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

LED LCD TV

Model No.	Brand
43H6D	Hisense
43H6D+	
43H6050	
43H6207	

FCC ID : W9HLCDD0066

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-F17012
Date of Test : Dec 22, 2016- Jan 03, 2017
Date of Report : Jan 10, 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	Hisense	120V/60Hz

Test Procedure Used:

FCC RULES AND REGULATIONS PART 15 SUBPART B CLASS B OCTOBER 2015 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 Dec 22, 2016- Jan 03, 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.F17011, a Verification report.

Date of Test : Dec 22, 2016- Jan 03, 2017 Date of Report : Jan 10, 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 :
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 OCTOBER 2015 AND ANSI C63.4-2014	15.107(a) Class B	Pass
Radiated Disturbance	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2015 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	:	43H6D, 43H6D+,43H6050, 43H6207
Note#1	:	The above models are all the same except for model number.43H6D model is tested and recorded in the report.
Note#2	:	"+"represents any of the Arabic numeral.
Brand	:	Hisense
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.
LCD Panel	:	Manufacturer : Hisense M/N : HD500K3U02-T1F1
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
LAN Cable	:	Unshielded, Detachable, 1.50m
USB Cable*3 (Lab provide)	:	Shielded, Detachable, 1.00m

MHL to HDMI Adaptor:	Manufacture: CE-Link
with RCP (Lab provide)	M/N: 3002

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

Side Port:

(1) One Audio out Port
: Connected with Earphone
(2) One USB 2 Port
: Connected with Hard-Disk
(3) One HDMI1/MHL Port
: Connected with Mobile phone
(4) One USB 1 Port
: Connected with Hard-Disk
(5) One Service Port
: Do not open to the customers
(6) One HDMI 2 Port
: Connected with PC
(7) One USB 3 Port
: Connected with Hard-Disk
(8) One ANT/CABLE IN Port
: Connected with Antenna or ATSC SG / TV SG

Back Port:
(9) One LAN Port
: Connected with PC
(10) One HDMI3 Port
: Connected with DVD PLAYER
(11) One HDMI4 Port
: Connected with PC
(12) One Digital Audio Out Port
: Connected with Audio Converter to Earphone
(13) One COMPONENT IN/AV IN 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, undetachable, 1.8m
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, Undetachable, 1.8m.
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 TV Signal Generator

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

2.2.7 ATSC Signal Generator

Manufacturer	:	SENCORE
Model Number	:	ATSC997
Serial Number	:	6790071

2.2.8 DVD PLAYER

Manufacturer	:	PHILIPS
Model Number	:	DVP3986K/93
Serial Number	:	KX1A0902120082
Certificate	:	CCC

2.2.9 Hard Disk#1

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

2.2.10 Hard Disk #2

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

2.2.11 Hard Disk #3

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

2.2.12 Mobile Phone

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

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
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

