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

LED LCD TV

Model No.	Serial No.	Brand
LTDN40K366WUS	E1207943-01/01	Hisense
40K366W	--	

FCC ID : W9HLCDD0021

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

Prepared By : Audix Technology (Shanghai) Co., Ltd.
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Report No. : ACI-F12136
Date of Test : Aug 03 – 18, 2012
Date of Report : Aug 23, 2012

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TEST REPORT FOR FCC CERTIFICATE

Applicant : Hisense Electric Co., Ltd.

Manufacturer : Hisense Electric Co., Ltd.

EUT Description : LED LCD TV

Model No.	Serial No.	Brand	Power Supply
LTDN40K366WUS	E1207943-01/01	Hisense	120V/60Hz
40K366W	--		

Test Procedure Used:

FCC RULES AND REGULATIONS PART 15 SUBPART B CLASS B OCTOBER 2011 AND ANSI C63.4-2003

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

The test results are contained in this test report and Audix Technology (Shanghai) Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. This report shows that the EUT (M/N: Refer to Sec2.1; S/N: Refer to Sec2.1) which was tested in 3m anechoic chamber Aug 03 – 18, 2012 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.F12137, a Verification report.

Date of Test : Aug 03 – 18, 2012 Date of Report : Aug 23, 2012

Producer : Kathy Wang
KATHY WANG/ Assistant

Review : Dio Yang
DIO YANG/ Assistant Manager

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

Signatory : Sammy Chen
Authorized Signature EMC SAMMY CHEN / Deputy 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 2011 AND ANSI C63.4-2003	15.107(a) Class B	Pass
Radiated Disturbance	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2011 AND ANSI C63.4-2003	15.109(a) Class B	Pass

2 GENERAL INFORMATION

2.1 Description of Equipment Under Test

Description : LED LCD TV

Type of EUT : ☑ Production ☐ Pre-product ☐ Pro-type

Model No.	Serial No.	Brand
LTDN40K366WUS	E1207943-01/01	Hisense
40K366W	--	

Note : The above models are all the same except for the different model name.
The LTDN40K366WUS was tested and recorded in the report.

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

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

LCD Panel : Manufacturer : Hisense
M/N : HE400GF-B31\PW1\S1

Max Resolution : 1024*768@60Hz

D-Sub Cable : Shielded, Detachable, 1.85m, with two cores on cable

HDMI Cable : Shielded, Detachable, 1.00m

LAN Cable : Unshielded, Detachable, 1.5m

Power Cord : Unshielded, undetachable, 1.80m

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

Bottom Port:
(1) One HDMI3 Port
: Connected with DVD PLAYER #2
(2) One HDMI4 Port
: Connected with DVD PLAYER #3
(3) One VGA Port
: Connected with PC
(4) One PC Audio In Port
: Connected with PC
(5) One USB1 Port
: Connected with U-Disk
(6) One USB2 Port
: Connected with U-Disk
(7) One LAN Port
: Connected with PC

Side Port:
(8) One HDMI1 Port
: Connected with PC
(9) One HDMI2 Port
: Connected with DVD PLAYER #1
(10) One ANT Port
: Connected with ATSC SG / TV SG
(11) One DIGITAL AUDIO OUT Port
: Connected with DVD PLAYER #1
(12) One Headphone Port
: Connected with Earphone
(13) One component of YPbPr Port
: Connected with DVD PLAYER #1
(14) One component of YPbPr Audio Port
: Connected with DVD PLAYER #1
(15) One component of AV Port
: Connected with DVD PLAYER #1

2.2 Peripherals

2.2.1 PC

Manufacturer	:	HP
Model Number	:	dx7200MT
Serial Number	:	CNG622017W
Power Cord	:	Unshielded, Detachable, 1.8m
Certificate	:	FCC DoC; CE/EMC; VCCI; C-Tick; UL BSMI (R33001) 3C (A000111) MIC (E-A011-04-2659(B))

2.2.2 Printer

Manufacturer	:	HP
Model Number	:	C3990A
Serial Number	:	JPZX020487
Data Cable	:	Shielded, detachable, 1.5m
Certificate	:	GS, CE/EMC, C-Tick, FCC DoC

