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

LED LCD TV

Model No.	Brand
75T910GUW, 75H9	Hisense
75XT910, 75H9G	

FCC ID : W9HLCDF0044

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-F14102
Date of Test : Jun 17 – 24, 2014
Date of Report : Jun 27, 2014

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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
75T910GUW, 75H9	Hisense	120V/60Hz
75XT910, 75H9G		

Test Procedure Used:

FCC RULES AND REGULATIONS PART 15 SUBPART B CLASS B OCTOBER 2013 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 Jun 17 – 24, 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.F14101, a Verification report.

Date of Test : Jun 17 – 24, 2014 Date of Report : Jun 27, 2014

Producer : EMILY ZHU / Assistant

Review : DIO YANG / Deputy Manager

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

Signatory : SAMMY CHEN / Deputy Manager
Authorized Signature EMC

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 2013 AND ANSI C63.4-2003	15.107(a) Class B	Pass
Radiated Disturbance	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2013 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.	:	75T910GUW, 75H9, 75XT910, 75H9G
Note	:	The above models are all the same except for model name. 75H9 model is tested and recorded in the report.
Brand Name	:	Hisense
Applicant	:	Hisense Electric Co., Ltd. No.218 Qianwangang Road, Economy & Technology Development Zone, Qingdao, China
Manufacturer	:	Hisense Electric Co., Ltd. No.218 Qianwangang Road, Economy & Technology Development Zone, Qingdao, China
Factory #1	:	Hisense Electric Co., Ltd. No.218 Qianwangang Road, Economy & Technology Development Zone, Qingdao, China
Factory #2	:	Tatung Mexico S.A. de C.V. Miguel Catalán 420, Parque Industrial Rio Bravo, Cd. Juarez, Chih., CP 32557
LCD Panel	:	Manufacturer : SAMSUNG M/N : LTA750FF01
Max Resolution	:	1920*1080@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 HDMI2 Port
: Connected with DVD PLAYER #3

(2) One HDMI3 Port
: Connected with DVD PLAYER #1

(3) One HDMI4/ARC Port
: Connected with DVD PLAYER #2

(4) One LAN Port
: Connected with PC

(5) One component of AV/YPbPr Port
: Connected with DVD PLAYER #1

Side Port:

(1) One PC/ AUDIO IN Port
: Connected with PC

(2) One VGA In Port
: Connected with PC

(3) One HDMI1 (UHD) Port
: Connected with PC

(4) One Headphone Port
: Connected with Earphone

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

(6) Three USB Ports
: Connected with U-Disk

(7) One DIGITAL AUDIO OUT Port
: Connected with DVD PLAYER #3

(8) One DEBUG Port
: Connected with IR CABLE

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; BSMI, 3C, MIC

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 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

2.2.7 ATSC Signal Generator

Manufacturer	:	SENCORE
Model Number	:	ATSC997
Serial Number	:	6790071
Certificate	:	CE/EMC, FCC DoC

2.2.8 DVD PLAYER#1

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

2.2.9 DVD PLAYER#2

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

2.2.10 DVD PLAYER #3

Manufacturer	:	LG
Model Number	:	DF9921N
Serial Number	:	3850R-M846W
Certificate	:	FCC DoC, CE/EMC, CCC

2.2.11 Earphone

Manufacturer	:	Skullcandy
Model Number	:	FMJ

2.2.12 U-DISK*3

Manufacturer	:	LG
Model Number	:	1GB
Certificate	:	CE/EMC, FCC DoC

2.3 Description of Test Facility

Site Description (No.3 3m Chamber)	:	Sept. 17, 1998 file on Mar 16, 2012 Renewed Federal Communications Commission FCC Engineering Laboratory 7435 Oakland Mills Road Columbia, MD 21046, USA
Name of Firm	:	Audix Technology (Shanghai) Co., Ltd.
Site Location	:	3F 34Bldg 680 Guiping Rd, Caohejing Hi-Tech Park, Shanghai 200233, China
NVLAP Lab Code	:	200371-0

2.4 Measurement Uncertainty

Conducted Emission Expanded Uncertainty: U = 3.02 dB
Radiated Emission Expanded Uncertainty (30-200MHz):
U = 4.17 dB (Horizontal)
U = 4.02 dB (Vertical)
Radiated Emission Expanded Uncertainty (200M-1GHz):
U = 3.38 dB (Horizontal)
U = 3.28 dB (Vertical)
Radiated Emission Expanded Uncertainty (Above 1GHz):
U = 4.68 dB (Horizontal)
U = 4.87 dB (Vertical)

