

EMC TEST REPORT

Test item : LED LCD TV Monitor
Model No. : 22LQ630H-UA
Order No. : 1201-00091
Date of receipt : 2012-01-20
Test duration : 2012-02-01 ~ 2012-02-03
Use of report : FCC CoC Marking
Date of Issue : 2012-02-09

Applicant : LG Electronics Inc.

9-1, 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 ~ 20) °C,
Humidity : (28 ~ 34) % 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:



Assistant Manager
D.H.EUN

Reviewed by:



Manager
M.J.SONG

The above test report is the accredited test results by Korea Laboratory Accreditation Scheme,
which signed the ILAC-MRA.

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	ROK1028C	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.	22LQ630H-UA
EUT Type	LED LCD TV Monitor
Serial No	NONE
FCC ID	BEJ22LQ630HUA
Type of Sample Tested	Pre-Production
High Frequency	667 MHz
Rating	AC100-240 V~, 50/60 Hz, 0.7 A
Supplied Power for Test	AC120V, 60Hz
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

Resolution	Horizontal Frequency(kHz)	Vertical Frequency(Hz)
640x350	31.468	70.09
720x400	31.469	70.08
640x480	31.469	59.94
800x600	37.879	60.31
1024x768	48.363	60.00
1280x768	47.776	59.87
1360x768	47.712	60.015

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.)	Pressure (hPa)
Conducted Disturbance	02-01	18	34	-
Radiated Disturbance	02-03	19	28	
	02-03	20	31	

4.3 Test result Summary

(1) Conducted Emission(HDMI MODE)

Frequency [MHz]	Phase	Result [dB μ V]	Detector	Limit [dB μ V]	Margin [dB]
0.38256	N	50.2	Quasi-Peak	58.2	8.0

(2) Radiated Emission(DSUB MODE)

Frequency [MHz]	Pol.	Result [dB(μ V/m)]	Detector	Limit [dB(μ V/m)]	Margin [dB]
198.013	V	38.6	Quasi-Peak	43.5	4.9

5. Test Set-up and operation mode

5.1 Principle of Configuration Selection

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

5.2 Test Operation Mode

- DSUB MODE – Resolution : 1360 x 768 Resolution (Worst Case)
- HDMI MODE – Resolution : 1360 x 768 Resolution (Worst Case)
- USB MODE

EUT is the following operational conditions apply:

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

5.3 Support Equipment Used

Unit	Model No.	Serial No.	Manufacturer	CABLE				Backshell	FCC ID
				Connect type	Length (m)	ferrite core	shield		
PC	VOSTRO 430	9K77SBX	DELL	POWER	1.8	Not use	Non-shield	Plastic	DOC
				HDMI	1.8	Not use	Shield		
				DSUB	1.8	Use	Shield		
				AV	1.6	Not use	Non-shield		
				STEREO	1.6	Not use	Non-shield		
				PS/2	1.6	Not use	Non-shield		
				PS/2	1.8	Not use	Non-shield		
KEYBOARD	SKG-210PB	TAKSB24503Y	MONITEREY INTERNATIONAL CORP	PS/2	1.6	Not use	Non-shield	Plastic	DOC
MOUSE	SML-510PB	TAKS903519Z	MONITEREY INTERNATIONAL CORP	PS/2	1.8	Not use	Non-shield	Plastic	DOC
PILLOW SPEAKER	DPS	J00321894-0002	CURBELL ELECTRONICS, INC	SPEAKER	2.0	Not use	Shield	Plastic	DOC
CD/DVD PLAYER	DVP-NS92V	2000407	SONY EMCS	POWER AV	1.8 1.6	Not use	Non-shield	Plastic	DOC
USB MEMORY	JEWERLY	N/A	AXXEN	USB	-	-	-	-	DOC

6. Test Results : Emission

6.1 Conducted Disturbance

6.1.1 Measurement Procedure

In the range of 0.15MHz to 30MHz, 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 0.8m above the reference ground plane and 0.4m from the conducting wall of the shielded room.

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

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

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

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

Using 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 0.15MHz to 0.5MHz.				

Test Result

< DSUB MODE >



Results of Conducted Emission

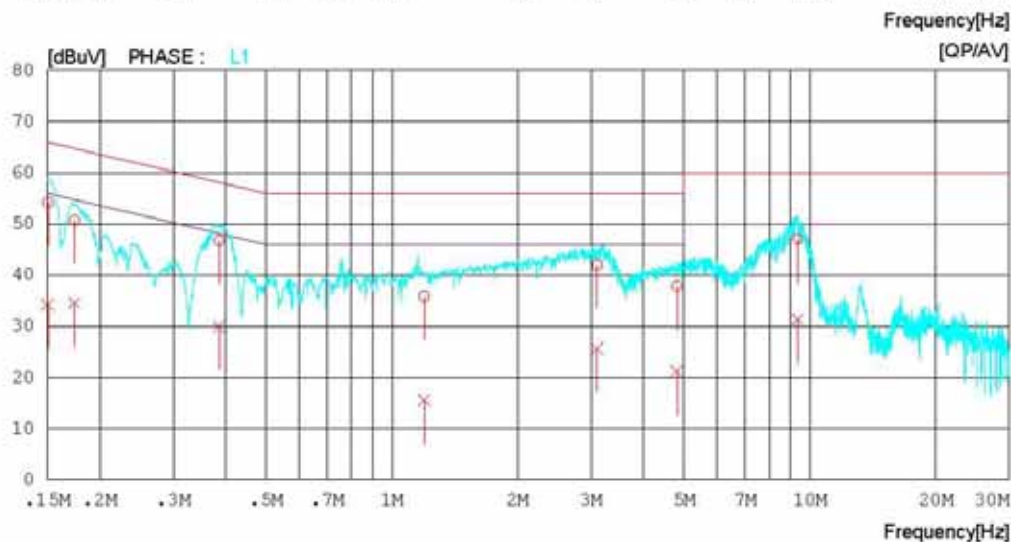
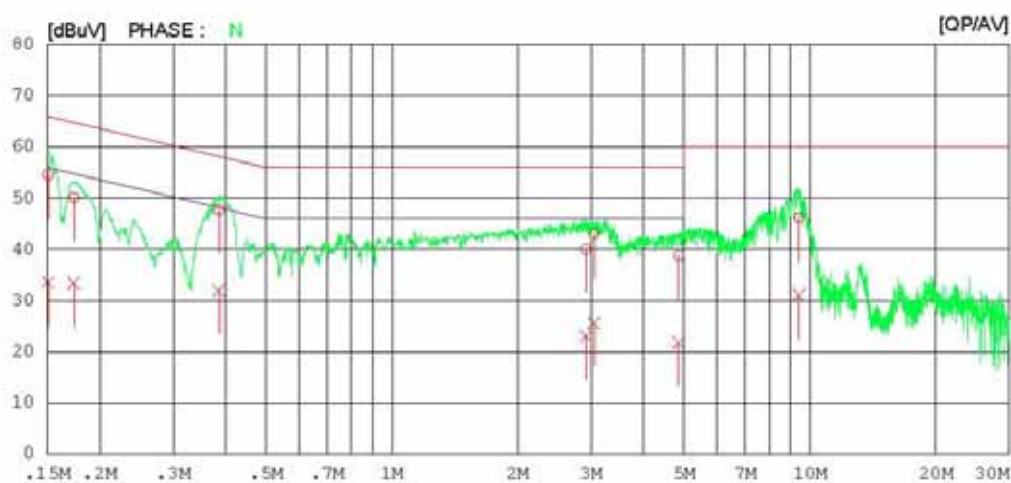
Digital EMC
 Date : 2012-02-01

Model No. : 22LQ630H-UA
 Type :
 Serial No. :
 Test Condition : DSUB

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Hum. : 18 °C 34 % R.H.
 Operator :

Memo :

