61.6	51.6	23.8	18.3	L1
12	0.31941	42.9	38.8	0.3	43.2	39.1	59.7	49.7	16.5	10.6	L1
13	0.38348	39.8	35.7	0.3	40.1	36.0	58.2	48.2	18.1	12.2	L1
14	0.44718	36.2	32.3	0.3	36.5	32.6	56.9	46.9	20.4	14.3	L1
15	0.51118	34.3	30.8	0.3	34.6	31.1	56.0	46.0	21.4	14.9	L1
16	0.57513	34.1	30.9	0.2	34.3	31.1	56.0	46.0	21.7	14.9	L1
17	1.59650	30.3	26.3	0.3	30.6	26.6	56.0	46.0	25.4	19.4	L1
18	22.36300	30.2	24.4	1.1	31.3	25.5	60.0	50.0	28.7	24.5	L1

< USB MODE >



Results of Conducted Emission

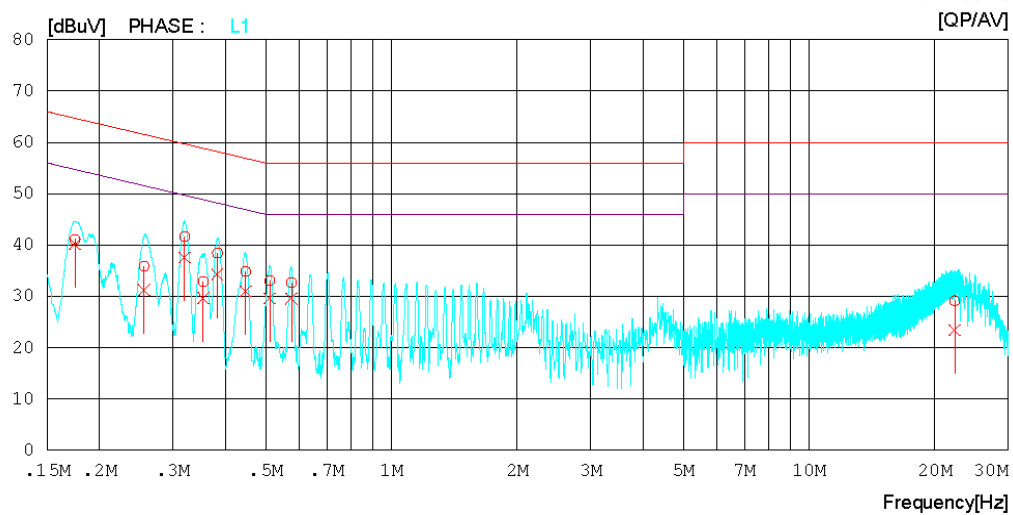
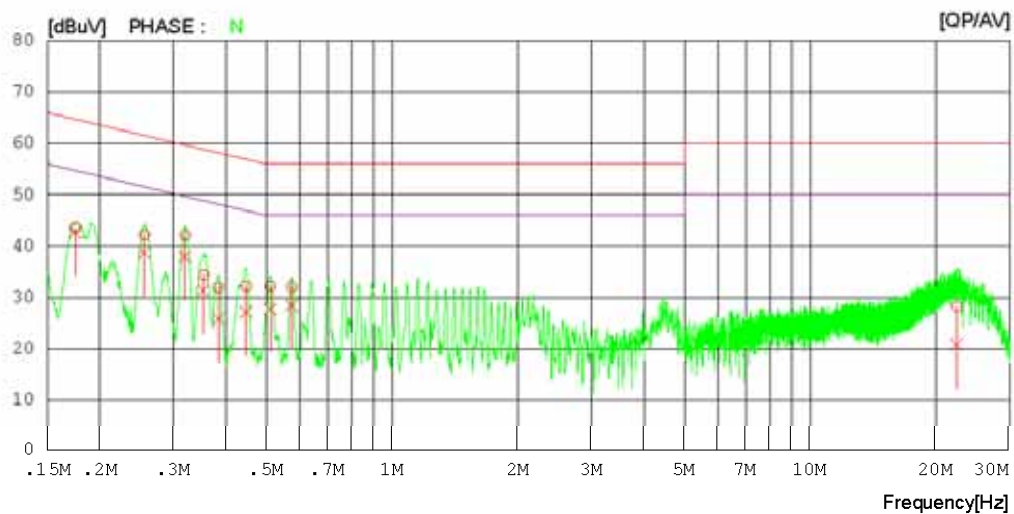
Digital EMC
Date : 2010/08/26

Model No. : 55LD650H-UA
Type :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi. : 25 °C 58 % R.H.
Operator :

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV





Results of Conducted Emission

Digital EMC
Date : 2010/08/26

Model No. : 55LD650H-UA
Type :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi. : 25 °C 58 % R.H.
Operator :

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV

NO	FREQ [MHz]	READING		C.FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	
1	0.17454	43.3	42.4	0.2	43.5	42.6	64.7	54.7	21.2	12.1	N
2	0.25559	42.0	38.5	0.2	42.2	38.7	61.6	51.6	19.4	12.9	N
3	0.31960	41.9	37.6	0.3	42.2	37.9	59.7	49.7	17.5	11.8	N
4	0.35401	34.1	31.1	0.3	34.4	31.4	58.9	48.9	24.5	17.5	N
5	0.38406	31.6	25.5	0.3	31.9	25.8	58.2	48.2	26.3	22.4	N
6	0.44771	31.9	26.9	0.3	32.2	27.2	56.9	46.9	24.7	19.7	N
7	0.51083	31.9	27.4	0.3	32.2	27.7	56.0	46.0	23.8	18.3	N
8	0.57506	31.8	28.2	0.2	32.0	28.4	56.0	46.0	24.0	17.6	N
9	22.36500	27.1	19.7	1.1	28.2	20.8	60.0	50.0	31.8	29.2	N
10	0.17454	40.9	40.0	0.2	41.1	40.2	64.7	54.7	23.6	14.5	L1
11	0.25560	35.7	31.1	0.2	35.9	31.3	61.6	51.6	25.7	20.3	L1
12	0.31959	41.4	37.3	0.3	41.7	37.6	59.7	49.7	18.0	12.1	L1
13	0.35436	32.6	29.4	0.3	32.9	29.7	58.9	48.9	26.0	19.2	L1
14	0.38319	38.1	34.0	0.3	38.4	34.3	58.2	48.2	19.8	13.9	L1
15	0.44735	34.5	30.7	0.3	34.8	31.0	56.9	46.9	22.1	15.9	L1
16	0.51118	32.8	29.3	0.3	33.1	29.6	56.0	46.0	22.9	16.4	L1
17	0.57553	32.5	29.4	0.2	32.7	29.6	56.0	46.0	23.3	16.4	L1
18	22.29650	28.0	22.3	1.1	29.1	23.4	60.0	50.0	30.9	26.6	L1

6.2 Radiated Emission

RESULT : COMPLY

6.2.1 Measurement Procedure

The radiated emission was measured and set-up was made accordance with **ANSI C63.4:2003**.

