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

LED LCD TV

Model No.	Brand
50K20DG, 50K21DG, 50K22DG, 50K23DG, 50K24DG, 50K25DG, 50H3G	Hisense

FCC ID : W9HLCDF0040

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-F13140A1
Date of Test : Mar 27 – 31, 2014
Date of Report : Apr 14, 2014

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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.

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 2012 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 Mar 27 – 31, 2014 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.F13141A1, a Verification report.

Date of Test : Mar 27 – 31, 2014 Date of Report : Apr 14, 2014

Producer : EMILY ZHU / Assistant

Review : DIO YANG / Deputy Manager

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

Signatory : Authorized Signature EMC SAMMY CHEN / Deputy 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 2012 AND ANSI C63.4-2003	15.107(a) Class B	Pass
Radiated Disturbance	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2012 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. : 50K20DG, 50K21DG, 50K22DG, 50K23DG, 50K24DG, 50K25DG, 50H3G

Note #1 : The modified histories of report are as follows:

Report No.	Model No.	Rev. Summary	Edition No.	Data of Rev.
ACI-F13140	50K20DG, 50K21DG, 50K22DG, 50K23DG, 50K24DG, LTDN50K20DGUS	Original Report	0	Aug 24, 2013
ACI-F13140A1	50K20DG, 50K21DG, 50K22DG, 50K23DG, 50K24DG, 50K25DG, 50H3G	1. To add two new model name (50K25DG, 50H3G). 2. To modify the panel, power board and base.	Rev. A1	Apr 14, 2014

Note #2 : The above models are all the same except for the different model name.
The 50K20DG was tested and reported 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-B57(010)\S0
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 HDMI1/ARC Port
: Connected with PC

(2) One Component of YPbPr/AV Port
: Connected with DVD PLAYER

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

Side Port:

(1) One HDMI2/MHL Port
: Connected with Smart Mobile Phone

(2) One DVI AUDIO IN Port
: Connected with PC

(3) One ANT/CABLE IN Port
: Connected with ATSC SG / TV SG

(4) One DIGITAL Output Port
: Connected with DVD PLAYER

(5) One Earphone/AUDIO OUT Port
: Connected with Earphone

2.2 Peripherals

2.2.1 PC

Manufacturer	:	HP
Model Number	:	dx7200MT
Serial Number	:	CNG622017W
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	:	C3990A
Serial Number	:	JPZX020487
Data Cable	:	Shielded, detachable, 1.5m
Certificate	:	GS, CE/EMC, C-Tick, FCC DoC

2.2.3 Keyboard

Manufacturer	:	Microsoft
Model Number	:	1406
Serial Number	:	0200702302609
Data Cable	:	Shielded, undetachable ,1.8m
Certificate	:	CE/EMC, FCC DoC, VCCI, MIC, C-Tick, BSMI

2.2.4 Mouse

Manufacturer	:	Microsoft
Model Number	:	1405
Serial Number	:	0204603562213
Data Cable	:	Shielded, undetachable, 1.8m.
Certificate	:	CE/EMC, FCC DoC, VCCI, MIC, C-Tick, BSMI

2.2.5 Modem

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

2.2.6 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

2.2.7 ATSC Signal Generator

Manufacturer	:	SENCORE
Model Number	:	ATSC997
Serial Number	:	6790071

2.2.8 DVD PLAYER

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

2.2.9 Earphone

Manufacturer	:	Skullcandy
Model Number	:	FMJ

2.2.10 U-DISK

Manufacturer	:	LG
Model Number	:	1GB

2.2.11 Smart Mobile Phone

Manufacturer : SAMSUNG
Model Number : GT-I9100G

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 = 3.02 dB
Radiated Emission Expanded Uncertainty (30-200MHz):
U = 4.17 dB (Horizontal)
U = 4.02 dB (Vertical)
Radiated Emission Expanded Uncertainty (200M-1GHz):
U = 3.38 dB (Horizontal)
U = 3.28 dB (Vertical)
Radiated Emission Expanded Uncertainty (Above 1GHz):
U = 4.68 dB (Horizontal)
U = 4.87 dB (Vertical)

