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

LED LCD TV

Model No.	Serial No.	Brand	
LTDN40K26WUS	E1106592-01/01	Higango	
F40K26EW		Hisense	

FCC ID: W9HLCDD0008

Prepared For: Hisense Electric Co., Ltd.

No.218 Qianwangang Road, Economy & Technology

Development Zone, Qingdao, China

Prepared By: Audix Technology (Shanghai) Co., Ltd.

3F & 4F 34Bldg 680 Guiping Rd,

Caohejing Hi-Tech Park, Shanghai 200233, China

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

Report No. : ACI-F11092 Date of Test : Jun 16 – 21, 2011 Date of Report : Jul 07, 2011

TABLE OF CONTENTS

			Page
1	SU	MMARY OF STANDARDS AND RESULTS	4
	1.1	Description of Standards and Results	4
2	GE	NERAL INFORMATION	5
	2.1	Description of Equipment Under Test	5
	2.2	Peripherals	
	2.3	Description of Test Facility	8
	2.4	Measurement Uncertainty	9
3	CO	NDUCTED EMISSION TEST	10
	3.1	Test Equipment	10
	3.2	Block Diagram of Test Setup	
	3.3	Conducted Emission Limit [FCC Part 15 Subpart B 15.107(a)]	11
	3.4	Test Configuration	11
	3.5	Operating Condition of EUT	12
	3.6	Test Procedures	12
	3.7	Test Results	13
4	RA	DIATED EMISSION TEST	22
	4.1	Test Equipment	22
	4.2	Block Diagram of Test Setup	
	4.3	Radiated Emission Limit [FCC Part 15 Subpart B 15.109(a)]	23
	4.4		
	4.5	Operating Condition of EUT	23
	4.6	Test Procedures	24
	4.7	Test Results	25
5	DE	VIATION TO TEST SPECIFICATIONS	34
6	DE	BUG DESCRIPTION	35

TEST REPORT FOR FCC CERTIFICATE

Applicant

: Hisense Electric Co., Ltd.

Manufacturer

Hisense Electric Co., Ltd.

EUT Description:

LED LCD TV

Model No.	Serial No.	Brand	Power Supply	
LTDN40K26WUS	E1106592-01/01	11.	120V/60Hz	
F40K26EW		Hisense		

Test Procedure Used:

FCC RULES AND REGULATIONS PART 15 SUBPART B CLASS B OCTOBER 2010 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 Sec.2.1; S/N: Refer to Sec.2.1) which was tested in 3m anechoic chamber Jun 16 - 21, 2011 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.F11093, a Verification report.

Date of Test:	Jun 16 – 21, 2011	_ Date of Report : _	Jul 07, 2011
Producer:	KATHY WANG / Assistant)		
Review:	DIO YANG/ Assistant Manager	-	
Audix Technology (Shar	nd on behalf of nghai) Co., Ltd.		

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 2010 AND ANSI C63.4-2003	15.107(a) Class B	Pass
Radiated Disturbance	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2010 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 : \square Production \square Pre-product \square Pro-type

Model No.	LTDN40K26WUS	F40K26EW	
Serial No.	E1106592-01/01		
Brand	Hisense		

Note : The above two models are all the same except for

the model name. The LTDN40K26WUS 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 : SAMSUNG

M/N : LTA400HM13

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

Remark:

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

Bottom Port:

(1) One HDMI3 Port

: Connected with DVD #2

(2) One HDMI4 Port

: Connected with DVD #3

(3) One USB Port

: Connected with U-DISK

(4) One PC AUDIO IN Port

: Connected with PC

(5) One VGA Port

: Connected with PC

(6) One LAN Port

: Connected with PC

Side Port

(7) One HDMI1 Port

: Connected with PC

(8) One HDMI2 Port

: Connected with DVD #1

(9) One component of AV Port

: Connected with DVD #1

(10) One component of YPbPr Port

: Connected with DVD #1

(11) One component of YPbPr Audio Port

: Connected with DVD #1

(12) One ANT Port

: Connected with TV SG / ATSC SG

(13) One HEADPHONE Port

: Connected with Earphone

(14) One DIGITAL AUDIO Port

: Connected with DVD #1

Hisense Electric Co., Ltd. FCC ID: W9HLCDD0008 Page 7 of 35

2.2 Peripherals

2.2.1 PC

Manufacturer: HP

Model Number: dx7400MT Serial Number: CNG8130K89

Power Cord : Unshielded, Detachable, 1.8m

Certificate : VCCI, FCC DoC, CE/EMC, 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, undetachable, 1.8m.

