

EMC TEST REPORT

Test item : LCD TV Monitor
Model No. : 42CQ610H-UA
Order No. : 1202-00163
Date of receipt : 2012-02-06
Test duration : 2012-02-08 ~ 2012-02-11
Use of report : FCC CoC Marking
Date of Issue : 2012-02-16

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 ~ 19) °C,
Humidity : (29 ~ 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:



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	ROK1124C	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.	42CQ610H-UA
EUT Type	LCD TV Monitor
Serial No	NONE
FCC ID	BEJ42CQ610HUA
Type of Sample Tested	Pre-Production
High Frequency	667 MHz
Rating	AC100-240 V~, 50/60 Hz, 1.5 A
Supplied Power for Test	AC120 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

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	02-08	19	37	-
Radiated Disturbance	02-11	18	29	

4.3 Test result Summary

(1) Conducted Emission(HDMI MODE)

Frequency [MHz]	Phase	Result [dB μ V]	Detector	Limit [dB μ V]	Margin [dB]
1.16700	L1	38.7	Average	46.0	7.3

(2) Radiated Emission(DSUB MODE)

Frequency [MHz]	Pol.	Result [dB(μ V/m)]	Detector	Limit [dB(μ V/m)]	Margin [dB]
221.554	H	40.8	Quasi-Peak	46.0	5.2

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 – 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	1.6	Use	Shield		
				STEREO	1.8	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	JEWELRY	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

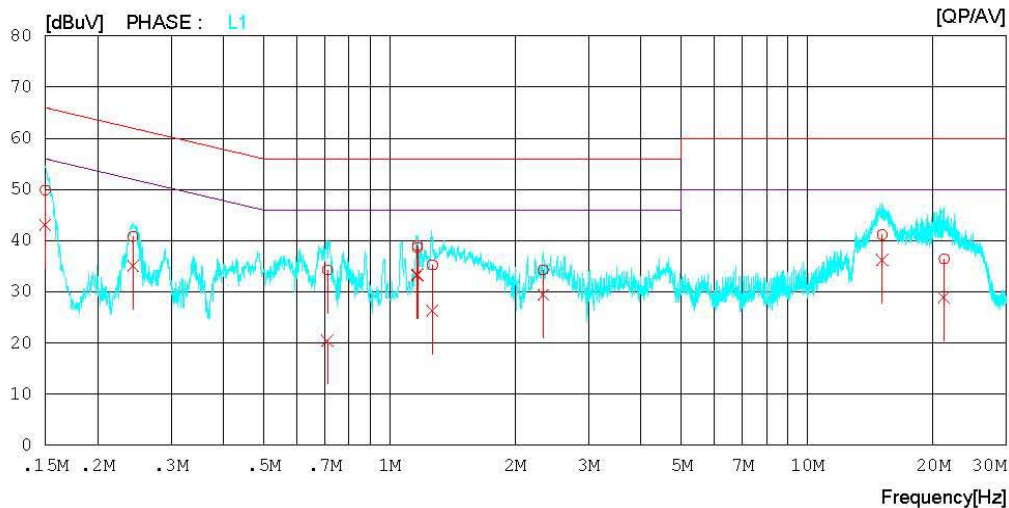
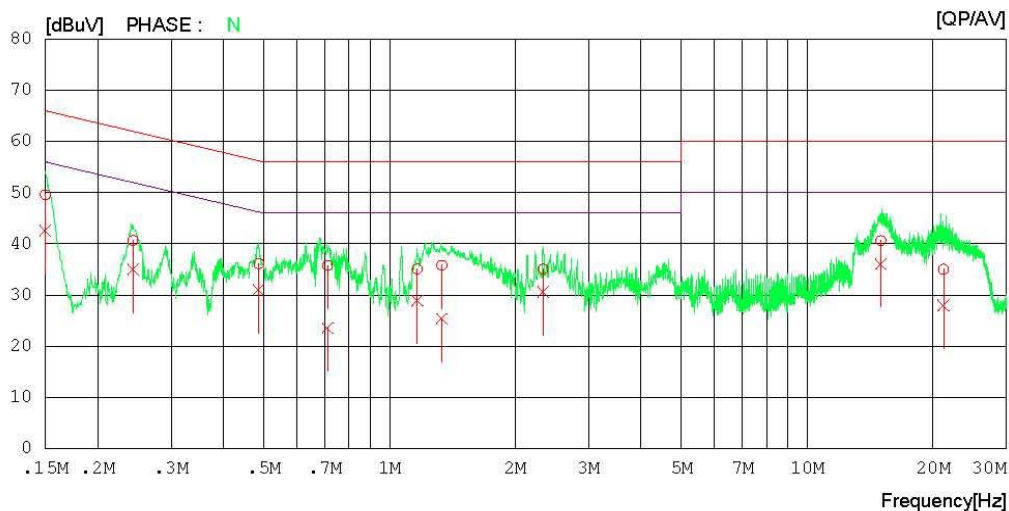
Digital EMC
 Date : 2012-02-08

Model No. : 42CQ610H-UA
 Type :
 Serial No. :
 Test Condition : DSUB

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi. : 19°C 37 % R.H.
 Operator :

Memo :

LIMIT : CISPR22_B QP
 CISPR22_B AV



Results of Conducted Emission

Digital EMC
 Date : 2012-02-08

Model No.	: 42CQ610H-UA	Reference No.	:
Type	:	Power Supply	: 120V 60Hz
Serial No.	:	Temp/Humi.	: 19°C 37 % R.H.
Test Condition	: DSUB	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	49.2	42.3	0.3	49.5	42.6	66.0	56.0	16.5	13.4	N
2	0.24319	40.5	34.8	0.2	40.7	35.0	62.0	52.0	21.3	17.0	N
3	0.48634	35.9	30.8	0.2	36.1	31.0	56.2	46.2	20.1	15.2	N
4	0.71139	35.5	23.4	0.2	35.7	23.6	56.0	46.0	20.3	22.4	N
5	1.16500	34.8	28.6	0.3	35.1	28.9	56.0	46.0	20.9	17.1	N
6	1.33450	35.5	25.0	0.3	35.8	25.3	56.0	46.0	20.2	20.7	N
7	2.33150	34.7	30.3	0.3	35.0	30.6	56.0	46.0	21.0	15.4	N
8	15.00350	39.7	35.2	0.9	40.6	36.1	60.0	50.0	19.4	13.9	N
9	21.21100	33.9	26.9	1.1	35.0	28.0	60.0	50.0	25.0	22.0	N
10	0.15000	49.6	42.8	0.3	49.9	43.1	66.0	56.0	16.1	12.9	L1
11	0.24314	40.6	34.8	0.2	40.8	35.0	62.0	52.0	21.2	17.0	L1
12	0.71023	34.1	20.3	0.2	34.3	20.5	56.0	46.0	21.7	25.5	L1
13	1.16700	38.4	33.0	0.3	38.7	33.3	56.0	46.0	17.3	12.7	L1
14	1.16600	38.8	33.0	0.3	39.1	33.3	56.0	46.0	16.9	12.7	L1
15	1.26800	35.0	26.0	0.3	35.3	26.3	56.0	46.0	20.7	19.7	L1
16	2.33500	34.0	29.1	0.3	34.3	29.4	56.0	46.0	21.7	16.6	L1
17	15.12800	40.3	35.3	0.9	41.2	36.2	60.0	50.0	18.8	13.8	L1
18	21.28800	35.3	27.8	1.1	36.4	28.9	60.0	50.0	23.6	21.1	L1

