

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

LCD TV

Model No.	Serial No.	Brand
LHD32K26NUS	E12091146-03/03	Hisense
32K26	--	
LHD32K20NUS	--	
32K20	--	

FCC ID : W9HLCDC0015

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-F12161
Date of Test : Sep 21 – 28, 2012
Date of Report : Oct 13, 2012

TABLE OF CONTENTS

	Page
1 SUMMARY OF STANDARDS AND RESULTS.....	4
1.1 Description of Standards and Results.....	4
2 GENERAL INFORMATION.....	5
2.1 Description of Equipment Under Test.....	5
2.2 Peripherals.....	6
2.3 Description of Test Facility.....	8
2.4 Measurement Uncertainty.....	8
3 CONDUCTED EMISSION TEST.....	9
3.1 Test Equipment.....	9
3.2 Block Diagram of Test Setup.....	9
3.3 Conducted Emission Limit [FCC Part 15 Subpart B 15.107(a)].....	10
3.4 Test Configuration.....	10
3.5 Operating Condition of EUT.....	11
3.6 Test Procedures.....	11
3.7 Test Results.....	12
4 RADIATED EMISSION TEST.....	18
4.1 Test Equipment.....	18
4.2 Block Diagram of Test Setup.....	18
4.3 Radiated Emission Limit [FCC Part 15 Subpart B 15.109(a)].....	19
4.4 Test Configuration.....	19
4.5 Operating Condition of EUT.....	19
4.6 Test Procedures.....	20
4.7 Test Results.....	20
5 DEVIATION TO TEST SPECIFICATIONS.....	26

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 2011 AND ANSI C63.4-2003	15.107(a) Class B	Pass
Radiated Disturbance	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2011 AND ANSI C63.4-2003	15.109(a) Class B	Pass

2 GENERAL INFORMATION

2.1 Description of Equipment Under Test

Description : LCD TV

Type of EUT : Production Pre-product Pro-type

Model No.	Serial No.	Brand
LHD32K26NUS	E12091146-03/03	Hisense
32K26	--	
LHD32K20NUS	--	
32K20	--	

Note : The model LHD32K26NUS and 32K26 are all the same except for the different model number.
The model LHD32K20NUS and 32K20 are all the same except for the different model number.
The model LHD32K26NUS and LHD32K20NUS are all the same except for the different appearance.
LHD32K26NUS was tested and recorded in the report.

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 : HE315FH-E78\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, Undetachable, 1.80m

Remark:

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

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
- (6) One component of YPbPr Audio Port : Connected with DVD PLAYER #1

Side Port:

- (7) One ANT Port : Connected with ATSC SG / TV SG
- (8) One VGA Port : Connected with PC
- (9) One PC Audio Port : Connected with PC
- (10) One DIGITAL OUTPUT Port : Connected with DVD PLAYER #1
- (11) One HDMI3 Port : Connected with DVD PLAYER #2
- (12) One component of AV 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 U-DISK

Manufacturer : LG
Model Number : 1GB

2.3 Description of Test Facility

Site Description (No.3 3m Chamber) : Sept. 17, 1998 file on
Apr 29, 2009 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 = 3.42dB
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

