

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

LED LCD TV

Model No.	Serial No.	Brand
LTDN46K20US	E1204398-01/01	Hisense
F46K20E	--	

FCC ID : W9HLCDE0006

Prepared For : Hisense Electric Co., Ltd.
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Report No. : ACI-F12006A1
Date of Test : Apr 09 – May 07, 2012
Date of Report : May 07, 2012

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TEST REPORT FOR FCC CERTIFICATE

Applicant : Hisense Electric Co., Ltd.

Manufacturer : Hisense Electric Co., Ltd.

EUT Description : LED LCD TV

Model No.	Serial No.	Brand	Power Supply
LTDN46K20US	E1204398-01/01	Hisense	120V/60Hz
F46K20E	--		

Test Procedure Used:

*FCC RULES AND REGULATIONS PART 15 SUBPART B CLASS B OCTOBER 2011
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: LTDN46K20US; S/N: E1204398-01/01) which was tested in 3m anechoic chamber Apr 09 – May 07, 2012 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.

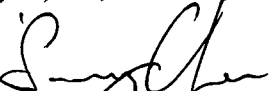
The test results for EUT's TV functions are contained in No.F12005A1, a Verification report.

Date of Test : Apr 09 – May 07, 2012 Date of Report : May 07, 2012

Producer : 
KATHY WANG / Assistant

Review : 
DIO YANG / Assistant Manager

AUDIX[®] 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 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. :

LTDN46K20US	F46K20E
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Serial No. :

E1204398-01/01	--
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Note #1 : The different list for all the models are as follows:

Report No.	Model No.	Rev. Summary	Edition No.	Data of Rev.
ACI-F12005	LTDN46K20US, F46K20E	Original Report.	0	Jan 16, 2012
ACI-F12005A1	LTDN46K20US, F46K20E	1.To add a new panel 2.To add a new power board	Rev. A1	May 07, 2012

Note #2 : The above models are all the same except for the different model name.
The model LTDN46K20US was tested in the report.

Brand : Hisense

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

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

LCD Panel : Manufacturer : Hisense
M/N : HE460FF-B37 (0200)\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 VGA Port : Connected with PC
- (2) One VGA AUDIO IN Port : Connected with PC
- (3) One HDMI1 Port : Connected with DVD PLAYER #1
- (4) One HDMI2 Port : Connected with DVD PLAYER #2
- (5) One HDMI3 Port : Connected with PC
- (6) One Service Port : Do not open to customer
- (7) One DIGITAL AUDIO OUT Port : Connected with DVD PLAYER #1

Side Port:

- (8) One component of YPbPr Port : Connected with DVD PLAYER #2
- (9) One component of YPbPr Audio Port : Connected with DVD PLAYER #2
- (10) One Headphone Port : Connected with Earphone
- (11) One ANT Port : Connected with ATSC SG
- (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)

