

EMC TEST REPORT

Test item : LED TV Monitor
Model No. : 47GA7900-UA
Order No. : DEMC1302-00540
Date of receipt : 2013-02-04
Test duration : 2013-02-14 ~ 2013-02-17
Use of report : FCC CoC Marking
Date of Issue : 2013-02-25

Applicant : LG Electronics Inc.

19-1, Cheongho-ri, Jinwi-myeon, Pyeongtaek-si, Gyeonggi-do, 451-713, Korea

Test laboratory : Digital EMC Co., Ltd.

683-3, Yubang-Dong, Cheoin-Gu, Yongin-Si, Gyeonggi-Do, 449-080, Korea

Test specification : ANSI C 63.4:2003
FCC Part 15 Subpart B
(Type of Device : Class B Personal Computers
and Peripherals (JBP))

Test environment : Temperature : 20 °C,
Humidity : (37 ~ 39) % R.H.

Test result : ☒ Comply ☐ Not Comply

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

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

Tested by:

Reviewed by:



Engineer
HyungJun Kim



General Manager
ChangHo Lee

PRESIDENT OF DIGITAL EMC CO., LTD.

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1. General Remarks

This report contains the result of tests performed by:

DIGITAL EMC CO., LTD.

Address : 683-3, Yubang-Dong, Cheoin-Gu, Yongin-Si, Gyeonggi-Do, 449-080, Korea

<http://www.digitalemcc.com>

Tel: +82-31-321-2664 Fax: +82-31-321-1664

2. Test Laboratory

Digital EMC Co., Ltd. has been accredited / filed / authorized by the agencies listed in the following table;

Certificate	Nation	Agency	Code	Mark
Accreditation	Korea	KOLAS	393	ISO/IEC 17025
Site Filing	USA	FCC	101842 678747	Test Facility list & NSA Data
	Canada	IC	5740A-1 5740A-2	Test Facility list & NSA Data
	Japan	VCCI	C-1427 R-1364, R-3385 T-1442, G-338	Test Facility list & NSA Data
Certification	Korea	KC	KR0034	Test Facility list & NSA Data
	Germany	TUV	ROK1221C	ISO/IEC 17025

Quality control in the testing laboratory is implemented as per ISO/IEC 17025 which is the "General requirements for the competent of calibration and testing laboratory".

3. General Information of EUT

Model No.	47GA7900-UA
EUT Type	LED TV Monitor
Serial No	NONE
FCC ID	BEJ47GA7900UA
Type of Sample Tested	Pre-Production
High Frequency	800 MHz
Rating	AC 100-240 V~ 50/60 Hz, 1.3 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

HDMI (PC) supported mode

Resolution	Horizontal Frequency (KHz)	Vertical Frequency (Hz)
640 x 350	31.468	70.09
720 x 400	31.469	70.08
640 x 480	31.469	59.94
800 x 600	37.879	60.31
1024 x 768	48.363	60.00
1360 x 768	47.712	60.015
1280 x 1024 HDMI-PC	63.981	60.02
1920 x 1080	67.50	60.00

4. Test Summary

4.1 Applied standards and test results

Test Items	Applied Standards	Results
Conducted Disturbance	ANSI C63.4:2003	C
Radiated Disturbance	ANSI C63.4:2003	C
C=Comply N/C=Not Comply N/T=Not Tested N/A=Not Applicable		

The data in this test report are traceable to the national or international standards.

4.2 Test environment and conditions

Test Items	Test date (MM-DD)	Temp (°C)	Humidity (% R.H.)
Conducted Disturbance	02-14	20	37
Radiated Disturbance	02-17 02-17	20 20	37 39

4.3 Test result Summary

(1) Conducted Emission (HDMI MODE)

Frequency [MHz]	Phase	Result [dB μ V]	Detector	Limit [dB μ V]	Margin [dB]
0.78861	N	37.6	Average	46.0	8.4

(2) Radiated Emission (HDMI MODE)

Frequency [MHz]	Pol.	Result [dB(μ V/m)]	Detector	Limit [dB(μ V/m)]	Margin [dB]
891.188	H	42.7	Quasi-Peak	46.0	3.3

5. Test Set-up and operation mode

5.1 Principle of Configuration Selection

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

5.2 Test Operation Mode

- HDMI MODE : 1920x1080 Resolution (Worst case)
- USB MODE : USB record file play
- HDMI MODE & USB MODE : “H” characters scroll on the LCD TV screen.

5.3 Support Equipment Used

Unit	Model No.	Serial No.	Manufacturer	CABLE				Backshell	FCC ID
				Connect type	Length (m)	ferrite core	shield		
PC	DC8CMF	G3RZKBX	DELL INC.	POWER	1.8	Not use	Non-shield	Plastic	DOC
				HDMI	1.8	Not use	Shield		
				USB	1.8	Not use	Shield		
				USB	1.8	Not use	Shield		
				USB	1.5	Not use	Shield		
KEYBOARD	KB-065	CN111363232	HP	USB	1.8	Not use	Shield	Plastic	DOC
MOUSE	1094	X817158-002	MICROSOFT CORPORATION	USB	1.6	Not use	Shield	Plastic	DOC
CD/DVD PLAYER	DVP-NS92V	2000407	SONY EMCS	POWER	1.8	Not use	Non-shield	Plastic	VER
				COMPONENT	1.6	Not use	Non-shield		
USB MEMORY	Cruzer 4GB	N/A	SANDISK	USB	-	-	-	-	DOC
PRINTER	Aculaser M1200	LWTZ181070	EPSON	USB	1.8	Not use	Shield	Plastic	-
				AC POWER	1.5	Not use	Non-shield		
HEADSET	COV903	N/A	COSY	HEADPHONE	2.5	Not use	Non-shield	Plastic	DOC
Remote Control	AN-MR400Q	N/A	OHSUNG ELECTRONIC	-	-	-	-	-	-

6. Test Results : Emission

6.1 Conducted Disturbance

6.1.1 Measurement Procedure

In the range of 0.15 MHz to 30 MHz, the conducted disturbance was measured and set-up was made accordance with **ANSI C63.4**.

If the EUT is table top equipment, it was placed on a wooden table with a height of 0.8 m above the reference ground plane and 0.4 m from the conducting wall of the shielded room.

