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

LCD TV

Model No.	Serial No.	Brand
LHDN32V88MH	E2010012806	Hisense

FCC ID : W9HLCDC0001

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-F10016
Date of Test : Feb 02, 2010
Date of Report : Feb 06, 2010

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TEST REPORT FOR FCC CERTIFICATE

Applicant : Hisense Electric Co., Ltd.

Manufacturer : Hisense Electric Co., Ltd.

EUT Description : LCD TV

Model No.	Serial No.	Brand	Power Supply
LHDN32V88MH	E2010012806	Hisense	120V/60Hz

Test Procedure Used:

FCC RULES AND REGULATIONS PART 15 SUBPART B CLASS B OCTOBER 2008 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 Feb 02, 2010 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.F10015, a Verification report.

Date of Test : Feb 02, 2010 Date of Report : Feb 06, 2010

Producer : Kathy Wang
KATHY WANG / Assistant

Review : Dio Yang
DIO YANG / Deputy Assistant Manager

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

Signatory : Sammy Chen
Authorized Signature EMC SAMMY CHEN/ Assistant 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 2008 AND ANSI C63.4-2003	15.107(a) Class B	Pass
Radiated Disturbance	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2008 AND ANSI C63.4-2003	15.109(a) Class B	Pass

2 GENERAL INFORMATION

2.1 Description of Equipment Under Test

Description : LCD TV

Type of EUT : ☑ Production ☐ Pre-product ☐ Pro-type

Model No.	Serial No.	Brand
LHDN32V88MH	E2010012806	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 : SAMSUNG
M/N : LTA320AP02

Max Resolution : 1024*768@60Hz

D-Sub Cable : Shielded, Detachable, 1.85m,
with two cores on cable

HDMI Cable : Shielded, Detachable, 1.85m,
without core on cable

Power Cord : Unshielded, Detachable, 1.80m

Remark:
The EUT is a LCD TV which input/output ports as follows:
Side View:
(1) One USB Port
Connected with U-Disk
(2) One ANT Port
Connected with TV SG/ATSC SG
(3) One MPI Port
Only for optical use
(4) One component of YPbPr1 Port
Connected with DVD #1
(5) One component of YPbPr1 Audio Port
Connected with DVD #1
(6) One VGA Port
Connected with PC
(7) One PC Audio Port
Connected with PC
(8) One HDMI4 Port
Connected with PC

Back View:

(9)	One HDMI1 Port	Connected with DVD #1
(10)	One HDMI2 Port	Connected with DVD #2
(11)	One HDMI3 Port	Connected with DVD #3
(12)	One component of YPbPr2 Port	Connected with DVD #2
(13)	One component of YPbPr2 Audio Port	Connected with DVD #2
(14)	One Headphone Port	Connected with earphone
(15)	One component of AV Port	Connected with DVD #3
(16)	One S-Video Port	Connected with DVD #3
(17)	One Digital Audio Out Port	Connected with DVD #3
(18)	One Audio Out Port	Connected with Speaker
(19)	One RS232 Port	Only for service, do no open to customer

2.2 Peripherals

2.2.1 PC

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)

2.2.2 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 #1

Manufacturer	:	PHILIPS
Model Number	:	DVP3986K/93
Serial Number	:	KX1A0902120108
Certificate	:	FCC DoC, CE/EMC, CCC

2.2.10 DVD#2

Manufacturer	:	PHILIPS
Model Number	:	DVP3986K/93
Serial Number	:	KX1A0902120082
Certificate	:	FCC DoC, CE/EMC, CCC

2.2.11 DVD#3

Manufacturer	:	LG
Model Number	:	DF9921N
Serial Number	:	3850R-N846W
Certificate	:	FCC DoC, CE/EMC, CCC

2.2.12 Speaker

Manufacturer	:	DIBA
Model Number	:	T520
Serial Number	:	10628

2.3 Description of Test Facility

Site Description (Semi-Anechoic 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 = 1.26 dB
Radiated Emission Expanded Uncertainty	:	U = 3.02 dB

