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

LED LCD TV

Model No.	Brand
32K360	Hisense

FCC ID : W9HLCDC0019

Prepared For : Hisense Electric Co., Ltd.
No.218 Qianwangang Road, Economy & Technology Development Zone, Qingdao, China

Prepared By : Audix Technology (Shanghai) Co., Ltd.
3F and 4F, 34Bldg 680 Guiping Rd,
Caohejing Hi-Tech Park,
Shanghai 200233, China

Tel: +86-21-64955500
Fax: +86-21-64955491

Report No. : ACI-F13031
Date of Test : Feb 27 – Mar 02, 2013
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TEST REPORT FOR FCC CERTIFICATE

Applicant : Hisense Electric Co., Ltd.

Manufacturer : Hisense Electric Co., Ltd.

EUT Description : LED LCD TV

Model No.	Brand	Power Supply
32K360	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 Feb 27 – Mar 02, 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.F13032, a Verification report.

Date of Test : Feb 27 – Mar 02, 2013 Date of Report : Mar 07, 2013

Producer : Yenny Yu.
YENNY YU / Assistant

Review : Wency Yang
WENCY YANG / Supervisor

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

Signatory : Sammy Chen
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.	:	32K360
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
LCD Panel	:	Manufacturer : Hisense M/N : HE315GH-E77\PW1
Max Resolution	:	1024*768@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

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

Side Port:

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

(2) One VGA Port
: Connected with PC

(3) One PC/DVI Audio In Port
: Connected with PC

(4) One DIGITAL AUDIO OUT Port
: Connected with SPEAKER

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

(6) One AV IN Port
: Connected with DVD PLAYER #1

Bottom Port:

(1) One AUDIO OUT Port
: Connected with EARPHONE

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

(3) One HDMI1 Port
: Connected with PC

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

(5) One component of YPbPr Port
: Connected with DVD PLAYER #1

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; UL BSMI (R33001) 3C (A000111) MIC (E-A011-04-2659(B))

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

2.2.4 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

2.2.5 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 Earphone

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

2.2.7 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

2.2.8 ATSC Signal Generator

Manufacturer	:	SENCORE
Model Number	:	ATSC997
Serial Number	:	6790071

2.2.9 DVD PLAYER #1

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

2.2.10 DVD PLAYER #2

Manufacturer	:	LG
Model Number	:	DF9921N
Serial Number	:	3850R-M846W
Certificate	:	FCC DoC, CE/EMC, CCC

