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

LED LCD TV

Model No.	Brand
LTDN50K2203GWUS	Hisense
50H6GB	

FCC ID : W9HLCDF0053

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-F15018
Date of Test : Dec 30, 2014 – Jan 14, 2015
Date of Report : Jan 19, 2015

TABLE OF CONTENTS

Page

TEST REPORT FOR FCC CERTIFICATE

Applicant : Hisense Electric Co., Ltd.

Manufacturer : Hisense Electric Co., Ltd.

Factory #1 : Hisense Electric Co., Ltd.

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

EUT Description : LED LCD TV

Model No.	Brand	Power Supply
Refer to Sec2.1	Hisense	120V/60Hz

Test Procedure Used:

FCC RULES AND REGULATIONS PART 15 SUBPART B CLASS B OCTOBER 2013 AND ANSI C63.4-2003

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 30, 2014 – Jan 14, 2015 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 contains data that are not covered by the NVLAP accreditation.

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.F15018, a Verification report.

Date of Test : Dec 30, 2014 – Jan 14, 2015 Date of Report : Jan 19, 2015

Producer : KATHY WANG / Supervisor

Review : SAMMY CHEN / Deputy Manager

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

Signatory : BYRON KWO / Assistant General Manager

Authorized Signature EMC

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 2013 AND ANSI C63.4-2003	15.107(a) Class B	Pass
Radiated Disturbance	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2013 AND ANSI C63.4-2003	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.	:	LTDN50K2203GWUS, 50H6GB
Note	:	The above models are all the same except for model name. 50H6GB model is tested and Recorded in the report.
Brand Name	:	Hisense
Applicant	:	Hisense Electric Co., Ltd. No.218 Qianwangang Road, Economy & Technology Development Zone, Qingdao, China
Manufacturer	:	Hisense Electric Co., Ltd. No.218 Qianwangang Road, Economy & Technology Development Zone, Qingdao, China
Factory #1	:	Hisense Electric Co., Ltd. No.218 Qianwangang Road, Economy & Technology Development Zone, Qingdao, China
Factory #2	:	Tatung Mexico S.A. de C.V. Miguel Catalán 420, Parque Industrial Rio Bravo, Cd. Juarez, Chih., CP 32557
LCD Panel	:	Manufacturer : Hisense M/N : HD500DF-B53\S2\ROH
Max Resolution	:	1920*1080@60Hz
HDMI Cable	:	Shielded, Detachable, 1.00m
Power Cord	:	Unshielded, Detachable, 1.80m

Remark:

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

Bottom Port:

(1) One USB Port
: Connected with U-Disk

(2) One component of Audio/YPbPr Audio Port
: Connected with DVD PLAYER#1

(3) One component of Video/YPbPr Port
: Connected with DVD PLAYER#1

(4) One Optical Port
: Connected with DVD PLAYER#1

Side Port:

(1) One LAN Port
: Connected with PC

(2) One HDMI3 Port
: Connected with DVD PLAYER#1

(3) One DEBUG Port
: Do not open to the costumers

(4) One HDMI2/ARC Port
: Connected with DVD PLAYER#1

(5) One HDMI1 Port
: Connected with DVD PLAYER#2

(6) One HEADPHONE Port
: Connected with Earphone

(7) One ANT/CABLE IN Port
: Connected with Antenna or ATSC SG / TV
One DVI AUDIO IN Port

(5) One USB Port
: Connected with U-Disk

2.2 Peripherals

2.2.1 PC

Manufacturer	:	HP
Model Number	:	dx7400MT
Serial Number	:	CNG8130K89
Power Cord	:	Unshielded, Detachable, 1.8m
Certificate	:	FCC DoC; CE/EMC; VCCI; C-Tick; BSMI, 3C, MIC

2.2.2 Printer

Manufacturer	:	HP
Model Number	:	P1007
Serial Number	:	VNFN713831
Data Cable	:	Shielded, detachable, 1.8m
Certificate	:	GS, CE/EMC, C-Tick, FCC DoC

2.2.3 Keyboard #1

Manufacturer	:	HP
Model Number	:	CS105
Serial Number	:	9GTRNB1300120632
Data Cable	:	Shielded, undetachable, 1.8m
Certificate	:	CE/EMC, FCC DoC, VCCI, MIC, C-Tick, BSMI

2.2.4 Keyboard #2

Manufacturer	:	Microsoft
Model Number	:	RT2300
Serial Number	:	7668200662248
Data Cable	:	Shielded, undetachable, 1.8m
Certificate	:	CE/EMC, FCC DoC, VCCI, MIC, C-Tick, BSMI

2.2.5 Mouse

Manufacturer	:	HP
Model Number	:	CS105
Serial Number	:	9GTRNB1300120632
Data Cable	:	Shielded, Undetachable, 1.8m.
Certificate	:	CE/EMC, FCC DoC, VCCI, MIC, C-Tick, BSMI