3 CONDUCTED EMISSION TEST

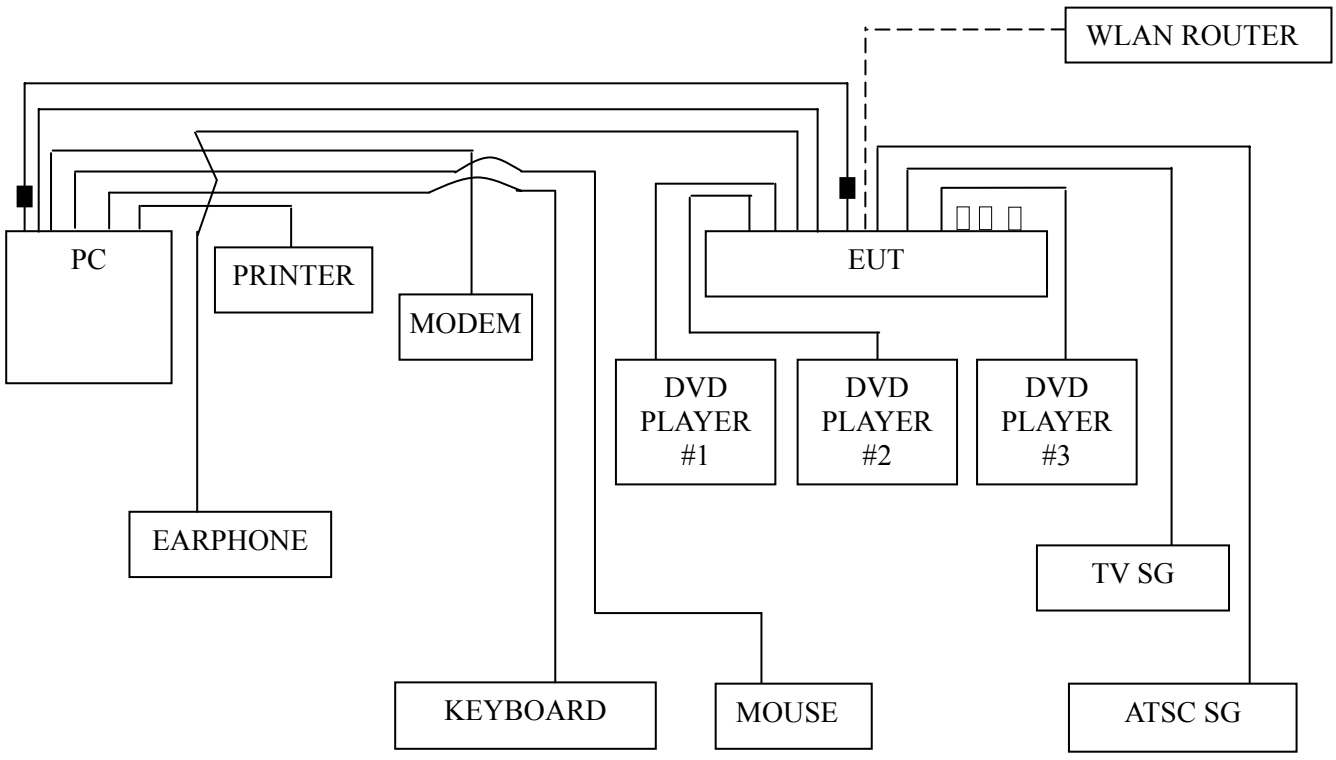
3.1 Test Equipment

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

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCI	100841	Mar 20, 2014	Mar 19, 2015
2.	Artificial Mains Network (AMN)	R&S	ESH2-Z5	843890/011	Feb 25, 2014	Feb 24, 2015
3.	Line Impedance Stabilization Network (LISN)	Kyoritsu	KNW-407	8-1280-4	Mar 20, 2014	Mar 19, 2015
4.	50 Ω Coaxial Switch	Anritsu	MP59B	6200426389	Mar 18, 2014	Sep 17, 2014
5.	50Ω Terminator	Anritsu	BNC	001	Mar 20, 2014	Mar 19, 2015
6.	Software	Audix	E3	6.2009-1-15	--	--

3.2 Block Diagram of Test Setup

3.2.1 EUT & Peripherals

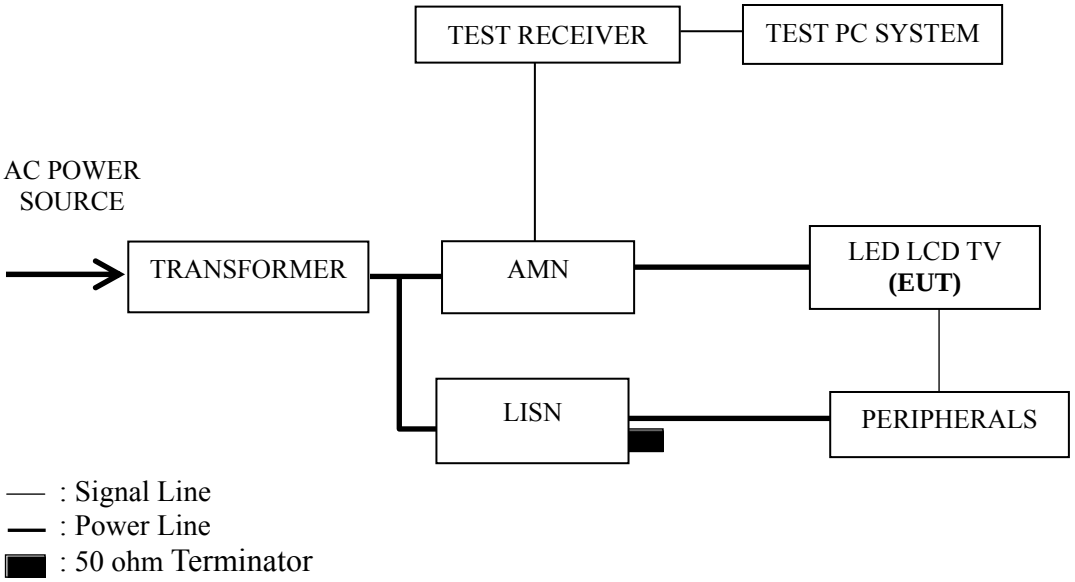


·– – : WLAN signal

■ : Ferrite core

 : U-Disk

3.2.2 Conducted Disturbance Test Setup



3.3 Conducted Emission Limit [FCC Part 15 Subpart B 15.107(a)]

Frequency Range (MHz)	Limits dB (μV)	
	Quasi-peak	Average
0.15 ~ 0.5	66~56	56~46
0.5 ~ 5	56	46
5 ~ 30	60	50

NOTE 1 – The lower limit shall apply at the transition frequencies.
NOTE 2 – The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz~0.50 MHz

3.4 Test Configuration

The EUT (listed in Sec.2.1) and the peripherals (listed in Sec 2.2) were installed as shown on Sec.3.2 to meet FCC requirement and operating in a manner that tends to maximize its emission level in a normal application.

