Application for FCC Certificate
On Behalf of
Hisense Electric Co., Ltd.

LED LCD TV

Model No.	Brand
LC-50N8002U, LC-50P8000U LC-50P8000U+, LC-50P80+0U LC-50P80+0U1, LC-50P80+0U2 LC-50P8+0U, LC-50P8+0U1 LC-50P8+0U2	Sharp

FCC ID : W9HLCDF0116

Prepared For : Hisense Electric Co., Ltd.
No.218 Qianwangang Road, Economy & Technology Development Zone, Qingdao, China

Prepared By : Audix Technology (Shanghai) Co., Ltd.
3F and 4F, 34Bldg 680 Guiping Rd,
Caohejing Hi-Tech Park,
Shanghai 200233, China

Tel: +86-21-64955500
Fax: +86-21-64955491

Report No. : ACI-F17113
Date of Test : Mar 02-10, 2017
Date of Report : Mar 21, 2017

TABLE OF CONTENTS

Page

TEST REPORT FOR FCC CERTIFICATE

Applicant : Hisense Electric Co., Ltd.

Manufacturer : Hisense Electric Co., Ltd.

Factory #1 : Hisense Electric Co., Ltd.

Factory #2 : Tatung Mexico S.A. de C.V.

Factory #3 : HISENSE ELECTRONICA MEXICO, S.A. DE C.V.

EUT Description : LED LCD TV

Model No.	Brand	Power Supply
LC-50N8002U, LC-50P8000U LC-50P8000U+, LC-50P80+0U LC-50P80+0U1, LC-50P80+0U2 LC-50P8+0U, LC-50P8+0U1 LC-50P8+0U2	Sharp	120V/60Hz

Test Procedure Used:

FCC RULES AND REGULATIONS PART 15 SUBPART B CLASS B AND ANSI C63.4-2014

The device described above is tested by Audix Technology (Shanghai) Co., Ltd. To determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart B (Class B) limits both radiated and conducted emissions.

The test results are contained in this test report and Audix Technology (Shanghai) Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. This report shows that the EUT (M/N: Refer to Sec2.1) which was tested in 3m anechoic chamber Mar 02-10, 2017 is technically compliance with the FCC official limits also.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Audix Technology (Shanghai) Co., Ltd.

This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

The test results for EUT's TV functions are contained in No.F17114, a Verification report.

Date of Test : Mar 02-10, 2017 Date of Report : Mar 21, 2017

Producer : TINA LIANG / Assistant

Review : BYRON WU / Deputy Assistant Manager

For and on behalf of
Audix Technology (Shanghai) Co., Ltd.

Signatory :
Authorized Signature(s) BYRON KWO / Assistant General Manager

1 SUMMARY OF STANDARDS AND RESULTS

1.1 Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below:

Description of Test Item	Standard	Limits	Results
EMISSION			
Conducted Disturbance at the Mains Terminal	FCC RULES AND REGULATIONS PART 15 SUBPART B AND ANSI C63.4-2014	15.107(a) Class B	Pass
Radiated Disturbance	FCC RULES AND REGULATIONS PART 15 SUBPART B AND ANSI C63.4-2014	15.109(a) Class B	Pass

2 GENERAL INFORMATION

2.1 Description of Equipment Under Test

Description : LED LCD TV

Type of EUT : ☑ Production ☐ Pre-product ☐ Pro-type

Model No.	Brand
LC-50N8002U, LC-50P8000U LC-50P8000U+, LC-50P80+0U LC-50P80+0U1, LC-50P80+0U2 LC-50P8+0U, LC-50P8+0U1 LC-50P8+0U2	Sharp

Note#1 : The above models are all the same except for model number. LC-50N8002U model was tested and recorded in the report.

Note#2 : "+"represents any of the Arabic numeral.

Applicant : Hisense Electric Co., Ltd.
No.218 Qianwangang Road, Economy & Technology Development Zone, Qingdao, China

Manufacturer : Same as Applicant

Factory #1 : Same as Applicant

Factory #2 : Tatung Mexico S.A. de C.V.
Miguel Catalán 420, Parque Industrial Rio Bravo, Cd. Juarez, Chih., CP 32557

Factory #3 : HISENSE ELECTRONICA MEXICO,S.A. DE C.V.
Blvd. Sharp #3510 Parque Industrial
Rosarito, C.P. 22710 Playas de Rosarito, B.C.

WIFI Modular : FCC ID: PPQ-WCBN4511R12

LCD Panel : Manufacturer : Hisense
M/N :HD500M5U01-LEB3

Tuner : Manufacturer : SILICON LABS
M/N : Si2151-A10

Max Resolution : 3840*2160@60Hz

HDMI Cable*4 (Lab provide) : Shielded, Detachable, 1.80m

Power Cord : Unshielded, Detachable, 1.80m, 2C

USB Cable*3 (Lab provide) : Shielded, Detachable, 1.00m

LAN Cable : Unshielded, Detachable, 1.50m

Remark:
The EUT is a LED LCD TV which input/output ports as follows:
Side Port:
(1) One ANT Port
: Connected with ATSC SG/TV SG
(2) One USB#1 Port
: Connected with Hard-Disk#1
(3) One USB#2Port
: Connected with Hard-Disk#2
(4) One Service Port
: Do not open to customer
(5) One AUDIO OUT Port
: Connected with Earphone#1
(6) One HDMI1/MHL Port
: Connected with Mobile Phone
(7) One HDMI2 Port
: Connected with PC
(8) One USB#3Port
: Connected with Hard-Disk#3
Back Port:
(9) One COMPONENT IN/AV IN Port
: Connected with DVD PLAYER
(10) One LAN Port
: Connected with PC
(11) One DIGITAL AUDIO OUT Port
: Connected with Audio Converter to Earphone#2
(12) One HDMI3 Port
: Connected with DVD Player
(13) One HDMI4 Port
: Connected with PC

2.2 Peripherals

2.2.1 PC

Manufacturer : HP
Model Number : Pro3340
Serial Number : 6CR2512VFD
Power Cord : Unshielded, Detachable, 1.8m
Certificate : CE/EMC, FCC DoC, VCCI, C-Tick

2.2.2 Modem

Manufacturer : TP-LINK
Model Number : TM-EC5658V
Serial Number : 07123301053
Data Cable : Unshielded, Detachable, 1.5m
Certificate : CE/EMC, FCC DoC, VCCI, UL, CCC

2.2.3 Keyboard

Manufacturer	:	Microsoft
Model Number	:	RT2300
Serial Number	:	7668200662248
Data Cable	:	Shielded, Detachable, 1.5m
Certificate	:	CE/EMC, FCC DoC, VCCI, MIC, C-Tick, BSMI

2.2.4 Mouse

Manufacturer	:	Microsoft
Model Number	:	RT2300
Serial Number	:	6965712071551
Data Cable	:	Shielded, Detachable, 1.5m.
Certificate	:	CE/EMC, FCC DoC, VCCI, MIC, C-Tick, BSMI

2.2.5 Earphone *2

Manufacturer	:	EDIFIER
Model Number	:	H210

2.2.6 DVD PLAYER

Manufacturer	:	PHILIPS
Model Number	:	DVP3986K/93
Serial Number	:	KX1A0902120108
Certificate	:	CCC

2.2.7 Hard Disk #1

Manufacturer	:	Tetasys
Model Number	:	F12
Serial Number	:	A010022-486006
Data Cable	:	Shielded, Detachable, 1.8m.
Certificate	:	CE, FCC DoC

2.2.8 Hard Disk #2

Manufacturer	:	Tetasys
Model Number	:	F12
Serial Number	:	A010022-4860010X
Data Cable	:	Shielded, Detachable, 1.8m.
Certificate	:	CE, FCC DoC

2.2.9 Hard Disk #3

Manufacturer	:	Tetasys
Model Number	:	F12
Serial Number	:	A010022-4A60007
Data Cable	:	Shielded, Detachable, 1.8m.
Certificate	:	CE, FCC DoC

2.2.10 ATSC Signal Generator

Manufacturer	:	SENCORE
Model Number	:	ATSC997
Serial Number	:	6790071

2.2.11 TV Signal Generator

Manufacturer : FLUKE
Model Number : 54200M01
Serial Number : 814008

2.2.12 Mobile Phone

Manufacturer : SAMSUNG
Model Number : GT-I9100G
Serial Number : 69351520011519

2.3 Description of Test Facility

Site Description (No.3 3m Chamber)	:	Sept. 17, 1998 file on Jan.15, 2015 Renewed Federal Communications Commission FCC Engineering Laboratory 7435 Oakland Mills Road Columbia, MD 21046, USA
Name of Firm	:	Audix Technology (Shanghai) Co., Ltd.
Site Location	:	3F 34Bldg 680 Guiping Rd, Caohejing Hi-Tech Park, Shanghai 200233, China
FCC registration Number	:	91789
NVLAP Lab Code	:	200371-0