2.2.6 Modem

Manufacturer	:	TP-LINK
Model Number	:	TM-EC5658V
Serial Number	:	07123301053
Data Cable	:	Shielded, Detachable, 1.8m
Certificate	:	FCC DoC, CE/EMC, CCC

2.2.7 Earphone

Manufacturer	:	audio-technica
Model Number	:	ATH-CKL200

2.2.8 TV Signal Generator

Manufacturer	:	FLUKE
Model Number	:	54200m01
Serial Number	:	814008
Data Cable	:	Shielded, detachable, 2.0m
Power Cord	:	Unshielded, detachable, 2.0m
Certificate	:	CE/EMC, FCC DoC, CCC

2.2.9 ATSC Signal Generator

Manufacturer	:	SENCORE
Model Number	:	ATSC997
Serial Number	:	6790071

2.2.10 DVD PLAYER #1

Manufacturer	:	PHILIPS
Model Number	:	DVP3986K/93
Serial Number	:	KX1A0902120108
Certificate	:	FCC DoC, CE/EMC, CCC

2.2.11 DVD PLAYER #2

Manufacturer	:	PHILIPS
Model Number	:	DVP3986K/93
Serial Number	:	KX1A0902120082
Certificate	:	FCC DoC, CE/EMC, CCC

2.2.12 U-DISK #1

Manufacturer	:	Kingmax
Model Number	:	8GB

2.2.13 U-DISK #2

Manufacturer	:	Transcend
Model Number	:	8GB

2.3 Description of Test Facility

Site Description (No.3 3m Chamber)	:	Sept. 17, 1998 file on Mar 16, 2012 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 = 2.77dB

Radiated Emission Expanded Uncertainty (30-200MHz):

U = 4.40dB (Horizontal)

U = 4.40dB (Vertical)

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

U = 4.40dB (Horizontal)

U = 5.40dB (Vertical)

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

U = 5.08 dB

3 CONDUCTED EMISSION TEST

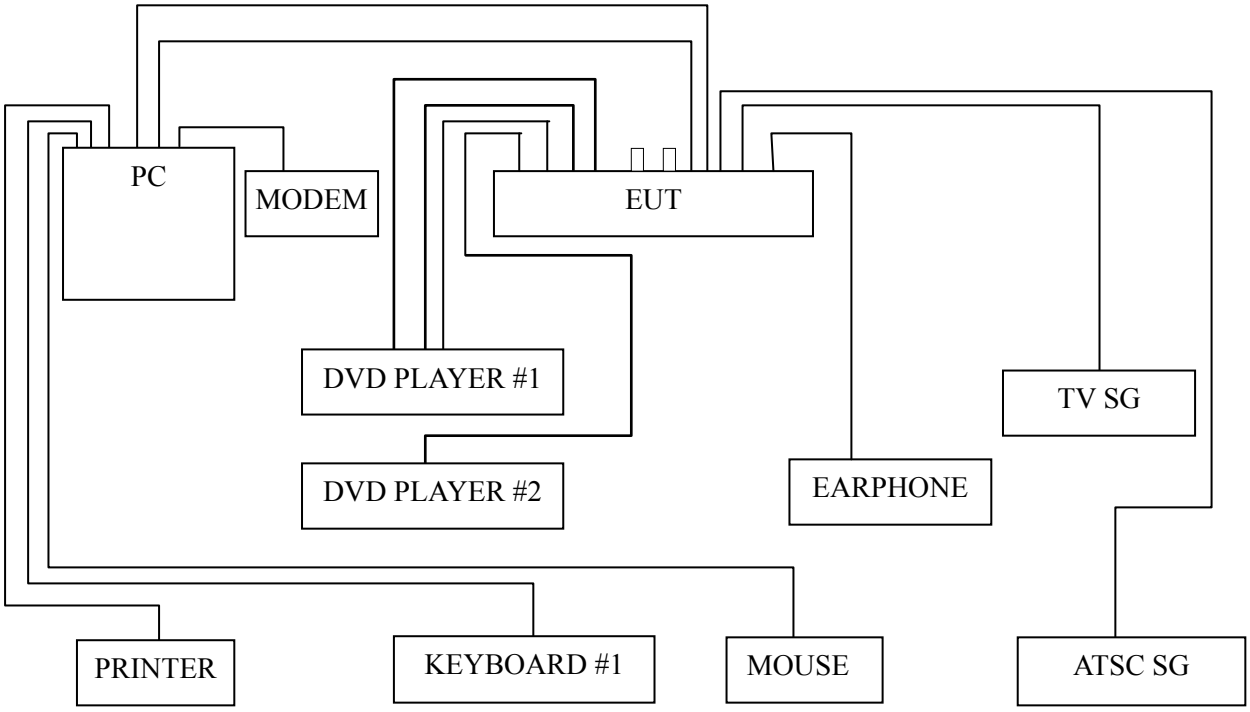
3.1 Test Equipment

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	101303	Sep 11, 2014	Sep 10, 2015
2.	Artificial Mains Network (AMN)	R&S	ENV4200	100125	Jun 27, 2014	Jun 26, 2015
3.	Line Impedance Stabilization Network (LISN)	Kyoritsu	KNW-407	8-1280-4	Mar 20, 2014	Mar 19, 2015
4.	50Ω Coaxial Switch	Anritsu	MP59B	6200426389	Sep 18, 2014	Mar 17, 2015
5.	50Ω Terminator	Anritsu	BNC	001	Mar 20, 2014	Mar 19, 2015
6.	Software	Audix	E3	6.111206	--	--

