

EMC TEST REPORT

Test item : LED TV Monitor
Model No. : 55LP645H-UH
Order No. : DEMC1304-01250
Date of receipt : 2013-04-10
Test duration : 2013-04-12 ~ 2013-04-16
Use of report : FCC CoC Marking
Date of Issue : 2013-04-19

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 : (17 ~ 20) °C,
Humidity : (32 ~ 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.

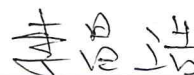
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Tested by:



Manager
DaeHwa Eun

Reviewed by:



Technical Manager
ChangHo Lee

PRESIDENT OF DIGITAL EMC CO., LTD.

CONTENTS

1. General Remarks	3
2. Test Laboratory	3
3. General Information of EUT	4
4. Test Summary	5
4.1 Applied standards and test results	5
4.2 Test environment and conditions	5
4.3 Test result Summary	5
5. Test Set-up and operation mode	6
5.1 Principle of Configuration Selection	6
5.2 Test Operation Mode	6
5.3 Support Equipment Used	6
6. Test Results : Emission	7
6.1 Conducted Disturbance	7
6.2 Radiated Disturbance	14
Appendix 1	34
List of Test and Measurement Instruments	34
Appendix 2	36
Report Revision History	36

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.	55LP645H-UH
EUT Type	LED TV Monitor
Serial No	NONE
FCC ID	BEJ55LP645HUH
Type of Sample Tested	Pre-Production
High Frequency	800 MHz
Rating	AC 100-240 V~ 50/60 Hz, 1.6 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	04-12	20	37
Radiated Disturbance	04-15	17	32
	04-16	20	37

4.3 Test result Summary

(1) Conducted Emission (USB MODE)

Frequency [MHz]	Phase	Result [dB μ V]	Detector	Limit [dB μ V]	Margin [Db]
0.51550	L	32.7	Average	46.0	13.3

(2) Radiated Emission (DSUB MODE)

Frequency [MHz]	Pol.	Result [dB(μ V/m)]	Detector	Limit [dB(μ V/m)]	Margin [dB]
331.276	H	39.7	Quasi-Peak	46.0	6.3

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
- HDMI MODE : 'H' Pattern mode, 1920 x 1080 Resolution
- USB MODE : USB recorded 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	VOSTRO460	6J7JXBX	DELL INC.	POWER	1.6	Not use	Non-shield	Plastic	DOC
				USB	1.7	Not use	Non-shield		
				USB	1.6	Use	Non-shield		
				USB	1.6	Use	Non-shield		
				HDMI	1.6	Not use	Shield		
				DSUB	1.7	Use	Shield		
KEYBOARD	KB-065	CN11163233	HP.	USB	1.7	Not use	Non-shield	Plastic	DOC
MOUSE	M-UAE96	N/A	Logitech	USB	1.6	Use	Non-shield	Plastic	DOC
CD/DVD PLAYER	DVP-NS92V	2001499	SONY EMCS.	POWER AV	1.7 1.8	Not use Not use	Non-shield Non-shield	Plastic	VER
USB MEMORY	SDCZ37-004G	N/A	SANDISK	USB	-	Not use	-	Plastic	DOC
PRINTER	SRP770	N/A	BICSOLON	POWER USB	1.8 2.0	Not use Use	Non-shield Non-shield	Plastic	DOC
REMOTE CONTROL	AKB73755414	N/A	HANSUNG ELECTRONICS CO., LTD.	-	-	Not use	-	Plastic	DOC
HEADSET	COV903	N/A	COSY	STEREO	2.0	Not use	Non-shield	Plastic	DOC

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

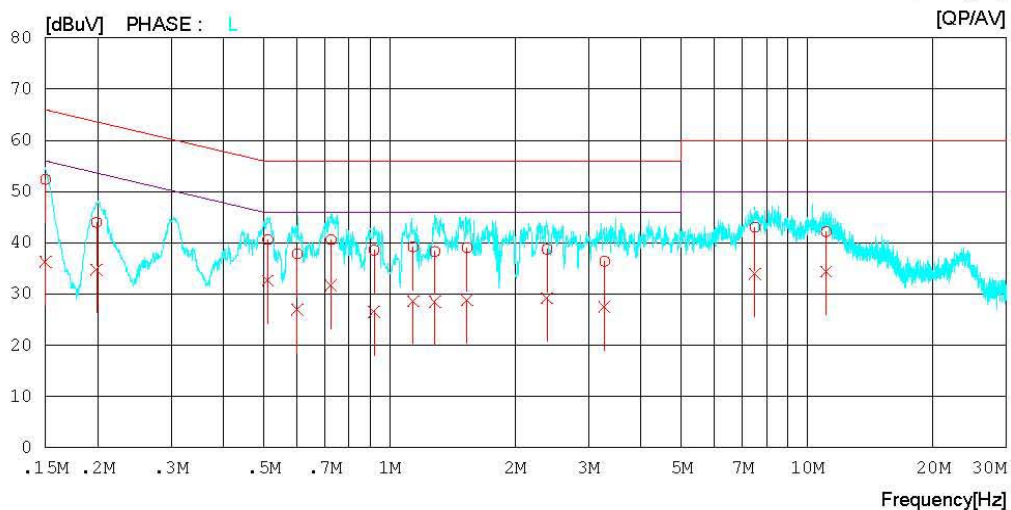
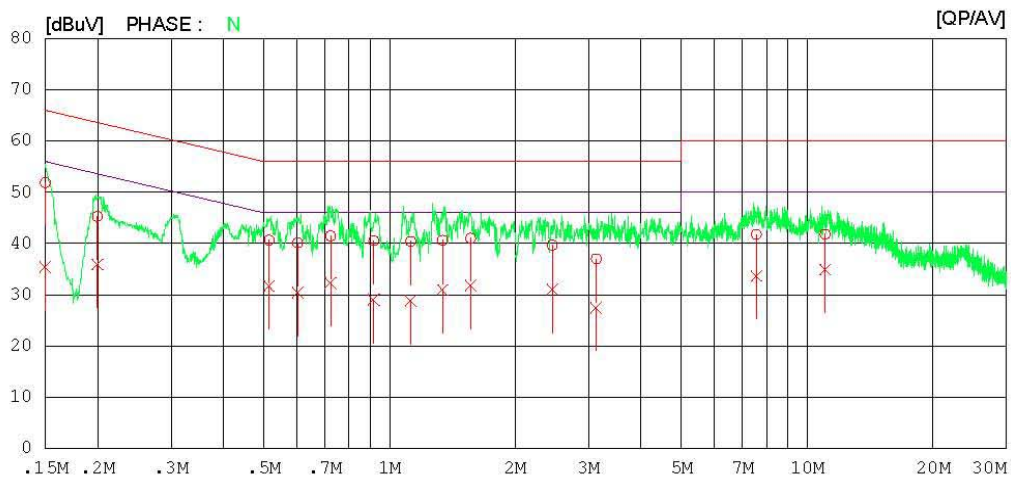
Digital EMC
Date : 2013-04-12