2.4 Measurement Uncertainty

Conducted Emission Expanded Uncertainty : U = 3.4dB
Radiated Emission Expanded Uncertainty (30-200MHz):
U = 4.6dB(Horizontal)
U = 4.3dB (Vertical)
Radiated Emission Expanded Uncertainty (200M-1GHz):
U = 4.5dB (Horizontal)
U = 5.4dB (Vertical)
Radiated Emission Expanded Uncertainty (1GHz-6GHz):
U = 5.1dB

3 CONDUCTED EMISSION TEST

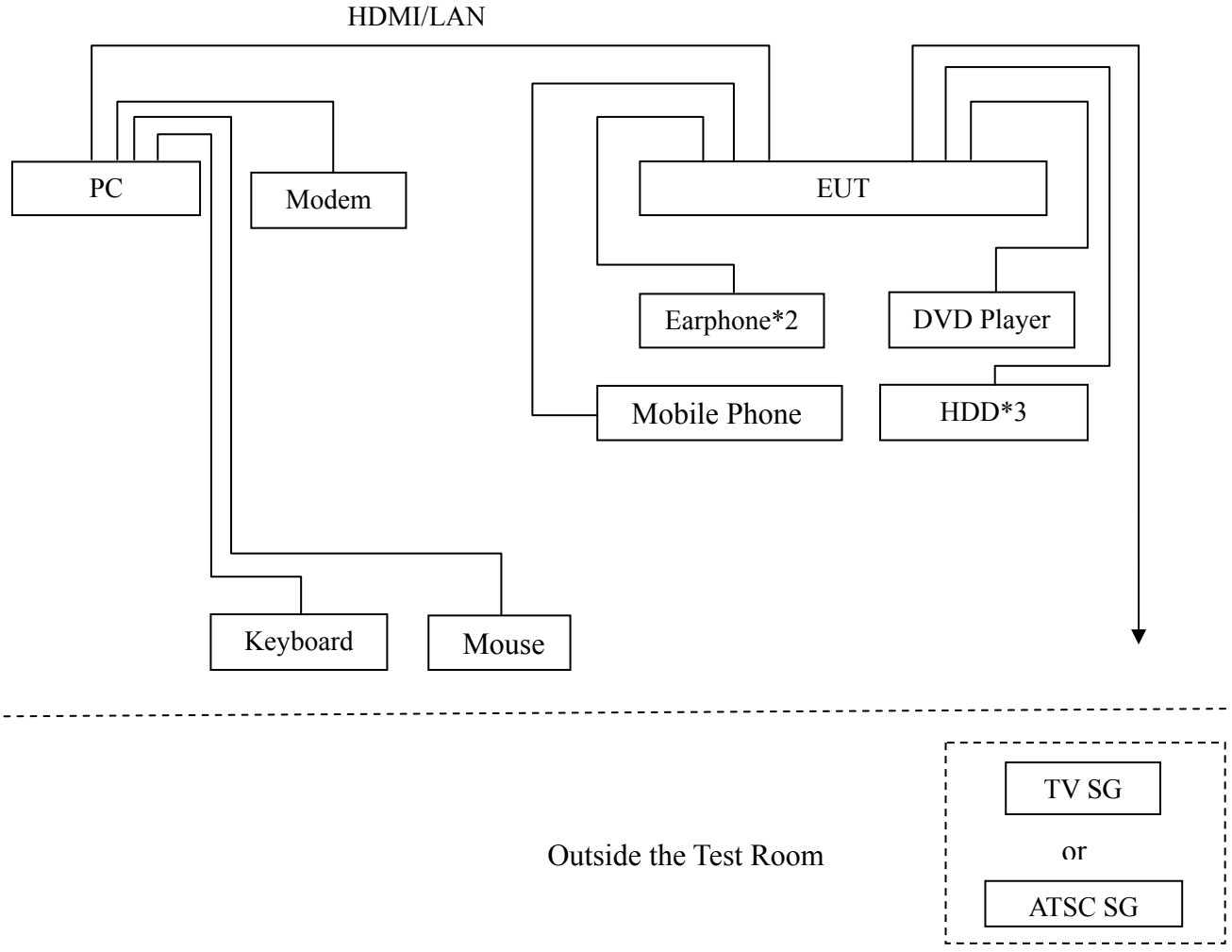
3.1 Test Equipment

The following test equipments are used during the conducted emission test in a shielded room:

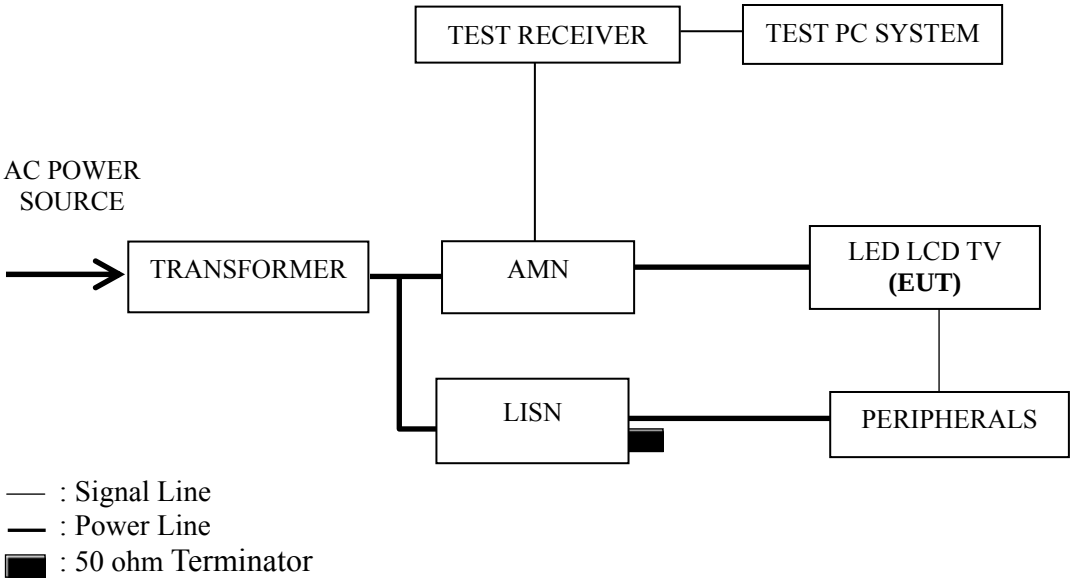
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCI	101302	Apr 27, 2016	Apr 26, 2017
2.	Artificial Mains Network (AMN)	R&S	ENV4200	100125	Jun 25, 2016	Jun 24, 2017
3.	Line Impedance Stabilization Network (LISN)	Kyoritsu	KNW-407	8-1280-4	Mar 20, 2016	Mar 19, 2017
4.	50Ω Terminator	Anritsu	BNC	001	Mar 20, 2016	Mar 19, 2017
5.	Software	Audix	e3	6.111206	--	--

3.2 Block Diagram of Test Setup

3.2.1 EUT & Peripherals



3.2.2 Conducted Disturbance Test Setup



3.3 Conducted Emission Limit [FCC Part 15 Subpart B 15.107(a)]

Frequency Range (MHz)	Limits dB (μV)	
	Quasi-peak	Average
0.15 ~ 0.5	66~56	56~46
0.5 ~ 5	56	46
5 ~ 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~0.50 MHz		

3.4 Test Configuration

The EUT (listed in Sec.2.1) and the peripherals (listed in Sec 2.2) were installed as shown on Sec.3.2 to meet FCC requirement and operating in a manner that tends to maximize its emission level in a normal application.

3.5 Operating Condition of EUT

3.5.1 Setup the EUT and peripherals as shown in Sec. 3.2.

3.5.2 Turn on the power of all equipments and the EUT.

3.5.3 Set the contrast & brightness of EUT to maximum.

3.5.4 PC system ran the self-test program "EMC Test" by windows XP and sent "H" characters to EUT through graphic card, the EUT's screen displayed and filled with "H" pattern by its resolution (Via HDMI Input).

3.5.5 PC system sent the 1kHz audio signal to EUT through audio port, the EUT speak out 1kHz audio signal.

3.5.6 In USB Play mode, set the EUT play digital media from H-Disk.

3.5.7 In LAN Play mode, set the EUT play digital media through LAN port.

3.5.8 In MHL mode, set the EUT play digital media from mobile phone.

3.5.9 The other peripherals devices were driven and operated during the test.

3.5.10 The test modes are as follows:

Test Mode
HDMI1 3840*2160@60Hz & 1kHz Playing
HDMI2 3840*2160@60Hz & 1kHz Playing
HDMI3 3840*2160@30Hz & 1kHz Playing
HDMI4 3840*2160@30Hz & 1kHz Playing
HDMI1 1920*1080@60Hz & 1kHz Playing
HDMI1 1280*1024@60Hz & 1kHz playing
HDMI1 640*480@60Hz & 1kHz playing
MHL
HDMI1080P
USB Play
LAN Play
Wifi

3.6 Test Procedures

The EUT and peripherals were connected to the power mains through an Artificial Mains Network (AMN). This provided a 50 ohm coupling impedance for the measuring equipment.

