

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

LED LCD TV

Model No.	Brand
55H6B	Hisense
55H6B*	

FCC ID : W9HLCDF0051

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-F15001A2
Date of Test : Jul 04 – 08, 2014
Date of Report : Jul 13, 2015

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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
Refer to Sec2.1	Hisense	120V/60Hz

Test Procedure Used:

*FCC RULES AND REGULATIONS PART 15 SUBPART B CLASS B OCTOBER 2014
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 Jul 04 - 08, 2014 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.

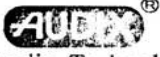
This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

The test results for EUT's TV functions are contained in No.F15002A2, a Verification report.

Date of Test : Jul 04 - 08, 2014 Date of Report : Jul 13, 2015

Producer : Kathy Wang
KATHY WANG / Assistant

Review : Sammy Chen
SAMMY CHEN / Manager

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

Signatory : Byron Kwo
Authorized Signature EMC BYRON KWO / Assistant General 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 2014 AND ANSI C63.4-2003	15.107(a) Class B	Pass
Radiated Disturbance	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2014 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. : 55H6B,55H6B*

Note #1 : The above models are all the same except for model name.55H6B model is tested and recorded in the report.

Note #2 : The modified histories of report are as follows:

Report No.	Model No.	Rev. Summary	Edition No.	Data of Rev.
ACI-F15001	LTDN55K2203GWUS, 55H6B	Original Report	0	Jan 05, 2015
ACI-F15001A1	55H6B*	1. To add one new model name	Rev. A1	Apr 03, 2015
ACI-F15001A2	55H6B*, 55H6B	1. To delete one model name. 2. To add a new panel.	Rev. A2	Jul 10, 2015

Applicant : Hisense Electric Co., Ltd.
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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 :HD550DF-B52(110)\SO\GM\ROH

Max Resolution : 1920*1080@60Hz

HDMI Cable : Shielded, Detachable, 1.00m with two cores

Power Cord : Unshielded, Detachable, 1.80m

Remark:

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

Back Port:

- (1) One LAN Port : Connected with PC
- (2) One HDMI3 Port : Connected with DVD PLAYER #1
- (3) One DIGITAL AUDIO OUT Port : Connected with DVD PLAYER #1
- (4) One component of Audio/YPbPr Audio Port : Connected with DVD PLAYER #2
- (5) One component of Video/YPbPr Port : Connected with DVD PLAYER #2
- (6) One AV In Port : Connected with DVD PLAYER #1

Side Port:

- (1) Two USB Ports : Connected with U-Disk #1/#2
- (2) One HDMI2/ARC Port : Connected with DVD PLAYER #2
- (3) One HDMI1 Port : Connected with PC
- (4) One AUDIO OUT Port : Connected with Earphone
- (5) One ANT/CABLE IN Port : Connected with Antenna or ATSC SG / TV SG
- (6) One Debug Port : Do not open to customer

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;

2.2.2 Printer

Manufacturer : HP
Model Number : P1007
Serial Number : VNFN713831
Data Cable : Shielded, detachable, 1.8m
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 : audio-technica
Model Number : ATH-CKL200

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

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 : CCC

2.2.10 DVD PLAYER #2

Manufacturer : PHILIPS
Model Number : DVP3986K/93
Serial Number : KX1A0902120082
Certificate : CCC

2.2.11 U-Disk #1

Manufacturer : Kingmax
Model Number : 8G
Certificate : CE FCC/IC

2.2.12 U-Disk #2

Manufacturer : Kingmax
Model Number : 8G
Certificate : CE FCC/IC

2.3 Description of Test Facility

Site Description : Sept. 17, 1998 file on
(No.3 3m Chamber) Jan. 15, 2015 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 34 Bldg 680 Guiping Rd,
Caohejing Hi-Tech Park,
Shanghai 200233, China

FCC registration Number : 91789

Accredited by NVLAP, Lab Code: 200371-0

2.4 Measurement Uncertainty

Conducted Emission Expanded Uncertainty : U = 2.8dB

Radiated Emission Expanded Uncertainty (30-200MHz):
U = 4.4dB (Horizontal)
U = 4.4dB (Vertical)

Radiated Emission Expanded Uncertainty (200M-1GHz):
U = 4.4dB (Horizontal)
U = 5.4dB (Vertical)

