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

LED LCD TV

Model No.	Brand
LHD32K366MH	Hisense
32K366MH	

FCC ID : W9HLCDC0023

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-F13111
Date of Test : Jul 12 – 15, 2013
Date of Report : Jul 23, 2013

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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
LHD32K366MH	Hisense	120V/60Hz
32K366MH		

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 Jul 12 – 15, 2013 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.F13112, a Verification report.

Date of Test : Jul 12 – 15, 2013 Date of Report : Jul 23, 2013

Producer : KATHY WANG / Supervisor

Review : BYRON WU / Supervisor

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

Signatory : SAMMY CHEN / Deputy Manager

Authorized Signature for

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.	:	LHD32K366MH, 32K366MH
Note	:	The above models are all the same except for the different model name. The LHD32K366MH was tested and reported in the report.
Bread 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 : HE315GH-E71\PW1
Max Resolution	:	1920*1080@60Hz
D-Sub Cable	:	Shielded, Detachable, 1.85m, with two cores on cable
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 COMPONENT IN Port
: Connected with DVD PLAYER
(2) One ANT Port
: Connected with ATSC SG
(3) One HDMI1 Port
: Connected with PC
(4) One SERVICE Port
: Not open to the customer

Side Port:
(1) One DIGITAL AUDIO OUT Port
: Connected with Speaker
(2) One HDMI2 Port
: Connected with DVD PLAYER
(3) One VGA Port
: Connected with PC
(4) One PC AUDIO in Port
: Connected with PC
(5) One USB Port
: Connected with U-Disk
(6) One AV Port
: Connected with DVD PLAYER
(7) One AUDIO OUT Port
: Connected with Earphone
(8) One RJ12 Port
: Connected with PC

2.2 Peripherals

2.2.1 PC #1

Manufacturer	:	HP
Model Number	:	dx7200MT
Serial Number	:	CNG622017W
Power Cord	:	Unshielded, Detachable, 1.8m
Certificate	:	FCC DoC; CE/EMC; VCCI; C-Tick; UL BSMI (R33001) 3C (A000111) MIC (E-A011-04-2659(B))

2.2.2 PC #2

Manufacturer	:	HP
Model Number	:	dx7400MT
Serial Number	:	CNG8130K89
Power Cord	:	Unshielded, Detachable, 1.8m
Certificate	:	FCC DoC; CE/EMC; VCCI; C-Tick; UL BSMI (R33001) 3C (A000111) MIC (E-A011-04-2659(B))

2.2.3 Printer #1

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

2.2.4 Printer #2

Manufacturer	:	HP
Model Number	:	C3990A/P1007
Data Cable	:	Shielded, detachable, 1.5m
Certificate	:	GS, CE/EMC, C-Tick, FCC DoC

2.2.5 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

2.2.6 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

2.2.7 Modem

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

2.2.8 Earphone

Manufacturer	:	SONY
Model Number	:	MDR-E808
Serial Number	:	1808030805305506

2.2.9 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

2.2.10 ATSC Signal Generator

Manufacturer	:	SENCORE
Model Number	:	ATSC997
Serial Number	:	6790071

2.2.11 DVD PLAYER

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

2.2.12 SPEAKER

Manufacturer	:	DIBA
Model Number	:	FS-04
Serial Number	:	002
Power Cord	:	Unshielded, Undetachable, 1.5m

2.2.13 U-DISK

Manufacturer	:	LG
Model Number	:	1GB

Note: PC#1 & Printer #1 were used in the Conducted Emission; PC#2 & Printer #2 were used in the Radiated Emission.

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 = 3.42 dB

Radiated Emission Expanded Uncertainty (30-200MHz):

U = 4.14 dB (Horizontal)

U = 4.28 dB (Vertical)

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

U = 4.18 dB (Horizontal)

U = 4.26 dB (Vertical)