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

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

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

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

Using conducted emission test software, the emissions were scanned with peak detector mode.

After scanning over the frequency range, suspected emissions were selected to perform final measurement. When performing final measurement, the receiver was used which has Quasi-Peak detector and Average detector.

By varying the configuration of the test sample and the cable routing it was attempted to maximize the emission.

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

6.1.2 Limit for Conducted Disturbance

(1) Conducted disturbance at mains ports.

Frequency range (MHz)	Limits dB(μV)			
	Quasi-peak		Average	
	Class A	Class B	Class A	Class B
0.15 to 0.50	79	66 to 56	66	56 to 46
0.50 to 5	73	56	60	46
5 to 30		60		50
Note 1 The lower limit shall apply at the transition frequencies.				
Note 2 The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

Note) 1. Emission Level = Reading Value + Correction Factor.

2. Correction Factor = Cable Loss + Insertion Loss of LISN

3. Margin = Limit - Emission level

Test Result

< HDMI MODE >



Results of Conducted Emission

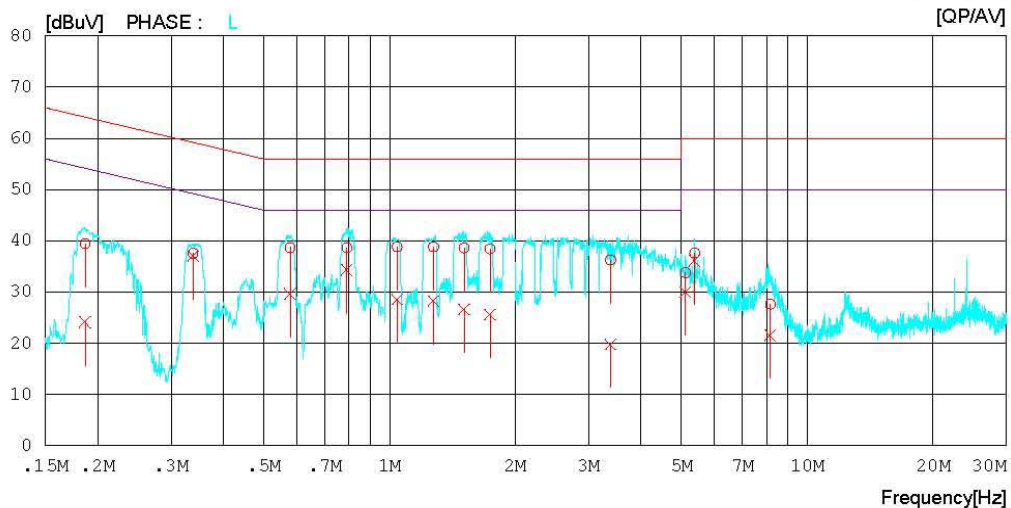
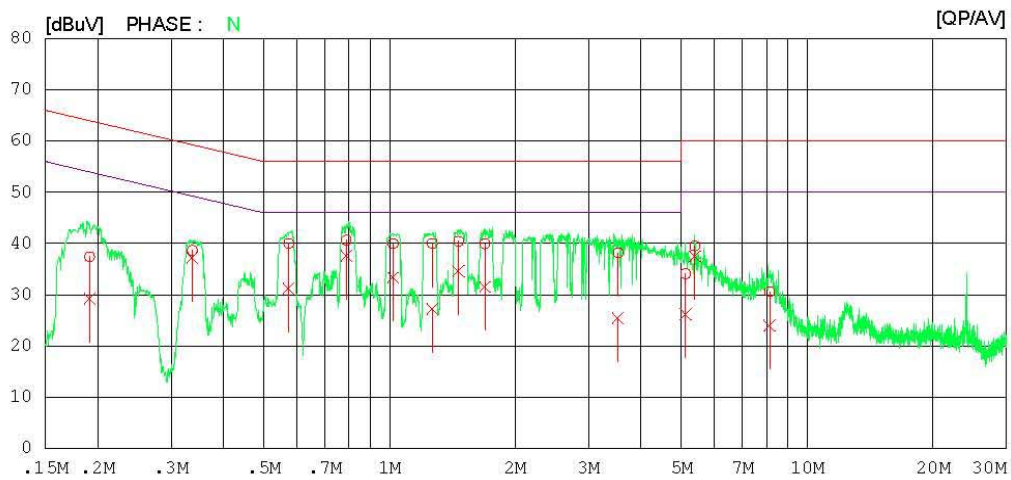
Digital EMC
Date : 2013-02-14

Model No. : 47GA7900-UA
Type :
Serial No. :
Test Condition : HDMI

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

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV



Results of Conducted Emission

Digital EMC
Date : 2013-02-14

Model No. : 47GA7900-UA
Type :
Serial No. :
Test Condition : HDMI

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

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV

NO	FREQ [MHz]	READING		C.FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	
1	0.19150	37.2	29.0	0.2	37.4	29.2	64.0	54.0	26.6	24.8	N
2	0.33743	38.4	37.0	0.2	38.6	37.2	59.3	49.3	20.7	12.1	N
3	0.57391	39.8	31.0	0.2	40.0	31.2	56.0	46.0	16.0	14.8	N
4	0.78861	40.5	37.4	0.2	40.7	37.6	56.0	46.0	15.3	8.4	N
5	1.02050	39.7	33.0	0.3	40.0	33.3	56.0	46.0	16.0	12.7	N
6	1.26700	39.7	27.0	0.3	40.0	27.3	56.0	46.0	16.0	18.7	N
7	1.46400	40.1	34.3	0.3	40.4	34.6	56.0	46.0	15.6	11.4	N
8	1.69350	39.6	31.2	0.3	39.9	31.5	56.0	46.0	16.1	14.5	N
9	3.52550	37.9	25.1	0.3	38.2	25.4	56.0	46.0	17.8	20.6	N
10	5.11650	33.7	25.8	0.4	34.1	26.2	60.0	50.0	25.9	23.8	N
11	5.38250	39.1	37.1	0.4	39.5	37.5	60.0	50.0	20.5	12.5	N
12	8.13000	30.0	23.4	0.6	30.6	24.0	60.0	50.0	29.4	26.0	N
13	0.18674	39.2	23.9	0.2	39.4	24.1	64.2	54.2	24.8	30.1	L
14	0.33881	37.4	36.8	0.2	37.6	37.0	59.2	49.2	21.6	12.2	L
15	0.57844	38.5	29.5	0.2	38.7	29.7	56.0	46.0	17.3	16.3	L
16	0.79059	38.4	34.1	0.2	38.6	34.3	56.0	46.0	17.4	11.7	L
17	1.04300	38.5	28.3	0.3	38.8	28.6	56.0	46.0	17.2	17.4	L
18	1.27450	38.5	27.9	0.3	38.8	28.2	56.0	46.0	17.2	17.8	L
19	1.50800	38.3	26.3	0.3	38.6	26.6	56.0	46.0	17.4	19.4	L
20	1.74050	38.1	25.3	0.3	38.4	25.6	56.0	46.0	17.6	20.4	L
21	3.38500	36.0	19.5	0.3	36.3	19.8	56.0	46.0	19.7	26.2	L
22	5.11050	33.4	29.6	0.4	33.8	30.0	60.0	50.0	26.2	20.0	L
23	5.38000	37.2	35.7	0.4	37.6	36.1	60.0	50.0	22.4	13.9	L
24	8.15850	27.0	21.0	0.6	27.6	21.6	60.0	50.0	32.4	28.4	L