LIMIT : CISPR22_B QP
 CISPR22_B AV



Results of Conducted Emission

Digital EMC
 Date : 2012-02-01

Model No. : 22LQ630H-UA
 Type :
 Serial No. :
 Test Condition : DSUB

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi. : 18 °C 34 % 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	0.15063	54.3	33.2	0.3	54.6	33.5	66.0	56.0	11.4	22.5	N
2	0.17329	49.9	33.2	0.2	50.1	33.4	64.8	54.8	14.7	21.4	N
3	0.38550	47.4	31.7	0.3	47.7	32.0	58.2	48.2	10.5	16.2	N
4	2.91500	39.7	22.7	0.3	40.0	23.0	56.0	46.0	16.0	23.0	N
5	3.04650	42.6	25.1	0.4	43.0	25.5	56.0	46.0	13.0	20.5	N
6	4.85600	38.4	21.4	0.4	38.8	21.8	56.0	46.0	17.2	24.2	N
7	9.41700	45.6	30.4	0.6	46.2	31.0	60.0	50.0	13.8	19.0	N
8	0.15047	54.0	33.9	0.3	54.3	34.2	66.0	56.0	11.7	21.8	L1
9	0.17405	50.5	34.4	0.2	50.7	34.6	64.8	54.8	14.1	20.2	L1
10	0.38636	46.4	29.7	0.3	46.7	30.0	58.1	48.1	11.4	18.1	L1
11	1.19450	35.5	15.3	0.3	35.8	15.6	56.0	46.0	20.2	30.4	L1
12	3.09550	41.6	25.3	0.4	42.0	25.7	56.0	46.0	14.0	20.3	L1
13	4.81000	37.4	20.8	0.4	37.8	21.2	56.0	46.0	18.2	24.8	L1
14	9.35800	46.5	30.8	0.6	47.1	31.4	60.0	50.0	12.9	18.6	L1

< HDMI MODE >



Results of Conducted Emission

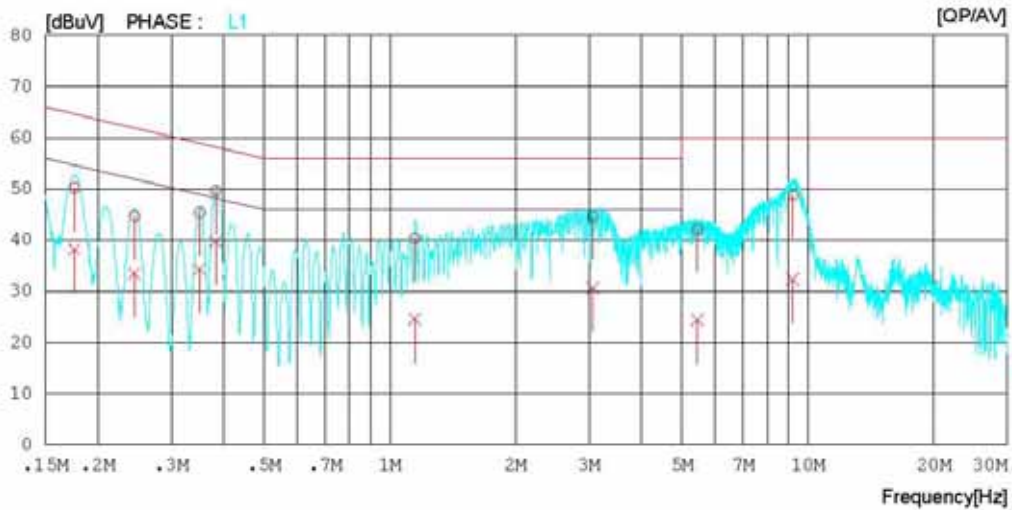
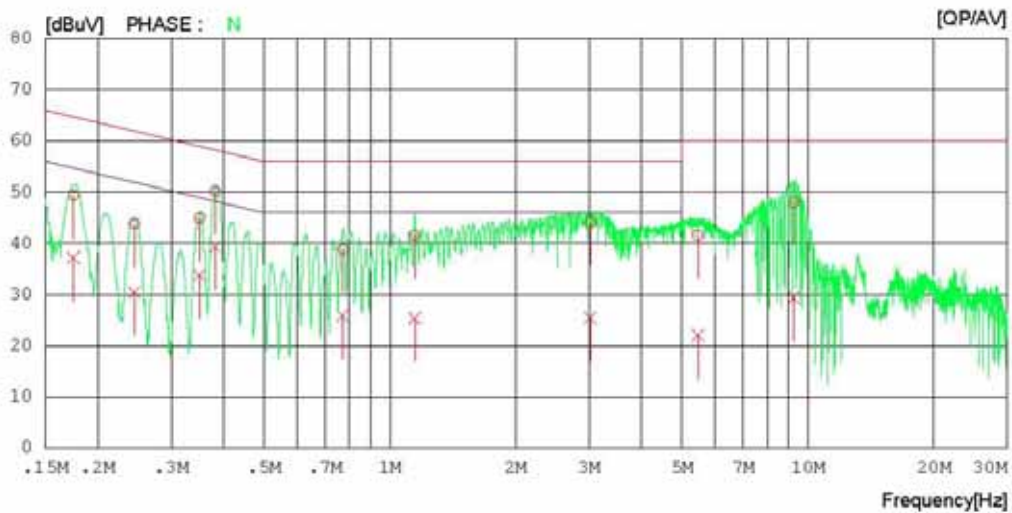
Digital EMC
 Date : 2012-02-01

Model No. : 22LQ630H-UA
 Type :
 Serial No. :
 Test Condition : HDMI

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Hum. : 18 °C 34 % R.H.
 Operator :

Memo :

LIMIT : CISPR22_B OP
 CISPR22_B AV



Results of Conducted Emission

Digital EMC
 Date : 2012-02-01

Model No. : 22LQ630H-UA
 Type :
 Serial No. :
 Test Condition : HDMI

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi. : 18 °C 34 % 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	0.17519	49.1	37.0	0.2	49.3	37.2	64.7	54.7	15.4	17.5	N
2	0.24475	43.6	30.3	0.2	43.8	30.5	61.9	51.9	18.1	21.4	N
3	0.35084	44.7	33.5	0.3	45.0	33.8	58.9	48.9	13.9	15.1	N
4	0.38256	49.9	39.0	0.3	50.2	39.3	58.2	48.2	8.0	8.9	N
5	0.77250	38.7	25.6	0.2	38.9	25.8	56.0	46.0	17.1	20.2	N
6	1.14800	41.3	25.0	0.3	41.6	25.3	56.0	46.0	14.4	20.7	N
7	3.01850	43.6	25.0	0.4	44.0	25.4	56.0	46.0	12.0	20.6	N
8	5.45600	41.1	21.7	0.4	41.5	22.1	60.0	50.0	18.5	27.9	N
9	9.26450	47.4	28.8	0.6	48.0	29.4	60.0	50.0	12.0	20.6	N
10	0.17605	50.0	38.0	0.2	50.2	38.2	64.7	54.7	14.5	16.5	L1
11	0.24511	44.5	33.3	0.2	44.7	33.5	61.9	51.9	17.2	18.4	L1
12	0.35101	45.1	34.0	0.3	45.4	34.3	58.9	48.9	13.5	14.6	L1
13	0.38366	49.3	39.5	0.3	49.6	39.8	58.2	48.2	8.6	8.4	L1
14	1.14750	40.0	24.3	0.3	40.3	24.6	56.0	46.0	15.7	21.4	L1
15	3.05850	44.2	30.3	0.4	44.6	30.7	56.0	46.0	11.4	15.3	L1
16	5.44650	41.7	24.0	0.4	42.1	24.4	60.0	50.0	17.9	25.6	L1
17	9.20750	48.2	31.7	0.6	48.8	32.3	60.0	50.0	11.2	17.7	L1