2.2.11 SPEAKER

Model Number	:	FS-04
Serial Number	:	002

2.2.12 U-DISK

Manufacturer	:	LG
Model Number	:	1GB

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

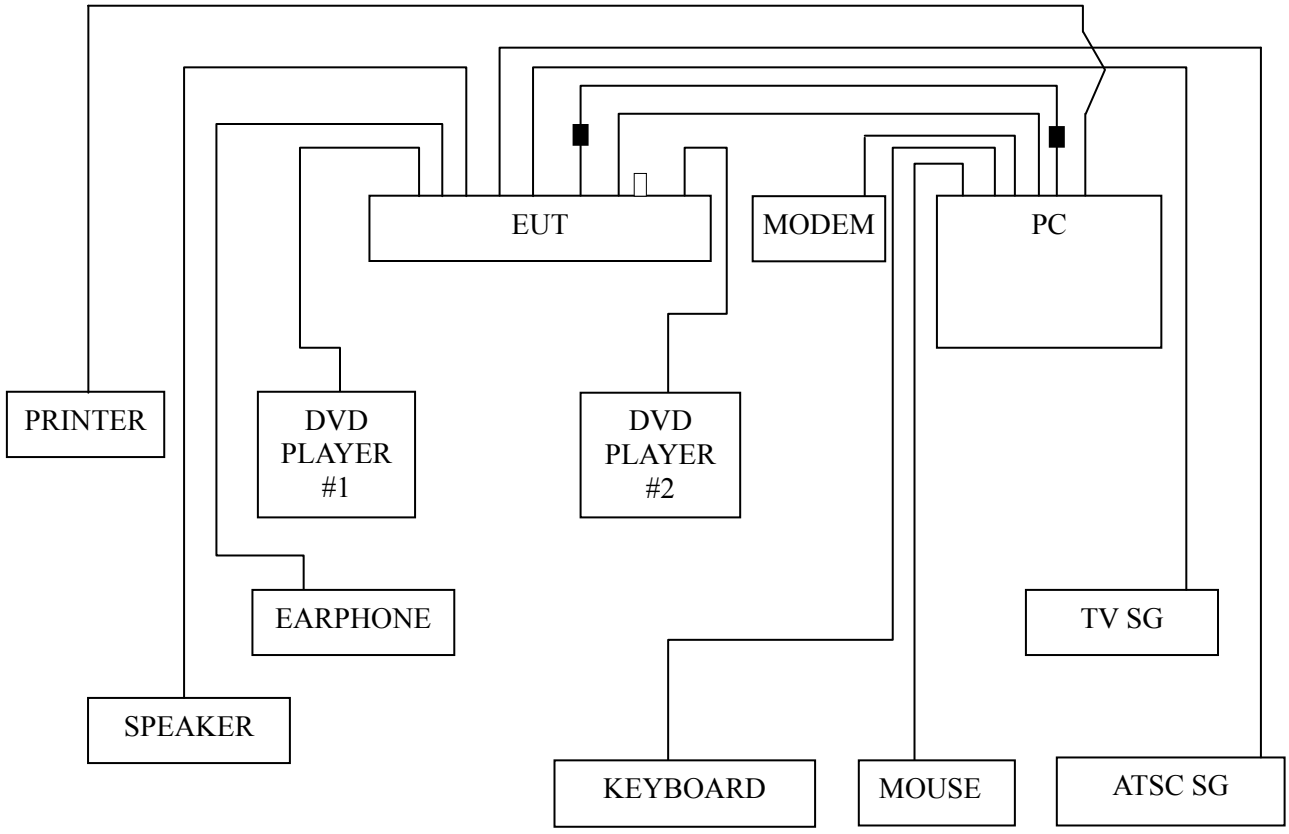
3.1 Test Equipment

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 22, 2012	Mar 22, 2013
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 22, 2012	Mar 22, 2013
4.	50 Ω Coaxial Switch	Anritsu	MP59B	6200426389	Sep 18, 2012	Mar 18, 2013
5.	50Ω Terminator	Anritsu	BNC	001	Mar 22, 2012	Mar 22, 2013
6.	Software	Audix	E3	SET00200 9804M592	--	--

