

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

LED LCD TV

Model No.	Brand
PLDED6079-SM	Proscan

FCC ID : W9HLCDF0082

Prepared For : Hisense Electric Co., Ltd.
No.218 Qianwangang Road, Economy & Technology
Development Zone, Qingdao, China

Prepared By : Audix Technology (Shanghai) Co., Ltd.
3F and 4F, 34Bldg 680 Guiping Rd,
Caohejing Hi-Tech Park,
Shanghai 200233, China

Tel: +86-21-64955500

Fax: +86-21-64955491

Report No. : ACI-F16096
Date of Test : Apr 01 - 12, 2016
Date of Report : Apr 19, 2016

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TEST REPORT FOR FCC CERTIFICATE

Applicant : Hisense Electric Co., Ltd.
 Manufacturer : Hisense Electric Co., Ltd.
 Factory #1 : Hisense Electric Co., Ltd.
 Factory #2 : Tatung Mexico S.A. de C.V.
 Factory #3 : HISENSE ELECTRONICA MEXICO, S.A. DE C.V.
 EUT Description : LED LCD TV

Model No.	Brand	Power Supply
PLDED6079-SM	Proscan	120V/60Hz

Test Procedure Used:

*FCC RULES AND REGULATIONS PART 15 SUBPART B CLASS B OCTOBER 2015
AND ANSI C63.4-2014*

The device described above is tested by Audix Technology (Shanghai) Co., Ltd. To determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart B (Class B) limits both radiated and conducted emissions.

The test results are contained in this test report and Audix Technology (Shanghai) Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. This report shows that the EUT (M/N: Refer to Sec2.1) which was tested in 3m anechoic chamber Apr 01 - 12, 2016 is technically compliance with the FCC official limits also.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Audix Technology (Shanghai) Co., Ltd.

This report contains data that are not covered by the NVLAP accreditation.


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

The test results for EUT's TV functions are contained in No.F16097, a Verification report.

Date of Test : Apr 01 - 12, 2016 Date of Report : Apr 19, 2016

Producer : Hui Min Yan
 HUI MIN YAN / Assistant

Review : Byron Wu
 BYRON WU / Deputy Assistant Manager

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

Signatory : Byron Kwo
 Authorized Signature EMC BYRON KWO / Assistant General Manager

1 SUMMARY OF STANDARDS AND RESULTS

1.1 Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below:

Description of Test Item	Standard	Limits	Results
EMISSION			
Conducted Disturbance at the Mains Terminal	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2015 AND ANSI C63.4-2014	15.107(a) Class B	Pass
Radiated Disturbance	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2015 AND ANSI C63.4-2014	15.109(a) Class B	Pass

2 GENERAL INFORMATION

2.1 Description of Equipment Under Test

Description	:	LED LCD TV
Type of EUT	:	<input checked="" type="checkbox"/> Production <input type="checkbox"/> Pre-product <input type="checkbox"/> Pro-type
Model No	:	PLDED6079-SM
Brand	:	Proscan
Applicant	:	Hisense Electric Co., Ltd. No.218 Qianwangang Road, Economy & Technology Development Zone, Qingdao, China
Manufacturer	:	Same as Applicant
Factory #1	:	Same as Applicant
Factory #2	:	Tatung Mexico S.A. de C.V. Miguel Catalán 420, Parque Industrial Rio Bravo, Cd. Juarez, Chih., CP 32557
Factory #3	:	HISENSE ELECTRONICA MEXICO,S.A. DE C.V. Blvd. Sharp #3510 Parque Industrial Rosarito, C.P. 22710 Playas de Rosarito, B.C.
LCD Panel	:	Manufacturer : Hisense M/N : HE600HF-B21(010)
Tuner	:	Manufacturer : XuGuang Tech. Co., Ltd M/N : SDVT-10A/WF2\ROH
Max Resolution	:	1024*768@60Hz
HDMI Cable*3 (Lab provide)	:	Shielded, Detachable, 1.50m
Power Cord	:	Unshielded, Detachable, 1.80m, 2C
USB Cable*2 (Lab provide)	:	Shielded, Detachable, 1.00m
LAN Cable	:	Shielded, Detachable, 1.50m

Remark:

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

Side Port:

- (1) One HDMI 1 /DVI Port : Connected with PC
- (2) One Digital Audio Out Port : Connected with Audio Converter to Earphone #1
- (3) One LAN Port : Connected with PC
- (4) One DVI AUDIO IN Port : Connected with PC
- (5) One HDMI 2 Port : Connected with DVD PLAYER #2
- (6) One HDMI 3/ARC Port : Connected with DVD PLAYER #1

Bottom Port:

- (7) One AUDIO OUT Port : Connected with Earphone
- (8) One AV IN /COMPONENT IN Port : Connected with DVD PLAYER #1
- (9) One ANT Port : Connected with Antenna or ATSC SG
- (10) One USB #1 Port : Connected with Hard-Disk #2
- (11) One USB #2 Port : Connected with Hard-Disk #1

2.2 Peripherals

2.2.1 PC

Manufacturer : HP
Model Number : Pro3340
Serial Number : 6CR2512VFD
Power Cord : Unshielded, Detachable, 1.8m
Certificate : FCC DoC; CE/EMC; VCCI; C-Tick

2.2.2 Keyboard

Manufacturer : Microsoft
Model Number : RT2300
Serial Number : 7668200662248
Data Cable : Shielded, undetachable, 1.8m
Certificate : CE/EMC, FCC DoC, VCCI, MIC, C-Tick, BSMI

2.2.3 Mouse

Manufacturer : Microsoft
Model Number : RT2300
Serial Number : 6965712071551
Data Cable : Shielded, Undetachable, 1.8m.
Certificate : CE/EMC, FCC DoC, VCCI, MIC,
C-Tick, BSMI

