#### FCC ID:W8ULE46FHDE5300

# APPLICATION OF CERTIFICATION For

TTE Technology Inc.

#### LCD TV

Brand Name	Model Number
TCL	LE46FHDE5300

FCC ID: W8ULE46FHDE5300

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- F12045

Date of Test : Feb.22~Mar.01, 2012

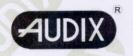
Date of Report : Mar.20, 2012



#### FCC ID:W8ULE46FHDE5300

## TABLE OF CONTENTS

<u>De</u>	scripi	<u>uon</u>	Page
Te	st Rep	port Certification	
1.	SUN	MMARY OF STANDARDS AND RESULTS	1-1
	1.1.	Description of Standards and Results	1-1
2.	GEN	NERAL INFORMATION	
_,	2.1.	Description of Device (EUT)	
	2.2.	Tested Supporting System Details	
	2.3.	Block diagram of connection between the EUT and simulators	
	2.4.	Test Facility	2-4
	2.5.	Measurement Uncertainty (95% confidence levels, k=2)	2-4
<b>3.</b>	POV	WER LINE CONDUCTED EMISSION TEST	3-1
	3.1.	Test Equipment	3-1
	3.2.	Block Diagram of Test Setup	3-1
	3.3.	Power Line Conducted Emission Test Limits	
	3.4.	Configuration of EUT on Test	3-1
	3.5.	Operating Condition of EUT	
	3.6.	Test Procedure	
	3.7.	Conducted Disturbance at Mains Terminals Test Results	
4.	RAI	DIATED EMISSION TEST	4-1
	4.1.	Test Equipment	
	4.2.	Block Diagram of Test Setup	
	4.3.	Radiated Emission Limit	
	4.4.	EUT Configuration on Test	
	4.5.	Operating Condition of EUT	
	4.6. 4.7.	Test Procedure	
_			
<b>5.</b>		VIATION TO TEST SPECIFICATIONS	
6.	PHO	OTOGRAPH	
	6.1.	Photos of Power Line Conducted Emission Test	
	6.2.	Photos of Radiated Emission Test (In Anechoic Chamber)	6-2
7.	PHO	OTOS OF THE EUT	



FCC ID: W8ULE46FHDE5300

#### TEST CERTIFICATION REPORT

Applicant

TTE Technology Inc.

Manufacturer

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

**EUT Description** 

LCD TV

FCC ID

W8ULE46FHDE5300

(A) Model No. &:

**Brand Name** Model Number LE46FHDE5300 TCL

**Brand Name** 

(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 2010, 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.

Report of date: Mar.20, 2012 Feb.22~ Mar.01, 2012 Date of Test:

Prepared by: Cerry He / Assist

Signature:

Audix TechnolSun Teng Supervisor EMC部門報告專用章

Stamp only for EMC Dept. Report

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						
<b>Description of Test Item</b>	Standard	Results	Remarks			
Power Line Conducted Emission Test	FCC Part 15: 2010 ANSI C63.4: 2009	PASS	Meets Class B Limit Minimum passing margin is 6.41dB at 1.172MHz			
Radiated Emission Test (30-1000MHz)	FCC Part 15: 2010 ANSI C63.4: 2009	PASS	Meets Class B Limit Minimum passing margin is 3.12dB at 585.000MHz			
Radiated Emission Test (1-2GHz)	FCC Part 15: 2010 ANSI C63.4: 2009	PASS	Meets Class B Limit Minimum passing margin is 10.20dB at 1112.560MHz			



### 2. GENERAL INFORMATION

### 2.1.Description of Device (EUT)

Description : LCD TV

Model Number&: Brand Name

Brand Name	Model Number
TCL	LE46FHDE5300

FCC ID : W8ULE46FHDE5300

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 & High-Level Tech Industries, Huizhou, Guangdong Province, China, 516006.

FREQUENCIES USED AND GENERATED WITHIN DEVICE						
X54M1 45-OSC54M-0Y1CR 54MHz						
LVDS CLOCK	81.43MHZ					
IF	44MHz					
DC-DC	U302->385KHz	U303->1MHz				
DDR	390MHz					
AMP	384KHz					

Power Cord : Unshielded, Detachable, 2.0m

Date of Test : Feb.22~Mar.01, 2012

Date of Receipt : Feb.22, 2012

Sample Type : Prototype production

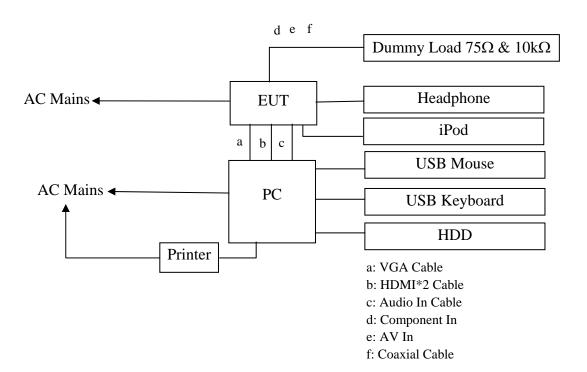


## 2.2.Tested Supporting System Details

	Description	ACS No.	Manufacturer	Model	Serial Number	Approved type	
1.	Personal Computer	Test PC M	DELL	Studio 540	224XK2X	☑FCC DoC ☑BSMI ID:R33002	
	Computer	Power Cord: Unshie Display Card: HD34	·				
2.	USB Keyboard	ACS-EMC- K04R	ACS_EMC_ KOAR DELL SK-8115 CN-OI		CN-ODJ313-7161 6-6BB-049J	☑ FCC DoC ☑BSMI ID: T3A002	
		Data Cable: shielded	l, Undetachable, 2	2.0m			
3.	Headphone	ACS-EMC-EP03	OVANN	OV880V	N/A	□FCC ID □BSMI ID	
J.	Пеаарноне	Cable: Shielded, Un	detachabled, 4.0n	1			
		ACS-EMC-PT04	НР	C9079A	N/A	☑FCC DoC ☑BSMI ID: R33001	
4. Printer USB Cable: Shielded, Detachabled, 1.8n Power Cord: Unshielded, Detachabled, 1 Power Adapter: HP, M/N: 0957-2119, B DC Cable: Unshielded, Detachabled, 1.5					33030,		
5.	USB Mouse	ACS-EMC-M04R	DELL	M056UO	512024282	☑ FCC DoC ☑BSMI ID: R41108	
		Data Cable: shielded	l, 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-HDD03	Terasys	F12-UF	A0100215-53900 30	☑FCC DoC ☑BSMI ID: 4912A022	
		USB Cable: Shielded	d, Detachable, 1.8	3m			
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: Mar.31, 2012

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

Registration Number: 794232 Valid Date: Dec.30, 2012

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, 2012

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

Test Item	Uncertainty
Uncertainty for Conduction emission test in No. 1 Conduction	3.2 dB
m r (ov r conduction	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℃

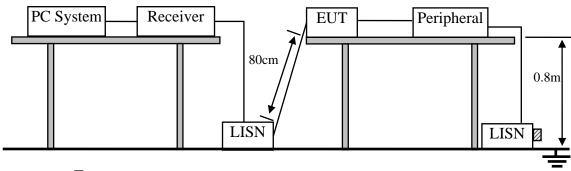


#### 3. POWER LINE CONDUCTED EMISSION TEST

#### 3.1.Test Equipment

		1			i	1
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESHS10	838693/001	Oct.31, 11	1 Year
2.	L.I.S.N.#1	Rohde & Schwarz	ESH2-Z5	834066/011	Oct.31, 11	1 Year
3.	L.I.S.N.#3	Kyoritsu	KNW-242C	8-1920-1	May.08, 11	1 Year
4.	Terminator	Hubersuhner	$50\Omega$	No. 1	May.08, 11	1 Year
5.	Terminator	Hubersuhner	$50\Omega$	No. 2	May.08, 11	1 Year
6.	RF Cable	Fujikura	3D-2W	No.1	May.08, 11	1Year
7.	Coaxial Switch	Anritsu	MP59B	M50564	May.08, 11	1 Year
8.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100341	May.08, 11	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.

### 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 : LE46FHDE5300

Serial Number : N/A

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

<sup>2.</sup> The lower limit shall apply at the transition frequencies.



#### 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 blackground, 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 10kHz.

