FCC ID:W8ULE32HDF3310

APPLICATION OF CERTIFICATION For

TTE Technology Inc.

LCD TV

Brand Name	Model Number
TCL	LE32HDF3310

FCC ID: W8ULE32HDF3310

Prepared for: TTE Technology Inc.

1255 Graphite Drive, Corona, CA 92881, U.S.A.

Prepared By: Audix Technology (Shenzhen) Co., Ltd.

No. 6, Ke Feng Rd., 52 Block,

Shenzhen Science & Industrial Park, Nantou, Shenzhen, Guangdong, China

Tel: (0755) 26639496 Fax: (0755) 26632877

Report Number : ACS-F13057

Date of Test : Feb. 19 ~ Mar. 03, 2013

Date of Report : Mar. 18, 2013



FCC ID:W8ULE32HDF3310

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FCC ID: W8ULE32HDF3310

TEST REPORT CERTIFICATION

Applicant

TTE Technology Inc.

Manufacturer

TCL King Electrical Appliances (Huizhou) Co., Ltd.

EUT Description

LCD TV

FCC ID

W8ULE32HDF3310

(A) Model No. &:

Brand Name | Model Number

Brand Name

TCL LE32HDF3310

(B) Power Supply: AC 120V/60Hz

(C) Test Voltage : AC 120V/60Hz

Measurement Standard Used:

FCC Rules and Regulations Part 15 Subpart B Class B 2011, ANSI C63.4: 2009 ICES-003 Issue 4 February 2004.

The device described above is tested by AUDIX TECHNOLOGY (SHENZHEN) 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 conducted and radiated emissions. The test results are contained in this test report and AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. is assumed of full responsibility for the accuracy and completeness of these tests. This report contains data that are not covered by the NVLAP accreditation.

After the test, our opinion is that EUT compliance with the requirement of the above standards.

This Report is made under FCC Part 2.1075. No modifications were required during testing to bring this product into compliance.

This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of AUDIX TECHNOLOGY (SHENZHEN) CO., LTD.

The 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.

Date of Test: Feb. 21 ~ Mar. 03, 2013 Report of date: Mar. 18, 2013

Prepared by: Julia 2

Reviewed by

1830

April Tseng / Assistant D

信拳科技(深圳)有限Sun Zeng / Supervisor

Audix Technology (Shenzhen) Co., Ltd. EMC 部門報告專用章

Stamp only for EMC Dept Report

Signature:

Len M 3/8 13

Approved & Authorized Signer:

Ken Lu / 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.

EMISSION							
Description of Test Item	Standard	Results	Remarks				
Power Line Conducted Emission Test	FCC Part 15: 2011 ANSI C63.4: 2009	PASS	Meets Class B Limit Minimum passing margin is 7.44dB at 0.45878MHz				
Radiated Emission Test (30-1000MHz)	1 CC 1 att 15. 2011		Meets Class B Limit Minimum passing margin is 4.07dB at 539.250MHz				
Radiated Emission Test (1-6GHz)	FCC Part 15: 2011 ANSI C63.4: 2009	PASS	Meets Class B Limit Minimum passing margin is 5.56dB at 1302.514MHz				



2. GENERAL INFORMATION

2.1.Description of Device (EUT)

Description : LCD TV

Model Number&:

Brand Name

Brand Name	Model Number
TCL	LE32HDF3310

FCC ID : W8ULE32HDF3310

Applicant : TTE Technology Inc.

1255 Graphite Drive, Corona, CA 92881, U.S.A.

Manufacturer : TCL King Electrical Appliances (Huizhou) Co., Ltd.

Section 19, Zhongkai Development Zone for New and High-Level Tech Industries, Huizhou, Guangdong Province, China, 516006.

FREQUENCIES USED AND GENERATED WITHIN DEVICE					
X54M1 45-OSC54M-0Y1CR 54MHz					
LVDS CLOCK	78MHZ				
IF	6MHz				
DC-DC	U302->385KHz	U303->1MHz			
DDR	390MHz				
AMP	384KHz				

Power Cord : Unshielded, Detachable, 1.8m

Date of Test : Feb. 21 ~ Mar. 03, 2013

Date of Receipt : Feb. 20, 2013

Sample Type : Prototype production

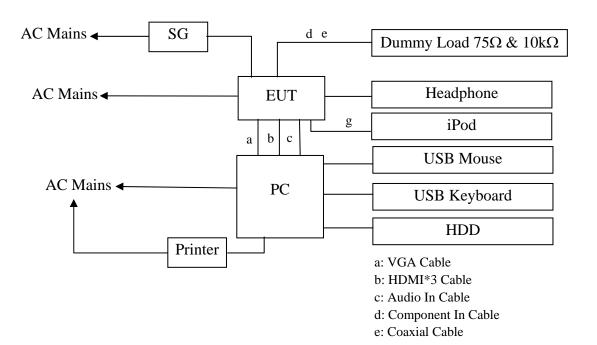


2.2.Tested Supporting System Details

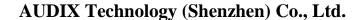
	Description	ACS No.	Manufacturer	Model	Serial Number	Approved type	
1.	Personal	Test PC M	DELL	Studio 540	224XK2X	☑FCC DoC ☑BSMI ID:R33002	
1.	Computer	Power Cord: Unshie Display Card: HD34	· · · · · · · · · · · · · · · · · · ·				
2.	USB Keyboard	ACS-EMC- K04R	DELL	SK-8115	CN-ODJ313-7161 6-6BB-049J	☑ FCC DoC ☑BSMI ID: T3A002	
	_	Power Cord: shielde	d, Undetachable,	2.0m			
3.	Headphone	ACS-EMC-EP03	OVANN	OV880V	N/A	□FCC ID □BSMI ID	
	Treadphone	Cable: Shielded, Un	detachabled, 4.0n	n			
		ACS-EMC-PT04	НР	C9079A	N/A	☑FCC DoC ☑BSMI ID: R33001	
4.		USB Cable: Shielded, Detachabled, 1.8m Power Cord: Unshielded, Detachabled, 1.8m Power Adapter: HP, M/N: 0957-2119, BSMI ID: R33030, DC Cable: Unshielded, Detachabled, 1.5m					
5.	USB Mouse	ACS-EMC-M04R	DELL	M056UO	512024282	☑ FCC DoC ☑BSMI ID: R41108	
3.		Power Cord: shielded, Undetachable, 1.8m					
6.	iPod nano	ACS-EMC-IP03	APPLE	A1199	YM711H3LVQ5	☑FCC DoC ☑BSMI ID: R33057	
		Data Cable: Shielded	d, Detachabled, 1	.0m			
7.	HDD	ACS-EMC-HDD01	Terasys	F12-UF	A0100215-53900 30	☑FCC DoC ☑BSMI ID: 4912A022	
	USB Cable: Shielded, Detachable, 1.8m						
8.	Dummy Load (10KΩ &75Ω) Component In Cable: Unshielded, Detachabled, 1.5m AV Cable: Unshielded, Detachable, 1.5m Coaxial Cable: Unshielded, Detachable, 1.5m						
9.	D-Sub Cable: Shielded, Detachable, 1.5m						



2.3.Block diagram of connection between the EUT and simulators



(EUT: LCD TV)





2.4.Test Facility

Site Description

Name of Firm : Audix Technology (Shenzhen) Co., Ltd.

No. 6, Ke Feng Rd., 52 Block, Shenzhen Science & Industrial Park, Nantou, Shenzhen, Guangdong, China

3m Anechoic Chamber : Certificated by FCC, USA

Registration Number: 90454 Valid Date: Feb.22, 2015

3m & 10m Anechoic Chamber : Certificated by FCC, USA

Registration Number: 794232 Valid Date: Oct.31, 2015

EMC Lab. : Certificated by DAkkS, Germany

Registration No: D-PL-12151-01-01

Valid Date: Feb.01, 2014

Accredited by NVLAP, USA NVLAP Code: 200372-0 Valid Date: Mar.31, 2013

2.5. Measurement Uncertainty (95% confidence levels, k=2)

Test Item	Uncertainty		
Uncertainty for Conduction emission test	3.48 dB(9KHz to 150KHz)		
in No. 1 Conduction	3.06 dB(150KHz to 30MHz)		
	3.6 dB(30~200MHz, Polarize: H)		
Uncertainty for Radiation Emission test	3.8 dB(30~200MHz, Polarize: V)		
in 3m chamber	4.2 dB(200M~1GHz, Polarize: H)		
	3.8 dB(200M~1GHz, Polarize: V)		
Uncertainty for Radiation Emission test in	3.1dB(Distance: 3m Polarize: V)		
3m chamber (1GHz-18GHz)	3.7 dB(Distance: 3m Polarize: H)		
Uncertainty for test site temperature	3%		
and humidity	0.6		

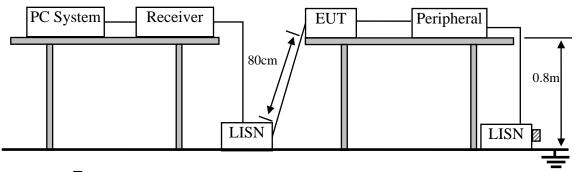


3. POWER LINE CONDUCTED EMISSION TEST

3.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESHS10	838693/001	Oct.31, 12	1 Year
2.	L.I.S.N.#1	Rohde & Schwarz	ESH2-Z5	834066/011	Oct.31, 12	1 Year
3.	L.I.S.N.#3	Kyoritsu	KNW-242C	8-1920-1	May.08, 12	1 Year
4.	Terminator	Hubersuhner	50Ω	No. 1	May.08, 12	1 Year
5.	Terminator	Hubersuhner	50Ω	No. 2	May.08, 12	1 Year
6.	RF Cable	Fujikura	3D-2W	No.1	May.08, 12	1Year
7.	Coaxial Switch	Anritsu	MP59B	M50564	May.08, 12	1 Year
8.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100341	May.08, 12	1 Year

3.2.Block Diagram of Test Setup



☑ :50Ω Terminator

3.3. Power Line Conducted Emission Test Limits

	Maximum RF Line Voltage			
Frequency	Quasi-Peak Level	Average Level		
	$dB(\mu V)$	$dB(\mu V)$		
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*		
500kHz ~ 5MHz	56	46		
5MHz ~ 30MHz	60	50		

Notes: 1. * Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

3.4. Configuration of EUT on Test

The following equipment are installed on Power Line Conducted Emission Test to meet the commission requirement and operating regulations in a manner which tends to maximize its emission characteristics in a normal application.

