

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

LED LCD TV

Model No.	Serial No.	Brand
LTDN42K20US	E1204399-01/01	Hisense
F42K20E	--	
LTDN42K26US	--	
42K26	--	

FCC ID : W9HLCDD0020

Prepared For : Hisense Electric Co., Ltd.
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Report No. : ACI-F12081
Date of Test : May 07 – 08, 2012
Date of Report : May 09, 2012

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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 : LED LCD TV

Type of EUT : Production Pre-product Pro-type

Model No.	:	LTDN42K20US	F42K20E
		LTDN42K26US	42K26
Serial No.	:	E1204399-01/01	--
		--	--
Brand	:	Hisense	

Note : The LTDN42K20US & F42K20E are all the same except for the model name.
The LTDN42K26US & 42K26 are all the same except for the model name.
The LTDN42K20US & LTDN42K26US are all the same except for different general appearance.

The LTDN42K20US model 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 : HE420FF-F57(0100)\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

Remark:

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

Bottom Port:

- (1) One HDMI1 Port : Connected with PC
- (2) One HDMI2 Port : Connected with DVD PLAYER #1
- (3) One USB Port : Connected with U-Disk
- (4) One Headphone Port : Connected with Earphone
- (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 VGA Port : Connected with PC
- (8) One PC AUDIO IN Port : Connected with PC
- (9) One HDMI3 Port : Connected with DVD PLAYER #2
- (10) One ANT Port : Connected with ATSC SG / TV SG
- (11) One DIGITAL AUDIO OUT Port : Connected with DVD PLAYER #1
- (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

2.3 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 = 3.43dB

Radiated Emission Expanded Uncertainty (30-200MHz):
U = 4.67 dB (horizontal)
U = 4.72 dB (vertical)

Radiated Emission Expanded Uncertainty (200M-1GHz):
U = 4.81 dB (horizontal)
U = 4.69 dB (vertical)

Radiated Emission Expanded Uncertainty (Above 1GHz):
U= 4.50 dB (Horizontal)
U= 4.16 dB (Vertical)