Radiated Emission Expanded Uncertainty (1GHz-6GHz):
U = 5.1 dB

3 CONDUCTED EMISSION TEST

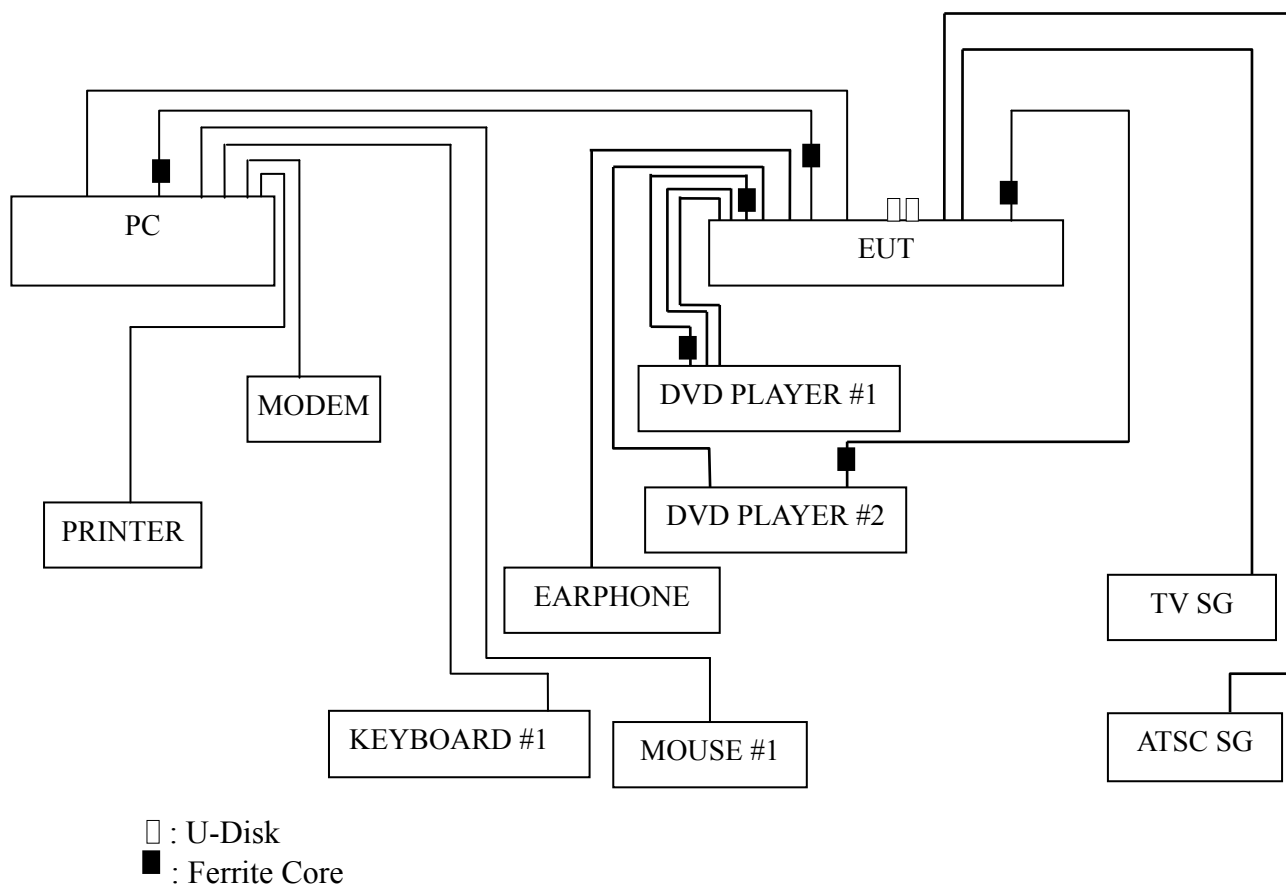
3.1 Test Equipment

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

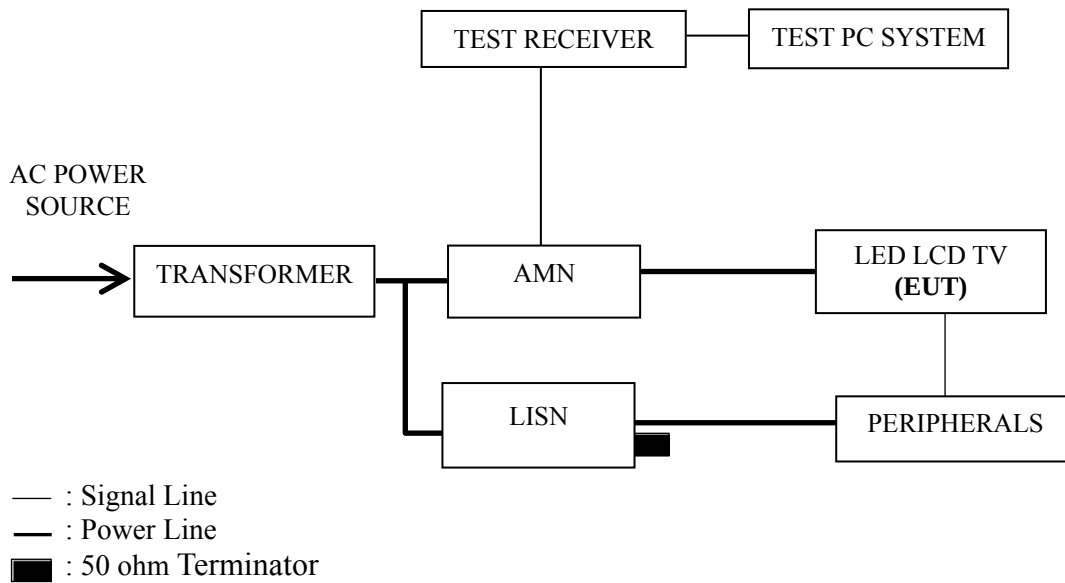
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCI	101303	Sep 11, 2014	Sep 10, 2015
2.	Artificial Mains Network (AMN)	R&S	ENV4200	100125	Jun 27, 2015	Jun 26, 2016
3.	Line Impedance Stabilization Network (LISN)	Kyoritsu	KNW-407	8-1280-4	Mar 20, 2015	Mar 19, 2016
4.	50Ω Coaxial Switch	Anritsu	MP59B	6200426389	Sep 18, 2015	Mar 17, 2016
5.	50Ω Terminator	Anritsu	BNC	001	Mar 20, 2015	Mar 19, 2016
6.	Software	Audix	E3	6.111206	--	--

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 HDMI Input).