3.4.1.LCD TV (EUT)

Model Number : LE32HDF3310

Serial Number : N/A

3.4.2. Support Equipment: As Tested Supporting System Detail, in Section 2.2.



3.5. Operating Condition of EUT

- 3.5.1. Setup the EUT and simulator as shown as Section 3.2.
- 3.5.2. Turn on the power of all equipment.
- 3.5.3. PC system ran the Self-test program "EMC Test. exe" by windows XP and sent "H" Character to LCD TV (EUT), the Screen of EUT displayed and filled with "H" pattern, use white letters on a black ground, set the contrast control to maximum, set the brightness control to maximum and measure it.
- 3.5.4. The PC system was running the program "1kHz signal Playing" and sending sound to EUT.
- 3.5.5. The other peripheral devices were driven and operated in turn during all testing.

3.6.Test Procedure

The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT Power connected to the power mains through a line impedance stabilization network (L.I.S.N. 1#). This provided a 50-ohm coupling impedance for the EUT (Please refer to the block diagram of the test setup and photographs). The other peripheral devices power cord connected to the power mains through a line impedance stabilization network (L.I.S.N.#3). Both sides of power line were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.4: 2009 on conducted Emission test.

The bandwidth of test receiver (R&S TEST RECEIVER ESHS10) is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked. The test result are reported on Section 3.7.

3.7. Conducted Disturbance at Mains Terminals Test Results

PASS. (All emissions not reported below are too low against the prescribed limits.)

The EUT with the following test modes were tested and selected to read Q.P values and average values, all the test results are listed in next pages.

EUT: LCD TV Model No.: LE32HDF3310

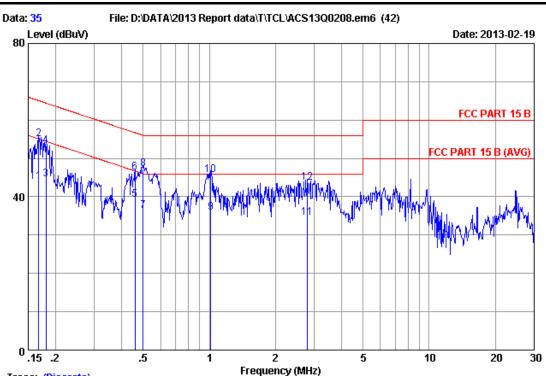
Test Date: Feb. 19, 2013 Temperature: 23.1 Humidity: 45%

The details of test modes are as follows:

No.	Test Mode	Immust Dont	Resolution &	Reference Test Data No.		
NO.	Test Mode	Input Port	Frequency	Line	Neutral	
1.			640*480@60Hz	#35	#36	
2.	PC Mode	VGA	1024*768@60Hz	#34	#33	
3.			1366*768@60Hz	#32	#31	
4.		HDMI 1	1920*1080@60Hz	#38	#37	
5.		HDMI 2	1920*1080@60Hz	#39	#40	
6.		HDMI 3	1920*1080@60Hz	#42	#41	

Worst test mode)





Trace: (Discrete)

Site no :Power Clamp Site Data No :35

Dis./Ant. :** 2012 ESH2-Z5 LINE

Limit :FCC PART 15 B

Env./Ins. :23.1*C/45% Engineer :Jerry

EUT :LCD TV M/N:LE32HDF3310

Power Rating :AC 120V/60Hz

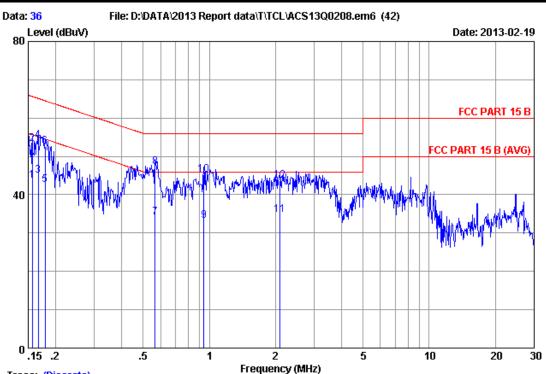
Test Mode : Running "H" Pattern And 1KHz Playing

:VGA:640*480@60Hz

No 	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.16765	0.19	0.14	43.63	43.96	55.08	11.12	Average
2	0.16765	0.19	0.14	54.68	55.01	65.08	10.07	QP
3	0.18056	0.19	0.14	44.21	44.54	54.46	9.92	Average
4	0.18056	0.19	0.14	53.01	53.34	64.46	11.12	QP
5	0.45878	0.19	0.15	38.93	39.27	46.71	7.44	Average
6	0.45878	0.19	0.15	45.93	46.27	56.71	10.44	QP
7	0.49937	0.19	0.15	35.94	36.28	46.01	9.73	Average
8	0.49937	0.19	0.15	46.92	47.26	56.01	8.75	QP
9	1.016	0.21	0.14	35.45	35.80	46.00	10.20	Average
10	1.016	0.21	0.14	45.39	45.74	56.00	10.26	QP
11	2.794	0.26	0.14	34.24	34.64	46.00	11.36	Average
12	2.794	0.26	0.14	43.26	43.66	56.00	12.34	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.





Trace: (Discrete)

Site no :Power Clamp Site Data No :36

Dis./Ant. :** 2012 ESH2-Z5 NEUTRAL

Limit :FCC PART 15 B

Env./Ins. :23.1*C/45% Engineer :Jerry

EUT :LCD TV M/N:LE32HDF3310

Power Rating :AC 120V/60Hz

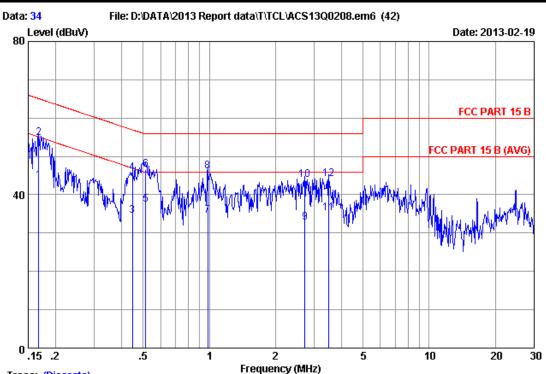
Test Mode : Running "H" Pattern And 1KHz Playing

:VGA:640*480@60Hz

No 	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15649	0.21	0.14	43.25	43.60	55.65	12.05	Average
2	0.15649	0.21	0.14	53.00	53.35	65.65	12.30	QP
3	0.16677	0.21	0.14	44.72	45.07	55.12	10.05	Average
4	0.16677	0.21	0.14	53.75	54.10	65.12	11.02	QP
5	0.17866	0.21	0.14	42.13	42.48	54.55	12.07	Average
6	0.17866	0.21	0.14	52.18	52.53	64.55	12.02	QP
7	0.56709	0.23	0.15	33.82	34.20	46.00	11.80	Average
8	0.56709	0.23	0.15	46.88	47.26	56.00	8.74	QP
9	0.94308	0.24	0.14	32.93	33.31	46.00	12.69	Average
10	0.94308	0.24	0.14	44.96	45.34	56.00	10.66	QP
11	2.099	0.28	0.14	34.45	34.87	46.00	11.13	Average
12	2.099	0.28	0.14	43.24	43.66	56.00	12.34	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.





Trace: (Discrete)

Site no :Power Clamp Site Data No :34

Dis./Ant. :** 2012 ESH2-Z5 LINE

Limit :FCC PART 15 B

Env./Ins. :23.1*C/45% Engineer :Jerry

EUT :LCD TV M/N:LE32HDF3310

Power Rating : AC 120V/60Hz

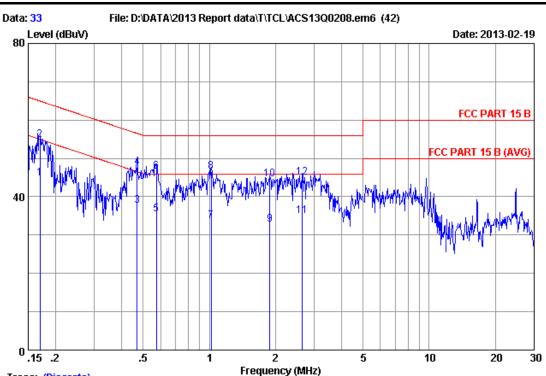
Test Mode : Running "H" Pattern And 1KHz Playing

:VGA:1024*768@60Hz

No 	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.16765	0.19	0.14	43.43	43.76	55.08	11.32	Average
2	0.16765	0.19	0.14	54.50	54.83	65.08	10.25	QP
3	0.44679	0.19	0.15	34.23	34.57	46.93	12.36	Average
4	0.44679	0.19	0.15	45.27	45.61	56.93	11.32	QP
5	0.51278	0.19	0.15	37.13	37.47	46.00	8.53	Average
6	0.51278	0.19	0.15	46.14	46.48	56.00	9.52	QP
7	0.98391	0.21	0.14	34.26	34.61	46.00	11.39	Average
8	0.98391	0.21	0.14	45.85	46.20	56.00	9.80	QP
9	2.721	0.26	0.14	32.43	32.83	46.00	13.17	Average
10	2.721	0.26	0.14	43.46	43.86	56.00	12.14	QP
11	3.491	0.27	0.14	34.73	35.14	46.00	10.86	Average
12	3.491	0.27	0.14	43.79	44.20	56.00	11.80	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.