Certificate : CE/EMC, FCC DoC, VCCI, MIC, C-Tick,

BSMI

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#1

Manufacturer : PHILIPS
Model Number : DVP3986K/93
Serial Number : KX1A0902120108

Data Cable : Unshielded, Undetachable, 1.2m Certificate : FCC DoC, CE/EMC, CCC

2.2.10 DVD#2

Manufacturer: LG

Model Number: DF9921N Serial Number: 3850R-N846W

Certificate : FCC DoC, CE/EMC, CCC

2.2.11 DVD#3

Manufacturer : DGT RONIK Model Number : DV-A340 Serial Number : 10004184-C

Certificate : FCC DoC, CE/EMC, CCC

2.3 Description of Test Facility

Site Description : Sept. 17, 1998 file on (No.3 3m Chamber) 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 = 3.38dB

Radiated Emission Expanded Uncertainty (30-200MHz):

U = 4.58 dB (horizontal)

U = 4.70 dB (vertical)

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

U = 4.84 dB (horizontal)

U = 4.70 dB (vertical)

3 CONDUCTED EMISSION TEST

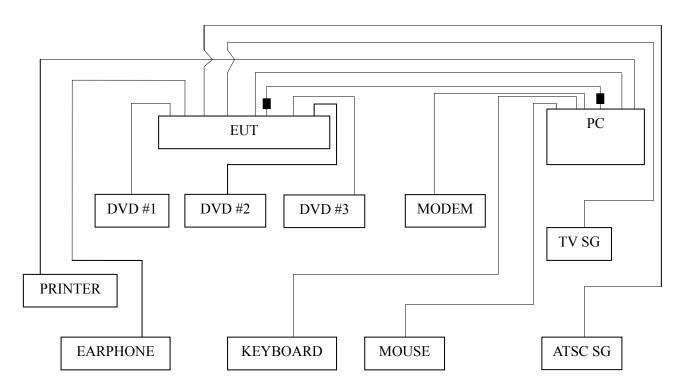
3.1 Test Equipment

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, 2011	Mar 22, 2012
2	Artificial Mains	D & C	EGH2 75	843890/011	Mar 22, 2011	Mar 22, 2012
2.	Network (AMN #1)	R&S	ESH2-Z5	843890/011	Mar 22, 2011	Mar 22, 2012
3.	Artificial Mains Network (AMN #2)	R&S	ENV4200	100125	Mar 22, 2011	Mar 22, 2012
4.	50 Ω Coaxial Switch	Anritsu	MP59B	6200426389	Mar 18, 2011	Sep 18, 2011
5.	50Ω Terminator	Anritsu	BNC	001	Mar 22, 2011	Mar 22, 2012
6.	Software	Audix	ЕЗ	SET00200 9804M592		

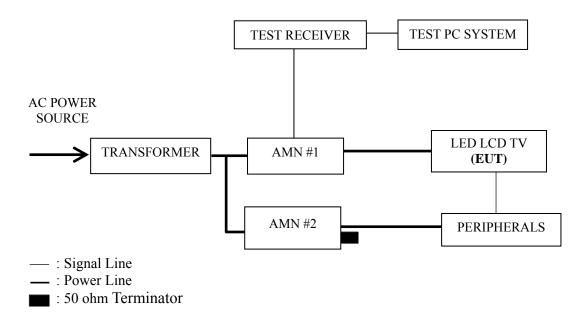
3.2 Block Diagram of Test Setup

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	Limits dB (μV)		
(MHz)	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 $0.15~\text{MHz}{\sim}0.50~\text{MHz}$

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 (we use white letters on a black background to represent all colors), the EUT's screen displayed and filled with "H" pattern by its resolution (Via D-Sub/HDMI Input).
- 3.5.5 Repeat above procedure 3.5.4 for difference test mode.
- 3.5.6 In LAN Play mode, set the EUT play digital media though LAN port.
- 3.5.7 In USB Play mode, set the EUT play digital media from U-Disk.
- 3.5.8 The other peripherals devices were driven and operated during the test.
- 3.5.9 The test modes are as follows:

Test Mode
D-Sub 640*480@60Hz
D-Sub 800*600@60Hz
D-Sub 1024*768@60Hz
HDMI 640*480@60Hz
HDMI 800*600@60Hz
HDMI 1024*768@60Hz
LAN Play
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 640*480@60Hz	P14
D-Sub 800*600@60Hz	P15
D-Sub 1024*768@60Hz	P16
HDMI 640*480@60Hz	P17
HDMI 800*600@60Hz	P18
HDMI 1024*768@60Hz	P19
LAN Play	P20
USB Play	P21

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 640*480@60Hz test mode. The worst emission is detected at 7.025 MHz (Quasi-Peak value) with corrected signal level of 56.21 dB (μ V) (limit is 60.00 dB (μ V)), when the Neutral of the EUT is connected to AMN.