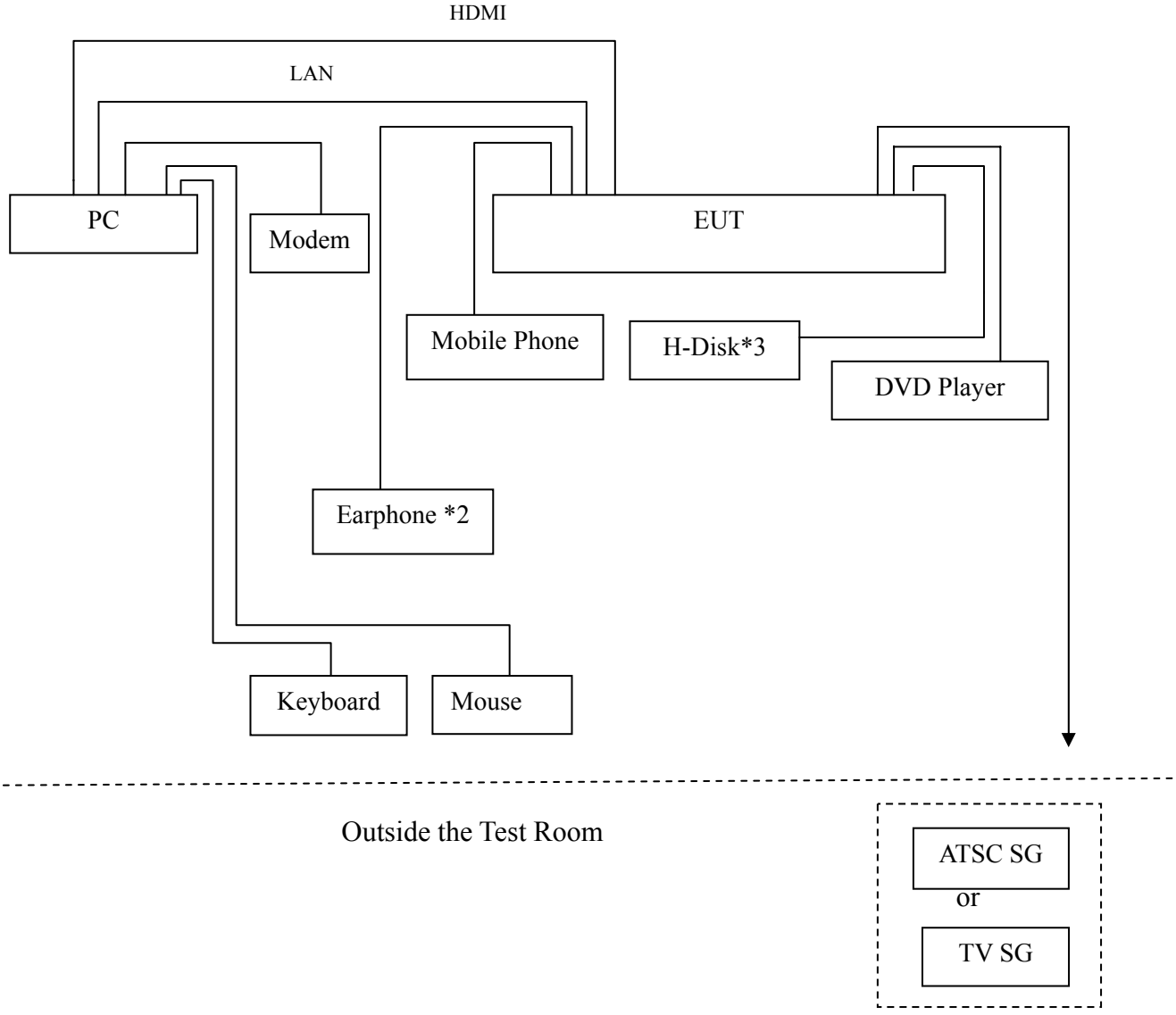
3.1 Test Equipment

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

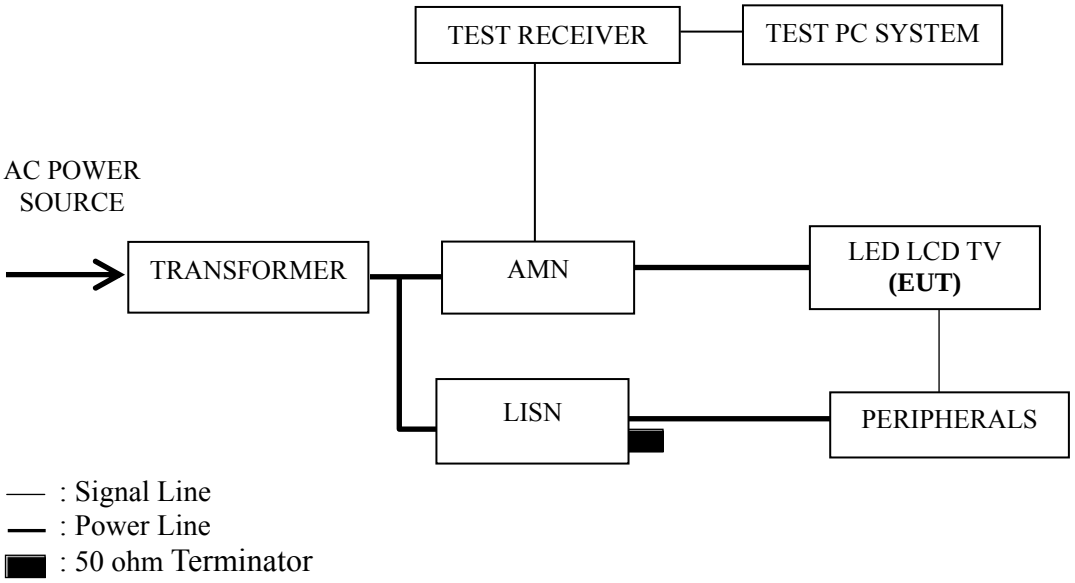
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCI	101302	Apr 27, 2016	Apr 26, 2017
2.	Artificial Mains Network (AMN)	R&S	ENV4200	100125	Jun 25, 2016	Jun 24, 2017
3.	Line Impedance Stabilization Network (LISN)	Kyoritsu	KNW-407	8-1280-4	Mar 20, 2016	Mar 19, 2017
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 Hard 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
HDMI 3840*2160@60Hz & 1kHz playing
HDMI 1920*1080@60Hz & 1kHz playing
HDMI 1280*1024@60Hz & 1kHz playing
HDMI 640*480@60Hz & 1kHz playing
HDMI1080P
MHL
USB Play
LAN Play

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
HDMI 3840*2160@60Hz & 1kHz Playing	P14
HDMI 1920*1080@60Hz & 1kHz Playing	P15
HDMI 1280*1024@60Hz & 1kHz playing	P16
HDMI 640*480@60Hz & 1kHz playing	P17
HDMI1080P	P18
MHL	P19
USB Play	P20
LAN Play	P21

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 0.489MHz (Average Value) with corrected signal level of 42.20 dB (μV) (limit is 56.19 dB (μV)), when the Line of the EUT is connected to AMN.

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	43H6D	Humidity :	48%RH	
Test Mode	:	HDMI 3840*2160@60Hz & 1kHz Playing	Date of Test :	Dec 22, 2016	

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.223	31.80	10.51	42.31	62.70	20.39	QP
	0.494	**29.40**	**10.40**	**39.80**	**56.10**	**16.30**	
	1.269	27.39	10.41	37.80	56.00	18.20	
	4.027	22.10	10.44	32.54	56.00	23.46	
	6.352	24.30	10.47	34.77	60.00	25.23	
	16.486	23.30	10.57	33.87	60.00	26.13	
	0.223	14.70	10.51	25.21	52.70	27.49	AV
	0.494	18.90	10.40	29.30	46.10	16.80	
	1.269	16.29	10.41	26.70	46.00	19.30	
	4.027	13.30	10.44	23.74	46.00	22.26	
	6.352	17.20	10.47	27.67	50.00	22.33	
	16.486	17.60	10.57	28.17	50.00	21.83	
Neutral	0.223	34.90	10.50	45.40	62.70	17.30	QP
	0.484	28.70	10.39	39.09	56.27	17.18	
	1.249	27.00	10.41	37.41	56.00	18.59	
	4.501	25.00	10.49	35.49	56.00	20.51	
	6.285	25.40	10.52	35.92	60.00	24.08	
	16.398	22.80	10.67	33.47	60.00	26.53	
	0.223	20.60	10.50	31.10	52.70	21.60	AV
	0.484	17.40	10.39	27.79	46.27	18.48	
	1.249	14.00	10.41	24.41	46.00	21.59	
	4.501	15.30	10.49	25.79	46.00	20.21	
	6.285	17.60	10.52	28.12	50.00	21.88	
	16.398	17.10	10.67	27.77	50.00	22.23	