3.5 Operating Condition of EUT

3.5.1 Setup the EUT and peripherals as shown in Sec. 3.2.

3.5.2 Turn on the power of all equipments and the EUT.

3.5.3 Set the contrast & brightness of EUT to maximum.

3.5.4 PC system ran the self-test program "EMC Test" by windows XP and sent "H" characters to EUT through graphic card, the EUT's screen displayed and filled with "H" pattern by its resolution (Via D-Sub & HDMI Input).

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

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

3.5.7 The WLAN function is operating to communicate with WLAN router.

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
D-Sub 1920*1080@60Hz
HDMI 1920*1080@60Hz
D-Sub 1280*1024@60Hz
D-Sub 640*480@60Hz
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
D-Sub 1920*1080@60Hz	P13
HDMI 1920*1080@60Hz	P14
D-Sub 1280*1024@60Hz	P15
D-Sub 640*480@60Hz	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 D-Sub 1920*1080@60Hz test mode. The worst emission is detected at 7.123 MHz (Average Value) with corrected signal level of 45.44 dB (μV) (limit is 50.00 dB (μV)), when the Neutral of the EUT is connected to AMN.

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	75H9	Humidity	:	48%RH
Test Mode	:	D-Sub 1920*1080@60Hz	Date of Test	:	Jun 24, 2014

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.176	54.51	0.13	54.64	64.69	10.05	QP
	0.230	39.21	0.09	39.30	62.44	23.14	
	0.590	35.10	0.03	35.13	56.00	20.87	
	2.629	34.90	0.10	35.00	56.00	21.00	
	6.272	42.30	0.24	42.54	60.00	17.46	
	7.260	44.00	0.26	44.26	60.00	15.74	
	0.176	42.91	0.13	43.04	54.69	11.65	AV
	0.230	25.11	0.09	25.20	52.44	27.24	
	0.590	26.20	0.03	26.23	46.00	19.77	
	2.629	26.00	0.10	26.10	46.00	19.90	
	6.272	37.50	0.24	37.74	50.00	12.26	
	7.260	38.20	0.26	38.46	50.00	11.54	
Neutral	0.175	55.01	0.17	55.18	64.71	9.53	QP
	0.232	40.31	0.20	40.51	62.37	21.86	
	0.568	34.59	0.18	34.77	56.00	21.23	
	3.312	33.30	0.19	33.49	56.00	22.51	
	6.268	44.80	0.29	45.09	60.00	14.91	
	7.123	47.21	0.33	47.54	60.00	12.46	
	0.175	43.51	0.17	43.68	54.71	11.03	AV
	0.232	27.31	0.20	27.51	52.37	24.86	
	0.568	22.89	0.18	23.07	46.00	22.93	
	3.312	26.80	0.19	26.99	46.00	19.01	
	6.268	39.20	0.29	39.49	50.00	10.51	
	7.123	**45.11**	**0.33**	**45.44**	**50.00**	**4.56**	

TEST ENGINEER: ERIC TANG

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	75H9	Humidity	:	48%RH
Test Mode	:	HDMI 1920*1080@60Hz	Date of Test	:	Jun 24, 2014

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.172	56.01	0.13	56.14	64.88	8.74	QP
	0.228	41.10	0.10	41.20	62.51	21.31	
	0.572	34.89	0.02	34.91	56.00	21.09	
	2.582	33.81	0.09	33.90	56.00	22.10	
	6.191	42.30	0.23	42.53	60.00	17.47	
	7.794	45.00	0.26	45.26	60.00	14.74	
	0.172	44.21	0.13	44.34	54.88	10.54	AV
	0.228	27.30	0.10	27.40	52.51	25.11	
	0.572	23.89	0.02	23.91	46.00	22.09	
	2.582	25.51	0.09	25.60	46.00	20.40	
	6.191	36.90	0.23	37.13	50.00	12.87	
	7.794	38.70	0.26	38.96	50.00	11.04	
Neutral	0.174	55.60	0.17	55.77	64.77	9.00	QP
	0.234	41.21	0.20	41.41	62.31	20.90	
	0.609	35.50	0.15	35.65	56.00	20.35	
	2.588	33.91	0.16	34.07	56.00	21.93	
	5.921	42.29	0.28	42.57	60.00	17.43	
	7.052	47.60	0.33	47.93	60.00	12.07	
	0.174	43.60	0.17	43.77	54.77	11.00	AV
	0.234	28.91	0.20	29.11	52.31	23.20	
	0.609	28.20	0.15	28.35	46.00	17.65	
	2.588	27.01	0.16	27.17	46.00	18.83	
	5.921	36.39	0.28	36.67	50.00	13.33	
	7.052	**44.10**	**0.33**	**44.43**	**50.00**	**5.57**	