< USB MODE >



Results of Conducted Emission

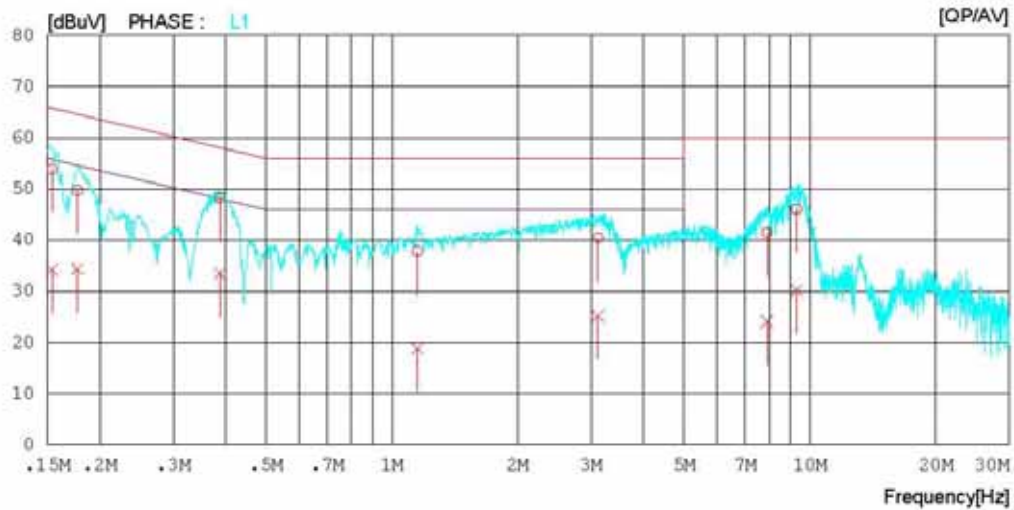
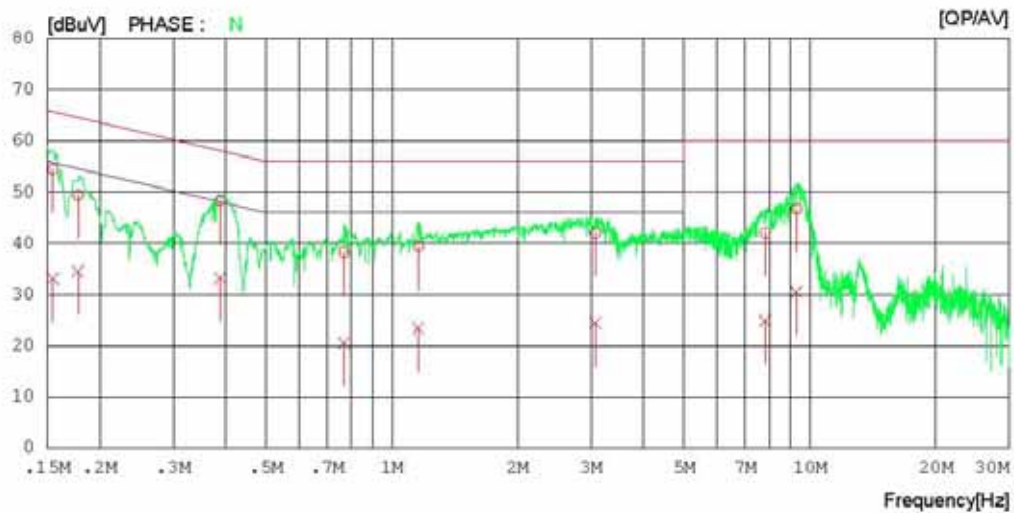
Digital EMC
 Date : 2012-02-01

Model No. : 22LQ630H-UA
 Type :
 Serial No. :
 Test Condition : USB

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Hum. : 18 °C 34 % R.H.
 Operator :

Memo :

LIMIT : CISPR22_B OP
 CISPR22_B AV



Results of Conducted Emission

Digital EMC
 Date : 2012-02-01

Model No. : 22LQ630H-UA
 Type :
 Serial No. :
 Test Condition : USB

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi. : 18 °C 34 % 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	0.15456	54.2	32.7	0.3	54.5	33.0	65.8	55.8	11.3	22.8	N
2	0.17766	49.2	34.3	0.2	49.4	34.5	64.6	54.6	15.2	20.1	N
3	0.38850	48.1	32.9	0.3	48.4	33.2	58.1	48.1	9.7	14.9	N
4	0.76844	38.0	20.3	0.2	38.2	20.5	56.0	46.0	17.8	25.5	N
5	1.15800	39.0	23.1	0.3	39.3	23.4	56.0	46.0	16.7	22.6	N
6	3.07150	41.6	24.0	0.4	42.0	24.4	56.0	46.0	14.0	21.6	N
7	7.82550	41.5	24.4	0.5	42.0	24.9	60.0	50.0	18.0	25.1	N
8	9.29200	46.1	29.9	0.6	46.7	30.5	60.0	50.0	13.3	19.5	N
9	0.15388	53.6	34.0	0.3	53.9	34.3	65.8	55.8	11.9	21.5	L1
10	0.17696	49.5	34.2	0.2	49.7	34.4	64.6	54.6	14.9	20.2	L1
11	0.38844	48.0	33.1	0.3	48.3	33.4	58.1	48.1	9.8	14.7	L1
12	1.15150	37.5	18.6	0.3	37.8	18.9	56.0	46.0	18.2	27.1	L1
13	3.10950	40.1	24.8	0.4	40.5	25.2	56.0	46.0	15.5	20.8	L1
14	7.90050	41.0	23.7	0.5	41.5	24.2	60.0	50.0	18.5	25.8	L1
15	9.29300	45.5	29.6	0.6	46.1	30.2	60.0	50.0	13.9	19.8	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 0.8m above the reference ground plane and 3m 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 0.15m above the reference ground plane.

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

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

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

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

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

6.2.2 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	1000
108 – 500	2000
500 – 1000	5000
Above 1000	5 th harmonic of the highest frequency or 40GHz, whichever is lower

(1) Limit for Radiated Emission below 1000MHz

Frequency range (MHz)	Class A Equipment (10m distance)	Class B Equipment (3m distance)
	Quasi-peak (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 1000	49.5	54

Note 1 The lower limit shall apply at the transition frequency.

Note 2 Additional provisions may be required for cases where interference occurs.

Note 3 According to 15.109(g), as an alternative to the radiated emission limit shown above, digital devices may be shown to comply with the standards(CISPR), Pub. 22 shown as below.

Frequency range (MHz)	Class A Equipment (10m distance)	Class B Equipment (10m distance)
	Quasi-peak (dBμV/m)	Quasi-peak (dBμV/m)
30 to 230	40	30
230 to 1000	47	37

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

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

Test Result

< DSUB MODE_30 MHz ~ 1 GHz >

RADIATED EMISSION

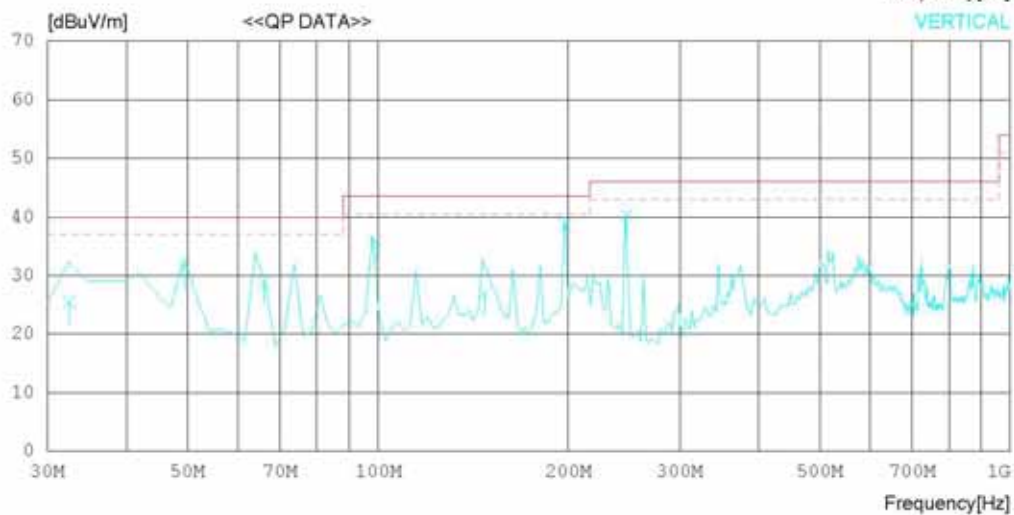
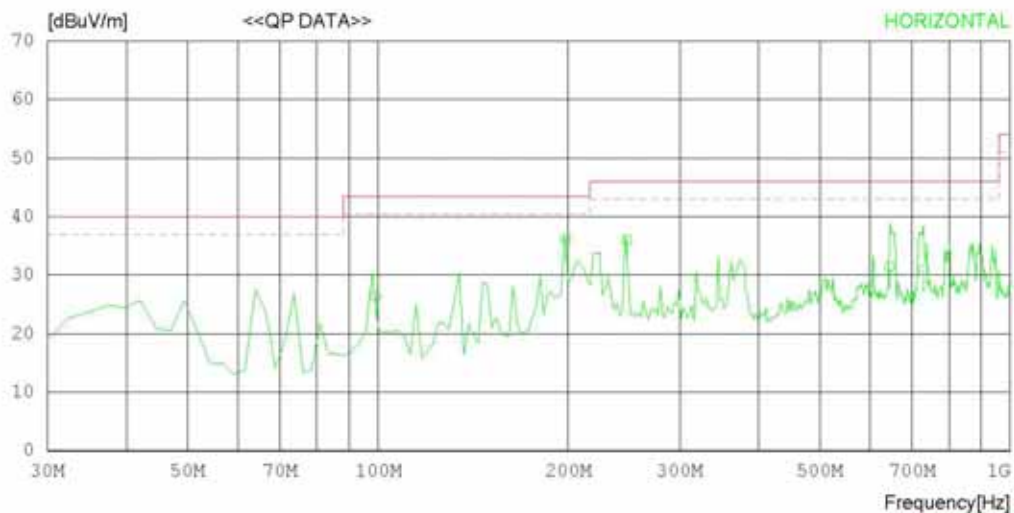
Date : 2012-02-03