3 CONDUCTED EMISSION TEST

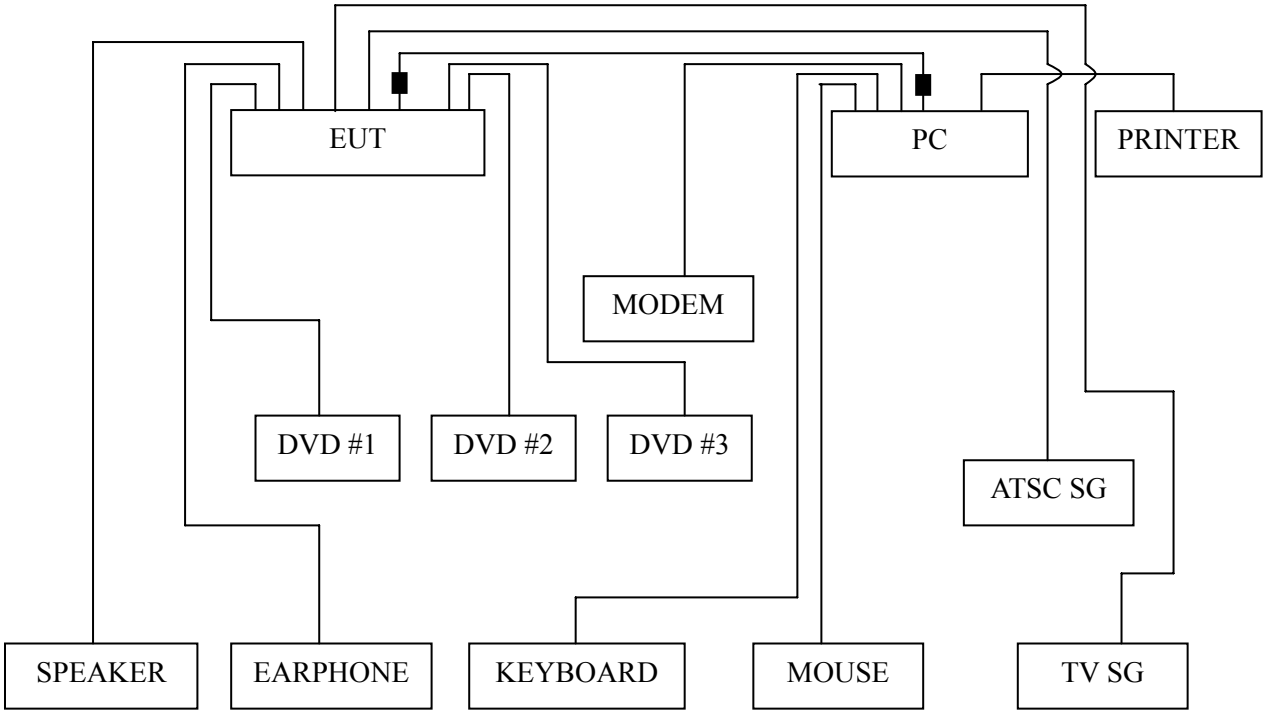
3.1.1 Test Equipment

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	Oct 15, 2009	Oct 15, 2010
2.	Artificial Mains Network (AMN)	R&S	ESH2-Z5	843890/011	Apr 02, 2009	Apr 02, 2010
3.	Line Impedance Stabilization Network (LISN)	Kyoritsu	KNW-407	8-1280-4	Apr 02, 2009	Apr 02, 2010
4.	50 Ω Coaxial Switch	Anritsu	MP59B	6200426389	Sep 19, 2009	Mar 19, 2010
5.	50Ω Terminator	Anritsu	BNC	001	Apr 02, 2009	Apr 02, 2010
6.	Software	Audix	E3	SET00200 9804M592	--	--

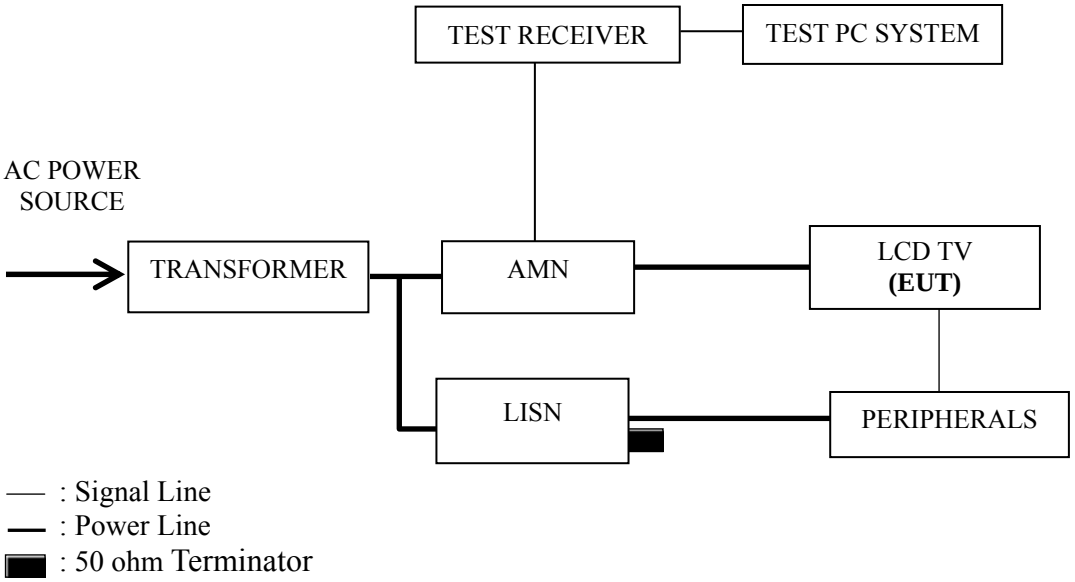
3.2 Block Diagram of Test Setup

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 (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 Repeat above procedure from 3.5.3 to 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 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
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	P13
D-Sub 800*600@60Hz	P14
D-Sub 1024*768@60Hz	P15
HDMI 640*480@60Hz	P16
HDMI 800*600@60Hz	P17
HDMI 1024*768@60Hz	P18
USB Play	P19

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 800*600@60Hz test mode. The worst emission is detected at 0.188 MHz (Quasi-Peak) with corrected signal level of 57.86 dB (μV) (limit is 64.11 dB (μV)), when the Line of the EUT is connected to AMN.