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.: LE46FHDE5300

Test Date: Feb.22, 2012 Temperature: 25.5°C Humidity: 55%

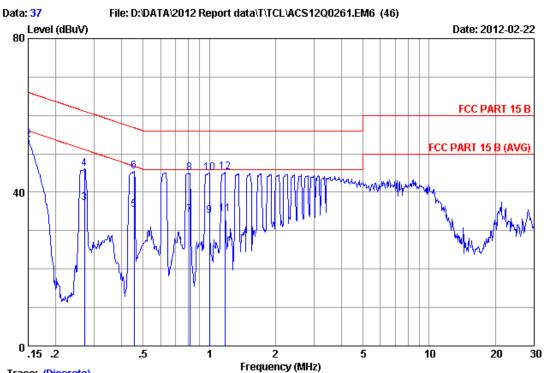
The details of test modes are as follows:

No.	Test Mode Input Port		t Port Resolution &		Reference Test Data No.		
			Frequency	Line	Neutral		
1.			640*480 @60Hz	#37	#38		
2.		VGA	VGA	VGA	1024*768 @ 60Hz	#40	#39
3. 💥	PC Mode		1920*1080@60Hz	#41	#42		
4.		HDMI 1	1920*1080@60Hz	#44	#43		
5.		HDMI 2	1920*1080@60Hz	#45	#46		

(\* Worst test mode)



Page 3-3 FCC ID: W8ULE46FHDE5300



Trace: (Discrete)

Site no :1#conduction Data No

:\*\* 2011 ESH2-Z5 LINE Dis./Ant.

:FCC PART 15 B Limit

Env./Ins. :23.8\*C/47% Engineer :Jerry

:LCD TV M/N:LE46FHDE5300 EUT

Power Rating : AC 120V/60Hz

:Running"H"Pattern And 1KHz Playing

VGA:640\*480@60Hz

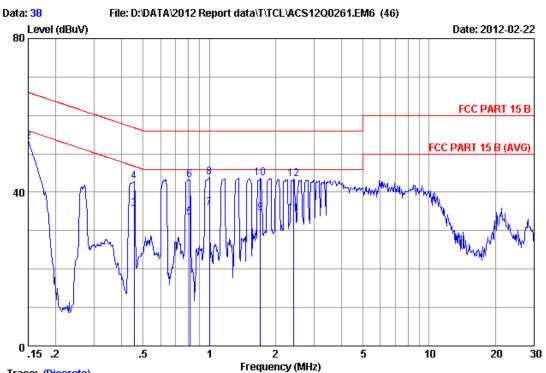
		LISN	Cable		Emission	n		
No	Freq	Factor	Loss	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dB)	
1	0.15000	0.16	9.98	31.56	41.70	56.00	14.30	Average
2	0.15000	0.16	9.98	43.54	53.68	66.00	12.32	QP
3	0.27009	0.15	9.98	27.07	37.20	51.12	13.92	Average
4	0.27009	0.15	9.98	36.03	46.16	61.12	14.96	QP
5	0.45395	0.16	9.98	25.27	35.41	46.80	11.39	Average
6	0.45395	0.16	9.98	35.21	45.35	56.80	11.45	QP
7	0.81305	0.16	9.97	23.87	34.00	46.00	12.00	Average
8	0.81305	0.16	9.97	34.83	44.96	56.00	11.04	QP
9	0.99968	0.17	9.98	23.82	33.97	46.00	12.03	Average
10	0.99968	0.17	9.98	34.86	45.01	56.00	10.99	QP
11	1.178	0.18	9.98	24.16	34.32	46.00	11.68	Average
12	1.178	0.18	9.98	35.16	45.32	56.00	10.68	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit) +Reading.

> 2. If the average limit is met when useing a quasi-peak detector. the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



Page 3-4 FCC ID: W8ULE46FHDE5300



Trace: (Discrete)

Site no :1#conduction Data No

:\*\* 2011 ESH2-Z5 NEUTRAL Dis./Ant.

:FCC PART 15 B Limit

Env./Ins. :23.8\*C/47% Engineer :Jerry

:LCD TV M/N:LE46FHDE5300 EUT

Power Rating : AC 120V/60Hz

:Running"H"Pattern And 1KHz Playing

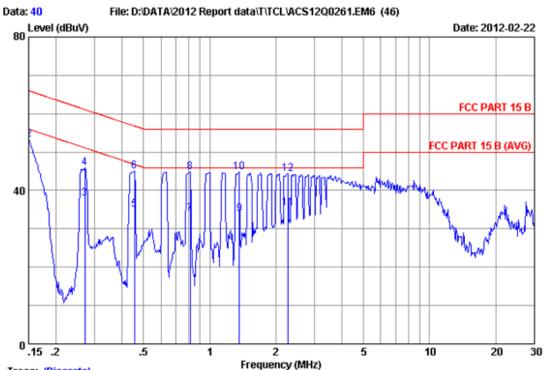
VGA:640\*480@60Hz

		LISN	Cable		Emission	n		
No	Freq	Factor	Loss	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dB)	
1	0.15000	0.14	9.98	35.24	45.36	56.00	10.64	Average
2	0.15000	0.14	9.98	43.21	53.33	66.00	12.67	QP
3	0.45395	0.15	9.98	25.55	35.68	46.80	11.12	Average
4	0.45395	0.15	9.98	32.54	42.67	56.80	14.13	QP
5	0.81305	0.16	9.97	23.19	33.32	46.00	12.68	Average
6	0.81305	0.16	9.97	33.15	43.28	56.00	12.72	QP
7	0.99968	0.17	9.98	25.63	35.78	46.00	10.22	Average
8	0.99968	0.17	9.98	33.68	43.83	56.00	12.17	QP
9	1.707	0.19	9.97	24.47	34.63	46.00	11.37	Average
10	1.707	0.19	9.97	33.44	43.60	56.00	12.40	QP
11	2.422	0.21	9.97	24.21	34.39	46.00	11.61	Average
12	2.422	0.21	9.97	33.20	43.38	56.00	12.62	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit) +Reading.

> 2. If the average limit is met when useing a quasi-peak detector. the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.





Trace: (Discrete)

Site no :1#conduction Data No :40

Dis./Ant. : \*\* 2011 ESH2-Z5 LINE

Limit :FCC PART 15 B

Env./Ins. :23.8\*C/47% Engineer :Jerry

EUT :LCD TV M/N:LE46FHDE5300

Power Rating : AC 120V/60Hz

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

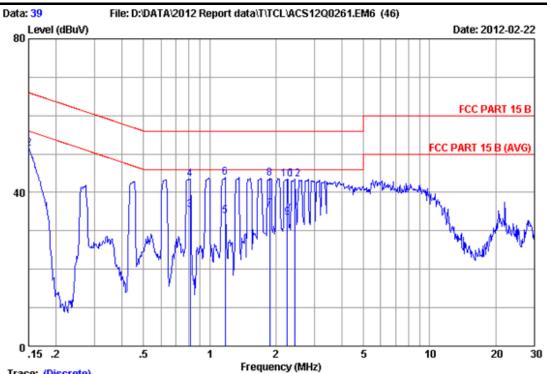
VGA:1024\*768@60Hz

		LISN	Cable		Emission	ı		
No	Freq	Factor	Loss	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dB)	
1	0.15000	0.16	9.98	32.29	42.43	56.00	13.57	Average
2	0.15000	0.16	9.98	43.22	53.36	66.00	12.64	QP
3	0.27009	0.15	9.98	27.78	37.91	51.12	13.21	Average
4	0.27009	0.15	9.98	35.71	45.84	61.12	15.28	QP
5	0.45395	0.16	9.98	24.83	34.97	46.80	11.83	Average
6	0.45395	0.16	9.98	34.86	45.00	56.80	11.80	QP
7	0.81305	0.16	9.97	23.76	33.89	46.00	12.11	Average
8	0.81305	0.16	9.97	34.71	44.84	56.00	11.16	QP
9	1.367	0.18	9.98	23.66	33.82	46.00	12.18	Average
10	1.367	0.18	9.98	34.64	44.80	56.00	11.20	QP
11	2.273	0.20	9.97	25.22	35.39	46.00	10.61	Average
12	2.273	0.20	9.97	34.20	44.37	56.00	11.63	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit) +Reading.

If the average limit is met when useing a quasi-peak detector. the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.





Trace: (Discrete)

:1#conduction Site no Data No :39

Dis./Ant. :\*\* 2011 ESH2-Z5 NEUTRAL

Limit :FCC PART 15 B

Env./Ins. :23.8\*C/47% Engineer :Jerry

EUT :LCD TV M/N:LE46FHDE5300

Power Rating : AC 120V/60Hz

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

VGA: 1024\*768@60Hz

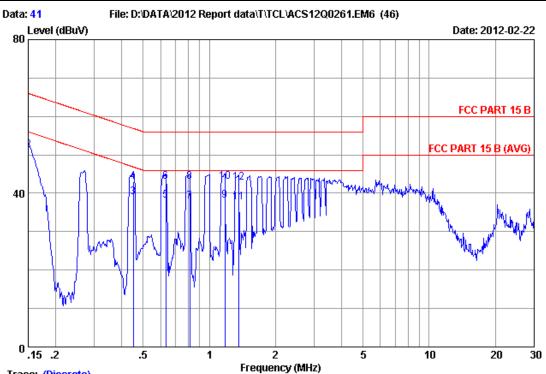
No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15000	0.14	9.98	32.49	42.61	56.00	13.39	Average
2	0.15000	0.14	9.98	41.43	51.55	66.00	14.45	QP
3	0.81305	0.16	9.97	25.34	35.47	46.00	10.53	Average
4	0.81305	0.16	9.97	33.33	43.46	56.00	12.54	QP
5	1.178	0.18	9.98	23.71	33.87	46.00	12.13	Average
6	1.178	0.18	9.98	33.79	43.95	56.00	12.05	QP
7	1.878	0.20	9.97	25.57	35.74	46.00	10.26	Average
8	1.878	0.20	9.97	33.55	43.72	56.00	12.28	QP
9	2.249	0.20	9.97	23.32	33.49	46.00	12.51	Average
10	2.249	0.20	9.97	33.38	43.55	56.00	12.45	QP
11	2.435	0.21	9.97	24.27	34.45	46.00	11.55	Average
12	2.435	0.21	9.97	33.22	43.40	56.00	12.60	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit) +Reading.