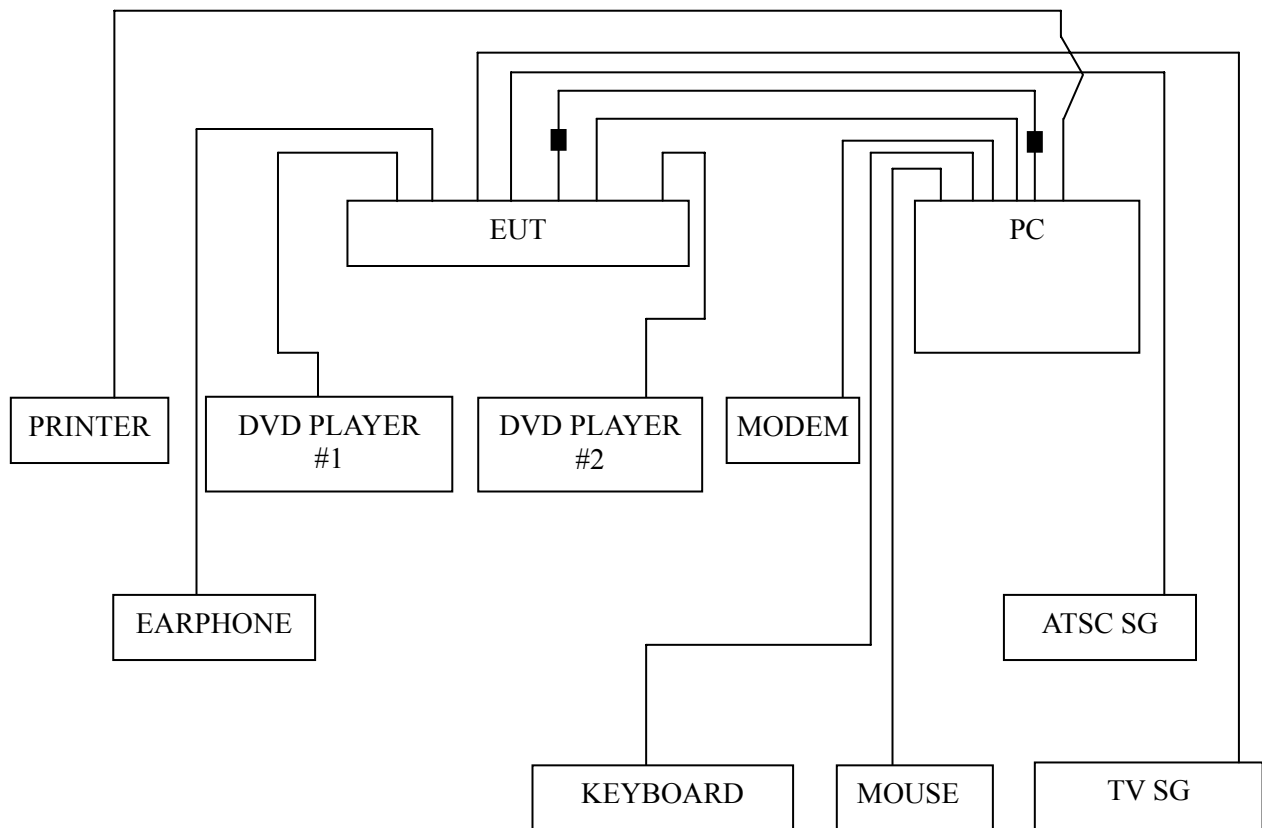
3.1 Test Equipment

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 #1)	R&S	ESH2-Z5	843890/011	Feb 13, 2012	Feb 13, 2013
3.	Artificial Mains Network (AMN #2)	R&S	ENV4200	100125	Mar 22, 2012	Mar 22, 2013
4.	50 Ω Coaxial Switch	Anritsu	MP59B	6200426389	Sep 18, 2012	Mar 18, 2013
5.	50 Ω Terminator	Anritsu	BNC	001	Mar 22, 2012	Mar 22, 2013
6.	Software	Audix	E3	SET00200 9804M592	--	--

