EMC TEST REPORT

Test item	:	LED LCD TV Monitor
Model No.	:	47LM7600-UA
Order No.	:	1112-01711
Date of receipt	:	2011-12-08
Test duration	:	2011-12-10 ~ 2011-12-12
Use of report	:	FCC Marking
Date of Issue	:	2011-12-15

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 (21 ~ 23) °C,
Humidity (35 ~ 38) % 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:

Assistant Manager
D.H EUN

Reviewed by:

General Manager
C.H.LEE

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.digitalemc.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
	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".

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3. General Information of EUT

3.1 Product Information

Model No.	47LM7600-UA
EUT Type	LED LCD TV Monitor
Serial No	NONE
FCC ID	BEJ47LM7600UA
Type of Sample Tested	Pre-Production
High Frequency	756 MHz
Rating	AC100-240 V~, 50/60 Hz, 1.3 A, 130 W
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

□ Formats Supported

PC Input Mode	Resolution	Horizontal Frequency (KHz)	Vertical Frequency (Hz)
HDMI-PC / RGB-PC	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
	1152x864	54.348	60.053
	1360x768	47.712	60.015
	1920x1080	67.5	60.00

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4. Test Summary

4.1 Applied standards and test results

Test Items	Applied Standards	Results
Conducted Disturbance	ANSI C63.4:2003	**Comply**
Radiated Disturbance	ANSI C63.4:2003	**Comply**

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 (℃)	Humidity (% R.H.)	Pressure (hPa)
Conducted Disturbance	12-12	21	38	-
Radiated Disturbance	12-10 12-12	23 22	36 35	

4.3 Test result Summary

(1) Conducted Emission(DSUB + LAN MODE)

Frequency [MHz]	Result [dBμV]	Phase	Detector	Limit [dBμV]	Margin [dB]
1.25700	**36.3**	N	Average	**46.0**	**9.7**

(2) Radiated Emission(HDMI + LAN MODE)

Frequency [MHz]	Pol.	Reading [dBμV]	C.F. [dB/m]	Result [dB(μV/m)]	Limit [dB(μV/m)]	Margin [dB]
250.000	**H**	**51.0**	**-8.0**	**43.0**	**46.0**	**3.0**

Note) 1. Emission Level = Reading Value + Correction Factor.
2. Correction Factor = Cable loss - Amp gain + Antenna Factor
3. Margin = Limit - Emission level

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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+LAN MODE - Worst Case Resolution : 1920 x 1080 Resolution
- HDMI+LAN MODE - Worst Case Resolution : 1920 x 1080 Resolution
- USB MODE

5.3 Support Equipment Used

Unit	Model No.	Serial No.	Manufacturer	CABLE			Backshell	FCC ID
				Connect type	Length (m)	shield		
PC	VOSTRO430	9K77SBX	DELL	POWER DSUB HDMI STEREO USB PS/2 PS/2 LAN	1.8 1.5 1.8 1.6 - 1.6 1.8 2.5	Non-shield Shield Shield Non-shield - Non-shield Non-shield Non-shield	Plastic	DOC
KEYBOARD	SKG-210P	TAKSC12255P	MONITOEREY INTERNATIONAL CORP	PS/2	1.6	Non-shield	Plastic	DOC
MOUSE	SML-510PB	TAKS903519Z	MONITOEREY INTERNATIONAL CORP	PS/2	1.8	Non-shield	Plastic	DOC
USB MEMORY	POP-S2	N/A	MEMORIVE	USB	-	-	-	DOC

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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 C63.4:2003.**

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.

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Test Result

< DSUB + LAN MODE >

Digital EMC

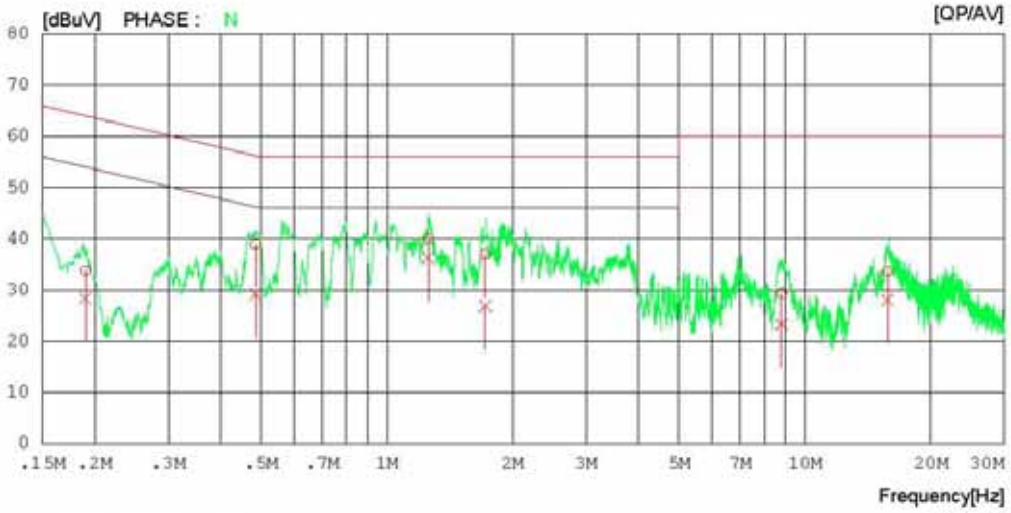
Results of Conducted Emission

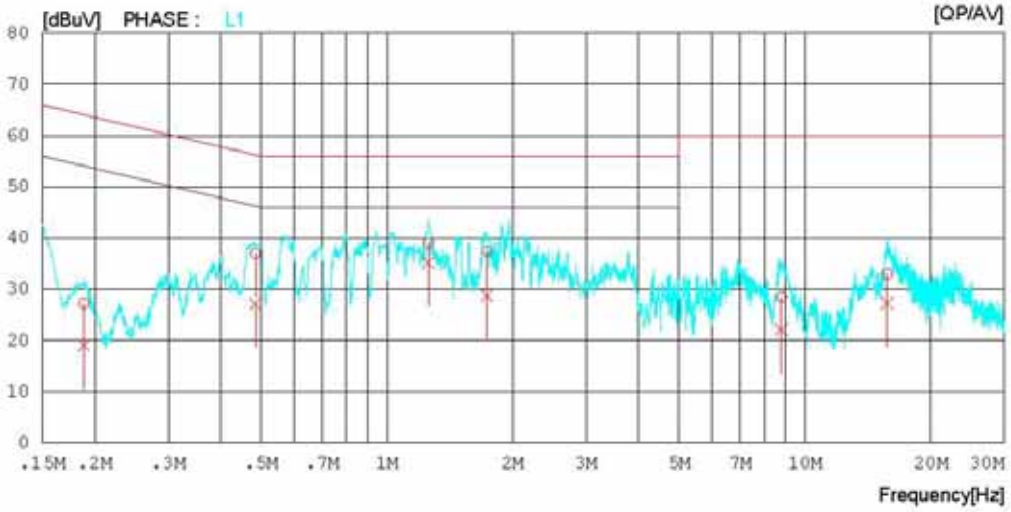
Digital EMC
Date : 2011-12-12

Model No.	:	47LM7600-UA	Referrence No.	:	
Type	:		Power Supply	:	120V 60Hz
Serial No.	:		Temp/Humi.	:	21 'C 38 % R.H.
Test Condition	:	DSUB	Operator	:	

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV





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Results of Conducted Emission

Digital EMC
Date : 2011-12-12

Model No.	:	47LM7600-UA	Referrence No.	:	
Type	:		Power Supply	:	120V 60Hz
Serial No.	:		Temp/Humi.	:	21 'C 38 % R.H.
Test Condition	:	DSUB	Operator	:	

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV

NO	FREQ [MHz]	READING QP [dBuV]	READING AV [dBuV]	C.FACTOR [dB]	RESULT QP [dBuV]	RESULT AV [dBuV]	LIMIT QP [dBuV]	LIMIT AV [dBuV]	MARGIN QP [dBuV]	MARGIN AV [dBuV]	PHASE
1	0.19033	33.7	28.2	0.1	33.8	28.3	64.0	54.0	30.2	25.7	N
2	0.48524	38.8	29.1	0.1	38.9	29.2	56.2	46.2	17.3	17.0	N
3	1.25700	39.8	36.1	0.2	40.0	36.3	56.0	46.0	16.0	9.7	N
4	1.71900	36.8	26.7	0.2	37.0	26.9	56.0	46.0	19.0	19.1	N
5	8.78900	28.8	22.8	0.6	29.4	23.4	60.0	50.0	30.6	26.6	N
6	15.77050	32.7	27.1	1.0	33.7	28.1	60.0	50.0	26.3	21.9	N
7	0.18846	27.1	18.9	0.1	27.2	19.0	64.1	54.1	36.9	35.1	L1
8	0.48513	36.9	27.1	0.1	37.0	27.2	56.3	46.3	19.3	19.1	L1
9	1.25700	38.9	34.9	0.2	39.1	35.1	56.0	46.0	16.9	10.9	L1
10	1.73700	37.2	28.6	0.2	37.4	28.8	56.0	46.0	18.6	17.2	L1
11	8.79200	27.9	21.6	0.6	28.5	22.2	60.0	50.0	31.5	27.8	L1
12	15.73300	32.0	26.3	1.0	33.0	27.3	60.0	50.0	27.0	22.7	L1