3.5.5 PC system sent the 1kHz audio signal to EUT through audio port, the EUT speak out 1kHz audio signal.

3.5.6 In USB Play mode, set the EUT play digital media from U-Disk.

3.5.7 In LAN Play mode, set the EUT play digital media through LAN port.

3.5.8 The other peripherals devices were driven and operated during the test.

3.5.9 The test modes are as follows:

Test Mode
HDMI 1920*1080@60Hz & 1kHz playing
HDMI 1280*1024@75Hz & 1kHz playing
HDMI 640*480@60Hz & 1kHz playing
USB Play
LAN 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
HDMI 1920*1080@60Hz & 1kHz playing	P14
HDMI 1280*1024@75Hz & 1kHz playing	P15
HDMI 640*480@60Hz & 1kHz playing	P16
USB Play	P17
LAN Play	P18

NOTE 1 – Factor = Cable Loss + AMN Factor.

NOTE 2 – Emission Level = Meter Reading + Factor.

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

NOTE 4 – The worst case is for HDMI 640*480@60Hz & 1kHz Playing test mode. The worst emission is detected at 1.210 MHz (AV Value) with corrected signal level of 30.91 dB (μV) (limit is 46.00 dB (μV)), when the Neutral of the EUT is connected to AMN.

EUT : LED LCD TV Temperature : 22°C

Model No. : 55H6B Humidity : 48%RH

Test Mode : HDMI 1920*1080@60Hz Date of Test : Jul 05, 2015
& 1kHz Playing

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.217	29.50	10.51	40.01	62.94	22.93	QP
	0.582	27.30	10.40	37.70	56.00	18.30	
	1.191	27.60	10.39	37.99	56.00	18.01	
	1.967	26.70	10.41	37.11	56.00	18.89	
	4.025	25.60	10.44	36.04	56.00	19.96	
	6.256	28.10	10.46	38.56	60.00	21.44	
	0.217	17.80	10.51	28.31	52.94	24.63	AV
	0.582	11.80	10.40	22.20	46.00	23.80	
	1.191	18.91	10.39	29.30	46.00	16.70	
	1.967	16.40	10.41	26.81	46.00	19.19	
	4.025	15.70	10.44	26.14	46.00	19.86	
	6.256	20.50	10.46	30.96	50.00	19.04	
Neutral	0.246	32.80	10.48	43.28	61.90	18.62	QP
	0.578	28.00	10.39	38.39	56.00	17.61	
	1.195	27.70	10.41	38.11	56.00	17.89	
	1.991	27.30	10.43	37.73	56.00	18.27	
	6.188	26.30	10.53	36.83	60.00	23.17	
	23.530	24.51	10.84	35.35	60.00	24.65	
	0.246	18.50	10.48	28.98	51.90	22.92	AV
	0.578	12.60	10.39	22.99	46.00	23.01	
	1.195	18.90	10.41	29.31	46.00	16.69	
	1.991	16.20	10.43	26.63	46.00	19.37	
	6.188	19.40	10.53	29.93	50.00	20.07	
	23.530	17.31	10.84	28.15	50.00	21.85	

TEST ENGINEER: WENCY YANG

EUT : LED LCD TV Temperature : 22°C

Model No. : 55H6B Humidity : 48%RH

Test Mode : HDMI 1280*1024@75Hz Date of Test : Jul 05, 2015
& 1kHz Playing

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.238	32.81	10.48	43.29	62.18	18.89	QP
	0.595	27.61	10.38	37.99	56.00	18.01	
	1.182	28.31	10.40	38.71	56.00	17.29	
	3.892	26.60	10.49	37.09	56.00	18.91	
	6.198	28.00	10.53	38.53	60.00	21.47	
	22.000	25.90	10.79	36.69	60.00	23.31	
	0.238	14.51	10.48	24.99	52.18	27.19	AV
	0.595	13.81	10.38	24.19	46.00	21.81	
	1.182	19.81	10.40	30.21	46.00	15.79	
	3.892	16.80	10.49	27.29	46.00	18.71	
	6.198	23.70	10.53	34.23	50.00	15.77	
	22.000	19.20	10.79	29.99	50.00	20.01	
Neutral	0.242	30.10	10.49	40.59	62.03	21.44	QP
	0.581	28.10	10.40	38.50	56.00	17.50	
	1.475	27.00	10.40	37.40	56.00	18.60	
	2.557	27.60	10.42	38.02	56.00	17.98	
	3.802	26.01	10.43	36.44	56.00	19.56	
	6.142	28.21	10.45	38.66	60.00	21.34	
	0.242	14.90	10.49	25.39	52.03	26.64	AV
	0.581	12.60	10.40	23.00	46.00	23.00	
	1.475	17.70	10.40	28.10	46.00	17.90	
	2.557	18.20	10.42	28.62	46.00	17.38	
	3.802	15.31	10.43	25.74	46.00	20.26	
	6.142	20.31	10.45	30.76	50.00	19.24	

