EMC TEST REPORT

Test item	: LED TV Monitor
Model No.	: 55LA6650-UA
Order No.	: DEMC1301-00384
Date of receipt	: 2013-01-29
Test duration	: 2013-02-07
Use of report	: FCC CoC Marking
Date of Issue	: 2013-02-12

Applicant : LG Electronics Inc.
19-1, Cheongho-ri, Jinwi-myeon, Pyeongtaek-si, Gyeonggi-do, 451-713, Korea

Test laboratory : Digital EMC Co., Ltd.
683-3, Yubang-Dong, Cheoin-Gu, Yongin-Si, Gyeonggi-Do, 449-080, Korea

Test specification : ANSI C 63.4:2003
FCC Part 15 Subpart B
(Type of Device : Class B Personal Computers and Peripherals (JBP))

Test environment : Temperature : (20 ~ 21) °C,
Humidity : (38 ~ 41) % R.H.

Test result : ☒ Comply ☐ Not Comply

The test results presented in this test report are limited only to the sample supplied by applicant and the use of this test report is inhibited other than its purpose.
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Tested by:

Engineer
SeHyun Kim

Reviewed by:

General Manager
ChangHo Lee

PRESIDENT OF DIGITAL EMC CO., LTD.

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1. General Remarks

This report contains the result of tests performed by:

DIGITAL EMC CO., LTD.

Address : 683-3, Yubang-Dong, Cheoin-Gu, Yongin-Si, Gyeonggi-Do, 449-080, Korea

http://www.digitalemc.com

Tel: +82-31-321-2664 Fax: +82-31-321-1664

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 678747	Test Facility list & NSA Data
	Canada	IC	5740A-1 5740A-2	Test Facility list & NSA Data
	Japan	VCCI	C-1427 R-1364, R-3385 T-1442, G-338	Test Facility list & NSA Data
Certification	Korea	KC	KR0034	Test Facility list & NSA Data
	Germany	TUV	ROK1221C	ISO/IEC 17025

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

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3. General Information of EUT

Model No.	55LA6650-UA
EUT Type	LED TV Monitor
Serial No	NONE
FCC ID	BEJ55LA6650UA
Type of Sample Tested	Pre-Production
High Frequency	Max 800 MHz
Rating	AC 100-240 V~ 50/60 Hz, 1.4 A
Supplied Power for Test	AC 120 V, 60 Hz
Applicant	LG Electronics Inc. 19-1, Cheongho-ri, Jinwi-myeon, Pyeongtaek-si, Gyeonggi-do, 451-713, Korea
Manufacturer	LG Electronics Inc. 19-1, Cheongho-ri, Jinwi-myeon, Pyeongtaek-si, Gyeonggi-do, 451-713, Korea

HDMI (PC) supported mode

Resolution	Horizontal Frequency (KHz)	Vertical Frequency (Hz)
640 x 350	31.468	70.09
720 x 400	31.469	70.08
640 x 480	31.469	59.94
800 x 600	37.879	60.31
1024 x 768	48.363	60.00
1360 x 768	47.712	60.015
1152 x 864	54.348	60.053
1280 x 1024	63.981	60.02
1920 x 1080	67.50	60.00

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4. Test Summary

4.1 Applied standards and test results

Test Items	Applied Standards	Results
Conducted Disturbance	ANSI C63.4:2003	C
Radiated Disturbance	ANSI C63.4:2003	C
C=Comply N/C=Not Comply N/T=Not Tested N/A=Not Applicable		

The data in this test report are traceable to the national or international standards.

4.2 Test environment and conditions

Test Items	Test date (MM-DD)	Temp (℃)	Humidity (% R.H.)
Conducted Disturbance	02-07	21	41
Radiated Disturbance	02-07	20	38

4.3 Test result Summary

(1) Conducted Emission (USB MODE)

Frequency [MHz]	Phase	Result [dBμV]	Detector	Limit [dBμV]	Margin [dB]
0.41650	**L1**	**41.6**	Quasi-Peak	**47.5**	**5.9**

(2) Radiated Emission (USB MODE)

Frequency [MHz]	Pol.	Result [dB(μV/m)]	Detector	Limit [dB(μV/m)]	Margin [dB]
749.728	**V**	**42.8**	Quasi-Peak	**46.0**	**3.2**

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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

- HDMI MODE : 1920x1080 Resolution (Worst case)
- USB MODE : USB record file play

5.3 Support Equipment Used

Unit	Model No.	Serial No.	Manufacturer	CABLE				Backshell	FCC ID
				Connect type	Length (m)	ferrite core	shield		
PC	VOSTRO430	9K77SBX	DELL	POWER HDMI USB USB USB	1.8 1.8 1.8 1.8 1.8	Not use Not use Not use Not use Not use	Non-shield Shield Shield Shield Shield	Plastic	DOC
KEYBOARD	SKG-2000UB	TAKB40142 5B	MONITEREY INTERNATIONAL CORP	USB	1.8	Not use	Shield	Plastic	DOC
MOUSE	1094	X817158-002	MICROSOFT CORPORATION	USB	1.8	Not use	Shield	Plastic	DOC
CD/DVD PLAYER	DVP-NS92V	2000407	SONY EMCS	POWER AV	1.8 1.6	Not use Not use	Non-shield Non-shield	Plastic	VER
USB MEMORY	Cruzer Z37	N/A	Sandisk	USB	-	-	-	-	DOC
PRINTER	SRP-770	SRP770080 60035	BICSOLON	POWER USB	1.8 1.8	Not use Not use	Non-shield	Plastic	DOC
Remote Control	AN-MR400G	N/A	OHSUNG ELECTRONIC	-	-	-	-	-	-
Headset	COV903	N/A	COSY	STEREO	1.5	Not use	Non-shield	Plastic	DOC

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6. Test Results : Emission

6.1 Conducted Disturbance

6.1.1 Measurement Procedure

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

If the EUT is table top equipment, it was placed on a wooden table with a height of 0.8 m above the reference ground plane and 0.4 m 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 0.15 m 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 conducted emission test software, the emissions were scanned 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 Limit for Conducted Disturbance

(1) Conducted disturbance at mains ports.

Frequency range (MHz)	Limits dB(μV)			
	Quasi-peak		Average	
	Class A	Class B	Class A	Class B
0.15 to 0.50	79	66 to 56	66	56 to 46
0.50 to 5	73	56	60	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 0.15 MHz to 0.5 MHz.

