

EMC TEST REPORT

Test item : LED TV Monitor
Model No. : 55LN541C-UA
Order No. : DEMC1302-00498
Date of receipt : 2013-02-05
Test duration : 2013-02-16 ~ 2013-02-17
Use of report : FCC CoC Marking
Date of Issue : 2013-02-21

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 ~ 22) °C,
Humidity : (35 ~ 37) % 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.

This test report shall not be reproduced except in full, without the written approval of DIGITAL EMC CO., LTD.

Tested by:



Engineer
DongWook 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.digitalemcc.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".

3. General Information of EUT

Model No.	55LN541C-UA
EUT Type	LED TV Monitor
Serial No	NONE
FCC ID	BEJ55LN541CUA
Type of Sample Tested	Pre-Production
High Frequency	Max 800 MHz
Rating	AC 100-240 V~ 50/60 Hz, 1.5 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

RGB (PC), HDMI (PC) supported mode

Resolution	Horizontal Frequency (KHz)	Vertical Frequency (Hz)
720 x 400	31.46	70.08
640 x 480	31.46	59.94
800 x 600	37.87	60.31
1024 x 768	48.36	60.00
1360 x 768	47.71	60.01
1280 x 1024	63.98	60.02
1920 x 1080	67.50	60.00

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 (°C)	Humidity (% R.H.)
Conducted Disturbance	02-17	22	35
Radiated Disturbance	02-16	20	37

4.3 Test result Summary

(1) Conducted Emission (USB MODE)

Frequency [MHz]	Phase	Result [dBμV]	Detector	Limit [dBμV]	Margin [dB]
0.41699	L	39.9	Average	47.5	7.6

(2) Radiated Emission (DSUB MODE)

Frequency [MHz]	Pol.	Result [dB(μV/m)]	Detector	Limit [dB(μV/m)]	Margin [dB]
98.993	H	39.5	Quasi-Peak	43.5	4.0

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 : 'H' Pattern mode, 1920 x 1080 Resolution (Worst case)
- HDMI MODE : "H" Pattern mode, 1920 x 1080 Resolution (Worst case)
- "H" characters scrolling is displayed en the EUT's screen.
- 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	DC8CMF	G3RZKBX	DELL INC.	POWER	1.8	Not use	Non-shield	Plastic	DOC
				HDMI	2.0	Not use	Shield		
				DSUB	1.8	Not use	Shield		
				LAN	2.2	Not use	Non-shield		
KEY BOARD	SKG-210P	TAKZ129860X	MONITEREY INTERNATIONAL CORP	PS/2	1.8	Not use	Shield	Plastic	DOC
MOUSE	1484	X822087-001	MICROSOFT CORPORATION	USB	1.6	Not use	Non-shield	Plastic	DOC
CD/DVD PLAYER	DVP-NS92V	2000407	SONY EMCS	POWER	1.8	Not use	Non-shield	Plastic	VER
				COMPONENT	1.6	Not use	Shield		
USB MEMORY	Cruze 4G	N/A	SANDISK	USB	-	-	-	Plastic	DOC
PRINTER	EPSON Aculaser M1200	LWTZ183808	EPSON	POWER	2.0	Not use	Non-shield	Plastic	DOC
				USB	1.6	Not use	Shield		
HEADSET	COV903	N/A	COSY	STEREO	2.3	Not use	Non-shield	Plastic	DOC
Remote control	AKB73715608	N/A	OHSUNG ELECTRONIC	-	-	-	-	-	-

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

Test Result

< DSUB MODE >



Results of Conducted Emission

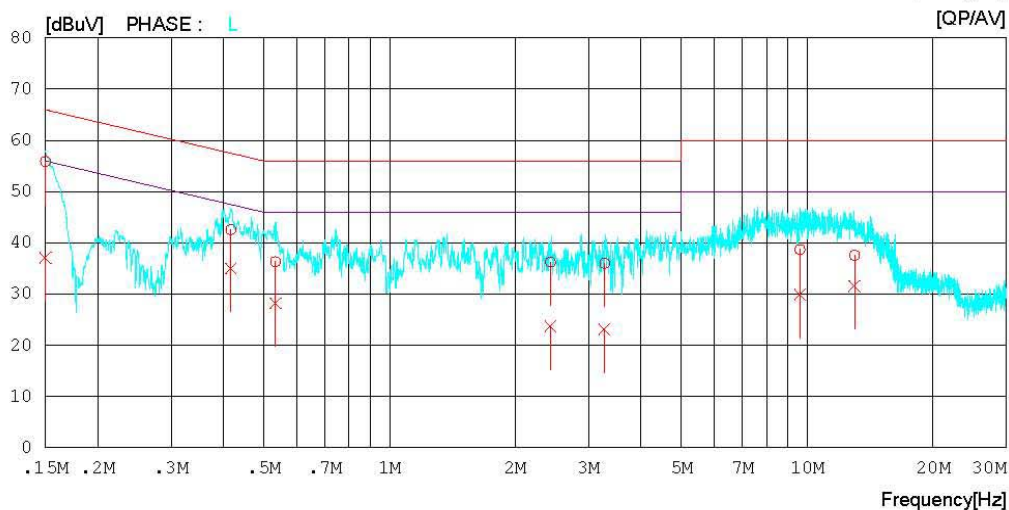
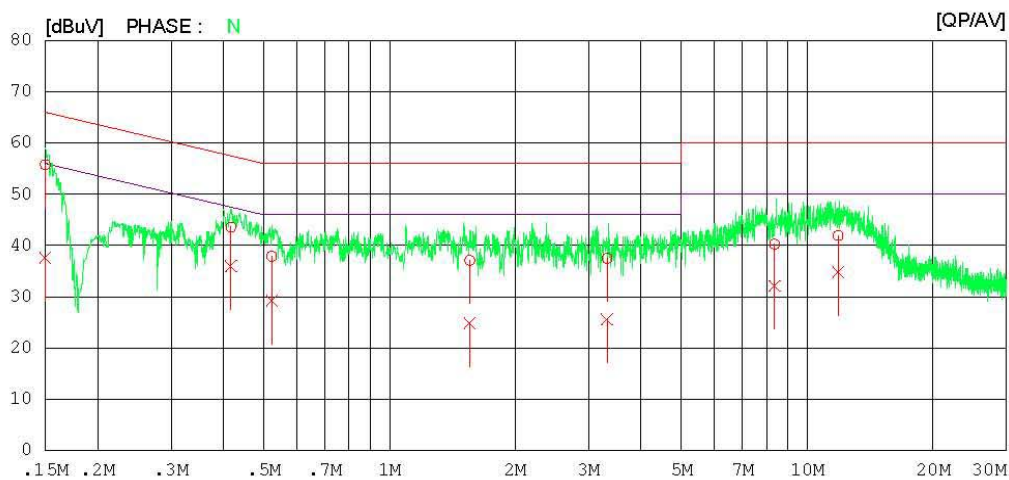
Digital EMC
Date : 2013-02-17

Model No. : 55LN541C-UA
Type :
Serial No. :
Test Condition : DSUB

Reference No. :
Power Supply : 120 V 60 Hz
Temp/Humi. : 22 °C 35 % R.H.
Operator :

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV



Results of Conducted Emission

Digital EMC
Date : 2013-02-17

Model No. : 55LN541C-UA
Type :
Serial No. :
Test Condition : DSUB

Reference No. :
Power Supply : 120 V 60 Hz
Temp/Humi. : 22 °C 35 % 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	0.15000	55.5	37.4	0.2	55.7	37.6	66.0	56.0	10.3	18.4	N
2	0.41741	43.4	35.8	0.2	43.6	36.0	57.5	47.5	13.9	11.5	N
3	0.52265	37.7	29.0	0.2	37.9	29.2	56.0	46.0	18.1	16.8	N
4	1.55700	36.8	24.5	0.3	37.1	24.8	56.0	46.0	18.9	21.2	N
5	3.31800	37.2	25.3	0.3	37.5	25.6	56.0	46.0	18.5	20.4	N
6	8.35700	39.5	31.4	0.7	40.2	32.1	60.0	50.0	19.8	17.9	N
7	11.86200	41.2	34.0	0.7	41.9	34.7	60.0	50.0	18.1	15.3	N
8	0.15006	55.7	36.9	0.2	55.9	37.1	66.0	56.0	10.1	18.9	L
9	0.41684	42.4	34.8	0.2	42.6	35.0	57.5	47.5	14.9	12.5	L
10	0.53350	36.1	28.0	0.2	36.3	28.2	56.0	46.0	19.7	17.8	L
11	2.43000	35.9	23.4	0.3	36.2	23.7	56.0	46.0	19.8	22.3	L
12	3.27350	35.7	22.8	0.3	36.0	23.1	56.0	46.0	20.0	22.9	L
13	9.60950	38.0	29.3	0.7	38.7	30.0	60.0	50.0	21.3	20.0	L
14	12.97700	36.9	30.9	0.7	37.6	31.6	60.0	50.0	22.4	18.4	L