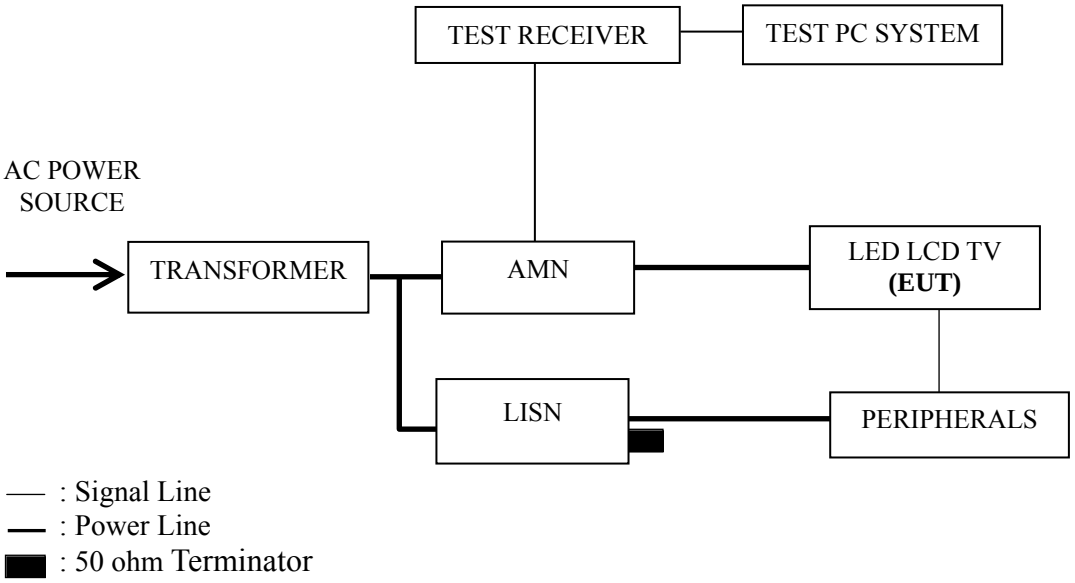
3.2 Block Diagram of Test Setup

3.2.1 EUT & Peripherals



: U-Disk

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 D-Sub & 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 U-Disk.

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

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

3.5.9 The test modes are as follows:

Test Mode
HDMI 1920*1080@60Hz & 1kHz playing
HDMI 1280*1024@75Hz & 1kHz playing
HDMI 640*480@60Hz & 1kHz playing
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 C63.4:2003 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 1920*1080@60Hz & 1kHz playing	P13
HDMI 1280*1024@75Hz & 1kHz playing	P14
HDMI 640*480@60Hz & 1kHz playing	P15
USB Play	P16
LAN Play	P17

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 HDMI 1280*1024@75Hz & 1kHz playing test mode. The worst emission is detected at 6.702 MHz (Average Value) with corrected signal level of 41.01 dB (μV) (limit is 50.00 dB (μV)), when the Neutral of the EUT is connected to AMN.

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	50H6GB	Humidity :	48%RH	
Test Mode	:	HDMI 1920*1080@60Hz & 1kHz Playing	Date of Test :	Dec 30, 2014	

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.151	39.00	10.58	49.58	65.93	16.35	QP
	0.344	29.50	10.47	39.97	59.10	19.13	
	0.642	26.90	10.43	37.33	56.00	18.67	
	1.197	28.00	10.40	38.40	56.00	17.60	
	2.229	26.10	10.44	36.54	56.00	19.46	
	6.648	35.81	10.43	46.24	60.00	13.76	
	0.151	27.50	10.58	38.08	55.93	17.85	AV
	0.344	18.60	10.47	29.07	49.10	20.03	
	0.642	15.40	10.43	25.83	46.00	20.17	
	1.197	19.40	10.40	29.80	46.00	16.20	
	2.229	17.80	10.44	28.24	46.00	17.76	
	6.648	**29.91**	**10.43**	**40.34**	**50.00**	**9.66**	
Neutral	0.151	41.80	10.58	52.38	65.96	13.58	QP
	0.338	26.60	10.46	37.06	59.26	22.20	
	0.624	26.30	10.42	36.72	56.00	19.28	
	1.376	27.30	10.41	37.71	56.00	18.29	
	6.648	35.50	10.51	46.01	60.00	13.99	
	14.650	21.80	10.66	32.46	60.00	27.54	
	0.151	27.90	10.58	38.48	55.96	17.48	AV
	0.338	15.50	10.46	25.96	49.26	23.30	
	0.624	16.40	10.42	26.82	46.00	19.18	
	1.376	15.90	10.41	26.31	46.00	19.69	
	6.648	29.70	10.51	40.21	50.00	9.79	
	14.650	15.70	10.66	26.36	50.00	23.64	