2.2.4 Modem

Manufacturer : TP-LINK
Model Number : TM-EC5658V
Serial Number : 07123301053
Data Cable : Shielded, Detachable, 1.5m
Certificate : CCC

2.2.5 Earphone*2

Manufacturer : Edifier
Model Number : H210

2.2.6 TV Signal Generator

Manufacturer : FLUKE
Model Number : 54200M01
Serial Number : 814008

2.2.7 ATSC Signal Generator

Manufacturer : SENCORE
Model Number : ATSC997
Serial Number : 6790071

2.2.8 DVD PLAYER #1

Manufacturer : PHILIPS
Model Number : DVP3986K/93
Serial Number : KX1A0902120108
Certificate : CCC

2.2.9 DVD PLAYER #2

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

2.2.10 Hard Disk #1

Manufacturer : Tetasys
Model Number : F12
Serial Number : A010022-4860010X
Data Cable : Shielded, Undetachable, 1.8m.
Certificate : CE, FCC DoC

2.2.11 Hard Disk #2

Manufacturer : Tetasys
Model Number : F12
Serial Number : A010022-486006
Data Cable : Shielded, Undetachable, 1.8m.
Certificate : CE, FCC DoC

2.3 Description of Test Facility

Site Description (No.3 3m Chamber) : Sept. 17, 1998 file on
Jan.15, 2015 Renewed
Federal Communications Commission
FCC Engineering Laboratory
7435 Oakland Mills Road
Columbia, MD 21046, USA

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

Site Location : 3F 34Bldg 680 Guiping Rd,
Caohejing Hi-Tech Park,
Shanghai 200233, China

FCC registration Number : 91789

NVLAP Lab Code : 200371-0

2.4 Measurement Uncertainty

Conducted Emission Expanded Uncertainty : U = 3.4dB
Radiated Emission Expanded Uncertainty (30-200MHz):
U = 4.6dB(Horizontal)
U = 4.3dB (Vertical)

Radiated Emission Expanded Uncertainty (200M-1GHz):
U = 4.5dB (Horizontal)
U = 5.4dB (Vertical)