Model Name : 22LQ630H-UA
 Model No. :
 Serial No. :
 Test Condition : DSUB

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi : 20 °C 31 % R.H.
 Operator :

Memo :

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



RADIATED EMISSION

Date : 2012-02-03

Model Name : 22LQ630H-UA	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 20 °C 31 % 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	99.025	37.1	10.6	1.5	22.8	26.4	43.5	17.1	100	165
2	198.013	47.7	9.7	2.0	23.3	36.1	43.5	7.4	100	358
3	247.500	44.4	12.9	2.3	23.6	36.0	46.0	10.0	100	226
4	643.972	33.1	18.8	4.0	24.5	31.4	46.0	14.6	100	151
5	729.050	31.3	19.3	4.3	24.1	30.8	46.0	15.2	100	165
----- Vertical -----										
6	32.425	30.6	17.1	0.9	23.2	25.4	40.0	14.6	100	1
7	49.400	43.3	10.0	1.0	22.8	31.5	40.0	8.5	100	274
8	66.010	44.1	6.0	1.2	22.7	28.6	40.0	11.4	100	1
9	99.004	46.5	10.6	1.5	22.8	35.8	43.5	7.7	100	37
10	147.256	37.7	10.6	1.7	23.1	26.9	43.5	16.6	100	1
11	198.013	50.2	9.7	2.0	23.3	38.6	43.5	4.9	100	1
12	247.525	48.7	12.9	2.3	23.6	40.3	46.0	5.7	100	1

< DSUB MODE_1 GHz ~ 6 GHz_Peak >

RADIATED EMISSION

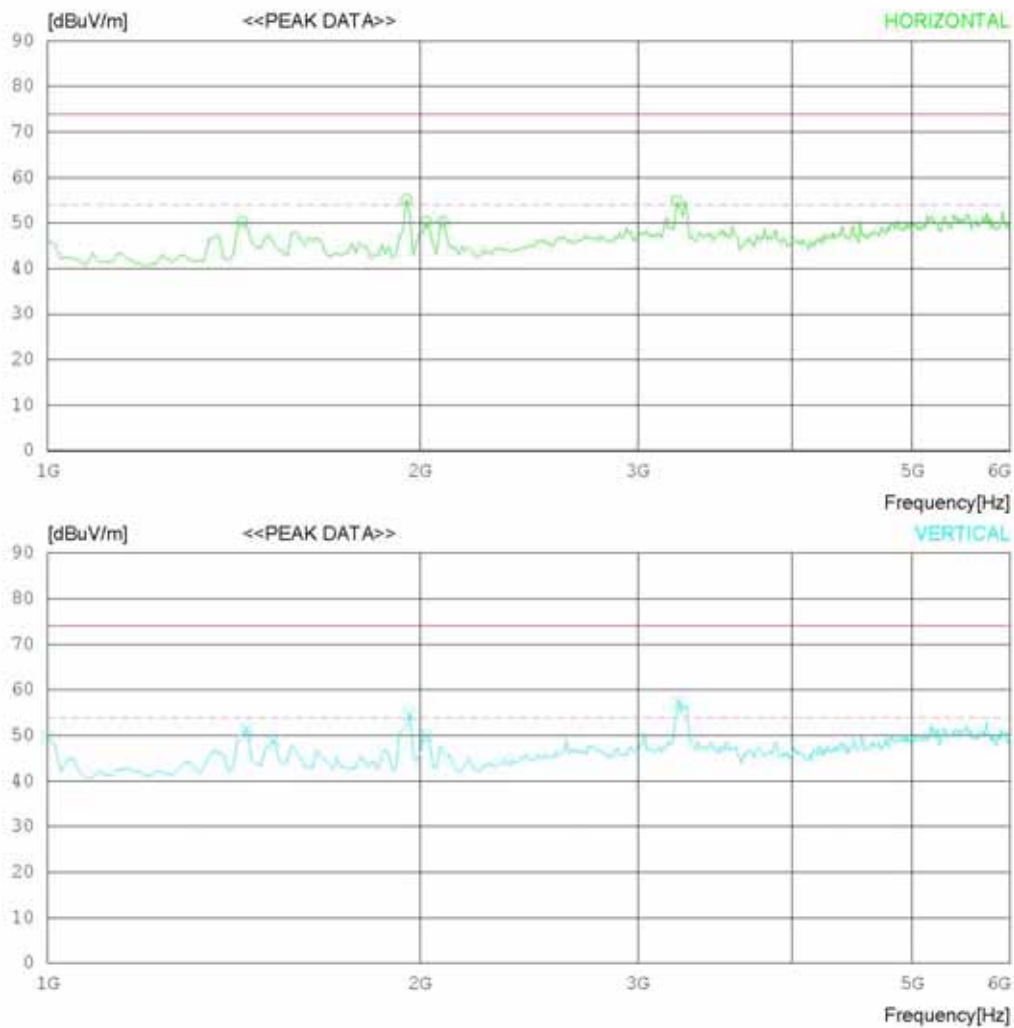
Date : 2012-02-03

Model Name : 22LQ630H-UA
 Model No. :
 Serial No. :
 Test Condition : DSUB

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi : 19 °C 28 % 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 : 2012-02-03

Model Name : 22LQ630H-UA	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 19 °C 28 % 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	1437.500	61.2	25.0	5.8	41.6	50.4	74.0	23.6	100	1
2	1950.000	64.8	25.2	6.9	41.7	55.2	74.0	18.8	100	166
3	2025.000	59.7	25.3	7.0	41.7	50.3	74.0	23.7	100	1
4	2087.500	59.3	25.6	7.1	41.7	50.3	74.0	23.7	100	1
5	3225.000	58.5	29.0	9.1	41.8	54.8	74.0	19.2	100	138
----- Vertical -----										
6	1000.000	63.0	23.6	4.8	41.8	49.6	74.0	24.4	100	151
7	1450.000	62.2	25.0	5.8	41.6	51.4	74.0	22.6	100	193
8	1525.000	59.3	25.1	6.0	41.6	48.8	74.0	25.2	100	193
9	1962.500	64.2	25.2	6.9	41.7	54.6	74.0	19.4	100	202
10	2025.000	59.4	25.3	7.0	41.7	50.0	74.0	24	100	186
11	3237.500	61.0	29.0	9.1	41.8	57.3	74.0	16.7	100	190