Both sides of AC line (Line & Neutral) were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables were changed or manipulated according to ANSI C63.4:2014 during conducted emission test.

The bandwidth of R&S Test Receiver ESCI was set at 9 kHz.

The frequency range from 150 kHz to 30 MHz was checked.

The test modes were done on conducted disturbance test and all the test results are listed in Sec. 3.7.

3.7 Test Results

< PASS >

The frequency and amplitude of the highest conducted emission relative to the limit is reported. All emissions not reported below are too low against the prescribed limits.

Test Mode	Data Page
HDMI1 3840*2160@60Hz & 1kHz Playing	P13
HDMI2 3840*2160@60Hz & 1kHz Playing	P14
HDMI3 3840*2160@30Hz & 1kHz Playing	P15
HDMI4 3840*2160@60Hz & 1kHz Playing	P16
HDMI1 1920*1080@60Hz & 1kHz Playing	P17
HDMI1 1280*1024@60Hz & 1kHz playing	P18
HDMI1 640*480@60Hz & 1kHz playing	P19
MHL	P20
HDMI1080P	P21
USB Play	P22
LAN Play	P23
Wifi	P24

NOTE 1 – Factor = Cable Loss + AMN Factor.
NOTE 2 – Emission Level = Meter Reading + Factor.
NOTE 3 – "QP" means "Quasi-Peak" values, "AV" means "Average" values.
NOTE 4 – The worst case is for MHL test mode. The worst emission is detected at 2.474MHz (Quasi-Peak Value) with corrected signal level of 49.72 dB (μV) (limit is 56.00 dB (μV)), when the Line of the EUT is connected to AMN.

EUT	:	LED LCD TV	Temperature	:	22℃
Model No.	:	LC-50N8002U	Humidity	:	48%RH
Test Mode	:	HDMI1 3840*2160@60Hz & 1kHz Playing	Date of Test	:	Mar 02, 2017

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.176	39.32	10.56	49.88	64.68	14.80	QP
	0.444	34.65	10.42	45.07	56.98	11.91	
	0.672	35.51	10.40	45.91	56.00	10.09	
	0.899	34.99	10.40	45.39	56.00	10.61	
	1.800	34.70	10.41	45.11	56.00	10.89	
	2.474	**38.62**	**10.42**	**49.04**	**56.00**	**6.96**	
	0.176	25.32	10.56	35.88	54.68	18.80	AV
	0.444	19.65	10.42	30.07	46.98	16.91	
	0.672	19.51	10.40	29.91	46.00	16.09	
	0.899	19.99	10.40	30.39	46.00	15.61	
	1.800	20.70	10.41	31.11	46.00	14.89	
	2.474	25.62	10.42	36.04	46.00	9.96	
Neutral	0.180	38.64	10.55	49.19	64.50	15.31	QP
	0.447	35.15	10.41	45.56	56.93	11.37	
	0.672	35.50	10.39	45.89	56.00	10.11	
	0.899	34.29	10.40	44.69	56.00	11.31	
	1.800	34.71	10.43	45.14	56.00	10.86	
	2.384	**35.91**	**10.44**	**46.35**	**56.00**	**9.65**	
	0.180	27.64	10.55	38.19	54.50	16.31	AV
	0.447	20.15	10.41	30.56	46.93	16.37	
	0.672	19.50	10.39	29.89	46.00	16.11	
	0.899	19.29	10.40	29.69	46.00	16.31	
	1.800	19.71	10.43	30.14	46.00	15.86	
	2.384	22.91	10.44	33.35	46.00	12.65	

TEST ENGINEER: BYRON WU

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	LC-50N8002U	Humidity :	48%RH	
Test Mode	:	HDMI2 3840*2160@60Hz & 1kHz Playing	Date of Test :	Mar 02, 2017	

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.178	39.22	10.56	49.78	64.59	14.81	QP
	0.440	34.82	10.42	45.24	57.07	11.83	
	0.679	36.51	10.40	46.91	56.00	9.09	
	1.054	31.17	10.40	41.57	56.00	14.43	
	1.800	34.21	10.41	44.62	56.00	11.38	
	2.474	**39.30**	**10.42**	**49.72**	**56.00**	**6.28**	
	0.178	27.22	10.56	37.78	54.59	16.81	AV
	0.440	17.82	10.42	28.24	47.07	18.83	
	0.679	18.51	10.40	28.91	46.00	17.09	
	1.054	15.17	10.40	25.57	46.00	20.43	
	1.800	20.21	10.41	30.62	46.00	15.38	
	2.474	25.30	10.42	35.72	46.00	10.28	
Neutral	0.178	39.86	10.55	50.41	64.59	14.18	QP
	0.447	35.20	10.41	45.61	56.93	11.32	
	0.672	35.49	10.39	45.88	56.00	10.12	
	0.899	34.61	10.40	45.01	56.00	10.99	
	1.552	33.97	10.42	44.39	56.00	11.61	
	2.474	**38.51**	**10.44**	**48.95**	**56.00**	**7.05**	
	0.178	27.86	10.55	38.41	54.59	16.18	AV
	0.447	20.20	10.41	30.61	46.93	16.32	
	0.672	19.49	10.39	29.88	46.00	16.12	
	0.899	18.61	10.40	29.01	46.00	16.99	
	1.552	16.97	10.42	27.39	46.00	18.61	
	2.474	25.51	10.44	35.95	46.00	10.05	

TEST ENGINEER: BYRON WU

EUT	:	LED LCD TV	Temperature	:	22℃
Model No.	:	LC-50N8002U	Humidity	:	48%RH
Test Mode	:	HDMI3 3840*2160@30Hz & 1kHz Playing	Date of Test	:	Mar 02, 2017

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.178	39.46	10.56	50.02	64.59	14.57	QP
	0.447	34.00	10.42	44.42	56.93	12.51	
	0.679	36.56	10.40	46.96	56.00	9.04	
	0.899	34.04	10.40	44.44	56.00	11.56	
	1.762	34.66	10.41	45.07	56.00	10.93	
	2.474	**38.26**	**10.42**	**48.68**	**56.00**	**7.32**	
	0.178	27.46	10.56	38.02	54.59	16.57	AV
	0.447	20.00	10.42	30.42	46.93	16.51	
	0.679	19.56	10.40	29.96	46.00	16.04	
	0.899	19.04	10.40	29.44	46.00	16.56	
	1.762	20.66	10.41	31.07	46.00	14.93	
	2.474	25.26	10.42	35.68	46.00	10.32	
Neutral	0.177	39.24	10.55	49.79	64.62	14.83	QP
	0.440	35.14	10.41	45.55	57.07	11.52	
	0.679	**36.07**	**10.39**	**46.46**	**56.00**	**9.54**	
	0.899	34.45	10.40	44.85	56.00	11.15	
	1.800	34.68	10.43	45.11	56.00	10.89	
	2.334	35.22	10.44	45.66	56.00	10.34	
	0.177	27.25	10.55	37.80	54.62	16.82	AV
	0.440	18.14	10.41	28.55	47.07	18.52	
	0.679	19.07	10.39	29.46	46.00	16.54	
	0.899	19.45	10.40	29.85	46.00	16.15	
	1.800	20.68	10.43	31.11	46.00	14.89	
	2.334	22.22	10.44	32.66	46.00	13.34	

EUT	:	LED LCD TV	Temperature	:	22℃
Model No.	:	LC-50N8002U	Humidity	:	48%RH
Test Mode	:	HDMI4 3840*2160@30Hz & 1kHz Playing	Date of Test	:	Mar 02, 2017

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.178	39.42	10.56	49.98	64.59	14.61	QP
	0.440	34.00	10.42	44.42	57.07	12.65	
	0.679	36.53	10.40	46.93	56.00	9.07	
	0.899	34.04	10.40	44.44	56.00	11.56	
	1.888	32.29	10.41	42.70	56.00	13.30	
	2.474	**39.04**	**10.42**	**49.46**	**56.00**	**6.54**	
	0.178	27.42	10.56	37.98	54.59	16.61	AV
	0.440	18.00	10.42	28.42	47.07	18.65	
	0.679	19.53	10.40	29.93	46.00	16.07	
	0.899	19.04	10.40	29.44	46.00	16.56	
	1.888	18.29	10.41	28.70	46.00	17.30	
	2.474	26.04	10.42	36.46	46.00	9.54	
Neutral	0.178	39.19	10.55	49.74	64.59	14.85	QP
	0.441	35.20	10.41	45.61	57.04	11.43	
	0.679	**36.90**	**10.39**	**47.29**	**56.00**	**8.71**	
	0.899	34.70	10.40	45.10	56.00	10.90	
	1.800	34.90	10.43	45.33	56.00	10.67	
	2.309	36.50	10.44	46.94	56.00	9.06	
	0.178	27.59	10.55	38.14	54.59	16.45	AV
	0.441	18.40	10.41	28.81	47.04	18.23	
	0.679	19.50	10.39	29.89	46.00	16.11	
	0.899	19.00	10.40	29.40	46.00	16.60	
	1.800	20.30	10.43	30.73	46.00	15.27	
	2.309	23.40	10.44	33.84	46.00	12.16	