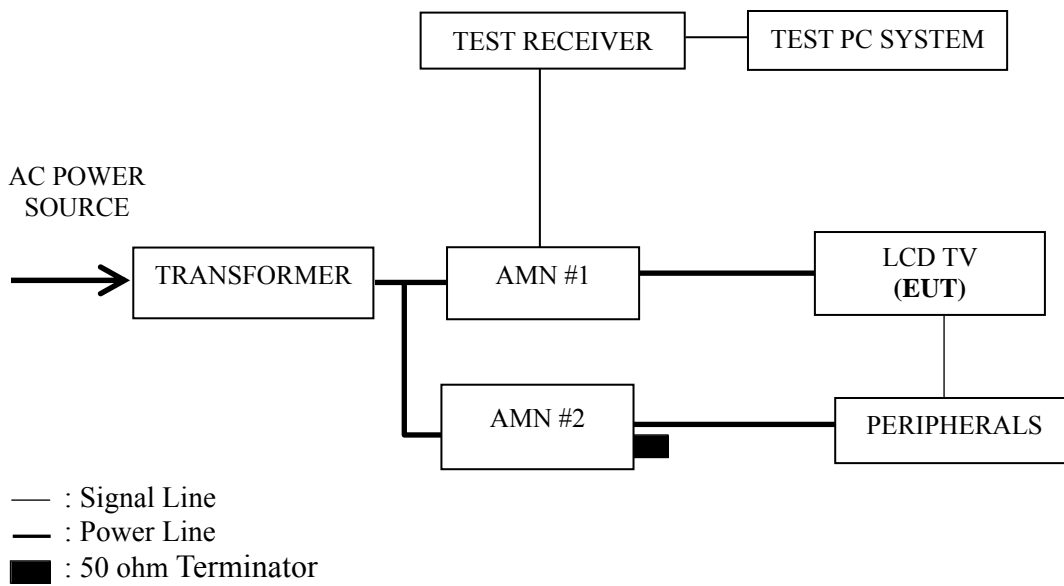
3.2 Block Diagram of Test Setup

3.2.1 EUT & Peripherals



■ : Ferrite core

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 (μ V)	
	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 Repeat above procedure 3.5.5 for difference test mode.

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

3.5.8 The test modes are as follows:

Test Mode
D-Sub 1024*768@60Hz
HDMI 1024*768@60Hz
D-Sub 800*600@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 1024*768@60Hz	P13
HDMI 1024*768@60Hz	P14
D-Sub 800*600@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 640*480@60Hz test mode. The worst emission is detected at 6.769 MHz (Average Value) with corrected signal level of 38.40 dB (μV) (limit is 50.00 dB (μV)), when the Line of the EUT is connected to AMN.

EUT : LCD TV Temperature : 22°C

Model No. : LHD32K26NUS Humidity : 48%RH

Serial No. : E12091146-03/03 Date of Test : Sep 21, 2012

Test Mode : D-Sub 1024*768@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μ V)	Factor (dB)	Emission Level dB(μ V)	Limits dB(μ V)	Margin (dB)	Remark
Line	0.151	36.79	0.25	37.04	65.96	28.92	QP
	0.408	34.79	0.49	35.28	57.68	22.40	
	1.082	36.47	0.49	36.96	56.00	19.04	
	1.628	36.13	0.55	36.68	56.00	19.32	
	7.025	43.98	0.76	44.74	60.00	15.26	
	26.841	32.06	1.29	33.35	60.00	26.65	
	0.151	27.33	0.25	27.58	55.96	28.38	AV
	0.408	26.23	0.49	26.72	47.68	20.96	
	1.082	27.44	0.49	27.93	46.00	18.07	
	1.628	27.69	0.55	28.24	46.00	17.76	
	7.025	35.11	0.76	35.87	50.00	14.13	
	26.841	24.21	1.29	25.50	50.00	24.50	
Neutral	0.151	39.05	0.15	39.20	65.96	26.76	QP
	0.408	32.87	0.32	33.19	57.68	24.49	
	1.082	33.75	0.39	34.14	56.00	21.86	
	1.628	33.52	0.35	33.87	56.00	22.13	
	6.951	44.23	0.69	44.92	60.00	15.08	
	26.841	34.11	1.17	35.28	60.00	24.72	
	0.151	30.45	0.15	30.60	55.96	25.36	AV
	0.408	23.46	0.32	23.78	47.68	23.90	
	1.082	24.87	0.39	25.26	46.00	20.74	
	1.628	26.20	0.35	26.55	46.00	19.45	
	6.951	37.00	0.69	37.69	50.00	12.31	
	26.841	27.02	1.17	28.19	50.00	21.81	