< USB MODE >



Results of Conducted Emission

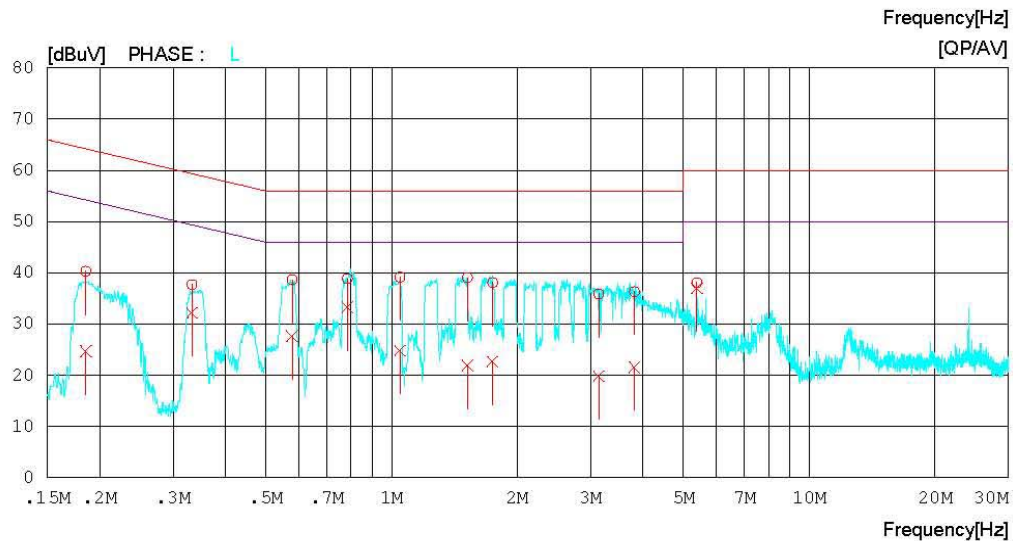
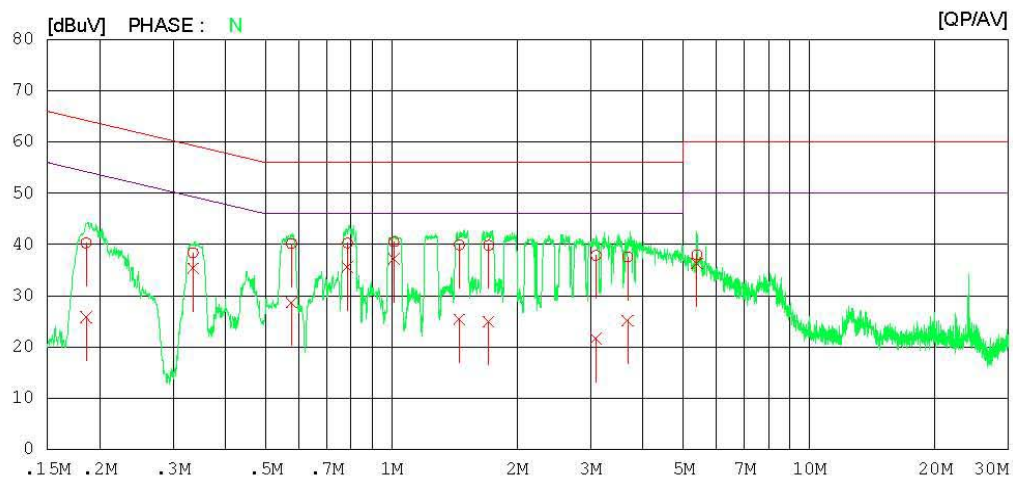
Digital EMC
Date : 2013-02-14

Model No. : 47GA7900-UA
Type :
Serial No. :
Test Condition : USB

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

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV



Results of Conducted Emission

Digital EMC
Date : 2013-02-14

Model No. : 47GA7900-UA
Type :
Serial No. :
Test Condition : USB

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

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV

NO	FREQ [MHz]	READING		C.FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	
1	0.18568	40.1	25.6	0.2	40.3	25.8	64.2	54.2	23.9	28.4	N
2	0.33523	38.2	35.1	0.2	38.4	35.3	59.3	49.3	20.9	14.0	N
3	0.57650	40.0	28.5	0.2	40.2	28.7	56.0	46.0	15.8	17.3	N
4	0.78500	40.0	35.4	0.2	40.2	35.6	56.0	46.0	15.8	10.4	N
5	1.01350	40.2	36.9	0.3	40.5	37.2	56.0	46.0	15.5	8.8	N
6	1.45350	39.6	25.0	0.3	39.9	25.3	56.0	46.0	16.1	20.7	N
7	1.70800	39.5	24.6	0.3	39.8	24.9	56.0	46.0	16.2	21.1	N
8	3.08750	37.6	21.4	0.3	37.9	21.7	56.0	46.0	18.1	24.3	N
9	3.67850	37.3	24.8	0.3	37.6	25.1	56.0	46.0	18.4	20.9	N
10	5.38300	37.6	35.8	0.4	38.0	36.2	60.0	50.0	22.0	13.8	N
11	0.18563	40.1	24.5	0.2	40.3	24.7	64.2	54.2	23.9	29.5	L
12	0.33290	37.5	32.0	0.2	37.7	32.2	59.4	49.4	21.7	17.2	L
13	0.57824	38.5	27.5	0.2	38.7	27.7	56.0	46.0	17.3	18.3	L
14	0.78441	38.7	33.1	0.2	38.9	33.3	56.0	46.0	17.1	12.7	L
15	1.04800	38.9	24.5	0.3	39.2	24.8	56.0	46.0	16.8	21.2	L
16	1.52100	38.7	21.6	0.3	39.0	21.9	56.0	46.0	17.0	24.1	L
17	1.74650	37.8	22.4	0.3	38.1	22.7	56.0	46.0	17.9	23.3	L
18	3.13550	35.6	19.5	0.3	35.9	19.8	56.0	46.0	20.1	26.2	L
19	3.81950	36.0	21.3	0.3	36.3	21.6	56.0	46.0	19.7	24.4	L
20	5.38250	37.7	36.6	0.4	38.1	37.0	60.0	50.0	21.9	13.0	L