3.2 Block Diagram of Test Setup

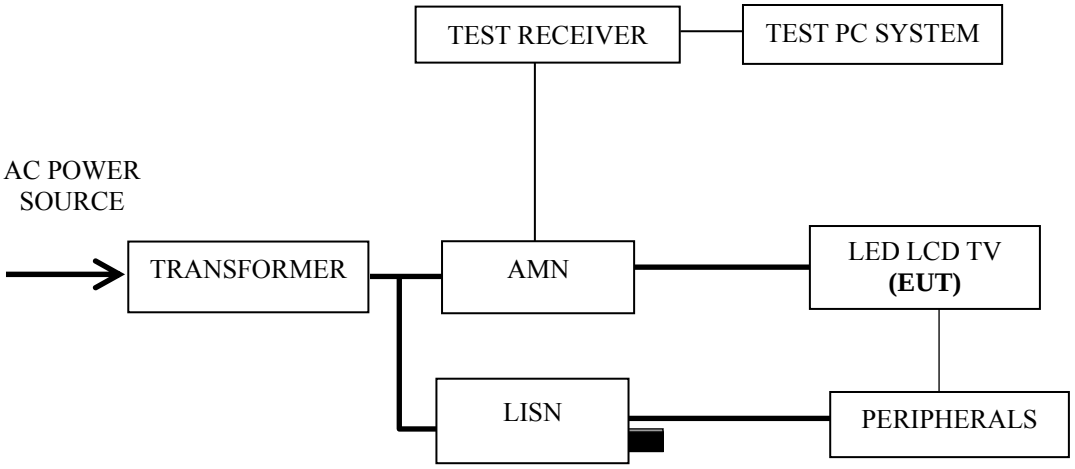
3.2.1 EUT & Peripherals



■: Ferrite core

: U-Disk

3.2.2 Conducted Disturbance Test Setup



—— : Signal Line
—— : Power Line
▬ : 50 ohm Terminator

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 1024*768@60Hz
HDMI 1024*768@60Hz
HDMI 800*600@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
D-Sub 1024*768@60Hz	P13
HDMI 1024*768@60Hz	P14
HDMI 800*600@60Hz	P15
HDMI 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 HDMI 1024*768@60Hz test mode. The worst emission is detected at 0.192 MHz (Quasi-Peak Value) with corrected signal level of 56.11 dB (μV) (limit is 63.93 dB (μV)), when the Line of the EUT is connected to AMN.

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	32K360	Humidity	:	48%RH
Test Mode	:	D-Sub 1024*768@60Hz	Date of Test	:	Mar 02, 2013

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	**0.192**	**54.15**	**0.25**	**54.40**	**63.93**	**9.53**	QP
	0.256	44.97	0.25	45.22	61.56	16.34	
	2.581	35.34	0.40	35.74	56.00	20.26	
	4.158	40.93	0.49	41.42	56.00	14.58	
	5.535	44.08	0.53	44.61	60.00	15.39	
	17.755	40.19	0.89	41.08	60.00	18.92	
	0.192	43.90	0.25	44.15	53.93	9.78	AV
	0.256	34.60	0.25	34.85	51.56	16.71	
	2.581	25.12	0.40	25.52	46.00	20.48	
	4.158	30.60	0.49	31.09	46.00	14.91	
	5.535	33.30	0.53	33.83	50.00	16.17	
	17.755	29.61	0.89	30.50	50.00	19.50	
Neutral	0.197	53.88	0.12	54.00	63.76	9.76	QP
	0.253	45.40	0.11	45.51	61.64	16.13	
	2.581	34.19	0.20	34.39	56.00	21.61	
	4.158	41.37	0.40	41.77	56.00	14.23	
	5.535	44.03	0.46	44.49	60.00	15.51	
	16.839	41.86	0.76	42.62	60.00	17.38	
	0.197	42.60	0.12	42.72	53.76	11.04	AV
	0.253	35.21	0.11	35.32	51.64	16.32	
	2.581	23.60	0.20	23.80	46.00	22.20	
	4.158	31.26	0.40	31.66	46.00	14.34	
	5.535	33.60	0.46	34.06	50.00	15.94	
	16.839	31.62	0.76	32.38	50.00	17.62	

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EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	32K360	Humidity	:	48%RH
Test Mode	:	HDMI 1024*768@60Hz	Date of Test	:	Mar 02, 2013

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	**0.192**	**55.86**	**0.25**	**56.11**	**63.93**	**7.82**	QP
	0.262	47.07	0.25	47.32	61.38	14.06	
	2.581	36.47	0.40	36.87	56.00	19.13	
	3.759	37.75	0.48	38.23	56.00	17.77	
	5.929	44.96	0.57	45.53	60.00	14.47	
	16.839	41.20	0.86	42.06	60.00	17.94	
	0.192	45.20	0.25	45.45	53.93	8.48	AV
	0.262	36.60	0.25	36.85	51.38	14.53	
	2.581	26.20	0.40	26.60	46.00	19.40	
	3.759	26.50	0.48	26.98	46.00	19.02	
	5.929	34.20	0.57	34.77	50.00	15.23	
	16.839	31.03	0.86	31.89	50.00	18.11	
Neutral	0.192	55.94	0.12	56.06	63.93	7.87	QP
	0.262	46.10	0.11	46.21	61.38	15.17	
	2.581	35.35	0.20	35.55	56.00	20.45	
	3.759	35.37	0.38	35.75	56.00	20.25	
	6.252	44.38	0.53	44.91	60.00	15.09	
	15.885	40.98	0.74	41.72	60.00	18.28	
	0.192	45.20	0.12	45.32	53.93	8.61	AV
	0.262	35.51	0.11	35.62	51.38	15.76	
	2.581	25.20	0.20	25.40	46.00	20.60	
	3.759	25.10	0.38	25.48	46.00	20.52	
	6.252	34.20	0.53	34.73	50.00	15.27	
	15.885	30.20	0.74	30.94	50.00	19.06	

