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

LED LCD TV

Model No.	Brand
LTDN42A300MH	Hisense

FCC ID : W9HLCDD0029

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-F13057
Date of Test : Apr 11 – 15, 2013
Date of Report : Apr 25, 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
LTDN42A300MH	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 Apr 11 – 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.F13056, a Verification report.

Date of Test : Apr 11 – 15, 2013 Date of Report : Apr 25, 2013

Producer : Yenny Yu.
YENNY YU / Assistant

Review : Dio Yang.
DIO YANG / Assistant Manager

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

Signatory :
Authorized Signature EMC SAMMY CHEN / Deputy Manager

1 SUMMARY OF STANDARDS AND RESULTS

1.1 Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below:

Description of Test Item	Standard	Limits	Results
EMISSION			
Conducted Disturbance at the Mains Terminal	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2012 AND ANSI C63.4-2003	15.107(a) Class B	Pass
Radiated Disturbance	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2012 AND ANSI C63.4-2003	15.109(a) Class B	Pass

2 GENERAL INFORMATION

2.1 Description of Equipment Under Test

Description	:	LED LCD TV
Type of EUT	:	☐ Production ☑ Pre-product ☐ Pro-type
Model No.	:	LTDN42A300MH
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 : HE416GF-E01\S4\PW1
Tuner	:	Manufacturer : XuGuang Tech.Co.,Ltd M/N : DVTX-9D/W41F2\ROH
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:

Side Port:

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

(2) One SERVICE Port
: Do not open to customer

(3) One component of YPbPr Port
: Connected with DVD PLAYER

(4) One component of YPbPr Audio Port
: Connected with DVD PLAYER

(5) One HDMI1 Port
: Connected with PC

Bottom Port:

(1) One VGA Port
: Connected with PC

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

(3) One Digital Audio Out Port
: Connected with SPEAKER

(4) One HDMI2 Port
: Connected with DVD PLAYER

(5) One RJ12 IN Port
: Connected with PC

(6) One AUDIO OUT Port
: Connected with Earphone

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

(8) One component of AV IN Port
: Connected with DVD PLAYER

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

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 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

2.2.5 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

2.2.6 Modem

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

2.2.7 Earphone

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

2.2.8 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

2.2.9 ATSC Signal Generator

Manufacturer : SENCORE
Model Number : ATSC997
Serial Number : 6790071

2.2.10 DVD PLAYER

Manufacturer : PHILIPS
Model Number : DVP3986K/93
Serial Number : KX1A0902120108
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 : Sept. 17, 1998 file on
(No.3 3m Chamber) 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

