

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

LED LCD TV

Model No.	Brand
LC-43P7000U, LC-43P7000U +	Sharp
LC-43P70+0U, LC-43P70+0U1, LC-43P70+0U2	
LC-43P7+0U , LC-43P7+0U1, LC-43P7+0U2	
LC-43P620U, LC-43P620U+	
LC-43P6200U,LC-43P6200U+	
LC-43N7002U	

FCC ID : W9HLCDD0076

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-F17119
Date of Test : Mar 09- 14, 2017
Date of Report : Mar 28, 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.	Brand	Power Supply
Refer to Sec.2.1	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 Sec.2.1) which was tested in 3m anechoic chamber Mar 09- 14, 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.

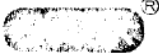
This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

The test results for EUT's TV functions are contained in No.F17118, a Verification report.

Date of Test : Mar 09- 14, 2017 Date of Report : Mar 28, 2017

Producer : Hui Min Yan
HUI MIN YAN / Assistant

Review : Byron WU
BYRON WU / Deputy Assistant Manager

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

Signatory : Byron Kwo
Authorized Signature EMC 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	:	LC-43P7000U, LC-43P7000U +, LC-43P70+0U, LC-43P70+0U1, LC-43P70+0U2, LC-43P7+0U , LC-43P7+0U1, LC-43P7+0U2, LC-43P620U,LC-43P620U+, LC-43P6200U, LC-43P6200U+, LC-43N7002U
Brand	:	Sharp
Note#1	:	The above models are all the same except for the model number. The LC-43P7000U was tested and reported in the report.
Note#2	:	“+”represents any of the Arabic numeral.
Note#3	:	The tuner port comply with the 15.111 requirement.
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.
Max Resolution	:	3840*2160@60Hz
LCD Panel	:	Manufacturer : Hisense M/N : HD426K3U51-T1K1
Tuner	:	Manufacturer : SILICON LABS M/N : Si2151-A10
WIFI Modular	:	FCC ID: PPQ-WCBN4511R12
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
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 Port:

- (1) One USB3 Port : Connected with Hard-Disk
- (2) One HDMI2 Port : Connected with PC
- (3) One HDMI1/MHL Port : Connected with Smart Mobile Phone
- (4) One Audio out Port : Connected with Earphone
- (5) One Service Port : This port does not open to customer
- (6) One USB1 Port : Connected with Hard-Disk
- (7) One USB2 Port : Connected with Hard-Disk
- (8) One ANT/CABLE IN Port : Connected with ATSC SG / TV SG

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
- (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, UL, CCC

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, 1.8m
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 : A010022-4860010X
Data Cable : Shielded, Undetachable, 1.8m.
Certificate : CE, FCC DoC

2.2.8 Hard Disk #2

Manufacturer : Tetasys
Model Number : F12
Serial Number : A010022-486006
Data Cable : Shielded, Undetachable, 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, 1.5m.
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 Smart Mobile Phone

Manufacturer : SAMSUNG
Model Number : GT-I9100G
Serial Number : 6935152011519
Certificate : CE/EMC

2.2.13 Router

Manufacturer : TP-LINK
Model Number : TL-WR800N
Serial Number : 13806805316

2.3 Description of Test Facility

Site Description : Sept. 17, 1998 file on
(No.3 3m Chamber) 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 : $U = 3.4\text{dB}$

Radiated Emission Expanded Uncertainty (30-200MHz):

$U = 4.6\text{dB}$ (Horizontal)

$U = 4.3\text{dB}$ (Vertical)

Radiated Emission Expanded Uncertainty (200M-1GHz):

$U = 4.5\text{dB}$ (Horizontal)

$U = 5.4\text{dB}$ (Vertical)

Radiated Emission Expanded Uncertainty (1GHz-6GHz):