< HDMI MODE >



Results of Conducted Emission

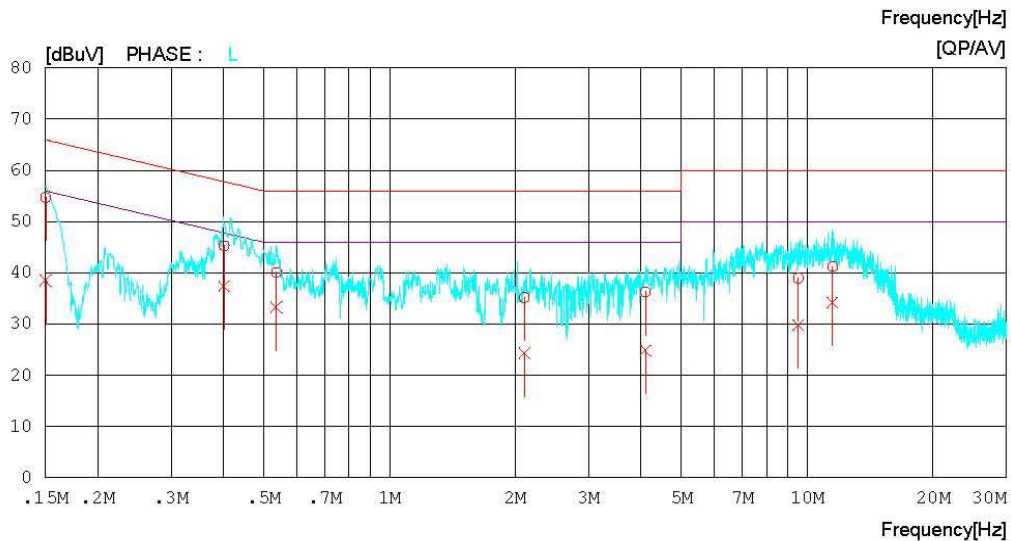
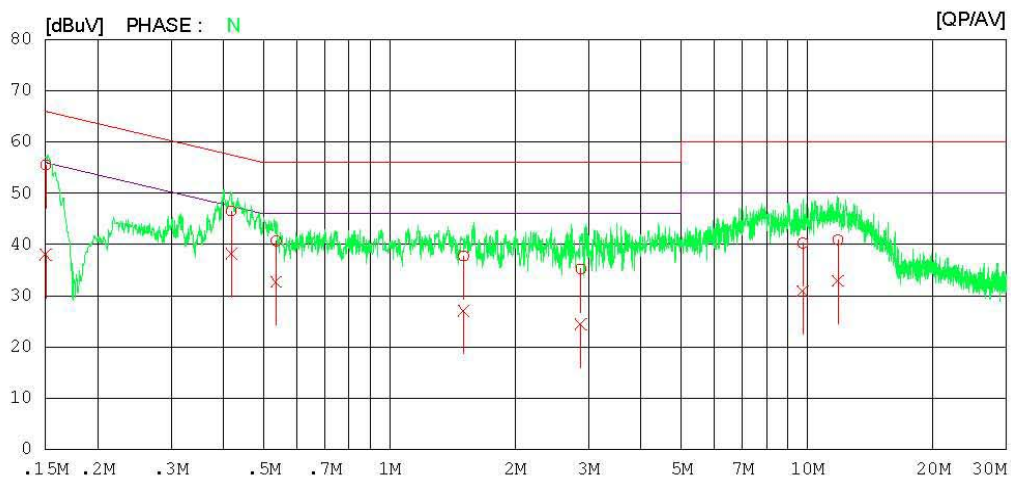
Digital EMC
Date : 2013-02-17

Model No. : 55LN541C-UA
Type :
Serial No. :
Test Condition : HDMI

Reference No. :
Power Supply : 120 V 60 Hz
Temp/Humi. : 22°C 35 % R.H.
Operator :

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV



Results of Conducted Emission

Digital EMC
Date : 2013-02-17

Model No. : 55LN541C-UA
Type :
Serial No. :
Test Condition : HDMI

Reference No. :
Power Supply : 120 V 60 Hz
Temp/Humi. : 22 °C 35 % 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	0.15025	55.3	37.8	0.2	55.5	38.0	66.0	56.0	10.5	18.0	N
2	0.41809	46.3	38.0	0.2	46.5	38.2	57.5	47.5	11.0	9.3	N
3	0.53518	40.5	32.5	0.2	40.7	32.7	56.0	46.0	15.3	13.3	N
4	1.50450	37.5	26.8	0.3	37.8	27.1	56.0	46.0	18.2	18.9	N
5	2.87200	34.9	24.1	0.3	35.2	24.4	56.0	46.0	20.8	21.6	N
6	9.75900	39.6	30.3	0.7	40.3	31.0	60.0	50.0	19.7	19.0	N
7	11.85350	40.2	32.2	0.7	40.9	32.9	60.0	50.0	19.1	17.1	N
8	0.15025	54.5	38.3	0.2	54.7	38.5	66.0	56.0	11.3	17.5	L
9	0.40198	45.1	37.2	0.2	45.3	37.4	57.8	47.8	12.5	10.4	L
10	0.53635	39.9	33.1	0.2	40.1	33.3	56.0	46.0	15.9	12.7	L
11	2.10350	34.9	24.1	0.3	35.2	24.4	56.0	46.0	20.8	21.6	L
12	4.10400	36.0	24.5	0.3	36.3	24.8	56.0	46.0	19.7	21.2	L
13	9.52050	38.3	29.2	0.7	39.0	29.9	60.0	50.0	21.0	20.1	L
14	11.49550	40.5	33.5	0.7	41.2	34.2	60.0	50.0	18.8	15.8	L

< USB MODE >



Results of Conducted Emission

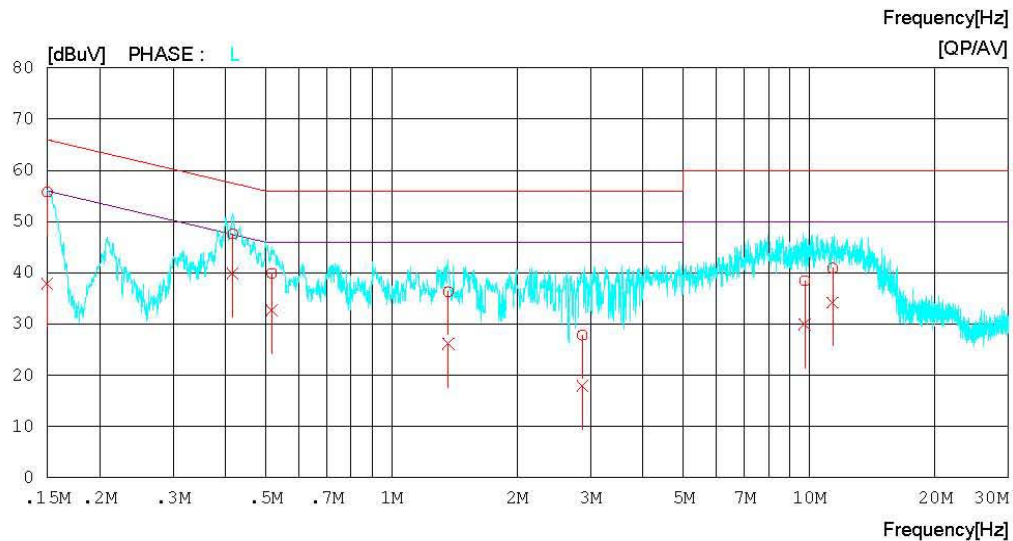
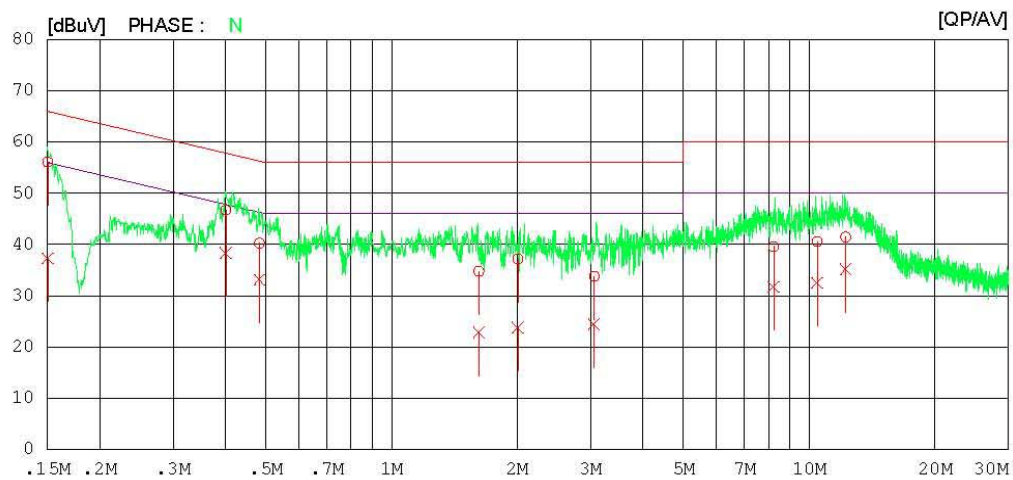
Digital EMC
Date : 2013-02-17

