EMC TEST REPORT

Test item	:	LED LCD TV Monitor
Model No.	:	42LM6200-UE
Order No.	:	1112-01717
Date of receipt	:	2011-12-08
Test duration	:	2011-12-10 ~ 2011-12-13
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.

Copyright © 2011, DIGITAL EMC CO., LTD.

CONTENTS

1. General Remarks 3

2. Test Laboratory 3

3. General Information of EUT 4

3.1 Product Information 4

4. Test Summary 5

4.1 Applied standards and test results 5

4.2 Test environment and conditions 5

4.3 Test result Summary 5

5. Test Set-up and operation mode 6

5.1 Principle of Configuration Selection 6

5.2 Test Operation Mode 6

5.3 Support Equipment Used 6

6. Test Results : Emission 7

6.1 Conducted Disturbance 7

6.2 Radiated Disturbance 14

Appendix 1 34

List of Test and Measurement Instruments 34

Copyright Ⓒ 2011, DIGITAL EMC CO., LTD.

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".

Copyright Ⓒ 2011, DIGITAL EMC CO., LTD.

3. General Information of EUT

3.1 Product Information

Model No.	42LM6200-UE
EUT Type	LED LCD TV Monitor
Serial No	NONE
FCC ID	BEJ42LM6200UE
Type of Sample Tested	Pre-Production
High Frequency	756 MHz
Rating	AC100-240 V~, 50/60 Hz, 1.0 A, 100 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

Copyright Ⓒ 2011, DIGITAL EMC CO., LTD.

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	12-13	21	38	-
Radiated Disturbance	12-10 12-12	23 22	36 35	

4.3 Test result Summary

(1) Conducted Emission(HDMI + LAN MODE)

Frequency [MHz]	Result [dBμV]	Phase	Detector	Limit [dBμV]	Margin [dB]
2.04200	**32.4**	N	Average	**46.0**	**13.6**

(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]
675.048	**H**	**37.9**	**-1.1**	**36.8**	**46.0**	**9.2**

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

Copyright Ⓒ 2011, DIGITAL EMC CO., LTD.

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

Copyright Ⓒ 2011, DIGITAL EMC CO., LTD.

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.

Copyright © 2011, DIGITAL EMC CO., LTD.

Test Result

< DSUB + LAN MODE >

Digital EMC

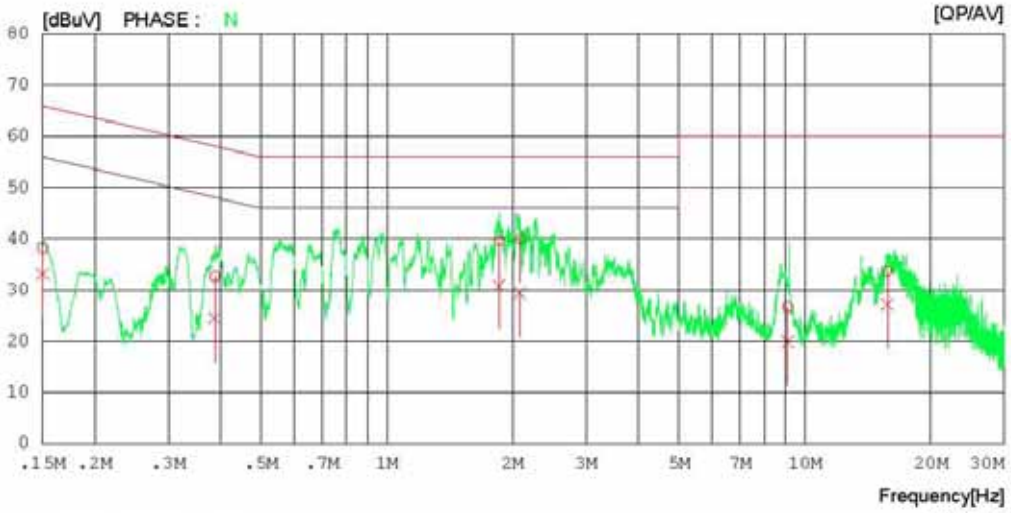
Results of Conducted Emission

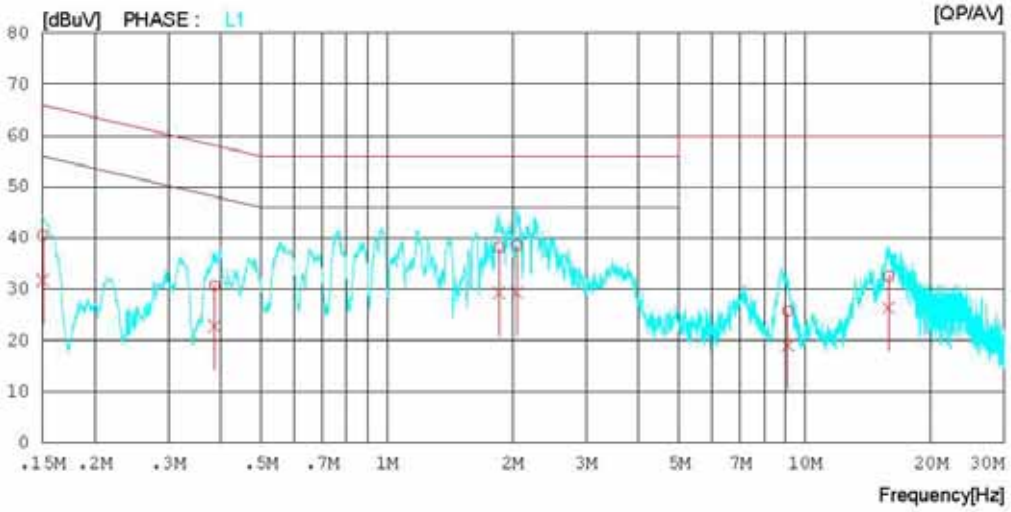
Digital EMC
Date : 2011-12-13

Model No.	:	42LM6200-UE	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





Copyright Ⓒ 2011, DIGITAL EMC CO., LTD.

Results of Conducted Emission

Digital EMC
Date : 2011-12-13

Model No.	:	42LM6200-UE	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	0.15008	38.0	32.9	0.2	38.2	33.1	66.0	56.0	27.8	22.9	N
2	0.38778	32.5	24.3	0.2	32.7	24.5	58.1	48.1	25.4	23.6	N
3	1.85650	39.4	30.7	0.2	39.6	30.9	56.0	46.0	16.4	15.1	N
4	2.08300	39.7	29.1	0.3	40.0	29.4	56.0	46.0	16.0	16.6	N
5	9.10550	26.1	19.4	0.6	26.7	20.0	60.0	50.0	33.3	30.0	N
6	15.76200	32.7	26.2	1.0	33.7	27.2	60.0	50.0	26.3	22.8	N
7	0.15039	40.4	31.5	0.2	40.6	31.7	66.0	56.0	25.4	24.3	L1
8	0.38761	30.6	22.6	0.2	30.8	22.8	58.1	48.1	27.3	25.3	L1
9	1.85600	38.0	29.1	0.2	38.2	29.3	56.0	46.0	17.8	16.7	L1
10	2.04600	38.3	29.1	0.3	38.6	29.4	56.0	46.0	17.4	16.6	L1
11	9.10550	25.1	18.5	0.6	25.7	19.1	60.0	50.0	34.3	30.9	L1
12	15.86150	31.6	25.4	1.0	32.6	26.4	60.0	50.0	27.4	23.6	L1

Copyright Ⓒ 2011, DIGITAL EMC CO., LTD.