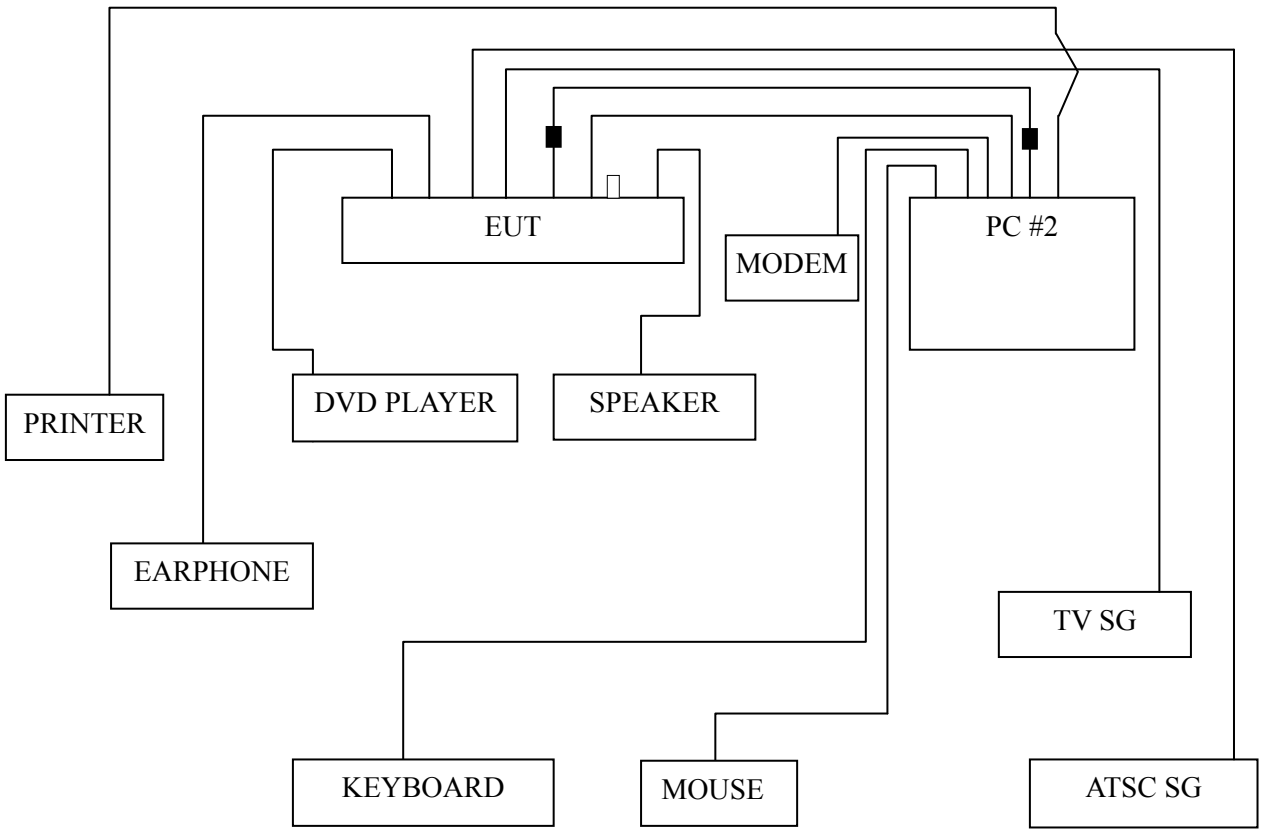
3.1 Test Equipment

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

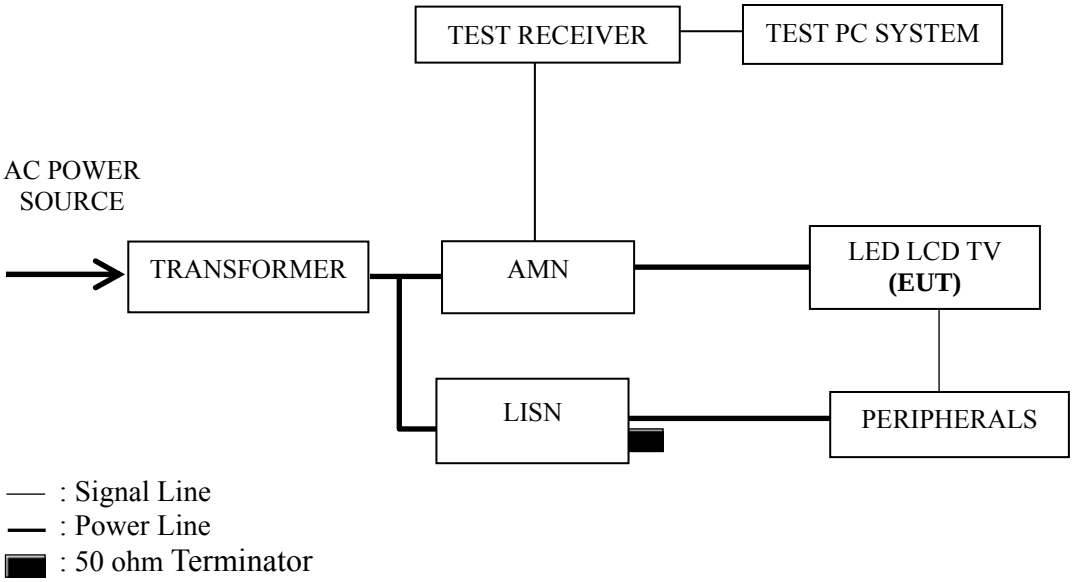
3.2.1 EUT & Peripherals



■: 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 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 USB Play test mode. The worst emission is detected at 6.805 MHz (Quasi-Peak Value) with corrected signal level of 50.72 dB (μV) (limit is 60.00 dB (μV)), when the Neutral of the EUT is connected to AMN.