Model No. : 55LN541C-UA
Type :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120 V 60 Hz
Temp/Humi. : 22°C 35 % R.H.
Operator :

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV



Results of Conducted Emission

Digital EMC
Date : 2013-02-17

Model No. : 55LN541C-UA
Type :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120 V 60 Hz
Temp/Humi. : 22 °C 35 % 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	0.15025	55.8	37.1	0.2	56.0	37.3	66.0	56.0	10.0	18.7	N
2	0.40120	46.5	38.2	0.2	46.7	38.4	57.8	47.8	11.1	9.4	N
3	0.48304	40.0	32.9	0.2	40.2	33.1	56.3	46.3	16.1	13.2	N
4	1.61900	34.5	22.5	0.3	34.8	22.8	56.0	46.0	21.2	23.2	N
5	2.00750	36.8	23.5	0.3	37.1	23.8	56.0	46.0	18.9	22.2	N
6	3.05750	33.5	24.1	0.3	33.8	24.4	56.0	46.0	22.2	21.6	N
7	8.22000	38.9	31.0	0.7	39.6	31.7	60.0	50.0	20.4	18.3	N
8	10.44350	39.8	31.8	0.7	40.5	32.5	60.0	50.0	19.5	17.5	N
9	12.23300	40.7	34.4	0.7	41.4	35.1	60.0	50.0	18.6	14.9	N
10	0.15000	55.5	37.7	0.2	55.7	37.9	66.0	56.0	10.3	18.1	L
11	0.41699	47.4	39.7	0.2	47.6	39.9	57.5	47.5	9.9	7.6	L
12	0.51665	39.7	32.5	0.2	39.9	32.7	56.0	46.0	16.1	13.3	L
13	1.36850	36.0	25.9	0.3	36.3	26.2	56.0	46.0	19.7	19.8	L
14	2.86250	27.5	17.7	0.3	27.8	18.0	56.0	46.0	28.2	28.0	L
15	9.76150	37.7	29.3	0.7	38.4	30.0	60.0	50.0	21.6	20.0	L
16	11.38400	40.2	33.5	0.7	40.9	34.2	60.0	50.0	19.1	15.8	L

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.

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	5 th 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 (dB μ V/m)	Quasi-peak (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 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 (dB μ V/m)	Quasi-peak (dB μ V/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 (dB μ V/m)	Average (dB μ V/m)	Peak (dB μ V/m)	Average (dB μ V/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

Test Result

< DSUB MODE _ 30 MHz ~ 1 GHz >

RADIATED EMISSION

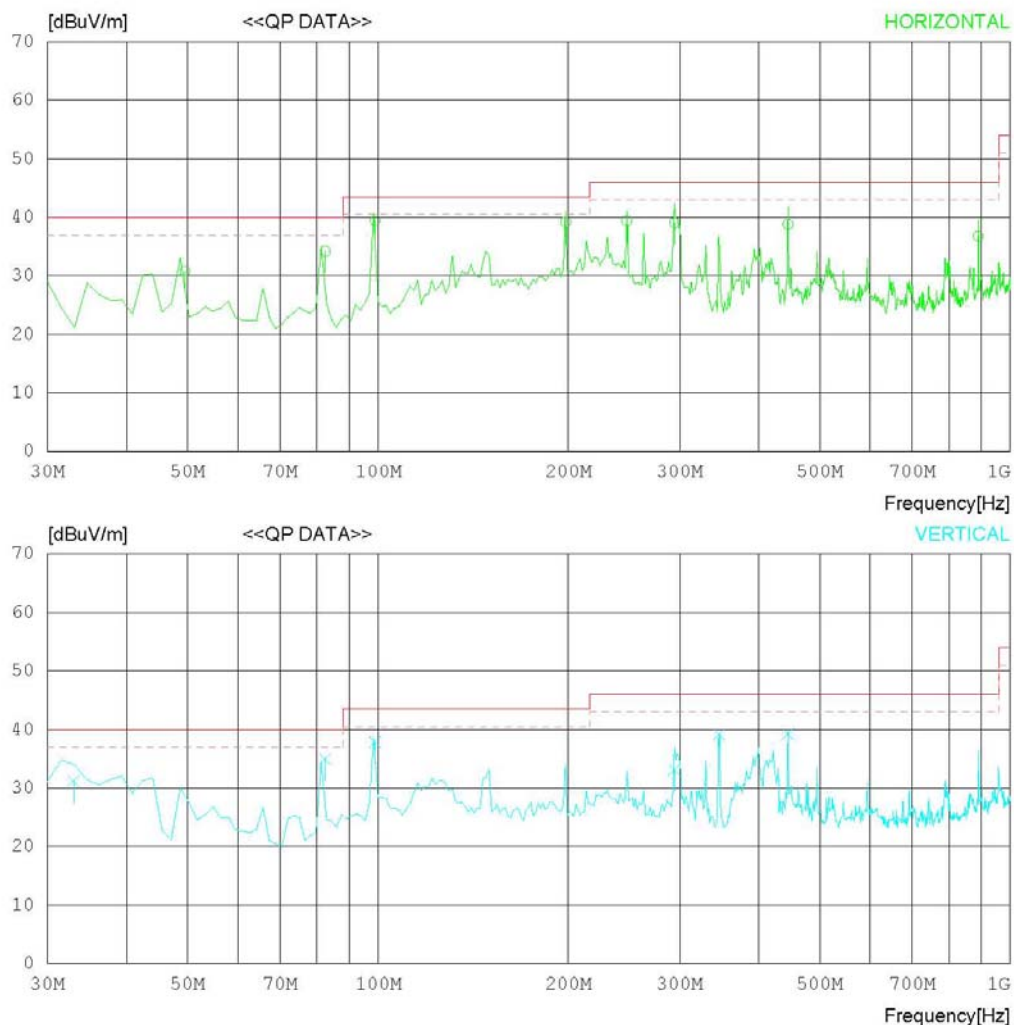
Date : 2013-02-16

Model Name : 55LN541C-UA
Model No. :
Serial No. :
Test Condition : DSUB

Reference No. :
Power Supply : 120 V 60 Hz
Temp/Humi : 20 °C 37 % R.H.
Operator :

Memo :

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



RADIATED EMISSION

Date : 2013-02-16

Model Name : 55LN541C-UA
Model No. :
Serial No. :
Test Condition : DSUB

Reference No. :
Power Supply : 120 V 60 Hz
Temp/Humi : 20 °C 37 % R.H.
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	49.498	45.0	8.9	1.3	24.4	30.8	40.0	9.2	400	327
2	82.514	49.3	7.6	1.6	24.3	34.2	40.0	5.8	364	217
3	98.993	51.7	10.5	1.4	24.1	39.5	43.5	4.0	177	253
4	197.993	51.2	9.7	2.3	24.0	39.2	43.5	4.3	100	302
5	247.512	48.0	12.6	2.6	23.8	39.4	46.0	6.6	100	282
6	294.464	46.3	13.6	2.8	23.6	39.1	46.0	6.9	100	151
7	445.064	42.0	16.6	3.5	23.3	38.8	46.0	7.2	200	302
8	890.118	34.0	20.7	5.2	23.1	36.8	46.0	9.2	137	224
----- Vertical -----										
9	32.987	37.8	16.3	1.0	23.9	31.2	40.0	8.8	100	152
10	82.506	50.1	7.6	1.6	24.3	35.0	40.0	5.0	100	270
11	98.993	50.1	10.5	1.4	24.1	37.9	43.5	5.6	100	299
12	294.400	40.3	13.6	2.8	23.6	33.1	46.0	12.9	199	321
13	346.506	44.7	14.8	3.3	23.6	39.2	46.0	6.8	100	162
14	445.040	42.4	16.6	3.5	23.3	39.2	46.0	6.8	100	218

