

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

LED LCD TV

Model No.:

LC-50P7000U, LC-50P7000U+, LC-50P70+0U, LC-50P70+0U1,
LC-50P70+0U2, LC-50P7+0U, LC-50P7+0U1, LC-50P7+0U2,
LC-50P620U, LC-50P620U+, LC-50P6200U, LC-50P6200U+,
LC-50P66U, LC-50P6000U

Brand: Hisense

FCC ID : W9HLCDF0134

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

Prepared By : Audix Technology (Shanghai) Co., Ltd.
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Report No. : ACI-F17228
Date of Test : Jun 16-23, 2017
Date of Report : Jul 04, 2017

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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. : Refer to Sec.2.1
 Brand : Hisense
 Power Supply : 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 Jun 16-23, 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.

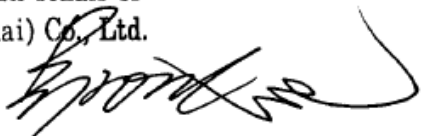
The test results for EUT's TV functions are contained in No.F17229, a Verification report.

Date of Test : Jun 16-23, 2017 Date of Report : Jul 04, 2017

Producer : Alan He
 ALAN HE / Assistant

Review : Byron Wu
 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
		Minimum passing margin is 10.08dB at 0.634MHz	
Radiated Disturbance	FCC RULES AND REGULATIONS PART 15 SUBPART B AND ANSI C63.4-2014	15.109(a) Class B	Pass
		Minimum passing margin is 3.40dB at 429.523MHz (Vertical, 2.1m/100°)	

2 GENERAL INFORMATION

2.1 Description of Equipment Under Test

Description : LED LCD TV

Type of EUT : Production Pre-product Pro-type

Model No : LC-50P7000U, LC-50P7000U+, LC-50P70+0U, LC-50P70+0U1, LC-50P70+0U2, LC-50P7+0U, LC-50P7+0U1, LC-50P7+0U2, LC-50P620U, LC-50P620U+, LC-50P6200U, LC-50P6200U+, LC-50P66U, LC-50P6000U

Note #1 : The differences among the above models are as following:

M/N	Difference	
LC-50P7000U, LC-50P7000U+, LC-50P70+0U, LC-50P70+0U1, LC-50P70+0U2, LC-50P7+0U, LC-50P7+0U1, LC-50P7+0U2, LC-50P620U, LC-50P620U+, LC-50P6200U, LC-50P6200U+	different model number	different appearance
LC-50P66U, LC-50P6000U	different model number	

Note #2 : Only the LC-50P7000U model is tested and recorded in the report.

Note #3 : “+”represents any of the Arabic numeral.

Note #4 : The tuner port comply with the 15.111 requirement.

Brand : Hisense

RF module FCC ID : 2AJVQ-ZDGFMT7612U

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. Hisense #3510 Parque Industrial Rosarito, C.P. 22710 Playas de Rosarito, B.C.	
LCD Panel	:	Manufacturer	: Hisense
		M/N	: HD500K3U54
Tuner	:	Manufacturer	: Silicon Labs
		M/N	: Si2151-A10
Max Resolution	:	3840*2160@60Hz	
HDMI Cable*4 (Lab provide)	:	Shielded, Detachable, 1.80m	
LAN Cable	:	Shielded, Detachable, 1.50m	
Power Cord	:	Unshielded, Detachable, 1.80m, 2C	
USB Cable*3 (Lab provide)	:	Shielded, Detachable, 1.00m	
MHL to HDMI Adaptor with RCP (Lab provide)	:	Manufacture:	CE-Link
		M/N:	3002

Remark:

The EUT is a LED LCD TV which input/output ports as follows:

Side View:

- (1) One ANT Port : Connected with ATSC SG/TV SG
- (2) One Service Port : Do not open to customer
- (3) One AUDIO OUT Port : Connected with Earphone
- (4) Three USB Ports : Connected with Hard-Disk*3
- (5) One HDMI1/MHL Port : Connected with Mobile phone
- (6) One HDMI2 Port : Connected with PC

Bottom View:

- (7) One AV/COMPONENT IN Port : Connected with DVD Player
- (8) One DIGITALAUDIO OUT Port : Connected with Audio Converter to Earphone
- (9) One ETHERNET Port : Connected with PC
- (10)One HDMI3 Port : Connected with PC

(11)One HDMI4 Port

: Connected with DVD Player

2.2 Peripherals

2.2.1 PC

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

2.2.2 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

2.2.3 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

2.2.4 Modem

Manufacturer : TP-LINK
Model Number : TM-EC5658V
Serial Number : 07123301053
Data Cable : Shielded, Detachable, 1.5m
Certificate : CCC

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, Undetachable, 1.8m.
Certificate : CE, FCC DoC

2.2.8 Hard Disk #2

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

2.2.9 Hard Disk #3

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

2.2.10 Mobile Phone

Manufacturer : SAMSUNG
Model Number : GT-I9100G
Serial Number : 6935152011519

2.2.11 ATSC Signal Generator

Manufacturer : SENCORE
Model Number : ATSC997
Serial Number : 6790071

2.2.12 TV Signal Generator

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

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 = 4.3dB(Horizontal)
U = 4.6dB (Vertical)

Radiated Emission Expanded Uncertainty (200M-1GHz):
U = 4.3dB (Horizontal)
U = 5.5dB (Vertical)