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

3 CONDUCTED EMISSION TEST

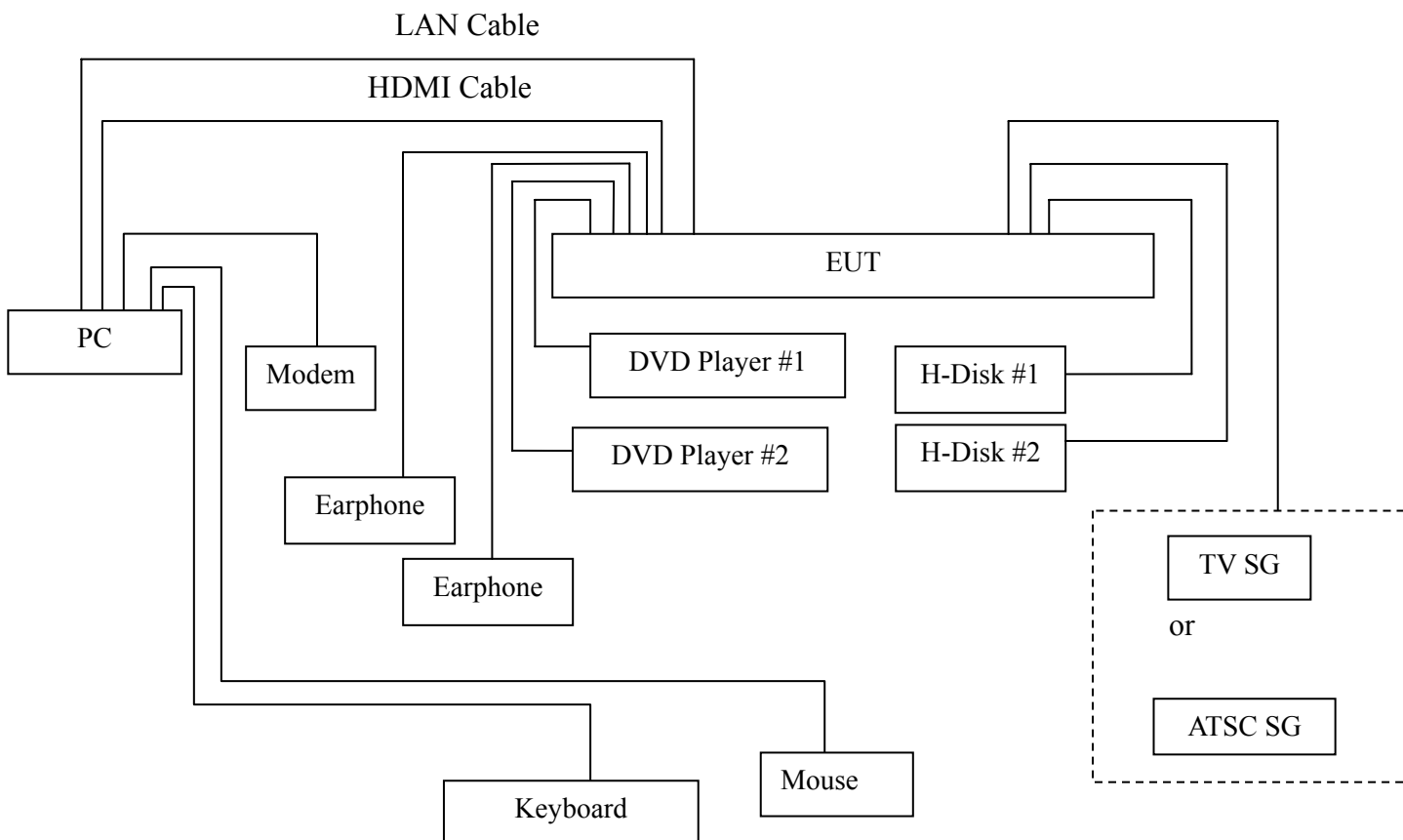
3.1 Test Equipment

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

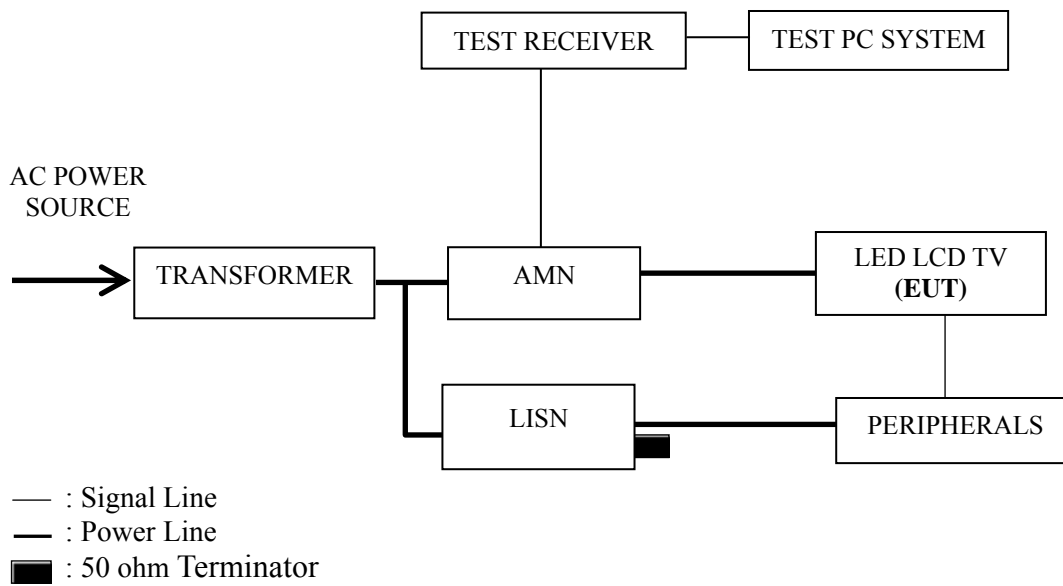
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCI	101302	Jul 03, 2015	Jul 02, 2016
2.	Artificial Mains Network (AMN)	R&S	ENV4200	100125	Jun 27, 2015	Jun 26, 2016
3.	Line Impedance Stabilization Network (LISN)	Kyoritsu	KNW-407	8-1280-5	Mar 20, 2016	Mar 19, 2017
4.	50Ω Terminator	Anritsu	BNC	001	Mar 20, 2016	Mar 19, 2017
5.	Software	Audix	e3	6.111206	--	--

3.2 Block Diagram of Test Setup

3.2.1 EUT & Peripherals



3.2.2 Conducted Disturbance Test Setup



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

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

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

3.4 Test Configuration

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

3.5 Operating Condition of EUT

- 3.5.1 Setup the EUT and peripherals as shown in Sec. 3.2.
- 3.5.2 Turn on the power of all equipments and the EUT.
- 3.5.3 Set the contrast & brightness of EUT to maximum.
- 3.5.4 PC system ran the self-test program “EMC Test” by windows XP and sent “H” characters to EUT through graphic card, the EUT’s screen displayed and filled with “H” pattern by its resolution (Via HDMI Input).
- 3.5.5 PC system sent the 1kHz audio signal to EUT through audio port, the EUT speak out 1kHz audio signal.
- 3.5.6 In USB Play mode, set the EUT play digital media from H-Disk.
- 3.5.7 The other peripherals devices were driven and operated during the test.
- 3.5.8 The test modes are as follows:

Test Mode
HDMI 1024*768@60Hz & 1kHz Playing
HDMI 800*600@60Hz & 1kHz Playing
HDMI 640*480@60Hz & 1kHz playing
HDMI1080P
USB Play
LAN Play

3.6 Test Procedures

The EUT and peripherals were connected to the power mains through an Artificial Mains Network (AMN). This provided a 50 ohm coupling impedance for the measuring equipment.

Both sides of AC line (Line & Neutral) were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables were changed or manipulated according to ANSI C63.4:2003 during conducted emission test.

The bandwidth of R&S Test Receiver ESCI was set at 9 kHz.

The frequency range from 150 kHz to 30 MHz was checked.

The test modes were done on conducted disturbance test and all the test results are listed in Sec. 3.7.

3.7 Test Results

< **PASS** >

The frequency and amplitude of the highest conducted emission relative to the limit is reported. All emissions not reported below are too low against the prescribed limits.

Test Mode	Data Page
HDMI 1024*768@60Hz & 1kHz Playing	P13
HDMI 800*600@60Hz & 1kHz Playing	P14
HDMI 640*480@60Hz & 1kHz playing	P15
HDMI1080P	P16
USB Play	P17
LAN Play	P18

NOTE 1 – Factor = Cable Loss + AMN Factor.

NOTE 2 – Emission Level = Meter Reading + Factor.

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

NOTE 4 – The worst case is for HDMI1080P test mode. The worst emission is detected at 0.151MHz (Quasi-Peak Value) with corrected signal level of 60.38 dB (μ V) (limit is 65.97 dB (μ V)), when the Neutral of the EUT is connected to AMN.