3 CONDUCTED EMISSION TEST

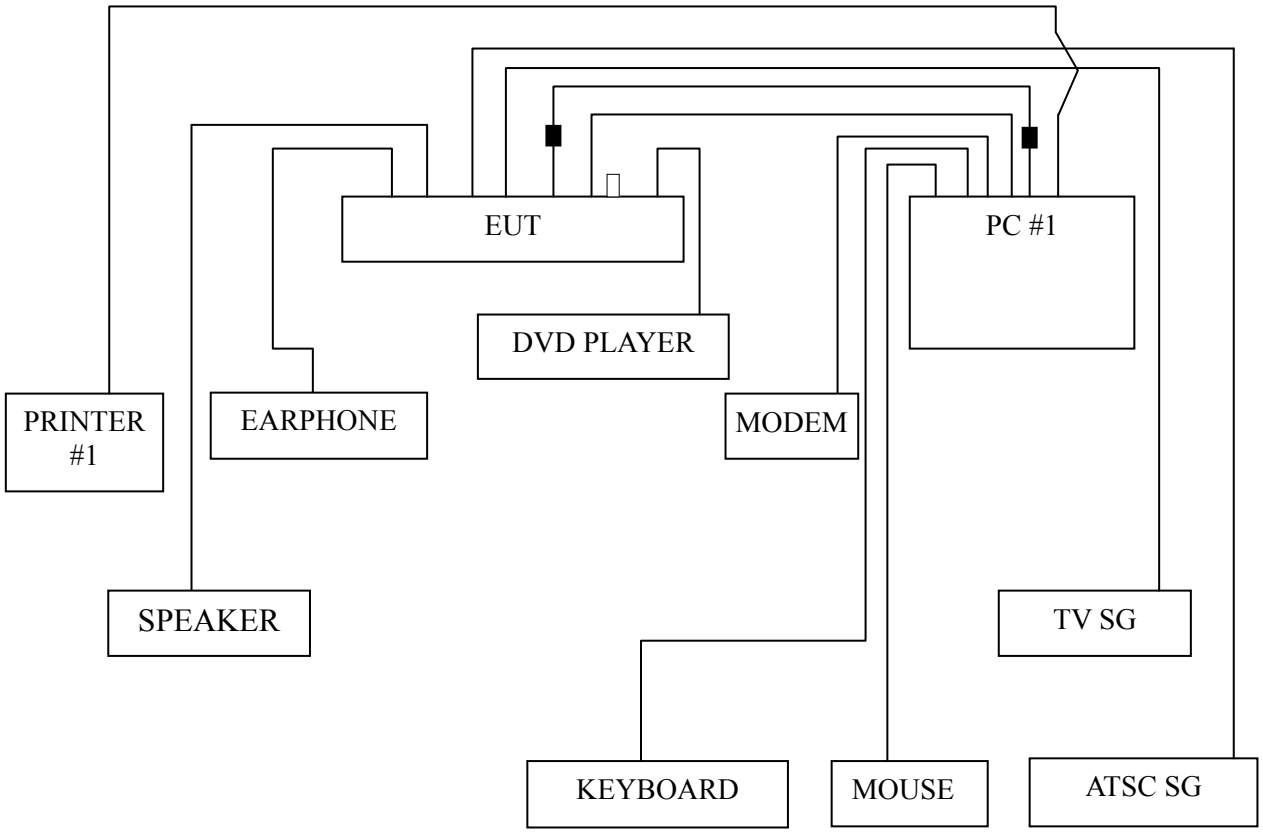
3.1 Test Equipment

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, 2013	Mar 20, 2014
2.	Artificial Mains Network (AMN)	R&S	ESH2-Z5	843890/011	Feb 25, 2013	Feb 25, 2014
3.	Line Impedance Stabilization Network (LISN)	Kyoritsu	KNW-407	8-1280-4	Mar 20, 2013	Mar 20, 2014
4.	50 Ω Coaxial Switch	Anritsu	MP59B	6200426389	Mar 18, 2013	Sep 18, 2013
5.	50Ω Terminator	Anritsu	BNC	001	Mar 20, 2013	Mar 20, 2014
6.	Software	Audix	E3	SET00200 9804M592	--	--