Model No. : LTDN40K26WUS Humidity : 48%RH

Serial No. : <u>E1106592-01/01</u> Date of Test : <u>Jun 16, 2011</u>

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
	0.247	39.60	0.23	39.83	61.86	22.03	
	0.499	40.32	0.31	40.63	56.01	15.38	
	0.830	45.40	0.39	45.79	56.00	10.21	OD
	2.765	43.53	0.45	43.98	56.00	12.02	QP
	5.166	47.84	0.55	48.39	60.00	11.61	
Line	6.820	53.60	0.66	54.26	60.00	5.74	
Line	0.247	29.13	0.23	29.36	51.86	22.50	
	0.499	30.00	0.31	30.31	46.01	15.70	
	0.830	35.02	0.39	35.41	46.00	10.59	AV
	2.765	33.16	0.45	33.61	46.00	12.39	
	5.166	37.40	0.55	37.95	50.00	12.05	
	6.820	43.00	0.66	43.66	50.00	6.34	
	0.247	33.80	0.18	33.98	61.86	27.88	
	0.521	38.51	0.24	38.75	56.00	17.25	QP
	0.830	45.24	0.36	45.60	56.00	10.40	
	3.074	42.64	0.61	43.25	56.00	12.75	
	5.005	47.80	0.76	48.56	60.00	11.44	
Neutral	6.963	54.30	0.98	55.28	60.00	4.72	
Neutrai	0.247	23.10	0.18	23.28	51.86	28.58	
	0.521	28.20	0.24	28.44	46.00	17.56	AV
	0.830	35.00	0.36	35.36	46.00	10.64	
	3.074	32.16	0.61	32.77	46.00	13.23	
	5.005	37.24	0.76	38.00	50.00	12.00	
	6.963	43.70	0.98	44.68	50.00	5.32	

Model No. : LTDN40K26WUS Humidity : 48%RH

Serial No. : E1106592-01/01 Date of Test : Jun 16, 2011

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

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(µV)	Limits dB(µV)	Margin (dB)	Remark
	0.244	39.95	0.23	40.18	61.95	21.77	
	0.499	41.81	0.31	42.12	56.01	13.89	
	0.933	46.33	0.37	46.70	56.00	9.30	OD
	3.074	43.56	0.47	44.03	56.00	11.97	QP
	4.952	47.81	0.55	48.36	56.00	7.64	
Line	7.366	53.11	0.67	53.78	60.00	6.22	
Line	0.244	29.43	0.23	29.66	51.95	22.29	
	0.499	31.24	0.31	31.55	46.01	14.46	
	0.933	36.04	0.37	36.41	46.00	9.59	AV
	3.074	33.10	0.47	33.57	46.00	12.43	
	4.952	37.26	0.55	37.81	46.00	8.19	
	7.366	43.31	0.67	43.98	50.00	6.02	
	0.247	33.86	0.18	34.04	61.86	27.82	
	0.529	38.42	0.24	38.66	56.00	17.34	OD
	0.933	45.70	0.43	46.13	56.00	9.87	
	2.707	42.71	0.58	43.29	56.00	12.71	QP
	4.952	45.95	0.76	46.71	56.00	9.29	
Neutral	7.368	54.67	0.98	55.65	60.00	4.35	
Neutrai	0.247	23.40	0.18	23.58	51.86	28.28	
	0.529	28.10	0.24	28.34	46.00	17.66	AV
	0.933	34.21	0.43	34.64	46.00	11.36	
	2.707	32.18	0.58	32.76	46.00	13.24	
	4.952	35.42	0.76	36.18	46.00	9.82	
	7.368	44.21	0.98	45.19	50.00	4.81	

Model No. : LTDN40K26WUS Humidity : 48%RH

Serial No. : E1106592-01/01 Date of Test : Jun 16, 2011

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

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(µV)	Limits dB(µV)	Margin (dB)	Remark				
	0.244	40.14	0.23	40.37	61.95	21.58					
	0.499	41.72	0.31	42.03	56.01	13.98					
	0.830	45.42	0.39	45.81	56.00	10.19	OD				
	2.765	43.59	0.45	44.04	56.00	11.96	QP				
Line	5.166	48.17	0.55	48.72	60.00	11.28					
	6.951	54.18	0.67	54.85	60.00	5.15					
	0.244	29.76	0.23	29.99	51.95	21.96					
	0.499	31.24	0.31	31.55	46.01	14.46	AV				
	0.830	35.10	0.39	35.49	46.00	10.51					
	2.765	33.16	0.45	33.61	46.00	12.39					
	5.166	37.80	0.55	38.35	50.00	11.65					
	6.951	43.80	0.67	44.47	50.00	5.53					
	0.247	34.09	0.18	34.27	61.86	27.59					
	0.499	38.85	0.24	39.09	56.01	16.92					
	0.830	45.24	0.36	45.60	56.00	10.40	OD				
	3.074	42.73	0.61	43.34	56.00	12.66	QP				
	5.005	46.39	0.76	47.15	60.00	12.85					
Neutral	7.374	54.21	0.98	55.19	60.00	4.81					
Neutrai	0.247	23.80	0.18	23.98	51.86	27.88					
	0.499	28.34	0.24	28.58	46.01	17.43					
	0.830	34.96	0.36	35.32	46.00	10.68	AX7				
	3.074	32.40	0.61	33.01	46.00	12.99	AV				
_	5.005	35.86	0.76	36.62	50.00	13.38					
	7.374	44.90	0.98	45.88	50.00	4.12					