TEST ENGINEER: SAWEN LI

EUT : LCD TV Temperature : 22°C

Model No. : LHD32K26NUS Humidity : 48%RH

Serial No. : E12091146-03/03 Date of Test : Sep 21, 2012

Test Mode : HDMI 1024*768@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μ V)	Factor (dB)	Emission Level dB(μ V)	Limits dB(μ V)	Margin (dB)	Remark
Line	0.151	36.61	0.25	36.86	65.96	29.10	QP
	0.408	34.74	0.49	35.23	57.68	22.45	
	1.082	36.11	0.49	36.60	56.00	19.40	
	1.628	37.16	0.55	37.71	56.00	18.29	
	6.951	44.70	0.76	45.46	60.00	14.54	
	26.558	32.86	1.29	34.15	60.00	25.85	
	0.151	27.01	0.25	27.26	55.96	28.70	AV
	0.408	26.03	0.49	26.52	47.68	21.16	
	1.082	27.55	0.49	28.04	46.00	17.96	
	1.628	29.35	0.55	29.90	46.00	16.10	
	6.951	35.87	0.76	36.63	50.00	13.37	
	26.558	23.98	1.29	25.27	50.00	24.73	
Neutral	0.151	35.54	0.15	35.69	65.96	30.27	QP
	0.408	32.92	0.32	33.24	57.68	24.44	
	1.082	33.24	0.39	33.63	56.00	22.37	
	1.628	33.29	0.35	33.64	56.00	22.36	
	6.878	44.59	0.69	45.28	60.00	14.72	
	26.841	34.78	1.17	35.95	60.00	24.05	
	0.151	28.21	0.15	28.36	55.96	27.60	AV
	0.408	23.98	0.32	24.30	47.68	23.38	
	1.082	26.74	0.39	27.13	46.00	18.87	
	1.628	26.20	0.35	26.55	46.00	19.45	
	6.878	36.87	0.69	37.56	50.00	12.44	
	26.841	26.45	1.17	27.62	50.00	22.38	

TEST ENGINEER: SAWEN LI

EUT : LCD TV Temperature : 22°C

Model No. : LHD32K26NUS Humidity : 48%RH

Serial No. : E12091146-03/03 Date of Test : Sep 21, 2012

Test Mode : D-Sub 800*600@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μ V)	Factor (dB)	Emission Level dB(μ V)	Limits dB(μ V)	Margin (dB)	Remark
Line	0.151	35.97	0.25	36.22	65.96	29.74	QP
	0.408	34.71	0.49	35.20	57.68	22.48	
	1.082	36.56	0.49	37.05	56.00	18.95	
	1.628	36.07	0.55	36.62	56.00	19.38	
	6.769	44.29	0.76	45.05	60.00	14.95	
	26.558	33.09	1.29	34.38	60.00	25.62	
	0.151	28.01	0.25	28.26	55.96	27.70	AV
	0.408	26.89	0.49	27.38	47.68	20.30	
	1.082	28.45	0.49	28.94	46.00	17.06	
	1.628	28.70	0.55	29.25	46.00	16.75	
	6.769	36.22	0.76	36.98	50.00	13.02	
	26.558	25.45	1.29	26.74	50.00	23.26	
Neutral	0.151	37.47	0.15	37.62	65.96	28.34	QP
	0.408	32.91	0.32	33.23	57.68	24.45	
	1.082	33.70	0.39	34.09	56.00	21.91	
	1.628	33.34	0.35	33.69	56.00	22.31	
	6.805	45.33	0.69	46.02	60.00	13.98	
	26.558	33.39	1.16	34.55	60.00	25.45	
	0.151	29.30	0.15	29.45	55.96	26.51	AV
	0.408	24.14	0.32	24.46	47.68	23.22	
	1.082	24.87	0.39	25.26	46.00	20.74	
	1.628	25.63	0.35	25.98	46.00	20.02	
	6.805	37.55	0.69	38.24	50.00	11.76	
	26.558	25.81	1.16	26.97	50.00	23.03	