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< HDMI + LAN MODE >

Digital EMC

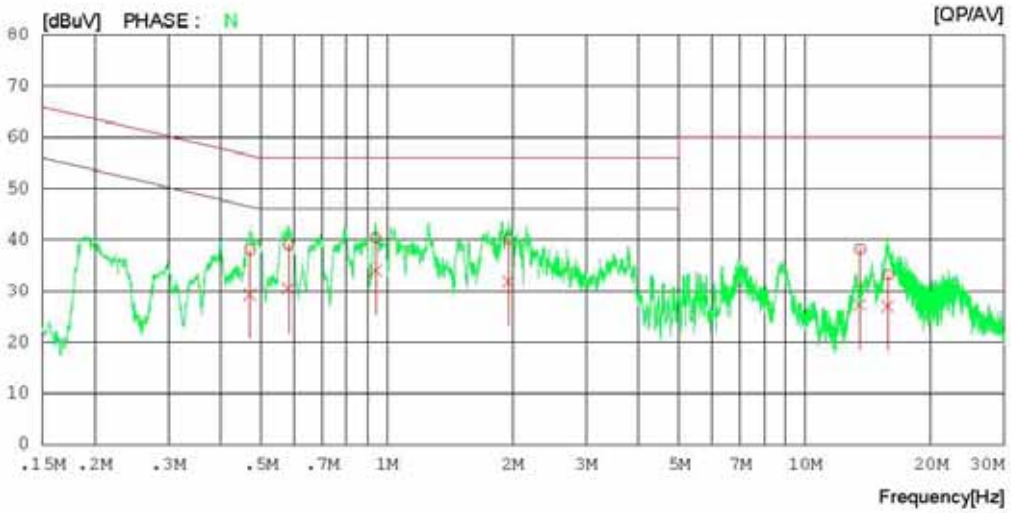
Results of Conducted Emission

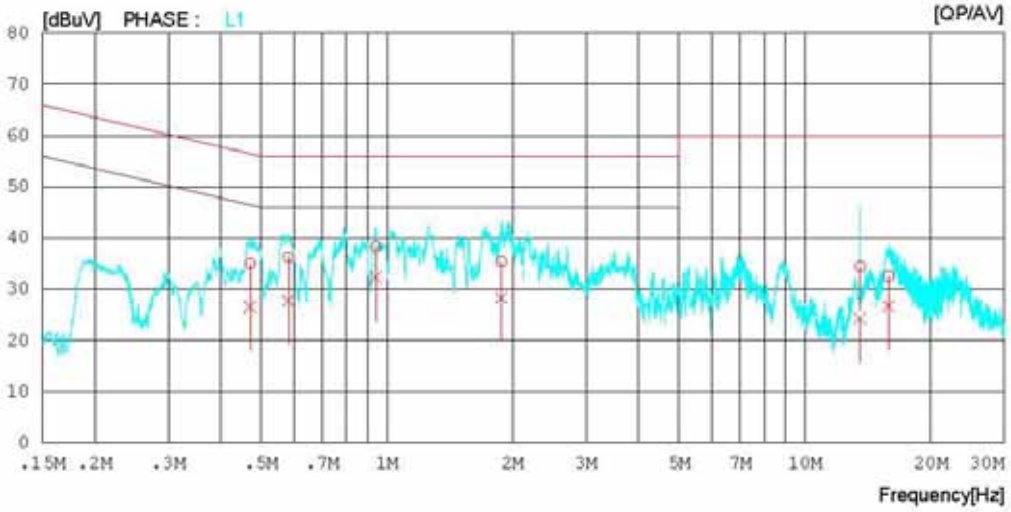
Digital EMC
Date : 2011-12-12

Model No.	:	47LM7600-UA	Referrence No.	:	
Type	:		Power Supply	:	120V 60Hz
Serial No.	:		Temp/Humi.	:	21 'C 38 % R.H.
Test Condition	:	HDMI	Operator	:	

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV





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Results of Conducted Emission

Digital EMC
Date : 2011-12-12

Model No.	:	47LM7600-UA	Referrence No.	:	
Type	:		Power Supply	:	120V 60Hz
Serial No.	:		Temp/Humi.	:	21 'C 38 % R.H.
Test Condition	:	HDMI	Operator	:	

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV

NO	FREQ [MHz]	READING QP [dBuV]	READING AV [dBuV]	C.FACTOR [dB]	RESULT QP [dBuV]	RESULT AV [dBuV]	LIMIT QP [dBuV]	LIMIT AV [dBuV]	MARGIN QP [dBuV]	MARGIN AV [dBuV]	PHASE
1	0.47018	38.0	29.2	0.1	38.1	29.3	56.5	46.5	18.4	17.2	N
2	0.58153	39.0	30.3	0.1	39.1	30.4	56.0	46.0	16.9	15.6	N
3	0.94039	40.2	33.8	0.2	40.4	34.0	56.0	46.0	15.6	12.0	N
4	1.95700	39.9	31.6	0.2	40.1	31.8	56.0	46.0	15.9	14.2	N
5	13.56100	37.3	26.3	0.9	38.2	27.2	60.0	50.0	21.8	22.8	N
6	15.80450	32.1	26.1	1.0	33.1	27.1	60.0	50.0	26.9	22.9	N
7	0.47081	34.9	26.5	0.1	35.0	26.6	56.5	46.5	21.5	19.9	L1
8	0.58153	36.2	27.8	0.1	36.3	27.9	56.0	46.0	19.7	18.1	L1
9	0.94033	38.2	32.1	0.2	38.4	32.3	56.0	46.0	17.6	13.7	L1
10	1.87900	35.3	28.2	0.2	35.5	28.4	56.0	46.0	20.5	17.6	L1
11	13.56050	33.6	23.4	0.9	34.5	24.3	60.0	50.0	25.5	25.7	L1
12	15.87850	31.6	25.7	1.0	32.6	26.7	60.0	50.0	27.4	23.3	L1

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< USB MODE >

Digital EMC

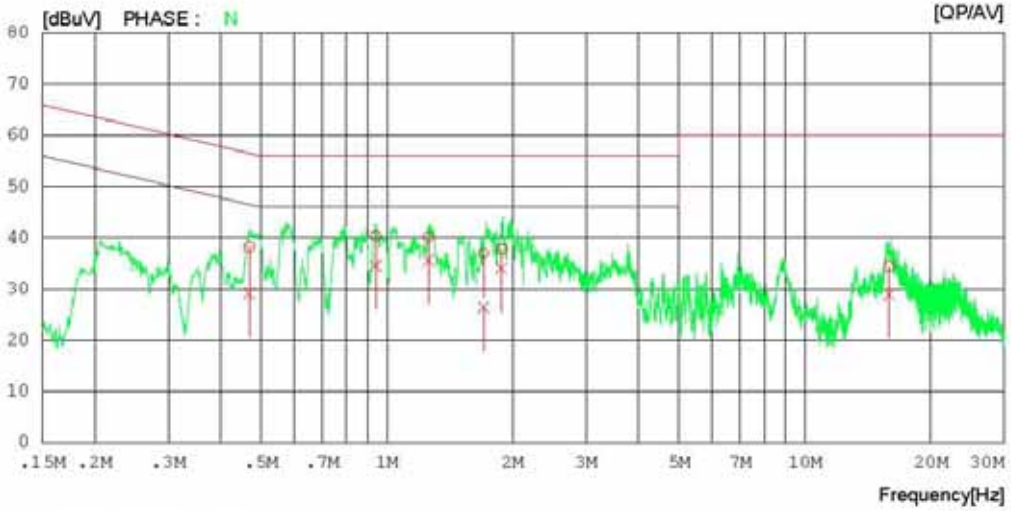
Results of Conducted Emission

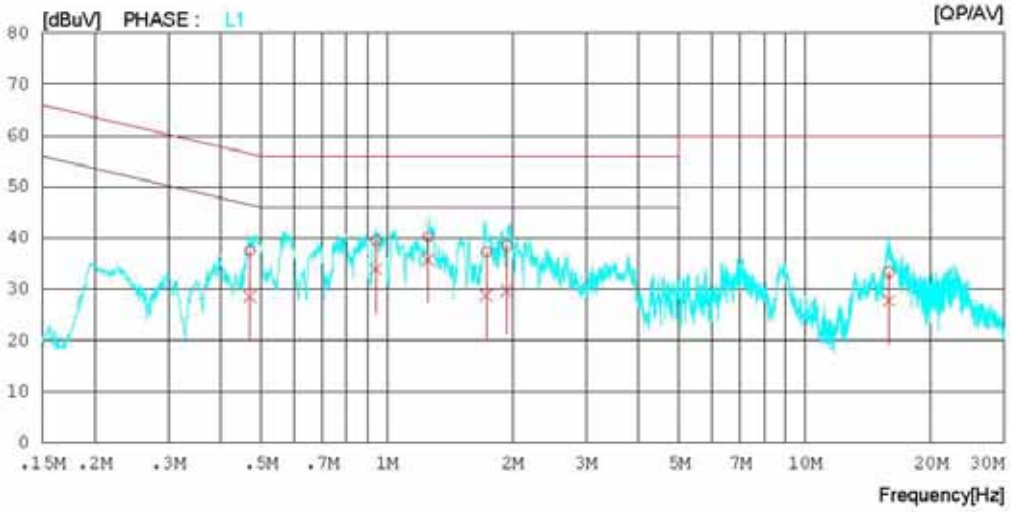
Digital EMC
Date : 2011-12-12

Model No.	:	47LM7600-UA	Referrence No.	:	
Type	:		Power Supply	:	120V 60Hz
Serial No.	:		Temp/Humi.	:	21 'C 38 % R.H.
Test Condition	:	USB	Operator	:	