EUT : LED LCD TV Temperature : 22°C

Model No. : LTDN40K26WUS Humidity : 48%RH

Serial No. : <u>E1106592-01/01</u> Date of Test : <u>Jun 16, 2011</u>

Test Mode : HDMI 640*480@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(µV)	Limits dB(µV)	Margin (dB)	Remark		
	0.244	40.38	0.23	40.61	61.95	21.34			
	0.499	39.86	0.31	40.17	56.01	15.84			
	0.830	44.20	0.39	44.59	56.00	11.41	OD		
	2.765	42.92	0.45	43.37	56.00	12.63	QP		
Line	4.952	45.56	0.55	46.11	56.00	9.89			
	7.368	52.59	0.67	53.26	60.00	6.74			
	0.244	29.86	0.23	30.09	51.95	21.86			
	0.499	29.43	0.31	29.74	46.01	16.27	AV		
	0.830	33.86	0.39	34.25	46.00	11.75			
	2.765	32.43	0.45	32.88	46.00	13.12			
	4.952	35.10	0.55	35.65	46.00	10.35			
	7.368	42.35	0.67	43.02	50.00	6.98			
	0.247	34.18	0.18	34.36	61.86	27.50			
	0.421	38.68	0.24	38.92	57.42	18.50			
	0.830	44.27	0.36	44.63	56.00	11.37	OD		
	3.074	40.94	0.61	41.55	56.00	14.45	QP		
	4.952	44.48	0.76	45.24	56.00	10.76			
Noutral	7.025	55.23	0.98	56.21	60.00	3.79			
Neutral	0.247	23.86	0.18	24.04	51.86	27.82			
	0.421	28.12	0.24	28.36	47.42	19.06			
	0.830	33.80	0.36	34.16	46.00	11.84	AV		
	3.074	30.42	0.61	31.03	46.00	14.97			
	4.952	34.02	0.76	34.78	46.00	11.22			
	7.025	44.83	0.98	45.81	50.00	4.19			

Model No. : LTDN40K26WUS Humidity : 48%RH

Serial No. : E1106592-01/01 Date of Test : Jun 16, 2011

Test Mode : HDMI 800*600@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(µV)	Limits dB(µV)	Margin (dB)	Remark				
	0.247	39.98	0.23	40.21	61.86	21.65					
	0.494	41.34	0.31	41.65	56.10	14.45					
	0.830	44.33	0.39	44.72	56.00	11.28	OD				
	2.765	43.58	0.45	44.03	56.00	11.97	QP				
	4.952	45.67	0.55	46.22	56.00	9.78					
Lina	7.025	53.03	0.67	53.70	60.00	6.30					
Line	0.247	29.40	0.23	29.63	51.86	22.23					
	0.494	31.02	0.31	31.33	46.10	14.77	AV				
	0.830	34.02	0.39	34.41	46.00	11.59					
	2.765	33.13	0.45	33.58	46.00	12.42	AV				
	4.952	35.21	0.55	35.76	46.00	10.24					
	7.025	42.80	0.67	43.47	50.00	6.53					
	0.247	33.98	0.18	34.16	61.86	27.70					
	0.499	38.62	0.24	38.86	56.01	17.15					
	0.830	44.63	0.36	44.99	56.00	11.01	OB				
	2.765	40.89	0.58	41.47	56.00	14.53	QP				
	5.058	45.31	0.76	46.07	60.00	13.93					
Neutral	7.252	54.75	0.98	55.73	60.00	4.27					
Neunai	0.247	23.42	0.18	23.60	51.86	28.26					
	0.499	28.10	0.24	28.34	46.01	17.67					
	0.830	34.20	0.36	34.56	46.00	11.44	A 3 7				
	2.765	30.42	0.58	31.00	46.00	15.00	AV				
	5.058	34.92	0.76	35.68	50.00	14.32					
	7.252	44.26	0.98	45.24	50.00	4.76					