Model No. : 55LP645H-UH
Type :
Serial No. :
Test Condition : DSUB

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

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV



Results of Conducted Emission

Digital EMC
Date : 2013-04-12

Model No. : 55LP645H-UH
Type :
Serial No. :
Test Condition : DSUB

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi. : 20 °C 37 % 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	51.7	35.2	0.2	51.9	35.4	66.0	56.0	14.1	20.6	N
2	0.19970	45.1	35.7	0.2	45.3	35.9	63.6	53.6	18.3	17.7	N
3	0.51515	40.5	31.5	0.2	40.7	31.7	56.0	46.0	15.3	14.3	N
4	0.60265	39.9	30.2	0.2	40.1	30.4	56.0	46.0	15.9	15.6	N
5	0.72268	41.3	32.1	0.2	41.5	32.3	56.0	46.0	14.5	13.7	N
6	0.91691	40.3	28.8	0.2	40.5	29.0	56.0	46.0	15.5	17.0	N
7	1.12400	40.1	28.5	0.3	40.4	28.8	56.0	46.0	15.6	17.2	N
8	1.34000	40.3	30.6	0.3	40.6	30.9	56.0	46.0	15.4	15.1	N
9	1.56500	40.7	31.5	0.3	41.0	31.8	56.0	46.0	15.0	14.2	N
10	2.45250	39.4	30.7	0.3	39.7	31.0	56.0	46.0	16.3	15.0	N
11	3.12550	36.7	27.2	0.3	37.0	27.5	56.0	46.0	19.0	18.5	N
12	7.56350	41.2	33.2	0.5	41.7	33.7	60.0	50.0	18.3	16.3	N
13	11.04200	41.1	34.2	0.7	41.8	34.9	60.0	50.0	18.2	15.1	N
14	0.15018	52.2	36.1	0.2	52.4	36.3	66.0	56.0	13.6	19.7	L
15	0.19889	43.8	34.5	0.2	44.0	34.7	63.7	53.7	19.7	19.0	L
16	0.51149	40.4	32.4	0.2	40.6	32.6	56.0	46.0	15.4	13.4	L
17	0.60149	37.7	26.7	0.2	37.9	26.9	56.0	46.0	18.1	19.1	L
18	0.72476	40.4	31.6	0.2	40.6	31.8	56.0	46.0	15.4	14.2	L
19	0.91819	38.4	26.4	0.2	38.6	26.6	56.0	46.0	17.4	19.4	L
20	1.13900	38.9	28.4	0.3	39.2	28.7	56.0	46.0	16.8	17.3	L
21	1.28500	38.0	28.2	0.3	38.3	28.5	56.0	46.0	17.7	17.5	L
22	1.53350	38.7	28.6	0.3	39.0	28.9	56.0	46.0	17.0	17.1	L
23	2.38350	38.5	28.9	0.3	38.8	29.2	56.0	46.0	17.2	16.8	L
24	3.27400	36.1	27.2	0.3	36.4	27.5	56.0	46.0	19.6	18.5	L
25	7.49650	42.5	33.5	0.5	43.0	34.0	60.0	50.0	17.0	16.0	L
26	11.10850	41.5	33.7	0.7	42.2	34.4	60.0	50.0	17.8	15.6	L

< HDMI MODE >



Results of Conducted Emission

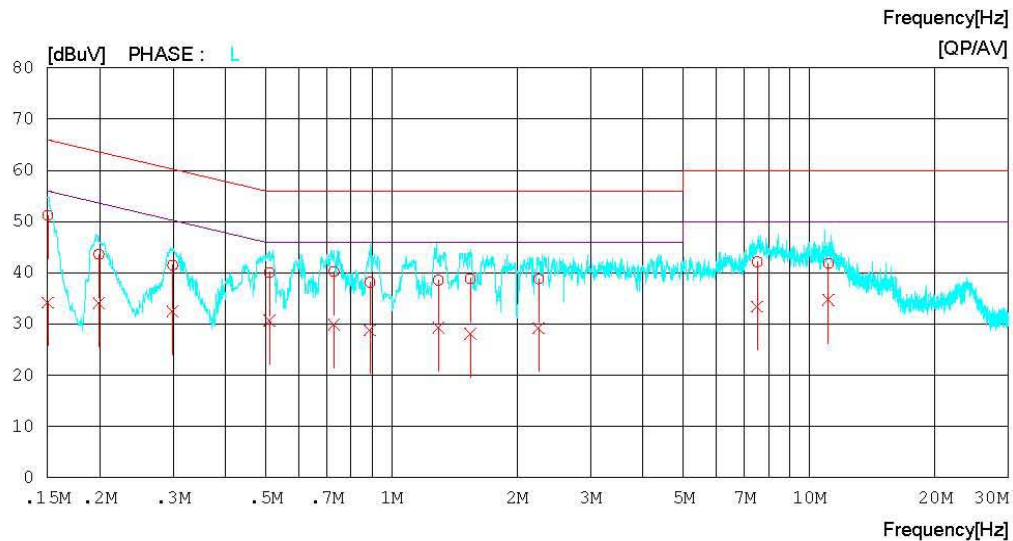
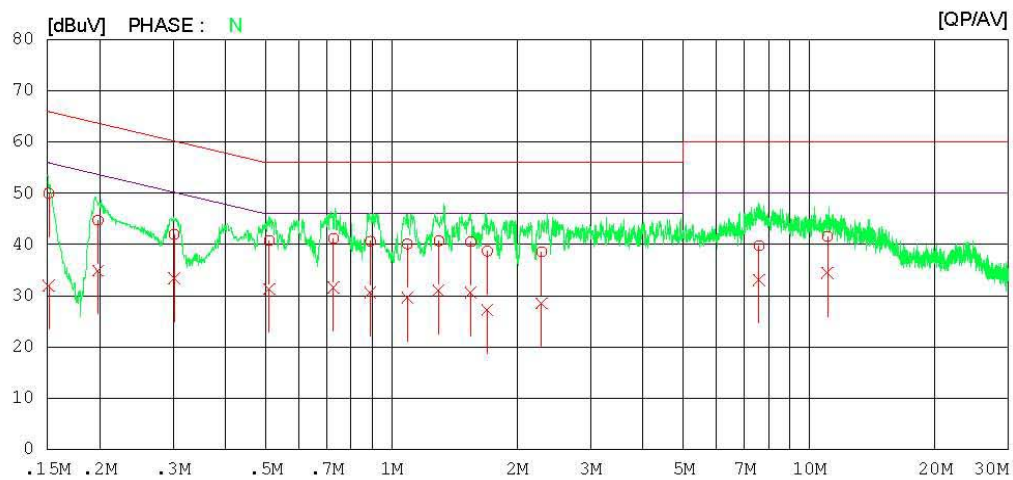
Digital EMC
Date : 2013-04-12

Model No. : 55LP645H-UH
Type :
Serial No. :
Test Condition : HDMI

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

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV



Results of Conducted Emission

Digital EMC
Date : 2013-04-12

Model No. : 55LP645H-UH
Type :
Serial No. :
Test Condition : HDMI

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi. : 20 °C 37 % 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	0.15116	49.8	31.8	0.2	50.0	32.0	65.9	55.9	15.9	23.9	N
2	0.19829	44.5	34.7	0.2	44.7	34.9	63.7	53.7	19.0	18.8	N
3	0.30193	41.8	33.2	0.2	42.0	33.4	60.2	50.2	18.2	16.8	N
4	0.50970	40.6	31.1	0.2	40.8	31.3	56.0	46.0	15.2	14.7	N
5	0.72650	41.0	31.4	0.2	41.2	31.6	56.0	46.0	14.8	14.4	N
6	0.89053	40.4	30.5	0.2	40.6	30.7	56.0	46.0	15.4	15.3	N
7	1.09150	39.8	29.3	0.3	40.1	29.6	56.0	46.0	15.9	16.4	N
8	1.29850	40.4	30.7	0.3	40.7	31.0	56.0	46.0	15.3	15.0	N
9	1.54800	40.2	30.3	0.3	40.5	30.6	56.0	46.0	15.5	15.4	N
10	1.69650	38.4	26.9	0.3	38.7	27.2	56.0	46.0	17.3	18.8	N
11	2.28800	38.3	28.2	0.3	38.6	28.5	56.0	46.0	17.4	17.5	N
12	7.58500	39.2	32.5	0.5	39.7	33.0	60.0	50.0	20.3	17.0	N
13	11.06300	40.8	33.7	0.7	41.5	34.4	60.0	50.0	18.5	15.6	N
14	0.15055	51.0	34.0	0.2	51.2	34.2	66.0	56.0	14.8	21.8	L
15	0.19934	43.4	33.9	0.2	43.6	34.1	63.6	53.6	20.0	19.5	L
16	0.29930	41.3	32.3	0.2	41.5	32.5	60.3	50.3	18.8	17.8	L
17	0.51016	39.9	30.5	0.2	40.1	30.7	56.0	46.0	15.9	15.3	L
18	0.72848	40.0	29.7	0.2	40.2	29.9	56.0	46.0	15.8	16.1	L
19	0.88825	38.0	28.6	0.2	38.2	28.8	56.0	46.0	17.8	17.2	L
20	1.29500	38.3	29.0	0.3	38.6	29.3	56.0	46.0	17.4	16.7	L
21	1.54450	38.6	27.8	0.3	38.9	28.1	56.0	46.0	17.1	17.9	L
22	2.25100	38.5	29.0	0.3	38.8	29.3	56.0	46.0	17.2	16.7	L
23	7.50700	41.7	32.9	0.5	42.2	33.4	60.0	50.0	17.8	16.6	L
24	11.11800	41.1	34.0	0.7	41.8	34.7	60.0	50.0	18.2	15.3	L