TEST ENGINEER: ERIC TANG

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	75H9	Humidity	:	48%RH
Test Mode	:	D-Sub 1280*1024@60Hz	Date of Test	:	Jun 24, 2014

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.173	56.31	0.13	56.44	64.82	8.38	QP
	0.234	41.21	0.09	41.30	62.32	21.02	
	0.594	35.10	0.03	35.13	56.00	20.87	
	3.772	32.20	0.16	32.36	56.00	23.64	
	6.336	41.30	0.24	41.54	60.00	18.46	
	7.794	45.40	0.26	45.66	60.00	14.34	
	0.173	45.21	0.13	45.34	54.82	9.48	AV
	0.234	29.91	0.09	30.00	52.32	22.32	
	0.594	26.50	0.03	26.53	46.00	19.47	
	3.772	25.90	0.16	26.06	46.00	19.94	
	6.336	35.80	0.24	36.04	50.00	13.96	
	7.794	39.40	0.26	39.66	50.00	10.34	
Neutral	0.175	56.21	0.17	56.38	64.72	8.34	QP
	0.230	42.31	0.20	42.51	62.46	19.95	
	0.597	34.90	0.16	35.06	56.00	20.94	
	1.890	32.91	0.16	33.07	56.00	22.93	
	6.775	45.50	0.32	45.82	60.00	14.18	
	7.792	47.30	0.37	47.67	60.00	12.33	
	0.175	45.51	0.17	45.68	54.72	9.04	AV
	0.230	29.61	0.20	29.81	52.46	22.65	
	0.597	27.70	0.16	27.86	46.00	18.14	
	1.890	24.21	0.16	24.37	46.00	21.63	
	6.775	41.90	0.32	42.22	50.00	7.78	
	7.792	**42.00**	**0.37**	**42.37**	**50.00**	**7.63**	

TEST ENGINEER: ERIC TANG

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	75H9	Humidity	:	48%RH
Test Mode	:	D-Sub 640*480@60Hz	Date of Test	:	Jun 24, 2014

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	**0.172**	**57.01**	**0.13**	**57.14**	**64.86**	**7.72**	QP
	0.229	43.20	0.10	43.30	62.49	19.19	
	0.604	35.30	0.04	35.34	56.00	20.66	
	3.367	32.50	0.14	32.64	56.00	23.36	
	6.252	42.80	0.24	43.04	60.00	16.96	
	7.720	44.90	0.26	45.16	60.00	14.84	
	0.172	44.81	0.13	44.94	54.86	9.92	AV
	0.229	30.60	0.10	30.70	52.49	21.79	
	0.604	27.70	0.04	27.74	46.00	18.26	
	3.367	25.20	0.14	25.34	46.00	20.66	
	6.252	37.80	0.24	38.04	50.00	11.96	
	7.720	39.50	0.26	39.76	50.00	10.24	
Neutral	0.176	56.61	0.17	56.78	64.70	7.92	QP
	0.228	42.60	0.20	42.80	62.53	19.73	
	0.566	34.49	0.18	34.67	56.00	21.33	
	2.247	33.60	0.17	33.77	56.00	22.23	
	6.300	45.00	0.29	45.29	60.00	14.71	
	7.789	47.20	0.37	47.57	60.00	12.43	
	0.176	46.01	0.17	46.18	54.70	8.52	AV
	0.228	30.30	0.20	30.50	52.53	22.03	
	0.566	23.09	0.18	23.27	46.00	22.73	
	2.247	25.90	0.17	26.07	46.00	19.93	
	6.300	40.40	0.29	40.69	50.00	9.31	
	7.789	41.20	0.37	41.57	50.00	8.43	

TEST ENGINEER: ERIC TANG

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	75H9	Humidity	:	48%RH
Test Mode	:	USB Play	Date of Test	:	Jun 24, 2014

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.174	57.21	0.13	57.34	64.77	7.43	QP
	0.237	42.80	0.09	42.89	62.20	19.31	
	0.561	34.50	0.00	34.50	56.00	21.50	
	3.889	33.00	0.17	33.17	56.00	22.83	
	6.263	42.90	0.24	43.14	60.00	16.86	
	7.449	43.90	0.26	44.16	60.00	15.84	
	0.174	46.21	0.13	46.34	54.77	8.43	AV
	0.237	31.90	0.09	31.99	52.20	20.21	
	0.561	22.60	0.00	22.60	46.00	23.40	
	3.889	26.20	0.17	26.37	46.00	19.63	
	6.263	37.70	0.24	37.94	50.00	12.06	
	7.449	39.20	0.26	39.46	50.00	10.54	
Neutral	0.174	57.00	0.17	57.17	64.77	7.60	QP
	0.233	43.51	0.20	43.71	62.36	18.65	
	0.560	34.21	0.17	34.38	56.00	21.62	
	3.005	33.30	0.18	33.48	56.00	22.52	
	6.365	44.60	0.30	44.90	60.00	15.10	
	7.718	47.90	0.37	48.27	60.00	11.73	
	0.174	46.50	0.17	46.67	54.77	8.10	AV
	0.233	32.21	0.20	32.41	52.36	19.95	
	0.560	22.51	0.17	22.68	46.00	23.32	
	3.005	25.30	0.18	25.48	46.00	20.52	
	6.365	40.20	0.30	40.50	50.00	9.50	
	7.718	**42.90**	**0.37**	**43.27**	**50.00**	**6.73**	

