

EMC TEST REPORT

Test item : LED TV Monitor
Model No. : 42LP645H-UA
Order No. : DEMC1301-00385
Date of receipt : 2013-01-29
Test duration : 2013-02-12
Use of report : FCC CoC Marking
Date of Issue : 2013-02-18

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 : (18 ~ 19) °C,
Humidity : (34 ~ 37) % R.H.

Test result : ☒ Comply ☐ Not Comply

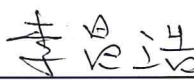
The test results presented in this test report are limited only to the sample supplied by applicant and
the use of this test report is inhibited other than its purpose.

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Tested by:

Reviewed by:


Assistant Manager
DaeHwa Eun


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.digitalemccom>

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.	42LP645H-UA
EUT Type	LED TV Monitor
Serial No	NONE
FCC ID	BEJ42LP645HUA
Type of Sample Tested	Pre-Production
High Frequency	Max 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)
720x400	31.46	70.08
640x480	31.46	59.94
800x600	37.87	60.31
1024x768	48.36	60.00
1360x768	47.71	60.01
1280x1024	63.98	60.02
1920x1080	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	02-12	18	37
Radiated Disturbance	02-12	19	34

4.3 Test result Summary

(1) Conducted Emission (USB MODE)

Frequency [MHz]	Phase	Result [dB μ V]	Detector	Limit [dB μ V]	Margin [dB]
0.41815	L1	37.4	Average	47.5	10.1

(2) Radiated Emission (USB MODE)

Frequency [MHz]	Pol.	Result [dB(μ V/m)]	Detector	Limit [dB(μ V/m)]	Margin [dB]
651.256	V	39.8	Quasi-Peak	46.0	6.2

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, 1920x1080 Resolution
- HDMI MODE : 'H' Pattern mode, 1920x1080 Resolution
- 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	VOSTRO220	G3RZKBX	DELL INC.	POWER	1.6	Not use	Non-shield	Plastic	DOC
				PS/2	1.8	Not use	Non-shield		
				PS/2	1.6	Not use	Non-shield		
				USB	1.8	Not use	Non-shield		
				HDMI	1.8	Not use	Shield		
				DSUB	1.7	Not use	Shield		
KEYBOARD	SKG-210P	TAKSC12256D	MONITEREY INTERNATIONAL CORP	PS/2	1.8	Not use	Non-shield	Plastic	DOC
MOUSE	SML-510PB	M5PBTAKS60 3018D	MICROSOFT CORPORATION	PS/2	1.6	Not use	Non-shield	Plastic	DOC
CD/DVD PLAYER	DVP-NS92V	2001499	SONY EMCS	POWER	1.7	Not use	Non-shield	Plastic	VER
				AV	1.8	Not use	Non-shield		
USB MEMORY	SDCZ37-004G	N/A	SANDISK	USB	-	-	-	Plastic	DOC
PRINTER	EPSON AcuLaser	LWTZ181070	EPSON	POWER	1.8	Not use	Non-shield	Plastic	DOC
				USB	2.0	Not use	Non-shield		
Remote control	AKB73755414	N/A	HANSUNG ELECTRONIC	-	-	-	-	-	-
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

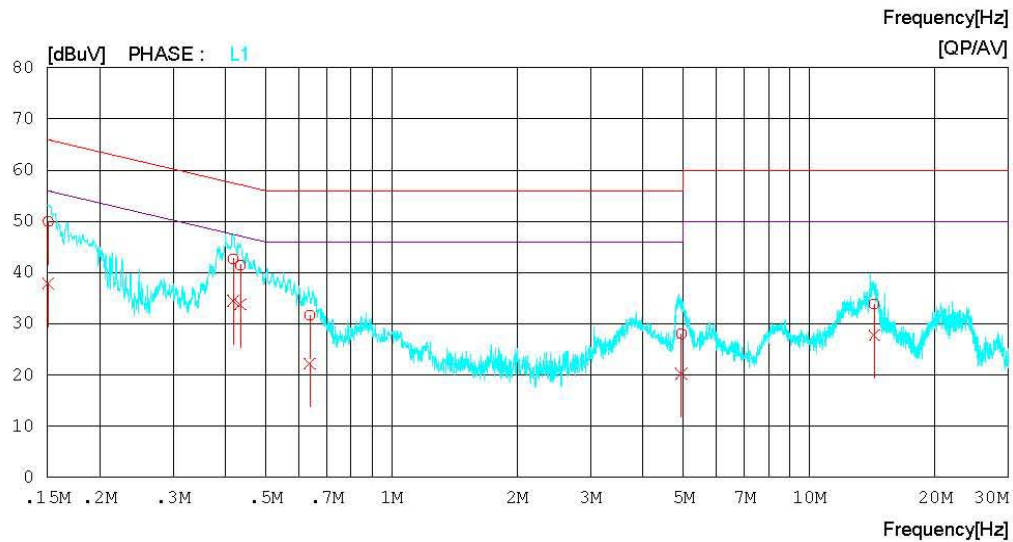
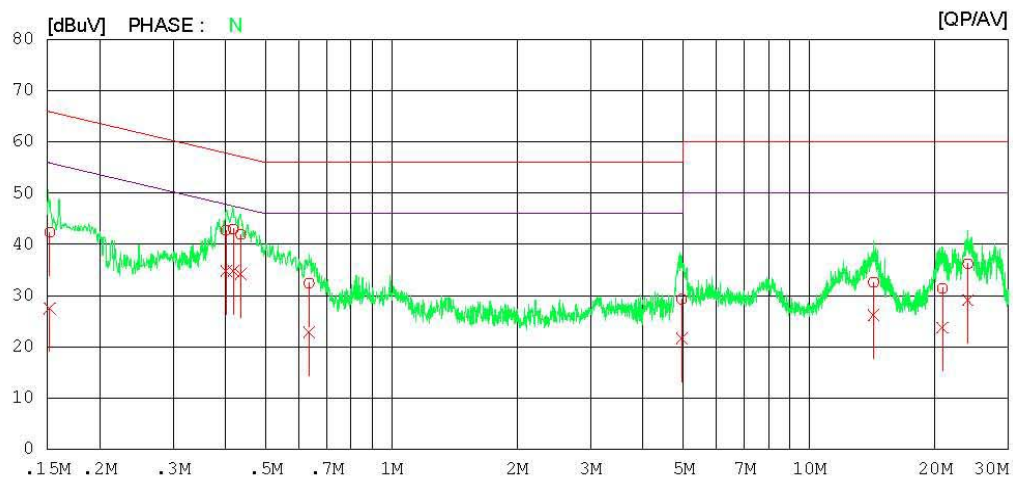
Digital EMC
Date : 2013-02-12

Model No. : 42LP645H-UA
Type :
Serial No. :
Test Condition : DSUB

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi. : 18 °C 37 % R.H.
Operator :

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV



Results of Conducted Emission

Digital EMC
Date : 2013-02-12

Model No. : 42LP645H-UA
Type :
Serial No. :
Test Condition : DSUB

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi. : 18 °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	0.15197	42.2	27.3	0.2	42.4	27.5	65.9	55.9	23.5	28.4	N
2	0.40178	42.6	34.6	0.2	42.8	34.8	57.8	47.8	15.0	13.0	N
3	0.41809	42.8	34.6	0.2	43.0	34.8	57.5	47.5	14.5	12.7	N
4	0.43534	41.7	34.0	0.2	41.9	34.2	57.2	47.2	15.3	13.0	N
5	0.63513	32.2	22.6	0.2	32.4	22.8	56.0	46.0	23.6	23.2	N
6	4.95550	28.9	21.2	0.4	29.3	21.6	56.0	46.0	26.7	24.4	N
7	14.26550	31.9	25.5	0.7	32.6	26.2	60.0	50.0	27.4	23.8	N
8	20.83750	30.5	22.8	0.9	31.4	23.7	60.0	50.0	28.6	26.3	N
9	23.99150	35.2	28.1	1.0	36.2	29.1	60.0	50.0	23.8	20.9	N
10	0.15067	49.8	37.7	0.2	50.0	37.9	66.0	56.0	16.0	18.1	L1
11	0.41798	42.5	34.3	0.2	42.7	34.5	57.5	47.5	14.8	13.0	L1
12	0.43493	41.3	33.6	0.2	41.5	33.8	57.2	47.2	15.7	13.4	L1
13	0.63709	31.5	22.0	0.2	31.7	22.2	56.0	46.0	24.3	23.8	L1
14	4.94550	27.6	19.9	0.4	28.0	20.3	56.0	46.0	28.0	25.7	L1
15	14.31800	33.2	27.1	0.7	33.9	27.8	60.0	50.0	26.1	22.2	L1