$U = 5.1\text{dB}$

3 CONDUCTED EMISSION TEST

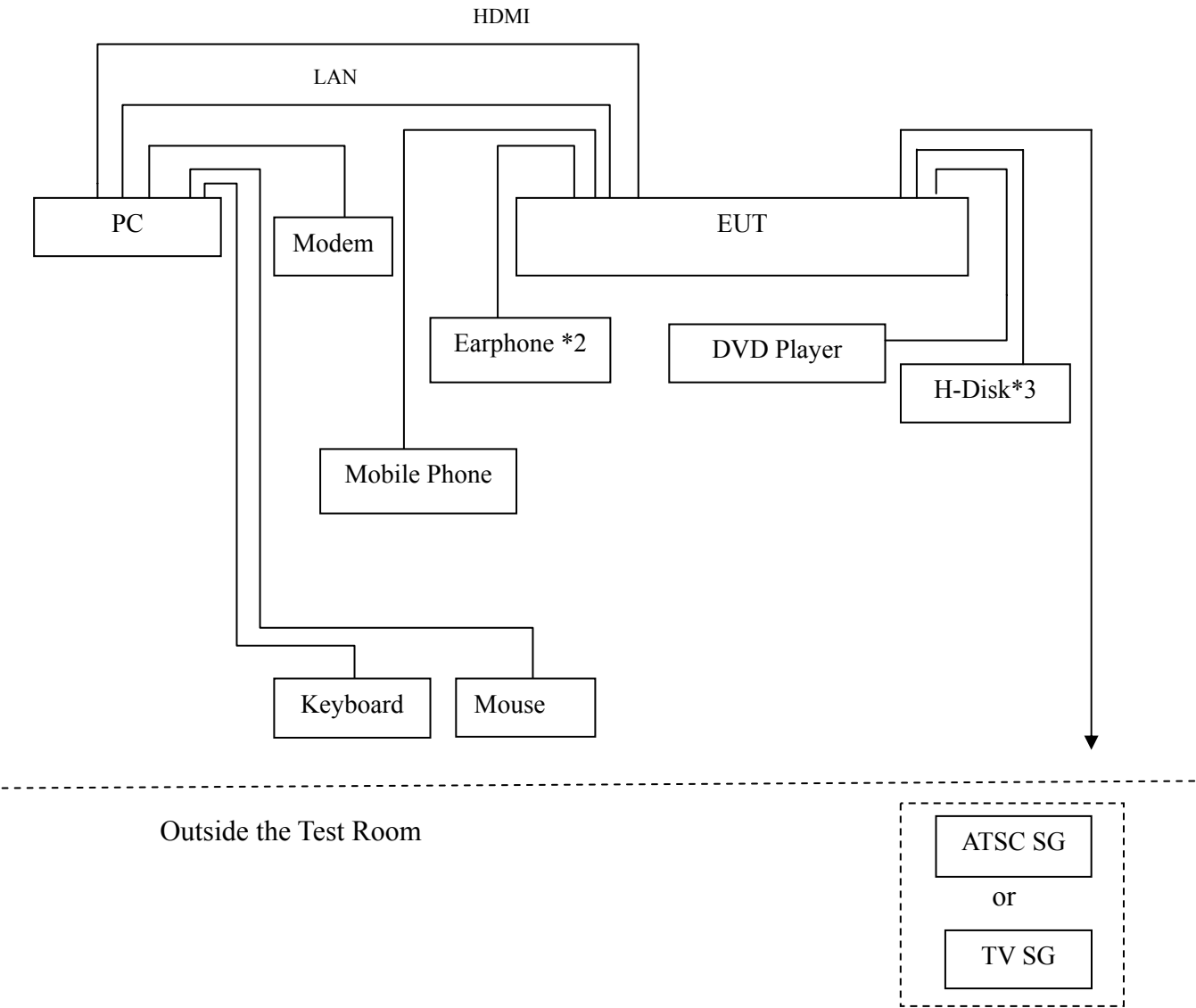
3.1 Test Equipment

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

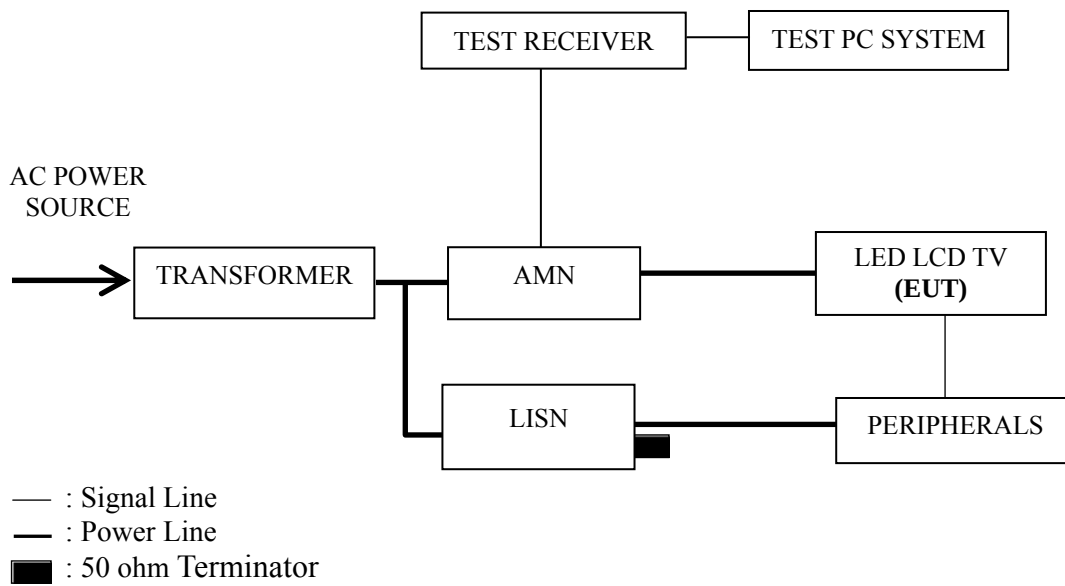
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCI	101302	Apr 27, 2016	Apr 26, 2017
2.	Artificial Mains Network (AMN)	R&S	ENV4200	100125	Jun 25, 2016	Jun 24, 2017
3.	Line Impedance Stabilization Network (LISN)	Kyoritsu	KNW-407	8-1280-4	Mar 20, 2016	Mar 19, 2017
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 (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
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
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 C63.4:2014 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	P14
HDMI2 3840*2160@60Hz & 1kHz Playing	P15
HDMI3 3840*2160@30Hz & 1kHz Playing	P16
HDMI4 3840*2160@30Hz & 1kHz Playing	P17
HDMI1 1920*1080@60Hz & 1kHz Playing	P18
HDMI1 1280*1024@60Hz & 1kHz playing	P19
HDMI1 640*480@60Hz & 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.

NOTE 4 – The worst case is for USB Play test mode. The worst emission is detected at 0.499MHz (Quasi-Peak Value) with corrected signal level of 32.35 dB (μV) (limit is 46.01 dB (μV)), when the Neutral of the EUT is connected to AMN.

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-43P7000U Humidity : 48%RH

Test Mode : HDMI1 3840*2160@60Hz Date of Test : Mar 09, 2017
& 1kHz Playing

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.223	29.36	10.51	39.87	62.70	22.83	QP
	0.499	30.14	10.40	40.54	56.01	15.47	
	0.751	29.65	10.40	40.05	56.00	15.95	
	1.223	25.70	10.41	36.11	56.00	19.89	
	1.762	26.97	10.41	37.38	56.00	18.62	
	6.698	20.67	10.47	31.14	60.00	28.86	
	0.223	18.36	10.51	28.87	52.70	23.83	AV
	0.499	20.14	10.40	30.54	46.01	15.47	
	0.751	18.65	10.40	29.05	46.00	16.95	
	1.223	9.70	10.41	20.11	46.00	25.89	
	1.762	13.97	10.41	24.38	46.00	21.62	
	6.698	10.67	10.47	21.14	50.00	28.86	
Neutral	0.237	27.52	10.49	38.01	62.22	24.21	QP
	0.499	29.28	10.39	39.67	56.01	16.34	
	0.751	28.24	10.39	38.63	56.00	17.37	
	0.989	25.47	10.40	35.87	56.00	20.13	
	1.223	26.30	10.41	36.71	56.00	19.29	
	1.744	25.03	10.43	35.46	56.00	20.54	
	0.237	14.52	10.49	25.01	52.22	27.21	AV
	0.499	20.28	10.39	30.67	46.01	15.34	
	0.751	17.24	10.39	27.63	46.00	18.37	
	0.989	15.47	10.40	25.87	46.00	20.13	
	1.223	9.30	10.41	19.71	46.00	26.29	
	1.744	13.03	10.43	23.46	46.00	22.54	

TEST ENGINEER: BYRON WU

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-43P7000U Humidity : 48%RH

Test Mode : HDMI2 3840*2160@60Hz & 1kHz Playing Date of Test : Mar 09, 2017

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.221	30.45	10.51	40.96	62.79	21.83	QP
	0.499	30.70	10.40	41.10	56.01	14.91	
	0.751	29.34	10.40	39.74	56.00	16.26	
	0.989	26.67	10.40	37.07	56.00	18.93	
	1.236	26.58	10.41	36.99	56.00	19.01	
	1.744	24.38	10.41	34.79	56.00	21.21	
	0.221	18.45	10.51	28.96	52.79	23.83	AV
	0.499	20.70	10.40	31.10	46.01	14.91	
	0.751	17.34	10.40	27.74	46.00	18.26	
	0.989	14.67	10.40	25.07	46.00	20.93	
	1.236	12.58	10.41	22.99	46.00	23.01	
	1.744	12.38	10.41	22.79	46.00	23.21	
Neutral	0.489	29.27	10.39	39.66	56.19	16.53	QP
	0.751	29.05	10.39	39.44	56.00	16.56	
	0.989	25.57	10.40	35.97	56.00	20.03	
	1.236	25.41	10.41	35.82	56.00	20.18	
	1.744	25.72	10.43	36.15	56.00	19.85	
	3.509	19.88	10.47	30.35	56.00	25.65	
	0.489	12.27	10.39	22.66	46.19	23.53	AV
	0.751	18.05	10.39	28.44	46.00	17.56	
	0.989	14.57	10.40	24.97	46.00	21.03	
	1.236	12.41	10.41	22.82	46.00	23.18	
	1.744	13.72	10.43	24.15	46.00	21.85	
	3.509	8.88	10.47	19.35	46.00	26.65	