TEST ENGINEER: SAWEN LI

EUT : LCD TV Temperature : 22°C

Model No. : LHD32K26NUS Humidity : 48%RH

Serial No. : E12091146-03/03 Date of Test : Sep 21, 2012

Test Mode : D-Sub 640*480@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.151	36.70	0.25	36.95	65.96	29.01	QP
	0.408	34.73	0.49	35.22	57.68	22.46	
	1.082	35.63	0.49	36.12	56.00	19.88	
	1.628	35.18	0.55	35.73	56.00	20.27	
	6.769	45.12	0.76	45.88	60.00	14.12	
	26.558	33.33	1.29	34.62	60.00	25.38	
	0.151	28.45	0.25	28.70	55.96	27.26	AV
	0.408	26.51	0.49	27.00	47.68	20.68	
	1.082	28.01	0.49	28.50	46.00	17.50	
	1.628	27.55	0.55	28.10	46.00	17.90	
	6.769	37.64	0.76	38.40	50.00	11.60	
	26.558	25.84	1.29	27.13	50.00	22.87	
Neutral	0.151	41.48	0.15	41.63	65.96	24.33	QP
	0.408	32.70	0.32	33.02	57.68	24.66	
	1.082	36.15	0.39	36.54	56.00	19.46	
	1.628	32.63	0.35	32.98	56.00	23.02	
	6.878	44.61	0.69	45.30	60.00	14.70	
	27.127	33.54	1.18	34.72	60.00	25.28	
	0.151	32.50	0.15	32.65	55.96	23.31	AV
	0.408	24.60	0.32	24.92	47.68	22.76	
	1.082	28.50	0.39	28.89	46.00	17.11	
	1.628	24.74	0.35	25.09	46.00	20.91	
	6.878	36.90	0.69	37.59	50.00	12.41	
	27.127	25.45	1.18	26.63	50.00	23.37	

TEST ENGINEER: SAWEN LI

EUT : LCD TV Temperature : 22°C

Model No. : LHD32K26NUS Humidity : 48%RH

Serial No. : E12091146-03/03 Date of Test : Sep 21, 2012

Test Mode : USB Play

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.176	33.21	0.28	33.49	64.68	31.19	QP
	0.408	35.02	0.49	35.51	57.68	22.17	
	1.082	35.05	0.49	35.54	56.00	20.46	
	1.628	35.90	0.55	36.45	56.00	19.55	
	6.878	43.55	0.76	44.31	60.00	15.69	
	26.841	33.30	1.29	34.59	60.00	25.41	
	0.176	24.77	0.28	25.05	54.68	29.63	AV
	0.408	26.79	0.49	27.28	47.68	20.40	
	1.082	26.87	0.49	27.36	46.00	18.64	
	1.628	27.35	0.55	27.90	46.00	18.10	
	6.878	35.84	0.76	36.60	50.00	13.40	
	26.841	24.68	1.29	25.97	50.00	24.03	
Neutral	0.151	35.52	0.15	35.67	65.96	30.29	QP
	0.408	32.91	0.32	33.23	57.68	24.45	
	1.082	33.10	0.39	33.49	56.00	22.51	
	1.628	33.17	0.35	33.52	56.00	22.48	
	6.878	43.89	0.69	44.58	60.00	15.42	
	26.841	33.91	1.17	35.08	60.00	24.92	
	0.151	27.76	0.15	27.91	55.96	28.05	AV
	0.408	24.78	0.32	25.10	47.68	22.58	
	1.082	24.80	0.39	25.19	46.00	20.81	
	1.628	24.68	0.35	25.03	46.00	20.97	
	6.878	35.90	0.69	36.59	50.00	13.41	
	26.841	26.74	1.17	27.91	50.00	22.09	