< HDMI + LAN MODE >

Digital EMC

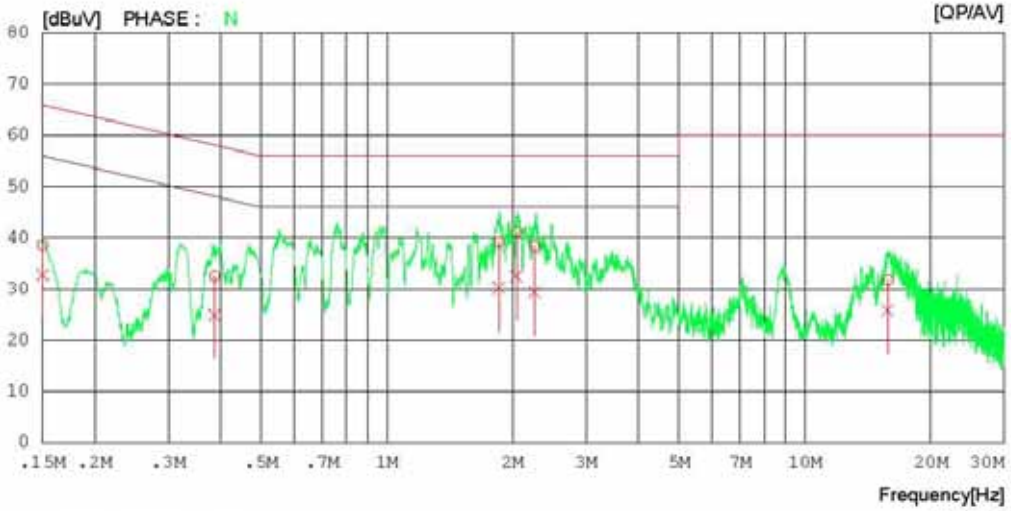
Results of Conducted Emission

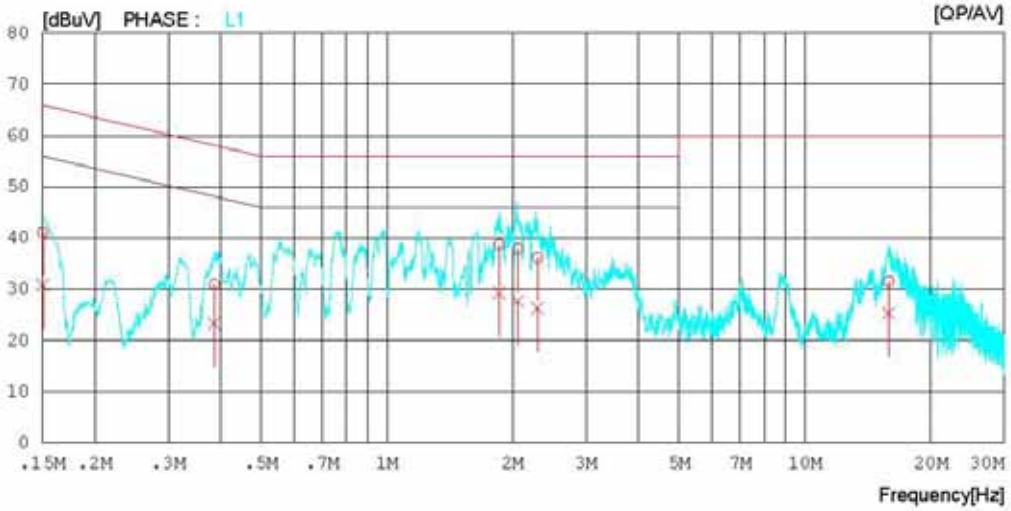
Digital EMC
Date : 2011-12-13

Model No.	:	42LM6200-UE	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





Copyright © 2011, DIGITAL EMC CO., LTD.

Results of Conducted Emission

Digital EMC
Date : 2011-12-13

Model No.	:	42LM6200-UE	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	0.15008	38.4	32.5	0.2	38.6	32.7	66.0	56.0	27.4	23.3	N
2	0.38708	32.3	24.7	0.2	32.5	24.9	58.1	48.1	25.6	23.2	N
3	1.85450	39.0	30.0	0.2	39.2	30.2	56.0	46.0	16.8	15.8	N
4	2.04200	40.9	32.1	0.3	41.2	32.4	56.0	46.0	14.8	13.6	N
5	2.25600	38.0	29.0	0.3	38.3	29.3	56.0	46.0	17.7	16.7	N
6	15.79600	30.7	24.8	1.0	31.7	25.8	60.0	50.0	28.3	24.2	N
7	0.15024	40.9	30.7	0.2	41.1	30.9	66.0	56.0	24.9	25.1	L1
8	0.38674	30.8	23.1	0.2	31.0	23.3	58.1	48.1	27.1	24.8	L1
9	1.85700	38.6	29.1	0.2	38.8	29.3	56.0	46.0	17.2	16.7	L1
10	2.05900	37.7	27.4	0.3	38.0	27.7	56.0	46.0	18.0	18.3	L1
11	2.29200	35.9	26.0	0.3	36.2	26.3	56.0	46.0	19.8	19.7	L1
12	15.88200	30.6	24.4	1.0	31.6	25.4	60.0	50.0	28.4	24.6	L1

Copyright © 2011, DIGITAL EMC CO., LTD.

< USB MODE >

Digital EMC

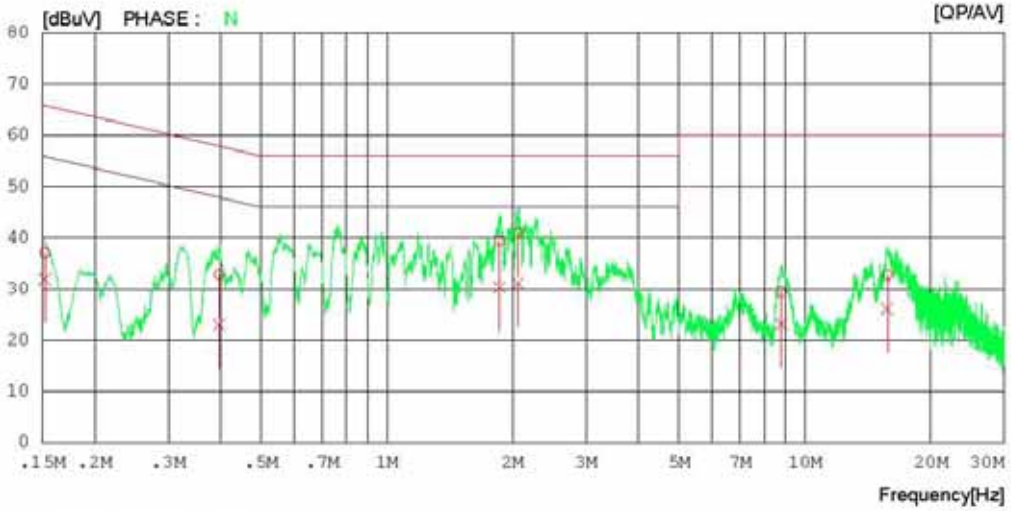
Results of Conducted Emission

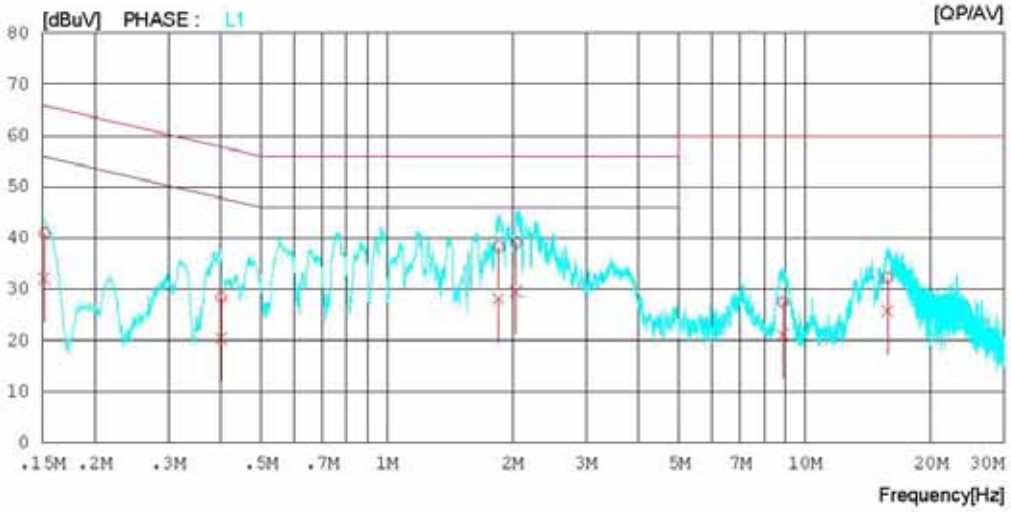
Digital EMC
Date : 2011-12-13

Model No.	:	42LM6200-UE	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





Copyright Ⓒ 2011, DIGITAL EMC CO., LTD.