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV





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Results of Conducted Emission

Digital EMC
Date : 2011-12-12

Model No.	:	47LM7600-UA	Referrence No.	:	
Type	:		Power Supply	:	120V 60Hz
Serial No.	:		Temp/Humi.	:	21 'C 38 % R.H.
Test Condition	:	USB	Operator	:	

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV

NO	FREQ [MHz]	READING QP [dBuV]	READING AV [dBuV]	C.FACTOR [dB]	RESULT QP [dBuV]	RESULT AV [dBuV]	LIMIT QP [dBuV]	LIMIT AV [dBuV]	MARGIN QP [dBuV]	MARGIN AV [dBuV]	PHASE
1	0.46914	38.1	29.0	0.1	38.2	29.1	56.5	46.5	18.3	17.4	N
2	0.94130	40.1	34.3	0.2	40.3	34.5	56.0	46.0	15.7	11.5	N
3	1.25800	40.0	35.4	0.2	40.2	35.6	56.0	46.0	15.8	10.4	N
4	1.70400	36.7	26.2	0.2	36.9	26.4	56.0	46.0	19.1	19.6	N
5	1.88200	37.6	33.8	0.2	37.8	34.0	56.0	46.0	18.2	12.0	N
6	15.90000	33.4	27.9	1.0	34.4	28.9	60.0	50.0	25.6	21.1	N
7	0.47043	37.5	28.5	0.1	37.6	28.6	56.5	46.5	18.9	17.9	L1
8	0.94134	39.4	33.7	0.2	39.6	33.9	56.0	46.0	16.4	12.1	L1
9	1.25600	40.1	35.6	0.2	40.3	35.8	56.0	46.0	15.7	10.2	L1
10	1.73200	37.2	28.6	0.2	37.4	28.8	56.0	46.0	18.6	17.2	L1
11	1.93950	38.4	29.6	0.2	38.6	29.8	56.0	46.0	17.4	16.2	L1
12	15.89750	32.4	26.8	1.0	33.4	27.8	60.0	50.0	26.6	22.2	L1

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6.2 Radiated Disturbance

6.2.1 Measurement Procedure

The radiated disturbance was measured and set-up was made accordance with **ANSI C63.4:2003.**

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.

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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	5th 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 limits (dBμV/m)	**Quasi-peak limits (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.		
30 to 230	40	30
230 to 1000	47	37

(2) Limits for Radiated Emission in the frequency range 1000 - 2000MHz at a measuring distance of 10m

Frequency (GHz)	**Class A Equipment**		**Class B Equipment**	
	peak (dBμV/m)	**Average (dBμV/m)**	**peak (dBμV/m)**	**Average (dBμV/m)**
1 to 2	69.5	49.5	63.5	43.5

(3) 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

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Test Result

< DSUB + LAN MODE_30 MHz ~ 1 GHz >

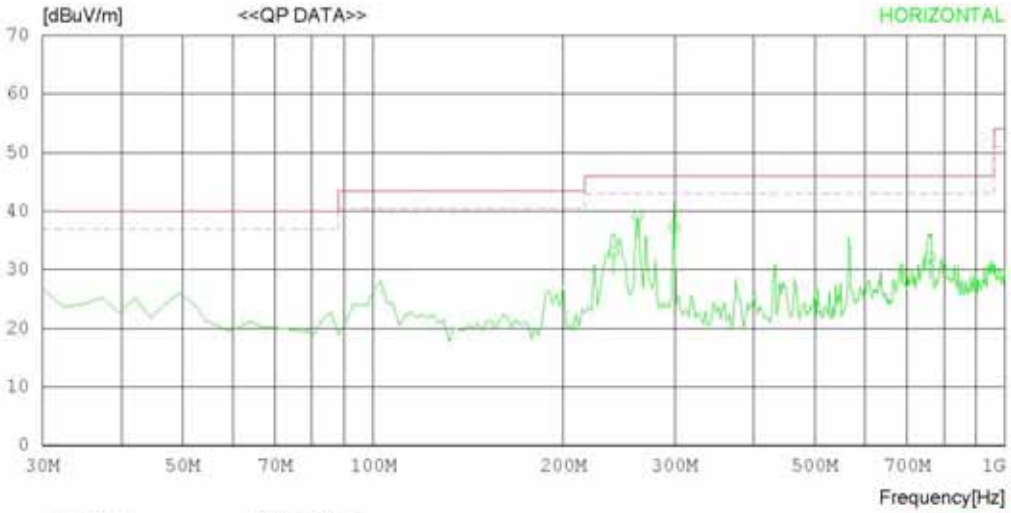
RADIATED EMISSION

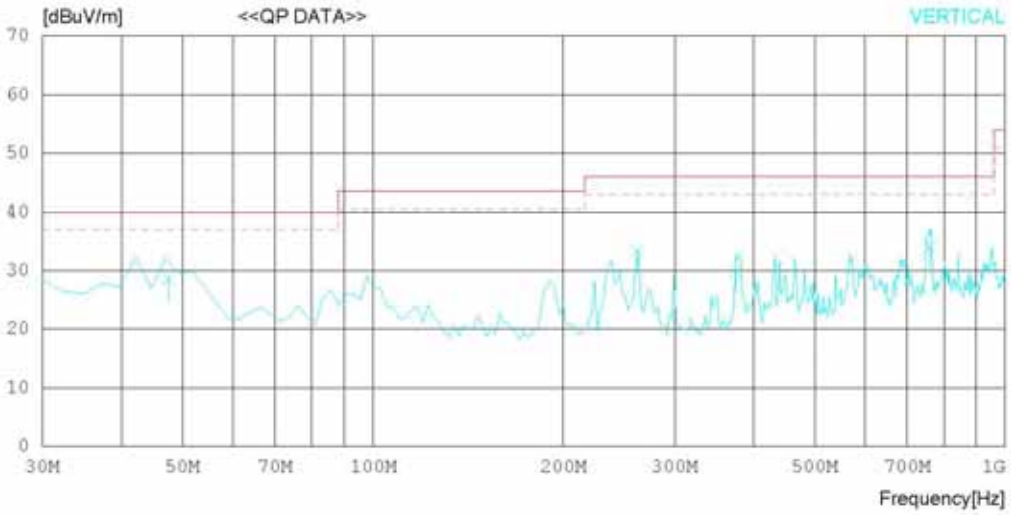
Date : 2011-12-10

Model Name	47LM7600-UA	Reference No.	
Model No.		Power Supply	120V 60Hz
Serial No.		Temp/Humi	23 'C 36 % R.H.
Test Condition	DSUB	Operator	

Memo :

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





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RADIATED EMISSION

Date : 2011-12-10

Model Name	:	47LM7600-UA	Reference No.	:	
Model No.	:		Power Supply	:	120V 60Hz
Serial No.	:		Temp/Humi	:	23 'C 36 % 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	240.005	41.8	12.4	2.3	23.5	33.0	46.0	13.0	100	223
2	262.325	47.0	13.3	2.4	23.6	39.1	46.0	6.9	100	358
3	299.825	44.7	13.8	2.6	23.9	37.2	46.0	8.8	100	358
4	760.850	31.8	19.7	4.4	23.8	32.1	46.0	13.9	100	358
----- Vertical ------										
5	47.500	38.4	11.8	1.0	22.6	28.6	40.0	11.4	100	173
6	262.300	41.3	13.3	2.4	23.6	33.4	46.0	12.6	175	19
7	374.988	35.7	15.4	2.9	24.2	29.8	46.0	16.2	100	210
8	760.850	33.6	19.7	4.4	23.8	33.9	46.0	12.1	100	187

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< DSUB + LAN MODE_1 GHz ~ 6 GHz_PEAK >