< HDMI MODE >



Results of Conducted Emission

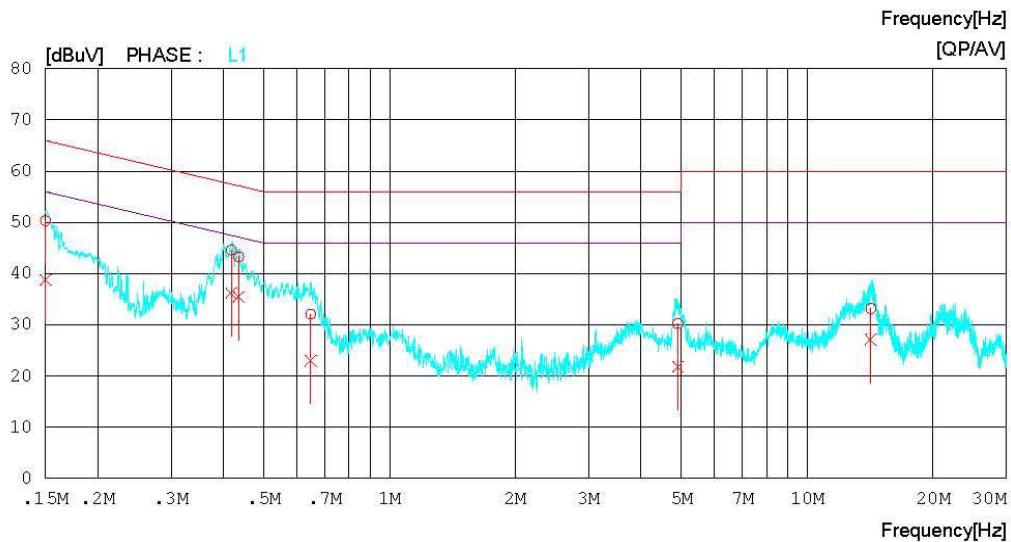
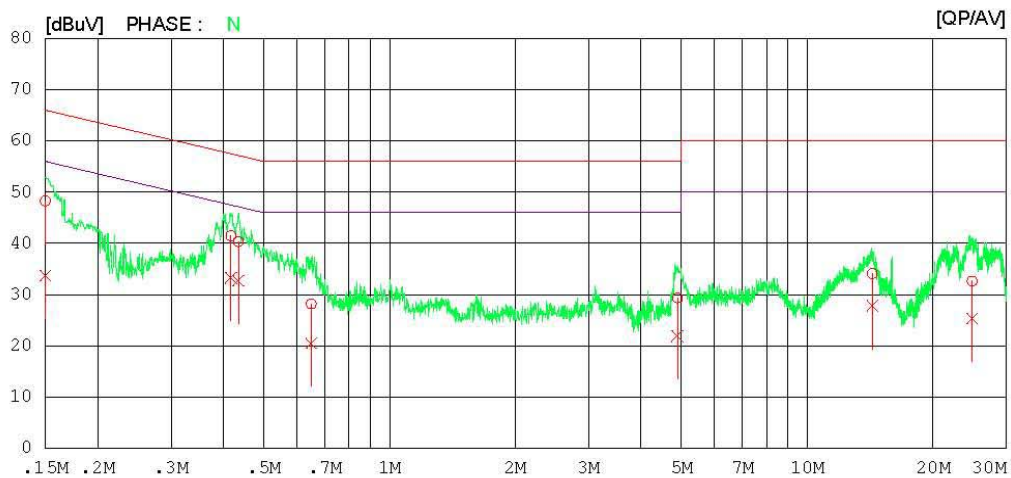
Digital EMC
Date : 2013-02-12

Model No. : 42LP645H-UA
Type :
Serial No. :
Test Condition : HDMI

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi. : 18 °C 37 % R.H.
Operator :

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV



Results of Conducted Emission

Digital EMC
Date : 2013-02-12

Model No. : 42LP645H-UA
Type :
Serial No. :
Test Condition : HDMI

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi. : 18 °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	48.1	33.5	0.2	48.3	33.7	66.0	56.0	17.7	22.3	N
2	0.41755	41.3	33.0	0.2	41.5	33.2	57.5	47.5	16.0	14.3	N
3	0.43459	40.1	32.5	0.2	40.3	32.7	57.2	47.2	16.9	14.5	N
4	0.64988	28.0	20.3	0.2	28.2	20.5	56.0	46.0	27.8	25.5	N
5	4.89450	28.9	21.5	0.4	29.3	21.9	56.0	46.0	26.7	24.1	N
6	14.32500	33.4	27.1	0.7	34.1	27.8	60.0	50.0	25.9	22.2	N
7	24.82400	31.6	24.4	1.0	32.6	25.4	60.0	50.0	27.4	24.6	N
8	0.15006	50.1	38.6	0.2	50.3	38.8	66.0	56.0	15.7	17.2	L1
9	0.41841	44.4	36.0	0.2	44.6	36.2	57.5	47.5	12.9	11.3	L1
10	0.43564	43.1	35.2	0.2	43.3	35.4	57.1	47.1	13.8	11.7	L1
11	0.64744	31.9	22.8	0.2	32.1	23.0	56.0	46.0	23.9	23.0	L1
12	4.90200	29.8	21.4	0.4	30.2	21.8	56.0	46.0	25.8	24.2	L1
13	14.20400	32.5	26.4	0.7	33.2	27.1	60.0	50.0	26.8	22.9	L1

< USB MODE >



Results of Conducted Emission

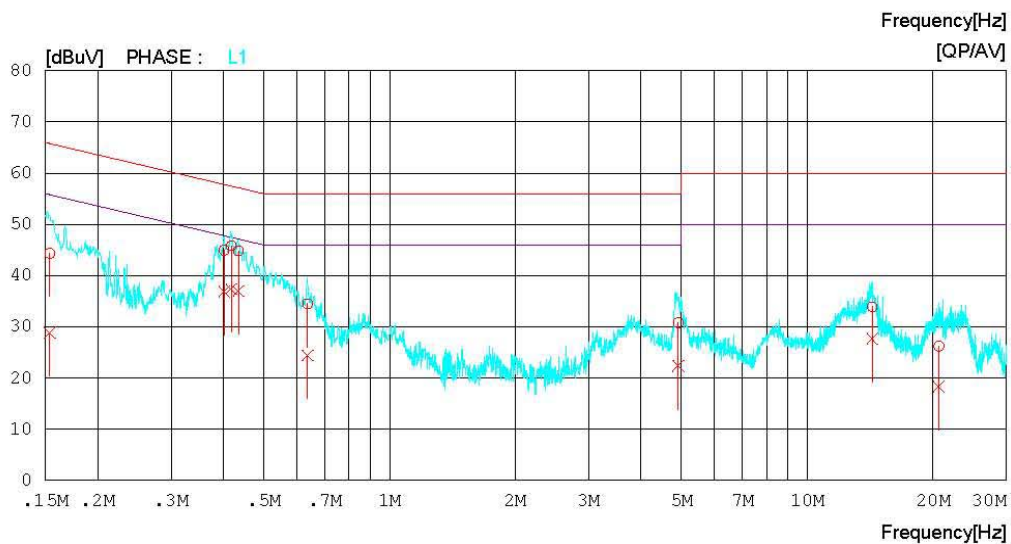
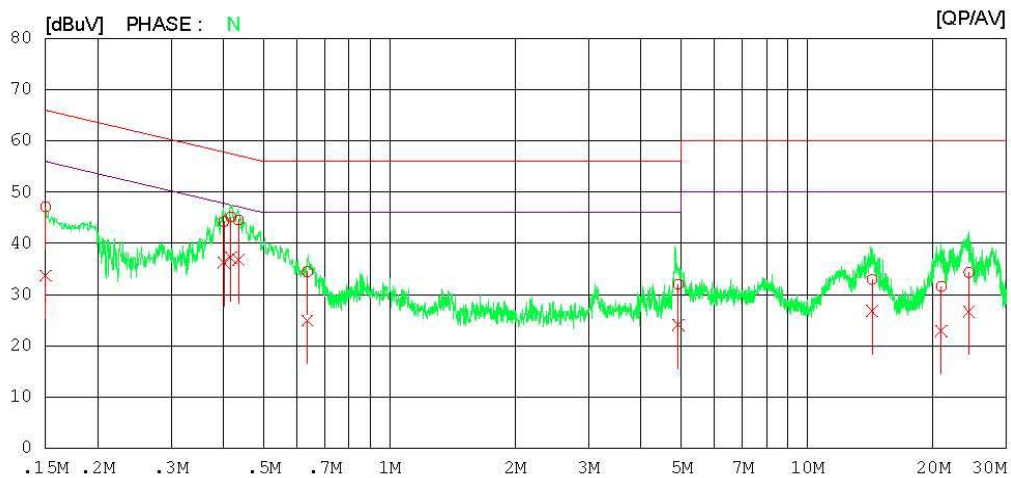
Digital EMC
Date : 2013-02-12