3 CONDUCTED EMISSION TEST

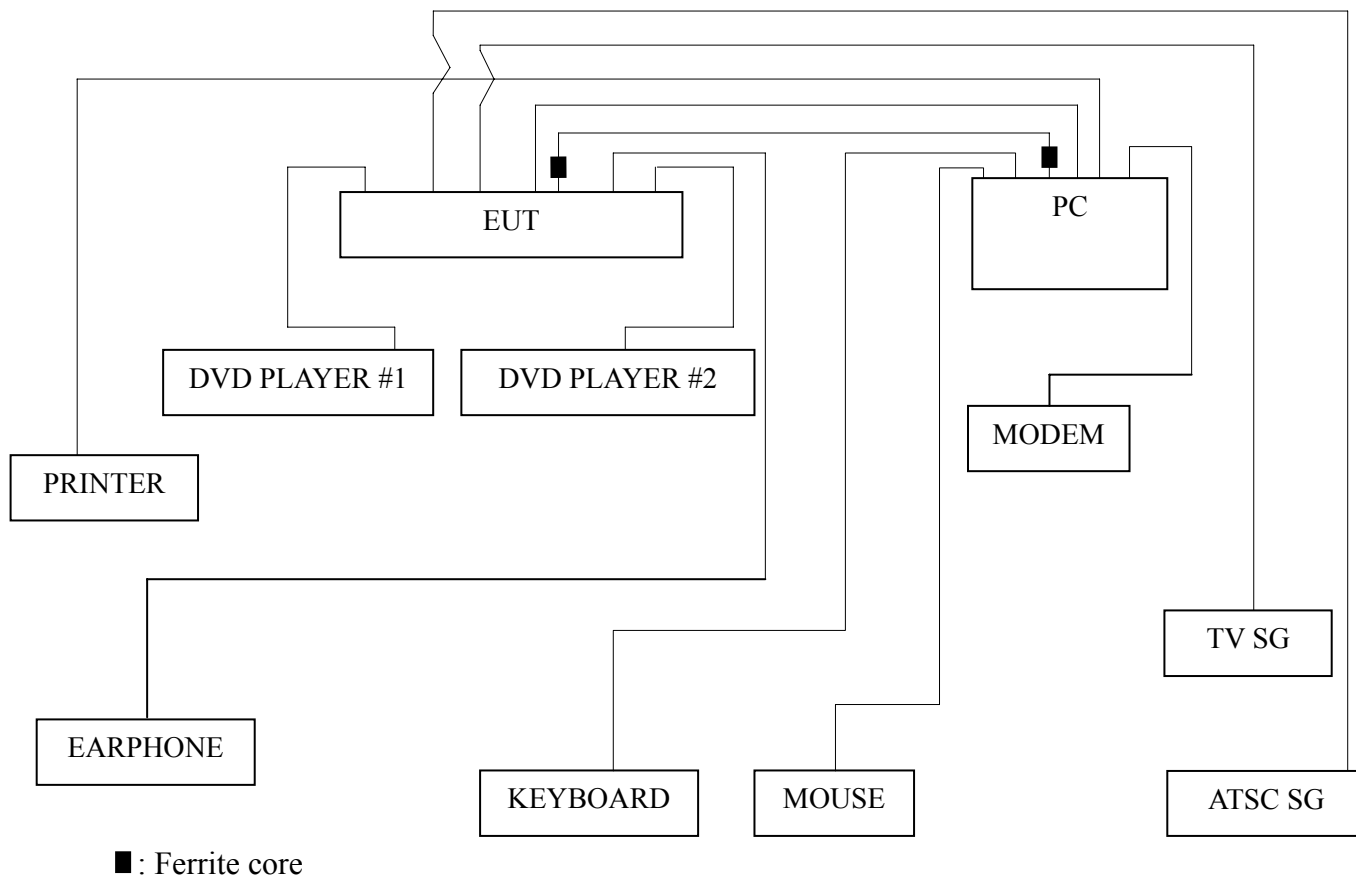
3.1 Test Equipment

The following test equipments are used during the conducted emission test in a shielded room:

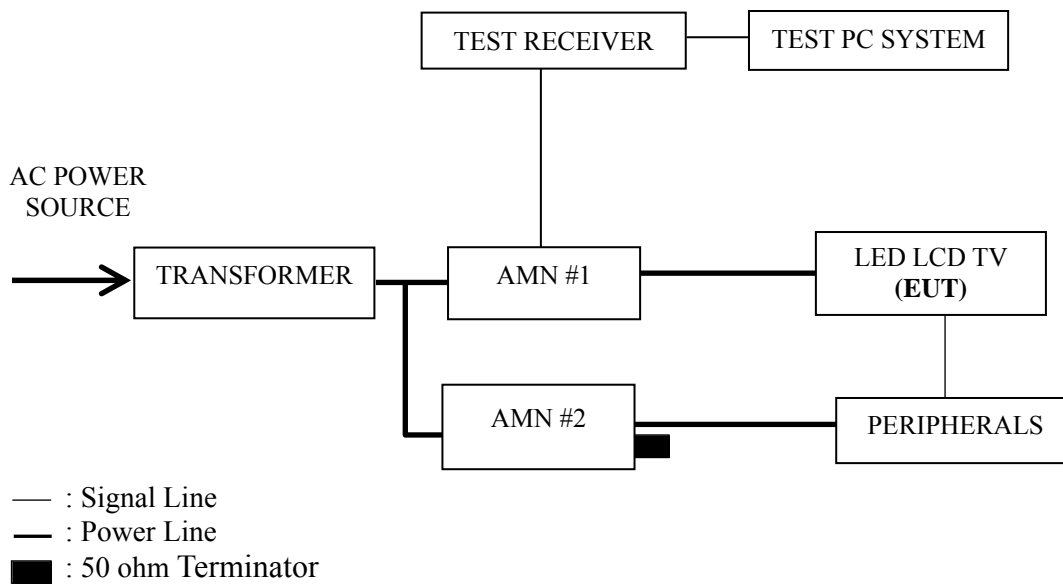
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCI	100841	Mar 22, 2012	Mar 22, 2013
2.	Artificial Mains Network (AMN #1)	R&S	ESH2-Z5	843890/011	Feb 13, 2012	Feb 13, 2013
3.	Artificial Mains Network (AMN #2)	R&S	ENV4200	100125	Mar 22, 2012	Mar 22, 2013
4.	50 Ω Coaxial 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