TEST ENGINEER: BYRON WU

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	43H6D	Humidity :	48%RH	
Test Mode	:	HDMI 1920*1080@60Hz & 1kHz Playing	Date of Test :	Dec 22, 2016	

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.223	31.60	10.51	42.11	62.70	20.59	QP
	0.492	29.80	10.40	40.20	56.14	15.94	
	1.262	27.79	10.41	38.20	56.00	17.80	
	3.881	26.00	10.44	36.44	56.00	19.56	
	6.951	25.30	10.47	35.77	60.00	24.23	
	15.885	23.40	10.56	33.96	60.00	26.04	
	0.223	14.50	10.51	25.01	52.70	27.69	AV
	0.492	19.30	10.40	29.70	46.14	16.44	
	1.262	16.49	10.41	26.90	46.00	19.10	
	3.881	14.10	10.44	24.54	46.00	21.46	
	6.951	18.30	10.47	28.77	50.00	21.23	
	15.885	**23.90**	**10.56**	**34.46**	**50.00**	**15.54**	
Neutral	0.223	34.50	10.50	45.00	62.70	17.70	QP
	0.494	30.00	10.39	40.39	56.10	15.71	
	1.262	27.70	10.41	38.11	56.00	17.89	
	3.881	25.80	10.48	36.28	56.00	19.72	
	6.056	24.00	10.52	34.52	60.00	25.48	
	16.055	22.29	10.67	32.96	60.00	27.04	
	0.223	18.80	10.50	29.30	52.70	23.40	AV
	0.494	18.60	10.39	28.99	46.10	17.11	
	1.262	16.20	10.41	26.61	46.00	19.39	
	3.881	14.00	10.48	24.48	46.00	21.52	
	6.056	16.70	10.52	27.22	50.00	22.78	
	16.055	16.99	10.67	27.66	50.00	22.34	

TEST ENGINEER: BYRON WU

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	43H6D	Humidity :	48%RH	
Test Mode	:	HDMI 1280*1024@60Hz & 1kHz Playing	Date of Test :	Dec 22, 2016	

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.223	31.70	10.51	42.21	62.70	20.49	QP
	0.494	**29.70**	**10.40**	**40.10**	**56.10**	**16.00**	
	1.262	27.89	10.41	38.30	56.00	17.70	
	4.549	24.81	10.44	35.25	56.00	20.75	
	6.951	25.50	10.47	35.97	60.00	24.03	
	15.885	23.80	10.56	34.36	60.00	25.64	
	0.223	16.00	10.51	26.51	52.70	26.19	AV
	0.494	18.10	10.40	28.50	46.10	17.60	
	1.262	16.49	10.41	26.90	46.00	19.10	
	4.549	14.31	10.44	24.75	46.00	21.25	
	6.951	18.30	10.47	28.77	50.00	21.23	
	15.885	18.20	10.56	28.76	50.00	21.24	
Neutral	0.223	34.40	10.50	44.90	62.70	17.80	QP
	0.489	29.60	10.39	39.99	56.19	16.20	
	1.032	27.40	10.40	37.80	56.00	18.20	
	1.800	25.20	10.43	35.63	56.00	20.37	
	4.672	22.79	10.50	33.29	56.00	22.71	
	6.951	25.20	10.53	35.73	60.00	24.27	
	0.223	18.80	10.50	29.30	52.70	23.40	AV
	0.489	19.60	10.39	29.99	46.19	16.20	
	1.032	16.80	10.40	27.20	46.00	18.80	
	1.800	15.20	10.43	25.63	46.00	20.37	
	4.672	13.29	10.50	23.79	46.00	22.21	
	6.951	18.20	10.53	28.73	50.00	21.27	

TEST ENGINEER: BYRON WU

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	43H6D	Humidity :	48%RH	
Test Mode	:	HDMI 640*480@60Hz & 1kHz Playing	Date of Test :	Dec 22, 2016	

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.223	31.70	10.51	42.21	62.70	20.49	QP
	0.484	28.80	10.40	39.20	56.27	17.07	
	1.249	27.39	10.41	37.80	56.00	18.20	
	4.501	25.81	10.44	36.25	56.00	19.75	
	6.805	24.60	10.47	35.07	60.00	24.93	
	15.146	22.60	10.55	33.15	60.00	26.85	
	0.223	14.70	10.51	25.21	52.70	27.49	AV
	0.484	17.70	10.40	28.10	46.27	18.17	
	1.249	14.39	10.41	24.80	46.00	21.20	
	4.501	15.81	10.44	26.25	46.00	19.75	
	6.805	17.80	10.47	28.27	50.00	21.73	
	15.146	18.00	10.55	28.55	50.00	21.45	
Neutral	0.223	34.50	10.50	45.00	62.70	17.70	QP
	0.494	**29.90**	**10.39**	**40.29**	**56.10**	**15.81**	
	1.262	28.00	10.41	38.41	56.00	17.59	
	3.799	25.41	10.47	35.88	56.00	20.12	
	6.488	24.59	10.53	35.12	60.00	24.88	
	16.839	22.20	10.67	32.87	60.00	27.13	
	0.223	18.80	10.50	29.30	52.70	23.40	AV
	0.494	18.30	10.39	28.69	46.10	17.41	
	1.262	16.60	10.41	27.01	46.00	18.99	
	3.799	14.41	10.47	24.88	46.00	21.12	
	6.488	18.39	10.53	28.92	50.00	21.08	
	16.839	16.60	10.67	27.27	50.00	22.73	