< HDMI MODE >



Results of Conducted Emission

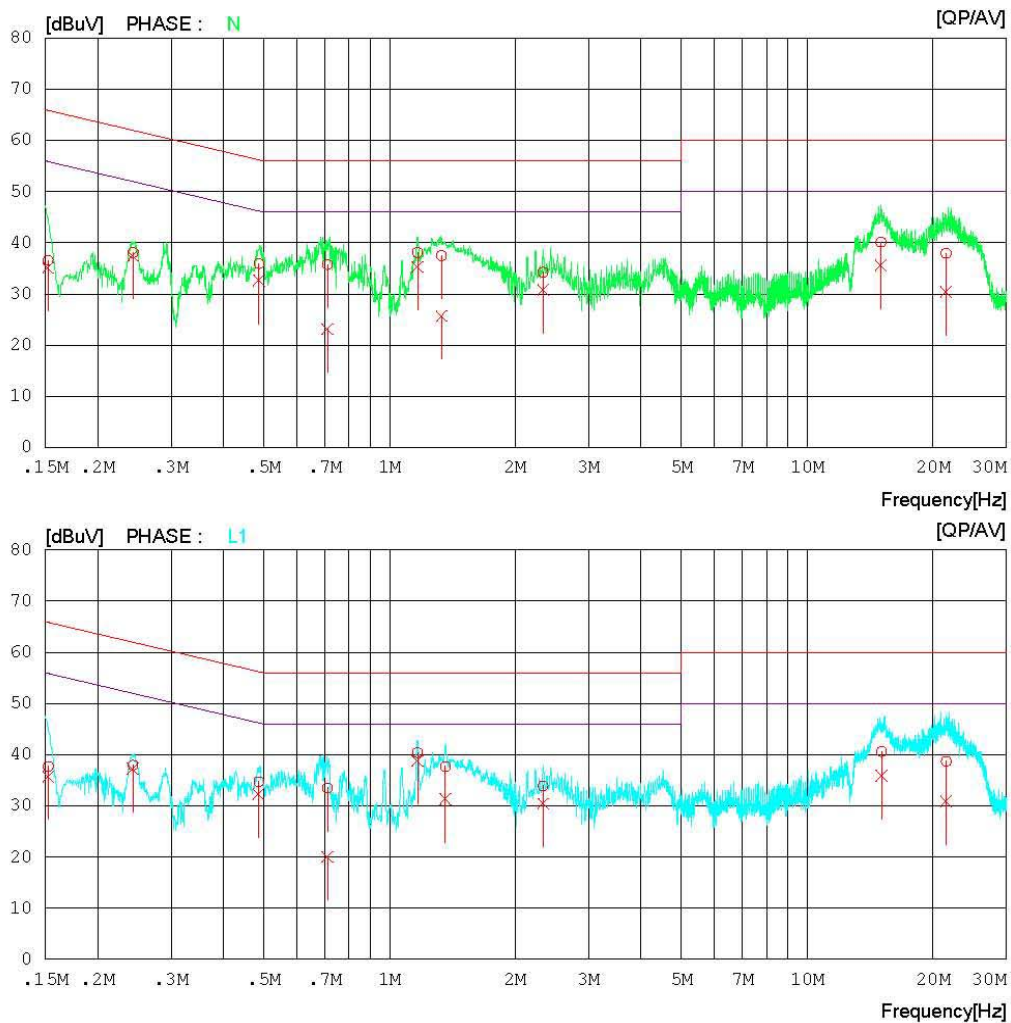
Digital EMC
Date : 2012-02-08

Model No. : 42CQ610H-UA
Type :
Serial No. :
Test Condition : HDMI

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi. : 19°C 37 % R.H.
Operator :

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV



Results of Conducted Emission

Digital EMC
Date : 2012-02-08

Model No. : 42CQ610H-UA
Type :
Serial No. :
Test Condition : HDMI

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi. : 19°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	0.15234	36.3	34.8	0.3	36.6	35.1	65.9	55.9	29.3	20.8	N
2	0.24334	37.9	37.3	0.2	38.1	37.5	62.0	52.0	23.9	14.5	N
3	0.48696	35.7	32.5	0.2	35.9	32.7	56.2	46.2	20.3	13.5	N
4	0.71050	35.5	22.9	0.2	35.7	23.1	56.0	46.0	20.3	22.9	N
5	1.16700	37.8	34.9	0.3	38.1	35.2	56.0	46.0	17.9	10.8	N
6	1.33300	37.2	25.4	0.3	37.5	25.7	56.0	46.0	18.5	20.3	N
7	2.33200	34.0	30.5	0.3	34.3	30.8	56.0	46.0	21.7	15.2	N
8	15.01250	39.2	34.6	0.9	40.1	35.5	60.0	50.0	19.9	14.5	N
9	21.51100	36.8	29.2	1.1	37.9	30.3	60.0	50.0	22.1	19.7	N
10	0.15240	37.4	35.4	0.3	37.7	35.7	65.9	55.9	28.2	20.2	L1
11	0.24305	37.7	37.0	0.2	37.9	37.2	62.0	52.0	24.1	14.8	L1
12	0.48650	34.5	32.1	0.2	34.7	32.3	56.2	46.2	21.5	13.9	L1
13	0.71004	33.3	19.8	0.2	33.5	20.0	56.0	46.0	22.5	26.0	L1
14	1.16700	40.1	38.4	0.3	40.4	38.7	56.0	46.0	15.6	7.3	L1
15	1.36100	37.4	31.0	0.3	37.7	31.3	56.0	46.0	18.3	14.7	L1
16	2.33350	33.6	30.2	0.3	33.9	30.5	56.0	46.0	22.1	15.5	L1
17	15.06700	39.7	35.0	0.9	40.6	35.9	60.0	50.0	19.4	14.1	L1
18	21.52900	37.6	29.8	1.1	38.7	30.9	60.0	50.0	21.3	19.1	L1

< USB MODE >



Results of Conducted Emission

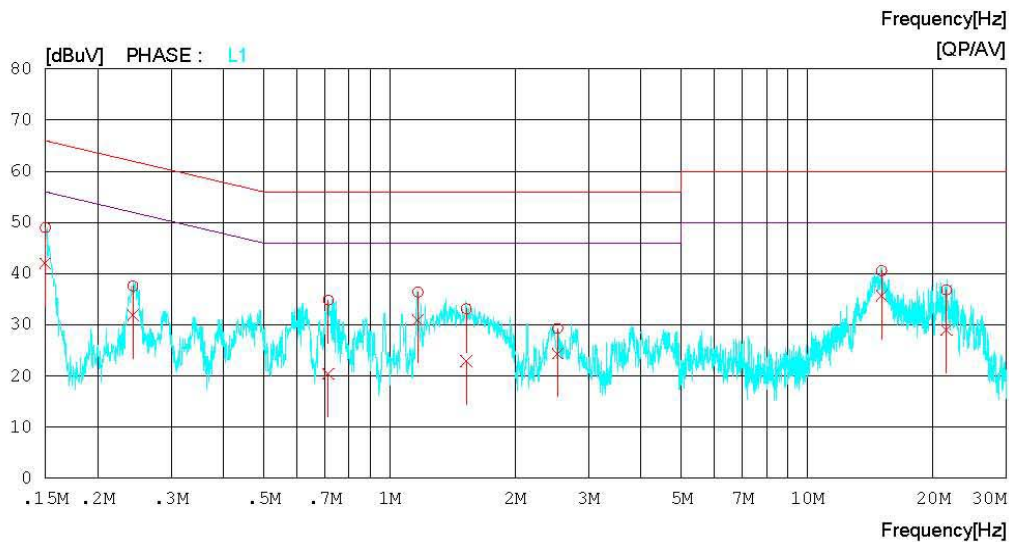
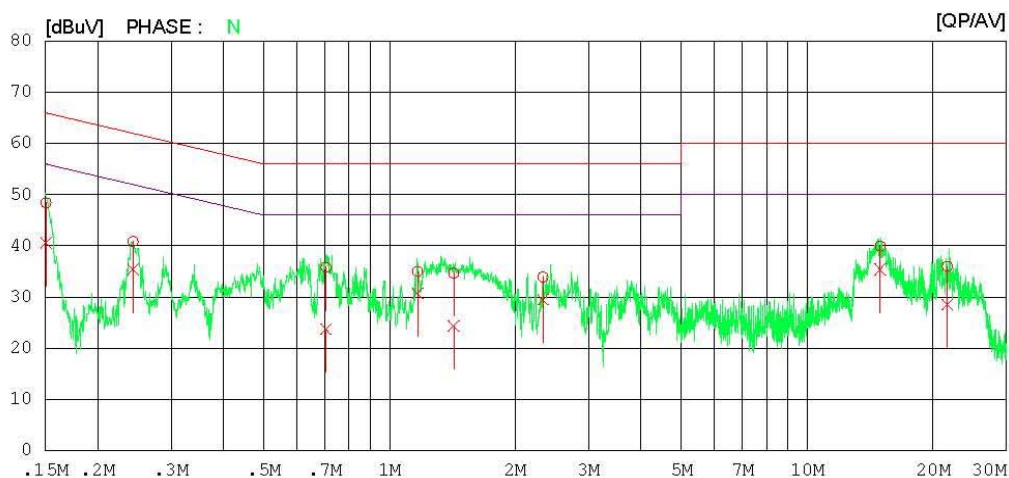
Digital EMC
 Date : 2012-02-08