3.2 Block Diagram of Test Setup

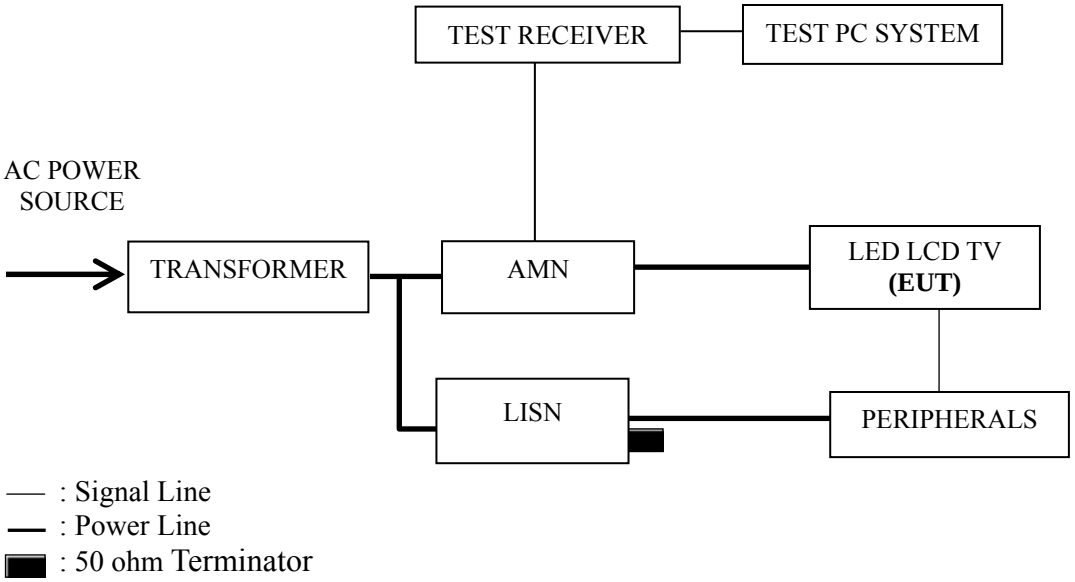
3.2.1 EUT & Peripherals



■: Ferrite core

: 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 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
D-Sub 1920*1080@60Hz
HDMI 1920*1080@60Hz
D-Sub 1280*1024@60Hz
D-Sub 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
D-Sub 1920*1080@60Hz	P13
HDMI 1920*1080@60Hz	P14
D-Sub 1280*1024@60Hz	P15
D-Sub 640*480@60Hz	P16
USB 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 D-Sub 1920*1080@60Hz test mode. The worst emission is detected at 0.196 MHz (Quasi-Peak Value) with corrected signal level of 54.26 dB (μV) (limit is 63.77 dB (μV)), when the Line of the EUT is connected to AMN.

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	LHD32K366MH	Humidity	:	48%RH
Test Mode	:	D-Sub 1920*1080@60Hz	Date of Test	:	Jul 12, 2013

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.153	45.20	0.12	45.32	65.82	20.50	QP
	0.196	**54.18**	**0.08**	**54.26**	**63.77**	**9.51**	
	0.709	39.54	0.08	39.62	56.00	16.38	
	5.920	40.17	0.19	40.36	60.00	19.64	
	8.367	43.16	0.20	43.36	60.00	16.64	
	19.810	38.90	-0.02	38.88	60.00	21.12	
	0.153	19.80	0.12	19.92	55.82	35.90	AV
	0.196	39.90	0.08	39.98	53.77	13.79	
	0.709	25.60	0.08	25.68	46.00	20.32	
	5.920	30.80	0.19	30.99	50.00	19.01	
	8.367	36.80	0.20	37.00	50.00	13.00	
	19.810	29.90	-0.02	29.88	50.00	20.12	
Neutral	0.151	47.48	0.12	47.60	65.94	18.34	QP
	0.196	**54.09**	**0.16**	**54.25**	**63.77**	**9.52**	
	0.710	36.07	0.10	36.17	56.00	19.83	
	5.922	39.48	0.24	39.72	60.00	20.28	
	8.797	42.58	0.36	42.94	60.00	17.06	
	19.830	38.85	0.82	39.67	60.00	20.33	
	0.151	23.80	0.12	23.92	55.94	32.02	AV
	0.196	40.90	0.16	41.06	53.77	12.71	
	0.710	22.80	0.10	22.90	46.00	23.10	
	5.922	30.59	0.24	30.83	50.00	19.17	
	8.797	35.79	0.36	36.15	50.00	13.85	
	19.830	30.50	0.82	31.32	50.00	18.68	

TEST ENGINEER: WENCY YANG

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	LHD32K366MH	Humidity	:	48%RH
Test Mode	:	HDMI 1920*1080@60Hz	Date of Test	:	Jul 12, 2013