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	LTDN42A300MH	Humidity	:	48%RH
Test Mode	:	D-Sub 1024*768@60Hz	Date of Test	:	Apr 11, 2013

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.188	45.55	0.25	45.80	64.11	18.31	QP
	0.273	44.20	0.25	44.45	61.03	16.58	
	0.377	42.17	0.33	42.50	58.34	15.84	
	0.505	44.73	0.35	45.08	56.00	10.92	
	2.622	40.56	0.40	40.96	56.00	15.04	
	6.805	49.78	0.65	50.43	60.00	9.57	
	0.188	34.22	0.25	34.47	54.11	19.64	AV
	0.273	31.51	0.25	31.76	51.03	19.27	
	0.377	31.54	0.33	31.87	48.34	16.47	
	0.505	31.85	0.35	32.20	46.00	13.80	
	2.622	28.44	0.40	28.84	46.00	17.16	
	6.805	38.55	0.65	39.20	50.00	10.80	
Neutral	0.150	42.81	0.13	42.94	66.00	23.06	QP
	0.252	42.84	0.11	42.95	61.69	18.74	
	0.377	40.29	0.15	40.44	58.34	17.90	
	0.505	43.59	0.17	43.76	56.00	12.24	
	2.133	38.88	0.17	39.05	56.00	16.95	
	6.805	**49.97**	**0.58**	**50.55**	**60.00**	**9.45**	
	0.150	31.03	0.13	31.16	56.00	24.84	AV
	0.252	31.86	0.11	31.97	51.69	19.72	
	0.377	28.91	0.15	29.06	48.34	19.28	
	0.505	32.22	0.17	32.39	46.00	13.61	
	2.133	27.45	0.17	27.62	46.00	18.38	
	6.805	38.25	0.58	38.83	50.00	11.17	

TEST ENGINEER: JOE YE

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	LTDN42A300MH	Humidity	:	48%RH
Test Mode	:	HDMI 1024*768@60Hz	Date of Test	:	Apr 11, 2013

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.190	44.99	0.25	45.24	64.02	18.78	QP
	0.274	44.02	0.25	44.27	60.98	16.71	
	0.381	42.22	0.33	42.55	58.25	15.70	
	0.505	44.68	0.35	45.03	56.00	10.97	
	2.622	39.32	0.40	39.72	56.00	16.28	
	6.805	49.66	0.65	50.31	60.00	9.69	
	0.190	34.00	0.25	34.25	54.02	19.77	AV
	0.274	33.00	0.25	33.25	50.98	17.73	
	0.381	31.27	0.33	31.60	48.25	16.65	
	0.505	33.22	0.35	33.57	46.00	12.43	
	2.622	28.75	0.40	29.15	46.00	16.85	
	6.805	38.24	0.65	38.89	50.00	11.11	
Neutral	0.190	43.08	0.12	43.20	64.02	20.82	QP
	0.259	42.72	0.11	42.83	61.47	18.64	
	0.385	40.18	0.16	40.34	58.17	17.83	
	0.505	43.59	0.17	43.76	56.00	12.24	
	2.133	38.99	0.17	39.16	56.00	16.84	
	6.805	**49.98**	**0.58**	**50.56**	**60.00**	**9.44**	
	0.190	32.56	0.12	32.68	54.02	21.34	AV
	0.259	31.23	0.11	31.34	51.47	20.13	
	0.385	28.49	0.16	28.65	48.17	19.52	
	0.505	31.00	0.17	31.17	46.00	14.83	
	2.133	27.45	0.17	27.62	46.00	18.38	
	6.805	36.69	0.58	37.27	50.00	12.73	

TEST ENGINEER: JOE YE

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	LTDN42A300MH	Humidity	:	48%RH
Test Mode	:	HDMI 800*600@60Hz	Date of Test	:	Apr 11, 2013