TEST ENGINEER: SAWEN LI

4 RADIATED EMISSION TEST

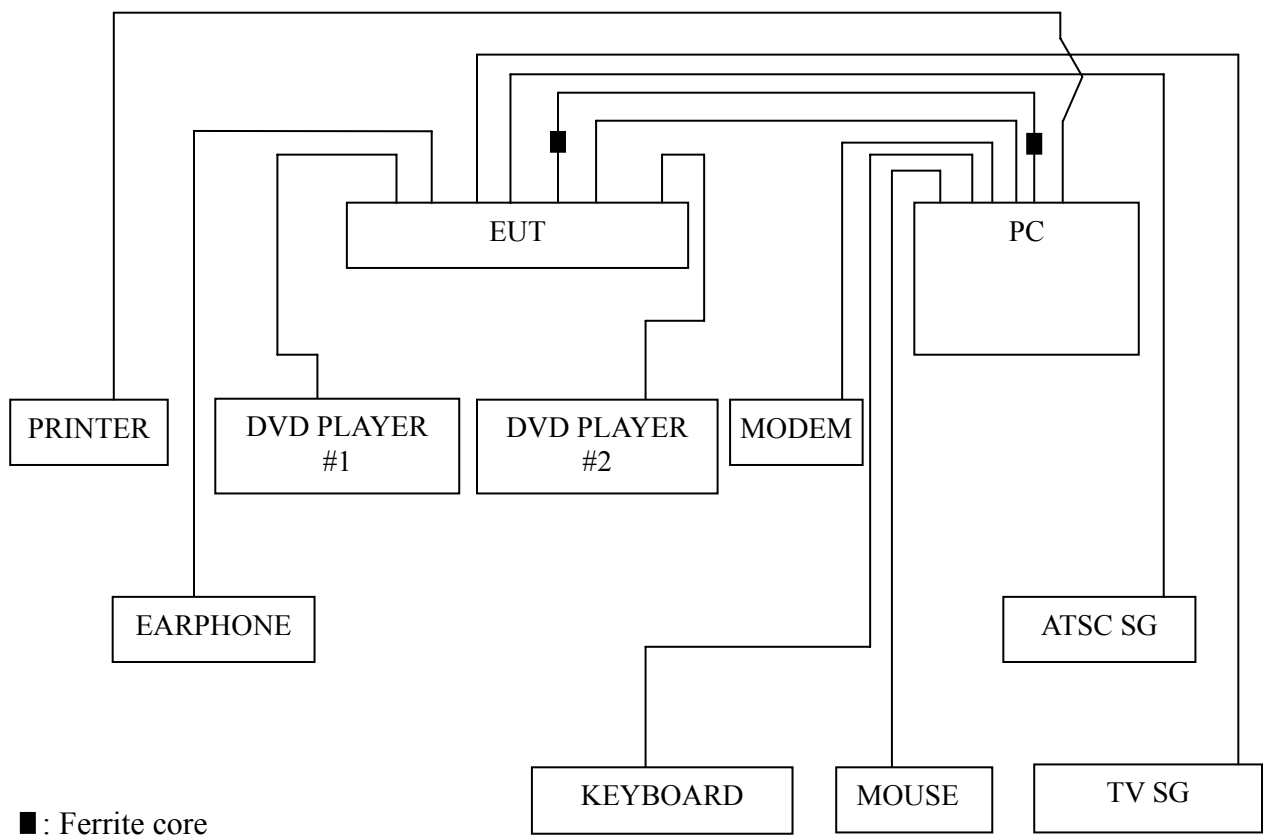
4.1 Test Equipment

The following test equipments are used during the radiated emission test in a semi-anechoic chamber:

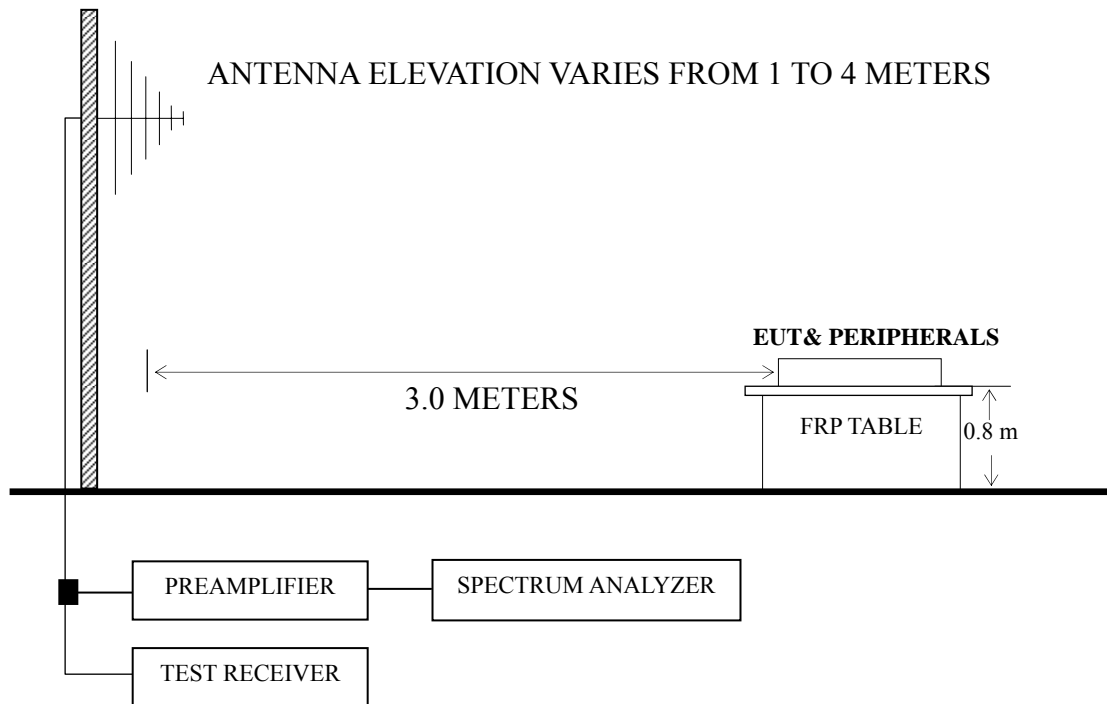
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESVS10	844594/001	Mar 22, 2012	Mar 22, 2013
2.	Preamplifier	Agilent	8447D	2944A10548	Sep 18, 2012	Mar 18, 2013
3.	Bi-log Antenna	TESEQ	CBL6112D	23193	May 03, 2012	May 03, 2013
4.	Spectrum	Agilent	E7405A	MY45106600	Mar 22, 2012	Mar 22, 2013
5.	50 Ω 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