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.150	47.61	0.13	47.74	66.00	18.26	QP
	0.194	**53.73**	**0.08**	**53.81**	**63.85**	**10.04**	
	0.709	39.56	0.08	39.64	56.00	16.36	
	5.923	40.09	0.19	40.28	60.00	19.72	
	8.795	42.75	0.20	42.95	60.00	17.05	
	19.530	38.03	-0.01	38.02	60.00	21.98	
	0.150	30.80	0.13	30.93	56.00	25.07	AV
	0.194	37.50	0.08	37.58	53.85	16.27	
	0.709	25.60	0.08	25.68	46.00	20.32	
	5.923	30.60	0.19	30.79	50.00	19.21	
	8.795	35.90	0.20	36.10	50.00	13.90	
	19.530	29.40	-0.01	29.39	50.00	20.61	
Neutral	0.150	48.22	0.12	48.34	66.00	17.66	QP
	0.196	**53.77**	**0.16**	**53.93**	**63.77**	**9.84**	
	0.733	34.29	0.11	34.40	56.00	21.60	
	5.921	40.25	0.24	40.49	60.00	19.51	
	8.817	41.90	0.36	42.26	60.00	17.74	
	19.870	39.16	0.82	39.98	60.00	20.02	
	0.150	28.70	0.12	28.82	56.00	27.18	AV
	0.196	40.30	0.16	40.46	53.77	13.31	
	0.733	18.40	0.11	18.51	46.00	27.49	
	5.921	30.79	0.24	31.03	50.00	18.97	
	8.817	35.79	0.36	36.15	50.00	13.85	
	19.870	30.60	0.82	31.42	50.00	18.58	

TEST ENGINEER: WENCY YANG

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	LHD32K366MH	Humidity	:	48%RH
Test Mode	:	D-Sub 1280*1024@60Hz	Date of Test	:	Jul 12, 2013

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.150	47.61	0.13	47.74	66.00	18.26	QP
	0.195	**53.68**	**0.08**	**53.76**	**63.83**	**10.07**	
	0.710	39.41	0.08	39.49	56.00	16.51	
	5.921	40.22	0.19	40.41	60.00	19.59	
	8.796	43.06	0.20	43.26	60.00	16.74	
	20.090	38.60	-0.04	38.56	60.00	21.44	
	0.150	30.80	0.13	30.93	56.00	25.07	AV
	0.195	37.90	0.08	37.98	53.83	15.85	
	0.710	25.80	0.08	25.88	46.00	20.12	
	5.921	30.80	0.19	30.99	50.00	19.01	
	8.796	35.80	0.20	36.00	50.00	14.00	
	20.090	28.91	-0.04	28.87	50.00	21.13	
Neutral	0.150	48.50	0.12	48.62	65.99	17.37	QP
	0.203	**52.98**	**0.16**	**53.14**	**63.51**	**10.37**	
	0.710	36.63	0.09	36.72	56.00	19.28	
	6.343	37.23	0.25	37.48	60.00	22.52	
	8.797	42.95	0.36	43.31	60.00	16.69	
	19.690	39.07	0.82	39.89	60.00	20.11	
	0.150	26.80	0.12	26.92	55.99	29.07	AV
	0.203	40.90	0.16	41.06	53.51	12.45	
	0.710	22.61	0.09	22.70	46.00	23.30	
	6.343	30.80	0.25	31.05	50.00	18.95	
	8.797	35.79	0.36	36.15	50.00	13.85	
	19.690	30.60	0.82	31.42	50.00	18.58	

TEST ENGINEER: WENCY YANG

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	LHD32K366MH	Humidity	:	48%RH
Test Mode	:	D-Sub 640*480@60Hz	Date of Test	:	Jul 12, 2013

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.150	47.52	0.13	47.65	66.00	18.35	QP
	0.199	**53.20**	**0.08**	**53.28**	**63.67**	**10.39**	
	0.710	39.44	0.09	39.53	56.00	16.47	
	6.313	39.80	0.20	40.00	60.00	20.00	
	8.816	41.29	0.20	41.49	60.00	18.51	
	20.100	38.90	-0.04	38.86	60.00	21.14	
	0.150	31.30	0.13	31.43	56.00	24.57	AV
	0.199	39.50	0.08	39.58	53.67	14.09	
	0.710	26.19	0.09	26.28	46.00	19.72	
	6.313	30.90	0.20	31.10	50.00	18.90	
	8.816	36.30	0.20	36.50	50.00	13.50	
	20.100	29.91	-0.04	29.87	50.00	20.13	
Neutral	0.150	47.48	0.12	47.60	66.00	18.40	QP
	0.197	**53.43**	**0.16**	**53.59**	**63.75**	**10.16**	
	0.736	33.91	0.11	34.02	56.00	21.98	
	6.316	39.89	0.25	40.14	60.00	19.86	
	8.819	41.76	0.36	42.12	60.00	17.88	
	19.750	39.14	0.82	39.96	60.00	20.04	
	0.150	30.80	0.12	30.92	56.00	25.08	AV
	0.197	40.30	0.16	40.46	53.75	13.29	
	0.736	18.50	0.11	18.61	46.00	27.39	
	6.316	30.80	0.25	31.05	50.00	18.95	
	8.819	35.79	0.36	36.15	50.00	13.85	
	19.750	30.80	0.82	31.62	50.00	18.38	