Results of Conducted Emission

Digital EMC
Date : 2011-12-13

Model No.	:	42LM6200-UE	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	0.15214	36.9	31.7	0.2	37.1	31.9	65.9	55.9	28.8	24.0	N
2	0.39773	32.6	22.8	0.2	32.8	23.0	57.9	47.9	25.1	24.9	N
3	1.85950	39.2	30.1	0.2	39.4	30.3	56.0	46.0	16.6	15.7	N
4	2.06100	40.7	30.8	0.3	41.0	31.1	56.0	46.0	15.0	14.9	N
5	8.79650	28.9	22.5	0.6	29.5	23.1	60.0	50.0	30.5	26.9	N
6	15.75100	31.7	25.2	1.0	32.7	26.2	60.0	50.0	27.3	23.8	N
7	0.15168	40.8	31.9	0.2	41.0	32.1	65.9	55.9	24.9	23.8	L1
8	0.40150	28.3	20.3	0.2	28.5	20.5	57.8	47.8	29.3	27.3	L1
9	1.84950	38.2	28.1	0.2	38.4	28.3	56.0	46.0	17.6	17.7	L1
10	2.03950	38.9	29.3	0.3	39.2	29.6	56.0	46.0	16.8	16.4	L1
11	8.86800	26.9	20.6	0.6	27.5	21.2	60.0	50.0	32.5	28.8	L1
12	15.77600	31.3	24.7	1.0	32.3	25.7	60.0	50.0	27.7	24.3	L1

Copyright © 2011, DIGITAL EMC CO., LTD.

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.

Copyright Ⓒ 2011, DIGITAL EMC CO., LTD.

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

Copyright Ⓒ 2011, DIGITAL EMC CO., LTD.

Test Result

< DSUB + LAN MODE_30 MHz ~ 1 GHz >

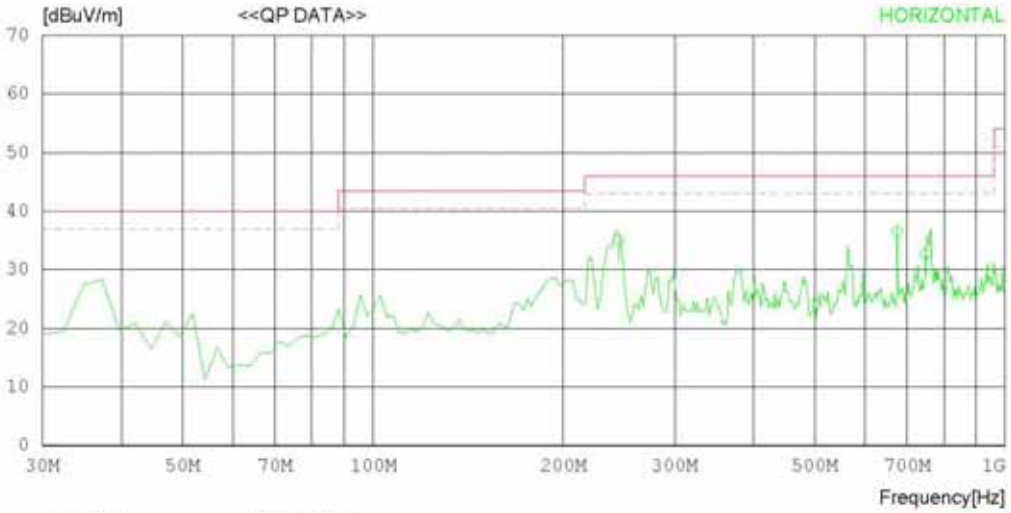
RADIATED EMISSION

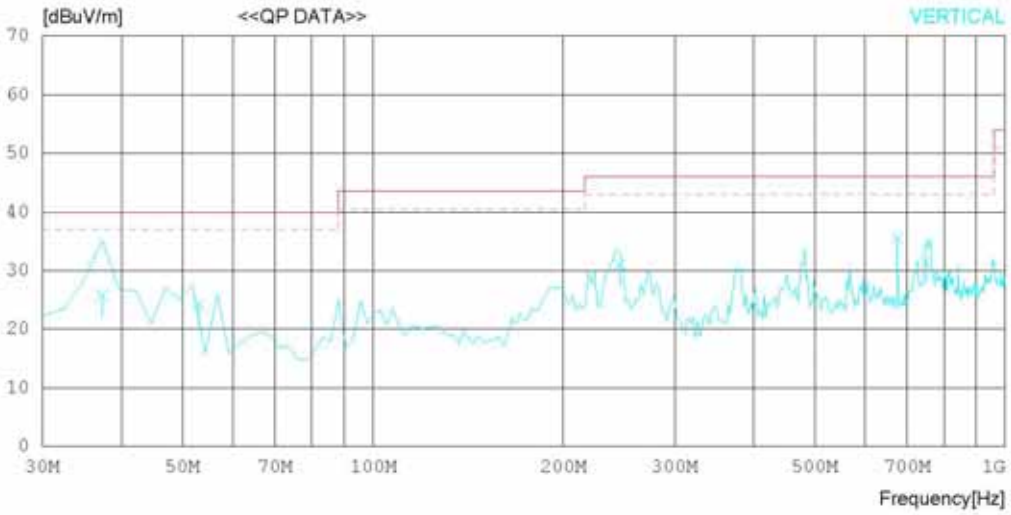
Date : 2011-12-10

Model Name	: 42LM6200-UE	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





Copyright Ⓒ 2011, DIGITAL EMC CO., LTD.

RADIATED EMISSION

Date : 2011-12-10

Model Name	:	42LM6200-UE	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	244.625	43.5	12.7	2.3	23.5	35.0	46.0	11.0	100	21
2	675.000	37.7	18.9	4.1	24.1	36.6	46.0	9.4	100	1
3	749.125	32.6	19.6	4.4	23.9	32.7	46.0	13.3	107	164
----- Vertical ------										
4	37.275	32.1	15.4	0.9	22.6	25.8	40.0	14.2	100	209
5	53.050	37.7	8.2	1.0	22.6	24.3	40.0	15.7	100	199
6	245.375	39.5	12.7	2.3	23.5	31.0	46.0	15.0	100	206
7	675.000	36.6	18.9	4.1	24.1	35.5	46.0	10.5	100	12
8	749.125	31.5	19.6	4.4	23.9	31.6	46.0	14.4	100	346

Copyright © 2011, DIGITAL EMC CO., LTD.