3 CONDUCTED EMISSION TEST

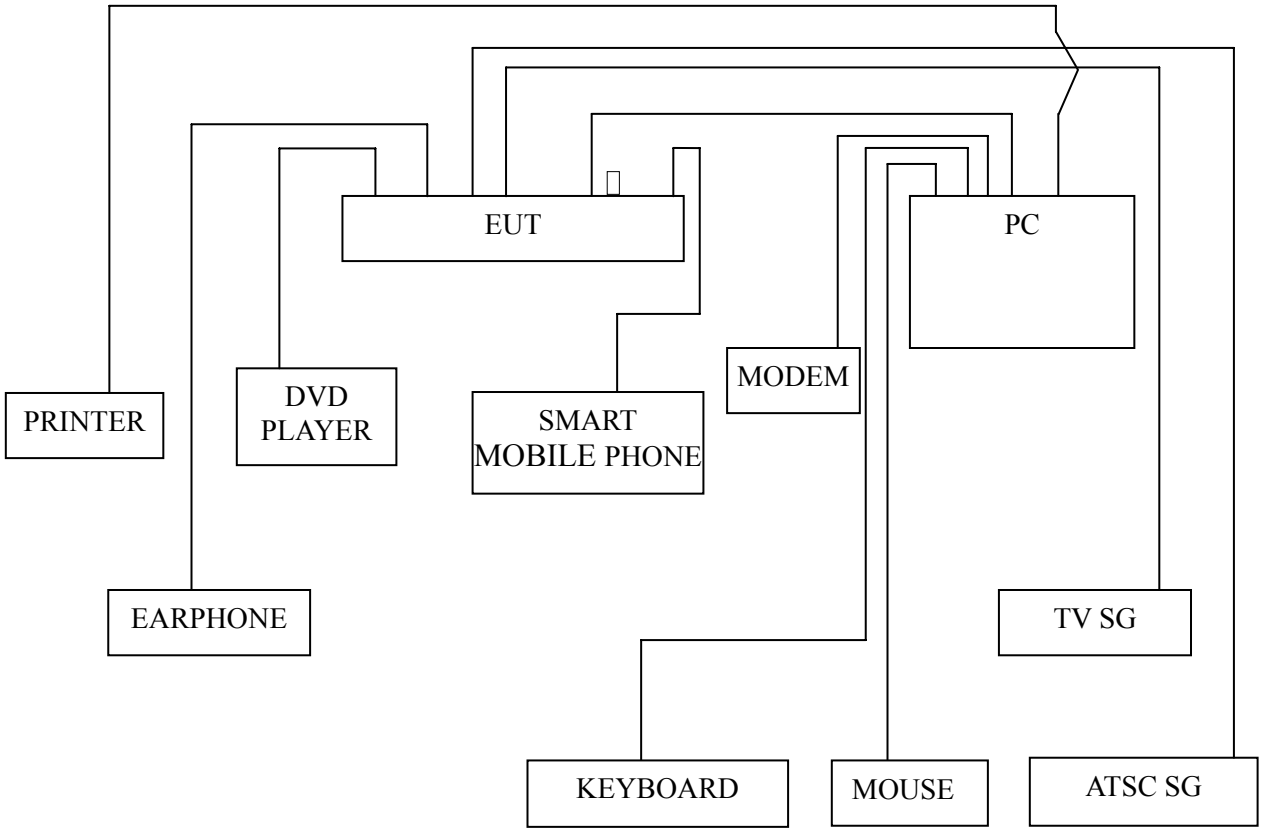
3.1 Test Equipment

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	100841	Mar 20, 2014	Mar 19, 2015
2.	Artificial Mains Network (AMN)	R&S	ESH2-Z5	843890/011	Feb 25, 2014	Feb 24, 2015
3.	Line Impedance Stabilization Network (LISN)	Kyoritsu	KNW-407	8-1280-4	Mar 20, 2014	Mar 19, 2015
4.	50 Ω Coaxial Switch	Anritsu	MP59B	6200426389	Mar 17, 2014	Sep 16, 2014
5.	50Ω Terminator	Anritsu	BNC	001	Mar 20, 2014	Mar 19, 2015
6.	Software	Audix	E3	6.2009-1-15	--	--