TEST ENGINEER: WENCY YANG

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	50H6GB	Humidity :	48%RH	
Test Mode	:	HDMI 1280*1024@75Hz & 1kHz Playing	Date of Test :	Dec 30, 2014	

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.151	29.30	10.58	39.88	65.94	26.06	QP
	0.341	29.40	10.47	39.87	59.17	19.30	
	0.637	27.20	10.43	37.63	56.00	18.37	
	1.971	25.90	10.44	36.34	56.00	19.66	
	6.674	34.61	10.43	45.04	60.00	14.96	
	14.500	22.40	10.54	32.94	60.00	27.06	
	0.151	28.40	10.58	38.98	55.94	16.96	AV
	0.341	19.00	10.47	29.47	49.17	19.70	
	0.637	16.30	10.43	26.73	46.00	19.27	
	1.971	17.00	10.44	27.44	46.00	18.56	
	6.674	29.21	10.43	39.64	50.00	10.36	
	14.500	16.50	10.54	27.04	50.00	22.96	
Neutral	0.151	42.10	10.58	52.68	65.92	13.24	QP
	0.338	26.70	10.46	37.16	59.26	22.10	
	0.633	26.70	10.42	37.12	56.00	18.88	
	1.552	27.20	10.42	37.62	56.00	18.38	
	6.702	37.39	10.52	47.91	60.00	12.09	
	19.460	22.40	10.71	33.11	60.00	26.89	
	0.151	27.80	10.58	38.38	55.92	17.54	AV
	0.338	15.50	10.46	25.96	49.26	23.30	
	0.633	16.40	10.42	26.82	46.00	19.18	
	1.552	16.30	10.42	26.72	46.00	19.28	
	6.702	**30.49**	**10.52**	**41.01**	**50.00**	**8.99**	
	19.460	17.30	10.71	28.01	50.00	21.99	

TEST ENGINEER: WENCY YANG

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	50H6GB	Humidity :	48%RH	
Test Mode	:	HDMI 640*480@60Hz & 1kHz Playing	Date of Test :	Dec 30, 2014	

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.152	39.60	10.58	50.18	65.91	15.73	QP
	0.343	29.40	10.47	39.87	59.13	19.26	
	0.649	27.40	10.43	37.83	56.00	18.17	
	1.466	27.00	10.40	37.40	56.00	18.60	
	6.512	34.50	10.43	44.93	60.00	15.07	
	14.900	22.90	10.54	33.44	60.00	26.56	
	0.152	28.30	10.58	38.88	55.91	17.03	AV
	0.343	18.80	10.47	29.27	49.13	19.86	
	0.649	14.70	10.43	25.13	46.00	20.87	
	1.466	18.90	10.40	29.30	46.00	16.70	
	6.512	27.30	10.43	37.73	50.00	12.27	
	14.900	16.30	10.54	26.84	50.00	23.16	
Neutral	0.152	41.20	10.58	51.78	65.91	14.13	QP
	0.672	27.10	10.42	37.52	56.00	18.48	
	1.203	28.10	10.41	38.51	56.00	17.49	
	2.262	25.71	10.46	36.17	56.00	19.83	
	6.647	35.90	10.51	46.41	60.00	13.59	
	27.230	22.61	11.00	33.61	60.00	26.39	
	0.152	28.30	10.58	38.88	55.91	17.03	AV
	0.672	17.30	10.42	27.72	46.00	18.28	
	1.203	19.50	10.41	29.91	46.00	16.09	
	2.262	17.51	10.46	27.97	46.00	18.03	
	6.647	**30.00**	**10.51**	**40.51**	**50.00**	**9.49**	
	27.230	16.11	11.00	27.11	50.00	22.89	

TEST ENGINEER: WENCY YANG

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	50H6GB	Humidity	:	48%RH
Test Mode	:	USB Play	Date of Test	:	Dec 30, 2014

