



APPLICATION OF CERTIFICATION

For

TTE Technology Inc.

LCD TV

Brand Name	Model Number
TCL	LE46FHDE5310; LE46FHDE5311

FCC ID: W8ULE46FHDE5310

Prepared for : TTE Technology Inc.
1255 Graphite Drive, Corona, CA 92881, U.S.A.

Prepared By: Audix Technology (Shenzhen) Co., Ltd.
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Shenzhen Science & Industrial Park,
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Report Number : ACS- F13104
Date of Test : Mar.14~Apr.02, 2013
Date of Report : Apr.25, 2013

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TEST REPORT CERTIFICATION

Applicant : TTE Technology Inc.
 Manufacturer : TCL King Electrical Appliances (Huizhou) Co., Ltd.
 EUT Description : LCD TV
 FCC ID : W8ULE46FHDE5310

(A) Model No. & : Brand Name	Brand Name	Model Number
	TCL	LE46FHDE5310; LE46FHDE5311

(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 2012,
 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 : Mar.14~ Apr.02,2013 Report of date: Apr.25, 2013

Prepared by : Julia Zhu Reviewed by : Sun Zeng
 Julia Zhu / Assistant Sun Zeng / Supervisor

AUDIX® 信華科技(深圳)有限公司
 Audix Technology (Shenzhen) Co., Ltd.
 EMC 部門報告專用章
 Stamp only for EMC Dept. Report
 Signature Ken Lu 4/25/13

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: 2012 ANSI C63.4: 2009	PASS	Meets Class B Limit Minimum passing margin is 9.53 dB at 1.560MHz
Radiated Emission Test (30-1000MHz)	FCC Part 15: 2012 ANSI C63.4: 2009	PASS	Meets Class B Limit Minimum passing margin is 3.17dB at 928.180MHz
Radiated Emission Test (1-2GHz)	FCC Part 15: 2012 ANSI C63.4: 2009	PASS	Meets Class B Limit Minimum passing margin is 9.45dB at 1755.913MHz

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

Description : LCD TV

Model Number : LE46FHDE5310; LE46FHDE5311
Only the before of article decorated box is different

FCC ID : W8ULE46FHDE5310

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		
LVDS (HD)	78MHZ	
LVDS (FHD)	75MHZ	
IF	6MHz	
DC-DC	U302->385KHz	
DDR	390MHz	
AMP	384KHz	

Power Cord : Unshielded, Undetachable, 2.0m

Date of Test : Mar.14~Apr.02, 2013

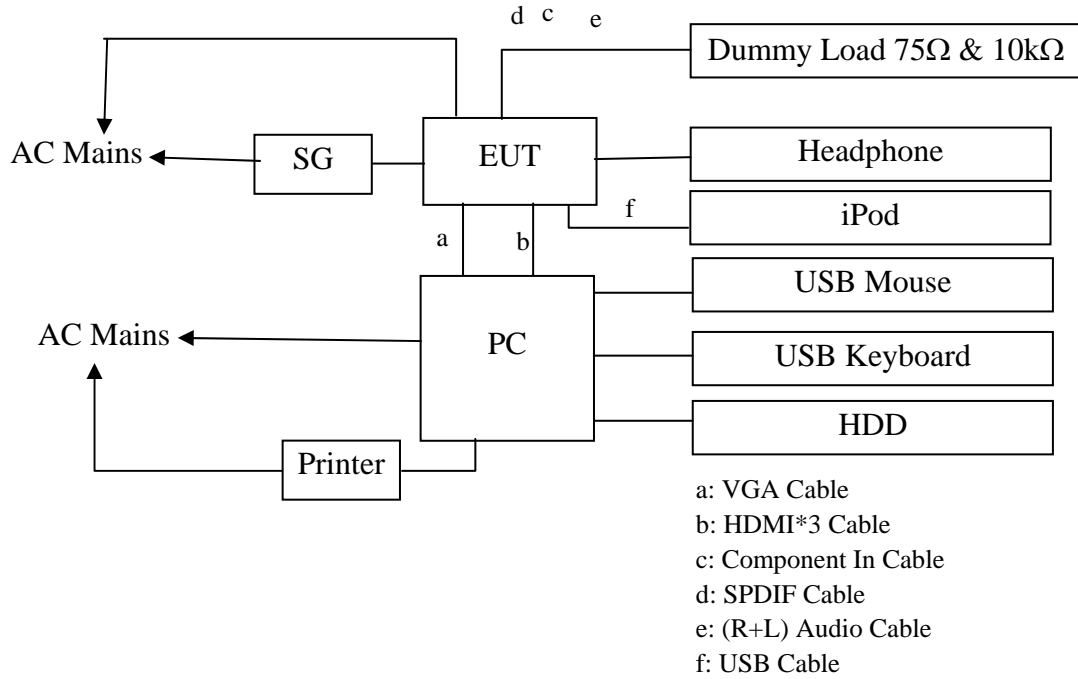
Date of Receipt : Mar.13,2013

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	<input checked="" type="checkbox"/> FCC DoC <input checked="" type="checkbox"/> BSMI ID:R33002
		Power Cord: Unshielded, Detachable, 1.8m Display Card: HD3450 (DVI+VGA+HDMI)				
2.	USB Keyboard	ACS-EMC- K04R	DELL	SK-8115	CN-ODJ313-7161 6-6BB-049J	<input checked="" type="checkbox"/> FCC DoC <input checked="" type="checkbox"/> BSMI ID: T3A002
		Data Cable: shielded, Undetachable, 2.0m				
3.	Headphone	ACS-EMC-EP03	OVANN	OV880V	N/A	<input type="checkbox"/> FCC ID <input type="checkbox"/> BSMI ID
		Cable: Shielded, Undetachabled, 4.0m				
4.	Printer	ACS-EMC-PT04	HP	C9079A	N/A	<input checked="" type="checkbox"/> FCC DoC <input checked="" type="checkbox"/> BSMI ID: R33001
		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	<input checked="" type="checkbox"/> FCC DoC <input checked="" type="checkbox"/> BSMI ID: R41108
		Data Cable: shielded, Undetachable, 1.8m				
6.	iPod nano	ACS-EMC-IP03	APPLE	A1199	YM711H3LVQ5	<input checked="" type="checkbox"/> FCC DoC <input checked="" type="checkbox"/> BSMI ID: R33057
		Data Cable: Shielded, Detachabled, 1.0m				
7.	HDD	ACS-EMC-HDD03	Terasys	F12-UF	A0100215-53900 30	<input checked="" type="checkbox"/> FCC DoC <input checked="" type="checkbox"/> BSMI ID: 4912A022
		USB Cable: Shielded, Detachable, 1.8m				
8.	Dummy Load (10KΩ & 75Ω)	Component In Cable: Unshielded, Detachabled, 1.5m SPDIF Cable: Unshielded, Detachable, 1.5m (R+L) Cable: Shielded, Detachable, 1.5m				
9.	D-Sub Cable: Shielded, Detachable, 1.5m HDMI Cable: Shielded, Detachable, 1.8m					

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, 2014

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

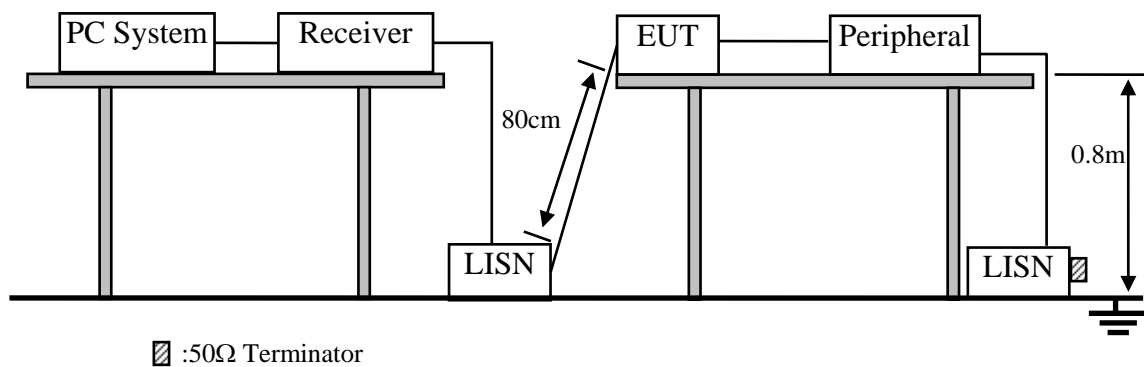
Test Item	Uncertainty
Uncertainty for Conduction emission test in No. 1 Conduction	3.06 dB
Uncertainty for Radiation Emission test in 3m chamber	3.6 dB(30~200MHz, Polarize: H)
	3.8 dB(30~200MHz, Polarize: V)
	4.2 dB(200M~1GHz, Polarize: H)
	3.8 dB(200M~1GHz, Polarize: V)
Uncertainty for Radiation Emission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

3. POWER LINE CONDUCTED EMISSION MEASUREMENT

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



3.3. Power Line Conducted Emission Test Limits

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level dB(μV)	Average Level dB(μV)
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.

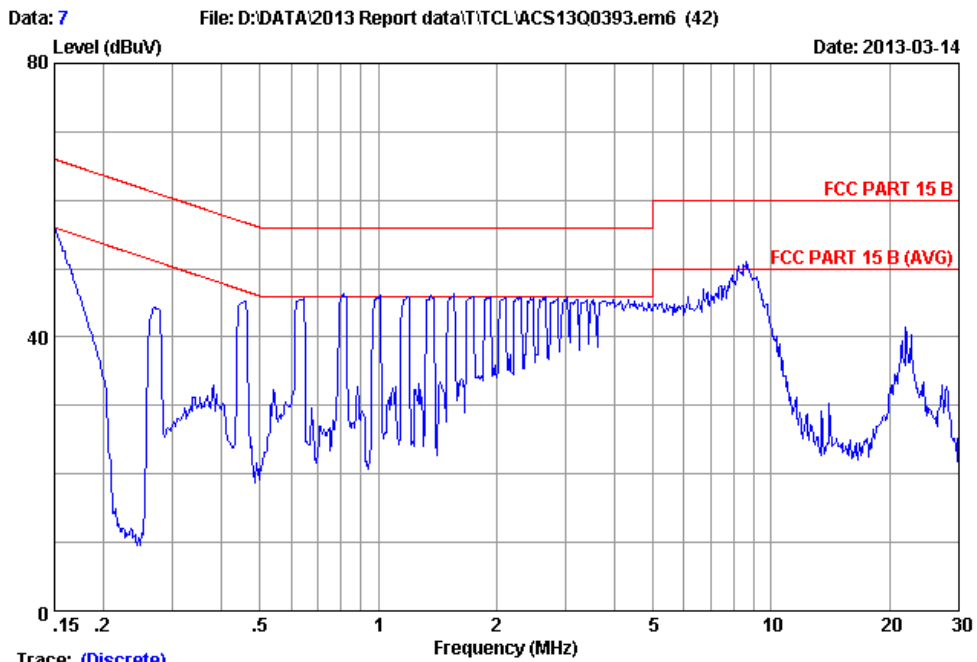
3.4. Configuration of EUT on Test

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 : LE46FHDE5310
 Serial Number : N/A

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



Trace: (Discrete)

Site no :1#conduction Data No :7

Dis./Ant. **: 2012 ESH2-25 LINE

Limit :FCC PART 15 B

Env./Ins. :24°C/51% Engineer :Dota-YAO

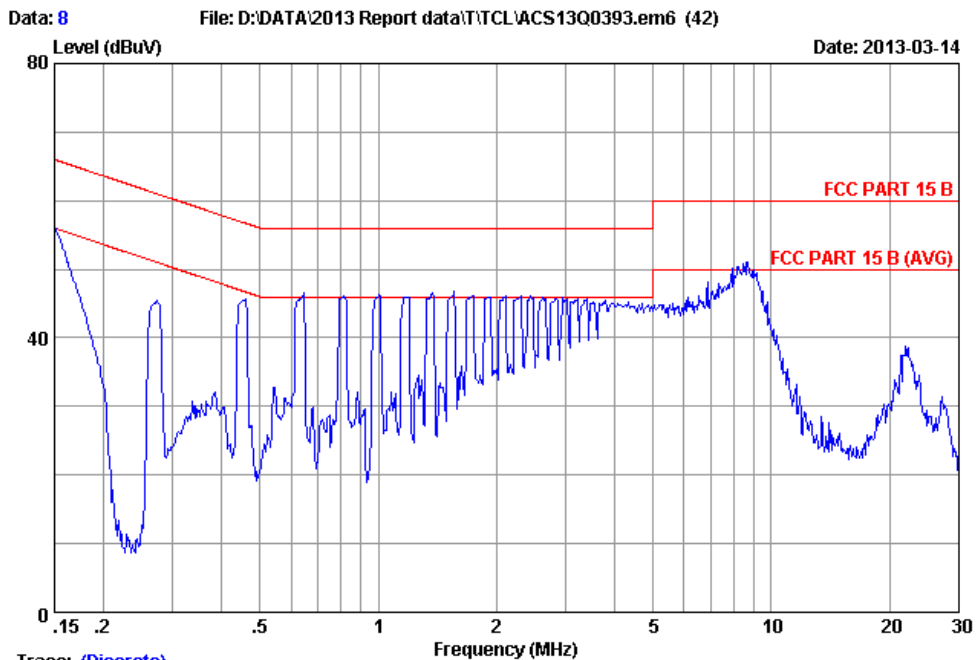
EUT :LCD TV M/N:LE46FHDE5310

Power Rating :AC 120V/60Hz

Test Mode :PC Mode

Running "H" Pattern And 1KHz Playing

VGA:640*480@60Hz



Trace: (Discrete)

Site no :1#conduction Data No :8

Dis./Ant. **: 2012 ESH2-25 NEUTRAL

Limit :FCC PART 15 B

Env./Ins. :24°C/51% Engineer :Dota-YAO

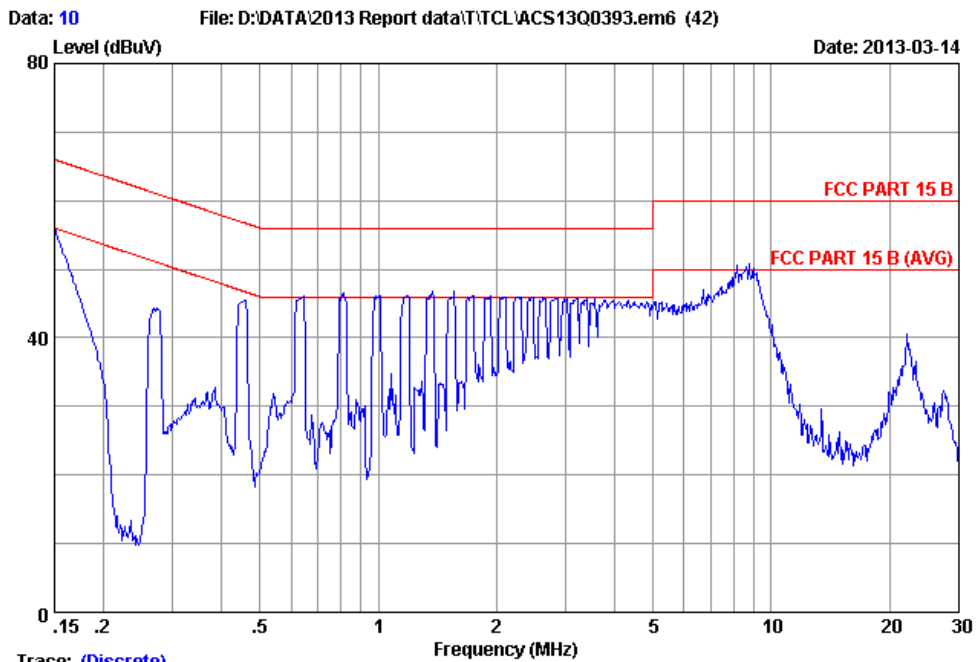
EUT :LCD TV M/N:LE46FHDE5310

Power Rating :AC 120V/60Hz

Test Mode :PC Mode

Running "H" Pattern And 1KHz Playing

VGA:640*480@60Hz



Trace: (Discrete)