> 2.If the average limit is met when useing a quasi-peak detector. the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



Page 3-7 FCC ID: W8ULE46FHDE5300



Trace: (Discrete)

Site no :1#conduction Data No

:\*\* 2011 ESH2-Z5 LINE Dis./Ant.

:FCC PART 15 B Limit

Env./Ins. :23.8\*C/47% Engineer :Jerry

:LCD TV M/N:LE46FHDE5300 EUT

Power Rating :AC 120V/60Hz

:Running"H"Pattern And 1KHz Playing

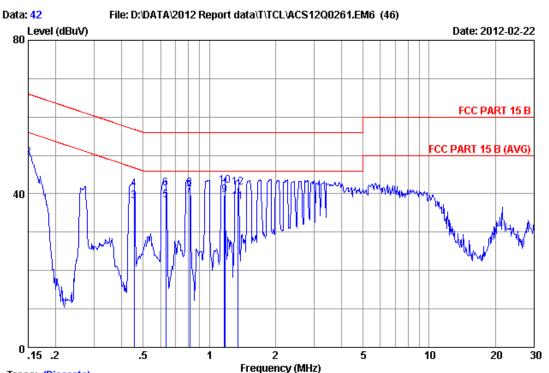
:VGA:1920\*1080@60Hz

		LISN	Cable		Emission	1		
No	Freq	Factor	Loss	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dB)	
1	0.15000	0.16	9.98	36.25	46.39	56.00	9.61	Average
2	0.15000	0.16	9.86	41.34	51.36	66.00	14.64	QP
3	0.45155	0.16	9.98	28.82	38.96	46.85	7.89	Average
4	0.45155	0.16	9.87	32.97	43.00	56.85	13.85	QP
5	0.63383	0.16	9.97	27.88	38.01	46.00	7.99	Average
6	0.63383	0.16	9.87	32.98	43.01	56.00	12.99	QP
7	0.81305	0.16	9.97	27.86	37.99	46.00	8.01	Average
8	0.81305	0.16	9.88	32.92	42.96	56.00	13.04	QP
9	1.178	0.18	9.98	27.90	38.06	46.00	7.94	Average
10	1.178	0.18	9.89	33.02	43.09	56.00	12.91	QP
11	1.367	0.18	9.98	27.58	37.74	46.00	8.26	Average
12	1.367	0.18	9.90	32.62	42.70	56.00	13.30	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit) +Reading.

> 2. If the average limit is met when useing a quasi-peak detector. the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.





Trace: (Discrete)

Site no :1#conduction Data No :42

Dis./Ant. :\*\* 2011 ESH2-Z5 NEUTRAL

Limit :FCC PART 15 B

Env./Ins. :23.8\*C/47% Engineer :Jerry

EUT :LCD TV M/N:LE46FHDE5300

Power Rating :AC 120V/60Hz

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

:VGA:1920\*1080@60Hz

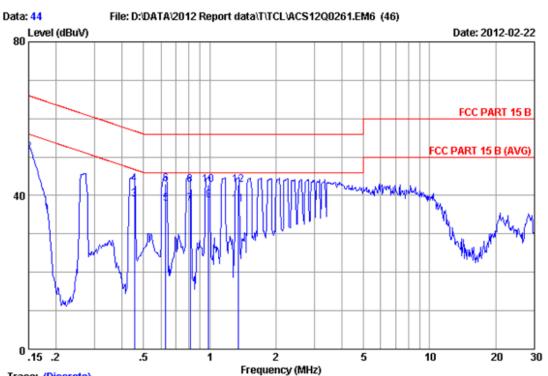
No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15000	0.14	9.98	35.46	45.58	56.00	10.42	Average
2	0.15000	0.14	9.86	39.55	49.55	66.00	16.45	QP
3	0.45395	0.15	9.98	27.97	38.10	46.80	8.70	Average
4	0.45395	0.15	9.87	31.09	41.11	56.80	15.69	QP
5	0.63383	0.16	9.97	28.22	38.35	46.00	7.65	Average
6	0.63383	0.16	9.87	31.34	41.37	56.00	14.63	QP
7	0.81305	0.16	9.97	29.36	39.49	46.00	6.51	Average
8	0.81305	0.16	9.88	31.42	41.46	56.00	14.54	QP
9	1.172	0.18	9.98	29.43	39.59	46.00	6.41	Average
10	1.178	0.18	9.89	32.00	42.07	56.00	13.93	QP
11	1.352	0.18	9.98	27.66	37.82	46.00	8.18	Average
12	1.352	0.18	9.90	31.68	41.76	56.00	14.24	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit) +Reading.

2.If the average limit is met when useing a quasi-peak detector. the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



Page 3-9 FCC ID: W8ULE46FHDE5300



Trace: (Discrete)

Site no :1#conduction Data No

Dis./Ant. :\*\* 2011 ESH2-Z5 LINE

:FCC PART 15 B Limit

Env./Ins. :23.8\*C/47% Engineer :Jerry

:LCD TV M/N:LE46FHDE5300 EUT

Power Rating : AC 120V/60Hz

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

: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	0.15000	0.16	9.98	35.13	45.27	56.00	10.73	Average
2	0.15000	0.16	9.86	41.30	51.32	66.00	14.68	QP
3	0.45395	0.16	9.98	28.91	39.05	46.80	7.75	Average
4	0.45395	0.16	9.87	33.07	43.10	56.80	13.70	QP
5	0.63048	0.16	9.97	27.84	37.97	46.00	8.03	Average
6	0.63048	0.16	9.87	32.92	42.95	56.00	13.05	QP
7	0.81305	0.16	9.97	27.65	37.78	46.00	8.22	Average
8	0.81305	0.16	9.88	32.72	42.76	56.00	13.24	QP
9	0.98914	0.17	9.98	28.63	38.78	46.00	7.22	Average
10	0.98914	0.17	9.88	32.72	42.77	56.00	13.23	QP
11	1.352	0.18	9.98	27.55	37.71	46.00	8.29	Average
12	1.352	0.18	9.90	32.62	42.70	56.00	13.30	QP

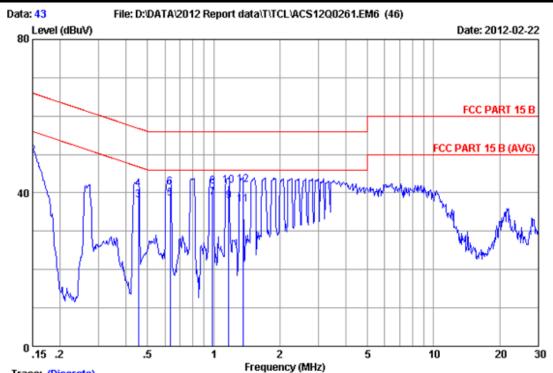
Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit) +Reading.

2. If the average limit is met when useing a quasi-peak detector. the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



FCC ID: W8ULE46FHDE5300

Page



Trace: (Discrete)

Site no :1#conduction Data No :43

Dis./Ant. :\*\* 2011 ESH2-Z5 NEUTRAL

Limit :FCC PART 15 B

Env./Ins. :23.8\*C/47% Engineer :Jerry

EUT :LCD TV M/N:LE46FHDE5300

Power Rating :AC 120V/60Hz

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

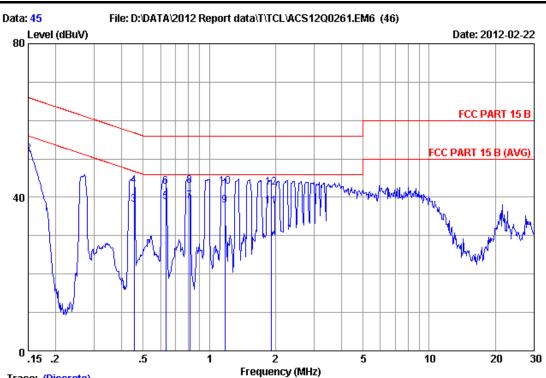
:HDMI 1:1920\*1080@60Hz

		LISN	Cable		Emission	ı		
No	Freq	Factor	Loss	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dB)	
1	0.15000	0.14	9.98	36.67	46.79	56.00	9.21	Average
2	0.15000	0.14	9.86	39.77	49.77	66.00	16.23	QP
3	0.45395	0.15	9.98	27.98	38.11	46.80	8.69	Average
4	0.45395	0.15	9.87	31.01	41.03	56.80	15.77	QP
5	0.63383	0.16	9.97	28.35	38.48	46.00	7.52	Average
6	0.63383	0.16	9.87	31.48	41.51	56.00	14.49	QP
7	0.98914	0.17	9.98	28.63	38.78	46.00	7.22	Average
8	0.98914	0.17	9.88	31.70	41.75	56.00	14.25	QP
9	1.172	0.18	9.98	27.71	37.87	46.00	8.13	Average
10	1.172	0.18	9.89	31.80	41.87	56.00	14.13	QP
11	1.367	0.18	9.98	26.80	36.96	46.00	9.04	Average
12	1.367	0.18	9.90	31.96	42.04	56.00	13.96	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit) +Reading.