EUT	:	LCD TV	Temperature :	22℃	
Model No.	:	LHDN32V88MH	Humidity	:	48%RH
Serial No.	:	E2010012806	Date of Test	:	Feb 02, 2010
Test Mode	:	D-Sub 640*480@60Hz			

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.172	55.61	0.24	55.85	64.86	9.01	QP
	0.228	46.77	0.32	47.09	62.52	15.43	
	0.393	44.03	0.43	44.46	57.99	13.53	
	0.653	36.62	0.45	37.07	56.00	18.93	
	2.581	28.06	0.57	28.63	56.00	27.37	
	21.373	41.55	1.10	42.65	60.00	17.35	
	0.172	41.35	0.24	41.59	54.86	13.27	AV
	0.228	33.11	0.32	33.43	52.52	19.09	
	0.393	36.00	0.43	36.43	47.99	11.56	
	0.653	29.22	0.45	29.67	46.00	16.33	
	2.581	19.39	0.57	19.96	46.00	26.04	
	21.373	34.24	1.10	35.34	50.00	14.66	
Neutral	**0.175**	**57.45**	**0.22**	**57.67**	**64.71**	**7.04**	QP
	0.389	44.72	0.39	45.11	58.08	12.97	
	0.490	38.26	0.44	38.70	56.17	17.47	
	0.779	33.67	0.47	34.14	56.00	21.86	
	2.581	27.01	0.57	27.58	56.00	28.42	
	21.373	39.14	1.06	40.20	60.00	19.80	
	0.175	44.37	0.22	44.59	54.71	10.12	AV
	0.389	38.93	0.39	39.32	48.08	8.76	
	0.490	24.79	0.44	25.23	46.17	20.94	
	0.779	28.16	0.47	28.63	46.00	17.37	
	2.581	19.02	0.57	19.59	46.00	26.41	
	21.373	23.54	1.06	24.60	50.00	25.40	

TEST ENGINEER: HUGH HUANG

EUT	:	LCD TV	Temperature :	22℃	
Model No.	:	LHDN32V88MH	Humidity :	48%RH	
Serial No.	:	E2010012806	Date of Test :	Feb 02, 2010	
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
Line	**0.178**	**56.87**	**0.24**	**57.11**	**64.59**	**7.48**	QP
	0.300	44.76	0.36	45.12	60.24	15.12	
	0.521	42.44	0.47	42.91	56.00	13.09	
	2.581	29.03	0.57	29.60	56.00	26.40	
	9.451	29.43	0.72	30.15	60.00	29.85	
	21.373	44.31	1.10	45.41	60.00	14.59	
	0.178	44.72	0.24	44.96	54.59	9.63	AV
	0.300	25.44	0.36	25.80	50.24	24.44	
	0.521	29.13	0.47	29.60	46.00	16.40	
	2.581	19.73	0.57	20.30	46.00	25.70	
	9.451	16.76	0.72	17.48	50.00	32.52	
	21.373	27.93	1.10	29.03	50.00	20.97	
Neutral	0.176	56.50	0.22	56.72	64.68	7.96	QP
	0.300	46.69	0.34	47.03	60.24	13.21	
	0.521	41.76	0.44	42.20	56.00	13.80	
	1.800	27.87	0.54	28.41	56.00	27.59	
	9.654	26.79	0.75	27.54	60.00	32.46	
	21.373	41.12	1.06	42.18	60.00	17.82	
	0.176	43.41	0.22	43.63	54.68	11.05	AV
	0.300	29.74	0.34	30.08	50.24	20.16	
	0.521	30.60	0.44	31.04	46.00	14.96	
	1.800	13.88	0.54	14.42	46.00	31.58	
	9.654	17.16	0.75	17.91	50.00	32.09	
	21.373	25.84	1.06	26.90	50.00	23.10	