6.2 Radiated Disturbance

6.2.1 Measurement Procedure

The radiated disturbance was measured and set-up was made accordance with **ANSI C63.4**.

If the EUT is tabletop equipment, it was placed on a wooden table with a height of 0.8 m above the reference ground plane and 3 m or 10 m away from the interference receiving antenna in the **10m semi-anechoic chamber**.

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

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

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

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

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

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

6.2.2 Limit for Radiated Disturbance

- The test frequency range of Radiated Disturbance measurements are listed below.

Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 108	1 000
108 – 500	2 000
500 – 1 000	5 000
Above 1 000	5 th harmonic of the highest frequency or 40 GHz, whichever is lower

(1) Limit for Radiated Emission below 1 000MHz

Frequency range (MHz)	Class A Equipment (10 m distance)	Class B Equipment (3 m distance)
	Quasi-peak (dBμV/m)	Quasi-peak (dBμV/m)
30 to 88	39.1	40
88 to 216	43.5	43.5
216 to 960	46.4	46
960 to 1 000	49.5	54

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

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

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

Frequency range (MHz)	Class A Equipment (10 m distance)	Class B Equipment (10 m distance)
	Quasi-peak (dBμV/m)	Quasi-peak (dBμV/m)
30 to 230	40	30
230 to 1 000	47	37

(2) Limits for Radiated Emission above 1 000MHz at a measuring distance of 3 m

Frequency (GHz)	Class A Equipment		Class B Equipment	
	Peak (dBμV/m)	Average (dBμV/m)	Peak (dBμV/m)	Average (dBμV/m)
1 to 40	80	60	74	54

Note) 1. Emission Level = Reading Value + Correction Factor.

2. Correction Factor = Cable loss - Amp gain + Antenna Factor

3. Margin = Limit - Emission level

Test Result

< HDMI MODE_30 MHz ~ 1 GHz >

RADIATED EMISSION

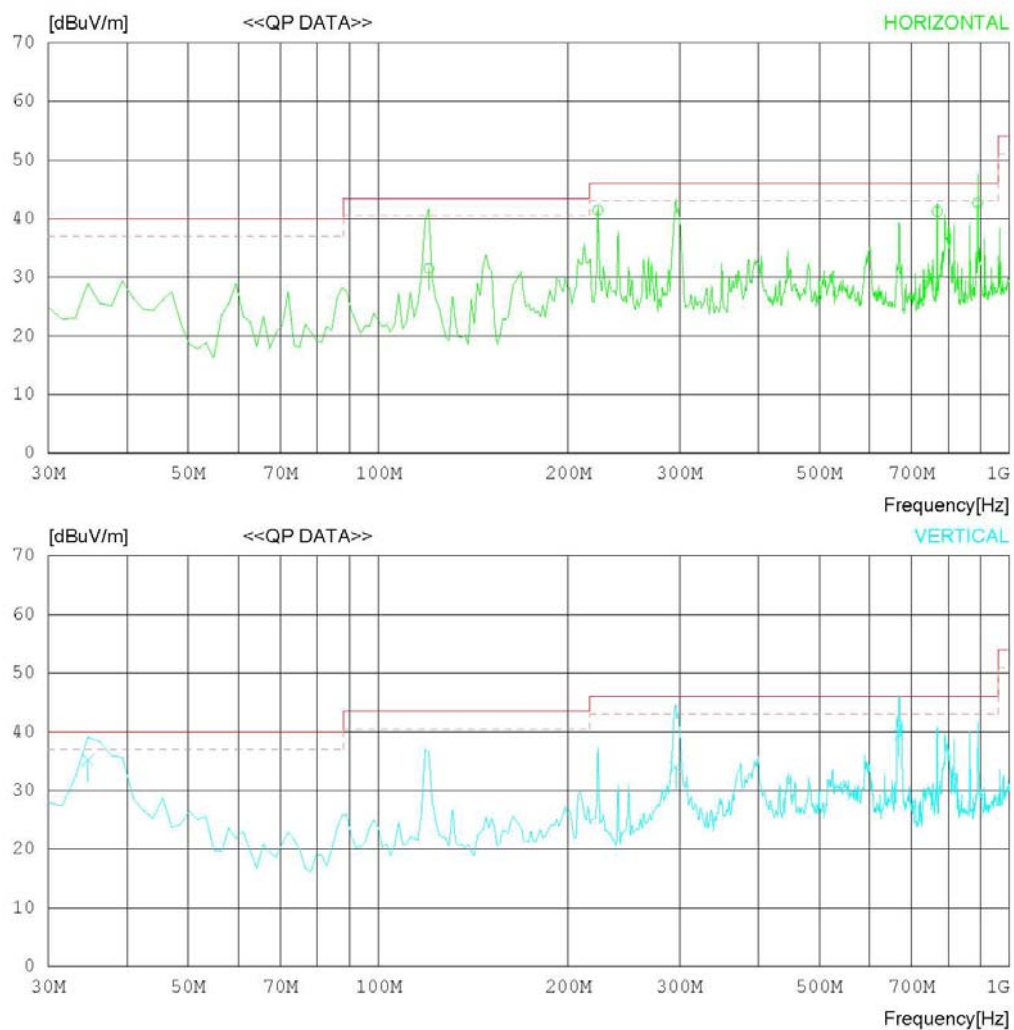
Date : 2013-02-17

Model Name : 47GA7900-UA
Model No. :
Serial No. :
Test Condition : HDMI

Reference No. :
Power Supply : 120 V 60 Hz
Temp/Humi : 20 °C 39 % R.H
Operator :