3 CONDUCTED EMISSION TEST

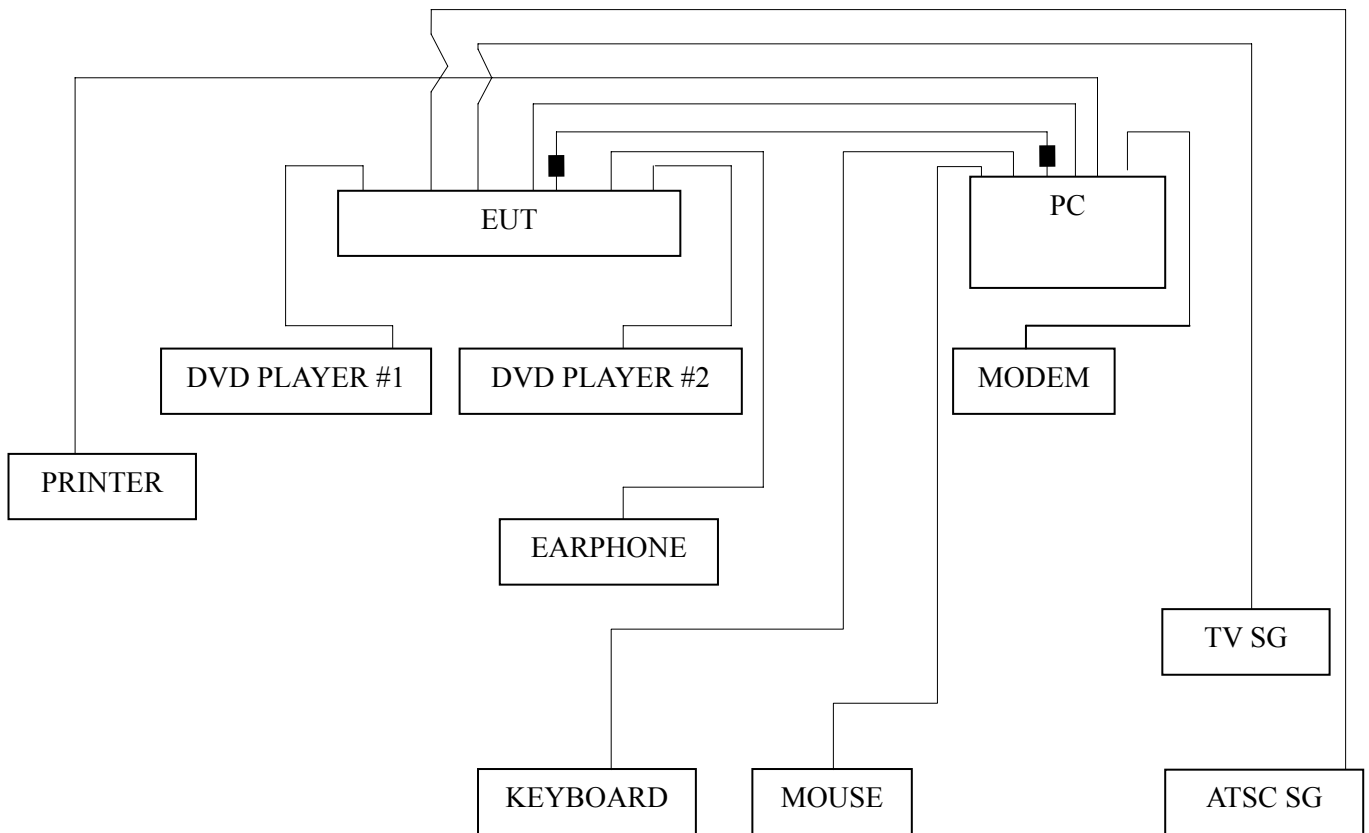
3.1 Test Equipment

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

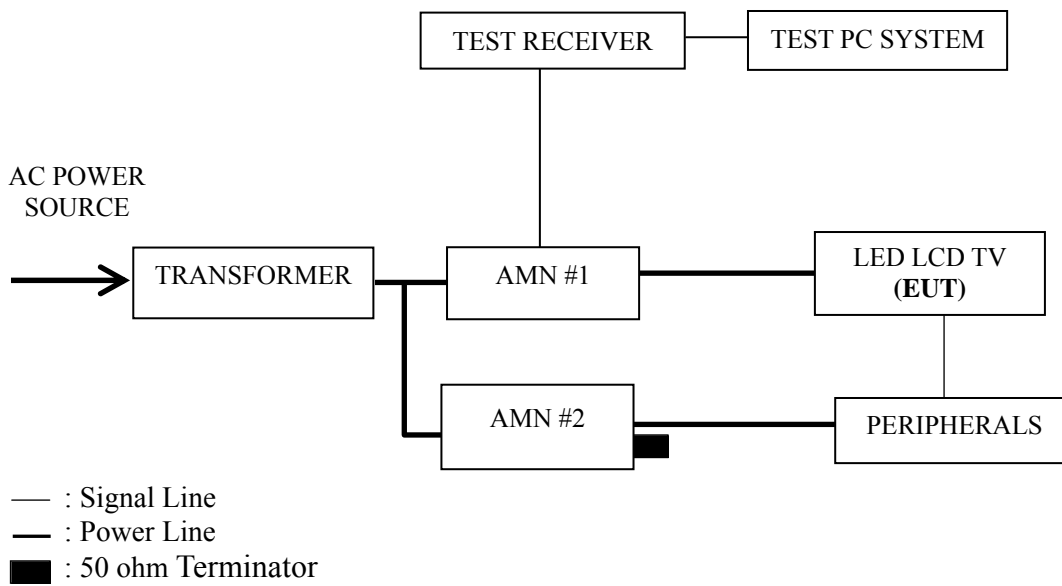
3.2 Block Diagram of Test Setup

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
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 0.150 MHz (Quasi-Peak Value) with corrected signal level of 62.95 dB (μ V) (limit is 66.00 dB (μ V)), when the Line of the EUT is connected to AMN.