Note) 1. Emission Level = Reading Value + Correction Factor.
2. Correction Factor = Cable Loss + Insertion Loss of LISN
3. Margin = Limit - Emission level

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Test Result

< HDMI MODE >

Digital EMC

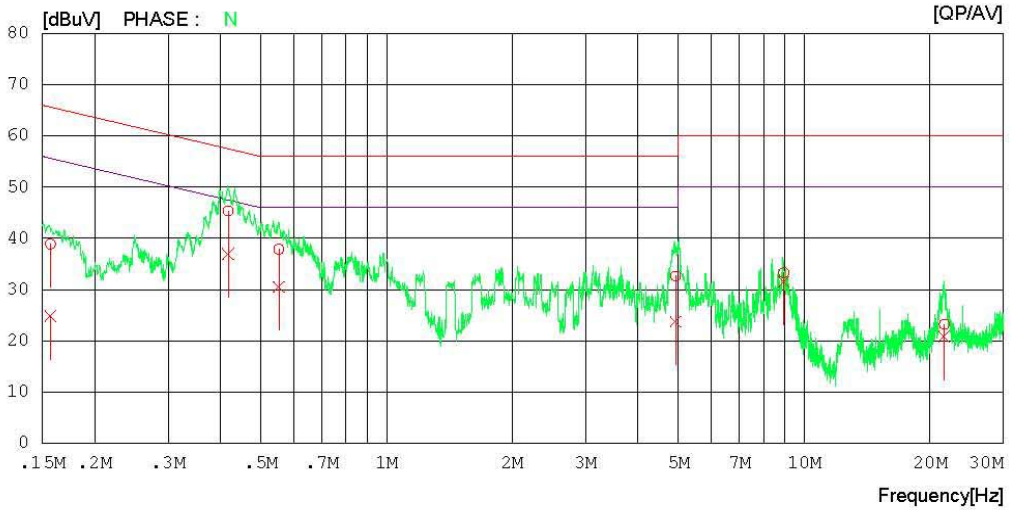
Results of Conducted Emission

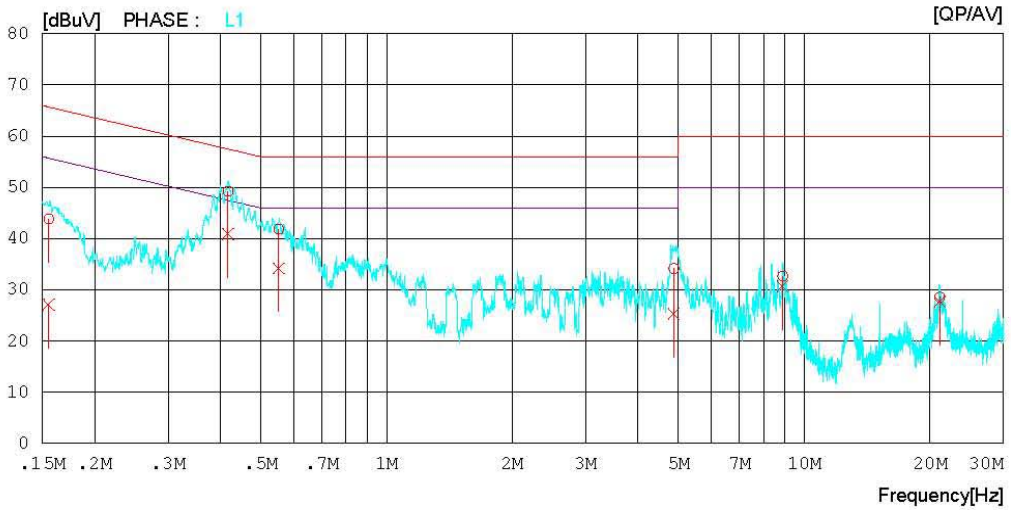
Digital EMC
Date : 2013-02-07

Model No.	:	55LA6650-UA	Referrence No.	:	
Type	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi.	:	21 'C 41 % R.H.
Test Condition	:	HDMI	Operator	:	

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV





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Results of Conducted Emission

Digital EMC
Date : 2013-02-07

Model No.	:	55LA6650-UA	Referrence No.	:	
Type	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi.	:	21 'C 41 % R.H.
Test Condition	:	HDMI	Operator	:	

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV

NO	FREQ [MHz]	READING QP [dBuV]	READING AV [dBuV]	C.FACTOR [dB]	RESULT QP [dBuV]	RESULT AV [dBuV]	LIMIT QP [dBuV]	LIMIT AV [dBuV]	MARGIN QP [dBuV]	MARGIN AV [dBuV]	PHASE
1	0.15681	38.7	24.7	0.2	38.9	24.9	65.6	55.6	26.7	30.7	N
2	0.41770	45.1	36.7	0.2	45.3	36.9	57.5	47.5	12.2	10.6	N
3	0.55249	37.7	30.3	0.2	37.9	30.5	56.0	46.0	18.1	15.5	N
4	4.92650	32.2	23.3	0.4	32.6	23.7	56.0	46.0	23.4	22.3	N
5	8.93550	32.6	30.8	0.7	33.3	31.5	60.0	50.0	26.7	18.5	N
6	21.63300	22.3	19.9	0.9	23.2	20.8	60.0	50.0	36.8	29.2	N
7	0.15536	43.6	26.9	0.2	43.8	27.1	65.7	55.7	21.9	28.6	L1
8	0.41754	49.0	40.7	0.2	49.2	40.9	57.5	47.5	8.3	6.6	L1
9	0.55179	41.6	34.0	0.2	41.8	34.2	56.0	46.0	14.2	11.8	L1
10	4.87800	33.7	24.9	0.4	34.1	25.3	56.0	46.0	21.9	20.7	L1
11	8.88350	32.0	30.0	0.7	32.7	30.7	60.0	50.0	27.3	19.3	L1
12	21.13550	27.7	26.8	0.9	28.6	27.7	60.0	50.0	31.4	22.3	L1