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.188	44.89	0.25	45.14	64.11	18.97	QP
	0.273	43.97	0.25	44.22	61.03	16.81	
	0.381	42.04	0.33	42.37	58.25	15.88	
	0.505	44.60	0.35	44.95	56.00	11.05	
	1.117	39.27	0.32	39.59	56.00	16.41	
	6.805	**49.68**	**0.65**	**50.33**	**60.00**	**9.67**	
	0.188	34.33	0.25	34.58	54.11	19.53	AV
	0.273	31.92	0.25	32.17	51.03	18.86	
	0.381	31.25	0.33	31.58	48.25	16.67	
	0.505	32.28	0.35	32.63	46.00	13.37	
	1.117	26.85	0.32	27.17	46.00	18.83	
	6.805	37.72	0.65	38.37	50.00	11.63	
Neutral	0.190	42.45	0.12	42.57	64.02	21.45	QP
	0.273	42.38	0.12	42.50	61.03	18.53	
	0.398	40.77	0.16	40.93	57.90	16.97	
	0.505	43.43	0.17	43.60	56.00	12.40	
	1.117	38.77	0.22	38.99	56.00	17.01	
	6.805	49.60	0.58	50.18	60.00	9.82	
	0.190	31.43	0.12	31.55	54.02	22.47	AV
	0.273	31.10	0.12	31.22	51.03	19.81	
	0.398	29.37	0.16	29.53	47.90	18.37	
	0.505	31.45	0.17	31.62	46.00	14.38	
	1.117	27.80	0.22	28.02	46.00	17.98	
	6.805	36.82	0.58	37.40	50.00	12.60	

TEST ENGINEER: JOE YE

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	LTDN42A300MH	Humidity	:	48%RH
Test Mode	:	HDMI 640*480@60Hz	Date of Test	:	Apr 11, 2013

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.190	44.00	0.25	44.25	64.02	19.77	QP
	0.274	43.33	0.25	43.58	60.98	17.40	
	0.377	41.56	0.33	41.89	58.34	16.45	
	0.505	44.45	0.35	44.80	56.00	11.20	
	2.809	39.08	0.40	39.48	56.00	16.52	
	6.488	49.47	0.62	50.09	60.00	9.91	
	0.190	31.98	0.25	32.23	54.02	21.79	AV
	0.274	33.02	0.25	33.27	50.98	17.71	
	0.377	29.70	0.33	30.03	48.34	18.31	
	0.505	32.02	0.35	32.37	46.00	13.63	
	2.809	28.25	0.40	28.65	46.00	17.35	
	6.488	35.94	0.62	36.56	50.00	13.44	
Neutral	0.150	42.03	0.13	42.16	66.00	23.84	QP
	0.253	42.18	0.11	42.29	61.64	19.35	
	0.381	39.78	0.16	39.94	58.25	18.31	
	0.505	43.42	0.17	43.59	56.00	12.41	
	1.117	38.49	0.22	38.71	56.00	17.29	
	6.805	**49.77**	**0.58**	**50.35**	**60.00**	**9.65**	
	0.150	31.45	0.13	31.58	56.00	24.42	AV
	0.253	32.46	0.11	32.57	51.64	19.07	
	0.381	28.46	0.16	28.62	48.25	19.63	
	0.505	31.67	0.17	31.84	46.00	14.16	
	1.117	27.25	0.22	27.47	46.00	18.53	
	6.805	38.87	0.58	39.45	50.00	10.55	

TEST ENGINEER: JOE YE

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	LTDN42A300MH	Humidity	:	48%RH
Test Mode	:	USB Play	Date of Test	:	Apr 11, 2013

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.194	45.19	0.25	45.44	63.84	18.40	QP
	0.273	44.25	0.25	44.50	61.03	16.53	
	0.400	42.56	0.33	42.89	57.86	14.97	
	0.505	44.81	0.35	45.16	56.00	10.84	
	1.819	39.44	0.39	39.83	56.00	16.17	
	6.488	49.77	0.62	50.39	60.00	9.61	
	0.194	35.20	0.25	35.45	53.84	18.39	AV
	0.273	34.51	0.25	34.76	51.03	16.27	
	0.400	30.23	0.33	30.56	47.86	17.30	
	0.505	31.50	0.35	31.85	46.00	14.15	
	1.819	28.14	0.39	28.53	46.00	17.47	
	6.488	38.10	0.62	38.72	50.00	11.28	
Neutral	0.188	43.58	0.12	43.70	64.11	20.41	QP
	0.253	42.97	0.11	43.08	61.64	18.56	
	0.381	40.49	0.16	40.65	58.25	17.60	
	0.505	43.70	0.17	43.87	56.00	12.13	
	2.900	39.01	0.23	39.24	56.00	16.76	
	6.805	**50.14**	**0.58**	**50.72**	**60.00**	**9.28**	
	0.188	32.50	0.12	32.62	54.11	21.49	AV
	0.253	31.56	0.11	31.67	51.64	19.97	
	0.381	29.19	0.16	29.35	48.25	18.90	
	0.505	31.80	0.17	31.97	46.00	14.03	
	2.900	28.49	0.23	28.72	46.00	17.28	
	6.805	39.80	0.58	40.38	50.00	9.62	