TEST ENGINEER: HUGH HUANG

EUT	:	LCD TV	Temperature :	22℃	
Model No.	:	LHDN32V88MH	Humidity :	48%RH	
Serial No.	:	E2010012806	Date of Test :	Feb 02, 2010	
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
Line	**0.172**	**57.05**	**0.24**	**57.29**	**64.86**	**7.57**	QP
	0.393	46.01	0.43	46.44	57.99	11.55	
	0.499	41.82	0.47	42.29	56.01	13.72	
	2.581	29.37	0.57	29.94	56.00	26.06	
	9.302	29.17	0.72	29.89	60.00	30.11	
	21.373	44.08	1.10	45.18	60.00	14.82	
	0.172	39.81	0.24	40.05	54.86	14.81	AV
	0.393	36.67	0.43	37.10	47.99	10.89	
	0.499	25.28	0.47	25.75	46.01	20.26	
	2.581	19.52	0.57	20.09	46.00	25.91	
	9.302	17.74	0.72	18.46	50.00	31.54	
	21.373	28.30	1.10	29.40	50.00	20.60	
Neutral	0.176	56.78	0.22	57.00	64.68	7.68	QP
	0.300	46.86	0.34	47.20	60.24	13.04	
	0.510	41.41	0.44	41.85	56.00	14.15	
	1.800	30.24	0.54	30.78	56.00	25.22	
	9.861	28.39	0.75	29.14	60.00	30.86	
	21.373	42.41	1.06	43.47	60.00	16.53	
	0.176	44.83	0.22	45.05	54.68	9.63	AV
	0.300	30.64	0.34	30.98	50.24	19.26	
	0.510	21.43	0.44	21.87	46.00	24.13	
	1.800	15.20	0.54	15.74	46.00	30.26	
	9.861	21.95	0.75	22.70	50.00	27.30	
	21.373	26.72	1.06	27.78	50.00	22.22	

TEST ENGINEER: HUGH HUANG

EUT	:	LCD TV	Temperature :	22℃	
Model No.	:	LHDN32V88MH	Humidity	:	48%RH
Serial No.	:	E2010012806	Date of Test	:	Feb 02, 2010
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
Line	0.188	53.73	0.25	53.98	64.11	10.13	QP
	0.389	44.72	0.42	45.14	58.08	12.94	
	0.499	37.79	0.47	38.26	56.01	17.75	
	2.581	27.03	0.57	27.60	56.00	28.40	
	8.148	23.30	0.70	24.00	60.00	36.00	
	21.830	41.64	1.09	42.73	60.00	17.27	
	0.188	39.37	0.25	39.62	54.11	14.49	AV
	0.389	39.31	0.42	39.73	48.08	8.35	
	0.499	20.04	0.47	20.51	46.01	25.50	
	2.581	18.33	0.57	18.90	46.00	27.10	
	8.148	15.66	0.70	16.36	50.00	33.64	
	21.830	28.50	1.09	29.59	50.00	20.41	
Neutral	**0.186**	**56.27**	**0.23**	**56.50**	**64.20**	**7.70**	QP
	0.389	46.78	0.39	47.17	58.08	10.91	
	0.499	41.31	0.44	41.75	56.01	14.26	
	1.552	31.45	0.51	31.96	56.00	24.04	
	5.362	26.02	0.64	26.66	60.00	33.34	
	21.830	41.28	1.04	42.32	60.00	17.68	
	0.186	40.72	0.23	40.95	54.20	13.25	AV
	0.389	39.09	0.39	39.48	48.08	8.60	
	0.499	24.32	0.44	24.76	46.01	21.25	
	1.552	22.33	0.51	22.84	46.00	23.16	
	5.362	15.67	0.64	16.31	50.00	33.69	
	21.830	24.36	1.04	25.40	50.00	24.60	

TEST ENGINEER: HUGH HUANG

EUT	:	LCD TV	Temperature :	22℃	
Model No.	:	LHDN32V88MH	Humidity :	48%RH	
Serial No.	:	E2010012806	Date of Test :	Feb 02, 2010	
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
Line	**0.188**	**57.61**	**0.25**	**57.86**	**64.11**	**6.25**	QP
	0.389	46.72	0.42	47.14	58.08	10.94	
	0.499	40.53	0.47	41.00	56.01	15.01	
	2.581	29.16	0.57	29.73	56.00	26.27	
	8.148	27.22	0.70	27.92	60.00	32.08	
	21.830	44.00	1.09	45.09	60.00	14.91	
	0.188	39.44	0.25	39.69	54.11	14.42	AV
	0.389	39.45	0.42	39.87	48.08	8.21	
	0.499	20.12	0.47	20.59	46.01	25.42	
	2.581	18.41	0.57	18.98	46.00	27.02	
	8.148	15.29	0.70	15.99	50.00	34.01	
	21.830	28.77	1.09	29.86	50.00	20.14	
Neutral	0.188	55.40	0.23	55.63	64.11	8.48	QP
	0.389	45.70	0.39	46.09	58.08	11.99	
	0.499	40.40	0.44	40.84	56.01	15.17	
	1.568	29.00	0.51	29.51	56.00	26.49	
	9.757	26.53	0.75	27.28	60.00	32.72	
	21.830	41.39	1.04	42.43	60.00	17.57	
	0.188	40.03	0.23	40.26	54.11	13.85	AV
	0.389	39.44	0.39	39.83	48.08	8.25	
	0.499	24.43	0.44	24.87	46.01	21.14	
	1.568	19.91	0.51	20.42	46.00	25.58	
	9.757	15.69	0.75	16.44	50.00	33.56	
	21.830	24.37	1.04	25.41	50.00	24.59	