EUT : LED LCD TV Temperature : 22

Model No. : PLDED6079-SM Humidity : 48%RH

Test Mode : HDMI 1024*768@60Hz Date of Test : Apr 01, 2016
& 1kHz Playing

Test Line	Frequency (MHz)	Meter Reading dB(μ V)	Factor (dB)	Emission Level dB(μ V)	Limits dB(μ V)	Margin (dB)	Remark
Line	0.153	48.39	10.59	58.98	65.85	6.87	QP
	0.364	32.50	10.44	42.94	58.63	15.69	
	0.547	33.71	10.38	44.09	56.00	11.91	
	1.371	30.10	10.39	40.49	56.00	15.51	
	2.619	29.60	10.43	40.03	56.00	15.97	
	5.910	28.50	10.47	38.97	60.00	21.03	
	0.153	36.29	10.59	46.88	55.85	8.97	AV
	0.364	21.30	10.44	31.74	48.63	16.89	
	0.547	22.81	10.38	33.19	46.00	12.81	
	1.371	21.20	10.39	31.59	46.00	14.41	
	2.619	18.30	10.43	28.73	46.00	17.27	
	5.910	22.40	10.47	32.87	50.00	17.13	
Neutral	0.154	48.70	10.58	59.28	65.80	6.52	QP
	0.364	29.60	10.42	40.02	58.63	18.61	
	0.545	33.11	10.36	43.47	56.00	12.53	
	0.870	30.39	10.37	40.76	56.00	15.24	
	2.842	29.20	10.43	39.63	56.00	16.37	
	5.917	28.00	10.49	38.49	60.00	21.51	
	0.154	36.40	10.58	46.98	55.80	8.82	AV
	0.364	19.20	10.42	29.62	48.63	19.01	
	0.545	21.81	10.36	32.17	46.00	13.83	
	0.870	20.79	10.37	31.16	46.00	14.84	
	2.842	18.40	10.43	28.83	46.00	17.17	
	5.917	21.70	10.49	32.19	50.00	17.81	

TEST ENGINEER: WENCY YANG

EUT : LED LCD TV Temperature : 22

Model No. : PLDED6079-SM Humidity : 48%RH

Test Mode : HDMI 800*600@60Hz & 1kHz Playing Date of Test : Apr 01, 2016

Test Line	Frequency (MHz)	Meter Reading dB(μ V)	Factor (dB)	Emission Level dB(μ V)	Limits dB(μ V)	Margin (dB)	Remark
Line	0.153	48.40	10.58	58.98	65.82	6.84	QP
	0.361	32.50	10.44	42.94	58.71	15.77	
	0.534	33.20	10.39	43.59	56.00	12.41	
	1.367	29.90	10.39	40.29	56.00	15.71	
	4.111	27.79	10.47	38.26	56.00	17.74	
	5.829	29.60	10.47	40.07	60.00	19.93	AV
	0.153	36.70	10.58	47.28	55.82	8.54	
	0.361	21.10	10.44	31.54	48.71	17.17	
	0.534	22.10	10.39	32.49	46.00	13.51	
	1.367	20.80	10.39	31.19	46.00	14.81	
4.111	18.09	10.47	28.56	46.00	17.44	AV	
5.829	21.90	10.47	32.37	50.00	17.63		
0.155	48.20	10.58	58.78	65.74	6.96		QP
0.348	29.49	10.43	39.92	59.01	19.09		
0.622	32.10	10.36	42.46	56.00	13.54		
1.376	30.30	10.39	40.69	56.00	15.31		
4.376	29.70	10.46	40.16	56.00	15.84		
5.724	28.30	10.49	38.79	60.00	21.21	AV	
0.155	36.60	10.58	47.18	55.74	8.56		
0.348	18.99	10.43	29.42	49.01	19.59		
0.622	24.30	10.36	34.66	46.00	11.34		
1.376	20.70	10.39	31.09	46.00	14.91		
4.376	20.40	10.46	30.86	46.00	15.14	AV	
5.724	21.20	10.49	31.69	50.00	18.31		

TEST ENGINEER: WENCY YANG

EUT : LED LCD TV Temperature : 22

Model No. : PLDED6079-SM Humidity : 48%RH

Test Mode : HDMI 640*480@60Hz & 1kHz playing Date of Test : Apr 01, 2016

Test Line	Frequency (MHz)	Meter Reading dB(μ V)	Factor (dB)	Emission Level dB(μ V)	Limits dB(μ V)	Margin (dB)	Remark
Line	0.151	49.49	10.59	60.08	65.96	5.88	QP
	0.349	32.19	10.45	42.64	58.98	16.34	
	0.541	33.10	10.39	43.49	56.00	12.51	
	1.258	29.30	10.39	39.69	56.00	16.31	
	2.125	29.90	10.41	40.31	56.00	15.69	
	5.547	28.50	10.48	38.98	60.00	21.02	
	0.151	36.69	10.59	47.28	55.96	8.68	AV
	0.349	20.79	10.45	31.24	48.98	17.74	
	0.541	21.00	10.39	31.39	46.00	14.61	
	1.258	18.50	10.39	28.89	46.00	17.11	
	2.125	19.10	10.41	29.51	46.00	16.49	
	5.547	20.60	10.48	31.08	50.00	18.92	
Neutral	0.151	49.59	10.59	60.18	65.95	5.77	QP
	0.348	29.19	10.43	39.62	59.02	19.40	
	0.626	31.90	10.36	42.26	56.00	13.74	
	1.375	30.50	10.39	40.89	56.00	15.11	
	2.623	29.81	10.42	40.23	56.00	15.77	
	6.064	28.61	10.49	39.10	60.00	20.90	
	0.151	37.49	10.59	48.08	55.95	7.87	AV
	0.348	18.59	10.43	29.02	49.02	20.00	
	0.626	23.50	10.36	33.86	46.00	12.14	
	1.375	20.70	10.39	31.09	46.00	14.91	
	2.623	18.91	10.42	29.33	46.00	16.67	
	6.064	21.11	10.49	31.60	50.00	18.40	