Radiated Emission Expanded Uncertainty (1GHz-6GHz):
U = 5.1 dB

3 CONDUCTED EMISSION TEST

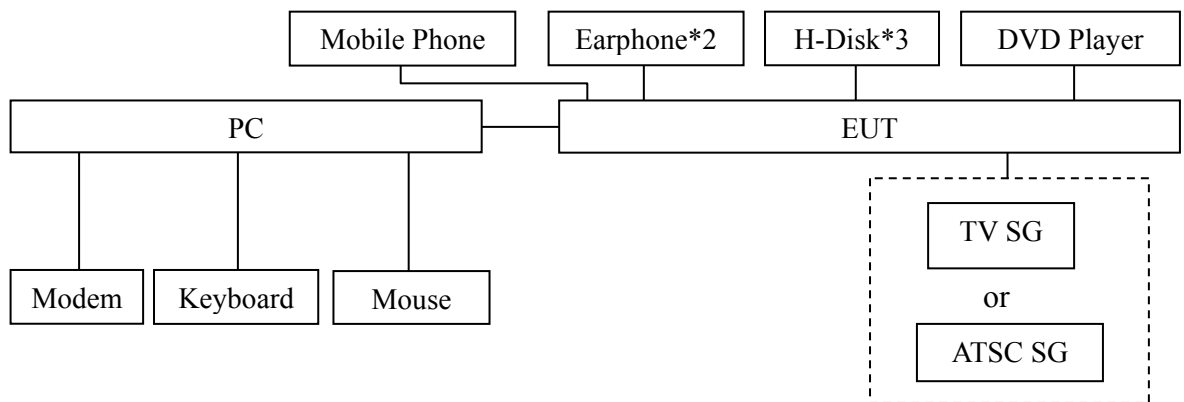
3.1 Test Equipment

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

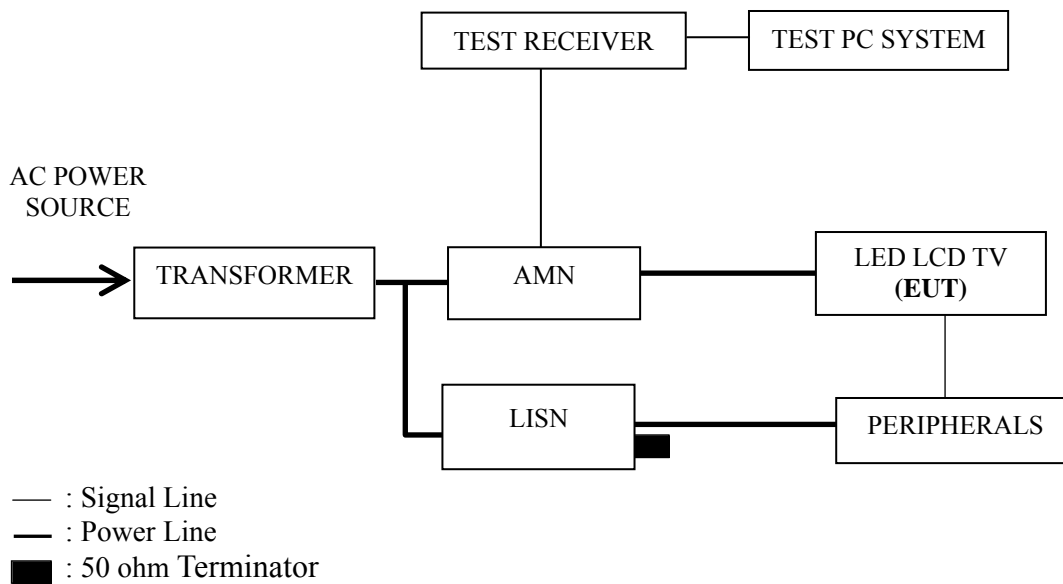
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCI	101302	Apr 27, 2017	Apr 26, 2018
2.	Artificial Mains Network (AMN)	R&S	ENV4200	100125	Jun 25, 2016	Jun 24, 2017
3.	Line Impedance Stabilization Network (LISN)	Kyoritsu	KNW-407	8-1280-4	Mar 17, 2017	Mar 16, 2018
4.	50Ω Terminator	Anritsu	BNC	001	Mar 20, 2017	Sep 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 (μ V)	
	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 WIFI mode, set the EUT play digital media through WIFI.
- 3.5.9 In MHL mode, set the EUT play digital media from mobile phone.
- 3.5.10 The other peripherals devices were driven and operated during the test.
- 3.5.11 The test modes are as follows:

Test Mode
HDMI1 3840*2160@60Hz & 1kHz playing
HDMI1 1920*1080@60Hz & 1kHz playing
HDMI1 1280*1024@60Hz & 1kHz playing
HDMI1 640*480@60Hz & 1kHz playing
HDMI2 3840*2160@60Hz & 1kHz playing
HDMI3 3840*2160@30Hz & 1kHz playing
HDMI4 3840*2160@30Hz & 1kHz playing
HDMI1080P
USB Play
LAN Play
MHL
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 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	P14
HDMI1 1920*1080@60Hz & 1kHz playing	P15
HDMI1 1280*1024@60Hz & 1kHz playing	P16
HDMI1 640*480@60Hz & 1kHz playing	P17
HDMI2 3840*2160@60Hz & 1kHz playing	P18
HDMI3 3840*2160@30Hz & 1kHz playing	P19
HDMI4 3840*2160@30Hz & 1kHz playing	P20
HDMI1080P	P21
USB Play	P22
LAN Play	P23
MHL	P24
WIFI	P25

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.

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-50P7000U Humidity : 48%RH

Test Mode : HDMI1 Date of Test : Jun 16, 2017
3840*2160@60Hz &
1kHz Playing

Test Line	Frequency (MHz)	Meter Reading dB(μ V)	Factor (dB)	Emission Level dB(μ V)	Limits dB(μ V)	Margin (dB)	Remark
Line	0.161	40.44	10.57	51.01	65.43	14.42	QP
	0.317	32.43	10.47	42.90	59.80	16.90	
	0.402	34.14	10.43	44.57	57.81	13.24	
	0.708	28.07	10.40	38.47	56.00	17.53	
	0.943	25.09	10.41	35.50	56.00	20.50	
	1.519	27.23	10.41	37.64	56.00	18.36	
	0.161	32.44	10.57	43.01	55.43	12.42	AV
	0.317	24.43	10.47	34.90	49.80	14.90	
	0.402	26.14	10.43	36.57	47.81	11.24	
	0.708	13.07	10.40	23.47	46.00	22.53	
	0.943	14.09	10.41	24.50	46.00	21.50	
	1.519	15.23	10.41	25.64	46.00	20.36	
Neutral	0.159	36.90	10.57	47.47	65.52	18.05	QP
	0.406	21.86	10.42	32.28	57.73	25.45	
	0.552	24.26	10.39	34.65	56.00	21.35	
	0.871	30.84	10.41	41.25	56.00	14.75	
	1.352	29.01	10.42	39.43	56.00	16.57	
	1.970	25.37	10.44	35.81	56.00	20.19	
	0.159	23.90	10.57	34.47	55.52	21.05	AV
	0.406	14.86	10.42	25.28	47.73	22.45	
	0.552	16.26	10.39	26.65	46.00	19.35	
	0.871	18.84	10.41	29.25	46.00	16.75	
	1.352	15.01	10.42	25.43	46.00	20.57	
	1.970	12.37	10.44	22.81	46.00	23.19	

TEST ENGINEER: KALSI CHEN

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-50P7000U Humidity : 48%RH

Test Mode : HDMI1 Date of Test : Jun 16, 2017
1920*1080@60Hz &
1kHz Playing

Test Line	Frequency (MHz)	Meter Reading dB(μ V)	Factor (dB)	Emission Level dB(μ V)	Limits dB(μ V)	Margin (dB)	Remark
Line	0.153	39.58	10.58	50.16	65.82	15.66	QP
	0.385	31.54	10.44	41.98	58.17	16.19	
	0.529	30.05	10.40	40.45	56.00	15.55	
	0.611	30.75	10.40	41.15	56.00	14.85	
	0.844	26.94	10.41	37.35	56.00	18.65	
	1.141	27.86	10.41	38.27	56.00	17.73	
	AV	0.153	32.58	10.58	43.16	55.82	12.66
		0.385	24.54	10.44	34.98	48.17	13.19
		0.529	24.05	10.40	34.45	46.00	11.55
		0.611	16.75	10.40	27.15	46.00	18.85
0.844		14.94	10.41	25.35	46.00	20.65	
1.141		17.86	10.41	28.27	46.00	17.73	
Neutral	0.152	36.21	10.58	46.79	65.91	19.12	QP
	0.385	22.97	10.43	33.40	58.17	24.77	
	0.529	25.21	10.39	35.60	56.00	20.40	
	0.839	29.46	10.41	39.87	56.00	16.13	
	1.141	27.80	10.41	38.21	56.00	17.79	
	1.433	25.78	10.43	36.21	56.00	19.79	
	AV	0.152	23.21	10.58	33.79	55.91	22.12
		0.385	14.97	10.43	25.40	48.17	22.77
		0.529	16.21	10.39	26.60	46.00	19.40
		0.839	18.46	10.41	28.87	46.00	17.13
1.141		16.80	10.41	27.21	46.00	18.79	
1.433		15.78	10.43	26.21	46.00	19.79	