< DSUB + LAN MODE_1 GHz ~ 6 GHz_PEAK >

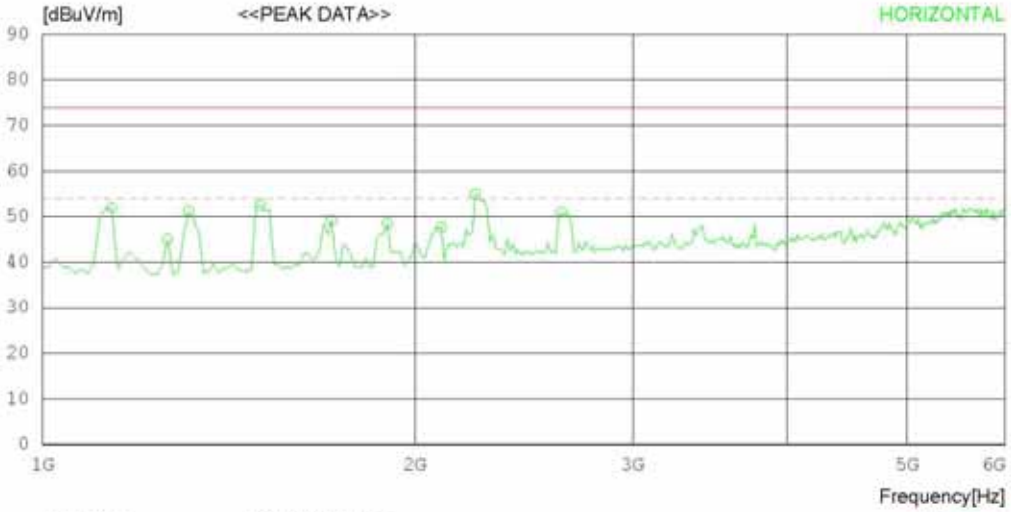
RADIATED EMISSION

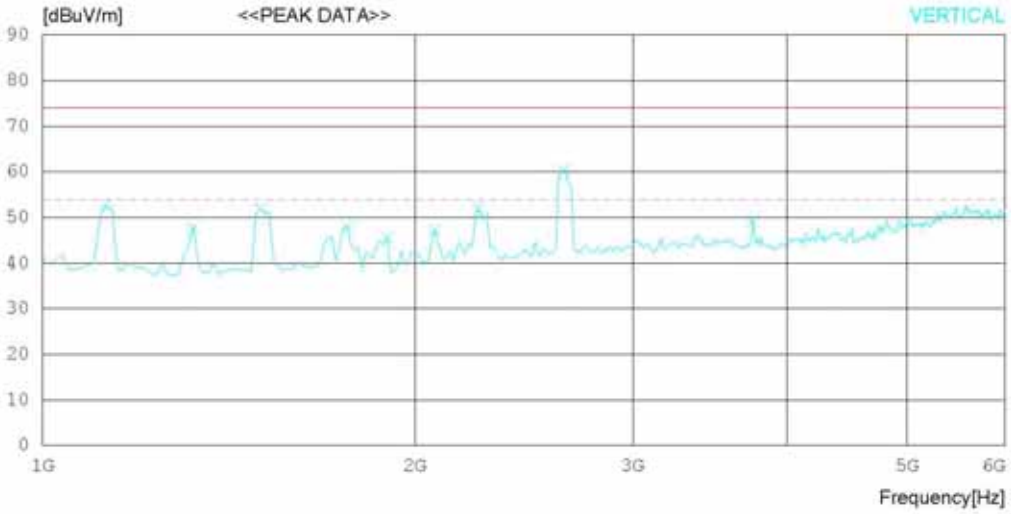
Date : 2011-12-12

Model Name	: 42LM6200-UE	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)





Copyright Ⓒ 2011, DIGITAL EMC CO., LTD.

RADIATED EMISSION

Date : 2011-12-12

Model Name	:	42LM6200-UE	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	1137.500	64.6	24.0	5.1	41.8	51.9	74.0	22.1	100	248
2	1262.500	57.1	24.4	5.4	41.9	45.0	74.0	29	100	250
3	1312.500	63.0	24.6	5.5	41.9	51.2	74.0	22.8	100	232
4	1500.000	63.4	25.1	6.0	41.9	52.6	74.0	21.4	100	358
5	1712.500	59.5	25.2	6.4	41.9	49.2	74.0	24.8	200	179
6	1900.000	58.4	25.2	6.8	42.0	48.4	74.0	25.6	100	358
7	2100.000	56.8	25.6	7.2	42.0	47.6	74.0	26.4	100	358
8	2237.500	63.3	26.2	7.4	42.0	54.9	74.0	19.1	100	250
9	2625.000	57.4	27.7	8.0	42.1	51.0	74.0	23	200	213
----- Vertical ------										
10	1125.000	65.2	24.0	5.1	41.8	52.5	74.0	21.5	201	14
11	1325.000	59.5	24.6	5.6	41.9	47.8	74.0	26.2	100	358
12	1500.000	62.7	25.1	6.0	41.9	51.9	74.0	22.1	100	358
13	1762.500	58.3	25.2	6.5	42.0	48.0	74.0	26	201	198
14	1900.000	55.5	25.2	6.8	42.0	45.5	74.0	28.5	100	180
15	2075.000	56.5	25.5	7.1	42.0	47.1	74.0	26.9	100	358
16	2250.000	60.3	26.3	7.4	42.0	52.0	74.0	22	100	358
17	2637.500	66.7	27.7	8.0	42.1	60.3	74.0	13.7	100	358
18	3750.000	51.7	29.7	9.7	41.9	49.2	74.0	24.8	201	14

Copyright © 2011, DIGITAL EMC CO., LTD.

< DSUB + LAN MODE_1 GHz ~ 6 GHz_AV >

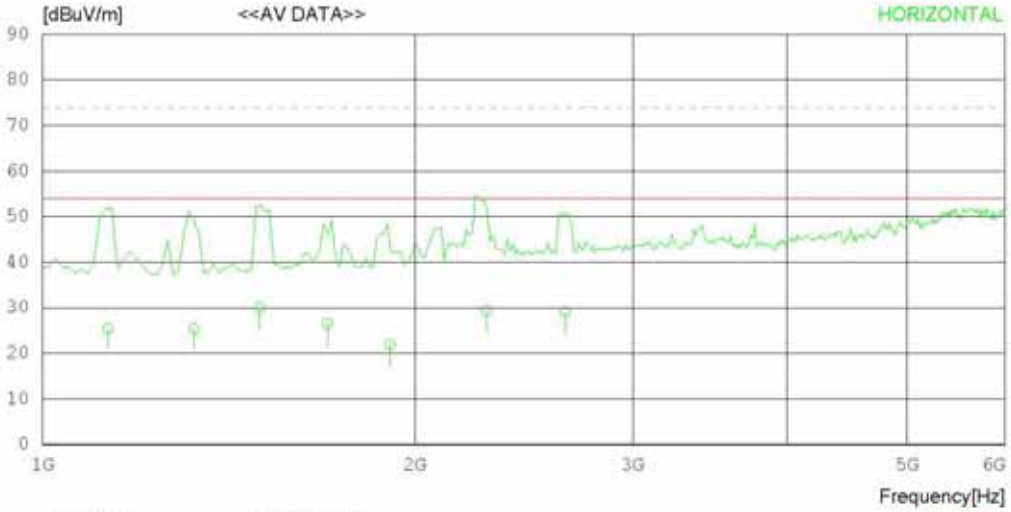
RADIATED EMISSION

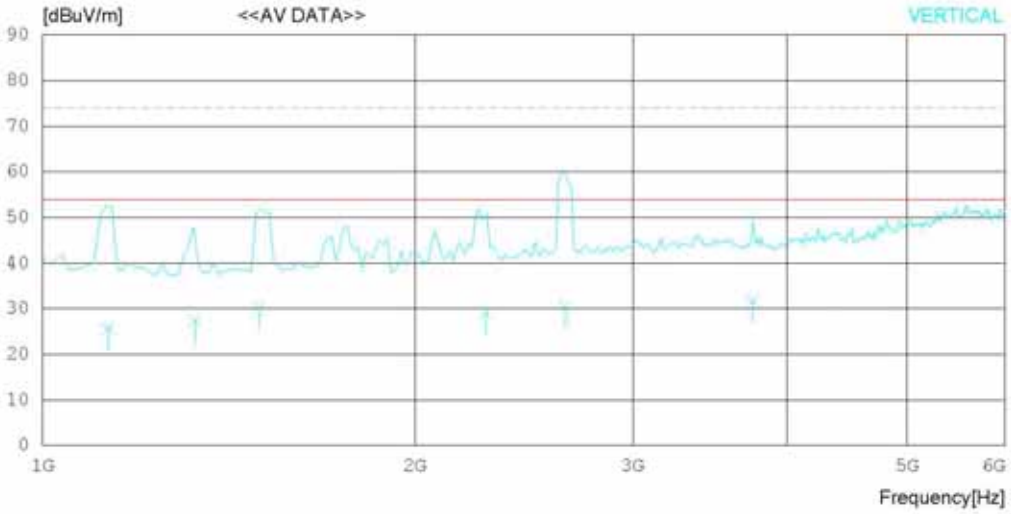
Date : 2011-12-12

Model Name	: 42LM6200-UE	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)





Copyright Ⓒ 2011, DIGITAL EMC CO., LTD.