Model No. : 42LP645H-UA
Type :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi. : 18 °C 37 % R.H.
Operator :

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV



Results of Conducted Emission

Digital EMC
Date : 2013-02-12

Model No. : 42LP645H-UA
Type :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi. : 18 °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	0.15016	46.9	33.5	0.2	47.1	33.7	66.0	56.0	18.9	22.3	N
2	0.40113	44.0	36.0	0.2	44.2	36.2	57.8	47.8	13.6	11.6	N
3	0.41723	44.9	37.0	0.2	45.1	37.2	57.5	47.5	12.4	10.3	N
4	0.43488	44.4	36.6	0.2	44.6	36.8	57.2	47.2	12.6	10.4	N
5	0.63614	34.3	24.8	0.2	34.5	25.0	56.0	46.0	21.5	21.0	N
6	4.91550	31.6	23.7	0.4	32.0	24.1	56.0	46.0	24.0	21.9	N
7	14.30950	32.2	26.1	0.7	32.9	26.8	60.0	50.0	27.1	23.2	N
8	20.94850	30.7	22.0	0.9	31.6	22.9	60.0	50.0	28.4	27.1	N
9	24.40250	33.3	25.7	1.0	34.3	26.7	60.0	50.0	25.7	23.3	N
10	0.15371	44.1	28.7	0.2	44.3	28.9	65.8	55.8	21.5	26.9	L1
11	0.40188	44.8	36.7	0.2	45.0	36.9	57.8	47.8	12.8	10.9	L1
12	0.41815	45.6	37.2	0.2	45.8	37.4	57.5	47.5	11.7	10.1	L1
13	0.43528	44.6	36.8	0.2	44.8	37.0	57.2	47.2	12.4	10.2	L1
14	0.63649	34.3	24.2	0.2	34.5	24.4	56.0	46.0	21.5	21.6	L1
15	4.91550	30.4	22.0	0.4	30.8	22.4	56.0	46.0	25.2	23.6	L1
16	14.31800	33.2	27.0	0.7	33.9	27.7	60.0	50.0	26.1	22.3	L1
17	20.67950	25.3	17.5	0.9	26.2	18.4	60.0	50.0	33.8	31.6	L1

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

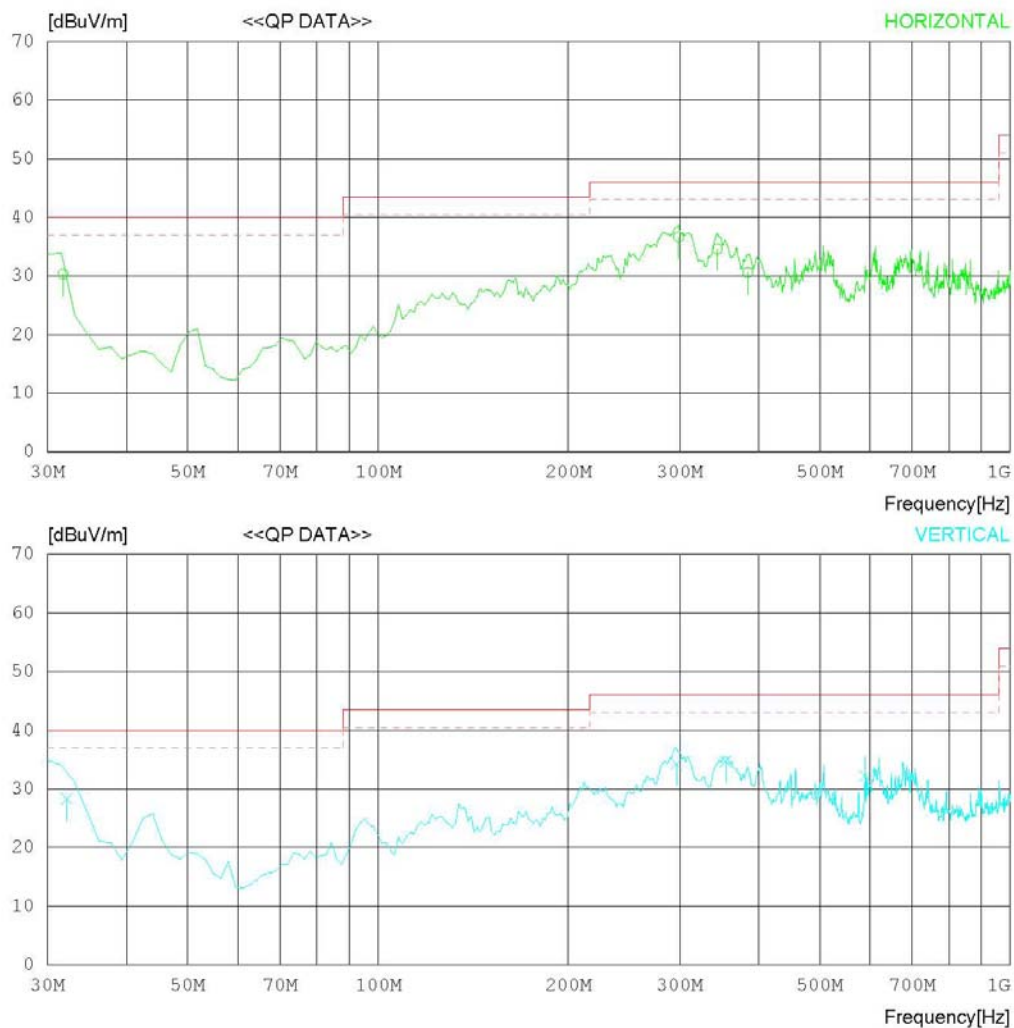
Date : 2013-02-12

Model Name : 42LP645H-UA
Model No. :
Serial No. :
Test Condition : DSUB

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 19 °C 34 % R.H.
Operator :

Memo :

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



RADIATED EMISSION

Date : 2013-02-12

Model Name : 42LP645H-UA
Model No. :
Serial No. :
Test Condition : DSUB

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 19 °C 34 % 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	31.755	36.2	17.0	0.9	23.8	30.3	40.0	9.7	168	266
2	298.926	43.7	13.7	2.8	23.6	36.6	46.0	9.4	100	232
3	344.006	40.1	14.8	3.3	23.6	34.6	46.0	11.4	178	217
4	384.422	34.9	15.7	3.5	23.5	30.6	46.0	15.4	173	181
----- Vertical -----										
5	32.204	34.6	16.7	0.9	23.9	28.3	40.0	11.7	200	240
6	296.519	41.4	13.7	2.8	23.6	34.3	46.0	11.7	171	174
7	354.522	39.9	15.0	3.4	23.6	34.7	46.0	11.3	168	181
8	589.873	32.9	18.6	4.1	23.4	32.2	46.0	13.8	100	200