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	
		($\mu\text{V}/\text{m}$)	dB ($\mu\text{V}/\text{m}$)
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 ($\mu\text{V}/\text{m}$) = 20 log Emission Level ($\mu\text{V}/\text{m}$)

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 ESVS10 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
HDMI 800*600@60Hz	P23
HDMI 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 HDMI 640*480@60Hz test mode. The worst emission at horizontal polarization was detected at 75.590 MHz with corrected signal level of 37.92 dB ($\mu\text{V}/\text{m}$) (limit is 40.00 dB ($\mu\text{V}/\text{m}$)), when the antenna was 1.80 m height and the turntable was at 42°. The worst emission at vertical polarization was detected at 30.000 MHz with corrected signal level of 37.05 dB ($\mu\text{V}/\text{m}$) (limit is 40.00 dB ($\mu\text{V}/\text{m}$)), when the antenna was 1.90 m height and the turntable was at 153°.

EUT : LCD TV Temperature : 22°C

Model No. : LHD32K26NUS Humidity : 60%RH

Serial No. : E12091146-03/03 Date of Test : Sep 28, 2012

Test Mode : D-Sub 1024*768@60Hz

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)
Horizontal	76.560	24.46	10.34	1.03	35.83	40.00	4.17
	93.050	22.32	11.12	1.26	34.70	43.50	8.80
	124.090	19.78	10.93	1.50	32.21	43.50	11.29
	263.770	22.07	12.57	2.30	36.94	46.00	9.06
	369.500	19.96	15.64	2.65	38.25	46.00	7.75
	593.570	18.10	18.17	3.20	39.47	46.00	6.53
Vertical	54.250	23.79	8.76	0.87	33.42	40.00	6.58
	153.190	23.93	10.36	1.65	35.94	43.50	7.56
	185.200	25.86	9.94	1.87	37.67	43.50	5.83
	295.780	22.03	13.60	2.52	38.15	46.00	7.85
	446.130	16.63	16.92	2.82	36.37	46.00	9.63
	508.210	21.17	17.65	3.00	41.82	46.00	4.18

TEST ENGINEER: RAVEN JIN

EUT : LCD TV Temperature : 22°C

Model No. : LHD32K26NUS Humidity : 60%RH

Serial No. : E12091146-03/03 Date of Test : Sep 28, 2012

Test Mode : HDMI 1024*768@60Hz

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	30.000	17.50	18.30	0.65	36.45	40.00	3.55
	92.080	22.46	11.08	1.24	34.78	43.50	8.72
	167.740	24.01	10.14	1.76	35.91	43.50	7.59
	191.990	20.33	9.87	1.91	32.11	43.50	11.39
	368.530	16.69	15.61	2.65	34.95	46.00	11.05
	591.630	19.22	18.16	3.20	40.58	46.00	5.42
Vertical	49.400	19.72	8.69	0.85	29.26	40.00	10.74
	94.990	22.80	11.18	1.29	35.27	43.50	8.23
	173.560	23.74	10.07	1.80	35.61	43.50	7.89
	184.670	24.20	9.94	1.86	36.00	43.50	7.50
	298.690	23.38	13.67	2.52	39.57	46.00	6.43
	395.690	22.04	16.20	2.68	40.92	46.00	5.08

