

# EMC TEST REPORT

Test item : LED TV Monitor  
Model No. : 55LN5700-UA  
Order No. : DEMC1310-03311  
Date of receipt : 2013-10-29  
Test duration : 2013-10-31 ~ 2013-11-01  
Use of report : FCC CoC Marking  
Date of Issue : 2013-11-01

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 : (21 ~ 24) °C,  
Humidity : (37 ~ 46) % 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:

  
\_\_\_\_\_  
Manager  
HyunSuk Ko

  
\_\_\_\_\_  
Manager  
MyungJin Song

**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
	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.	55LN5700-UA
EUT Type	LED TV Monitor
Serial No	NONE
FCC ID	BEJ55LN5700UA
Type of Sample Tested	Pre-Production
High Frequency	795 MHz
Rating	AC 120-240 V~ 50/60 Hz, 1.6 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)
720 x 480	31.469	59.94
	31.5	60
1280 x 720	44.96	59.94
	45	60
1920 x 1080	33.72	59.94
	33.75	60
	26.97	23.97
	27	24
	33.716	29.976
	33.75	30.00
	67.43	59.94
67.5	60	

## 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	10-31	21	37
Radiated Disturbance	10-31	24	46
	11-01	24	46

### 4.3 Test result Summary

#### (1) Conducted Emission (HDMI MODE)

Frequency [MHz]	Phase	Result [dB $\mu$ V]	Detector	Limit [dB $\mu$ V]	Margin [dB]
0.16062	LI	56.5	Quasi-Peak	65.4	8.9

#### (2) Radiated Emission (USB MODE)

Frequency [MHz]	Pol.	Result [dB( $\mu$ V/m)]	Detector	Limit [dB( $\mu$ V/m)]	Margin [dB]
742.887	H	42.9	Quasi-Peak	46.0	3.1

## 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 : EUT displayed 'H' pattern on LCD display,  
 1920 x 1080 Resolution (Worst Case)
- USB MODE : EUT displayed pictures which is in USB.

### 5.3 Support Equipment Used

Unit	Model No.	Serial No.	Manufacturer	CABLE				Backshell	FCC ID
				Connect type	Length (m)	ferrite core	shield		
PC	VOSTRO460	7L7JXBX	DELL	POWER	1.8	Not use	Non-shield	Plastic	DOC
				USB	1.7	Not use	Non-shield		
				USB	1.6	Not use	Non-shield		
				USB	2.0	Not use	Non-shield		
				HDMI	1.9	Not use	Shield		
KEYBOARD	SKG-3000UB	TAK601241E	MONITREY INTERNATIONAL CORP.	USB	1.7	Not use	Non-shield	Plastic	DOC
MOUSE	1484	352700021372	MICROSOFT CORPORATION	USB	1.6	Not use	Non-shield	Plastic	DOC
PRINT	SPR-770	N/A	BICSOLON	POWER	1.8	Not use	Non-shield	Plastic	DOC
				USB	2.0	Not use	Non-shield		
CD/DVD PLAYER	DVP-NS92V	2000407	SONY EMCS.	POWER AV	1.8 1.5	Not use Not use	Non-shield Non-shield	Plastic	VER
USB MEMORY	Cruzer Blade 4GB	N/A	SANDISK	USB	-	-	-	Plastic	DOC
Headset	COV903	N/A	COSY	STEREO	2.0	Not use	Non-shield	Plastic	DOC

## 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 2<sup>nd</sup> 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 >

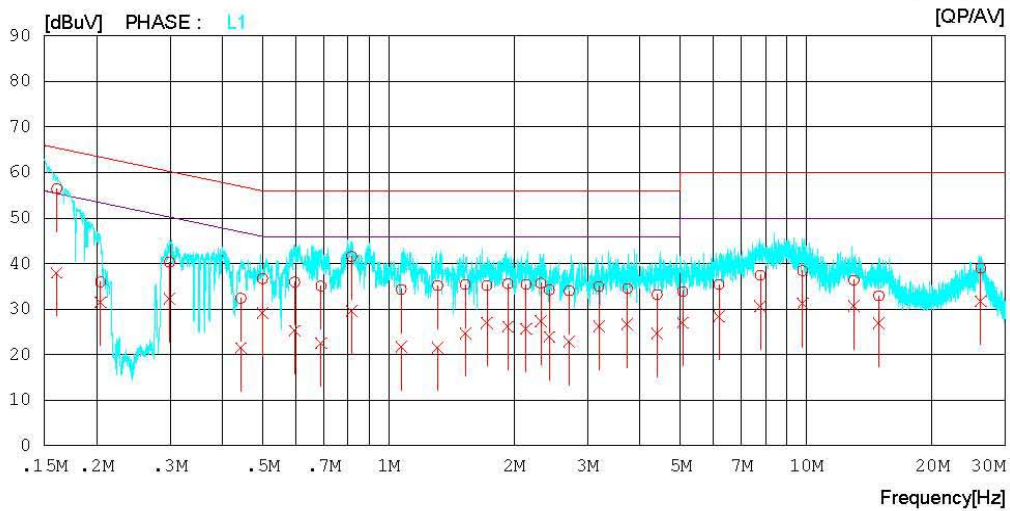
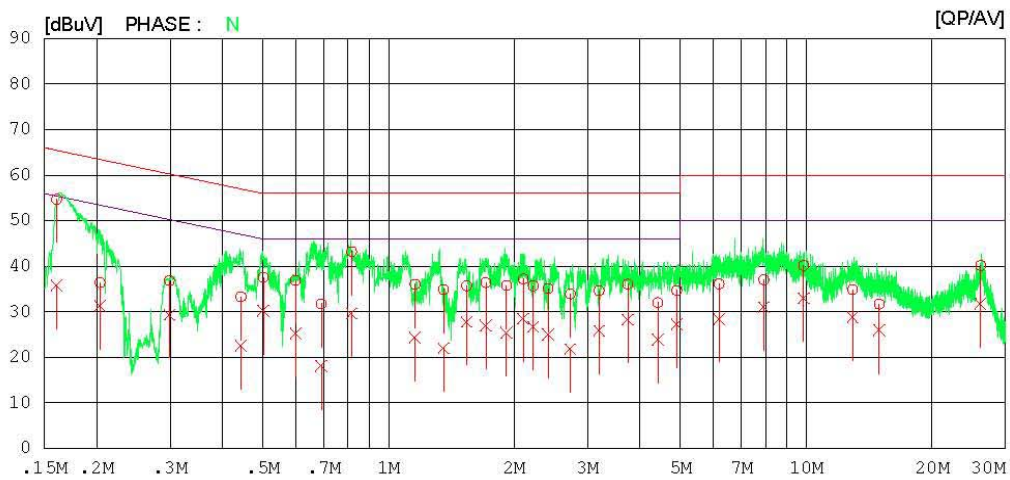


Results of Conducted Emission

Digital EMC  
Date : 2013-10-31

Model No.	: 55LN5700-UA	Reference No.	:
Type	:	Power Supply	: 120 V 60 Hz
Serial No.	:	Temp/Humi.	: 21 °C 37 % R.H.
Test Condition	: HDMI	Operator	:

Memo :  
LIMIT : CISPR22\_B QP  
CISPR22\_B AV



## Results of Conducted Emission

Digital EMC  
 Date : 2013-10-31

Model No. : 55LN5700-UA	Reference No. :
Type :	Power Supply : 120 V 60 Hz
Serial No. :	Temp/Humi. : 21 °C 37 % R.H.
Test Condition : HDMI	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	0.16050	54.6	35.7	0.1	54.7	35.8	65.4	55.4	10.7	19.6	N
2	0.20394	36.3	31.2	0.1	36.4	31.3	63.4	53.4	27.0	22.1	N
3	0.29890	36.7	29.2	0.1	36.8	29.3	60.3	50.3	23.5	21.0	N
4	0.44350	33.2	22.4	0.1	33.3	22.5	57.0	47.0	23.7	24.5	N
5	0.50174	37.4	30.1	0.1	37.5	30.2	56.0	46.0	18.5	15.8	N
6	0.59906	36.8	25.2	0.1	36.9	25.3	56.0	46.0	19.1	20.7	N
7	0.69039	31.7	18.0	0.1	31.8	18.1	56.0	46.0	24.2	27.9	N
8	0.81616	43.0	29.4	0.2	43.2	29.6	56.0	46.0	12.8	16.4	N
9	1.15780	35.8	24.1	0.2	36.0	24.3	56.0	46.0	20.0	21.7	N
10	1.35560	34.7	21.8	0.2	34.9	22.0	56.0	46.0	21.1	24.0	N
11	1.53920	35.4	27.5	0.3	35.7	27.8	56.0	46.0	20.3	18.2	N
12	1.71120	36.1	26.7	0.3	36.4	27.0	56.0	46.0	19.6	19.0	N
13	1.91700	35.4	25.1	0.3	35.7	25.4	56.0	46.0	20.3	20.6	N
14	2.10200	36.9	28.2	0.3	37.2	28.5	56.0	46.0	18.8	17.5	N
15	2.22080	35.4	26.4	0.3	35.7	26.7	56.0	46.0	20.3	19.3	N
16	2.41120	34.7	24.7	0.3	35.0	25.0	56.0	46.0	21.0	21.0	N
17	2.72480	33.5	21.4	0.4	33.9	21.8	56.0	46.0	22.1	24.2	N
18	3.19280	34.2	25.4	0.4	34.6	25.8	56.0	46.0	21.4	20.2	N
19	3.74080	35.7	27.8	0.4	36.1	28.2	56.0	46.0	19.9	17.8	N
20	4.41360	31.6	23.5	0.4	32.0	23.9	56.0	46.0	24.0	22.1	N
21	4.90100	34.2	26.7	0.5	34.7	27.2	56.0	46.0	21.3	18.8	N
22	6.19180	35.6	27.9	0.5	36.1	28.4	60.0	50.0	23.9	21.6	N
23	7.92260	36.6	30.6	0.4	37.0	31.0	60.0	50.0	23.0	19.0	N
24	9.85160	39.7	32.5	0.5	40.2	33.0	60.0	50.0	19.8	17.0	N
25	12.92600	34.3	28.2	0.5	34.8	28.7	60.0	50.0	25.2	21.3	N
26	14.95960	31.0	25.3	0.6	31.6	25.9	60.0	50.0	28.4	24.1	N
27	26.14660	39.4	31.1	0.7	40.1	31.8	60.0	50.0	19.9	18.2	N
28	0.16062	56.4	37.9	0.1	56.5	38.0	65.4	55.4	8.9	17.4	L1
29	0.20440	35.9	31.4	0.1	36.0	31.5	63.4	53.4	27.4	21.9	L1
30	0.29908	40.3	32.2	0.1	40.4	32.3	60.3	50.3	19.9	18.0	L1
31	0.44338	32.3	21.4	0.1	32.4	21.5	57.0	47.0	24.6	25.5	L1
32	0.49971	36.6	29.0	0.1	36.7	29.1	56.0	46.0	19.3	16.9	L1
33	0.59667	35.9	25.2	0.1	36.0	25.3	56.0	46.0	20.0	20.7	L1
34	0.68916	35.0	22.5	0.1	35.1	22.6	56.0	46.0	20.9	23.4	L1
35	0.81622	41.4	29.5	0.2	41.6	29.7	56.0	46.0	14.4	16.3	L1
36	1.07300	34.1	21.6	0.2	34.3	21.8	56.0	46.0	21.7	24.2	L1
37	1.31160	35.0	21.4	0.2	35.2	21.6	56.0	46.0	20.8	24.4	L1
38	1.52840	35.1	24.4	0.3	35.4	24.7	56.0	46.0	20.6	21.3	L1
39	1.72080	34.9	26.7	0.3	35.2	27.0	56.0	46.0	20.8	19.0	L1
40	1.93180	35.3	25.9	0.3	35.6	26.2	56.0	46.0	20.4	19.8	L1
41	2.13480	35.1	25.4	0.3	35.4	25.7	56.0	46.0	20.6	20.3	L1
42	2.31640	35.4	27.1	0.3	35.7	27.4	56.0	46.0	20.3	18.6	L1
43	2.42760	33.9	23.6	0.3	34.2	23.9	56.0	46.0	21.8	22.1	L1
44	2.70960	33.7	22.6	0.3	34.0	22.9	56.0	46.0	22.0	23.1	L1
45	3.19040	34.6	25.9	0.4	35.0	26.3	56.0	46.0	21.0	19.7	L1
46	3.73280	34.1	26.3	0.4	34.5	26.7	56.0	46.0	21.5	19.3	L1
47	4.39640	32.8	24.3	0.4	33.2	24.7	56.0	46.0	22.8	21.3	L1
48	5.06900	33.4	26.6	0.5	33.9	27.1	60.0	50.0	26.1	22.9	L1
49	6.18460	34.9	28.0	0.5	35.4	28.5	60.0	50.0	24.6	21.5	L1
50	7.76100	37.1	30.3	0.4	37.5	30.7	60.0	50.0	22.5	19.3	L1
51	9.80960	37.9	30.7	0.5	38.4	31.2	60.0	50.0	21.6	18.8	L1
52	13.01280	35.9	30.2	0.5	36.4	30.7	60.0	50.0	23.6	19.3	L1
53	14.93320	32.3	26.3	0.6	32.9	26.9	60.0	50.0	27.1	23.1	L1
54	26.15580	38.3	31.0	0.7	39.0	31.7	60.0	50.0	21.0	18.3	L1

< USB MODE >



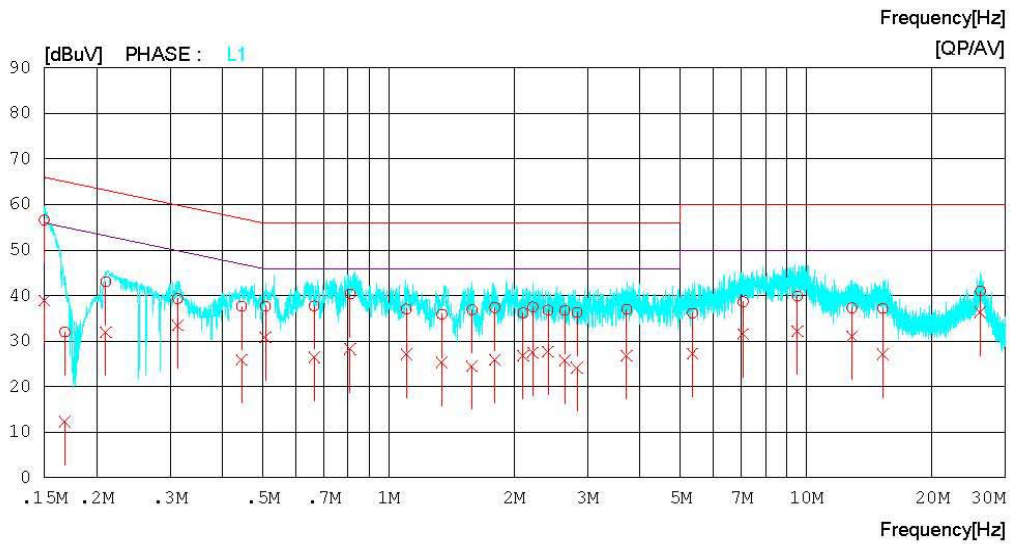
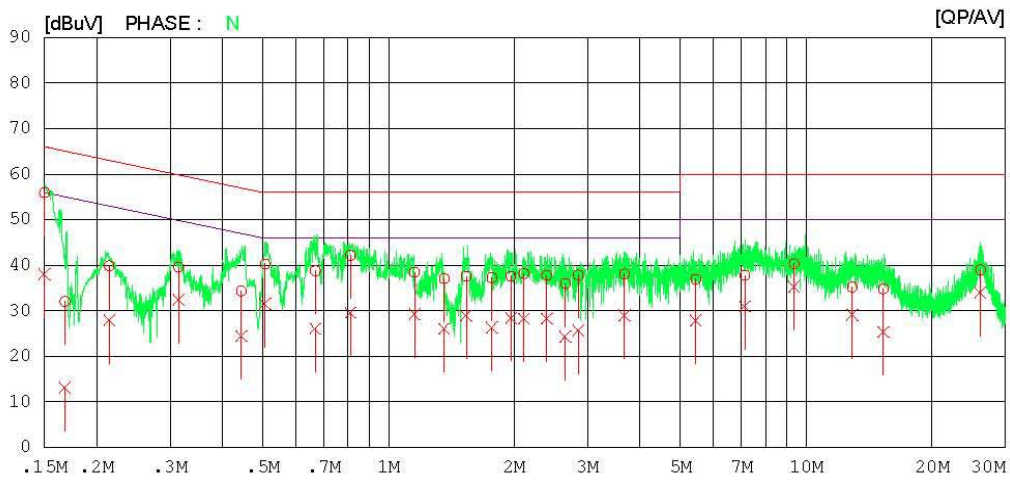
Results of Conducted Emission