2.If the average limit is met when useing a quasi-peak detector. the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

FCC ID: W8ULE46FHDE5300 Page



Trace: (Discrete)

Site no :1#conduction Data No

: \* \* 2011 ESH2-Z5 LINE Dis./Ant.

:FCC PART 15 B Limit

Env./Ins. :23.8\*C/47% Engineer :Jerry

:LCD TV M/N:LE46FHDE5300 EUT

Power Rating :AC 120V/60Hz

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

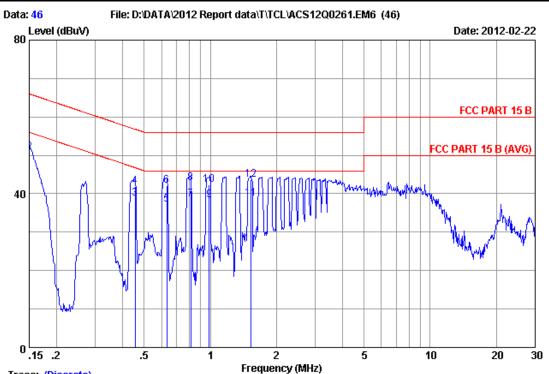
:HDMI 2:1920\*1080@60Hz

		LISN	Cable		Emission	n		
No	Freq	Factor	Loss	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dB)	
1	0.15000	0.16	9.98	36.13	46.27	56.00	9.73	Average
2	0.15000	0.16	9.86	41.26	51.28	66.00	14.72	QP
3	0.45395	0.16	9.98	27.86	38.00	46.80	8.80	Average
4	0.45395	0.16	9.87	32.93	42.96	56.80	13.84	QP
5	0.63383	0.16	9.97	28.64	38.77	46.00	7.23	Average
6	0.63383	0.16	9.87	32.78	42.81	56.00	13.19	QP
7	0.81305	0.16	9.97	28.83	38.96	46.00	7.04	Average
8	0.81305	0.16	9.88	32.96	43.00	56.00	13.00	QP
9	1.178	0.18	9.98	27.72	37.88	46.00	8.12	Average
10	1.178	0.18	9.89	32.80	42.87	56.00	13.13	QP
11	1.908	0.20	9.97	27.43	37.60	46.00	8.40	Average
12	1.908	0.20	9.91	32.51	42.62	56.00	13.38	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit) +Reading.

> 2. If the average limit is met when useing a quasi-peak detector. the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

FCC ID: W8ULE46FHDE5300 Page



Trace: (Discrete)

:1#conduction Site no Data No :46

Dis./Ant. : \* \* 2011 ESH2-Z5 NEUTRAL

:FCC PART 15 B Limit

:23.8\*C/47% Env./Ins. Engineer :Jerry

:LCD TV M/N:LE46FHDE5300

Power Rating : AC 120V/60Hz

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

: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	0.15000	0.14	9.98	36.75	46.87	56.00	9.13	Average
2	0.15000	0.14	9.86	40.88	50.88	66.00	15.12	QP
3	0.45395	0.15	9.98	28.63	38.76	46.80	8.04	Average
4	0.45395	0.15	9.87	31.77	41.79	56.80	15.01	QP
5	0.63383	0.16	9.97	27.05	37.18	46.00	8.82	Average
6	0.63383	0.16	9.87	32.18	42.21	56.00	13.79	QP
7	0.81305	0.16	9.97	28.53	38.66	46.00	7.34	Average
8	0.81305	0.16	9.88	32.68	42.72	56.00	13.28	QP
9	0.98914	0.17	9.98	28.23	38.38	46.00	7.62	Average
10	0.98914	0.17	9.88	32.36	42.41	56.00	13.59	QP
11	1.527	0.19	9.97	28.52	38.68	46.00	7.32	Average
12	1.527	0.19	9.90	33.58	43.67	56.00	12.33	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit) +Reading.

> 2. If the average limit is met when useing a quasi-peak detector. the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



### 4. RADIATED EMISSION TEST

### 4.1.Test Equipment

4.1.1.For frequency range 30MHz~1000MHz

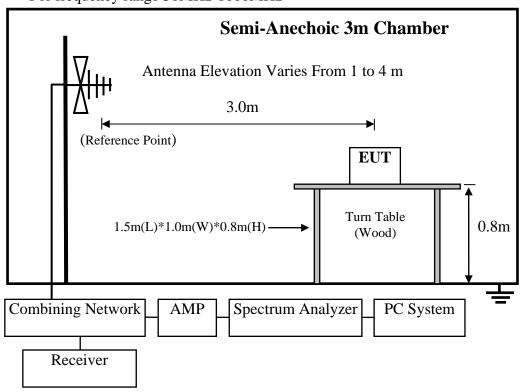
-						
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	3#Chamber	AUDIX	N/A	N/A	Nov.28,11	1 Year
2	EMI Spectrum	Agilent	E4407B	MY41440292	May.08, 11	1 Year
3	Test Receiver	Rohde & Schwarz	ESVS10	834468/011	May.08, 11	1 Year
4	Amplifier	HP	8447D	2648A04738	May.08, 11	1 Year
5	Bilog Antenna	Schaffner	CBL6111C	2598	Oct.26, 10	1.5 Year
6	RF Cable	MIYAZAKI	CFD400-NL	3# Chamber No.1	Dec.06, 11	1/2Year
7	Coaxial Switch	Anritsu	MP59B	M74389	May.08, 11	1 Year

#### 4.1.2.For frequency range 1GHz~2GHz

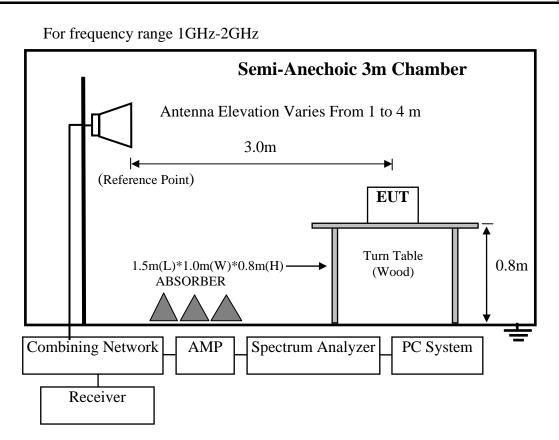
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Agilent	E4407B	MY41440292	May.08, 11	1 Year
2	Horn Antenna	EMCO	3115	9607-4877	July.01, 11	1 Year
3	Amplifier	Agilent	8449B	3008A00863	May.08, 11	1 Year
4	RF Cable	Hubersuhner	SUCOFLEX106	77980/6	Dec.06, 11	0.5Year
5	RF Cable	Hubersuhner	SUCOFLEX106	77977/6	Dec.06, 11	0.5Year

## 4.2.Block Diagram of Test Setup

For frequency range 30MHz-1000MHz







#### 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. : LE46FHDE5300

#### 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.22, 2012 Temperature: 24°C Humidity: 56%

The details of test modes are as follows:

No.	Test Mode	Input Port	Resolution &	Reference Test Data No.		
			Frequency	Horizontal	Vertical	
1.			640*480 @60Hz	#37	#38	
2.		VGA	1024*768 @ 60Hz	#40	#39	
3.	PC Mode		1920*1080@60Hz	#41	#42	
4.		HDMI 1	1920*1080@60Hz	#45	#46	
5. 💥		HDMI 2	1920*1080@60Hz	#44	#43	

(\* Worst test mode)



FCC ID: W8ULE46FHDE5300 Page 4-4

#### For frequency range 1GHz~2GHz

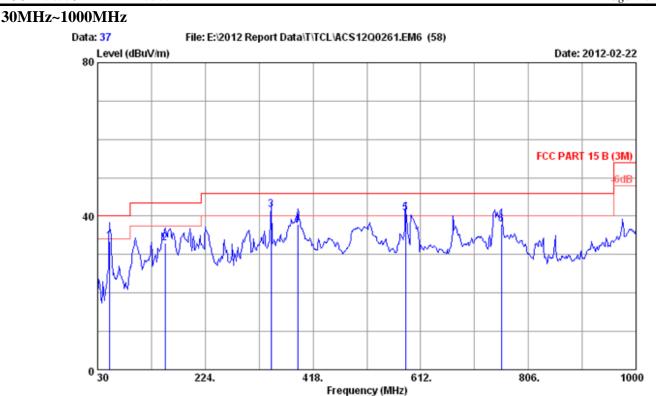
The EUT with below test mode were measured within Anechoic Chamber and the test results listed in next pages