Site no :1#conduction Data No :10

Dis./Ant. **: 2012 ESH2-25 LINE

Limit :FCC PART 15 B

Env./Ins. :24°C/51%

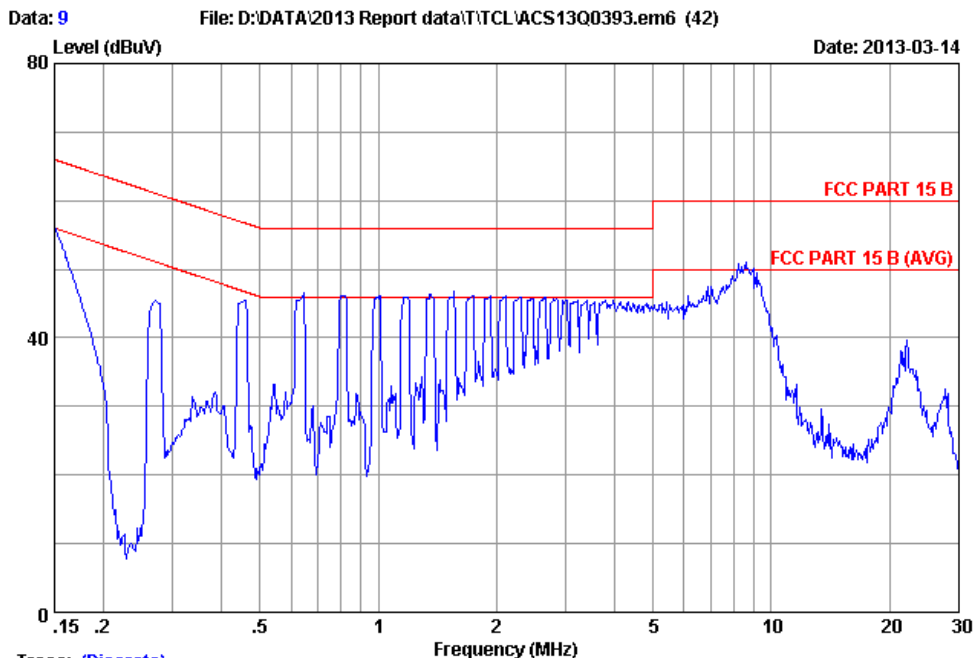
EUT :LCD TV M/N:LE46FHDE5310 Engineer :Dota-YAO

Power Rating :AC 120V/60Hz

Test Mode :PC Mode

Running "H" Pattern And 1KHz Playing

VGA:1024*768@60Hz



Trace: (Discrete)

Site no :1#conduction Data No :9

Dis./Ant. **: 2012 ESH2-25 NEUTRAL

Limit :FCC PART 15 B

Env./Ins. :24°C/51%

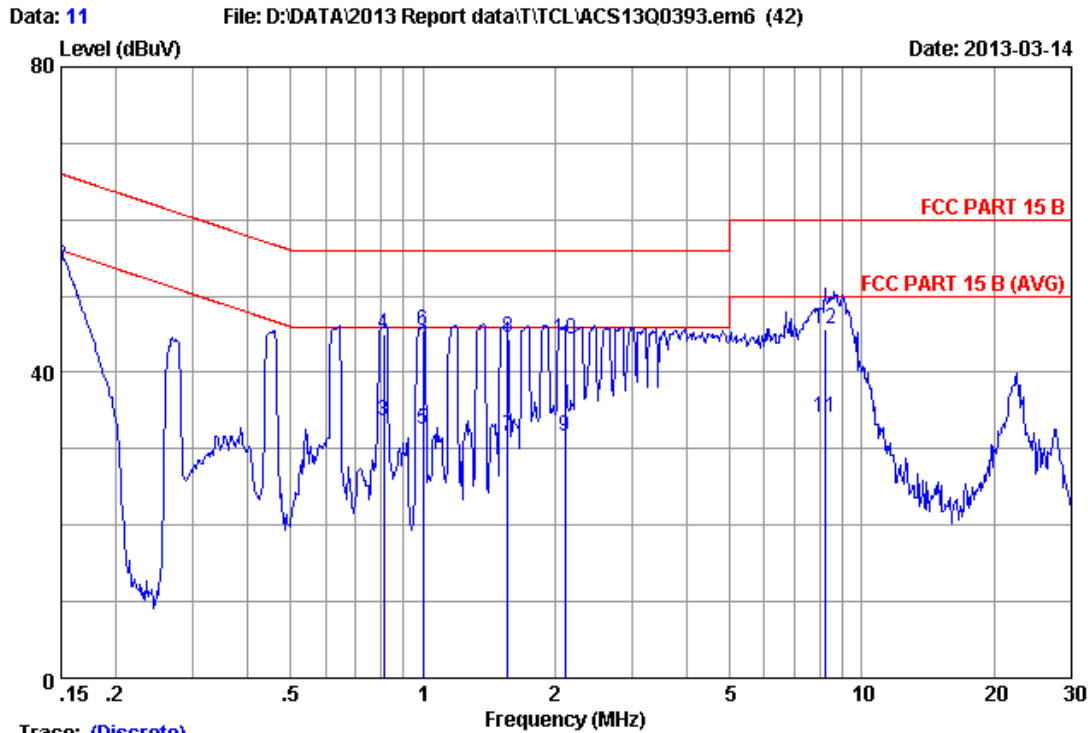
EUT :LCD TV M/N:LE46FHDE5310 Engineer :Dota-YAO

Power Rating :AC 120V/60Hz

Test Mode :PC Mode

Running "H" Pattern And 1KHz Playing

VGA:1024*768@60Hz

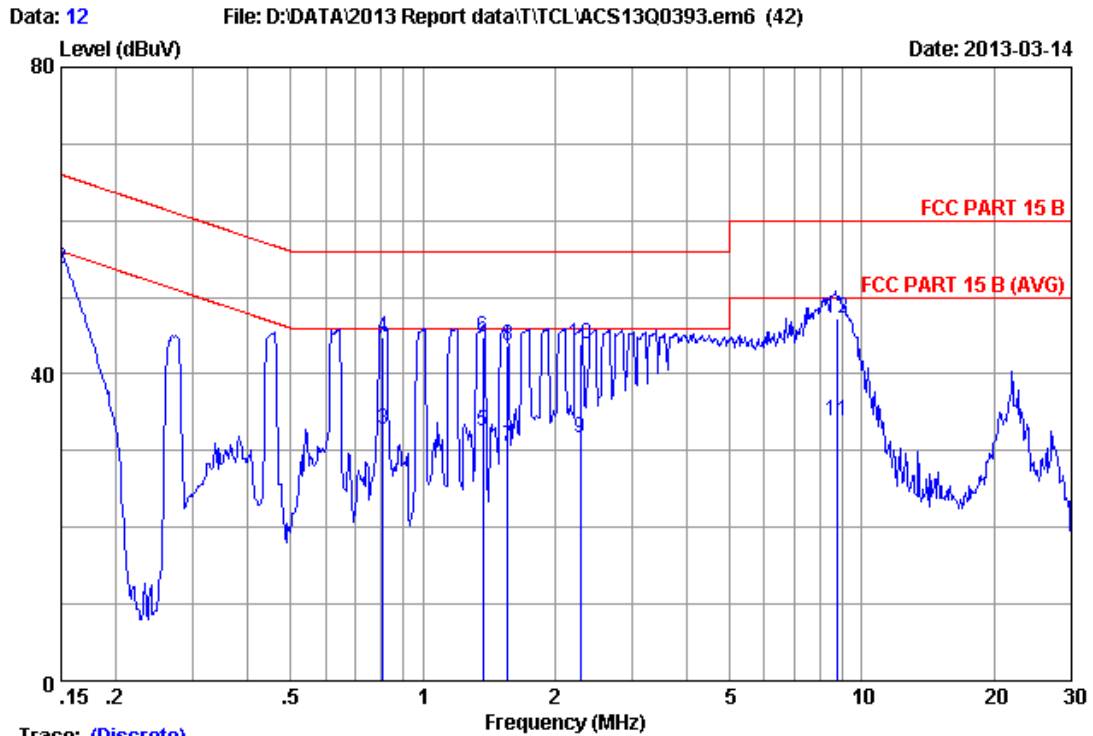


Trace: (Discrete)

Site no :1#conduction Data No :11
 Dis./Ant. :** 2012 ESH2-Z5 LINE
 Limit :FCC PART 15 B
 Env./Ins. :24°C/51% Engineer :Dota-YAO
 EUT :LCD TV M/N:LE46FHDE5310
 Power Rating :AC 120V/60Hz
 Test Mode :PC 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	0.19	0.14	35.81	36.14	56.00	19.86	Average
2	0.15000	0.19	0.14	53.61	53.94	66.00	12.06	QP
3	0.81300	0.20	0.15	33.20	33.55	46.00	12.45	Average
4	0.81300	0.20	0.15	44.70	45.05	56.00	10.95	QP
5	1.000	0.21	0.14	32.20	32.55	46.00	13.45	Average
6	1.000	0.21	0.14	45.10	45.45	56.00	10.55	QP
7	1.560	0.23	0.14	31.20	31.57	46.00	14.43	Average
8	1.560	0.23	0.14	44.30	44.67	56.00	11.33	QP
9	2.110	0.24	0.14	31.30	31.68	46.00	14.32	Average
10	2.110	0.24	0.14	43.90	44.28	56.00	11.72	QP
11	8.230	0.41	0.16	33.50	34.07	50.00	15.93	Average
12	8.230	0.41	0.16	45.10	45.67	60.00	14.33	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

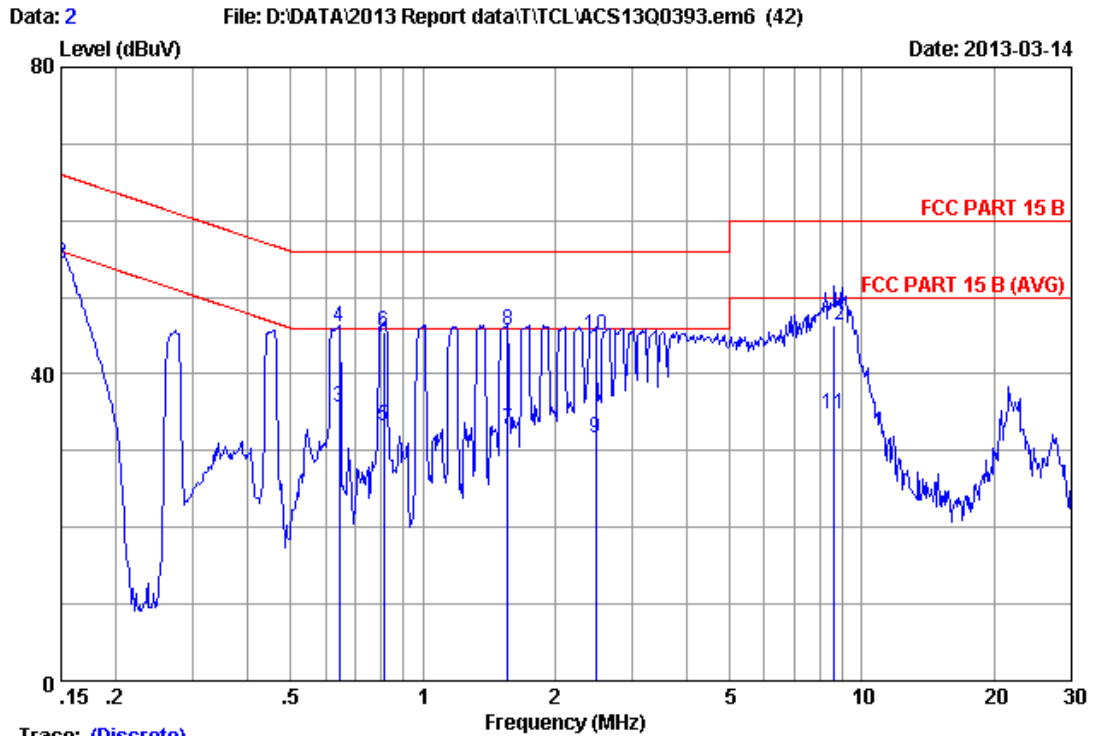


Trace: (Discrete)

Site no :1#conduction Data No :12
 Dis./Ant. :** 2012 ESH2-25 NEUTRAL
 Limit :FCC PART 15 B
 Env./Ins. :24°C/51% Engineer :Dota-YAO
 EUT :LCD TV M/N:LE46FHDE5310
 Power Rating :AC 120V/60Hz
 Test Mode :PC 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	0.21	0.14	35.20	35.55	56.00	20.45	Average
2	0.15000	0.21	0.14	53.40	53.75	66.00	12.25	QP
3	0.81200	0.24	0.15	32.40	32.79	46.00	13.21	Average
4	0.81200	0.24	0.15	44.30	44.69	56.00	11.31	QP
5	1.370	0.26	0.14	32.10	32.50	46.00	13.50	Average
6	1.370	0.26	0.14	44.50	44.90	56.00	11.10	QP
7	1.560	0.27	0.14	30.09	30.50	46.00	15.50	Average
8	1.560	0.27	0.14	43.19	43.60	56.00	12.40	QP
9	2.280	0.29	0.14	31.20	31.63	46.00	14.37	Average
10	2.280	0.29	0.14	43.50	43.93	56.00	12.07	QP
11	8.756	0.42	0.16	33.21	33.79	50.00	16.21	Average
12	8.756	0.42	0.16	46.71	47.29	60.00	12.71	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

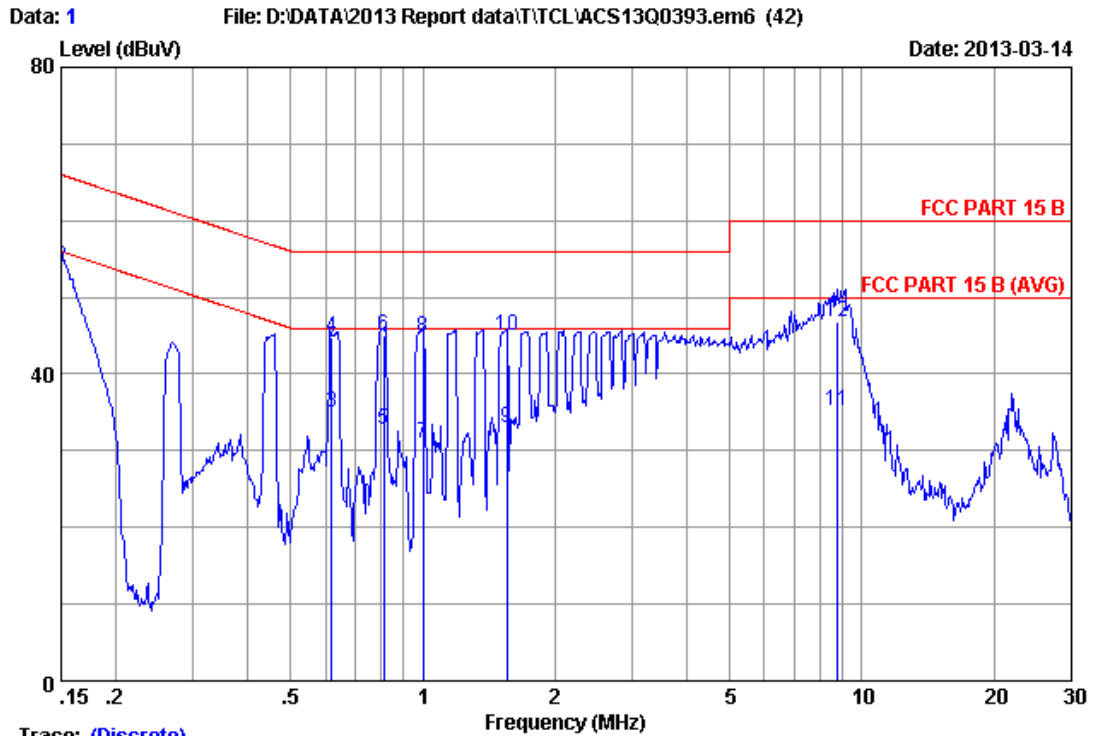


Trace: (Discrete)