2.2.3 Keyboard

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

2.2.4 Mouse

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

2.2.5 Modem

Manufacturer	:	TP-LINK
Model Number	:	TM-EC5658V
Serial Number	:	07123301053
Data Cable	:	Shielded, Detachable, 1.8m
Certificate	:	FCC DoC, CE/EMC, CCC

2.2.6 Earphone

Manufacturer	:	SONY
Model Number	:	MDR-E808
Serial Number	:	1808030805305506

2.2.7 TV Signal Generator

Manufacturer	:	FLUKE
Model Number	:	54200m01
Serial Number	:	814008
Data Cable	:	Shielded, detachable, 2.0m
Power Cord	:	Unshielded, detachable, 2.0m
Certificate	:	CE/EMC, FCC DoC, CCC

2.2.8 ATSC Signal Generator

Manufacturer	:	SENCORE
Model Number	:	ATSC997
Serial Number	:	6790071

2.2.9 DVD PLAYER #1

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

2.2.10 DVD PLAYER #2

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

2.2.11 DVD PLAYER #3

Manufacturer	:	DGT RONIK
Model Number	:	DV-A340
Serial Number	:	10004184-C
Certificate	:	FCC DoC, CE/EMC, CCC

2.2.12 U-DISK

Manufacturer	:	LG
Model Number	:	1GB

2.3 Description of Test Facility

Site Description (No.3 3m Chamber)	:	Sept. 17, 1998 file on Apr 29, 2009 Renewed Federal Communications Commission FCC Engineering Laboratory 7435 Oakland Mills Road Columbia, MD 21046, USA
Name of Firm	:	Audix Technology (Shanghai) Co., Ltd.
Site Location	:	3F 34Bldg 680 Guiping Rd, Caohejing Hi-Tech Park, Shanghai 200233, China
NVLAP Lab Code	:	200371-0

2.4 Measurement Uncertainty

Conducted Emission Expanded Uncertainty: U = 3.42dB

Radiated Emission Expanded Uncertainty (30-200MHz):

U = 4.14 dB (horizontal)

U = 4.28 dB (vertical)

Radiated Emission Expanded Uncertainty (200M-1GHz):

U = 4.18 dB (horizontal)

U = 4.26 dB (vertical)