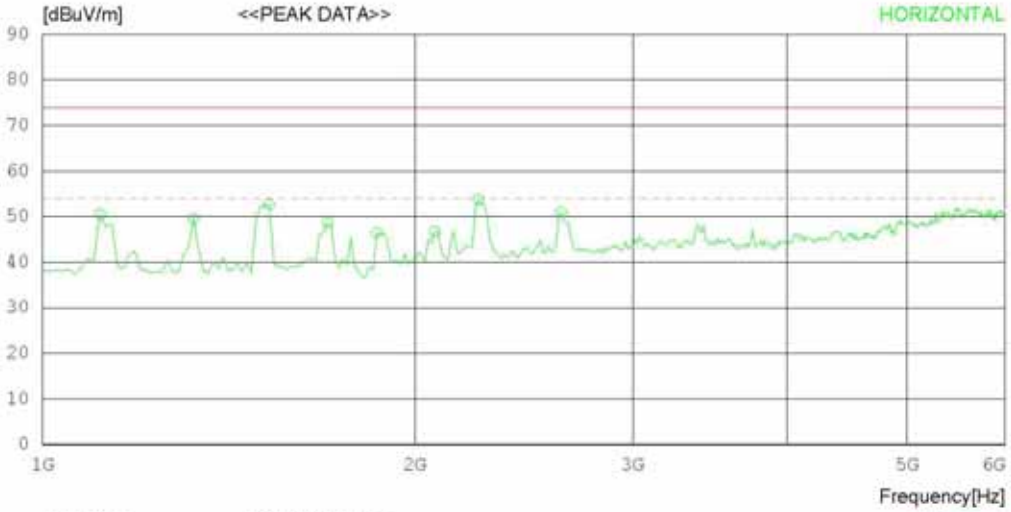
RADIATED EMISSION

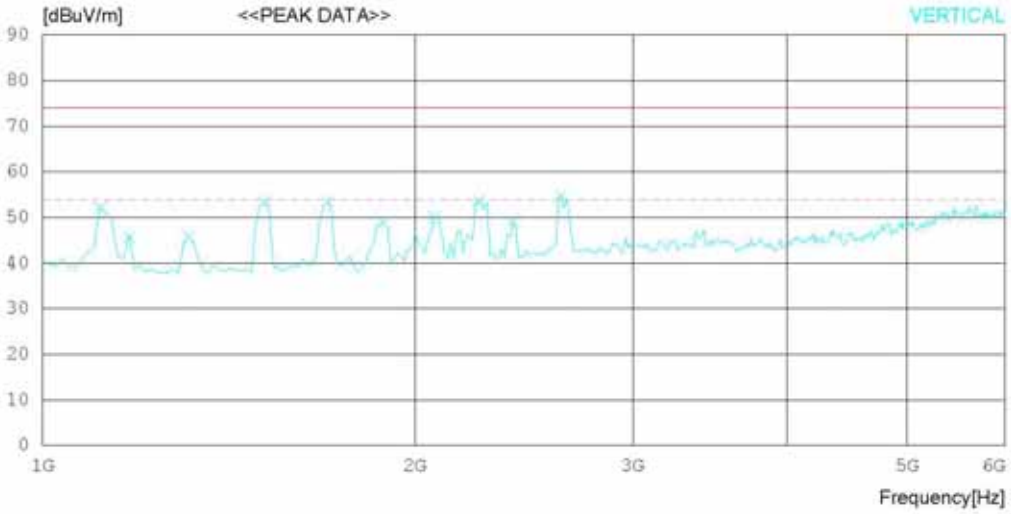
Date : 2011-12-12

Model Name	: 47LM7600-UA	Reference No.	:
Model No.	:	Power Supply	: 120V 60Hz
Serial No.	:	Temp/Humi	: 22 'C 35 % 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)





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RADIATED EMISSION

Date : 2011-12-12

Model Name	:	47LM7600-UA	Reference No.	:	
Model No.	:		Power Supply	:	120V 60Hz
Serial No.	:		Temp/Humi	:	22 'C 35 % 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	1112.500	63.3	24.0	5.1	41.8	50.6	74.0	23.4	100	358
2	1325.000	61.3	24.6	5.6	41.9	49.6	74.0	24.4	100	199
3	1525.000	63.5	25.1	6.0	41.9	52.7	74.0	21.3	100	128
4	1700.000	59.0	25.2	6.4	41.9	48.7	74.0	25.3	100	358
5	1862.500	56.6	25.2	6.7	42.0	46.5	74.0	27.5	100	172
6	2075.000	56.1	25.5	7.1	42.0	46.7	74.0	27.3	100	358
7	2250.000	62.1	26.3	7.4	42.0	53.8	74.0	20.2	100	358
8	2625.000	57.4	27.7	8.0	42.1	51.0	74.0	23	100	358
----- Vertical ------										
9	1112.500	64.8	24.0	5.1	41.8	52.1	74.0	21.9	100	209
10	1175.000	58.2	24.2	5.2	41.8	45.8	74.0	28.2	100	112
11	1312.500	57.7	24.6	5.5	41.9	45.9	74.0	28.1	100	189
12	1512.500	64.3	25.1	6.0	41.9	53.5	74.0	20.5	100	189
13	1700.000	63.8	25.2	6.4	41.9	53.5	74.0	20.5	100	207
14	1887.500	58.8	25.2	6.8	42.0	48.8	74.0	25.2	100	198
15	2075.000	59.6	25.5	7.1	42.0	50.2	74.0	23.8	100	170
16	2250.000	62.0	26.3	7.4	42.0	53.7	74.0	20.3	100	1
17	2400.000	56.5	26.9	7.6	42.0	49.0	74.0	25	100	1
18	2625.000	61.2	27.7	8.0	42.1	54.8	74.0	19.2	100	1

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< DSUB + LAN MODE_1 GHz ~ 6 GHz_AV >

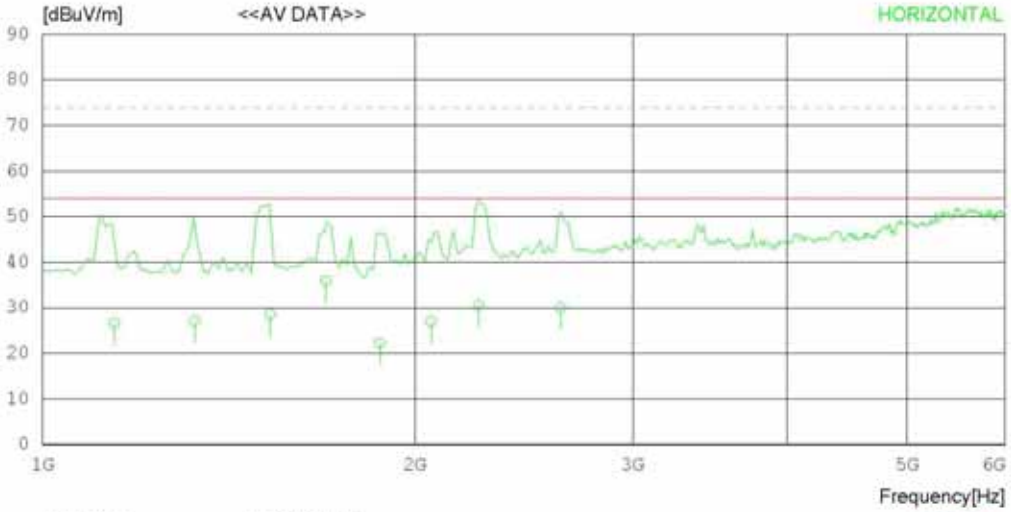
RADIATED EMISSION

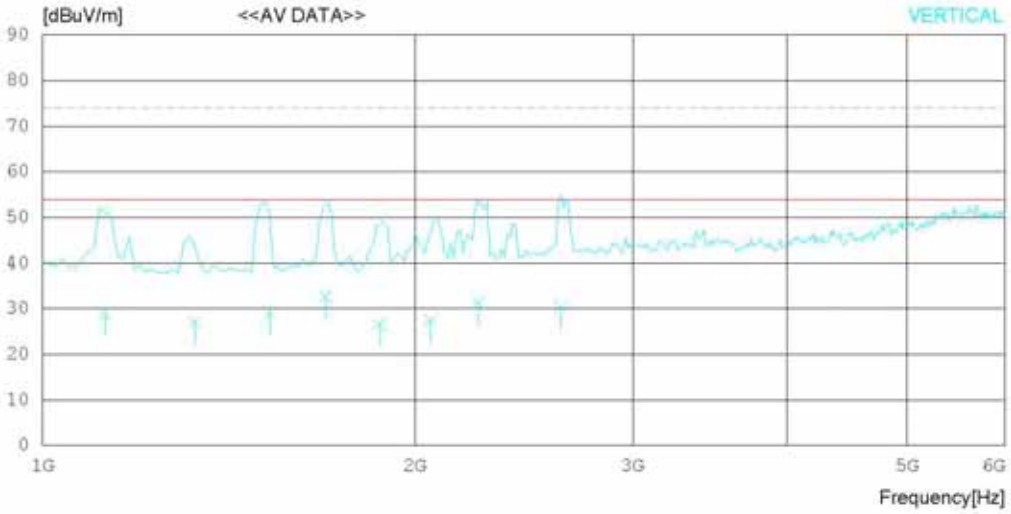
Date : 2011-12-12

Model Name	: 47LM7600-UA	Reference No.	:
Model No.	:	Power Supply	: 120V 60Hz
Serial No.	:	Temp/Humi	: 22 'C 35 % 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)