TEST ENGINEER: BYRON WU

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	43H6D	Humidity	:	48%RH
Test Mode	:	HDMI1080P	Date of Test	:	Dec 22, 2016

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.152	27.10	10.59	37.69	65.91	28.22	QP
	0.484	29.00	10.40	39.40	56.27	16.87	
	1.262	27.89	10.41	38.30	56.00	17.70	
	3.799	25.31	10.43	35.74	56.00	20.26	
	6.878	25.10	10.47	35.57	60.00	24.43	
	14.986	22.80	10.55	33.35	60.00	26.65	
	0.152	5.10	10.59	15.69	55.91	40.22	AV
	0.484	17.70	10.40	28.10	46.27	18.17	
	1.262	16.59	10.41	27.00	46.00	19.00	
	3.799	14.31	10.43	24.74	46.00	21.26	
	6.878	18.30	10.47	28.77	50.00	21.23	
	14.986	18.20	10.55	28.75	50.00	21.25	
Neutral	0.223	34.50	10.50	45.00	62.70	17.70	QP
	0.489	29.60	10.39	39.99	56.19	16.20	
	1.249	27.30	10.41	37.71	56.00	18.29	
	4.224	22.70	10.49	33.19	56.00	22.81	
	6.951	25.40	10.53	35.93	60.00	24.07	
	15.718	22.90	10.66	33.56	60.00	26.44	
	0.223	19.10	10.50	29.60	52.70	23.10	AV
	0.489	**19.60**	**10.39**	**29.99**	**46.19**	**16.20**	
	1.249	14.50	10.41	24.91	46.00	21.09	
	4.224	16.10	10.49	26.59	46.00	19.41	
	6.951	18.40	10.53	28.93	50.00	21.07	
	15.718	17.60	10.66	28.26	50.00	21.74	

TEST ENGINEER: BYRON WU

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	43H6D	Humidity	:	48%RH
Test Mode	:	MHL	Date of Test	:	Dec 22, 2016

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.223	31.80	10.51	42.31	62.70	20.39	QP
	0.484	28.90	10.40	39.30	56.27	16.97	
	1.262	27.69	10.41	38.10	56.00	17.90	
	4.407	24.60	10.44	35.04	56.00	20.96	
	6.186	25.90	10.46	36.36	60.00	23.64	
	17.018	23.00	10.57	33.57	60.00	26.43	
	0.223	14.90	10.51	25.41	52.70	27.29	AV
	0.484	17.80	10.40	28.20	46.27	18.07	
	1.262	16.59	10.41	27.00	46.00	19.00	
	4.407	16.10	10.44	26.54	46.00	19.46	
	6.186	17.50	10.46	27.96	50.00	22.04	
	17.018	17.00	10.57	27.57	50.00	22.43	
Neutral	0.223	34.60	10.50	45.10	62.70	17.60	QP
	0.489	29.50	10.39	39.89	56.19	16.30	
	1.032	27.40	10.40	37.80	56.00	18.20	
	1.970	27.30	10.43	37.73	56.00	18.27	
	6.186	25.50	10.52	36.02	60.00	23.98	
	15.885	22.69	10.67	33.36	60.00	26.64	
	0.223	19.10	10.50	29.60	52.70	23.10	AV
	0.489	**19.70**	**10.39**	**30.09**	**46.19**	**16.10**	
	1.032	16.80	10.40	27.20	46.00	18.80	
	1.970	16.30	10.43	26.73	46.00	19.27	
	6.186	17.20	10.52	27.72	50.00	22.28	
	15.885	17.59	10.67	28.26	50.00	21.74	

TEST ENGINEER: BYRON WU

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	43H6D	Humidity	:	48%RH
Test Mode	:	USB Play	Date of Test	:	Dec 22, 2016

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.223	31.80	10.51	42.31	62.70	20.39	QP
	0.489	**31.80**	**10.40**	**42.20**	**56.19**	**13.99**	
	1.249	27.39	10.41	37.80	56.00	18.20	
	2.736	24.59	10.43	35.02	56.00	20.98	
	6.252	25.80	10.46	36.26	60.00	23.74	
	15.718	23.51	10.55	34.06	60.00	25.94	
	0.223	14.80	10.51	25.31	52.70	27.39	AV
	0.489	19.40	10.40	29.80	46.19	16.39	
	1.249	14.49	10.41	24.90	46.00	21.10	
	2.736	15.49	10.43	25.92	46.00	20.08	
	6.252	17.80	10.46	28.26	50.00	21.74	
	15.718	18.31	10.55	28.86	50.00	21.14	
Neutral	0.223	34.50	10.50	45.00	62.70	17.70	QP
	0.494	29.80	10.39	40.19	56.10	15.91	
	1.236	26.90	10.41	37.31	56.00	18.69	
	2.707	23.99	10.46	34.45	56.00	21.55	
	6.186	25.40	10.52	35.92	60.00	24.08	
	14.986	22.20	10.65	32.85	60.00	27.15	
	0.223	19.00	10.50	29.50	52.70	23.20	AV
	0.494	18.20	10.39	28.59	46.10	17.51	
	1.236	13.50	10.41	23.91	46.00	22.09	
	2.707	14.99	10.46	25.45	46.00	20.55	
	6.186	17.30	10.52	27.82	50.00	22.18	
	14.986	17.70	10.65	28.35	50.00	21.65	