TEST ENGINEER: BYRON WU

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-43P7000U Humidity : 48%RH

Test Mode : HDMI3 3840*2160@30Hz & 1kHz Playing Date of Test : Mar 09, 2017

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.221	30.28	10.51	40.79	62.79	22.00	QP
	0.499	30.28	10.40	40.68	56.01	15.33	
	0.751	29.29	10.40	39.69	56.00	16.31	
	0.989	26.58	10.40	36.98	56.00	19.02	
	1.223	25.31	10.41	35.72	56.00	20.28	
	1.744	24.39	10.41	34.80	56.00	21.20	
	0.221	18.28	10.51	28.79	52.79	24.00	AV
	0.499	20.28	10.40	30.68	46.01	15.33	
	0.751	17.29	10.40	27.69	46.00	18.31	
	0.989	14.58	10.40	24.98	46.00	21.02	
	1.223	10.31	10.41	20.72	46.00	25.28	
	1.744	12.39	10.41	22.80	46.00	23.20	
Neutral	0.221	27.75	10.50	38.25	62.79	24.54	QP
	0.499	29.16	10.39	39.55	56.01	16.46	
	0.751	29.29	10.39	39.68	56.00	16.32	
	0.923	26.86	10.40	37.26	56.00	18.74	
	1.236	25.96	10.41	36.37	56.00	19.63	
	1.970	22.30	10.43	32.73	56.00	23.27	
	0.221	18.75	10.50	29.25	52.79	23.54	AV
	0.499	20.16	10.39	30.55	46.01	15.46	
	0.751	18.29	10.39	28.68	46.00	17.32	
	0.923	10.86	10.40	21.26	46.00	24.74	
	1.236	11.96	10.41	22.37	46.00	23.63	
	1.970	10.30	10.43	20.73	46.00	25.27	

TEST ENGINEER: BYRON WU

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-43P7000U Humidity : 48%RH

Test Mode : HDMI4 3840*2160@30Hz & 1kHz Playing Date of Test : Mar 09, 2017

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.228	29.51	10.51	40.02	62.52	22.50	QP
	0.494	29.64	10.40	40.04	56.10	16.06	
	0.751	29.43	10.40	39.83	56.00	16.17	
	0.989	25.78	10.40	36.18	56.00	19.82	
	1.223	25.55	10.41	35.96	56.00	20.04	
	1.744	24.04	10.41	34.45	56.00	21.55	
	0.228	16.51	10.51	27.02	52.52	25.50	AV
	0.494	18.64	10.40	29.04	46.10	17.06	
	0.751	17.43	10.40	27.83	46.00	18.17	
	0.989	14.78	10.40	25.18	46.00	20.82	
	1.223	10.55	10.41	20.96	46.00	25.04	
	1.744	13.04	10.41	23.45	46.00	22.55	
Neutral	0.226	27.85	10.50	38.35	62.61	24.26	QP
	0.499	29.73	10.39	40.12	56.01	15.89	
	0.751	29.44	10.39	39.83	56.00	16.17	
	0.989	25.38	10.40	35.78	56.00	20.22	
	1.223	26.49	10.41	36.90	56.00	19.10	
	1.744	25.37	10.43	35.80	56.00	20.20	
	0.226	15.85	10.50	26.35	52.61	26.26	AV
	0.499	20.73	10.39	31.12	46.01	14.89	
	0.751	18.44	10.39	28.83	46.00	17.17	
	0.989	14.38	10.40	24.78	46.00	21.22	
	1.223	10.49	10.41	20.90	46.00	25.10	
	1.744	13.37	10.43	23.80	46.00	22.20	

TEST ENGINEER: BYRON WU

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-43P7000U Humidity : 48%RH

Test Mode : HDMI1 1920*1080@60Hz & 1kHz Playing Date of Test : Mar 09, 2017

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.221	30.17	10.51	40.68	62.79	22.11	QP
	0.505	29.74	10.40	40.14	56.00	15.86	
	0.751	29.24	10.40	39.64	56.00	16.36	
	0.989	26.61	10.40	37.01	56.00	18.99	
	1.223	25.43	10.41	35.84	56.00	20.16	
	1.487	24.81	10.40	35.21	56.00	20.79	
	0.221	18.17	10.51	28.68	52.79	24.11	AV
	0.505	15.74	10.40	26.14	46.00	19.86	
	0.751	17.24	10.40	27.64	46.00	18.36	
	0.989	14.61	10.40	25.01	46.00	20.99	
	1.223	9.43	10.41	19.84	46.00	26.16	
	1.487	8.81	10.40	19.21	46.00	26.79	
Neutral	0.237	28.42	10.49	38.91	62.22	23.31	QP
	0.499	28.60	10.39	38.99	56.01	17.02	
	0.751	28.13	10.39	38.52	56.00	17.48	
	1.197	25.76	10.41	36.17	56.00	19.83	
	1.744	25.30	10.43	35.73	56.00	20.27	
	3.472	20.74	10.47	31.21	56.00	24.79	
	0.237	16.42	10.49	26.91	52.22	25.31	AV
	0.499	19.60	10.39	29.99	46.01	16.02	
	0.751	18.13	10.39	28.52	46.00	17.48	
	1.197	18.76	10.41	29.17	46.00	16.83	
	1.744	18.30	10.43	28.73	46.00	17.27	
	3.472	12.74	10.47	23.21	46.00	22.79	

TEST ENGINEER: BYRON WU

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-43P7000U Humidity : 48%RH

Test Mode : HDMI1 1280*1024@60Hz Date of Test : Mar 09, 2017
& 1kHz playing

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.216	29.12	10.52	39.64	62.96	23.32	QP
	0.499	30.16	10.40	40.56	56.01	15.45	
	0.751	28.49	10.40	38.89	56.00	17.11	
	0.989	26.59	10.40	36.99	56.00	19.01	
	1.236	26.63	10.41	37.04	56.00	18.96	
	1.744	24.15	10.41	34.56	56.00	21.44	
	0.216	18.12	10.52	28.64	52.96	24.32	AV
	0.499	20.16	10.40	30.56	46.01	15.45	
	0.751	17.49	10.40	27.89	46.00	18.11	
	0.989	15.59	10.40	25.99	46.00	20.01	
	1.236	13.63	10.41	24.04	46.00	21.96	
	1.744	13.15	10.41	23.56	46.00	22.44	
Neutral	0.219	28.84	10.51	39.35	62.88	23.53	QP
	0.499	29.80	10.39	40.19	56.01	15.82	
	0.751	28.51	10.39	38.90	56.00	17.10	
	0.914	27.81	10.40	38.21	56.00	17.79	
	1.197	25.23	10.41	35.64	56.00	20.36	
	1.744	25.41	10.43	35.84	56.00	20.16	
	0.219	18.84	10.51	29.35	52.88	23.53	AV
	0.499	20.80	10.39	31.19	46.01	14.82	
	0.751	16.51	10.39	26.90	46.00	19.10	
	0.914	10.81	10.40	21.21	46.00	24.79	
	1.197	11.23	10.41	21.64	46.00	24.36	
	1.744	12.41	10.43	22.84	46.00	23.16	