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 Repeat above procedure 3.5.4 for difference test mode.
- 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

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	P14
HDMI 1024*768@60Hz	P15
HDMI 800*600@60Hz	P16
HDMI 640*480@60Hz	P17

NOTE 1 – Factor = Cable Loss + AMN Factor.

NOTE 2 – Emission Level = Meter Reading + Factor.

NOTE 3 – “QP” means “Quasi-Peak” values, “AV” means “Average” values.

NOTE 4 – The worst case is for HDMI 1024*768@60Hz test mode. The worst emission is detected at 0.202 MHz (Average Value) with corrected signal level of 38.81 dB (μV) (limit is 53.54 dB (μV)), when the Line of the EUT is connected to AMN.

EUT : LED LCD TV Temperature : 22°C

Model No. : LTDN46K20US Humidity : 48%RH

Serial No. : E1204398-01/01 Date of Test : Apr 09, 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	50.42	0.23	50.65	66.00	15.35	QP
	0.202	47.26	0.25	47.51	63.54	16.03	
	0.343	38.38	0.31	38.69	59.13	20.44	
	0.871	38.16	0.29	38.45	56.00	17.55	
	4.501	40.07	0.50	40.57	56.00	15.43	
	13.551	44.24	0.82	45.06	60.00	14.94	
	0.150	39.62	0.23	39.85	56.00	16.15	AV
	0.202	37.52	0.25	37.77	53.54	15.77	
	0.343	27.67	0.31	27.98	49.13	21.15	
	0.871	27.60	0.29	27.89	46.00	18.11	
	4.501	29.62	0.50	30.12	46.00	15.88	
	13.551	33.69	0.82	34.51	50.00	15.49	
Neutral	0.150	49.93	0.13	50.06	66.00	15.94	QP
	0.202	47.12	0.12	47.24	63.54	16.30	
	0.348	38.91	0.14	39.05	59.00	19.95	
	0.822	38.28	0.22	38.50	56.00	17.50	
	4.549	37.61	0.41	38.02	56.00	17.98	
	14.213	43.63	0.72	44.35	60.00	15.65	
	0.150	39.20	0.13	39.33	56.00	16.67	AV
	0.202	37.20	0.12	37.32	53.54	16.22	
	0.348	28.43	0.14	28.57	49.00	20.43	
	0.822	27.62	0.22	27.84	46.00	18.16	
	4.549	26.85	0.41	27.26	46.00	18.74	
	14.213	33.80	0.72	34.52	50.00	15.48	

TEST ENGINEER: L V Y L V

EUT : LED LCD TV Temperature : 22°C

Model No. : LTDN46K20US Humidity : 48%RH

Serial No. : E1204398-01/01 Date of Test : Apr 09, 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	50.70	0.23	50.93	66.00	15.07	QP	
	0.202	48.16	0.25	48.41	63.54	15.13		
	0.339	38.35	0.31	38.66	59.22	20.56		
	0.871	37.80	0.29	38.09	56.00	17.91		
	4.501	39.72	0.50	40.22	56.00	15.78		
	14.517	43.11	0.84	43.95	60.00	16.05		
	0.150	39.62	0.23	39.85	56.00	16.15	AV	
	0.202	38.56	0.25	38.81	53.54	14.73		
	0.339	28.41	0.31	28.72	49.22	20.50		
	0.871	27.46	0.29	27.75	46.00	18.25		
	4.501	28.66	0.50	29.16	46.00	16.84		
	14.517	33.52	0.84	34.36	50.00	15.64		
	Neutral	0.150	50.26	0.13	50.39	65.99	15.60	QP
		0.204	47.60	0.12	47.72	63.45	15.73	
0.348		37.41	0.14	37.55	59.00	21.45		
0.804		37.88	0.22	38.10	56.00	17.90		
4.501		37.36	0.41	37.77	56.00	18.23		
14.364		43.13	0.72	43.85	60.00	16.15		
0.150		39.52	0.13	39.65	55.99	16.34	AV	
0.204		36.85	0.12	36.97	53.45	16.48		
0.348		26.58	0.14	26.72	49.00	22.28		
0.804		26.79	0.22	27.01	46.00	18.99		
4.501		26.58	0.41	26.99	46.00	19.01		
14.364		32.94	0.72	33.66	50.00	16.34		