TEST ENGINEER: BYRON WU

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	43H6D	Humidity	:	48%RH
Test Mode	:	LAN Play	Date of Test	:	Dec 22, 2016

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.223	31.90	10.51	42.41	62.70	20.29	QP
	0.476	28.10	10.41	38.51	56.41	17.90	
	1.236	26.89	10.41	37.30	56.00	18.70	
	3.025	24.80	10.43	35.23	56.00	20.77	
	6.805	24.80	10.47	35.27	60.00	24.73	
	15.718	23.71	10.55	34.26	60.00	25.74	
	0.223	15.00	10.51	25.51	52.70	27.19	AV
	0.476	15.10	10.41	25.51	46.41	20.90	
	1.236	13.49	10.41	23.90	46.00	22.10	
	3.025	12.50	10.43	22.93	46.00	23.07	
	6.805	17.90	10.47	28.37	50.00	21.63	
	15.718	18.31	10.55	28.86	50.00	21.14	
Neutral	0.223	34.70	10.50	45.20	62.70	17.50	QP
	0.489	29.50	10.39	39.89	56.19	16.30	
	0.974	25.70	10.40	36.10	56.00	19.90	
	2.066	26.30	10.43	36.73	56.00	19.27	
	6.951	25.30	10.53	35.83	60.00	24.17	
	14.986	22.20	10.65	32.85	60.00	27.15	
	0.223	19.10	10.50	29.60	52.70	23.10	AV
	0.489	**19.60**	**10.39**	**29.99**	**46.19**	**16.20**	
	0.974	13.10	10.40	23.50	46.00	22.50	
	2.066	15.70	10.43	26.13	46.00	19.87	
	6.951	18.30	10.53	28.83	50.00	21.17	
	14.986	17.80	10.65	28.45	50.00	21.55	