TEST ENGINEER: WENCY YANG

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	LHD32K366MH	Humidity	:	48%RH
Test Mode	:	USB Play	Date of Test	:	Jul 12, 2013

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.150	47.29	0.13	47.42	66.00	18.58	QP
	0.194	**53.12**	**0.08**	**53.20**	**63.86**	**10.66**	
	0.709	39.80	0.08	39.88	56.00	16.12	
	6.311	39.81	0.20	40.01	60.00	19.99	
	7.917	40.98	0.22	41.20	60.00	18.80	
	19.770	38.48	-0.02	38.46	60.00	21.54	
	0.150	31.30	0.13	31.43	56.00	24.57	AV
	0.194	36.80	0.08	36.88	53.86	16.98	
	0.709	25.80	0.08	25.88	46.00	20.12	
	6.311	31.30	0.20	31.50	50.00	18.50	
	7.917	34.50	0.22	34.72	50.00	15.28	
	19.770	30.40	-0.02	30.38	50.00	19.62	
Neutral	0.152	46.94	0.12	47.06	65.90	18.84	QP
	0.195	**53.33**	**0.16**	**53.49**	**63.81**	**10.32**	
	0.710	36.77	0.09	36.86	56.00	19.14	
	6.312	39.55	0.25	39.80	60.00	20.20	
	8.627	42.62	0.35	42.97	60.00	17.03	
	19.640	39.02	0.82	39.84	60.00	20.16	
	0.152	22.60	0.12	22.72	55.90	33.18	AV
	0.195	39.29	0.16	39.45	53.81	14.36	
	0.710	22.91	0.09	23.00	46.00	23.00	
	6.312	30.90	0.25	31.15	50.00	18.85	
	8.627	36.30	0.35	36.65	50.00	13.35	
	19.640	30.70	0.82	31.52	50.00	18.48	