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.150	39.60	10.58	50.18	65.99	15.81	QP
	0.343	29.50	10.47	39.97	59.13	19.16	
	0.674	27.60	10.43	38.03	56.00	17.97	
	1.550	26.90	10.40	37.30	56.00	18.70	
	6.756	34.50	10.44	44.94	60.00	15.06	
	14.760	23.20	10.54	33.74	60.00	26.26	
	0.150	28.40	10.58	38.98	55.99	17.01	AV
	0.343	18.90	10.47	29.37	49.13	19.76	
	0.674	17.80	10.43	28.23	46.00	17.77	
	1.550	16.80	10.40	27.20	46.00	18.80	
	6.756	28.20	10.44	38.64	50.00	11.36	
	14.760	16.80	10.54	27.34	50.00	22.66	
Neutral	0.151	41.40	10.58	51.98	65.96	13.98	QP
	0.341	26.60	10.46	37.06	59.19	22.13	
	0.667	27.70	10.42	38.12	56.00	17.88	
	1.193	27.70	10.41	38.11	56.00	17.89	
	6.756	34.50	10.52	45.02	60.00	14.98	
	26.300	22.80	10.95	33.75	60.00	26.25	
	0.151	27.50	10.58	38.08	55.96	17.88	AV
	0.341	16.40	10.46	26.86	49.19	22.33	
	0.667	19.10	10.42	29.52	46.00	16.48	
	1.193	19.50	10.41	29.91	46.00	16.09	
	6.756	**28.30**	**10.52**	**38.82**	**50.00**	**11.18**	
	26.300	16.70	10.95	27.65	50.00	22.35	

TEST ENGINEER: WENCY YANG

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	50H6GB	Humidity	:	48%RH
Test Mode	:	LAN Play	Date of Test	:	Dec 30, 2014

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.155	37.21	10.57	47.78	65.72	17.94	QP
	0.344	29.50	10.47	39.97	59.11	19.14	
	0.642	27.30	10.43	37.73	56.00	18.27	
	1.469	27.30	10.40	37.70	56.00	18.30	
	6.512	34.80	10.43	45.23	60.00	14.77	
	14.730	23.50	10.54	34.04	60.00	25.96	
	0.155	24.51	10.57	35.08	55.72	20.64	AV
	0.344	18.80	10.47	29.27	49.11	19.84	
	0.642	15.10	10.43	25.53	46.00	20.47	
	1.469	19.40	10.40	29.80	46.00	16.20	
	6.512	27.50	10.43	37.93	50.00	12.07	
	14.730	16.80	10.54	27.34	50.00	22.66	
Neutral	0.151	41.80	10.58	52.38	65.97	13.59	QP
	0.607	26.90	10.42	37.32	56.00	18.68	
	1.194	27.50	10.41	37.91	56.00	18.09	
	4.162	22.10	10.50	32.60	56.00	23.40	
	6.648	35.60	10.51	46.11	60.00	13.89	
	14.640	21.90	10.66	32.56	60.00	27.44	
	0.151	28.00	10.58	38.58	55.97	17.39	AV
	0.607	15.10	10.42	25.52	46.00	20.48	
	1.194	19.70	10.41	30.11	46.00	15.89	
	4.162	15.00	10.50	25.50	46.00	20.50	
	6.648	**29.70**	**10.51**	**40.21**	**50.00**	**9.79**	
	14.640	15.80	10.66	26.46	50.00	23.54	