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< USB MODE >

Digital EMC

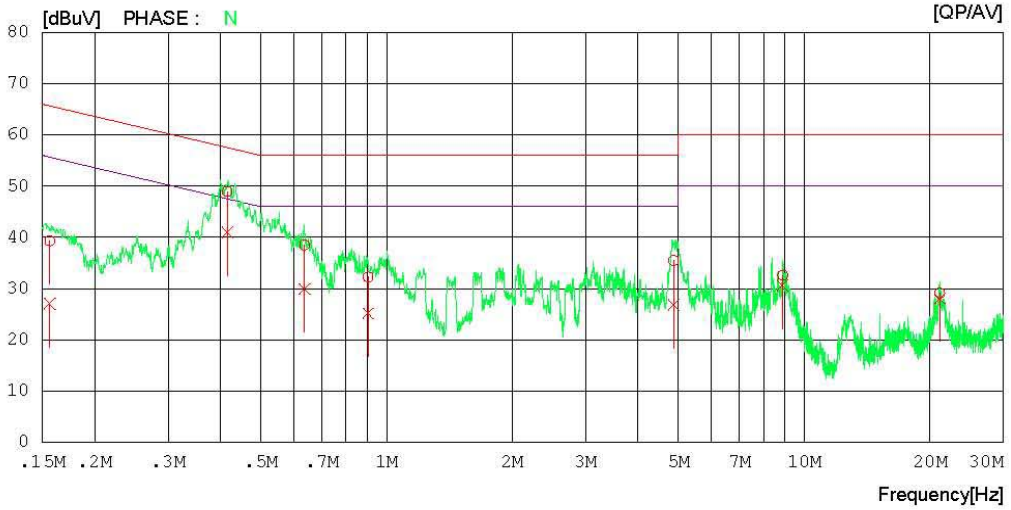
Results of Conducted Emission

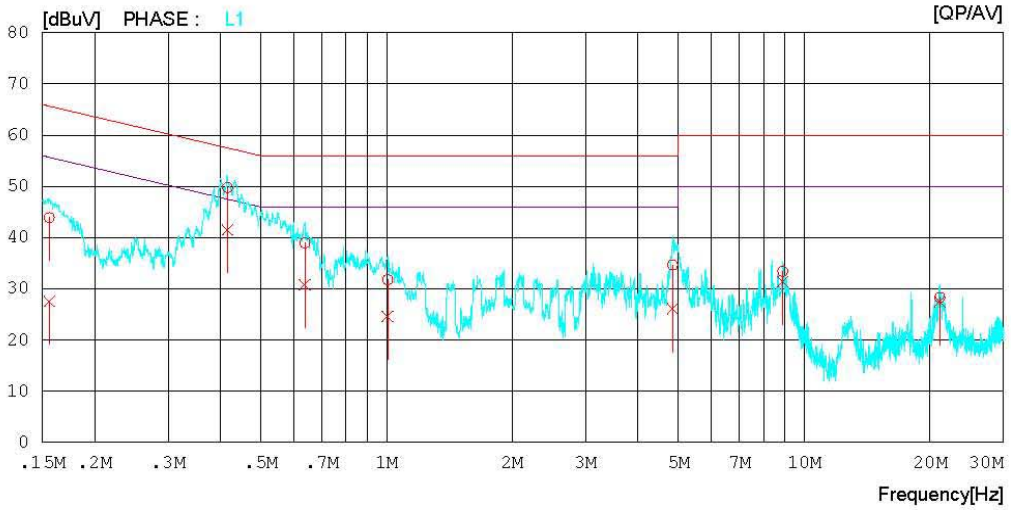
Digital EMC
Date : 2013-02-07

Model No.	:	55LA6650-UA	Referrence No.	:	
Type	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi.	:	21 'C 41 % R.H.
Test Condition	:	USB	Operator	:	

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV





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Results of Conducted Emission

Digital EMC
Date : 2013-02-07

Model No.	:	55LA6650-UA	Referrence No.	:	
Type	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi.	:	21 'C 41 % R.H.
Test Condition	:	USB	Operator	:	

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV

NO	FREQ [MHz]	READING QP [dBuV]	READING AV [dBuV]	C.FACTOR [dB]	RESULT QP [dBuV]	RESULT AV [dBuV]	LIMIT QP [dBuV]	LIMIT AV [dBuV]	MARGIN QP [dBuV]	MARGIN AV [dBuV]	PHASE
1	0.15625	39.1	26.9	0.2	39.3	27.1	65.7	55.7	26.4	28.6	N
2	0.41598	48.7	40.7	0.2	48.9	40.9	57.5	47.5	8.6	6.6	N
3	0.63661	38.3	29.7	0.2	38.5	29.9	56.0	46.0	17.5	16.1	N
4	0.90400	32.0	25.0	0.2	32.2	25.2	56.0	46.0	23.8	20.8	N
5	4.87250	35.1	26.4	0.4	35.5	26.8	56.0	46.0	20.5	19.2	N
6	8.88450	31.9	29.9	0.7	32.6	30.6	60.0	50.0	27.4	19.4	N
7	21.13500	28.2	27.2	0.9	29.1	28.1	60.0	50.0	30.9	21.9	N
8	0.15595	43.7	27.4	0.2	43.9	27.6	65.7	55.7	21.8	28.1	L1
9	0.41650	49.6	41.4	0.2	49.8	41.6	57.5	47.5	7.7	5.9	L1
10	0.63765	38.8	30.6	0.2	39.0	30.8	56.0	46.0	17.0	15.2	L1
11	1.00650	31.5	24.4	0.3	31.8	24.7	56.0	46.0	24.2	21.3	L1
12	4.84650	34.3	25.7	0.4	34.7	26.1	56.0	46.0	21.3	19.9	L1
13	8.88600	32.7	30.7	0.7	33.4	31.4	60.0	50.0	26.6	18.6	L1
14	21.13500	27.5	26.5	0.9	28.4	27.4	60.0	50.0	31.6	22.6	L1

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6.2 Radiated Disturbance

6.2.1 Measurement Procedure

The radiated disturbance was measured and set-up was made accordance with **ANSI C63.4.**
If the EUT is tabletop equipment, it was placed on a wooden table with a height of 0.8 m above the reference ground plane and 3 m or 10 m away from the interference receiving antenna in the **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 0.15 m above the reference ground plane.
Rotate the EUT from (0 - 360)° and position the receiving antenna at heights from (1 - 4) m 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 1 GHz frequency range, Quasi-Peak detector with 120 kHz RBW was used.
Also Peak and Average detector with 1 MHz RBW were used for above 1 GHz frequency range.
For further description of the configuration refer to the picture of the test set-up.

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6.2.2 Limit for Radiated Disturbance

- The test frequency range of Radiated Disturbance 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	1 000
108 – 500	2 000
500 – 1 000	5 000
Above 1 000	5th harmonic of the highest frequency or 40 GHz, whichever is lower

(1) Limit for Radiated Emission below 1 000MHz

Frequency range (MHz)	Class A Equipment (10 m distance)	Class B Equipment (3 m distance)
	Quasi-peak (dBμV/m)	Quasi-peak (dBμV/m)
30 to 88	39.1	40
88 to 216	43.5	43.5
216 to 960	46.4	46
960 to 1 000	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.

Frequency range (MHz)	Class A Equipment (10 m distance)	Class B Equipment (10 m distance)
	Quasi-peak (dBμV/m)	Quasi-peak (dBμV/m)
30 to 230	40	30
230 to 1 000	47	37

(2) Limits for Radiated Emission above 1 000MHz at a measuring distance of 3 m

Frequency (GHz)	Class A Equipment		Class B Equipment	
	Peak (dBμV/m)	Average (dBμV/m)	Peak (dBμV/m)	Average (dBμV/m)
1 to 40	80	60	74	54

Note) 1. Emission Level = Reading Value + Correction Factor.
2. Correction Factor = Cable loss - Amp gain + Antenna Factor
3. Margin = Limit - Emission level