TEST ENGINEER: WENCY YANG

4 RADIATED EMISSION TEST

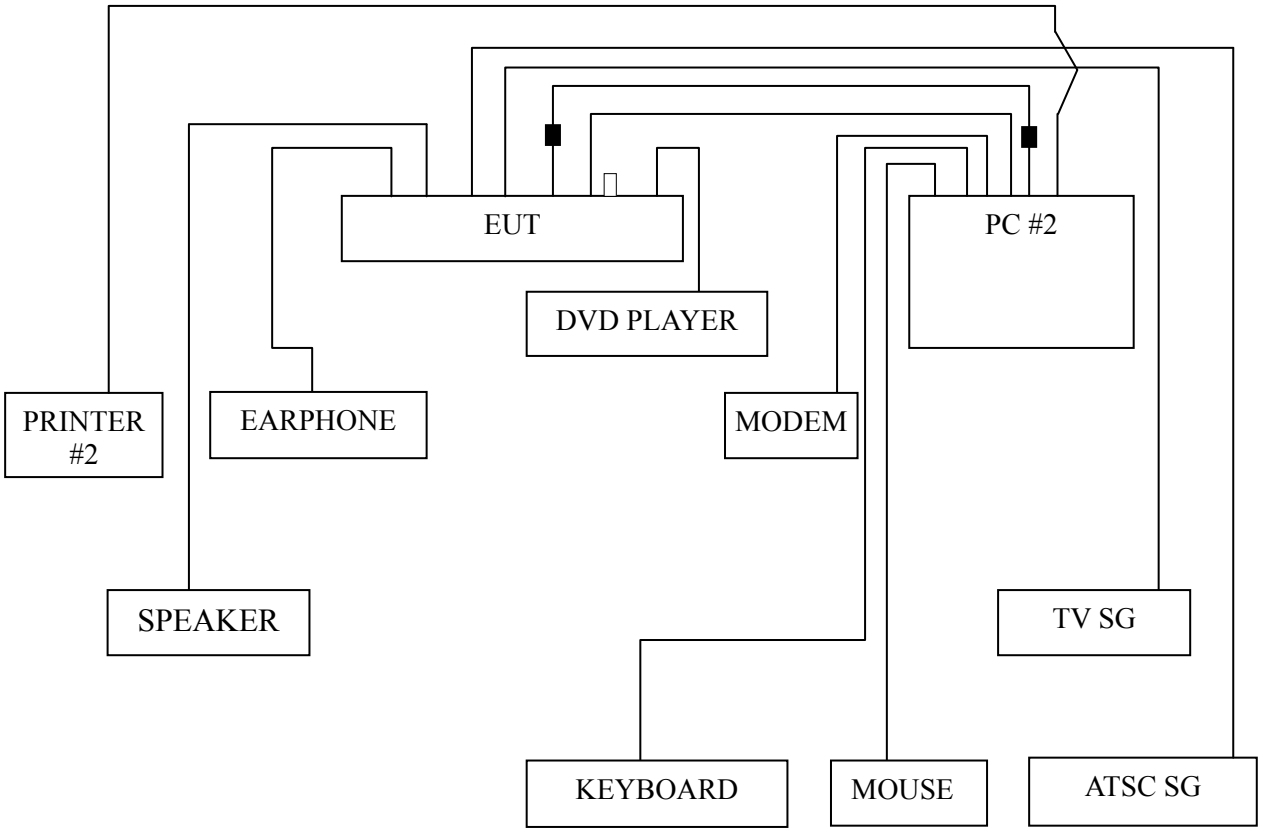
4.1 Test Equipment

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 11, 2012	Sep 11, 2013
2.	Preamplifier	Agilent	8447D	2944A10548	Mar 18, 2013	Sep 18, 2013
3.	Preamplifier	HP	8449B	3008A00864	Mar 20, 2013	Mar 20, 2014
4.	Bi-log Antenna	TESEQ	CBL6112D	23193	May 03, 2013	May 03, 2014
5.	Horn Antenna	EMCO	3115	9607-4878	May 11, 2013	May 11, 2014
6.	Spectrum	Agilent	E7405A	MY45106600	Dec 17, 2012	Dec 17, 2013
7.	50Ω Coaxial Switch	Anritsu	MP59B	6200426390	Mar 18, 2013	Sep 18, 2013
8.	Software	Audix	E3	SET00200 9912M295-2	--	--

4.2 Block Diagram of Test Setup

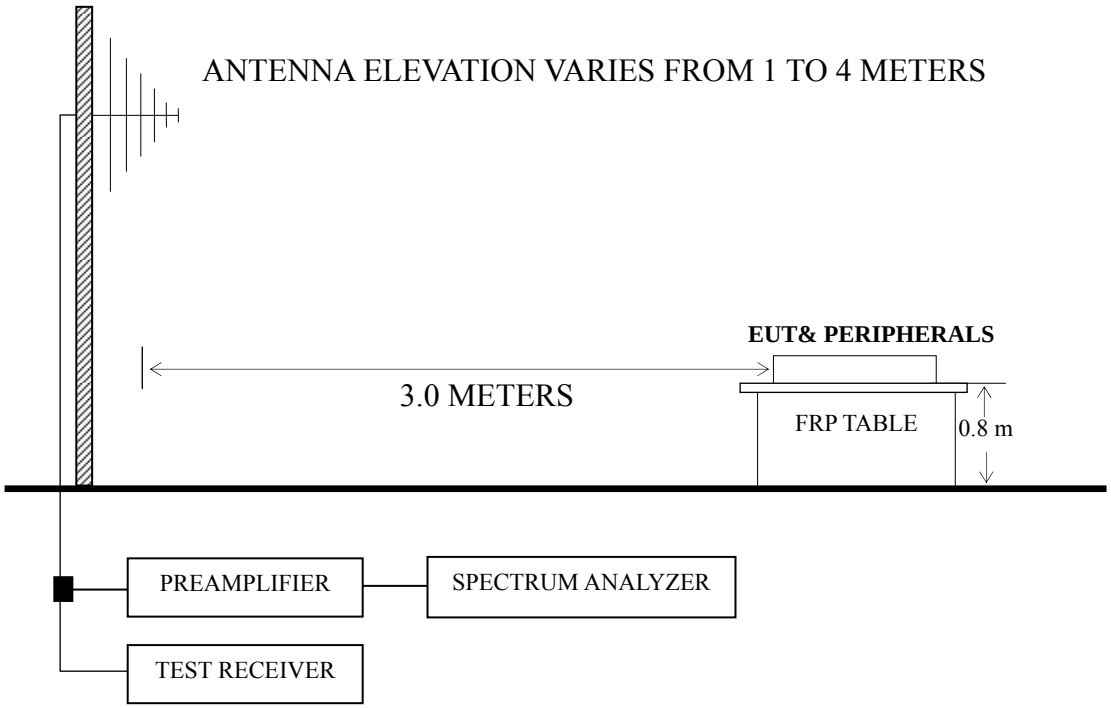
4.2.1 EUT and Peripherals



■: Ferrite core

□: 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 2000MHz was checked for all test modes.