Digital EMC  
Date : 2013-10-31

Model No.	: 55LN5700-UA	Reference No.	:
Type	:	Power Supply	: 120 V 60 Hz
Serial No.	:	Temp/Humi.	: 21 °C 37 % R.H.
Test Condition	: USB	Operator	:

Memo :

LIMIT : CISPR22\_B QP  
CISPR22\_B AV



## Results of Conducted Emission

Digital EMC  
 Date : 2013-10-31

Model No. : 55LN5700-UA	Reference No. :
Type :	Power Supply : 120 V 60 Hz
Serial No. :	Temp/Humi. : 21 °C 37 % R.H.
Test Condition : USB	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	0.15013	55.8	37.9	0.1	55.9	38.0	66.0	56.0	10.1	18.0	N
2	0.16802	32.0	13.0	0.1	32.1	13.1	65.1	55.1	33.0	42.0	N
3	0.21451	39.8	27.8	0.1	39.9	27.9	63.0	53.0	23.1	25.1	N
4	0.31445	39.5	32.3	0.1	39.6	32.4	59.9	49.9	20.3	17.5	N
5	0.44402	34.2	24.4	0.1	34.3	24.5	57.0	47.0	22.7	22.5	N
6	0.50655	40.2	31.4	0.1	40.3	31.5	56.0	46.0	15.7	14.5	N
7	0.66850	38.7	25.9	0.1	38.8	26.0	56.0	46.0	17.2	20.0	N
8	0.81139	42.0	29.4	0.2	42.2	29.6	56.0	46.0	13.8	16.4	N
9	1.15460	38.2	29.0	0.2	38.4	29.2	56.0	46.0	17.6	16.8	N
10	1.35940	36.9	25.9	0.2	37.1	26.1	56.0	46.0	18.9	19.9	N
11	1.53540	37.2	28.6	0.3	37.5	28.9	56.0	46.0	18.5	17.1	N
12	1.76780	37.0	26.0	0.3	37.3	26.3	56.0	46.0	18.7	19.7	N
13	1.96560	37.3	28.1	0.3	37.6	28.4	56.0	46.0	18.4	17.6	N
14	2.10920	37.8	28.0	0.3	38.1	28.3	56.0	46.0	17.9	17.7	N
15	2.39160	37.5	28.0	0.3	37.8	28.3	56.0	46.0	18.2	17.7	N
16	2.65160	35.7	24.0	0.3	36.0	24.3	56.0	46.0	20.0	21.7	N
17	2.84960	37.4	25.3	0.4	37.8	25.7	56.0	46.0	18.2	20.3	N
18	3.67120	37.7	28.6	0.4	38.1	29.0	56.0	46.0	17.9	17.0	N
19	5.44240	36.5	27.4	0.5	37.0	27.9	60.0	50.0	23.0	22.1	N
20	7.13580	37.2	30.4	0.5	37.7	30.9	60.0	50.0	22.3	19.1	N
21	9.35900	39.9	34.9	0.4	40.3	35.3	60.0	50.0	19.7	14.7	N
22	12.89800	34.7	28.6	0.5	35.2	29.1	60.0	50.0	24.8	20.9	N
23	15.29620	34.2	24.8	0.6	34.8	25.4	60.0	50.0	25.2	24.6	N
24	26.12660	38.3	33.3	0.7	39.0	34.0	60.0	50.0	21.0	16.0	N
25	0.15000	56.5	38.8	0.1	56.6	38.9	66.0	56.0	9.4	17.1	L1
26	0.16808	31.9	12.3	0.1	32.0	12.4	65.1	55.1	33.1	42.7	L1
27	0.21050	43.0	31.8	0.1	43.1	31.9	63.2	53.2	20.1	21.3	L1
28	0.31304	39.3	33.4	0.1	39.4	33.5	59.9	49.9	20.5	16.4	L1
29	0.44507	37.5	25.8	0.1	37.6	25.9	57.0	47.0	19.4	21.1	L1
30	0.50724	37.6	30.8	0.1	37.7	30.9	56.0	46.0	18.3	15.1	L1
31	0.66397	37.7	26.3	0.1	37.8	26.4	56.0	46.0	18.2	19.6	L1
32	0.80964	40.1	28.1	0.2	40.3	28.3	56.0	46.0	15.7	17.7	L1
33	1.10380	36.9	27.0	0.2	37.1	27.2	56.0	46.0	18.9	18.8	L1
34	1.34260	35.7	25.2	0.2	35.9	25.4	56.0	46.0	20.1	20.6	L1
35	1.58460	36.6	24.2	0.3	36.9	24.5	56.0	46.0	19.1	21.5	L1
36	1.79780	37.1	25.6	0.3	37.4	25.9	56.0	46.0	18.6	20.1	L1
37	2.10040	35.9	26.5	0.3	36.2	26.8	56.0	46.0	19.8	19.2	L1
38	2.21640	37.2	27.2	0.3	37.5	27.5	56.0	46.0	18.5	18.5	L1
39	2.41040	36.5	27.4	0.3	36.8	27.7	56.0	46.0	19.2	18.3	L1
40	2.64360	36.4	25.5	0.3	36.7	25.8	56.0	46.0	19.3	20.2	L1
41	2.82840	36.0	23.8	0.4	36.4	24.2	56.0	46.0	19.6	21.8	L1
42	3.71480	36.6	26.4	0.4	37.0	26.8	56.0	46.0	19.0	19.2	L1
43	5.34360	35.7	26.8	0.5	36.2	27.3	60.0	50.0	23.8	22.7	L1
44	7.06500	38.1	31.1	0.5	38.6	31.6	60.0	50.0	21.4	18.4	L1
45	9.53340	39.4	31.7	0.5	39.9	32.2	60.0	50.0	20.1	17.8	L1
46	12.87240	36.8	30.6	0.5	37.3	31.1	60.0	50.0	22.7	18.9	L1
47	15.26180	36.6	26.5	0.6	37.2	27.1	60.0	50.0	22.8	22.9	L1
48	26.13140	40.3	35.6	0.7	41.0	36.3	60.0	50.0	19.0	13.7	L1

## 6.2 Radiated Disturbance

### 6.2.1 Measurement Procedure

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

If the EUT is tabletop equipment, it was placed on a wooden table with a height of 0.8 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 <sup>th</sup> 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 (dB $\mu$ V/m)	Quasi-peak (dB $\mu$ V/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 (dB $\mu$ V/m)	Quasi-peak (dB $\mu$ V/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 (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Peak (dB $\mu$ V/m)	Average (dB $\mu$ V/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 >