3 CONDUCTED EMISSION TEST

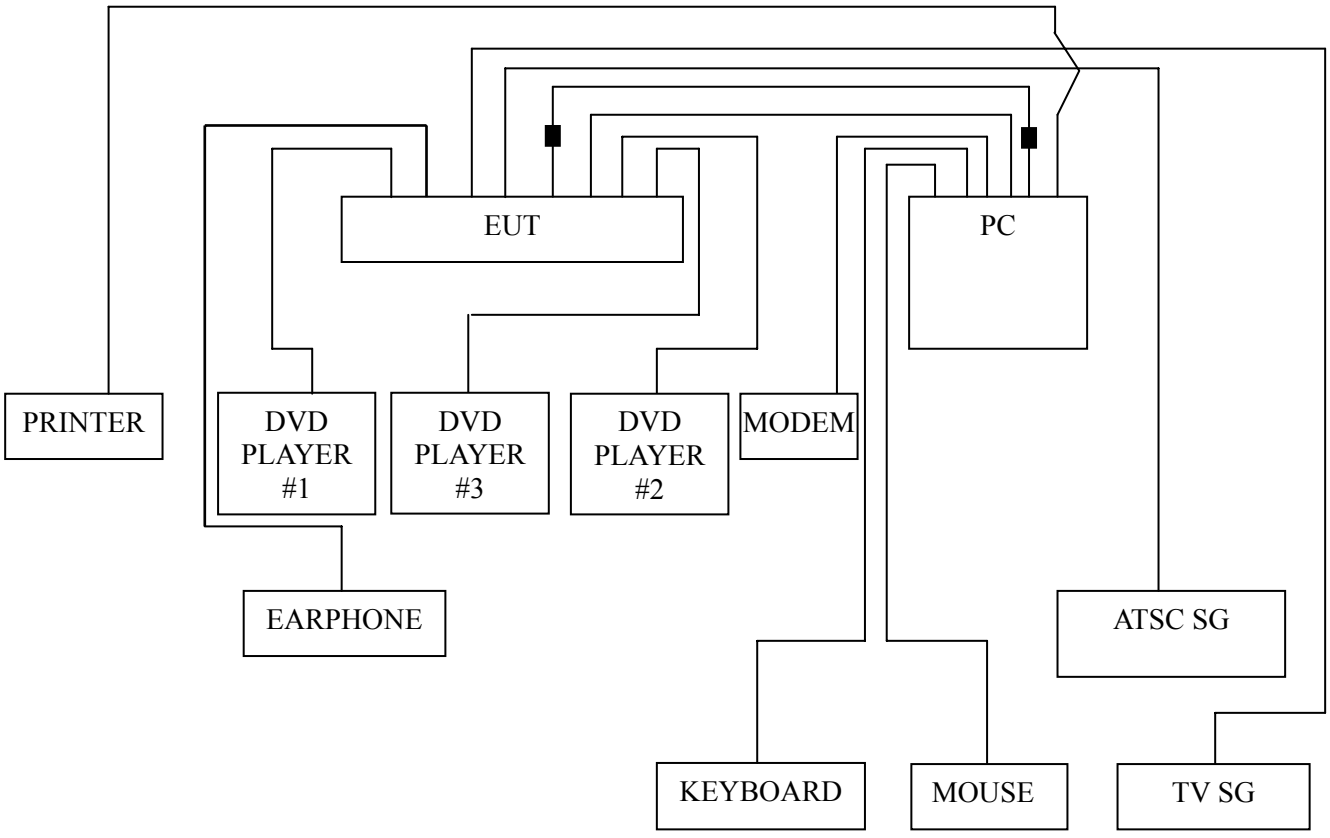
3.1 Test Equipment

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

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCI	100841	Mar 22, 2012	Mar 22, 2013
2.	Artificial Mains Network (AMN #1)	R&S	ESH2-Z5	843890/011	Feb 13, 2012	Feb 13, 2013
3.	Artificial Mains Network (AMN #2)	R&S	ENV4200	100125	Mar 22, 2012	Mar 22, 2013
4.	50 Ω Coaxial Switch	Anritsu	MP59B	6200426389	Mar 18, 2012	Sep 18, 2012
5.	50Ω Terminator	Anritsu	BNC	001	Mar 22, 2012	Mar 22, 2013
6.	Software	Audix	E3	SET00200 9804M592	--	--