TEST ENGINEER: WENCY YANG

EUT : LED LCD TV Temperature : 22°C

Model No. : 55H6B Humidity : 48%RH

Test Mode : HDMI 640*480@60Hz & 1kHz Playing Date of Test : Jul 05, 2015

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.212	29.30	10.51	39.81	63.12	23.31	QP
	0.576	28.50	10.40	38.90	56.00	17.10	
	1.172	25.40	10.39	35.79	56.00	20.21	
	1.745	28.10	10.41	38.51	56.00	17.49	
	2.544	27.30	10.42	37.72	56.00	18.28	
	6.498	27.60	10.46	38.06	60.00	21.94	
	0.212	19.10	10.51	29.61	53.12	23.51	AV
	0.576	12.60	10.40	23.00	46.00	23.00	
	1.172	14.00	10.39	24.39	46.00	21.61	
	1.745	19.20	10.41	29.61	46.00	16.39	
	2.544	17.70	10.42	28.12	46.00	17.88	
	6.498	21.50	10.46	31.96	50.00	18.04	
Neutral	0.246	32.80	10.48	43.28	61.88	18.60	QP
	0.511	30.00	10.39	40.39	56.00	15.61	
	1.210	29.10	10.41	39.51	56.00	16.49	
	2.015	28.00	10.43	38.43	56.00	17.57	
	6.198	28.50	10.53	39.03	60.00	20.97	
	22.800	24.00	10.82	34.82	60.00	25.18	
	0.246	17.90	10.48	28.38	51.88	23.50	AV
	0.511	17.60	10.39	27.99	46.00	18.01	
	1.210	20.50	10.41	30.91	46.00	15.09	
	2.015	18.10	10.43	28.53	46.00	17.47	
	6.198	23.80	10.53	34.33	50.00	15.67	
	22.800	16.80	10.82	27.62	50.00	22.38	

TEST ENGINEER: WENCY YANG

EUT : LED LCD TV Temperature : 22°C

Model No. : 55H6B Humidity : 48%RH

Test Mode : USB Play Date of Test : Jul 05, 2015

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.239	29.91	10.49	40.40	62.13	21.73	QP
	0.512	28.10	10.40	38.50	56.00	17.50	
	1.143	26.70	10.39	37.09	56.00	18.91	
	1.988	27.90	10.41	38.31	56.00	17.69	
	3.810	27.10	10.44	37.54	56.00	18.46	
	6.078	29.81	10.45	40.26	60.00	19.74	
	0.239	14.41	10.49	24.90	52.13	27.23	AV
	0.512	16.50	10.40	26.90	46.00	19.10	
	1.143	16.00	10.39	26.39	46.00	19.61	
	1.988	17.50	10.41	27.91	46.00	18.09	
	3.810	16.70	10.44	27.14	46.00	18.86	
	6.078	23.71	10.45	34.16	50.00	15.84	
Neutral	0.243	32.80	10.48	43.28	61.98	18.70	QP
	0.511	30.20	10.39	40.59	56.00	15.41	
	1.199	28.60	10.41	39.01	56.00	16.99	
	1.998	27.60	10.43	38.03	56.00	17.97	
	6.195	28.10	10.53	38.63	60.00	21.37	
	23.750	24.39	10.86	35.25	60.00	24.75	
	0.243	16.40	10.48	26.88	51.98	25.10	AV
	0.511	18.00	10.39	28.39	46.00	17.61	
	1.199	19.20	10.41	29.61	46.00	16.39	
	1.998	16.90	10.43	27.33	46.00	18.67	
	6.195	22.90	10.53	33.43	50.00	16.57	
	23.750	17.49	10.86	28.35	50.00	21.65	

TEST ENGINEER: WENCY YANG

EUT : LED LCD TV Temperature : 22°C

Model No. : 55H6B Humidity : 48%RH

Test Mode : LAN Play Date of Test : Jul 05, 2015

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.239	32.81	10.48	43.29	62.12	18.83	QP
	0.573	28.60	10.39	38.99	56.00	17.01	
	1.184	29.61	10.40	40.01	56.00	15.99	
	1.731	28.59	10.43	39.02	56.00	16.98	
	3.585	26.00	10.48	36.48	56.00	19.52	
	6.072	27.00	10.53	37.53	60.00	22.47	
	0.239	15.41	10.48	25.89	52.12	26.23	AV
	0.573	13.00	10.39	23.39	46.00	22.61	
	1.184	20.31	10.40	30.71	46.00	15.29	
	1.731	18.39	10.43	28.82	46.00	17.18	
	3.585	15.40	10.48	25.88	46.00	20.12	
	6.072	18.80	10.53	29.33	50.00	20.67	
Neutral	0.210	29.70	10.51	40.21	63.22	23.01	QP
	0.513	28.10	10.40	38.50	56.00	17.50	
	1.201	28.80	10.40	39.20	56.00	16.80	
	2.552	27.50	10.42	37.92	56.00	18.08	
	6.082	27.91	10.45	38.36	60.00	21.64	
	22.260	24.20	10.70	34.90	60.00	25.10	
	0.210	19.80	10.51	30.31	53.22	22.91	AV
	0.513	16.60	10.40	27.00	46.00	19.00	
	1.201	19.60	10.40	30.00	46.00	16.00	
	2.552	16.20	10.42	26.62	46.00	19.38	
	6.082	19.81	10.45	30.26	50.00	19.74	
	22.260	17.50	10.70	28.20	50.00	21.80	