Trace: (Discrete)

Site no :Power Clamp Site Data No :33

Dis./Ant. :** 2012 ESH2-Z5 NEUTRAL

Limit :FCC PART 15 B

Env./Ins. :23.1*C/45% Engineer :Jerry

EUT :LCD TV M/N:LE32HDF3310

Power Rating :AC 120V/60Hz

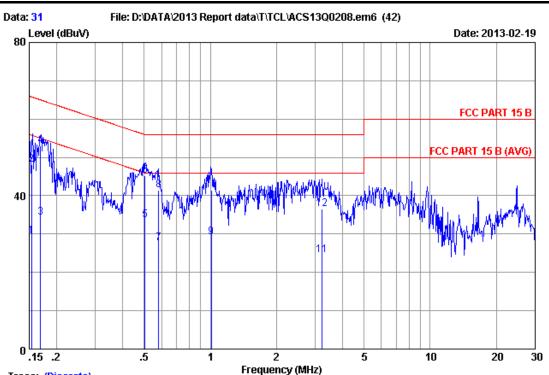
Test Mode : Running "H" Pattern And 1KHz Playing

:VGA:1024*768@60Hz

No 	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.16944	0.21	0.14	44.46	44.81	54.99	10.18	Average
2	0.16944	0.21	0.14	54.47	54.82	64.99	10.17	QP
3	0.46861	0.23	0.15	37.22	37.60	46.54	8.94	Average
4	0.46861	0.23	0.15	47.22	47.60	56.54	8.94	QP
5	0.57313	0.23	0.15	35.12	35.50	46.00	10.50	Average
6	0.57313	0.23	0.15	46.15	46.53	56.00	9.47	QP
7	1.021	0.24	0.14	33.27	33.65	46.00	12.35	Average
8	1.021	0.24	0.14	46.21	46.59	56.00	9.41	QP
9	1.888	0.28	0.14	32.25	32.67	46.00	13.33	Average
10	1.888	0.28	0.14	44.05	44.47	56.00	11.53	QP
11	2.636	0.30	0.14	34.62	35.06	46.00	10.94	Average
12	2.636	0.30	0.14	44.66	45.10	56.00	10.90	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.





Trace: (Discrete)

Site no :Power Clamp Site Data No :31

Dis./Ant. :** 2012 ESH2-Z5 LINE

Limit :FCC PART 15 B

Env./Ins. :23.1*C/45% Engineer :Jerry

EUT :LCD TV M/N:LE32HDF3310

Power Rating : AC 120V/60Hz

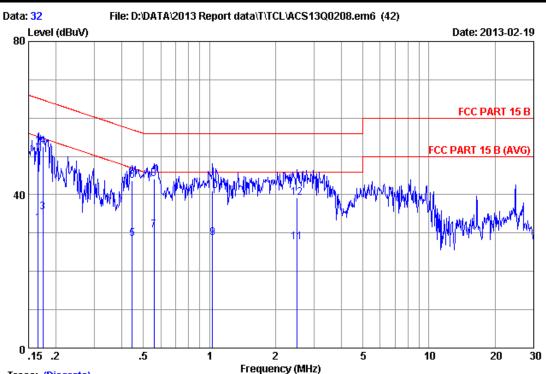
Test Mode : Running "H" Pattern And 1KHz Playing

:VGA:1366*768@60Hz

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15400	0.19	0.14	29.11	29.44	55.78	26.34	Average
2	0.15400	0.19	0.14	47.71	48.04	65.78	17.74	QP
3	0.16900	0.19	0.14	34.00	34.33	55.01	20.68	Average
4	0.16900	0.19	0.14	52.80	53.13	65.01	11.88	QP
5	0.50500	0.19	0.15	33.30	33.64	46.00	12.36	Average
6	0.50500	0.19	0.15	44.80	45.14	56.00	10.86	QP
7	0.58200	0.19	0.15	27.40	27.74	46.00	18.26	Average
8	0.58200	0.19	0.15	41.10	41.44	56.00	14.56	QP
9	1.008	0.21	0.14	28.80	29.15	46.00	16.85	Average
10	1.008	0.21	0.14	41.10	41.45	56.00	14.55	QP
11	3.223	0.27	0.14	24.10	24.51	46.00	21.49	Average
12	3.223	0.27	0.14	36.10	36.51	56.00	19.49	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.





Trace: (Discrete)

Site no :Power Clamp Site Data No :32

Dis./Ant. :** 2012 ESH2-Z5 NEUTRAL

Limit :FCC PART 15 B

Env./Ins. :23.1*C/45% Engineer :Jerry

EUT :LCD TV M/N:LE32HDF3310

Power Rating :AC 120V/60Hz

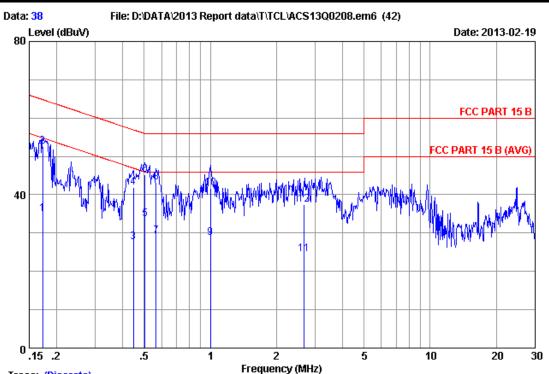
Test Mode : Running "H" Pattern And 1KHz Playing

:VGA:1366*768@60Hz

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.16600	0.21	0.14	32.20	32.55	55.16	22.61	Average
2	0.16600	0.21	0.14	52.00	52.35	65.16	12.81	QP
3	0.17400	0.21	0.14	35.10	35.45	54.77	19.32	Average
4	0.17400	0.21	0.14	52.30	52.65	64.77	12.12	QP
5	0.44400	0.23	0.15	28.09	28.47	46.99	18.52	Average
6	0.44400	0.23	0.15	43.29	43.67	56.99	13.32	QP
7	0.55800	0.23	0.15	30.30	30.68	46.00	15.32	Average
8	0.55800	0.23	0.15	43.70	44.08	56.00	11.92	QP
9	1.031	0.24	0.14	28.30	28.68	46.00	17.32	Average
10	1.031	0.24	0.14	40.70	41.08	56.00	14.92	QP
11	2.513	0.29	0.14	27.20	27.63	46.00	18.37	Average
12	2.513	0.29	0.14	38.80	39.23	56.00	16.77	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.





Trace: (Discrete)

Site no :Power Clamp Site Data No :38

Dis./Ant. :** 2012 ESH2-Z5 LINE

Limit :FCC PART 15 B

Env./Ins. :23.1*C/45% Engineer :Jerry

EUT :LCD TV M/N:LE32HDF3310

Power Rating : AC 120V/60Hz

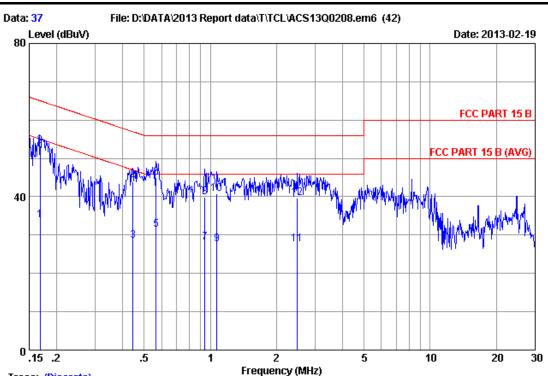
Test Mode : Running "H" Pattern And 1KHz Playing

:HDMI 1:1920*1080@60Hz

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.17300	0.19	0.14	34.70	35.03	54.82	19.79	Average
2	0.17300	0.19	0.14	52.30	52.63	64.82	12.19	QP
3	0.44600	0.19	0.15	27.20	27.54	46.95	19.41	Average
4	0.44600	0.19	0.15	41.60	41.94	56.95	15.01	QP
5	0.50400	0.19	0.15	33.30	33.64	46.00	12.36	Average
6	0.50400	0.19	0.15	44.90	45.24	56.00	10.76	QP
7	0.56700	0.19	0.15	28.90	29.24	46.00	16.76	Average
8	0.56700	0.19	0.15	42.80	43.14	56.00	12.86	QP
9	0.99900	0.21	0.14	28.50	28.85	46.00	17.15	Average
10	0.99900	0.21	0.14	41.30	41.65	56.00	14.35	QP
11	2.678	0.26	0.14	24.19	24.59	46.00	21.41	Average
12	2.678	0.26	0.14	37.09	37.49	56.00	18.51	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.





Trace: (Discrete)

Site no :Power Clamp Site Data No :37

Dis./Ant. :** 2012 ESH2-Z5 NEUTRAL

Limit :FCC PART 15 B

Env./Ins. :23.1*C/45% Engineer :Jerry

EUT :LCD TV M/N:LE32HDF3310

Power Rating : AC 120V/60Hz

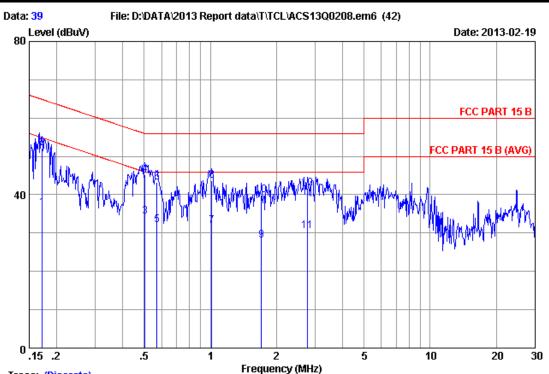
Test Mode : Running "H" Pattern And 1KHz Playing

:HDMI 1:1920*1080@60Hz

No 	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.16800	0.21	0.14	33.60	33.95	55.06	21.11	Average
2	0.16800	0.21	0.14	52.80	53.15	65.06	11.91	QP
3	0.44400	0.23	0.15	28.09	28.47	46.99	18.52	Average
4	0.44400	0.23	0.15	43.59	43.97	56.99	13.02	QP
5	0.56700	0.23	0.15	31.10	31.48	46.00	14.52	Average
6	0.56700	0.23	0.15	44.60	44.98	56.00	11.02	QP
7	0.94300	0.24	0.14	27.70	28.08	46.00	17.92	Average
8	0.94300	0.24	0.14	39.40	39.78	56.00	16.22	QP
9	1.070	0.24	0.14	27.30	27.68	46.00	18.32	Average
10	1.070	0.24	0.14	40.40	40.78	56.00	15.22	QP
11	2.473	0.29	0.14	27.30	27.73	46.00	18.27	Average
12	2.473	0.29	0.14	39.20	39.63	56.00	16.37	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.