If the EUT is tabletop equipment, it was placed on a wooden table with a height of 0.8m above the reference ground plane and 3m away from the interference receiving antenna **10m semi-anechoic chamber**.

Also if the EUT is floor-standing equipment, it was placed on a non-conducted support with a height up to 0.15m above the reference ground plane.

Rotate the EUT from 0° to 360° and position the receiving antenna at heights from 1 to 4m above the reference ground plane continuously to determine associated with higher emission levels and record them.

The measurement was made in both the vertical and horizontal polarization, and the maximum value is presented in the report.

For below 1GHz frequency range, Quasi-Peak detector with 120kHz RBW was used.

Also Peak and Average detector with 1MHz RBW were used for above 1GHz frequency range.

For further description of the configuration refer to the picture of the test set-up.

6.2.2 List of Test and Measurement Instruments

Radiated Emission (10m Chamber)					
Name of Instrument	Model No.	Serial No.	Manufacturer	Cal. Date	Next Cal. Date
EMI Test Receiver	ESU	100014	R&S	2010.01.29	2011.01.29
Bilog Antenna	CBL6112D	22609	SCHAFFNER	2010.10.28	2011.10.28
Horn Antenna	3115	21097	ETS	2009.09.23	2010.09.23
Amplifier(22dB)	8447E	2945A02865	H/P	2010.01.29	2011.01.29
Low Noise Preamplifier	MLA-00108-B02-36	1518831	TSJ	2010.02.08	2011.02.08
Controller	5905A	N/A	TOKIN	-	-
ANT.master	N/A	N/A	TOKIN	-	-

6.2.3 Limit of Radiated Emission

- The test frequency range of Radiated Emission measurements are listed below.

Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 108	1000
108 – 500	2000
500 – 1000	5000
Above 1000	5 th harmonic of the highest frequency or 40GHz, whichever is lower

(1) Limit for Radiated Emission below 1000MHz

Frequency range (MHz)	Class A Equipment (10m distance)	Class B Equipment (3m distance)
	Quasi-peak limits (dB μ V/m)	Quasi-peak limits (dB μ V/m)
30 to 88	39.1	40
88 to 216	43.5	43.5
216 to 960	46.4	46
960 to 1000	49.5	54
Note 1 The lower limit shall apply at the transition frequency. Note 2 Additional provisions may be required for cases where interference occurs. Note 3 According to 15.109(g), as an alternative to the radiated emission limit shown above, digital devices may be shown to comply with the standards(CISPR), Pub. 22 shown as below.		
30 to 230	40	30
230 to 1000	47	37

(2) Limits for Radiated Emission in the frequency range 1000 - 2000MHz at a measuring distance of 10m

Frequency (GHz)	Class A Equipment		Class B Equipment	
	peak (dB μ V/m)	peak (dB μ V/m)	peak (dB μ V/m)	Average (dB μ V/m)
1 to 2	69.5	49.5	63.5	43.5

(3) Limits for Radiated Emission above 1000MHz at a measuring distance of 3m

Frequency (GHz)	Class A Equipment		Class B Equipment	
	peak (dB μ V/m)	peak (dB μ V/m)	peak (dB μ V/m)	Average (dB μ V/m)
1 to 40	80	60	74	54

6.2.4 Test Result

Test date	August 31, 2010	September 08, 2010
Ambient Temperature	23	24
Relative Humidity	47 % R.H.	41 % R.H.

Result : For the measurement data, see next page

Note) 1. Emission Level = Reading Value + Correction Factor.

2. Correction Factor = Cable loss - Amp gain + Antenna Factor

3. Margin = Limit - Emission level

Test Result

< DSUB MODE >

- 30MHz-1GHz

**RADIATED EMISSION**

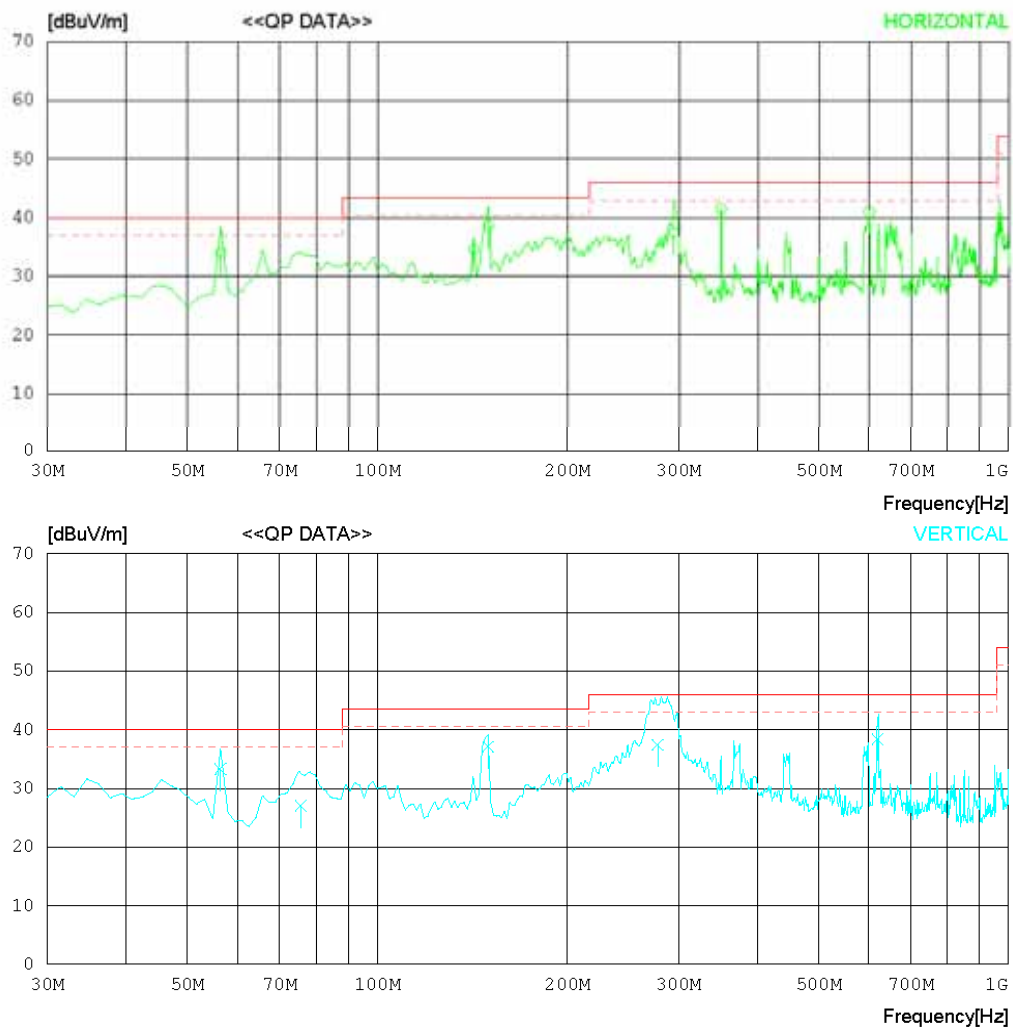
Date : 2010-08-31

Model Name : 55LD650H-UA
Model No. :
Serial No. :
Test Condition : DSUB

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 23°C 47 % R.H.
Operator :