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Test Result

< HDMI MODE_30 MHz ~ 1 GHz >

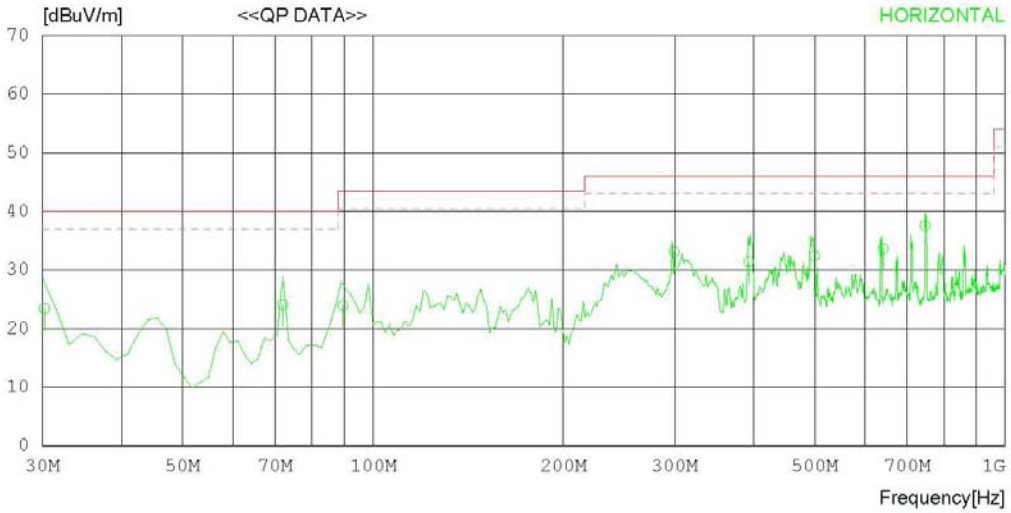
RADIATED EMISSION

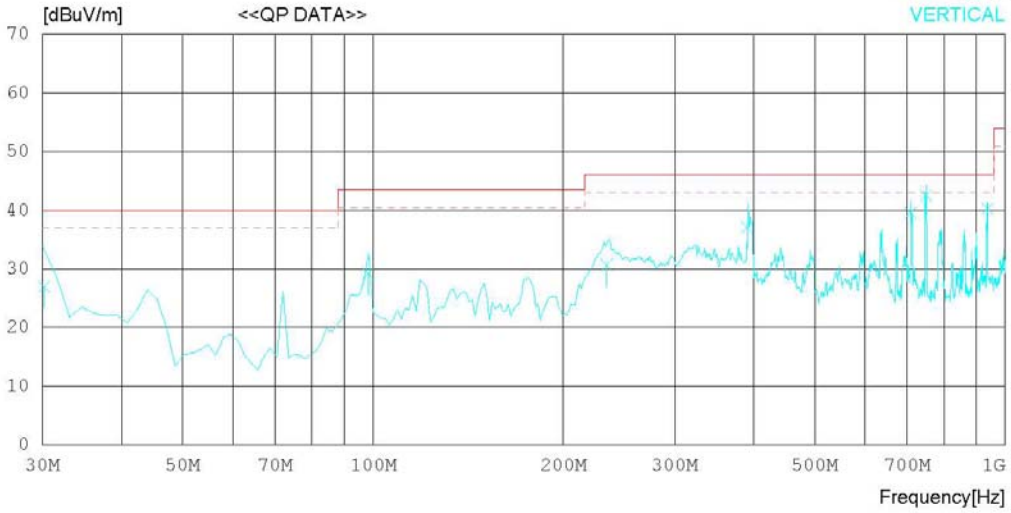
Date : 2013-02-07

Model Name	: 55LA6650-UA	Reference No.	:
Model No.	:	Power Supply	: 120 V 60 Hz
Serial No.	:	Temp/Humi	: 20 'C 38 % R.H.
Test Condition	: HDMI	Operator	:

Memo :

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





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RADIATED EMISSION

Date : 2013-02-07

Model Name	:	55LA6650-UA	Reference No.	:	
Model No.	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi	:	20 'C 38 % 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	71.904	40.3	6.5	1.7	24.4	24.1	40.0	15.9	400	135
2	89.618	37.7	8.9	1.5	24.2	23.9	43.5	19.6	100	142
3	299.312	40.2	13.7	2.8	23.6	33.1	46.0	12.9	400	138
4	393.141	35.5	15.9	3.5	23.5	31.4	46.0	14.6	100	151
5	499.504	34.2	17.3	3.9	23.0	32.4	46.0	13.6	300	134
6	641.202	34.4	18.6	4.2	23.6	33.6	46.0	12.4	201	131
7	746.619	37.4	19.2	4.6	23.7	37.5	46.0	8.5	100	142
8	30.202	28.6	17.8	0.8	23.8	23.4	40.0	16.6	100	148
----- Vertical ------										
9	30.190	32.2	17.8	0.8	23.8	27.0	40.0	13.0	100	142
10	98.398	41.6	10.4	1.4	24.1	29.3	43.5	14.2	100	146
11	234.150	40.2	11.8	2.5	23.8	30.7	46.0	15.3	400	139
12	391.258	41.3	15.8	3.5	23.5	37.1	46.0	8.9	199	151
13	709.311	40.1	18.7	4.6	23.8	39.6	46.0	6.4	400	142
14	749.728	42.2	19.3	4.6	23.6	42.5	46.0	3.5	100	136
15	937.823	36.6	21.3	5.4	23.0	40.3	46.0	5.7	100	148

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< HDMI MODE _ (1 ~ 6) GHz _ Peak >

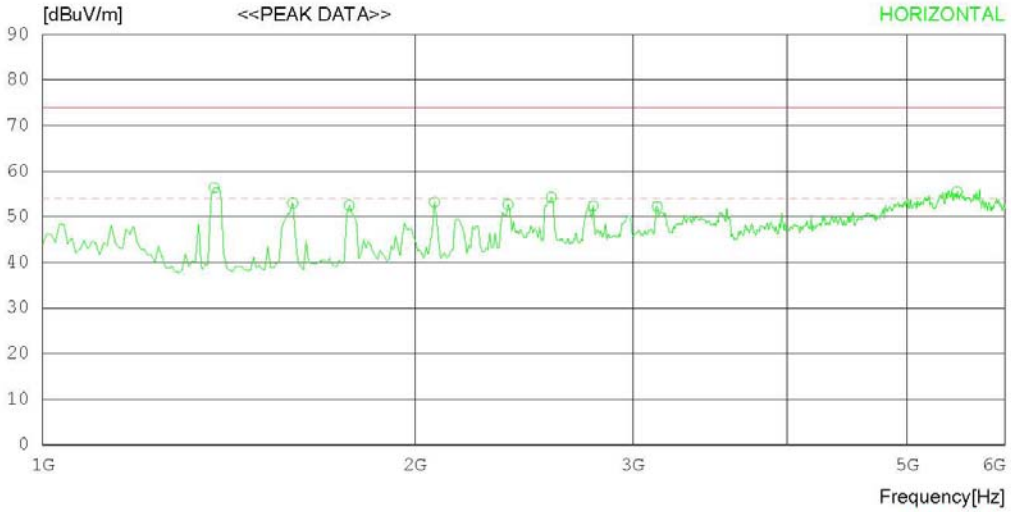
RADIATED EMISSION

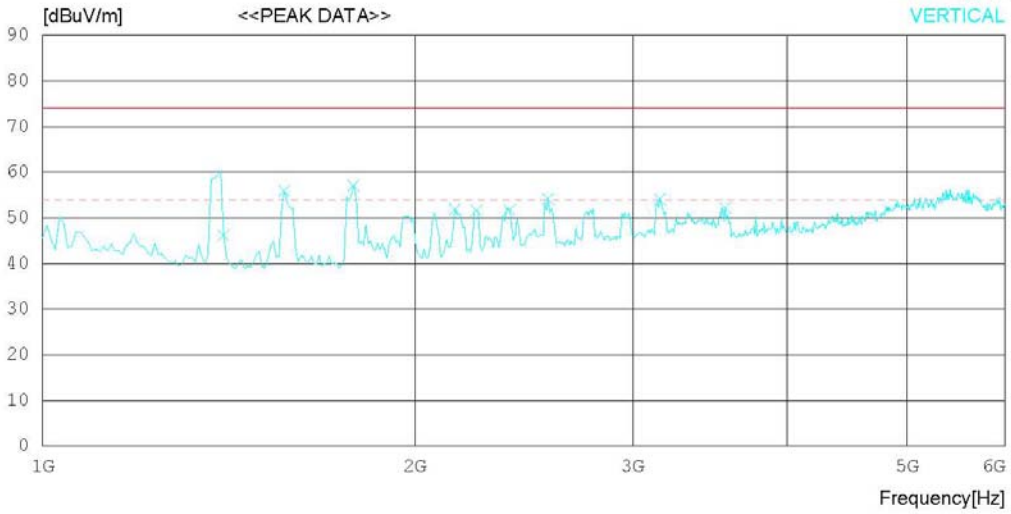
Date : 2013-02-07

Model Name	:	55LA6650-UA	Reference No.	:	
Model No.	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi	:	20 'C 38 % R.H.
Test Condition	:	HDMI	Operator	:	