TEST ENGINEER: BYRON WU

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-43P7000U Humidity : 48%RH

Test Mode : HDMI1 640*480@60Hz & 1kHz playing Date of Test : Mar 09, 2017

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.219	30.94	10.52	41.46	62.88	21.42	QP
	0.499	30.77	10.40	41.17	56.01	14.84	
	0.751	29.78	10.40	40.18	56.00	15.82	
	0.923	26.41	10.40	36.81	56.00	19.19	
	1.236	26.47	10.41	36.88	56.00	19.12	
	1.744	24.82	10.41	35.23	56.00	20.77	
	0.219	18.94	10.52	29.46	52.88	23.42	AV
	0.499	20.77	10.40	31.17	46.01	14.84	
	0.751	18.78	10.40	29.18	46.00	16.82	
	0.923	10.41	10.40	20.81	46.00	25.19	
	1.236	12.47	10.41	22.88	46.00	23.12	
	1.744	12.82	10.41	23.23	46.00	22.77	
Neutral	0.223	29.52	10.50	40.02	62.70	22.68	QP
	0.494	29.80	10.39	40.19	56.10	15.91	
	0.751	29.54	10.39	39.93	56.00	16.07	
	0.989	26.50	10.40	36.90	56.00	19.10	
	1.223	26.11	10.41	36.52	56.00	19.48	
	1.503	26.52	10.42	36.94	56.00	19.06	
	0.223	17.52	10.50	28.02	52.70	24.68	AV
	0.494	18.80	10.39	29.19	46.10	16.91	
	0.751	17.54	10.39	27.93	46.00	18.07	
	0.989	14.50	10.40	24.90	46.00	21.10	
	1.223	13.11	10.41	23.52	46.00	22.48	
	1.503	11.52	10.42	21.94	46.00	24.06	

TEST ENGINEER: BYRON WU

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-43P7000U Humidity : 48%RH

Test Mode : HDMI1080P Date of Test : Mar 09, 2017

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.237	29.31	10.50	39.81	62.22	22.41	QP
	0.499	30.42	10.40	40.82	56.01	15.19	
	0.751	28.32	10.40	38.72	56.00	17.28	
	0.989	26.86	10.40	37.26	56.00	18.74	
	1.744	25.60	10.41	36.01	56.00	19.99	
	3.901	23.41	10.44	33.85	56.00	22.15	
	0.237	15.31	10.50	25.81	52.22	26.41	AV
	0.499	16.42	10.40	26.82	46.01	19.19	
	0.751	17.32	10.40	27.72	46.00	18.28	
	0.989	15.86	10.40	26.26	46.00	19.74	
	1.744	13.60	10.41	24.01	46.00	21.99	
	3.901	11.41	10.44	21.85	46.00	24.15	
Neutral	0.219	28.00	10.51	38.51	62.88	24.37	QP
	0.505	29.34	10.39	39.73	56.00	16.27	
	0.751	29.22	10.39	39.61	56.00	16.39	
	0.923	26.55	10.40	36.95	56.00	19.05	
	1.236	26.35	10.41	36.76	56.00	19.24	
	1.734	25.15	10.43	35.58	56.00	20.42	
	0.219	18.00	10.51	28.51	52.88	24.37	AV
	0.505	15.34	10.39	25.73	46.00	20.27	
	0.751	17.22	10.39	27.61	46.00	18.39	
	0.923	11.55	10.40	21.95	46.00	24.05	
	1.236	11.35	10.41	21.76	46.00	24.24	
	1.734	11.15	10.43	21.58	46.00	24.42	

TEST ENGINEER: BYRON WU

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-43P7000U Humidity : 48%RH

Test Mode : USB Play Date of Test : Mar 09, 2017

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.223	29.54	10.51	40.05	62.70	22.65	QP
	0.499	30.90	10.40	41.30	56.01	14.71	
	0.751	29.01	10.40	39.41	56.00	16.59	
	0.989	26.91	10.40	37.31	56.00	18.69	
	1.236	26.64	10.41	37.05	56.00	18.95	
	1.744	24.87	10.41	35.28	56.00	20.72	
	0.223	17.54	10.51	28.05	52.70	24.65	AV
	0.499	20.90	10.40	31.30	46.01	14.71	
	0.751	18.01	10.40	28.41	46.00	17.59	
	0.989	14.91	10.40	25.31	46.00	20.69	
	1.236	12.64	10.41	23.05	46.00	22.95	
	1.744	13.87	10.41	24.28	46.00	21.72	
Neutral	0.219	29.92	10.51	40.43	62.88	22.45	QP
	0.499	30.96	10.39	41.35	56.01	14.66	
	0.751	29.55	10.39	39.94	56.00	16.06	
	0.923	26.81	10.40	37.21	56.00	18.79	
	1.236	26.67	10.41	37.08	56.00	18.92	
	1.734	24.54	10.43	34.97	56.00	21.03	
	0.219	18.92	10.51	29.43	52.88	23.45	AV
	0.499	21.96	10.39	32.35	46.01	13.66	
	0.751	18.55	10.39	28.94	46.00	17.06	
	0.923	10.81	10.40	21.21	46.00	24.79	
	1.236	12.67	10.41	23.08	46.00	22.92	
	1.734	12.54	10.43	22.97	46.00	23.03	

TEST ENGINEER: BYRON WU

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-43P7000U Humidity : 48%RH

Test Mode : LAN Play Date of Test : Mar 09, 2017

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.226	29.45	10.51	39.96	62.61	22.65	QP
	0.499	30.86	10.40	41.26	56.01	14.75	
	0.751	29.53	10.40	39.93	56.00	16.07	
	0.989	26.54	10.40	36.94	56.00	19.06	
	1.249	25.80	10.41	36.21	56.00	19.79	
	1.744	24.14	10.41	34.55	56.00	21.45	
	0.226	17.45	10.51	27.96	52.61	24.65	AV
	0.499	20.86	10.40	31.26	46.01	14.75	
	0.751	17.53	10.40	27.93	46.00	18.07	
	0.989	14.54	10.40	24.94	46.00	21.06	
	1.249	13.80	10.41	24.21	46.00	21.79	
	1.744	12.14	10.41	22.55	46.00	23.45	
Neutral	0.228	28.91	10.50	39.41	62.52	23.11	QP
	0.499	30.76	10.39	41.15	56.01	14.86	
	0.751	29.21	10.39	39.60	56.00	16.40	
	0.914	26.63	10.40	37.03	56.00	18.97	
	1.197	24.32	10.41	34.73	56.00	21.27	
	1.744	25.37	10.43	35.80	56.00	20.20	
	0.228	17.91	10.50	28.41	52.52	24.11	AV
	0.499	20.76	10.39	31.15	46.01	14.86	
	0.751	17.21	10.39	27.60	46.00	18.40	
	0.914	10.63	10.40	21.03	46.00	24.97	
	1.197	12.32	10.41	22.73	46.00	23.27	
	1.744	13.37	10.43	23.80	46.00	22.20	