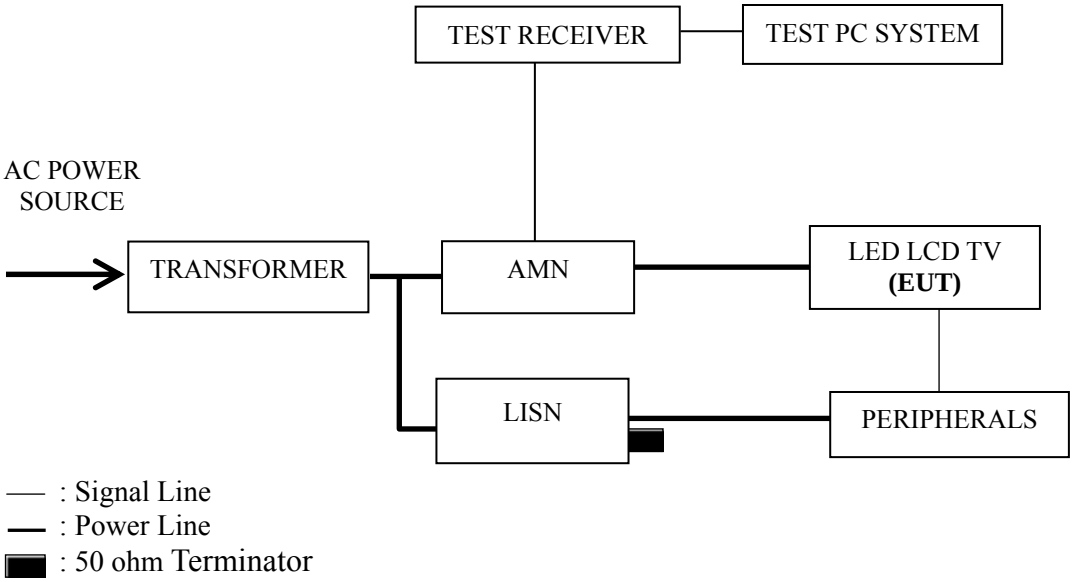
3.2 Block Diagram of Test Setup

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 (HDMI Input).

3.5.5 In USB Play mode, set the EUT play digital media from U-Disk.

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

3.5.7 The test modes are as follows:

Test Mode
HDMI 1920*1080@60Hz
HDMI 1280*1024@60Hz
HDMI 640*480@60Hz
USB 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	P13
HDMI 1280*1024@60Hz	P14
HDMI 640*480@60Hz	P15
USB Play	P16

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 1920*1080@60Hz test mode. The worst emission is detected at 0.165 MHz (Quasi-Peak Value) with corrected signal level of 61.44 dB (μV) (limit is 65.20 dB (μV)), when the Line of the EUT is connected to AMN.

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	50K20DG	Humidity	:	48%RH
Test Mode	:	HDMI 1920*1080@60Hz	Date of Test	:	Mar 28, 2014

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	**0.165**	**61.30**	**0.14**	**61.44**	**65.20**	**3.76**	QP
	0.594	41.20	0.03	41.23	56.00	14.77	
	1.504	36.90	0.06	36.96	56.00	19.04	
	2.630	33.90	0.10	34.00	56.00	22.00	
	6.374	47.60	0.24	47.84	60.00	12.16	
	16.580	33.30	-0.02	33.28	60.00	26.72	
	0.165	47.90	0.14	48.04	55.20	7.16	AV
	0.594	29.60	0.03	29.63	46.00	16.37	
	1.504	26.00	0.06	26.06	46.00	19.94	
	2.630	23.70	0.10	23.80	46.00	22.20	
	6.374	40.30	0.24	40.54	50.00	9.46	
	16.580	28.20	-0.02	28.18	50.00	21.82	
Neutral	0.165	61.30	0.16	61.46	65.23	3.77	QP
	0.585	40.99	0.17	41.16	56.00	14.84	
	1.149	37.79	0.18	37.97	56.00	18.03	
	2.150	35.50	0.17	35.67	56.00	20.33	
	6.394	48.30	0.30	48.60	60.00	11.40	
	24.450	47.00	0.89	47.89	60.00	12.11	
	0.165	48.50	0.16	48.66	55.23	6.57	AV
	0.585	29.09	0.17	29.26	46.00	16.74	
	1.149	25.09	0.18	25.27	46.00	20.73	
	2.150	27.30	0.17	27.47	46.00	18.53	
	6.394	36.50	0.30	36.80	50.00	13.20	
	24.450	36.80	0.89	37.69	50.00	12.31	