TEST ENGINEER: KALSI CHEN

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-50P7000U Humidity : 48%RH

Test Mode : HDMI1 Date of Test : Jun 16, 2017
1280*1024@60Hz &
1kHz Playing

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.152	40.86	10.59	51.45	65.91	14.46	QP
	0.381	32.51	10.44	42.95	58.25	15.30	
	0.529	34.59	10.40	44.99	56.00	11.01	
	0.611	28.23	10.40	38.63	56.00	17.37	
	0.830	25.88	10.41	36.29	56.00	19.71	
	1.153	27.50	10.41	37.91	56.00	18.09	
	AV	0.152	32.86	10.59	43.45	55.91	12.46
		0.381	24.51	10.44	34.95	48.25	13.30
		0.529	24.59	10.40	34.99	46.00	11.01
		0.611	15.23	10.40	25.63	46.00	20.37
		0.830	14.88	10.41	25.29	46.00	20.71
		1.153	15.50	10.41	25.91	46.00	20.09
Neutral	0.153	34.84	10.57	45.41	65.82	20.41	QP
	0.385	22.01	10.43	32.44	58.17	25.73	
	0.524	25.51	10.39	35.90	56.00	20.10	
	0.621	28.63	10.39	39.02	56.00	16.98	
	0.839	28.29	10.41	38.70	56.00	17.30	
	1.141	24.33	10.41	34.74	56.00	21.26	
	AV	0.153	23.84	10.57	34.41	55.82	21.41
		0.385	14.01	10.43	24.44	48.17	23.73
		0.524	16.51	10.39	26.90	46.00	19.10
		0.621	17.63	10.39	28.02	46.00	17.98
		0.839	16.29	10.41	26.70	46.00	19.30
		1.141	12.33	10.41	22.74	46.00	23.26

TEST ENGINEER: KALSI CHEN

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-50P7000U Humidity : 48%RH

Test Mode : HDMI1 640*480@60Hz & 1kHz Playing Date of Test : Jun 16, 2017

Test Line	Frequency (MHz)	Meter Reading dB(μ V)	Factor (dB)	Emission Level dB(μ V)	Limits dB(μ V)	Margin (dB)	Remark
Line	0.161	40.37	10.57	50.94	65.43	14.49	QP
	0.406	31.91	10.43	42.34	57.73	15.39	
	0.552	32.21	10.40	42.61	56.00	13.39	
	0.720	28.65	10.41	39.06	56.00	16.94	
	0.943	25.30	10.41	35.71	56.00	20.29	
	1.338	27.59	10.42	38.01	56.00	17.99	
	0.161	32.37	10.57	42.94	55.43	12.49	AV
	0.406	23.91	10.43	34.34	47.73	13.39	
	0.552	25.21	10.40	35.61	46.00	10.39	
	0.720	15.65	10.41	26.06	46.00	19.94	
	0.943	14.30	10.41	24.71	46.00	21.29	
	1.338	16.59	10.42	27.01	46.00	18.99	
Neutral	0.159	35.80	10.57	46.37	65.52	19.15	QP
	0.402	22.67	10.42	33.09	57.81	24.72	
	0.552	24.14	10.39	34.53	56.00	21.47	
	0.634	28.06	10.39	38.45	56.00	17.55	
	0.871	27.93	10.41	38.34	56.00	17.66	
	1.352	25.73	10.42	36.15	56.00	19.85	
	0.159	23.80	10.57	34.37	55.52	21.15	AV
	0.402	14.67	10.42	25.09	47.81	22.72	
	0.552	16.14	10.39	26.53	46.00	19.47	
	0.634	19.06	10.39	29.45	46.00	16.55	
	0.871	14.93	10.41	25.34	46.00	20.66	
	1.352	13.73	10.42	24.15	46.00	21.85	

TEST ENGINEER: KALSI CHEN

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-50P7000U Humidity : 48%RH

Test Mode : HDMI2 Date of Test : Jun 16, 2017
3840*2160@60Hz &
1kHz playing

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark	
Line	0.159	39.18	10.58	49.76	65.52	15.76	QP	
	0.385	32.48	10.44	42.92	58.17	15.25		
	0.524	32.79	10.40	43.19	56.00	12.81		
	0.611	28.90	10.40	39.30	56.00	16.70		
	0.839	25.05	10.41	35.46	56.00	20.54		
	1.282	27.78	10.42	38.20	56.00	17.80		
		0.159	32.18	10.58	42.76	55.52	12.76	AV
		0.385	24.48	10.44	34.92	48.17	13.25	
		0.524	21.79	10.40	32.19	46.00	13.81	
		0.611	13.90	10.40	24.30	46.00	21.70	
		0.839	14.05	10.41	24.46	46.00	21.54	
		1.282	15.78	10.42	26.20	46.00	19.80	
Neutral	0.159	36.08	10.57	46.65	65.52	18.87	QP	
	0.408	21.51	10.42	31.93	57.68	25.75		
	0.552	24.13	10.39	34.52	56.00	21.48		
	0.634	29.88	10.39	40.27	56.00	15.73		
	0.871	29.68	10.41	40.09	56.00	15.91		
	1.338	25.43	10.42	35.85	56.00	20.15		
		0.159	23.08	10.57	33.65	55.52	21.87	AV
		0.408	15.51	10.42	25.93	47.68	21.75	
		0.552	17.13	10.39	27.52	46.00	18.48	
		0.634	18.88	10.39	29.27	46.00	16.73	
		0.871	15.68	10.41	26.09	46.00	19.91	
		1.338	12.43	10.42	22.85	46.00	23.15	