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

RADIATED EMISSION

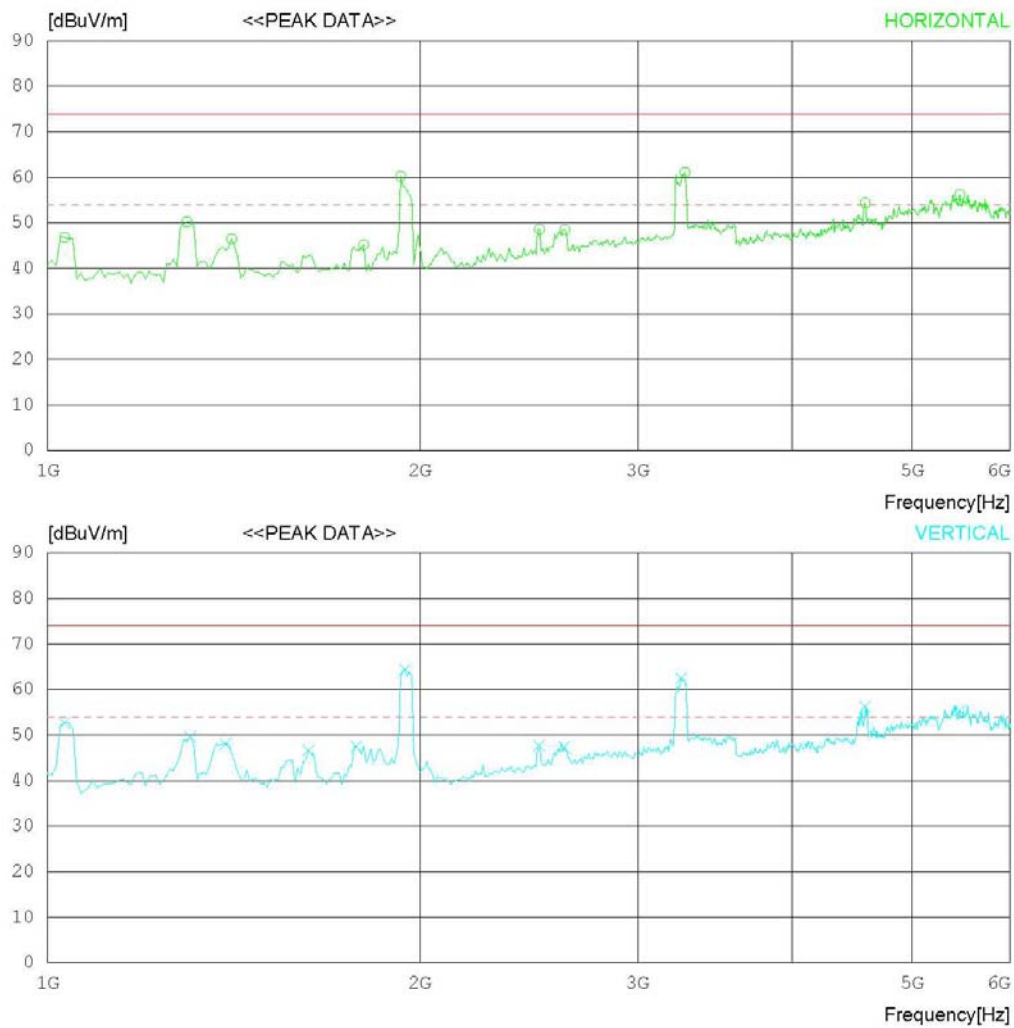
Date : 2013-02-16

Model Name : 55LN541C-UA
Model No. :
Serial No. :
Test Condition : DSUB

Reference No. :
Power Supply : 120 V 60 Hz
Temp/Humi : 20 °C 37 % R.H.
Operator :

Memo :

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



RADIATED EMISSION

Date : 2013-02-16

Model Name : 55LN541C-UA
Model No. :
Serial No. :
Test Condition : DSUB

Reference No. :
Power Supply : 120 V 60 Hz
Temp/Humi : 20 °C 37 % R.H.
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	1032.051	45.5	23.9	5.9	28.5	46.8	74.0	27.2	100	238
2	1296.474	47.6	24.3	6.8	28.5	50.2	74.0	23.8	100	204
3	1408.654	43.3	24.5	7.2	28.5	46.5	74.0	27.5	100	83
4	1801.282	41.0	24.6	8.1	28.5	45.2	74.0	28.8	100	229
5	1929.487	55.8	24.6	8.3	28.5	60.2	74.0	13.8	100	1
6	2498.404	40.2	27.4	9.5	28.5	48.6	74.0	25.4	100	1
7	2618.598	39.3	27.8	9.8	28.4	48.5	74.0	25.5	100	178
8	3275.659	49.4	28.9	11.2	28.4	61.1	74.0	12.9	100	191
9	4581.753	37.6	31.2	13.8	28.2	54.4	74.0	19.6	100	166
10	5463.150	34.5	34.9	14.9	28.1	56.2	74.0	17.8	100	254
----- Vertical -----										
11	1032.051	51.4	23.9	5.9	28.5	52.7	74.0	21.3	100	358
12	1304.487	47.0	24.3	6.8	28.5	49.6	74.0	24.4	100	358
13	1392.628	45.0	24.5	7.1	28.5	48.1	74.0	25.9	100	202
14	1625.000	42.8	24.6	7.7	28.5	46.6	74.0	27.4	100	358
15	1777.243	43.4	24.6	8.0	28.5	47.5	74.0	26.5	100	358
16	1945.512	60.0	24.6	8.3	28.5	64.4	74.0	9.6	100	358
17	2498.404	39.3	27.4	9.5	28.5	47.7	74.0	26.3	100	187
18	2618.598	38.1	27.8	9.8	28.4	47.3	74.0	26.7	100	211
19	3251.620	50.9	28.9	11.1	28.4	62.5	74.0	11.5	100	358
20	4581.753	39.4	31.2	13.8	28.2	56.2	74.0	17.8	100	358
21	5463.150	33.6	34.9	14.9	28.1	55.3	74.0	18.7	100	15

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

RADIATED EMISSION

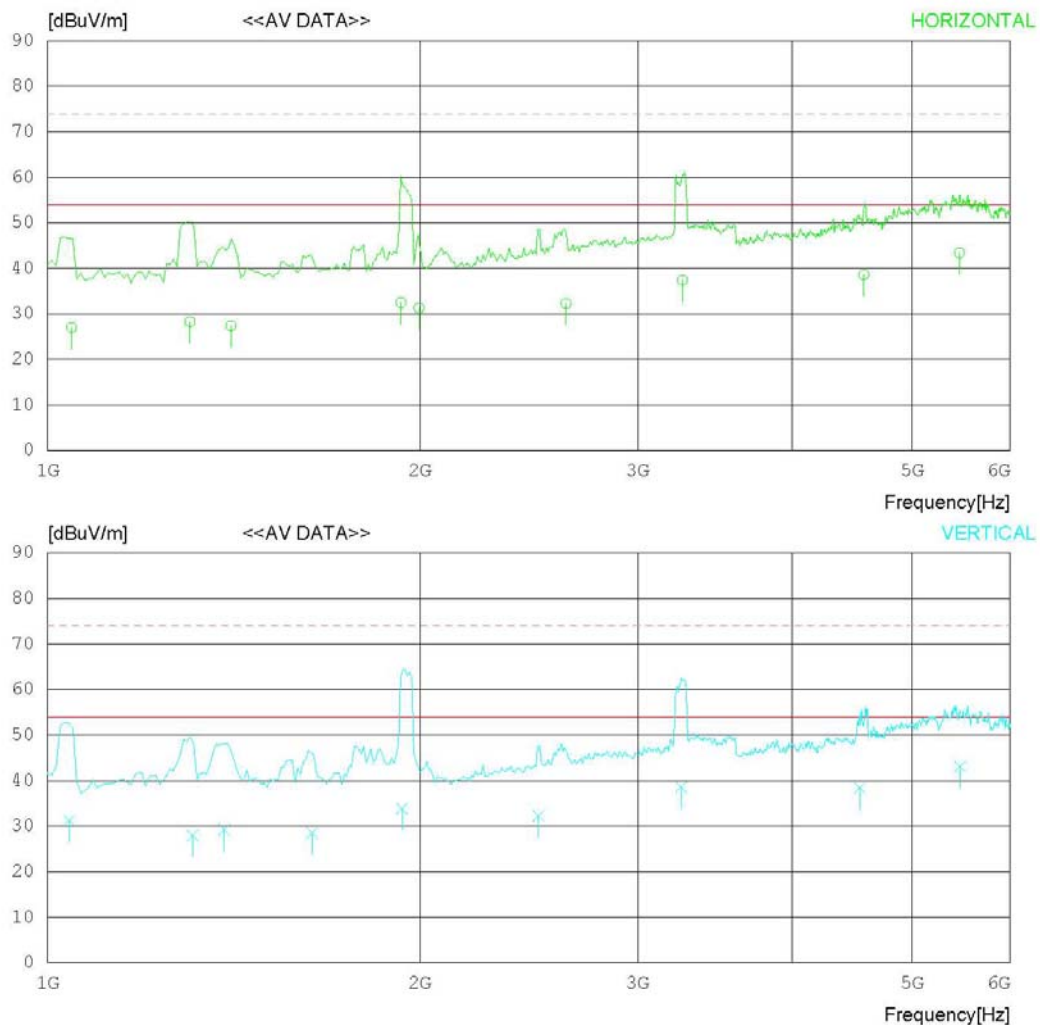
Date : 2013-02-16

Model Name : 55LN541C-UA
Model No. :
Serial No. :
Test Condition : DSUB

Reference No. :
Power Supply : 120 V 60 Hz
Temp/Humi : 20 °C 37 % R.H.
Operator :