TEST ENGINEER: BYRON WU

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-43P7000U Humidity : 48%RH

Test Mode : MHL Date of Test : Mar 09, 2017

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.226	29.38	10.51	39.89	62.61	22.72	QP
	0.499	30.71	10.40	41.11	56.01	14.90	
	0.751	29.36	10.40	39.76	56.00	16.24	
	1.236	26.48	10.41	36.89	56.00	19.11	
	1.744	24.14	10.41	34.55	56.00	21.45	
	3.472	23.08	10.43	33.51	56.00	22.49	
	0.226	17.38	10.51	27.89	52.61	24.72	AV
	0.499	21.71	10.40	32.11	46.01	13.90	
	0.751	17.36	10.40	27.76	46.00	18.24	
	1.236	12.48	10.41	22.89	46.00	23.11	
	1.744	13.14	10.41	23.55	46.00	22.45	
	3.472	10.08	10.43	20.51	46.00	25.49	
Neutral	0.219	29.54	10.51	40.05	62.88	22.83	QP
	0.499	30.34	10.39	40.73	56.01	15.28	
	0.751	29.45	10.39	39.84	56.00	16.16	
	0.923	26.64	10.40	37.04	56.00	18.96	
	1.223	25.51	10.41	35.92	56.00	20.08	
	1.744	24.16	10.43	34.59	56.00	21.41	
	0.219	18.54	10.51	29.05	52.88	23.83	AV
	0.499	19.34	10.39	29.73	46.01	16.28	
	0.751	17.45	10.39	27.84	46.00	18.16	
	0.923	10.64	10.40	21.04	46.00	24.96	
	1.223	10.51	10.41	20.92	46.00	25.08	
	1.744	13.16	10.43	23.59	46.00	22.41	

TEST ENGINEER: BYRON WU

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-43P7000U Humidity : 48%RH

Test Mode : Wifi Date of Test : Mar 09, 2017

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.228	29.50	10.51	40.01	62.52	22.51	QP
	0.499	30.52	10.40	40.92	56.01	15.09	
	0.751	29.51	10.40	39.91	56.00	16.09	
	0.989	26.07	10.40	36.47	56.00	19.53	
	1.236	26.32	10.41	36.73	56.00	19.27	
	1.762	25.11	10.41	35.52	56.00	20.48	
	0.228	16.50	10.51	27.01	52.52	25.51	AV
	0.499	21.52	10.40	31.92	46.01	14.09	
	0.751	17.51	10.40	27.91	46.00	18.09	
	0.989	14.07	10.40	24.47	46.00	21.53	
	1.236	12.32	10.41	22.73	46.00	23.27	
	1.762	13.11	10.41	23.52	46.00	22.48	
Neutral	0.228	28.73	10.50	39.23	62.52	23.29	QP
	0.494	29.34	10.39	39.73	56.10	16.37	
	0.751	29.13	10.39	39.52	56.00	16.48	
	0.914	25.54	10.40	35.94	56.00	20.06	
	1.223	25.03	10.41	35.44	56.00	20.56	
	1.744	24.66	10.43	35.09	56.00	20.91	
	0.228	16.73	10.50	27.23	52.52	25.29	AV
	0.494	19.34	10.39	29.73	46.10	16.37	
	0.751	18.13	10.39	28.52	46.00	17.48	
	0.914	10.54	10.40	20.94	46.00	25.06	
	1.223	10.03	10.41	20.44	46.00	25.56	
	1.744	13.66	10.43	24.09	46.00	21.91	