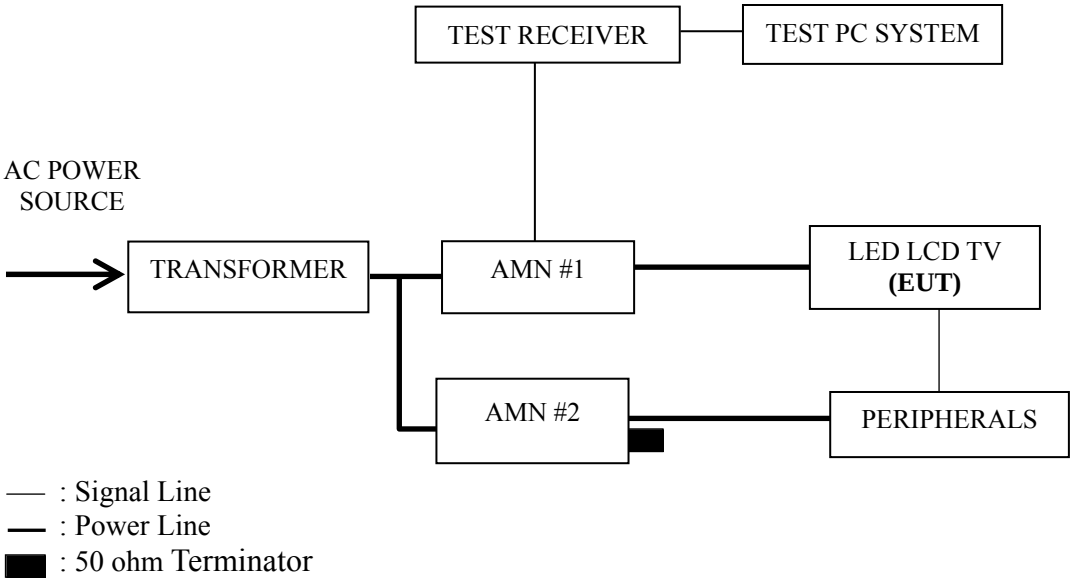
3.2 Block Diagram of Test Setup

3.2.1 EUT & Peripherals



■: Ferrite core

3.2.2 Conducted Disturbance Test Setup



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

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

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

3.4 Test Configuration

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

3.5 Operating Condition of EUT

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

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

3.5.3 Set the contrast & brightness of EUT to maximum.

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

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

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

3.5.7 Repeat above procedure 3.5.6 for difference test mode.

3.5.8 The other peripherals devices were driven and operated during the test.

3.5.9 The test modes are as follows:

Test Mode
D-Sub 1024*768@60Hz
HDMI 1024*768@60Hz
D-Sub 800*600@60Hz
D-Sub 640*480@60Hz
USB Play
LAN

3.6 Test Procedures

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

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

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

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

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

3.7 Test Results

< PASS >

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

Test Mode	Data Page
D-Sub 1024*768@60Hz	P13
HDMI 1024*768@60Hz	P14
D-Sub 800*600@60Hz	P15
D-Sub 640*480@60Hz	P16
USB Play	P17
LAN	P18

NOTE 1 – Factor = Cable Loss + AMN Factor.
NOTE 2 – Emission Level = Meter Reading + Factor.
NOTE 3 – "QP" means "Quasi-Peak" values, "AV" means "Average" values.
NOTE 4 – The worst case is for D-Sub 1024*768@60Hz test mode. The worst emission is detected at 19.021 MHz (Average Value) with corrected signal level of 42.36 dB (μV) (limit is 50.00 dB (μV)), when the Line of the EUT is connected to AMN.

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	LTDN40K366WUS	Humidity	:	48%RH
Serial No.	:	E1207943-01/01	Date of Test	:	Aug 03, 2012
Test Mode	:	D-Sub 1024*768@60Hz			

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.327	35.10	0.30	35.40	59.53	24.13	QP
	0.413	42.89	0.34	43.23	57.59	14.36	
	1.388	41.36	0.35	41.71	56.00	14.29	
	3.041	44.96	0.42	45.38	56.00	10.62	
	5.713	45.89	0.55	46.44	60.00	13.56	
	19.021	51.33	0.92	52.25	60.00	7.75	
	0.327	24.60	0.30	24.90	49.53	24.63	AV
	0.413	32.20	0.34	32.54	47.59	15.05	
	1.388	31.80	0.35	32.15	46.00	13.85	
	3.041	33.50	0.42	33.92	46.00	12.08	
	5.713	34.80	0.55	35.35	50.00	14.65	
	19.021	**41.44**	**0.92**	**42.36**	**50.00**	**7.64**	
Neutral	0.313	35.45	0.28	35.73	59.88	24.15	QP
	0.413	42.94	0.34	43.28	57.59	14.31	
	1.374	41.09	0.35	41.44	56.00	14.56	
	3.041	44.26	0.42	44.68	56.00	11.32	
	6.488	47.28	0.62	47.90	60.00	12.10	
	19.021	44.19	0.92	45.11	60.00	14.89	
	0.313	24.21	0.28	24.49	49.88	25.39	AV
	0.413	31.30	0.34	31.64	47.59	15.95	
	1.374	31.30	0.35	31.65	46.00	14.35	
	3.041	33.50	0.42	33.92	46.00	12.08	
	6.488	36.50	0.62	37.12	50.00	12.88	
	19.021	33.69	0.92	34.61	50.00	15.39	

TEST ENGINEER: LVY LV

EUT	:	LED LCD TV	Temperature	:	22℃
Model No.	:	LTDN40K366WUS	Humidity	:	48%RH
Serial No.	:	E1207943-01/01	Date of Test	:	Aug 03, 2012
Test Mode	:	HDMI 1024*768@60Hz			