TEST ENGINEER: ERIC TANG

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	50K20DG	Humidity	:	48%RH
Test Mode	:	HDMI 1280*1024@60Hz	Date of Test	:	Mar 28, 2014

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.166	61.00	0.14	61.14	65.17	4.03	QP
	0.388	39.00	0.00	39.00	58.11	19.11	
	0.590	41.10	0.03	41.13	56.00	14.87	
	1.387	39.00	0.06	39.06	56.00	16.94	
	4.109	33.81	0.17	33.98	56.00	22.02	
	6.384	47.00	0.24	47.24	60.00	12.76	
	0.166	47.30	0.14	47.44	55.17	7.73	AV
	0.388	27.30	0.00	27.30	48.11	20.81	
	0.590	29.90	0.03	29.93	46.00	16.07	
	1.387	29.00	0.06	29.06	46.00	16.94	
	4.109	26.91	0.17	27.08	46.00	18.92	
	6.384	36.40	0.24	36.64	50.00	13.36	
Neutral	**0.167**	**61.01**	**0.16**	**61.17**	**65.12**	**3.95**	QP
	0.393	43.50	0.21	43.71	58.00	14.29	
	0.591	42.30	0.16	42.46	56.00	13.54	
	1.595	38.90	0.17	39.07	56.00	16.93	
	2.121	34.80	0.17	34.97	56.00	21.03	
	6.445	45.80	0.30	46.10	60.00	13.90	
	0.167	47.81	0.16	47.97	55.12	7.15	AV
	0.393	31.70	0.21	31.91	48.00	16.09	
	0.591	30.90	0.16	31.06	46.00	14.94	
	1.595	26.30	0.17	26.47	46.00	19.53	
	2.121	26.30	0.17	26.47	46.00	19.53	
	6.445	35.00	0.30	35.30	50.00	14.70	

TEST ENGINEER: ERIC TANG

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	50K20DG	Humidity	:	48%RH
Test Mode	:	HDMI 640*480@60Hz	Date of Test	:	Mar 28, 2014

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	**0.166**	**61.10**	**0.14**	**61.24**	**65.17**	**3.93**	QP
	0.582	40.10	0.02	40.12	56.00	15.88	
	1.393	37.00	0.06	37.06	56.00	18.94	
	2.399	35.80	0.09	35.89	56.00	20.11	
	6.445	46.30	0.24	46.54	60.00	13.46	
	23.150	30.81	-0.34	30.47	60.00	29.53	
	0.166	47.10	0.14	47.24	55.17	7.93	AV
	0.582	28.50	0.02	28.52	46.00	17.48	
	1.393	28.30	0.06	28.36	46.00	17.64	
	2.399	26.30	0.09	26.39	46.00	19.61	
	6.445	35.80	0.24	36.04	50.00	13.96	
	23.150	25.31	-0.34	24.97	50.00	25.03	
Neutral	0.165	60.91	0.16	61.07	65.20	4.13	QP
	0.396	44.00	0.21	44.21	57.94	13.73	
	0.594	43.30	0.16	43.46	56.00	12.54	
	1.385	39.60	0.17	39.77	56.00	16.23	
	2.533	35.00	0.16	35.16	56.00	20.84	
	6.292	46.20	0.29	46.49	60.00	13.51	
	0.165	46.91	0.16	47.07	55.20	8.13	AV
	0.396	31.50	0.21	31.71	47.94	16.23	
	0.594	31.30	0.16	31.46	46.00	14.54	
	1.385	29.60	0.17	29.77	46.00	16.23	
	2.533	24.90	0.16	25.06	46.00	20.94	
	6.292	40.30	0.29	40.59	50.00	9.41	

TEST ENGINEER: ERIC TANG

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	50K20DG	Humidity	:	48%RH
Test Mode	:	USB Play	Date of Test	:	Mar 28, 2014