Model No. : LTDN40K26WUS Humidity : 48%RH

Serial No. : E1106592-01/01 Date of Test : Jun 16, 2011

Test Mode : HDMI 1024*768@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(µV)	Limits dB(µV)	Margin (dB)	Remark			
	0.247	39.21	0.23	39.44	61.86	22.42				
	0.499	39.80	0.31	40.11	56.01	15.90	OD			
	0.933	42.66	0.37	43.03	56.00	12.97				
	2.707	41.99	0.45	42.44	56.00	13.56	QP			
Line	4.952	44.69	0.55	45.24	56.00	10.76				
	7.368	53.56	0.67	54.23	60.00	5.77				
	0.247	28.83	0.23	29.06	51.86	22.80				
	0.499	29.34	0.31	29.65	46.01	16.36				
	0.933	32.15	0.37	32.52	46.00	13.48	AV			
	2.707	31.53	0.45	31.98	46.00	14.02				
	4.952	34.26	0.55	34.81	46.00	11.19				
	7.368	43.11	0.67	43.78	50.00	6.22				
	0.247	32.74	0.18	32.92	61.86	28.94				
	0.494	38.10	0.24	38.34	56.10	17.76				
	0.830	43.08	0.36	43.44	56.00	12.56	QP			
	2.839	40.97	0.59	41.56	56.00	14.44	Qr			
	4.952	44.18	0.76	44.94	56.00	11.06				
Neutral	6.951	54.53	0.98	55.51	60.00	4.49				
Neuman	0.247	22.40	0.18	22.58	51.86	29.28				
	0.494	27.86	0.24	28.10	46.10	18.00				
	0.830	32.80	0.36	33.16	46.00	12.84	AV			
	2.839	30.18	0.59	30.77	46.00	15.23				
	4.952	33.86	0.76	34.62	46.00	11.38				
	6.951	44.16	0.98	45.14	50.00	4.86				

Model No. : LTDN40K26WUS Humidity : 48%RH

Serial No. : E1106592-01/01 Date of Test : Jun 16, 2011

Test Mode : LAN Play

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(µV)	Limits dB(µV)	Margin (dB)	Remark			
	0.244	39.36	0.23	39.59	61.95	22.36				
	0.499	40.79	0.31	41.10	56.01	14.91				
	0.933	43.22	0.37	43.59	56.00	12.41	ΩD			
	2.736	41.07	0.45	41.52	56.00	14.48	QP			
Line	5.058	45.33	0.55	45.88	60.00	14.12				
	6.951	53.61	0.67	54.28	60.00	5.72	_			
	0.244	28.78	0.23	29.01	51.95	22.94				
	0.499	30.26	0.31	30.57	46.01	15.44	AV			
	0.933	32.62	0.37	32.99	46.00	13.01				
	2.736	30.57	0.45	31.02	46.00	14.98				
	5.058	34.43	0.55	34.98	50.00	15.02				
	6.951	42.15	0.67	42.82	50.00	7.18				
	0.247	33.05	0.18	33.23	61.86	28.63				
	0.494	38.46	0.24	38.70	56.10	17.40				
	0.830	43.14	0.36	43.50	56.00	12.50	ΟD			
	3.074	40.70	0.61	41.31	56.00	14.69	QP			
	5.058	44.66	0.76	45.42	60.00	14.58				
Neutral	6.951	55.11	0.98	56.09	60.00	3.91				
Neutrai	0.247	22.67	0.18	22.85	51.86	29.01				
	0.494	27.86	0.24	28.10	46.10	18.00				
	0.830	32.76	0.36	33.12	46.00	12.88	AV			
	3.074	30.12	0.61	30.73	46.00	15.27				
	5.058	34.12	0.76	34.88	50.00	15.12				
	6.951	44.86	0.98	45.84	50.00	4.16				

Model No. : LTDN40K26WUS Humidity : 48%RH

Serial No. : E1106592-01/01 Date of Test : Jun 16, 2011

Test Mode : USB Play

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(µV)	Limits dB(µV)	Margin (dB)	Remark				
	0.244	40.41	0.23	40.64	61.95	21.31					
	0.499	40.48	0.31	40.79	56.01	15.22					
	0.933	43.81	0.37	44.18	56.00	11.82	OD				
Line	2.650	41.85	0.45	42.30	56.00	13.70	QP				
	5.058	46.24	0.55	46.79	60.00	13.21					
	6.951	53.37	0.67	54.04	60.00	5.96	•				
	0.244	30.26	0.23	30.49	51.95	21.46					
	0.499	30.25	0.31	30.56	46.01	15.45	AV				
	0.933	33.64	0.37	34.01	46.00	11.99					
	2.650	31.75	0.45	32.20	46.00	13.80					
	5.058	34.25	0.55	34.80	50.00	15.20					
	6.951	41.57	0.67	42.24	50.00	7.76					
	0.247	34.03	0.18	34.21	61.86	27.65					
	0.524	38.43	0.24	38.67	56.00	17.33					
	0.830	44.00	0.36	44.36	56.00	11.64	OD				
	2.839	40.93	0.59	41.52	56.00	14.48	QP				
	4.622	42.41	0.76	43.17	56.00	12.83					
Neutral	6.951	54.43	0.98	55.41	60.00	4.59					
Neutrai	0.247	23.72	0.18	23.90	51.86	27.96					
	0.524	27.68	0.24	27.92	46.00	18.08					
	0.830	33.52	0.36	33.88	46.00	12.12	A 3 7				
	2.839	30.66	0.59	31.25	46.00	14.75	AV				
	4.622	31.30	0.76	32.06	46.00	13.94					
	6.951	41.23	0.98	42.21	50.00	7.79					