Model No. : 42CQ610H-UA
 Type :
 Serial No. :
 Test Condition : USB

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi. : 19°C 37 % R.H.
 Operator :

Memo :

LIMIT : CISPR22_B QP
 CISPR22_B AV



Results of Conducted Emission

Digital EMC
Date : 2012-02-08

Model No. : 42CQ610H-UA
Type :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi. : 19 °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	0.15063	48.1	40.3	0.3	48.4	40.6	66.0	56.0	17.6	15.4	N
2	0.24329	40.6	35.1	0.2	40.8	35.3	62.0	52.0	21.2	16.7	N
3	0.70470	35.6	23.5	0.2	35.8	23.7	56.0	46.0	20.2	22.3	N
4	1.16800	34.7	30.5	0.3	35.0	30.8	56.0	46.0	21.0	15.2	N
5	1.42550	34.3	24.0	0.3	34.6	24.3	56.0	46.0	21.4	21.7	N
6	2.33300	33.6	29.2	0.3	33.9	29.5	56.0	46.0	22.1	16.5	N
7	14.96200	39.0	34.5	0.9	39.9	35.4	60.0	50.0	20.1	14.6	N
8	21.64300	34.8	27.3	1.2	36.0	28.5	60.0	50.0	24.0	21.5	N
9	0.15000	48.7	41.7	0.3	49.0	42.0	66.0	56.0	17.0	14.0	L1
10	0.24325	37.4	31.7	0.2	37.6	31.9	62.0	52.0	24.4	20.1	L1
11	0.71403	34.6	20.3	0.2	34.8	20.5	56.0	46.0	21.2	25.5	L1
12	1.17000	36.1	30.7	0.3	36.4	31.0	56.0	46.0	19.6	15.0	L1
13	1.52700	32.8	22.6	0.3	33.1	22.9	56.0	46.0	22.9	23.1	L1
14	2.52800	29.0	24.1	0.3	29.3	24.4	56.0	46.0	26.7	21.6	L1
15	15.07700	39.7	34.8	0.9	40.6	35.7	60.0	50.0	19.4	14.3	L1
16	21.53650	35.7	27.9	1.1	36.8	29.0	60.0	50.0	23.2	21.0	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 (dB μ V/m)	Quasi-peak (dB μ V/m)
30 to 88	39.1	40
88 to 216	43.5	43.5
216 to 960	46.4	46
960 to 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 (dB μ V/m)	Quasi-peak (dB μ V/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 (dB μ V/m)	Average (dB μ V/m)	Peak (dB μ V/m)	Average (dB μ V/m)
1 to 40	80	60	74	54

Test Result

< DSUB MODE_30 MHz ~ 1 GHz >

RADIATED EMISSION

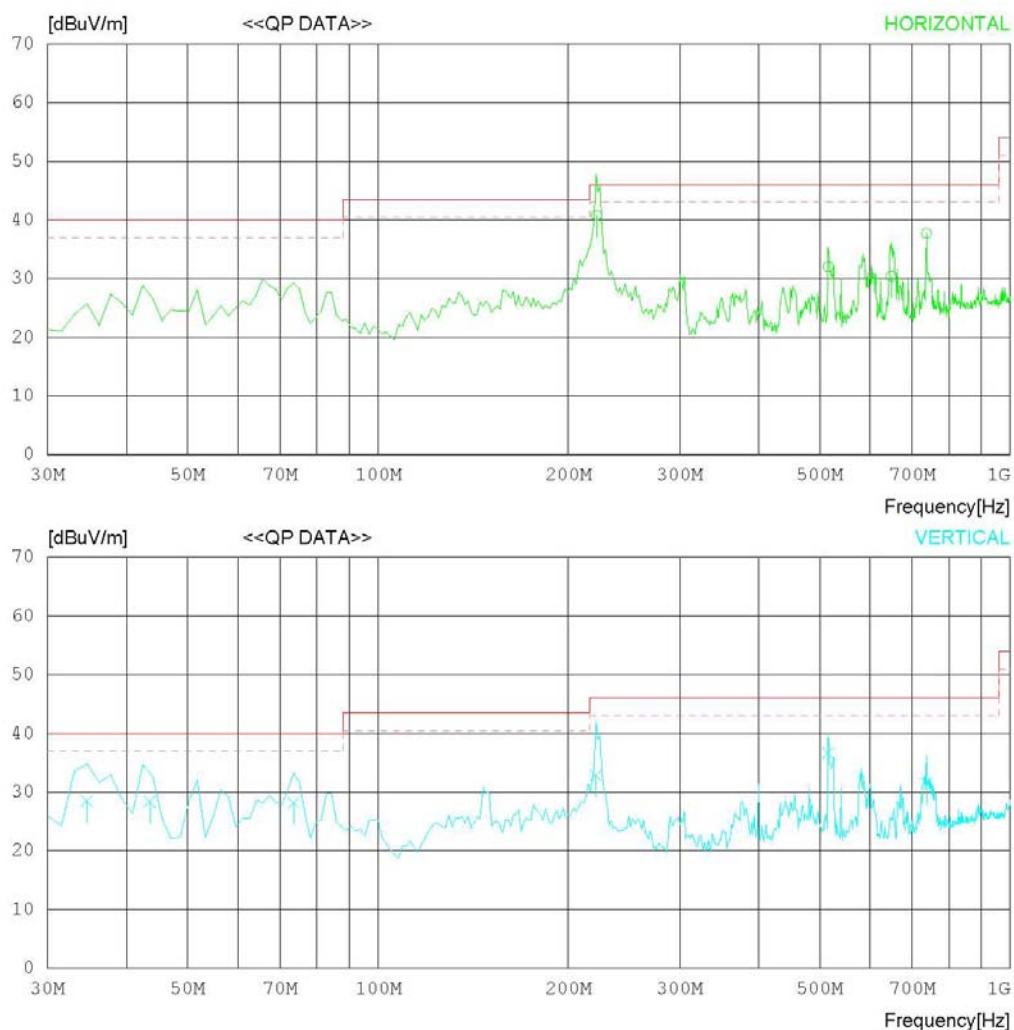
Date : 2012-02-11

Model Name : 42CQ610H-UA
 Model No. :
 Serial No. :
 Test Condition : DSUB

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi : 18 °C 29 % R.H.
 Operator :