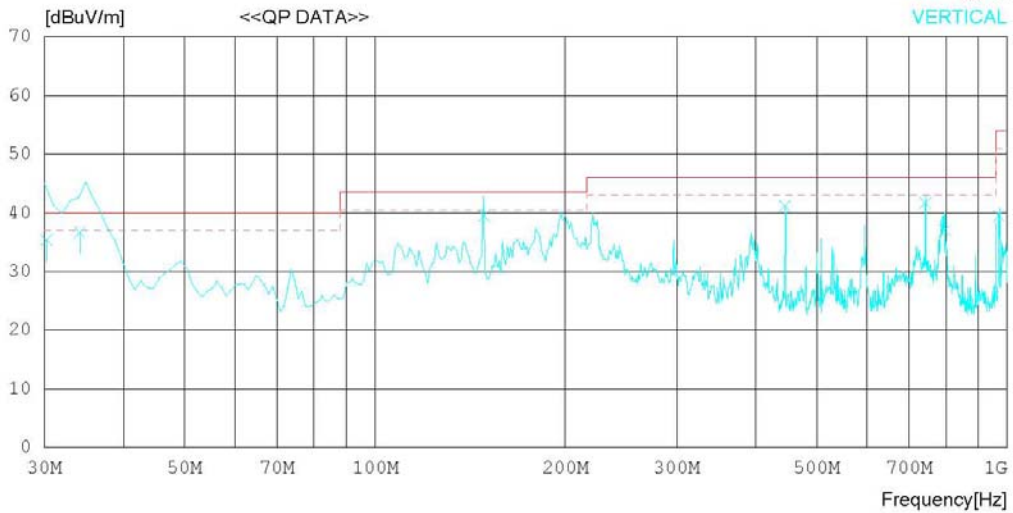
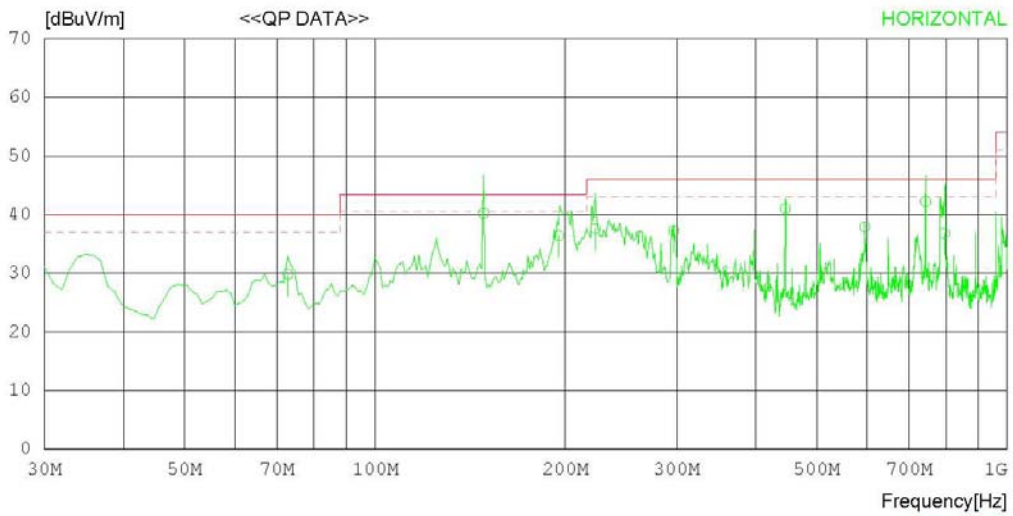
RADIATED EMISSION

Date : 2013-10-31

Model Name	: 55LN5700-UA	Reference No.	:
Model No.	:	Power Supply	: 120 V 60 Hz
Serial No.	:	Temp/Humi	: 24 °C 46 % R.H.
Test Condition	: HDMI	Operator	:

Memo :

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



## RADIATED EMISSION

Date : 2013-10-31

Model Name : 55LN5700-UA	Reference No. :
Model No. :	Power Supply : 120 V 60 Hz
Serial No. :	Temp/Humi : 24 °C 46 % 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	72.760	45.3	10.4	0.8	26.7	29.8	40.0	10.2	300	320
2	148.516	51.8	13.8	1.2	26.6	40.2	43.5	3.3	200	360
3	195.268	50.9	10.7	1.4	26.6	36.4	43.5	7.1	200	210
4	223.144	51.7	10.9	1.5	26.5	37.6	46.0	8.4	100	220
5	296.992	48.6	13.1	1.8	26.3	37.2	46.0	8.8	100	180
6	445.622	48.8	16.3	2.2	26.3	41.0	46.0	5.0	200	260
7	594.984	42.5	19.0	2.7	26.3	37.9	46.0	8.1	400	360
8	742.663	44.5	21.1	3.0	26.4	42.2	46.0	3.8	300	210
9	796.854	38.4	21.7	3.2	26.5	36.8	46.0	9.2	200	180
----- Vertical -----										
10	30.240	49.2	12.2	0.5	26.5	35.4	40.0	4.6	100	130
11	34.105	50.4	12.3	0.6	26.6	36.7	40.0	3.3	100	180
12	148.520	51.1	13.8	1.2	26.6	39.5	43.5	4.0	100	360
13	445.520	49.0	16.3	2.2	26.3	41.2	46.0	4.8	100	230
14	742.532	44.0	21.1	3.0	26.4	41.7	46.0	4.3	100	180
15	796.998	38.6	21.7	3.2	26.5	37.0	46.0	9.0	100	360
16	970.156	39.7	23.4	3.4	27.0	39.5	54.0	14.5	100	290

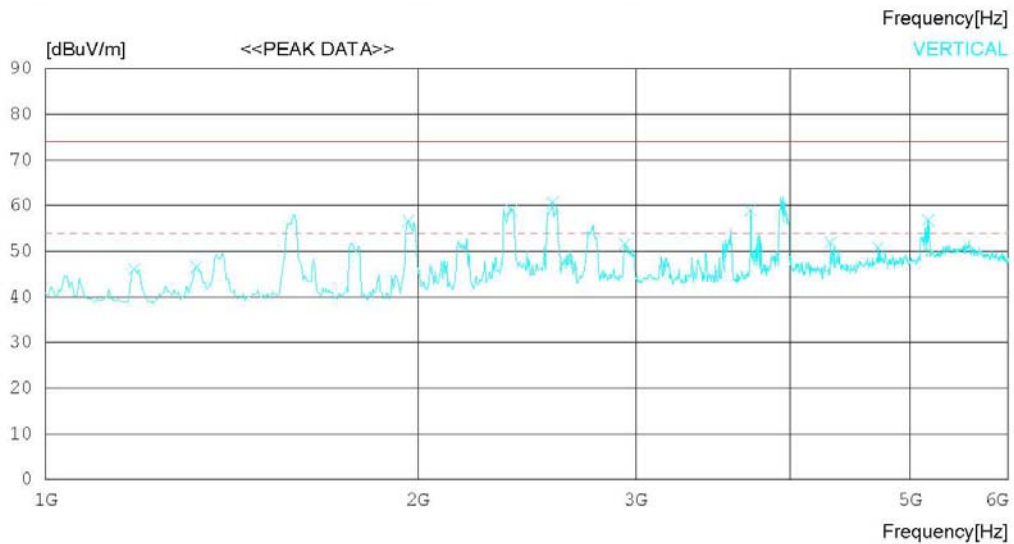
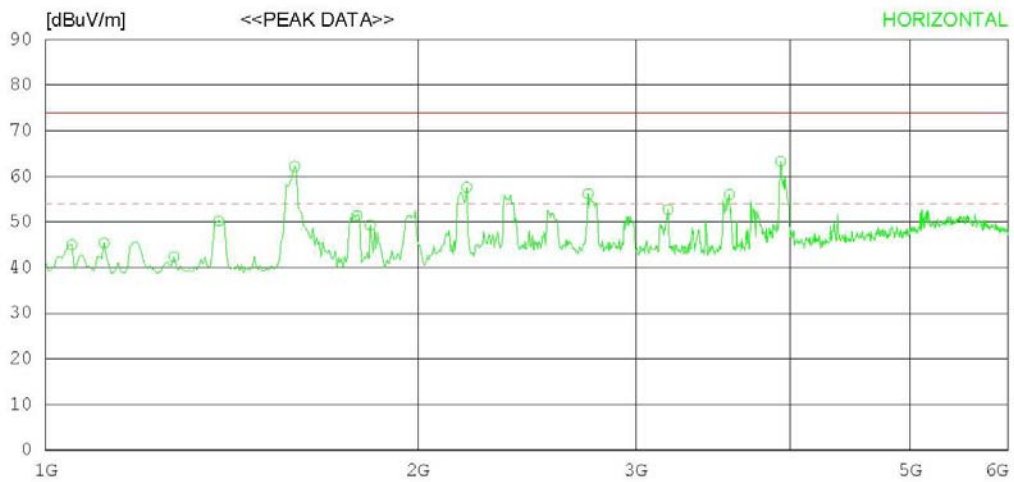
< HDMI MODE \_ (1 ~ 6) GHz \_ Peak >