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: Mar.01, 2012	Temperature: 24°C	Humidity: 56%
		Reference Test Data

NO.	Test Mode	Resolution & Frequency	Reference Test Data No.			
NO.	Test Mode	Resolution & Prequency	Horizontal	Vertical		
1.	VGA	1920*1080 @60Hz	#55, #56	#57, #58		
2.	HDMI 1	1920*1080 @60Hz	#47, #48	#49, #50		
3.	HDMI 2	1920*1080 @60Hz	#53, #54	#51, #52		





Site no. : 3m Chamber Data no. : 37

Ant. pol. : HORIZONTAL Dis. / Ant. : 3m 2010 CBL6111C 2598

: FCC PART 15 B (3M) Limit

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

: LCD TV M/N:LE46FHDE5300

Power rating : AC 120V/60Hz

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

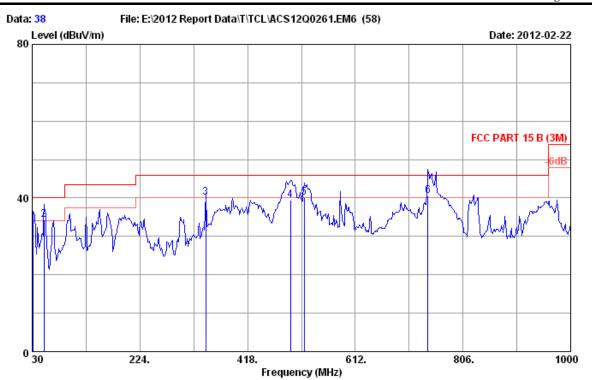
VGA:640\*480@60Hz

No.	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	51.340	8.86	0.36	24.11	33.33	40.00	6.67	QP
2	151.250	11.54	0.80	20.74	33.08	43.50	10.42	QP
3	342.340	14.86	1.41	25.35	41.62	46.00	4.38	QP
4	390.840	16.31	1.34	20.27	37.92	46.00	8.08	QP
5	584.840	19.70	1.58	19.51	40.79	46.00	5.21	QP
6	757.500	22.00	2.07	13.74	37.81	46.00	8.19	QP

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

<sup>2.</sup> The emission levels that are 20dB below the official limit are not reported.

FCC ID: W8ULE46FHDE5300 Page 4-6



Site no. : 3m Chamber Data no. : 38
Dis. / Ant. : 3m 2010 CBL6111C 2598 Ant. pol. : VERTICAL

Limit : FCC PART 15 B (3M)

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

EUT : LCD TV M/N:LE46FHDE5300

Power rating : AC 120V/60Hz

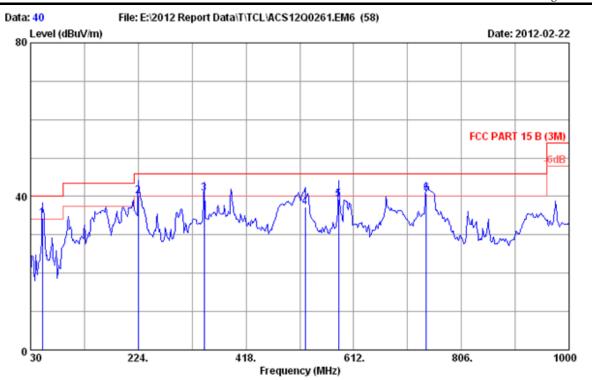
Test Mode : Running "H" Pattern And 1KHz Playing

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	31.940	18.88	0.30	13.33	32.51	40.00	7.49	QP
	2	51.340	8.86	0.36	25.20	34.42	40.00	5.58	QP
	3	342.340	14.86	1.41	23.87	40.14	46.00	5.86	QP
	4	495.600	18.25	1.50	19.75	39.50	46.00	6.50	QP
	5	519.850	18.40	1.60	20.01	40.01	46.00	5.99	QP
	6	742.950	21.86	1.93	16.68	40.47	46.00	5.53	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. : 40

Dis. / Ant. : 3m 2010 CBL6111C 2598 Ant. pol. : HORIZONTAL

Limit : FCC PART 15 B (3M)

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

EUT : LCD TV M/N:LE46FHDE5300

Power rating : AC 120V/60Hz

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

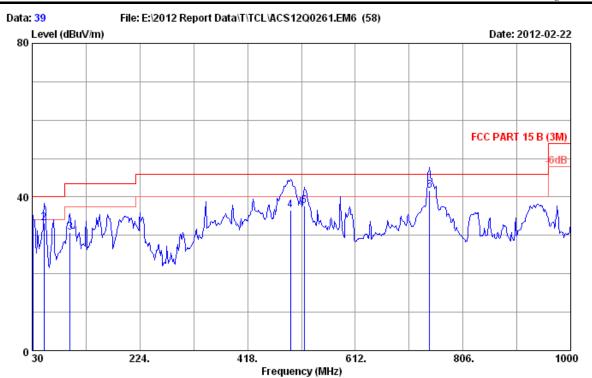
VGA: 1024\*768@60Hz

No.	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	51.340	8.86	0.36	25.11	34.33	40.00	5.67	QP
2	224.000	10.52	1.10	28.56	40.18	46.00	5.82	QP
3	342.340	14.86	1.41	24.45	40.72	46.00	5.28	QP
4	524.700	18.35	1.60	17.34	37.29	46.00	8.71	QP
5	584.840	19.70	1.58	17.88	39.16	46.00	6.84	QP
6	742.950	21.86	1.93	16.92	40.71	46.00	5.29	QP

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

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





Site no. : 3m Chamber Data no. : 39
Dis. / Ant. : 3m 2010 CBL6111C 2598 Ant. pol. : VERTICAL

Limit : FCC PART 15 B (3M)

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

EUT : LCD TV M/N:LE46FHDE5300

Power rating : AC 120V/60Hz

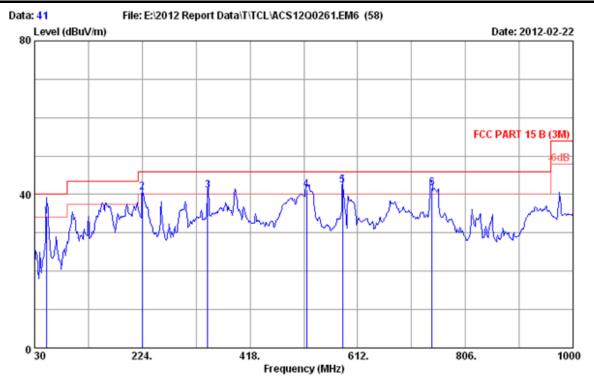
Test Mode : Running "H" Pattern And 1KHz Playing

VGA:1024\*768@60Hz

_	No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
	1	31.940	18.88	0.30	13.32	32.50	40.00	7.50	QP
	2	51.340	8.86	0.36	24.01	33.23	40.00	6.77	QP
	3	97.900	10.12	0.51	20.10	30.73	43.50	12.77	QP
	4	495.600	18.25	1.50	16.74	36.49	46.00	9.51	QP
	5	519.850	18.40	1.60	17.67	37.67	46.00	8.33	QP
	6	745.860	21.92	1.96	17.72	41.60	46.00	4.40	QP

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

<sup>2.</sup> The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 41

Dis. / Ant. : 3m 2010 CBL6111C 2598 Ant. pol. : HORIZONTAL

Limit : FCC PART 15 B (3M)

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

EUT : LCD TV M/N:LE46FHDE5300

Power rating : AC 120V/60Hz

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

VGA: 1920 \* 1080@60Hz

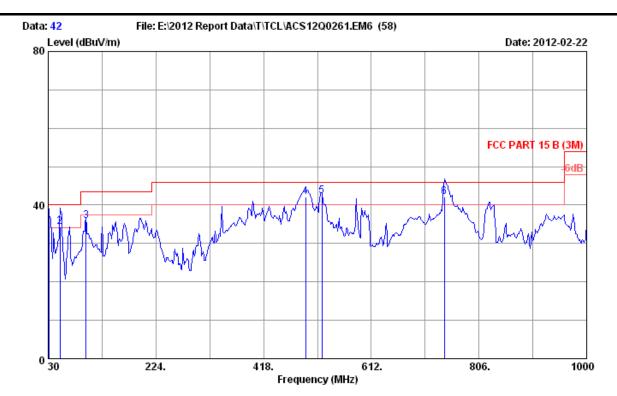
No.	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	52.300	8.42	0.36	25.50	34.28	40.00	5.72	QP
2	224.000	10.52	1.10	28.90	40.52	46.00	5.48	QP
3	342.000	14.86	1.41	24.80	41.07	46.00	4.93	QP
4	519.850	18.40	1.60	21.23	41.23	46.00	4.77	QP
5	585.000	19.70	1.58	21.00	42.28	46.00	3.72	QP
6	745.860	21.92	1.96	17.86	41.74	46.00	4.26	QP