TEST ENGINEER: ERIC TANG

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	75H9	Humidity	:	48%RH
Test Mode	:	LAN Play	Date of Test	:	Jun 24, 2014

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.175	57.11	0.13	57.24	64.73	7.49	QP
	0.231	44.31	0.09	44.40	62.43	18.03	
	0.595	35.00	0.03	35.03	56.00	20.97	
	1.825	34.50	0.07	34.57	56.00	21.43	
	6.354	40.90	0.24	41.14	60.00	18.86	
	7.716	45.00	0.26	45.26	60.00	14.74	
	0.175	46.81	0.13	46.94	54.73	7.79	AV
	0.231	32.51	0.09	32.60	52.43	19.83	
	0.595	28.30	0.03	28.33	46.00	17.67	
	1.825	26.30	0.07	26.37	46.00	19.63	
	6.354	35.10	0.24	35.34	50.00	14.66	
	7.716	39.20	0.26	39.46	50.00	10.54	
Neutral	0.175	57.01	0.17	57.18	64.71	7.53	QP
	0.228	44.01	0.20	44.21	62.51	18.30	
	0.606	34.80	0.16	34.96	56.00	21.04	
	2.648	33.30	0.17	33.47	56.00	22.53	
	6.254	43.50	0.29	43.79	60.00	16.21	
	7.717	48.00	0.37	48.37	60.00	11.63	
	0.175	46.81	0.17	46.98	54.71	7.73	AV
	0.228	31.31	0.20	31.51	52.51	21.00	
	0.606	27.20	0.16	27.36	46.00	18.64	
	2.648	24.80	0.17	24.97	46.00	21.03	
	6.254	38.30	0.29	38.59	50.00	11.41	
	7.717	**42.80**	**0.37**	**43.17**	**50.00**	**6.83**	