TEST ENGINEER: BYRON WU

4 RADIATED EMISSION TEST

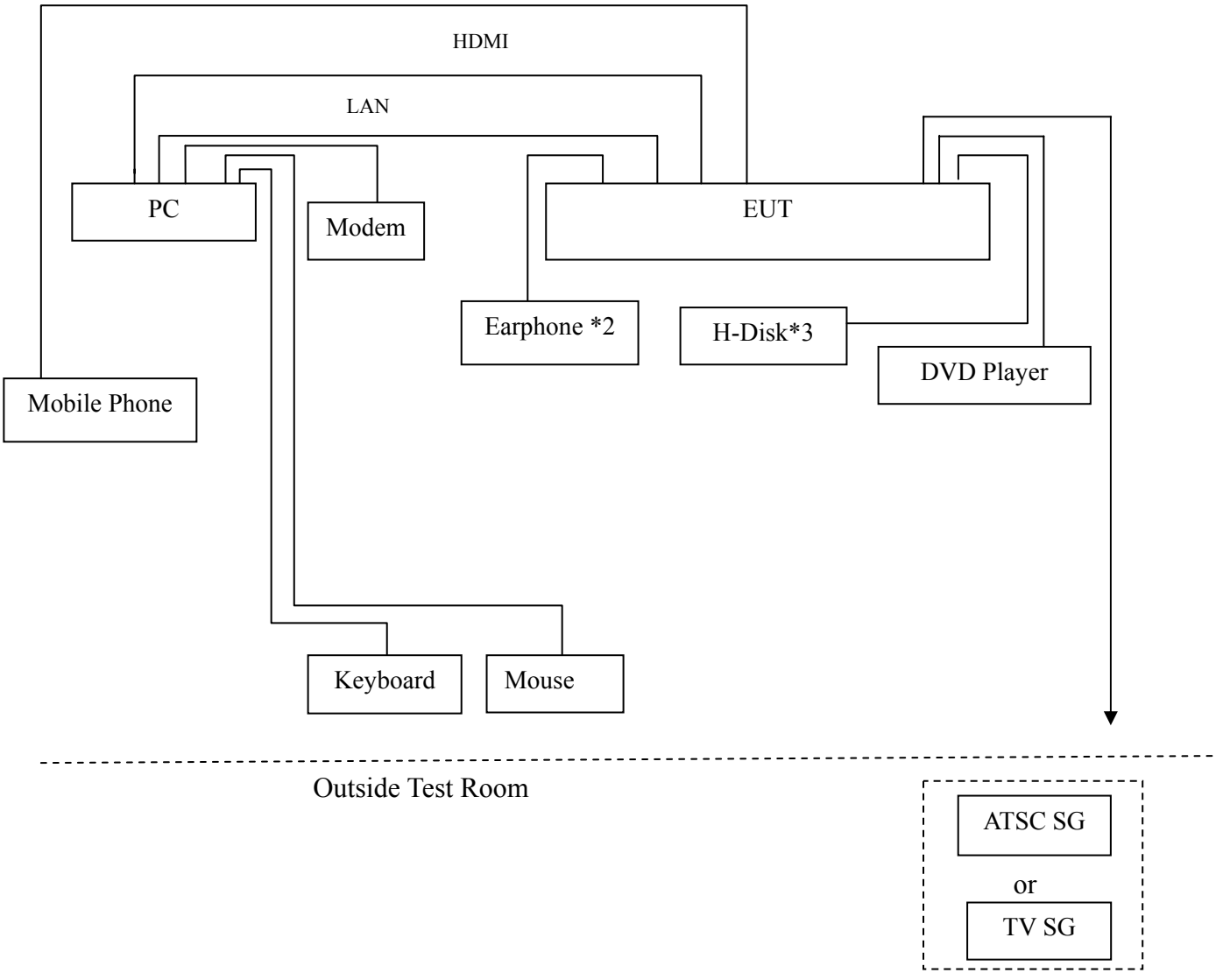
4.1 Test Equipment

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	--	--

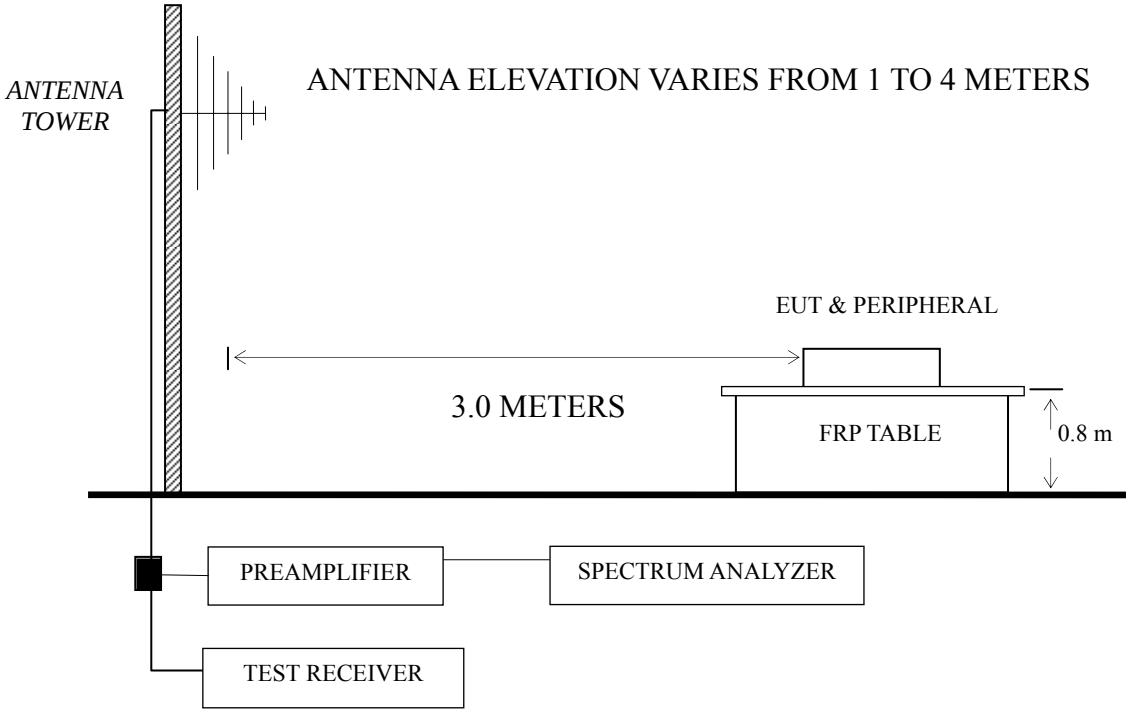
4.2 Block Diagram of Test Setup

4.2.1 EUT & Peripherals



4.2.2 Test Setup

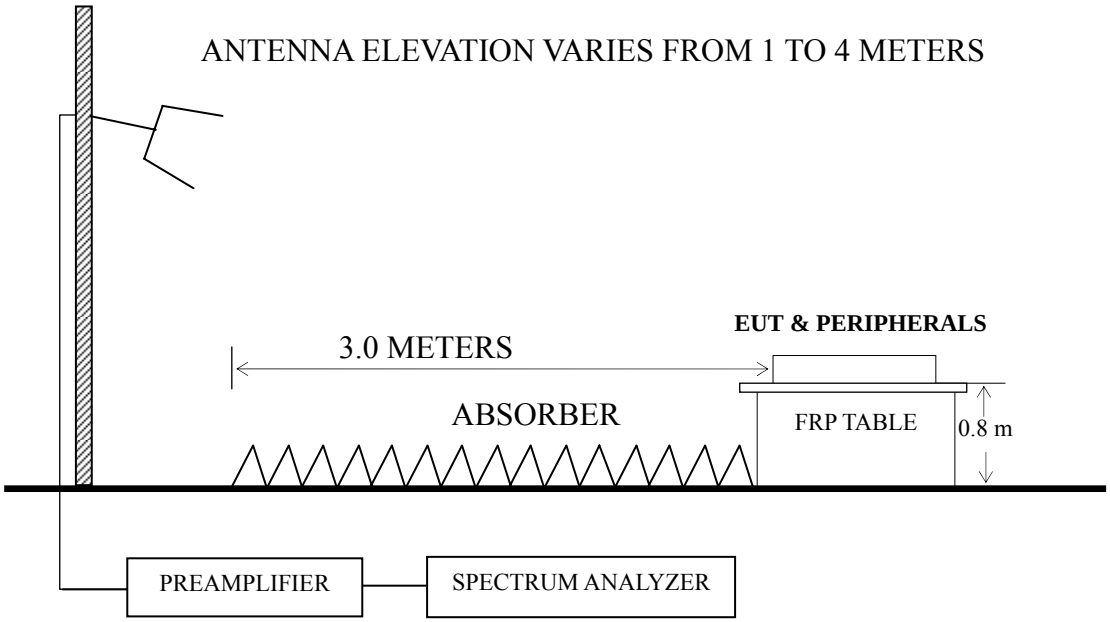
4.2.2.1 Below 1GHz



■ : 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 C63.4:2014 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
HDMI 3840*2160@60Hz & 1kHz playing	P26 - P27
HDMI 1920*1080@60Hz & 1kHz playing	P28
HDMI 1280*1024@60Hz & 1kHz playing	P29
HDMI 640*480@60Hz & 1kHz playing	P30
HDMI1080P	P31
MHL	P32
USB Play	P33
LAN Play	P34

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.