Trace: (Discrete)

Site no :Power Clamp Site Data No :39

Dis./Ant. :** 2012 ESH2-Z5 LINE

Limit :FCC PART 15 B

Env./Ins. :23.1*C/45% Engineer :Jerry

EUT :LCD TV M/N:LE32HDF3310

Power Rating : AC 120V/60Hz

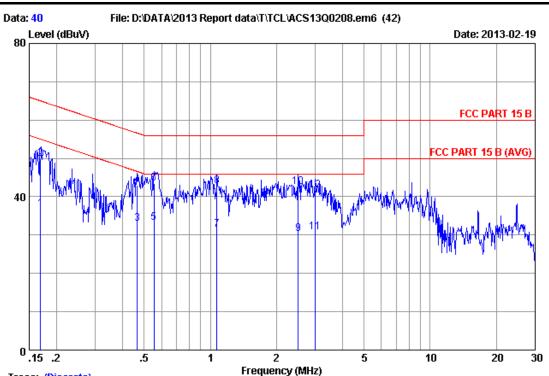
Test Mode : Running "H" Pattern And 1KHz Playing

:HDMI 2:1920*1080@60Hz

No 	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.17200	0.19	0.14	36.30	36.63	54.86	18.23	Average
2	0.17200	0.19	0.14	51.80	52.13	64.86	12.73	QP
3	0.50400	0.19	0.15	33.90	34.24	46.00	11.76	Average
4	0.50400	0.19	0.15	44.90	45.24	56.00	10.76	QP
5	0.57300	0.19	0.15	31.70	32.04	46.00	13.96	Average
6	0.57300	0.19	0.15	42.90	43.24	56.00	12.76	QP
7	1.015	0.21	0.14	31.50	31.85	46.00	14.15	Average
8	1.015	0.21	0.14	43.40	43.75	56.00	12.25	QP
9	1.707	0.23	0.14	27.60	27.97	46.00	18.03	Average
10	1.707	0.23	0.14	39.60	39.97	56.00	16.03	QP
11	2.764	0.26	0.14	30.19	30.59	46.00	15.41	Average
12	2.764	0.26	0.14	41.29	41.69	56.00	14.31	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.





Trace: (Discrete)

Site no :Power Clamp Site Data No :40

Dis./Ant. :** 2012 ESH2-Z5 NEUTRAL

Limit :FCC PART 15 B

Env./Ins. :23.1*C/45% Engineer :Jerry

EUT :LCD TV M/N:LE32HDF3310

Power Rating : AC 120V/60Hz

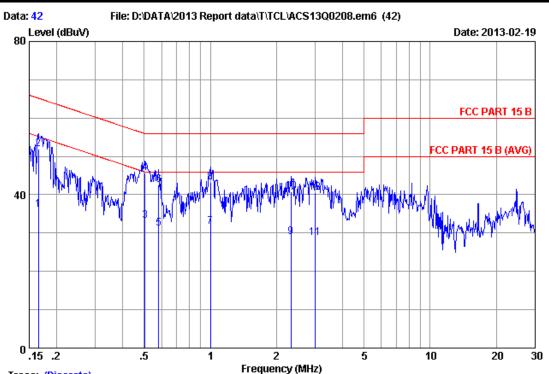
Test Mode : Running "H" Pattern And 1KHz Playing

:HDMI 2:1920*1080@60Hz

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.16900	0.21	0.14	36.40	36.75	55.01	18.26	Average
2	0.16900	0.21	0.14	49.60	49.95	65.01	15.06	QP
3	0.46600	0.23	0.15	32.69	33.07	46.58	13.51	Average
4	0.46600	0.23	0.15	42.69	43.07	56.58	13.51	QP
5	0.55500	0.23	0.15	32.80	33.18	46.00	12.82	Average
6	0.55500	0.23	0.15	43.10	43.48	56.00	12.52	QP
7	1.070	0.24	0.14	31.00	31.38	46.00	14.62	Average
8	1.070	0.24	0.14	42.30	42.68	56.00	13.32	QP
9	2.512	0.29	0.14	29.80	30.23	46.00	15.77	Average
10	2.512	0.29	0.14	42.10	42.53	56.00	13.47	QP
11	2.993	0.31	0.14	30.39	30.84	46.00	15.16	Average
12	2.993	0.31	0.14	41.19	41.64	56.00	14.36	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.





Trace: (Discrete)

Site no :Power Clamp Site Data No :42

Dis./Ant. :** 2012 ESH2-Z5 LINE

Limit :FCC PART 15 B

Env./Ins. :23.1*C/45% Engineer :Jerry

EUT :LCD TV M/N:LE32HDF3310

Power Rating : AC 120V/60Hz

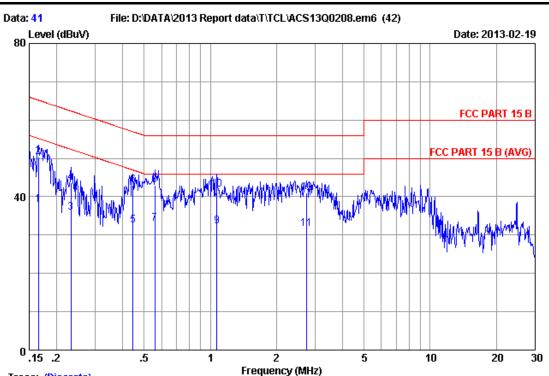
Test Mode : Running "H" Pattern And 1KHz Playing

:HDMI 3:1920*1080@60Hz

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.16500	0.19	0.14	35.80	36.13	55.21	19.08	Average
2	0.16500	0.19	0.14	51.60	51.93	65.21	13.28	QP
3	0.50400	0.19	0.15	32.90	33.24	46.00	12.76	Average
4	0.50400	0.19	0.15	45.30	45.64	56.00	10.36	QP
5	0.58200	0.19	0.15	30.90	31.24	46.00	14.76	Average
6	0.58200	0.19	0.15	42.20	42.54	56.00	13.46	QP
7	0.99900	0.21	0.14	31.20	31.55	46.00	14.45	Average
8	0.99900	0.21	0.14	42.90	43.25	56.00	12.75	QP
9	2.321	0.25	0.14	28.49	28.88	46.00	17.12	Average
10	2.321	0.25	0.14	40.29	40.68	56.00	15.32	QP
11	2.993	0.26	0.14	28.40	28.80	46.00	17.20	Average
12	2.993	0.26	0.14	40.10	40.50	56.00	15.50	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.





Trace: (Discrete)

Site no :Power Clamp Site Data No :41

Dis./Ant. :** 2012 ESH2-Z5 NEUTRAL

Limit :FCC PART 15 B

Env./Ins. :23.1*C/45% Engineer :Jerry

EUT :LCD TV M/N:LE32HDF3310

Power Rating : AC 120V/60Hz

Test Mode : Running "H" Pattern And 1KHz Playing

:HDMI 3:1920*1080@60Hz

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.16500	0.21	0.14	37.60	37.95	55.21	17.26	Average
2	0.16500	0.21	0.14	50.10	50.45	65.21	14.76	QP
3	0.23200	0.21	0.15	35.50	35.86	52.38	16.52	Average
4	0.23200	0.21	0.15	43.30	43.66	62.38	18.72	QP
5	0.44400	0.23	0.15	32.19	32.57	46.99	14.42	Average
6	0.44400	0.23	0.15	42.59	42.97	56.99	14.02	QP
7	0.55800	0.23	0.15	32.60	32.98	46.00	13.02	Average
8	0.55800	0.23	0.15	42.60	42.98	56.00	13.02	QP
9	1.070	0.24	0.14	32.00	32.38	46.00	13.62	Average
10	1.070	0.24	0.14	41.40	41.78	56.00	14.22	QP
11	2.750	0.30	0.14	31.20	31.64	46.00	14.36	Average
12	2.750	0.30	0.14	40.60	41.04	56.00	14.96	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.



4. RADIATED EMISSION TEST

4.1.Test Equipment

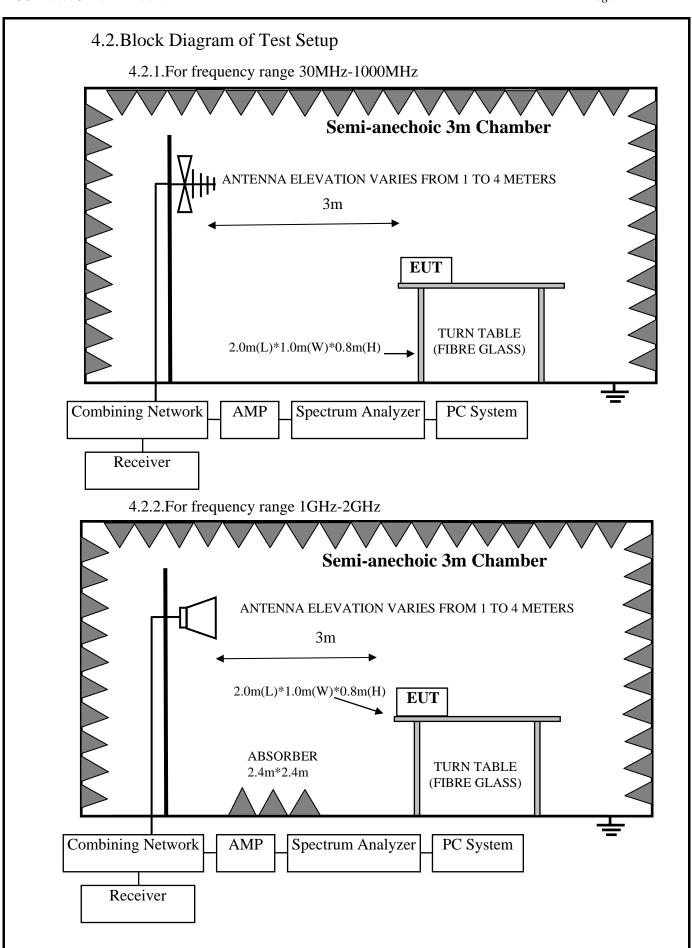
4.1.1. For frequency range 30MHz~1000MHz

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	3#Chamber	AUDIX	N/A	N/A	Nov.24,12	1 Year
2	EMI Spectrum	Agilent	E4407B	MY41440292	May.08, 12	1 Year
3	Test Receiver	Rohde & Schwarz	ESVS10	834468/011	May.08, 12	1 Year
4	Amplifier	HP	8447D	2648A04738	May.08, 12	1 Year
5	Trilog-Broadba nd Antenna	SCHWARZBECK	VULB 9168	9168-429	Nov.27, 12	1.0 Year
6	RF Cable	MIYAZAKI	CFD400-NL	3# Chamber No.1	May.08, 12	1 Year
7	Coaxial Switch	Anritsu	MP59B	M74389	May.08, 12	1 Year

4.1.2.For frequency range 1GHz~2GHz

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum	Agilent	E4407B	MY41440292	May.08, 12	1 Year
1	Analyzer					
2	Horn Antenna	EMCO	3115	9510-4580	June.05, 12	1 Year
3	Amplifier	Agilent	8449B	3008A00863	May.08, 12	1 Year
4	RF Cable	Hubersuhner	SUCOFLEX106	77980/6	May.08, 12	1 Year
5	RF Cable	Hubersuhner	SUCOFLEX106	77977/6	May.08, 12	1 Year







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4.3. Radiated Emission Limit

Frequency	Distance	Field Strengths Limits
MHz	(Meters)	dB(μV)/m
30 ~ 88	3	40.0
88 ~ 216	3	43.5
216 ~ 960	3	46.0
960 ~ 1000	3	54.0
Above 1000	3	74(Peak)54(Average)

Remark: (1) Emission level = Antenna Factor + Cable Loss + Reading Emission level = Antenna Factor - Amp Factor + Cable Loss + Reading (above 1000MHz)

- (2) The smaller limit shall apply at the cross point between two frequency bands
- (3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

4.4.EUT Configuration on Test

The configurations of EUT are listed in Section 3.4

4.5. Operating Condition of EUT

Same as Conducted Emission test that is listed in Section 3.5. except the test set up replaced by Section 4.2.