TEST ENGINEER: WENCY YANG

4 RADIATED EMISSION TEST

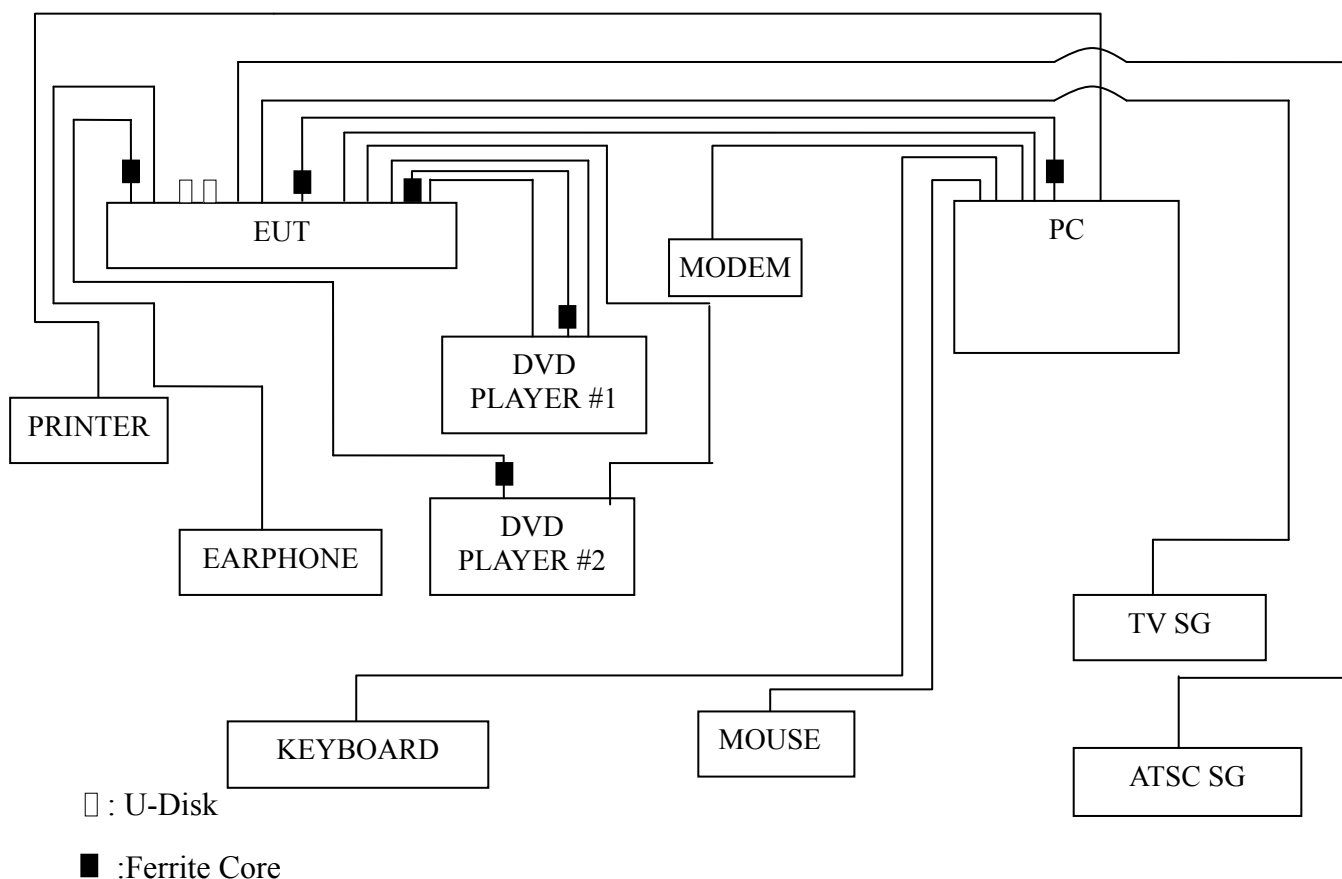
4.1 Test Equipment

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	Apr 27, 2015	Apr 26, 2016
2.	Preamplifier	Agilent	8447D	2944A10548	Mar 20, 2015	Mar 19, 2016
3.	Preamplifier	HP	8449B	3008A00864	May 03, 2015	May 02, 2016
4.	Bi-log Antenna	TESEQ	CBL6112D	23193	May 11, 2015	May 10, 2016
5.	Horn Antenna	EMCO	3115	9607-4878	Nov 11, 2014	Nov 10, 2015
6.	Spectrum	Agilent	E7405A	MY45106600	Sep 18, 2015	Mar 17, 2016
7.	50 Ω Coaxial Switch	Anritsu	MP59B	6200426390	Sep 18, 2015	Mar 17, 2016
8.	Software	Audix	E3	6.2007-9-10	--	--