TEST ENGINEER: ERIC TANG

4 RADIATED EMISSION TEST

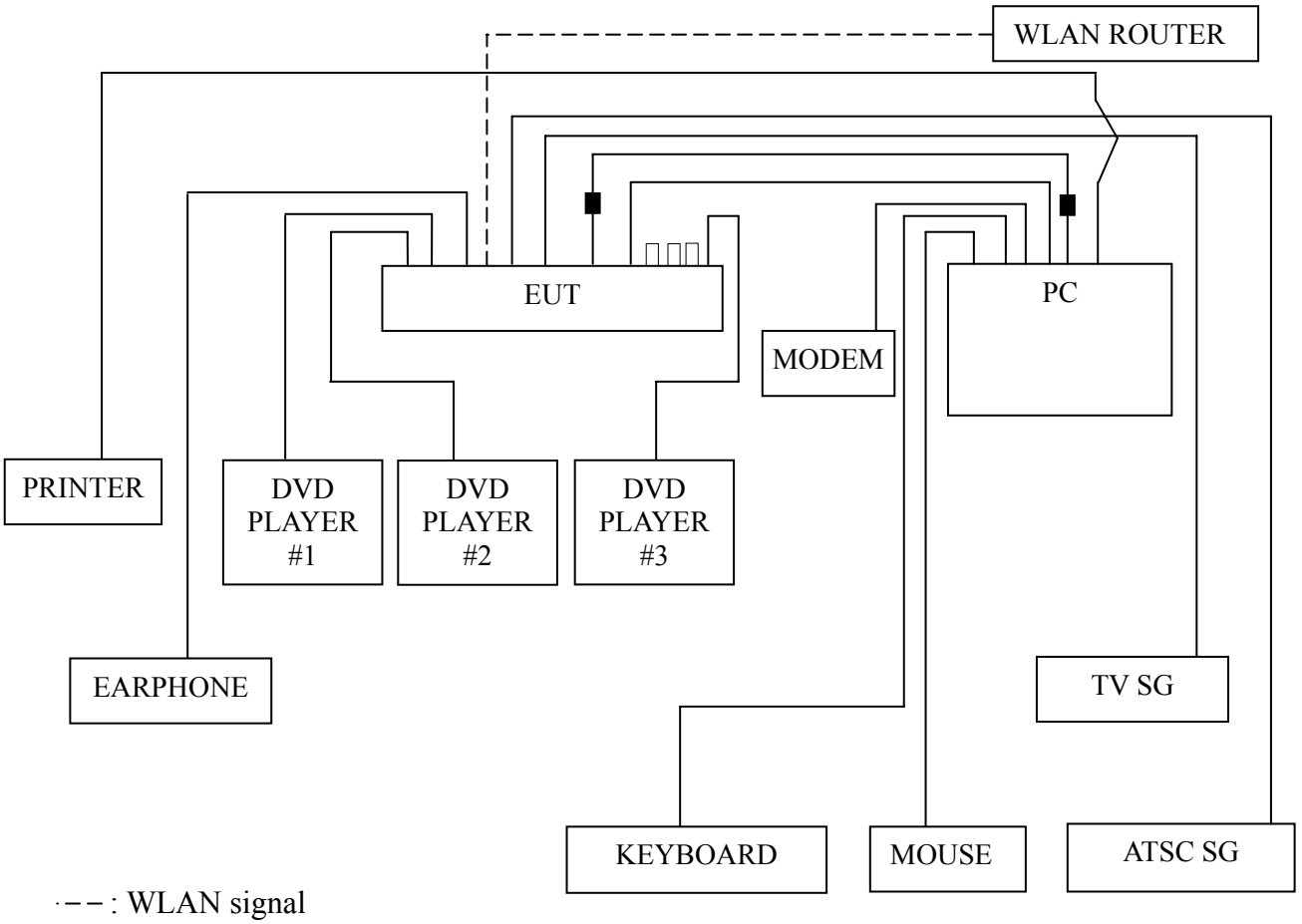
4.1 Test Equipment

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

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCI	101302	Sep 03, 2013	Sep 02, 2014
2.	Preamplifier	Agilent	8447D	2944A10548	Mar 18, 2014	Sep 17, 2014
3.	Preamplifier	HP	8449B	3008A00864	Mar 20, 2014	Mar 19, 2015
4.	Bi-log Antenna	TESEQ	CBL6112D	23193	May 03, 2014	May 02, 2015
5.	Horn Antenna	EMCO	3115	9607-4878	May 11, 2014	May 10, 2015
6.	Spectrum	Agilent	E7405A	MY45106600	Nov 11, 2013	Nov 10, 2014
7.	50Ω Coaxial Switch	Anritsu	MP59B	6200426390	Mar 18, 2014	Sep 17, 2014
8.	Software	Audix	E3	6.2007-9-10	--	--

4.2 Block Diagram of Test Setup

4.2.1 EUT & Peripherals

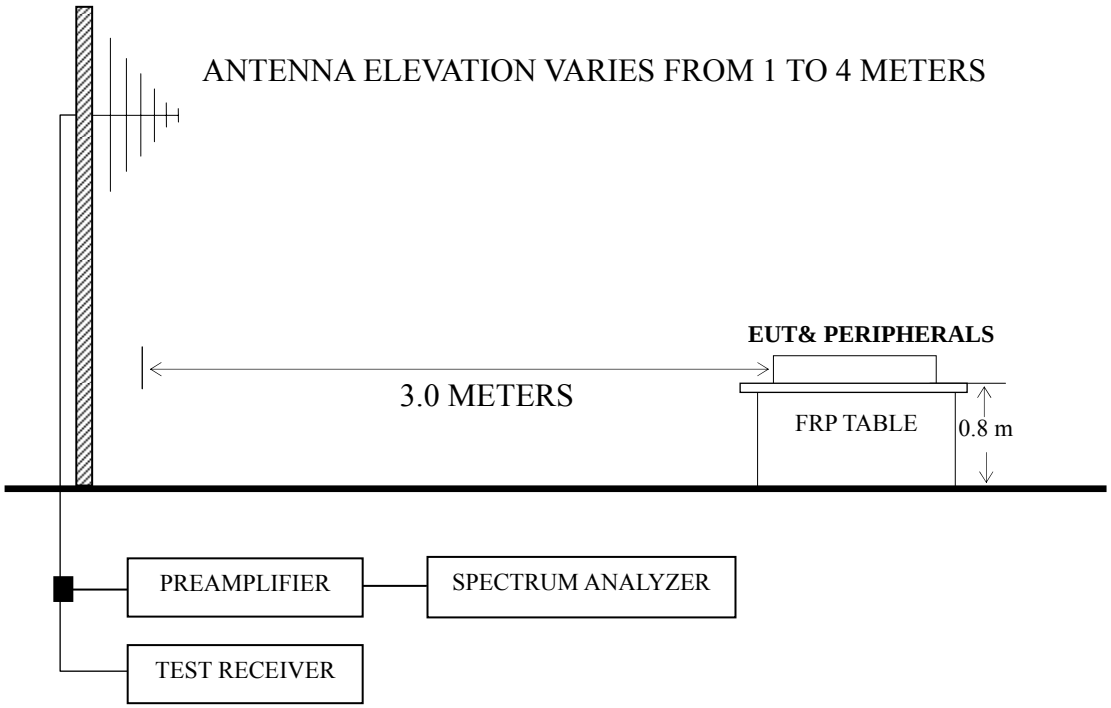


·– – : WLAN signal

■ : Ferrite core

□ : U-Disk

4.2.2 Radiated emission test setup



■ : 50 ohm Coaxial Switch

4.3 Radiated Emission Limit [FCC Part 15 Subpart B 15.109(a)]

Frequency (MHz)	Distance (m)	Field strength limits	
		(μV/m)	dB (μV/m)
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
Above 960	3	500	54.0

NOTE 1 - Emission Level dB (μV/m) = 20 log Emission Level (μV/m)
NOTE 2 - The tighter limit applies at the band edges.
NOTE 3 - Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
NOTE 4 - The limits shown are based on Quasi-peak value detector.
NOTE 5 - Above 1 GHz, the limit on peak emission is 20 dB above the maximum permitted average emission limit applicable to the EUT.

4.4 Test Configuration

The configuration of the EUT and peripherals are same as those used in conducted emission test.

Please refer to Sec.3.4.

4.5 Operating Condition of EUT

Same as conducted emission test which is listed in Sec.3.5, except for the test setup replaced by Sec.4.2.

4.6 Test Procedures

The EUT and peripherals were placed on a FRP turntable that is 0.8 meter above ground. The FRP turntable rotated 360 degrees to determine the position of the maximum emission level. The EUT was set 3 meters away from the receiving antenna, which was mounted on an antenna tower. Broadband antenna (Calibrated Bilog Antenna) or horn 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 below 1GHz.