4.6.Test Procedure

The EUT was placed on a non-metallic table, 80 cm above the ground plane inside a semi-anechoic chamber. An antenna was located 3m from the EUT on an adjustable mast. A pre-scan was first performed in order to find prominent radiated emissions. For final emissions measurements at each frequency of interest, the EUT were rotated and the antenna height was varied between 1m and 4m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.4: 2009 on Radiated Emission test.

The bandwidth of the EMI test receiver (R&S ESVS10) is set at 120kHz for frequency range from 30MHz to 1000 MHz.

The bandwidth of the Spectrum's RBW is set at 1MHz and VBW is set at 3MHz for peak emissions measurement above 1GHz and 1MHz RBW, 10Hz VBW for average emissions measure above 1GHz.

4.7. Radiated Disturbance Test Results

PASS. (All emissions not reported below are too low against the prescribed limits.)

EUT: LCD TV Model No.: LE32HDF3310

For frequency range 30MHz~1000MHz

The EUT with the following test modes were tested and selected to read Q.P values, all the test results are listed in next pages.

Test Date: Feb. 19, 2013 Temperature: 24 Humidity: 56%

The details of test modes are as follows:

No.	Test Mode	Input Port	Resolution &	Reference Test Data No.		
110.	Test Mode	Input Fort	Frequency	Horizontal	Vertical	
1.			640*480@60Hz	#12	#11	
2.		VGA	1024*768@60Hz	#9	#10	
3.	PC Mode		1366*768@60Hz	#8	#7	
4.	PC Wlode	HDMI 1	1920*1080@60Hz	#2	#1	
5.		HDMI 2	1920*1080@60Hz	#3	#4	
6.		HDMI 3	1920*1080@60Hz	#6	#5	

Worst test mode)



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For frequency range 1GHz~2GHz

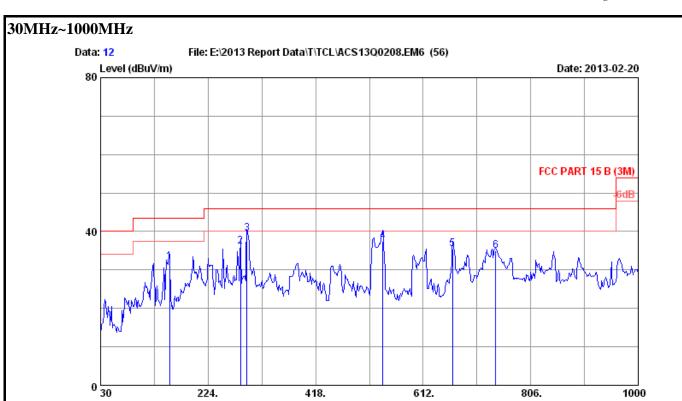
The EUT with below test mode were measured within Anechoic Chamber and the test results listed in next pages

Note: For all the emissions above 1GHz, the peak measured level comply with peak limit, so the average level were deemed to comply with average limit.

Test Date: Feb. 20, 2013 Temperature: 24 Humidity: 56%

NO.	Test Mode	Resolution & Frequency	Reference Test Data No.		
NO.	Test Mode	Resolution & Frequency	Horizontal	Vertical	
1.	VGA	1366*768@60Hz	#44	#43	
2.	HDMI 1	1920*1080@60Hz	#50	#49	
3.	HDMI 2	1920*1080@60Hz	#47	#48	
4.	HDMI 3	1920*1080@60Hz	#46	#45	





Site no. : 3m Chamber

Data no. : 12 Ant. pol. : HORIZONTAL Dis. / Ant. : 3m 9168-429

Frequency (MHz)

Engineer : Even_Deng

: FCC PART 15 B (3M) Limit

Env. / Ins. : 24*C/56%

M/N:LE32HDF3310 : LCD TV

Power rating : AC 120V/60Hz

Test Mode : Running "H" Pattern And 1KHz Playing

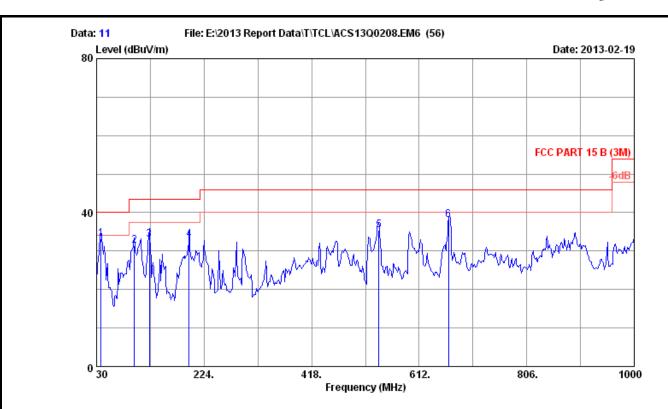
VGA:640*480@60Hz

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	154.160	14.15	0.97	17.03	32.15	43.50	11.35	QP
2	282.200	12.42	1.24	22.49	36.15	46.00	9.85	QP
3	293.840	12.66	1.27	25.57	39.50	46.00	6.50	QP
4	539.250	17.21	1.95	18.24	37.40	46.00	8.60	QP
5	665.350	19.28	2.32	13.75	35.35	46.00	10.65	QP
6	742.950	20.19	2.54	12.26	34.99	46.00	11.01	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.

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





Site no. : 3m Chamber Data no. : 11
Dis. / Ant. : 3m 9168-429 Ant. pol. : VERTICAL

Limit : FCC PART 15 B (3M)

Env. / Ins. : 24*C/56% Engineer : Even_Deng

EUT : LCD TV M/N:LE32HDF3310

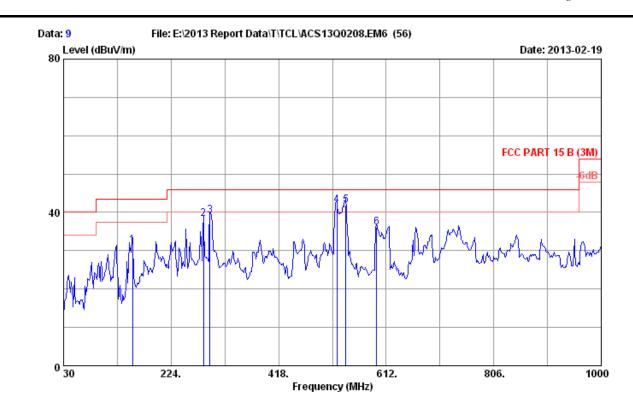
Power rating : AC 120V/60Hz

Test Mode : Running "H" Pattern And 1KHz Playing

VGA:640*480@60Hz

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	37.760	13.77	0.51	18.95	33.23	40.00	6.77	QP
2	97.900	10.00	0.85	20.61	31.46	43.50	12.04	QP
3	125.060	12.52	0.90	19.56	32.98	43.50	10.52	QP
4	196.840	10.08	1.06	21.77	32.91	43.50	10.59	QP
5	539.250	17.21	1.95	16.30	35.46	46.00	10.54	QP
6	665.350	19.28	2.32	16.46	38.06	46.00	7.94	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.



Site no. : 3m Chamber Data no. : 9

Dis. / Ant. : 3m 9168-429 Ant. pol. : HORIZONTAL

Limit : FCC PART 15 B (3M)

Env. / Ins. : 24*C/56% Engineer : Even_Deng

EUT : LCD TV M/N:LE32HDF3310

Power rating : AC 120V/60Hz

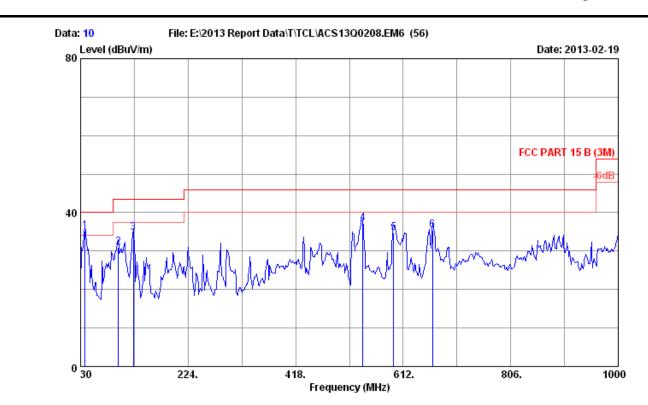
Test Mode : Running "H" Pattern And 1KHz Playing

VGA:1024*768@60Hz

No	o. Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	154.160	14.15	0.97	16.34	31.46	43.50	12.04	QP
2	282.200	12.42	1.24	24.60	38.26	46.00	7.74	QP
3	293.840	12.66	1.27	25.20	39.13	46.00	6.87	QP
4	522.760	16.92	1.89	23.08	41.89	46.00	4.11	QP
5	539.250	17.21	1.95	22.77	41.93	46.00	4.07	QP
6	594.540	18.21	2.11	15.73	36.05	46.00	9.95	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.