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

RADIATED EMISSION

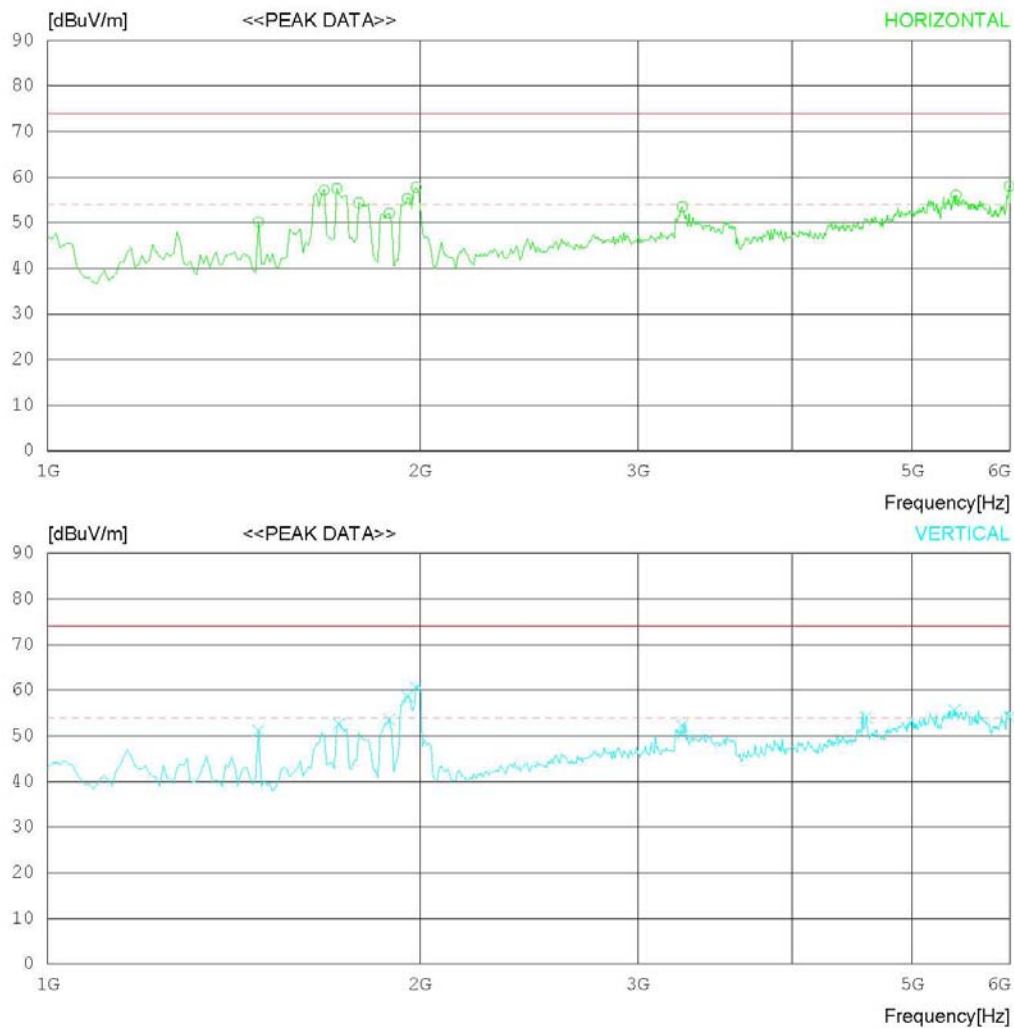
Date : 2013-02-12

Model Name : 42LP645H-UA
Model No. :
Serial No. :
Test Condition : DSUB

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 19 °C 34 % 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 : 2013-02-12

Model Name : 42LP645H-UA	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 19 °C 34 % 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	1480.769	46.7	24.6	7.4	28.5	50.2	74.0	23.8	100	358
2	1673.077	53.3	24.6	7.8	28.5	57.2	74.0	16.8	100	181
3	1713.141	53.5	24.6	7.9	28.5	57.5	74.0	16.5	100	358
4	1785.256	50.3	24.6	8.0	28.5	54.4	74.0	19.6	100	358
5	1889.423	47.8	24.6	8.2	28.5	52.1	74.0	21.9	100	166
6	1953.525	50.8	24.6	8.4	28.5	55.3	74.0	18.7	100	245
7	1985.577	53.3	24.6	8.4	28.5	57.8	74.0	16.2	100	229
8	3259.633	41.9	28.9	11.1	28.4	53.5	74.0	20.5	100	144
9	5423.086	34.6	34.7	14.9	28.1	56.1	74.0	17.9	100	358
10	5991.988	38.5	31.9	15.8	28.2	58.0	74.0	16	100	33
----- Vertical -----										
11	1480.769	47.7	24.6	7.4	28.5	51.2	74.0	22.8	100	1
12	1721.154	48.6	24.6	7.9	28.5	52.6	74.0	21.4	100	1
13	1889.423	49.3	24.6	8.2	28.5	53.6	74.0	20.4	100	1
14	1953.525	54.2	24.6	8.4	28.5	58.7	74.0	15.3	100	1
15	1985.577	56.2	24.6	8.4	28.5	60.7	74.0	13.3	100	1
16	3259.633	40.7	28.9	11.1	28.4	52.3	74.0	21.7	100	223
17	4589.766	37.3	31.2	13.8	28.2	54.1	74.0	19.9	100	1
18	5407.061	34.1	34.6	15.0	28.1	55.6	74.0	18.4	100	262
19	6000.000	34.8	31.8	15.8	28.2	54.2	74.0	19.8	100	1