The bandwidth of the VBW was set at 3MHz and RBW was set at 1MHz using peak detector for peak emission / using average detector for average emission above 1GHz for Spectrum Agilent E7405A

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

The frequency range from 1 GHz to 24 GHz (10^{th} harmonic of the 2.4GHz RF function) was checked for the worst emission 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	P23 – P24
D-Sub 1920*1080@60Hz	P25
HDMI 1280*1024@60Hz	P26
HDMI 640*480@60Hz	P27
USB Play	P28
LAN Play	P29

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 test mode. The worst emission at horizontal polarization was detected at 80.927 MHz with corrected signal level of 38.78 dB (μV/m) (limit is 40.00 dB (μV/m)), when the antenna was 1.60 m height and the turntable was at 135°. The worst emission at vertical polarization was detected at 80.927 MHz with corrected signal level of 37.87 dB (μV/m) (limit is 40.00 dB (μV/m)), when the antenna was 1.50 m height and the turntable was at 330°.

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	75H9	Humidity :	60%RH
Test Mode	:	HDMI 1920*1080@60Hz	Date of Test :	Jun 17, 2014

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	**80.927**	**30.82**	**6.88**	**1.08**	**--**	**38.78**	**40.00**	**1.22**	QP
	165.227	27.33	8.40	1.75	--	37.48	43.50	6.02	
	189.074	28.69	8.00	1.89	--	38.58	43.50	4.92	
	331.355	23.57	14.47	2.60	--	40.64	46.00	5.36	
	593.050	19.06	18.50	3.20	--	40.76	46.00	5.24	
	793.396	17.29	19.07	3.61	--	39.97	46.00	6.03	
	1046.000	47.25	23.88	4.94	38.10	37.97	74.00	36.03	PK
	1144.000	46.62	24.28	5.05	37.88	38.07	74.00	35.93	
	1272.000	45.90	24.87	5.30	37.55	38.52	74.00	35.48	
	1435.000	46.10	25.43	5.61	37.08	40.06	74.00	33.94	
	1637.000	47.19	27.14	5.81	36.61	43.53	74.00	30.47	
	1895.000	45.45	30.10	6.18	36.22	45.51	74.00	28.49	
	1046.000	33.46	23.88	4.94	38.10	24.18	54.00	29.82	AV
	1144.000	33.62	24.28	5.05	37.88	25.07	54.00	28.93	
	1272.000	31.62	24.87	5.30	37.55	24.24	54.00	29.76	
	1435.000	33.89	25.43	5.61	37.08	27.85	54.00	26.15	
	1637.000	34.63	27.14	5.81	36.61	30.97	54.00	23.03	
	1895.000	32.82	30.10	6.18	36.22	32.88	54.00	21.12	

TEST ENGINEER: NEAL WANG

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	75H9	Humidity	:	60%RH
Test Mode	:	HDMI 1920*1080@60Hz	Date of Test	:	Jun 17, 2014

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Vertical	33.211	19.75	16.25	0.70	--	36.70	40.00	3.30	QP
	43.050	24.37	11.05	0.80	--	36.22	40.00	3.78	
	80.927	**29.91**	**6.88**	**1.08**	**--**	**37.87**	**40.00**	**2.13**	
	262.896	22.11	12.90	2.30	--	37.31	46.00	8.69	
	350.477	19.47	14.80	2.63	--	36.90	46.00	9.10	
	785.093	18.43	18.30	3.60	--	40.33	46.00	5.67	
	1033.000	46.48	23.82	4.92	38.13	37.09	74.00	36.91	PK
	1130.000	46.04	24.21	5.03	37.90	37.38	74.00	36.62	
	1281.000	46.08	24.92	5.35	37.53	38.82	74.00	35.18	
	1378.000	45.31	25.27	5.55	37.26	38.87	74.00	35.13	
	1530.000	46.16	25.92	5.64	36.83	40.89	74.00	33.11	
	1887.000	45.44	30.05	6.18	36.23	45.44	74.00	28.56	
	1033.000	33.25	23.82	4.92	38.13	23.86	54.00	30.14	AV
	1130.000	32.10	24.21	5.03	37.90	23.44	54.00	30.56	
	1281.000	31.02	24.92	5.35	37.53	23.76	54.00	30.24	
	1378.000	32.10	25.27	5.55	37.26	25.66	54.00	28.34	
	1530.000	32.84	25.92	5.64	36.83	27.57	54.00	26.43	
	1887.000	32.83	30.05	6.18	36.23	32.83	54.00	21.17	

TEST ENGINEER: NEAL WANG

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	75H9	Humidity :	60%RH
Test Mode	:	D-Sub 1920*1080@60Hz	Date of Test :	Jun 17, 2014

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	**80.081**	**29.66**	**6.80**	**1.08**	**37.54**	**40.00**	**2.46**
	189.074	26.95	8.00	1.89	36.84	43.50	6.66
	262.896	24.06	12.90	2.30	39.26	46.00	6.74
	396.242	20.89	15.93	2.68	39.50	46.00	6.50
	556.774	17.97	19.10	3.10	40.17	46.00	5.83
	854.025	13.18	20.90	4.08	38.16	46.00	7.84
Vertical	32.979	19.80	16.27	0.70	36.77	40.00	3.23
	41.277	22.25	11.97	0.78	35.00	40.00	5.00
	80.927	**29.39**	**6.88**	**1.08**	**37.35**	**40.00**	**2.65**
	329.039	21.88	14.32	2.59	38.79	46.00	7.21
	704.226	16.83	20.13	3.55	40.51	46.00	5.49
	796.183	16.97	19.43	3.61	40.01	46.00	5.99