TEST ENGINEER: LUY LV

EUT : LED LCD TV Temperature : 22°C

Model No. : LTDN46K20US Humidity : 48%RH

Serial No. : E1204398-01/01 Date of Test : Apr 09, 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	50.23	0.23	50.46	66.00	15.54	QP
	0.204	47.77	0.25	48.02	63.45	15.43	
	0.339	38.54	0.31	38.85	59.22	20.37	
	0.853	38.05	0.28	38.33	56.00	17.67	
	4.501	39.56	0.50	40.06	56.00	15.94	
	14.063	43.63	0.84	44.47	60.00	15.53	
	0.150	39.52	0.23	39.75	56.00	16.25	AV
	0.204	37.48	0.25	37.73	53.45	15.72	
	0.339	28.18	0.31	28.49	49.22	20.73	
	0.853	27.69	0.28	27.97	46.00	18.03	
	4.501	28.66	0.50	29.16	46.00	16.84	
	14.063	33.57	0.84	34.41	50.00	15.59	
Neutral	0.150	49.69	0.13	49.82	66.00	16.18	QP
	0.202	47.47	0.12	47.59	63.54	15.95	
	0.339	37.83	0.14	37.97	59.22	21.25	
	0.830	38.02	0.22	38.24	56.00	17.76	
	2.261	37.62	0.19	37.81	56.00	18.19	
	14.364	44.33	0.72	45.05	60.00	14.95	
	0.150	39.04	0.13	39.17	56.00	16.83	AV
	0.202	37.60	0.12	37.72	53.54	15.82	
	0.339	27.41	0.14	27.55	49.22	21.67	
	0.830	27.62	0.22	27.84	46.00	18.16	
	2.261	26.75	0.19	26.94	46.00	19.06	
	14.364	33.68	0.72	34.40	50.00	15.60	

TEST ENGINEER: LUY LV

EUT : LED LCD TV Temperature : 22°C

Model No. : LTDN46K20US Humidity : 48%RH

Serial No. : E1204398-01/01 Date of Test : Apr 09, 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	50.47	0.23	50.70	66.00	15.30	QP
	0.200	48.05	0.25	48.30	63.62	15.32	
	0.343	37.71	0.31	38.02	59.13	21.11	
	0.871	38.35	0.29	38.64	56.00	17.36	
	2.500	40.07	0.40	40.47	56.00	15.53	
	13.841	44.22	0.83	45.05	60.00	14.95	
	0.150	39.27	0.23	39.50	56.00	16.50	AV
	0.200	37.87	0.25	38.12	53.62	15.50	
	0.343	27.34	0.31	27.65	49.13	21.48	
	0.871	27.69	0.29	27.98	46.00	18.02	
	2.500	29.58	0.40	29.98	46.00	16.02	
13.841	34.00	0.83	34.83	50.00	15.17		
Neutral	0.150	50.03	0.13	50.16	66.00	15.84	QP
	0.202	47.06	0.12	47.18	63.54	16.36	
	0.346	38.09	0.14	38.23	59.05	20.82	
	0.813	38.49	0.22	38.71	56.00	17.29	
	2.261	40.33	0.19	40.52	56.00	15.48	
	14.213	43.76	0.72	44.48	60.00	15.52	
	0.150	39.58	0.13	39.71	56.00	16.29	AV
	0.202	36.75	0.12	36.87	53.54	16.67	
	0.346	27.46	0.14	27.60	49.05	21.45	
	0.813	28.10	0.22	28.32	46.00	17.68	
	2.261	30.09	0.19	30.28	46.00	15.72	
14.213	33.18	0.72	33.90	50.00	16.10		