EUT : LED LCD TV Temperature : 22°C

Model No. : LTDN42K20US Humidity : 48%RH

Serial No. : E1204399-01/01 Date of Test : May 07, 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	0.150	62.58	0.23	62.81	66.00	3.19	QP
	0.216	46.20	0.24	46.44	62.96	16.52	
	0.573	35.25	0.30	35.55	56.00	20.45	
	2.044	32.56	0.39	32.95	56.00	23.05	
	5.419	36.31	0.52	36.83	60.00	23.17	
	17.568	45.05	0.89	45.94	60.00	14.06	
	AV	0.150	52.40	0.23	52.63	56.00	3.37
		0.216	36.31	0.24	36.55	52.96	16.41
		0.573	25.41	0.30	25.71	46.00	20.29
		2.044	22.60	0.39	22.99	46.00	23.01
		5.419	26.70	0.52	27.22	50.00	22.78
		17.568	36.10	0.89	36.99	50.00	13.01
Neutral	0.150	62.53	0.13	62.66	66.00	3.34	QP
	0.221	47.05	0.11	47.16	62.79	15.63	
	0.641	33.55	0.20	33.75	56.00	22.25	
	2.237	32.66	0.18	32.84	56.00	23.16	
	5.805	36.55	0.48	37.03	60.00	22.97	
	17.568	42.44	0.79	43.23	60.00	16.77	
	AV	0.150	52.40	0.13	52.53	56.00	3.47
		0.221	37.20	0.11	37.31	52.79	15.48
		0.641	23.59	0.20	23.79	46.00	22.21
		2.237	22.40	0.18	22.58	46.00	23.42
		5.805	26.40	0.48	26.88	50.00	23.12
		17.568	32.50	0.79	33.29	50.00	16.71

TEST ENGINEER: LUY LV

EUT : LED LCD TV Temperature : 22°C

Model No. : LTDN42K20US Humidity : 48%RH

Serial No. : E1204399-01/01 Date of Test : May 07, 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	0.150	62.60	0.23	62.83	66.00	3.17	QP
	0.216	46.20	0.24	46.44	62.96	16.52	
	0.573	35.25	0.30	35.55	56.00	20.45	
	2.044	32.56	0.39	32.95	56.00	23.05	
	5.419	36.31	0.52	36.83	60.00	23.17	
	17.568	45.05	0.89	45.94	60.00	14.06	
	0.150	52.30	0.23	52.53	56.00	3.47	AV
	0.216	36.31	0.24	36.55	52.96	16.41	
	0.573	25.41	0.30	25.71	46.00	20.29	
	2.044	22.60	0.39	22.99	46.00	23.01	
	5.419	26.40	0.52	26.92	50.00	23.08	
	17.568	35.20	0.89	36.09	50.00	13.91	
Neutral	0.150	62.03	0.13	62.16	66.00	3.84	QP
	0.223	46.76	0.11	46.87	62.70	15.83	
	0.647	34.36	0.20	34.56	56.00	21.44	
	2.237	33.04	0.18	33.22	56.00	22.78	
	5.713	36.77	0.47	37.24	60.00	22.76	
	17.568	43.43	0.79	44.22	60.00	15.78	
	0.150	52.10	0.13	52.23	56.00	3.77	AV
	0.223	36.80	0.11	36.91	52.70	15.79	
	0.647	24.39	0.20	24.59	46.00	21.41	
	2.237	23.40	0.18	23.58	46.00	22.42	
	5.713	26.80	0.47	27.27	50.00	22.73	
	17.568	33.50	0.79	34.29	50.00	15.71	