Site no :1#conduction Data No :2
 Dis./Ant. :** 2012 ESH2-25 LINE
 Limit :FCC PART 15 B
 Env./Ins. :24°C/51% Engineer :Dota-YAO
 EUT :LCD TV M/N:LE46FHDE5310
 Power Rating :AC 120V/60Hz
 Test Mode :PC 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	0.15000	0.19	0.14	35.71	36.04	56.00	19.96	Average
2	0.15000	0.19	0.14	54.01	54.34	66.00	11.66	QP
3	0.64400	0.20	0.15	35.29	35.64	46.00	10.36	Average
4	0.64400	0.20	0.15	45.69	46.04	56.00	9.96	QP
5	0.81300	0.20	0.15	32.90	33.25	46.00	12.75	Average
6	0.81300	0.20	0.15	45.20	45.55	56.00	10.45	QP
7	1.560	0.23	0.14	32.40	32.77	46.00	13.23	Average
8	1.560	0.23	0.14	45.30	45.67	56.00	10.33	QP
9	2.474	0.25	0.14	31.30	31.69	46.00	14.31	Average
10	2.474	0.25	0.14	44.60	44.99	56.00	11.01	QP
11	8.636	0.42	0.16	34.10	34.68	50.00	15.32	Average
12	8.636	0.42	0.16	45.80	46.38	60.00	13.62	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

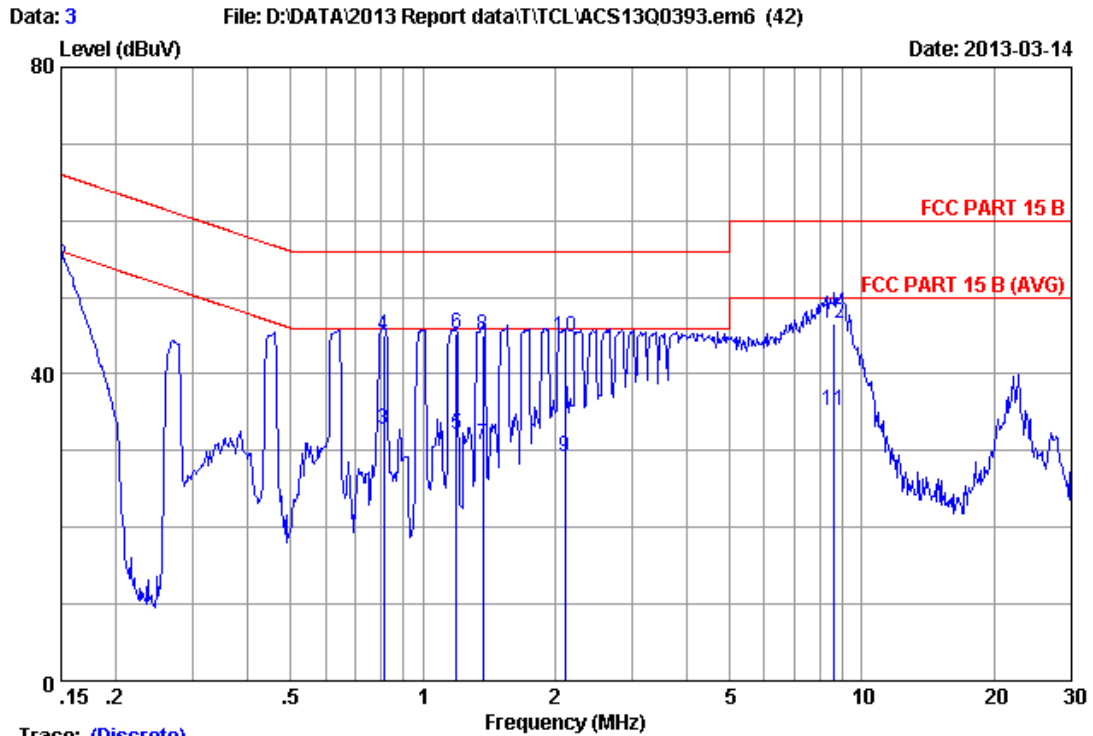


Trace: (Discrete)

Site no :1#conduction Data No :1
 Dis./Ant. :** 2012 ESH2-25 NEUTRAL
 Limit :FCC PART 15 B
 Env./Ins. :24°C/51% Engineer :Dota-YAO
 EUT :LCD TV M/N:LE46FHDE5310
 Power Rating :AC 120V/60Hz
 Test Mode :PC 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	0.15000	0.21	0.14	35.50	35.85	56.00	20.15	Average
2	0.15000	0.21	0.14	53.60	53.95	66.00	12.05	QP
3	0.61900	0.24	0.15	34.49	34.88	46.00	11.12	Average
4	0.61900	0.24	0.15	44.49	44.88	56.00	11.12	QP
5	0.81600	0.24	0.15	32.30	32.69	46.00	13.31	Average
6	0.81600	0.24	0.15	44.60	44.99	56.00	11.01	QP
7	1.000	0.24	0.14	30.70	31.08	46.00	14.92	Average
8	1.000	0.24	0.14	44.50	44.88	56.00	11.12	QP
9	1.552	0.27	0.14	32.49	32.90	46.00	13.10	Average
10	1.552	0.27	0.14	44.59	45.00	56.00	11.00	QP
11	8.779	0.43	0.16	34.60	35.19	50.00	14.81	Average
12	8.779	0.43	0.16	46.10	46.69	60.00	13.31	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

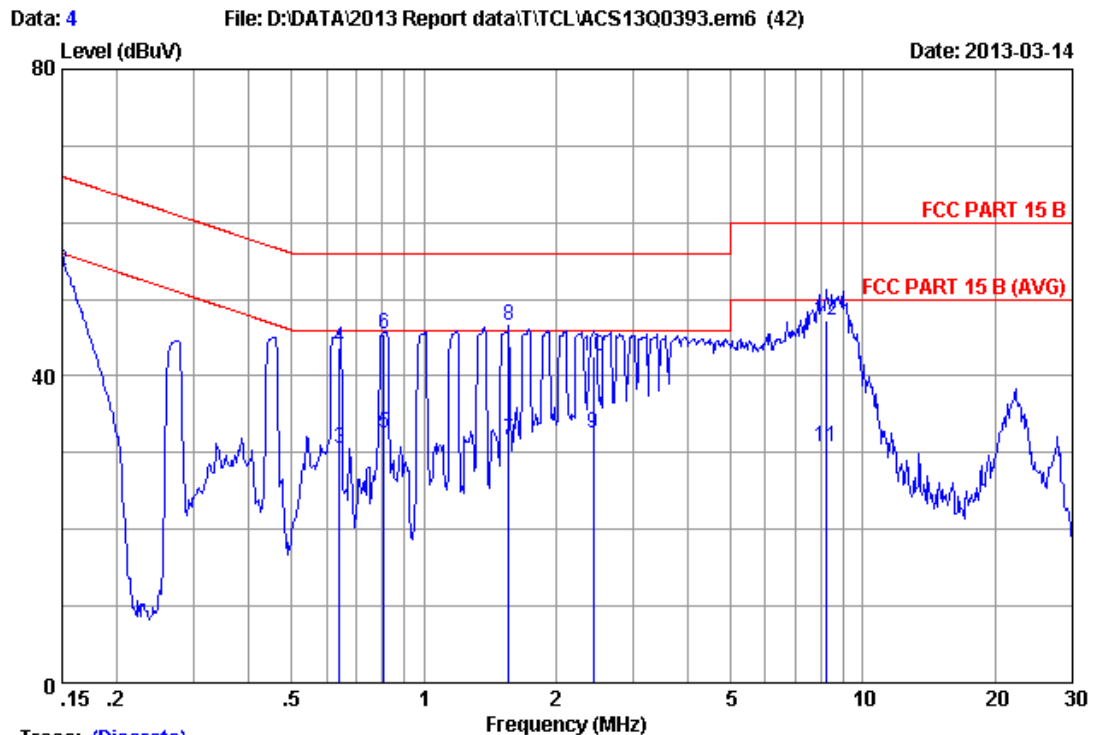


Trace: (Discrete)

Site no :1#conduction Data No :3
 Dis./Ant. :** 2012 ESH2-25 LINE
 Limit :FCC PART 15 B
 Env./Ins. :24°C/51% Engineer :Dota-YAO
 EUT :LCD TV M/N:LE46FHDE5310
 Power Rating :AC 120V/60Hz
 Test Mode :PC 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	0.15000	0.19	0.14	35.71	36.04	56.00	19.96	Average
2	0.15000	0.19	0.14	53.81	54.14	66.00	11.86	QP
3	0.81300	0.20	0.15	32.30	32.65	46.00	13.35	Average
4	0.81300	0.20	0.15	44.70	45.05	56.00	10.95	QP
5	1.190	0.22	0.14	31.80	32.16	46.00	13.84	Average
6	1.190	0.22	0.14	44.90	45.26	56.00	10.74	QP
7	1.370	0.22	0.14	30.50	30.86	46.00	15.14	Average
8	1.370	0.22	0.14	44.60	44.96	56.00	11.04	QP
9	2.110	0.24	0.14	28.90	29.28	46.00	16.72	Average
10	2.110	0.24	0.14	44.30	44.68	56.00	11.32	QP
11	8.630	0.42	0.16	34.60	35.18	50.00	14.82	Average
12	8.630	0.42	0.16	46.10	46.68	60.00	13.32	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

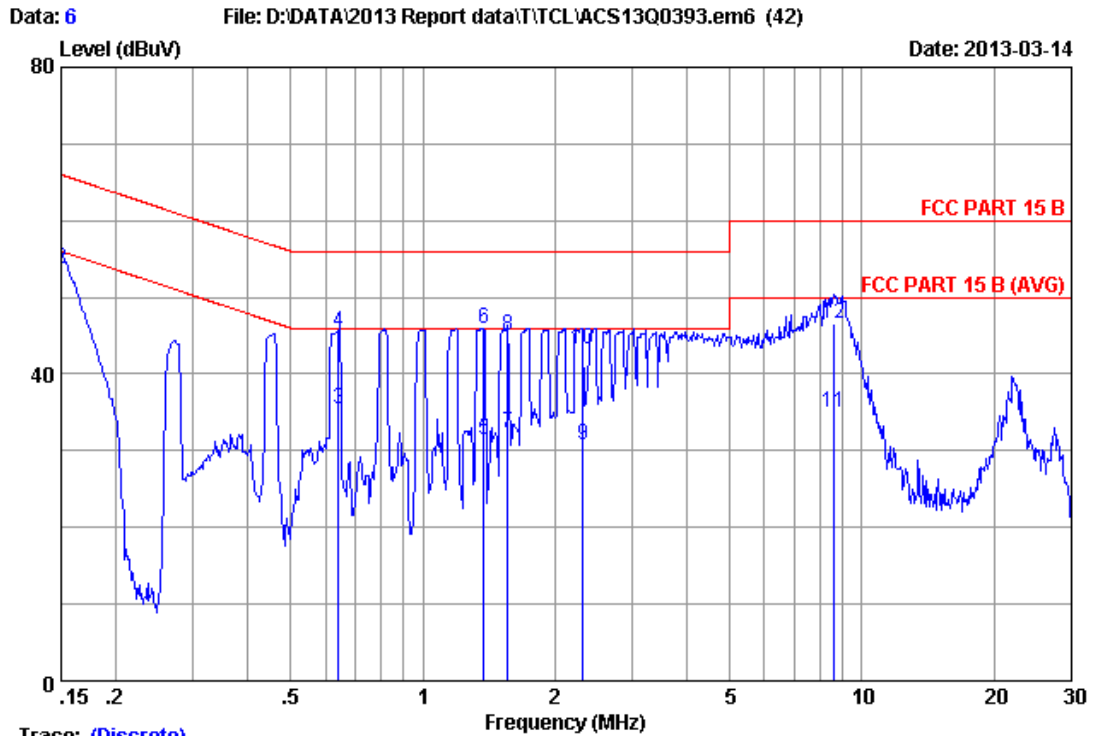


Trace: (Discrete)

Site no :1#conduction Data No :4
 Dis./Ant. :** 2012 ESH2-25 NEUTRAL
 Limit :FCC PART 15 B
 Env./Ins. :24°C/51% Engineer :Dota-YAO
 EUT :LCD TV M/N:LE46FHDE5310
 Power Rating :AC 120V/60Hz
 Test Mode :PC 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	0.15000	0.21	0.14	35.00	35.35	56.00	20.65	Average
2	0.15000	0.21	0.14	53.40	53.75	66.00	12.25	QP
3	0.64100	0.24	0.15	30.19	30.58	46.00	15.42	Average
4	0.64100	0.24	0.15	43.19	43.58	56.00	12.42	QP
5	0.81200	0.24	0.15	32.10	32.49	46.00	13.51	Average
6	0.81200	0.24	0.15	45.10	45.49	56.00	10.51	QP
7	1.560	0.27	0.14	31.19	31.60	46.00	14.40	Average
8	1.560	0.27	0.14	46.06	46.47	56.00	9.53	QP
9	2.430	0.29	0.14	32.10	32.53	46.00	13.47	Average
10	2.430	0.29	0.14	42.10	42.53	56.00	13.47	QP
11	8.230	0.42	0.16	30.20	30.78	50.00	19.22	Average
12	8.230	0.42	0.16	46.70	47.28	60.00	12.72	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

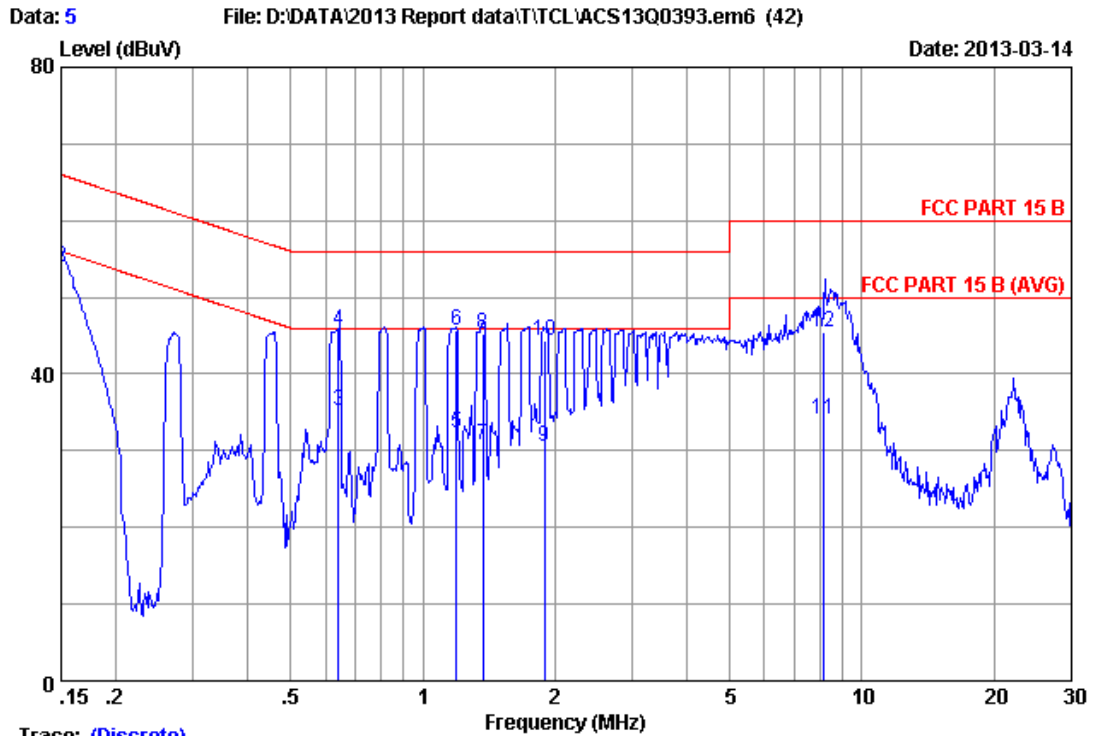


Trace: (Discrete)