TEST ENGINEER: WENCY YANG

4 RADIATED EMISSION TEST

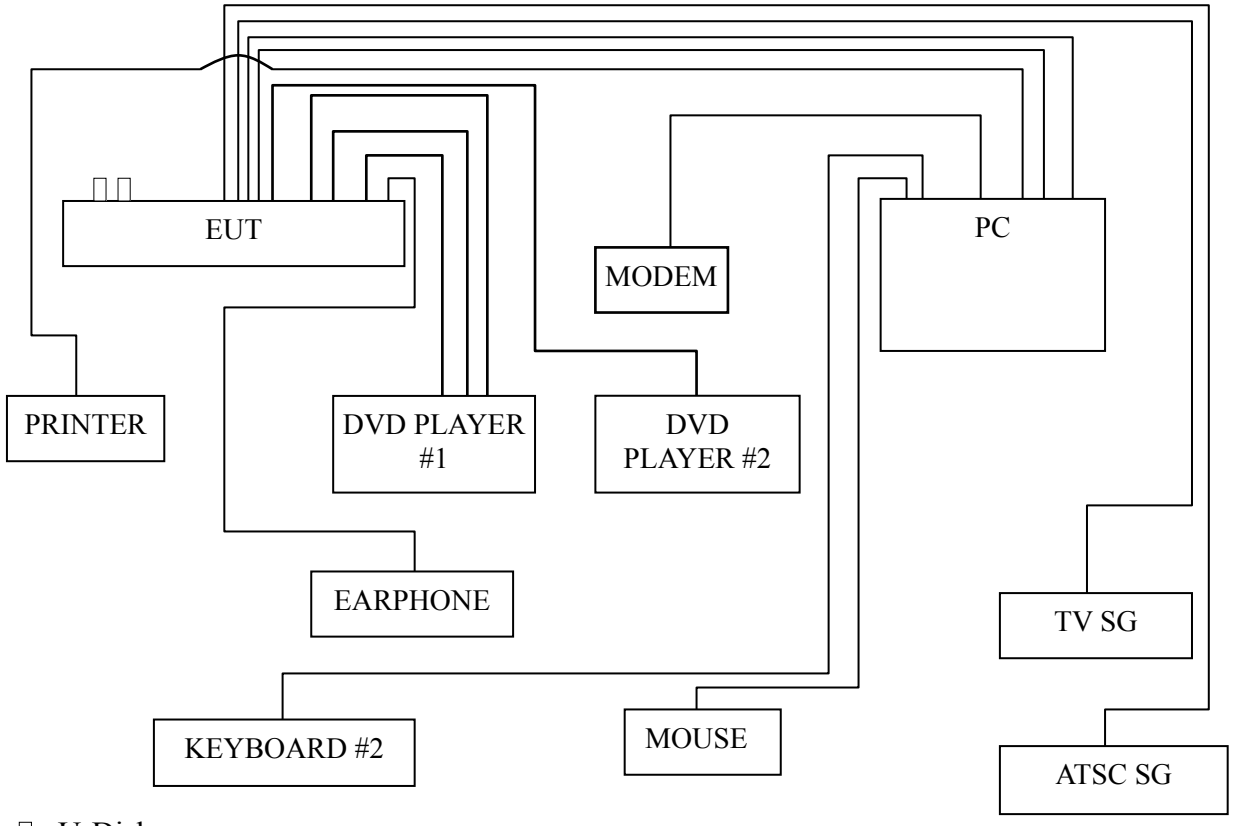
4.1 Test Equipment

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	101302	Sep 18, 2014	Mar 17, 2015
2.	Preamplifier	Agilent	8447D	2944A10548	Mar 20, 2014	Mar 19, 2015
3.	Preamplifier	HP	8449B	3008A00864	May 03, 2014	May 02, 2015
4.	Bi-log Antenna	TESEQ	CBL6112D	23193	May 11, 2014	May 10, 2015
5.	Horn Antenna	EMCO	3115	9607-4878	Nov 11, 2014	Nov 10, 2015
6.	Spectrum	Agilent	E7405A	MY45106600	Sep 18, 2014	Mar 17, 2015
7.	50Ω Coaxial Switch	Anritsu	MP59B	6200426390	Sep 18, 2014	Mar 17, 2015
8.	Software	Audix	E3	6.2007-9-10	--	--

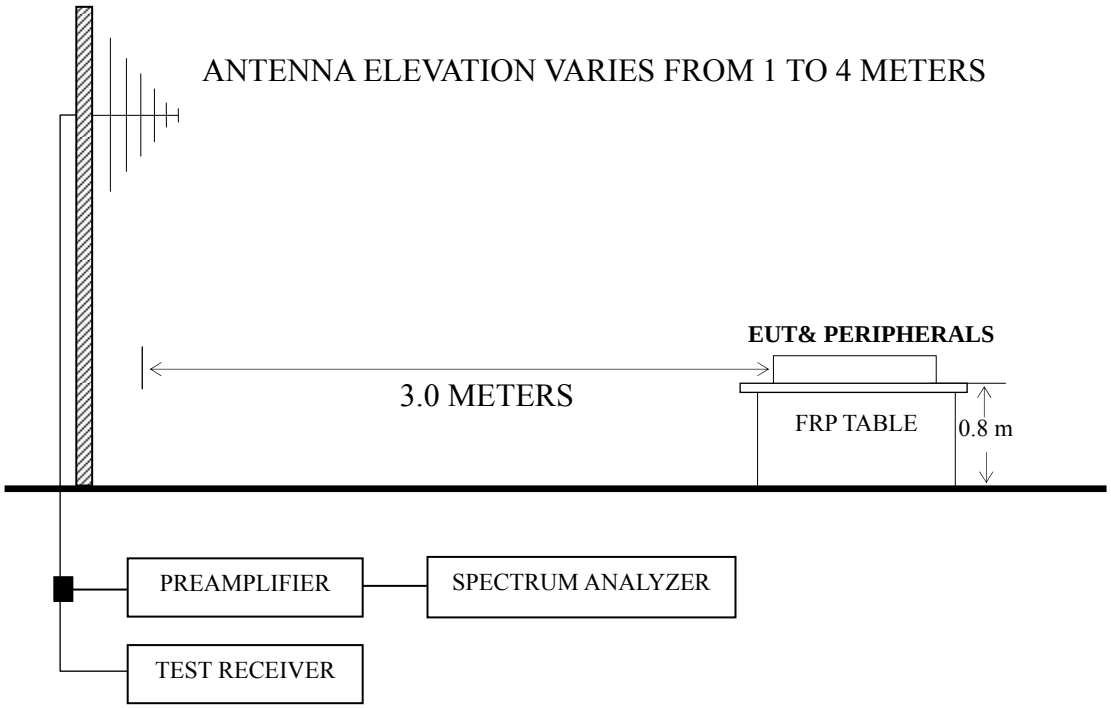
4.2 Block Diagram of Test Setup

4.2.1 EUT & Peripherals



: U-Disk

4.2.2 Radiated emission test setup



■ : 50 ohm Coaxial Switch

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 C63.4:2003 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 2 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 1920*1080@60Hz & 1kHz playing	P22 – P23
HDMI 1280*1024@75Hz & 1kHz playing	P24
HDMI 640*480@60Hz & 1kHz playing	P25
USB Play	P26
LAN Play	P27