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RADIATED EMISSION

Date : 2011-12-12

Model Name	:	47LM7600-UA	Reference No.	:	
Model No.	:		Power Supply	:	120V 60Hz
Serial No.	:		Temp/Humi	:	22 'C 35 % 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	1142.820	39.2	24.1	5.1	41.8	26.6	54.0	27.4	100	189
2	1327.350	38.8	24.6	5.6	41.9	27.1	54.0	26.9	100	109
3	1526.750	39.4	25.1	6.0	41.9	28.6	54.0	25.4	100	128
4	1693.500	46.2	25.2	6.4	41.9	35.9	54.0	18.1	100	36
5	1873.250	32.4	25.2	6.7	42.0	22.3	54.0	31.7	100	172
6	2060.891	36.3	25.5	7.1	42.0	26.9	54.0	27.1	100	358
7	2250.000	38.9	26.3	7.4	42.0	30.6	54.0	23.4	100	358
8	2624.250	36.4	27.7	8.0	42.1	30.0	54.0	24.0	100	358
----- Vertical ------										
9	1123.493	41.6	24.0	5.1	41.8	28.9	54.0	25.1	100	209
10	1328.000	38.8	24.6	5.6	41.9	27.1	54.0	26.9	100	189
11	1526.750	40.0	25.1	6.0	41.9	29.2	54.0	24.8	100	189
12	1693.500	43.0	25.2	6.4	41.9	32.7	54.0	21.3	100	332
13	1873.250	36.7	25.2	6.7	42.0	26.6	54.0	27.4	100	198
14	2059.391	36.9	25.5	7.1	42.0	27.5	54.0	26.5	100	170
15	2250.000	39.5	26.3	7.4	42.0	31.2	54.0	22.8	100	252
16	2624.250	36.8	27.7	8.0	42.1	30.4	54.0	23.6	100	1

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< HDMI + LAN MODE_30 MHz ~ 1 GHz >

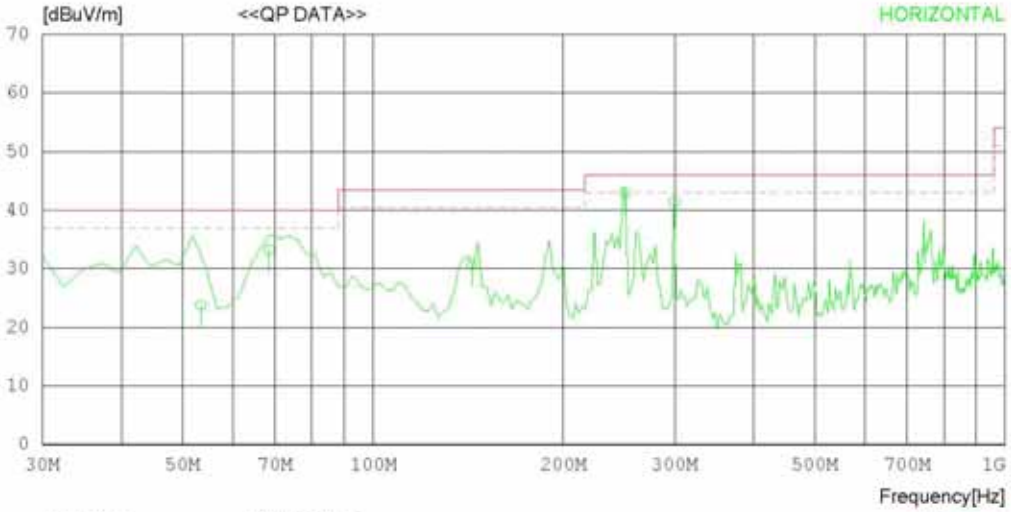
RADIATED EMISSION

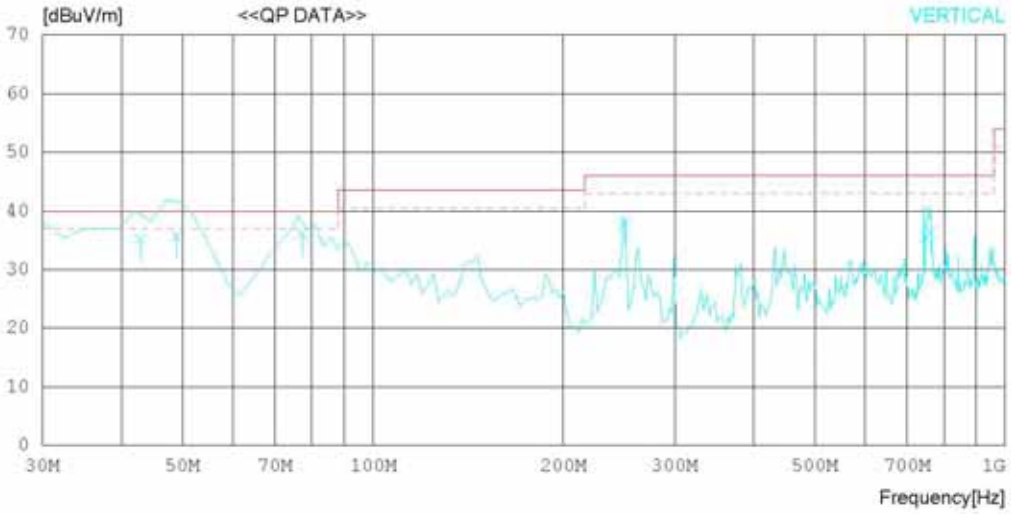
Date : 2011-12-10

Model Name	: 47LM7600-UA	Reference No.	:
Model No.	:	Power Supply	: 120V 60Hz
Serial No.	:	Temp/Humi	: 23 'C 36 % R.H.
Test Condition	: HDMI	Operator	:

Memo :

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





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RADIATED EMISSION

Date : 2011-12-10

Model Name	:	47LM7600-UA	Reference No.	:	
Model No.	:		Power Supply	:	120V 60Hz
Serial No.	:		Temp/Humi	:	23 'C 36 % 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	53.400	37.3	8.1	1.0	22.6	23.8	40.0	16.2	375	29
2	68.471	48.4	6.2	1.2	22.6	33.2	40.0	6.8	400	358
3	143.295	41.3	10.8	1.6	23.0	30.7	43.5	12.8	208	223
4	250.000	51.0	13.1	2.4	23.5	43.0	46.0	3.0	100	188
5	299.795	48.9	13.8	2.6	23.9	41.4	46.0	4.6	100	277
----- Vertical ------										
6	48.950	47.0	10.4	1.0	22.6	35.8	40.0	4.2	100	1
7	42.800	42.9	14.0	1.0	22.6	35.3	40.0	4.7	100	37
8	77.200	50.5	6.9	1.3	22.6	36.1	40.0	3.9	100	1
9	250.005	45.9	13.1	2.4	23.5	37.9	46.0	8.1	100	70
10	749.000	35.5	19.6	4.4	23.9	35.6	46.0	10.4	100	1
11	763.125	36.1	19.7	4.4	23.8	36.4	46.0	9.6	100	196

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< HDMI + LAN MODE_1 GHz ~ 6 GHz_PEAK >