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Peak)
FCC Part15 Subpart.B Class B (3m) - 18G(Avg)





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RADIATED EMISSION

Date : 2013-02-07

Model Name	:	55LA6650-UA	Reference No.	:	
Model No.	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi	:	20 'C 38 % R.H.
Test Condition	:	HDMI	Operator	:	

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Peak)
FCC Part15 Subpart.B Class B (3m) - 18G(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	1376.602	53.3	24.5	7.1	28.5	56.4	74.0	17.6	100	229
2	1592.948	49.2	24.6	7.7	28.5	53.0	74.0	21	100	220
3	1769.230	48.4	24.6	8.0	28.5	52.5	74.0	21.5	100	358
4	2073.718	48.1	25.0	8.6	28.5	53.2	74.0	20.8	100	221
5	2378.210	45.2	26.7	9.3	28.5	52.7	74.0	21.3	100	221
6	2578.533	45.3	27.7	9.7	28.4	54.3	74.0	19.7	100	231
7	2786.870	42.4	28.3	10.1	28.4	52.4	74.0	21.6	100	358
8	3139.439	40.9	29.0	10.8	28.4	52.3	74.0	21.7	100	358
9	5487.188	33.7	35.0	14.9	28.1	55.5	74.0	18.5	100	282
----- Vertical ------										
10	1400.641	43.0	24.5	7.2	28.5	46.2	74.0	27.8	100	1
11	1568.910	52.2	24.6	7.6	28.5	55.9	74.0	18.1	100	172
12	1785.256	53.0	24.6	8.0	28.5	57.1	74.0	16.9	100	1
13	2153.847	46.2	25.4	8.8	28.5	51.9	74.0	22.1	100	1
14	2241.990	45.1	26.0	9.0	28.5	51.6	74.0	22.4	100	349
15	2386.223	44.1	26.8	9.3	28.5	51.7	74.0	22.3	100	179
16	2562.507	45.3	27.6	9.7	28.4	54.2	74.0	19.8	100	226
17	3155.465	42.7	28.9	10.9	28.4	54.1	74.0	19.9	100	209
18	3564.125	39.6	29.0	11.9	28.3	52.2	74.0	21.8	100	1

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< HDMI MODE _ (1 ~ 6) GHz _ Average >

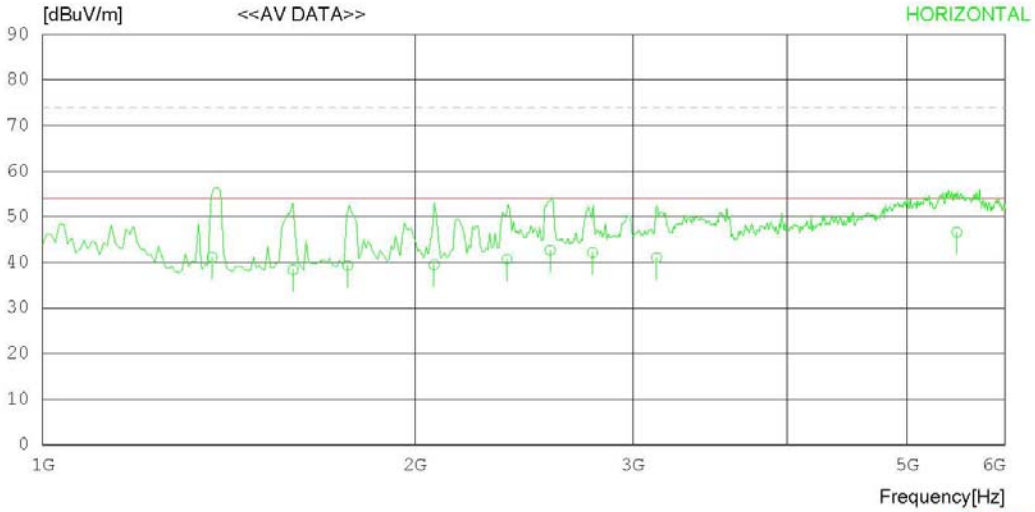
RADIATED EMISSION

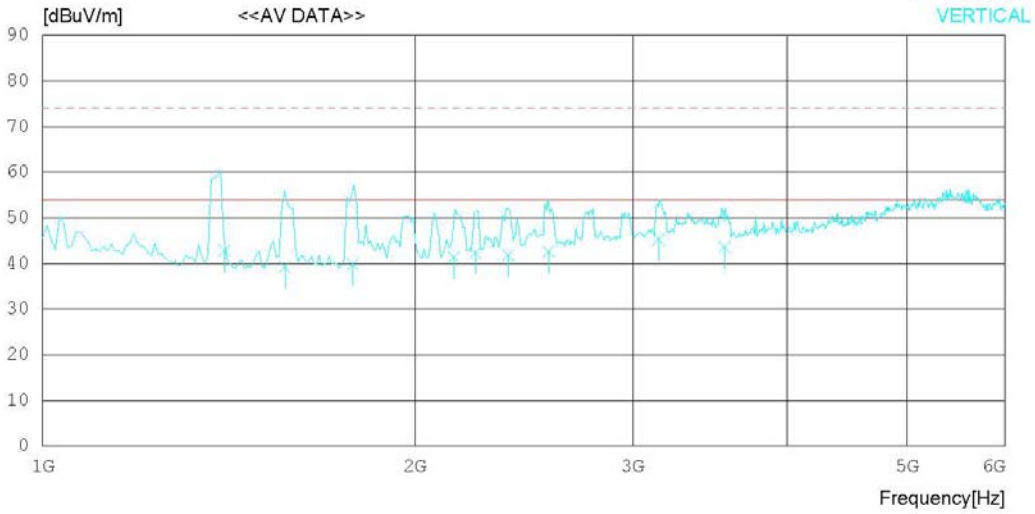
Date : 2013-02-07

Model Name	:	55LA6650-UA	Reference No.	:	
Model No.	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi	:	20 'C 38 % R.H.
Test Condition	:	HDMI	Operator	:	

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Avg)
FCC Part15 Subpart.B Class B (3m) - 18G(Peak)





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RADIATED EMISSION

Date : 2013-02-07

Model Name	:	55LA6650-UA	Reference No.	:	
Model No.	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi	:	20 'C 38 % R.H.
Test Condition	:	HDMI	Operator	:	