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

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



FCC ID: W8ULE46FHDE5300 Page



Site no. : 3m Chamber Data no. : 42

Dis. / Ant. : 3m 2010 CBL6111C 2598 Ant. pol. : VERTICAL

Limit : FCC PART 15 B (3M)

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

EUT : LCD TV M/N:LE46FHDE5300

Power rating : AC 120V/60Hz

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

VGA:1920\*1080@60Hz

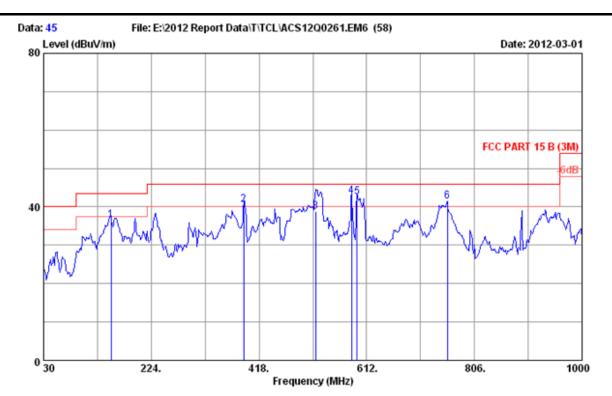
_	No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
	1	31.940	18.88	0.30	17.22	36.40	40.00	3.60	QP
	2	51.000	8.86	0.36	25.00	34.22	40.00	5.78	QP
	3	97.900	10.12	0.51	25.15	35.78	43.50	7.72	QP
	4	493.660	18.24	1.50	22.29	42.03	46.00	3.97	QP
	5	522.760	18.37	1.60	22.31	42.28	46.00	3.72	QP
	6	743.300	21.86	1.93	18.40	42.19	46.00	3.81	QP

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

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



FCC ID: W8ULE46FHDE5300 Page



Site no. : 3m Chamber Data no. : 45

Dis. / Ant. : 3m 2010 CBL6111C 2598 Ant. pol. : HORIZONTAL

Limit : FCC PART 15 B (3M)

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

EUT : LCD TV M/N:LE46FHDE5300

Power rating : AC 120V/60Hz

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

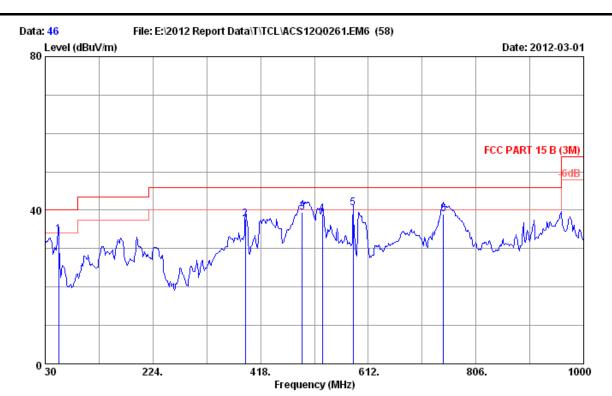
HDMI 1:1920\*1080@60Hz

1 151.250 11.54 0.80 24.22 36.56 43.50 6.94 QP 2 390.840 16.31 1.34 23.02 40.67 46.00 5.33 QP 3 520.350 18.39 1.60 18.80 38.79 46.00 7.21 QP 4 585.000 19.70 1.58 21.60 42.88 46.00 3.12 QP	No.	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
2 390.840 16.31 1.34 23.02 40.67 46.00 5.33 QP 3 520.350 18.39 1.60 18.80 38.79 46.00 7.21 QP	1	151.250	11.54	0.80	24.22	36.56	43.50	6.94	OP
	_								_
4 585.000 19.70 1.58 21.60 42.88 46.00 3.12 OP	3	520.350	18.39	1.60	18.80	38.79	46.00	7.21	QP
· · · · · · · · · · · · · · · · · · ·	4	585.000	19.70	1.58	21.60	42.88	46.00	3.12	QP
5 594.540 19.85 1.53 21.18 42.56 46.00 3.44 QP	5	594.540	19.85	1.53	21.18	42.56	46.00	3.44	QP
6 757.500 22.00 2.07 17.48 41.55 46.00 4.45 QP	6	757.500	22.00	2.07	17.48	41.55	46.00	4.45	QP

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

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

FCC ID: W8ULE46FHDE5300 Page



Site no. : 3m Chamber Data no. : 46
Dis. / Ant. : 3m 2010 CBL6111C 2598 Ant. pol. : VERTICAL

Limit : FCC PART 15 B (3M)

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

EUT : LCD TV M/N:LE46FHDE5300

Power rating : AC 120V/60Hz

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

HDMI 1:1920\*1080@60Hz

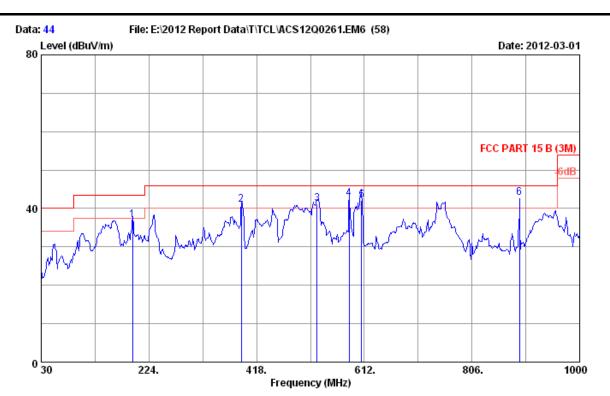
_	No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
	1	54.250	7.54	0.37	25.65	33.56	40.00	6.44	QP
	2	390.840	16.31	1.34	19.93	37.58	46.00	8.42	QP
	3	493.200	18.24	1.50	19.80	39.54	46.00	6.46	QP
	4	529.550	18.30	1.60	19.11	39.01	46.00	6.99	QP
	5	584.840	19.70	1.58	19.21	40.49	46.00	5.51	QP
	6	747.800	21.96	1.98	15.12	39.06	46.00	6.94	QP

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

<sup>2.</sup> The emission levels that are 20dB below the official limit are not reported.



FCC ID: W8ULE46FHDE5300 Page



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

Dis. / Ant. : 3m 2010 CBL6111C 2598 Ant. pol. : HORIZONTAL

Limit : FCC PART 15 B (3M)

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

EUT : LCD TV M/N:LE46FHDE5300

Power rating : AC 120V/60Hz

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

HDMI 2:1920\*1080@60Hz

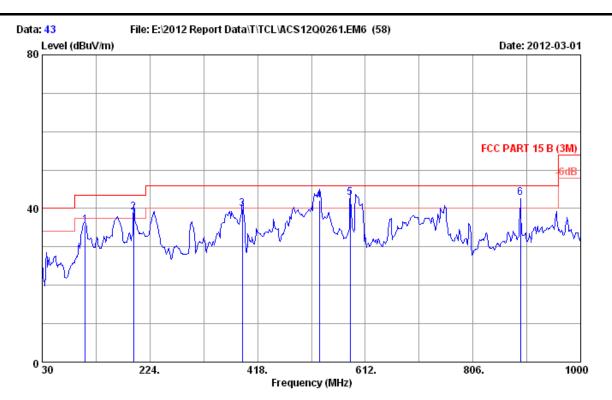
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	194.900	9.70	0.92	26.37	36.99	43.50	6.51	QP
2	390.840	16.31	1.34	23.26	40.91	46.00	5.09	QP
3	526.640	18.33	1.60	21.35	41.28	46.00	4.72	QP
4	585.000	19.70	1.58	21.20	42.48	46.00	3.52	QP
5	607.150	19.76	1.57	20.76	42.09	46.00	3.91	QP
6	891.360	22.89	2.24	17.58	42.71	46.00	3.29	QP

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

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



FCC ID: W8ULE46FHDE5300 Page



Site no. : 3m Chamber Data no. : 43
Dis. / Ant. : 3m 2010 CBL6111C 2598 Ant. pol. : VERTICAL

Limit : FCC PART 15 B (3M)

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

EUT : LCD TV M/N:LE46FHDE5300

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	107.600	11.20	0.54	23.86	35.60	43.50	7.90	QP
2	194.900	9.70	0.92	28.41	39.03	43.50	4.47	QP
3	390.840	16.31	1.34	22.31	39.96	46.00	6.04	QP
4	529.550	18.30	1.60	22.12	42.02	46.00	3.98	QP
5	585.000	19.70	1.58	21.40	42.68	46.00	3.32	QP
6	891.360	22.89	2.24	17.55	42.68	46.00	3.32	QP

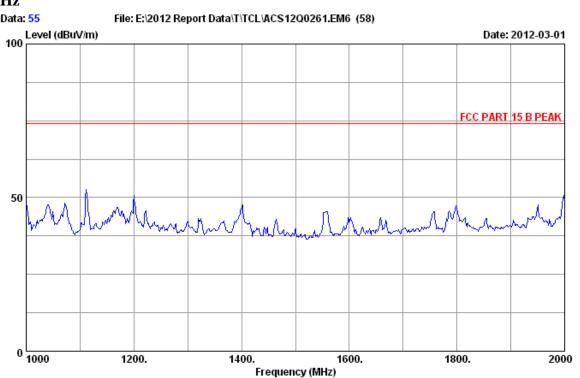
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.