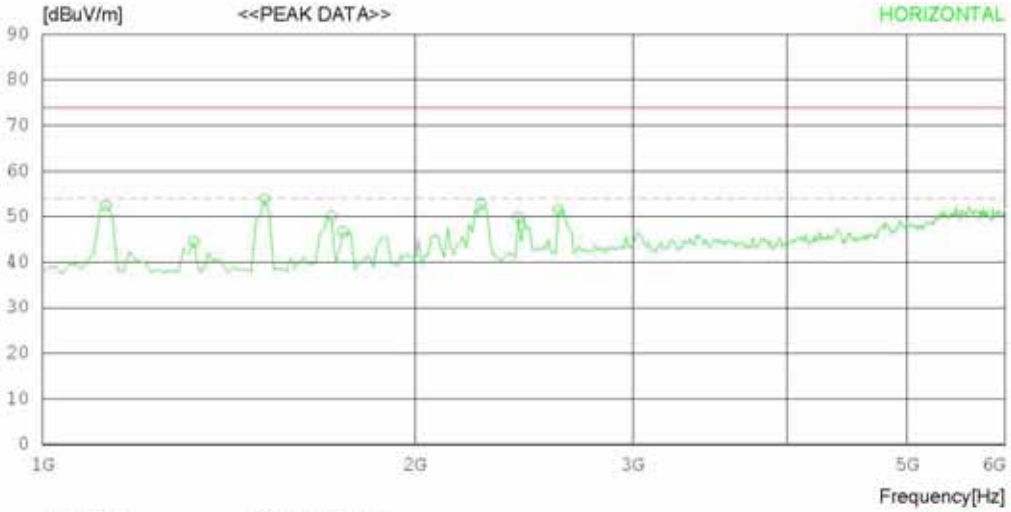
RADIATED EMISSION

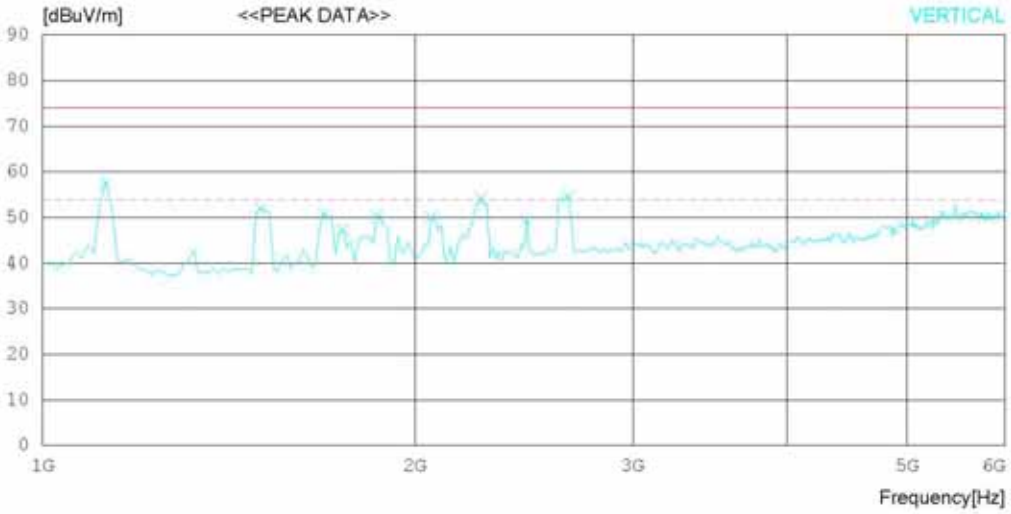
Date : 2011-12-12

Model Name	: 47LM7600-UA	Reference No.	:
Model No.	:	Power Supply	: 120V 60Hz
Serial No.	:	Temp/Humi	: 22 'C 35 % 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)





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RADIATED EMISSION

Date : 2011-12-12

Model Name	:	47LM7600-UA	Reference No.	:	
Model No.	:		Power Supply	:	120V 60Hz
Serial No.	:		Temp/Humi	:	22 'C 35 % 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	1125.000	65.1	24.0	5.1	41.8	52.4	74.0	21.6	100	252
2	1325.000	56.1	24.6	5.6	41.9	44.4	74.0	29.6	100	217
3	1512.500	64.6	25.1	6.0	41.9	53.8	74.0	20.2	100	128
4	1712.500	60.4	25.2	6.4	41.9	50.1	74.0	23.9	100	217
5	1750.000	57.0	25.2	6.5	42.0	46.7	74.0	27.3	100	358
6	2262.500	61.1	26.3	7.4	42.0	52.8	74.0	21.2	100	358
7	2425.000	57.3	27.0	7.6	42.0	49.9	74.0	24.1	100	358
8	2612.500	57.8	27.7	8.0	42.1	51.4	74.0	22.6	100	139
----- Vertical ------										
9	1125.000	70.4	24.0	5.1	41.8	57.7	74.0	16.3	100	1
10	1500.000	62.8	25.1	6.0	41.9	52.0	74.0	22	100	190
11	1687.500	61.2	25.2	6.3	41.9	50.8	74.0	23.2	100	1
12	1750.000	57.6	25.2	6.5	42.0	47.3	74.0	26.7	100	1
13	1862.500	60.4	25.2	6.7	42.0	50.3	74.0	23.7	100	1
14	2062.500	59.5	25.5	7.1	42.0	50.1	74.0	23.9	100	1
15	2262.500	62.5	26.3	7.4	42.0	54.2	74.0	19.8	100	1
16	2462.500	56.4	27.2	7.7	42.0	49.3	74.0	24.7	100	1
17	2662.500	60.9	27.8	8.1	42.1	54.7	74.0	19.3	100	188

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< HDMI + LAN MODE_1 GHz ~ 6 GHz_AV >

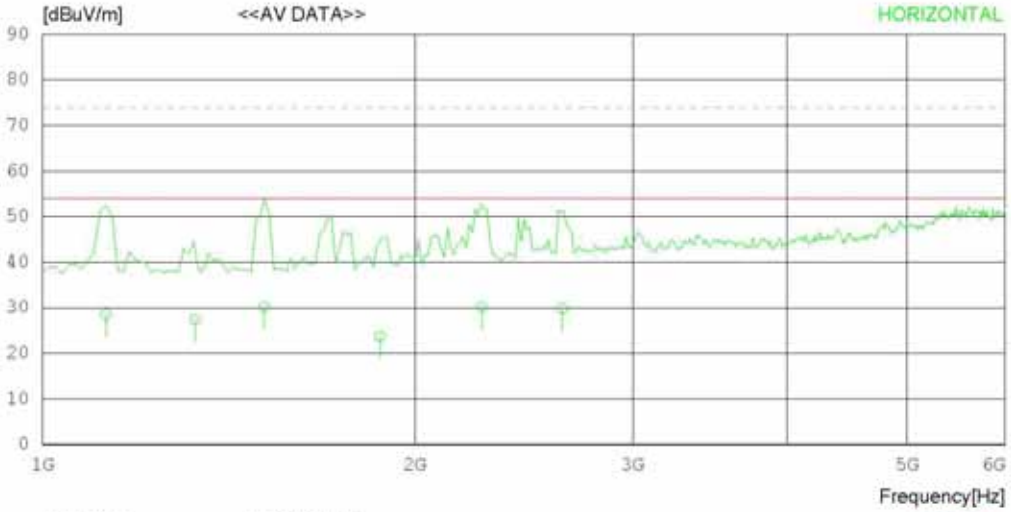
RADIATED EMISSION

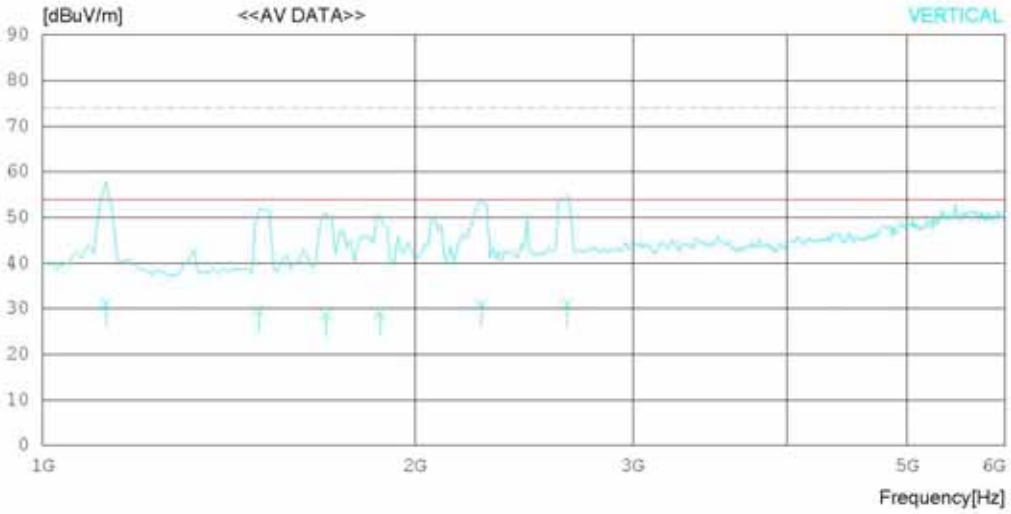
Date : 2011-12-12

Model Name	: 47LM7600-UA	Reference No.	:
Model No.	:	Power Supply	: 120V 60Hz
Serial No.	:	Temp/Humi	: 22 'C 35 % 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)





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RADIATED EMISSION

Date : 2011-12-12

Model Name	:	47LM7600-UA	Reference No.	:	
Model No.	:		Power Supply	:	120V 60Hz
Serial No.	:		Temp/Humi	:	22 'C 35 % 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	1125.000	41.3	24.0	5.1	41.8	28.6	54.0	25.4	100	252
2	1327.750	39.1	24.6	5.6	41.9	27.4	54.0	26.6	100	217
3	1510.500	41.0	25.1	6.0	41.9	30.2	54.0	23.8	100	128
4	1873.192	33.9	25.2	6.7	42.0	23.8	54.0	30.2	100	358
5	2265.365	38.4	26.3	7.4	42.0	30.1	54.0	23.9	100	358
6	2630.750	36.3	27.7	8.0	42.1	29.9	54.0	24.1	100	255
----- Vertical ------										
7	1125.000	43.8	24.0	5.1	41.8	31.1	54.0	22.9	100	32
8	1494.000	40.6	25.1	5.9	41.9	29.7	54.0	24.3	100	190
9	1694.750	38.9	25.2	6.4	41.9	28.6	54.0	25.4	100	189
10	1873.192	38.9	25.2	6.7	42.0	28.8	54.0	25.2	100	1
11	2262.500	39.2	26.3	7.4	42.0	30.9	54.0	23.1	100	277
12	2655.500	37.3	27.8	8.1	42.1	31.1	54.0	22.9	100	188