TEST ENGINEER: KALSI CHEN

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-50P7000U Humidity : 48%RH

Test Mode : HDMI3 Date of Test : Jun 16, 2017
3840*2160@30Hz &
1kHz playing

Test Line	Frequency (MHz)	Meter Reading dB(μ V)	Factor (dB)	Emission Level dB(μ V)	Limits dB(μ V)	Margin (dB)	Remark	
Line	0.152	40.62	10.59	51.21	65.91	14.70	QP	
	0.303	32.93	10.48	43.41	60.15	16.74		
	0.385	34.35	10.44	44.79	58.17	13.38		
	0.611	28.02	10.40	38.42	56.00	17.58		
	0.830	25.01	10.41	35.42	56.00	20.58		
	1.141	27.19	10.41	37.60	56.00	18.40		
		0.152	32.62	10.59	43.21	55.91	12.70	AV
		0.303	24.93	10.48	35.41	50.15	14.74	
		0.385	25.35	10.44	35.79	48.17	12.38	
		0.611	13.02	10.40	23.42	46.00	22.58	
		0.830	14.01	10.41	24.42	46.00	21.58	
		1.141	15.19	10.41	25.60	46.00	20.40	
Neutral	0.152	36.31	10.58	46.89	65.91	19.02	QP	
	0.385	22.09	10.43	32.52	58.17	25.65		
	0.529	24.11	10.39	34.50	56.00	21.50		
	0.839	30.14	10.41	40.55	56.00	15.45		
	1.141	29.62	10.41	40.03	56.00	15.97		
	1.449	25.74	10.43	36.17	56.00	19.83		
		0.152	23.31	10.58	33.89	55.91	22.02	AV
		0.385	14.09	10.43	24.52	48.17	23.65	
		0.529	16.11	10.39	26.50	46.00	19.50	
		0.839	19.14	10.41	29.55	46.00	16.45	
		1.141	15.62	10.41	26.03	46.00	19.97	
		1.449	12.74	10.43	23.17	46.00	22.83	

TEST ENGINEER: KALSI CHEN

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-50P7000U Humidity : 48%RH

Test Mode : HDMI4 Date of Test : Jun 16, 2017
3840*2160@30Hz &
1kHz playing

Test Line	Frequency (MHz)	Meter Reading dB(μ V)	Factor (dB)	Emission Level dB(μ V)	Limits dB(μ V)	Margin (dB)	Remark	
Line	0.151	40.71	10.59	51.30	65.96	14.66	QP	
	0.381	32.45	10.44	42.89	58.25	15.36		
	0.529	32.86	10.40	43.26	56.00	12.74		
	0.611	28.20	10.40	38.60	56.00	17.40		
	0.839	29.88	10.41	40.29	56.00	15.71		
	1.141	27.84	10.41	38.25	56.00	17.75		
		0.151	32.71	10.59	43.30	55.96	12.66	AV
		0.381	24.45	10.44	34.89	48.25	13.36	
		0.529	19.86	10.40	30.26	46.00	15.74	
		0.611	16.20	10.40	26.60	46.00	19.40	
		0.839	17.88	10.41	28.29	46.00	17.71	
		1.141	15.84	10.41	26.25	46.00	19.75	
Neutral	0.153	36.93	10.57	47.50	65.82	18.32	QP	
	0.385	22.05	10.43	32.48	58.17	25.69		
	0.524	25.37	10.39	35.76	56.00	20.24		
	0.621	29.73	10.39	40.12	56.00	15.88		
	0.839	29.80	10.41	40.21	56.00	15.79		
	1.153	25.83	10.41	36.24	56.00	19.76		
		0.153	23.93	10.57	34.50	55.82	21.32	AV
		0.385	15.05	10.43	25.48	48.17	22.69	
		0.524	16.37	10.39	26.76	46.00	19.24	
		0.621	17.73	10.39	28.12	46.00	17.88	
		0.839	16.80	10.41	27.21	46.00	18.79	
		1.153	12.83	10.41	23.24	46.00	22.76	

TEST ENGINEER: KALSI CHEN

EUT : LED LCD TV Temperature : 22°C
 Model No. : LC-50P7000U Humidity : 48%RH
 Test Mode : HDMI 1080P Date of Test : Jun 16, 2017

Test Line	Frequency (MHz)	Meter Reading dB(μ V)	Factor (dB)	Emission Level dB(μ V)	Limits dB(μ V)	Margin (dB)	Remark
Line	0.161	40.32	10.57	50.89	65.43	14.54	QP
	0.239	32.24	10.51	42.75	62.13	19.38	
	0.402	33.92	10.43	44.35	57.81	13.46	
	0.716	28.82	10.41	39.23	56.00	16.77	
	0.871	26.75	10.41	37.16	56.00	18.84	
	1.352	26.94	10.42	37.36	56.00	18.64	
	AV	0.161	32.32	10.57	42.89	55.43	12.54
		0.239	24.24	10.51	34.75	52.13	17.38
		0.402	25.92	10.43	36.35	47.81	11.46
		0.716	14.82	10.41	25.23	46.00	20.77
		0.871	15.75	10.41	26.16	46.00	19.84
		1.352	15.94	10.42	26.36	46.00	19.64
Neutral	0.161	35.73	10.56	46.29	65.43	19.14	QP
	0.408	22.67	10.42	33.09	57.68	24.59	
	0.552	24.30	10.39	34.69	56.00	21.31	
	0.641	30.98	10.39	41.37	56.00	14.63	
	0.871	28.72	10.41	39.13	56.00	16.87	
	1.338	25.67	10.42	36.09	56.00	19.91	
	AV	0.161	23.73	10.56	34.29	55.43	21.14
		0.408	15.67	10.42	26.09	47.68	21.59
		0.552	17.30	10.39	27.69	46.00	18.31
		0.641	19.98	10.39	30.37	46.00	15.63
		0.871	15.72	10.41	26.13	46.00	19.87
		1.338	13.67	10.42	24.09	46.00	21.91

TEST ENGINEER: KALSI CHEN

EUT : LED LCD TV Temperature : 22°C
 Model No. : LC-50P7000U Humidity : 48%RH
 Test Mode : USB Play Date of Test : Jun 16, 2017

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark	
Line	0.159	40.68	10.58	51.26	65.52	14.26	QP	
	0.408	31.97	10.43	42.40	57.68	15.28		
	0.727	32.86	10.41	43.27	56.00	12.73		
	0.871	27.80	10.41	38.21	56.00	17.79		
	1.117	26.74	10.41	37.15	56.00	18.85		
	1.367	27.82	10.42	38.24	56.00	17.76		
		0.159	32.68	10.58	43.26	55.52	12.26	AV
		0.408	23.97	10.43	34.40	47.68	13.28	
		0.727	22.86	10.41	33.27	46.00	12.73	
		0.871	14.80	10.41	25.21	46.00	20.79	
		1.117	14.74	10.41	25.15	46.00	20.85	
		1.367	16.82	10.42	27.24	46.00	18.76	
	Neutral	0.161	35.57	10.56	46.13	65.43	19.30	QP
		0.406	21.23	10.42	31.65	57.73	26.08	
0.634		25.67	10.39	36.06	56.00	19.94		
0.862		30.07	10.41	40.48	56.00	15.52		
1.367		28.66	10.42	39.08	56.00	16.92		
1.585		24.71	10.43	35.14	56.00	20.86		
		0.161	23.57	10.56	34.13	55.43	21.30	AV
		0.406	14.23	10.42	24.65	47.73	23.08	
		0.634	16.67	10.39	27.06	46.00	18.94	
		0.862	17.07	10.41	27.48	46.00	18.52	
		1.367	15.66	10.42	26.08	46.00	19.92	
		1.585	12.71	10.43	23.14	46.00	22.86	

TEST ENGINEER: KALSI CHEN

EUT : LED LCD TV Temperature : 22°C
 Model No. : LC-50P7000U Humidity : 48%RH
 Test Mode : LAN Play Date of Test : Jun 16, 2017