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m)
MARGIN: 3 dB



RADIATED EMISSION

Date : 2010-08-31

Model Name	:	55LD650H-UA	Reference No.	:	
Model No.	:		Power Supply	:	120V 60Hz
Serial No.	:		Temp/Humi	:	23 °C 47 % R.H.
Test Condition	:	DSUB	Operator	:	

Memo :

LIMIT : FCC Part15 Subpart B Class B (3m)
MARGIN: 3 dB

No.	FREQ	READING	ANT	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	QP [dBuV]	FACTOR [dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
----- Horizontal -----										
1	56.426	49.2	6.7	0.9	22.7	34.1	40.0	5.9	121	186
2	141.923	45.4	10.7	1.4	22.9	34.6	43.5	8.9	100	221
3	149.696	49.9	10.3	1.4	23.0	38.6	43.5	4.9	121	218
4	294.220	45.3	13.8	2.0	23.7	37.4	46.0	8.6	100	358
5	350.010	48.3	15.0	2.2	24.0	41.5	46.0	4.5	181	222
6	600.019	43.7	18.8	2.9	24.4	41.0	46.0	5.0	180	1
----- Vertical -----										
7	56.426	48.4	6.7	0.9	22.7	33.3	40.0	6.7	100	120
8	75.600	41.9	6.8	1.0	22.7	27.0	40.0	13.0	100	156
9	149.861	48.4	10.3	1.4	23.0	37.1	43.5	6.4	203	174
10	278.179	45.5	13.6	1.9	23.6	37.4	46.0	8.6	200	179
11	620.800	40.9	18.8	3.0	24.3	38.4	46.0	7.6	100	358

- 1GHz-6GHz



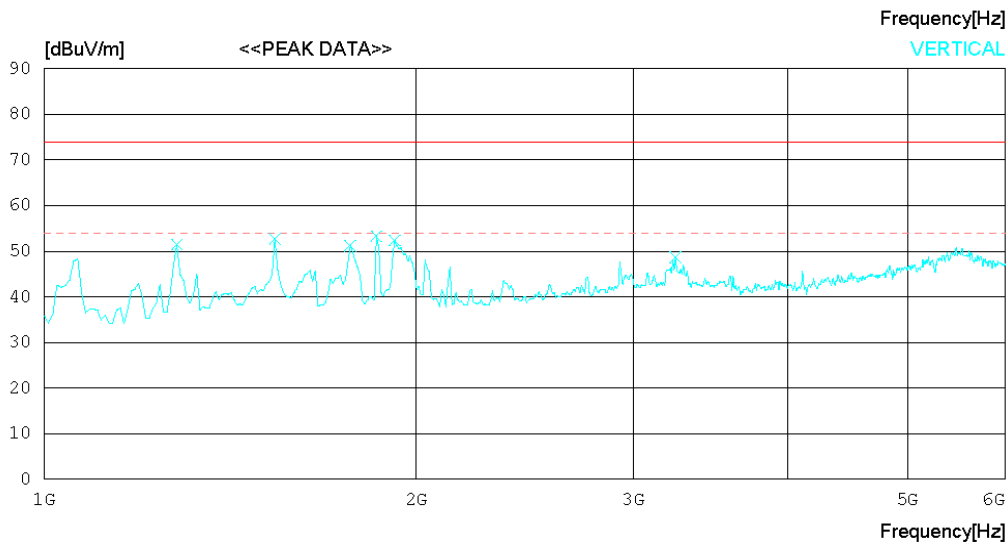
RADIATED EMISSION

Date : 2010-09-07

Model Name	: 55LD650H-UA	Reference No.	:	
Model No.	:	Power Supply	:	120V 60Hz
Serial No.	:	Temp/Humi	:	24 °C 41 % R.H.
Test Condition	: DSUB	Operator	:	

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m) - 8G(Peak)
FCC Part15 Subpart.B Class B (3m) - 8G(Avg)



RADIATED EMISSION

Date : 2010-09-07

Model Name	:	55LD650H-UA	Reference No.	:	
Model No.	:		Power Supply	:	120V 60Hz
Serial No.	:		Temp/Humi	:	24 °C 41 % R.H.
Test Condition	:	DSUB	Operator	:	

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m) - 8G(Peak)
 FCC Part15 Subpart.B Class B (3m) - 8G(Avg)

No.	FREQ [MHz]	READING PEAK [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	1280.449	66.9	24.5	5.5	41.9	55.0	74.0	19	100	1
2	1544.872	64.7	25.1	6.0	41.9	53.9	74.0	20.1	100	1
3	1616.987	63.5	25.2	6.2	41.9	53.0	74.0	21	100	1
4	1769.230	62.0	25.2	6.5	41.9	51.8	74.0	22.2	100	128
5	1937.500	68.5	25.2	6.9	41.9	58.7	74.0	15.3	100	128
6	2025.641	58.0	25.3	7.0	41.9	48.4	74.0	25.6	100	254
7	2266.029	56.4	26.3	7.4	41.7	48.4	74.0	25.6	100	1
8	2570.520	57.3	27.5	7.9	41.6	51.1	74.0	22.9	100	198
9	2987.193	57.8	28.8	8.7	41.3	54.0	74.0	20	100	196
10	3075.335	54.0	28.9	8.9	41.3	50.5	74.0	23.5	100	1
11	3115.400	52.2	28.9	8.9	41.2	48.8	74.0	25.2	100	1
12	3187.517	57.8	28.9	9.0	41.2	54.5	74.0	19.5	100	1
----- Vertical -----										
13	1280.449	63.4	24.5	5.5	41.9	51.5	74.0	22.5	100	358
14	1536.859	63.5	25.1	6.0	41.9	52.7	74.0	21.3	100	358
15	1769.230	61.4	25.2	6.5	41.9	51.2	74.0	22.8	100	358
16	1857.371	63.3	25.2	6.7	41.9	53.3	74.0	20.7	100	358
17	1921.474	62.3	25.2	6.8	41.9	52.4	74.0	21.6	100	202
18	3243.607	51.8	29.0	9.1	41.2	48.7	74.0	25.3	100	212