EUT : LED LCD TV Temperature : 22

Model No. : PLDED6079-SM Humidity : 48%RH

Test Mode : HDMI 1080P Date of Test : Apr 01, 2016

Test Line	Frequency (MHz)	Meter Reading dB(μ V)	Factor (dB)	Emission Level dB(μ V)	Limits dB(μ V)	Margin (dB)	Remark
Line	0.151	49.49	10.59	60.08	65.97	5.89	QP
	0.347	32.09	10.45	42.54	59.03	16.49	
	0.626	32.50	10.38	42.88	56.00	13.12	
	1.372	30.30	10.39	40.69	56.00	15.31	
	2.857	28.80	10.44	39.24	56.00	16.76	
	5.897	29.90	10.47	40.37	60.00	19.63	
	AV	0.151	36.59	10.59	47.18	55.97	8.79
		0.347	20.79	10.45	31.24	49.03	17.79
		0.626	24.40	10.38	34.78	46.00	11.22
		1.372	20.40	10.39	30.79	46.00	15.21
		2.857	18.20	10.44	28.64	46.00	17.36
		5.897	22.00	10.47	32.47	50.00	17.53
Neutral	0.151	49.79	10.59	60.38	65.97	5.59	QP
	0.348	29.29	10.43	39.72	59.01	19.29	
	0.629	31.80	10.36	42.16	56.00	13.84	
	1.131	31.61	10.37	41.98	56.00	14.02	
	2.627	30.30	10.43	40.73	56.00	15.27	
	5.683	29.60	10.49	40.09	60.00	19.91	
	AV	0.151	37.09	10.59	47.68	55.97	8.29
		0.348	19.39	10.43	29.82	49.01	19.19
		0.629	23.70	10.36	34.06	46.00	11.94
		1.131	22.01	10.37	32.38	46.00	13.62
		2.627	19.40	10.43	29.83	46.00	16.17
		5.683	21.10	10.49	31.59	50.00	18.41

TEST ENGINEER: WENCY YANG

EUT : LED LCD TV Temperature : 22

Model No. : PLDED6079-SM Humidity : 48%RH

Test Mode : USB Play Date of Test : Apr 01, 2016

Test Line	Frequency (MHz)	Meter Reading dB(μ V)	Factor (dB)	Emission Level dB(μ V)	Limits dB(μ V)	Margin (dB)	Remark
Line	0.151	49.39	10.59	59.98	65.95	5.97	QP
	0.346	32.09	10.45	42.54	59.06	16.52	
	0.537	32.50	10.39	42.89	56.00	13.11	
	1.383	30.00	10.39	40.39	56.00	15.61	
	2.881	29.40	10.44	39.84	56.00	16.16	
	5.907	30.80	10.47	41.27	60.00	18.73	
	0.151	37.49	10.59	48.08	55.95	7.87	AV
	0.346	20.29	10.45	30.74	49.06	18.32	
	0.537	21.70	10.39	32.09	46.00	13.91	
	1.383	20.80	10.39	31.19	46.00	14.81	
	2.881	18.60	10.44	29.04	46.00	16.96	
	5.907	22.50	10.47	32.97	50.00	17.03	
Neutral	0.152	49.49	10.59	60.08	65.91	5.83	QP
	0.542	32.00	10.37	42.37	56.00	13.63	
	1.129	32.01	10.37	42.38	56.00	13.62	
	2.139	30.40	10.41	40.81	56.00	15.19	
	4.347	29.80	10.46	40.26	56.00	15.74	
	5.878	30.50	10.49	40.99	60.00	19.01	
	0.152	37.19	10.59	47.78	55.91	8.13	AV
	0.542	20.30	10.37	30.67	46.00	15.33	
	1.129	22.11	10.37	32.48	46.00	13.52	
	2.139	20.50	10.41	30.91	46.00	15.09	
	4.347	19.50	10.46	29.96	46.00	16.04	
	5.878	21.80	10.49	32.29	50.00	17.71	

EUT : LED LCD TV Temperature : 22

Model No. : PLDED6079-SM Humidity : 48%RH

Test Mode : LAN Play Date of Test : Apr 01, 2016

Test Line	Frequency (MHz)	Meter Reading dB(μ V)	Factor (dB)	Emission Level dB(μ V)	Limits dB(μ V)	Margin (dB)	Remark
Line	0.151	49.49	10.59	60.08	65.97	5.89	QP
	0.344	31.59	10.45	42.04	59.11	17.07	
	0.537	32.70	10.39	43.09	56.00	12.91	
	1.118	31.30	10.38	41.68	56.00	14.32	
	2.628	29.79	10.44	40.23	56.00	15.77	
	5.673	28.50	10.47	38.97	60.00	21.03	
	0.151	37.19	10.59	47.78	55.97	8.19	AV
	0.344	18.89	10.45	29.34	49.11	19.77	
	0.537	21.50	10.39	31.89	46.00	14.11	
	1.118	21.50	10.38	31.88	46.00	14.12	
	2.628	19.49	10.44	29.93	46.00	16.07	
	5.673	21.10	10.47	31.57	50.00	18.43	
Neutral	0.151	31.19	10.59	41.78	65.96	24.18	QP
	0.347	27.19	10.43	37.62	59.04	21.42	
	0.624	31.80	10.36	42.16	56.00	13.84	
	1.373	30.80	10.39	41.19	56.00	14.81	
	2.853	29.90	10.43	40.33	56.00	15.67	
	6.068	29.91	10.49	40.40	60.00	19.60	
	0.151	11.49	10.59	22.08	55.96	33.88	AV
	0.347	16.69	10.43	27.12	49.04	21.92	
	0.624	23.90	10.36	34.26	46.00	11.74	
	1.373	21.20	10.39	31.59	46.00	14.41	
	2.853	19.50	10.43	29.93	46.00	16.07	
	6.068	21.61	10.49	32.10	50.00	17.90	