TEST ENGINEER: BYRON WU

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	LC-50N8002U	Humidity :	48%RH	
Test Mode	:	HDMI1 1920*1080@60Hz & 1kHz Playing	Date of Test :	Mar 02, 2017	

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.176	39.48	10.56	50.04	64.68	14.64	QP
	0.440	34.70	10.42	45.12	57.07	11.95	
	0.679	36.56	10.40	46.96	56.00	9.04	
	1.021	31.15	10.40	41.55	56.00	14.45	
	1.800	34.51	10.41	44.92	56.00	11.08	
	2.474	**38.98**	**10.42**	**49.40**	**56.00**	**6.60**	
	0.176	25.48	10.56	36.04	54.68	18.64	AV
	0.440	17.70	10.42	28.12	47.07	18.95	
	0.679	19.56	10.40	29.96	46.00	16.04	
	1.021	15.15	10.40	25.55	46.00	20.45	
	1.800	20.51	10.41	30.92	46.00	15.08	
	2.474	25.98	10.42	36.40	46.00	9.60	
Neutral	0.178	39.11	10.55	49.66	64.59	14.93	QP
	0.435	34.09	10.41	44.50	57.15	12.65	
	0.679	37.06	10.39	47.45	56.00	8.55	
	0.899	34.07	10.40	44.47	56.00	11.53	
	1.310	32.72	10.41	43.13	56.00	12.87	
	2.474	38.70	10.44	49.14	56.00	6.86	
	0.178	27.11	10.55	37.66	54.59	16.93	AV
	0.435	17.09	10.41	27.50	47.15	19.65	
	0.679	19.06	10.39	29.45	46.00	16.55	
	0.899	19.07	10.40	29.47	46.00	16.53	
	1.310	15.72	10.41	26.13	46.00	19.87	
	2.474	**25.70**	**10.44**	**36.14**	**46.00**	**6.67**	

TEST ENGINEER: BYRON WU

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	LC-50N8002U	Humidity :	48%RH	
Test Mode	:	HDMI1 1280*1024@60Hz & 1kHz playing	Date of Test :	Mar 02, 2017	

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.178	39.46	10.56	50.02	64.59	14.57	QP
	0.435	34.95	10.42	45.37	57.15	11.78	
	0.679	36.44	10.40	46.84	56.00	9.16	
	0.899	34.43	10.40	44.83	56.00	11.17	
	1.800	34.40	10.41	44.81	56.00	11.19	
	2.474	**38.23**	**10.42**	**48.65**	**56.00**	**7.35**	
	0.178	27.46	10.56	38.02	54.59	16.57	AV
	0.435	16.95	10.42	27.37	47.15	19.78	
	0.679	19.44	10.40	29.84	46.00	16.16	
	0.899	19.43	10.40	29.83	46.00	16.17	
	1.800	20.40	10.41	30.81	46.00	15.19	
	2.474	25.23	10.42	35.65	46.00	10.35	
Neutral	0.176	38.17	10.55	48.72	64.68	15.96	QP
	0.435	34.16	10.41	44.57	57.15	12.58	
	0.672	**35.61**	**10.39**	**46.00**	**56.00**	**10.00**	
	0.899	34.21	10.40	44.61	56.00	11.39	
	1.800	34.39	10.43	44.82	56.00	11.18	
	2.334	35.22	10.44	45.66	56.00	10.34	
	0.176	26.17	10.55	36.72	54.68	17.96	AV
	0.435	17.16	10.41	27.57	47.15	19.58	
	0.672	20.61	10.39	31.00	46.00	15.00	
	0.899	19.21	10.40	29.61	46.00	16.39	
	1.800	20.39	10.43	30.82	46.00	15.18	
	2.334	23.22	10.44	33.66	46.00	12.34	

TEST ENGINEER: BYRON WU

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	LC-50N8002U	Humidity :	48%RH	
Test Mode	:	HDMI1 640*480@60Hz & 1kHz playing	Date of Test :	Mar 02, 2017	

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.176	39.43	10.56	49.99	64.68	14.69	QP
	0.440	34.98	10.42	45.40	57.07	11.67	
	0.679	**36.62**	**10.40**	**47.02**	**56.00**	**8.98**	
	0.909	32.38	10.40	42.78	56.00	13.22	
	1.762	35.88	10.41	46.29	56.00	9.71	
	2.358	35.18	10.42	45.60	56.00	10.40	
	0.176	26.43	10.56	36.99	54.68	17.69	AV
	0.440	17.98	10.42	28.40	47.07	18.67	
	0.679	18.62	10.40	29.02	46.00	16.98	
	0.909	15.38	10.40	25.78	46.00	20.22	
	1.762	20.88	10.41	31.29	46.00	14.71	
	2.358	24.18	10.42	34.60	46.00	11.40	
Neutral	0.176	38.31	10.55	48.86	64.68	15.82	QP
	0.431	34.09	10.41	44.50	57.24	12.74	
	0.679	36.59	10.39	46.98	56.00	9.02	
	0.899	34.40	10.40	44.80	56.00	11.20	
	1.296	32.19	10.41	42.60	56.00	13.40	
	2.474	**38.74**	**10.44**	**49.18**	**56.00**	**6.82**	
	0.176	26.31	10.55	36.86	54.68	17.82	AV
	0.431	16.09	10.41	26.50	47.24	20.74	
	0.679	19.59	10.39	29.98	46.00	16.02	
	0.899	19.40	10.40	29.80	46.00	16.20	
	1.296	16.19	10.41	26.60	46.00	19.40	
	2.474	25.74	10.44	36.18	46.00	9.82	

TEST ENGINEER: BYRON WU

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	LC-50N8002U	Humidity	:	48%RH
Test Mode	:	MHL	Date of Test	:	Mar 02, 2017

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.178	40.22	10.56	50.78	64.59	13.81	QP
	0.440	33.82	10.42	44.24	57.07	12.83	
	0.679	36.51	10.40	46.91	56.00	9.09	
	1.054	32.17	10.40	42.57	56.00	13.43	
	1.800	35.21	10.41	45.62	56.00	10.38	
	2.474	**39.30**	**10.42**	**49.72**	**56.00**	**6.28**	
	0.178	28.22	10.56	38.78	54.59	15.81	AV
	0.440	18.82	10.42	29.24	47.07	17.83	
	0.679	17.51	10.40	27.91	46.00	18.09	
	1.054	16.17	10.40	26.57	46.00	19.43	
	1.800	19.21	10.41	29.62	46.00	16.38	
	2.474	24.30	10.42	34.72	46.00	11.28	
Neutral	0.179	40.86	10.55	51.41	64.55	13.14	QP
	0.447	34.20	10.41	44.61	56.93	12.32	
	0.672	33.49	10.39	43.88	56.00	12.12	
	0.899	33.61	10.40	44.01	56.00	11.99	
	1.552	32.97	10.42	43.39	56.00	12.61	
	2.474	**37.51**	**10.44**	**47.95**	**56.00**	**8.05**	
	0.179	28.86	10.55	39.41	54.55	15.14	AV
	0.447	22.20	10.41	32.61	46.93	14.32	
	0.672	22.49	10.39	32.88	46.00	13.12	
	0.899	20.61	10.40	31.01	46.00	14.99	
	1.552	18.97	10.42	29.39	46.00	16.61	
	2.474	24.51	10.44	34.95	46.00	11.05	

TEST ENGINEER: BYRON WU

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	LC-50N8002U	Humidity	:	48%RH
Test Mode	:	HDMI1080P	Date of Test	:	Feb 08, 2017