Memo :

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



RADIATED EMISSION

Date : 2013-02-16

Model Name : 55LN541C-UA	Reference No. :
Model No. :	Power Supply : 120 V 60 Hz
Serial No. :	Temp/Humi : 20 °C 37 % R.H.
Test Condition : DSUB	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	1045.820	25.7	23.9	5.9	28.5	27.0	54.0	27.0	100	147
2	1303.833	25.7	24.3	6.8	28.5	28.3	54.0	25.7	100	135
3	1406.379	24.2	24.5	7.2	28.5	27.4	54.0	26.6	100	126
4	1930.602	28.1	24.6	8.3	28.5	32.5	54.0	21.5	100	150
5	1996.307	26.8	24.6	8.4	28.5	31.3	54.0	22.7	100	193
6	2624.410	23.1	27.8	9.8	28.4	32.3	54.0	21.7	100	201
7	3260.384	25.8	28.9	11.1	28.4	37.4	54.0	16.6	100	211
8	4570.141	22.0	31.1	13.7	28.2	38.6	54.0	15.4	100	188
9	5460.321	21.7	34.9	14.9	28.1	43.4	54.0	10.6	100	303
----- Vertical -----										
10	1041.615	29.9	23.9	5.9	28.5	31.2	54.0	22.8	100	299
11	1310.410	25.3	24.4	6.8	28.5	28.0	54.0	26.0	100	305
12	1388.935	26.1	24.5	7.1	28.5	29.2	54.0	24.8	100	287
13	1636.217	24.6	24.6	7.8	28.5	28.5	54.0	25.5	100	295
14	1934.294	29.5	24.6	8.3	28.5	33.9	54.0	20.1	100	254
15	2494.794	23.8	27.4	9.5	28.5	32.2	54.0	21.8	100	200
16	3253.192	27.0	28.9	11.1	28.4	38.6	54.0	15.4	100	195
17	4536.487	22.0	31.0	13.6	28.2	38.4	54.0	15.6	100	234
18	5466.519	21.4	34.9	14.9	28.1	43.1	54.0	10.9	100	244

< HDMI MODE _ 30 MHz ~ 1 GHz >

RADIATED EMISSION

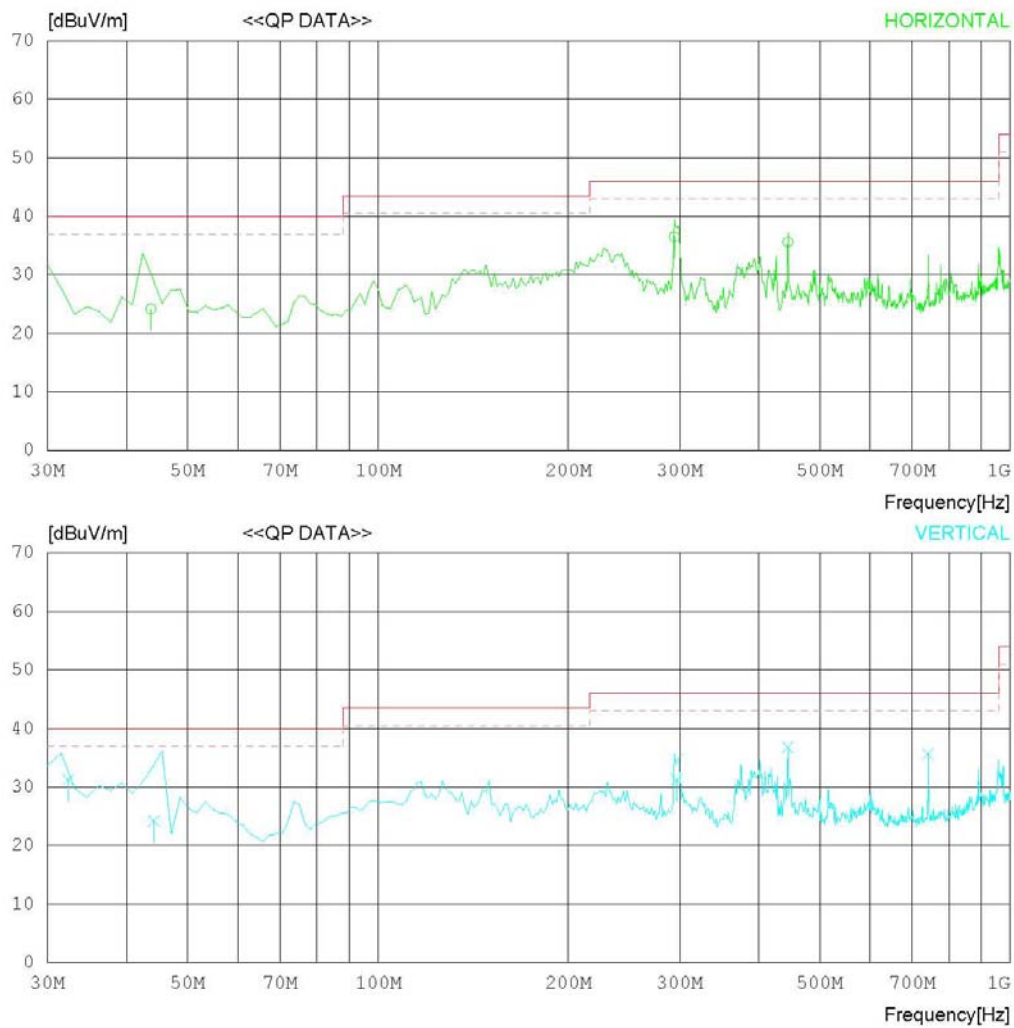
Date : 2013-02-16

Model Name : 55LN541C-UA
Model No. :
Serial No. :
Test Condition : HDMI

Reference No. :
Power Supply : 120 V 60 Hz
Temp/Humi : 20 °C 37 % R.H.
Operator :

Memo :

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



RADIATED EMISSION

Date : 2013-02-16

Model Name : 55LN541C-UA
Model No. :
Serial No. :
Test Condition : HDMI

Reference No. :
Power Supply : 120 V 60 Hz
Temp/Humi : 20 °C 37 % R.H.
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	43.698	33.7	13.6	1.1	24.2	24.2	40.0	15.8	301	324
2	294.147	43.7	13.6	2.8	23.6	36.5	46.0	9.5	100	146
3	445.054	38.8	16.6	3.5	23.3	35.6	46.0	10.4	201	122
----- Vertical -----										
4	32.378	37.7	16.6	0.9	23.9	31.3	40.0	8.7	100	212
5	44.205	33.6	13.7	1.1	24.2	24.2	40.0	15.8	100	264
6	296.724	38.4	13.7	2.8	23.6	31.3	46.0	14.7	199	316
7	445.032	40.0	16.6	3.5	23.3	36.8	46.0	9.2	100	209
8	741.769	35.6	19.1	4.6	23.7	35.6	46.0	10.4	100	318