Site no. : 3m Chamber Data no. : 10
Dis. / Ant. : 3m 9168-429 Ant. pol. : VERTICAL

Limit : FCC PART 15 B (3M)

Env. / Ins. : 24*C/56% Engineer : Even_Deng

EUT : LCD TV M/N:LE32HDF3310

Power rating : AC 120V/60Hz

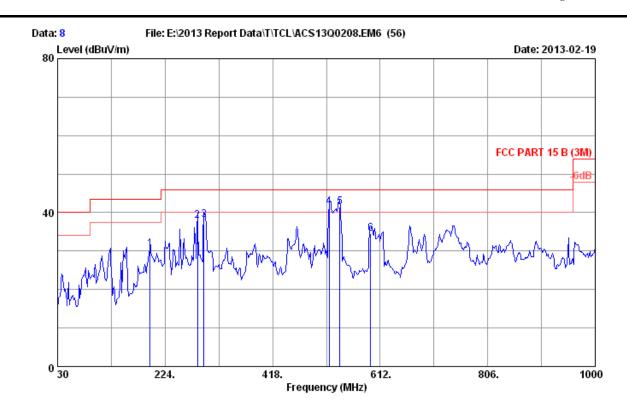
Test Mode : Running "H" Pattern And 1KHz Playing

VGA:1024*768@60Hz

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	_	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	37.760	13.77	0.51	20.91	35.19	40.00	4.81	QP
2	97.900	10.00	0.85	20.13	30.98	43.50	12.52	QP
3	125.060	12.52	0.90	21.39	34.81	43.50	8.69	QP
4	539.250	17.21	1.95	18.02	37.18	46.00	8.82	QP
5	594.540	18.21	2.11	14.49	34.81	46.00	11.19	QP
6	665.350	19.28	2.32	13.91	35.51	46.00	10.49	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.





Site no. : 3m Chamber Data no. : 8

Ant. pol. : HORIZONTAL Dis. / Ant. : 3m 9168-429

: FCC PART 15 B (3M) Limit

Env. / Ins. : 24*C/56% Engineer : Even_Deng

EUT M/N:LE32HDF3310 : LCD TV

Power rating : AC 120V/60Hz

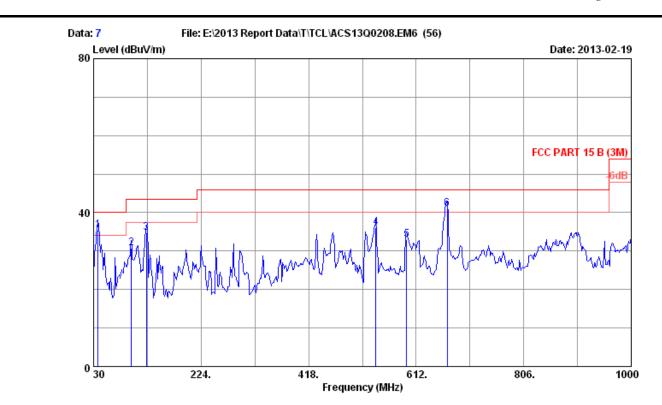
Test Mode : Running "H" Pattern And 1KHz Playing

VGA:1366*768@60Hz

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	196.840	10.08	1.06	19.50	30.64	43.50	12.86	QP
2	282.200	12.42	1.24	24.16	37.82	46.00	8.18	QP
3	293.840	12.66	1.27	24.18	38.11	46.00	7.89	QP
4	519.850	16.87	1.89	22.58	41.34	46.00	4.66	QP
5	539.250	17.21	1.95	22.26	41.42	46.00	4.58	QP
6	594.540	18.21	2.11	14.32	34.64	46.00	11.36	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.

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



Site no. : 3m Chamber Data no. : 7

Dis. / Ant. : 3m 9168-429 Ant. pol. : VERTICAL

Limit : FCC PART 15 B (3M)

Env. / Ins. : 24*C/56% Engineer : Even_Deng

EUT : LCD TV M/N:LE32HDF3310

Power rating : AC 120V/60Hz

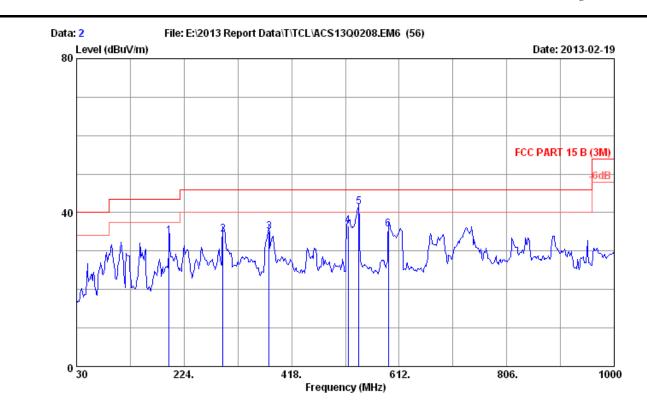
Test Mode : Running "H" Pattern And 1KHz Playing

VGA:1366*768@60Hz

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	37.760	13.77	0.51	21.14	35.42	40.00	4.58	QP
2	97.900	10.00	0.85	19.80	30.65	43.50	12.85	QP
3	125.060	12.52	0.90	21.42	34.84	43.50	8.66	QP
4	539.250	17.21	1.95	16.96	36.12	46.00	9.88	QP
5	594.540	18.21	2.11	12.65	32.97	46.00	13.03	QP
6	668.260	19.32	2.32	19.42	41.06	46.00	4.94	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.





Site no. : 3m Chamber Data no. : 2

Dis. / Ant. : 3m 9168-429 Ant. pol. : HORIZONTAL

Limit : FCC PART 15 B (3M)

Env. / Ins. : 24*C/56% Engineer : Even_Deng

EUT : LCD TV M/N:LE32HDF3310

Power rating : AC 120V/60Hz

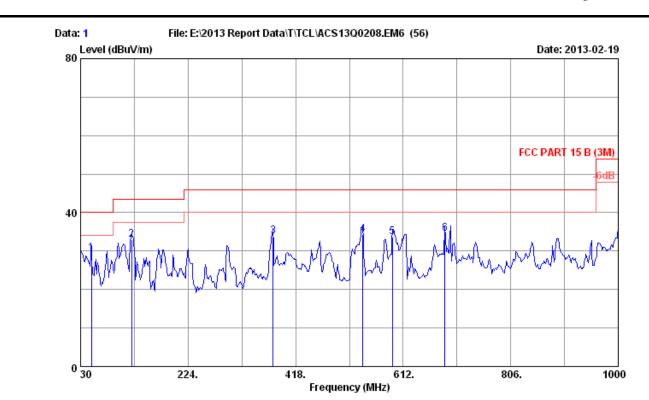
Test Mode : Running "H" Pattern And 1KHz Playing

HDMI 1:1920*1080@60Hz

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	196.840	10.08	1.06	22.68	33.82	43.50	9.68	QP
2	293.840	12.66	1.27	20.29	34.22	46.00	11.78	QP
3	377.260	14.36	1.50	19.22	35.08	46.00	10.92	QP
4	519.850	16.87	1.89	17.73	36.49	46.00	9.51	QP
5	539.250	17.21	1.95	22.24	41.40	46.00	4.60	QP
6	592.600	18.17	2.09	15.34	35.60	46.00	10.40	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.





Site no. : 3m Chamber Data no. : 1

Dis. / Ant. : 3m 9168-429 Ant. pol. : VERTICAL

Limit : FCC PART 15 B (3M)

Env. / Ins. : 24*C/56% Engineer : Even_Deng

EUT : LCD TV M/N:LE32HDF3310

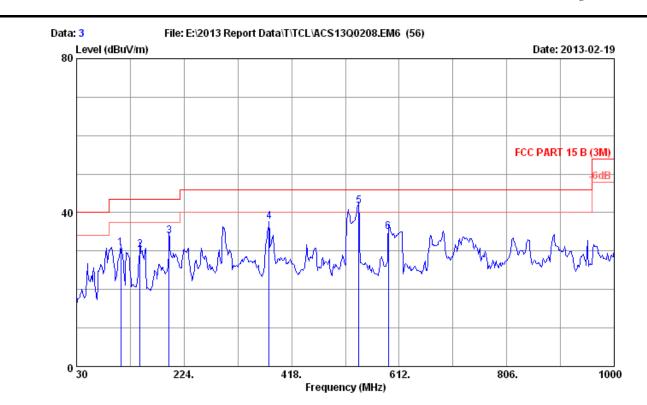
Power rating : AC 120V/60Hz

Test Mode : Running "H" Pattern And 1KHz Playing

HDMI 1:1920*1080@60Hz

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	49.400	13.55	0.63	15.24	29.42	40.00	10.58	QP
2	122.150	12.36	0.90	19.66	32.92	43.50	10.58	QP
3	377.260	14.36	1.50	18.12	33.98	46.00	12.02	QP
4	539.250	17.21	1.95	15.13	34.29	46.00	11.71	QP
5	592.600	18.17	2.09	13.48	33.74	46.00	12.26	QP
6	687.660	19.52	2.38	12.61	34.51	46.00	11.49	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.



Site no. : 3m Chamber Data no. : 3

Dis. / Ant. : 3m 9168-429 Ant. pol. : HORIZONTAL

Limit : FCC PART 15 B (3M)

Env. / Ins. : 24*C/56% Engineer : Even_Deng

EUT : LCD TV M/N:LE32HDF3310

Power rating : AC 120V/60Hz

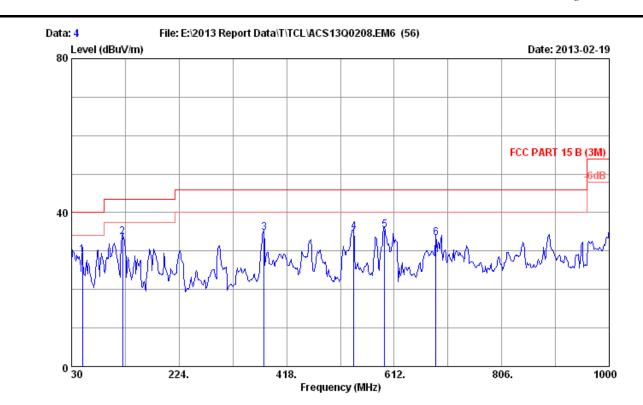
Test Mode : Running "H" Pattern And 1KHz Playing

HDMI 2:1920*1080@60Hz

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	109.540	11.08	0.87	18.74	30.69	43.50	12.81	QP
2	144.460	13.80	0.94	15.51	30.25	43.50	13.25	QP
3	196.840	10.08	1.06	22.83	33.97	43.50	9.53	QP
4	377.260	14.36	1.50	21.81	37.67	46.00	8.33	QP
5	539.250	17.21	1.95	22.60	41.76	46.00	4.24	QP
6	592.600	18.17	2.09	14.80	35.06	46.00	10.94	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.