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.159	40.27	10.58	50.85	65.52	14.67	QP
	0.402	32.91	10.43	43.34	57.81	14.47	
	0.634	32.52	10.40	42.92	56.00	13.08	
	0.871	28.79	10.41	39.20	56.00	16.80	
	1.043	25.97	10.41	36.38	56.00	19.62	
	1.352	27.73	10.42	38.15	56.00	17.85	
	AV	0.159	31.27	10.58	41.85	55.52	13.67
		0.402	24.91	10.43	35.34	47.81	12.47
		0.634	25.52	10.40	35.92	46.00	10.08
		0.871	13.79	10.41	24.20	46.00	21.80
		1.043	14.97	10.41	25.38	46.00	20.62
		1.352	15.73	10.42	26.15	46.00	19.85
Neutral	0.159	36.58	10.57	47.15	65.52	18.37	QP
	0.408	21.76	10.42	32.18	57.68	25.50	
	0.552	25.25	10.39	35.64	56.00	20.36	
	0.871	29.70	10.41	40.11	56.00	15.89	
	1.338	29.66	10.42	40.08	56.00	15.92	
	1.585	25.33	10.43	35.76	56.00	20.24	
	AV	0.159	23.58	10.57	34.15	55.52	21.37
		0.408	15.76	10.42	26.18	47.68	21.50
		0.552	16.25	10.39	26.64	46.00	19.36
		0.871	17.70	10.41	28.11	46.00	17.89
		1.338	16.66	10.42	27.08	46.00	18.92
		1.585	12.33	10.43	22.76	46.00	23.24

TEST ENGINEER: KALSI CHEN

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-50P7000U Humidity : 48%RH

Test Mode : MHL Date of Test : Jun 16, 2017

Test Line	Frequency (MHz)	Meter Reading dB(μ V)	Factor (dB)	Emission Level dB(μ V)	Limits dB(μ V)	Margin (dB)	Remark	
Line	0.161	39.30	10.57	49.87	65.43	15.56	QP	
	0.406	31.83	10.43	42.26	57.73	15.47		
	0.552	32.09	10.40	42.49	56.00	13.51		
	0.727	28.64	10.41	39.05	56.00	16.95		
	0.953	25.85	10.41	36.26	56.00	19.74		
	1.585	25.47	10.41	35.88	56.00	20.12		
		0.161	32.30	10.57	42.87	55.43	12.56	AV
		0.406	23.83	10.43	34.26	47.73	13.47	
		0.552	25.09	10.40	35.49	46.00	10.51	
		0.727	15.64	10.41	26.05	46.00	19.95	
		0.953	14.85	10.41	25.26	46.00	20.74	
		1.585	14.47	10.41	24.88	46.00	21.12	
Neutral	0.159	35.87	10.57	46.44	65.52	19.08	QP	
	0.402	21.34	10.42	31.76	57.81	26.05		
	0.558	25.96	10.39	36.35	56.00	19.65		
	0.871	29.92	10.41	40.33	56.00	15.67		
	1.032	27.53	10.41	37.94	56.00	18.06		
	1.367	25.01	10.42	35.43	56.00	20.57		
		0.159	24.87	10.57	35.44	55.52	20.08	AV
		0.402	15.34	10.42	25.76	47.81	22.05	
		0.558	16.96	10.39	27.35	46.00	18.65	
		0.871	18.92	10.41	29.33	46.00	16.67	
		1.032	14.53	10.41	24.94	46.00	21.06	
		1.367	13.01	10.42	23.43	46.00	22.57	

TEST ENGINEER: KALSI CHEN

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-50P7000U Humidity : 48%RH

Test Mode : WIFI Date of Test : Jun 16, 2017

Test Line	Frequency (MHz)	Meter Reading dB(μ V)	Factor (dB)	Emission Level dB(μ V)	Limits dB(μ V)	Margin (dB)	Remark
Line	0.159	40.47	10.58	51.05	65.52	14.47	QP
	0.408	31.19	10.43	41.62	57.68	16.06	
	0.552	30.99	10.40	41.39	56.00	14.61	
	0.716	28.28	10.41	38.69	56.00	17.31	
	0.871	26.58	10.41	36.99	56.00	19.01	
	1.141	26.32	10.41	36.73	56.00	19.27	
	0.159	30.47	10.58	41.05	55.52	14.47	AV
	0.408	23.19	10.43	33.62	47.68	14.06	
	0.552	20.99	10.40	31.39	46.00	14.61	
	0.716	18.28	10.41	28.69	46.00	17.31	
	0.871	14.58	10.41	24.99	46.00	21.01	
	1.141	16.32	10.41	26.73	46.00	19.27	
Neutral	0.161	35.55	10.56	46.11	65.43	19.32	QP
	0.402	23.33	10.42	33.75	57.81	24.06	
	0.558	25.02	10.39	35.41	56.00	20.59	
	0.871	29.00	10.41	39.41	56.00	16.59	
	1.032	28.10	10.41	38.51	56.00	17.49	
	1.352	25.23	10.42	35.65	56.00	20.35	
	0.161	24.55	10.56	35.11	55.43	20.32	AV
	0.402	15.33	10.42	25.75	47.81	22.06	
	0.558	16.02	10.39	26.41	46.00	19.59	
	0.871	18.00	10.41	28.41	46.00	17.59	
	1.032	15.10	10.41	25.51	46.00	20.49	
	1.352	13.23	10.42	23.65	46.00	22.35	

TEST ENGINEER: KALSI CHEN

4 RADIATED EMISSION TEST

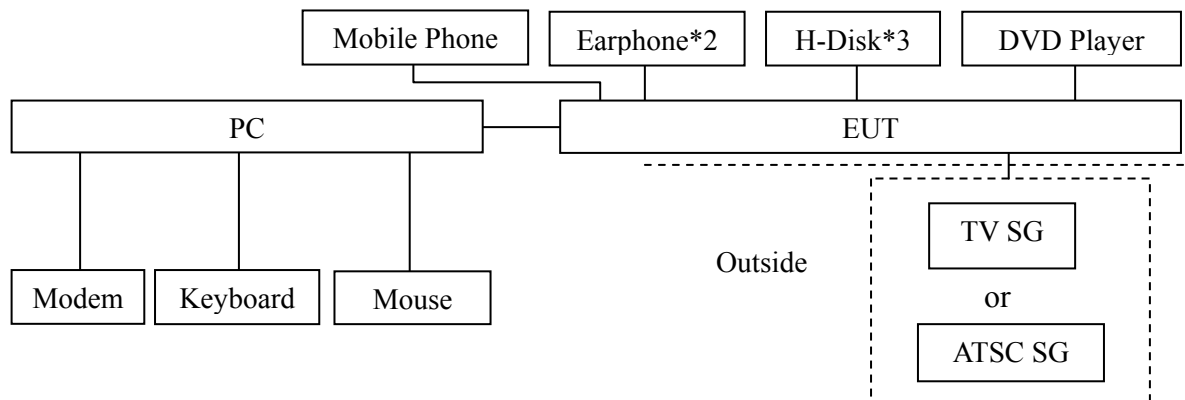
4.1 Test Equipment

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, 2017	May 06, 2018
2.	Preamplifier	Agilent	8447D	2944A06664	Apr 27, 2017	Apr 26, 2018
3.	Preamplifier	HP	8449B	3008A00864	Mar 20, 2017	Mar 19, 2018
4.	Bi-log Antenna	TESEQ	CBL6112D	23193	May 15, 2017	May 14, 2018
5.	Horn Antenna	EMCO	3115	9607-4878	Jun 02, 2017	Jun 01, 2018
6.	Spectrum	Agilent	E7405A	MY45106600	Apr 26, 2017	Apr 25, 2018
7.	Software	Audix	e3	6.2007-9-10	--	--