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

RADIATED EMISSION

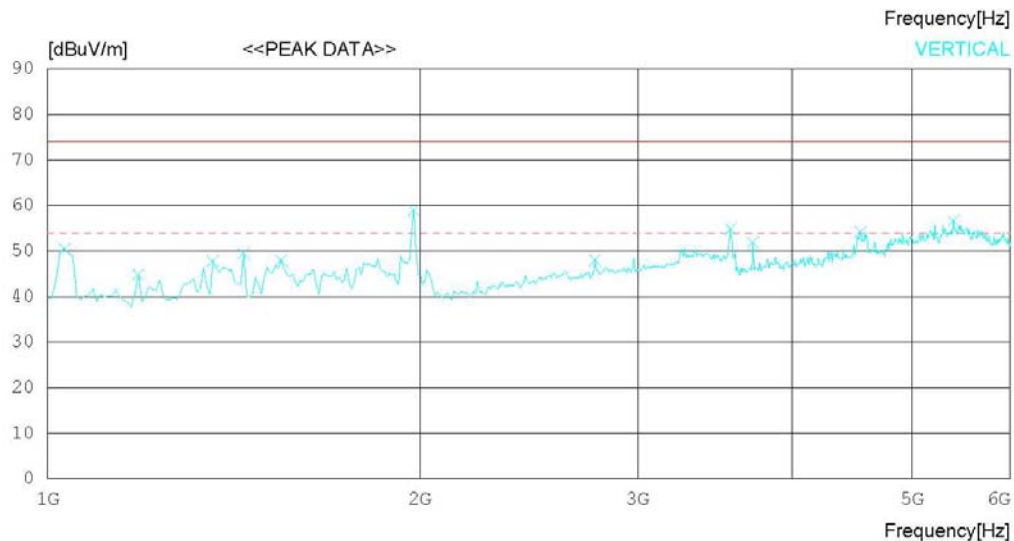
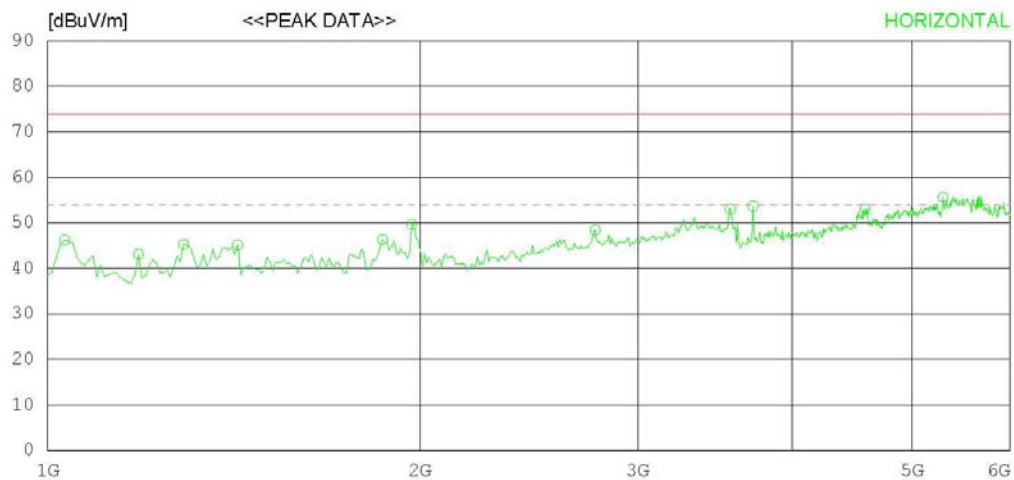
Date : 2013-02-16

Model Name : 55LN541C-UA
Model No. :
Serial No. :
Test Condition : HDMI

Reference No. :
Power Supply : 120 V 60 Hz
Temp/Humi : 20 °C 37 % R.H.
Operator :

Memo :

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



RADIATED EMISSION

Date : 2013-02-16

Model Name : 55LN541C-UA	Reference No. :
Model No. :	Power Supply : 120 V 60 Hz
Serial No. :	Temp/Humi : 20 °C 37 % 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	1032.051	44.9	23.9	5.9	28.5	46.2	74.0	27.8	100	238
2	1184.295	41.0	24.2	6.4	28.5	43.1	74.0	30.9	100	1
3	1288.461	42.7	24.3	6.8	28.5	45.3	74.0	28.7	100	1
4	1424.679	41.9	24.5	7.2	28.5	45.1	74.0	28.9	100	205
5	1865.384	42.0	24.6	8.2	28.5	46.3	74.0	27.7	100	229
6	1969.551	45.2	24.6	8.4	28.5	49.7	74.0	24.3	100	188
7	2770.844	38.4	28.3	10.1	28.4	48.4	74.0	25.6	100	130
8	3564.125	40.4	29.0	11.9	28.3	53.0	74.0	21	100	1
9	3716.371	40.4	29.4	12.2	28.3	53.7	74.0	20.3	100	216
10	4581.753	36.2	31.2	13.8	28.2	53.0	74.0	21	100	166
11	5294.883	34.6	34.0	15.1	28.1	55.6	74.0	18.4	100	254
----- Vertical -----										
12	1032.051	49.1	23.9	5.9	28.5	50.4	74.0	23.6	100	358
13	1184.295	42.7	24.2	6.4	28.5	44.8	74.0	29.2	100	358
14	1360.577	44.9	24.4	7.0	28.5	47.8	74.0	26.2	100	358
15	1440.705	46.0	24.6	7.3	28.5	49.4	74.0	24.6	100	358
16	1544.872	44.3	24.6	7.6	28.5	48.0	74.0	26	100	214
17	1977.564	54.5	24.6	8.4	28.5	59.0	74.0	15	100	358
18	2770.844	38.0	28.3	10.1	28.4	48.0	74.0	26	100	199
19	3564.125	42.2	29.0	11.9	28.3	54.8	74.0	19.2	100	358
20	3716.371	38.6	29.4	12.2	28.3	51.9	74.0	22.1	100	160
21	4541.690	37.8	31.0	13.6	28.2	54.2	74.0	19.8	100	177
22	5399.048	35.1	34.6	15.0	28.1	56.6	74.0	17.4	100	358

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

RADIATED EMISSION

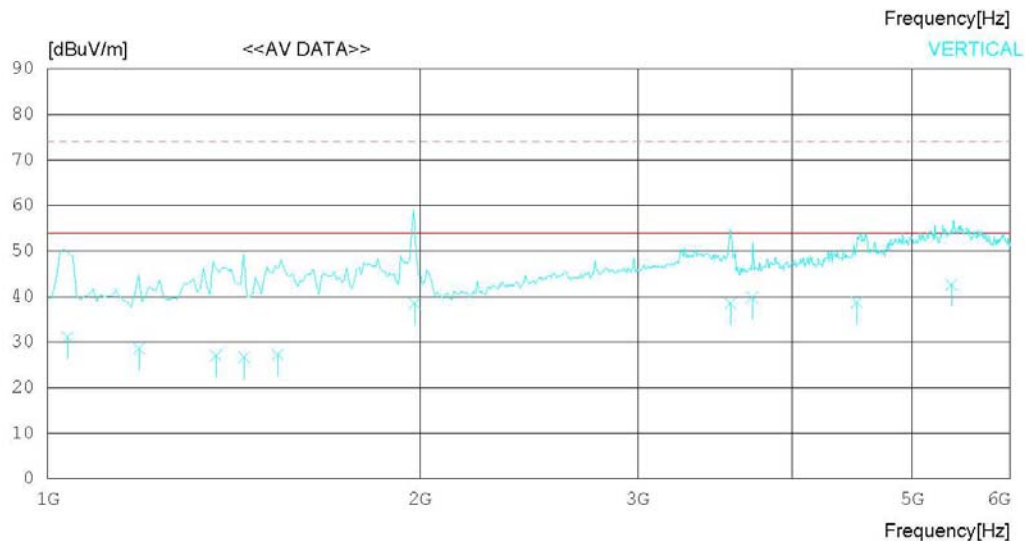
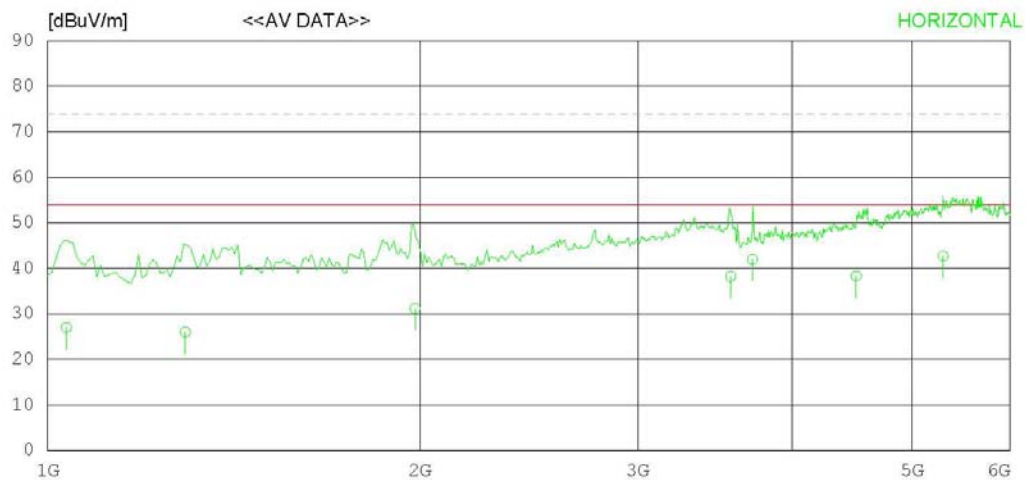
Date : 2013-02-16

Model Name : 55LN541C-UA
Model No. :
Serial No. :
Test Condition : HDMI

Reference No. :
Power Supply : 120 V 60 Hz
Temp/Humi : 20 °C 37 % R.H.
Operator :

Memo :