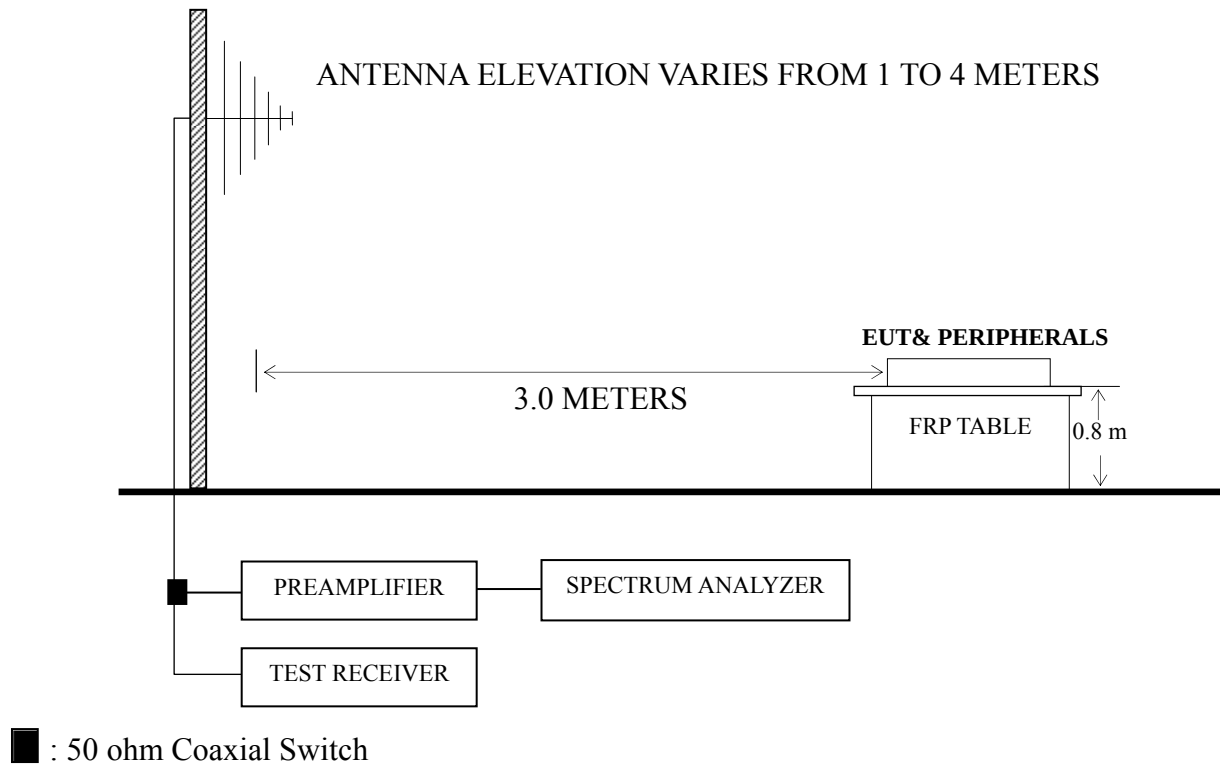
4.2 Block Diagram of Test Setup

4.2.1 EUT & Peripherals



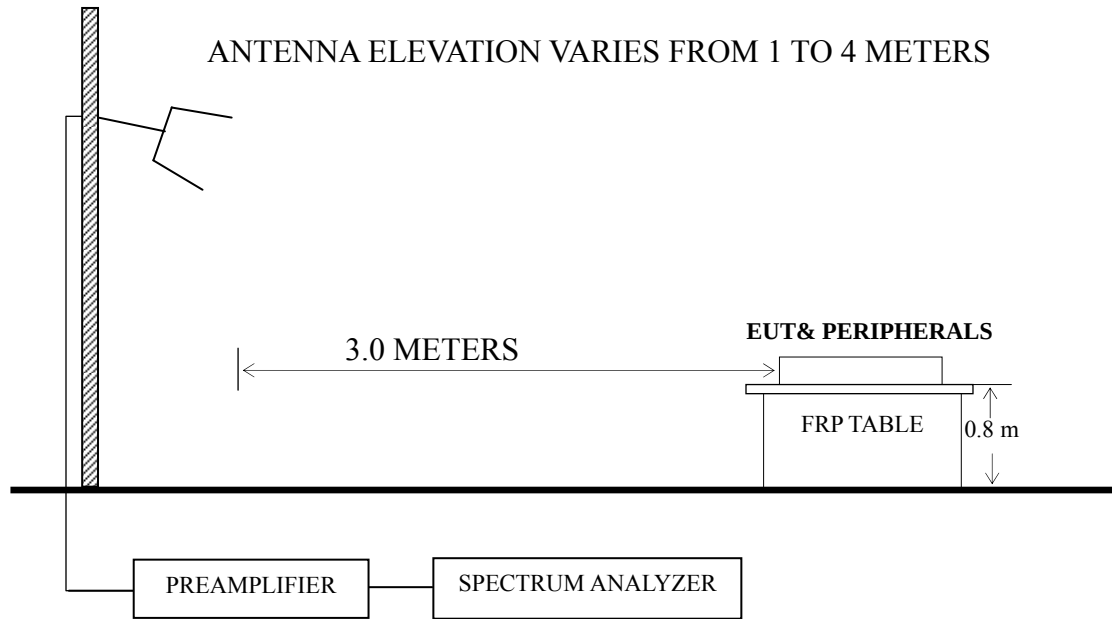
4.2.2 Radiated emission test setup

4.2.2.1 Below 1GHz



4.2.2.1 Above 1GHz

BORE-SIGHT ANTENNA TOWER



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 ESCI was set at 120 kHz.