< DSUB MODE_1 GHz ~ 6 GHz_Average >

RADIATED EMISSION

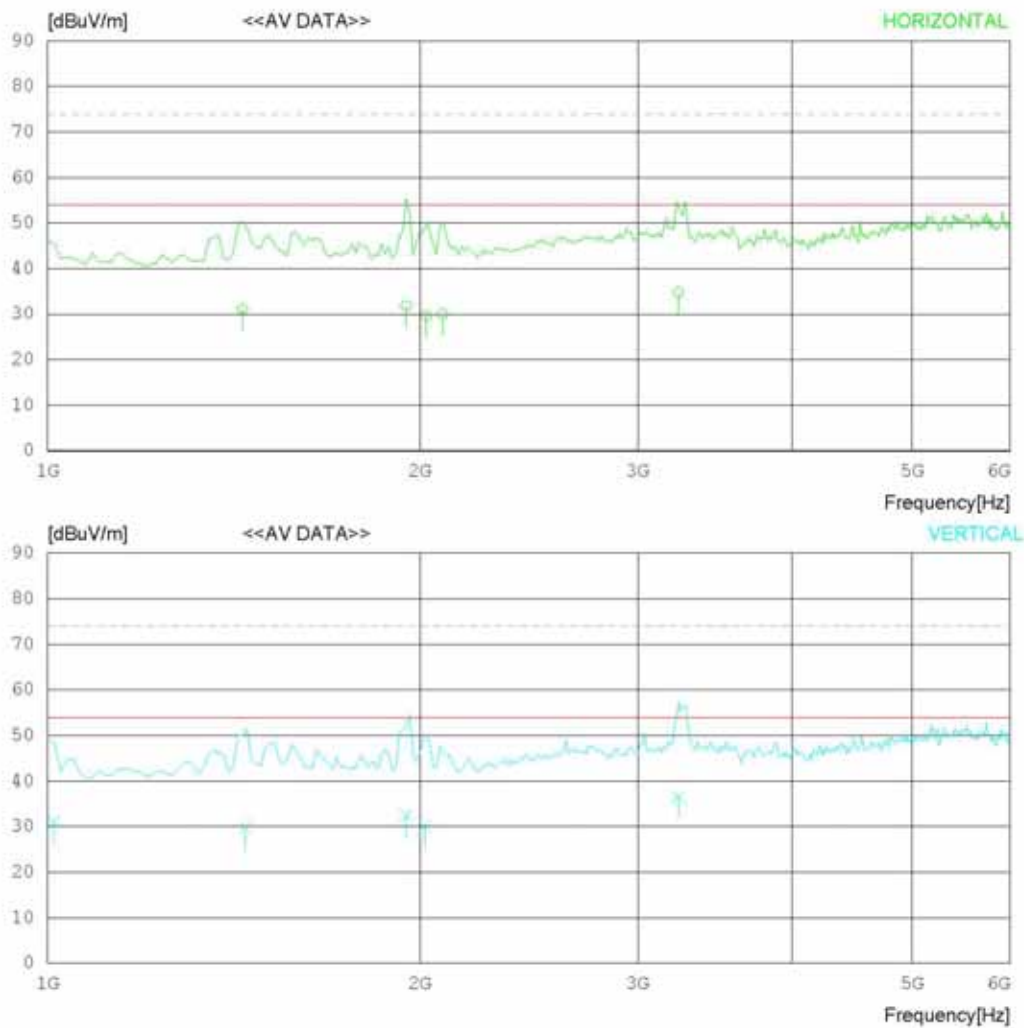
Date : 2012-02-03

Model Name : 22LQ630H-UA
 Model No. :
 Serial No. :
 Test Condition : DSUB

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi : 19 °C 28 % 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 : 2012-02-03

Model Name : 22LQ630H-UA	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 19 °C 28 % 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	1437.981	41.9	25.0	5.8	41.6	31.1	54.0	22.9	100	64
2	1950.000	41.5	25.2	6.9	41.7	31.9	54.0	22.1	100	332
3	2025.000	39.1	25.3	7.0	41.7	29.7	54.0	24.3	100	1
4	2086.076	39.0	25.6	7.1	41.7	30.0	54.0	24.0	100	1
5	3236.250	38.5	29.0	9.1	41.8	34.8	54.0	19.2	100	138
----- Vertical -----										
6	1010.862	44.3	23.7	4.8	41.8	31.0	54.0	23.0	100	151
7	1445.000	40.7	25.0	5.8	41.6	29.9	54.0	24.1	100	193
8	1950.000	42.0	25.2	6.9	41.7	32.4	54.0	21.6	100	202
9	2018.827	39.4	25.3	7.0	41.7	30.0	54.0	24.0	100	186
10	3237.250	40.3	29.0	9.1	41.8	36.6	54.0	17.4	100	190

< HDMI MODE_30 MHz ~ 1 GHz >

RADIATED EMISSION

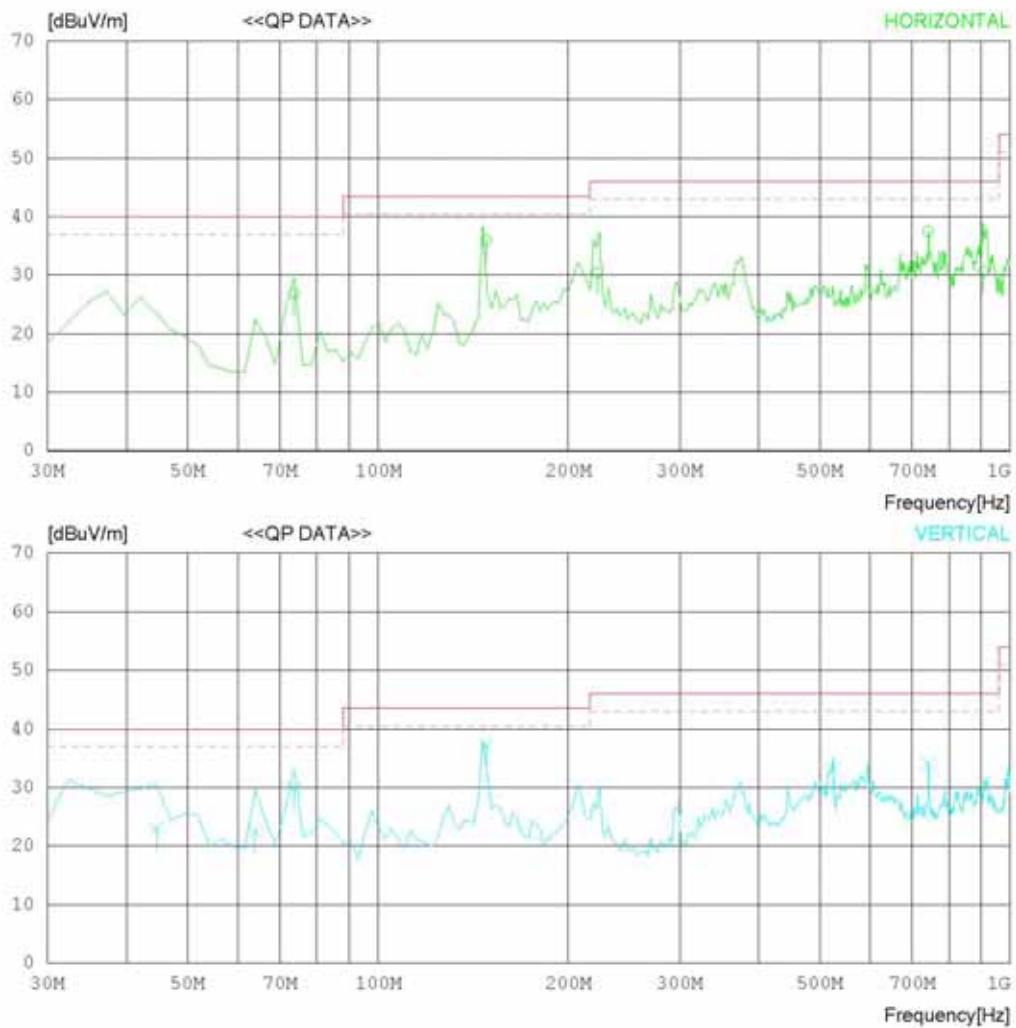
Date : 2012-02-03

Model Name : 22LQ630H-UA
 Model No. :
 Serial No. :
 Test Condition : HDMI

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi : 20 °C 31 % R.H.
 Operator :

Memo :

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



RADIATED EMISSION

Date : 2012-02-03

Model Name : 22LQ630H-UA	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 20 °C 31 % R.H.
Test Condition : HDMI	Operator :

Memo :

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

No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	73.650	41.7	6.6	1.3	22.8	26.8	40.0	13.2	306	314
2	148.358	46.9	10.5	1.7	23.1	36.0	43.5	7.5	225	46
3	222.127	40.5	11.2	2.2	23.5	30.4	46.0	15.6	100	179
4	741.775	37.6	19.5	4.4	24.0	37.5	46.0	8.5	100	358
5	905.422	28.3	20.6	4.8	23.1	30.6	46.0	15.4	300	0
----- Vertical -----										
6	44.541	30.7	14.2	1.0	22.9	23.0	40.0	17.0	100	158
7	63.950	38.2	5.9	1.2	22.7	22.6	40.0	17.4	199	358
8	73.650	44.8	6.6	1.3	22.8	29.9	40.0	10.1	100	275
9	148.358	48.1	10.5	1.7	23.1	37.2	43.5	6.3	100	1
10	524.886	36.6	17.9	3.5	24.8	33.2	46.0	12.8	100	1
11	741.775	34.2	19.5	4.4	24.0	34.1	46.0	11.9	100	1