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Avg)
FCC Part15 Subpart.B Class B (3m) - 18G(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	1371.465	38.2	24.4	7.0	28.5	41.1	54.0	12.9	100	139
2	1593.959	34.6	24.6	7.7	28.5	38.4	54.0	15.6	100	152
3	1764.518	35.2	24.6	8.0	28.5	39.3	54.0	14.7	100	136
4	2072.336	34.4	25.0	8.6	28.5	39.5	54.0	14.5	100	142
5	2374.174	33.2	26.7	9.3	28.5	40.7	54.0	13.3	100	149
6	2572.054	33.7	27.7	9.7	28.4	42.7	54.0	11.3	100	144
7	2784.158	32.2	28.3	10.1	28.4	42.2	54.0	11.8	100	133
8	3136.398	29.6	29.0	10.8	28.4	41.0	54.0	13.0	100	150
9	5484.177	24.8	35.0	14.9	28.1	46.6	54.0	7.4	100	147
----- Vertical ------										
10	1403.528	39.6	24.5	7.2	28.5	42.8	54.0	11.2	100	136
11	1569.638	35.6	24.6	7.6	28.5	39.3	54.0	14.7	100	142
12	1781.654	35.8	24.6	8.0	28.5	39.9	54.0	14.1	100	150
13	2149.815	35.7	25.4	8.8	28.5	41.4	54.0	12.6	100	139
14	2238.512	36.0	25.9	9.0	28.5	42.4	54.0	11.6	100	154
15	2379.518	34.2	26.8	9.3	28.5	41.8	54.0	12.2	100	148
16	2566.815	33.6	27.7	9.7	28.4	42.6	54.0	11.4	100	138
17	3149.036	33.8	29.0	10.9	28.4	45.3	54.0	8.7	100	141
18	3562.141	31.0	29.0	11.9	28.3	43.6	54.0	10.4	100	150

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< USB MODE_30 MHz ~ 1 GHz >

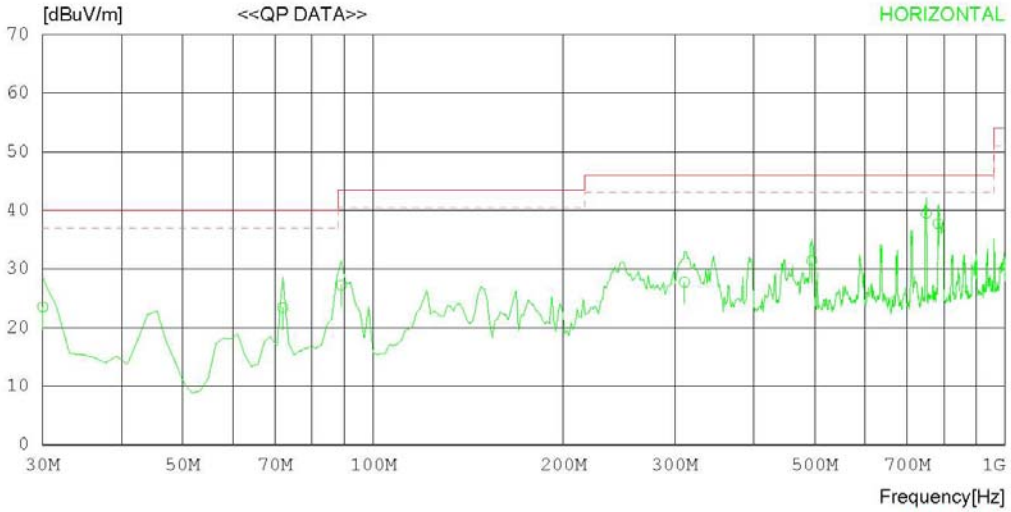
RADIATED EMISSION

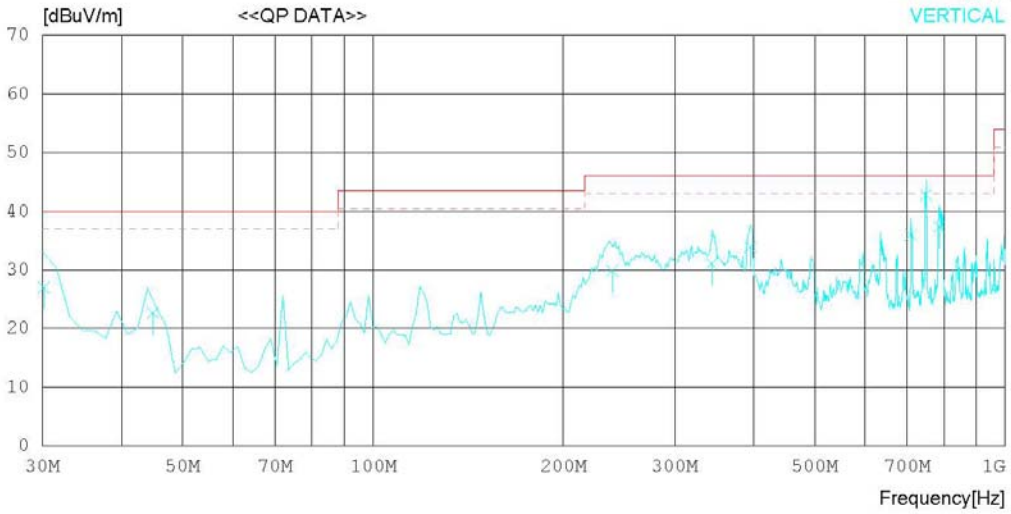
Date : 2013-02-07

Model Name	:	55LA6650-UA	Reference No.	:	
Model No.	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi	:	20 'C 38 % R.H.
Test Condition	:	USB	Operator	:	

Memo :

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





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RADIATED EMISSION

Date : 2013-02-07

Model Name	:	55LA6650-UA	Reference No.	:	
Model No.	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi	:	20 'C 38 % R.H.
Test Condition	:	USB	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	30.018	28.6	17.9	0.8	23.8	23.5	40.0	16.5	400	138
2	71.971	39.6	6.5	1.7	24.4	23.4	40.0	16.6	201	129
3	89.071	41.1	8.8	1.5	24.2	27.2	43.5	16.3	100	141
4	311.088	34.4	14.0	2.9	23.6	27.7	46.0	18.3	100	133
5	494.790	33.2	17.3	3.9	23.0	31.4	46.0	14.6	100	148
6	749.728	39.2	19.3	4.6	23.6	39.5	46.0	6.5	400	147
7	783.927	36.6	19.8	4.8	23.5	37.7	46.0	8.3	199	128
----- Vertical ------										
8	30.162	32.2	17.8	0.8	23.8	27.0	40.0	13.0	400	132
9	44.855	32.0	13.9	1.1	24.3	22.7	40.0	17.3	100	127
10	239.115	39.1	12.1	2.5	23.8	29.9	46.0	16.1	100	139
11	344.006	36.6	14.8	3.3	23.6	31.1	46.0	14.9	199	144
12	395.304	38.0	15.9	3.5	23.5	33.9	46.0	12.1	100	142
13	709.311	36.5	18.7	4.6	23.8	36.0	46.0	10.0	400	136
14	749.728	42.5	19.3	4.6	23.6	42.8	46.0	3.2	199	151
15	787.036	36.3	19.8	4.8	23.5	37.4	46.0	8.6	400	148

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< USB MODE _ (1 ~ 6) GHz _ Peak >