NOTE 4 – The worst case is for HDMI 3840*2160@60Hz & 1kHz playing test mode. The worst emission at horizontal polarization was detected at 938.833 MHz with corrected signal level of 42.21 dB (μV/m) (limit is 46.00 dB (μV/m)), when the antenna was 2.0 m height and the turntable was at 220°. The worst emission at vertical polarization was detected at 813.112 MHz with corrected signal level of 42.66dB (μV/m) (limit is 46.00 dB (μV/m)), when the antenna was 1.2m height and the turntable was at 60°.

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	43H6D	Humidity :	60%RH
Test Mode	:	HDMI 3840*2160@60Hz & 1kHz Playing	Date of Test :	Jan 03, 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	77.051	25.78	8.56	0.87	0.00	35.21	40.00	4.79	QP
	141.826	23.21	12.98	1.24	0.00	37.43	43.50	6.07	
	239.147	23.70	12.04	1.60	0.00	37.34	46.00	8.66	
	504.706	21.55	17.54	2.28	0.00	41.37	46.00	4.63	
	554.825	17.34	18.00	2.40	0.00	37.74	46.00	8.26	
	938.833	**17.47**	**21.60**	**3.14**	**0.00**	**42.21**	**46.00**	**3.79**	
	1491.172	50.82	25.57	3.86	35.69	44.56	74.00	29.44	PK
	2107.225	59.43	27.71	4.55	35.11	56.58	74.00	17.42	
	2872.970	52.31	30.00	5.61	35.19	52.73	74.00	21.27	
	1491.172	34.29	25.57	3.86	35.69	28.03	54.00	25.97	AV
	2107.225	43.84	27.71	4.55	35.11	40.99	54.00	13.01	
	2872.970	36.45	30.00	5.61	35.19	36.87	54.00	17.13	

TEST ENGINEER: LEON YUN

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	43H6D	Humidity :	60%RH
Test Mode	:	HDMI 3840*2160@60Hz & 1kHz Playing	Date of Test :	Jan 03, 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	32.293	19.05	16.94	0.58	0.00	36.57	40.00	3.43	QP
	85.898	24.03	10.20	0.93	0.00	35.16	40.00	4.84	
	136.939	23.95	12.98	1.22	0.00	38.15	43.50	5.35	
	675.208	18.09	19.47	2.67	0.00	40.23	46.00	5.77	
	813.112	**19.42**	**20.30**	**2.94**	**0.00**	**42.66**	**46.00**	**3.34**	
	942.131	16.64	21.63	3.16	0.00	41.43	46.00	4.57	
	1215.678	63.14	24.52	3.54	36.10	55.10	74.00	18.90	PK
	1819.292	58.46	26.87	4.19	35.29	54.23	74.00	19.77	
	3375.707	54.63	31.27	6.10	34.83	57.17	74.00	16.83	
	1215.678	47.49	24.52	3.54	36.10	39.45	54.00	14.55	AV
	1819.292	42.11	26.87	4.19	35.29	37.88	54.00	16.12	
	3375.707	37.10	31.27	6.10	34.83	39.64	54.00	14.36	

TEST ENGINEER: LEON YUN

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	43H6D	Humidity :	60%RH
Test Mode	:	HDMI 1920*1080@60Hz & 1kHz Playing	Date of Test :	Jan 03, 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	**74.919**	**26.53**	**8.30**	**0.86**	**35.69**	**40.00**	**4.31**
	140.342	22.33	13.20	1.23	36.76	43.50	6.74
	218.309	25.55	10.98	1.54	38.07	46.00	7.93
	502.940	18.63	17.52	2.26	38.41	46.00	7.59
	890.728	17.43	21.10	3.07	41.60	46.00	4.40
	975.753	17.16	21.90	3.20	42.26	54.00	11.74
Vertical	80.927	23.99	9.07	0.89	33.95	40.00	6.05
	135.982	23.72	12.89	1.21	37.82	43.50	5.68
	181.283	24.27	10.28	1.41	35.96	43.50	7.54
	239.987	21.81	12.10	1.60	35.51	46.00	10.49
	672.845	16.77	19.47	2.65	38.89	46.00	7.11
	932.272	15.98	21.40	3.14	40.52	46.00	5.48

TEST ENGINEER: LEON YUN

EUT	:	LED LCD TV	Temperature	:	22℃
Model No.	:	43H6D	Humidity	:	60%RH
Test Mode	:	HDMI 1280*1024@60Hz & 1kHz Playing	Date of Test	:	Jan 03, 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	74.919	26.13	8.30	0.86	35.29	40.00	4.71
	88.964	24.13	10.65	0.94	35.72	43.50	7.78
	140.835	22.84	13.12	1.24	37.20	43.50	6.30
	205.675	26.86	10.30	1.50	38.66	43.50	4.84
	238.310	24.17	11.98	1.60	37.75	46.00	8.25
	929.008	16.22	21.43	3.14	40.79	46.00	5.21
Vertical	**31.289**	**17.35**	**17.53**	**0.57**	**35.45**	**40.00**	**4.55**
	80.927	24.66	9.07	0.89	34.62	40.00	5.38
	135.982	23.69	12.89	1.21	37.79	43.50	5.71
	239.987	24.05	12.10	1.60	37.75	46.00	8.25
	672.845	17.06	19.47	2.65	39.18	46.00	6.82
	932.272	15.72	21.40	3.14	40.26	46.00	5.74