Memo :

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



RADIATED EMISSION

Date : 2013-02-17

Model Name : 47GA7900-UA	Reference No. :
Model No. :	Power Supply : 120 V 60 Hz
Serial No. :	Temp/Humi : 20 'C 39 % 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	120.160	42.4	11.6	1.6	24.1	31.5	43.5	12.0	188	13
2	222.757	51.8	11.1	2.4	23.9	41.4	46.0	4.6	100	276
3	768.382	40.6	19.5	4.7	23.6	41.2	46.0	4.8	201	358
4	891.188	39.9	20.7	5.2	23.1	42.7	46.0	3.3	100	132
----- Vertical -----										
5	34.663	42.6	15.4	1.1	23.9	35.2	40.0	4.8	100	225
6	295.817	41.1	13.7	2.8	23.6	34.0	46.0	12.0	222	185
7	668.894	40.2	18.6	4.4	23.7	39.5	46.0	6.5	100	1

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

RADIATED EMISSION

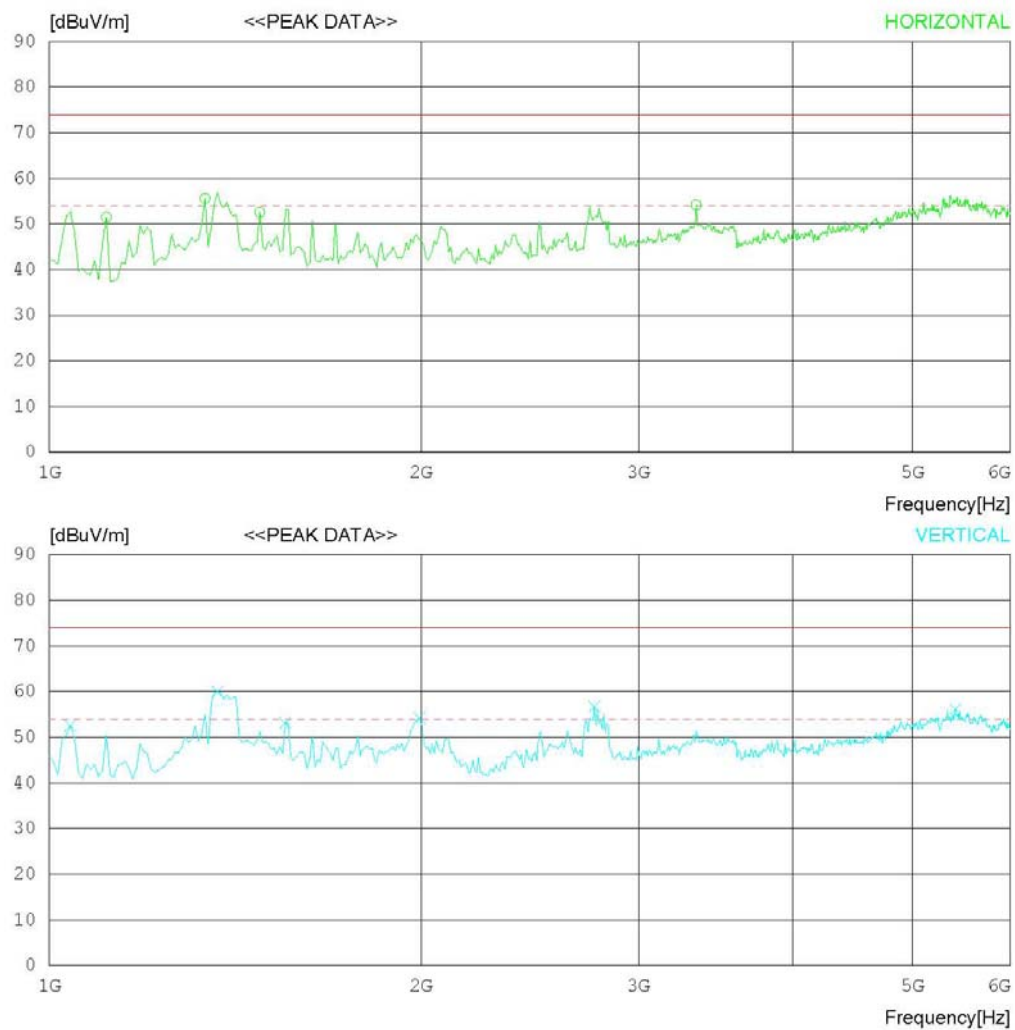
Date : 2013-02-17

Model Name : 47GA7900-UA
Model No. :
Serial No. :
Test Condition : HDMI

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

Memo :

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



RADIATED EMISSION

Date : 2013-02-17

Model Name : 47GA7900-UA	Reference No. :
Model No. :	Power Supply : 120 V 60 Hz
Serial No. :	Temp/Humi : 20 °C 37 % R.H.
Test Condition : HDMI	Operator :

Memo :

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

No.	FREQ [MHz]	READING PEAK [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	1112.179	49.9	24.0	6.1	28.5	51.5	74.0	22.5	100	211
2	1336.538	52.8	24.4	6.9	28.5	55.6	74.0	18.4	100	149
3	1480.769	49.1	24.6	7.4	28.5	52.6	74.0	21.4	100	358
4	3339.762	42.4	28.9	11.3	28.4	54.2	74.0	19.8	100	358
----- Vertical -----										
5	1040.064	51.2	23.9	5.9	28.5	52.5	74.0	21.5	100	214
6	1368.590	57.1	24.4	7.0	28.5	60.0	74.0	14	100	213
7	1552.884	49.5	24.6	7.6	28.5	53.2	74.0	20.8	100	165
8	1993.589	49.8	24.6	8.4	28.5	54.3	74.0	19.7	100	172
9	2762.831	46.9	28.3	10.0	28.4	56.8	74.0	17.2	100	1
10	5415.074	34.8	34.6	14.9	28.1	56.2	74.0	17.8	100	1