4 RADIATED EMISSION TEST

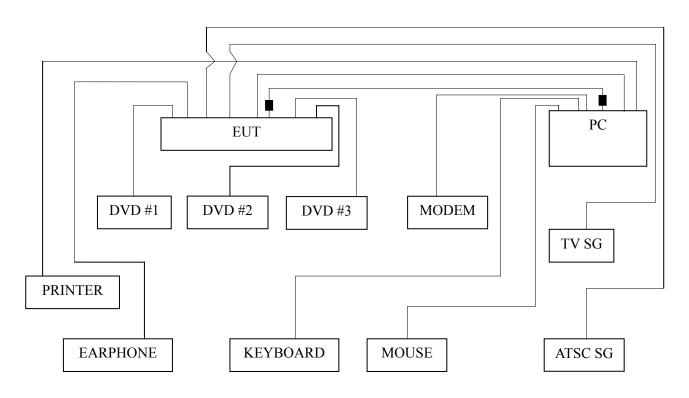
4.1 Test Equipment

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

Item	Туре	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESVS10	844594/001	Mar 22, 2011	Mar 22, 2012
2.	Preamplifier	Agilent	8447D	2944A10548	Mar 18, 2011	Sep 18, 2011
3.	Bi-log Antenna	TESEQ	CBL6112D	23192	Dec 01, 2010	Dec 01, 2011
4.	Spectrum Analyzer	Agilent	E7405A	MY45106600	Mar 22, 2011	Mar 22, 2012
5.	50Ω Coaxial Switch	Anritsu	MP59B	6200426390	Mar 18, 2011	Sep 18, 2011
6.	Software	Audix	E3	SET00200 9912M295-2		

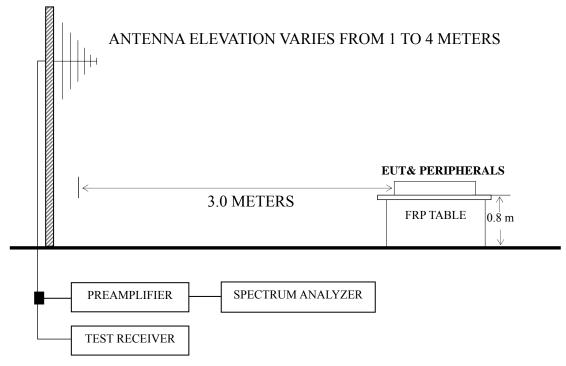
4.2 Block Diagram of Test Setup

4.2.1 EUT and Peripherals



■: Ferrite core

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	Distance	Field strength limits			
(MHz)	(m)	(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 (μ V/m) = 20 log Emission Level (μ V/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 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 640*480@60Hz	P26
D-Sub 800*600@60Hz	P27
D-Sub 1024*768@60Hz	P28
HDMI 640*480@60Hz	P30
HDMI 800*600@60Hz	P31
HDMI 1024*768@60Hz	P32
LAN Play	P33
USB Play	P34

- NOTE 1 Emission Level = Antenna Factor + Cable Loss + Meter Reading.(< 1GHz)
- NOTE 2 Emission Level = Antenna Factor + Cable Loss Preamp Factor + Meter Reading.(> 1GHz)
- NOTE 3 –All readings are Quasi-Peak values below or equal to 1GHz, Peak and Average values above 1GHz.
- NOTE $4 0^{\circ}$ was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.
- NOTE 5 The worst case is for D-Sub 800*600@60Hz test mode. The worst emission at horizontal polarization was detected at 162.890 MHz with corrected signal level of 37.22 dB (μ V/m) (limit is 43.50 dB (μ V/m)), when the antenna was 1.70 m height and the turntable was at 260°. The worst emission at vertical polarization was detected at 269.590 MHz with corrected signal level of 43.60 dB (μ V/m) (limit is 46.00 dB (μ V/m)), when the antenna was 1.60 m height and the turntable was at 100°.

Model No. : LTDN40K26WUS Humidity : 60%RH

Serial No. : E1106592-01/01 Date of Test : Jun 21, 2011

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

Polarization	Frequency (MHz)	Meter Reading dB (µV)	Antenna Factor (dB/m)		Emission Level dB (µV/m)	Limits dB (µV/m)	Margin (dB)
	34.129	18.00	17.30	0.83	36.13	40.00	3.87
	98.870	50.42	11.27	1.83	35.62	43.50	7.88
Horizontal	136.700	43.52	12.23	2.15	30.36	43.50	13.14
попиона	232.730	44.77	12.24	2.55	32.63	46.00	13.37
	487.840	39.32	17.75	3.23	32.24	46.00	13.76
	733.250	39.29	20.04	3.75	35.11	46.00	10.89
	33.880	45.15	17.44	0.83	35.25	40.00	4.75
	97.900	49.82	11.11	1.83	34.86	43.50	8.64
Vertical	164.830	44.90	10.35	2.30	30.08	43.50	13.42
vertical	232.730	45.32	12.24	2.55	33.18	46.00	12.82
	441.280	40.68	17.09	3.09	33.07	46.00	12.93
	742.950	39.82	20.13	3.78	35.79	46.00	10.21