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

RADIATED EMISSION

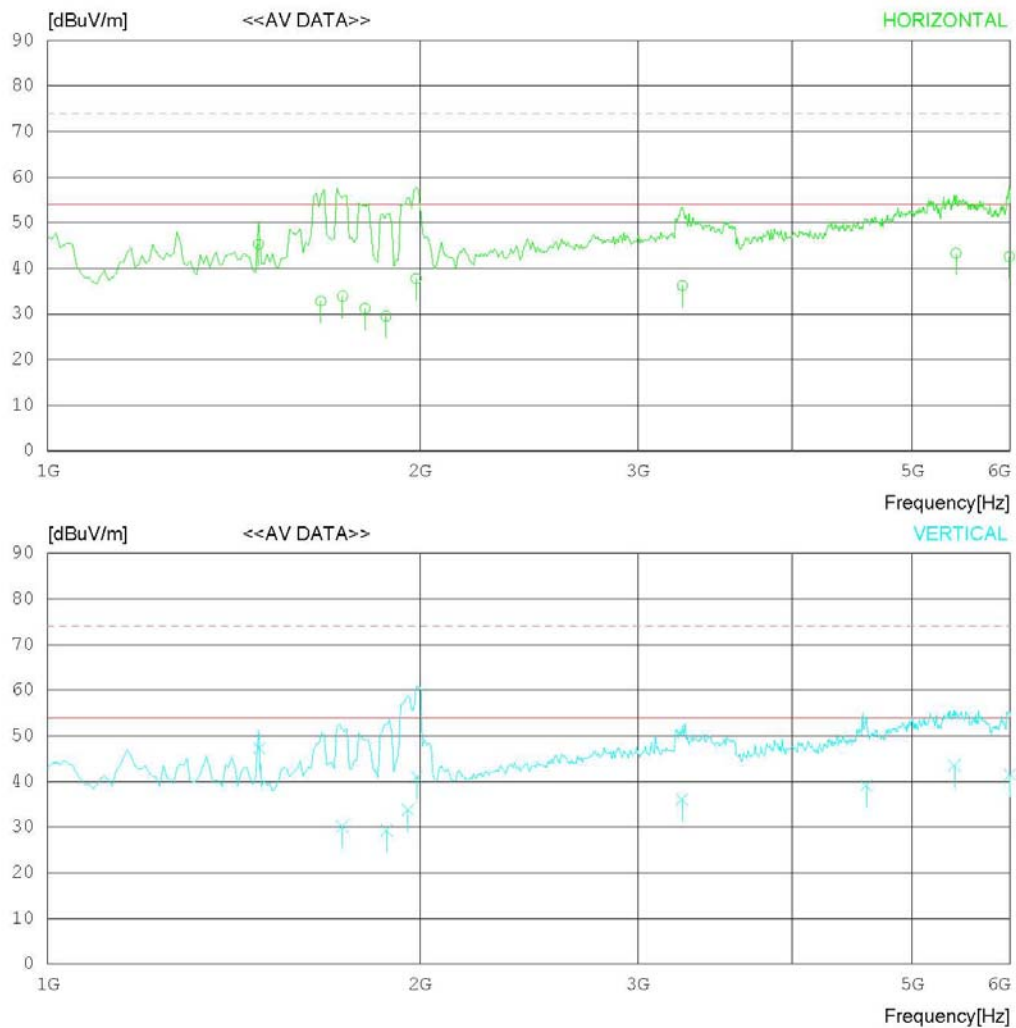
Date : 2013-02-12

Model Name : 42LP645H-UA
Model No. :
Serial No. :
Test Condition : DSUB

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 19 °C 34 % 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 : 2013-02-12

Model Name : 42LP645H-UA	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 19 °C 34 % 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	1480.769	41.8	24.6	7.4	28.5	45.3	54.0	8.7	100	294
2	1662.711	28.9	24.6	7.8	28.5	32.8	54.0	21.2	100	181
3	1731.769	29.9	24.6	7.9	28.5	33.9	54.0	20.1	100	182
4	1806.122	27.0	24.6	8.1	28.5	31.2	54.0	22.8	100	187
5	1877.458	25.2	24.6	8.2	28.5	29.5	54.0	24.5	100	166
6	1985.391	33.3	24.6	8.4	28.5	37.8	54.0	16.2	100	229
7	3259.633	24.6	28.9	11.1	28.4	36.2	54.0	17.8	100	144
8	5423.086	21.8	34.7	14.9	28.1	43.3	54.0	10.7	100	358
9	5991.988	23.1	31.9	15.8	28.2	42.6	54.0	11.4	100	155
----- Vertical -----										
10	1483.526	43.8	24.6	7.4	28.5	47.3	54.0	6.7	100	202
11	1730.807	26.2	24.6	7.9	28.5	30.2	54.0	23.8	100	158
12	1880.494	25.0	24.6	8.2	28.5	29.3	54.0	24.7	100	231
13	1955.756	29.3	24.6	8.4	28.5	33.8	54.0	20.2	100	183
14	1990.227	36.4	24.6	8.4	28.5	40.9	54.0	13.1	100	179
15	3258.038	24.4	28.9	11.1	28.4	36.0	54.0	18.0	100	223
16	4593.301	22.3	31.2	13.8	28.2	39.1	54.0	14.9	100	1
17	5407.061	22.0	34.6	15.0	28.1	43.5	54.0	10.5	100	262
18	6000.000	22.1	31.8	15.8	28.2	41.5	54.0	12.5	100	1

< HDMI MODE_30 MHz ~ 1 GHz >

RADIATED EMISSION

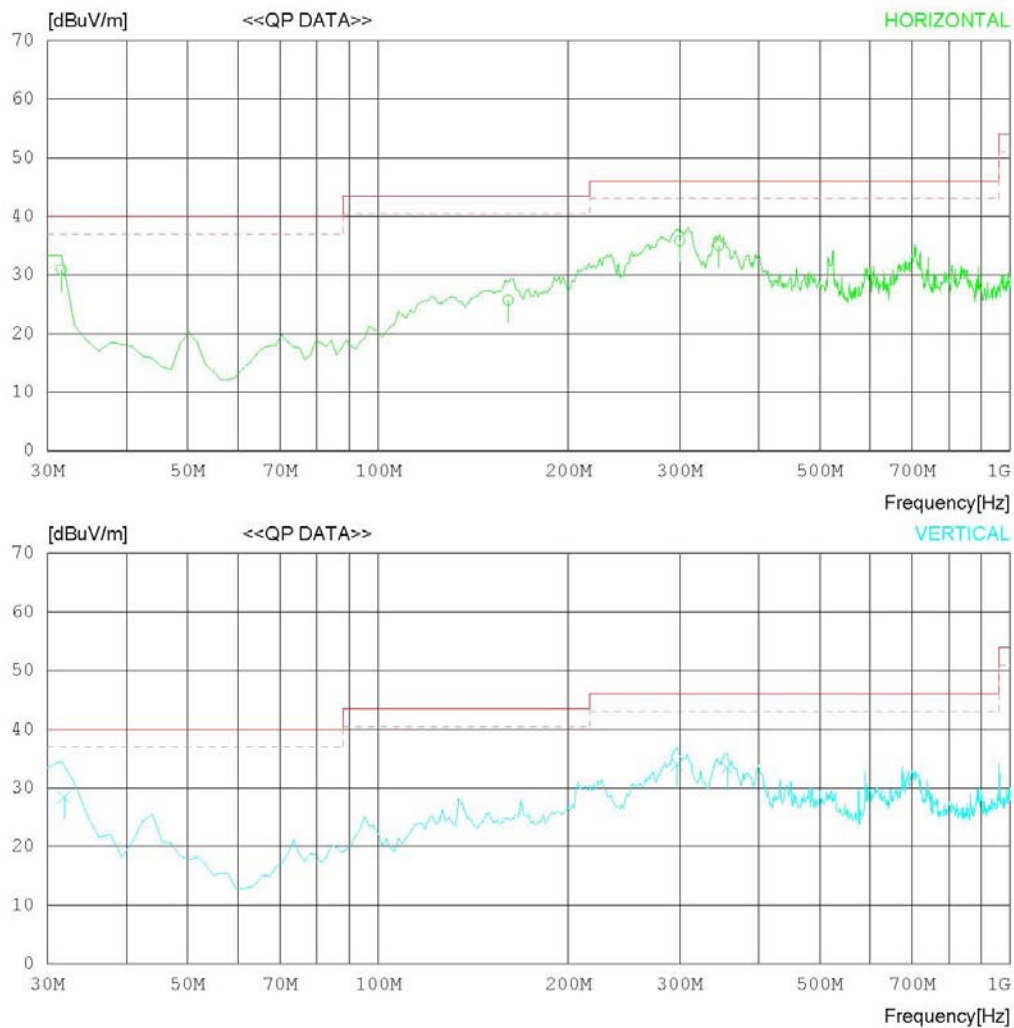
Date : 2013-02-12

Model Name : 42LP645H-UA
Model No. :
Serial No. :
Test Condition : HDMI

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 19 °C 34 % R.H.
Operator :

Memo :

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



RADIATED EMISSION

Date : 2013-02-12

Model Name : 42LP645H-UA
Model No. :
Serial No. :
Test Condition : HDMI

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 19 °C 34 % 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	31.528	36.7	17.1	0.9	23.8	30.9	40.0	9.1	171	245
2	299.896	42.9	13.7	2.8	23.6	35.8	46.0	10.2	218	233
3	345.727	40.5	14.8	3.3	23.6	35.0	46.0	11.0	174	233
4	160.581	37.9	10.1	1.9	24.2	25.7	43.5	17.8	131	194
----- Vertical -----										
5	31.857	34.4	16.9	0.9	23.8	28.4	40.0	11.6	100	181
6	297.231	41.1	13.7	2.8	23.6	34.0	46.0	12.0	206	202
7	356.442	38.7	15.0	3.4	23.6	33.5	46.0	12.5	173	157