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.317	35.27	0.29	35.56	59.80	24.24	QP
	0.481	42.72	0.35	43.07	56.32	13.25	
	1.172	41.32	0.32	41.64	56.00	14.36	
	3.041	44.76	0.42	45.18	56.00	10.82	
	6.698	48.73	0.65	49.38	60.00	10.62	
	19.021	50.27	0.92	51.19	60.00	8.81	
	0.317	24.90	0.29	25.19	49.80	24.61	AV
	0.481	31.10	0.35	31.45	46.32	14.87	
	1.172	31.51	0.32	31.83	46.00	14.17	
	3.041	33.60	0.42	34.02	46.00	11.98	
	6.698	37.19	0.65	37.84	50.00	12.16	
	19.021	40.19	0.92	41.11	50.00	8.89	
Neutral	0.277	36.42	0.12	36.54	60.90	24.36	QP
	0.417	42.69	0.17	42.86	57.51	14.65	
	0.767	41.04	0.21	41.25	56.00	14.75	
	3.041	43.90	0.24	44.14	56.00	11.86	
	6.488	47.81	0.55	48.36	60.00	11.64	
	19.021	**50.59**	**0.82**	**51.41**	**60.00**	**8.59**	
	0.277	25.40	0.12	25.52	50.90	25.38	AV
	0.417	31.89	0.17	32.06	47.51	15.45	
	0.767	31.70	0.21	31.91	46.00	14.09	
	3.041	33.50	0.24	33.74	46.00	12.26	
	6.488	36.60	0.55	37.15	50.00	12.85	
	19.021	40.19	0.82	41.01	50.00	8.99	

TEST ENGINEER: LVY LV

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	LTDN40K366WUS	Humidity :	48%RH	
Serial No.	:	E1207943-01/01	Date of Test :	Aug 03, 2012	
Test Mode	:	D-Sub 800*600@60Hz			

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.313	35.45	0.28	35.73	59.88	24.15	QP
	0.413	42.94	0.34	43.28	57.59	14.31	
	1.374	41.09	0.35	41.44	56.00	14.56	
	3.041	**44.26**	**0.42**	**44.68**	**56.00**	**11.32**	
	6.488	47.28	0.62	47.90	60.00	12.10	
	19.021	44.19	0.92	45.11	60.00	14.89	
	0.313	24.21	0.28	24.49	49.88	25.39	AV
	0.413	31.30	0.34	31.64	47.59	15.95	
	1.374	31.30	0.35	31.65	46.00	14.35	
	3.041	33.50	0.42	33.92	46.00	12.08	
	6.488	36.50	0.62	37.12	50.00	12.88	
	19.021	33.69	0.92	34.61	50.00	15.39	
Neutral	0.317	36.27	0.13	36.40	59.80	23.40	QP
	0.417	42.97	0.17	43.14	57.51	14.37	
	1.172	40.76	0.21	40.97	56.00	15.03	
	2.839	44.04	0.22	44.26	56.00	11.74	
	6.627	47.83	0.57	48.40	60.00	11.60	
	18.622	46.45	0.81	47.26	60.00	12.74	
	0.317	26.70	0.13	26.83	49.80	22.97	AV
	0.417	31.29	0.17	31.46	47.51	16.05	
	1.172	30.81	0.21	31.02	46.00	14.98	
	2.839	33.70	0.22	33.92	46.00	12.08	
	6.627	36.30	0.57	36.87	50.00	13.13	
	18.622	35.10	0.81	35.91	50.00	14.09	

TEST ENGINEER: LVY LV

EUT	:	LED LCD TV	Temperature	:	22℃
Model No.	:	LTDN40K366WUS	Humidity	:	48%RH
Serial No.	:	E1207943-01/01	Date of Test	:	Aug 03, 2012
Test Mode	:	D-Sub 640*480@60Hz			