RADIATED EMISSION

Date : 2011-12-12

Model Name	:	42LM6200-UE	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	1129.205	38.1	24.0	5.1	41.8	25.4	54.0	28.6	100	248
2	1326.250	37.1	24.6	5.6	41.9	25.4	54.0	28.6	100	232
3	1498.019	40.9	25.1	5.9	41.9	30.0	54.0	24.0	100	358
4	1700.500	36.8	25.2	6.4	41.9	26.5	54.0	27.5	100	179
5	1908.865	31.9	25.2	6.8	42.0	21.9	54.0	32.1	100	358
6	2286.500	37.6	26.4	7.4	42.0	29.4	54.0	24.6	100	250
7	2644.564	35.4	27.8	8.0	42.1	29.1	54.0	24.9	200	213
----- Vertical ------										
8	1131.000	38.4	24.0	5.1	41.8	25.7	54.0	28.3	201	14
9	1328.500	39.0	24.6	5.6	41.9	27.3	54.0	26.7	100	358
10	1498.000	41.2	25.1	5.9	41.9	30.3	54.0	23.7	100	358
11	2282.500	37.3	26.4	7.4	42.0	29.1	54.0	24.9	100	358
12	2644.564	36.7	27.8	8.0	42.1	30.4	54.0	23.6	100	358
13	3750.000	34.2	29.7	9.7	41.9	31.7	54.0	22.3	125	14

Copyright Ⓒ 2011, DIGITAL EMC CO., LTD.

< HDMI + LAN MODE_30 MHz ~ 1 GHz >

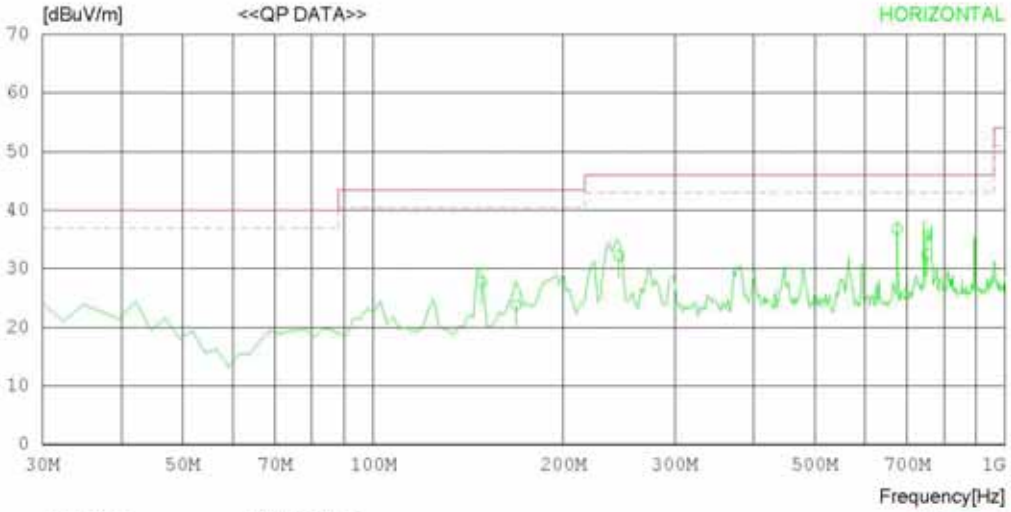
RADIATED EMISSION

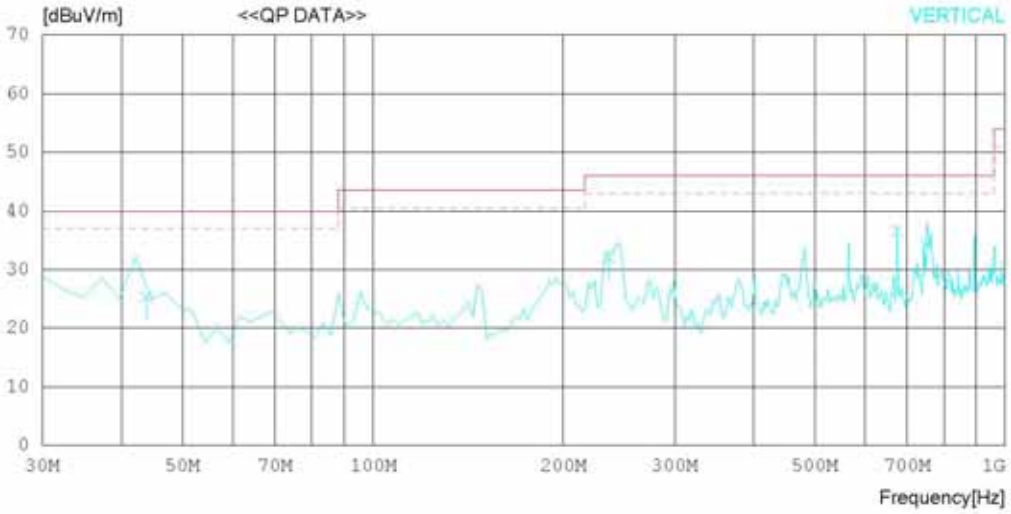
Date : 2011-12-10

Model Name	: 42LM6200-UE	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





Copyright Ⓒ 2011, DIGITAL EMC CO., LTD.

RADIATED EMISSION

Date : 2011-12-10

Model Name	:	42LM6200-UE	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	148.513	38.6	10.5	1.7	23.1	27.7	43.5	15.8	199	358
2	168.500	35.1	10.0	1.8	23.1	23.8	43.5	19.7	100	359
3	244.750	40.7	12.7	2.3	23.5	32.2	46.0	13.8	100	18
4	675.048	37.9	18.9	4.1	24.1	36.8	46.0	9.2	100	157
5	752.850	32.2	19.6	4.4	23.8	32.4	46.0	13.6	100	157
----- Vertical ------										
6	43.800	32.8	14.1	1.0	22.6	25.3	40.0	14.7	100	358
7	236.150	41.1	12.1	2.3	23.5	32.0	46.0	14.0	200	227
8	675.000	37.7	18.9	4.1	24.1	36.6	46.0	9.4	100	212
9	749.600	34.1	19.6	4.4	23.9	34.2	46.0	11.8	100	358

Copyright Ⓒ 2011, DIGITAL EMC CO., LTD.