TEST ENGINEER: HUGH HUANG

EUT	:	LCD TV	Temperature	:	22℃
Model No.	:	LHDN32V88MH	Humidity	:	48%RH
Serial No.	:	E2010012806	Date of Test	:	Feb 02, 2010
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
Line	**0.190**	**56.34**	**0.25**	**56.59**	**64.02**	**7.43**	QP
	0.389	47.64	0.42	48.06	58.08	10.02	
	0.499	40.79	0.47	41.26	56.01	14.75	
	2.581	30.00	0.57	30.57	56.00	25.43	
	8.323	27.03	0.71	27.74	60.00	32.26	
	21.830	44.51	1.09	45.60	60.00	14.40	
	0.190	39.49	0.25	39.74	54.02	14.28	AV
	0.389	39.59	0.42	40.01	48.08	8.07	
	0.499	19.97	0.47	20.44	46.01	25.57	
	2.581	18.12	0.57	18.69	46.00	27.31	
	8.323	14.19	0.71	14.90	50.00	35.10	
	21.830	29.13	1.09	30.22	50.00	19.78	
Neutral	0.188	56.40	0.23	56.63	64.11	7.48	QP
	0.393	45.78	0.40	46.18	57.99	11.81	
	0.499	41.64	0.44	42.08	56.01	13.93	
	2.066	29.95	0.54	30.49	56.00	25.51	
	9.861	26.43	0.75	27.18	60.00	32.82	
	21.373	41.76	1.06	42.82	60.00	17.18	
	0.188	40.00	0.23	40.23	54.11	13.88	AV
	0.393	38.14	0.40	38.54	47.99	9.45	
	0.499	24.40	0.44	24.84	46.01	21.17	
	2.066	19.58	0.54	20.12	46.00	25.88	
	9.861	14.22	0.75	14.97	50.00	35.03	
	21.373	22.85	1.06	23.91	50.00	26.09	

TEST ENGINEER: HUGH HUANG

EUT	:	LCD TV	Temperature	:	22℃
Model No.	:	LHDN32V88MH	Humidity	:	48%RH
Serial No.	:	E2010012806	Date of Test	:	Feb 02, 2010
Test Mode	:	USB Play			

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	**0.178**	**56.88**	**0.24**	**57.12**	**64.59**	**7.47**	QP
	0.389	45.32	0.42	45.74	58.08	12.34	
	0.516	40.89	0.47	41.36	56.00	14.64	
	2.869	27.68	0.57	28.25	56.00	27.75	
	8.148	30.58	0.70	31.28	60.00	28.72	
	21.373	44.19	1.10	45.29	60.00	14.71	
	0.178	44.48	0.24	44.72	54.59	9.87	AV
	0.389	39.21	0.42	39.63	48.08	8.45	
	0.516	27.04	0.47	27.51	46.00	18.49	
	2.869	16.43	0.57	17.00	46.00	29.00	
	8.148	20.25	0.70	20.95	50.00	29.05	
	21.373	28.19	1.10	29.29	50.00	20.71	
Neutral	0.178	55.75	0.22	55.97	64.59	8.62	QP
	0.389	45.17	0.39	45.56	58.08	12.52	
	0.510	40.52	0.44	40.96	56.00	15.04	
	1.800	28.00	0.54	28.54	56.00	27.46	
	8.148	30.48	0.71	31.19	60.00	28.81	
	21.373	42.35	1.06	43.41	60.00	16.59	
	0.178	44.35	0.22	44.57	54.59	10.02	AV
	0.389	39.10	0.39	39.49	48.08	8.59	
	0.510	18.11	0.44	18.55	46.00	27.45	
	1.800	14.59	0.54	15.13	46.00	30.87	
	8.148	19.21	0.71	19.92	50.00	30.08	
	21.373	24.56	1.06	25.62	50.00	24.38	