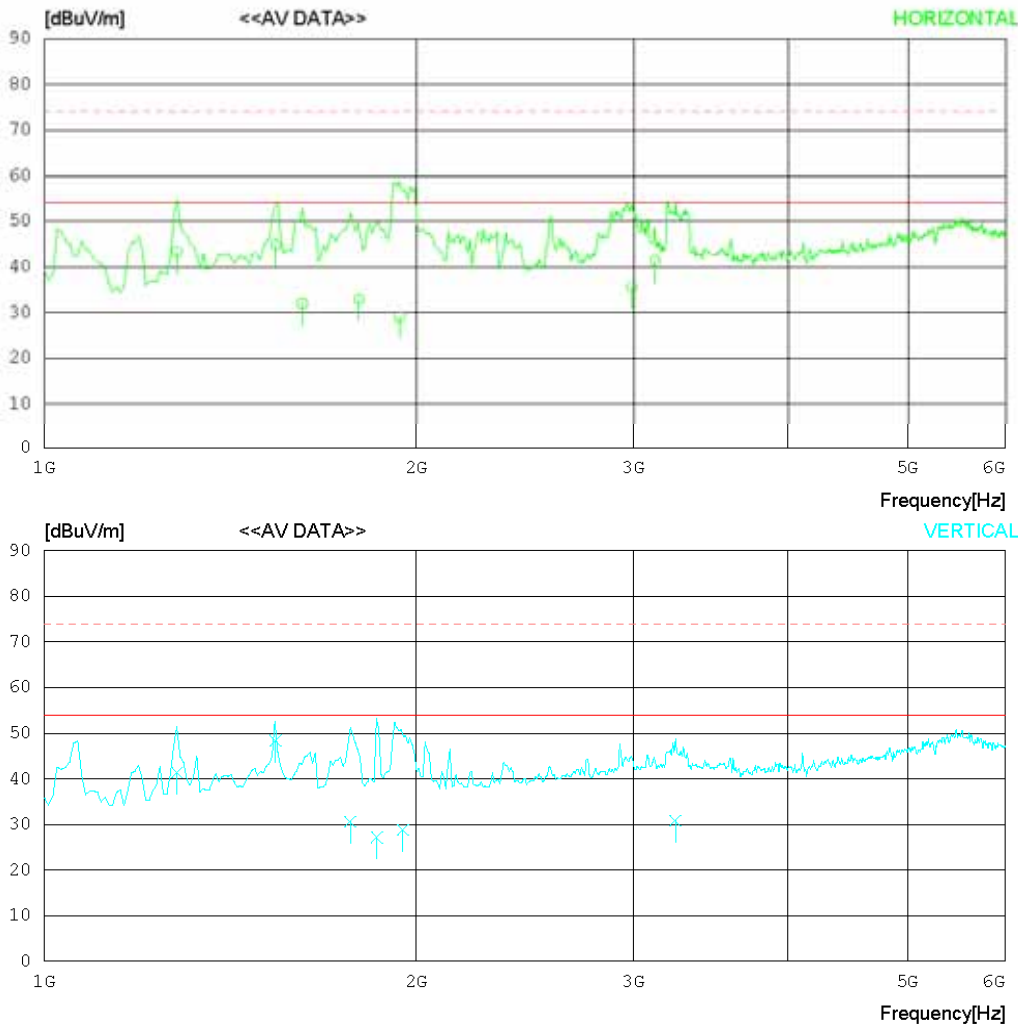


RADIATED EMISSION

Date : 2010-09-07

Model Name	: 55LD650H-UA	Reference No.	:	
Model No.	:	Power Supply	:	120V 60Hz
Serial No.	:	Temp/Humi	:	24 °C 41 % R.H.
Test Condition	: DSUB	Operator	:	

Memo :
LIMIT : FCC Part15 Subpart.B Class B (3m) - 8G(Avg)
FCC Part15 Subpart.B Class B (3m) - 8G(Peak)



RADIATED EMISSION

Date : 2010-09-07

Model Name	: 55LD650H-UA	Reference No.	:
Model No.	:	Power Supply	: 120V 60Hz
Serial No.	:	Temp/Humi	: 24 °C 41 % R.H.
Test Condition	: DSUB	Operator	:

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m) - 8G(Avg)
 FCC Part15 Subpart.B Class B (3m) - 8G(Peak)

No.	FREQ [MHz]	READING AV [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	1280.449	55.2	24.5	5.5	41.9	43.3	54.0	10.7	100	1
2	1538.997	55.6	25.1	6.0	41.9	44.8	54.0	9.2	100	1
3	1616.987	42.5	25.2	6.2	41.9	32.0	54.0	22.0	100	1
4	1796.000	43.0	25.2	6.6	41.9	32.9	54.0	21.1	100	128
5	1937.500	38.9	25.2	6.9	41.9	29.1	54.0	24.9	100	128
6	2987.193	39.5	28.8	8.7	41.3	35.7	54.0	18.3	100	196
7	3118.315	44.7	28.9	8.9	41.2	41.3	54.0	12.7	100	1
----- Vertical -----										
8	1280.449	53.3	24.5	5.5	41.9	41.4	54.0	12.6	100	358
9	1538.997	59.2	25.1	6.0	41.9	48.4	54.0	5.6	100	358
10	1769.230	40.8	25.2	6.5	41.9	30.6	54.0	23.4	100	358
11	1858.756	37.2	25.2	6.7	41.9	27.2	54.0	26.8	100	358
12	1951.195	38.6	25.2	6.9	41.9	28.8	54.0	25.2	100	202
13	3243.607	33.9	29.0	9.1	41.2	30.8	54.0	23.2	100	212

< HDMI MODE >

- 30MHz-1GHz



RADIATED EMISSION

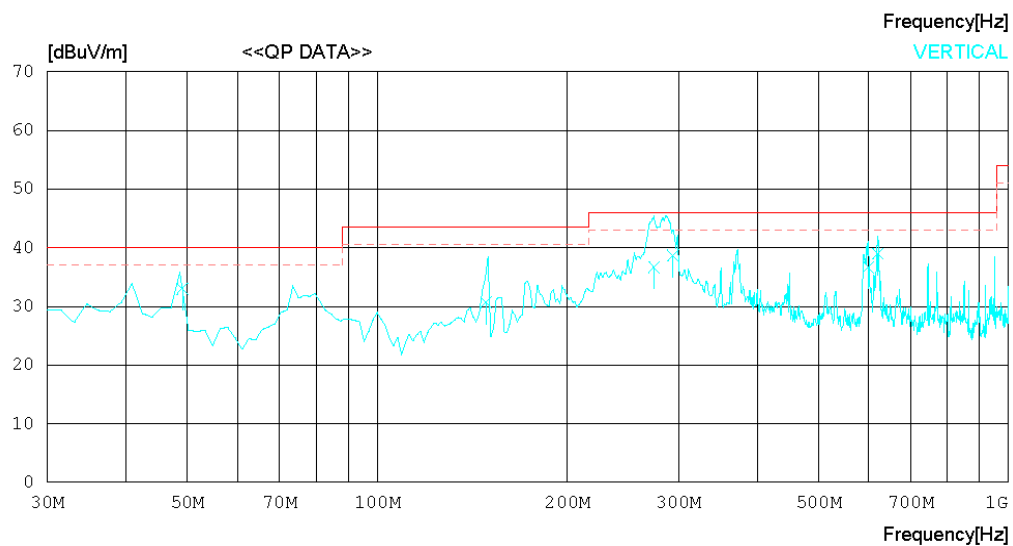
Date : 2010-08-31

Model Name : 55LD650H-UA
Model No. :
Serial No. :
Test Condition : HDMI

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 23 °C 47 % R.H.
Operator :