TEST ENGINEER: L V Y L V

EUT : LED LCD TV Temperature : 22°C

Model No. : LTDN42K20US Humidity : 48%RH

Serial No. : E1204399-01/01 Date of Test : May 07, 2012

Test Mode : HDMI 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	0.150	62.27	0.23	62.50	66.00	3.50	QP
	0.221	45.39	0.24	45.63	62.79	17.16	
	0.641	35.59	0.21	35.80	56.00	20.20	
	2.044	32.47	0.39	32.86	56.00	23.14	
	5.277	36.10	0.52	36.62	60.00	23.38	
	17.568	43.56	0.89	44.45	60.00	15.55	
	0.150	52.40	0.23	52.63	56.00	3.37	AV
	0.221	35.51	0.24	35.75	52.79	17.04	
	0.641	25.70	0.21	25.91	46.00	20.09	
	2.044	22.60	0.39	22.99	46.00	23.01	
	5.277	26.29	0.52	26.81	50.00	23.19	
	17.568	33.65	0.89	34.54	50.00	15.46	
Neutral	0.150	62.37	0.13	62.50	66.00	3.50	QP
	0.219	46.59	0.11	46.70	62.88	16.18	
	0.567	34.31	0.17	34.48	56.00	21.52	
	2.044	32.97	0.17	33.14	56.00	22.86	
	5.362	36.34	0.44	36.78	60.00	23.22	
	17.568	42.10	0.79	42.89	60.00	17.11	
	0.150	52.40	0.13	52.53	56.00	3.47	AV
	0.219	36.60	0.11	36.71	52.88	16.17	
	0.567	24.51	0.17	24.68	46.00	21.32	
	2.044	22.40	0.17	22.57	46.00	23.43	
	5.362	26.40	0.44	26.84	50.00	23.16	
	17.568	32.50	0.79	33.29	50.00	16.71	

TEST ENGINEER: LUY LV

EUT : LED LCD TV Temperature : 22°C

Model No. : LTDN42K20US Humidity : 48%RH

Serial No. : E1204399-01/01 Date of Test : May 07, 2012

Test Mode : HDMI 640*480@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	0.150	62.41	0.23	62.64	66.00	3.36	QP
	0.223	45.45	0.24	45.69	62.70	17.01	
	0.647	35.77	0.21	35.98	56.00	20.02	
	1.908	33.56	0.39	33.95	56.00	22.05	
	5.277	36.29	0.52	36.81	60.00	23.19	
	17.568	44.13	0.89	45.02	60.00	14.98	
	0.150	52.30	0.23	52.53	56.00	3.47	AV
	0.223	35.61	0.24	35.85	52.70	16.85	
	0.647	25.90	0.21	26.11	46.00	19.89	
	1.908	23.50	0.39	23.89	46.00	22.11	
	5.277	26.39	0.52	26.91	50.00	23.09	
	17.568	34.20	0.89	35.09	50.00	14.91	
Neutral	0.150	62.40	0.13	62.53	66.00	3.47	QP
	0.221	46.75	0.11	46.86	62.79	15.93	
	0.573	32.49	0.18	32.67	56.00	23.33	
	2.178	33.59	0.17	33.76	56.00	22.24	
	5.362	35.96	0.44	36.40	60.00	23.60	
	17.568	45.94	0.79	46.73	60.00	13.27	
	0.150	48.60	0.13	48.73	56.00	7.27	AV
	0.221	36.80	0.11	36.91	52.79	15.88	
	0.573	22.50	0.18	22.68	46.00	23.32	
	2.178	22.61	0.17	22.78	46.00	23.22	
	5.362	25.90	0.44	26.34	50.00	23.66	
	17.568	35.40	0.79	36.19	50.00	13.81	