TEST ENGINEER: HUGH HUANG

4 RADIATED EMISSION TEST

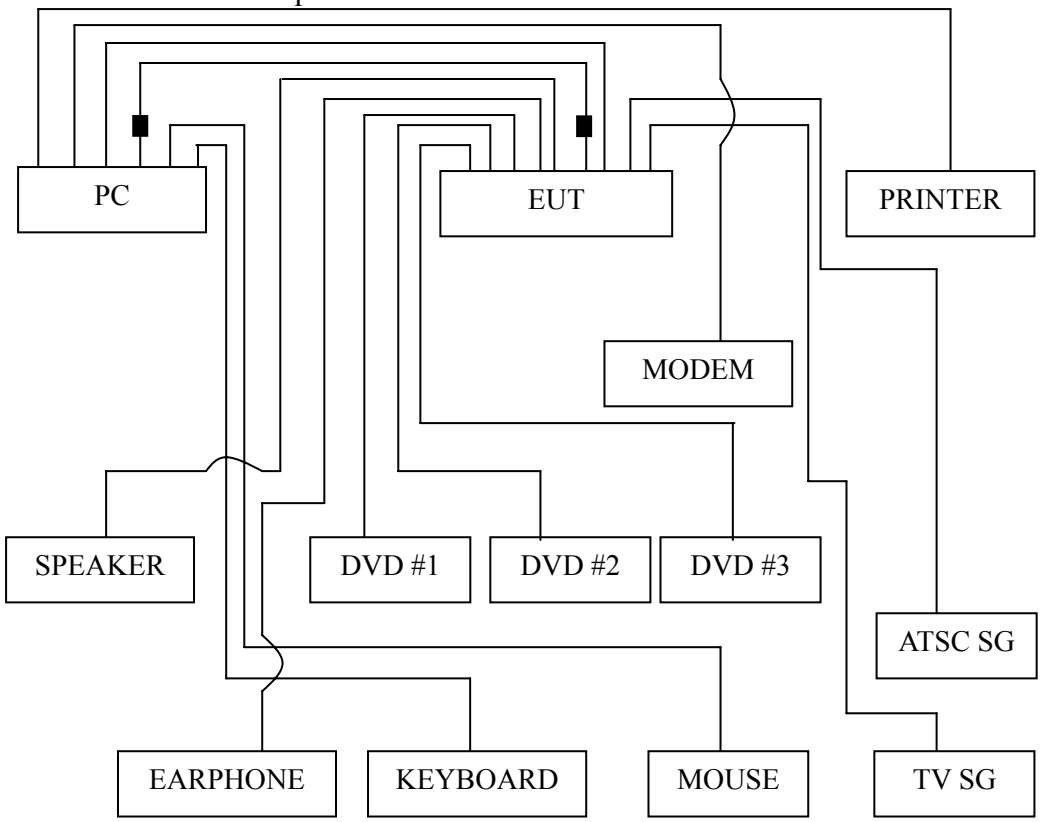
4.1 Test Equipment

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 07, 2009	Mar 07, 2010
2.	Preamplifier	Agilent	8447D	2944A10548	Sep 19, 2009	Mar 19, 2010
3.	Bi-log Antenna	TESEQ	CBL6112D	23193	May 14, 2008	May 14, 2010
4.	Spectrum Analyzer	Agilent	E7405A	MY45106600	May 19, 2009	May 19, 2010
5.	Software	Audix	E3	SET00200 9912M295-2	--	--

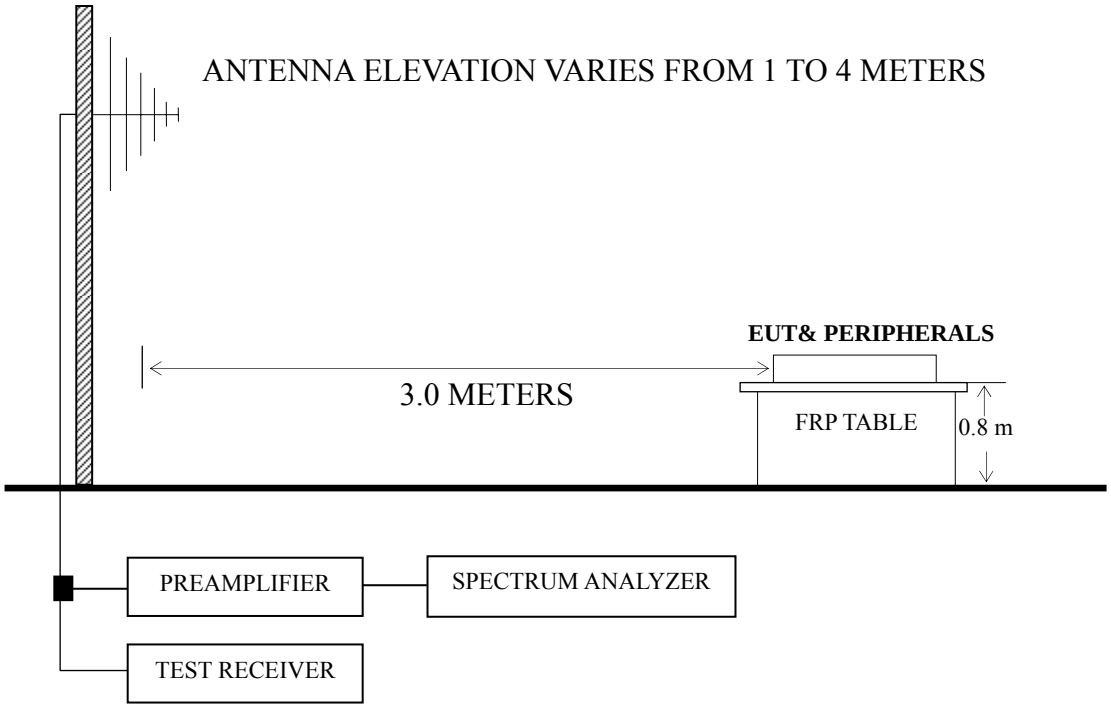
4.2 Block Diagram of Test Setup

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 (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.