TEST ENGINEER: WENCY YANG

4 RADIATED EMISSION TEST

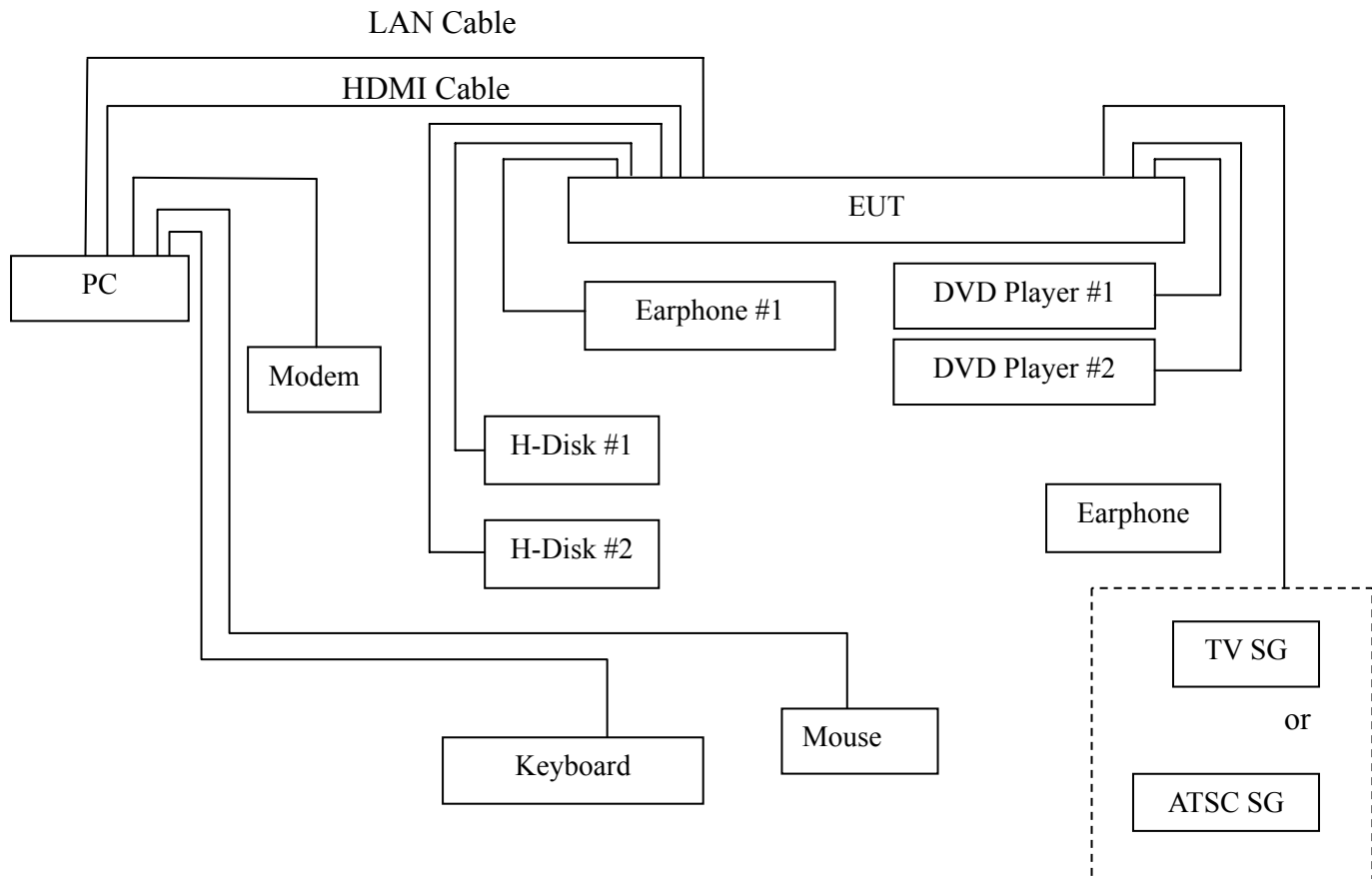
4.1 Test Equipment

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

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCI	101303	May 07, 2015	May 06, 2016
2.	Preamplifier	Agilent	8447D	2944A06664	Apr 27, 2015	Apr 26, 2016
3.	Preamplifier	HP	8449B	3008A00864	Mar 20, 2015	Sep 19, 2016
4.	Bi-log Antenna	TESEQ	CBL6112D	23193	May 15, 2015	May 14, 2016
5.	Horn Antenna	EMCO	3115	9607-4878	Jun 03, 2015	Jun 02, 2016
6.	Spectrum	Agilent	N9010A	MY52221182	Jun 12, 2015	Jun 11, 2016
7.	Spectrum	HP	8591EM	3628A00908	May 07, 2015	May 06, 2016
8.	Software	Audix	e3	6.2007-9-10	--	--