TEST ENGINEER: L V Y L V

EUT : LED LCD TV Temperature : 22°C

Model No. : LTDN42K20US Humidity : 48%RH

Serial No. : E1204399-01/01 Date of Test : May 07, 2012

Test Mode : USB Play

Test Line	Frequency (MHz)	Meter Reading dB(μ V)	Factor (dB)	Emission Level dB(μ V)	Limits dB(μ V)	Margin (dB)	Remark
Line	0.150	62.72	0.23	62.95	66.00	3.05	QP
	0.221	47.02	0.24	47.26	62.79	15.53	
	0.579	35.65	0.30	35.95	56.00	20.05	
	1.970	32.58	0.39	32.97	56.00	23.03	
	5.419	36.46	0.52	36.98	60.00	23.02	
	17.568	44.23	0.89	45.12	60.00	14.88	
	0.150	52.40	0.23	52.63	56.00	3.37	AV
	0.221	37.21	0.24	37.45	52.79	15.34	
	0.579	25.80	0.30	26.10	46.00	19.90	
	1.970	22.60	0.39	22.99	46.00	23.01	
	5.419	26.60	0.52	27.12	50.00	22.88	
	17.568	34.40	0.89	35.29	50.00	14.71	
Neutral	0.150	62.38	0.13	62.51	66.00	3.49	QP
	0.223	45.57	0.11	45.68	62.70	17.02	
	0.573	33.80	0.18	33.98	56.00	22.02	
	2.066	33.45	0.17	33.62	56.00	22.38	
	5.867	37.07	0.49	37.56	60.00	22.44	
	17.568	41.42	0.79	42.21	60.00	17.79	
	0.150	52.40	0.13	52.53	56.00	3.47	AV
	0.223	35.60	0.11	35.71	52.70	16.99	
	0.573	23.80	0.18	23.98	46.00	22.02	
	2.066	23.60	0.17	23.77	46.00	22.23	
	5.867	27.20	0.49	27.69	50.00	22.31	
	17.568	31.70	0.79	32.49	50.00	17.51	