Site no :1#conduction Data No :6
 Dis./Ant. :** 2012 ESH2-25 LINE
 Limit :FCC PART 15 B
 Env./Ins. :24°C/51% Engineer :Dota-YAO
 EUT :LCD TV M/N:LE46FHDE5310
 Power Rating :AC 120V/60Hz
 Test Mode :PC 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	0.15000	0.19	0.14	35.81	36.14	56.00	19.86	Average
2	0.15000	0.19	0.14	53.41	53.74	66.00	12.26	QP
3	0.64300	0.20	0.15	35.09	35.44	46.00	10.56	Average
4	0.64300	0.20	0.15	45.19	45.54	56.00	10.46	QP
5	1.374	0.22	0.14	31.10	31.46	46.00	14.54	Average
6	1.374	0.22	0.14	45.60	45.96	56.00	10.04	QP
7	1.560	0.23	0.14	31.90	32.27	46.00	13.73	Average
8	1.560	0.23	0.14	44.70	45.07	56.00	10.93	QP
9	2.310	0.25	0.14	30.39	30.78	46.00	15.22	Average
10	2.310	0.25	0.14	42.89	43.28	56.00	12.72	QP
11	8.637	0.42	0.16	34.30	34.88	50.00	15.12	Average
12	8.637	0.42	0.16	45.90	46.48	60.00	13.52	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using 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 :5
 Dis./Ant. :** 2012 ESH2-25 NEUTRAL
 Limit :FCC PART 15 B
 Env./Ins. :24°C/51% Engineer :Dota-YAO
 EUT :LCD TV M/N:LE46FHDE5310
 Power Rating :AC 120V/60Hz
 Test Mode :PC 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	0.15000	0.21	0.14	35.10	35.45	56.00	20.55	Average
2	0.15000	0.21	0.14	53.50	53.85	66.00	12.15	QP
3	0.64100	0.24	0.15	34.89	35.28	46.00	10.72	Average
4	0.64100	0.24	0.15	45.29	45.68	56.00	10.32	QP
5	1.190	0.25	0.14	31.90	32.29	46.00	13.71	Average
6	1.190	0.25	0.14	45.20	45.59	56.00	10.41	QP
7	1.373	0.26	0.14	30.30	30.70	46.00	15.30	Average
8	1.373	0.26	0.14	44.90	45.30	56.00	10.70	QP
9	1.888	0.28	0.14	30.09	30.51	46.00	15.49	Average
10	1.888	0.28	0.14	43.89	44.31	56.00	11.69	QP
11	8.210	0.42	0.16	33.50	34.08	50.00	15.92	Average
12	8.210	0.42	0.16	44.90	45.48	60.00	14.52	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

4. RADIATED EMISSION MEASUREMENT

4.1. Test Equipment

4.1.1. For frequency range 30MHz~1000MHz

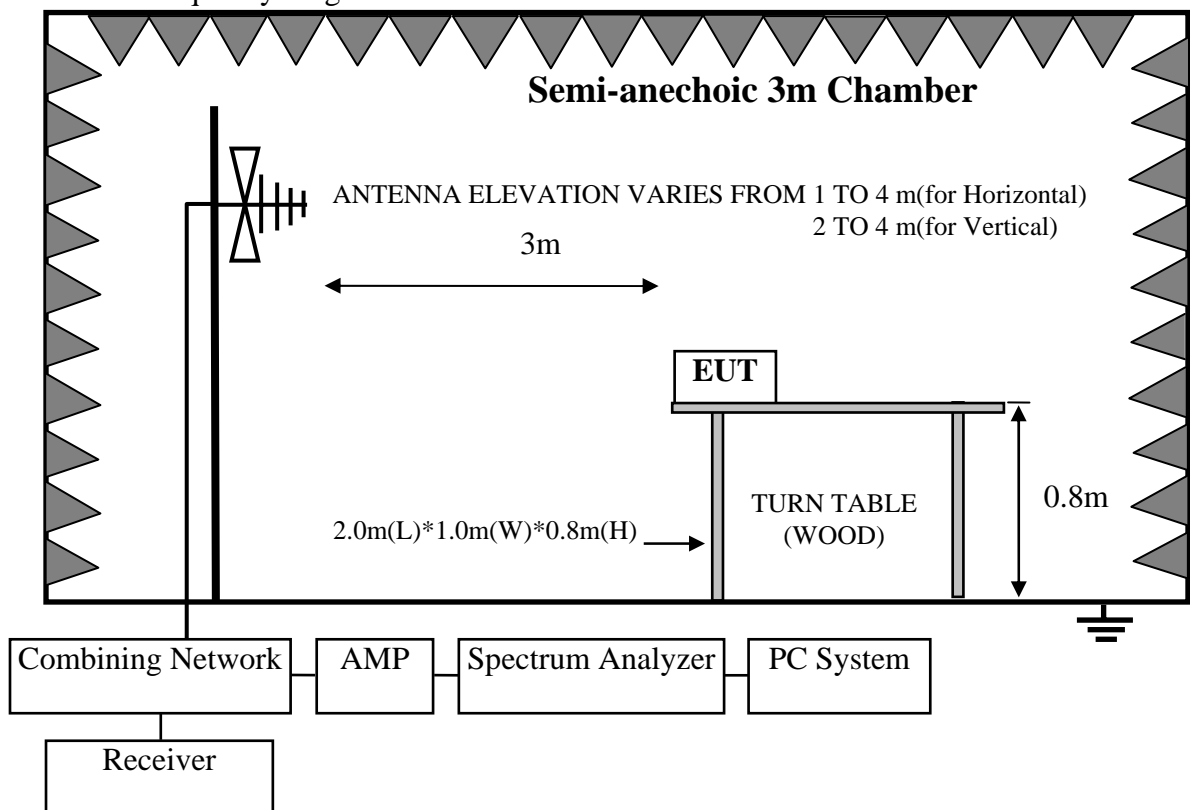
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	3#Chamber	AUDIX	N/A	N/A	Nov.24,12	1 Year
2	EMI Spectrum	Agilent	E4407B	MY41440292	May.08, 12	1 Year
3	Test Receiver	Rohde & Schwarz	ESVS10	834468/011	May.08, 12	1 Year
4	Amplifier	HP	8447D	2648A04738	May.08, 12	1 Year
5	Bilog Antenna	Schaffner	CBL6111C	2598	Dec.26, 10	2.0 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

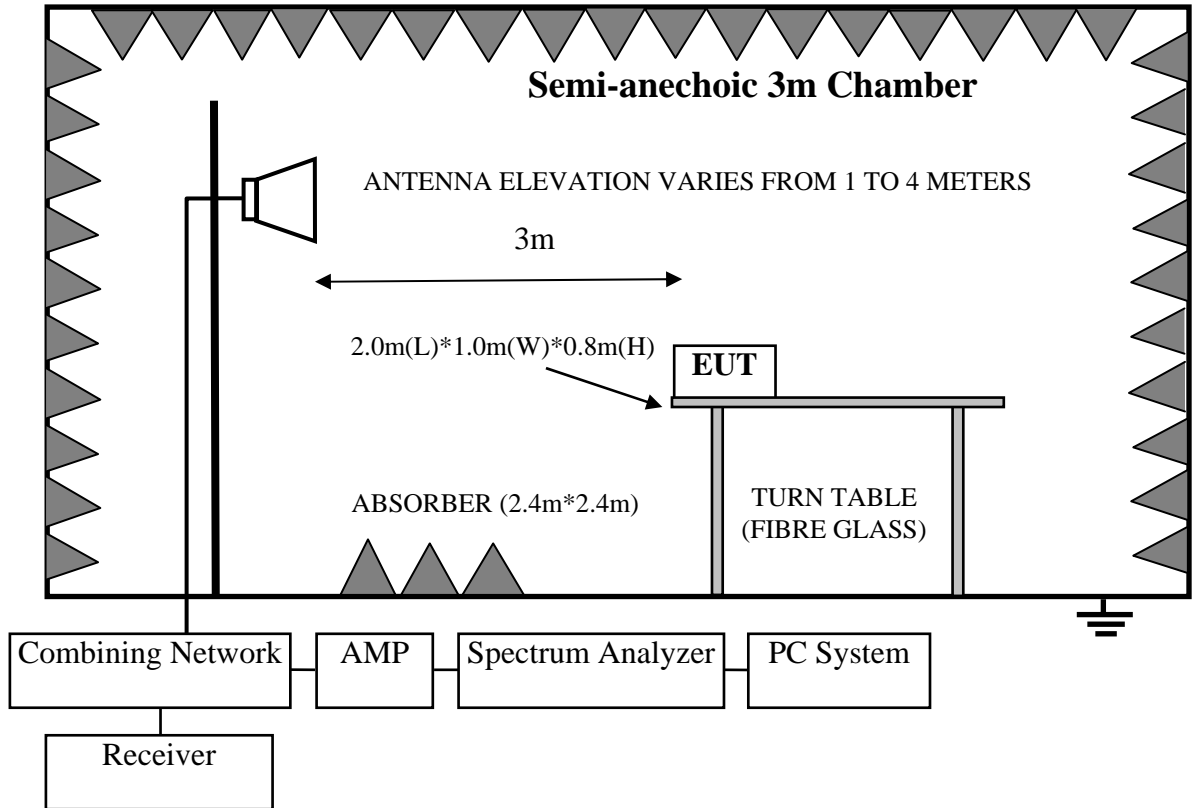
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Agilent	E4407B	MY41440292	May.08, 12	1 Year
2	Horn Antenna	EMCO	3115	9510-4580	June.05, 12	1 Year
3	Amplifier	Agilent	8449B	3008A00863	May.08, 12	1 Year
4	RF Cable	Hubersuhner	SUCOFLEX106	77980/6	May.08, 12	1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

4.2. Block Diagram of Test Setup

For frequency range 30MHz-1000MHz



For frequency range 1GHz-2GHz



4.3. Radiated Emission Limit

Frequency MHz	Distance (Meters)	Field Strengths Limits 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. : LE46FHDE5310

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: Apr.02,2013 Temperature: 24°C Humidity: 56%

The details of test modes are as follows :

No.	Test Mode	Input Port	Resolution & Frequency	Reference Test Data No.	
				Horizontal	Vertical
1.	PC Mode	VGA	640*480 @60Hz	#35	#36
2.			1024*768 @ 60Hz	#33	#34
3.			1920*1080@60Hz	#31	#32
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)

For frequency range 1GHz~2GHz

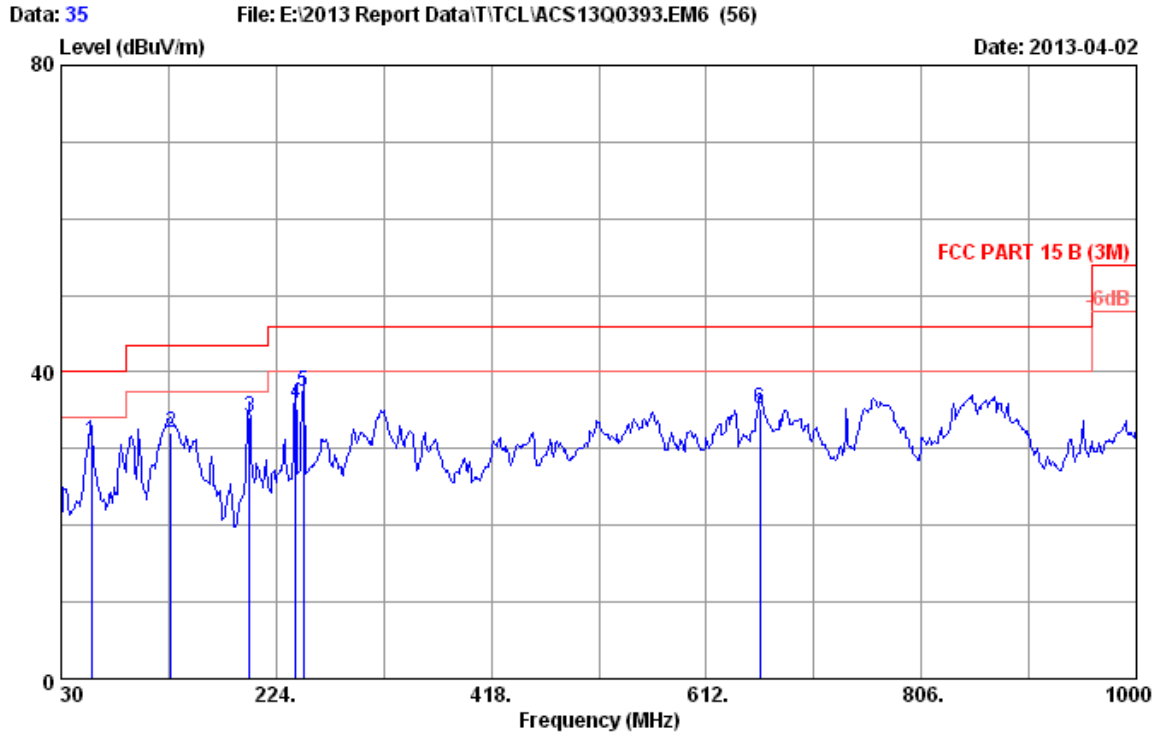
The EUT with below test mode were measured within Anechoic Chamber and the test results listed in next pages

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: Apr.02,2013 Temperature: 24°C Humidity: 56%

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

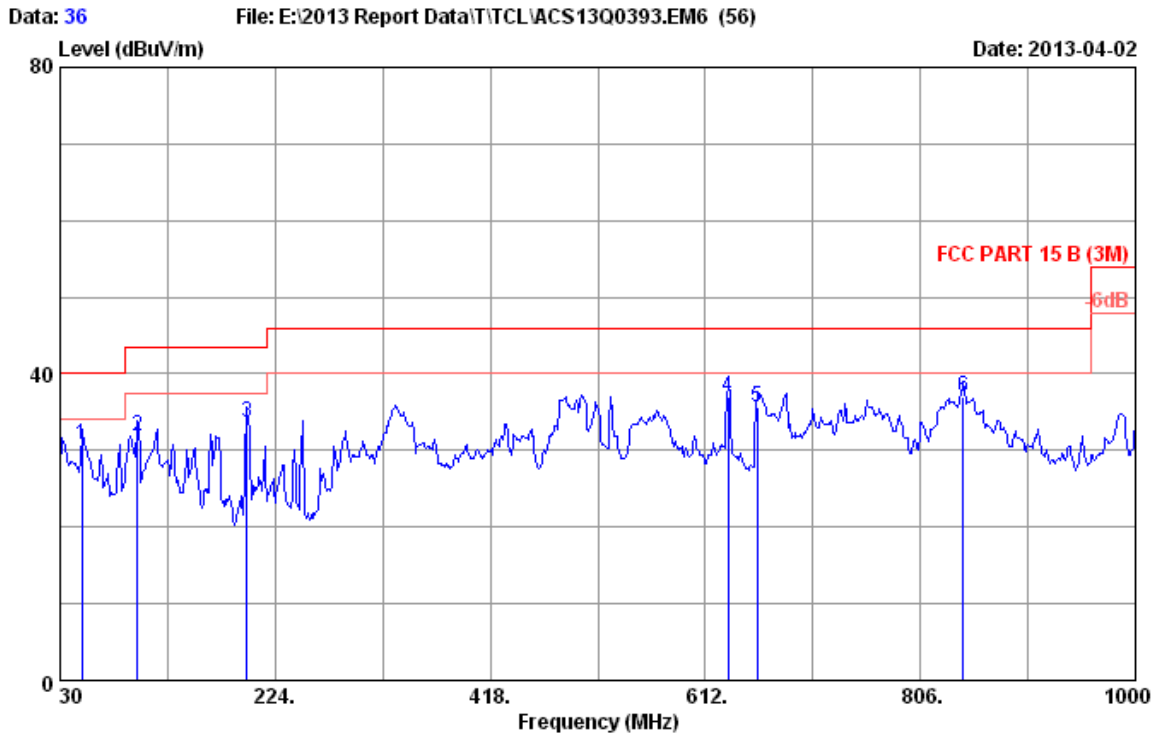
30MHz~1000MHz



Site no. : 3m Chamber Data no. : 35
 Dis. / Ant. : 3m 9168-429 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 B (3M)
 Env. / Ins. : 24°C/65% Engineer : Victory
 EUT : LCD TV M/N:LE46FHDE5310
 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	57.160	12.97	0.66	17.43	31.06	40.00	8.94	QP
2	128.940	12.73	0.91	18.55	32.19	43.50	11.31	QP
3	199.750	9.91	1.06	23.22	34.19	43.50	9.31	QP
4	241.460	11.47	1.15	23.19	35.81	46.00	10.19	QP
5	248.250	11.55	1.16	24.74	37.45	46.00	8.55	QP
6	660.500	19.23	2.30	13.78	35.31	46.00	10.69	QP