TEST ENGINEER: BYRON WU

4 RADIATED EMISSION TEST

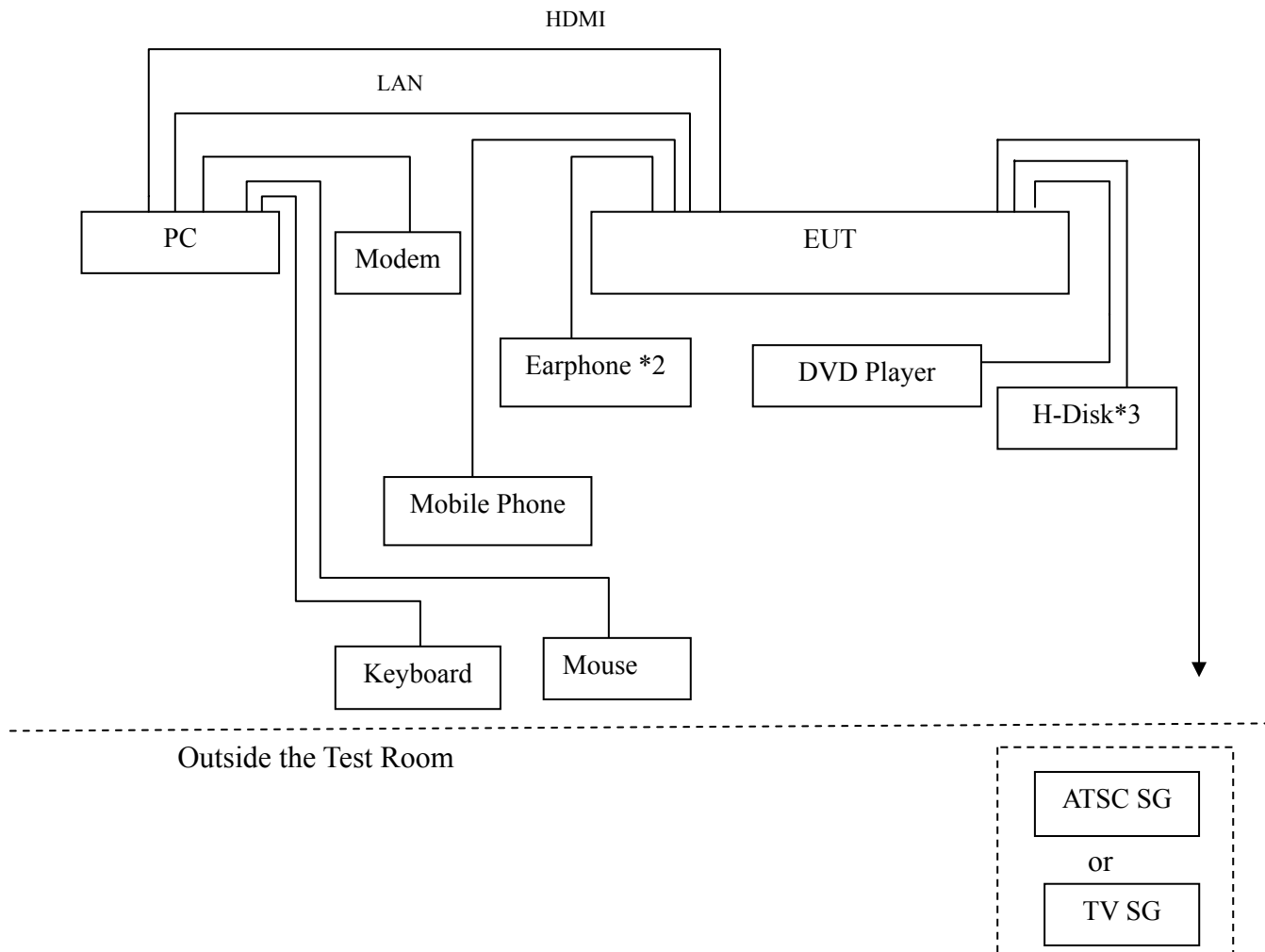
4.1 Test Equipment

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	--	--

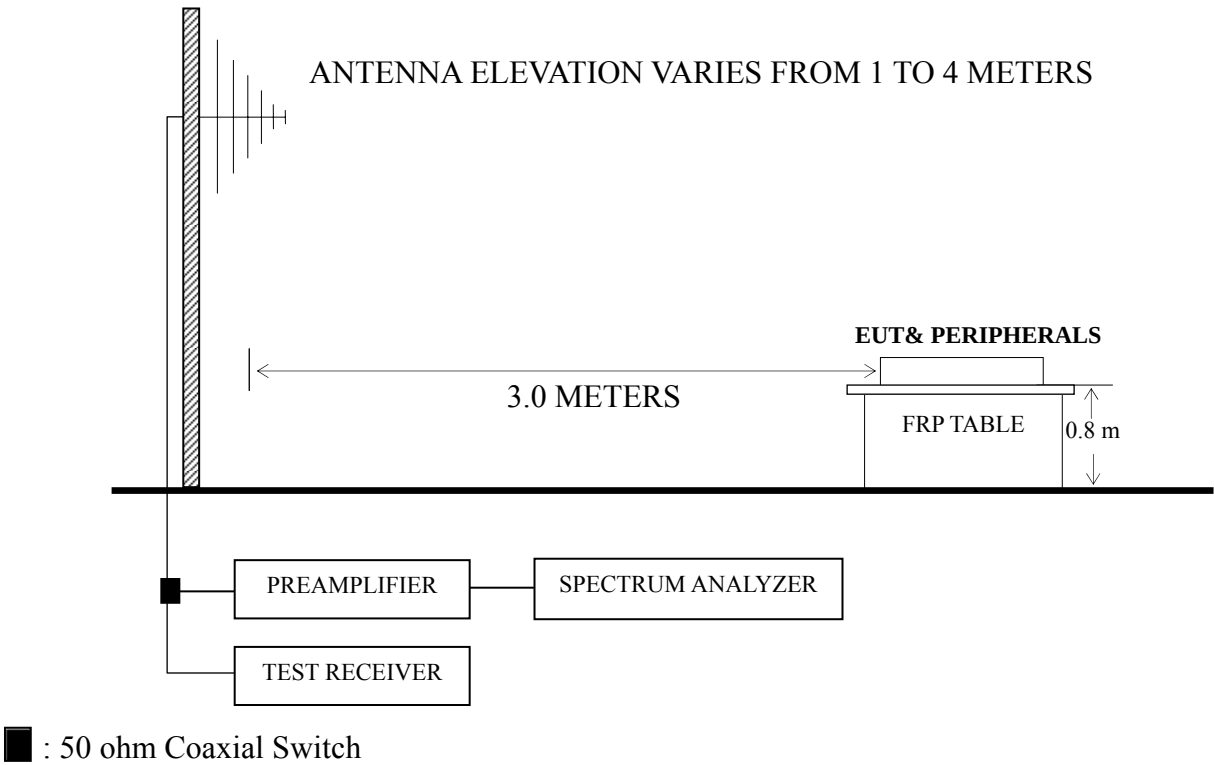
4.2 Block Diagram of Test Setup

4.2.1 EUT & Peripherals



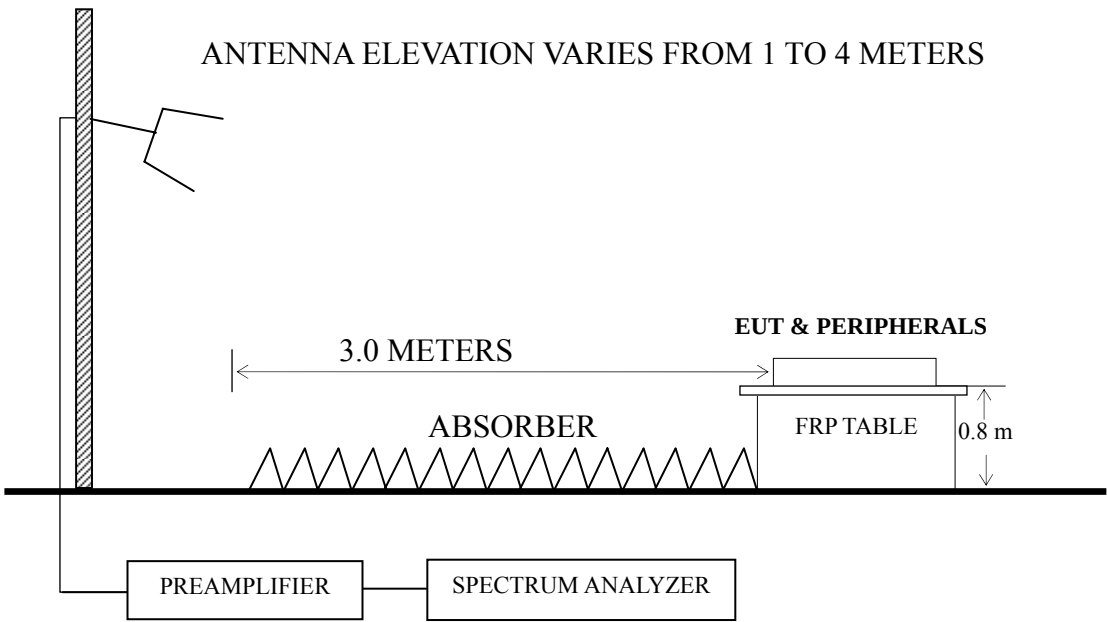
4.2.2 Radiated emission test setup

4.2.2.1 Below 1GHz



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	
		($\mu\text{V/m}$)	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 and The Spectrum AgilentE7405A was set at 1MHz above 1GHz.

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	P30- P31
HDMI2 3840*2160@60Hz & 1kHz Playing	P32
HDMI3 3840*2160@30Hz & 1kHz Playing	P33
HDMI4 3840*2160@30Hz & 1kHz Playing	P34
HDMI1 1920*1080@60Hz & 1kHz Playing	P35
HDMI1 1280*1024@60Hz & 1kHz playing	P36
HDMI1 640*480@60Hz & 1kHz playing	P37
HDMI 1080P	P38
USB Play	P39
LAN Play	P40
MHL	P41
Wifi	P42

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 HDMI1 3840*2160@60Hz & 1kHz Playing test mode. The worst emission at horizontal polarization was detected at 893.857 MHz with corrected signal level of 41.90dB (μV/m) (limit is 46.00 dB (μV/m)), when the antenna was 2.2 m height and the turntable was at 300°. The worst emission at vertical polarization was detected at 30.962 MHz with corrected signal level of 34.72dB (μV/m) (limit is 40.00 dB (μV/m)), when the antenna was 1.4m height and the turntable was at 120°.