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.327	35.15	0.30	35.45	59.53	24.08	QP
	0.417	43.00	0.34	43.34	57.51	14.17	
	1.172	41.31	0.32	41.63	56.00	14.37	
	2.993	**45.36**	**0.42**	**45.78**	**56.00**	**10.22**	
	6.420	47.87	0.62	48.49	60.00	11.51	
	18.820	45.50	0.92	46.42	60.00	13.58	
	0.327	24.10	0.30	24.40	49.53	25.13	AV
	0.417	33.80	0.34	34.14	47.51	13.37	
	1.172	31.41	0.32	31.73	46.00	14.27	
	2.993	34.59	0.42	35.01	46.00	10.99	
	6.420	36.29	0.62	36.91	50.00	13.09	
	18.820	34.59	0.92	35.51	50.00	14.49	
Neutral	0.277	36.25	0.12	36.37	60.90	24.53	QP
	0.484	42.56	0.17	42.73	56.27	13.54	
	0.751	40.82	0.21	41.03	56.00	14.97	
	2.839	43.76	0.22	43.98	56.00	12.02	
	6.352	47.18	0.54	47.72	60.00	12.28	
	18.622	45.82	0.81	46.63	60.00	13.37	
	0.277	26.90	0.12	27.02	50.90	23.88	AV
	0.484	31.70	0.17	31.87	46.27	14.40	
	0.751	30.90	0.21	31.11	46.00	14.89	
	2.839	33.80	0.22	34.02	46.00	11.98	
	6.352	36.80	0.54	37.34	50.00	12.66	
	18.622	34.50	0.81	35.31	50.00	14.69	

TEST ENGINEER: LVY LV

EUT	:	LED LCD TV	Temperature	:	22℃
Model No.	:	LTDN40K366WUS	Humidity	:	48%RH
Serial No.	:	E1207943-01/01	Date of Test	:	Aug 03, 2012
Test Mode	:	USB Play			

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.325	35.42	0.30	35.72	59.57	23.85	QP
	0.413	42.73	0.34	43.07	57.59	14.52	
	1.388	41.36	0.35	41.71	56.00	14.29	
	3.041	**44.93**	**0.42**	**45.35**	**56.00**	**10.65**	
	6.557	47.76	0.63	48.39	60.00	11.61	
	18.820	45.59	0.92	46.51	60.00	13.49	
	0.325	25.90	0.30	26.20	49.57	23.37	AV
	0.413	31.70	0.34	32.04	47.59	15.55	
	1.388	31.50	0.35	31.85	46.00	14.15	
	3.041	33.50	0.42	33.92	46.00	12.08	
	6.557	36.60	0.63	37.23	50.00	12.77	
	18.820	34.89	0.92	35.81	50.00	14.19	
Neutral	0.277	36.43	0.12	36.55	60.90	24.35	QP
	0.510	42.52	0.17	42.69	56.00	13.31	
	1.043	40.98	0.22	41.20	56.00	14.80	
	3.041	44.22	0.24	44.46	56.00	11.54	
	6.557	47.85	0.56	48.41	60.00	11.59	
	18.820	46.50	0.81	47.31	60.00	12.69	
	0.277	25.90	0.12	26.02	50.90	24.88	AV
	0.510	31.80	0.17	31.97	46.00	14.03	
	1.043	30.40	0.22	30.62	46.00	15.38	
	3.041	33.70	0.24	33.94	46.00	12.06	
	6.557	36.60	0.56	37.16	50.00	12.84	
	18.820	35.90	0.81	36.71	50.00	13.29	

TEST ENGINEER: LVY LV

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	LTDN40K366WUS	Humidity	:	48%RH
Serial No.	:	E1207943-01/01	Date of Test	:	Aug 03, 2012
Test Mode	:	LAN			

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.327	35.67	0.30	35.97	59.53	23.56	QP
	0.417	43.13	0.34	43.47	57.51	14.04	
	0.974	41.35	0.32	41.67	56.00	14.33	
	3.025	44.37	0.42	44.79	56.00	11.21	
	6.627	47.53	0.64	48.17	60.00	11.83	
	18.622	44.61	0.91	45.52	60.00	14.48	
	0.327	24.10	0.30	24.40	49.53	25.13	AV
	0.417	32.80	0.34	33.14	47.51	14.37	
	0.974	31.10	0.32	31.42	46.00	14.58	
	3.025	33.40	0.42	33.82	46.00	12.18	
	6.627	36.90	0.64	37.54	50.00	12.46	
	18.622	34.10	0.91	35.01	50.00	14.99	
Neutral	0.322	36.26	0.14	36.40	59.66	23.26	QP
	0.413	42.78	0.17	42.95	57.59	14.64	
	1.388	40.94	0.21	41.15	56.00	14.85	
	3.041	**44.90**	**0.24**	**45.14**	**56.00**	**10.86**	
	6.488	48.37	0.55	48.92	60.00	11.08	
	18.820	46.14	0.81	46.95	60.00	13.05	
	0.322	25.30	0.14	25.44	49.66	24.22	AV
	0.413	31.39	0.17	31.56	47.59	16.03	
	1.388	30.49	0.21	30.70	46.00	15.30	
	3.041	33.90	0.24	34.14	46.00	11.86	
	6.488	37.60	0.55	38.15	50.00	11.85	
	18.820	35.80	0.81	36.61	50.00	13.39	