**RADIATED EMISSION**

Date : 2013-11-01

Model Name	: 55LN5700-UA	Reference No.	:
Model No.	:	Power Supply	: 120 V 60 Hz
Serial No.	:	Temp/Humi	: 24 °C 46 % 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)



## RADIATED EMISSION

Date : 2013-11-01

Model Name : 55LN5700-UA	Reference No. :
Model No. :	Power Supply : 120 V 60 Hz
Serial No. :	Temp/Humi : 24 °C 46 % 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	1050.000	58.8	23.9	3.4	41.1	45.0	74.0	29	100	241
2	1115.000	58.8	24.0	3.5	40.9	45.4	74.0	28.6	100	1
3	1270.000	55.0	24.3	3.7	40.6	42.4	74.0	31.6	100	1
4	1380.000	62.1	24.5	3.9	40.3	50.2	74.0	23.8	100	1
5	1590.000	73.4	24.6	4.2	40.0	62.2	74.0	11.8	100	1
6	1785.000	62.1	24.6	4.4	39.7	51.4	74.0	22.6	100	1
7	1830.000	59.9	24.6	4.5	39.7	49.3	74.0	24.7	100	212
8	2190.000	66.4	25.7	4.9	39.4	57.6	74.0	16.4	100	1
9	2745.000	61.8	28.2	5.5	39.3	56.2	74.0	17.8	100	132
10	3185.000	57.2	28.9	5.9	39.2	52.8	74.0	21.2	100	181
11	3570.000	59.5	29.1	6.3	38.9	56.0	74.0	18	100	245
12	3930.000	65.1	30.0	6.6	38.4	63.3	74.0	10.7	100	216
----- Vertical -----										
13	1180.000	59.1	24.2	3.6	40.8	46.1	74.0	27.9	100	198
14	1325.000	58.9	24.4	3.8	40.5	46.6	74.0	27.4	100	358
15	1965.000	66.9	24.6	4.7	39.5	56.7	74.0	17.3	100	358
16	2380.000	66.3	26.8	5.1	39.3	58.9	74.0	15.1	100	199
17	2570.000	66.9	27.7	5.3	39.3	60.6	74.0	13.4	100	221
18	2940.000	56.5	28.8	5.6	39.3	51.6	74.0	22.4	100	206
19	3715.000	62.0	29.4	6.4	38.7	59.1	74.0	14.9	100	358
20	4310.000	52.8	30.6	7.0	38.5	51.9	74.0	22.1	100	202
21	4710.000	50.5	31.6	7.5	38.7	50.9	74.0	23.1	100	174
22	5170.000	54.2	33.4	7.9	38.6	56.9	74.0	17.1	100	358

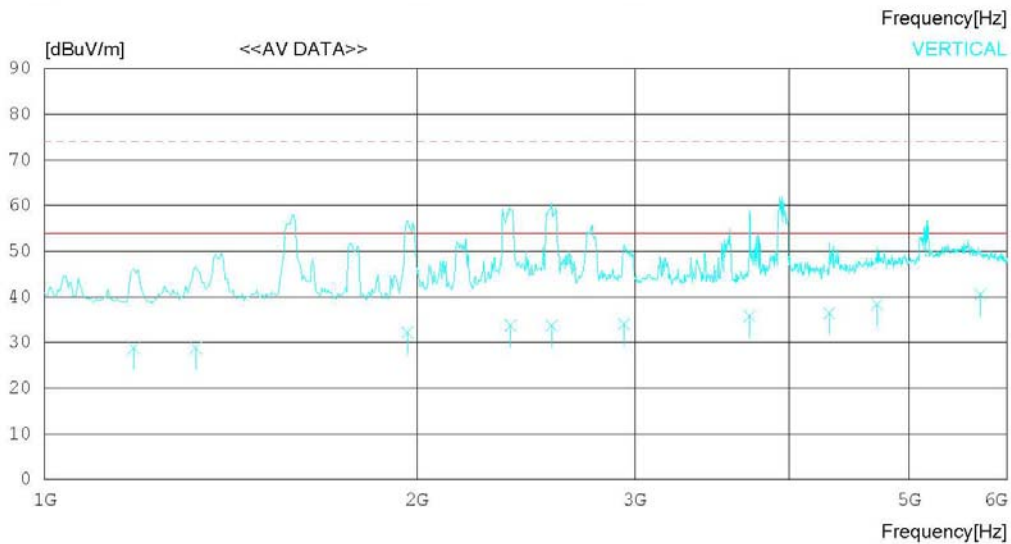
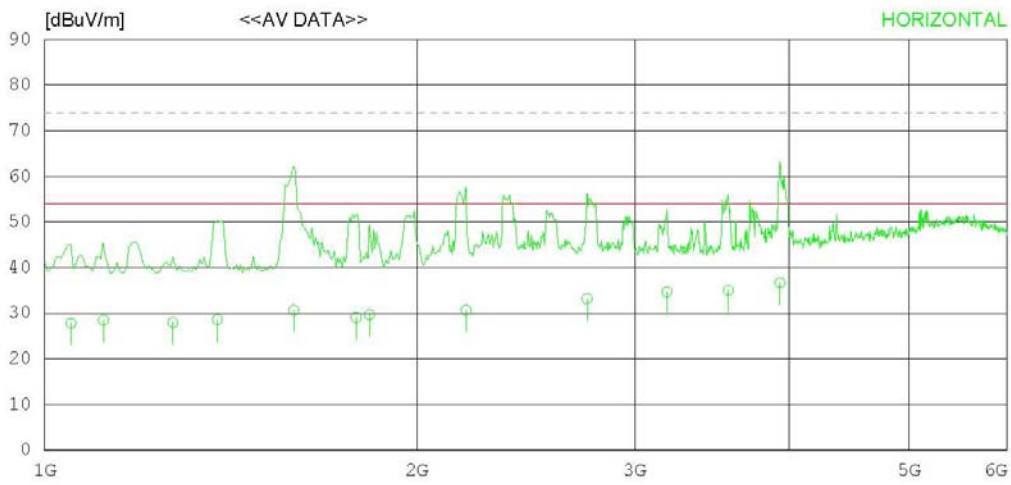
< HDMI MODE \_ (1 ~ 6) GHz \_ Average >

**RADIATED EMISSION**

Date : 2013-11-01

Model Name	: 55LN5700-UA	Reference No.	:
Model No.	:	Power Supply	: 120 V 60 Hz
Serial No.	:	Temp/Humi	: 24 °C 46 % 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)