Model No. : LTDN40K26WUS Humidity : 60%RH

Serial No. : <u>E1106592-01/01</u> Date of Test : <u>Jun 21, 2011</u>

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

Polarization	Frequency (MHz)	Meter Reading dB (µV)	Antenna Factor (dB/m)		Emission Level dB (µV/m)	Limits dB ($\mu V/m$)	Margin (dB)
	94.020	45.91	10.27	1.78	30.07	43.50	13.43
	122.150	38.96	12.91	2.04	26.23	43.50	17.27
Horizontal	162.890	51.99	10.42	2.29	37.22	43.50	6.28
Пописний	296.750	48.66	13.86	2.75	38.38	46.00	7.62
	594.540	39.24	19.14	3.45	33.49	46.00	12.51
	888.450	40.16	21.60	4.89	39.13	46.00	6.87
	54.250	53.43	7.92	1.03	34.41	40.00	5.59
	71.710	53.44	6.69	1.45	33.77	40.00	6.23
Vartical	107.600	50.98	12.10	1.92	37.18	43.50	6.32
Vertical	217.210	48.18	11.48	2.50	35.16	46.00	10.84
	269.590	54.50	13.32	2.66	43.60	46.00	2.40
	378.230	50.98	16.03	2.95	42.54	46.00	3.46

Model No. : LTDN40K26WUS Humidity : 60%RH

Serial No. : <u>E1106592-01/01</u> Date of Test : Jun 21, 2011

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

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)		Emission Level dB (µV/m)	Limits dB (µV/m)	Margin (dB)
	54.250	54.43	7.92	1.03	35.41	40.00	4.59
	71.710	53.93	6.69	1.45	34.26	40.00	5.74
Horizontal	108.300	25.97	12.17	1.93	40.07	43.50	3.43
Пописний	180.350	53.74	9.90	2.36	38.64	43.50	4.86
	269.590	51.70	13.32	2.66	40.80	46.00	5.20
	666.320	39.26	19.54	3.62	34.24	46.00	11.76
	34.850	43.85	16.97	0.84	33.48	40.00	6.52
	80.440	48.97	7.85	1.59	30.48	40.00	9.52
Vartical	222.060	44.26	11.75	2.51	31.54	46.00	14.46
Vertical	296.750	47.82	13.86	2.75	37.54	46.00	8.46
	596.480	44.09	19.17	3.45	38.36	46.00	7.64
	892.330	42.10	21.63	4.89	41.12	46.00	4.88

EUT : LED LCD TV Temperature : 22°C

Model No. : LTDN40K26WUS Humidity : 60%RH

Serial No. : E1106592-01/01 Date of Test : Jun 21, 2011

Test Mode : HDMI 640*480@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)
	54.250	56.43	7.92	1.03	37.41	40.00	2.59
	134.760	46.02	12.30	2.14	32.90	43.50	10.60
Horizontal	190.050	46.48	10.30	2.39	31.95	43.50	11.55
Попідопіаї	371.440	45.28	15.88	2.93	36.71	46.00	9.29
	630.430	42.60	19.35	3.53	37.21	46.00	8.79
	871.960	44.09	21.42	4.60	42.56	46.00	3.44
	42.610	44.20	12.39	0.88	29.32	40.00	10.68
	80.440	48.97	7.85	1.59	30.48	40.00	9.52
Vertical	149.310	44.07	11.35	2.23	30.14	43.50	13.36
	296.750	47.82	13.86	2.75	37.54	46.00	8.46
	588.720	41.17	19.09	3.44	35.37	46.00	10.63
	892.330	42.10	21.63	4.89	41.12	46.00	4.88

Model No. : LTDN40K26WUS Humidity : 60%RH

Serial No. : <u>E1106592-01/01</u> Date of Test : <u>Jun 21, 2011</u>

Test Mode : HDMI 800*600@60Hz

Polarization	Frequency (MHz)	Meter Reading dB (µV)	Antenna Factor (dB/m)		Emission Level dB (µV/m)	Limits dB ($\mu V/m$)	Margin (dB)
	34.850	43.33	16.97	0.84	32.96	40.00	7.04
	79.470	51.02	7.72	1.58	32.40	40.00	7.60
Horizontal	148.340	45.18	11.41	2.22	31.30	43.50	12.20
Пописний	295.780	43.06	13.84	2.75	32.76	46.00	13.24
	597.000	17.51	19.17	3.45	40.13	46.00	5.87
	743.000	13.00	20.13	3.78	36.91	46.00	9.09
	54.250	54.43	7.92	1.03	35.41	40.00	4.59
	116.330	44.31	12.78	2.00	31.36	43.50	12.14
Vertical	195.870	50.74	10.54	2.41	36.56	43.50	6.94
	393.750	41.21	16.37	2.98	33.06	46.00	12.94
	547.010	39.95	18.52	3.36	33.59	46.00	12.41
	777.870	38.30	20.49	3.84	34.82	46.00	11.18