< USB MODE >



Results of Conducted Emission

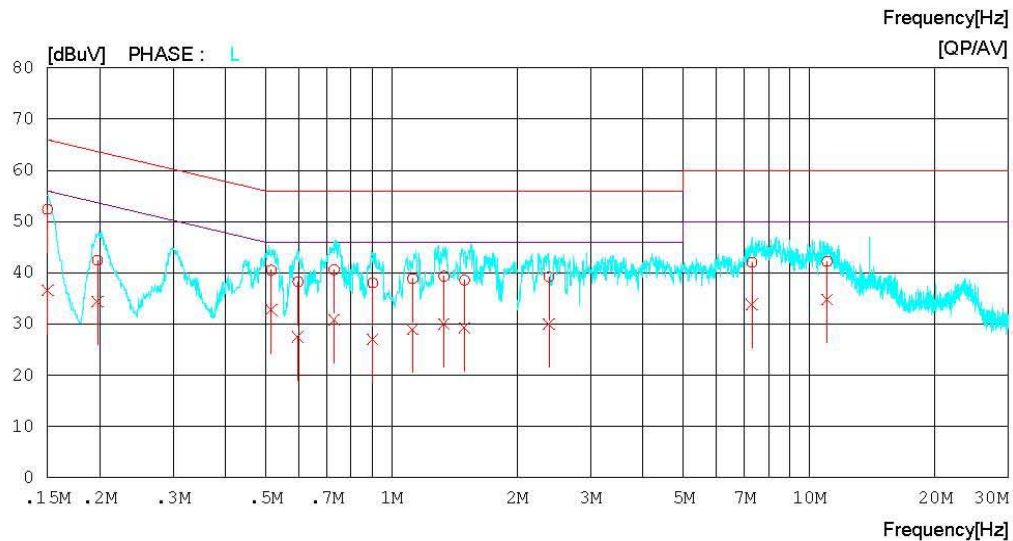
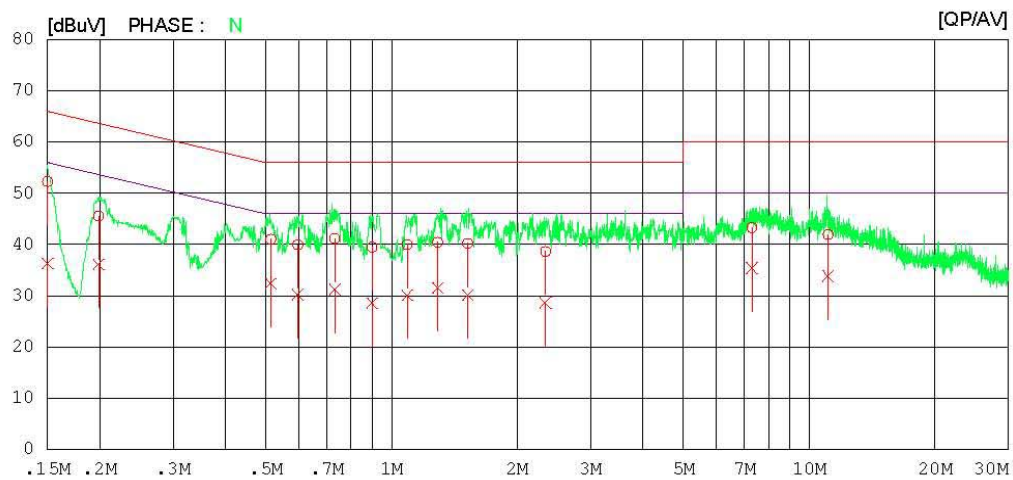
Digital EMC
Date : 2013-04-12

Model No. : 55LP645H-UH
Type :
Serial No. :
Test Condition : USB

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

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV



Results of Conducted Emission

Digital EMC
Date : 2013-04-12

Model No. : 55LP645H-UH
Type :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi. : 20 °C 37 % 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	0.15012	52.1	36.1	0.2	52.3	36.3	66.0	56.0	13.7	19.7	N
2	0.19913	45.3	35.9	0.2	45.5	36.1	63.6	53.6	18.1	17.5	N
3	0.51446	40.8	32.1	0.2	41.0	32.3	56.0	46.0	15.0	13.7	N
4	0.59680	39.7	30.0	0.2	39.9	30.2	56.0	46.0	16.1	15.8	N
5	0.73181	41.0	31.0	0.2	41.2	31.2	56.0	46.0	14.8	14.8	N
6	0.89918	39.3	28.3	0.2	39.5	28.5	56.0	46.0	16.5	17.5	N
7	1.09100	39.7	29.8	0.3	40.0	30.1	56.0	46.0	16.0	15.9	N
8	1.29100	40.1	31.2	0.3	40.4	31.5	56.0	46.0	15.6	14.5	N
9	1.52200	39.9	29.8	0.3	40.2	30.1	56.0	46.0	15.8	15.9	N
10	2.33900	38.3	28.3	0.3	38.6	28.6	56.0	46.0	17.4	17.4	N
11	7.29200	42.8	34.9	0.5	43.3	35.4	60.0	50.0	16.7	14.6	N
12	11.10900	41.2	33.1	0.7	41.9	33.8	60.0	50.0	18.1	16.2	N
13	0.15012	52.2	36.4	0.2	52.4	36.6	66.0	56.0	13.6	19.4	L
14	0.19768	42.3	34.2	0.2	42.5	34.4	63.7	53.7	21.2	19.3	L
15	0.51550	40.3	32.5	0.2	40.5	32.7	56.0	46.0	15.5	13.3	L
16	0.59726	38.1	27.3	0.2	38.3	27.5	56.0	46.0	17.7	18.5	L
17	0.72885	40.4	30.6	0.2	40.6	30.8	56.0	46.0	15.4	15.2	L
18	0.90139	37.8	26.8	0.2	38.0	27.0	56.0	46.0	18.0	19.0	L
19	1.12400	38.6	28.7	0.3	38.9	29.0	56.0	46.0	17.1	17.0	L
20	1.33550	39.0	29.7	0.3	39.3	30.0	56.0	46.0	16.7	16.0	L
21	1.49550	38.3	28.9	0.3	38.6	29.2	56.0	46.0	17.4	16.8	L
22	2.38300	38.9	29.7	0.3	39.2	30.0	56.0	46.0	16.8	16.0	L
23	7.29400	41.6	33.4	0.5	42.1	33.9	60.0	50.0	17.9	16.1	L
24	11.04050	41.5	34.1	0.7	42.2	34.8	60.0	50.0	17.8	15.2	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 (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

Test Result

< DSUB MODE_30 MHz ~ 1 GHz >

RADIATED EMISSION

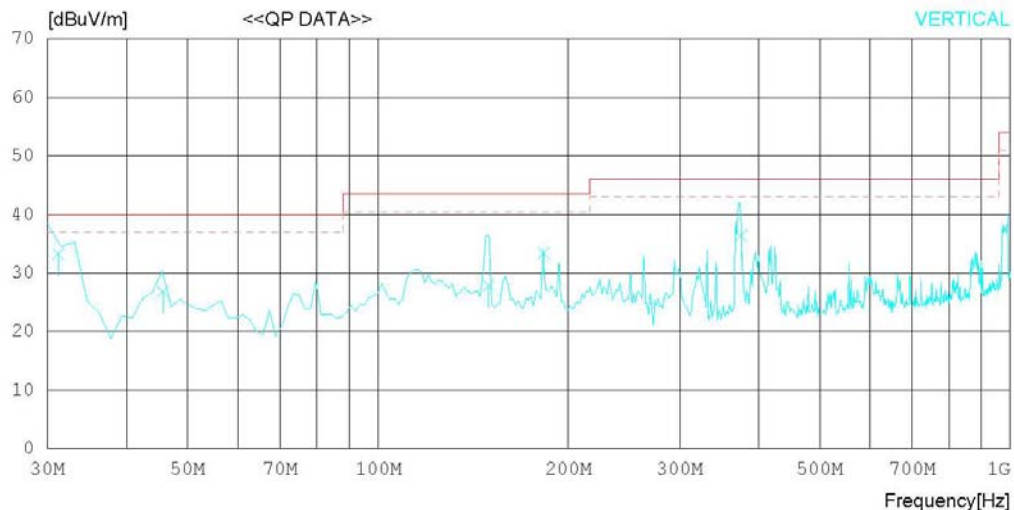
Date : 2013-04-15

Model Name : 55LP645H-UH
Model No. :
Serial No. :
Test Condition : DSUB

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 17 °C 32 % R.H.
Operator :