## RADIATED EMISSION

Date : 2013-11-01

Model Name	: 55LN5700-UA	Reference No.	:
Model No.	:	Power Supply	: 120 V 60 Hz
Serial No.	:	Temp/Humi	: 24 °C 46 % 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	1050.010	41.6	23.9	3.4	41.1	27.8	54.0	26.2	100	220
2	1115.708	41.8	24.1	3.5	40.9	28.5	54.0	25.5	100	100
3	1270.060	40.6	24.3	3.7	40.6	28.0	54.0	26.0	100	360
4	1379.230	40.5	24.5	3.9	40.3	28.6	54.0	25.4	100	180
5	1590.448	41.9	24.6	4.2	40.0	30.7	54.0	23.3	100	220
6	1785.945	39.8	24.6	4.4	39.7	29.1	54.0	24.9	100	130
7	1830.840	40.3	24.6	4.5	39.7	29.7	54.0	24.3	100	280
8	2190.593	39.5	25.7	4.9	39.4	30.7	54.0	23.3	100	160
9	2745.071	38.8	28.2	5.5	39.3	33.2	54.0	20.8	100	160
10	3184.120	39.1	28.9	5.9	39.2	34.7	54.0	19.3	100	120
11	3570.483	38.5	29.1	6.3	38.9	35.0	54.0	19.0	100	260
12	3931.210	38.5	30.0	6.6	38.4	36.7	54.0	17.3	100	360
----- Vertical -----										
13	1180.702	41.8	24.2	3.6	40.8	28.8	54.0	25.2	100	210
14	1325.115	41.2	24.4	3.8	40.5	28.9	54.0	25.1	100	320
15	1965.240	42.4	24.6	4.7	39.5	32.2	54.0	21.8	100	330
16	2380.301	41.2	26.8	5.1	39.3	33.8	54.0	20.2	100	80
17	2570.286	40.0	27.7	5.3	39.3	33.7	54.0	20.3	100	200
18	2940.621	39.0	28.8	5.6	39.3	34.1	54.0	19.9	100	310
19	3715.384	38.7	29.4	6.4	38.7	35.8	54.0	18.2	100	270
20	4310.830	37.4	30.6	7.0	38.5	36.5	54.0	17.5	100	270
21	4710.860	38.0	31.6	7.5	38.7	38.4	54.0	15.6	100	160
22	5710.536	37.3	33.7	8.1	38.5	40.6	54.0	13.4	100	330

< USB MODE\_30 MHz ~ 1 GHz >

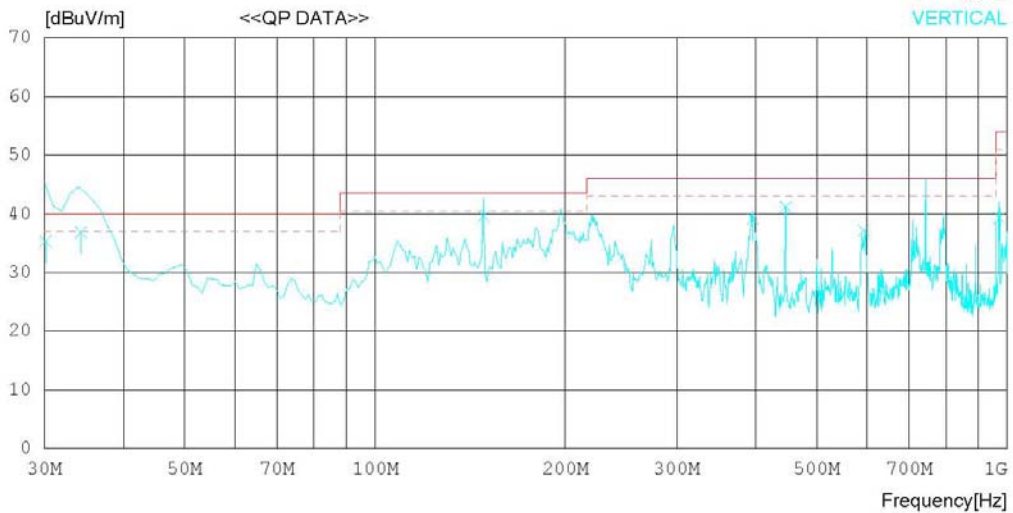
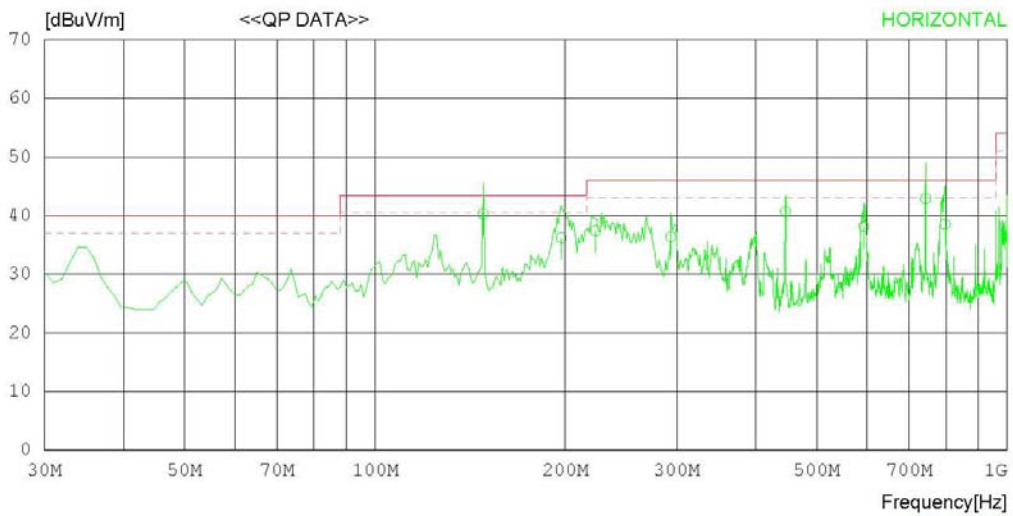
**RADIATED EMISSION**

Date : 2013-10-31

Model Name	: 55LN5700-UA	Reference No.	:
Model No.	:	Power Supply	: 120 V 60 Hz
Serial No.	:	Temp/Humi	: 24 °C 46 % R.H.
Test Condition	: USB	Operator	:

Memo :

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



## RADIATED EMISSION

Date : 2013-10-31

Model Name : 55LN5700-UA	Reference No. :
Model No. :	Power Supply : 120 V 60 Hz
Serial No. :	Temp/Humi : 24 °C 46 % 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	148.394	51.9	13.8	1.2	26.6	40.3	43.5	3.2	200	350
2	196.998	50.8	10.6	1.4	26.6	36.2	43.5	7.3	200	220
3	223.214	51.5	10.9	1.5	26.5	37.4	46.0	8.6	100	210
4	293.751	47.9	13.1	1.7	26.3	36.4	46.0	9.6	100	180
5	446.088	48.5	16.3	2.2	26.3	40.7	46.0	5.3	200	140
6	593.187	42.7	19.0	2.7	26.3	38.1	46.0	7.9	100	180
7	742.887	45.2	21.1	3.0	26.4	42.9	46.0	3.1	100	230
8	797.646	40.1	21.7	3.2	26.5	38.5	46.0	7.5	200	180
----- Vertical -----										
9	30.114	49.1	12.2	0.5	26.5	35.3	40.0	4.7	100	360
10	34.278	50.5	12.3	0.6	26.6	36.8	40.0	3.2	100	360
11	148.574	51.2	13.8	1.2	26.6	39.6	43.5	3.9	100	350
12	395.897	48.2	15.2	2.0	26.3	39.1	46.0	6.9	100	210
13	446.214	49.0	16.3	2.2	26.3	41.2	46.0	4.8	100	360
14	593.842	41.8	19.0	2.7	26.3	37.2	46.0	8.8	100	250
15	971.571	39.5	23.4	3.4	27.0	39.3	54.0	14.7	100	360