TEST ENGINEER: L V Y L V

4 RADIATED EMISSION TEST

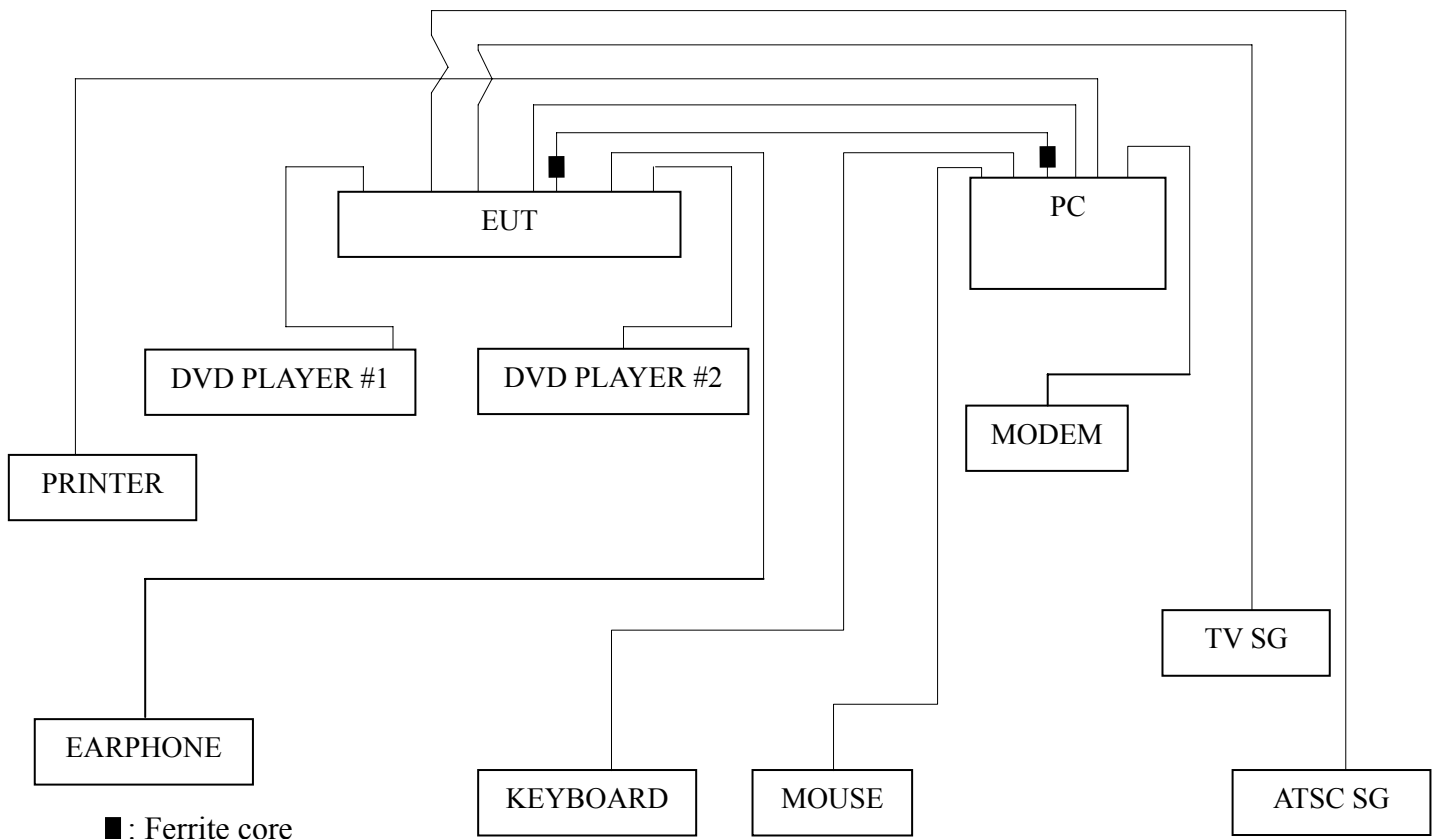
4.1 Test Equipment

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

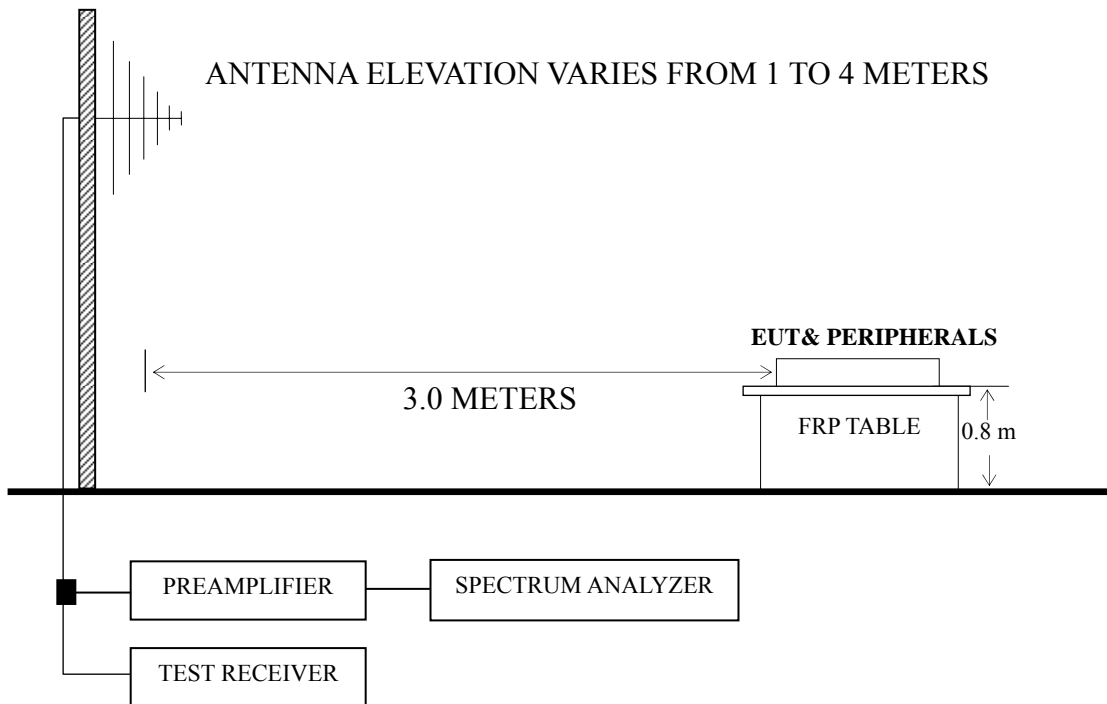
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESVS10	844594/001	Mar 22, 2012	Mar 22, 2013
2.	Preamplifier	Agilent	8447D	2944A10548	Dec 01, 2012	Dec 01, 2013
3.	Bi-log Antenna	TESEQ	CBL6112D	23192	May 06, 2012	May 06, 2013
4.	Spectrum Analyzer	Agilent	E7405A	MY45106600	Mar 22, 2012	Mar 22, 2013
5.	50Ω Coaxial Switch	Anritsu	MP59B	6200426390	Mar 18, 2012	Sep 18, 2012
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	
		($\mu\text{V/m}$)	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.

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	P22
HDMI 1024*768@60Hz	P23
D-Sub 800*600@60Hz	P24
D-Sub 640*480@60Hz	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 800.180 MHz with corrected signal level of 43.60 dB ($\mu\text{V}/\text{m}$) (limit is 46.00 dB ($\mu\text{V}/\text{m}$)), when the antenna was 1.70 m height and the turntable was at 135°. The worst emission at vertical polarization was detected at 83.350 MHz with corrected signal level of 36.64 dB ($\mu\text{V}/\text{m}$) (limit is 40.00 dB ($\mu\text{V}/\text{m}$)), when the antenna was 1.70 m height and the turntable was at 260°.