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	**0.166**	**61.00**	**0.14**	**61.14**	**65.16**	**4.02**	QP
	0.395	39.90	0.00	39.90	57.95	18.05	
	0.593	41.50	0.03	41.53	56.00	14.47	
	1.658	36.30	0.07	36.37	56.00	19.63	
	3.541	33.89	0.16	34.05	56.00	21.95	
	6.215	44.80	0.24	45.04	60.00	14.96	
	0.166	47.40	0.14	47.54	55.16	7.62	AV
	0.395	29.00	0.00	29.00	47.95	18.95	
	0.593	30.60	0.03	30.63	46.00	15.37	
	1.658	27.50	0.07	27.57	46.00	18.43	
	3.541	24.59	0.16	24.75	46.00	21.25	
	6.215	35.80	0.24	36.04	50.00	13.96	
Neutral	0.168	60.50	0.17	60.67	65.05	4.38	QP
	0.394	43.60	0.21	43.81	57.98	14.17	
	0.593	42.90	0.16	43.06	56.00	12.94	
	1.395	37.50	0.17	37.67	56.00	18.33	
	2.405	36.20	0.16	36.36	56.00	19.64	
	6.157	44.61	0.28	44.89	60.00	15.11	
	0.168	47.90	0.17	48.07	55.05	6.98	AV
	0.394	31.80	0.21	32.01	47.98	15.97	
	0.593	31.50	0.16	31.66	46.00	14.34	
	1.395	28.60	0.17	28.77	46.00	17.23	
	2.405	27.20	0.16	27.36	46.00	18.64	
	6.157	38.31	0.28	38.59	50.00	11.41	