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< USB MODE_30 MHz ~ 1 GHz >

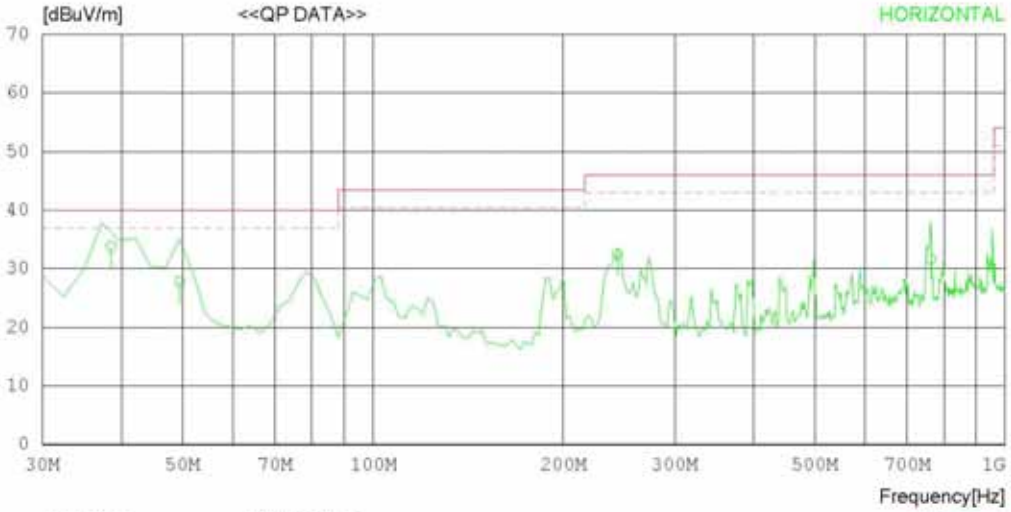
RADIATED EMISSION

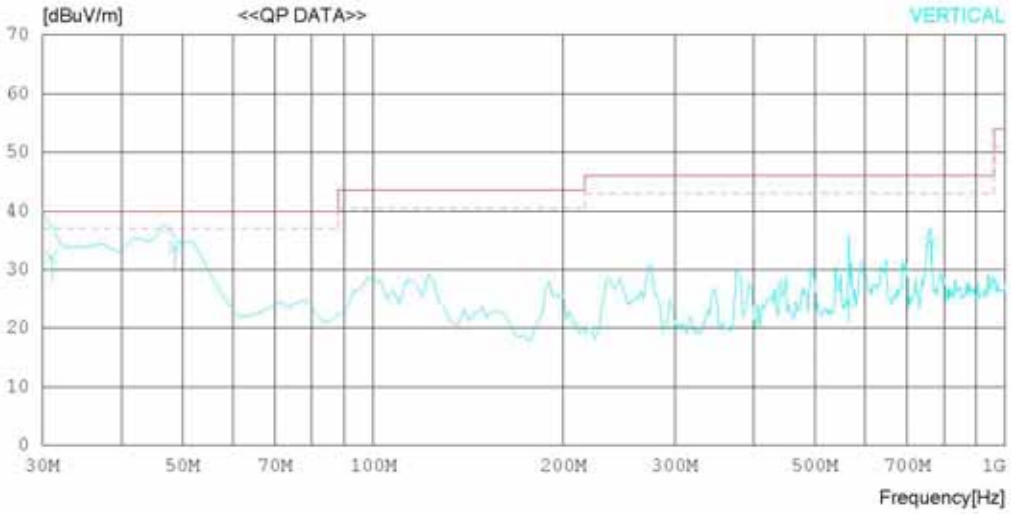
Date : 2011-12-10

Model Name	: 47LM7600-UA	Reference No.	:
Model No.	:	Power Supply	: 120V 60Hz
Serial No.	:	Temp/Humi	: 23 'C 36 % R.H.
Test Condition	: USB	Operator	:

Memo :

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





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< USB MODE_30 MHz ~ 1 GHz >

RADIATED EMISSION

Date : 2011-12-10

Model Name	:	47LM7600-UA	Reference No.	:	
Model No.	:		Power Supply	:	120V 60Hz
Serial No.	:		Temp/Humi	:	23 'C 36 % 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	38.515	40.8	14.7	0.9	22.6	33.8	40.0	6.2	100	342
2	49.400	39.4	10.0	1.0	22.6	27.8	40.0	12.2	100	358
3	243.400	41.1	12.6	2.3	23.5	32.5	46.0	13.5	100	184
4	762.463	31.4	19.7	4.4	23.8	31.7	46.0	14.3	100	358
----- Vertical ------										
5	31.000	36.6	17.3	0.8	22.6	32.1	40.0	7.9	100	236
6	48.500	44.6	10.8	1.0	22.6	33.8	40.0	6.2	100	132
7	564.500	27.0	18.4	3.6	24.5	24.5	46.0	21.5	100	1
8	762.575	34.3	19.7	4.4	23.8	34.6	46.0	11.4	199	166

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< USB MODE_1 GHz ~ 6 GHz_PEAK >

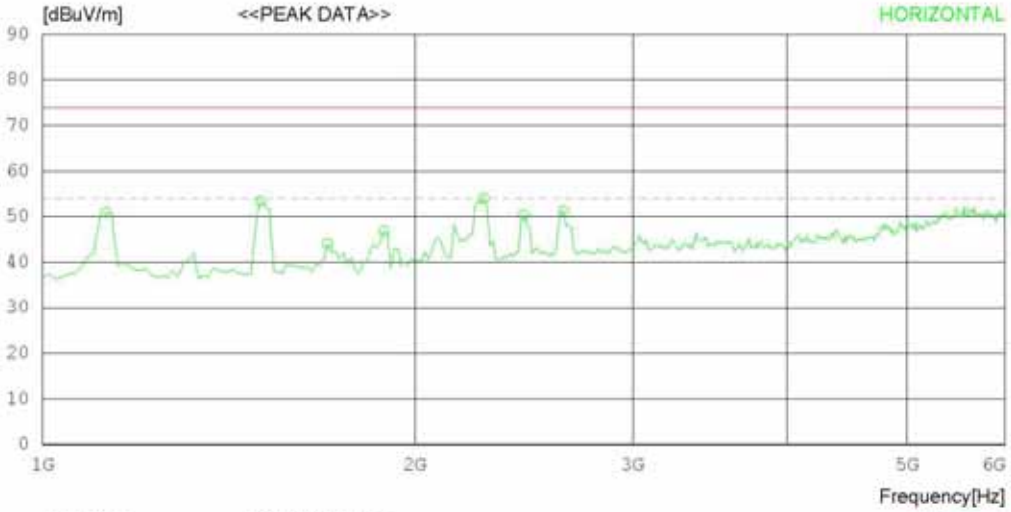
RADIATED EMISSION

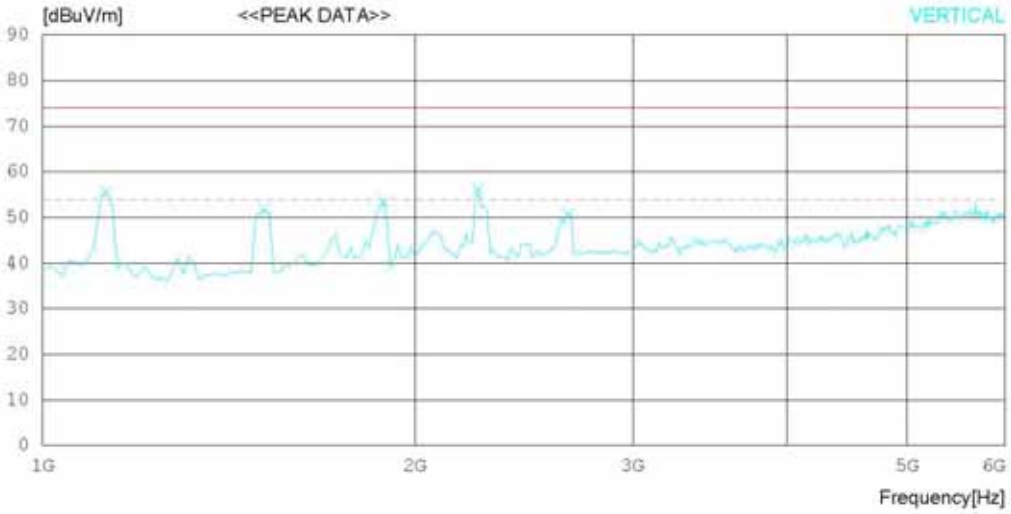
Date : 2011-12-12

Model Name	: 47LM7600-UA	Reference No.	:
Model No.	:	Power Supply	: 120V 60Hz
Serial No.	:	Temp/Humi	: 22 'C 35 % 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)





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RADIATED EMISSION

Date : 2011-12-12

Model Name	:	47LM7600-UA	Reference No.	:	
Model No.	:		Power Supply	:	120V 60Hz
Serial No.	:		Temp/Humi	:	22 'C 35 % 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	1125.000	63.6	24.0	5.1	41.8	50.9	74.0	23.1	100	191
2	1500.000	64.2	25.1	6.0	41.9	53.4	74.0	20.6	100	1
3	1700.000	54.4	25.2	6.4	41.9	44.1	74.0	29.9	100	154
4	1887.500	56.9	25.2	6.8	42.0	46.9	74.0	27.1	100	1
5	2275.000	62.3	26.4	7.4	42.0	54.1	74.0	19.9	100	1
6	2450.000	57.6	27.1	7.7	42.0	50.4	74.0	23.6	100	1
7	2637.500	57.6	27.7	8.0	42.1	51.2	74.0	22.8	100	215
----- Vertical ------										
8	1125.000	68.4	24.0	5.1	41.8	55.7	74.0	18.3	100	203
9	1512.500	62.5	25.1	6.0	41.9	51.7	74.0	22.3	100	358
10	1887.500	63.5	25.2	6.8	42.0	53.5	74.0	20.5	100	358
11	2250.000	64.5	26.3	7.4	42.0	56.2	74.0	17.8	100	233
12	2662.500	57.0	27.8	8.1	42.1	50.8	74.0	23.2	100	189