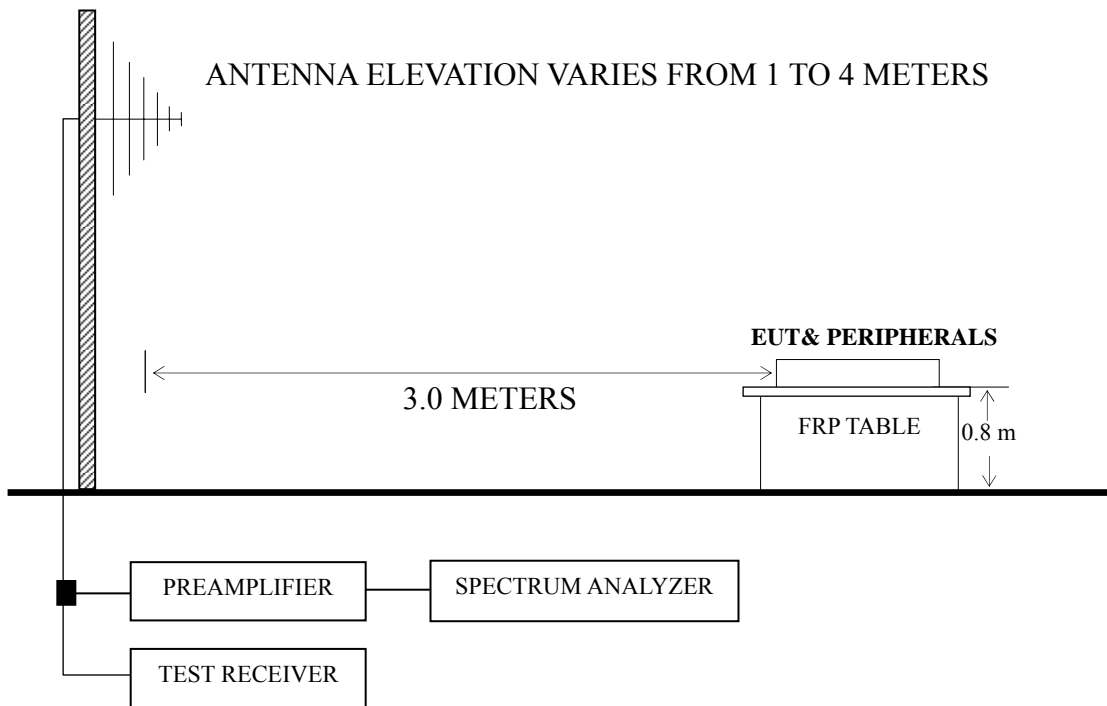
4.2 Block Diagram of Test Setup

4.2.1 EUT & Peripherals



4.2.2 Radiated emission test setup

4.2.2.1 Below 1GHz



■ : 50 ohm Coaxial Switch

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

Frequency (MHz)	Distance (m)	Field strength limits	
		($\mu\text{V/m}$)	dB ($\mu\text{V/m}$)
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
Above 960	3	500	54.0

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

4.4 Test Configuration

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

Please refer to Sec.3.4.

4.5 Operating Condition of EUT

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

4.6 Test Procedures

The EUT and peripherals were placed on a FRP turntable that is 0.8 meter above ground. The FRP turntable rotated 360 degrees to determine the position of the maximum emission level. The EUT was set 3 meters away from the receiving antenna, which was mounted on an antenna tower. Broadband antenna (Calibrated Bilog Antenna) was used as receiving antenna. The antenna moved up and down between 1 meter and 4 meters to find out the maximum emission level. Both horizontal and vertical polarizations of the antenna were set on measurement. In order to find the maximum emission, all of the interference cables were manipulated according to ANSI C63.4 requirements during radiated emission test.

The I.F. bandwidth of Test Receiver R&S ESCI was set at 120 kHz.

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

The test modes were done on radiated disturbance test and all the test results are listed in Sec.4.7.

4.7 Test Results

<PASS>

The frequency and amplitude of the highest radiated emission relative the limit is reported. All the emissions not reported below are too low against the FCC limit.

Test Mode	Data Page
HDMI 1024*768@60Hz & 1kHz Playing	P23
HDMI 800*600@60Hz & 1kHz Playing	P24
HDMI 640*480@60Hz & 1kHz Playing	P25
HDMI1080P	P26
USB Play	P27
LAN Play	P28

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

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

NOTE 3 – 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

NOTE 4 – The worst case is for HDMI 1024*768@60Hz & 1kHz Playing test mode. The worst emission at horizontal polarization was detected at 742.440 MHz with corrected signal level of 44.97 dB ($\mu\text{V}/\text{m}$) (limit is 46.00 dB ($\mu\text{V}/\text{m}$)), when the antenna was 2.00 m height and the turntable was at 250°. The worst emission at vertical polarization was detected at 69.357 MHz with corrected signal level of 37.26 dB ($\mu\text{V}/\text{m}$) (limit is 40.00 dB ($\mu\text{V}/\text{m}$)), when the antenna was 1.50 m height and the turntable was at 350°.

EUT : LED LCD TV Temperature : 22

Model No. : PLDED6079-SM Humidity : 60%RH

Test Mode : HDMI 1024*768@60Hz & 1kHz Playing Date of Test : Apr 12, 2016

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)
Horizontal	78.689	21.85	9.17	1.07	32.09	40.00	7.91
	189.074	20.46	10.36	1.90	32.72	43.50	10.78
	242.525	18.81	12.10	2.13	33.04	46.00	12.96
	292.058	18.84	13.60	2.52	34.96	46.00	11.04
	480.528	14.11	17.50	2.90	34.51	46.00	11.49
	701.761	17.03	19.80	3.54	40.37	46.00	5.63
Vertical	30.745	16.50	18.34	0.64	35.48	40.00	4.52
	39.994	20.46	12.92	0.73	34.11	40.00	5.89
	80.081	20.05	9.40	1.09	30.54	40.00	9.46
	446.414	17.25	16.83	2.82	36.90	46.00	9.10
	704.226	15.03	19.80	3.56	38.39	46.00	7.61
	742.500	18.00	19.97	3.60	41.57	46.00	4.43