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 1920*1080@60Hz & 1kHz playing test mode. The worst emission at horizontal polarization was detected at 308.560 MHz with corrected signal level of 44.74 dB (μV/m) (limit is 46.00 dB (μV/m)), when the antenna was 2.10 m height and the turntable was at 334°. The worst emission at vertical polarization was detected at 63.983 MHz with corrected signal level of 33.63 dB (μV/m) (limit is 40.00 dB (μV/m)), when the antenna was 1.50 m height and the turntable was at 144°.

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	50H6GB	Humidity :	60%RH
Test Mode	:	HDMI 1920*1080@60Hz & 1kHz Playing	Date of Test :	Jan 14, 2015

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	75.977	21.50	7.25	0.87	--	29.62	40.00	10.38	QP
	130.837	18.30	12.29	1.16	--	31.75	43.50	11.75	
	222.170	22.53	8.15	1.50	--	32.18	46.00	13.82	
	308.560	**30.00**	**12.93**	**1.81**	**--**	**44.74**	**46.00**	**1.26**	
	556.775	17.07	19.10	2.39	--	38.56	46.00	7.44	
	798.980	13.02	20.70	2.87	--	36.59	46.00	9.41	
	1187.857	50.61	3.52	24.88	36.85	42.16	74.00	31.84	PK
	1285.563	50.13	3.67	25.46	36.71	42.55	74.00	31.45	
	1363.265	51.47	3.78	25.81	36.59	44.47	74.00	29.53	
	1560.833	50.15	4.04	26.87	36.28	44.78	74.00	29.22	
	1741.605	51.91	4.26	28.76	36.09	48.84	74.00	25.16	
	1866.886	49.40	4.41	29.99	35.99	47.81	74.00	26.19	
	1187.857	34.53	3.52	24.88	36.85	26.08	54.00	27.92	AV
	1285.563	36.56	3.67	25.46	36.71	28.98	54.00	25.02	
	1363.265	36.57	3.78	25.81	36.59	29.57	54.00	24.43	
	1560.833	36.57	4.04	26.87	36.28	31.20	54.00	22.80	
	1741.605	36.28	4.26	28.76	36.09	33.21	54.00	20.79	
	1866.886	38.74	4.41	29.99	35.99	37.15	54.00	16.85	

TEST ENGINEER: BILL WU

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	50H6GB	Humidity :	60%RH
Test Mode	:	HDMI 1920*1080@60Hz & 1kHz Playing	Date of Test :	Jan 14, 2015

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	30.105	13.61	19.43	0.54	--	33.58	40.00	6.42	QP
	63.983	**27.62**	**5.22**	**0.79**	**--**	**33.63**	**40.00**	**6.37**	
	212.270	23.91	8.05	1.46	--	33.42	43.50	10.08	
	308.913	24.39	12.93	1.81	--	39.13	46.00	6.87	
	556.775	13.69	19.10	2.39	--	35.18	46.00	10.82	
	798.980	13.89	20.70	2.87	--	37.46	46.00	8.54	
	1120.240	49.18	3.41	24.49	36.95	40.13	74.00	33.87	PK
	1332.026	49.22	3.75	25.68	36.64	42.01	74.00	31.99	
	1526.620	49.11	4.01	26.54	36.33	43.33	74.00	30.67	
	1571.478	51.43	4.06	26.95	36.27	46.17	74.00	27.83	
	1735.972	50.76	4.26	28.71	36.10	47.63	74.00	26.37	
	1892.399	50.31	4.44	30.22	35.97	49.00	74.00	25.00	
	1120.240	36.75	3.41	24.49	36.95	27.70	54.00	26.30	AV
	1332.026	35.36	3.75	25.68	36.64	28.15	54.00	25.85	
	1526.620	36.47	4.01	26.54	36.33	30.69	54.00	23.31	
	1571.478	37.66	4.06	26.95	36.27	32.40	54.00	21.60	
	1735.972	38.74	4.26	28.71	36.10	35.61	54.00	18.39	
	1892.399	37.92	4.44	30.22	35.97	36.61	54.00	17.39	

TEST ENGINEER: BILL WU

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	50H6GB	Humidity :	60%RH
Test Mode	:	HDMI 1280*1024@75Hz & 1kHz Playing	Date of Test :	Jan 14, 2015