TEST ENGINEER: JOE YE

4 RADIATED EMISSION TEST

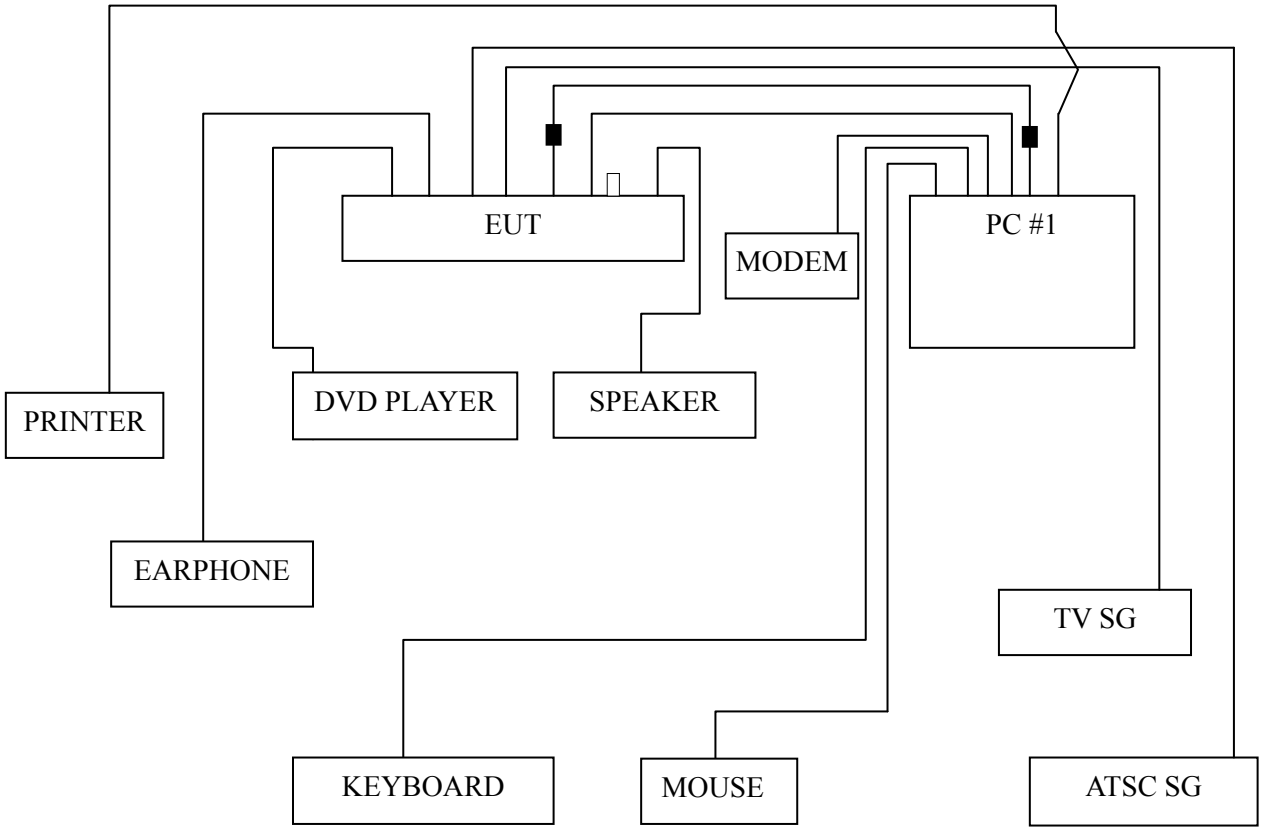
4.1 Test Equipment

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.	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	Mar 18, 2013	Sep 18, 2013
6.	Software	Audix	E3	SET00200 9912M295-2	--	--