TEST ENGINEER: LEON YUN

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	43H6D	Humidity :	60%RH
Test Mode	:	HDMI 640*480@60Hz & 1kHz Playing	Date of Test :	Jan 03, 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	74.919	25.30	8.30	0.86	34.46	40.00	5.54
	137.903	22.64	13.02	1.22	36.88	43.50	6.62
	207.123	25.97	10.42	1.50	37.89	43.50	5.61
	501.179	20.29	17.50	2.26	40.05	46.00	5.95
	869.130	15.14	20.90	3.03	39.07	46.00	6.93
	942.131	15.89	21.63	3.16	40.68	46.00	5.32
Vertical	31.955	17.30	17.10	0.58	34.98	40.00	5.02
	80.927	**25.59**	**9.07**	**0.89**	**35.55**	**40.00**	**4.45**
	135.982	23.42	12.89	1.21	37.52	43.50	5.98
	672.845	16.41	19.47	2.65	38.53	46.00	7.47
	813.112	16.36	20.30	2.94	39.60	46.00	6.40
	929.008	16.01	21.43	3.14	40.58	46.00	5.42

TEST ENGINEER: LEON YUN

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	43H6D	Humidity :	60%RH
Test Mode	:	HDMI1080P	Date of Test :	Jan 03, 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	**75.977**	**26.38**	**8.41**	**0.87**	**35.66**	**40.00**	**4.34**
	138.874	22.36	13.11	1.23	36.70	43.50	6.80
	239.987	23.09	12.10	1.60	36.79	46.00	9.21
	501.179	18.77	17.50	2.26	38.53	46.00	7.47
	893.857	17.10	21.13	3.07	41.30	46.00	4.70
	942.131	16.68	21.63	3.16	41.47	46.00	4.53
Vertical	33.799	15.15	16.41	0.59	32.15	40.00	7.85
	80.081	25.04	8.90	0.89	34.83	40.00	5.17
	138.387	23.13	13.07	1.22	37.42	43.50	6.08
	670.489	16.88	19.40	2.65	38.93	46.00	7.07
	813.112	15.91	20.30	2.94	39.15	46.00	6.85
	932.272	16.43	21.40	3.14	40.97	46.00	5.03

TEST ENGINEER: LEON YUN

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	43H6D	Humidity :	60%RH
Test Mode	:	MHL	Date of Test :	Jan 03, 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	68.151	23.42	7.21	0.83	31.46	40.00	8.54
	133.619	18.77	12.82	1.20	32.79	43.50	10.71
	202.100	21.80	10.17	1.49	33.46	43.50	10.04
	281.008	19.68	13.48	1.71	34.87	46.00	11.13
	429.523	14.42	16.40	2.12	32.94	46.00	13.06
	552.883	15.11	17.95	2.40	35.46	46.00	10.54
Vertical	**84.702**	**21.91**	**10.01**	**0.92**	**32.84**	**40.00**	**7.16**
	117.360	19.64	12.25	1.11	33.00	43.50	10.50
	193.773	22.92	9.93	1.46	34.31	43.50	9.19
	297.224	18.96	13.60	1.75	34.31	46.00	11.69
	533.832	15.10	17.75	2.36	35.21	46.00	10.79
	890.728	9.96	21.10	3.07	34.13	46.00	11.87

TEST ENGINEER: LEON YUN

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	43H6D	Humidity :	60%RH
Test Mode	:	USB Play	Date of Test :	Jan 03, 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**	**23.68**	**8.64**	**0.88**	**33.20**	**40.00**	**6.80**
	147.404	19.37	12.35	1.27	32.99	43.50	10.51
	248.552	18.97	12.52	1.63	33.12	46.00	12.88
	333.687	17.99	14.63	1.86	34.48	46.00	11.52
	494.199	17.44	17.38	2.25	37.07	46.00	8.93
	638.369	11.91	19.18	2.59	33.68	46.00	12.32
Vertical	84.405	20.79	9.93	0.91	31.63	40.00	8.37
	141.826	19.96	12.98	1.24	34.18	43.50	9.32
	198.588	23.41	10.03	1.47	34.91	43.50	8.59
	338.400	19.25	14.76	1.87	35.88	46.00	10.12
	499.425	15.06	17.50	2.26	34.82	46.00	11.18
	845.088	13.22	20.40	2.98	36.60	46.00	9.40

TEST ENGINEER: LEON YUN

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	43H6D	Humidity :	60%RH
Test Mode	:	LAN Play	Date of Test :	Jan 03, 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	80.362	22.13	8.99	0.89	32.01	40.00	7.99
	122.834	20.58	12.22	1.14	33.94	43.50	9.56
	138.874	21.67	13.11	1.23	36.01	43.50	7.49
	284.977	20.18	13.40	1.72	35.30	46.00	10.70
	468.876	15.86	17.10	2.20	35.16	46.00	10.84
	881.407	14.46	21.00	3.05	38.51	46.00	7.49
Vertical	**46.995**	**22.50**	**9.45**	**0.68**	**32.63**	**40.00**	**7.37**
	85.298	21.29	10.15	0.92	32.36	40.00	7.64
	147.921	20.81	12.29	1.27	34.37	43.50	9.13
	221.392	22.76	11.10	1.55	35.41	46.00	10.59
	265.676	20.34	13.10	1.67	35.11	46.00	10.89
	492.469	16.67	17.34	2.25	36.26	46.00	9.74

TEST ENGINEER: LEON YUN

5 DEBUG DESCRIPTION

The following components are used during the countermeasure procedures:

Name	M/N	Manufacturer	Location
Conductive foam	SMR-TSL-4-3.5-5R	QINGDAO JOINSET CO.,LTD	See Appendix 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 certification testing, must be incorporated in each unit marked

TEST ENGINEER: 

(BYRON WU)

6 DEVIATION TO TEST SPECIFICATIONS

None.