TEST ENGINEER: RAVEN JIN

EUT : LCD TV Temperature : 22°C

Model No. : LHD32K26NUS Humidity : 60%RH

Serial No. : E12091146-03/03 Date of Test : Sep 28, 2012

Test Mode : HDMI 800*600@60Hz

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	76.560	25.32	10.34	1.03	36.69	40.00	3.31
	93.050	24.03	11.12	1.26	36.41	43.50	7.09
	184.670	24.60	9.94	1.86	36.40	43.50	7.10
	230.790	25.15	11.10	2.11	38.36	46.00	7.64
	323.910	23.87	14.38	2.58	40.83	46.00	5.17
	819.580	16.75	20.54	3.80	41.09	46.00	4.91
Vertical	111.480	22.20	11.15	1.42	34.77	43.50	8.73
	150.280	24.32	10.41	1.64	36.37	43.50	7.13
	230.790	23.77	11.10	2.11	36.98	46.00	9.02
	368.530	22.90	15.61	2.65	41.16	46.00	4.84
	594.540	17.95	18.17	3.20	39.32	46.00	6.68
	822.490	15.83	20.54	3.80	40.17	46.00	5.83

TEST ENGINEER: RAVEN JIN

EUT : LCD TV Temperature : 22°C

Model No. : LHD32K26NUS Humidity : 60%RH

Serial No. : E12091146-03/03 Date of Test : Sep 28, 2012

Test Mode : HDMI 640*480@60Hz

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)
Horizontal	75.590	26.64	10.27	1.01	37.92	40.00	2.08
	92.080	24.71	11.08	1.24	37.03	43.50	6.47
	153.190	24.00	10.36	1.65	36.01	43.50	7.49
	460.680	22.19	17.11	2.86	42.16	46.00	3.84
	644.980	19.27	18.81	3.38	41.46	46.00	4.54
	819.580	18.05	20.54	3.80	42.39	46.00	3.61
Vertical	30.000	18.10	18.30	0.65	37.05	40.00	2.95
	94.020	22.72	11.15	1.27	35.14	43.50	8.36
	185.200	24.83	9.94	1.87	36.64	43.50	6.86
	230.790	19.48	11.10	2.11	32.69	46.00	13.31
	323.910	19.69	14.38	2.58	36.65	46.00	9.35
	595.510	17.57	18.19	3.20	38.96	46.00	7.04

TEST ENGINEER: RAVEN JIN

EUT : LCD TV Temperature : 22°C

Model No. : LHD32K26NUS Humidity : 60%RH

Serial No. : E12091146-03/03 Date of Test : Sep 28, 2012

Test Mode : USB Play

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)
Horizontal	76.560	22.27	10.34	1.03	33.64	40.00	6.36
	93.050	22.54	11.12	1.26	34.92	43.50	8.58
	124.090	24.62	10.93	1.50	37.05	43.50	6.45
	184.660	26.00	9.94	1.86	37.80	43.50	5.70
	197.600	23.60	9.82	1.94	35.36	43.50	8.14
	521.790	20.48	17.73	3.03	41.24	46.00	4.76
Vertical	104.690	18.42	11.27	1.37	31.06	43.50	12.44
	177.440	24.39	10.02	1.83	36.24	43.50	7.26
	310.330	21.65	13.97	2.56	38.18	46.00	7.82
	449.040	20.63	16.95	2.84	40.42	46.00	5.58
	521.790	18.16	17.73	3.03	38.92	46.00	7.08
	793.390	16.58	20.54	3.61	40.73	46.00	5.27

TEST ENGINEER: RAVEN JIN

5 DEVIATION TO TEST SPECIFICATIONS

None.