4.2 Block Diagram of Test Setup

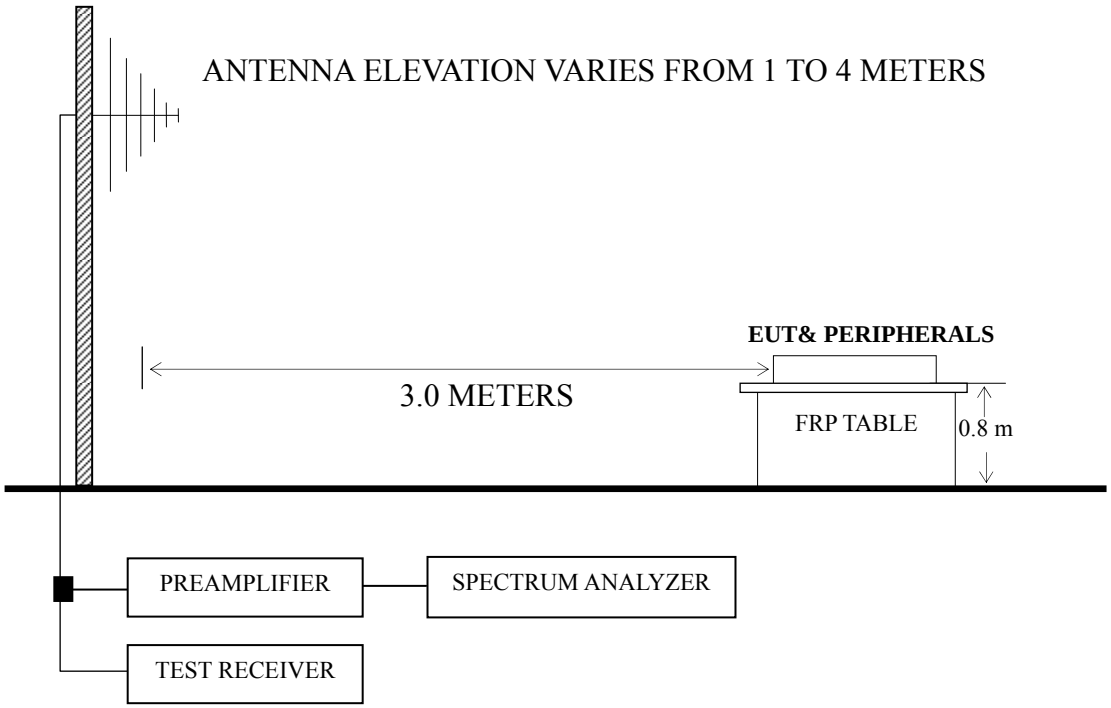
4.2.1 EUT and Peripherals



■: 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.
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 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 884.570 MHz with corrected signal level of 36.58 dB (μV/m) (limit is 46.00 dB (μV/m)), when the antenna was 1.50 m height and the turntable was at 123°. The worst emission at vertical polarization was detected at 51.340 MHz with corrected signal level of 36.50 dB (μV/m) (limit is 40.00 dB (μV/m)), when the antenna was 1.50 m height and the turntable was at 195°.

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	LTDN42A300MH	Humidity :	60%RH
Test Mode	:	D-Sub 1024*768@60Hz	Date of Test :	Apr 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	51.340	18.25	7.20	0.86	26.31	40.00	13.69
	96.930	11.56	9.76	1.31	22.63	43.50	20.87
	144.460	16.44	10.30	1.61	28.35	43.50	15.15
	224.970	17.51	8.50	2.08	28.09	46.00	17.91
	298.690	11.67	12.52	2.52	26.71	46.00	19.29
	884.570	**12.61**	**19.65**	**4.32**	**36.58**	**46.00**	**9.42**
Vertical	**51.340**	**28.44**	**7.20**	**0.86**	**36.50**	**40.00**	**3.50**
	116.330	19.88	11.54	1.46	32.88	43.50	10.62
	144.460	23.79	10.30	1.61	35.70	43.50	7.80
	295.780	10.77	12.58	2.52	25.87	46.00	20.13
	769.610	20.20	18.20	3.60	42.00	46.00	4.00
	881.660	13.95	19.50	4.32	37.77	46.00	8.23