< HDMI MODE_1 GHz ~ 6 GHz_Peak >

RADIATED EMISSION

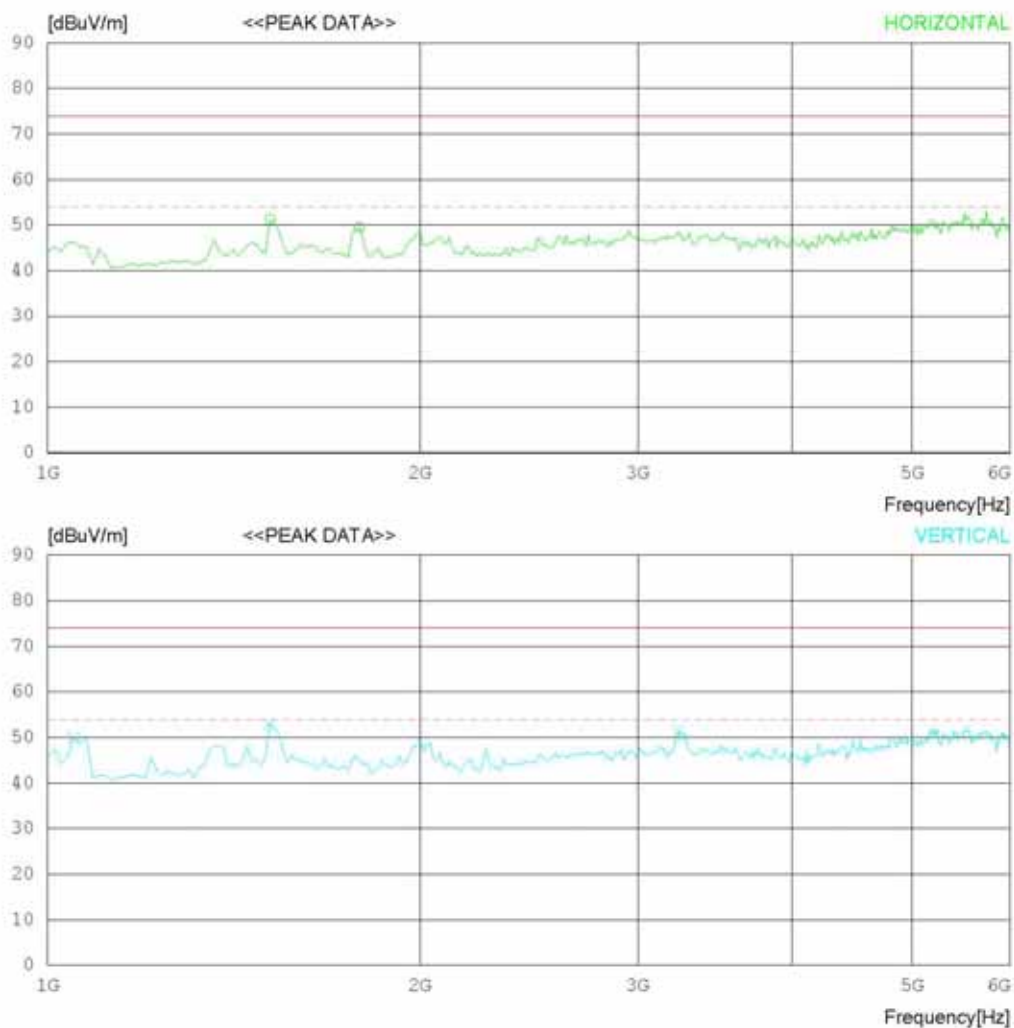
Date : 2012-02-03

Model Name : 22LQ630H-UA
 Model No. :
 Serial No. :
 Test Condition : HDMI

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi : 19 °C 28 % 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 : 2012-02-03

Model Name : 22LQ630H-UA	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 19 °C 28 % 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	1512.500	61.7	25.1	6.0	41.6	51.2	74.0	22.8	100	358
2	1787.500	59.5	25.2	6.6	41.8	49.5	74.0	24.5	100	358
----- Vertical -----										
3	1050.000	63.0	23.8	4.9	41.8	49.9	74.0	24.1	100	142
4	1512.500	63.5	25.1	6.0	41.6	53.0	74.0	21	100	1
5	2000.000	58.5	25.2	7.0	41.7	49.0	74.0	25	100	183
6	3237.500	55.1	29.0	9.1	41.8	51.4	74.0	22.6	100	1

< HDMI MODE_1 GHz ~ 6 GHz_Average >

RADIATED EMISSION

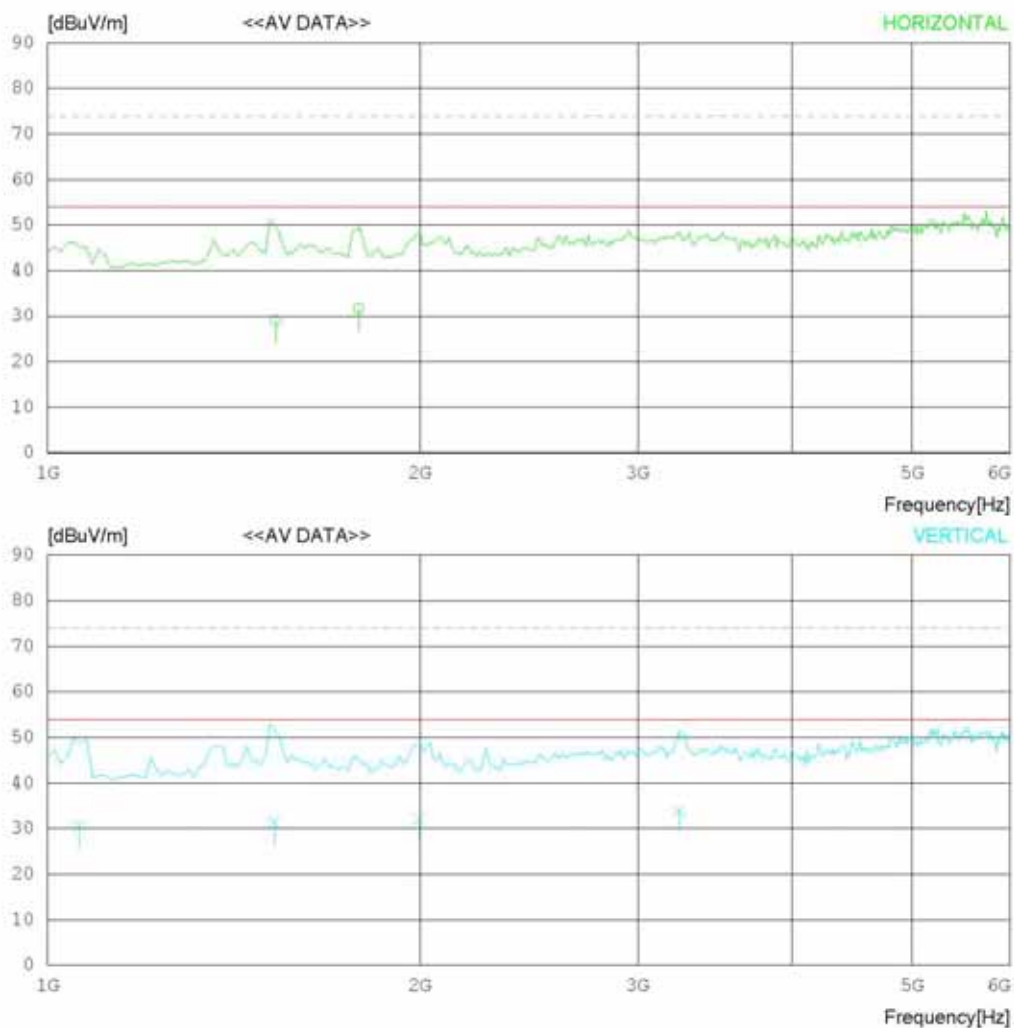
Date : 2012-02-03

Model Name : 22LQ630H-UA
 Model No. :
 Serial No. :
 Test Condition : HDMI

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi : 19 °C 28 % 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 : 2012-02-03