Memo :

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



RADIATED EMISSION

Date : 2013-04-15

Model Name : 55LP645H-UH	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 17 °C 32 % R.H.
Test Condition : DSUB	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	79.961	44.7	7.2	1.6	24.3	29.2	40.0	10.8	232	112
2	182.766	47.3	9.7	2.2	24.0	35.2	43.5	8.3	100	98
3	262.731	46.7	13.0	2.6	23.7	38.6	46.0	7.4	100	232
4	331.276	45.7	14.5	3.1	23.6	39.7	46.0	6.3	100	208
5	375.225	38.6	15.5	3.4	23.6	33.9	46.0	12.1	100	358
6	415.865	40.1	16.2	3.5	23.4	36.4	46.0	9.6	100	265
----- Vertical -----										
7	31.196	38.9	17.2	0.9	23.8	33.2	40.0	6.8	100	225
8	45.689	36.9	13.1	1.1	24.3	26.8	40.0	13.2	100	256
9	149.696	40.0	10.4	1.7	24.2	27.9	43.5	15.6	100	318
10	182.777	45.5	9.7	2.2	24.0	33.4	43.5	10.1	100	278
11	375.237	41.1	15.5	3.4	23.6	36.4	46.0	9.6	100	157

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

RADIATED EMISSION

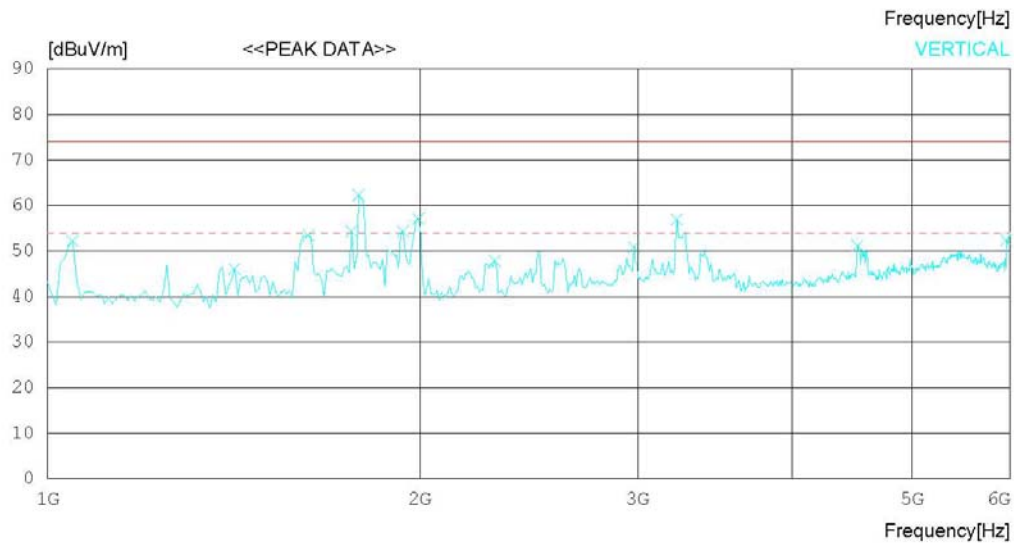
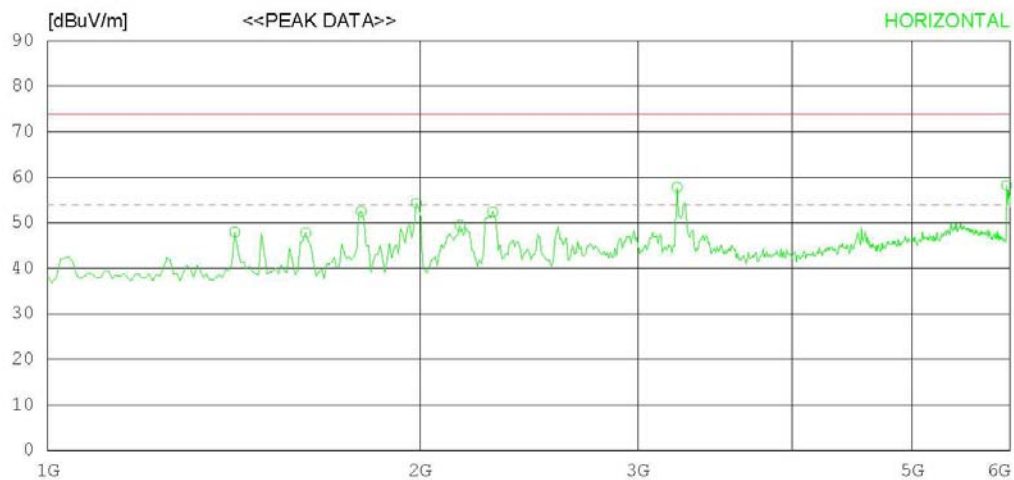
Date : 2013-04-16

Model Name : 55LP645H-UH
Model No. :
Serial No. :
Test Condition : DSUB

Reference No. :
Power Supply : 120V 60Hz
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 : 2013-04-16

Model Name : 55LP645H-UH	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 20 °C 37 % R.H.
Test Condition : DSUB	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	1416.667	59.9	24.5	3.9	40.3	48.0	74.0	26	100	145
2	1616.987	58.9	24.6	4.2	39.9	47.8	74.0	26.2	100	358
3	1793.269	63.1	24.6	4.5	39.7	52.5	74.0	21.5	100	358
4	1985.577	64.5	24.6	4.7	39.5	54.3	74.0	19.7	100	58
5	2153.847	58.5	25.4	4.9	39.4	49.4	74.0	24.6	100	203
6	2290.067	60.6	26.2	5.0	39.4	52.4	74.0	21.6	100	358
7	3227.581	62.2	28.9	5.9	39.2	57.8	74.0	16.2	100	237
8	5959.937	56.4	32.1	8.4	38.7	58.2	74.0	15.8	100	72
----- Vertical -----										
9	1048.077	66.0	23.9	3.4	41.1	52.2	74.0	21.8	100	1
10	1416.667	58.0	24.5	3.9	40.3	46.1	74.0	27.9	100	172
11	1625.000	64.5	24.6	4.2	39.9	53.4	74.0	20.6	100	1
12	1761.218	65.2	24.6	4.4	39.8	54.4	74.0	19.6	100	205
13	1785.256	73.0	24.6	4.4	39.7	62.3	74.0	11.7	100	203
14	1937.500	64.8	24.6	4.6	39.6	54.4	74.0	19.6	100	172
15	1993.589	67.3	24.6	4.7	39.5	57.1	74.0	16.9	100	1
16	2298.080	56.0	26.3	5.0	39.4	47.9	74.0	26.1	100	163
17	2979.180	55.6	28.9	5.7	39.3	50.9	74.0	23.1	100	1
18	3227.581	61.3	28.9	5.9	39.2	56.9	74.0	17.1	100	225
19	4517.652	51.7	31.0	7.1	38.6	51.2	74.0	22.8	100	1
20	5959.937	50.6	32.1	8.4	38.7	52.4	74.0	21.6	100	191