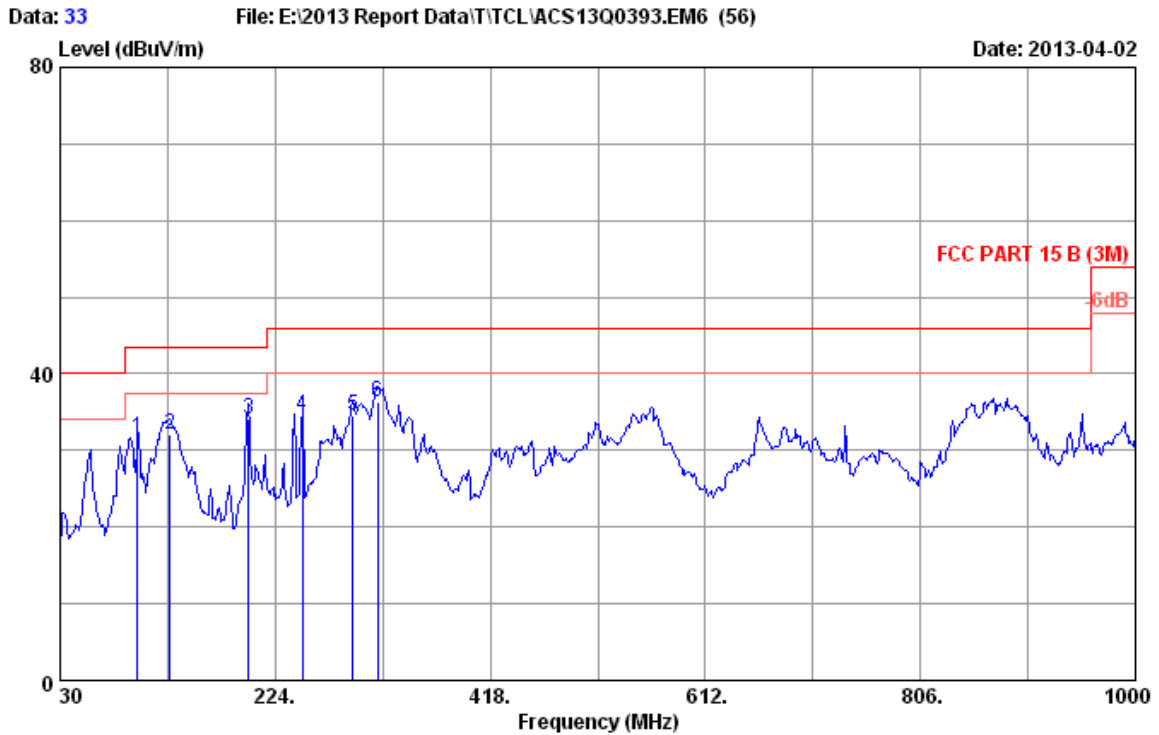
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 36
 Dis. / Ant. : 3m 9168-429 Ant. pol. : VERTICAL
 Limit : FCC PART 15 B (3M)
 Env. / Ins. : 24°C/65% Engineer : Victory
 EUT : LCD TV M/N:LE46FHDE5310
 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	49.400	13.55	0.63	16.47	30.65	40.00	9.35	QP
2	99.840	10.14	0.85	20.78	31.77	43.50	11.73	QP
3	198.780	9.97	1.06	22.56	33.59	43.50	9.91	QP
4	632.370	18.89	2.21	15.93	37.03	46.00	8.97	QP
5	658.560	19.20	2.30	14.10	35.60	46.00	10.40	QP
6	844.800	21.00	2.75	13.19	36.94	46.00	9.06	QP

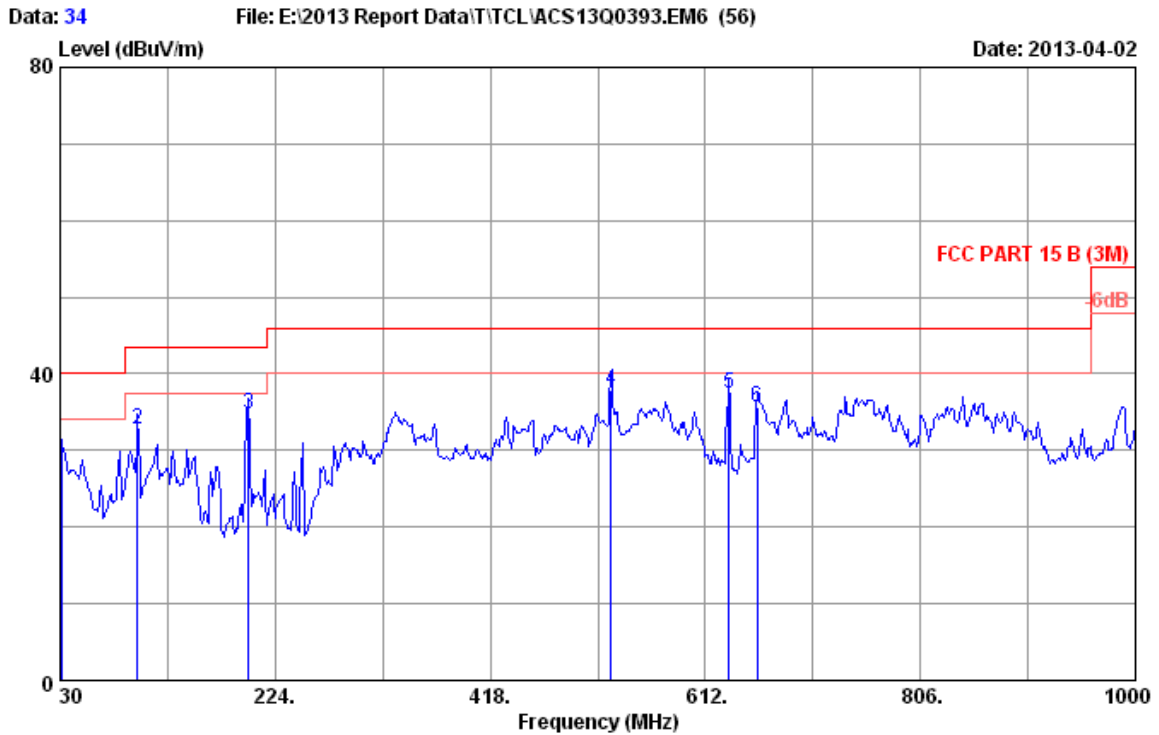
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 33
 Dis. / Ant. : 3m 9168-429 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 B (3M)
 Env. / Ins. : 24°C/65% Engineer : Victory
 EUT : LCD TV M/N:LE46FHDE5310
 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	99.840	10.14	0.85	20.63	31.62	43.50	11.88	QP
2	128.940	12.73	0.91	18.55	32.19	43.50	11.31	QP
3	199.750	9.91	1.06	23.22	34.19	43.50	9.31	QP
4	248.250	11.55	1.16	21.74	34.45	46.00	11.55	QP
5	293.840	12.66	1.27	20.54	34.47	46.00	11.53	QP
6	316.150	13.21	1.33	21.72	36.26	46.00	9.74	QP

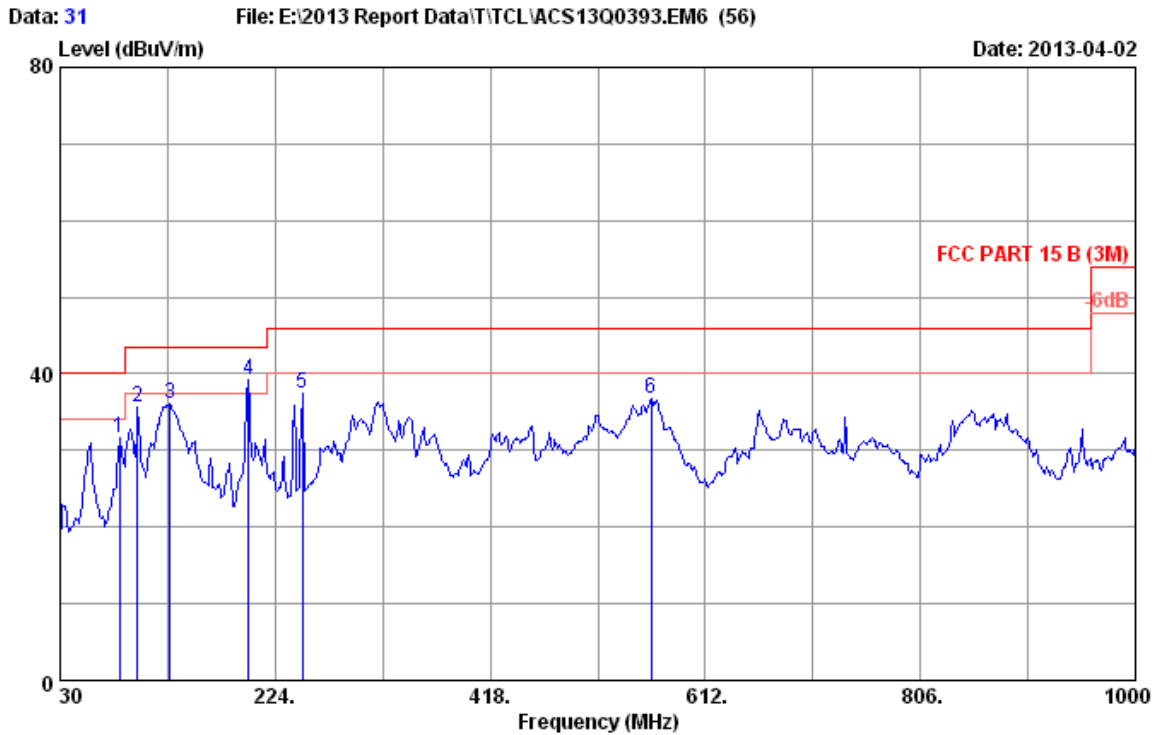
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 34
 Dis. / Ant. : 3m 9168-429 Ant. pol. : VERTICAL
 Limit : FCC PART 15 B (3M)
 Env. / Ins. : 24°C/65% Engineer : Victory
 EUT : LCD TV M/N:LE46FHDE5310
 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	13.29	0.45	14.95	28.69	40.00	11.31	QP
2	99.840	10.14	0.85	21.78	32.77	43.50	10.73	QP
3	199.750	9.91	1.06	23.88	34.85	43.50	8.65	QP
4	526.640	16.99	1.91	19.03	37.93	46.00	8.07	QP
5	633.340	18.90	2.21	16.42	37.53	46.00	8.47	QP
6	658.560	19.20	2.30	14.10	35.60	46.00	10.40	QP

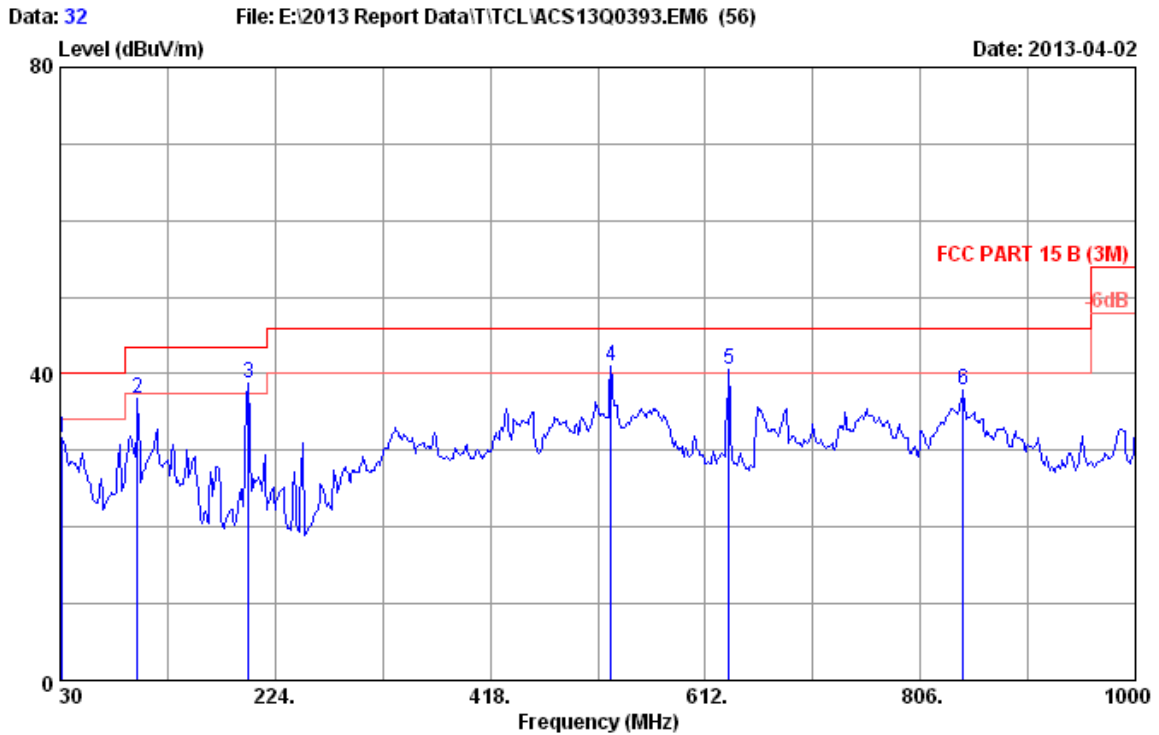
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 31
 Dis. / Ant. : 3m 9168-429 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 B (3M)
 Env. / Ins. : 24°C/65% Engineer : Victory
 EUT : LCD TV M/N:LE46FHDE5310
 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	83.350	9.34	0.76	21.49	31.59	40.00	8.41	QP
2	99.840	10.14	0.85	24.63	35.62	43.50	7.88	QP
3	128.940	12.73	0.91	22.55	36.19	43.50	7.31	QP
4	199.750	9.91	1.06	28.22	39.19	43.50	4.31	QP
5	248.250	11.55	1.16	24.74	37.45	46.00	8.55	QP
6	563.500	17.62	2.01	17.07	36.70	46.00	9.30	QP

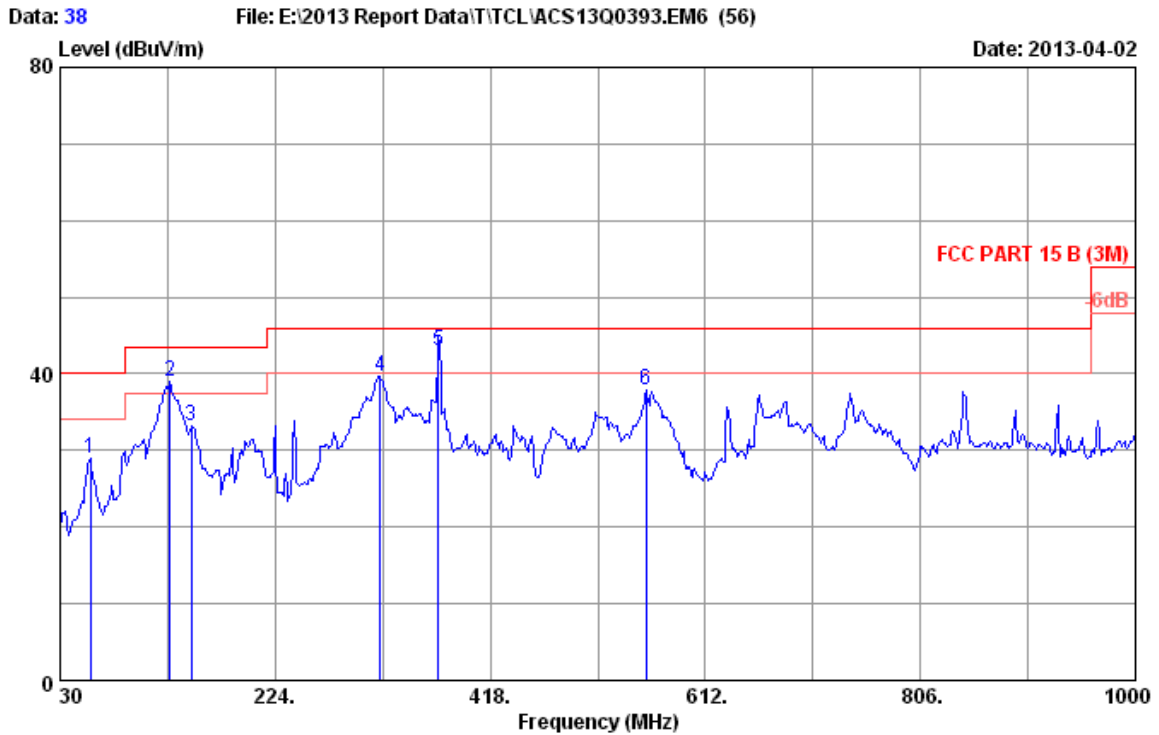
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 32
 Dis. / Ant. : 3m 9168-429 Ant. pol. : VERTICAL
 Limit : FCC PART 15 B (3M)
 Env. / Ins. : 24°C/65% Engineer : Victory
 EUT : LCD TV M/N:LE46FHDE5310
 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	13.29	0.45	17.95	31.69	40.00	8.31	QP
2	99.840	10.14	0.85	25.78	36.77	43.50	6.73	QP
3	199.750	9.91	1.06	27.88	38.85	43.50	4.65	QP
4	526.640	16.99	1.91	22.03	40.93	46.00	5.07	QP
5	633.340	18.90	2.21	19.42	40.53	46.00	5.47	QP
6	844.800	21.00	2.75	14.19	37.94	46.00	8.06	QP