Site no. : 3m Chamber Data no. : 4

Dis. / Ant. : 3m 9168-429 Ant. pol. : VERTICAL

Limit : FCC PART 15 B (3M)

Env. / Ins. : 24*C/56% Engineer : Even_Deng

EUT : LCD TV M/N:LE32HDF3310

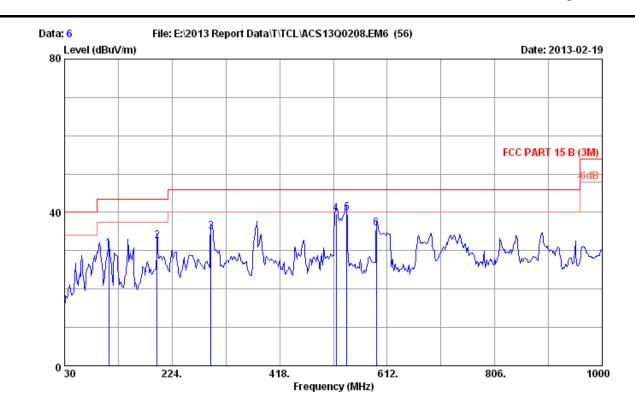
Power rating : AC 120V/60Hz

Test Mode : Running "H" Pattern And 1KHz Playing

HDMI 2:1920*1080@60Hz

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	49.400	13.55	0.63	14.74	28.92	40.00	11.08	QP
2	122.150	12.36	0.90	20.41	33.67	43.50	9.83	QP
3	377.260	14.36	1.50	18.85	34.71	46.00	11.29	QP
4	539.250	17.21	1.95	15.74	34.90	46.00	11.10	QP
5	594.540	18.21	2.11	15.08	35.40	46.00	10.60	QP
6	687.660	19.52	2.38	11.52	33.42	46.00	12.58	QP

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



Site no. : 3m Chamber Data no. : 6

Ant. pol. : HORIZONTAL Dis. / Ant. : 3m 9168-429

Limit : FCC PART 15 B (3M)

Env. / Ins. : 24*C/56% Engineer : Even Deng

: LCD TV M/N:LE32HDF3310

Power rating : AC 120V/60Hz

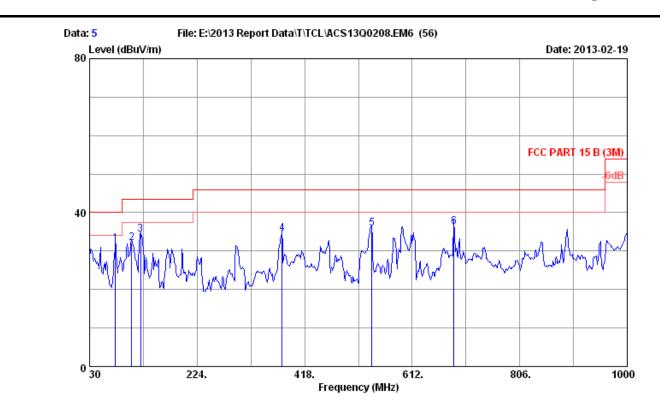
Test Mode : Running "H" Pattern And 1KHz Playing

HDMI 3:1920*1080@60Hz

 No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	109.540	11.08	0.87	18.64	30.59	43.50	12.91	QP
2	196.840	10.08	1.06	21.37	32.51	43.50	10.99	QP
3	293.840	12.66	1.27	21.08	35.01	46.00	10.99	QP
4	519.850	16.87	1.89	20.94	39.70	46.00	6.30	QP
5	539.250	17.21	1.95	20.68	39.84	46.00	6.16	QP
6	592.600	18.17	2.09	15.73	35.99	46.00	10.01	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.

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



Site no. : 3m Chamber Data no. : 5

Dis. / Ant. : 3m 9168-429 Ant. pol. : VERTICAL

Limit : FCC PART 15 B (3M)

Env. / Ins. : 24*C/56% Engineer : Even_Deng

EUT : LCD TV M/N:LE32HDF3310

Power rating : AC 120V/60Hz

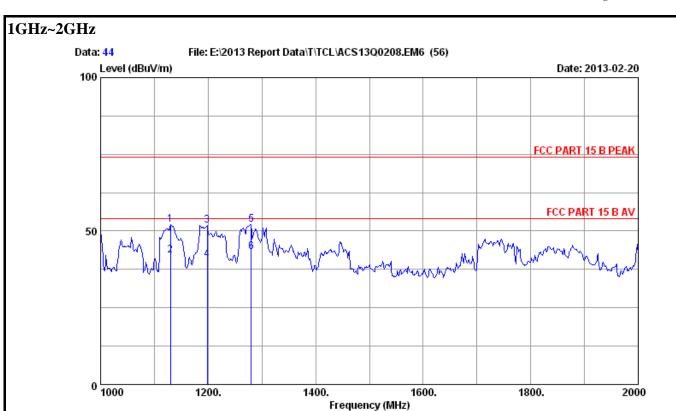
Test Mode : Running "H" Pattern And 1KHz Playing

HDMI 3:1920*1080@60Hz

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	76.560	9.82	0.76	21.22	31.80	40.00	8.20	QP
2	105.660	10.70	0.87	20.51	32.08	43.50	11.42	QP
3	122.150	12.36	0.90	20.97	34.23	43.50	9.27	QP
4	377.260	14.36	1.50	18.67	34.53	46.00	11.47	QP
5	539.250	17.21	1.95	16.68	35.84	46.00	10.16	QP
6	687.660	19.52	2.38	14.41	36.31	46.00	9.69	QP

^{2.} The emission levels that are 20dB below the official limit are not reported.





Site no. : 3m Chamber Data no. : 44

Dis. / Ant. : 3m 2012 3115 (4877) Ant. pol. : HORIZONTAL

Limit : FCC PART 15 B PEAK

Env. / Ins. : 24*C/56% Engineer : Victory

EUT : LCD TV M/N:LE32HDF3310

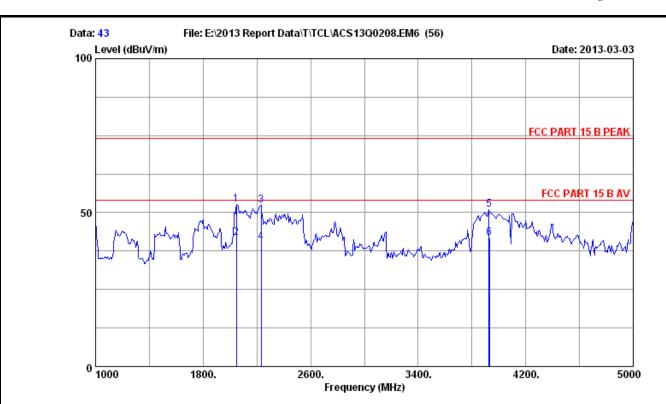
Power rating : AC 120V/60Hz

Test Mode : Running "H" Pattern And 1KHz Playing

VGA: 1366*768@60Hz

No.	. Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1130.000	23.36	0.97	61.70	51.96	74.00	22.04	Peak
2	1130.355	23.36	0.97	51.73	41.99	54.00	12.01	Average
3	1198.000	23.50	0.98	61.34	51.76	74.00	22.24	Peak
4	1198.158	23.50	0.98	50.35	40.77	54.00	13.23	Average
5	1280.000	23.66	0.99	61.49	52.10	74.00	21.90	Peak
6	1280.336	23.66	0.99	52.46	43.07	54.00	10.93	Average

^{2.} The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 43
Dis. / Ant. : 3m 2012 3115 (4877) Ant. pol. : VERTICAL

Limit : FCC PART 15 B PEAK

Env. / Ins. : 24*C/56% Engineer : Victory

EUT : LCD TV M/N:LE32HDF3310

Power rating : AC 120V/60Hz

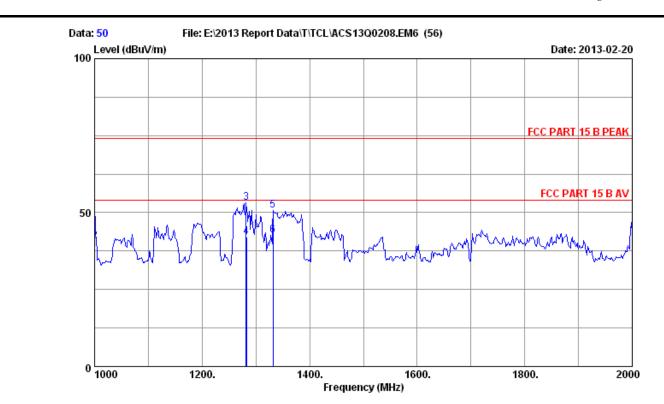
Test Mode : Running "H" Pattern And 1KHz Playing

VGA:1366*768@60Hz

No	. Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2048.000	24.15	1.15	61.08	52.76	74.00	21.24	Peak
2	2048.266	24.15	1.15	50.02	41.70	54.00	12.30	Average
3	2232.000	23.97	1.22	60.59	52.45	74.00	21.55	Peak
4	2232.523	23.97	1.22	48.54	40.40	54.00	13.60	Average
5	3928.000	30.51	1.58	50.98	50.94	74.00	23.06	Peak
6	3928.661	30.51	1.58	41.93	41.89	54.00	12.11	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.