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 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	P23
D-Sub 800*600@60Hz	P24
D-Sub 1024*768@60Hz	P25
HDMI 640*480@60Hz	P26
HDMI 800*600@60Hz	P27
HDMI 1024*768@60Hz	P28
USB Play	P29

NOTE 1 – Emission Level = Antenna Factor + Cable Loss + Meter Reading.

NOTE 2 – The emission levels that are 20dB below the official limit are not reported.

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 800*600@60Hz test mode. The worst emission at horizontal polarization was detected at 837.040 MHz with corrected signal level of 40.71dB (μV/m) (limit is 46.00dB (μV/m)), when the antenna was 1.20 m height and the turntable was at 250°. The worst emission at vertical polarization was detected at 36.790 MHz with corrected signal level of 37.38 dB (μV/m) (limit is 40.00 dB (μV/m)), when the antenna was 1.10 m height and the turntable was at 100°.

EUT	:	LCD TV	Temperature :	22℃
Model No.	:	LHDN32V88MH	Humidity :	60%RH
Serial No.	:	E2010012806	Date of Test :	Feb 02, 2010
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	33.880	7.13	17.44	0.65	25.22	40.00	14.78
	135.730	23.46	12.28	1.19	36.93	43.50	6.57
	300.630	22.30	13.93	1.76	37.99	46.00	8.01
	455.830	11.40	17.32	2.15	30.87	46.00	15.13
	678.930	19.20	19.61	2.64	41.45	46.00	4.55
	837.040	**18.51**	**21.09**	**2.94**	**42.54**	**46.00**	**3.46**
Vertical	**36.790**	**19.78**	**15.80**	**0.68**	**36.26**	**40.00**	**3.74**
	85.290	23.75	8.66	0.97	33.38	40.00	6.62
	119.240	18.78	12.97	1.13	32.88	43.50	10.62
	455.830	12.92	17.32	2.15	32.39	46.00	13.61
	606.180	19.18	19.24	2.47	40.89	46.00	5.11
	866.140	17.18	21.39	2.97	41.54	46.00	4.46

TEST ENGINEER: RAVEN JIN

EUT	:	LCD TV	Temperature :	22℃
Model No.	:	LHDN32V88MH	Humidity :	60%RH
Serial No.	:	E2010012806	Date of Test :	Feb 02, 2010
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	33.880	6.60	17.44	0.65	24.69	40.00	15.31
	135.730	24.28	12.28	1.19	37.75	43.50	5.75
	303.540	21.61	14.00	1.77	37.38	46.00	8.62
	458.740	10.09	17.35	2.15	29.59	46.00	16.41
	676.990	17.86	19.59	2.64	40.09	46.00	5.91
	837.040	**16.68**	**21.09**	**2.94**	**40.71**	**46.00**	**5.29**
Vertical	**36.790**	**20.90**	**15.80**	**0.68**	**37.38**	**40.00**	**2.62**
	94.990	25.30	10.45	1.03	36.78	43.50	6.72
	135.730	23.81	12.28	1.19	37.28	43.50	6.22
	458.740	12.01	17.35	2.15	31.51	46.00	14.49
	601.330	17.59	19.21	2.47	39.27	46.00	6.73
	863.230	17.31	21.35	2.97	41.63	46.00	4.37

TEST ENGINEER: RAVEN JIN

EUT	:	LCD TV	Temperature :	22℃
Model No.	:	LHDN32V88MH	Humidity :	60%RH
Serial No.	:	E2010012806	Date of Test :	Feb 02, 2010
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	36.790	8.43	15.80	0.68	24.91	40.00	15.09
	87.230	**25.39**	**8.96**	**0.99**	**35.34**	**40.00**	**4.66**
	174.530	25.36	10.07	1.33	36.76	43.50	6.74
	240.490	13.90	12.56	1.58	28.04	46.00	17.96
	620.730	13.47	19.30	2.51	35.28	46.00	10.72
	837.040	15.93	21.09	2.94	39.96	46.00	6.04
Vertical	36.790	19.86	15.80	0.68	36.34	40.00	3.66
	87.230	**26.96**	**8.96**	**0.99**	**36.91**	**40.00**	**3.09**
	109.540	20.45	12.25	1.09	33.79	43.50	9.71
	174.530	22.65	10.07	1.33	34.05	43.50	9.45
	604.240	19.03	19.22	2.47	40.72	46.00	5.28
	866.140	16.76	21.39	2.97	41.12	46.00	4.88