EUT : LED LCD TV Temperature : 22°C

Model No. : LTDN46K20US Humidity : 60%RH

Serial No. : E1204398-01/01 Date of Test : Apr 04, 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	50.370	12.55	8.51	0.78	21.84	40.00	18.16
	98.870	16.84	11.31	1.03	29.18	43.50	14.32
	197.810	24.74	9.82	1.44	36.00	43.50	7.50
	337.490	24.24	14.74	1.88	40.86	46.00	5.14
	686.690	6.15	19.33	2.65	28.13	46.00	17.87
	800.180	20.11	20.60	2.89	43.60	46.00	2.40
Vertical	50.370	24.12	8.51	0.78	33.41	40.00	6.59
	83.350	24.98	10.70	0.96	36.64	40.00	3.36
	116.330	18.51	11.07	1.12	30.70	43.50	12.80
	248.250	15.16	11.90	1.60	28.66	46.00	17.34
	395.690	14.44	16.20	2.05	32.69	46.00	13.31
	593.570	11.73	18.17	2.44	32.34	46.00	13.66

TEST ENGINEER: RAVEN JIN

EUT : LED LCD TV Temperature : 22°C

Model No. : LTDN46K20US Humidity : 60%RH

Serial No. : E1204398-01/01 Date of Test : Apr 04, 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	98.870	17.03	11.31	1.03	29.37	43.50	14.13
	159.010	16.42	10.27	1.28	27.97	43.50	15.53
	197.810	25.28	9.82	1.44	36.54	43.50	6.96
	336.520	24.38	14.74	1.88	41.00	46.00	5.00
	375.320	13.86	15.79	1.99	31.64	46.00	14.36
	800.180	12.94	20.60	2.89	36.43	46.00	9.57
Vertical	50.370	22.34	8.51	0.78	31.63	40.00	8.37
	65.890	21.83	9.55	0.87	32.25	40.00	7.75
	83.350	23.65	10.70	0.96	35.31	40.00	4.69
	116.330	17.92	11.07	1.12	30.11	43.50	13.39
	395.690	14.15	16.20	2.05	32.40	46.00	13.60
	593.570	10.60	18.17	2.44	31.21	46.00	14.79

TEST ENGINEER: RAVEN JIN

EUT : LED LCD TV Temperature : 22°C

Model No. : LTDN46K20US Humidity : 60%RH

Serial No. : E1204398-01/01 Date of Test : Apr 04, 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	83.350	13.18	10.70	0.96	24.84	40.00	15.16
	98.870	17.49	11.31	1.03	29.83	43.50	13.67
	161.920	16.44	10.23	1.29	27.96	43.50	15.54
	197.810	24.86	9.82	1.44	36.12	43.50	7.38
	336.520	25.19	14.74	1.88	41.81	46.00	4.19
	800.180	17.39	20.60	2.89	40.88	46.00	5.12
Vertical	50.370	25.45	8.51	0.78	34.74	40.00	5.26
	65.890	24.40	9.55	0.87	34.82	40.00	5.18
	83.350	24.56	10.70	0.96	36.22	40.00	3.78
	116.330	20.38	11.07	1.12	32.57	43.50	10.93
	197.810	18.92	9.82	1.44	30.18	43.50	13.32
	395.690	14.88	16.20	2.05	33.13	46.00	12.87

TEST ENGINEER: RAVEN JIN

EUT : LED LCD TV Temperature : 22°C

Model No. : LTDN46K20US Humidity : 60%RH

Serial No. : E1204398-01/01 Date of Test : Apr 04, 2012

Test Mode : D-Sub 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	50.370	12.99	8.51	0.78	22.28	40.00	17.72
	83.350	12.79	10.70	0.96	24.45	40.00	15.55
	98.870	17.49	11.31	1.03	29.83	43.50	13.67
	197.810	24.78	9.82	1.44	36.04	43.50	7.46
	336.520	25.54	14.74	1.88	42.16	46.00	3.84
	800.180	12.81	20.60	2.89	36.30	46.00	9.70
Vertical	50.370	24.44	8.51	0.78	33.73	40.00	6.27
	83.350	25.44	10.70	0.96	37.10	40.00	2.90
	116.330	19.02	11.07	1.12	31.21	43.50	12.29
	197.810	18.27	9.82	1.44	29.53	43.50	13.97
	395.690	14.93	16.20	2.05	33.18	46.00	12.82
	593.570	12.11	18.17	2.44	32.72	46.00	13.28

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	DAA25X20X75\ROH	Qingdao Joinset S&T Co., Ltd.	See Internal Photos Figure 16
		TAT ELECTRONIC TECH CO.,LTD.	
Gasket	DAA1002\ROH	Qingdao Joinset S&T Co., Ltd.	See Internal Photos Figure 17
		TAT ELECTRONIC TECH CO.,LTD.	

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)