< HDMI + LAN MODE_1 GHz ~ 6 GHz_PEAK >

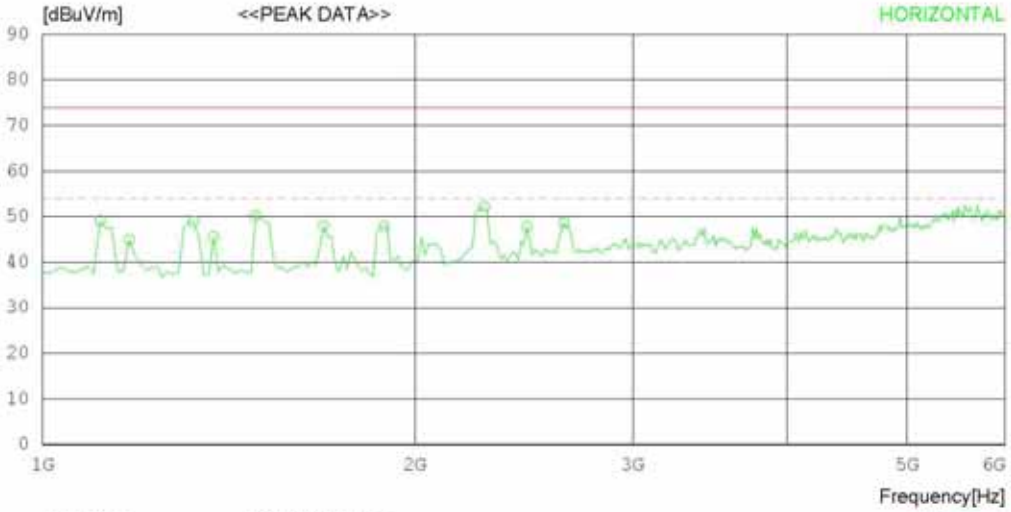
RADIATED EMISSION

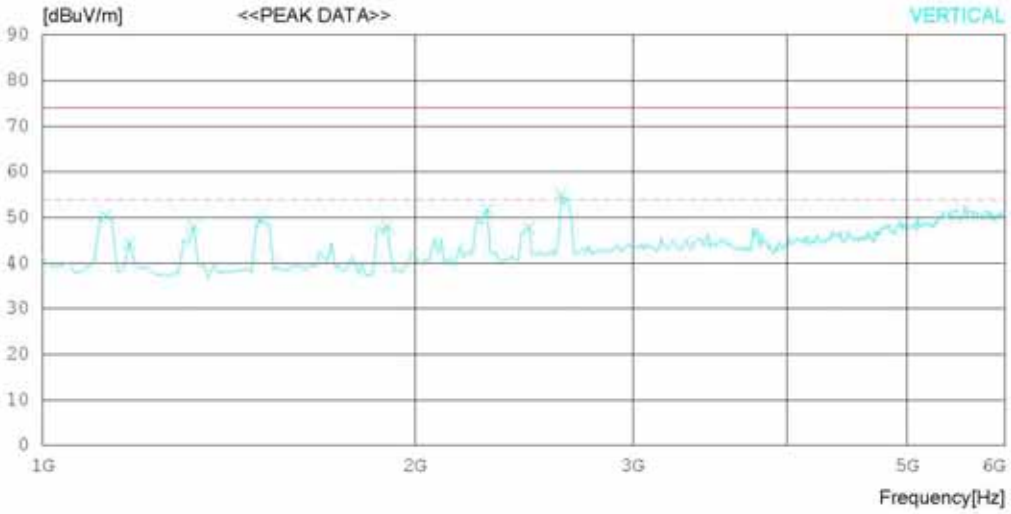
Date : 2011-12-12

Model Name	: 42LM6200-UE	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)





Copyright Ⓒ 2011, DIGITAL EMC CO., LTD.

RADIATED EMISSION

Date : 2011-12-12

Model Name	:	42LM6200-UE	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	1112.500	61.8	24.0	5.1	41.8	49.1	74.0	24.9	100	253
2	1175.000	57.3	24.2	5.2	41.8	44.9	74.0	29.1	100	1
3	1325.000	60.6	24.6	5.6	41.9	48.9	74.0	25.1	100	1
4	1375.000	57.0	24.8	5.7	41.9	45.6	74.0	28.4	100	1
5	1487.500	61.1	25.1	5.9	41.9	50.2	74.0	23.8	100	1
6	1687.500	58.3	25.2	6.3	41.9	47.9	74.0	26.1	100	1
7	1887.500	57.9	25.2	6.8	42.0	47.9	74.0	26.1	100	1
8	2275.000	60.4	26.4	7.4	42.0	52.2	74.0	21.8	100	1
9	2462.500	54.8	27.2	7.7	42.0	47.7	74.0	26.3	100	1
10	2637.500	55.1	27.7	8.0	42.1	48.7	74.0	25.3	100	1
----- Vertical ------										
11	1125.000	63.0	24.0	5.1	41.8	50.3	74.0	23.7	100	358
12	1175.000	56.7	24.2	5.2	41.8	44.3	74.0	29.7	100	358
13	1325.000	59.6	24.6	5.6	41.9	47.9	74.0	26.1	100	170
14	1500.000	60.2	25.1	6.0	41.9	49.4	74.0	24.6	100	358
15	1900.000	58.1	25.2	6.8	42.0	48.1	74.0	25.9	100	171
16	2287.500	60.0	26.4	7.4	42.0	51.8	74.0	22.2	100	322
17	2475.000	54.9	27.2	7.7	42.0	47.8	74.0	26.2	100	340
18	2625.000	61.3	27.7	8.0	42.1	54.9	74.0	19.1	100	21

Copyright © 2011, DIGITAL EMC CO., LTD.

< HDMI + LAN MODE_1 GHz ~ 6 GHz_AV >

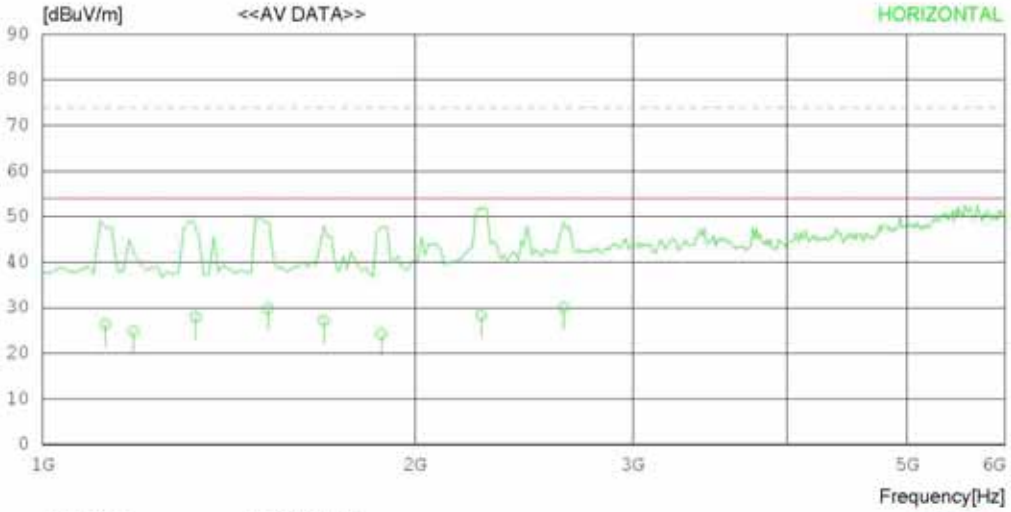
RADIATED EMISSION

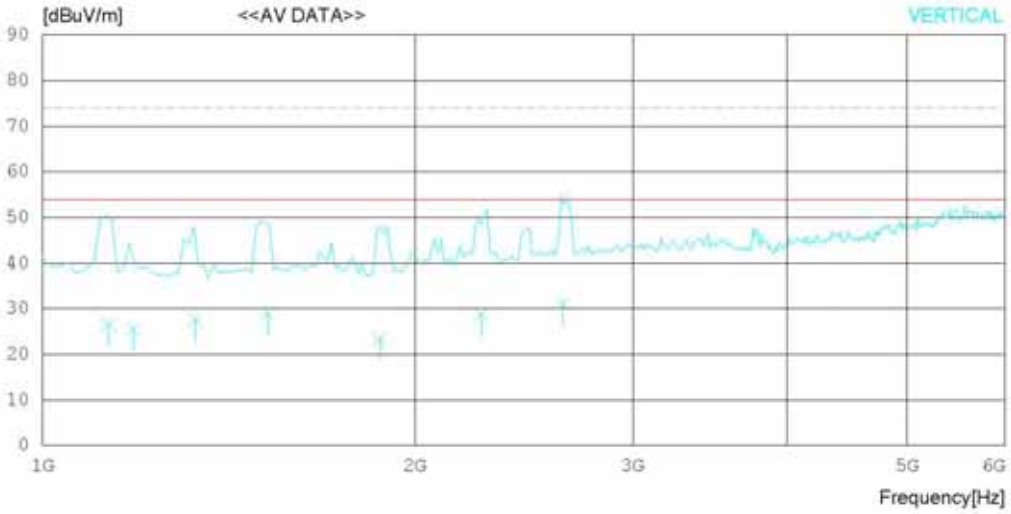
Date : 2011-12-12

Model Name	: 42LM6200-UE	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)





Copyright Ⓒ 2011, DIGITAL EMC CO., LTD.