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-43P7000U Humidity : 60%RH

Test Mode : HDMI1 3840*2160@30Hz & 1kHz Playing Date of Test : Mar 14, 2017

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	80.927	24.70	9.07	0.89	0.00	34.66	40.00	5.34	QP
	130.837	23.37	12.88	1.19	0.00	37.44	43.50	6.06	
	205.675	25.42	10.30	1.50	0.00	37.22	43.50	6.28	
	324.456	24.56	14.27	1.83	0.00	40.66	46.00	5.34	
	721.726	17.24	19.30	2.75	0.00	39.29	46.00	6.71	
	893.857	17.70	21.13	3.07	0.00	41.90	46.00	4.10	PK
	1454.232	49.76	25.45	4.02	35.80	43.43	74.00	30.57	
	1786.985	44.35	26.76	4.44	35.41	40.14	74.00	33.86	
	3594.181	40.76	31.78	6.50	34.58	44.46	74.00	29.54	AV
	1454.232	30.89	25.45	4.02	35.80	24.56	54.00	29.44	
	1786.985	26.71	26.76	4.44	35.41	22.50	54.00	31.50	
	3594.181	24.28	31.78	6.50	34.58	27.98	54.00	26.02	

TEST ENGINEER: BYRON WU

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-43P7000U Humidity : 60%RH

Test Mode : HDMI1 3840*2160@30Hz & 1kHz Playing Date of Test : Mar 14, 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	30.962	16.44	17.71	0.57	0.00	34.72	40.00	5.28	QP
	74.919	25.37	8.30	0.86	0.00	34.53	40.00	5.47	
	204.955	23.38	10.30	1.50	0.00	35.18	43.50	8.32	
	297.224	21.14	13.60	1.75	0.00	36.49	46.00	9.51	
	719.200	18.16	19.27	2.75	0.00	40.18	46.00	5.82	
	890.728	16.04	21.10	3.07	0.00	40.21	46.00	5.79	
	1464.692	50.64	25.48	4.02	35.79	44.35	74.00	29.65	PK
	2191.948	45.17	27.87	4.93	35.20	42.77	74.00	31.23	
	4314.907	41.37	33.32	7.25	34.10	47.84	74.00	26.16	
	1464.692	34.21	25.48	4.02	35.79	27.92	54.00	26.08	AV
	2191.948	27.21	27.87	4.93	35.20	24.81	54.00	29.19	
	4314.907	24.88	33.32	7.25	34.10	31.35	54.00	22.65	

TEST ENGINEER: BYRON WU

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-43P7000U Humidity : 60%RH

Test Mode : HDMI2 3840*2160@30Hz Date of Test : Mar 14, 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	77.593	24.74	8.60	0.88	34.22	40.00	5.78
	129.923	21.97	12.90	1.18	36.05	43.50	7.45
	204.238	22.76	10.27	1.49	34.52	43.50	8.98
	336.035	21.63	14.67	1.87	38.17	46.00	7.83
	714.173	14.18	19.25	2.75	36.18	46.00	9.82
	896.997	14.99	21.17	3.07	39.23	46.00	6.77
Vertical	30.531	16.03	18.05	0.56	34.64	40.00	5.36
	73.103	24.69	7.96	0.85	33.50	40.00	6.50
	133.151	20.14	12.83	1.20	34.17	43.50	9.33
	322.189	20.19	14.16	1.83	36.18	46.00	9.82
	724.261	16.49	19.33	2.77	38.59	46.00	7.41
	893.857	12.78	21.13	3.07	36.98	46.00	9.02

TEST ENGINEER: BYRON WU

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-43P7000U Humidity : 60%RH

Test Mode : HDMI3 3840*2160@30Hz & 1kHz Playing Date of Test : Mar 14, 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	80.927	24.46	9.07	0.89	34.42	40.00	5.58
	129.923	23.11	12.90	1.18	37.19	43.50	6.31
	205.675	23.72	10.30	1.50	35.52	43.50	7.98
	324.456	23.98	14.27	1.83	40.08	46.00	5.92
	721.726	17.36	19.30	2.75	39.41	46.00	6.59
	890.728	16.65	21.10	3.07	40.82	46.00	5.18
Vertical	31.955	16.78	17.10	0.58	34.46	40.00	5.54
	54.071	25.26	7.80	0.73	33.79	40.00	6.21
	82.071	23.71	9.41	0.90	34.02	40.00	5.98
	204.955	22.54	10.30	1.50	34.34	43.50	9.16
	721.726	17.23	19.30	2.75	39.28	46.00	6.72
	890.728	16.06	21.10	3.07	40.23	46.00	5.77

TEST ENGINEER: BYRON WU

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-43P7000U Humidity : 60%RH

Test Mode : HDMI4 3840*2160@30Hz Date of Test : Mar 14, 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	82.648	23.72	9.50	0.90	34.12	40.00	5.88
	127.218	22.10	12.57	1.17	35.84	43.50	7.66
	213.015	22.96	10.80	1.52	35.28	43.50	8.22
	323.320	23.39	14.21	1.83	39.43	46.00	6.57
	497.677	16.98	17.46	2.26	36.70	46.00	9.30
	896.997	16.02	21.17	3.07	40.26	46.00	5.74
Vertical	30.531	14.76	18.05	0.56	33.37	40.00	6.63
	46.666	22.79	9.51	0.68	32.98	40.00	7.02
	80.644	23.13	8.99	0.89	33.01	40.00	6.99
	331.355	21.21	14.54	1.86	37.61	46.00	8.39
	499.425	15.60	17.50	2.26	35.36	46.00	10.64
	887.610	12.17	21.10	3.07	36.34	46.00	9.66

TEST ENGINEER: BYRON WU

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-43P7000U Humidity : 60%RH

Test Mode : HDMI1 1920*1080@60Hz Date of Test : Mar 14, 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	77.865	24.29	8.64	0.88	33.81	40.00	6.19
	130.837	23.23	12.88	1.19	37.30	43.50	6.20
	205.675	25.41	10.30	1.50	37.21	43.50	6.29
	324.456	23.54	14.27	1.83	39.64	46.00	6.36
	719.200	17.59	19.27	2.75	39.61	46.00	6.39
	896.997	15.72	21.17	3.07	39.96	46.00	6.04
Vertical	30.531	15.53	18.05	0.56	34.14	40.00	5.86
	52.945	24.83	7.97	0.72	33.52	40.00	6.48
	205.675	24.42	10.30	1.50	36.22	43.50	7.28
	324.456	19.12	14.27	1.83	35.22	46.00	10.78
	719.200	17.51	19.27	2.75	39.53	46.00	6.47
	996.500	13.10	22.20	3.25	38.55	54.00	15.45