TEST ENGINEER: ERIC TANG

4 RADIATED EMISSION TEST

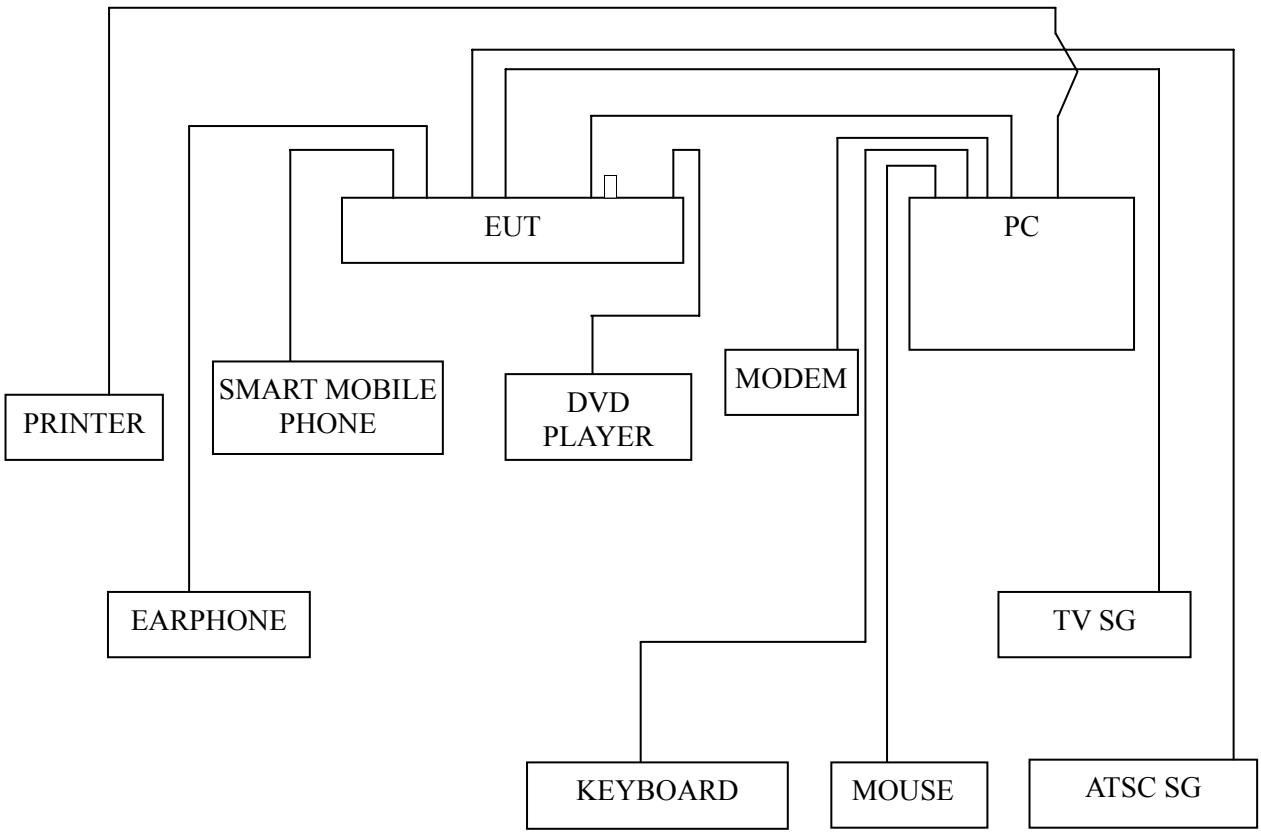
4.1 Test Equipment

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 03, 2013	Sep 02, 2014
2.	Preamplifier	Agilent	8447D	2944A10548	Mar 17, 2014	Sep 16, 2014
3.	Preamplifier	HP	8449B	3008A00864	Mar 20, 2014	Mar 19, 2015
4.	Bi-log Antenna	TESEQ	CBL6112D	23193	May 03, 2013	May 02, 2014
5.	Horn Antenna	EMCO	3115	9607-4878	May 11, 2013	May 10, 2014
6.	Spectrum	Agilent	E7405A	MY45106600	Nov 11, 2013	Nov 10, 2014
7.	50Ω Coaxial Switch	Anritsu	MP59B	6200426390	Mar 17, 2014	Sep 16, 2014
8.	Software	Audix	E3	6.2007-9-10	--	--

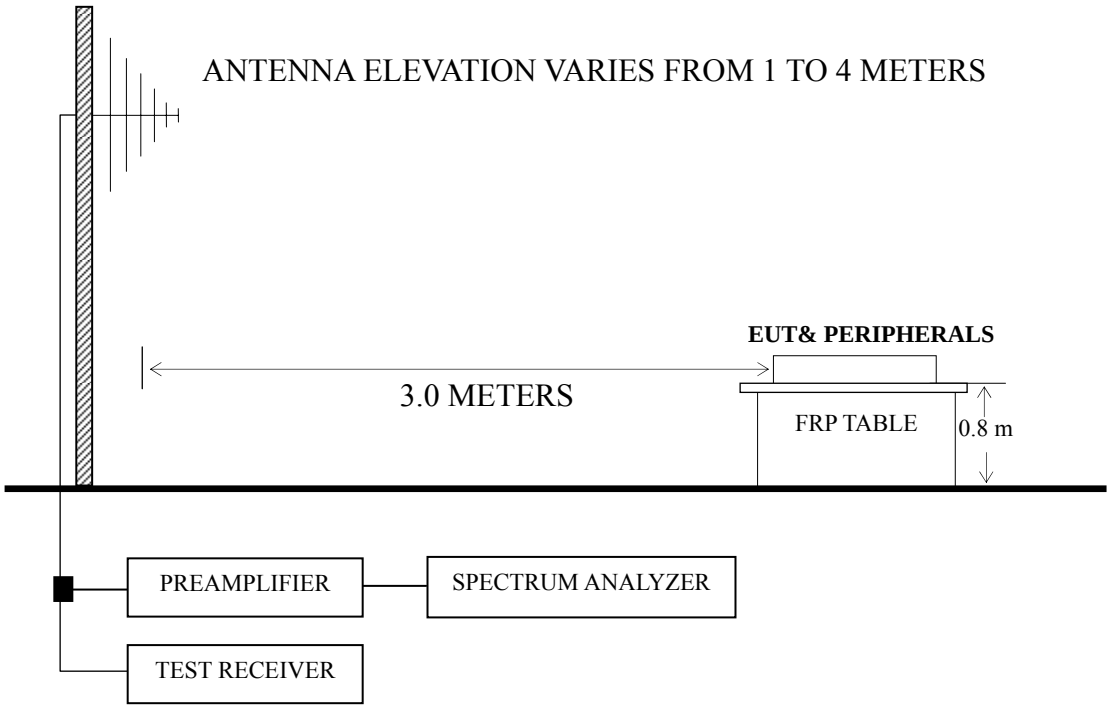
4.2 Block Diagram of Test Setup

4.2.1 EUT and 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 and The Spectrum Agilent E7405A 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 2 GHz was checked for the worst test mode in 30 – 1000 MHz test.