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m)
MARGIN: 3 dB



RADIATED EMISSION

Date : 2010-08-31

Model Name	: 55LD650H-UA	Reference No.	:
Model No.	:	Power Supply	: 120V 60Hz
Serial No.	:	Temp/Humi	: 23 °C 47 % R.H.
Test Condition	: HDMI	Operator	:

Memo :

LIMIT : FCC Part15 Subpart B Class B (3m)
MARGIN: 3 dB

No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	148.802	46.1	10.3	1.4	23.0	34.8	43.5	8.7	100	1
2	174.841	47.2	10.1	1.5	23.2	35.6	43.5	7.9	100	223
3	216.512	45.7	11.6	1.7	23.4	35.6	46.0	10.4	100	173
4	294.263	48.4	13.8	2.0	23.7	40.5	46.0	5.5	175	144
5	350.010	47.5	15.0	2.2	24.0	40.7	46.0	5.3	176	236
6	599.762	45.0	18.8	2.9	24.4	42.3	46.0	3.7	154	204
7	674.740	41.3	18.8	3.1	24.2	39.0	46.0	7.0	154	204
8	824.407	38.5	19.8	3.4	23.6	38.1	46.0	7.9	100	181
----- Vertical -----										
9	49.100	46.2	8.6	0.9	22.7	33.0	40.0	7.0	100	358
10	148.796	42.0	10.3	1.4	23.0	30.7	43.5	12.8	199	1
11	274.481	44.8	13.6	1.9	23.6	36.7	46.0	9.3	100	358
12	294.195	46.6	13.8	2.0	23.7	38.7	46.0	7.3	100	176
13	600.015	39.4	18.8	2.9	24.4	36.7	46.0	9.3	100	0
14	620.704	41.5	18.8	3.0	24.3	39.0	46.0	7.0	100	0

- 1GHz-6GHz



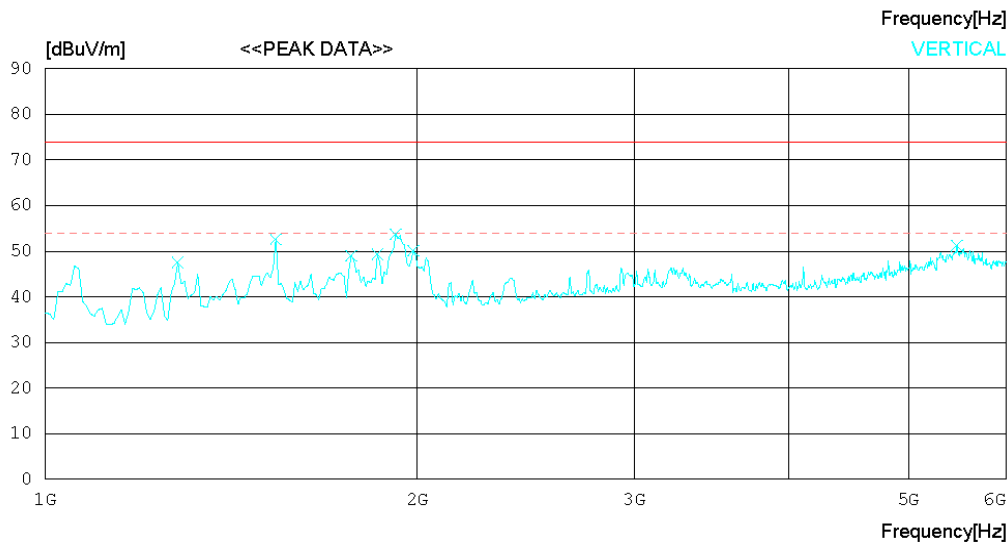
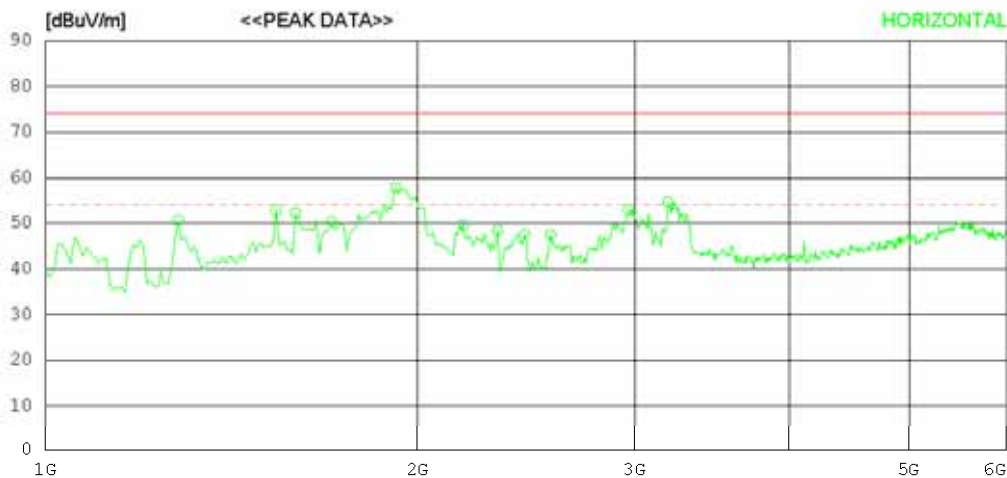
RADIATED EMISSION

Date : 2010-09-07

Model Name	: 55LD650H-UA	Reference No.	:	
Model No.	:	Power Supply	:	120V 60Hz
Serial No.	:	Temp/Humi	:	24 °C 41 % R.H.
Test Condition	: HDMI	Operator	:	

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m) - 8G(Peak)
FCC Part15 Subpart.B Class B (3m) - 8G(Avg)



RADIATED EMISSION

Date : 2010-09-07

Model Name	: 55LD650H-UA	Reference No.	:
Model No.	:	Power Supply	: 120V 60Hz
Serial No.	:	Temp/Humi	: 24 °C 41 % R.H.
Test Condition	: HDMI	Operator	:

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m) - 8G(Peak)
 FCC Part15 Subpart.B Class B (3m) - 8G(Avg)

No.	FREQ [MHz]	READING PEAK [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	1280.449	62.6	24.5	5.5	41.9	50.7	74.0	23.3	100	358
2	1536.859	63.7	25.1	6.0	41.9	52.9	74.0	21.1	100	358
3	1592.948	62.8	25.2	6.1	41.9	52.2	74.0	21.8	100	358
4	1705.128	60.7	25.2	6.4	41.9	50.4	74.0	23.6	100	178
5	1921.474	67.7	25.2	6.8	41.9	57.8	74.0	16.2	100	130
6	2177.886	58.2	26.0	7.3	41.8	49.7	74.0	24.3	100	228
7	2322.119	56.0	26.6	7.5	41.7	48.4	74.0	25.6	100	358
8	2442.313	54.4	27.1	7.7	41.6	47.6	74.0	26.4	100	220
9	2562.507	53.7	27.5	7.9	41.6	47.5	74.0	26.5	100	358
10	2963.154	56.7	28.7	8.7	41.3	52.8	74.0	21.2	100	358
11	3187.517	58.0	28.9	9.0	41.2	54.7	74.0	19.3	100	206
----- Vertical -----										
12	1280.449	59.4	24.5	5.5	41.9	47.5	74.0	26.5	100	1
13	1536.859	63.4	25.1	6.0	41.9	52.6	74.0	21.4	100	1
14	1769.230	59.2	25.2	6.5	41.9	49.0	74.0	25	100	1
15	1857.371	59.3	25.2	6.7	41.9	49.3	74.0	24.7	100	341
16	1921.474	63.6	25.2	6.8	41.9	53.7	74.0	20.3	100	1
17	1985.577	59.8	25.2	7.0	41.9	50.1	74.0	23.9	100	1
18	5471.163	44.5	35.0	11.8	40.1	51.2	74.0	22.8	100	1