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

RADIATED EMISSION

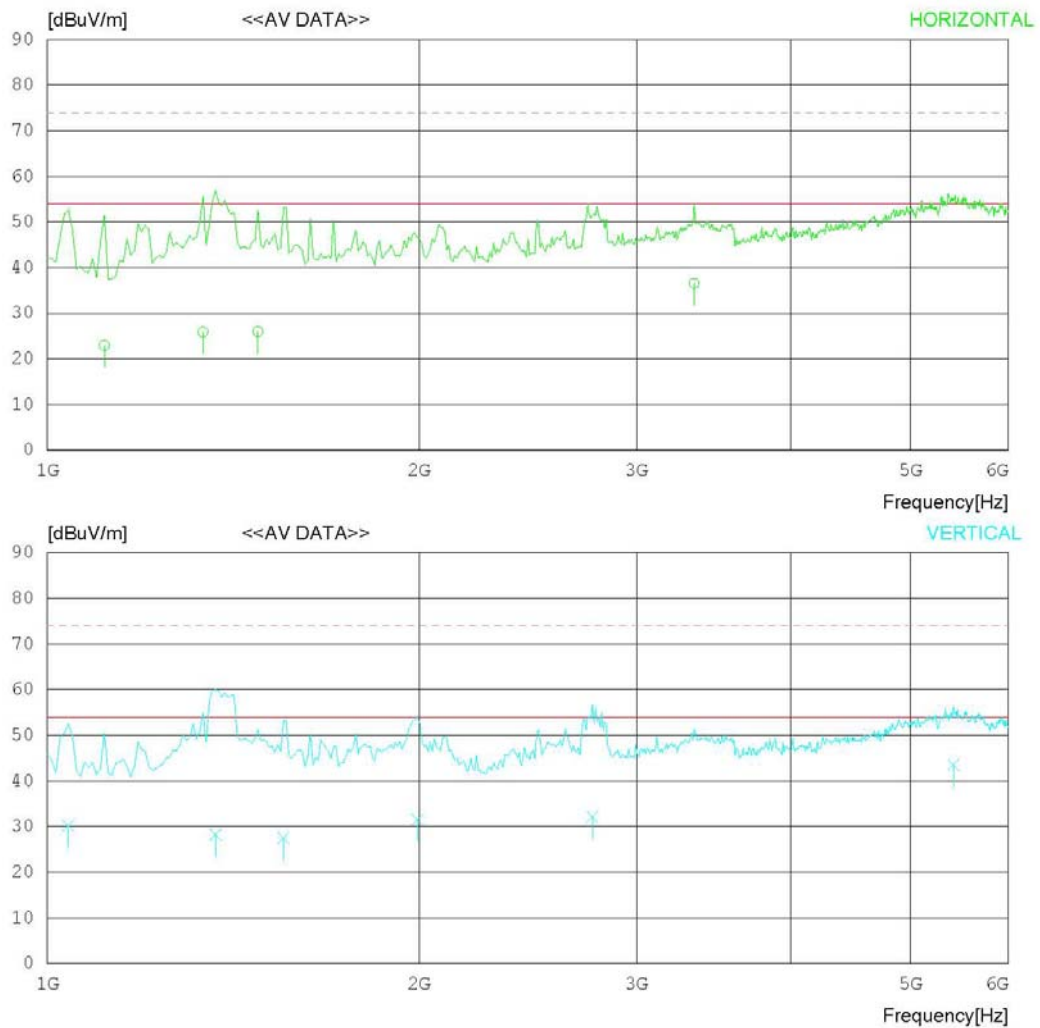
Date : 2013-02-17

Model Name : 47GA7900-UA
Model No. :
Serial No. :
Test Condition : HDMI

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

Memo :

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



RADIATED EMISSION

Date : 2013-02-17

Model Name : 47GA7900-UA	Reference No. :
Model No. :	Power Supply : 120 V 60 Hz
Serial No. :	Temp/Humi : 20 °C 37 % R.H.
Test Condition : HDMI	Operator :

Memo :

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

No.	FREQ [MHz]	READING AV [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	1112.179	21.4	24.0	6.1	28.5	23.0	54.0	31.0	100	211
2	1336.538	23.1	24.4	6.9	28.5	25.9	54.0	28.1	100	149
3	1480.769	22.5	24.6	7.4	28.5	26.0	54.0	28.0	100	358
4	3339.762	24.8	28.9	11.3	28.4	36.6	54.0	17.4	100	358
----- Vertical -----										
5	1040.064	28.9	23.9	5.9	28.5	30.2	54.0	23.8	100	214
6	1368.590	25.3	24.4	7.0	28.5	28.2	54.0	25.8	100	213
7	1552.884	23.8	24.6	7.6	28.5	27.5	54.0	26.5	100	165
8	1993.589	27.0	24.6	8.4	28.5	31.5	54.0	22.5	100	172
9	2762.831	22.3	28.3	10.0	28.4	32.2	54.0	21.9	100	1
10	5415.074	22.1	34.6	14.9	28.1	43.5	54.0	10.5	100	1