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



FCC ID: W8ULE46FHDE5300 Page





Site no. : 3m Chamber Data no. : 55

Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : HORIZONTAL

Limit : FCC PART 15 B PEAK

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

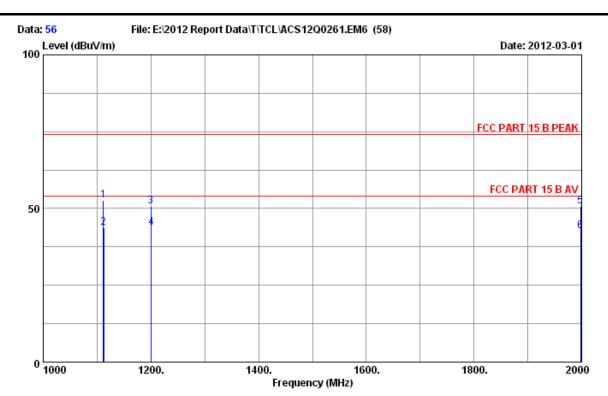
EUT : LCD TV M/N:LE46FHDE5300

Power Rating : AC 120V/60Hz

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

VGA:1920\*1080@60Hz

FCC ID: W8ULE46FHDE5300 Page



Site no. : 3m Chamber Data no. : 56

Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : HORIZONTAL

Limit : FCC PART 15 B PEAK

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

EUT : LCD TV M/N:LE46FHDE5300

Power Rating : AC 120V/60Hz

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

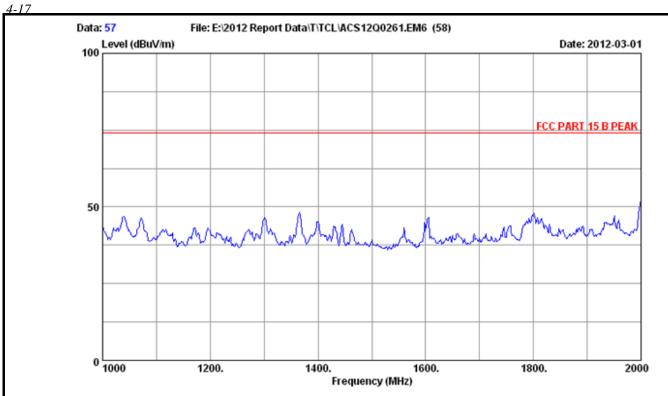
VGA:1920\*1080@60Hz

		Ant.	Cable	AMP		Emission			
No.	Freq. (MHz)	Factor (dB/m)	Loss (dB)	factor (dBuV)	Reading (dBuV/m)	Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	1112.000	23.78	0.74	35.32	63.53	52.73	74.00	21.27	Peak
2	1112.560	23.78	0.74	35.30	54.58	43.80	54.00	10.20	Average
3	1200.000	24.19	0.86	35.24	60.92	50.73	74.00	23.27	Peak
4	1200.560	24.19	0.86	35.24	53.98	43.79	54.00	10.21	Average
5	1998.000	27.50	2.05	34.60	55.64	50.59	74.00	23.41	Peak
6	1998.250	27.50	2.05	34.60	47.67	42.62	54.00	11.38	Average

\_\_\_\_\_\_

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading  $-\mathrm{Amp}$  Factor

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



Site no. : 3m Chamber Data no. : 57
Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : VERTICAL

Limit : FCC PART 15 B PEAK

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

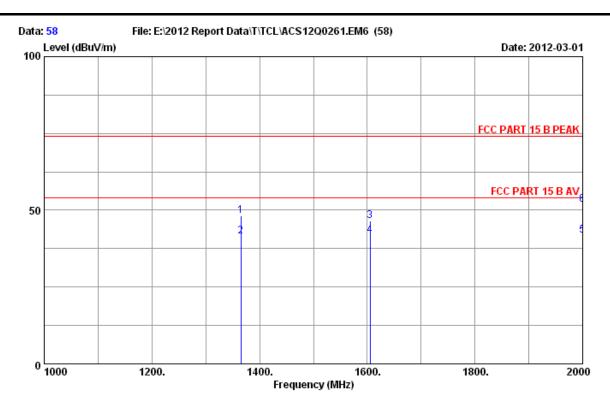
EUT : LCD TV M/N:LE46FHDE5300

Power Rating : AC 120V/60Hz

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

VGA:1920\*1080@60Hz

FCC ID: W8ULE46FHDE5300 Page



Site no. : 3m Chamber Data no. : 58
Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : VERTICAL

Limit : FCC PART 15 B PEAK

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

EUT : LCD TV M/N:LE46FHDE5300

Power Rating : AC 120V/60Hz

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

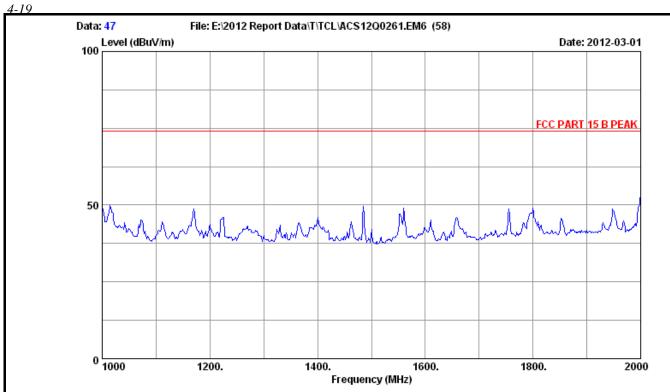
VGA:1920\*1080@60Hz

		Ant.	Cable	AMP		Emission			
No.	Freq. (MHz)	Factor (dB/m)	Loss (dB)	factor (dBuV)	Reading (dBuV/m)	Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	1365.000	24.94	1.10	35.10	57.19	48.13	74.00	25.87	Peak
2	1365.650	25.02	1.10	35.10	50.60	41.62	54.00	12.38	Average
3	1605.000	26.04	1.45	34.92	54.08	46.65	74.00	27.35	Peak
4	1605.250	26.04	1.45	34.92	49.10	41.67	54.00	12.33	Average
5	1999.500	27.50	2.05	34.60	46.87	41.82	54.00	12.18	Average
6	2000.000	27.50	2.05	34.60	56.83	51.78	74.00	22.22	Peak

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.



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

Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : HORIZONTAL

Limit : FCC PART 15 B PEAK

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

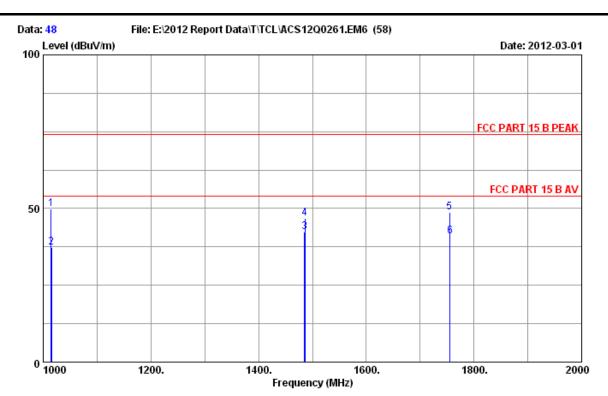
EUT : LCD TV M/N:LE46FHDE5300

Power Rating : AC 120V/60Hz

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

HDMI 1:1920\*1080@60Hz

FCC ID: W8ULE46FHDE5300 Page



Site no. : 3m Chamber Data no. : 48

Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : HORIZONTAL

Limit : FCC PART 15 B PEAK

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

EUT : LCD TV M/N:LE46FHDE5300

Power Rating : AC 120V/60Hz

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

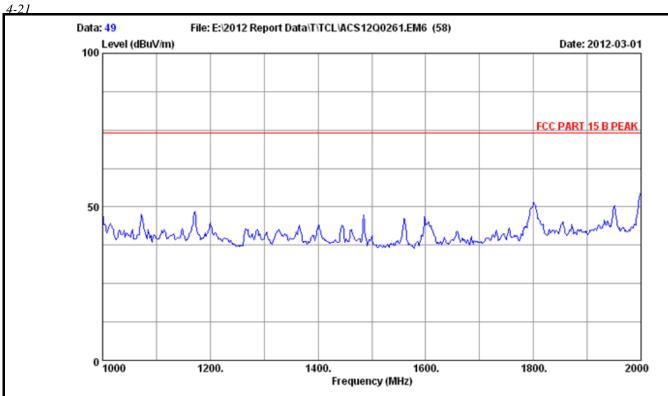
HDMI 1:1920\*1080@60Hz

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	1015.000	23.28	0.59	35.38	61.27	49.76	74.00	24.24	Peak
2	1015.300	23.28	0.59	35.38	48.80	37.29	54.00	16.71	Average
3	1485.300	25.60	1.28	35.02	50.50	42.36	54.00	11.64	Average
4	1486.000	25.60	1.28	35.02	54.84	46.70	74.00	27.30	Peak
5	1755.000	26.55	1.69	34.80	55.36	48.80	74.00	25.20	Peak
6	1755.600	26.55	1.69	34.80	47.60	41.04	54.00	12.96	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.