TEST ENGINEER: LUY LV

4 RADIATED EMISSION TEST

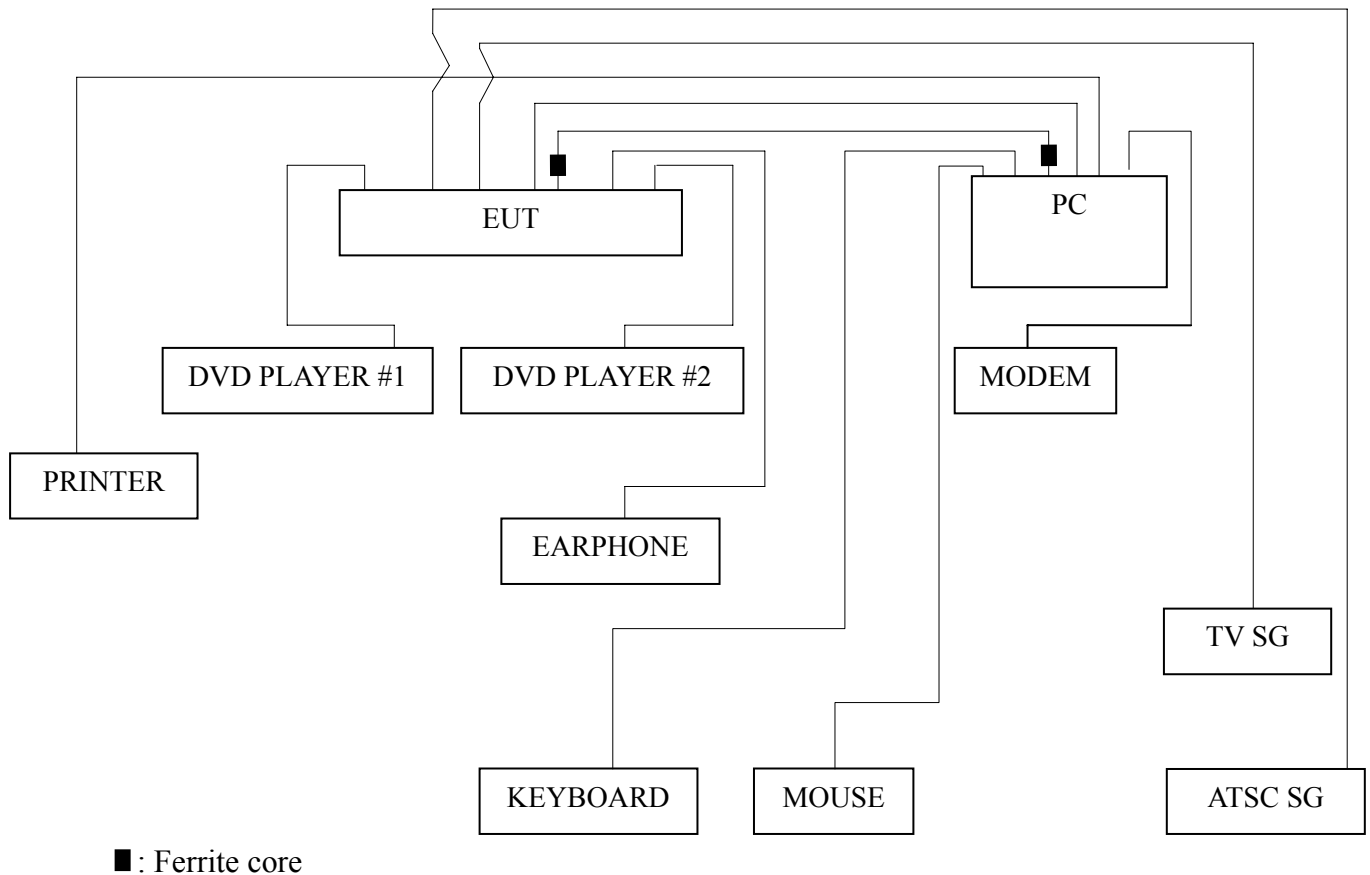
4.1 Test Equipment

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

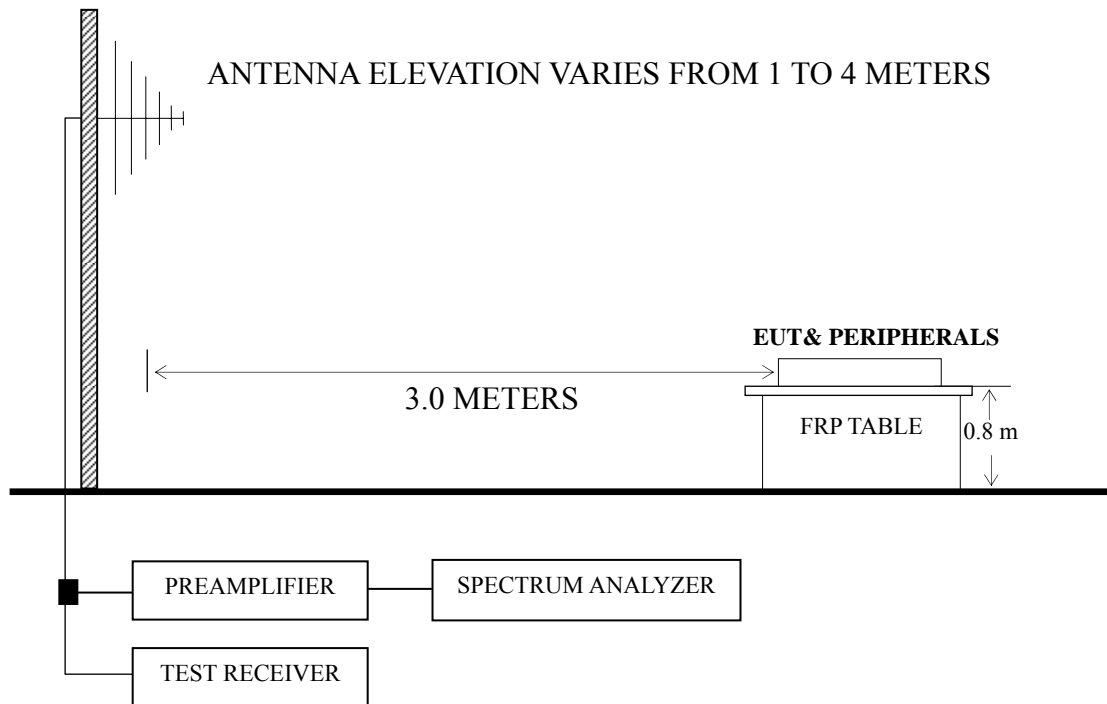
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	E7405A	MY45106600	Mar 22, 2012	Mar 22, 2013
2.	Bi-log Antenna	TESEQ	CBL6112D	23192	Dec 01, 2011	Dec 01, 2012
3.	Test Receiver	R&S	ESVS10	844594/001	Mar 22, 2012	Mar 22, 2013
4.	Preamplifier	HP	8447D	2944A10548	Mar 18, 2012	Sep 18, 2012
5.	Preamplifier	HP	8449B	3008A00864	Apr 29, 2012	Apr 29, 2013
6.	50Ω Coaxial Switch	Anritsu	MP59B	6200426390	Mar 18, 2012	Sep 18, 2012
7.	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	
		($\mu\text{V/m}$)	dB ($\mu\text{V/m}$)
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 ($\mu\text{V/m}$) = 20 log Emission Level ($\mu\text{V/m}$)