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

RADIATED EMISSION

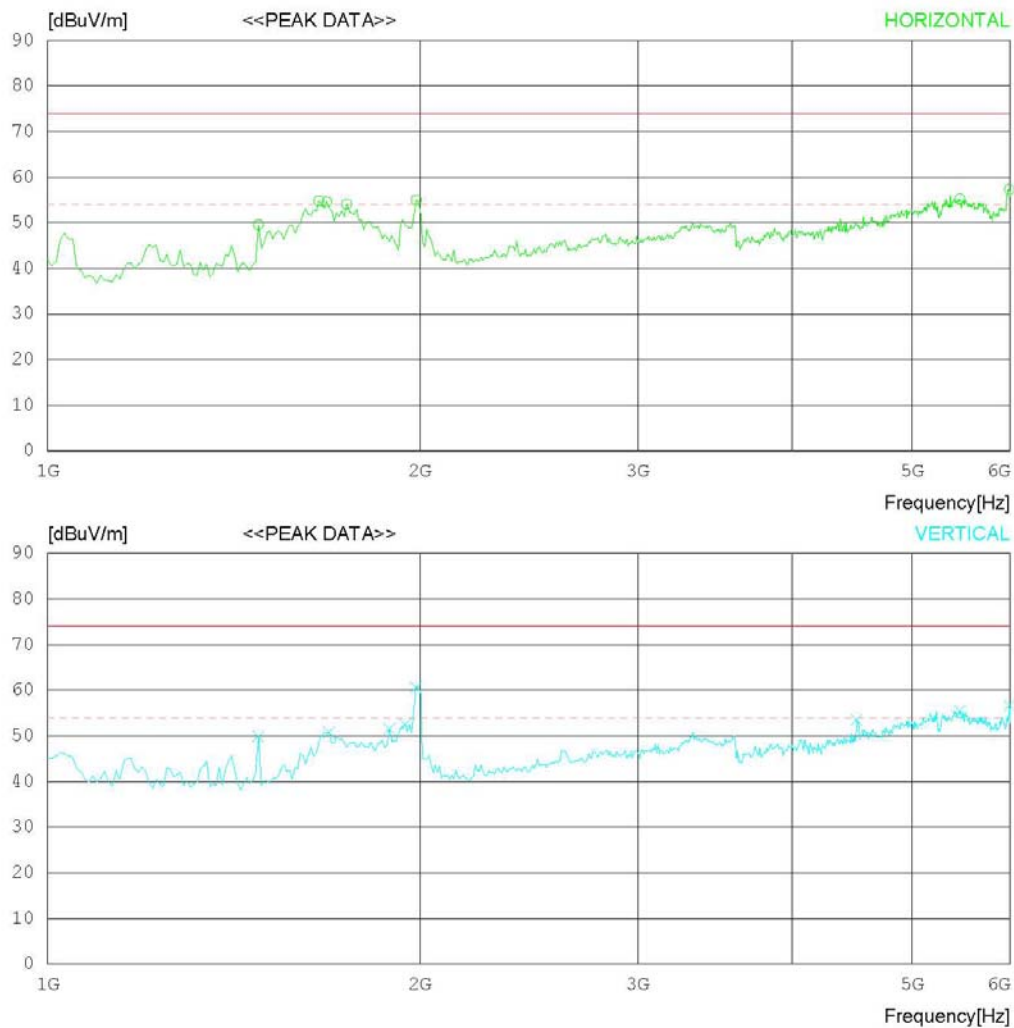
Date : 2013-02-12

Model Name : 42LP645H-UA
Model No. :
Serial No. :
Test Condition : HDMI

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 19 °C 34 % 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 : 2013-02-12

Model Name : 42LP645H-UA	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 19 °C 34 % 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	1480.769	46.1	24.6	7.4	28.5	49.6	74.0	24.4	100	358
2	1657.051	50.9	24.6	7.8	28.5	54.8	74.0	19.2	100	181
3	1681.089	50.7	24.6	7.8	28.5	54.6	74.0	19.4	100	358
4	1745.192	50.0	24.6	8.0	28.5	54.1	74.0	19.9	100	358
5	1985.577	50.5	24.6	8.4	28.5	55.0	74.0	19	100	166
6	5463.150	33.5	34.9	14.9	28.1	55.2	74.0	18.8	100	276
7	5991.988	37.8	31.9	15.8	28.2	57.3	74.0	16.7	100	155
----- Vertical -----										
8	1480.769	46.4	24.6	7.4	28.5	49.9	74.0	24.1	100	203
9	1689.102	46.8	24.6	7.9	28.5	50.8	74.0	23.2	100	1
10	1889.423	47.2	24.6	8.2	28.5	51.5	74.0	22.5	100	220
11	1945.512	48.1	24.6	8.3	28.5	52.5	74.0	21.5	100	220
12	1985.577	56.2	24.6	8.4	28.5	60.7	74.0	13.3	100	163
13	4509.639	37.3	30.9	13.5	28.2	53.5	74.0	20.5	100	1
14	5463.150	33.7	34.9	14.9	28.1	55.4	74.0	18.6	100	1
15	5991.988	37.1	31.9	15.8	28.2	56.6	74.0	17.4	100	167

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

RADIATED EMISSION

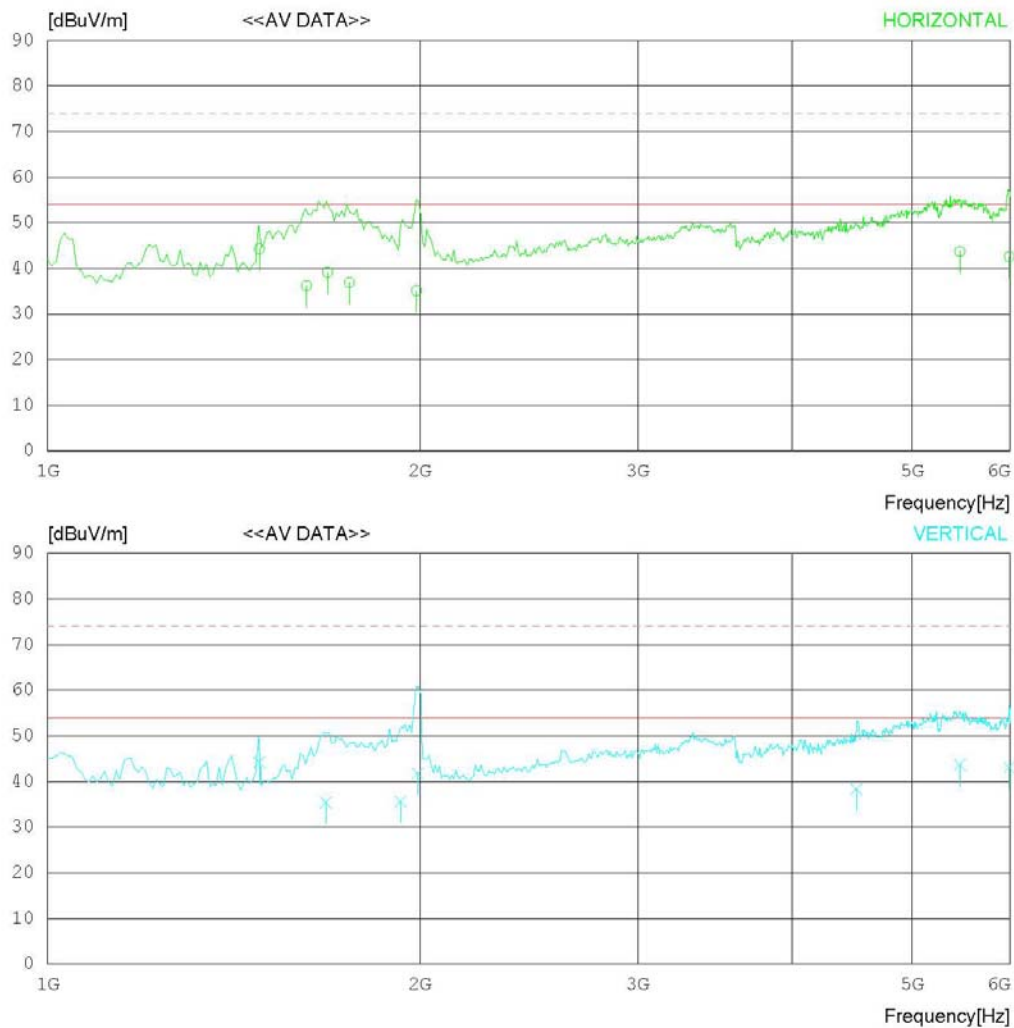
Date : 2013-02-12

Model Name : 42LP645H-UA
Model No. :
Serial No. :
Test Condition : HDMI

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 19 °C 34 % 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 : 2013-02-12