RADIATED EMISSION

Date : 2011-12-12

Model Name	:	42LM6200-UE	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	1124.513	39.1	24.0	5.1	41.8	26.4	54.0	27.6	100	253
2	1184.700	37.2	24.2	5.2	41.8	24.8	54.0	29.2	100	169
3	1330.000	39.7	24.6	5.6	41.9	28.0	54.0	26.0	100	32
4	1521.000	40.6	25.1	6.0	41.9	29.8	54.0	24.2	100	1
5	1687.500	37.6	25.2	6.3	41.9	27.2	54.0	26.8	100	179
6	1878.500	34.2	25.2	6.8	42.0	24.2	54.0	29.8	100	32
7	2262.250	36.6	26.3	7.4	42.0	28.3	54.0	25.7	100	169
8	2637.500	36.4	27.7	8.0	42.1	30.0	54.0	24.0	100	1
----- Vertical ------										
9	1131.250	39.3	24.0	5.1	41.8	26.6	54.0	27.4	100	358
10	1184.538	37.9	24.2	5.2	41.8	25.5	54.0	28.5	100	358
11	1330.000	39.2	24.6	5.6	41.9	27.5	54.0	26.5	100	170
12	1521.000	39.8	25.1	6.0	41.9	29.0	54.0	25.0	100	358
13	1873.000	33.5	25.2	6.7	42.0	23.4	54.0	30.6	100	171
14	2262.250	37.0	26.3	7.4	42.0	28.7	54.0	25.3	100	221
15	2633.500	37.5	27.7	8.0	42.1	31.1	54.0	22.9	100	21

Copyright © 2011, DIGITAL EMC CO., LTD.

< USB MODE_30 MHz ~ 1 GHz >

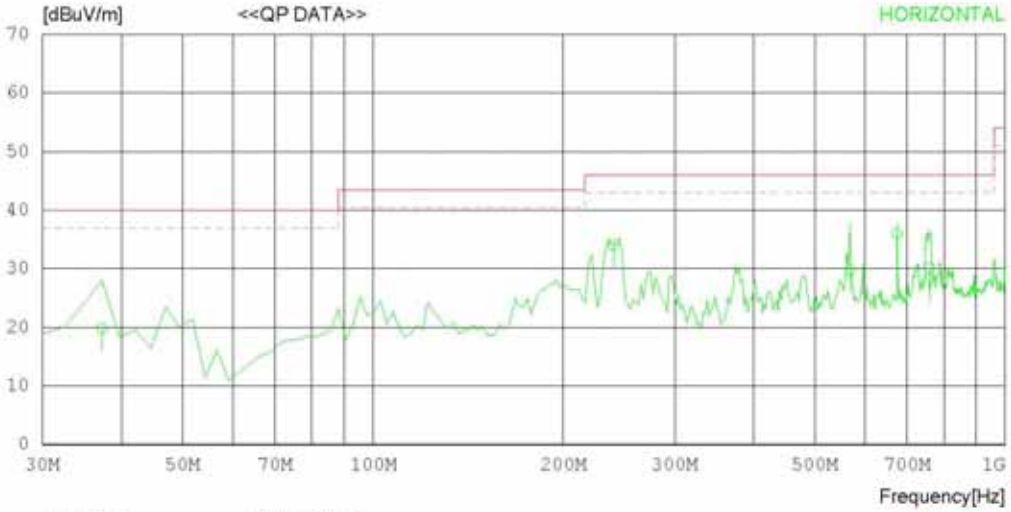
RADIATED EMISSION

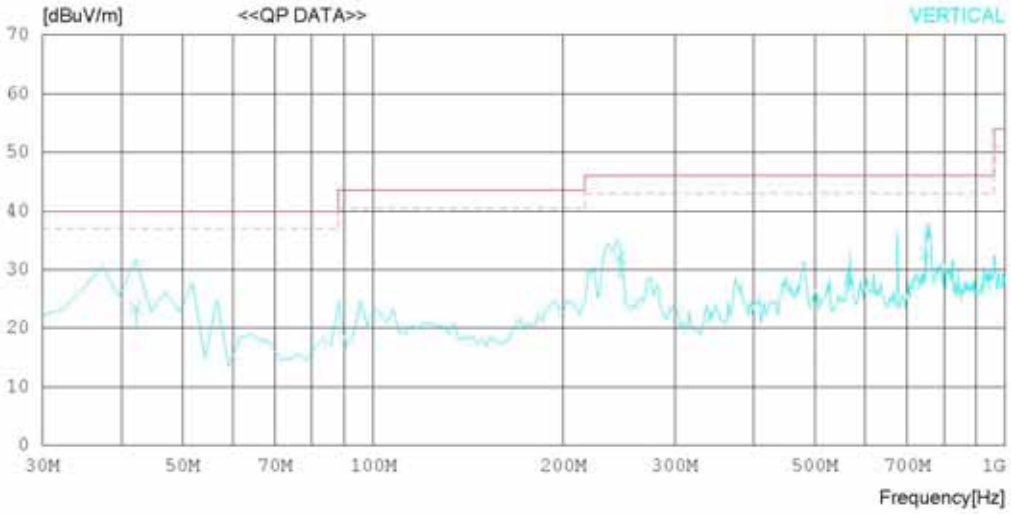
Date : 2011-12-10

Model Name	: 42LM6200-UE	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





Copyright Ⓒ 2011, DIGITAL EMC CO., LTD.

< USB MODE_30 MHz ~ 1 GHz >

RADIATED EMISSION

Date : 2011-12-10

Model Name	:	42LM6200-UE	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	37.275	26.1	15.4	0.9	22.6	19.8	40.0	20.2	100	87
2	240.000	42.8	12.4	2.3	23.5	34.0	46.0	12.0	100	358
3	568.349	32.0	18.4	3.7	24.4	29.7	46.0	16.3	100	214
4	675.048	37.1	18.9	4.1	24.1	36.0	46.0	10.0	100	95
5	757.498	29.9	19.7	4.4	23.8	30.2	46.0	15.8	100	231
6	761.750	27.9	19.7	4.4	23.8	28.2	46.0	17.8	200	1
----- Vertical ------										
7	42.125	31.0	14.0	1.0	22.6	23.4	40.0	16.6	400	139
8	245.513	40.5	12.8	2.3	23.5	32.1	46.0	13.9	100	358
9	749.780	32.6	19.6	4.4	23.9	32.7	46.0	13.3	100	1

Copyright © 2011, DIGITAL EMC CO., LTD.

< USB MODE_1 GHz ~ 6 GHz_PEAK >

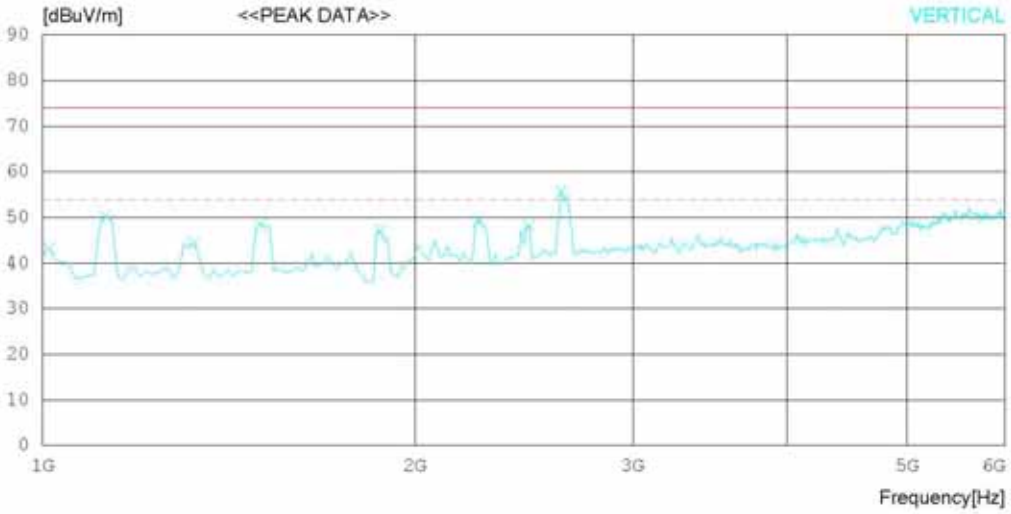
RADIATED EMISSION

Date : 2011-12-12

Model Name	: 42LM6200-UE	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)



Copyright Ⓒ 2011, DIGITAL EMC CO., LTD.