The frequency range from 30 MHz to 1000MHz was checked for all test modes.

The frequency range from 1 GHz to 2 GHz was checked for the maximum resolution test mode.

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
HDMI 1920*1080@60Hz & 1kHz playing	P23 – P24
HDMI 1280*1024@75Hz & 1kHz playing	P25
HDMI 640*480@60Hz & 1kHz playing	P26
USB Play	P27
LAN Play	P28

NOTE 1 – Emission Level = Antenna Factor + Cable Loss + Meter Reading. (< 1GHz);

Emission Level = Antenna Factor + Cable Loss – Preamp Factor + Meter Reading. (> 1GHz)

NOTE 2 – All readings are Quasi-Peak values below or equal to 1GHz, Peak and Average values above 1GHz.

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 HDMI 1920*1080@60Hz & 1kHz Playing test mode. The worst emission at horizontal polarization was detected at 742.470 MHz with corrected signal level of 45.04 dB (μV/m) (limit is 46.00 dB (μV/m)), when the antenna was 2.20 m height and the turntable was at 156°. The worst emission at vertical polarization was detected at 56.991 MHz with corrected signal level of 36.50 dB (μV/m) (limit is 40.00 dB (μV/m)), when the antenna was 2.10 m height and the turntable was at 246°.

EUT : LED LCD TV Temperature : 22°C

Model No. : 55H6B Humidity : 60%RH

Test Mode : HDMI 1920*1080@60Hz & 1kHz Playing Date of Test : Jul 04, 2015

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	77.051	25.39	8.89	1.04	--	35.32	40.00	4.68	QP
	197.893	21.73	9.90	1.95	--	33.58	43.50	9.92	
	325.596	20.61	14.67	2.62	--	37.90	46.00	8.10	
	390.723	18.70	16.50	2.71	--	37.91	46.00	8.09	
	612.064	17.40	19.15	2.39	--	38.94	46.00	7.06	
	742.470	21.47	19.97	3.60	--	45.04	46.00	0.96	
	1054.857	60.24	4.55	23.46	36.39	51.86	74.00	22.14	PK
	1079.501	59.57	4.32	23.59	36.35	51.13	74.00	22.87	
	1204.659	58.43	3.54	24.31	36.12	50.16	74.00	23.84	
	1493.706	58.12	3.86	25.69	35.69	51.98	74.00	22.02	
	1659.685	54.09	4.06	26.26	35.48	48.93	74.00	25.07	
	1860.146	54.61	4.27	27.02	35.25	50.65	74.00	23.35	
	1054.857	38.47	4.55	23.46	36.39	30.09	54.00	23.91	AV
	1079.501	42.68	4.32	23.59	36.35	34.24	54.00	19.76	
	1204.659	40.47	3.54	24.31	36.12	32.20	54.00	21.80	
	1493.706	38.37	3.86	25.69	35.69	32.23	54.00	21.77	
	1659.685	35.47	4.06	26.26	35.48	30.31	54.00	23.69	
	1860.146	34.47	4.27	27.02	35.25	30.51	54.00	23.49	

TEST ENGINEER: BILL WU

EUT : LED LCD TV Temperature : 22°C

Model No. : 55H6B Humidity : 60%RH

Test Mode : HDMI 1920*1080@60Hz & 1kHz Playing Date of Test : Jul 04, 2015

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Vertical	30.000	15.19	18.90	0.63	--	34.72	40.00	5.28	QP
	56.991	29.39	6.25	0.86	--	36.50	40.00	3.50	
	73.876	26.69	8.27	0.99	--	35.95	40.00	4.05	
	295.147	19.63	13.60	2.56	--	35.79	46.00	10.21	
	612.064	18.73	19.15	2.39	--	40.27	46.00	5.73	
	742.470	17.97	19.97	3.60	--	41.54	46.00	4.46	
	1282.085	57.24	3.63	24.80	36.00	49.67	74.00	24.33	PK
	1358.586	56.61	3.72	25.17	35.88	49.62	74.00	24.38	
	1427.278	55.82	3.79	25.45	35.78	49.28	74.00	24.72	
	1514.309	57.28	3.89	25.76	35.66	51.27	74.00	22.73	
	1644.734	54.31	4.04	26.20	35.50	49.05	74.00	24.95	
	1879.030	53.90	4.27	27.07	35.23	50.01	74.00	23.99	
	1282.085	41.45	3.63	24.80	36.00	33.88	54.00	20.12	AV
	1358.586	39.89	3.72	25.17	35.88	32.90	54.00	21.10	
	1427.278	36.47	3.79	25.45	35.78	29.93	54.00	24.07	
	1514.309	39.58	3.89	25.76	35.66	33.57	54.00	20.43	
	1644.734	38.99	4.04	26.20	35.50	33.73	54.00	20.27	
	1879.030	33.37	4.27	27.07	35.23	29.48	54.00	24.52	