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



Site no. : 3m Chamber Data no. : 50

Dis. / Ant. : 3m 2012 3115 (4877) Ant. pol. : HORIZONTAL

Limit : FCC PART 15 B PEAK

Env. / Ins. : 24*C/56% Engineer : Victory

EUT : LCD TV M/N:LE32HDF3310

Power Rating : AC 120V/60Hz

Test Mode : Running "H" Pattern And 1KHz Playing

HDMI 1:1920*1080@60Hz

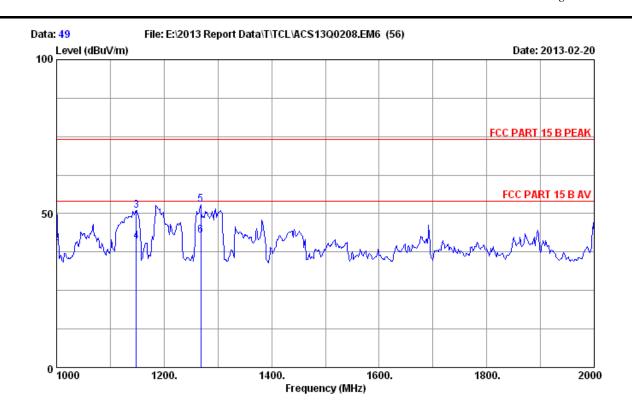
		Ant.	Cable	AMP		Emission	ı		
No.	Freq.	Factor	Loss	factor	Reading	Level	Limits	_	Remark
	(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	1000.000	23.10	0.95	34.10	60.78	50.73	74.00	23.27	Peak
2	1000.629	23.10	0.95	34.10	50.71	40.66	54.00	13.34	Average
3	1282.000	23.66	0.99	34.04	62.47	53.08	74.00	20.92	Peak
4	1282.225	23.66	0.99	34.04	51.43	42.04	54.00	11.96	Average
5	1332.000	23.76	1.00	34.03	59.91	50.64	74.00	23.36	Peak
6	1332.185	23.76	1.00	34.03	51.92	42.65	54.00	11.35	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp Factor

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

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Site no. : 3m Chamber Data no. : 49
Dis. / Ant. : 3m 2012 3115 (4877) Ant. pol. : VERTICAL

Limit : FCC PART 15 B PEAK

Env. / Ins. : 24*C/56% Engineer : Victory

EUT : LCD TV M/N:LE32HDF3310

Power Rating : AC 120V/60Hz

Test Mode : Running "H" Pattern And 1KHz Playing

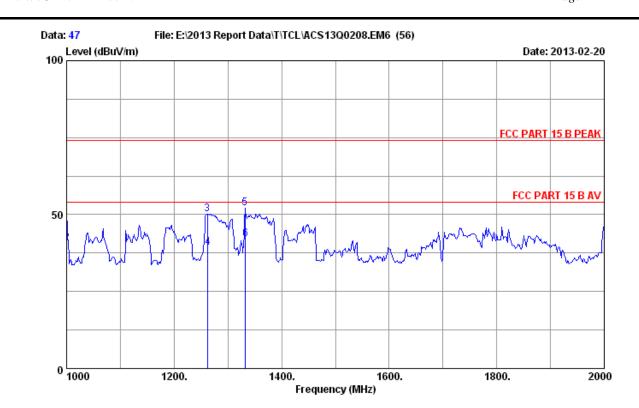
HDMI 1:1920*1080@60Hz

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1000.000	23.10	0.95	34.10	61.52	51.47	74.00	22.53	Peak
2	1000.209	23.10	0.95	34.10	50.53	40.48	54.00	13.52	Average
3	1148.000	23.40	0.97	34.07	60.75	51.05	74.00	22.95	Peak
4	1148.563	23.40	0.97	34.07	50.72	41.02	54.00	12.98	Average
5	1268.000	23.64	0.99	34.05	62.43	53.01	74.00	20.99	Peak
6	1268.287	23.64	0.99	34.05	52.41	42.99	54.00	11.01	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp Factor

FCC ID: W8ULE32HDF3310

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Site no. : 3m Chamber Data no. : 47

Dis. / Ant. : 3m 2012 3115 (4877) Ant. pol. : HORIZONTAL

Limit : FCC PART 15 B PEAK

Env. / Ins. : 24*C/56% Engineer : Victory

EUT : LCD TV M/N:LE32HDF3310

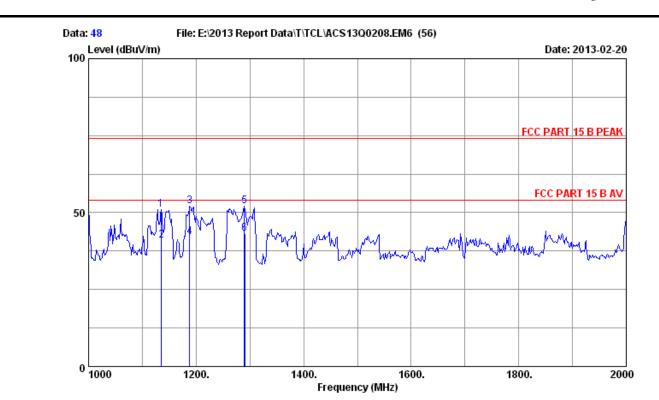
Power rating : AC 120V/60Hz

Test Mode : Running "H" Pattern And 1KHz Playing

HDMI 2:1920*1080@60Hz

No	. Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1000.000	23.10	0.95	59.76	49.71	74.00	24.29	Peak
2	1000.202	23.10	0.95	50.73	40.68	54.00	13.32	Average
3	1262.000	23.62	0.99	59.72	50.28	74.00	23.72	Peak
4	1262.475	23.62	0.99	48.73	39.29	54.00	14.71	Average
5	1332.000	23.76	1.00	61.27	52.00	74.00	22.00	Peak
6	1332.352	23.76	1.00	51.23	41.96	54.00	12.04	Average

^{2.} The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 48 Dis. / Ant. : 3m 2012 3115 (4877) Ant. pol. : VERTICAL

: FCC PART 15 B PEAK Limit

Env. / Ins. : 24*C/56% Engineer : Victory

EUT M/N:LE32HDF3310 : LCD TV

Power rating : AC 120V/60Hz

Test Mode : Running "H" Pattern And 1KHz Playing

HDMI 2:1920*1080@60Hz

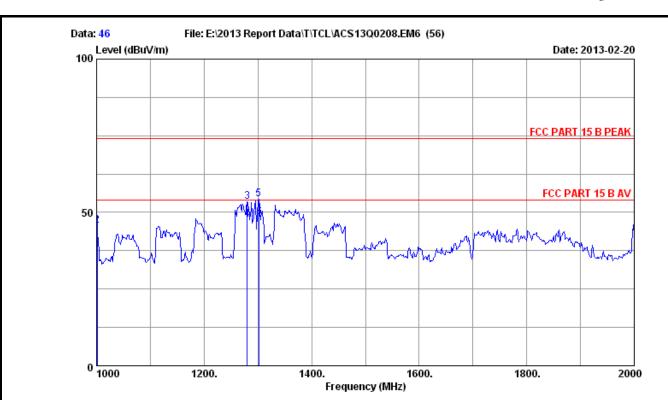
No	. Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1135.000	23.37	0.97	60.77	51.04	74.00	22.96	Peak
2	1135.468	23.37	0.97	50.72	40.99	54.00	13.01	Average
3	1188.000	23.48	0.98	61.69	52.09	74.00	21.91	Peak
4	1188.259	23.48	0.98	51.62	42.02	54.00	11.98	Average
5	1290.000	23.68	0.99	61.50	52.13	74.00	21.87	Peak
6	1290.365	23.68	0.99	52.42	43.05	54.00	10.95	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.

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

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FCC ID: W8ULE32HDF3310 Page 4-24



Site no. : 3m Chamber Data no. : 46

Dis. / Ant. : 3m 2012 3115 (4877) Ant. pol. : HORIZONTAL

Limit : FCC PART 15 B PEAK

Env. / Ins. : 24*C/56% Engineer : Victory

EUT : LCD TV M/N:LE32HDF3310

Power rating : AC 120V/60Hz

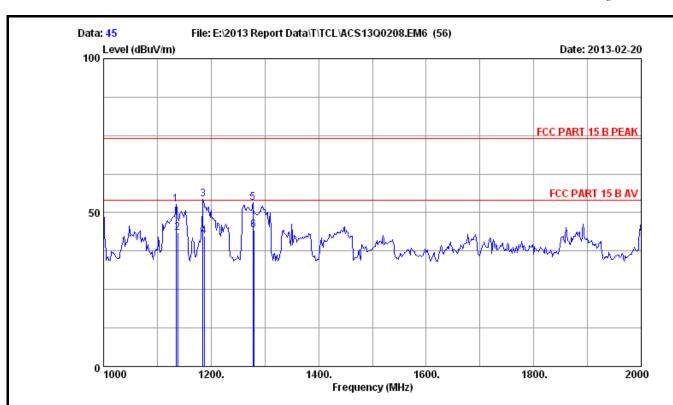
Test Mode : Running "H" Pattern And 1KHz Playing

HDMI 3:1920*1080@60Hz

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
2 3 4	1000.000 1001.260 1280.000 1280.326 1302.000	23.10 23.10 23.66 23.66 23.70	0.95 0.95 0.99 0.99 0.99	60.71 55.71 62.93 56.93 63.79	50.66 45.66 53.54 47.54 54.44	54.00	23.34 8.34 20.46 6.46 19.56	Peak Average Peak Average Peak
6	1302.514	23.71	0.99	57.78	48.44	54.00	5.56	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.





Site no. : 3m Chamber Data no. : 45
Dis. / Ant. : 3m 2012 3115 (4877) Ant. pol. : VERTICAL

Limit : FCC PART 15 B PEAK

Env. / Ins. : 24*C/56% Engineer : Victory

EUT : LCD TV M/N:LE32HDF3310

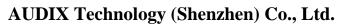
Power rating : AC 120V/60Hz

Test Mode : Running "H" Pattern And 1KHz Playing

HDMI 3:1920*1080@60Hz

No	. Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1135.000	23.37	0.97	62.32	52.59	74.00	21.41	Peak
2	1137.569	23.38	0.97	53.31	43.59	54.00	10.41	Average
3	1185.000	23.47	0.98	63.92	54.31	74.00	19.69	Peak
4	1187.236	23.47	0.98	51.92	42.31	54.00	11.69	Average
5	1278.000	23.66	0.99	62.58	53.19	74.00	20.81	Peak
6	1279.256	23.66	0.99	53.58	44.19	54.00	9.81	Average

^{2.} The emission levels that are 20dB below the official limit are not reported.





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5. DEVIATION TO TEST SPECIFICATIONS [NONE]	