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.178	39.47	10.56	50.03	64.59	14.56	QP
	0.440	34.72	10.42	45.14	57.07	11.93	
	0.679	**36.09**	**10.40**	**46.49**	**56.00**	**9.51**	
	0.899	34.29	10.40	44.69	56.00	11.31	
	1.800	34.33	10.41	44.74	56.00	11.26	
	2.422	35.91	10.42	46.33	56.00	9.67	
	0.178	27.47	10.56	38.03	54.59	16.56	AV
	0.440	17.72	10.42	28.14	47.07	18.93	
	0.679	19.09	10.40	29.49	46.00	16.51	
	0.899	19.29	10.40	29.69	46.00	16.31	
	1.800	20.33	10.41	30.74	46.00	15.26	
	2.422	23.91	10.42	34.33	46.00	11.67	
Neutral	0.178	39.24	10.55	49.79	64.59	14.80	QP
	0.444	35.14	10.41	45.55	56.98	11.43	
	0.679	36.84	10.39	47.23	56.00	8.77	
	0.899	34.52	10.40	44.92	56.00	11.08	
	1.800	34.08	10.43	44.51	56.00	11.49	
	2.358	**35.58**	**10.44**	**46.02**	**56.00**	**9.98**	
	0.178	27.24	10.55	37.79	54.59	16.80	AV
	0.444	20.14	10.41	30.55	46.98	16.43	
	0.679	19.84	10.39	30.23	46.00	15.77	
	0.899	19.52	10.40	29.92	46.00	16.08	
	1.800	20.08	10.43	30.51	46.00	15.49	
	2.358	23.58	10.44	34.02	46.00	11.98	

TEST ENGINEER: BYRON WU

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	LC-50N8002U	Humidity	:	48%RH
Test Mode	:	USB Play	Date of Test	:	Feb 08, 2017

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.178	39.28	10.56	49.84	64.59	14.75	QP
	0.435	34.88	10.42	45.30	57.15	11.85	
	0.679	36.69	10.40	47.09	56.00	8.91	
	0.899	34.98	10.40	45.38	56.00	10.62	
	1.762	35.87	10.41	46.28	56.00	9.72	
	2.474	**38.26**	**10.42**	**48.68**	**56.00**	**7.32**	
	0.178	27.28	10.56	37.84	54.59	16.75	AV
	0.435	16.88	10.42	27.30	47.15	19.85	
	0.679	20.69	10.40	31.09	46.00	14.91	
	0.899	19.98	10.40	30.38	46.00	15.62	
	1.762	20.87	10.41	31.28	46.00	14.72	
	2.474	25.26	10.42	35.68	46.00	10.32	
Neutral	0.176	39.54	10.55	50.09	64.68	14.59	QP
	0.447	35.04	10.41	45.45	56.93	11.48	
	0.679	**36.03**	**10.39**	**46.42**	**56.00**	**9.58**	
	0.899	34.66	10.40	45.06	56.00	10.94	
	1.552	32.13	10.42	42.55	56.00	13.45	
	2.396	35.16	10.44	45.60	56.00	10.40	
	0.176	26.54	10.55	37.09	54.68	17.59	AV
	0.447	20.04	10.41	30.45	46.93	16.48	
	0.679	20.03	10.39	30.42	46.00	15.58	
	0.899	19.66	10.40	30.06	46.00	15.94	
	1.552	16.13	10.42	26.55	46.00	19.45	
	2.396	23.16	10.44	33.60	46.00	12.40	

TEST ENGINEER: BYRON WU

EUT	:	LED LCD TV	Temperature	:	22℃
Model No.	:	LC-50N8002U	Humidity	:	48%RH
Test Mode	:	LAN Play	Date of Test	:	Feb 08, 2017

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.178	39.41	10.56	49.97	64.59	14.62	QP
	0.435	34.88	10.42	45.30	57.15	11.85	
	0.679	36.45	10.40	46.85	56.00	9.15	
	1.071	34.55	10.40	44.95	56.00	11.05	
	1.552	33.98	10.40	44.38	56.00	11.62	
	2.334	**36.71**	**10.42**	**47.13**	**56.00**	**8.87**	
	0.178	27.41	10.56	37.97	54.59	16.62	AV
	0.435	6.88	10.42	17.30	47.15	29.85	
	0.679	19.45	10.40	29.85	46.00	16.15	
	1.071	18.55	10.40	28.95	46.00	17.05	
	1.552	16.98	10.40	27.38	46.00	18.62	
	2.334	22.71	10.42	33.13	46.00	12.87	
Neutral	0.180	38.22	10.55	48.77	64.50	15.73	QP
	0.444	35.16	10.41	45.57	56.98	11.41	
	0.679	36.78	10.39	47.17	56.00	8.83	
	0.899	34.20	10.40	44.60	56.00	11.40	
	2.033	36.09	10.43	46.52	56.00	9.48	
	2.474	**38.43**	**10.44**	**48.87**	**56.00**	**7.13**	
	0.180	27.22	10.55	37.77	54.50	16.73	AV
	0.444	19.16	10.41	29.57	46.98	17.41	
	0.679	19.78	10.39	30.17	46.00	15.83	
	0.899	19.20	10.40	29.60	46.00	16.40	
	2.033	21.09	10.43	31.52	46.00	14.48	
	2.474	25.43	10.44	35.87	46.00	10.13	

TEST ENGINEER: BYRON WU

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	LC-50N8002U	Humidity	:	48%RH
Test Mode	:	Wifi	Date of Test	:	Feb 08, 2017

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.176	39.56	10.56	50.12	64.68	14.56	QP
	0.440	34.80	10.42	45.22	57.07	11.85	
	0.679	36.42	10.40	46.82	56.00	9.18	
	0.899	34.93	10.40	45.33	56.00	10.67	
	1.418	35.27	10.40	45.67	56.00	10.33	
	2.358	**36.42**	**10.42**	**46.84**	**56.00**	**9.16**	
	0.176	26.56	10.56	37.12	54.68	17.56	AV
	0.440	17.80	10.42	28.22	47.07	18.85	
	0.679	19.42	10.40	29.82	46.00	16.18	
	0.899	18.93	10.40	29.33	46.00	16.67	
	1.418	18.27	10.40	28.67	46.00	17.33	
	2.358	23.42	10.42	33.84	46.00	12.16	
Neutral	0.178	39.24	10.55	49.79	64.59	14.80	QP
	0.444	35.24	10.41	45.65	56.98	11.33	
	0.679	**36.02**	**10.39**	**46.41**	**56.00**	**9.59**	
	0.899	35.07	10.40	45.47	56.00	10.53	
	1.568	34.95	10.42	45.37	56.00	10.63	
	2.384	35.87	10.44	46.31	56.00	9.69	
	0.178	27.24	10.55	37.79	54.59	16.80	AV
	0.444	19.24	10.41	29.65	46.98	17.33	
	0.679	20.02	10.39	30.41	46.00	15.59	
	0.899	19.07	10.40	29.47	46.00	16.53	
	1.568	16.95	10.42	27.37	46.00	18.63	
	2.384	22.87	10.44	33.31	46.00	12.69	