TEST ENGINEER: SAWEN LI

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	32K360	Humidity	:	48%RH
Test Mode	:	HDMI 800*600@60Hz	Date of Test	:	Mar 02, 2013

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	**0.190**	**55.36**	**0.25**	**55.61**	**64.02**	**8.41**	QP
	0.256	46.18	0.25	46.43	61.56	15.13	
	2.581	36.86	0.40	37.26	56.00	18.74	
	3.759	37.15	0.48	37.63	56.00	18.37	
	5.929	45.78	0.57	46.35	60.00	13.65	
	17.849	40.71	0.90	41.61	60.00	18.39	
	0.190	45.10	0.25	45.35	54.02	8.67	AV
	0.256	35.56	0.25	35.81	51.56	15.75	
	2.581	26.20	0.40	26.60	46.00	19.40	
	3.759	26.20	0.48	26.68	46.00	19.32	
	5.929	35.20	0.57	35.77	50.00	14.23	
	17.849	30.20	0.90	31.10	50.00	18.90	
Neutral	0.190	54.99	0.12	55.11	64.02	8.91	QP
	0.256	45.71	0.11	45.82	61.56	15.74	
	2.581	36.10	0.20	36.30	56.00	19.70	
	3.759	36.66	0.38	37.04	56.00	18.96	
	5.929	45.19	0.49	45.68	60.00	14.32	
	15.146	40.96	0.73	41.69	60.00	18.31	
	0.190	44.20	0.12	44.32	54.02	9.70	AV
	0.256	35.13	0.11	35.24	51.56	16.32	
	2.581	25.36	0.20	25.56	46.00	20.44	
	3.759	26.23	0.38	26.61	46.00	19.39	
	5.929	35.20	0.49	35.69	50.00	14.31	
	15.146	30.33	0.73	31.06	50.00	18.94	

TEST ENGINEER: SAWEN LI

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	32K360	Humidity	:	48%RH
Test Mode	:	HDMI 640*480@60Hz	Date of Test	:	Mar 02, 2013

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	**0.192**	**55.00**	**0.25**	**55.25**	**63.93**	**8.68**	QP
	0.256	45.89	0.25	46.14	61.56	15.42	
	2.581	36.16	0.40	36.56	56.00	19.44	
	3.759	37.72	0.48	38.20	56.00	17.80	
	5.929	45.44	0.57	46.01	60.00	13.99	
	16.839	40.80	0.86	41.66	60.00	18.34	
	0.192	44.62	0.25	44.87	53.93	9.06	AV
	0.256	35.12	0.25	35.37	51.56	16.19	
	2.581	26.00	0.40	26.40	46.00	19.60	
	3.759	26.60	0.48	27.08	46.00	18.92	
	5.929	35.12	0.57	35.69	50.00	14.31	
	16.839	30.12	0.86	30.98	50.00	19.02	
Neutral	0.192	54.94	0.12	55.06	63.93	8.87	QP
	0.256	45.42	0.11	45.53	61.56	16.03	
	2.581	35.67	0.20	35.87	56.00	20.13	
	4.158	37.24	0.40	37.64	56.00	18.36	
	5.929	44.93	0.49	45.42	60.00	14.58	
	16.839	40.75	0.76	41.51	60.00	18.49	
	0.192	44.30	0.12	44.42	53.93	9.51	AV
	0.256	35.24	0.11	35.35	51.56	16.21	
	2.581	25.36	0.20	25.56	46.00	20.44	
	4.158	27.12	0.40	27.52	46.00	18.48	
	5.929	34.62	0.49	35.11	50.00	14.89	
	16.839	30.60	0.76	31.36	50.00	18.64	