RADIATED EMISSION

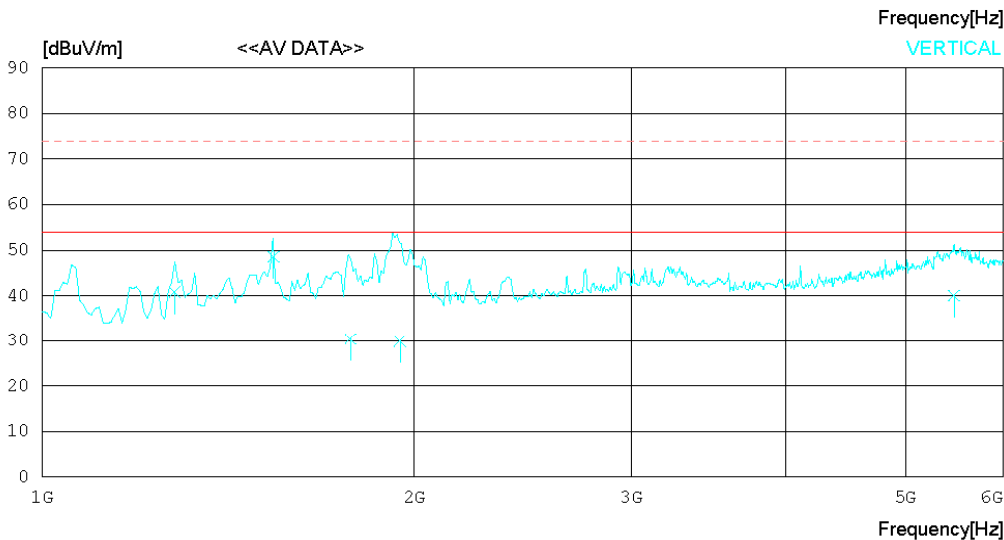
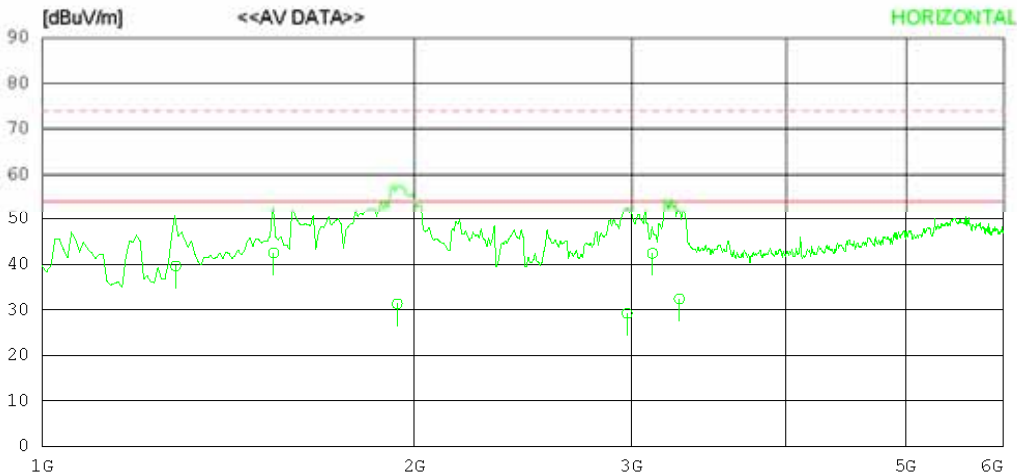
Date : 2010-09-07

Model Name : 55LD650H-UA
Model No. :
Serial No. :
Test Condition : HDMI

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 24 °C 41 % R.H.
Operator :

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m) - 8G(Avg)
FCC Part15 Subpart.B Class B (3m) - 8G(Peak)



RADIATED EMISSION

Date : 2010-09-07

Model Name	:	55LD650H-UA	Reference No.	:	
Model No.	:		Power Supply	:	120V 60Hz
Serial No.	:		Temp/Humi	:	24 °C 41 % R.H.
Test Condition	:	HDMI	Operator	:	

Memo :

LIMIT : FCC Part15 Subpart B Class B (3m) - 8G(Avg)
 FCC Part15 Subpart B Class B (3m) - 8G(Peak)

No.	FREQ	READING	ANT	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	AV	FACTOR							
		[dBuV]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
----- Horizontal -----										
1	1282.493	51.5	24.5	5.5	41.9	39.6	54.0	14.4	100	358
2	1538.984	53.3	25.1	6.0	41.9	42.5	54.0	11.5	100	358
3	1938.000	41.1	25.2	6.9	41.9	31.3	54.0	22.7	100	130
4	2975.140	33.1	28.7	8.7	41.3	29.2	54.0	24.8	100	358
5	3118.688	45.8	28.9	8.9	41.2	42.4	54.0	11.6	100	358
6	3278.128	35.4	29.0	9.1	41.1	32.4	54.0	21.6	100	206
----- Vertical -----										
7	1280.449	52.7	24.5	5.5	41.9	40.8	54.0	13.2	100	1
8	1539.003	59.4	25.1	6.0	41.9	48.6	54.0	5.4	100	1
9	1776.314	40.6	25.2	6.5	41.9	30.4	54.0	23.6	100	1
10	1947.807	39.7	25.2	6.9	41.9	29.9	54.0	24.1	100	1
11	5471.163	33.4	35.0	11.8	40.1	40.1	54.0	13.9	100	1