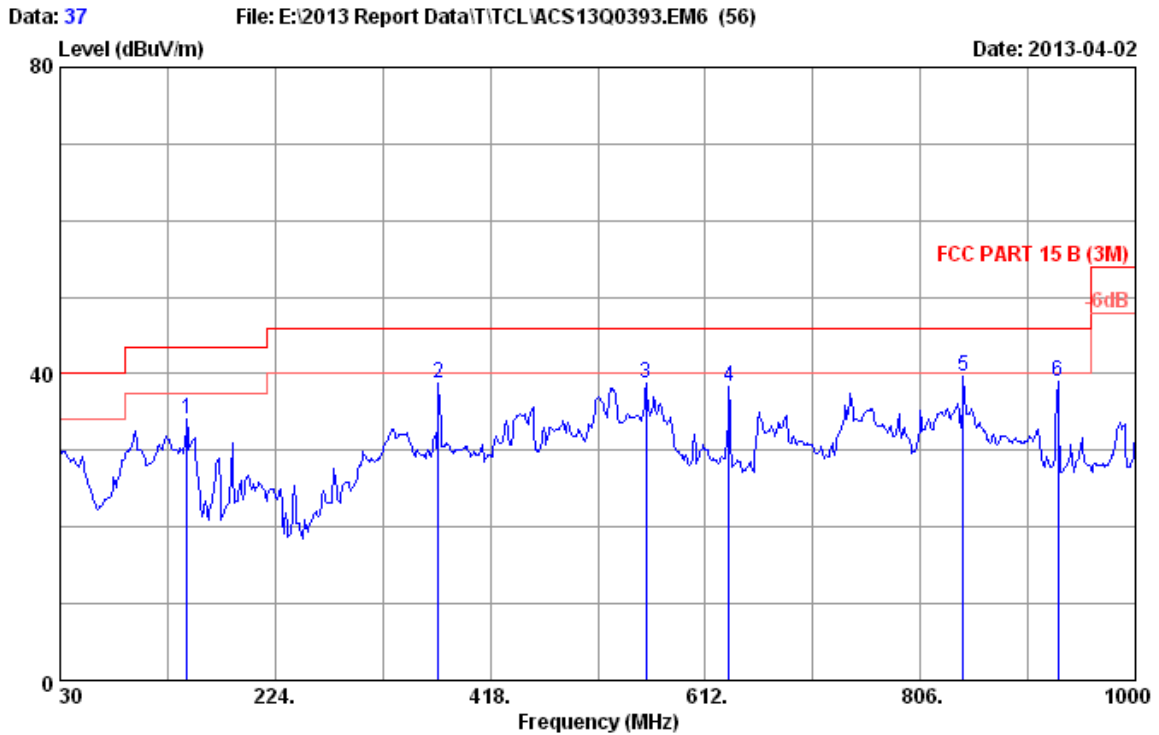
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 38
 Dis. / Ant. : 3m 9168-429 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 B (3M)
 Env. / Ins. : 24°C/65% Engineer : Victory
 EUT : LCD TV M/N:LE46FHDE5310
 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	57.160	12.97	0.66	15.29	28.92	40.00	11.08	QP
2	128.940	12.73	0.91	25.33	38.97	43.50	4.53	QP
3	148.340	14.05	0.96	18.14	33.15	43.50	10.35	QP
4	319.060	13.28	1.33	25.06	39.67	46.00	6.33	QP
5	371.280	14.25	1.48	27.20	42.93	46.00	3.07	QP
6	558.650	17.54	1.99	18.40	37.93	46.00	8.07	QP

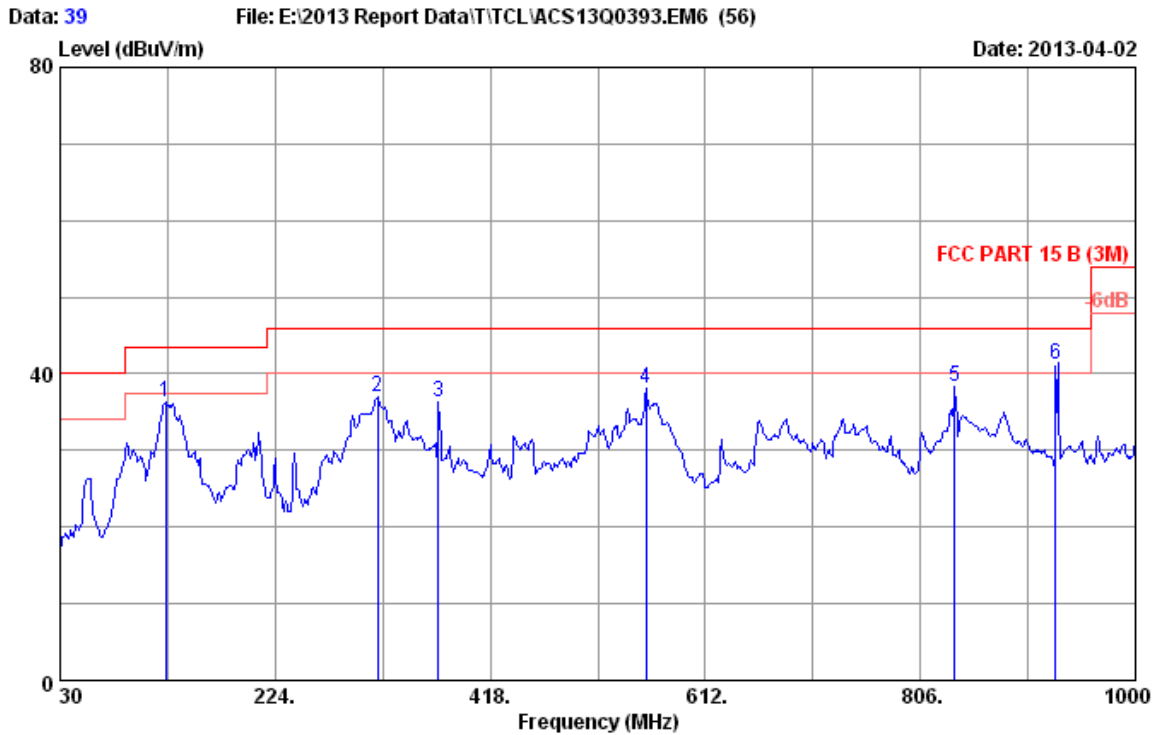
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 37
 Dis. / Ant. : 3m 9168-429 Ant. pol. : VERTICAL
 Limit : FCC PART 15 B (3M)
 Env. / Ins. : 24°C/65% Engineer : Victory
 EUT : LCD TV M/N:LE46FHDE5310
 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	144.460	13.80	0.94	19.35	34.09	43.50	9.41	QP
2	371.440	14.25	1.48	23.05	38.78	46.00	7.22	QP
3	558.650	17.54	1.99	19.21	38.74	46.00	7.26	QP
4	633.340	18.90	2.21	17.29	38.40	46.00	7.60	QP
5	844.800	21.00	2.75	15.85	39.60	46.00	6.40	QP
6	930.160	22.01	2.84	14.09	38.94	46.00	7.06	QP

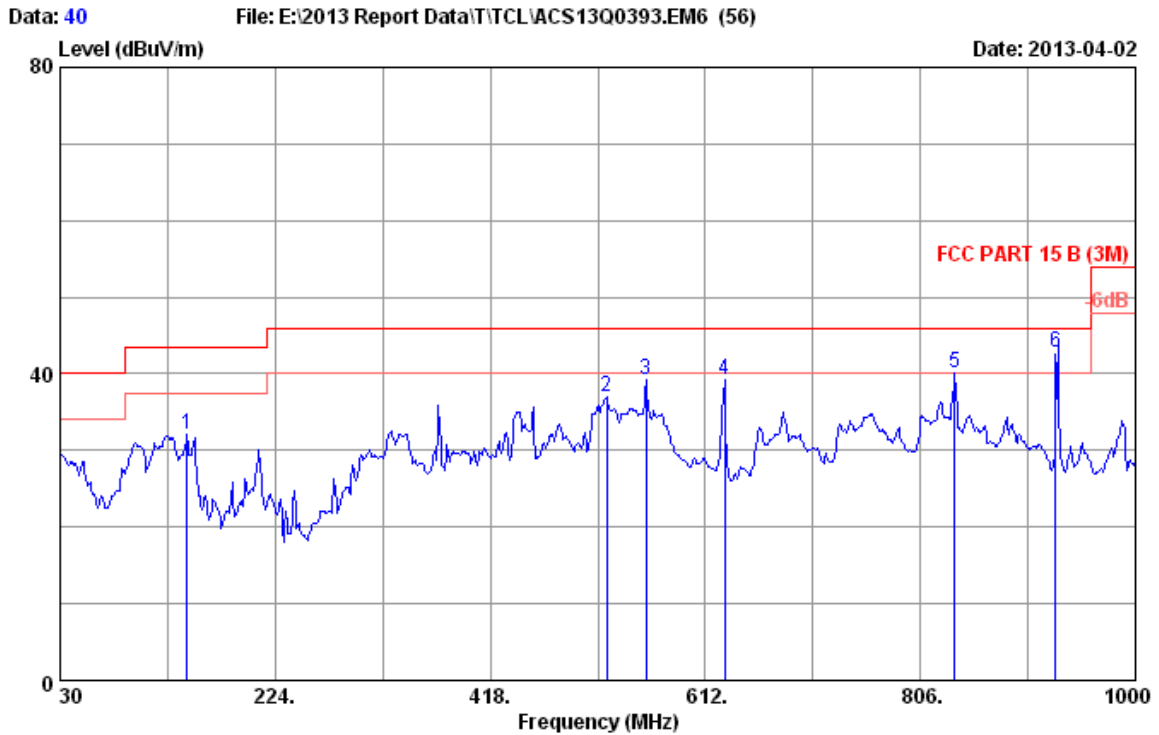
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 39
 Dis. / Ant. : 3m 9168-429 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 B (3M)
 Env. / Ins. : 24°C/65% Engineer : Victory
 EUT : LCD TV M/N:LE46FHDE5310
 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	125.060	12.52	0.90	23.01	36.43	43.50	7.07	QP
2	316.150	13.21	1.33	22.53	37.07	46.00	8.93	QP
3	371.440	14.25	1.48	20.62	36.35	46.00	9.65	QP
4	558.650	17.54	1.99	18.50	38.03	46.00	7.97	QP
5	837.040	20.95	2.74	14.56	38.25	46.00	7.75	QP
6	928.180	21.99	2.84	16.50	41.33	46.00	4.67	QP

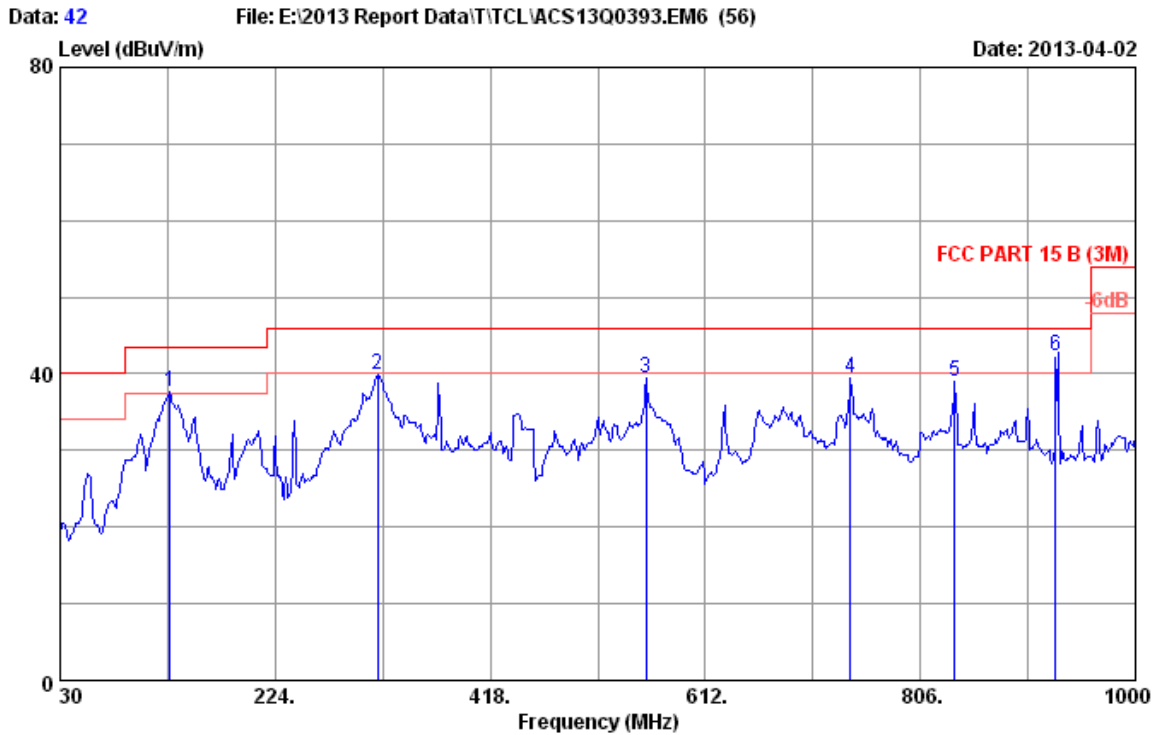
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 40
 Dis. / Ant. : 3m 9168-429 Ant. pol. : VERTICAL
 Limit : FCC PART 15 B (3M)
 Env. / Ins. : 24°C/65% Engineer : Victory
 EUT : LCD TV M/N:LE46FHDE5310
 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	144.460	13.80	0.94	17.40	32.14	43.50	11.36	QP
2	522.760	16.92	1.89	18.25	37.06	46.00	8.94	QP
3	558.650	17.54	1.99	19.60	39.13	46.00	6.87	QP
4	629.460	18.85	2.21	18.13	39.19	46.00	6.81	QP
5	837.040	20.95	2.74	16.31	40.00	46.00	6.00	QP
6	928.180	21.99	2.84	18.00	42.83	46.00	3.17	QP