TEST ENGINEER: BILL WU

EUT : LED LCD TV Temperature : 22°C

Model No. : 55H6B Humidity : 60%RH

Test Mode : HDMI 1280*1024@75Hz Date of Test : Jul 04, 2015
& 1kHz Playing

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	77.051	26.48	8.89	1.04	36.41	40.00	3.59
	197.893	20.01	9.90	1.95	31.86	43.50	11.64
	294.114	22.34	13.60	2.52	38.46	46.00	7.54
	390.723	16.66	16.50	2.71	35.87	46.00	10.13
	612.064	17.62	19.15	2.39	39.16	46.00	6.84
	796.183	13.54	20.57	3.68	37.79	46.00	8.21
Vertical	30.531	11.86	18.53	0.64	31.03	40.00	8.97
	56.001	26.46	6.30	0.85	33.61	40.00	6.39
	75.977	25.09	8.67	1.02	34.78	40.00	5.22
	294.114	17.65	13.60	2.52	33.77	46.00	12.23
	397.633	19.61	16.57	2.71	38.89	46.00	7.11
	612.064	18.73	19.15	2.39	40.27	46.00	5.73

TEST ENGINEER: BILL WU

EUT : LED LCD TV Temperature : 22°C

Model No. : 55H6B Humidity : 60%RH

Test Mode : HDMI 640*480@60Hz & 1kHz Playing Date of Test : Jul 04, 2015

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	73.876	24.45	8.27	0.99	33.71	40.00	6.29
	226.894	22.29	10.96	2.08	35.33	46.00	10.67
	294.114	23.49	13.60	2.52	39.61	46.00	6.39
	390.723	18.50	16.50	2.71	37.71	46.00	8.29
	612.064	18.44	19.15	2.39	39.98	46.00	6.02
	798.980	16.50	20.60	3.68	40.78	46.00	5.22
Vertical	56.991	26.88	6.25	0.86	33.99	40.00	6.01
	77.051	27.41	8.89	1.04	37.34	40.00	2.66
	153.739	19.10	11.27	1.66	32.03	43.50	11.47
	397.633	19.50	16.57	2.71	38.78	46.00	7.22
	612.064	21.07	19.15	2.39	42.61	46.00	3.39
	793.396	11.72	20.53	3.68	35.93	46.00	10.07

TEST ENGINEER: BILL WU

EUT : LED LCD TV Temperature : 22°C

Model No. : 55H6B Humidity : 60%RH

Test Mode : USB Play Date of Test : Jul 04, 2015

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	60.069	21.64	6.20	0.88	28.72	40.00	11.28
	94.760	15.29	11.70	1.26	28.25	43.50	15.25
	170.793	16.08	10.87	1.78	28.73	43.50	14.77
	326.740	22.00	14.71	2.63	39.34	46.00	6.66
	417.641	13.04	16.76	2.76	32.56	46.00	13.44
	851.035	13.35	20.73	4.17	38.25	46.00	7.75
Vertical	31.289	14.66	17.97	0.65	33.28	40.00	6.72
	59.441	27.05	6.20	0.87	34.12	40.00	5.88
	77.051	23.59	8.89	1.04	33.52	40.00	6.48
	141.826	15.30	12.35	1.59	29.24	43.50	14.26
	400.432	21.60	16.60	2.72	40.92	46.00	5.08
	684.745	14.39	19.80	3.41	37.60	46.00	8.40

TEST ENGINEER: BILL WU

EUT : LED LCD TV Temperature : 22°C

Model No. : 55H6B Humidity : 60%RH

Test Mode : LAN Play Date of Test : Jul 04, 2015

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	54.452	20.73	6.61	0.84	28.18	40.00	11.82
	87.112	17.27	10.10	1.18	28.55	40.00	11.45
	178.758	12.50	10.56	1.83	24.89	43.50	18.61
	323.320	20.23	14.59	2.62	37.44	46.00	8.56
	568.613	20.19	18.30	2.47	40.96	46.00	5.04
	821.710	12.32	20.70	3.88	36.90	46.00	9.10
Vertical	32.179	13.37	17.35	0.66	31.38	40.00	8.62
	60.704	25.74	6.25	0.88	32.87	40.00	7.13
	118.186	15.31	12.76	1.45	29.52	43.50	13.98
	268.485	15.40	13.27	2.32	30.99	46.00	15.01
	531.964	18.20	18.35	2.73	39.28	46.00	6.72
	776.878	10.04	20.50	3.65	34.19	46.00	11.81

TEST ENGINEER: BILL WU

5 DEVIATION TO TEST SPECIFICATIONS

None.

6 DEBUG DESCRIPTION

The following components are used during the countermeasure procedures:

Name	M/N	Manufacturer	Location
Conductive Tape	JCT-RF-5-0.12-50\ROH	Qingdao Joinset S&T Co., Ltd.	See Internal Photo Figure 17
		Shenzhen TAT Electronic Technology 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:

Wency Yang
(WENCY YANG)