< USB MODE_30 MHz ~ 1 GHz >

RADIATED EMISSION

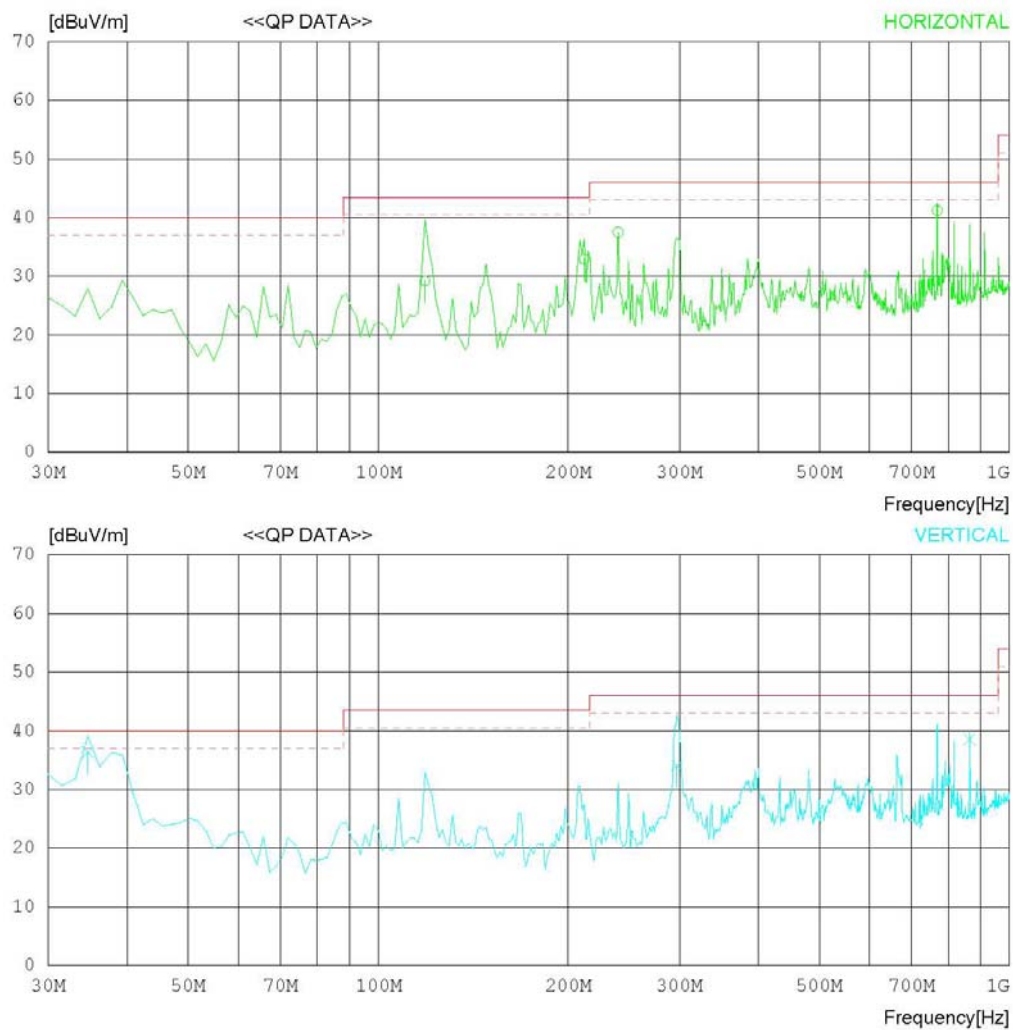
Date : 2013-02-17

Model Name : 47GA7900-UA
Model No. :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120 V 60 Hz
Temp/Humi : 20 °C 39 % R.H
Operator :

Memo :

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



RADIATED EMISSION

Date : 2013-02-17

Model Name : 47GA7900-UA
Model No. :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120 V 60 Hz
Temp/Humi : 20 °C 39 % 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	118.606	40.2	11.5	1.6	24.1	29.2	43.5	14.3	249	5
2	211.875	44.0	10.4	2.4	23.9	32.9	43.5	10.6	100	66
3	239.856	46.7	12.1	2.5	23.8	37.5	46.0	8.5	100	1
4	768.382	40.6	19.5	4.7	23.6	41.2	46.0	4.8	211	0
----- Vertical -----										
5	34.663	43.8	15.4	1.1	23.9	36.4	40.0	3.6	100	59
6	297.372	41.2	13.7	2.8	23.6	34.1	46.0	11.9	235	191
7	864.762	36.4	20.5	4.9	23.2	38.6	46.0	7.4	168	79

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

RADIATED EMISSION

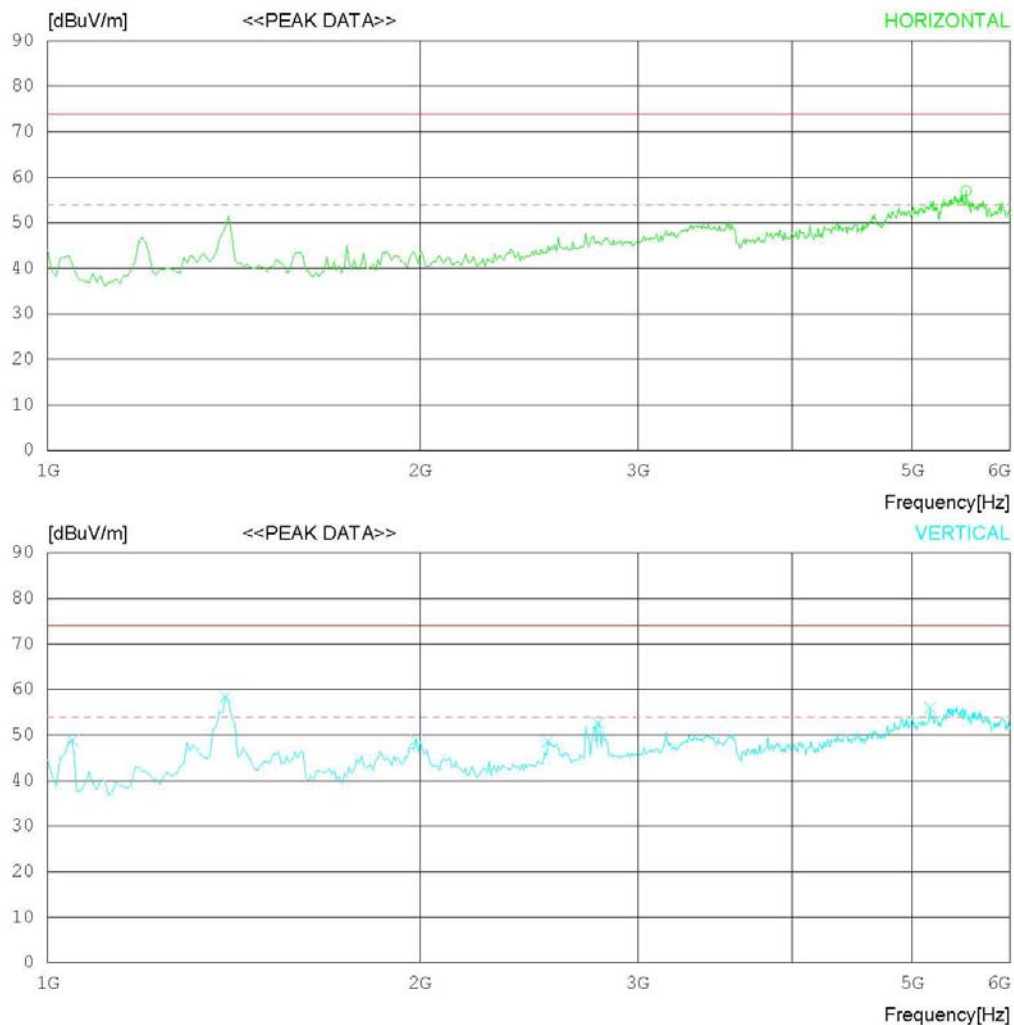
Date : 2013-02-17

Model Name : 47GA7900-UA
Model No. :
Serial No. :
Test Condition : USB

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

Memo :