< USB MODE >

- 30MHz-1GHz



RADIATED EMISSION

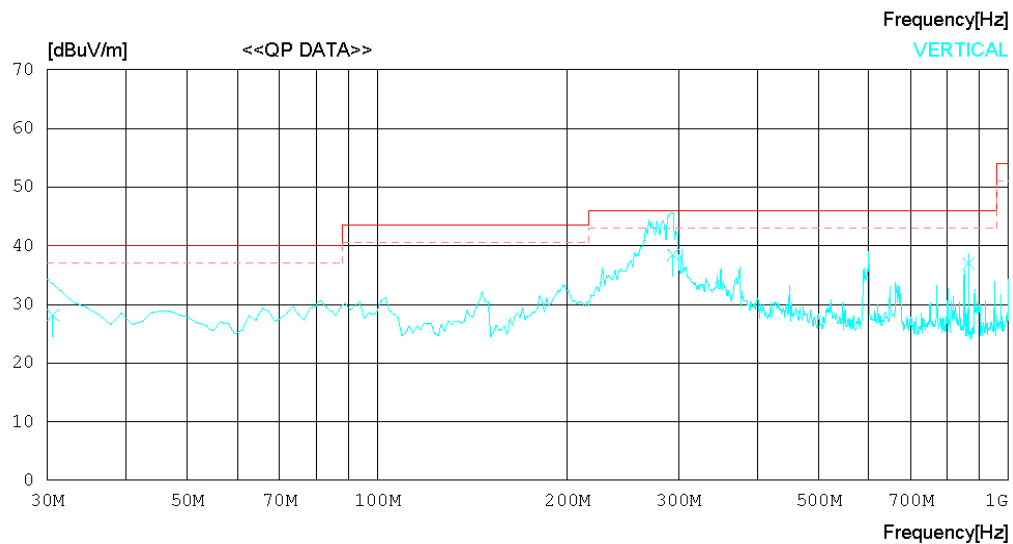
Date : 2010-09-07

Model Name : 55LD650H-UA
Model No. :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 24 °C 41 % R.H.
Operator :

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m)
MARGIN: 3 dB



RADIATED EMISSION

Date : 2010-09-07

Model Name	: 55LD650H-UA	Reference No.	:
Model No.	:	Power Supply	: 120V 60Hz
Serial No.	:	Temp/Humi	: 24 °C 41 % R.H.
Test Condition	: USB	Operator	:

Memo :

LIMIT : FCC Part15 Subpart B Class B (3m)
MARGIN: 3 dB

No.	FREQ	READING	ANT	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	QP [dBuV]	FACTOR [dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
----- Horizontal -----										
1	79.800	46.6	7.1	1.1	22.7	32.1	40.0	7.9	229	164
2	200.013	47.5	10.7	1.7	23.3	36.6	43.5	6.9	100	133
3	297.372	45.6	13.9	2.0	23.7	37.8	46.0	8.2	100	216
4	350.010	47.7	15.0	2.2	24.0	40.9	46.0	5.1	180	225
5	600.496	43.3	18.8	2.9	24.4	40.6	46.0	5.4	201	358
6	661.900	40.4	18.8	3.1	24.2	38.1	46.0	7.9	201	231
7	950.032	38.2	21.1	3.7	23.0	40.0	46.0	6.0	172	118
----- Vertical -----										
8	30.600	31.9	18.2	0.7	22.6	28.2	40.0	11.8	100	358
9	294.220	46.3	13.8	2.0	23.7	38.4	46.0	7.6	199	1
10	864.762	36.7	20.2	3.5	23.4	37.0	46.0	9.0	100	213

- 1GHz-6GHz



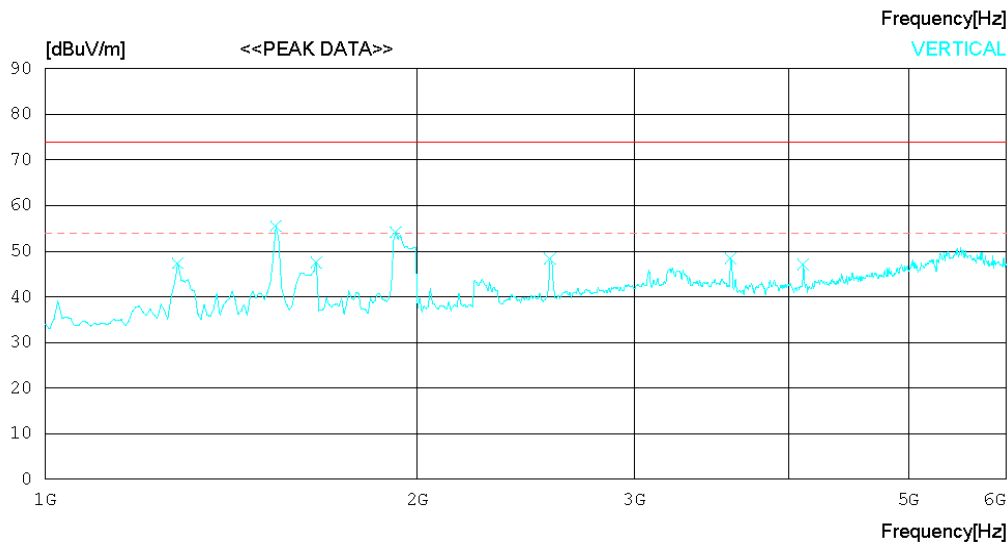
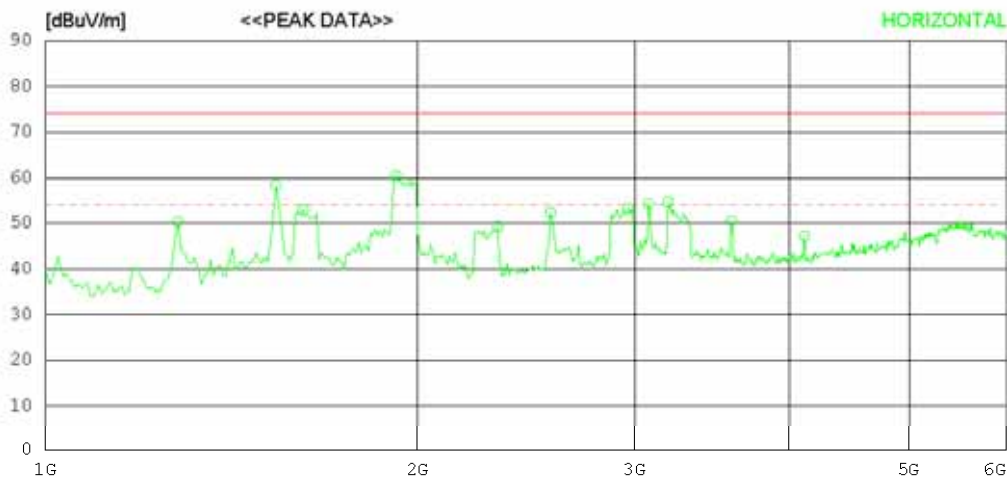
RADIATED EMISSION

Date : 2010-09-07

Model Name	: 55LD650H-UA	Reference No.	:	
Model No.	:	Power Supply	:	120V 60Hz
Serial No.	:	Temp/Humi	:	24 °C 41 % R.H.
Test Condition	: USB	Operator	:	

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m) - 8G(Peak)
FCC Part15 Subpart.B Class B (3m) - 8G(Avg)



RADIATED EMISSION

Date : 2010-09-07

Model Name	: 55LD650H-UA	Reference No.	:		
Model No.	:	Power Supply	:	120V	60Hz
Serial No.	:	Temp/Humi	:	24 °C	41 % R.H.
Test Condition	: USB	Operator	:		

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m) - 8G(Peak)
 FCC Part15 Subpart.B Class B (3m) - 8G(Avg)