Model Name : 22LQ630H-UA	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 19 °C 28 % 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	1529.375	39.6	25.1	6.0	41.6	29.1	54.0	24.9	100	358
2	1784.231	41.7	25.2	6.6	41.8	31.7	54.0	22.3	100	358
----- Vertical -----										
3	1060.657	43.6	23.8	5.0	41.8	30.6	54.0	23.4	100	142
4	1525.250	41.9	25.1	6.0	41.6	31.4	54.0	22.6	100	169
5	1996.250	41.5	25.2	7.0	41.7	32.0	54.0	22.0	100	183
6	3238.375	37.6	29.0	9.1	41.8	33.9	54.0	20.1	100	44

< USB MODE_30 MHz ~ 1 GHz >

RADIATED EMISSION

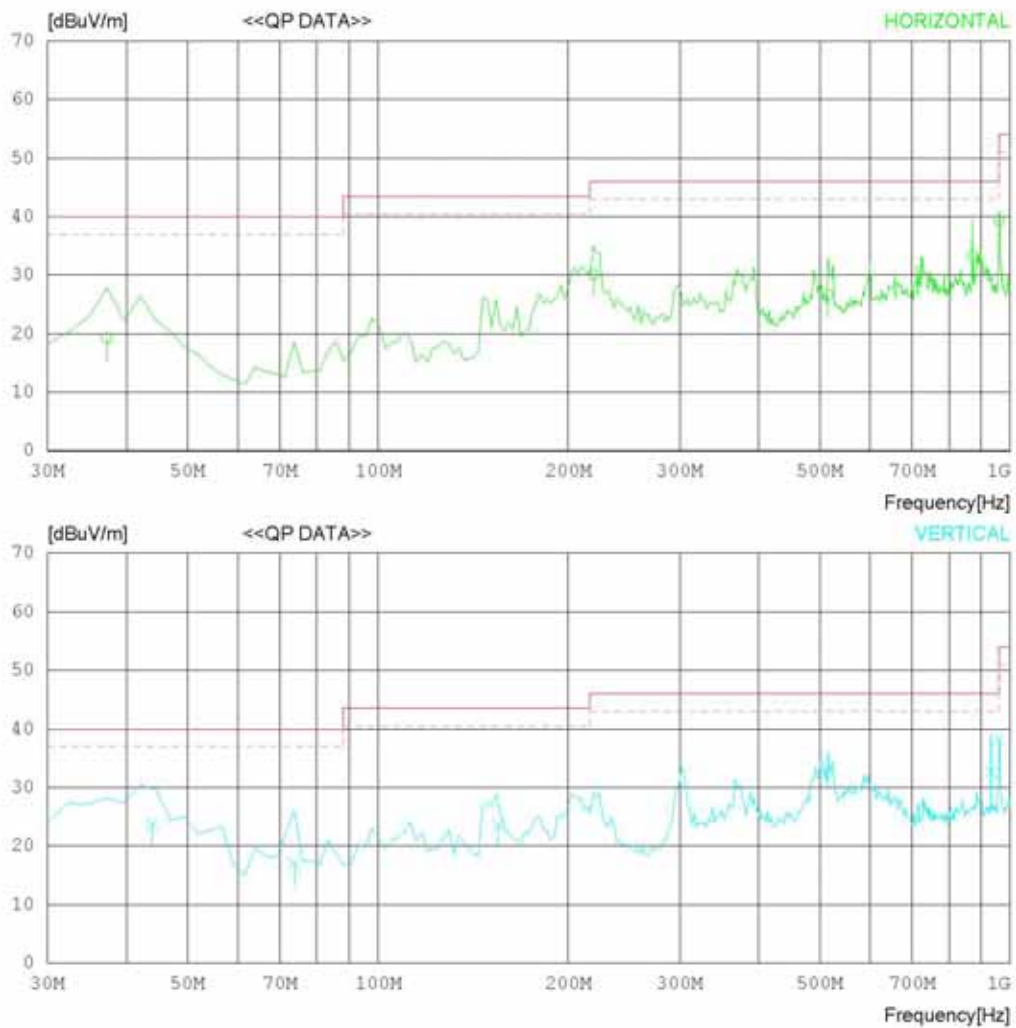
Date : 2012-02-03

Model Name : 22LQ630H-UA
 Model No. :
 Serial No. :
 Test Condition : USB

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi : 20 °C 31 % R.H.
 Operator :

Memo :

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



RADIATED EMISSION

Date : 2012-02-03

Model Name : 22LQ630H-UA	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 20 °C 31 % 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	37.275	26.0	15.4	0.9	23.1	19.2	40.0	20.8	100	216
2	219.150	40.3	11.0	2.2	23.4	30.1	46.0	15.9	100	1
3	515.097	30.2	17.8	3.4	24.8	26.6	46.0	19.4	100	188
4	871.472	31.4	20.6	4.6	23.3	33.3	46.0	12.7	300	359
5	960.000	36.4	21.0	4.9	23.0	39.3	46.0	6.7	115	185
----- Vertical -----										
6	43.913	31.5	14.1	1.0	22.9	23.7	40.0	16.3	100	358
7	73.788	31.9	6.6	1.3	22.8	17.0	40.0	23.0	100	166
8	154.954	34.6	10.3	1.7	23.1	23.5	43.5	20.0	100	36
9	515.097	37.0	17.8	3.4	24.8	33.4	46.0	12.6	100	358
10	932.097	29.9	20.8	4.9	23.0	32.6	46.0	13.4	100	211
11	960.000	35.4	21.0	4.9	23.0	38.3	46.0	7.7	100	169

< USB MODE_1 GHz ~ 6 GHz_Peak >

RADIATED EMISSION

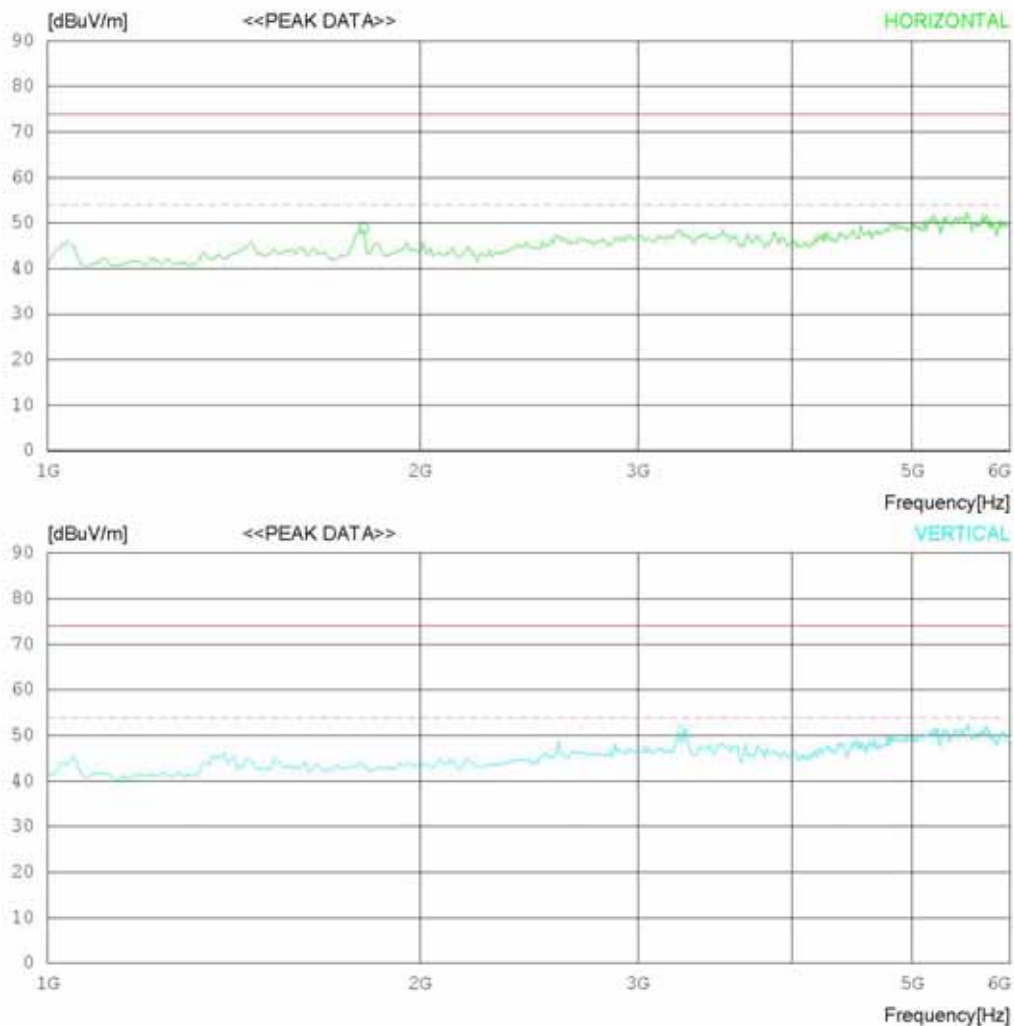
Date : 2012-02-03

Model Name : 22LQ630H-UA
 Model No. :
 Serial No. :
 Test Condition : USB

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi : 19 °C 28 % 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 : 2012-02-03