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
D-Sub 1920*1080@60Hz	P21-P22
HDMI 1920*1080@60Hz	P23
D-Sub 1280*1024@60Hz	P24
D-Sub 640*480@60Hz	P25
USB Play	P26

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 D-Sub 1920*1080@60Hz test mode. The worst emission at horizontal polarization was detected at 633.340 MHz with corrected signal level of 40.06 dB (μV/m) (limit is 46.00 dB (μV/m)), when the antenna was 1.00 m height and the turntable was at 254°. The worst emission at vertical polarization was detected at 568.350 MHz with corrected signal level of 42.97 dB (μV/m) (limit is 46.00 dB (μV/m)), when the antenna was 1.00 m height and the turntable was at 160°.

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	LHD32K366MH	Humidity :	60%RH
Test Mode	:	D-Sub 1920*1080@60Hz	Date of Test :	Jul 15, 2013

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	51.340	18.46	7.20	0.86	--	26.52	40.00	13.48	QP
	102.750	22.92	10.93	1.36	--	35.21	43.50	8.29	
	129.910	22.59	11.90	1.53	--	36.02	43.50	7.48	
	222.060	24.81	8.40	2.06	--	35.27	46.00	10.73	
	286.080	22.29	12.37	2.46	--	37.12	46.00	8.88	
	633.340	**18.32**	**18.42**	**3.32**	**--**	**40.06**	**46.00**	**5.94**	
	1016.000	47.51	23.75	4.91	38.16	38.01	74.00	35.99	PK
	1159.000	46.82	24.34	5.07	37.84	38.39	74.00	35.61	
	1364.000	45.93	25.21	5.51	37.30	39.35	74.00	34.65	
	1639.000	47.53	27.14	5.81	36.60	43.88	74.00	30.12	
	1765.000	47.18	28.75	6.11	36.40	45.64	74.00	28.36	
	1831.000	45.11	29.46	6.16	36.30	44.43	74.00	29.57	
	1016.000	35.83	23.75	4.91	38.16	26.33	54.00	27.67	AV
	1159.000	33.62	24.34	5.07	37.84	25.19	54.00	28.81	
	1365.000	32.19	25.23	5.51	37.29	25.64	54.00	28.36	
	1639.000	34.32	27.14	5.81	36.60	30.67	54.00	23.33	
	1765.000	35.92	28.75	6.11	36.40	34.38	54.00	19.62	
	1831.000	32.43	29.46	6.16	36.30	31.75	54.00	22.25	

TEST ENGINEER: NEAL WANG

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	LHD32K366MH	Humidity :	60%RH
Test Mode	:	D-Sub 1920*1080@60Hz	Date of Test :	Jul 15, 2013

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	33.880	15.90	16.12	0.70	--	32.72	40.00	7.28	QP
	52.310	28.90	6.83	0.86	--	36.59	40.00	3.41	
	191.990	29.99	8.00	1.91	--	39.90	43.50	3.60	
	568.350	**20.53**	**19.30**	**3.14**	**--**	**42.97**	**46.00**	**3.03**	
	634.310	14.45	18.45	3.32	--	36.22	46.00	9.78	
	993.210	15.72	21.10	4.83	--	41.65	54.00	12.35	
	1031.000	46.37	23.82	4.92	38.14	36.97	74.00	37.03	PK
	1304.000	45.92	25.01	5.39	37.47	38.85	74.00	35.15	
	1482.000	45.21	25.56	5.63	36.95	39.45	74.00	34.55	
	1675.000	48.26	27.55	5.89	36.55	45.15	74.00	28.85	
	1809.000	44.39	29.23	6.16	36.33	43.45	74.00	30.55	
	1947.000	44.09	30.59	6.19	36.16	44.71	74.00	29.29	
	1031.000	33.99	23.82	4.92	38.14	24.59	54.00	29.41	AV
	1304.000	32.38	25.01	5.39	37.47	25.31	54.00	28.69	
	1482.000	32.74	25.56	5.63	36.95	26.98	54.00	27.02	
	1675.000	35.75	27.55	5.89	36.55	32.64	54.00	21.36	
	1809.000	31.84	29.23	6.16	36.33	30.90	54.00	23.10	
	1947.000	31.09	30.59	6.19	36.16	31.71	54.00	22.29	

TEST ENGINEER: NEAL WANG

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	LHD32K366MH	Humidity :	60%RH
Test Mode	:	HDMI 1920*1080@60Hz	Date of Test :	Jul 15, 2013