TEST ENGINEER: SAWEN LI

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	32K360	Humidity	:	48%RH
Test Mode	:	USB Play	Date of Test	:	Mar 02, 2013

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	**0.192**	**53.83**	**0.25**	**54.08**	**63.93**	**9.85**	QP
	0.256	44.57	0.25	44.82	61.56	16.74	
	2.581	34.57	0.40	34.97	56.00	21.03	
	4.158	41.57	0.49	42.06	56.00	13.94	
	5.535	44.30	0.53	44.83	60.00	15.17	
	15.885	41.10	0.85	41.95	60.00	18.05	
	0.192	43.20	0.25	43.45	53.93	10.48	AV
	0.256	34.20	0.25	34.45	51.56	17.11	
	2.581	24.20	0.40	24.60	46.00	21.40	
	4.158	30.20	0.49	30.69	46.00	15.31	
	5.535	34.20	0.53	34.73	50.00	15.27	
	15.885	30.30	0.85	31.15	50.00	18.85	
Neutral	0.192	53.74	0.12	53.86	63.93	10.07	QP
	0.259	44.12	0.11	44.23	61.47	17.24	
	2.581	34.50	0.20	34.70	56.00	21.30	
	4.158	41.49	0.40	41.89	56.00	14.11	
	5.535	44.30	0.46	44.76	60.00	15.24	
	17.383	40.32	0.79	41.11	60.00	18.89	
	0.192	43.26	0.12	43.38	53.93	10.55	AV
	0.259	33.63	0.11	33.74	51.47	17.73	
	2.581	24.36	0.20	24.56	46.00	21.44	
	4.158	30.62	0.40	31.02	46.00	14.98	
	5.535	34.05	0.46	34.51	50.00	15.49	
	17.383	30.19	0.79	30.98	50.00	19.02	