EUT : LED LCD TV Temperature : 22

Model No. : PLDED6079-SM Humidity : 60%RH

Test Mode : HDMI 800*600@60Hz & 1kHz Playing Date of Test : Apr 12, 2016

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)
Horizontal	79.243	21.49	9.23	1.07	31.79	40.00	8.21
	132.221	17.73	12.71	1.53	31.97	43.50	11.53
	244.232	20.96	12.20	2.14	35.30	46.00	10.70
	289.002	18.69	13.58	2.49	34.76	46.00	11.24
	539.478	18.89	18.50	2.68	40.07	46.00	5.93
	701.761	17.60	19.80	3.54	40.94	46.00	5.06
Vertical	31.731	15.82	17.69	0.65	34.16	40.00	5.84
	40.135	20.49	12.90	0.73	34.12	40.00	5.88
	78.965	21.50	9.17	1.07	31.74	40.00	8.26
	150.011	20.43	11.50	1.63	33.56	43.50	9.94
	539.478	14.54	18.50	2.68	35.72	46.00	10.28
	701.761	16.20	19.80	3.54	39.54	46.00	6.46

TEST ENGINEER: MARK LI

EUT : LED LCD TV Temperature : 22

Model No. : PLDED6079-SM Humidity : 60%RH

Test Mode : HDMI 640*480@60Hz & 1kHz Playing Date of Test : Apr 12, 2016

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)
Horizontal	79.243	19.53	9.23	1.07	29.83	40.00	10.17
	186.441	20.58	10.44	1.88	32.90	43.50	10.60
	244.232	19.37	12.20	2.14	33.71	46.00	12.29
	291.036	19.79	13.60	2.52	35.91	46.00	10.09
	483.910	13.48	17.54	2.91	33.93	46.00	12.07
	701.761	17.29	19.80	3.54	40.63	46.00	5.37
Vertical	32.067	16.69	17.43	0.66	34.78	40.00	5.22
	39.994	20.30	12.92	0.73	33.95	40.00	6.05
	79.243	21.22	9.23	1.07	31.52	40.00	8.48
	130.837	18.54	12.76	1.53	32.83	43.50	10.67
	291.036	15.94	13.60	2.52	32.06	46.00	13.94
	701.761	14.22	19.80	3.54	37.56	46.00	8.44

TEST ENGINEER: MARK LI

EUT : LED LCD TV Temperature : 22

Model No. : PLDED6079-SM Humidity : 60%RH

Test Mode : HDMI1080P Date of Test : Apr 12, 2016

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)
Horizontal	79.243	20.56	9.23	1.07	30.86	40.00	9.14
	148.963	24.71	11.57	1.63	37.91	43.50	5.59
	287.990	17.08	13.58	2.49	33.15	46.00	12.85
	701.761	14.66	19.80	3.54	38.00	46.00	8.00
	742.259	14.44	19.97	3.60	38.01	46.00	7.99
	935.546	11.13	21.75	4.65	37.53	46.00	8.47
Vertical	32.293	16.95	17.28	0.66	34.89	40.00	5.11
	39.715	20.62	12.95	0.73	34.30	40.00	5.70
	131.758	17.91	12.73	1.53	32.17	43.50	11.33
	289.002	17.89	13.58	2.49	33.96	46.00	12.04
	701.761	16.94	19.80	3.54	40.28	46.00	5.72
		742.500	17.50	19.97	3.60	41.07	46.00

TEST ENGINEER: MARK LI

EUT : LED LCD TV Temperature : 22

Model No. : PLDED6079-SM Humidity : 60%RH

Test Mode : USB Play Date of Test : Apr 12, 2016

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)
Horizontal	76.781	22.79	8.84	1.04	32.67	40.00	7.33
	108.647	18.71	12.57	1.39	32.67	43.50	10.83
	163.755	19.16	11.24	1.73	32.13	43.50	11.37
	278.067	21.31	13.20	2.42	36.93	46.00	9.07
	584.790	12.73	18.55	2.36	33.64	46.00	12.36
	945.440	7.03	21.87	4.70	33.60	46.00	12.40
Vertical	56.593	24.85	6.28	0.86	31.99	40.00	8.01
	115.321	18.64	12.71	1.43	32.78	43.50	10.72
	226.894	20.97	10.96	2.08	34.01	46.00	11.99
	336.035	16.22	14.97	2.64	33.83	46.00	12.17
	629.477	11.67	19.50	2.64	33.81	46.00	12.19
	833.317	11.14	20.75	3.97	35.86	46.00	10.14

TEST ENGINEER: MARK LI

EUT : LED LCD TV Temperature : 22

Model No. : PLDED6079-SM Humidity : 60%RH

Test Mode : LAN Play Date of Test : Apr 12, 2016

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)
Horizontal	78.413	23.00	9.12	1.05	33.17	40.00	6.83
	135.506	18.92	12.59	1.55	33.06	43.50	10.44
	242.525	21.81	12.10	2.13	36.04	46.00	9.96
	330.195	16.19	14.80	2.63	33.62	46.00	12.38
	609.922	12.50	19.10	2.39	33.99	46.00	12.01
	771.449	11.21	20.50	3.65	35.36	46.00	10.64
Vertical	36.001	17.31	15.10	0.70	33.11	40.00	6.89
	70.584	22.58	7.45	0.95	30.98	40.00	9.02
	104.170	18.52	12.46	1.35	32.33	43.50	11.17
	222.950	20.35	10.70	2.05	33.10	46.00	12.90
	501.179	11.60	17.90	2.94	32.44	46.00	13.56
	636.134	12.57	19.50	2.77	34.84	46.00	11.16

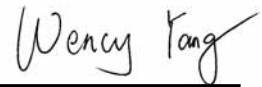
5 DEBUG DESCRIPTION

The following components are used during the countermeasure procedures:

Name	M/N	Manufacturer	Location
Conductive Tape	40-100\ROH	ZhuoYun club Co., Ltd.	See Internal Photos Figure 22, Figure 23

Note: We had required the applicant and manufacturer that all electrical and mechanical devices employed for spurious radiation suppression, including any modifications made during certification testing, must be incorporated in each unit marked

TEST ENGINEER:



(WENCY YANG)

6 DEVIATION TO TEST SPECIFICATIONS

None