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	33.880	13.16	16.12	0.70	29.98	40.00	10.02
	44.550	22.18	9.91	0.81	32.90	40.00	7.10
	150.280	25.14	10.04	1.64	36.82	43.50	6.68
	191.020	27.55	7.95	1.91	37.41	43.50	6.09
	568.350	**19.60**	**19.30**	**3.14**	**42.04**	**46.00**	**3.96**
	631.400	15.64	18.40	3.32	37.36	46.00	8.64
Vertical	30.970	15.26	17.65	0.67	33.58	40.00	6.42
	44.550	22.29	9.91	0.81	33.01	40.00	6.99
	120.210	23.27	11.41	1.48	36.16	43.50	7.34
	191.990	**29.23**	**8.00**	**1.91**	**39.14**	**43.50**	**4.36**
	568.350	18.99	19.30	3.14	41.43	46.00	4.57
	634.310	14.54	18.45	3.32	36.31	46.00	9.69

TEST ENGINEER: NEAL WANG

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	LHD32K366MH	Humidity :	60%RH	
Test Mode	:	D-Sub 1280*1024@60Hz	Date of Test :	Jul 15, 2013	

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	**31.940**	**13.24**	**16.50**	**0.68**	**30.42**	**40.00**	**9.58**
	44.550	18.33	9.91	0.81	29.05	40.00	10.95
	123.120	19.89	11.46	1.49	32.84	43.50	10.66
	153.190	17.98	9.79	1.65	29.42	43.50	14.08
	305.480	15.52	13.00	2.56	31.08	46.00	14.92
	852.560	7.47	20.90	4.08	32.45	46.00	13.55
Vertical	**32.910**	**19.39**	**16.30**	**0.69**	**36.38**	**40.00**	**3.62**
	40.670	22.43	12.15	0.78	35.36	40.00	4.64
	123.120	20.39	11.46	1.49	33.34	43.50	10.16
	297.720	18.35	12.55	2.52	33.42	46.00	12.58
	634.310	14.53	18.45	3.32	36.30	46.00	9.70
	990.300	12.04	21.10	4.83	37.97	54.00	16.03

TEST ENGINEER: NEAL WANG

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	LHD32K366MH	Humidity :	60%RH
Test Mode	:	D-Sub 640*480@60Hz	Date of Test :	Jul 15, 2013

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	50.370	18.81	7.78	0.85	27.44	40.00	12.56
	83.350	15.39	7.19	1.13	23.71	40.00	16.29
	120.210	**19.79**	**11.41**	**1.48**	**32.68**	**43.50**	**10.82**
	231.760	22.01	9.80	2.11	33.92	46.00	12.08
	430.610	8.14	17.60	2.78	28.52	46.00	17.48
	840.920	4.33	20.40	3.98	28.71	46.00	17.29
Vertical	31.940	14.42	16.50	0.68	31.60	40.00	8.40
	51.340	**27.39**	**7.20**	**0.86**	**35.45**	**40.00**	**4.55**
	124.090	19.83	11.48	1.50	32.81	43.50	10.69
	149.310	21.36	10.12	1.64	33.12	43.50	10.38
	288.020	18.42	12.73	2.46	33.61	46.00	12.39
	669.230	6.18	19.45	3.44	29.07	46.00	16.93

TEST ENGINEER: NEAL WANG

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	LHD32K366MH	Humidity :	60%RH
Test Mode	:	USB Play	Date of Test :	Jul 15, 2013

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	**31.940**	**14.25**	**16.50**	**0.68**	**31.43**	**40.00**	**8.57**
	62.010	19.13	4.70	0.89	24.72	40.00	15.28
	127.000	16.75	11.70	1.52	29.97	43.50	13.53
	147.370	20.47	10.20	1.63	32.30	43.50	11.20
	298.690	18.56	12.52	2.52	33.60	46.00	12.40
	506.270	6.56	18.30	3.00	27.86	46.00	18.14
Vertical	34.850	11.84	15.85	0.71	28.40	40.00	11.60
	47.460	18.15	8.30	0.84	27.29	40.00	12.71
	148.340	**20.89**	**10.15**	**1.63**	**32.67**	**43.50**	**10.83**
	279.290	16.65	12.52	2.40	31.57	46.00	14.43
	342.340	16.86	14.80	2.61	34.27	46.00	11.73
	676.020	5.34	19.20	3.48	28.02	46.00	17.98

TEST ENGINEER: NEAL WANG

5 DEVIATION TO TEST SPECIFICATIONS

None.