4 RADIATED EMISSION TEST

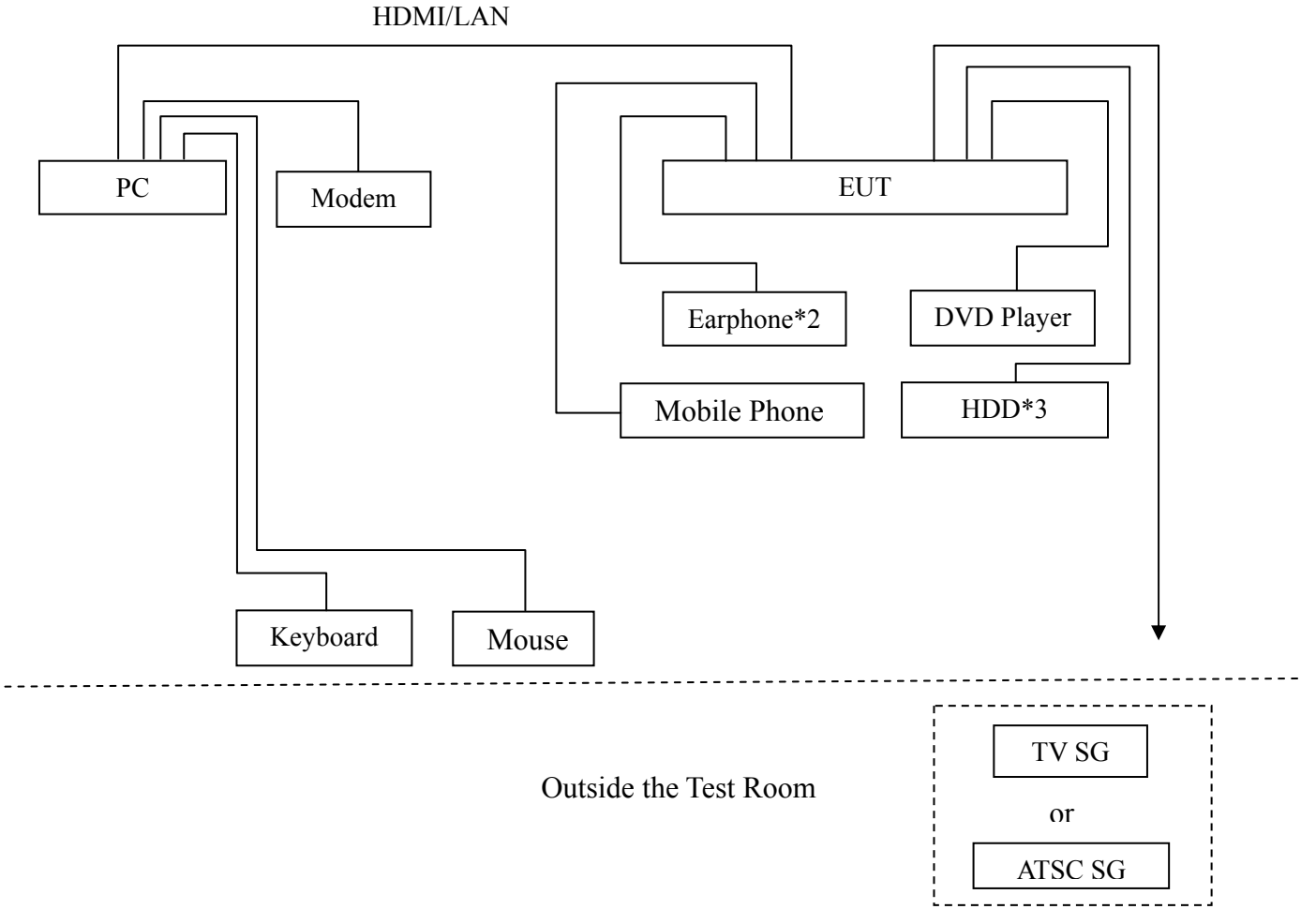
4.1 Test Equipment

The following test equipments are used during the radiated emission test in a semi-anechoic chamber:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCI	101303	May 07, 2016	May 06, 2017
2.	Preamplifier	Agilent	8447D	2944A06664	Apr 27, 2016	Apr 26, 2017
3.	Preamplifier	HP	8449B	3008A00864	Mar 20, 2016	Mar 19, 2017
4.	Bi-log Antenna	TESEQ	CBL6112D	23193	May 15, 2016	May 14, 2017
5.	Horn Antenna	EMCO	3115	9607-4878	Jun 03, 2016	Jun 02, 2017
6.	Spectrum	Agilent	E7405A	MY45106600	Apr 26, 2016	Apr 25, 2017
7.	Software	Audix	e3	6.2007-9-10	--	--

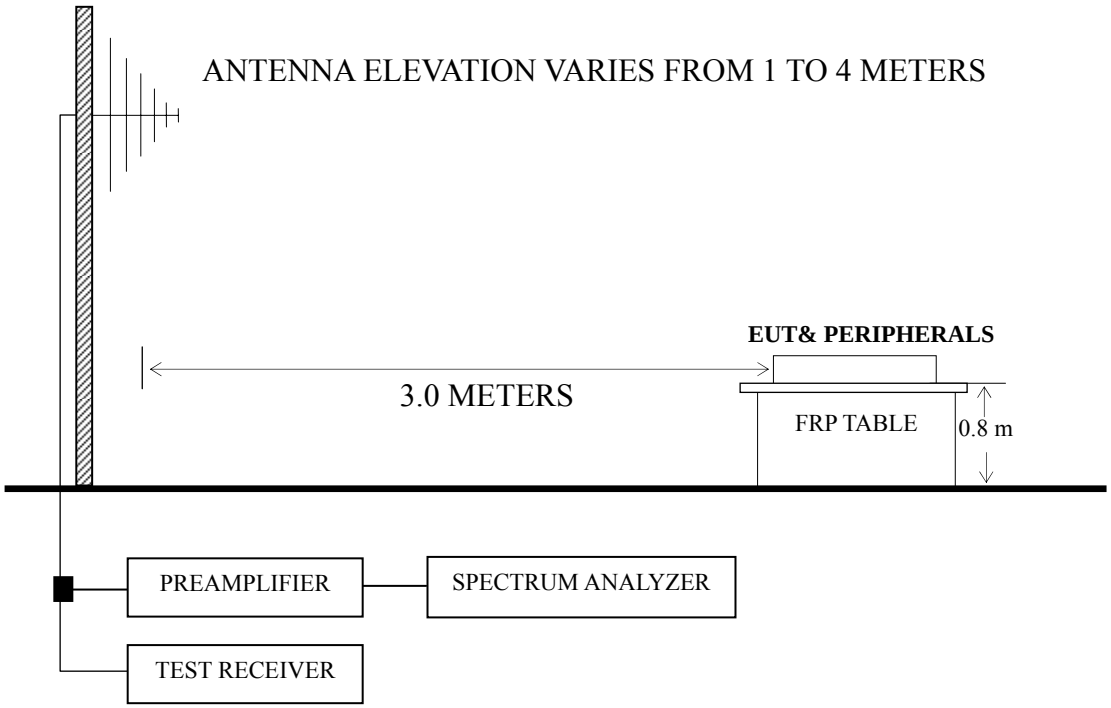
4.2 Block Diagram of Test Setup

4.2.1 EUT & Peripherals



4.2.2 Radiated emission test setup

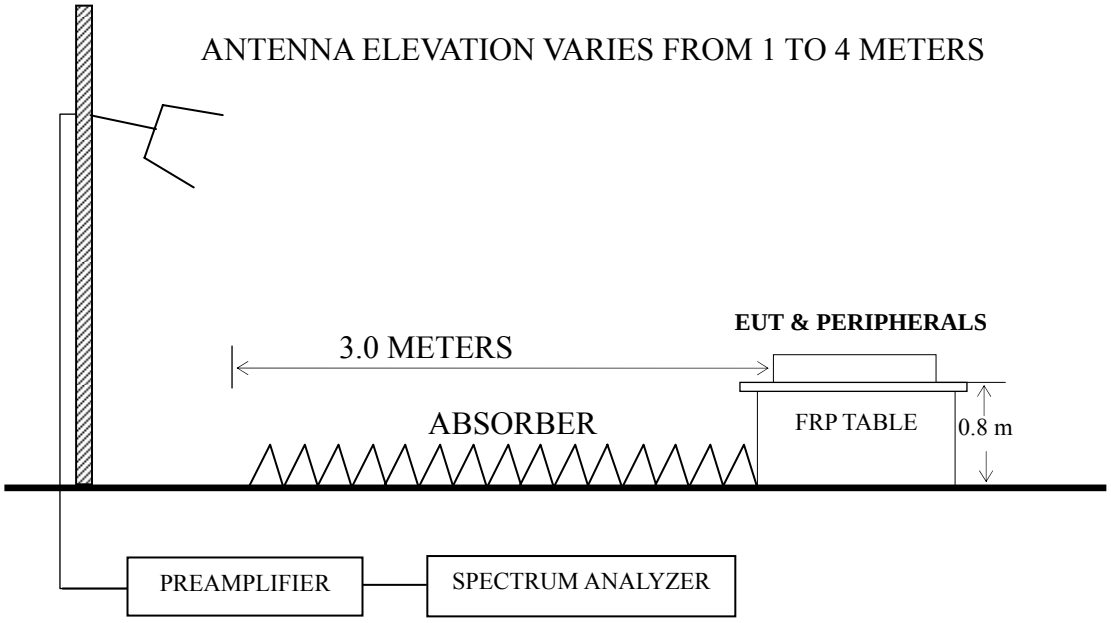
4.2.2.1 Below 1GHz



■ : 50 ohm Coaxial Switch

4.2.2.2 Above 1GHz

BORE-SIGHT ANTENNA TOWER



4.3 Radiated Emission Limit [FCC Part 15 Subpart B 15.109(a)]

Frequency (MHz)	Distance (m)	Field strength limits	
		(μV/m)	dB (μV/m)
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
Above 960	3	500	54.0

NOTE 1 - Emission Level dB (μV/m) = 20 log Emission Level (μV/m)
NOTE 2 - The tighter limit applies at the band edges.
NOTE 3 - Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
NOTE 4 - The limits shown are based on Quasi-peak value detector.
NOTE 5 - Above 1 GHz, the limit on peak emission is 20 dB above the maximum permitted average emission limit applicable to the EUT.

4.4 Test Configuration

The configuration of the EUT and peripherals are same as those used in conducted emission test.

Please refer to Sec.3.4.

4.5 Operating Condition of EUT

Same as conducted emission test which is listed in Sec.3.5, except for the test setup replaced by Sec.4.2.

4.6 Test Procedures

The EUT and peripherals were placed on a FRP turntable that is 0.8 meter above ground. The FRP turntable rotated 360 degrees to determine the position of the maximum emission level. The EUT was set 3 meters away from the receiving antenna, which was mounted on an antenna tower. Broadband antenna (Calibrated Bilog Antenna) was used as receiving antenna. The antenna moved up and down between 1 meter and 4 meters to find out the maximum emission level. Both horizontal and vertical polarizations of the antenna were set on measurement. In order to find the maximum emission, all of the interference cables were manipulated according to ANSI C63.4 requirements during radiated emission test.