Model Name	: 42LP645H-UA	Reference No.	:
Model No.	:	Power Supply	: 120V 60Hz
Serial No.	:	Temp/Humi	: 19 °C 34 % 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	1483.557	40.8	24.6	7.4	28.5	44.3	54.0	9.7	100	221
2	1619.647	32.4	24.6	7.7	28.5	36.2	54.0	17.8	100	165
3	1683.692	35.2	24.6	7.8	28.5	39.1	54.0	14.9	100	169
4	1753.698	32.8	24.6	8.0	28.5	36.9	54.0	17.1	100	224
5	1986.673	30.6	24.6	8.4	28.5	35.1	54.0	18.9	100	199
6	5463.150	22.0	34.9	14.9	28.1	43.7	54.0	10.3	100	276
7	5991.988	23.1	31.9	15.8	28.2	42.6	54.0	11.4	100	155
----- Vertical -----										
8	1483.557	40.7	24.6	7.4	28.5	44.2	54.0	9.8	100	203
9	1678.955	31.5	24.6	7.8	28.5	35.4	54.0	18.6	100	220
10	1928.403	31.2	24.6	8.3	28.5	35.6	54.0	18.4	100	177
11	1991.481	37.2	24.6	8.4	28.5	41.7	54.0	12.3	100	169
12	4509.639	22.1	30.9	13.5	28.2	38.3	54.0	15.7	100	167
13	5463.150	22.0	34.9	14.9	28.1	43.7	54.0	10.3	100	180
14	5991.988	23.6	31.9	15.8	28.2	43.1	54.0	10.9	100	167

< USB MODE_30 MHz ~ 1 GHz >

RADIATED EMISSION

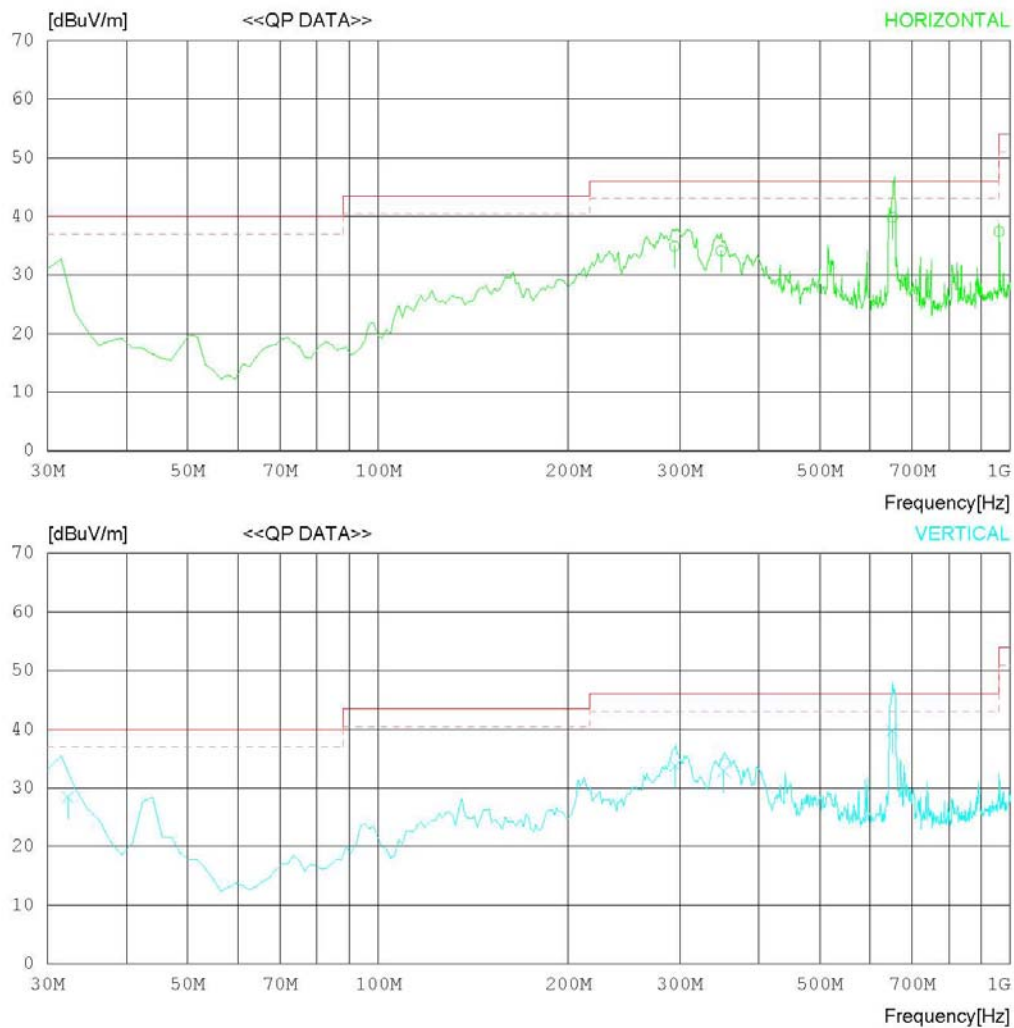
Date : 2013-02-12

Model Name : 42LP645H-UA
Model No. :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 19 °C 34 % R.H.
Operator :

Memo :

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



RADIATED EMISSION

Date : 2013-02-12

Model Name : 42LP645H-UA	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 19 °C 34 % 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	294.307	42.1	13.6	2.8	23.6	34.9	46.0	11.1	200	207
2	348.669	39.5	14.9	3.3	23.6	34.1	46.0	11.9	200	235
3	651.256	40.6	18.6	4.2	23.6	39.8	46.0	6.2	100	207
4	959.981	33.2	21.7	5.4	22.9	37.4	46.0	8.6	201	358
----- Vertical -----										
5	32.322	34.7	16.7	0.9	23.9	28.4	40.0	11.6	100	1
6	295.232	41.0	13.6	2.8	23.6	33.8	46.0	12.2	200	199
7	352.296	38.3	14.9	3.3	23.6	32.9	46.0	13.1	170	197
8	651.256	40.6	18.6	4.2	23.6	39.8	46.0	6.2	200	224