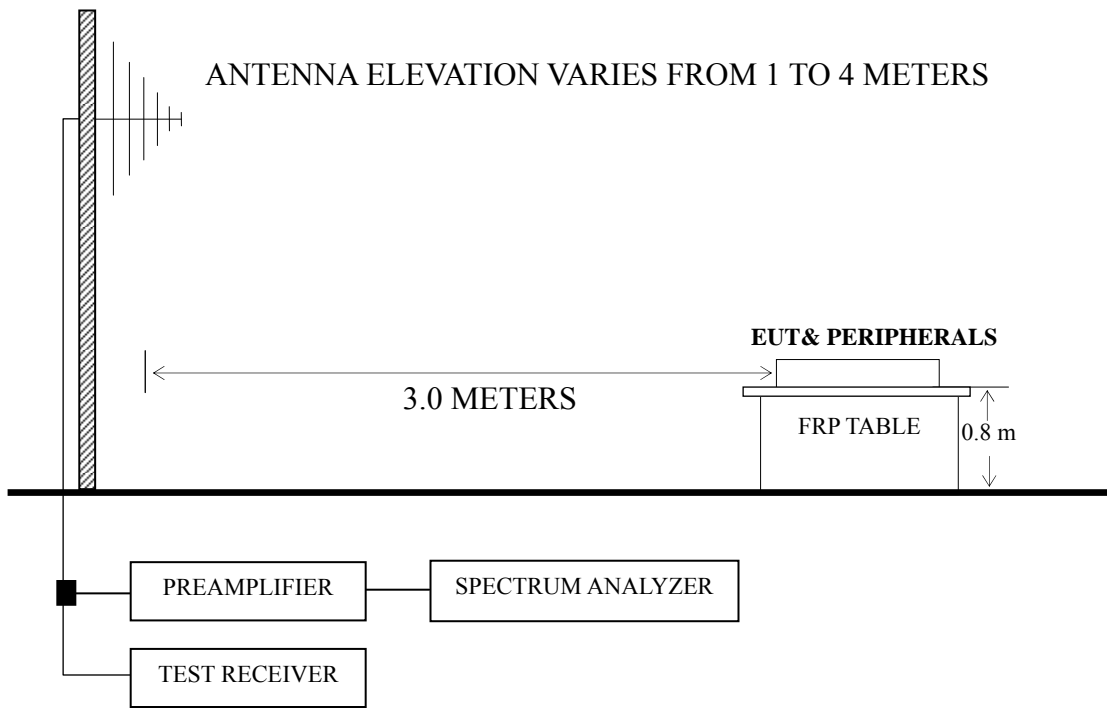
4.2 Block Diagram of Test Setup

4.2.1 EUT & Peripherals



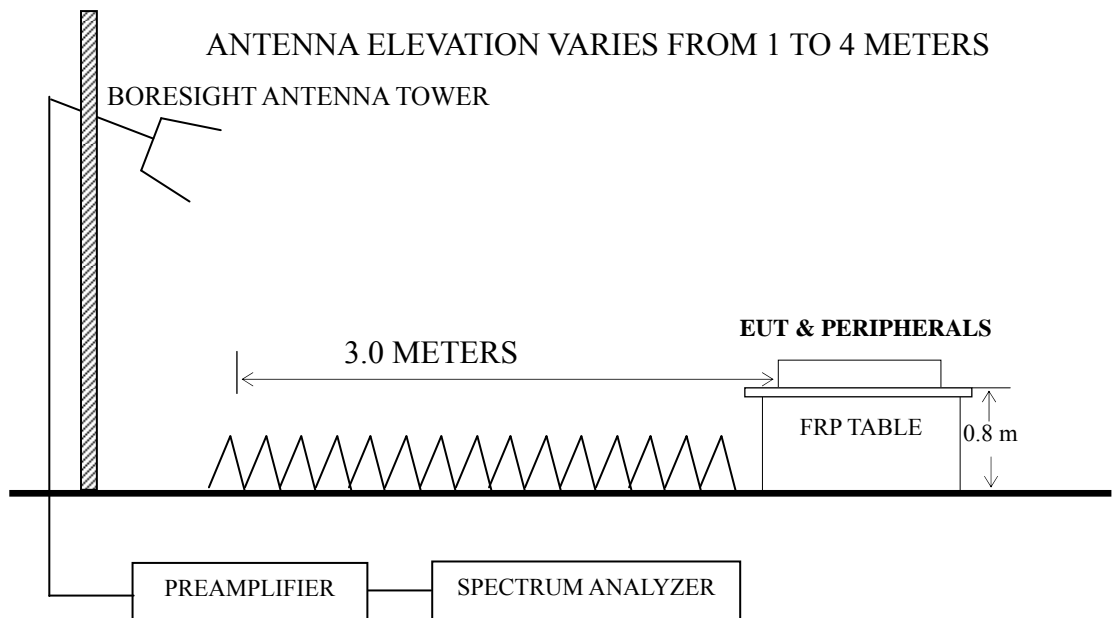
4.2.2 Radiated emission test setup

4.2.2.1 Below 1GHz



■ : 50 ohm Coaxial Switch

4.2.2.2 Above 1GHz



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

Frequency (MHz)	Distance (m)	Field strength limits	
		($\mu\text{V/m}$)	dB ($\mu\text{V/m}$)
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 ($\mu\text{V/m}$) = 20 log Emission Level ($\mu\text{V/m}$)
 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
HDMI4 3840*2160@30Hz & 1kHz playing	P30-P31
HDMI4 1920*1080@60Hz & 1kHz playing	P32
HDMI4 1280*1024@60Hz & 1kHz playing	P33
HDMI4 640*480@60Hz & 1kHz playing	P34
HDMI1 3840*2160@60Hz & 1kHz playing	P35
HDMI2 3840*2160@60Hz & 1kHz playing	P36
HDMI3 3840*2160@30Hz & 1kHz playing	P37
HDMI1080P	P38
USB Play	P39
LAN Play	P40
MHL	P41
WIFI	P42

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

Emission Level = Antenna Factor + Cable Loss – Preamp Factor + 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.