RADIATED EMISSION

Date : 2011-12-12

Model Name	:	42LM6200-UE	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	1137.500	62.1	24.0	5.1	41.8	49.4	74.0	24.6	100	1
2	1312.500	61.1	24.6	5.5	41.9	49.3	74.0	24.7	100	215
3	1500.000	61.3	25.1	6.0	41.9	50.5	74.0	23.5	100	233
4	1712.500	56.6	25.2	6.4	41.9	46.3	74.0	27.7	100	1
5	1762.500	57.3	25.2	6.5	42.0	47.0	74.0	27	100	136
6	1900.000	58.5	25.2	6.8	42.0	48.5	74.0	25.5	100	1
7	2262.500	60.7	26.3	7.4	42.0	52.4	74.0	21.6	100	1
8	2437.500	55.6	27.1	7.7	42.0	48.4	74.0	25.6	100	196
9	2650.000	54.6	27.8	8.1	42.1	48.4	74.0	25.6	100	1
10	3400.000	52.9	29.1	9.3	42.0	49.3	74.0	24.7	100	1
----- Vertical ------										
11	1012.500	56.5	23.7	4.8	41.8	43.2	74.0	30.8	100	358
12	1125.000	62.9	24.0	5.1	41.8	50.2	74.0	23.8	100	358
13	1325.000	56.1	24.6	5.6	41.9	44.4	74.0	29.6	100	214
14	1500.000	59.3	25.1	6.0	41.9	48.5	74.0	25.5	100	358
15	1875.000	57.1	25.2	6.7	42.0	47.0	74.0	27	100	169
16	2250.000	57.5	26.3	7.4	42.0	49.2	74.0	24.8	100	358
17	2475.000	55.3	27.2	7.7	42.0	48.2	74.0	25.8	100	358
18	2625.000	62.1	27.7	8.0	42.1	55.7	74.0	18.3	100	20

Copyright © 2011, DIGITAL EMC CO., LTD.

< USB MODE_1 GHz ~ 6 GHz_AV >

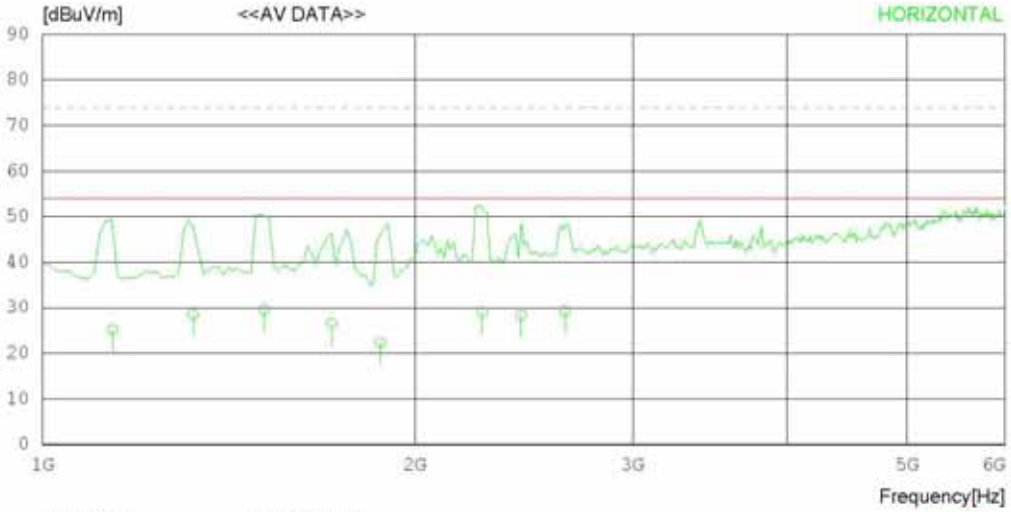
RADIATED EMISSION

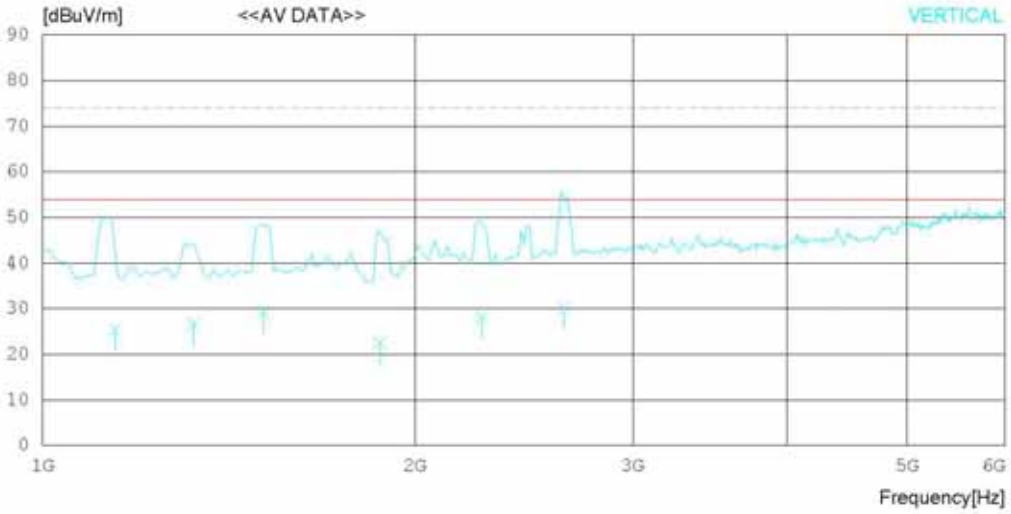
Date : 2011-12-12

Model Name	: 42LM6200-UE	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)





Copyright Ⓒ 2011, DIGITAL EMC CO., LTD.

RADIATED EMISSION

Date : 2011-12-12

Model Name	:	42LM6200-UE	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	1139.000	37.9	24.0	5.1	41.8	25.2	54.0	28.8	100	128
2	1323.250	40.2	24.6	5.6	41.9	28.5	54.0	25.5	100	156
3	1510.763	40.3	25.1	6.0	41.9	29.5	54.0	24.5	100	233
4	1712.500	36.9	25.2	6.4	41.9	26.6	54.0	27.4	100	1
5	1875.359	32.5	25.2	6.7	42.0	22.4	54.0	31.6	100	1
6	2267.250	37.3	26.3	7.4	42.0	29.0	54.0	25.0	100	1
7	2437.500	35.6	27.1	7.7	42.0	28.4	54.0	25.6	100	196
8	2645.000	35.6	27.8	8.0	42.1	29.3	54.0	24.7	100	1
----- Vertical ------										
9	1145.250	37.9	24.1	5.1	41.8	25.3	54.0	28.7	100	358
10	1325.000	38.3	24.6	5.6	41.9	26.6	54.0	27.4	100	214
11	1507.763	40.1	25.1	6.0	41.9	29.3	54.0	24.7	100	358
12	1875.000	32.6	25.2	6.7	42.0	22.5	54.0	31.5	100	169
13	2267.250	36.3	26.3	7.4	42.0	28.0	54.0	26.0	100	358
14	2639.500	36.7	27.7	8.0	42.1	30.3	54.0	23.7	100	20

Copyright Ⓒ 2011, DIGITAL EMC CO., LTD.

Appendix 1

List of Test and Measurement Instruments

Copyright Ⓒ 2011, DIGITAL EMC CO., LTD.

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	-	-

Copyright © 2011, DIGITAL EMC CO., LTD.