Model Name : 22LQ630H-UA	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 19 'C 28 % 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	1800.000	58.8	25.2	6.6	41.8	48.8	74.0	25.2	100	212
----- Vertical -----										
2	3275.000	54.8	29.0	9.1	41.9	51.0	74.0	23	100	1

< USB MODE_1 GHz ~ 6 GHz_Average >

RADIATED EMISSION

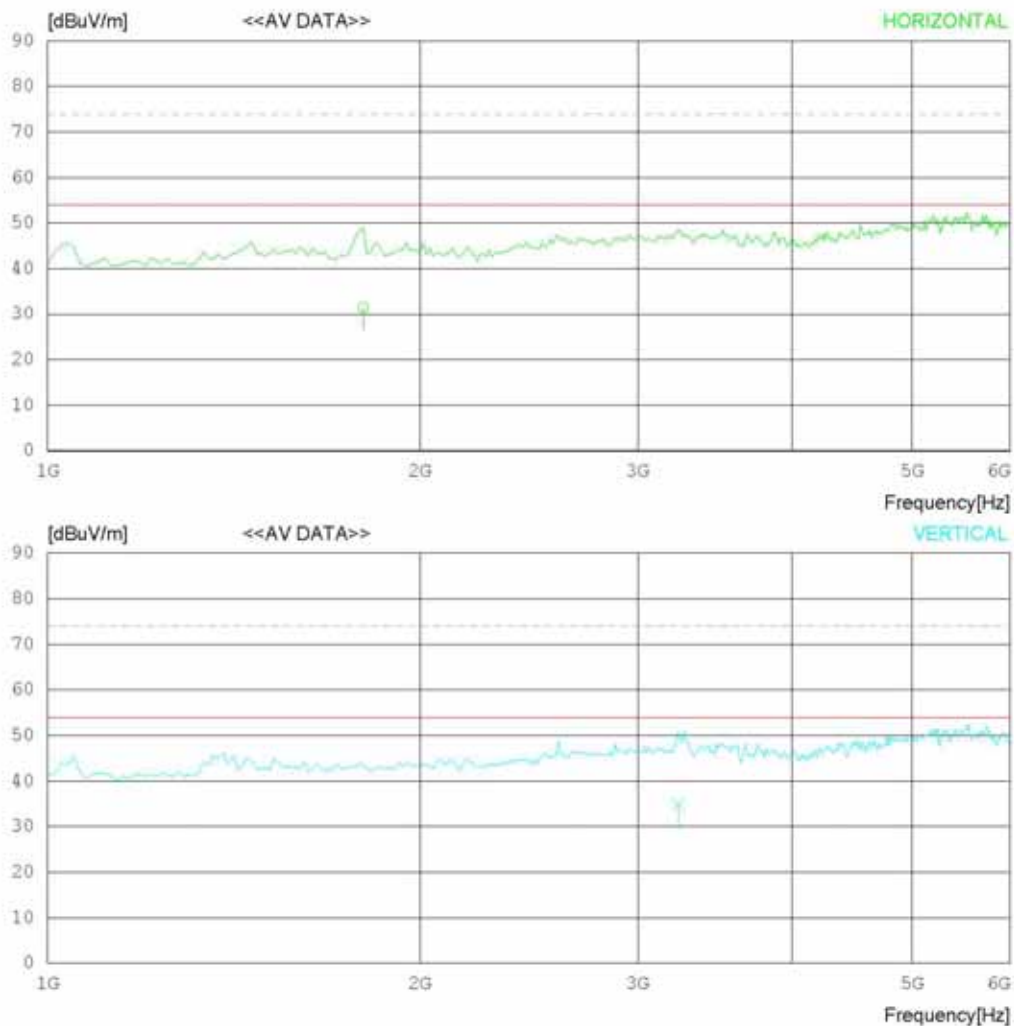
Date : 2012-02-03

Model Name : 22LQ630H-UA
 Model No. :
 Serial No. :
 Test Condition : USB

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi : 19 °C 28 % 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 : 2012-02-03

Model Name : 22LQ630H-UA	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 19 'C 28 % 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	READING	ANT	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
		AV	FACTOR							
	[MHz]	[dBuV]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
----- Horizontal -----										
1	1800.000	41.4	25.2	6.6	41.8	31.4	54.0	22.6	100	212
----- Vertical -----										
2	3236.585	38.6	29.0	9.1	41.8	34.9	54.0	19.1	100	1

Appendix 1

List of Test and Measurement Instruments

1. Conducted Disturbance

Name of Instrument	Model No.	Manufacturer	Serial No.	Cal. Date	Next Cal. Date
☐ SPECTRUM ANALYZER	8591E	H/P	3649A05889	2011.03.07	2012.03.07
☐ RFI/FIELD INTENSITY METER	KNM-2402	KYORITSU	4N-170-3	2011.07.02	2012.07.02
☐ LISN	KNW-407	KYORITSU	8-317-8	2012.01.09	2013.01.09
☐ LISN	KNW-242	KYORITSU	8-654-15	2011.07.01	2012.07.01
☐ 50 OHM TERMINATOR	CT-01	TME	N/A	2012.01.09	2013.01.09
☒ EMI TEST RECEIVER	ESCI	ROHDE & SCHWARZ	100364	2011.03.08	2012.03.08
☒ LISN	ESH2-Z5	ROHDE & SCHWARZ	828739/006	2011.09.30	2012.09.30
☒ LISN	LISN1600	TTI	197204	2011.07.02	2012.07.02
☒ 50 OHM TERMINATOR	CT-01	TME	N/A	2012.01.09	2013.01.09

2. Radiated Disturbance

Name of Instrument	Model No.	Manufacturer	Serial No.	Cal. Date	Next Cal. Date
☒ EMI TEST RECEIVER	ESU	ROHDE & SCHWARZ	100014	2012.01.09	2013.01.09
☒ BILOG ANTENNA	CBL6112B	SCHAFFNER	2737	2010.07.14	2012.07.14
☒ HORN ANTENNA	BBHA9120A	SCHWARZBECK	322	2010.04.13	2012.04.13
☒ AMPLIFIER	8447E	H/P	2945A02865	2012.01.09	2013.01.09
☒ AMPLIFIER	MLA-00108-B02-36	TSJ	1518831	2012.01.09	2013.01.09
☐ SPECTRUM ANALYZER	E4411B	AGILENT	US41062735	2011.07.01	2012.07.01
☐ AMPLIFIER	8447D	AGILENT	2443A03690	2011.07.01	2012.07.01
☐ BILOG ANTENNA	VULB9160	SCHAFFNER	3151	2010.08.25	2012.08.25
☐ EMI TEST RECEIVER	ESCI	ROHDE & SCHWARZ	100364	2011.03.08	2012.03.08
☐ BICONICAL ANT.	VHA 9103	SCHWARZBECK	91032789	2010.11.29	2012.11.29
☐ LOG-PERIODIC ANT.	UHALP 9108A	SCHWARZBECK	590	2010.07.07	2012.07.07
☐ BICONICAL ANT.	VHA 9103	SCHWARZBECK	91031946	2010.12.21	2012.12.21
☐ LOG-PERIODIC ANT.	UHALP 9108-A1	SCHWARZBECK	1098	2010.11.29	2012.11.29
☐ AMPLIFIER	MLA-100K01-B01-26	TSJ	1252741	2011.03.07	2012.03.07