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

RADIATED EMISSION

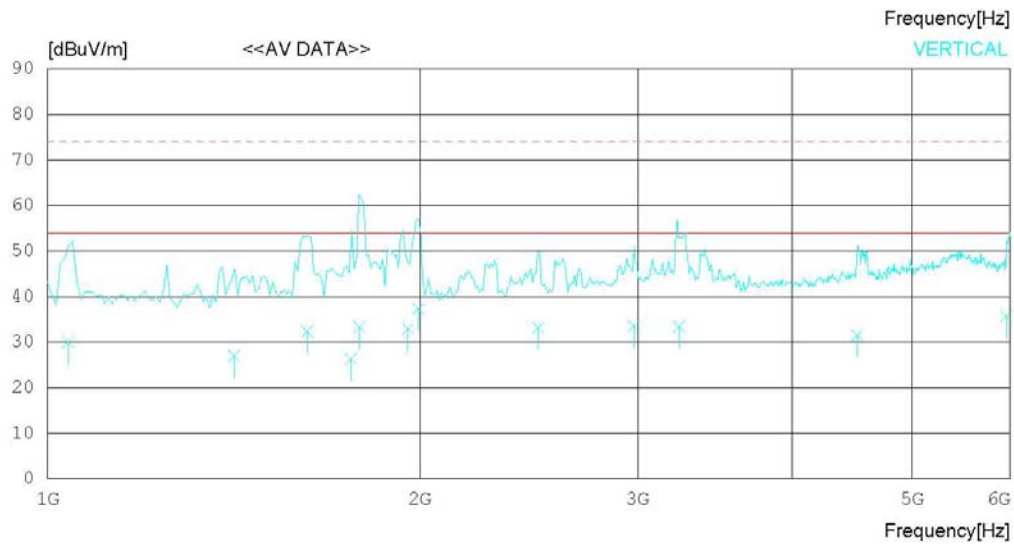
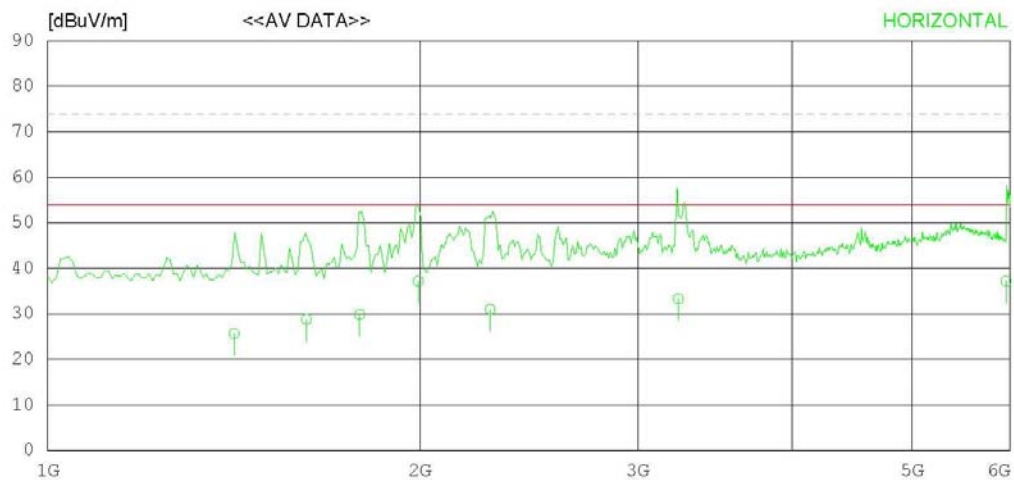
Date : 2013-04-16

Model Name : 55LP645H-UH
Model No. :
Serial No. :
Test Condition : DSUB

Reference No. :
Power Supply : 120V 60Hz
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 : 2013-04-16

Model Name : 55LP645H-UH	Reference No. :
Model No. :	Power Supply : 120V 60Hz
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	1415.359	37.6	24.5	3.9	40.3	25.7	54.0	28.3	100	234
2	1619.205	39.9	24.6	4.2	39.9	28.8	54.0	25.2	100	94
3	1787.683	40.6	24.6	4.4	39.7	29.9	54.0	24.1	100	358
4	1994.234	47.4	24.6	4.7	39.5	37.2	54.0	16.8	100	58
5	2280.202	39.2	26.2	5.0	39.4	31.0	54.0	23.0	100	358
6	3234.179	37.7	28.9	5.9	39.2	33.3	54.0	20.7	100	237
7	5953.551	35.4	32.1	8.4	38.7	37.2	54.0	16.8	100	72
----- Vertical -----										
8	1039.907	43.8	23.9	3.4	41.1	30.0	54.0	24.0	100	221
9	1415.359	38.9	24.5	3.9	40.3	27.0	54.0	27.0	100	202
10	1621.929	43.5	24.6	4.2	39.9	32.4	54.0	21.6	100	299
11	1759.645	37.1	24.6	4.4	39.8	26.3	54.0	27.7	100	205
12	1787.683	44.0	24.6	4.4	39.7	33.3	54.0	20.7	100	203
13	1955.929	43.2	24.6	4.7	39.5	33.0	54.0	21.0	100	172
14	1995.035	47.5	24.6	4.7	39.5	37.3	54.0	16.7	100	188
15	2494.500	39.9	27.4	5.2	39.3	33.2	54.0	20.8	100	163
16	2979.638	38.2	28.9	5.7	39.3	33.5	54.0	20.5	100	1
17	3238.888	37.8	28.9	5.9	39.2	33.4	54.0	20.6	100	225
18	4517.652	32.0	31.0	7.1	38.6	31.5	54.0	22.5	100	189
19	5958.051	33.9	32.1	8.4	38.7	35.7	54.0	18.3	100	158

< HDMI MODE_30 MHz ~ 1 GHz >

RADIATED EMISSION

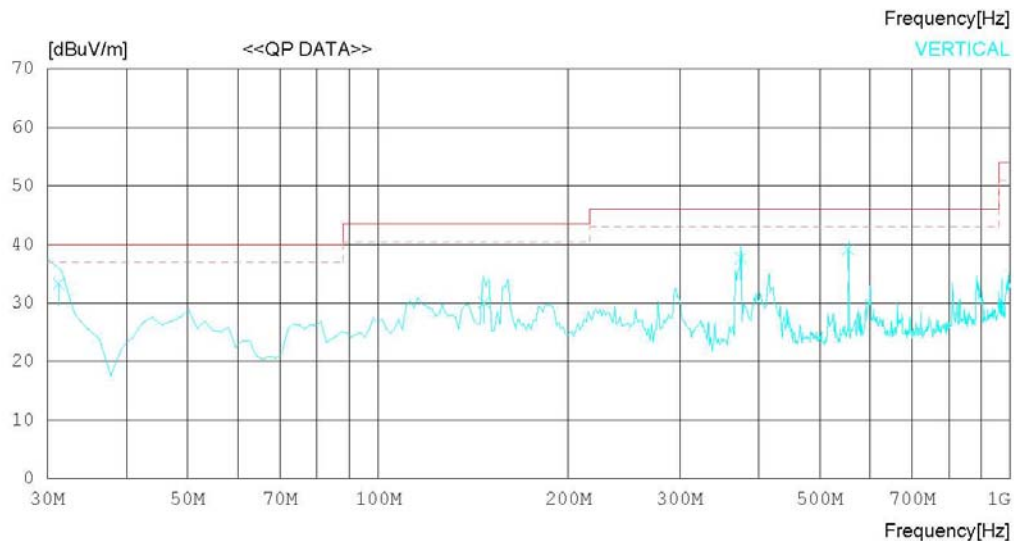
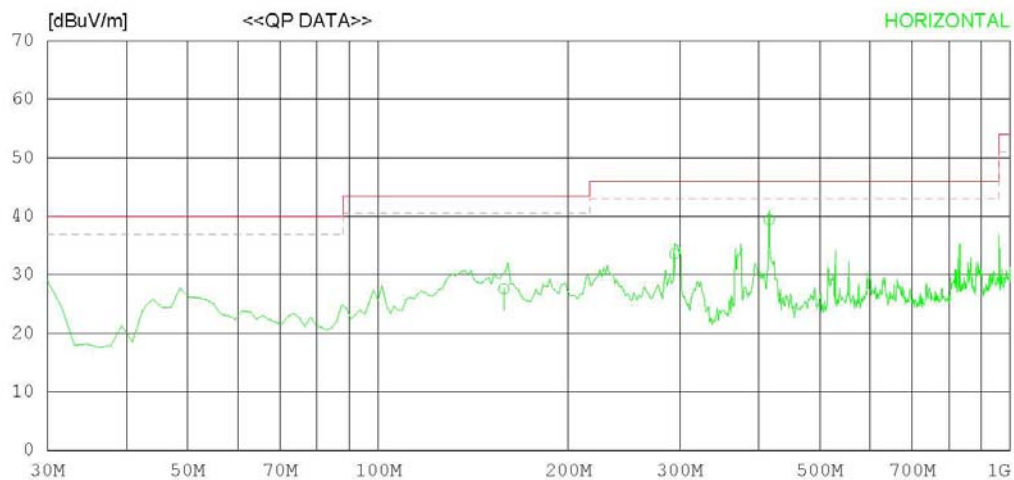
Date : 2013-04-15

Model Name : 55LP645H-UH
Model No. :
Serial No. :
Test Condition : HDMI

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 17 °C 32 % R.H.
Operator :

Memo :