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



RADIATED EMISSION

Date : 2013-02-16

Model Name : 55LN541C-UA	Reference No. :
Model No. :	Power Supply : 120 V 60 Hz
Serial No. :	Temp/Humi : 20 °C 37 % 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	1035.680	25.7	23.9	5.9	28.5	27.0	54.0	27.0	100	210
2	1292.564	23.4	24.3	6.8	28.5	26.0	54.0	28.0	100	247
3	1981.820	26.7	24.6	8.4	28.5	31.2	54.0	22.8	100	155
4	3565.602	25.6	29.0	11.9	28.3	38.2	54.0	15.8	100	164
5	3712.474	28.7	29.4	12.2	28.3	42.0	54.0	12.0	100	335
6	4505.102	22.1	30.9	13.5	28.2	38.3	54.0	15.7	100	347
7	5297.594	21.7	34.0	15.1	28.1	42.7	54.0	11.3	100	109
----- Vertical -----										
8	1038.410	29.8	23.9	5.9	28.5	31.1	54.0	22.9	100	211
9	1185.846	26.5	24.2	6.4	28.5	28.6	54.0	25.4	100	247
10	1368.538	24.2	24.4	7.0	28.5	27.1	54.0	26.9	100	230
11	1442.256	23.3	24.6	7.3	28.5	26.7	54.0	27.3	100	295
12	1535.205	23.6	24.6	7.6	28.5	27.3	54.0	26.7	100	281
13	1980.205	34.0	24.6	8.4	28.5	38.5	54.0	15.5	100	302
14	3564.265	25.9	29.0	11.9	28.3	38.5	54.0	15.5	100	124
15	3712.794	26.5	29.4	12.2	28.3	39.8	54.0	14.2	100	117
16	4510.230	22.5	30.9	13.5	28.2	38.7	54.0	15.3	100	152
17	5381.456	21.2	34.5	15.0	28.1	42.6	54.0	11.4	100	160

< USB MODE _ 30 MHz ~ 1 GHz >

RADIATED EMISSION

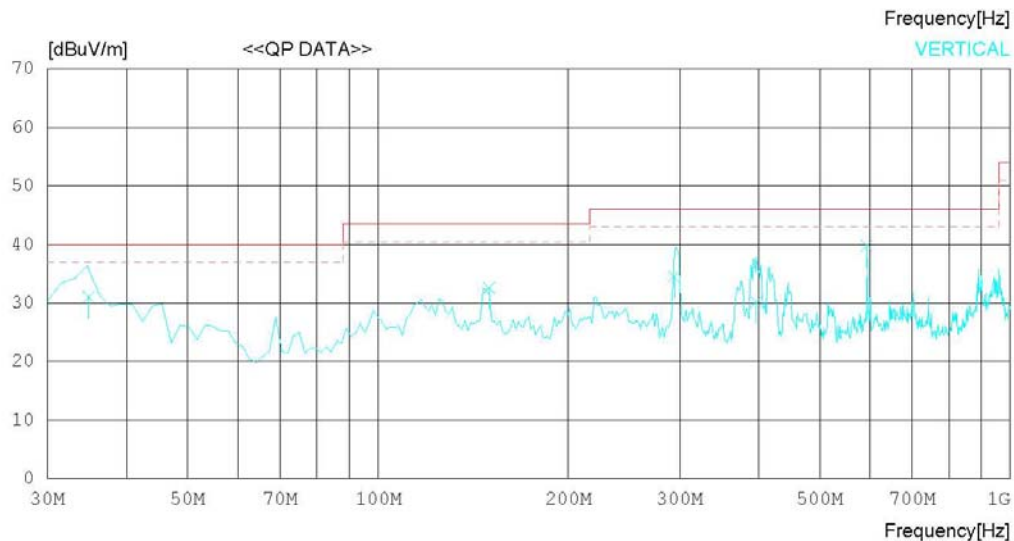
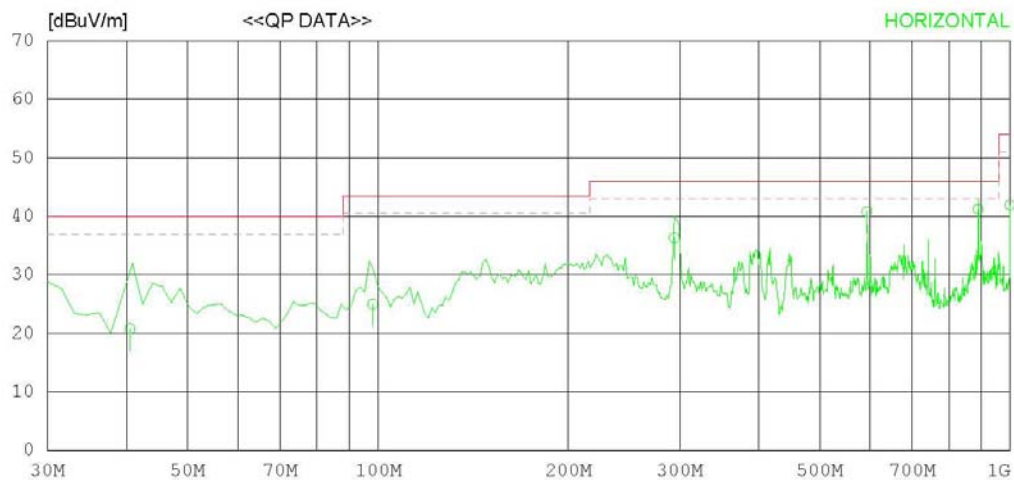
Date : 2013-02-16

Model Name : 55LN541C-UA
Model No. :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120 V 60 Hz
Temp/Humi : 20 °C 37 % R.H.
Operator :

Memo :

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



RADIATED EMISSION

Date : 2013-02-16

Model Name : 55LN541C-UA
Model No. :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120 V 60 Hz
Temp/Humi : 20 °C 37 % R.H.
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	40.496	30.9	13.0	1.1	24.2	20.8	40.0	19.2	100	358
2	98.003	37.4	10.3	1.4	24.1	25.0	43.5	18.5	200	169
3	294.096	43.5	13.6	2.8	23.6	36.3	46.0	9.7	100	287
4	593.423	41.5	18.6	4.1	23.4	40.8	46.0	5.2	200	359
5	890.118	38.4	20.7	5.2	23.1	41.2	46.0	4.8	113	193
6	999.996	36.8	22.3	5.5	22.7	41.9	54.0	12.1	100	142
----- Vertical -----										
7	34.865	38.7	15.3	1.1	24.0	31.1	40.0	8.9	100	156
8	149.923	44.7	10.4	1.7	24.2	32.6	43.5	10.9	100	110
9	294.198	41.7	13.6	2.8	23.6	34.5	46.0	11.5	203	238
10	396.560	34.2	16.0	3.5	23.5	30.2	46.0	15.8	200	229
11	593.410	40.5	18.6	4.1	23.4	39.8	46.0	6.2	100	184

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

RADIATED EMISSION

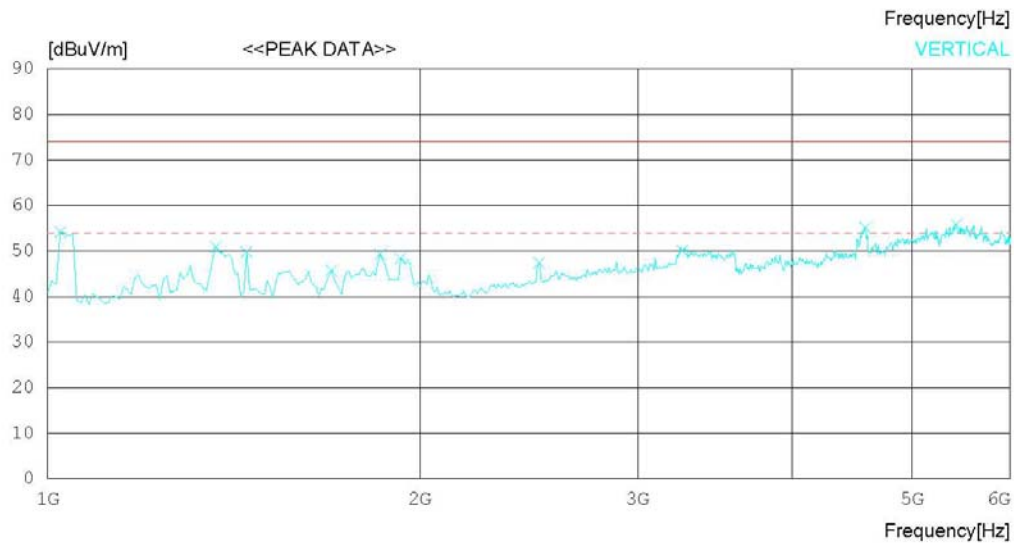
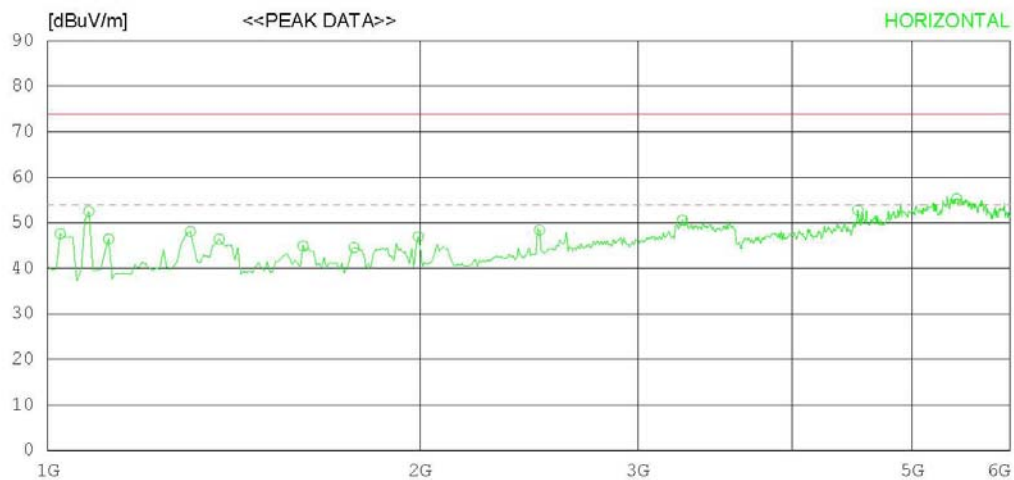
Date : 2013-02-16