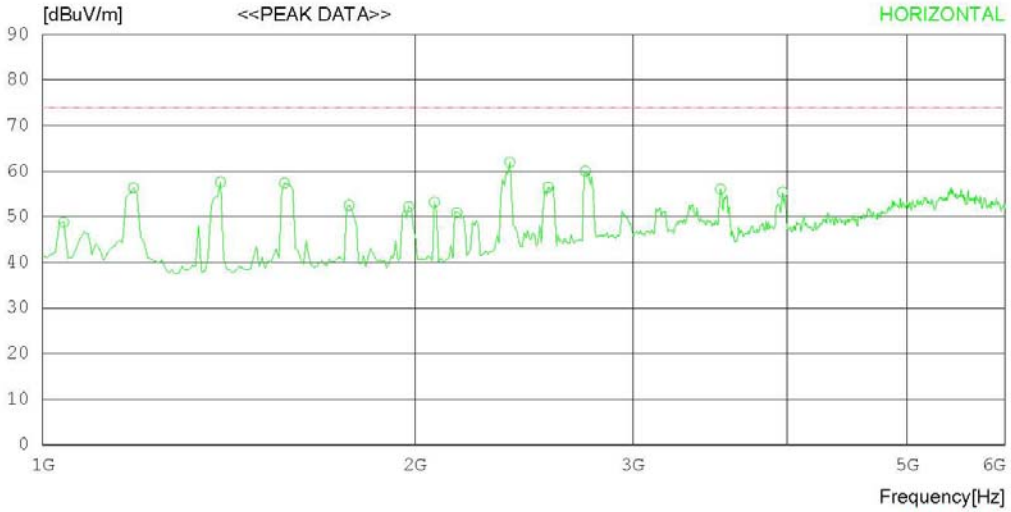
RADIATED EMISSION

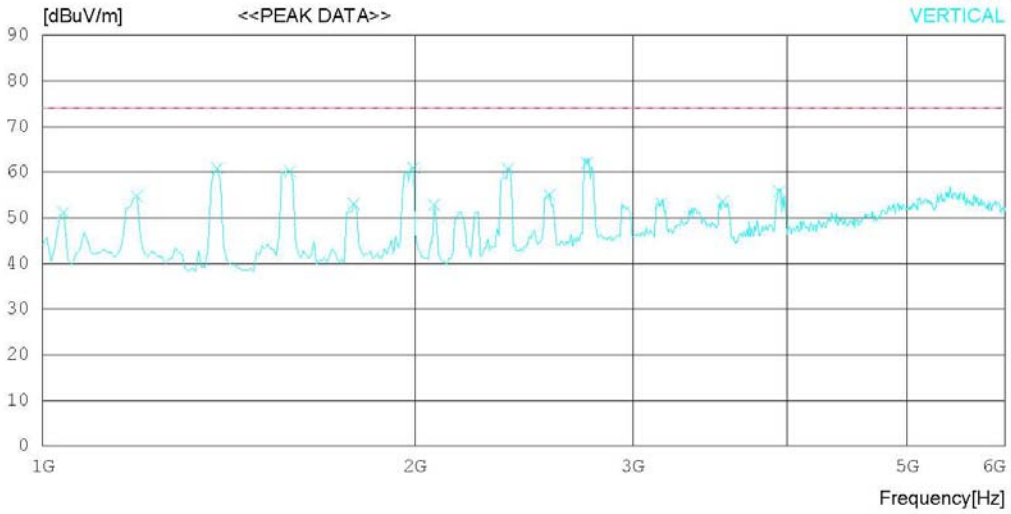
Date : 2013-02-07

Model Name	:	55LA6650-UA	Reference No.	:	
Model No.	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi	:	20 'C 38 % R.H.
Test Condition	:	USB	Operator	:	

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Peak)
FCC Part15 Subpart.B Class B (3m) - 18G(Peak)





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RADIATED EMISSION

Date : 2013-02-07

Model Name	:	55LA6650-UA	Reference No.	:	
Model No.	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi	:	20 'C 38 % R.H.
Test Condition	:	USB	Operator	:	

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Peak)
FCC Part15 Subpart.B Class B (3m) - 18G(Peak)

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	1040.064	47.5	23.9	5.9	28.5	48.8	74.0	25.2	100	358
2	1184.295	54.3	24.2	6.4	28.5	56.4	74.0	17.6	100	358
3	1392.628	54.5	24.5	7.1	28.5	57.6	74.0	16.4	100	228
4	1568.910	53.7	24.6	7.6	28.5	57.4	74.0	16.6	100	358
5	1769.230	48.4	24.6	8.0	28.5	52.5	74.0	21.5	100	214
6	1977.564	47.7	24.6	8.4	28.5	52.2	74.0	21.8	100	358
7	2073.718	48.1	25.0	8.6	28.5	53.2	74.0	20.8	100	358
8	2161.860	45.1	25.5	8.8	28.5	50.9	74.0	23.1	100	358
9	2386.223	54.4	26.8	9.3	28.5	62.0	74.0	12	100	216
10	2562.507	47.6	27.6	9.7	28.4	56.5	74.0	17.5	100	230
11	2746.805	50.2	28.2	10.0	28.4	60.0	74.0	14	100	238
12	3532.073	43.6	29.0	11.8	28.3	56.1	74.0	17.9	100	233
13	3964.772	40.7	30.1	12.9	28.3	55.4	74.0	18.6	100	242
----- Vertical ------										
14	1040.064	49.9	23.9	5.9	28.5	51.2	74.0	22.8	100	164
15	1192.308	52.7	24.2	6.4	28.5	54.8	74.0	19.2	100	214
16	1384.615	57.8	24.5	7.1	28.5	60.9	74.0	13.1	100	155
17	1584.936	56.4	24.6	7.7	28.5	60.2	74.0	13.8	100	171
18	1785.256	49.0	24.6	8.0	28.5	53.1	74.0	20.9	100	188
19	1993.589	56.5	24.6	8.4	28.5	61.0	74.0	13	100	1
20	2073.718	47.8	25.0	8.6	28.5	52.9	74.0	21.1	100	227
21	2378.210	53.3	26.7	9.3	28.5	60.8	74.0	13.2	100	194
22	2570.520	46.0	27.7	9.7	28.4	55.0	74.0	19	100	153
23	2754.818	52.2	28.2	10.0	28.4	62.0	74.0	12	100	1
24	3163.478	41.9	28.9	10.9	28.4	53.3	74.0	20.7	100	209
25	3548.099	41.1	29.0	11.8	28.3	53.6	74.0	20.4	100	1
26	3940.733	41.3	30.0	12.8	28.3	55.8	74.0	18.2	100	1

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< USB MODE _ (1 ~ 6) GHz _ Average >