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	P20 – P21
HDMI 1280*1024@60Hz	P22
HDMI 640*480@60Hz	P23
USB Play	P24

NOTE 1 – Emission Level = Antenna Factor + Cable Loss + Meter Reading.

NOTE 2 – All readings are Quasi-Peak values.

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 test mode. The worst emission at horizontal polarization was detected at 922.400MHz with corrected signal level of 43.27 dB (μV/m) (limit is 46.00 dB (μV/m)), when the antenna was 1.90 m height and the turntable was at 340°. The worst emission at vertical polarization was detected at 922.400 MHz with corrected signal level of 44.46 dB (μV/m) (limit is 46.00 dB (μV/m)), when the antenna was 1.90 m height and the turntable was at 220°.

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	50K20DG	Humidity	:	60%RH
Test Mode	:	HDMI 1920*1080@60Hz	Date of Test	:	Mar 31, 2014

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	80.440	28.59	6.84	1.08	--	36.51	40.00	3.49	QP
	138.640	23.07	10.51	1.59	--	35.17	43.50	8.33	
	222.060	23.90	8.40	2.06	--	34.36	46.00	11.64	
	311.300	26.05	13.37	2.56	--	41.98	46.00	4.02	
	740.040	19.08	18.90	3.57	--	41.55	46.00	4.45	
	922.400	**19.18**	**19.50**	**4.59**	**--**	**43.27**	**46.00**	**2.73**	
	1092.000	48.31	24.05	4.50	38.00	38.86	74.00	35.14	PK
	1172.000	47.87	24.40	4.51	37.81	38.97	74.00	35.03	
	1234.000	49.28	24.70	4.52	37.65	40.85	74.00	33.15	
	1416.000	46.66	25.38	4.54	37.14	39.44	74.00	34.56	
	1531.000	47.37	25.92	4.55	36.83	41.01	74.00	32.99	
	1764.000	48.43	28.69	4.58	36.40	45.30	74.00	28.70	
	1092.000	34.89	24.05	4.50	38.00	25.44	54.00	28.56	AV
	1172.000	34.78	24.40	4.51	37.81	25.88	54.00	28.12	
	1234.000	35.88	24.70	4.52	37.65	27.45	54.00	26.55	
	1416.000	33.46	25.38	4.54	37.14	26.24	54.00	27.76	
	1531.000	34.48	25.92	4.55	36.83	28.12	54.00	25.88	
	1764.000	35.36	28.69	4.58	36.40	32.23	54.00	21.77	

TEST ENGINEER: NEAL WANG

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	50K20DG	Humidity	:	60%RH
Test Mode	:	HDMI 1920*1080@60Hz	Date of Test	:	Mar 31, 2014

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Vertical	31.940	17.29	16.50	0.68	--	34.47	40.00	5.53	QP
	73.650	26.27	6.33	0.98	--	33.58	40.00	6.42	
	141.550	23.55	10.30	1.60	--	35.45	43.50	8.05	
	293.840	24.04	12.67	2.49	--	39.20	46.00	6.80	
	613.940	20.00	18.65	3.25	--	41.90	46.00	4.10	
	922.400	**19.91**	**19.50**	**4.59**	--	**44.00**	**46.00**	**2.00**	
	1050.000	46.51	23.89	4.94	38.09	37.25	74.00	36.75	PK
	1132.000	46.20	24.22	5.03	37.90	37.55	74.00	36.45	
	1243.000	45.66	24.74	5.25	37.63	38.02	74.00	35.98	
	1482.000	45.21	25.56	5.63	36.95	39.45	74.00	34.55	
	1575.000	45.47	26.40	5.66	36.74	40.79	74.00	33.21	
	1746.000	45.60	28.50	6.06	36.43	43.73	74.00	30.27	
	1050.000	33.84	23.89	4.94	38.09	24.58	54.00	29.42	AV
	1132.000	32.38	24.22	5.03	37.90	23.73	54.00	30.27	
	1243.000	32.83	24.74	5.25	37.63	25.19	54.00	28.81	
	1482.000	32.12	25.56	5.63	36.95	26.36	54.00	27.64	
	1575.000	32.53	26.40	5.66	36.74	27.85	54.00	26.15	
	1746.000	31.54	28.50	6.06	36.43	29.67	54.00	24.33	