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



RADIATED EMISSION

Date : 2013-04-15

Model Name : 55LP645H-UH
Model No. :
Serial No. :
Test Condition : HDMI

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 17 °C 32 % 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	158.063	39.7	10.2	1.9	24.2	27.6	43.5	15.9	171	150
2	294.388	40.8	13.6	2.8	23.6	33.6	46.0	12.4	100	314
3	415.864	43.1	16.2	3.5	23.4	39.4	46.0	6.6	100	1
----- Vertical -----										
4	31.250	39.0	17.2	0.9	23.8	33.3	40.0	6.7	100	225
5	147.231	42.1	10.6	1.7	24.2	30.2	43.5	13.3	100	37
6	375.138	42.4	15.5	3.4	23.6	37.7	46.0	8.3	202	148
7	554.487	40.3	18.1	3.8	23.0	39.2	46.0	6.8	100	223

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

RADIATED EMISSION

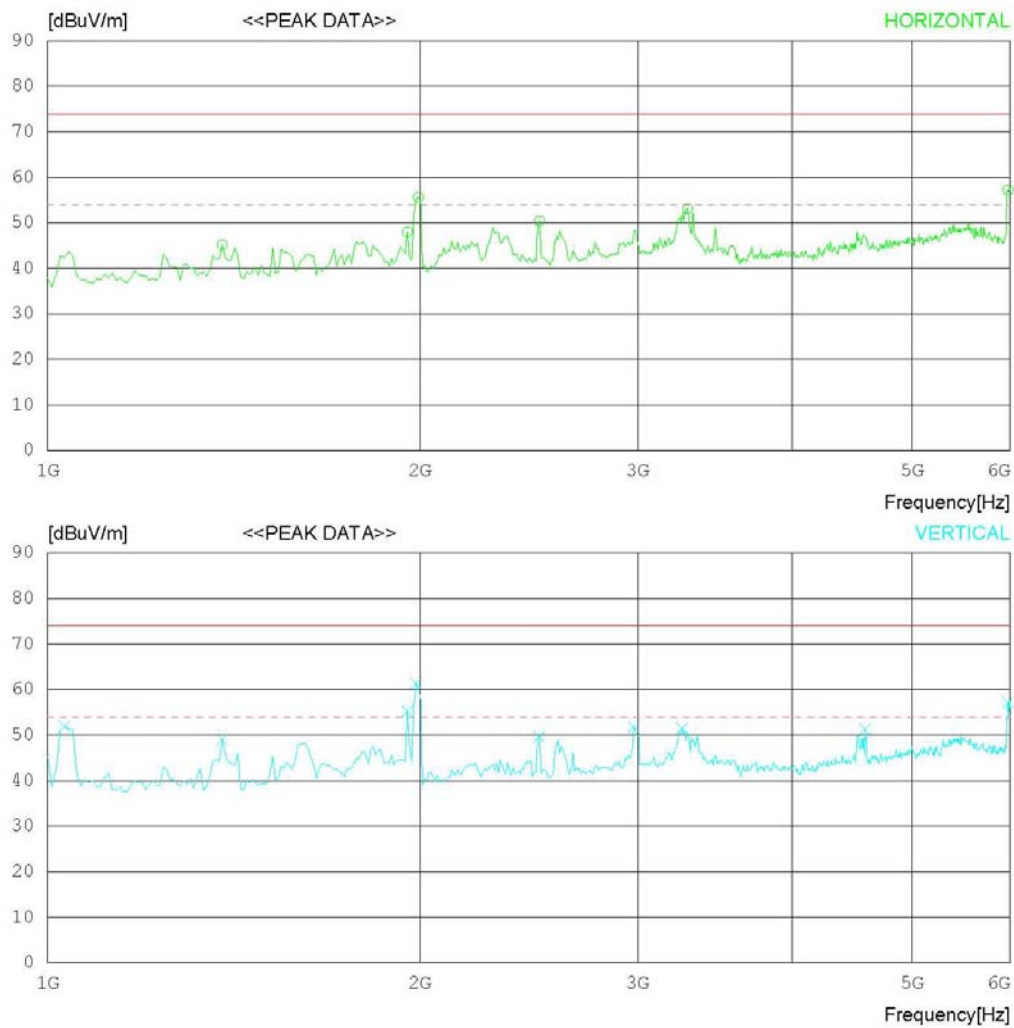
Date : 2013-04-16

Model Name : 55LP645H-UH
Model No. :
Serial No. :
Test Condition : HDMI

Reference No. :
Power Supply : 120V 60Hz
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 : 2013-04-16

Model Name : 55LP645H-UH	Reference No. :
Model No. :	Power Supply : 120V 60Hz
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	1384.615	57.1	24.5	3.9	40.3	45.2	74.0	28.8	100	115
2	1953.525	58.2	24.6	4.7	39.5	48.0	74.0	26	100	1
3	1993.589	65.8	24.6	4.7	39.5	55.6	74.0	18.4	100	1
4	2498.404	57.1	27.4	5.2	39.3	50.4	74.0	23.6	100	1
5	3291.685	57.3	28.9	6.0	39.1	53.1	74.0	20.9	100	1
6	5975.962	55.5	32.0	8.4	38.7	57.2	74.0	16.8	100	1
----- Vertical -----										
7	1032.051	65.7	23.9	3.4	41.1	51.9	74.0	22.1	100	201
8	1384.615	60.9	24.5	3.9	40.3	49.0	74.0	25	100	137
9	1953.525	65.4	24.6	4.7	39.5	55.2	74.0	18.8	100	358
10	1985.577	71.6	24.6	4.7	39.5	61.4	74.0	12.6	100	1
11	2498.404	56.4	27.4	5.2	39.3	49.7	74.0	24.3	100	358
12	2979.180	56.5	28.9	5.7	39.3	51.8	74.0	22.2	100	157
13	3259.633	55.9	28.9	5.9	39.2	51.5	74.0	22.5	100	358
14	4581.753	51.5	31.2	7.2	38.6	51.3	74.0	22.7	100	207
15	5975.962	55.4	32.0	8.4	38.7	57.1	74.0	16.9	100	167

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

RADIATED EMISSION

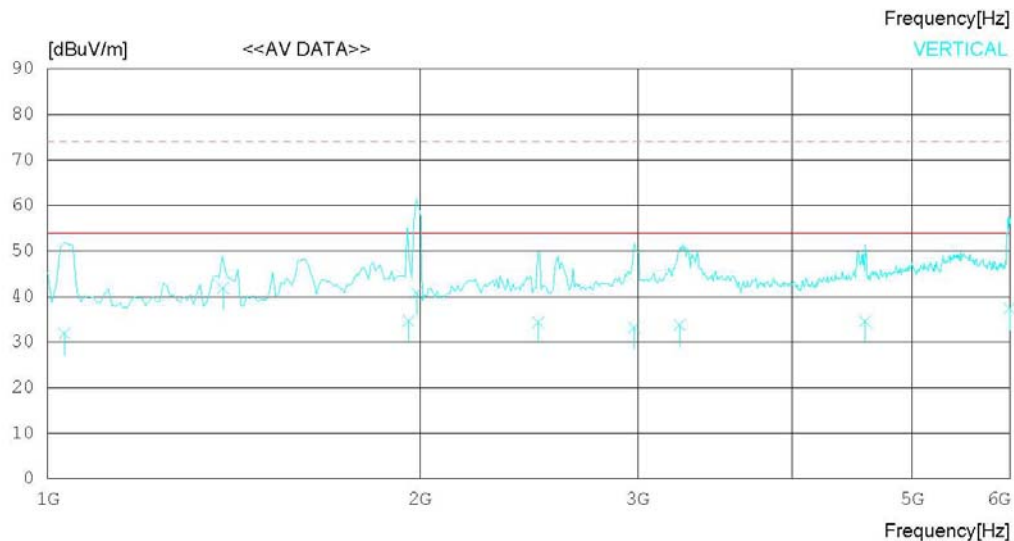
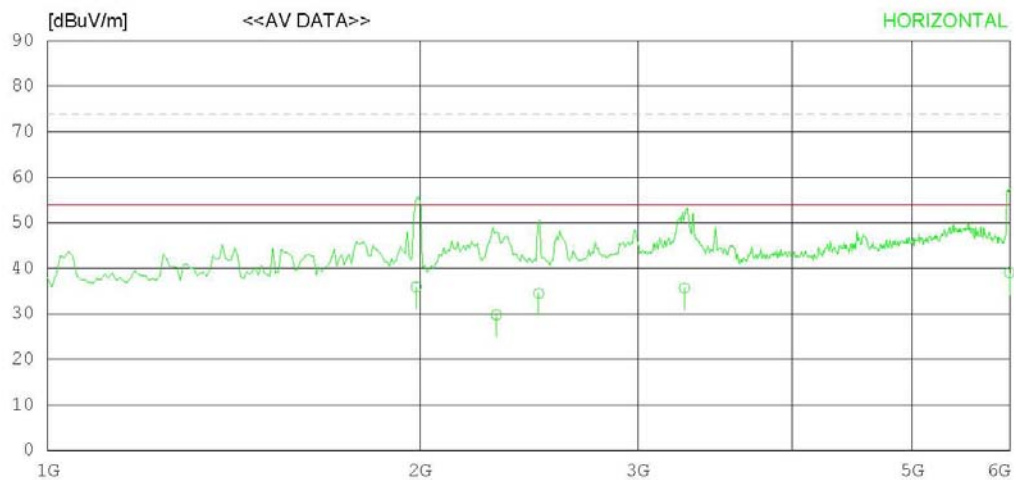
Date : 2013-04-16