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-50P7000U Humidity : 60%RH

Test Mode : HDMI4 3840*2160@30Hz & 1kHz Playing Date of Test : Jun 23, 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	90.855	20.75	10.98	0.93	--	32.66	43.50	10.84	QP
	132.221	21.33	12.28	1.19	--	34.80	43.50	8.70	
	275.157	21.14	13.60	1.71	--	36.45	46.00	9.55	
	431.032	20.36	17.32	2.14	--	39.82	46.00	6.18	
	661.151	14.49	19.90	2.62	--	37.01	46.00	8.99	
	900.147	18.03	20.90	3.05	--	41.98	46.00	4.02	PK
	1464.692	52.47	25.48	3.84	35.79	46.00	74.00	28.00	
	2069.805	49.31	27.64	4.53	35.20	46.28	74.00	27.72	
	2626.779	50.23	28.97	5.11	35.20	49.11	74.00	24.89	AV
	1464.692	36.54	25.48	3.84	35.79	30.07	54.00	23.93	
	2069.805	33.91	27.64	4.53	35.20	30.88	54.00	23.12	
2626.779	38.78	28.97	5.11	35.20	37.66	54.00	16.34		

TEST ENGINEER: LEON YUN

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-50P7000U Humidity : 60%RH

Test Mode : HDMI4 3840*2160@30Hz & 1kHz Playing Date of Test : Jun 23, 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	31.955	13.23	17.70	0.57	--	31.50	40.00	8.50	QP
	84.110	22.00	10.11	0.89	--	33.00	40.00	7.00	
	132.221	22.07	12.28	1.19	--	35.54	43.50	7.96	
	205.675	22.81	9.90	1.51	--	34.22	43.50	9.28	
	429.523	23.16	17.30	2.14	--	42.60	46.00	3.40	
	890.728	15.42	21.00	3.03	--	39.45	46.00	6.55	PK
	1189.818	56.58	24.40	3.52	36.17	48.33	74.00	25.67	
	1752.110	60.48	26.63	4.11	35.45	55.77	74.00	18.23	
	2655.171	53.66	29.10	5.18	35.20	52.74	74.00	21.26	AV
	1189.818	32.47	24.40	3.52	36.17	24.22	54.00	29.78	
	1752.110	45.63	26.63	4.11	35.45	40.92	54.00	13.08	
2655.171	39.66	29.10	5.18	35.20	38.74	54.00	15.26		

TEST ENGINEER: LEON YUN

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-50P7000U Humidity : 60%RH

Test Mode : HDMI4 1920*1080@60Hz & 1kHz Playing Date of Test : Jun 23, 2017

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)
Horizontal	85.598	20.53	10.37	0.90	31.80	40.00	8.20
	129.923	20.66	12.50	1.18	34.34	43.50	9.16
	275.157	21.84	13.60	1.71	37.15	46.00	8.85
	428.019	18.98	17.27	2.13	38.38	46.00	7.62
	668.142	14.56	20.05	2.64	37.25	46.00	8.75
	900.147	15.91	20.90	3.05	39.86	46.00	6.14
Vertical	34.037	13.29	16.90	0.59	30.78	40.00	9.22
	80.927	22.33	9.53	0.86	32.72	40.00	7.28
	130.837	22.13	12.39	1.19	35.71	43.50	7.79
	275.157	17.49	13.60	1.71	32.80	46.00	13.20
	432.546	20.36	17.32	2.14	39.82	46.00	6.18
	890.728	13.63	21.00	3.03	37.66	46.00	8.34

TEST ENGINEER: LEON YUN

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-50P7000U Humidity : 60%RH

Test Mode : HDMI4 1280*1024@60Hz Date of Test : Jun 23, 2017
& 1kHz Playing

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	82.938	21.70	9.91	0.88	32.49	40.00	7.51
	132.221	19.98	12.28	1.19	33.45	43.50	10.05
	207.123	22.69	10.14	1.51	34.34	43.50	9.16
	281.008	21.17	13.62	1.72	36.51	46.00	9.49
	429.523	19.91	17.30	2.14	39.35	46.00	6.65
	893.857	15.46	20.97	3.03	39.46	46.00	6.54
Vertical	31.955	13.27	17.70	0.57	31.54	40.00	8.46
	84.110	22.07	10.11	0.89	33.07	40.00	6.93
	130.837	22.55	12.39	1.19	36.13	43.50	7.37
	275.157	18.19	13.60	1.71	33.50	46.00	12.50
	429.523	21.38	17.30	2.14	40.82	46.00	5.18
	724.261	11.80	20.47	2.74	35.01	46.00	10.99

TEST ENGINEER: LEON YUN

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-50P7000U Humidity : 60%RH

Test Mode : HDMI4 640*480@60Hz & 1kHz Playing Date of Test : Jun 23, 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	84.110	22.30	10.11	0.89	33.30	40.00	6.70
	128.113	20.22	12.63	1.17	34.02	43.50	9.48
	275.157	21.09	13.60	1.71	36.40	46.00	9.60
	429.523	18.97	17.30	2.14	38.41	46.00	7.59
	663.473	15.23	19.95	2.64	37.82	46.00	8.18
	896.997	16.79	20.93	3.03	40.75	46.00	5.25
Vertical	31.955	11.68	17.70	0.57	29.95	40.00	10.05
	82.938	22.40	9.91	0.88	33.19	40.00	6.81
	129.923	21.45	12.50	1.18	35.13	43.50	8.37
	210.048	20.02	10.50	1.52	32.04	43.50	11.46
	429.523	20.79	17.30	2.14	40.23	46.00	5.77
	893.857	11.78	20.97	3.03	35.78	46.00	10.22

TEST ENGINEER: LEON YUN

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-50P7000U Humidity : 60%RH

Test Mode : HDMI1 3840*2160@60Hz Date of Test : Jun 23, 2017
& 1kHz playing

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)
Horizontal	85.898	22.61	10.37	0.91	33.89	40.00	6.11
	134.088	21.32	12.06	1.20	34.58	43.50	8.92
	275.157	22.92	13.60	1.71	38.23	46.00	7.77
	426.521	21.43	17.23	2.13	40.79	46.00	5.21
	658.836	14.49	19.90	2.62	37.01	46.00	8.99
	893.857	16.41	20.97	3.03	40.41	46.00	5.59
Vertical	85.898	20.24	10.37	0.91	31.52	40.00	8.48
	202.810	23.88	9.80	1.50	35.18	43.50	8.32
	282.985	24.32	13.65	1.73	39.70	46.00	6.30
	332.519	24.33	14.89	1.87	41.09	46.00	4.91
	426.521	22.11	17.23	2.13	41.47	46.00	4.53
	955.438	16.01	21.50	3.14	40.65	46.00	5.35

TEST ENGINEER: LEON YUN

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-50P7000U Humidity : 60%RH

Test Mode : HDMI2 3840*2160@60Hz & 1kHz playing Date of Test : Jun 23, 2017

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)
Horizontal	85.898	21.32	10.37	0.91	32.60	40.00	7.40
	133.151	21.68	12.17	1.20	35.05	43.50	8.45
	235.816	21.48	11.76	1.60	34.84	46.00	11.16
	283.979	20.17	13.68	1.73	35.58	46.00	10.42
	426.521	20.04	17.23	2.13	39.40	46.00	6.60
	900.147	16.35	20.90	3.05	40.30	46.00	5.70
Vertical	84.999	19.35	10.30	0.90	30.55	40.00	9.45
	235.816	24.11	11.76	1.60	37.47	46.00	8.53
	281.995	24.45	13.65	1.73	39.83	46.00	6.17
	337.216	24.30	15.01	1.89	41.20	46.00	4.80
	425.028	21.85	17.20	2.13	41.18	46.00	4.82
	945.440	15.49	21.37	3.12	39.98	46.00	6.02