Memo :

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



RADIATED EMISSION

Date : 2012-02-11

Model Name : 42CQ610H-UA	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 18 °C 29 % 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	221.554	51.0	11.1	2.2	23.5	40.8	46.0	5.2	100	38
2	515.162	35.6	17.8	3.4	24.8	32.0	46.0	14.0	100	0
3	648.686	32.1	18.8	4.0	24.5	30.4	46.0	15.6	100	358
4	737.316	38.0	19.4	4.3	24.0	37.7	46.0	8.3	100	205
----- Vertical -----										
5	34.663	33.9	16.8	0.9	23.1	28.5	40.0	11.5	200	322
6	43.540	36.2	14.1	1.0	22.9	28.4	40.0	11.6	100	43
7	73.526	43.1	6.6	1.3	22.8	29.2	40.0	11.8	200	358
8	221.202	43.1	11.1	2.2	23.5	32.9	46.0	13.1	200	347
9	515.174	40.3	17.8	3.4	24.8	36.7	46.0	9.3	220	190
10	737.321	31.9	19.4	4.3	24.0	31.6	46.0	14.4	100	165

< DSUB MODE_1 GHz ~ 6 GHz_Peak >

RADIATED EMISSION

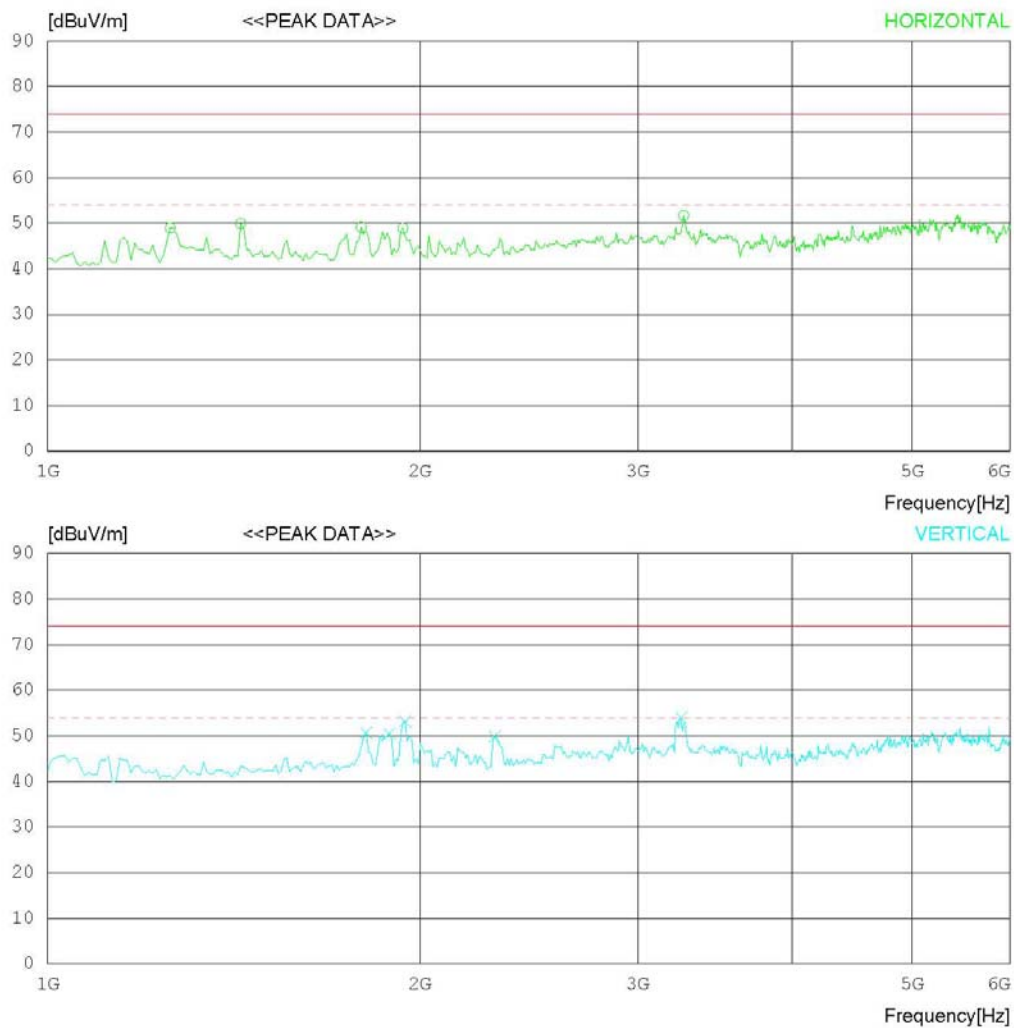
Date : 2012-02-11

Model Name : 42CQ610H-UA
Model No. :
Serial No. :
Test Condition : DSUB

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 18 'C 29 % 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 : 2012-02-11

Model Name	: 42CQ610H-UA	Reference No.	:
Model No.	:	Power Supply	: 120V 60Hz
Serial No.	:	Temp/Humi	: 18 °C 29 % 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	1256.410	61.0	24.4	5.4	41.8	49.0	74.0	25	100	358
2	1432.692	60.8	24.9	5.8	41.6	49.9	74.0	24.1	100	358
3	1793.269	59.1	25.2	6.6	41.8	49.1	74.0	24.9	100	132
4	1937.500	58.5	25.2	6.9	41.7	48.9	74.0	25.1	100	358
5	3267.646	55.4	29.0	9.1	41.8	51.7	74.0	22.3	100	160
----- Vertical -----										
6	1809.295	60.7	25.2	6.6	41.8	50.7	74.0	23.3	100	181
7	1889.423	60.2	25.2	6.8	41.7	50.5	74.0	23.5	100	1
8	1945.512	62.8	25.2	6.9	41.7	53.2	74.0	20.8	100	1
9	2298.080	57.6	26.5	7.5	41.8	49.8	74.0	24.2	100	205
10	3251.620	57.6	29.0	9.1	41.8	53.9	74.0	20.1	100	185