Model Name : 55LP645H-UH
Model No. :
Serial No. :
Test Condition : HDMI

Reference No. :
Power Supply : 120V 60Hz
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 : 2013-04-16

Model Name : 55LP645H-UH	Reference No. :
Model No. :	Power Supply : 120V 60Hz
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	1985.897	46.1	24.6	4.7	39.5	35.9	54.0	18.1	100	78
2	2305.961	37.9	26.3	5.0	39.4	29.8	54.0	24.2	100	224
3	2495.000	41.2	27.4	5.2	39.3	34.5	54.0	19.5	100	201
4	3272.000	40.0	28.9	6.0	39.2	35.7	54.0	18.3	100	1
5	5992.756	37.4	31.9	8.4	38.7	39.0	54.0	15.0	100	311
----- Vertical -----										
6	1032.051	45.7	23.9	3.4	41.1	31.9	54.0	22.1	100	221
7	1386.217	53.7	24.5	3.9	40.3	41.8	54.0	12.2	100	194
8	1958.353	44.8	24.6	4.7	39.5	34.6	54.0	19.4	100	185
9	1988.686	51.0	24.6	4.7	39.5	40.8	54.0	13.2	100	321
10	2494.474	41.1	27.4	5.2	39.3	34.4	54.0	19.6	100	358
11	2978.356	37.9	28.9	5.7	39.3	33.2	54.0	20.8	100	266
12	3243.276	38.2	28.9	5.9	39.2	33.8	54.0	20.2	100	204
13	4581.753	34.8	31.2	7.2	38.6	34.6	54.0	19.4	100	210
14	5992.756	35.8	31.9	8.4	38.7	37.4	54.0	16.6	100	192

< USB MODE_30 MHz ~ 1 GHz >

RADIATED EMISSION

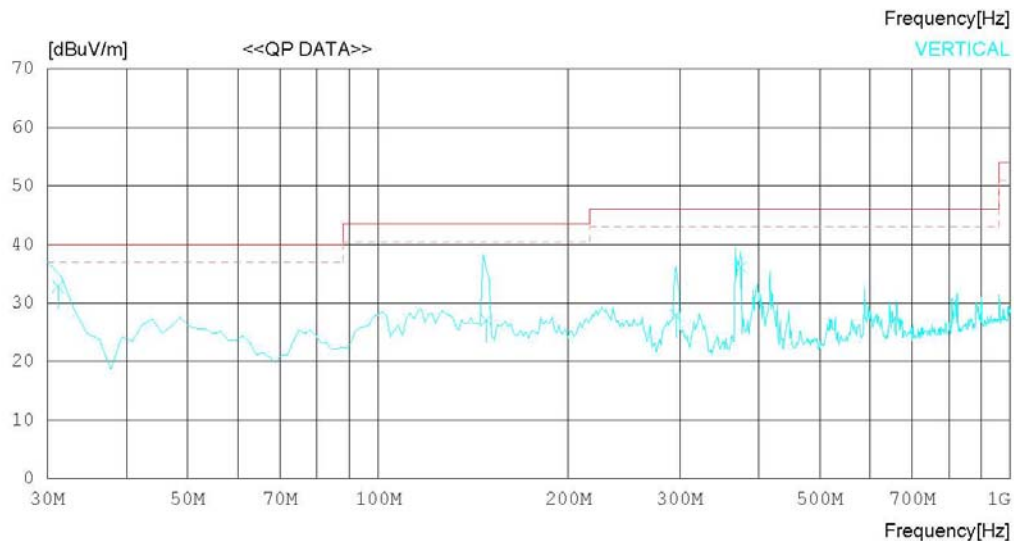
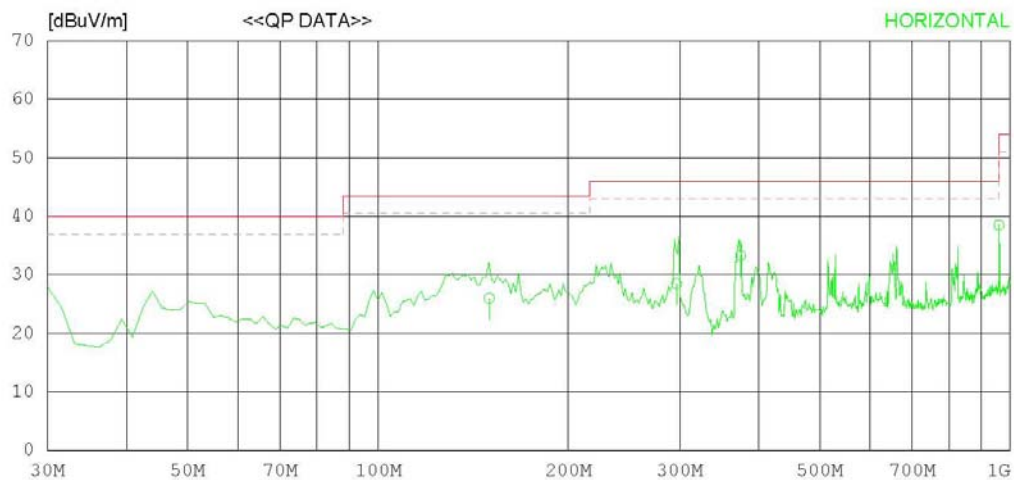
Date : 2013-04-15

Model Name : 55LP645H-UH
Model No. :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 17 °C 32 % R.H.
Operator :

Memo :

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



RADIATED EMISSION

Date : 2013-04-15

Model Name : 55LP645H-UH
Model No. :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 17 °C 32 % 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	149.888	38.1	10.4	1.7	24.2	26.0	43.5	17.5	100	131
2	296.494	35.6	13.7	2.8	23.6	28.5	46.0	17.5	224	145
3	374.753	38.0	15.5	3.4	23.6	33.3	46.0	12.7	100	213
4	959.988	34.1	21.7	5.4	22.7	38.5	46.0	7.5	100	78
----- Vertical -----										
5	31.186	38.4	17.3	0.9	23.8	32.8	40.0	7.2	100	358
6	148.362	39.1	10.5	1.7	24.2	27.1	43.5	16.4	100	355
7	296.391	35.0	13.7	2.8	23.6	27.9	46.0	18.1	207	1
8	374.727	40.8	15.5	3.4	23.6	36.1	46.0	9.9	200	3