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

RADIATED EMISSION

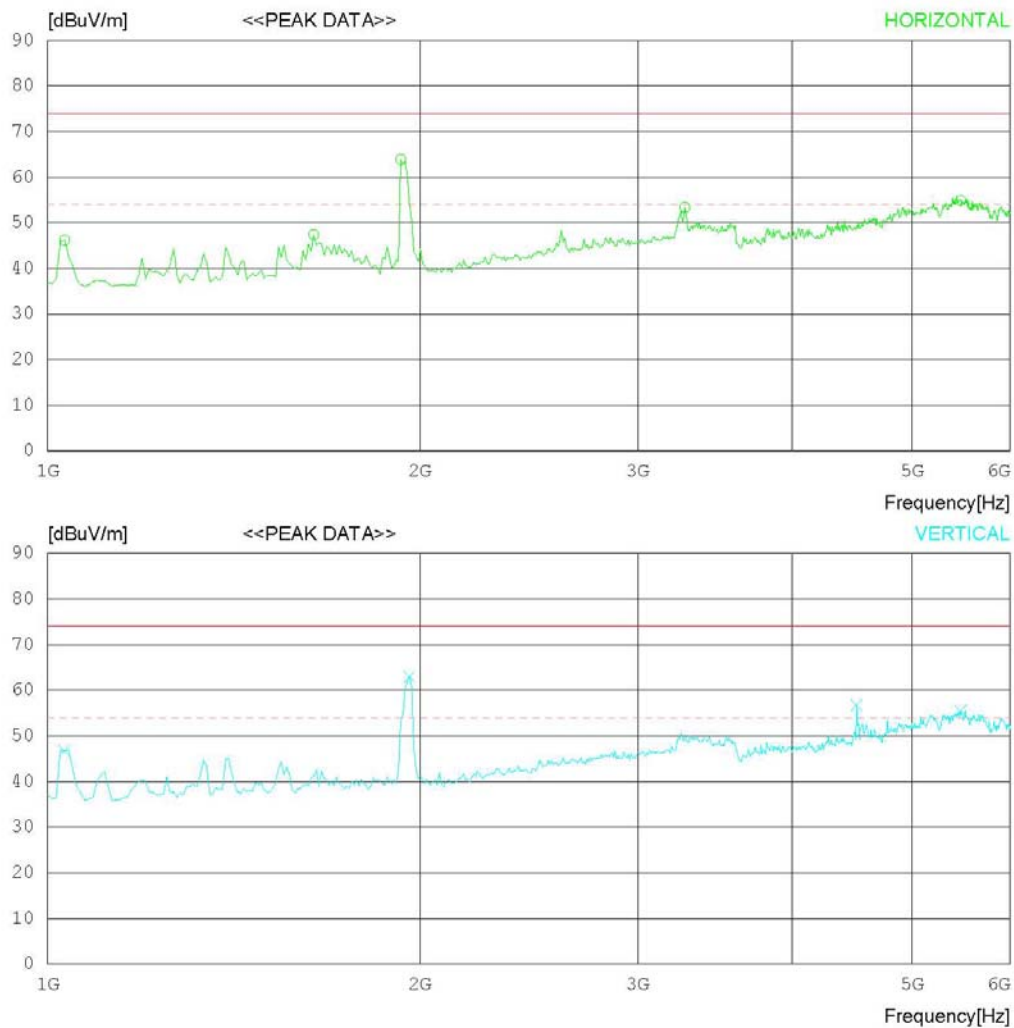
Date : 2013-02-12

Model Name : 42LP645H-UA
Model No. :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 19 °C 34 % 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 : 2013-02-12

Model Name : 42LP645H-UA	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 19 °C 34 % 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	1032.051	44.9	23.9	5.9	28.5	46.2	74.0	27.8	100	229
2	1641.025	43.5	24.6	7.8	28.5	47.4	74.0	26.6	100	1
3	1929.487	59.5	24.6	8.3	28.5	63.9	74.0	10.1	100	219
4	3275.659	41.7	28.9	11.2	28.4	53.4	74.0	20.6	100	232
5	5471.163	33.2	34.9	14.9	28.1	54.9	74.0	19.1	100	359
----- Vertical -----										
6	1032.051	45.4	23.9	5.9	28.5	46.7	74.0	27.3	100	358
7	1961.538	58.5	24.6	8.4	28.5	63.0	74.0	11	100	358
8	4509.639	40.5	30.9	13.5	28.2	56.7	74.0	17.3	100	358
9	5471.163	33.7	34.9	14.9	28.1	55.4	74.0	18.6	100	15

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

RADIATED EMISSION

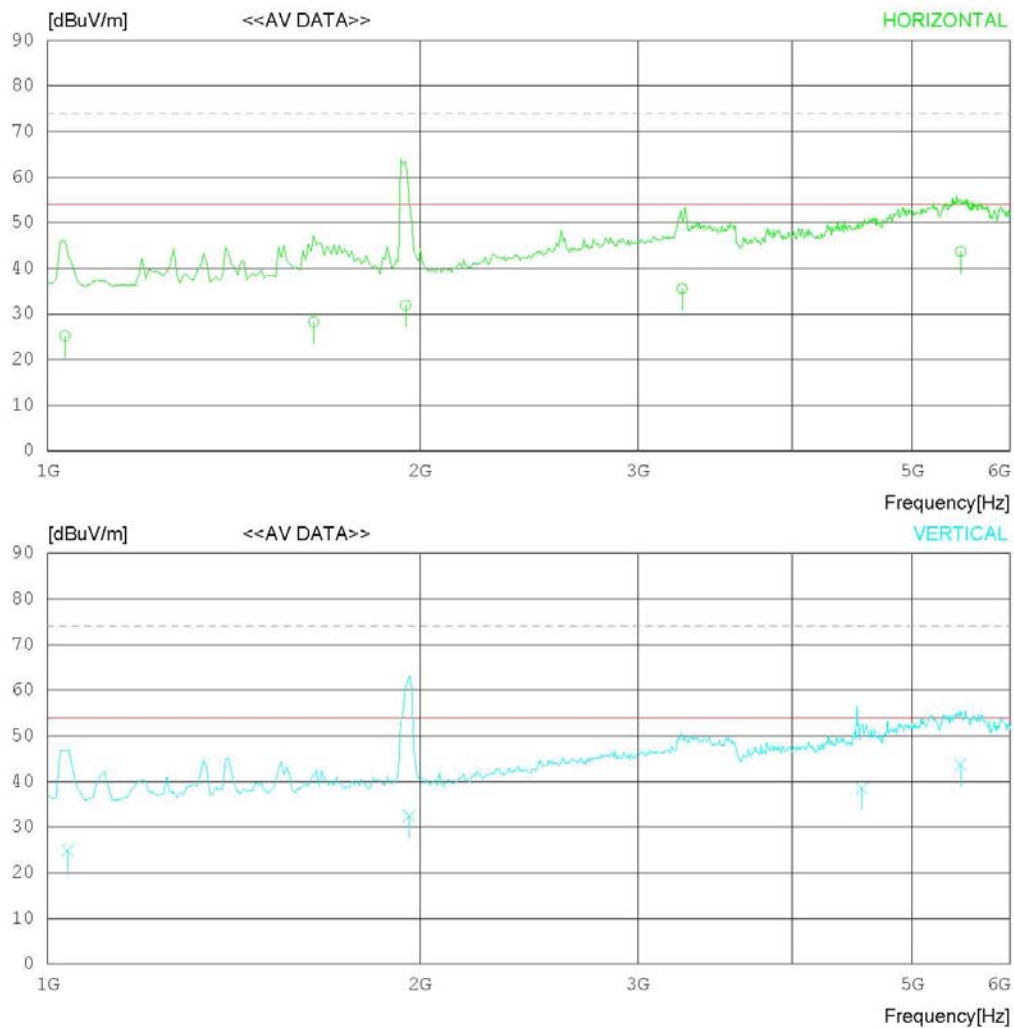
Date : 2013-02-12

Model Name : 42LP645H-UA
Model No. :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 19 °C 34 % 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 : 2013-02-12

Model Name : 42LP645H-UA	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 19 °C 34 % 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	1032.926	23.9	23.9	5.9	28.5	25.2	54.0	28.8	100	229
2	1641.025	24.4	24.6	7.8	28.5	28.3	54.0	25.7	100	166
3	1947.904	27.4	24.6	8.4	28.5	31.9	54.0	22.1	100	219
4	3257.737	23.9	28.9	11.1	28.4	35.5	54.0	18.5	100	232
5	5471.163	22.0	34.9	14.9	28.1	43.7	54.0	10.3	100	359
----- Vertical -----										
6	1037.926	23.5	23.9	5.9	28.5	24.8	54.0	29.2	100	177
7	1961.525	28.0	24.6	8.4	28.5	32.5	54.0	21.5	100	140
8	4554.698	22.0	31.1	13.6	28.2	38.5	54.0	15.5	100	179
9	5471.163	22.0	34.9	14.9	28.1	43.7	54.0	10.3	100	15

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