< DSUB MODE_1 GHz ~ 6 GHz_Average >

RADIATED EMISSION

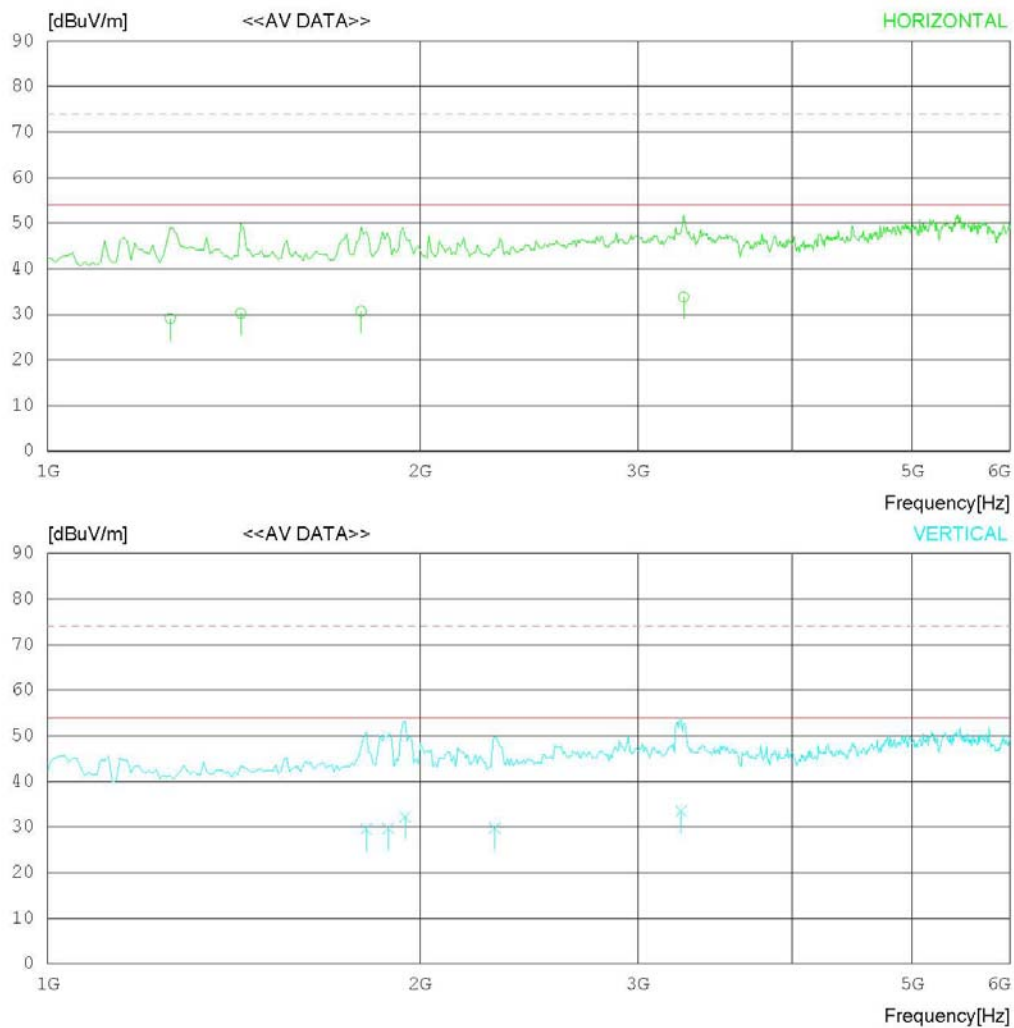
Date : 2012-02-11

Model Name : 42CQ610H-UA
Model No. :
Serial No. :
Test Condition : DSUB

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 18 °C 29 % 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 : 2012-02-11

Model Name	: 42CQ610H-UA	Reference No.	:
Model No.	:	Power Supply	: 120V 60Hz
Serial No.	:	Temp/Humi	: 18 °C 29 % 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	1256.410	41.1	24.4	5.4	41.8	29.1	54.0	24.9	100	358
2	1432.692	41.1	24.9	5.8	41.6	30.2	54.0	23.8	100	358
3	1793.269	40.7	25.2	6.6	41.8	30.7	54.0	23.3	100	132
4	3267.646	37.5	29.0	9.1	41.8	33.8	54.0	20.2	100	160
----- Vertical -----										
5	1809.295	39.5	25.2	6.6	41.8	29.5	54.0	24.5	100	181
6	1885.460	39.4	25.2	6.8	41.7	29.7	54.0	24.3	100	1
7	1945.512	41.8	25.2	6.9	41.7	32.2	54.0	21.8	100	1
8	2298.080	37.6	26.5	7.5	41.8	29.8	54.0	24.2	100	205
9	3251.620	37.2	29.0	9.1	41.8	33.5	54.0	20.5	100	185

< HDMI MODE_30 MHz ~ 1 GHz >

RADIATED EMISSION

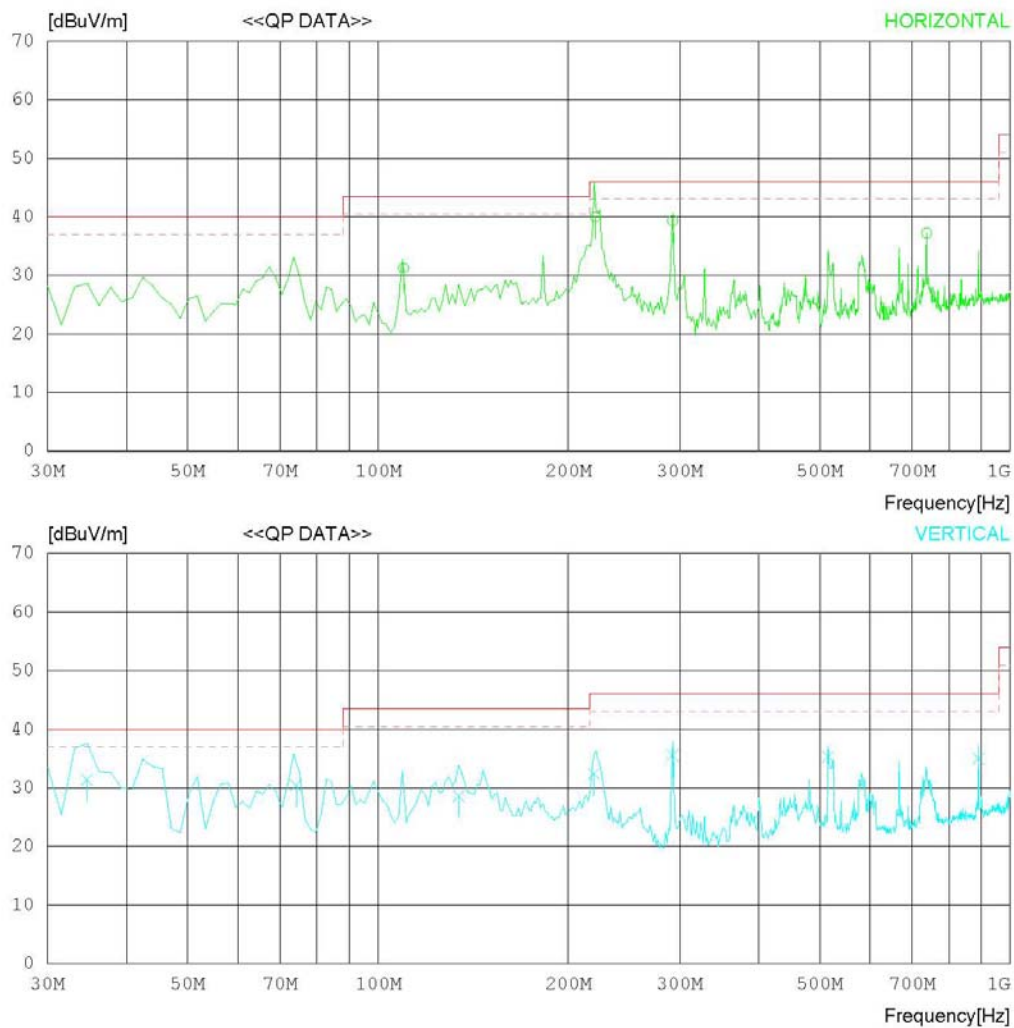
Date : 2012-02-11

Model Name : 42CQ610H-UA
Model No. :
Serial No. :
Test Condition : HDMI

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 18 'C 29 % R.H.
Operator :

Memo :

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



RADIATED EMISSION

Date : 2012-02-11

Model Name : 42CQ610H-UA	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 18 °C 29 % 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	109.713	41.3	11.2	1.5	22.8	31.2	43.5	12.3	196	89
2	220.586	50.2	11.1	2.2	23.5	40.0	46.0	6.0	100	312
3	292.455	46.8	13.7	2.6	23.8	39.3	46.0	6.7	100	179
4	737.300	37.5	19.4	4.3	24.0	37.2	46.0	8.8	100	144
----- Vertical -----										
5	34.663	36.8	16.8	0.9	23.1	31.4	40.0	8.6	199	1
6	74.152	45.2	6.7	1.3	22.8	30.4	40.0	9.6	199	1
7	134.151	38.7	11.3	1.6	23.0	28.6	43.5	14.9	100	252
8	219.319	42.6	11.0	2.2	23.4	32.4	46.0	13.6	100	150
9	292.464	43.1	13.7	2.6	23.8	35.6	46.0	10.4	100	358
10	514.998	38.9	17.8	3.4	24.8	35.3	46.0	10.7	223	186
11	891.188	32.8	20.6	4.8	23.2	35.0	46.0	11.0	100	358