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

RADIATED EMISSION

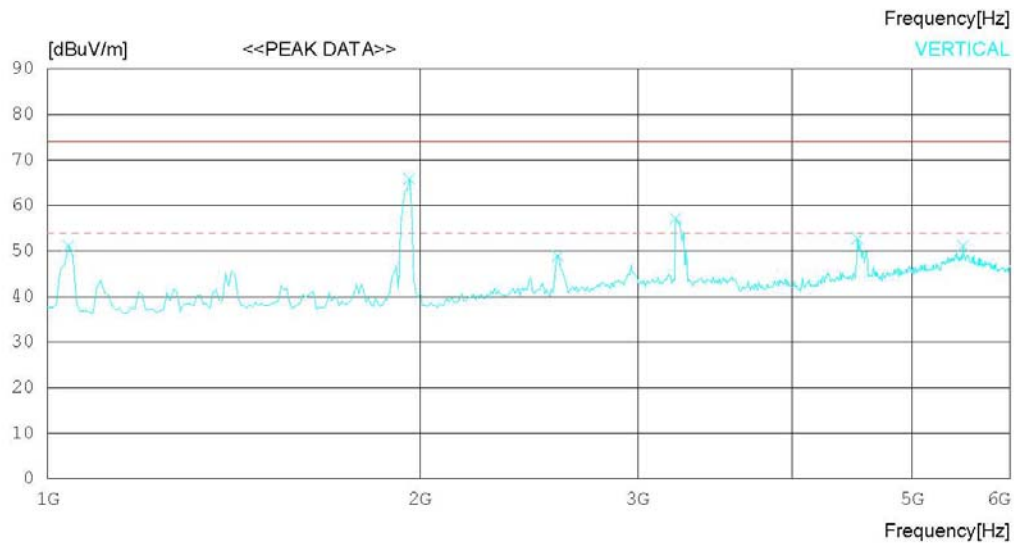
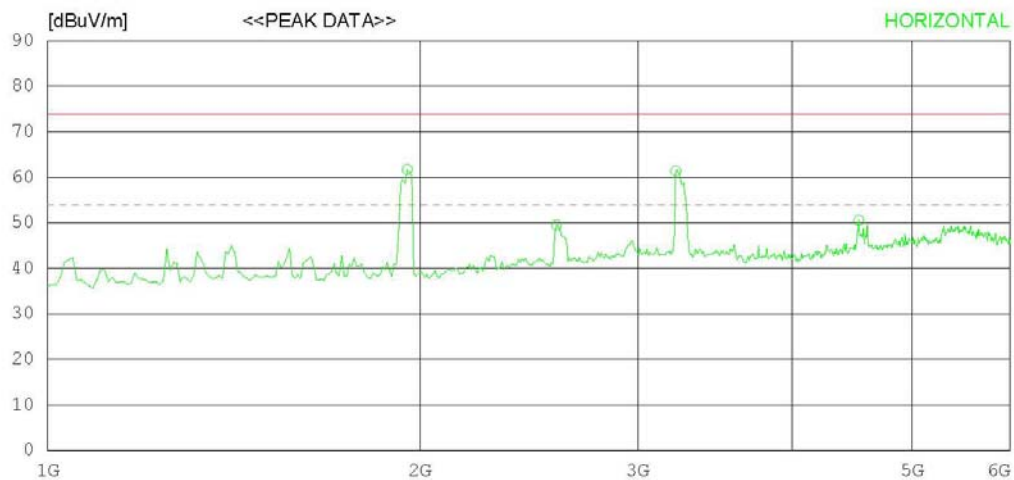
Date : 2013-04-16

Model Name : 55LP645H-UH
Model No. :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120V 60Hz
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 : 2013-04-16

Model Name : 55LP645H-UH	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 20 °C 37 % 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(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	1953.525	71.9	24.6	4.7	39.5	61.7	74.0	12.3	100	211
2	2578.533	55.8	27.7	5.3	39.3	49.5	74.0	24.5	100	149
3	3219.568	65.8	28.9	5.9	39.2	61.4	74.0	12.6	100	231
4	4525.665	50.9	31.0	7.2	38.6	50.5	74.0	23.5	100	358
----- Vertical -----										
5	1040.064	64.9	23.9	3.4	41.1	51.1	74.0	22.9	100	1
6	1961.538	76.1	24.6	4.7	39.5	65.9	74.0	8.1	100	171
7	2586.546	55.2	27.7	5.3	39.3	48.9	74.0	25.1	100	201
8	3219.568	61.5	28.9	5.9	39.2	57.1	74.0	16.9	100	1
9	4517.652	53.2	31.0	7.1	38.6	52.7	74.0	21.3	100	1
10	5495.201	46.4	35.1	7.9	38.3	51.1	74.0	22.9	100	133

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

RADIATED EMISSION

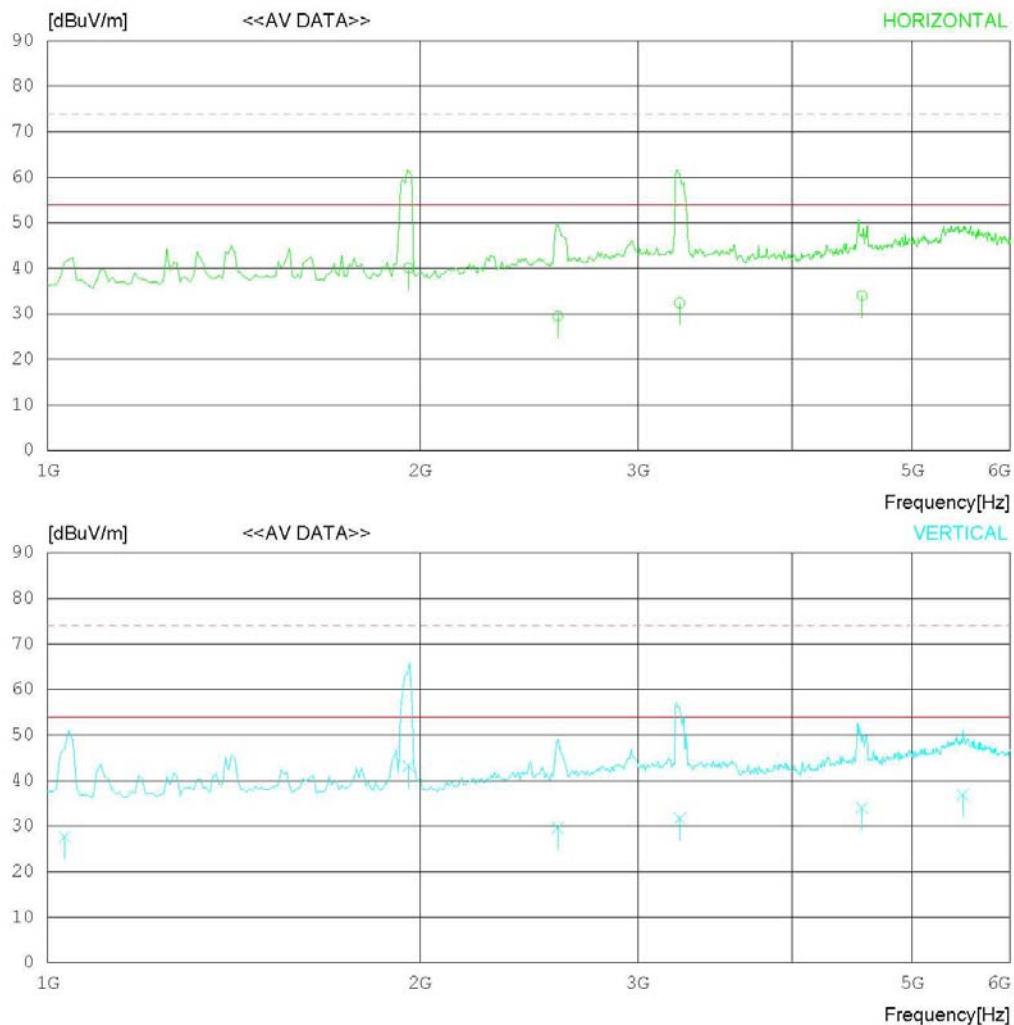
Date : 2013-04-16

Model Name : 55LP645H-UH
Model No. :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120V 60Hz
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 : 2013-04-16

Model Name : 55LP645H-UH	Reference No. :
Model No. :	Power Supply : 120V 60Hz
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	1957.833	50.3	24.6	4.7	39.5	40.1	54.0	13.9	100	211
2	2584.263	35.8	27.7	5.3	39.3	29.5	54.0	24.5	100	149
3	3242.577	36.8	28.9	5.9	39.2	32.4	54.0	21.6	100	178
4	4553.124	34.3	31.1	7.2	38.6	34.0	54.0	20.0	100	204
----- Vertical -----										
5	1032.788	41.5	23.9	3.4	41.1	27.7	54.0	26.3	100	32
6	1957.833	53.4	24.6	4.7	39.5	43.2	54.0	10.8	100	171
7	2584.263	35.9	27.7	5.3	39.3	29.6	54.0	24.4	100	201
8	3246.577	36.1	28.9	5.9	39.2	31.7	54.0	22.3	100	46
9	4553.124	34.3	31.1	7.2	38.6	34.0	54.0	20.0	100	1
10	5495.201	32.2	35.1	7.9	38.3	36.9	54.0	17.1	100	133

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	2013.02.28	2014.02.28
☐ 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	2013.02.27	2014.02.27
☒ 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
☒ PREAMPLIFIER	8449B	AGILENT	3008A01590	2013.02.27	2014.02.27
☐ 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	2013.02.27	2014.02.27
☐ 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	2013.02.28	2014.02.28

Appendix 2

Report Revision History

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