TEST ENGINEER: SAWEN LI

4 RADIATED EMISSION TEST

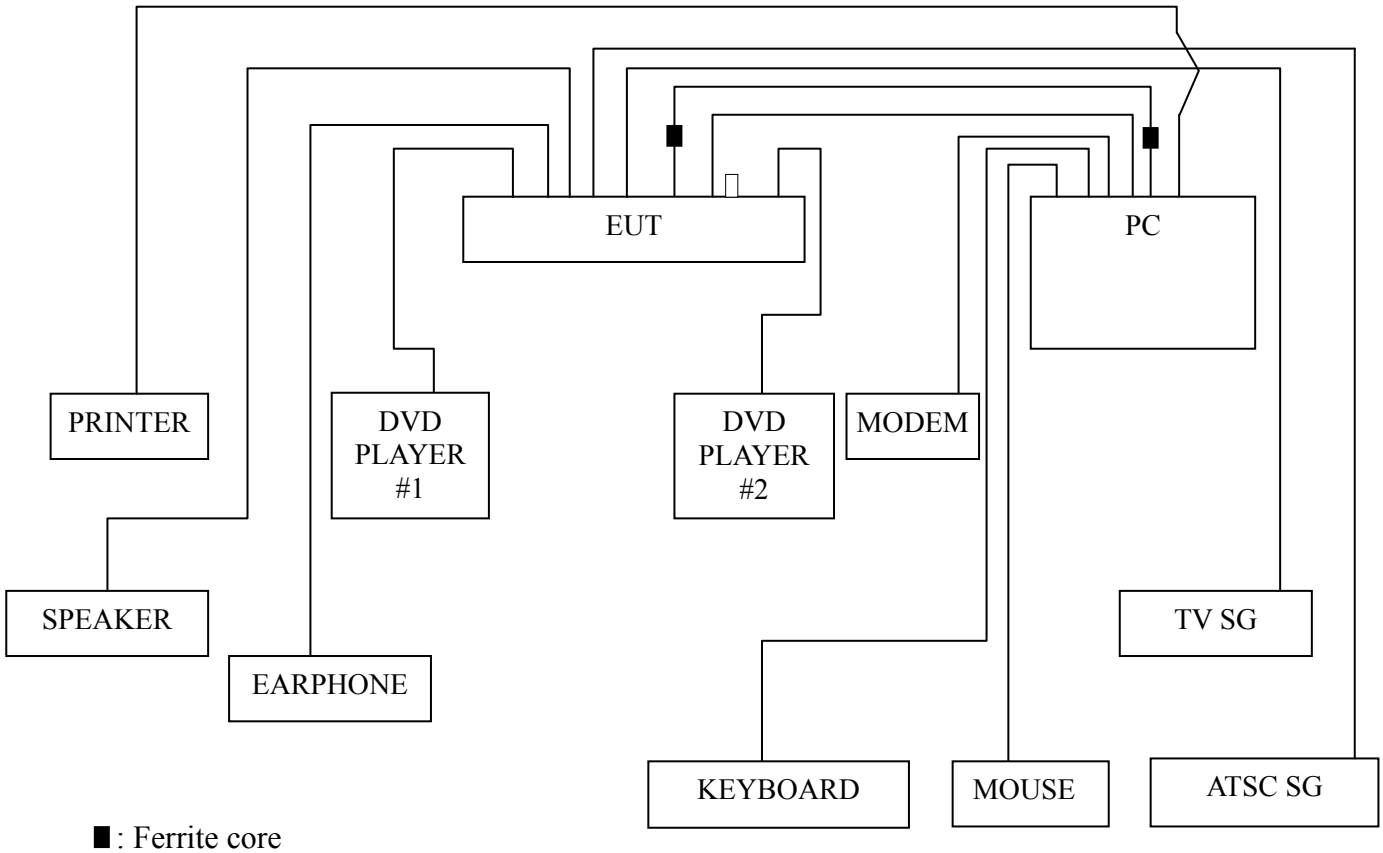
4.1 Test Equipment

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	Sep 18, 2012	Mar 18, 2013
3.	Bi-log Antenna	TESEQ	CBL6112D	23193	May 03, 2012	May 03, 2013
4.	Spectrum	Agilent	E7405A	MY45106600	Dec 17, 2012	Dec 17, 2013
5.	50Ω Coaxial Switch	Anritsu	MP59B	6200426390	Sep 18, 2012	Mar 18, 2013
6.	Software	Audix	E3	SET00200 9912M295-2	--	--