Site no. : 3m Chamber Data no. : 49
Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : VERTICAL

Limit : FCC PART 15 B PEAK

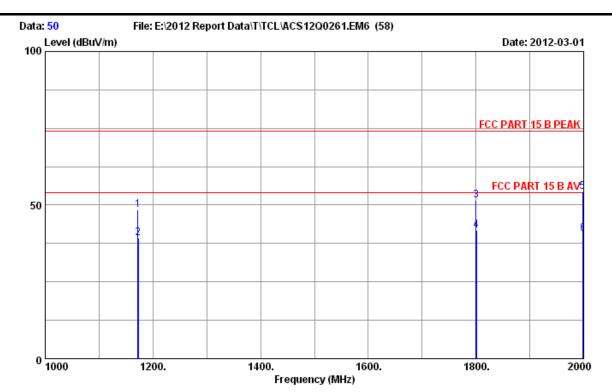
Env. / Ins. : 24\*C/56% Engineer : Victory-Cao

EUT : LCD TV M/N:LE46FHDE5300

Power Rating : AC 120V/60Hz

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

HDMI 1:1920\*1080@60Hz



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

Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : VERTICAL

Limit : FCC PART 15 B PEAK

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

EUT : LCD TV M/N:LE46FHDE5300

Power Rating : AC 120V/60Hz

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

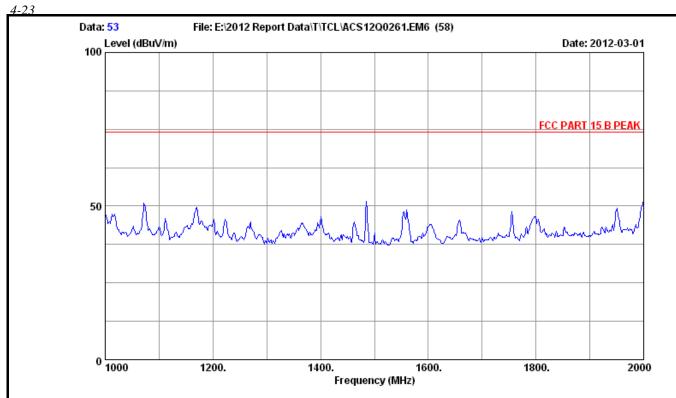
HDMI 1:1920\*1080@60Hz

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	1172.000	24.03	0.83	35.26	58.97	48.57	74.00	25.43	Peak
2	1172.600	24.03	0.83	35.26	49.80	39.40	54.00	14.60	Average
3	1800.000	26.74	1.75	34.76	57.86	51.59	74.00	22.41	Peak
4	1800.500	26.74	1.75	34.76	48.00	41.73	54.00	12.27	Average
5	1998.000	27.50	2.05	34.60	59.26	54.21	74.00	19.79	Peak
6	1998.500	27.50	2.05	34.60	45.60	40.55	54.00	13.45	Average

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

-Amp Factor

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



Site no. : 3m Chamber Data no. : 53

Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : HORIZONTAL

Limit : FCC PART 15 B PEAK

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

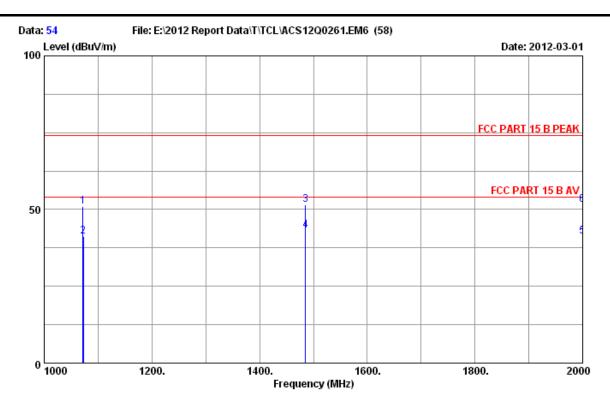
EUT : LCD TV M/N:LE46FHDE5300

Power Rating : AC 120V/60Hz

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

HDMI 2:1920\*1080@60Hz

FCC ID: W8ULE46FHDE5300 Page



Site no. : 3m Chamber Data no. : 54

Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : HORIZONTAL

Limit : FCC PART 15 B PEAK

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

EUT : LCD TV M/N:LE46FHDE5300

Power Rating : AC 120V/60Hz

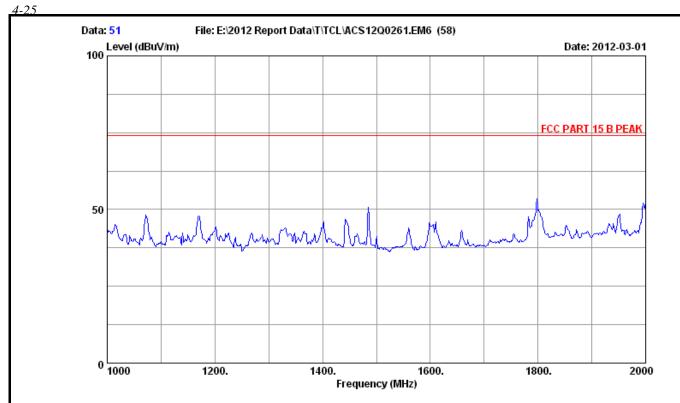
Test Mode : Running "H" Pattern And 1KHz Playing

HDMI 2:1920\*1080@60Hz

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	1072.000	23.53	0.68	35.34	62.21	51.08	74.00	22.92	Peak
2	1072.600	23.53	0.68	35.34	52.30	41.17	54.00	12.83	Average
3	1485.000	25.60	1.28	35.02	59.66	51.52	74.00	22.48	Peak
4	1485.600	25.60	1.28	35.02	51.40	43.26	54.00	10.74	Average
5	1999.400	27.50	2.05	34.60	46.30	41.25	54.00	12.75	Average
6	2000.000	27.50	2.05	34.60	56.53	51.48	74.00	22.52	Peak

-----

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading  $-\mathrm{Amp}$  Factor



Site no. : 3m Chamber Data no. : 51
Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : VERTICAL

Limit : FCC PART 15 B PEAK

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

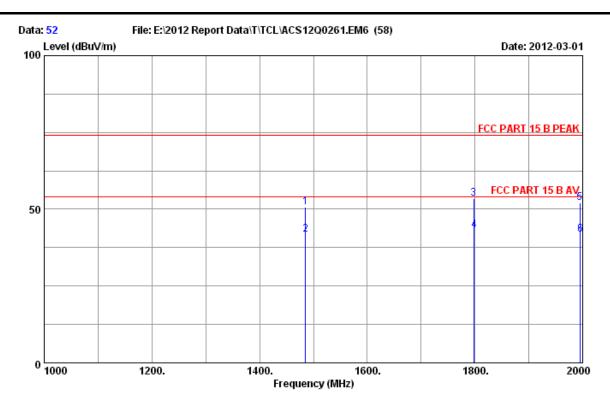
EUT : LCD TV M/N:LE46FHDE5300

Power Rating : AC 120V/60Hz

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

HDMI 2:1920\*1080@60Hz

FCC ID: W8ULE46FHDE5300 Page



Site no. : 3m Chamber Data no. : 52
Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : VERTICAL

Limit : FCC PART 15 B PEAK

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

EUT : LCD TV M/N:LE46FHDE5300

Power Rating : AC 120V/60Hz

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

HDMI 2:1920\*1080@60Hz

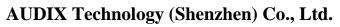
No.	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dBuV)	Reading (dBuV/m)	Emission Level (dBuV/m)	Limits (dB)	Margin (dB)	Remark
1	1485.000	25.60	1.28	35.02	58.73	50.59	74.00	23.41	Peak
2	1485.600	25.60	1.28	35.02	49.90	41.76	54.00	12.24	Average
3	1798.000	26.74	1.75	34.76	59.73	53.46	74.00	20.54	Peak
4	1798.600	26.74	1.75	34.76	49.40	43.13	54.00	10.87	Average
5	1995.000	27.50	2.05	34.60	57.01	51.96	74.00	22.04	Peak
6	1995.300	27.50	2.05	34.60	46.80	41.75	54.00	12.25	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.

Audix Technology (Shenzhen) Co., Ltd. Report No. ACS-F12045





Page 5-1

5. DEVIATION TO TEST SPECIFICATIONS [NONE]