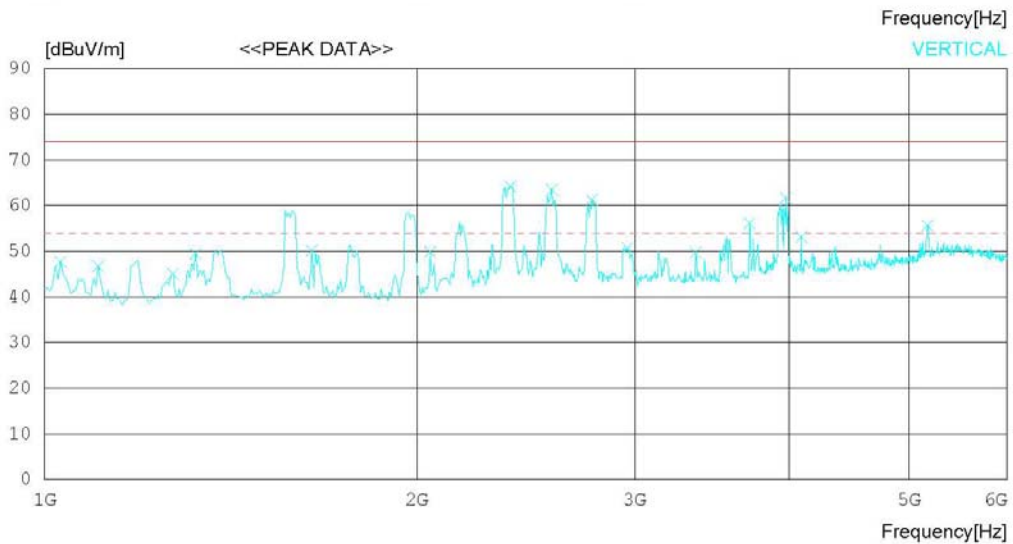
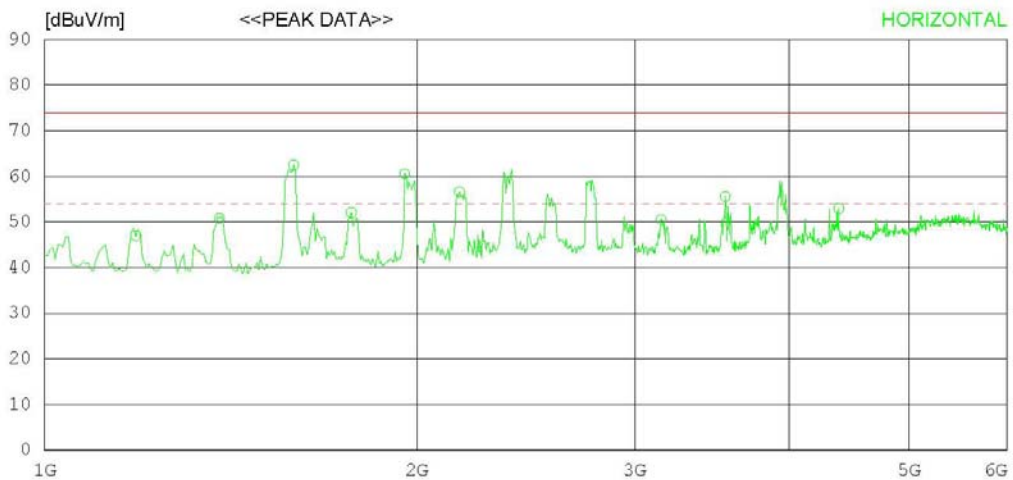
< USB MODE \_ (1 ~ 6) GHz \_ Peak >

## RADIATED EMISSION

Date : 2013-10-31

Model Name	: 55LN5700-UA	Reference No.	:
Model No.	:	Power Supply	: 120 V 60 Hz
Serial No.	:	Temp/Humi	: 24 °C 46 % 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)



## RADIATED EMISSION

Date : 2013-10-31

Model Name : 55LN5700-UA	Reference No. :
Model No. :	Power Supply : 120 V 60 Hz
Serial No. :	Temp/Humi : 24 °C 46 % 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	1185.000	60.0	24.2	3.6	40.8	47.0	74.0	27	100	1
2	1385.000	62.7	24.5	3.9	40.3	50.8	74.0	23.2	100	1
3	1590.000	73.7	24.6	4.2	40.0	62.5	74.0	11.5	100	239
4	1770.000	62.9	24.6	4.4	39.8	52.1	74.0	21.9	100	1
5	1955.000	70.8	24.6	4.7	39.5	60.6	74.0	13.4	100	210
6	2165.000	65.6	25.5	4.9	39.4	56.6	74.0	17.4	100	1
7	3150.000	55.0	29.0	5.8	39.2	50.6	74.0	23.4	100	166
8	3550.000	59.3	29.0	6.2	38.9	55.6	74.0	18.4	100	1
9	4385.000	53.8	30.7	7.0	38.5	53.0	74.0	21	100	135
----- Vertical -----										
10	1030.000	61.5	23.9	3.4	41.1	47.7	74.0	26.3	100	358
11	1105.000	60.2	24.0	3.5	40.9	46.8	74.0	27.2	100	358
12	1270.000	57.7	24.3	3.7	40.6	45.1	74.0	28.9	100	233
13	1325.000	61.8	24.4	3.8	40.5	49.5	74.0	24.5	100	358
14	1645.000	61.2	24.6	4.3	39.9	50.2	74.0	23.8	100	233
15	2050.000	59.8	24.8	4.8	39.5	49.9	74.0	24.1	100	358
16	2380.000	71.6	26.8	5.1	39.3	64.2	74.0	9.8	100	184
17	2570.000	69.8	27.7	5.3	39.3	63.5	74.0	10.5	100	358
18	2770.000	66.8	28.3	5.5	39.3	61.3	74.0	12.7	100	241
19	2960.000	55.5	28.9	5.6	39.3	50.7	74.0	23.3	100	358
20	3360.000	53.9	28.9	6.1	39.1	49.8	74.0	24.2	100	235
21	3715.000	59.0	29.4	6.4	38.7	56.1	74.0	17.9	100	358
22	3975.000	63.3	30.1	6.7	38.4	61.7	74.0	12.3	100	358
23	4090.000	54.4	30.3	6.8	38.4	53.1	74.0	20.9	100	223
24	5175.000	53.0	33.4	7.9	38.6	55.7	74.0	18.3	100	217