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	20.67	7.25	0.87	28.79	40.00	11.21
	130.837	18.54	12.29	1.16	31.99	43.50	11.51
	222.170	22.63	8.15	1.50	32.28	46.00	13.72
	308.913	**28.99**	**12.93**	**1.81**	**43.73**	**46.00**	**2.27**
	675.208	12.15	19.07	2.66	33.88	46.00	12.12
	798.980	13.07	20.70	2.87	36.64	46.00	9.36
Vertical	30.962	13.66	18.27	0.54	32.47	40.00	7.53
	63.092	**27.60**	**5.24**	**0.78**	**33.62**	**40.00**	**6.38**
	213.763	24.41	8.02	1.46	33.89	43.50	9.61
	308.913	24.57	12.93	1.81	39.31	46.00	6.69
	399.030	17.58	15.50	2.04	35.12	46.00	10.88
	796.183	14.41	20.17	2.87	37.45	46.00	8.55

TEST ENGINEER: BILL WU

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	50H6GB	Humidity :	60%RH
Test Mode	:	HDMI 640*480@60Hz & 1kHz Playing	Date of Test :	Jan 14, 2015

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	63.983	22.35	5.22	0.79	28.36	40.00	11.64
	82.071	22.08	7.03	0.90	30.01	40.00	9.99
	135.032	19.27	11.20	1.17	31.64	43.50	11.86
	215.268	23.22	8.00	1.48	32.70	43.50	10.80
	307.831	**28.23**	**12.85**	**1.81**	**42.89**	**46.00**	**3.11**
	798.980	13.11	20.70	2.87	36.68	46.00	9.32
Vertical	30.962	13.81	18.27	0.54	32.62	40.00	7.38
	64.887	26.58	5.20	0.80	32.58	40.00	7.42
	218.309	21.87	8.08	1.49	31.44	46.00	14.56
	307.831	**24.02**	**12.85**	**1.81**	**38.68**	**46.00**	**7.32**
	397.634	16.34	15.40	2.04	33.78	46.00	12.22
	798.980	11.70	20.70	2.87	35.27	46.00	10.73

TEST ENGINEER: BILL WU

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	50H6GB	Humidity :	60%RH
Test Mode	:	USB Play	Date of Test :	Jan 14, 2015

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	30.745	2.38	18.60	0.54	21.52	40.00	18.48
	74.919	21.33	7.40	0.86	29.59	40.00	10.41
	135.506	19.05	11.14	1.17	31.36	43.50	12.14
	303.544	**26.15**	**12.62**	**1.80**	**40.57**	**46.00**	**5.43**
	556.775	18.07	19.10	2.39	39.56	46.00	6.44
	790.619	13.09	19.10	2.87	35.06	46.00	10.94
Vertical	**30.853**	**12.03**	**18.43**	**0.54**	**31.00**	**40.00**	**9.00**
	65.114	24.66	5.23	0.80	30.69	40.00	9.31
	153.739	13.17	9.50	1.25	23.92	43.50	19.58
	356.676	17.83	14.79	1.95	34.57	46.00	11.43
	709.182	9.81	20.00	2.72	32.53	46.00	13.47
	863.056	8.36	20.93	2.99	32.28	46.00	13.72

TEST ENGINEER: BILL WU

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	50H6GB	Humidity :	60%RH
Test Mode	:	LAN Play	Date of Test :	Jan 14, 2015

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	61.995	19.00	5.26	0.78	25.04	40.00	14.96
	118.601	16.94	12.25	1.09	30.28	43.50	13.22
	228.491	19.73	8.92	1.53	30.18	46.00	15.82
	301.422	**24.90**	**12.47**	**1.79**	**39.16**	**46.00**	**6.84**
	369.405	11.38	14.80	1.98	28.16	46.00	17.84
	750.108	14.83	18.20	2.80	35.83	46.00	10.17
Vertical	32.520	11.37	16.99	0.56	28.92	40.00	11.08
	64.433	27.51	5.21	0.80	33.52	40.00	6.48
	132.685	18.28	11.82	1.16	31.26	43.50	12.24
	186.441	19.71	8.73	1.37	29.81	43.50	13.69
	373.311	20.17	14.77	1.99	36.93	46.00	9.07
	675.208	**18.55**	**19.07**	**2.66**	**40.28**	**46.00**	**5.72**

TEST ENGINEER: BILL WU

5 DEBUG DESCRIPTION

The following components are used during the countermeasure procedures:

Name	M/N	Manufacturer	Location
Gasket	JCT-RF-13-0.12-35\ROH	JOINSET	See Internal Photos Figure 19, 20, 21
Gasket	JCT-19.5-11-120-CR\ROH	JOINSET	See Internal Photos Figure 22, 23
Al Tape	FFC-60-60-P\60.0\ROH	Foshan City Shunde District Hehui Electronic CO.,Ltd	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 certification testing, must be incorporated in each unit marked

TEST ENGINEER: Wency Yang

(WENCY YANG)

6 DEVIATION TO TEST SPECIFICATIONS

None.