TEST ENGINEER: NEAL WANG

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	75H9	Humidity :	60%RH
Test Mode	:	HDMI 1280*1024@60Hz	Date of Test :	Jun 17, 2014

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	**78.965**	**29.91**	**6.73**	**1.06**	**37.70**	**40.00**	**2.30**
	189.074	27.56	8.00	1.89	37.45	43.50	6.05
	264.746	26.17	12.90	2.30	41.37	46.00	4.63
	329.039	22.55	14.32	2.59	39.46	46.00	6.54
	793.396	16.90	19.07	3.61	39.58	46.00	6.42
	929.008	18.01	19.30	4.63	41.94	46.00	4.06
Vertical	**32.979**	**19.76**	**16.27**	**0.70**	**36.73**	**40.00**	**3.27**
	82.938	27.37	7.14	1.11	35.62	40.00	4.38
	264.746	24.23	12.90	2.30	39.43	46.00	6.57
	394.855	21.98	15.80	2.68	40.46	46.00	5.54
	742.259	18.45	18.87	3.57	40.89	46.00	5.11
	982.620	20.13	21.03	4.83	45.99	54.00	8.01

TEST ENGINEER: NEAL WANG

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	75H9	Humidity :	60%RH
Test Mode	:	HDMI 640*480@60Hz	Date of Test :	Jun 17, 2014

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	**78.965**	**29.35**	**6.73**	**1.06**	**37.14**	**40.00**	**2.86**
	103.080	26.94	11.00	1.36	39.30	43.50	4.20
	262.896	19.82	12.90	2.30	35.02	46.00	10.98
	350.477	20.97	14.80	2.63	38.40	46.00	7.60
	539.478	19.41	19.50	3.06	41.97	46.00	4.03
	704.226	14.03	20.13	3.55	37.71	46.00	8.29
Vertical	34.037	19.50	16.10	0.71	36.31	40.00	3.69
	72.084	**30.69**	**6.10**	**0.97**	**37.76**	**40.00**	**2.24**
	152.130	24.11	9.85	1.65	35.61	43.50	7.89
	331.355	22.50	14.47	2.60	39.57	46.00	6.43
	810.265	16.55	20.20	3.70	40.45	46.00	5.55
	989.536	17.80	21.07	4.83	43.70	54.00	10.30

TEST ENGINEER: NEAL WANG

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	75H9	Humidity :	60%RH
Test Mode	:	USB Play	Date of Test :	Jun 17, 2014

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	54.071	28.30	6.20	0.87	35.37	40.00	4.63
	79.243	**29.18**	**6.75**	**1.06**	**36.99**	**40.00**	**3.01**
	263.819	25.11	12.90	2.30	40.31	46.00	5.69
	330.195	24.51	14.40	2.59	41.50	46.00	4.50
	704.226	15.23	20.13	3.55	38.91	46.00	7.09
	798.980	17.07	19.80	3.61	40.48	46.00	5.52
Vertical	**40.988**	**24.12**	**12.05**	**0.78**	**36.95**	**40.00**	**3.05**
	72.084	29.79	6.10	0.97	36.86	40.00	3.14
	106.013	21.83	11.45	1.38	34.66	43.50	8.84
	173.814	24.59	8.32	1.80	34.71	43.50	8.79
	331.355	22.28	14.47	2.60	39.35	46.00	6.65
	658.836	16.46	19.00	3.41	38.87	46.00	7.13

TEST ENGINEER: NEAL WANG

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	75H9	Humidity :	60%RH
Test Mode	:	LAN Play	Date of Test :	Jun 17, 2014

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	54.071	27.26	6.20	0.87	34.33	40.00	5.67
	78.965	**29.24**	**6.73**	**1.06**	**37.03**	**40.00**	**2.97**
	154.821	26.77	9.60	1.67	38.04	43.50	5.46
	263.819	24.85	12.90	2.30	40.05	46.00	5.95
	396.242	20.98	15.93	2.68	39.59	46.00	6.41
	629.477	16.22	18.40	3.32	37.94	46.00	8.06
Vertical	**78.965**	**30.18**	**6.73**	**1.06**	**37.97**	**40.00**	**2.03**
	133.151	25.47	11.34	1.56	38.37	43.50	5.13
	189.074	28.14	8.00	1.89	38.03	43.50	5.47
	396.242	21.54	15.93	2.68	40.15	46.00	5.85
	629.477	17.41	18.40	3.32	39.13	46.00	6.87
	787.851	17.55	18.50	3.60	39.65	46.00	6.35

TEST ENGINEER: NEAL WANG

5 KEY COMPONENTS LIST

The following components are used in each unit marked:

Name	M/N	Manufacturer	Location
Ferrite Core	ZCAT3035-1330\ROH	Jiangsu Ruifeng Electronic Co., Ltd, FEELUX CO.LTD, Jiangsu Chenlang Electronic Co., Ltd.	See Internal Photo Appendix Figure 28, 29
Gasket	35X0.7X56mm\VGA\ROH	JOINSET, Shenzhen Tongantai Electronic Technology Co., Ltd.	See Internal Photo Appendix Figure 30

TEST ENGINEER: Neal_wang

(NEAL WANG)

6 DEVIATION TO TEST SPECIFICATIONS

None.