4.2 Block Diagram of Test Setup

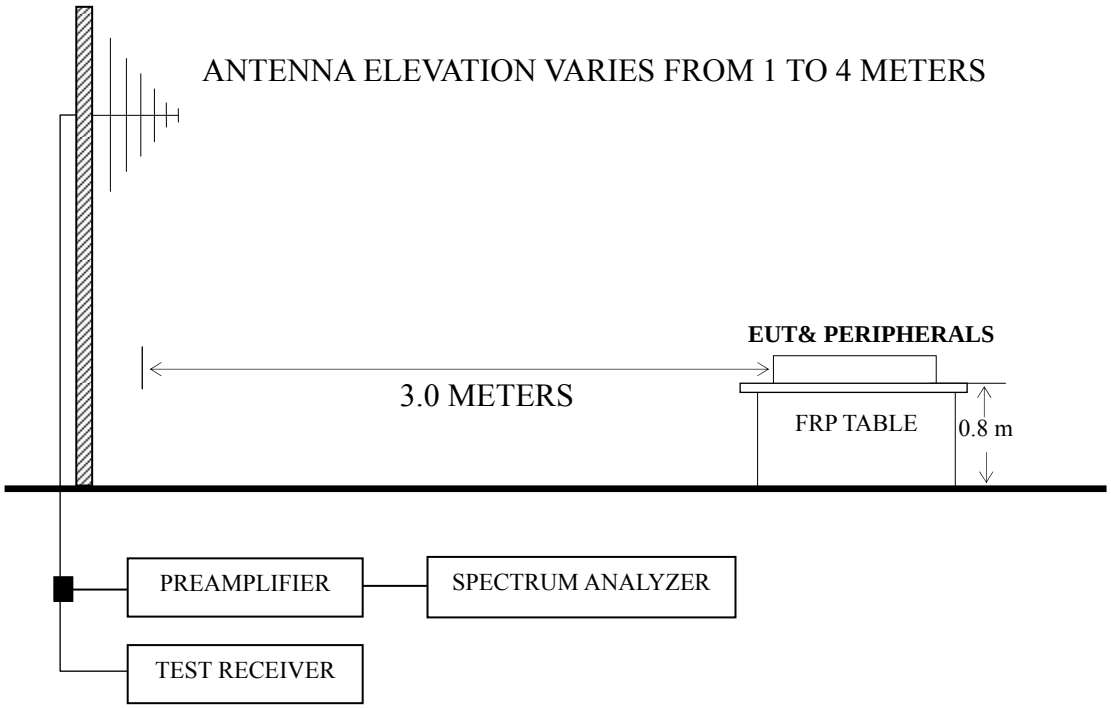
4.2.1 EUT and Peripherals



■: 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.

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 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 1024*768@60Hz	P21
HDMI 1024*768@60Hz	P22
D-Sub 800*600@60Hz	P23
D-Sub 640*480@60Hz	P24
USB Play	P25

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 1024*768@60Hz test mode. The worst emission at horizontal polarization was detected at 227.880 MHz with corrected signal level of 40.20 dB (μV/m) (limit is 46.00 dB (μV/m)), when the antenna was 1.00 m height and the turntable was at 92°. The worst emission at vertical polarization was detected at 284.000 MHz with corrected signal level of 43.05 dB (μV/m) (limit is 46.00 dB (μV/m)), when the antenna was 1.00 m height and the turntable was at 290°.

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	32K360	Humidity :	60%RH
Test Mode	:	D-Sub 1024*768@60Hz	Date of Test :	Feb 27, 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	75.590	18.23	10.27	1.53	30.03	40.00	9.97
	184.230	22.72	9.95	2.37	35.04	43.50	8.46
	227.880	**26.70**	**10.97**	**2.53**	**40.20**	**46.00**	**5.80**
	308.390	22.01	13.94	2.78	38.73	46.00	7.27
	455.830	15.06	17.06	3.15	35.27	46.00	10.73
	674.080	11.41	19.19	3.64	34.24	46.00	11.76
Vertical	75.590	24.95	10.27	1.53	36.75	40.00	3.25
	150.280	23.90	10.41	2.23	36.54	43.50	6.96
	227.880	26.55	10.97	2.53	40.05	46.00	5.95
	284.000	**27.10**	**13.24**	**2.71**	**43.05**	**46.00**	**2.95**
	455.830	22.03	17.06	3.15	42.24	46.00	3.76
	674.080	15.34	19.19	3.64	38.17	46.00	7.83

TEST ENGINEER: RAVEN JIN

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	32K360	Humidity :	60%RH
Test Mode	:	HDMI 1024*768@60Hz	Date of Test :	Feb 27, 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	75.590	15.23	10.27	1.53	27.03	40.00	12.97
	184.230	19.72	9.95	2.37	32.04	43.50	11.46
	227.880	**23.70**	**10.97**	**2.53**	**37.20**	**46.00**	**8.80**
	308.390	19.01	13.94	2.78	35.73	46.00	10.27
	455.830	12.06	17.06	3.15	32.27	46.00	13.73
	674.080	8.41	19.19	3.64	31.24	46.00	14.76
Vertical	75.590	19.95	10.27	1.53	31.75	40.00	8.25
	150.280	18.90	10.41	2.23	31.54	43.50	11.96
	186.170	20.80	9.93	2.38	33.11	43.50	10.39
	455.830	17.03	17.06	3.15	37.24	46.00	8.76
	473.290	14.87	17.29	3.19	35.35	46.00	10.65
	824.430	**15.06**	**20.53**	**4.11**	**39.70**	**46.00**	**6.30**