Model Name : 55LN541C-UA
Model No. :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120 V 60 Hz
Temp/Humi : 20 °C 37 % R.H.
Operator :

Memo :

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



RADIATED EMISSION

Date : 2013-02-16

Model Name : 55LN541C-UA
Model No. :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120 V 60 Hz
Temp/Humi : 20 °C 37 % R.H.
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	1024.038	46.4	23.9	5.8	28.5	47.6	74.0	26.4	100	239
2	1080.128	51.0	24.0	6.0	28.5	52.5	74.0	21.5	100	1
3	1120.192	44.6	24.1	6.2	28.5	46.4	74.0	27.6	100	222
4	1304.487	45.5	24.3	6.8	28.5	48.1	74.0	25.9	100	1
5	1376.602	43.3	24.5	7.1	28.5	46.4	74.0	27.6	100	1
6	1608.974	41.1	24.6	7.7	28.5	44.9	74.0	29.1	100	1
7	1769.230	40.5	24.6	8.0	28.5	44.6	74.0	29.4	100	1
8	1993.589	42.5	24.6	8.4	28.5	47.0	74.0	27	100	1
9	2498.404	40.0	27.4	9.5	28.5	48.4	74.0	25.6	100	1
10	3259.633	39.0	28.9	11.1	28.4	50.6	74.0	23.4	100	1
11	4517.652	36.5	31.0	13.5	28.2	52.8	74.0	21.2	100	1
12	5431.099	33.8	34.7	14.9	28.1	55.3	74.0	18.7	100	184
----- Vertical -----										
13	1024.038	53.0	23.9	5.8	28.5	54.2	74.0	19.8	100	358
14	1368.590	48.1	24.4	7.0	28.5	51.0	74.0	23	100	358
15	1448.718	46.4	24.6	7.3	28.5	49.8	74.0	24.2	100	358
16	1697.115	41.8	24.6	7.9	28.5	45.8	74.0	28.2	100	358
17	1857.371	45.0	24.6	8.2	28.5	49.3	74.0	24.7	100	358
18	1929.487	44.0	24.6	8.3	28.5	48.4	74.0	25.6	100	221
19	2498.404	39.0	27.4	9.5	28.5	47.4	74.0	26.6	100	358
20	3259.633	38.5	28.9	11.1	28.4	50.1	74.0	23.9	100	358
21	4581.753	38.3	31.2	13.8	28.2	55.1	74.0	18.9	100	177
22	5431.099	34.3	34.7	14.9	28.1	55.8	74.0	18.2	100	358

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

RADIATED EMISSION

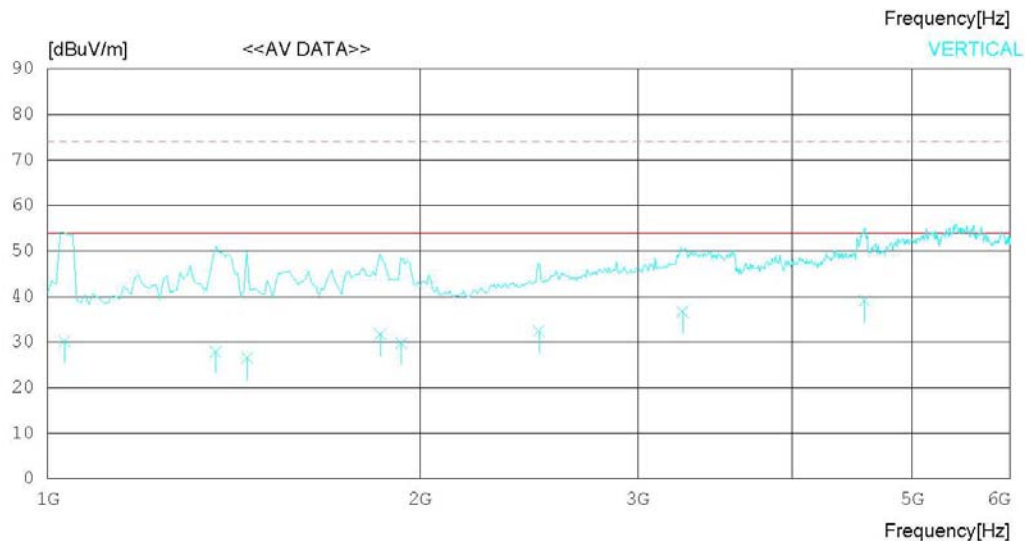
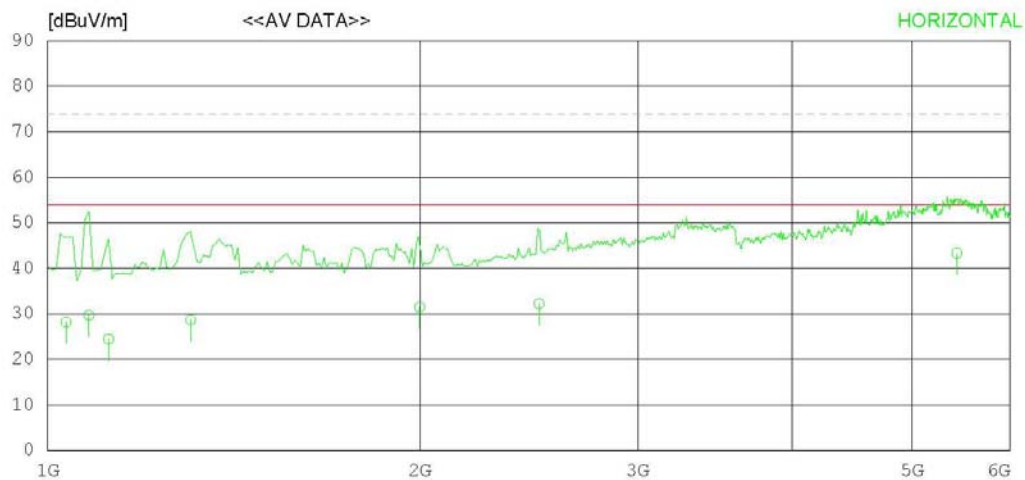
Date : 2013-02-16

Model Name : 55LN541C-UA
Model No. :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120 V 60 Hz
Temp/Humi : 20 °C 37 % R.H.
Operator :

Memo :

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



RADIATED EMISSION

Date : 2013-02-16

Model Name : 55LN541C-UA	Reference No. :
Model No. :	Power Supply : 120 V 60 Hz
Serial No. :	Temp/Humi : 20 °C 37 % 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	1035.217	26.9	23.9	5.9	28.5	28.2	54.0	25.8	100	210
2	1080.089	28.2	24.0	6.0	28.5	29.7	54.0	24.3	100	305
3	1120.153	22.7	24.1	6.2	28.5	24.5	54.0	29.5	100	269
4	1305.613	26.1	24.3	6.8	28.5	28.7	54.0	25.3	100	314
5	1998.973	27.0	24.6	8.4	28.5	31.5	54.0	22.5	100	269
6	2496.238	23.8	27.4	9.5	28.5	32.2	54.0	21.8	100	288
7	5433.595	21.8	34.7	14.9	28.1	43.3	54.0	10.7	100	291
----- Vertical -----										
8	1032.012	28.9	23.9	5.9	28.5	30.2	54.0	23.8	100	156
9	1367.750	25.0	24.4	7.0	28.5	27.9	54.0	26.1	100	140
10	1450.282	23.1	24.6	7.3	28.5	26.5	54.0	27.5	100	133
11	1858.602	27.4	24.6	8.2	28.5	31.7	54.0	22.3	100	184
12	1932.455	25.4	24.6	8.3	28.5	29.8	54.0	24.2	100	192
13	2495.192	24.0	27.4	9.5	28.5	32.4	54.0	21.6	100	206
14	3262.540	25.1	28.9	11.1	28.4	36.7	54.0	17.3	100	159
15	4576.134	22.5	31.1	13.7	28.2	39.1	54.0	14.9	100	187

Appendix 1

List of Test and Measurement Instruments

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

Appendix 2

Report Revision History

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