< HDMI MODE_1 GHz ~ 6 GHz_Peak >

RADIATED EMISSION

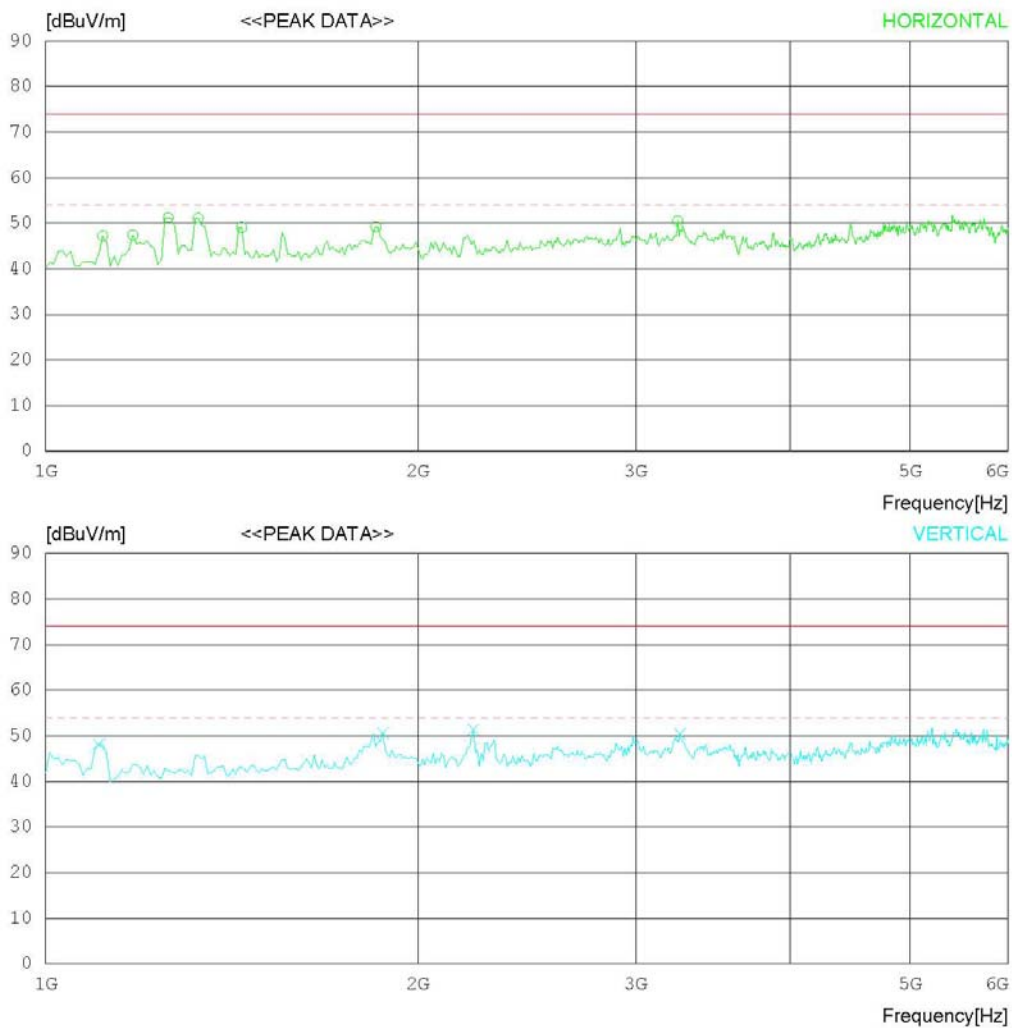
Date : 2012-02-11

Model Name : 42CQ610H-UA
Model No. :
Serial No. :
Test Condition : HDMI

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 18 'C 29 % 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 : 2012-02-11

Model Name	: 42CQ610H-UA	Reference No.	:
Model No.	:	Power Supply	: 120V 60Hz
Serial No.	:	Temp/Humi	: 18 °C 29 % 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	1112.179	59.9	24.0	5.1	41.8	47.2	74.0	26.8	100	1
2	1176.282	59.9	24.2	5.2	41.9	47.4	74.0	26.6	100	181
3	1256.410	63.2	24.4	5.4	41.8	51.2	74.0	22.8	100	1
4	1328.526	62.6	24.6	5.6	41.7	51.1	74.0	22.9	100	1
5	1440.705	59.9	25.0	5.8	41.6	49.1	74.0	24.9	100	155
6	1849.359	59.1	25.2	6.7	41.8	49.2	74.0	24.8	100	1
7	3243.607	54.2	29.0	9.1	41.8	50.5	74.0	23.5	100	1
----- Vertical -----										
8	1104.167	61.0	23.9	5.1	41.8	48.2	74.0	25.8	100	358
9	1873.397	60.4	25.2	6.7	41.7	50.6	74.0	23.4	100	358
10	2217.951	59.7	26.1	7.3	41.7	51.4	74.0	22.6	100	211
11	3259.633	54.1	29.0	9.1	41.8	50.4	74.0	23.6	100	358

< HDMI MODE_1 GHz ~ 6 GHz_Average >

RADIATED EMISSION

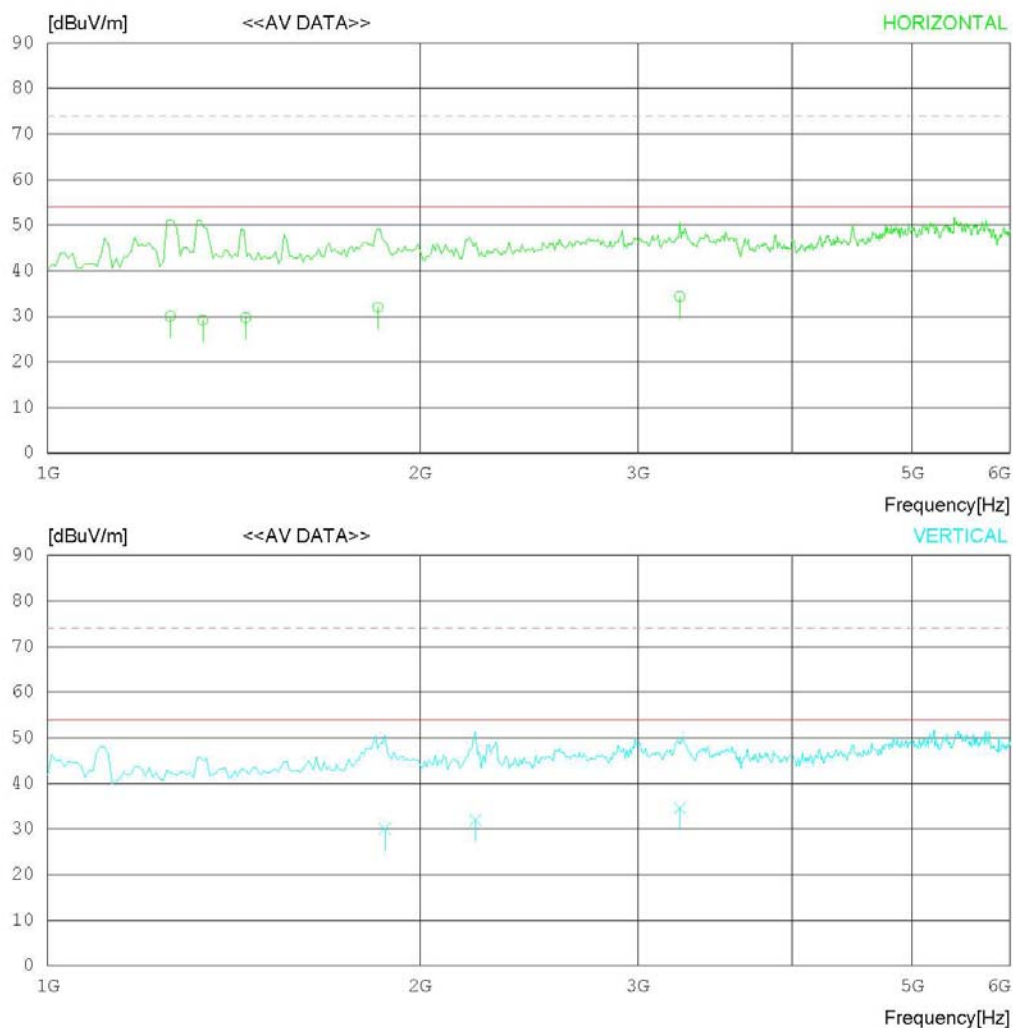
Date : 2012-02-11

Model Name : 42CQ610H-UA
 Model No. :
 Serial No. :
 Test Condition : HDMI

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi : 18 'C 29 % 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 : 2012-02-11