TEST ENGINEER: BYRON WU

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-43P7000U Humidity : 60%RH

Test Mode : HDMI1 1280*1024@60Hz Date of Test : Mar 14, 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	79.521	24.22	8.82	0.88	33.92	40.00	6.08
	129.923	22.41	12.90	1.18	36.49	43.50	7.01
	205.675	25.99	10.30	1.50	37.79	43.50	5.71
	324.456	23.40	14.27	1.83	39.50	46.00	6.50
	719.200	17.77	19.27	2.75	39.79	46.00	6.21
	945.440	14.74	21.67	3.16	39.57	46.00	6.43
Vertical	30.531	15.88	18.05	0.56	34.49	40.00	5.51
	52.945	24.27	7.97	0.72	32.96	40.00	7.04
	77.051	24.14	8.56	0.87	33.57	40.00	6.43
	205.675	24.19	10.30	1.50	35.99	43.50	7.51
	719.200	18.44	19.27	2.75	40.46	46.00	5.54
	986.072	13.34	22.07	3.23	38.64	54.00	15.36

TEST ENGINEER: BYRON WU

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-43P7000U Humidity : 60%RH

Test Mode : HDMI1 640*480@60Hz & 1kHz Playing Date of Test : Mar 14, 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	82.938	23.32	9.59	0.90	33.81	40.00	6.19
	131.297	21.99	12.87	1.19	36.05	43.50	7.45
	205.675	26.26	10.30	1.50	38.06	43.50	5.44
	331.355	23.16	14.54	1.86	39.56	46.00	6.44
	721.726	17.29	19.30	2.75	39.34	46.00	6.66
	900.147	14.40	21.20	3.09	38.69	46.00	7.31
Vertical	30.424	15.71	18.14	0.56	34.41	40.00	5.59
	54.071	24.68	7.80	0.73	33.21	40.00	6.79
	70.090	25.34	7.40	0.84	33.58	40.00	6.42
	205.675	24.13	10.30	1.50	35.93	43.50	7.57
	324.456	19.65	14.27	1.83	35.75	46.00	10.25
	719.200	18.50	19.27	2.75	40.52	46.00	5.48

TEST ENGINEER: BYRON WU

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-43P7000U Humidity : 60%RH

Test Mode : HDMI 1080P Date of Test : Mar 14, 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	81.497	23.95	9.24	0.90	34.09	40.00	5.91
	137.903	18.34	13.02	1.22	32.58	43.50	10.92
	215.268	22.28	10.90	1.53	34.71	43.50	8.79
	330.195	19.81	14.50	1.85	36.16	46.00	9.84
	490.745	16.42	17.30	2.25	35.97	46.00	10.03
	952.094	12.58	21.70	3.16	37.44	46.00	8.56
Vertical	30.531	15.53	18.05	0.56	34.14	40.00	5.86
	52.391	23.70	8.03	0.72	32.45	40.00	7.55
	76.781	21.54	8.52	0.87	30.93	40.00	9.07
	338.400	18.86	14.76	1.87	35.49	46.00	10.51
	480.528	17.28	17.20	2.22	36.70	46.00	9.30
	793.396	13.28	20.33	2.89	36.50	46.00	9.50

TEST ENGINEER: BYRON WU

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-43P7000U Humidity : 60%RH

Test Mode : USB Play Date of Test : Mar 14, 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	79.243	24.89	8.79	0.88	34.56	40.00	5.44
	128.113	20.02	12.70	1.17	33.89	43.50	9.61
	222.170	21.18	11.15	1.55	33.88	46.00	12.12
	339.589	22.52	14.80	1.87	39.19	46.00	6.81
	477.169	17.00	17.18	2.22	36.40	46.00	9.60
	890.728	14.05	21.10	3.07	38.22	46.00	7.78
Vertical	53.131	23.71	7.93	0.72	32.36	40.00	7.64
	73.617	22.93	8.07	0.86	31.86	40.00	8.14
	92.462	21.86	11.20	0.96	34.02	43.50	9.48
	331.355	16.49	14.54	1.86	32.89	46.00	13.11
	649.660	13.63	19.30	2.61	35.54	46.00	10.46
	790.619	10.26	20.30	2.89	33.45	46.00	12.55

TEST ENGINEER: BYRON WU

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-43P7000U Humidity : 60%RH

Test Mode : LAN Play Date of Test : Mar 14, 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	23.03	10.10	0.92	34.05	40.00	5.95
	138.874	20.38	13.11	1.23	34.72	43.50	8.78
	244.232	21.02	12.34	1.62	34.98	46.00	11.02
	403.250	16.37	16.27	2.05	34.69	46.00	11.31
	651.942	11.88	19.27	2.61	33.76	46.00	12.24
	815.968	11.51	20.30	2.94	34.75	46.00	11.25
Vertical	31.843	16.13	17.19	0.58	33.90	40.00	6.10
	78.965	22.33	8.75	0.88	31.96	40.00	8.04
	340.782	12.51	14.84	1.89	29.24	46.00	16.76
	651.942	10.67	19.27	2.61	32.55	46.00	13.45
	785.093	9.98	20.17	2.87	33.02	46.00	12.98
	955.438	8.05	21.75	3.18	32.98	46.00	13.02

TEST ENGINEER: BYRON WU

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-43P7000U Humidity : 60%RH

Test Mode : MHL Date of Test : Mar 14, 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	76.781	25.04	8.52	0.87	34.43	40.00	5.57
	216.024	22.92	10.92	1.53	35.37	46.00	10.63
	322.189	22.54	14.16	1.83	38.53	46.00	7.47
	475.499	18.86	17.16	2.22	38.24	46.00	7.76
	787.851	14.81	20.23	2.87	37.91	46.00	8.09
Vertical	938.833	13.63	21.60	3.14	38.37	46.00	7.63
	31.399	15.66	17.45	0.57	33.68	40.00	6.32
	47.659	21.68	9.36	0.69	31.73	40.00	8.27
	79.800	22.37	8.86	0.89	32.12	40.00	7.88
	336.035	19.55	14.67	1.87	36.09	46.00	9.91
	501.179	15.73	17.50	2.26	35.49	46.00	10.51
	787.851	14.99	20.23	2.87	38.09	46.00	7.91

TEST ENGINEER: BYRON WU

EUT : LED LCD TV Temperature : 22°C

Model No. : LC-43P7000U Humidity : 60%RH

Test Mode : Wifi Date of Test : Mar 14, 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	24.20	8.64	0.88	33.72	40.00	6.28
	141.330	19.37	13.05	1.24	33.66	43.50	9.84
	219.075	21.70	10.98	1.54	34.22	46.00	11.78
	369.405	16.25	15.60	1.96	33.81	46.00	12.19
	492.469	15.30	17.34	2.25	34.89	46.00	11.11
	848.056	11.79	20.50	2.98	35.27	46.00	10.73
Vertical	45.855	22.69	9.70	0.68	33.07	40.00	6.93
	75.977	24.33	8.41	0.87	33.61	40.00	6.39
	173.814	21.50	10.69	1.38	33.57	43.50	9.93
	340.782	18.09	14.84	1.89	34.82	46.00	11.18
	665.804	13.04	19.30	2.65	34.99	46.00	11.01
	962.162	11.11	21.80	3.18	36.09	54.00	17.91

TEST ENGINEER: BYRON WU

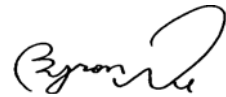
5 DEBUG DESCRIPTION

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 Figure 20

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