TEST ENGINEER: RAVEN JIN

EUT	:	LCD TV	Temperature :	22℃
Model No.	:	LHDN32V88MH	Humidity :	60%RH
Serial No.	:	E2010012806	Date of Test :	Feb 02, 2010
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)
Horizontal	30.970	2.25	19.03	0.63	21.91	40.00	18.09
	135.730	**25.20**	**12.28**	**1.19**	**38.67**	**43.50**	**4.83**
	300.630	17.70	13.93	1.76	33.39	46.00	12.61
	455.830	10.20	17.32	2.15	29.67	46.00	16.33
	676.990	16.39	19.59	2.64	38.62	46.00	7.38
	863.230	14.31	21.35	2.97	38.63	46.00	7.37
Vertical	**36.790**	**20.75**	**15.80**	**0.68**	**37.23**	**40.00**	**2.77**
	94.990	24.34	10.45	1.03	35.82	43.50	7.68
	135.730	23.31	12.28	1.19	36.78	43.50	6.72
	458.740	12.44	17.35	2.15	31.94	46.00	14.06
	604.240	18.44	19.22	2.47	40.13	46.00	5.87
	863.230	16.71	21.35	2.97	41.03	46.00	4.97

TEST ENGINEER: RAVEN JIN

EUT	:	LCD TV	Temperature :	22℃
Model No.	:	LHDN32V88MH	Humidity :	60%RH
Serial No.	:	E2010012806	Date of Test :	Feb 02, 2010
Test Mode	:	HDMI 800*600@60Hz		

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	36.790	6.14	15.80	0.68	22.62	40.00	17.38
	135.730	23.40	12.28	1.19	36.87	43.50	6.63
	300.630	20.44	13.93	1.76	36.13	46.00	9.87
	453.890	9.11	17.29	2.13	28.53	46.00	17.47
	620.730	**18.46**	**19.30**	**2.51**	**40.27**	**46.00**	**5.73**
	863.230	15.11	21.35	2.97	39.43	46.00	6.57
Vertical	**36.790**	**19.66**	**15.80**	**0.68**	**36.14**	**40.00**	**3.86**
	135.730	23.84	12.28	1.19	37.31	43.50	6.19
	279.290	11.68	13.52	1.70	26.90	46.00	19.10
	458.740	12.04	17.35	2.15	31.54	46.00	14.46
	676.990	14.92	19.59	2.64	37.15	46.00	8.85
	863.230	13.75	21.35	2.97	38.07	46.00	7.93

TEST ENGINEER: RAVEN JIN

EUT	:	LCD TV	Temperature :	22℃
Model No.	:	LHDN32V88MH	Humidity :	60%RH
Serial No.	:	E2010012806	Date of Test :	Feb 02, 2010
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	36.790	8.03	15.80	0.68	24.51	40.00	15.49
	135.730	**25.56**	**12.28**	**1.19**	**39.03**	**43.50**	**4.47**
	281.230	13.93	13.57	1.70	29.20	46.00	16.80
	455.830	9.48	17.32	2.15	28.95	46.00	17.05
	601.330	18.72	19.21	2.47	40.40	46.00	5.60
	809.880	14.83	20.80	2.89	38.52	46.00	7.48
Vertical	33.880	16.87	17.44	0.65	34.96	40.00	5.04
	94.990	23.32	10.45	1.03	34.80	43.50	8.70
	135.730	21.24	12.28	1.19	34.71	43.50	8.79
	405.390	10.63	16.57	2.01	29.21	46.00	16.79
	601.330	18.22	19.21	2.47	39.90	46.00	6.10
	863.230	**17.27**	**21.35**	**2.97**	**41.59**	**46.00**	**4.41**

TEST ENGINEER: RAVEN JIN

EUT	:	LCD TV	Temperature :	22℃
Model No.	:	LHDN32V88MH	Humidity :	60%RH
Serial No.	:	E2010012806	Date of Test :	Feb 02, 2010
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 (μV/m)	Margin (dB)
Horizontal	36.790	7.28	15.80	0.68	23.76	40.00	16.24
	135.730	25.35	12.28	1.19	38.82	43.50	4.68
	298.690	13.97	13.88	1.75	29.60	46.00	16.40
	458.740	8.70	17.35	2.15	28.20	46.00	17.80
	601.330	14.91	19.21	2.47	36.59	46.00	9.41
	809.880	**17.76**	**20.80**	**2.89**	**41.45**	**46.00**	**4.55**
Vertical	36.790	19.92	15.80	0.68	36.40	40.00	3.60
	135.730	22.00	12.28	1.19	35.47	43.50	8.03
	174.530	22.40	10.07	1.33	33.80	43.50	9.70
	487.840	10.53	17.75	2.23	30.51	46.00	15.49
	604.240	18.53	19.22	2.47	40.22	46.00	5.78
	863.230	**18.31**	**21.35**	**2.97**	**42.63**	**46.00**	**3.37**

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
Ferrite core	ZCAT3035-1330\ROH	FEELUX Rui Feng Electronic Co., Ltd. Hai An Magnetic Material No.2 Factory	See Internal Photo Figure 28
Ferrite core	ZCAT2132-1130\ROH	FEELUX Rui Feng Electronic Co., Ltd. Hai An Magnetic Material No.2 Factory	See Internal Photo Figure 29

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)