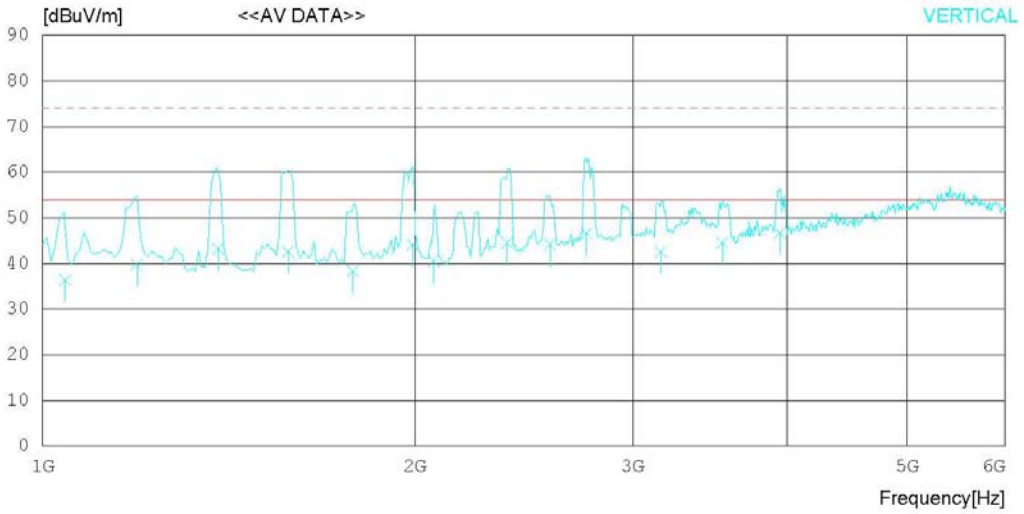
RADIATED EMISSION

Date : 2013-02-07

Model Name	:	55LA6650-UA	Reference No.	:	
Model No.	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi	:	20 'C 38 % R.H.
Test Condition	:	USB	Operator	:	

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Avg)
FCC Part15 Subpart.B Class B (3m) - 18G(Peak)



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RADIATED EMISSION

Date : 2013-02-07

Model Name	: 55LA6650-UA	Reference No.	:
Model No.	:	Power Supply	: 120 V 60 Hz
Serial No.	:	Temp/Humi	: 20 'C 38 % R.H.
Test Condition	: USB	Operator	:

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Avg)
FCC Part15 Subpart.B Class B (3m) - 18G(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	1044.518	34.2	23.9	5.9	28.5	35.5	54.0	18.5	100	142
2	1186.395	38.2	24.2	6.4	28.5	40.3	54.0	13.7	100	136
3	1394.147	39.4	24.5	7.1	28.5	42.5	54.0	11.5	100	151
4	1571.258	37.4	24.6	7.6	28.5	41.1	54.0	12.9	100	133
5	1766.369	35.2	24.6	8.0	28.5	39.3	54.0	14.7	100	147
6	1974.159	34.2	24.6	8.4	28.5	38.7	54.0	15.3	100	132
7	2072.020	34.6	25.0	8.6	28.5	39.7	54.0	14.3	100	144
8	2166.985	33.4	25.5	8.8	28.5	39.2	54.0	14.8	100	135
9	2384.152	37.7	26.8	9.3	28.5	45.3	54.0	8.7	100	151
10	2560.362	35.7	27.6	9.7	28.4	44.6	54.0	9.4	100	135
11	2740.144	36.8	28.2	10.0	28.4	46.6	54.0	7.4	100	144
12	3536.885	32.2	29.0	11.8	28.3	44.7	54.0	9.3	100	132
13	3962.391	30.6	30.1	12.8	28.3	45.2	54.0	8.8	100	149
----- Vertical ------										
14	1043.202	35.0	23.9	5.9	28.5	36.3	54.0	17.7	100	141
15	1191.959	37.7	24.2	6.4	28.5	39.8	54.0	14.2	100	146
16	1386.887	40.1	24.5	7.1	28.5	43.2	54.0	10.8	100	152
17	1579.665	38.8	24.6	7.7	28.5	42.6	54.0	11.4	100	148
18	1781.254	34.2	24.6	8.0	28.5	38.3	54.0	15.7	100	136
19	1991.360	39.6	24.6	8.4	28.5	44.1	54.0	9.9	100	155
20	2071.418	35.4	25.0	8.6	28.5	40.5	54.0	13.5	100	133
21	2374.515	37.0	26.7	9.3	28.5	44.5	54.0	9.5	100	140
22	2572.347	35.2	27.7	9.7	28.4	44.2	54.0	9.8	100	152
23	2752.209	36.8	28.2	10.0	28.4	46.6	54.0	7.4	100	147
24	3160.117	31.2	28.9	10.9	28.4	42.6	54.0	11.4	100	136
25	3546.399	32.0	29.0	11.8	28.3	44.5	54.0	9.5	100	133
26	3944.125	32.2	30.0	12.8	28.3	46.7	54.0	7.3	100	151

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Appendix 1

List of Test and Measurement Instruments

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To facilitate inclusion on each page of the test equipment used for related tests, each item of test equipment is identified by the Test Laboratory.

1. Conducted Disturbance

Name of Instrument		Model No.	Manufacturer	Serial No.	Cal. Date	Next Cal. Date
☐	SPECTRUM ANALYZER	8591E	H/P	3649A05889	2012.03.05	2013.03.05
☐	RFI/FIELD INTENSITY METER	KNM-2402	KYORITSU	4N-170-3	2012.07.02	2013.07.02
☐	LISN	KNW-407	KYORITSU	8-317-8	2013.01.08	2014.01.08
☐	LISN	PMM L2-16B	NARDA S.T.S. / PMM	000WX20305	2012.07.25	2013.07.25
☐	50 OHM TERMINATOR	CT-01	TME	N/A	2013.01.08	2014.01.08
☒	EMI TEST RECEIVER	ESCI	ROHDE & SCHWARZ	100364	2012.03.06	2013.03.06
☒	LISN	ESH2-Z5	ROHDE & SCHWARZ	828739/006	2012.09.18	2013.09.18
☒	LISN	LISN1600	TTI	197204	2012.07.02	2013.07.02
☒	50 OHM TERMINATOR	CT-01	TME	N/A	2013.01.08	2014.01.08

2. Radiated Disturbance

Name of Instrument		Model No.	Manufacturer	Serial No.	Cal. Date	Next Cal. Date
☒	EMI TEST RECEIVER	ESU	ROHDE & SCHWARZ	100014	2013.01.08	2014.01.08
☒	BILOG ANTENNA	CBL6112B	SCHAFFNER	2737	2012.11.06	2014.11.06
☒	HORN ANTENNA	BBHA9120A	SCHWARZBECK	322	2012.05.15	2014.05.15
☒	AMPLIFIER	8447E	H/P	2945A02865	2013.01.08	2014.01.08
☒	AMPLIFIER	MLA-100M18-B01-25	TSJ	1719458	2012.06.04	2013.06.04
☐	SPECTRUM ANALYZER	E4411B	AGILENT	US41062735	2012.07.11	2013.07.11
☐	AMPLIFIER	8447D	AGILENT	2443A03690	2012.07.01	2013.07.01
☐	EMI TEST RECEIVER	ESCI	ROHDE & SCHWARZ	100364	2012.03.06	2013.03.06
☐	BICONICAL ANT.	VHA 9103	SCHWARZBECK	91032789	2012.04.10	2014.04.10
☐	LOG-PERIODIC ANT.	UHALP 9108A	SCHWARZBECK	590	2012.04.10	2014.04.10
☐	BICONICAL ANT.	VHA 9103	SCHWARZBECK	91031946	2012.03.12	2014.03.12
☐	LOG-PERIODIC ANT.	UHALP 9108-A1	SCHWARZBECK	1098	2012.03.12	2014.03.12
☐	AMPLIFIER	MLA-100K01-B01-26	TSJ	1252741	2012.03.05	2013.03.05

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Appendix 2

Report Revision History

Revision Date	Description	Revised By	Revision Reviewed By
None	Original	N/A	N/A

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