TEST ENGINEER: LEON YUN

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-50P7000U Humidity : 60%RH

Test Mode : HDMI3 3840*2160@30Hz & 1kHz playing Date of Test : Jun 23, 2017

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)
Horizontal	85.898	20.45	10.37	0.91	31.73	40.00	8.27
	132.221	19.87	12.28	1.19	33.34	43.50	10.16
	281.008	20.81	13.62	1.72	36.15	46.00	9.85
	429.523	19.64	17.30	2.14	39.08	46.00	6.92
	663.473	14.43	19.95	2.64	37.02	46.00	8.98
	893.857	16.90	20.97	3.03	40.90	46.00	5.10
Vertical	32.067	12.67	17.65	0.57	30.89	40.00	9.11
	84.110	22.59	10.11	0.89	33.59	40.00	6.41
	130.837	22.05	12.39	1.19	35.63	43.50	7.87
	297.224	18.09	13.90	1.76	33.75	46.00	12.25
	428.019	21.58	17.27	2.13	40.98	46.00	5.02
	890.728	14.71	21.00	3.03	38.74	46.00	7.26

TEST ENGINEER: LEON YUN

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-50P7000U Humidity : 60%RH

Test Mode : HDMI1080P Date of Test : Jun 23, 2017

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)
Horizontal	89.905	18.82	10.76	0.93	30.51	43.50	12.99
	275.157	24.18	13.60	1.71	39.49	46.00	6.51
	336.035	21.05	14.97	1.89	37.91	46.00	8.09
	393.472	19.64	16.23	2.04	37.91	46.00	8.09
	429.523	18.87	17.30	2.14	38.31	46.00	7.69
	955.438	15.44	21.50	3.14	40.08	46.00	5.92
Vertical	87.112	20.17	10.51	0.92	31.60	40.00	8.40
	235.816	20.92	11.76	1.60	34.28	46.00	11.72
	275.157	20.77	13.60	1.71	36.08	46.00	9.92
	429.523	17.55	17.30	2.14	36.99	46.00	9.01
	721.726	12.03	20.50	2.73	35.26	46.00	10.74
	900.147	12.52	20.90	3.05	36.47	46.00	9.53

TEST ENGINEER: LEON YUN

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-50P7000U Humidity : 60%RH

Test Mode : USB Play Date of Test : Jun 23, 2017

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)
Horizontal	77.865	19.29	8.96	0.85	29.10	40.00	10.90
	141.826	17.52	12.27	1.24	31.03	43.50	12.47
	275.157	24.82	13.60	1.71	40.13	46.00	5.87
	345.595	21.50	15.21	1.92	38.63	46.00	7.37
	719.200	12.84	20.48	2.73	36.05	46.00	9.95
	945.440	14.88	21.37	3.12	39.37	46.00	6.63
Vertical	80.927	18.81	9.53	0.86	29.20	40.00	10.80
	127.218	16.10	12.72	1.17	29.99	43.50	13.51
	236.645	19.91	11.82	1.60	33.33	46.00	12.67
	275.157	21.34	13.60	1.71	36.65	46.00	9.35
	426.521	17.36	17.23	2.13	36.72	46.00	9.28
	721.726	12.53	20.50	2.73	35.76	46.00	10.24

TEST ENGINEER: LEON YUN

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-50P7000U Humidity : 60%RH

Test Mode : LAN Play Date of Test : Jun 23, 2017

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)
Horizontal	81.497	19.01	9.66	0.87	29.54	40.00	10.46
	145.861	17.94	11.82	1.26	31.02	43.50	12.48
	235.816	24.50	11.76	1.60	37.86	46.00	8.14
	343.180	22.37	15.16	1.90	39.43	46.00	6.57
	721.726	12.69	20.50	2.73	35.92	46.00	10.08
	896.997	13.57	20.93	3.03	37.53	46.00	8.47
Vertical	32.979	10.89	17.27	0.58	28.74	40.00	11.26
	89.905	20.56	10.76	0.93	32.25	43.50	11.25
	235.816	20.12	11.76	1.60	33.48	46.00	12.52
	275.157	20.50	13.60	1.71	35.81	46.00	10.19
	429.523	16.38	17.30	2.14	35.82	46.00	10.18
	900.147	12.47	20.90	3.05	36.42	46.00	9.58

TEST ENGINEER: LEON YUN

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-50P7000U Humidity : 60%RH

Test Mode : MHL Date of Test : Jun 23, 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	77.865	18.68	8.96	0.85	28.49	40.00	11.51
	138.874	17.25	12.39	1.23	30.87	43.50	12.63
	281.008	23.86	13.62	1.72	39.20	46.00	6.80
	337.216	21.59	15.01	1.89	38.49	46.00	7.51
	432.546	18.99	17.32	2.14	38.45	46.00	7.55
	890.728	14.59	21.00	3.03	38.62	46.00	7.38
Vertical	85.898	19.81	10.37	0.91	31.09	40.00	8.91
	212.270	18.38	10.75	1.53	30.66	43.50	12.84
	275.157	20.84	13.60	1.71	36.15	46.00	9.85
	432.546	18.75	17.32	2.14	38.21	46.00	7.79
	724.261	11.62	20.47	2.74	34.83	46.00	11.17
	890.728	12.13	21.00	3.03	36.16	46.00	9.84

TEST ENGINEER: LEON YUN

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-50P7000U Humidity : 60%RH

Test Mode : WIFI Date of Test : Jun 23, 2017

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)
Horizontal	77.051	19.63	8.84	0.85	29.32	40.00	10.68
	281.008	24.61	13.62	1.72	39.95	46.00	6.05
	350.477	21.70	15.30	1.93	38.93	46.00	7.07
	429.523	18.79	17.30	2.14	38.23	46.00	7.77
	721.726	13.22	20.50	2.73	36.45	46.00	9.55
Vertical	945.440	14.84	21.37	3.12	39.33	46.00	6.67
	34.037	10.93	16.90	0.59	28.42	40.00	11.58
	87.112	19.81	10.51	0.92	31.24	40.00	8.76
	235.816	21.47	11.76	1.60	34.83	46.00	11.17
	429.523	17.73	17.30	2.14	37.17	46.00	8.83
	721.726	11.80	20.50	2.73	35.03	46.00	10.97
	900.147	11.71	20.90	3.05	35.66	46.00	10.34

TEST ENGINEER: LEON YUN

5 DEVIATION TO TEST SPECIFICATIONS

None.

6 DEBUG DESCRIPTION

The following components are used during the countermeasure procedures:

Name	M/N	Manufacturer	Location
SMcontact	SMR-TSL-4-3.5-5R	Joinset	See Internal Photos Figure 19

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

TEST ENGINEER:



(KALSI CHEN)