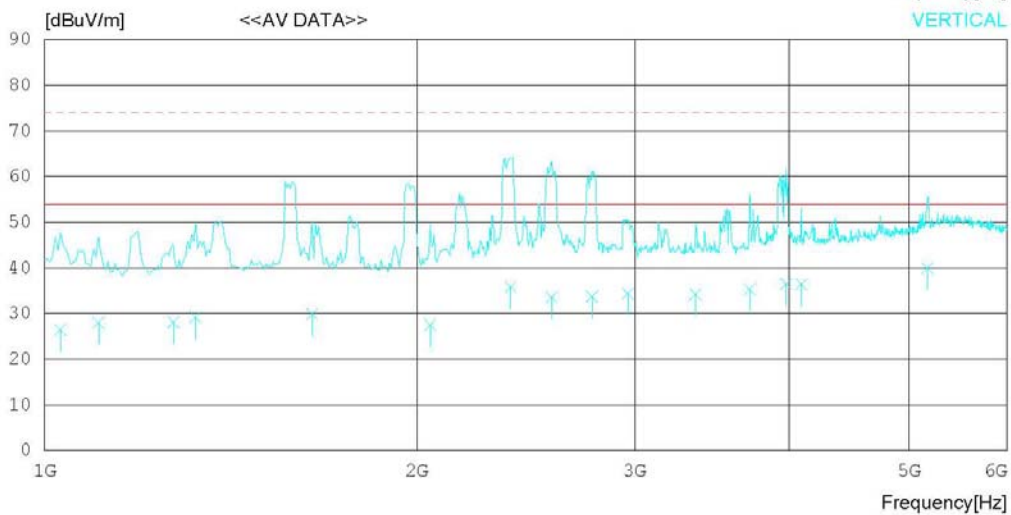
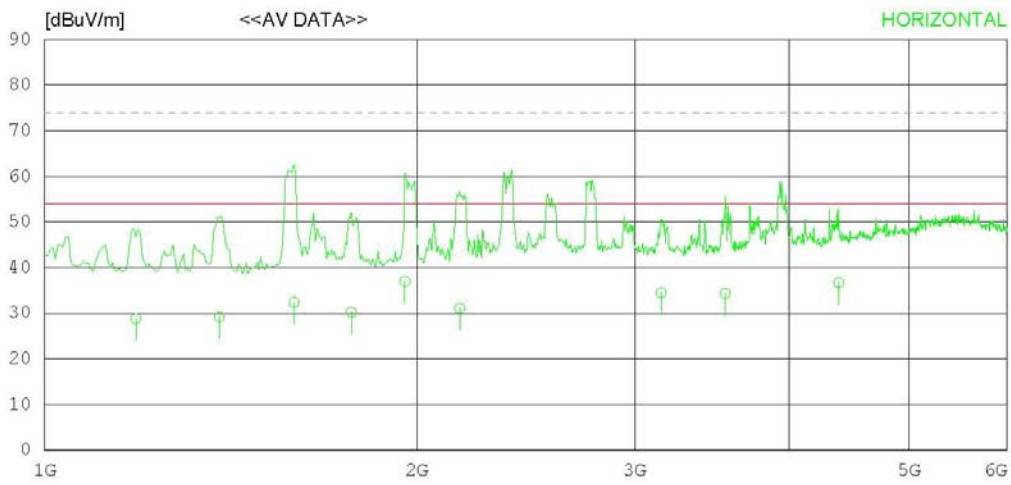
< USB MODE \_ (1 ~ 6) GHz \_ Average >

**RADIATED EMISSION**

Date : 2013-10-31

Model Name	: 55LN5700-UA	Reference No.	:
Model No.	:	Power Supply	: 120 V 60 Hz
Serial No.	:	Temp/Humi	: 24 °C 46 % 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)



## RADIATED EMISSION

Date : 2013-10-31

Model Name : 55LN5700-UA	Reference No. :
Model No. :	Power Supply : 120 V 60 Hz
Serial No. :	Temp/Humi : 24 °C 46 % 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	1185.466	41.8	24.2	3.6	40.8	28.8	54.0	25.2	100	180
2	1385.262	41.1	24.5	3.9	40.3	29.2	54.0	24.8	100	100
3	1590.864	43.6	24.6	4.2	40.0	32.4	54.0	21.6	100	60
4	1770.164	41.0	24.6	4.4	39.8	30.2	54.0	23.8	100	360
5	1955.898	47.2	24.6	4.7	39.5	37.0	54.0	17.0	100	150
6	2165.457	40.1	25.5	4.9	39.4	31.1	54.0	22.9	100	70
7	3150.414	39.0	28.9	5.8	39.2	34.5	54.0	19.5	100	100
8	3550.167	38.1	29.0	6.2	38.9	34.4	54.0	19.6	100	190
9	4385.370	37.5	30.7	7.0	38.5	36.7	54.0	17.3	100	240
----- Vertical -----										
10	1030.105	40.3	23.9	3.4	41.1	26.5	54.0	27.5	100	310
11	1105.950	41.4	24.0	3.5	40.9	28.0	54.0	26.0	100	320
12	1271.169	40.7	24.3	3.7	40.6	28.1	54.0	25.9	100	210
13	1324.051	41.5	24.4	3.8	40.5	29.2	54.0	24.8	100	180
14	1645.758	40.9	24.6	4.3	39.9	29.9	54.0	24.1	100	130
15	2050.135	37.4	24.8	4.8	39.5	27.5	54.0	26.5	100	330
16	2381.873	43.2	26.8	5.1	39.3	35.8	54.0	18.2	100	120
17	2570.597	39.9	27.7	5.3	39.3	33.6	54.0	20.4	100	320
18	2770.926	39.3	28.3	5.5	39.3	33.8	54.0	20.2	100	200
19	2960.383	39.2	28.9	5.6	39.3	34.4	54.0	19.6	100	360
20	3360.975	38.3	28.9	6.1	39.1	34.2	54.0	19.8	100	120
21	3715.950	38.3	29.4	6.4	38.7	35.4	54.0	18.6	100	330
22	3975.536	38.1	30.1	6.7	38.4	36.5	54.0	17.5	100	150
23	4090.647	37.7	30.3	6.8	38.4	36.4	54.0	17.6	100	120
24	5175.409	37.3	33.4	7.9	38.6	40.0	54.0	14.0	100	120

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## Appendix 1

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### 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
<input type="checkbox"/> SPECTRUM ANALYZER	8591E	H/P	3649A05889	2013.02.28	2014.02.28
<input type="checkbox"/> RFI/FIELD INTENSITY METER	KNM-2402	KYORITSU	4N-170-3	2013.06.28	2014.06.28
<input type="checkbox"/> LISN	KNW-407	KYORITSU	8-317-8	2013.01.08	2014.01.08
<input type="checkbox"/> LISN	PMM L2-16B	NARDA S.T.S. / PMM	000WX20305	2013.06.27	2014.06.27
<input type="checkbox"/> 50 OHM TERMINATOR	CT-01	TME	N/A	2013.01.08	2014.01.08
<input checked="" type="checkbox"/> EMI TEST RECEIVER	ESCI	ROHDE & SCHWARZ	100364	2013.02.27	2014.02.27
<input checked="" type="checkbox"/> LISN	ESH2-Z5	ROHDE & SCHWARZ	828739/006	2013.09.12	2014.09.12
<input checked="" type="checkbox"/> LISN	LISN1600	TTI	197204	2013.06.28	2014.06.28
<input checked="" type="checkbox"/> 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
<input checked="" type="checkbox"/> EMI TEST RECEIVER	ESU	ROHDE & SCHWARZ	100014	2013.01.08	2014.01.08
<input checked="" type="checkbox"/> BILOG ANTENNA	VULB9160	SCHWARZBECK	3339	2013.02.05	2015.02.05
<input checked="" type="checkbox"/> HORN ANTENNA	BBHA9120A	SCHWARZBECK	322	2012.05.15	2014.05.15
<input checked="" type="checkbox"/> AMPLIFIER	MLA-100K01-B01-26	TSJ	1252741	2013.02.28	2014.02.28
<input checked="" type="checkbox"/> AMPLIFIER	8449B	AGILENT	3008A01590	2013.02.27	2014.02.27
<input type="checkbox"/> SPECTRUM ANALYZER	E4411B	AGILENT	US41062735	2013.06.27	2014.06.27
<input type="checkbox"/> AMPLIFIER	8447D	AGILENT	2443A03690	2013.06.28	2014.06.28
<input type="checkbox"/> EMI TEST RECEIVER	ESCI	ROHDE & SCHWARZ	100364	2013.02.27	2014.02.27
<input type="checkbox"/> BICONICAL ANT.	VHA 9103	SCHWARZBECK	91032789	2012.04.10	2014.04.10
<input type="checkbox"/> LOG-PERIODIC ANT.	UHALP 9108A	SCHWARZBECK	590	2012.04.10	2014.04.10
<input type="checkbox"/> BICONICAL ANT.	VHA 9103	SCHWARZBECK	91031946	2012.03.12	2014.03.12
<input type="checkbox"/> LOG-PERIODIC ANT.	UHALP 9108-A1	SCHWARZBECK	1098	2012.03.12	2014.03.12
<input type="checkbox"/> AMPLIFIER	MLA-100K01-B01-26	TSJ	1252741	2013.02.28	2014.02.28

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**Appendix 2**

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**Report Revision History**

Revision Date	Description	Revised By	Revision Reviewed By
None	Original	N/A	N/A