TEST ENGINEER: RAVEN JIN

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	32K360	Humidity :	60%RH
Test Mode	:	HDMI 800*600@60Hz	Date of Test :	Feb 27, 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	75.590	13.04	10.27	1.53	24.84	40.00	15.16
	184.230	19.97	9.95	2.37	32.29	43.50	11.21
	227.880	25.58	10.97	2.53	39.08	46.00	6.92
	308.390	**23.23**	**13.94**	**2.78**	**39.95**	**46.00**	**6.05**
	455.830	13.26	17.06	3.15	33.47	46.00	12.53
	601.330	11.45	18.23	3.47	33.15	46.00	12.85
Vertical	75.590	19.15	10.27	1.53	30.95	40.00	9.05
	96.930	15.53	11.24	1.82	28.59	43.50	14.91
	150.280	19.04	10.41	2.23	31.68	43.50	11.82
	227.880	20.53	10.97	2.53	34.03	46.00	11.97
	295.780	**24.36**	**13.60**	**2.75**	**40.71**	**46.00**	**5.29**
	455.830	14.26	17.06	3.15	34.47	46.00	11.53

TEST ENGINEER: RAVEN JIN

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	32K360	Humidity :	60%RH
Test Mode	:	HDMI 640*480@60Hz	Date of Test :	Feb 27, 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	182.290	17.49	9.97	2.36	29.82	43.50	13.68
	227.880	21.42	10.97	2.53	34.92	46.00	11.08
	305.480	**20.15**	**13.87**	**2.77**	**36.79**	**46.00**	**9.21**
	455.830	10.81	17.06	3.15	31.02	46.00	14.98
	601.330	6.22	18.23	3.47	27.92	46.00	18.08
	929.190	10.38	20.44	5.07	35.89	46.00	10.11
Vertical	75.590	17.66	10.27	1.53	29.46	40.00	10.54
	150.280	16.76	10.41	2.23	29.40	43.50	14.10
	187.140	18.17	9.92	2.38	30.47	43.50	13.03
	227.880	15.40	10.97	2.53	28.90	46.00	17.10
	308.390	**20.93**	**13.94**	**2.78**	**37.65**	**46.00**	**8.35**
	455.830	13.22	17.06	3.15	33.43	46.00	12.57

TEST ENGINEER: RAVEN JIN

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	32K360	Humidity :	60%RH
Test Mode	:	USB Play	Date of Test :	Feb 27, 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	**75.590**	**21.23**	**10.27**	**1.53**	**33.03**	**40.00**	**6.97**
	184.230	19.72	9.95	2.37	32.04	43.50	11.46
	227.880	23.70	10.97	2.53	37.20	46.00	8.80
	308.390	19.01	13.94	2.78	35.73	46.00	10.27
	455.830	12.06	17.06	3.15	32.27	46.00	13.73
	674.080	8.41	19.19	3.64	31.24	46.00	14.76
Vertical	75.590	19.95	10.27	1.53	31.75	40.00	8.25
	150.280	18.90	10.41	2.23	31.54	43.50	11.96
	227.880	21.55	10.97	2.53	35.05	46.00	10.95
	455.830	17.03	17.06	3.15	37.24	46.00	8.76
	674.080	10.34	19.19	3.64	33.17	46.00	12.83
	824.430	**15.06**	**20.53**	**4.11**	**39.70**	**46.00**	**6.30**

TEST ENGINEER: RAVEN JIN

5 DEBUG DESCRIPTION

The following components are used during the countermeasure procedures:

Name	M/N	Manufacturer	Location
Gasket	35X0.7X41mm\VGA\ROH	Qingdao Joinset S&T Co., Ltd.	See Internal Photos Figure 17

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: Raven Jin

(RAVEN JIN)

6 DEVIATION TO TEST SPECIFICATIONS

None.