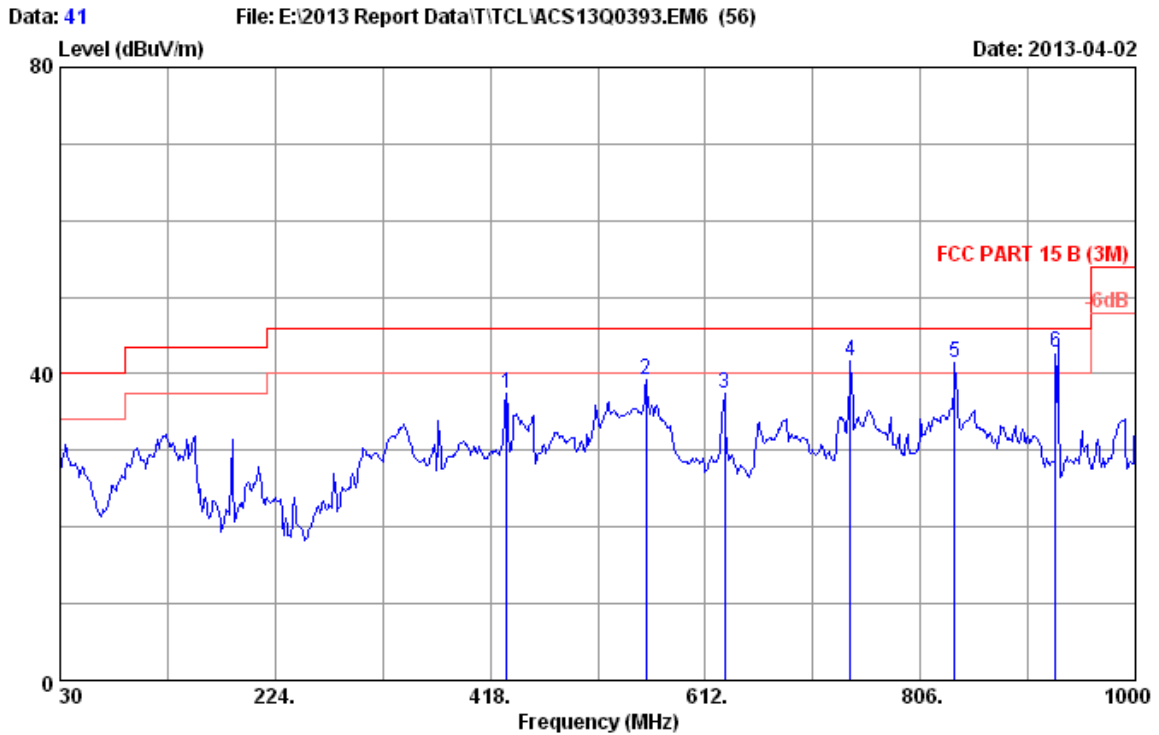
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 42
 Dis. / Ant. : 3m 9168-429 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 B (3M)
 Env. / Ins. : 24°C/65% Engineer : Victory
 EUT : LCD TV M/N:LE46FHDE5310
 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	128.940	12.73	0.91	24.02	37.66	43.50	5.84	QP
2	316.150	13.21	1.33	25.37	39.91	46.00	6.09	QP
3	558.650	17.54	1.99	19.83	39.36	46.00	6.64	QP
4	742.950	20.19	2.54	16.71	39.44	46.00	6.56	QP
5	837.040	20.95	2.74	15.33	39.02	46.00	6.98	QP
6	928.190	21.99	2.84	17.50	42.33	46.00	3.67	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

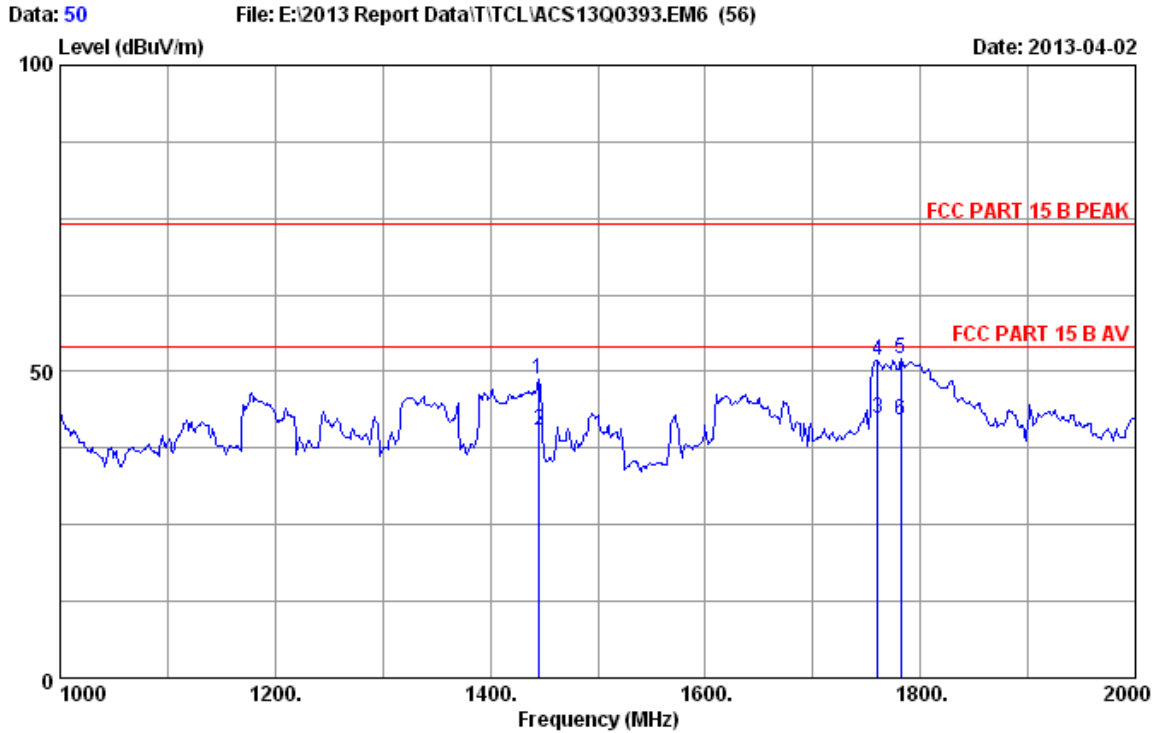


Site no. : 3m Chamber Data no. : 41
 Dis. / Ant. : 3m 9168-429 Ant. pol. : VERTICAL
 Limit : FCC PART 15 B (3M)
 Env. / Ins. : 24°C/65% Engineer : Victory
 EUT : LCD TV M/N:LE46FHDE5310
 Power rating : AC 120V/60Hz
 Test Mode : Running "H" Pattern And 1KHz Playing
 HDMI 3:1920*1080@60Hz

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	432.550	15.56	1.64	20.29	37.49	46.00	8.51	QP
2	558.650	17.54	1.99	19.79	39.32	46.00	6.68	QP
3	629.460	18.85	2.21	16.39	37.45	46.00	8.55	QP
4	742.950	20.19	2.54	19.03	41.76	46.00	4.24	QP
5	837.040	20.95	2.74	17.81	41.50	46.00	4.50	QP
6	928.180	21.99	2.84	17.90	42.73	46.00	3.27	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

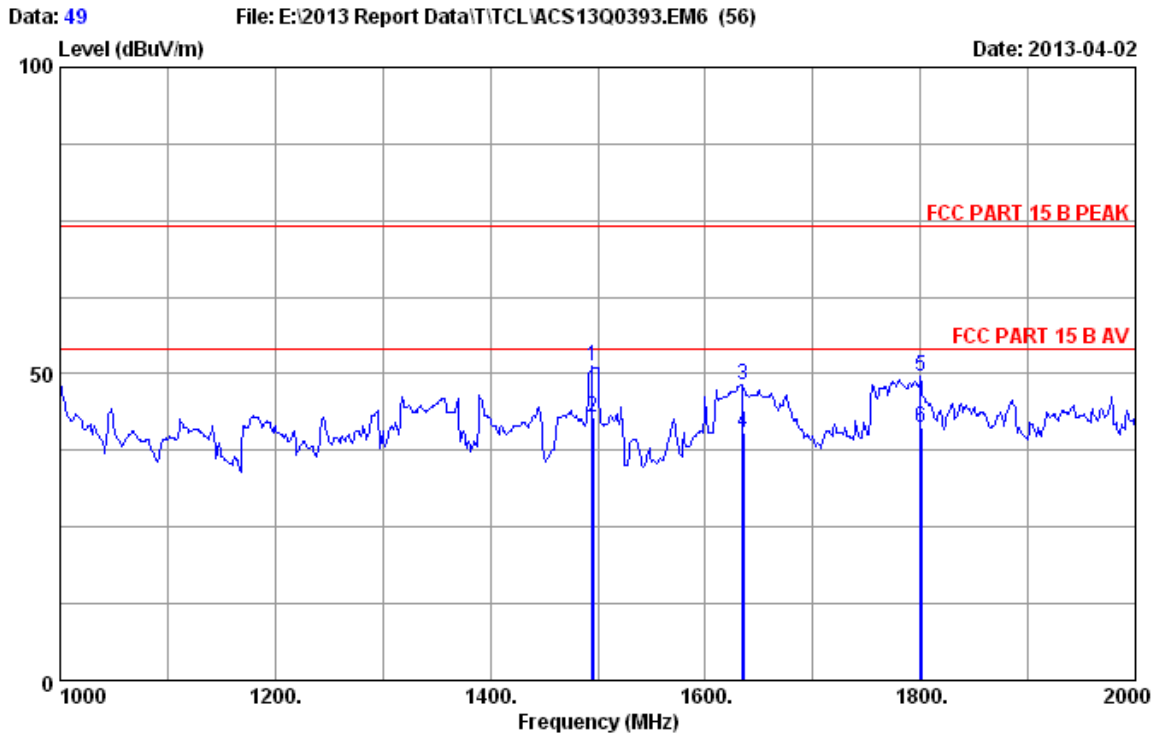
1-2GMHz



Site no. : 3m Chamber Data no. : 50
 Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 B PEAK
 Env. / Ins. : 24°C/56% Engineer : Victory
 EUT : LCD TV M/N:LE46FHDE5310
 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)	AMP factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1445.000	25.35	1.01	36.01	58.42	48.77	74.00	25.23	Peak
2	1445.745	25.35	1.01	36.01	49.91	40.26	54.00	13.74	Average
3	1760.000	26.61	1.08	35.68	50.41	42.42	54.00	11.58	Average
4	1760.000	26.61	1.08	35.68	59.88	51.89	74.00	22.11	Peak
5	1782.000	26.68	1.08	35.65	59.87	51.98	74.00	22.02	Peak
6	1782.045	26.68	1.08	35.65	49.91	42.02	54.00	11.98	Average

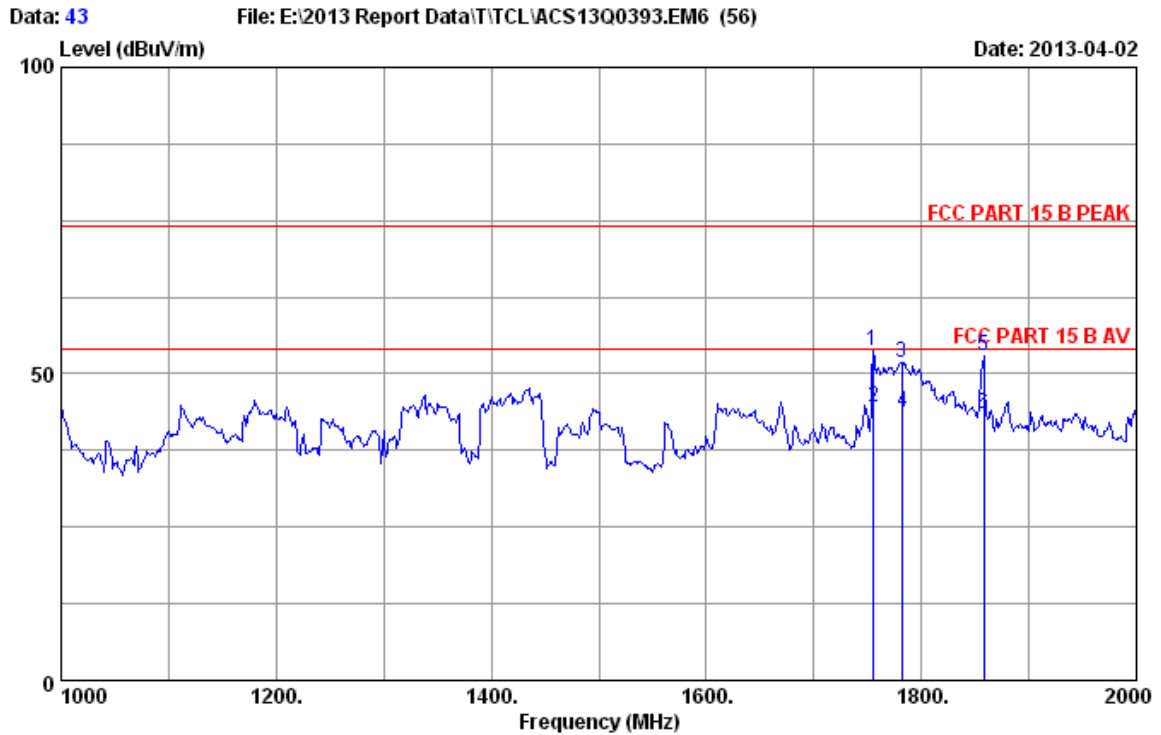
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor
 2. The emission levels that are 20dB below the official limit are not reported.



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
 EUT : LCD TV M/N:LE46FHDE5310
 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)	AMP factor (dB)	Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	1495.000	25.60	1.02	35.95	60.49	51.16	74.00	22.84	Peak
2	1495.704	25.60	1.02	35.95	52.10	42.77	54.00	11.23	Average
3	1635.000	26.11	1.05	35.81	56.94	48.29	74.00	25.71	Peak
4	1635.632	26.11	1.05	35.81	49.09	40.44	54.00	13.56	Average
5	1800.000	26.74	1.09	35.62	57.44	49.65	74.00	24.35	Peak
6	1800.895	26.74	1.09	35.62	48.90	41.11	54.00	12.89	Average

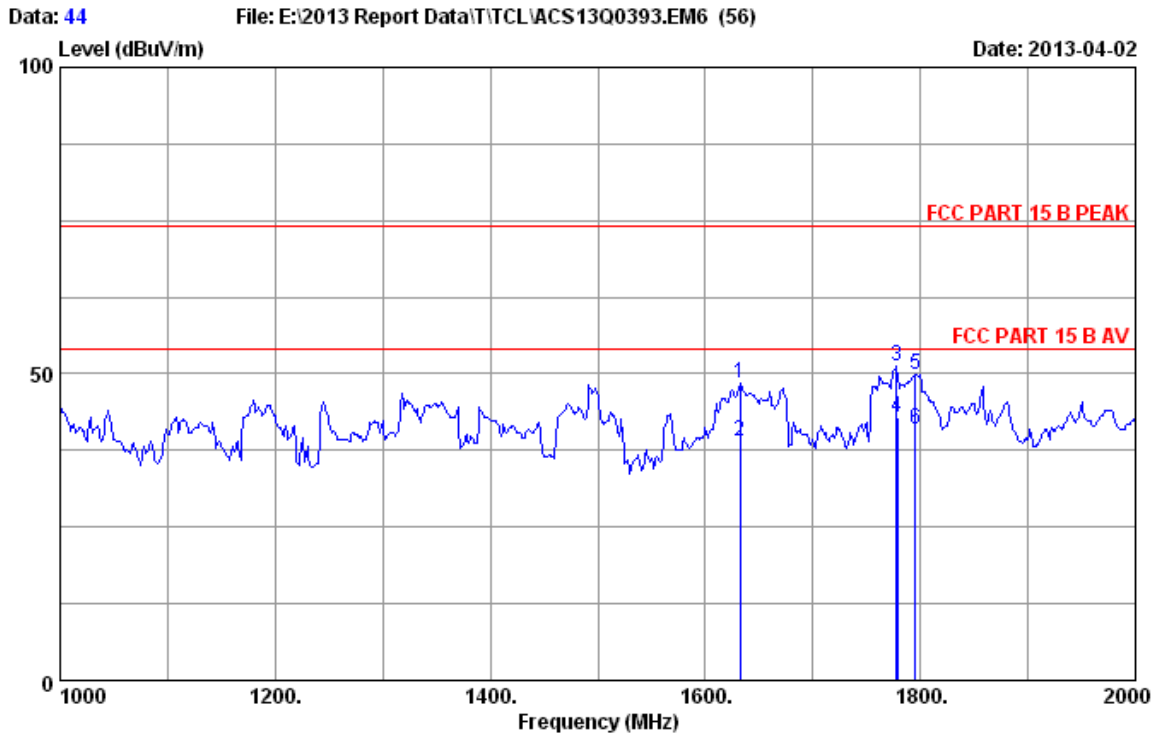
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 43
 Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 B PEAK
 Env. / Ins. : 24°C/56% Engineer : Victory
 EUT : LCD TV M/N:LE46FHDE5310
 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	1755.000	26.55	1.08	35.68	61.89	53.84	74.00	20.16	Peak
2	1755.913	26.55	1.08	35.68	52.60	44.55	54.00	9.45	Average
3	1782.000	26.68	1.08	35.65	59.65	51.76	74.00	22.24	Peak
4	1782.275	26.68	1.08	35.65	51.70	43.81	54.00	10.19	Average
5	1858.000	26.93	1.10	35.57	60.54	53.00	74.00	21.00	Peak
6	1858.478	26.93	1.10	35.57	50.90	43.36	54.00	10.64	Average