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.

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
D-Sub 1024*768@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 640*480@60Hz test mode. The worst emission at horizontal polarization was detected at 75.590 MHz with corrected signal level of 34.92 dB ($\mu\text{V}/\text{m}$) (limit is 40.00 dB ($\mu\text{V}/\text{m}$)), when the antenna was 1.60 m height and the turntable was at 270°. The worst emission at vertical polarization was detected at 371.440 MHz with corrected signal level of 41.12 dB ($\mu\text{V}/\text{m}$) (limit is 46.00 dB ($\mu\text{V}/\text{m}$)), when the antenna was 1.60 m height and the turntable was at 30°.

EUT : LED LCD TV Temperature : 22°C
 Model No. : LTDN42K20US Humidity : 60%RH
 Serial No. : E1204399-01/01 Date of Test : May 08, 2012
 Test Mode : D-Sub 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	64.920	22.54	9.49	1.30	33.33	40.00	6.67
	89.170	23.51	10.96	1.72	36.19	43.50	7.31
	128.940	19.41	10.84	2.10	32.35	43.50	11.15
	230.790	23.40	11.10	2.55	37.05	46.00	8.95
	371.440	17.78	15.68	2.93	36.39	46.00	9.61
	742.950	9.86	19.98	3.78	33.62	46.00	12.38
Vertical	90.140	19.61	11.00	1.73	32.34	43.50	11.16
	130.880	16.20	10.80	2.11	29.11	43.50	14.39
	165.800	16.81	10.17	2.30	29.28	43.50	14.22
	223.030	25.69	10.76	2.51	38.96	46.00	7.04
	269.590	21.67	12.78	2.66	37.11	46.00	8.89
	371.440	22.21	15.68	2.93	40.82	46.00	5.18

TEST ENGINEER: RAVEN JIN

EUT : LED LCD TV Temperature : 22°C

Model No. : LTDN42K20US Humidity : 60%RH

Serial No. : E1204399-01/01 Date of Test : May 08, 2012

Test Mode : HDMI 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	41.640	11.68	11.78	0.88	24.34	40.00	15.66
	66.860	19.85	9.63	1.34	30.82	40.00	9.18
	85.290	19.90	10.80	1.66	32.36	40.00	7.64
	132.820	16.75	10.77	2.12	29.64	43.50	13.86
	223.030	20.18	10.76	2.51	33.45	46.00	12.55
	371.440	8.55	15.68	2.93	27.16	46.00	18.84
Vertical	41.640	18.68	11.78	0.88	31.34	40.00	8.66
	85.290	19.90	10.80	1.66	32.36	40.00	7.64
	128.940	16.40	10.84	2.10	29.34	43.50	14.16
	223.030	23.18	10.76	2.51	36.45	46.00	9.55
	371.440	18.55	15.68	2.93	37.16	46.00	8.84
	526.640	14.39	17.76	3.33	35.48	46.00	10.52