No.	FREQ [MHz]	READING PEAK [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	1280.449	62.2	24.5	5.5	41.9	50.3	74.0	23.7	100	213
2	1536.859	69.2	25.1	6.0	41.9	58.4	74.0	15.6	100	358
3	1616.987	63.4	25.2	6.2	41.9	52.9	74.0	21.1	100	358
4	1921.474	70.3	25.2	6.8	41.9	60.4	74.0	13.6	100	358
5	2322.119	56.8	26.6	7.5	41.7	49.2	74.0	24.8	100	358
6	2562.507	58.6	27.5	7.9	41.6	52.4	74.0	21.6	100	358
7	2963.154	57.2	28.7	8.7	41.3	53.3	74.0	20.7	100	191
8	3075.335	57.8	28.9	8.9	41.3	54.3	74.0	19.7	100	358
9	3187.517	58.0	28.9	9.0	41.2	54.7	74.0	19.3	100	358
10	3588.164	52.7	29.3	9.5	40.9	50.6	74.0	23.4	100	240
11	4109.004	47.4	30.3	10.1	40.6	47.2	74.0	26.8	100	232
----- Vertical -----										
12	1280.449	59.3	24.5	5.5	41.9	47.4	74.0	26.6	100	189
13	1536.859	66.3	25.1	6.0	41.9	55.5	74.0	18.5	100	1
14	1657.051	57.9	25.2	6.3	41.9	47.5	74.0	26.5	100	1
15	1921.474	64.1	25.2	6.8	41.9	54.2	74.0	19.8	100	197
16	2562.507	54.6	27.5	7.9	41.6	48.4	74.0	25.6	100	147
17	3588.164	50.6	29.3	9.5	40.9	48.5	74.0	25.5	100	177
18	4109.004	47.3	30.3	10.1	40.6	47.1	74.0	26.9	100	177



RADIATED EMISSION

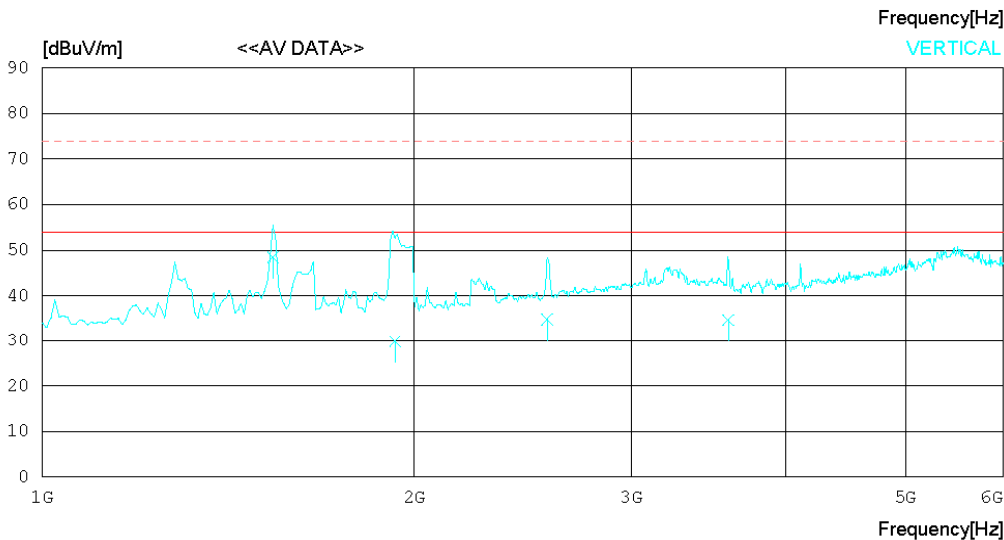
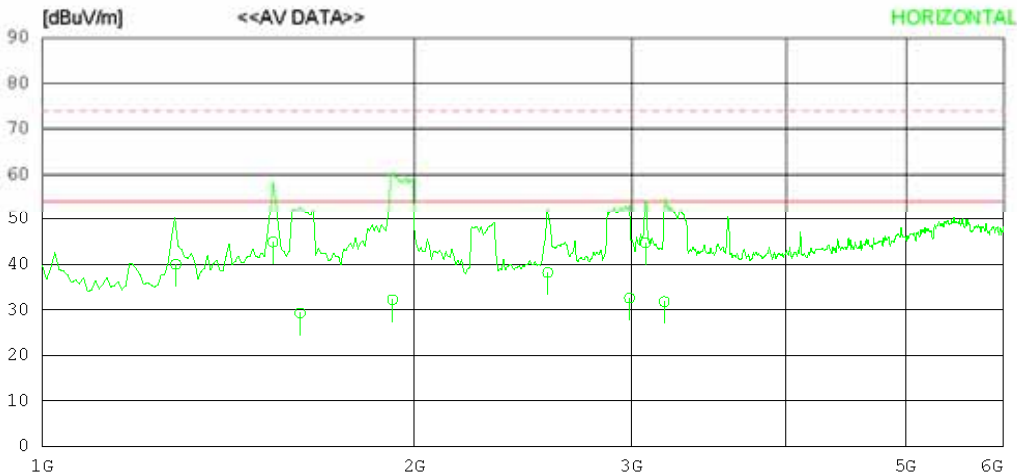
Date : 2010-09-07

Model Name : 55LD650H-UA
Model No. :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 24 °C 41 % R.H.
Operator :

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m) - 8G(Avg)
FCC Part15 Subpart.B Class B (3m) - 8G(Peak)



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Date : 2010-09-07

Model Name	: 55LD650H-UA	Reference No.	:
Model No.	:	Power Supply	: 120V 60Hz
Serial No.	:	Temp/Humi	: 24 °C 41 % R.H.
Test Condition	: USB	Operator	:

Memo :

LIMIT : FCC Part15 Subpart B Class B (3m) - 8G(Avg)
 FCC Part15 Subpart B Class B (3m) - 8G(Peak)

No.	FREQ [MHz]	READING AV [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	1282.564	51.9	24.5	5.5	41.9	40.0	54.0	14.0	100	213
2	1536.859	55.7	25.1	6.0	41.9	44.9	54.0	9.1	100	358
3	1617.000	39.8	25.2	6.2	41.9	29.3	54.0	24.7	100	358
4	1921.474	42.1	25.2	6.8	41.9	32.2	54.0	21.8	100	358
5	2565.485	44.4	27.5	7.9	41.6	38.2	54.0	15.8	100	358
6	2987.600	36.4	28.8	8.7	41.3	32.6	54.0	21.4	100	191
7	3077.833	48.2	28.9	8.9	41.3	44.7	54.0	9.3	100	358
8	3188.000	35.1	28.9	9.0	41.2	31.8	54.0	22.2	100	358
----- Vertical -----										
9	1536.859	59.3	25.1	6.0	41.9	48.5	54.0	5.5	100	1
10	1931.000	39.7	25.2	6.9	41.9	29.9	54.0	24.1	100	197
11	2562.507	41.0	27.5	7.9	41.6	34.8	54.0	19.2	100	147
12	3592.200	36.8	29.3	9.5	40.9	34.7	54.0	19.3	100	177