Model Name : 42CQ610H-UA	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 18 °C 29 % 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	1256.410	42.0	24.4	5.4	41.8	30.0	54.0	24.0	100	129
2	1335.000	40.7	24.6	5.6	41.7	29.2	54.0	24.8	100	110
3	1446.000	40.5	25.0	5.8	41.6	29.7	54.0	24.3	100	155
4	1849.359	41.9	25.2	6.7	41.8	32.0	54.0	22.0	100	89
5	3243.607	38.1	29.0	9.1	41.8	34.4	54.0	19.6	100	1
----- Vertical -----										
6	1873.397	39.9	25.2	6.7	41.7	30.1	54.0	23.9	100	358
7	2217.951	40.3	26.1	7.3	41.7	32.0	54.0	22.0	100	211
8	3245.586	38.3	29.0	9.1	41.8	34.6	54.0	19.4	100	358

< USB MODE_30 MHz ~ 1 GHz >

RADIATED EMISSION

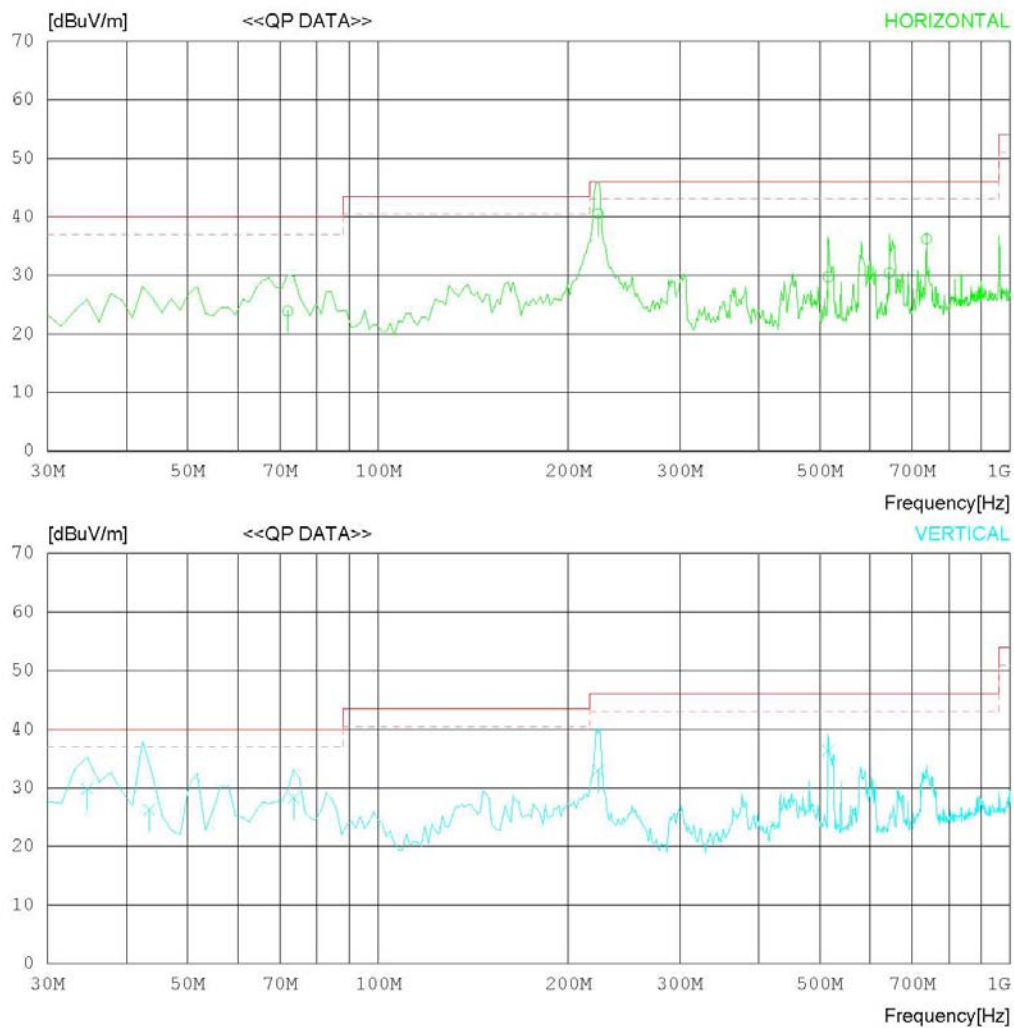
Date : 2012-02-11

Model Name : 42CQ610H-UA
Model No. :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 18 °C 29 % R.H.
Operator :

Memo :

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



RADIATED EMISSION

Date : 2012-02-11

Model Name : 42CQ610H-UA	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 18 °C 29 % 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	71.971	38.9	6.5	1.2	22.7	23.9	40.0	16.1	400	1
2	222.852	50.6	11.2	2.2	23.5	40.5	46.0	5.5	136	43
3	515.178	33.3	17.8	3.4	24.8	29.7	46.0	16.3	333	213
4	644.022	32.1	18.8	4.0	24.5	30.4	46.0	15.6	100	156
5	737.316	36.5	19.4	4.3	24.0	36.2	46.0	9.8	100	142
----- Vertical -----										
6	34.663	35.3	16.8	0.9	23.1	29.9	40.0	10.1	119	26
7	43.497	34.1	14.1	1.0	22.9	26.3	40.0	13.7	197	358
8	73.526	43.2	6.6	1.3	22.8	28.3	40.0	11.7	100	1
9	222.853	43.0	11.2	2.2	23.5	32.9	46.0	13.1	199	358
10	515.154	40.0	17.8	3.4	24.8	36.4	46.0	9.6	123	182