TEST ENGINEER: RAVEN JIN

EUT : LED LCD TV Temperature : 22°C

Model No. : LTDN42K20US Humidity : 60%RH

Serial No. : E1204399-01/01 Date of Test : May 08, 2012

Test Mode : D-Sub 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	73.650	20.71	10.15	1.49	32.35	40.00	7.65
	163.860	20.50	10.20	2.29	32.99	43.50	10.51
	223.030	24.83	10.76	2.51	38.10	46.00	7.90
	371.440	21.96	15.68	2.93	40.57	46.00	5.43
	742.950	11.79	19.98	3.78	35.55	46.00	10.45
	816.670	12.27	20.55	4.11	36.93	46.00	9.07
Vertical	130.880	17.85	10.80	2.11	30.76	43.50	12.74
	191.990	24.36	9.87	2.40	36.63	43.50	6.87
	223.030	24.73	10.76	2.51	38.00	46.00	8.00
	372.410	20.97	15.72	2.93	39.62	46.00	6.38
	446.130	15.00	16.92	3.11	35.03	46.00	10.97
	742.950	13.80	19.98	3.78	37.56	46.00	8.44

TEST ENGINEER: RAVEN JIN

EUT : LED LCD TV Temperature : 22°C

Model No. : LTDN42K20US Humidity : 60%RH

Serial No. : E1204399-01/01 Date of Test : May 08, 2012

Test Mode : D-Sub 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)
Horizontal	75.590	23.12	10.27	1.53	34.92	40.00	5.08
	108.570	20.48	11.21	1.93	33.62	43.50	9.88
	223.030	27.42	10.76	2.51	40.69	46.00	5.31
	376.290	14.59	15.79	2.93	33.31	46.00	12.69
	446.130	12.41	16.92	3.11	32.44	46.00	13.56
	742.950	15.17	19.98	3.78	38.93	46.00	7.07
Vertical	103.720	19.94	11.29	1.89	33.12	43.50	10.38
	139.610	18.61	10.63	2.16	31.40	43.50	12.10
	230.790	27.37	11.10	2.55	41.02	46.00	4.98
	371.440	22.51	15.68	2.93	41.12	46.00	4.88
	593.570	11.16	18.17	3.45	32.78	46.00	13.22
	742.950	13.89	19.98	3.78	37.65	46.00	8.35

TEST ENGINEER: RAVEN JIN

EUT : LED LCD TV Temperature : 22°C

Model No. : LTDN42K20US Humidity : 60%RH

Serial No. : E1204399-01/01 Date of Test : May 08, 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	75.590	15.98	10.27	1.53	27.78	40.00	12.22
	91.110	16.36	11.05	1.75	29.16	43.50	14.34
	165.800	14.15	10.17	2.30	26.62	43.50	16.88
	223.030	18.40	10.76	2.51	31.67	46.00	14.33
	371.440	13.80	15.68	2.93	32.41	46.00	13.59
	742.950	6.11	19.98	3.78	29.87	46.00	16.13
Vertical	103.720	13.94	11.29	1.89	27.12	43.50	16.38
	139.610	12.61	10.63	2.16	25.40	43.50	18.10
	230.790	21.47	11.10	2.55	35.12	46.00	10.88
	371.440	16.41	15.68	2.93	35.02	46.00	10.98
	593.570	5.16	18.17	3.45	26.78	46.00	19.22
	742.950	7.89	19.98	3.78	31.65	46.00	14.35

TEST ENGINEER: RAVEN JIN

5 DEVIATION TO TEST SPECIFICATIONS

None.

6 DEBUG DESCRIPTION

The following components are used during the countermeasure procedures:

Name	M/N	Manufacturer	Location
Gasket	20X20X22T\ROH	JOINSET	See Internal Photos Figure 16
		SZTAT	
Gasket	DAA25X20X150\ROH	JOINSET	See Internal Photos Figure 17
		SZTAT	
Gasket	35X0.7X56mm\VGA\ROH	JOINSET	See Internal Photos Figure 18

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)