Model No. : LTDN40K26WUS Humidity : 60%RH

Serial No. : E1106592-01/01 Date of Test : Jun 21, 2011

Test Mode : HDMI 1024*768@60Hz

Polarization	Frequency (MHz)	Meter Reading dB (µV)	Antenna Factor (dB/m)		Emission Level dB (µV/m)	Limits dB ($\mu V/m$)	Margin (dB)
	34.850	36.57	16.97	0.84	26.20	40.00	13.80
	93.050	42.01	10.09	1.77	25.98	43.50	17.52
Horizontal	169.680	50.96	10.20	2.32	36.04	43.50	7.46
попиона	297.000	26.00	13.86	2.75	42.61	46.00	3.39
	594.540	38.67	19.14	3.45	32.92	46.00	13.08
	896.210	35.70	21.67	4.89	34.76	46.00	11.24
	100.810	45.55	11.57	1.86	31.09	43.50	12.41
	169.680	50.05	10.20	2.32	35.13	43.50	8.37
Vertical	297.000	25.20	13.86	2.75	41.81	46.00	4.19
	506.270	43.93	17.98	3.28	37.05	46.00	8.95
	594.540	41.82	19.14	3.45	36.07	46.00	9.93
	900.090	34.13	21.70	5.03	33.37	46.00	12.63

Model No. : LTDN40K26WUS Humidity : 60%RH

Serial No. : E1106592-01/01 Date of Test : Jun 21, 2011

Test Mode : LAN Play

Polarization	Frequency (MHz)	Meter Reading dB (µV)	Antenna Factor (dB/m)		Emission Level dB (µV/m)	Limits dB ($\mu V/m$)	Margin (dB)
	33.880	42.13	17.44	0.83	32.23	40.00	7.77
	83.350	46.72	8.30	1.64	28.74	40.00	11.26
Horizontal	149.310	44.44	11.35	2.23	30.51	43.50	12.99
попідопіаї	295.780	40.06	13.84	2.75	29.76	46.00	16.24
	594.540	45.65	19.14	3.45	39.90	46.00	6.10
	888.450	37.87	21.60	4.89	36.84	46.00	9.16
	98.870	47.11	11.27	1.83	32.31	43.50	11.19
	154.160	45.32	10.94	2.25	31.00	43.50	12.50
Vertical	191.990	51.60	10.37	2.40	37.18	43.50	6.32
	395.690	43.94	16.40	2.98	35.81	46.00	10.19
	602.300	39.13	19.21	3.47	33.47	46.00	12.53
	796.300	36.83	20.67	3.88	33.63	46.00	12.37

Model No. : LTDN40K26WUS Humidity : 60%RH

Serial No. : E1106592-01/01 Date of Test : Jun 21, 2011

Test Mode : USB Play

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (µV/m)	Limits dB ($\mu V/m$)	Margin (dB)
	101.780	39.08	11.63	1.86	24.69	43.50	18.81
	167.740	49.82	10.27	2.31	34.95	43.50	8.55
Horizontal	295.780	46.58	13.84	2.75	36.28	46.00	9.72
Horizontai	596.480	39.94	19.17	3.45	34.21	46.00	11.79
	736.160	29.20	20.07	3.78	25.09	46.00	20.91
	892.330	39.40	21.63	4.89	38.42	46.00	7.58
	98.870	47.11	11.27	1.83	32.31	43.50	11.19
	154.160	45.32	10.94	2.25	31.00	43.50	12.50
Vertical	191.990	51.60	10.37	2.40	37.18	43.50	6.32
	395.690	43.94	16.40	2.98	35.81	46.00	10.19
	602.300	39.13	19.21	3.47	33.47	46.00	12.53
	796.300	36.83	20.67	3.88	33.63	46.00	12.37

Hisense Electric Co., Ltd. FCC ID: W9HLCDD0008 Page 34 of 35

5 DEVIATION TO TEST SPECIFICATIONS

None.

6 DEBUG DESCRIPTION

The following components are used during the countermeasure procedures:

Name	M/N	Manufacturer	Location
Tape	DAA1001\ROH	Qingdao Joinset S&T Co., Ltd. TAT ELECTRONIC TECH CO.,LTD.	See Internal Photos Figure 16, 17
Tape	35*0.7*41mm\VGA\R OH	Qingdao Joinset S&T Co., Ltd.	See Internal Photos Figure 15
EMI Gasket	22*20*22T\ROH	Qingdao Joinset S&T Co., Ltd.	See Internal Photos Figure 16

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: Loven Jin