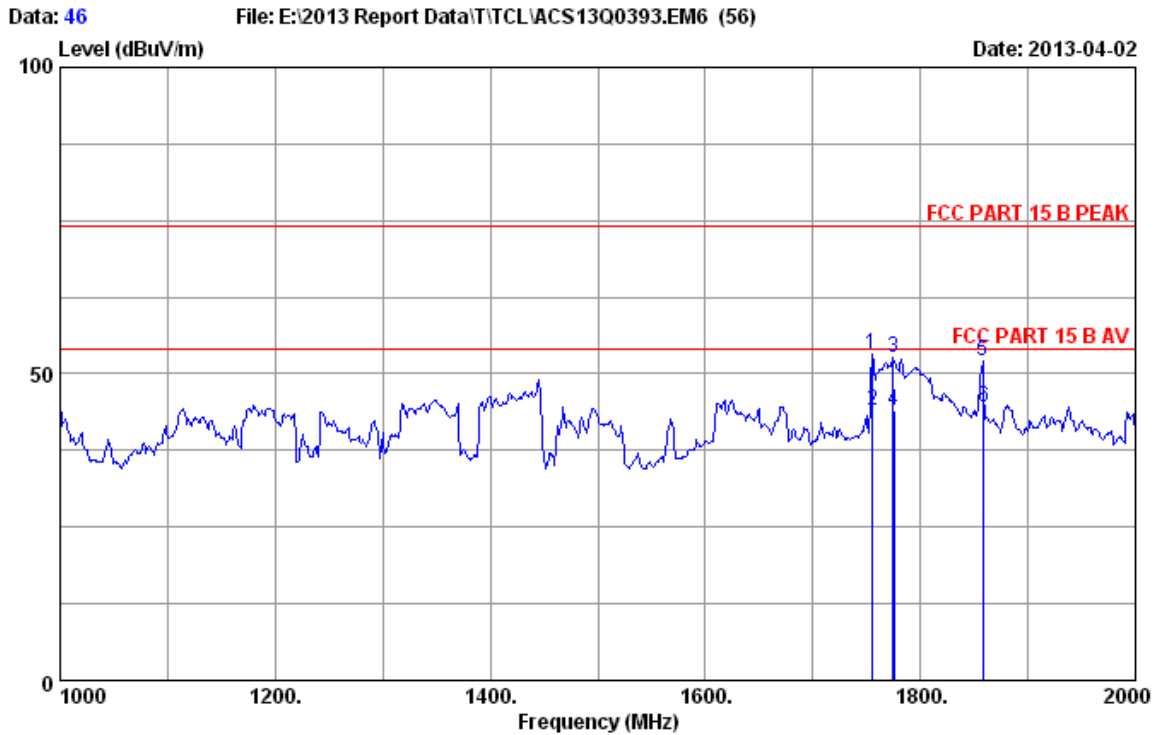
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 44
 Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : VERTICAL
 Limit : FCC PART 15 B PEAK
 Env. / Ins. : 24°C/56% Engineer : Victory
 EUT : LCD TV M/N:LE46FHDE5310
 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	1632.000	26.11	1.05	35.81	57.21	48.56	74.00	25.44	Peak
2	1632.328	26.11	1.05	35.81	47.69	39.04	54.00	14.96	Average
3	1778.000	26.68	1.08	35.65	59.25	51.36	74.00	22.64	Peak
4	1778.471	26.68	1.08	35.65	50.70	42.81	54.00	11.19	Average
5	1795.000	26.74	1.09	35.62	57.70	49.91	74.00	24.09	Peak
6	1795.247	26.74	1.09	35.62	48.80	41.01	54.00	12.99	Average

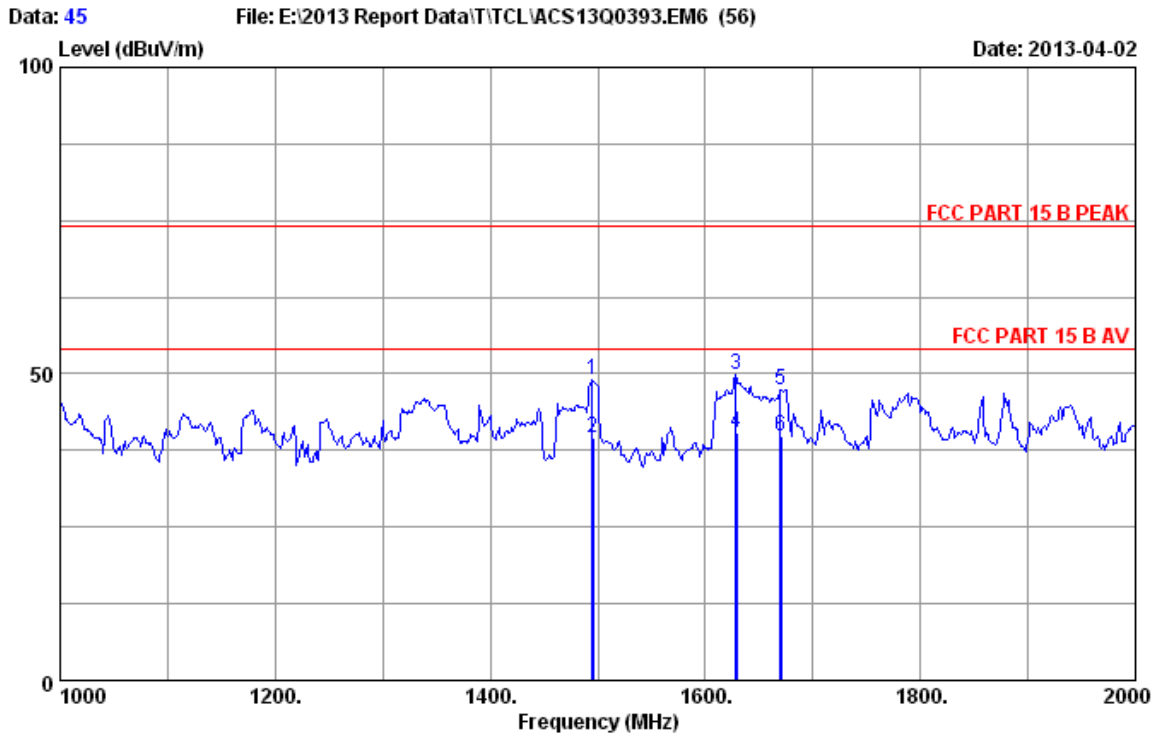
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 46
 Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 B PEAK
 Env. / Ins. : 24°C/56% Engineer : Victory
 EUT : LCD TV M/N:LE46FHDE5310
 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 (dB)	Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	1755.000	26.55	1.08	35.68	61.20	53.15	74.00	20.85	Peak
2	1755.874	26.55	1.08	35.68	52.20	44.15	54.00	9.85	Average
3	1775.000	26.68	1.08	35.65	60.40	52.51	74.00	21.49	Peak
4	1775.451	26.68	1.08	35.65	51.80	43.91	54.00	10.09	Average
5	1858.000	26.93	1.10	35.57	59.73	52.19	74.00	21.81	Peak
6	1858.745	26.99	1.10	35.57	51.91	44.43	54.00	9.57	Average

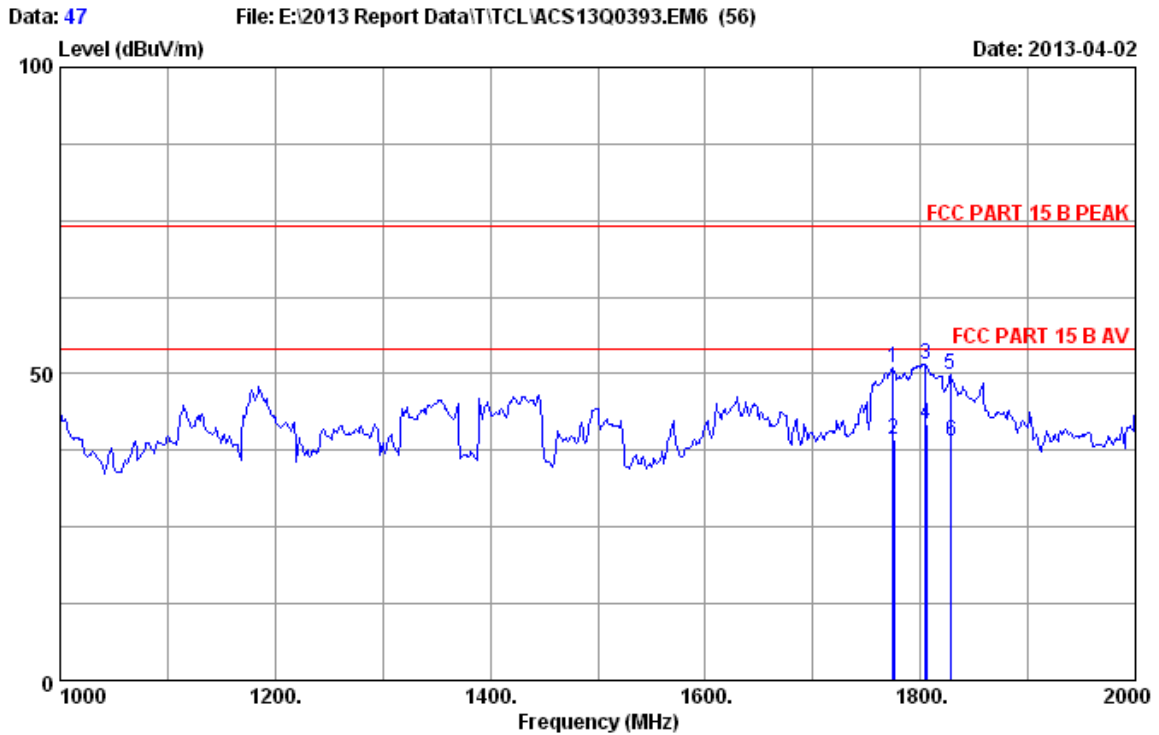
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 45
 Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : VERTICAL
 Limit : FCC PART 15 B PEAK
 Env. / Ins. : 24°C/56% Engineer : Victory
 EUT : LCD TV M/N:LE46FHDE5310
 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 (dB)	Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	1495.000	25.60	1.02	35.95	58.36	49.03	74.00	24.97	Peak
2	1495.471	25.60	1.02	35.95	48.90	39.57	54.00	14.43	Average
3	1628.000	26.11	1.05	35.81	58.52	49.87	74.00	24.13	Peak
4	1628.961	26.11	1.05	35.81	49.09	40.44	54.00	13.56	Average
5	1670.000	26.23	1.06	35.76	55.90	47.43	74.00	26.57	Peak
6	1670.278	26.23	1.06	35.76	48.20	39.73	54.00	14.27	Average

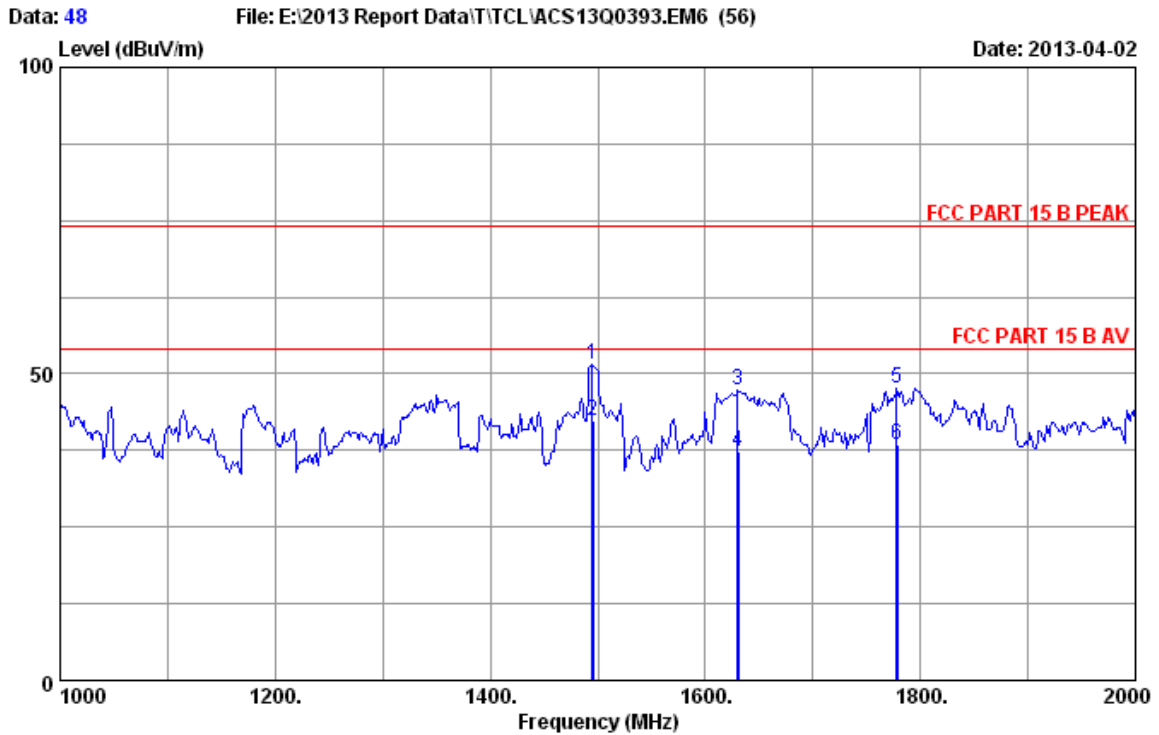
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 47
 Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 B PEAK
 Env. / Ins. : 24°C/56% Engineer : Victory
 EUT : LCD TV M/N:LE46FHDE5310
 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)	AMP factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1775.000	26.68	1.08	35.65	58.90	51.01	74.00	22.99	Peak
2	1775.746	26.68	1.08	35.65	47.30	39.41	54.00	14.59	Average
3	1805.000	26.74	1.09	35.62	59.42	51.63	74.00	22.37	Peak
4	1805.517	26.74	1.09	35.62	49.70	41.91	54.00	12.09	Average
5	1828.000	26.87	1.09	35.59	57.46	49.83	74.00	24.17	Peak
6	1828.432	26.87	1.09	35.59	46.70	39.07	54.00	14.93	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. : 48
 Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : VERTICAL
 Limit : FCC PART 15 B PEAK
 Env. / Ins. : 24°C/56% Engineer : Victory
 EUT : LCD TV M/N:LE46FHDE5310
 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)	AMP factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1495.000	25.60	1.02	35.95	60.81	51.48	74.00	22.52	Peak
2	1495.706	25.60	1.02	35.95	51.80	42.47	54.00	11.53	Average
3	1630.000	26.11	1.05	35.81	56.01	47.36	74.00	26.64	Peak
4	1630.632	26.11	1.05	35.81	45.89	37.24	54.00	16.76	Average
5	1778.000	26.68	1.08	35.65	55.41	47.52	74.00	26.48	Peak
6	1778.716	26.68	1.08	35.65	46.40	38.51	54.00	15.49	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.

5. DEVIATION TO TEST SPECIFICATIONS

[NONE]