The I.F. bandwidth of Test Receiver R&S ESCI was set at 120 kHz.

The frequency range from 30 MHz to 1000MHz was checked for all test modes.

The frequency range from 1 GHz to 6 GHz was checked for the maximum resolution test mode

The test modes were done on radiated disturbance test and all the test results are listed in Sec.4.7.

4.7 Test Results

<PASS>

The frequency and amplitude of the highest radiated emission relative the limit is reported. All the emissions not reported below are too low against the FCC limit.

Test Mode	Data Page
HDMI1 3840*2160@60Hz & 1kHz Playing	P29
HDMI2 3840*2160@60Hz & 1kHz Playing	P30
HDMI3 3840*2160@30Hz & 1kHz Playing	P31-P32
HDMI4 3840*2160@30Hz & 1kHz Playing	P33
HDMI3 1920*1080@60Hz & 1kHz Playing	P34
HDMI3 1280*1024@60Hz & 1kHz playing	P35
HDMI3 640*480@60Hz & 1kHz playing	P36
MHL	P37
HDMI1080P	P38
USB Play	P39
LAN Play	P40
Wifi	P41

NOTE 1 – Emission Level = Antenna Factor + Cable Loss + Meter Reading. (< 1GHz);

NOTE 2 – All readings are Quasi-Peak values below or equal to 1GHz, Peak and Average values above 1GHz.

NOTE 3 – 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

NOTE 4 – The worst case is for HDMI3 3840*2160@30Hz & 1kHz Playing test mode. The worst emission at horizontal polarization was detected at 390.72MHz with corrected signal level of 41.63dB (μV/m) (limit is 46.00 dB (μV/m)), when the antenna was 2.10 m height and the turntable was at 75°. The worst emission at vertical polarization was detected at 429.520MHz with corrected signal level of 43.00dB (μV/m) (limit is 46.00dB (μV/m)), when the antenna was 1.1 m height and the turntable was at 76°.

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	LC-50N8002U	Humidity :	60%RH
Test Mode	:	HDMI1 3840*2160@60Hz & 1kHz Playing	Date of Test :	Mar 10, 2017

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	31.071	14.23	17.71	0.57	32.51	40.00	7.49
	90.855	25.85	10.93	0.95	37.73	43.50	5.77
	159.225	23.46	11.35	1.32	36.13	43.50	7.37
	277.094	25.27	13.27	1.70	40.24	46.00	5.76
	389.800	**24.40**	**16.10**	**2.02**	**42.52**	**46.00**	**3.48**
	890.728	17.12	21.10	3.07	41.29	46.00	4.71
Vertical	31.04	17.59	17.71	0.57	35.87	40.00	4.13
	93.11	25.62	11.33	0.96	37.91	43.50	5.59
	157.01	21.58	11.43	1.31	34.32	43.50	9.18
	389.36	**24.88**	**16.05**	**2.02**	**42.95**	**46.00**	**3.05**
	429.52	22.61	16.40	2.12	41.13	46.00	4.87
	890.73	15.19	21.10	3.07	39.36	46.00	6.64

EUT	:	LED LCD TV	Temperature	:	22℃
Model No.	:	LC-50N8002U	Humidity	:	60%RH
Test Mode	:	HDMI2 3840*2160@60Hz & 1kHz Playing	Date of Test	:	Mar 10, 2017

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	90.54	24.62	10.87	0.95	36.44	43.50	7.06
	153.74	21.46	11.65	1.3	34.41	43.50	9.09
	284.98	20.65	13.4	1.72	35.77	46.00	10.23
	393.47	**23.29**	**16.17**	**2.02**	**41.48**	**46.00**	**4.52**
	558.73	14.96	18.05	2.42	35.43	46.00	10.57
	906.48	13.05	21.3	3.09	37.44	46.00	8.56
Vertical	31.40	17.94	17.45	0.57	35.96	40.00	4.04
	87.11	23.50	10.40	0.93	34.83	40.00	5.17
	155.36	21.87	11.48	1.30	34.65	43.50	8.85
	200.69	22.17	10.13	1.48	33.78	43.50	9.72
	397.63	24.14	16.23	2.03	42.40	46.00	3.60
	426.52	**23.50**	**16.37**	**2.10**	**41.97**	**46.00**	**4.03**

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	50H8C	Humidity :	60%RH
Test Mode	:	HDMI3 3840*2160@30Hz & 1kHz Playing	Date of Test :	Mar 10, 2017

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	85.90	23.52	10.20	0.93	--	34.65	40.00	5.35	QP
	157.01	23.33	11.43	1.31	--	36.07	43.50	7.43	
	275.16	24.03	13.20	1.70	--	38.93	46.00	7.07	
	390.72	**23.51**	**16.10**	**2.02**	--	**41.63**	**46.00**	**4.37**	
	554.83	15.43	18.00	2.40	--	35.83	46.00	10.17	
	900.15	15.74	21.20	3.09	--	40.03	46.00	5.97	
	1464.692	52.29	25.48	4.02	35.79	46.00	74.00	28.00	PK
	1892.439	51.19	27.14	4.56	35.30	47.59	74.00	26.41	
	2631.490	49.42	29.00	5.44	35.20	48.66	74.00	25.34	
	1464.692	33.67	25.48	4.02	35.79	27.38	54.00	26.62	AV
	1892.439	31.72	27.14	4.56	35.30	28.12	54.00	25.88	
	2631.490	30.00	29.00	5.44	35.20	29.24	54.00	24.76	

TEST ENGINEER: CAESAR WU

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	LC-50N8002U	Humidity :	60%RH
Test Mode	:	HDMI3 3840*2160@30Hz & 1kHz Playing	Date of Test :	Mar 10, 2017

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Vertical	30.760	17.00	17.88	0.57	--	35.45	40.00	4.55	QP
	91.500	25.20	11.07	0.96	--	37.23	43.50	6.27	
	158.110	23.76	11.38	1.32	--	36.46	43.50	7.04	
	390.720	24.27	16.10	2.02	--	42.39	46.00	3.61	
	429.520	**24.48**	**16.40**	**2.12**	--	**43.00**	**46.00**	**3.00**	
	890.730	15.01	21.10	3.07	--	39.18	46.00	6.82	
	1191.952	56.89	24.42	3.61	36.17	48.75	74.00	25.25	PK
	1739.597	54.47	26.59	4.38	35.46	49.98	74.00	24.02	
	2650.417	52.14	29.07	5.48	35.20	51.49	74.00	22.51	
	1191.952	35.62	24.42	3.61	36.17	27.48	54.00	26.52	AV
	1739.597	33.52	26.59	4.38	35.46	29.03	54.00	24.97	
	2650.417	33.13	29.07	5.48	35.20	32.48	54.00	21.52	

TEST ENGINEER: CAESAR WU

EUT	:	LED LCD TV	Temperature	:	22℃
Model No.	:	LC-50N8002U	Humidity	:	60%RH
Test Mode	:	HDMI4 3840*2160@30Hz & 1kHz Playing	Date of Test	:	Mar 10, 2017

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	87.112	24.58	10.40	0.93	35.91	40.00	4.09
	157.007	22.42	11.43	1.31	35.16	43.50	8.34
	274.194	22.76	13.22	1.70	37.68	46.00	8.32
	387.992	**24.44**	**16.05**	**2.02**	**42.51**	**46.00**	**3.49**
	425.028	20.08	16.35	2.10	38.53	46.00	7.47
	893.857	15.57	21.13	3.07	39.77	46.00	6.23
Vertical	31.620	18.07	17.27	0.58	35.92	40.00	4.08
	90.855	25.82	10.93	0.95	37.70	43.50	5.80
	156.458	20.64	11.45	1.31	33.40	43.50	10.10
	392.095	**24.14**	**16.13**	**2.02**	**42.29**	**46.00**	**3.71**
	423.540	22.18	16.33	2.10	40.61	46.00	5.39
	893.857	13.65	21.13	3.07	37.85	46.00	8.15

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	LC-50N8002U	Humidity :	60%RH
Test Mode	:	HDMI3 1920*1080@60Hz & 1kHz Playing	Date of Test :	Mar 10, 2017

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	30.962	14.99	17.71	0.57	33.27	40.00	6.73
	90.855	24.52	10.93	0.95	36.40	43.50	7.10
	157.007	22.19	11.43	1.31	34.93	43.50	8.57
	275.157	24.13	13.20	1.70	39.03	46.00	6.97
	389.355	**22.80**	**16.05**	**2.02**	**40.87**	**46.00**	**5.13**
	890.728	15.62	21.10	3.07	39.79	46.00	6.21
Vertical	30.660	16.99	17.97	0.57	35.53	40.00	4.47
	89.590	26.21	10.75	0.95	37.91	43.50	5.59
	157.007	22.18	11.43	1.31	34.92	43.50	8.58
	389.355	23.47	16.05	2.02	41.54	46.00	4.46
	428.019	**23.16**	**16.38**	**2.10**	**41.64**	**46.00**	**4.36**
	890.728	11.92	21.10	3.07	36.09	46.00	9.91