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



RADIATED EMISSION

Date : 2013-02-17

Model Name : 47GA7900-UA
Model No. :
Serial No. :
Test Condition : USB

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

Memo :

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

No.	FREQ [MHz]	READING PEAK [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	5527.251	35.4	34.9	14.9	28.2	57.0	74.0	17	100	166
----- Vertical -----										
2	1048.077	47.5	23.9	5.9	28.5	48.8	74.0	25.2	100	196
3	1392.628	55.4	24.5	7.1	28.5	58.5	74.0	15.5	100	358
4	1985.577	44.4	24.6	8.4	28.5	48.9	74.0	25.1	100	358
5	2538.469	39.8	27.6	9.6	28.4	48.6	74.0	25.4	100	183
6	2786.870	42.7	28.3	10.1	28.4	52.7	74.0	21.3	100	191
7	5166.680	35.6	33.3	15.2	28.1	56.0	74.0	18	100	358

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

RADIATED EMISSION

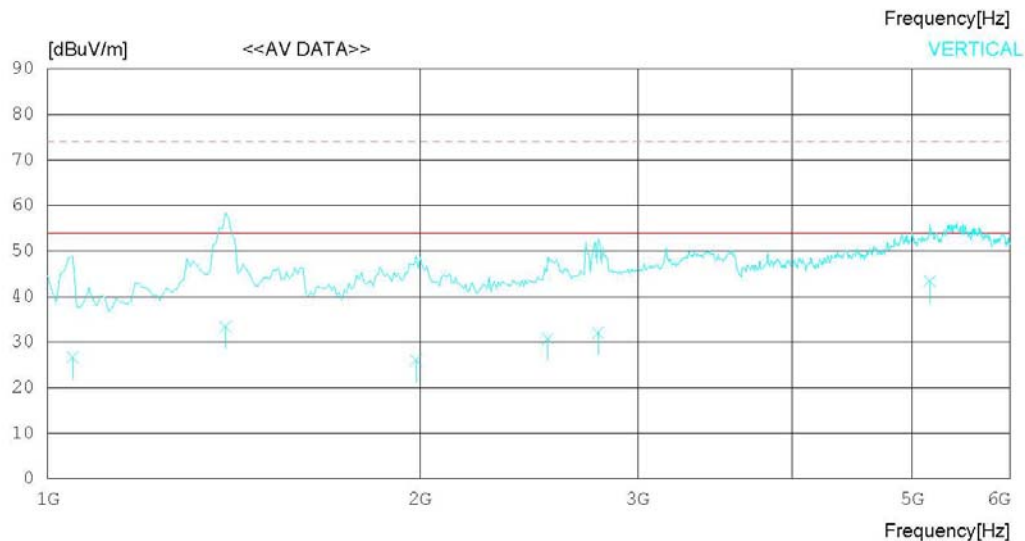
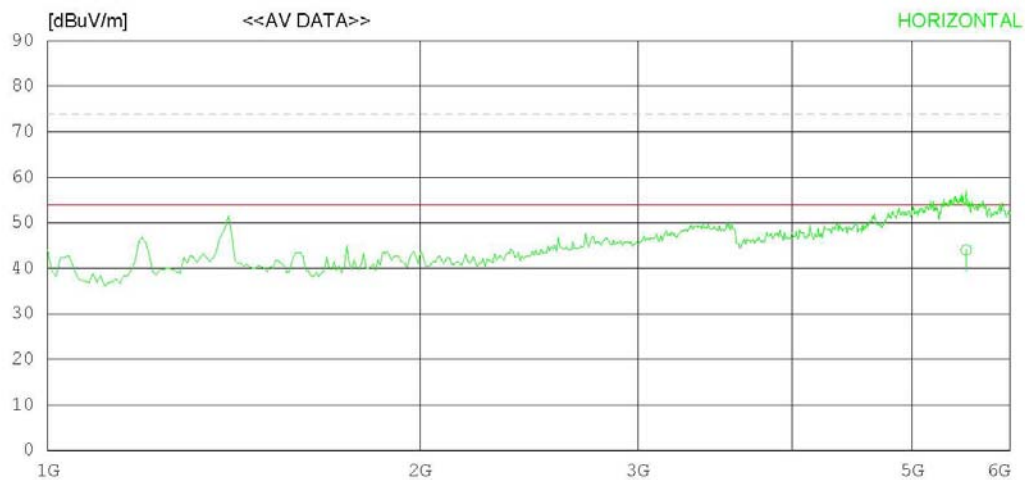
Date : 2013-02-17

Model Name : 47GA7900-UA
Model No. :
Serial No. :
Test Condition : USB

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

Memo :

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



RADIATED EMISSION

Date : 2013-02-17

Model Name : 47GA7900-UA	Reference No. :
Model No. :	Power Supply : 120 V 60 Hz
Serial No. :	Temp/Humi : 20 °C 37 % R.H.
Test Condition : USB	Operator :

Memo :

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

No.	FREQ [MHz]	READING AV [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	5527.251	22.4	34.9	14.9	28.2	44.0	54.0	10.0	100	166
----- Vertical -----										
2	1048.077	25.4	23.9	5.9	28.5	26.7	54.0	27.3	100	196
3	1392.628	30.3	24.5	7.1	28.5	33.4	54.0	20.6	100	358
4	1985.577	21.5	24.6	8.4	28.5	26.0	54.0	28.0	100	358
5	2538.469	22.0	27.6	9.6	28.4	30.8	54.0	23.2	100	183
6	2786.870	22.1	28.3	10.1	28.4	32.1	54.0	21.9	100	191
7	5166.680	23.0	33.3	15.2	28.1	43.4	54.0	10.6	100	358

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