< USB MODE_1 GHz ~ 6 GHz_Peak >

RADIATED EMISSION

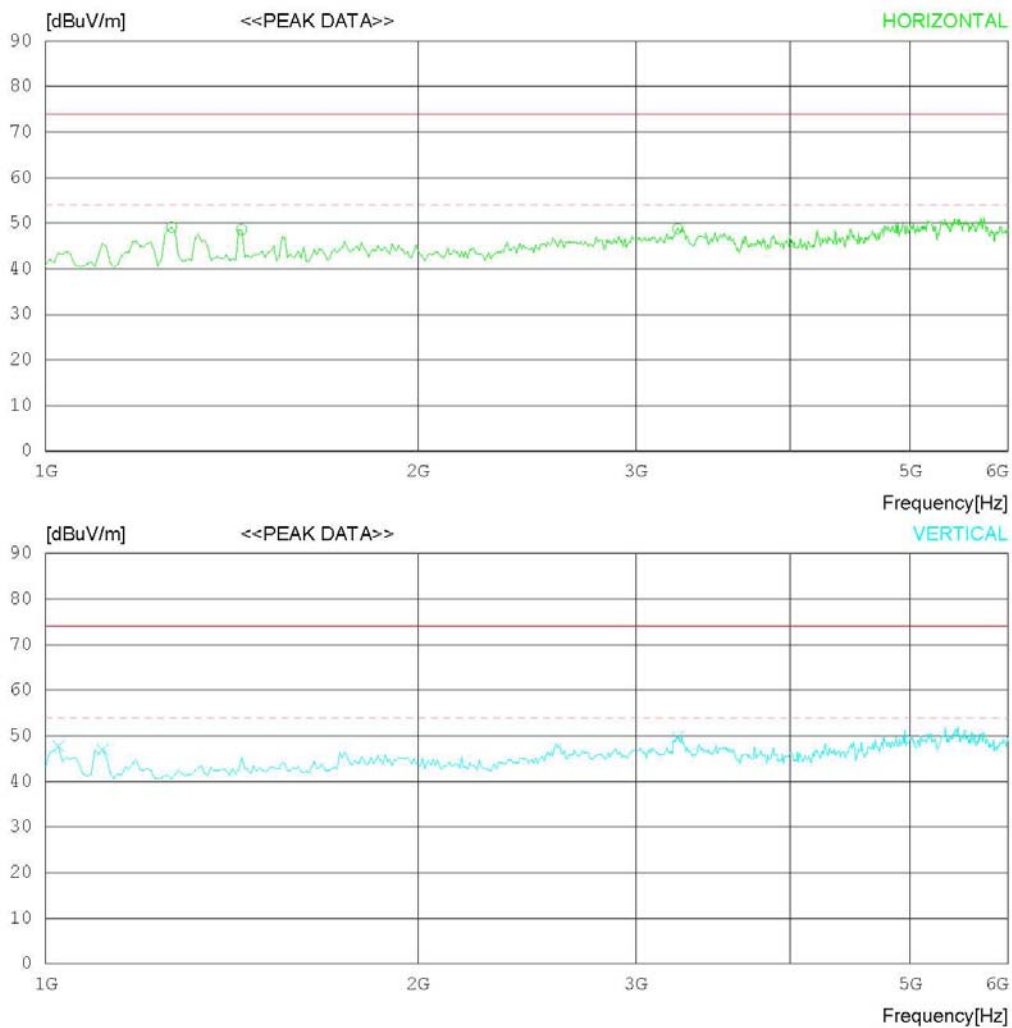
Date : 2012-02-11

Model Name : 42CQ610H-UA
Model No. :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 18 'C 29 % 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 : 2012-02-11

Model Name	: 42CQ610H-UA	Reference No.	:
Model No.	:	Power Supply	: 120V 60Hz
Serial No.	:	Temp/Humi	: 18 °C 29 % 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	1264.423	61.1	24.4	5.4	41.8	49.1	74.0	24.9	100	173
2	1440.705	59.4	25.0	5.8	41.6	48.6	74.0	25.4	100	197
3	3243.607	52.5	29.0	9.1	41.8	48.8	74.0	25.2	100	162
----- Vertical -----										
4	1024.038	60.9	23.7	4.9	41.8	47.7	74.0	26.3	100	178
5	1112.179	59.7	24.0	5.1	41.8	47.0	74.0	27	100	186
6	3243.607	53.4	29.0	9.1	41.8	49.7	74.0	24.3	100	174

< USB MODE_1 GHz ~ 6 GHz_Average >

RADIATED EMISSION

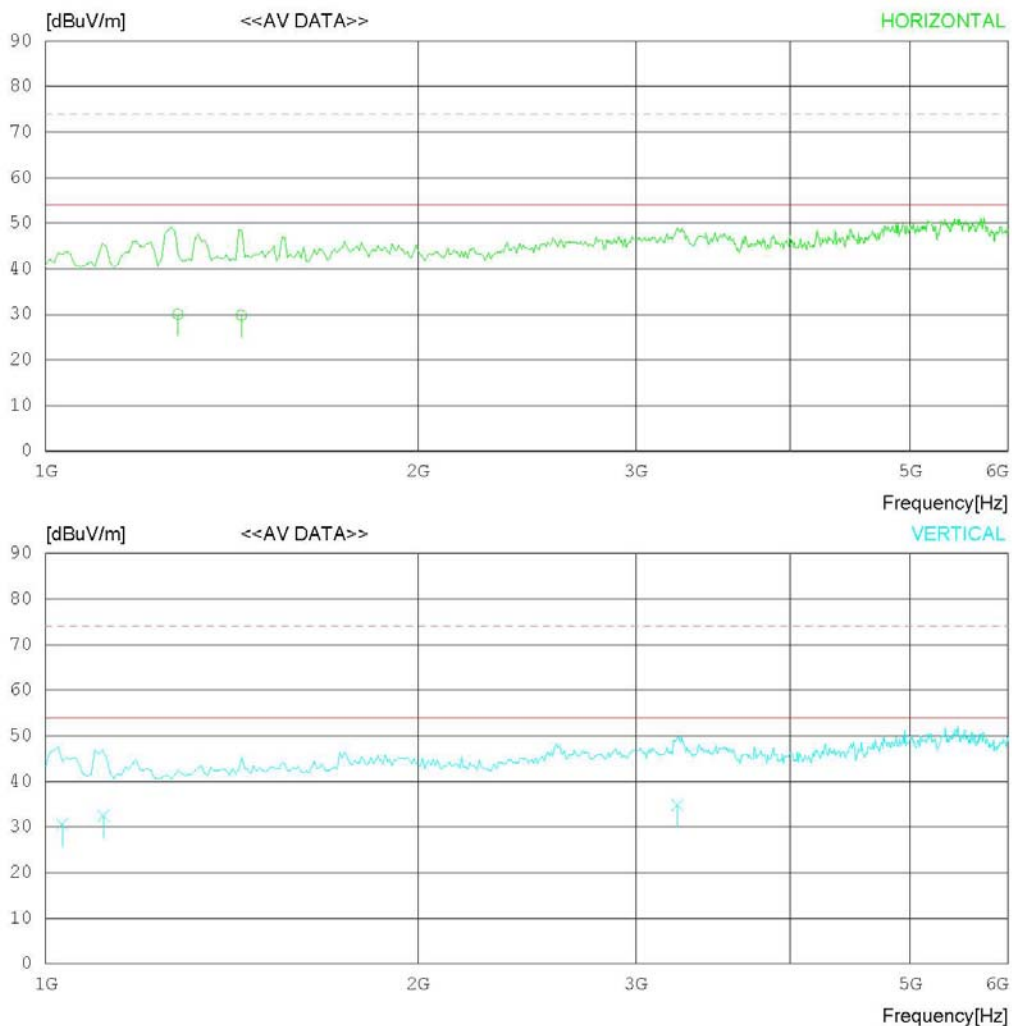
Date : 2012-02-11

Model Name : 42CQ610H-UA
Model No. :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 18 'C 29 % 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 : 2012-02-11

Model Name	: 42CQ610H-UA	Reference No.	:
Model No.	:	Power Supply	: 120V 60Hz
Serial No.	:	Temp/Humi	: 18 'C 29 % 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
	[MHz]	AV	FACTOR	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
		[dBuV]	[dB]							
----- Horizontal -----										
1	1279.307	41.8	24.5	5.5	41.8	30.0	54.0	24.0	100	173
2	1439.564	40.6	25.0	5.8	41.6	29.8	54.0	24.2	100	197
----- Vertical -----										
3	1031.519	43.8	23.7	4.9	41.8	30.6	54.0	23.4	100	187
4	1114.000	45.1	24.0	5.1	41.8	32.4	54.0	21.6	100	186
5	3242.000	38.5	29.0	9.1	41.8	34.8	54.0	19.2	100	174

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