TEST ENGINEER: RAVEN JIN

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	LTDN42A300MH	Humidity :	60%RH
Test Mode	:	HDMI 1024*768@60Hz	Date of Test :	Apr 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	49.400	14.66	7.93	0.85	23.44	40.00	16.56
	94.020	12.98	9.12	1.27	23.37	43.50	20.13
	141.550	9.89	10.30	1.60	21.79	43.50	21.71
	336.520	9.19	14.70	2.61	26.50	46.00	19.50
	826.370	8.68	20.57	3.89	33.14	46.00	12.86
	903.000	**9.75**	**19.30**	**4.55**	**33.60**	**46.00**	**12.40**
Vertical	**45.520**	**23.42**	**9.32**	**0.82**	**33.56**	**40.00**	**6.44**
	115.360	18.35	11.58	1.45	31.38	43.50	12.12
	143.490	19.51	10.30	1.61	31.42	43.50	12.08
	303.540	8.53	12.80	2.56	23.89	46.00	22.11
	450.980	5.80	16.90	2.84	25.54	46.00	20.46
	736.160	11.51	19.00	3.57	34.08	46.00	11.92

TEST ENGINEER: RAVEN JIN

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	LTDN42A300MH	Humidity :	60%RH
Test Mode	:	D-Sub 800*600@60Hz	Date of Test :	Apr 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	53.280	17.69	6.46	0.86	25.01	40.00	14.99
	144.460	16.29	10.30	1.61	28.20	43.50	15.30
	301.600	11.13	12.70	2.55	26.38	46.00	19.62
	739.070	8.27	18.90	3.57	30.74	46.00	15.26
	815.700	**12.08**	**20.37**	**3.80**	**36.25**	**46.00**	**9.75**
	881.660	10.76	19.50	4.32	34.58	46.00	11.42
Vertical	**50.370**	**27.09**	**7.78**	**0.85**	**35.72**	**40.00**	**4.28**
	101.780	18.51	10.76	1.35	30.62	43.50	12.88
	116.330	19.47	11.54	1.46	32.47	43.50	11.03
	140.580	16.80	10.30	1.60	28.70	43.50	14.80
	716.760	11.11	19.42	3.56	34.09	46.00	11.91
	887.480	12.26	19.80	4.43	36.49	46.00	9.51

TEST ENGINEER: RAVEN JIN

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	LTDN42A300MH	Humidity :	60%RH
Test Mode	:	D-Sub 640*480@60Hz	Date of Test :	Apr 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	54.250	16.89	6.18	0.87	23.94	40.00	16.06
	103.720	10.04	11.08	1.37	22.49	43.50	21.01
	144.460	16.92	10.30	1.61	28.83	43.50	14.67
	297.720	12.38	12.55	2.52	27.45	46.00	18.55
	743.920	**10.46**	**18.83**	**3.57**	**32.86**	**46.00**	**13.14**
	894.270	7.59	19.63	4.43	31.65	46.00	14.35
Vertical	**49.400**	**25.53**	**7.93**	**0.85**	**34.31**	**40.00**	**5.69**
	92.080	18.08	8.66	1.24	27.98	43.50	15.52
	119.240	16.69	11.42	1.47	29.58	43.50	13.92
	138.640	14.88	10.51	1.59	26.98	43.50	16.52
	445.160	9.62	17.15	2.82	29.59	46.00	16.41
	887.480	13.01	19.80	4.43	37.24	46.00	8.76

TEST ENGINEER: RAVEN JIN

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	LTDN42A300MH	Humidity :	60%RH
Test Mode	:	USB Play	Date of Test :	Apr 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	52.310	14.86	6.83	0.86	22.55	40.00	17.45
	88.200	14.48	7.92	1.18	23.58	43.50	19.92
	145.430	12.98	10.28	1.62	24.88	43.50	18.62
	296.750	12.91	12.55	2.52	27.98	46.00	18.02
	497.540	6.93	17.98	2.98	27.89	46.00	18.11
	751.680	**6.93**	**18.73**	**3.58**	**29.24**	**46.00**	**16.76**
Vertical	**45.520**	**51.18**	**9.32**	**0.82**	**33.16**	**40.00**	**6.84**
	101.780	46.39	10.76	1.35	30.62	43.50	12.88
	139.610	43.84	10.37	1.59	28.28	43.50	15.22
	371.440	37.78	14.85	2.66	27.91	46.00	18.09
	723.550	37.66	19.27	3.56	32.48	46.00	13.52
	812.790	35.81	20.37	3.70	32.17	46.00	13.83

TEST ENGINEER: RAVEN JIN

5 DEBUG DESCRIPTION

The following components are used during the countermeasure procedures:

Name	M/N	Manufacturer	Location
Ferrite core	LGK2029-HX\ROH	Rui Feng Electronic Co., Ltd.	See Internal Photos Figure 14

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.