TEST ENGINEER: NEAL WANG

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	50K20DG	Humidity :	60%RH
Test Mode	:	HDMI 1280*1024@60Hz	Date of Test :	Mar 31, 2014

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	73.650	25.89	6.33	0.98	33.20	40.00	6.80
	141.550	21.83	10.30	1.60	33.73	43.50	9.77
	311.300	22.91	13.37	2.56	38.84	46.00	7.16
	539.250	15.89	19.50	3.06	38.45	46.00	7.55
	806.000	17.87	20.07	3.70	41.64	46.00	4.36
	939.860	**17.68**	**19.30**	**4.68**	**41.66**	**46.00**	**4.34**
Vertical	30.970	14.23	17.65	0.67	32.55	40.00	7.45
	73.650	24.67	6.33	0.98	31.98	40.00	8.02
	136.700	22.16	10.74	1.58	34.48	43.50	9.02
	293.840	22.35	12.67	2.49	37.51	46.00	8.49
	539.250	18.38	19.50	3.06	40.94	46.00	5.06
	895.240	**17.85**	**19.47**	**4.43**	**41.75**	**46.00**	**4.25**

TEST ENGINEER: NEAL WANG

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	50K20DG	Humidity :	60%RH
Test Mode	:	HDMI 640*480@60Hz	Date of Test :	Mar 31, 2014

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	**80.440**	**24.92**	**6.84**	**1.08**	**32.84**	**40.00**	**7.16**
	138.640	24.17	10.51	1.59	36.27	43.50	7.23
	225.940	25.81	8.80	2.08	36.69	46.00	9.31
	309.360	22.69	13.30	2.56	38.55	46.00	7.45
	534.400	16.06	18.95	3.06	38.07	46.00	7.93
	869.050	12.45	20.30	4.20	36.95	46.00	9.05
Vertical	30.970	14.54	17.65	0.67	32.86	40.00	7.14
	78.500	25.01	6.71	1.05	32.77	40.00	7.23
	309.360	23.31	13.30	2.56	39.17	46.00	6.83
	613.940	16.79	18.65	3.25	38.69	46.00	7.31
	757.500	17.12	18.57	3.59	39.28	46.00	6.72
	871.960	**16.02**	**20.30**	**4.20**	**40.52**	**46.00**	**5.48**

TEST ENGINEER: NEAL WANG

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	50K20DG	Humidity :	60%RH
Test Mode	:	USB Play	Date of Test :	Mar 31, 2014

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	54.250	25.52	6.18	0.87	32.57	40.00	7.43
	84.320	**24.91**	**7.32**	**1.13**	**33.36**	**40.00**	**6.64**
	135.730	22.48	10.91	1.57	34.96	43.50	8.54
	258.920	20.25	12.70	2.27	35.22	46.00	10.78
	385.990	19.27	15.30	2.67	37.24	46.00	8.76
	708.030	13.54	19.80	3.55	36.89	46.00	9.11
Vertical	**35.820**	**16.02**	**15.63**	**0.73**	**32.38**	**40.00**	**7.62**
	55.220	23.67	6.08	0.87	30.62	40.00	9.38
	127.970	21.62	11.74	1.52	34.88	43.50	8.62
	281.230	21.63	12.43	2.40	36.46	46.00	9.54
	531.490	15.81	18.40	3.05	37.26	46.00	8.74
	821.520	12.73	20.70	3.80	37.23	46.00	8.77

TEST ENGINEER: NEAL WANG

5 DEVIATION TO TEST SPECIFICATIONS

None.