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< USB MODE_1 GHz ~ 6 GHz_AV >

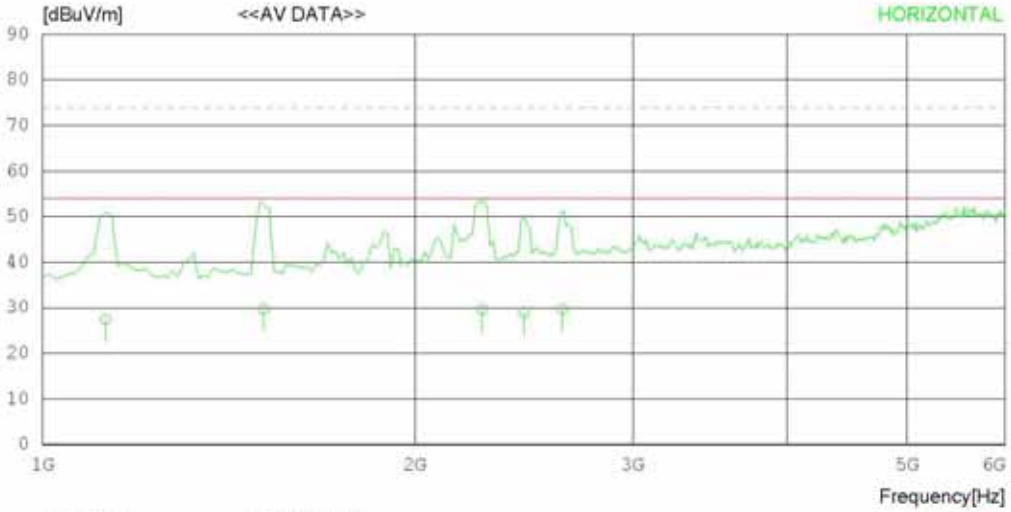
RADIATED EMISSION

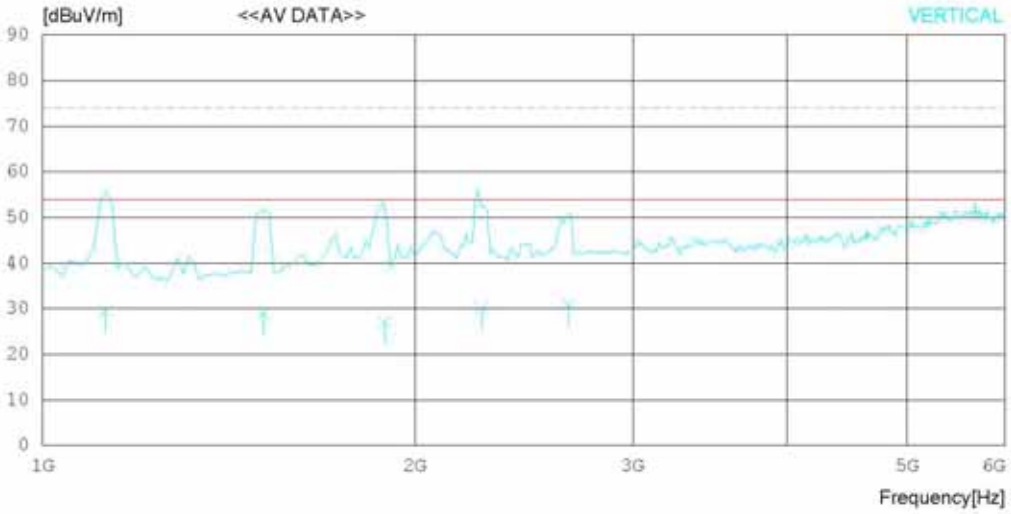
Date : 2011-12-12

Model Name	: 47LM7600-UA	Reference No.	:		
Model No.	:	Power Supply	:	120V	60Hz
Serial No.	:	Temp/Humi	:	22 'C	35 % 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)





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RADIATED EMISSION

Date : 2011-12-12

Model Name	:	47LM7600-UA	Reference No.	:	
Model No.	:		Power Supply	:	120V 60Hz
Serial No.	:		Temp/Humi	:	22 'C 35 % 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	1124.750	40.1	24.0	5.1	41.8	27.4	54.0	26.6	100	191
2	1508.150	40.5	25.1	6.0	41.9	29.7	54.0	24.3	100	350
3	2265.917	37.9	26.3	7.4	42.0	29.6	54.0	24.4	100	229
4	2450.000	36.2	27.1	7.7	42.0	29.0	54.0	25.0	100	1
5	2631.525	36.1	27.7	8.0	42.1	29.7	54.0	24.3	100	215
----- Vertical ------										
6	1124.750	42.3	24.0	5.1	41.8	29.6	54.0	24.4	100	203
7	1508.150	39.8	25.1	6.0	41.9	29.0	54.0	25.0	100	358
8	1889.551	37.0	25.2	6.8	42.0	27.0	54.0	27.0	100	232
9	2265.916	38.5	26.3	7.4	42.0	30.2	54.0	23.8	100	233
10	2662.500	37.1	27.8	8.1	42.1	30.9	54.0	23.1	100	189

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Appendix 1

List of Test and Measurement Instruments

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1. Conducted Disturbance

Name of Instrument		Model No.	Serial No.	Manufacturer	Cal. Date	Next Cal. Date
☒	EMI Test Receiver	ESCI	100364	Rohde & Schwarz	2011.03.08	2012.03.08
☒	LISN	LISN1600	197204	TTI	2011.07.02	2012.07.02
☒	LISN(EUT)	ESH2-Z5	828739/006	R&S	2011.09.30	2012.09.30
☒	50 ohm Terminator	CT-01	N/A	TME	2011.01.11	2012.01.11
☐	UNIVERSAL RADIO COMMUNICATION TESTER	CMU200	106760	R&S	2011.03.07	2012.03.07
☐	Spectrum Analyzer	8591E	3649A05889	H/P	2011.03.07	2012.03.07
☐	RFI/Field intensity Meter	KNM-2402	4N-170-3	KYORITSU	2011.07.02	2012.07.02
☐	LISN	KNW-407	8-317-8	KYORITSU	2011.01.11	2012.01.11
☐	LISN	KNW-242	8-654-15	KYORITSU	2011.07.02	2012.07.02
☐	50 ohm Terminator	CT-01	N/A	TME	2011.01.11	2012.01.11
☐	ISN	T4A	24869	Teseq GmbH	2011.01.11	2012.01.11
☐	LISN(DC)	NNBM8125	8125-821	SCHWARZBECK	2011.07.01	2012.07.01

2. Radiated Disturbance

Name of Instrument		Model No.	Serial No.	Manufacturer	Cal. Date	Next Cal. Date
☒	EMI Test Receiver	ESU	100014	Rohde & Schwarz	2011.01.20	2012.01.20
☒	Bilog Antenna	CBL6112B	2737	SCHAFFNER	2010.07.14	2012.07.14
☒	Horn Antenna	BBHA9120A	322	SCHWARZBECK	2010.04.13	2012.04.13
☒	Amplifier(22dB)	8447E	2945A02865	H/P	2011.01.11	2012.01.11
☒	Pre Amplifier	MLA-00108-B02-36	1518831	TSJ	2011.01.11	2012.01.11
☒	Controller	5905A	N/A	TOKIN	-	-
☒	ANT.master	N/A	N/A	TOKIN	-	-
☐	UNIVERSAL RADIO COMMUNICATION TESTER	CMU200	106760	R&S	2011.03.07	2012.03.07
☐	EMI Test Receiver	ESCI	100364	Rohde & Schwarz	2011.03.08	2012.03.08
☐	BICONICAL ANT.	VHA 9103	91031946	SCHWARZBECK	2010.12.21	2012.12.21
☐	LOG-PERIODIC ANT.	UHALP 9108A-A1	1098	SCHWARZBECK	2010.11.29	2012.11.29
☐	Pre Amplifier	MLA-100K01-B01-26	1252741	TSJ	2011.03.07	2012.03.07
☐	Position Controller	5901T	14173	TOKIN	-	-
☐	DRIVER	5902T2	14174	TOKIN	-	-
☐	Spectrum Analyzer	E4411B	US41062735	Agilent	2011.07.01	2012.07.01
☐	Amplifier (25dB)	8447D	2443A03690	Agilent	2011.07.01	2012.07.01
☐	Bilog Antenna	VULB9160	3151	SCHAFFNER	2010.08.25	2012.08.25
☐	Controller	5900	N/A	TOKIN	-	-

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