TEST ENGINEER: CAESAR WU

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	LC-50N8002U	Humidity :	60%RH
Test Mode	:	HDMI3 1280*1024@60Hz & 1kHz Playing	Date of Test :	Mar 10, 2017

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	89.590	25.31	10.75	0.95	37.01	43.50	6.49
	159.230	22.57	11.35	1.32	35.24	43.50	8.26
	275.160	24.51	13.20	1.70	39.41	46.00	6.59
	389.360	**23.21**	**16.05**	**2.02**	**41.28**	**46.00**	**4.72**
	477.170	17.83	17.18	2.22	37.23	46.00	8.77
	890.730	15.02	21.10	3.07	39.19	46.00	6.81
Vertical	**30.680**	**17.19**	**17.97**	**0.57**	**35.73**	**40.00**	**4.27**
	90.860	25.81	10.93	0.95	37.69	43.50	5.81
	158.110	20.51	11.38	1.32	33.21	43.50	10.29
	199.990	24.62	10.10	1.48	36.20	43.50	7.30
	389.360	18.68	16.05	2.02	36.75	46.00	9.25
	721.730	16.04	19.30	2.75	38.09	46.00	7.91

TEST ENGINEER: CAESAR WU

EUT	:	LED LCD TV	Temperature	:	22℃
Model No.	:	LC-50N8002U	Humidity	:	60%RH
Test Mode	:	HDMI3 640*480@60Hz & 1kHz Playing	Date of Test	:	Mar 10, 2017

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	30.850	15.75	17.79	0.57	34.11	40.00	5.89
	85.900	23.37	10.20	0.93	34.50	40.00	5.50
	275.160	23.56	13.20	1.70	38.46	46.00	7.54
	389.360	**22.78**	**16.05**	**2.02**	**40.85**	**46.00**	**5.15**
	426.520	19.86	16.37	2.10	38.33	46.00	7.67
	890.730	14.63	21.10	3.07	38.80	46.00	7.20
Vertical	30.720	17.20	17.88	0.57	35.65	40.00	4.35
	93.110	24.78	11.33	0.96	37.07	43.50	6.43
	199.290	24.03	10.07	1.48	35.58	43.50	7.92
	387.990	**23.13**	**16.05**	**2.02**	**41.20**	**46.00**	**3.12**
	429.520	22.52	16.40	2.12	41.04	46.00	4.96
	721.730	13.79	19.30	2.75	35.84	46.00	10.16

TEST ENGINEER: CAESAR WU

EUT	:	LED LCD TV	Temperature :		22℃
Model No.	:	LC-50N8002U	Humidity	:	60%RH
Test Mode	:	MHL	Date of Test	:	Mar 10, 2017

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	**84.999**	**24.21**	**10.10**	**0.92**	**35.23**	**40.00**	**4.77**
	156.458	21.59	11.45	1.31	34.35	43.50	9.15
	278.067	22.23	13.35	1.71	37.29	46.00	8.71
	375.939	22.00	15.71	1.97	39.68	46.00	6.32
	472.176	17.18	17.12	2.20	36.50	46.00	9.50
	896.997	13.41	21.17	3.07	37.65	46.00	8.35
Vertical	**30.424**	**16.47**	**18.14**	**0.56**	**35.17**	**40.00**	**4.83**
	83.230	23.53	9.67	0.90	34.10	40.00	5.90
	151.597	20.09	11.88	1.29	33.26	43.50	10.24
	196.510	24.16	9.97	1.47	35.60	43.50	7.90
	365.539	18.89	15.50	1.95	36.34	46.00	9.66
	455.906	18.52	16.86	2.17	37.55	46.00	8.45

TEST ENGINEER: CAESAR WU

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	LC-50N8002U	Humidity :	60%RH	
Test Mode	:	HDMI1080P	Date of Test :	Mar 10, 2017	

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	90.220	25.04	10.80	0.95	36.79	43.50	6.71
	156.458	21.58	11.45	1.31	34.34	43.50	9.16
	273.234	20.16	13.24	1.69	35.09	46.00	10.91
	393.472	**21.39**	**16.17**	**2.02**	**39.58**	**46.00**	**6.42**
	422.058	18.44	16.33	2.09	36.86	46.00	9.14
	887.610	14.15	21.10	3.07	38.32	46.00	7.68
Vertical	**31.955**	**17.62**	**17.10**	**0.58**	**35.30**	**40.00**	**4.70**
	86.503	23.56	10.30	0.93	34.79	40.00	5.21
	199.986	23.62	10.10	1.48	35.20	43.50	8.30
	381.249	20.75	15.80	1.99	38.54	46.00	7.46
	422.058	17.31	16.33	2.09	35.73	46.00	10.27
	872.183	9.69	20.90	3.03	33.62	46.00	12.38

TEST ENGINEER: CAESAR WU

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	LC-50N8002U	Humidity :	60%RH	
Test Mode	:	USB Play	Date of Test :	Mar 10, 2017	

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	**81.783**	**24.70**	**9.33**	**0.90**	**34.93**	**40.00**	**5.07**
	101.289	20.14	12.37	1.01	33.52	43.50	9.98
	148.441	20.52	12.23	1.27	34.02	43.50	9.48
	274.194	21.52	13.22	1.70	36.44	46.00	9.56
	414.722	19.75	16.24	2.07	38.06	46.00	7.94
	824.597	13.15	20.33	2.94	36.42	46.00	9.58
Vertical	**32.179**	**17.70**	**16.99**	**0.58**	**35.27**	**40.00**	**4.73**
	82.359	23.56	9.41	0.90	33.87	40.00	6.13
	148.963	21.68	12.16	1.28	35.12	43.50	8.38
	243.377	20.57	12.28	1.61	34.46	46.00	11.54
	360.448	19.17	15.40	1.93	36.50	46.00	9.50
	790.619	13.26	20.30	2.89	36.45	46.00	9.55

TEST ENGINEER: CAESAR WU

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	LC-50N8002U	Humidity :	60%RH	
Test Mode	:	LAN Play	Date of Test :	Mar 10, 2017	

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	**85.598**	**23.48**	**10.20**	**0.92**	**34.60**	**40.00**	**5.40**
	157.007	23.19	11.43	1.31	35.93	43.50	7.57
	247.682	21.00	12.52	1.63	35.15	46.00	10.85
	354.183	17.60	15.23	1.92	34.75	46.00	11.25
	482.216	17.77	17.22	2.23	37.22	46.00	8.78
	679.960	11.96	19.60	2.67	34.23	46.00	11.77
Vertical	81.497	22.93	9.24	0.90	33.07	40.00	6.93
	162.611	22.12	11.21	1.34	34.67	43.50	8.83
	199.286	24.59	10.07	1.48	36.14	43.50	7.36
	397.633	**22.11**	**16.23**	**2.03**	**40.37**	**46.00**	**5.63**
	549.020	13.78	17.84	2.38	34.00	46.00	12.00
	860.035	10.95	20.70	3.00	34.65	46.00	11.35

TEST ENGINEER: CAESAR WU

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	LC-50N8002U	Humidity :	60%RH	
Test Mode	:	Wifi	Date of Test :	Mar 10, 2017	

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	78.689	24.21	8.75	0.88	33.84	40.00	6.16
	108.647	18.16	12.15	1.06	31.37	43.50	12.13
	163.182	**21.55**	**11.19**	**1.34**	**34.08**	**43.50**	**9.42**
	305.680	20.65	13.79	1.77	36.21	46.00	9.79
	451.135	14.55	16.8	2.16	33.51	46.00	12.49
	842.130	12.64	20.3	2.98	35.92	46.00	10.08
Vertical	**32.067**	**18.32**	**17.05**	**0.58**	**35.95**	**40.00**	**4.05**
	86.200	23.56	10.25	0.93	34.74	40.00	5.26
	148.963	20.61	12.16	1.28	34.05	43.50	9.45
	236.645	19.77	11.92	1.59	33.28	46.00	12.72
	370.702	17.84	15.63	1.96	35.43	46.00	10.57
	609.922	12.58	18.6	2.54	33.72	46.00	12.28

TEST ENGINEER: CAESAR WU

5 DEBUG DESCRIPTION

The following components are used during the countermeasure procedures:

Name	M/N	Manufacturer	Location
SMcontact	SMR-TSL-4-3.5-5R	Qingdao Joinset Co., Ltd	See Appendix II Figure 23

Note: We had required the applicant and manufacturer that all electrical and mechanical devices employed for spurious radiation suppression, including any modifications made during certification testing, must be incorporated in each unit marked

TEST ENGINEER: 

(BYRON WU)

6 DEVIATION TO TEST SPECIFICATIONS

None