TEST ENGINEER: LVY LV

4 RADIATED EMISSION TEST

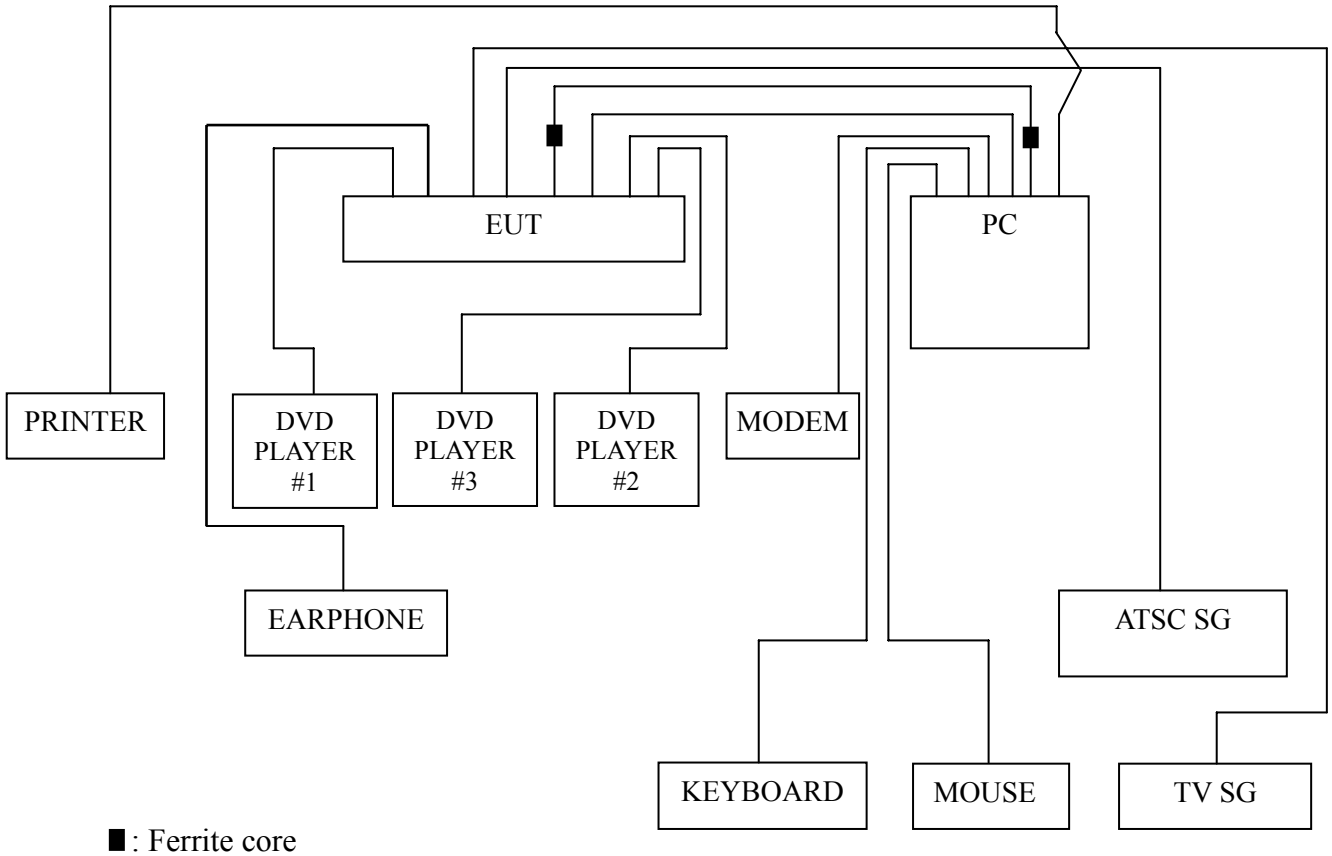
4.1 Test Equipment

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	ESVS10	844594/001	Mar 22, 2012	Mar 22, 2013
2.	Preamplifier	Agilent	8447D	2944A10548	Mar 18, 2012	Sep 18, 2012
3.	Bi-log Antenna	TESEQ	CBL6112D	23192	Dec 01, 2011	Dec 01, 2012
4.	Spectrum	Agilent	E7405A	MY45106600	Mar 22, 2012	Mar 22, 2013
5.	50Ω Coaxial Switch	Anritsu	MP59B	6200426390	Mar 18, 2012	Sep 18, 2012
6.	Software	Audix	E3	SET00200 9912M295-2	--	--

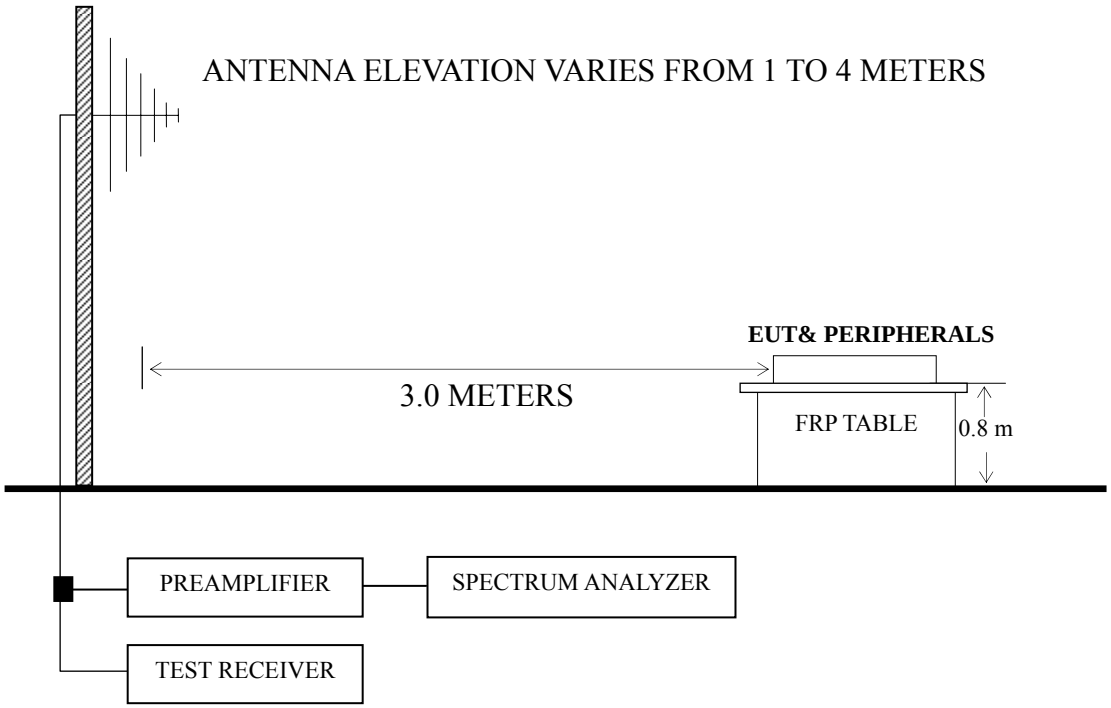
4.2 Block Diagram of Test Setup

4.2.1 EUT and Peripherals



■: Ferrite core

4.2.2 Radiated emission test setup



■ : 50 ohm Coaxial Switch

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

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

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

4.4 Test Configuration

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

Please refer to Sec.3.4.

4.5 Operating Condition of EUT

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

4.6 Test Procedures

The EUT and peripherals were placed on a FRP turntable that is 0.8 meter above ground. The FRP turntable rotated 360 degrees to determine the position of the maximum emission level. The EUT was set 3 meters away from the receiving antenna, which was mounted on an antenna tower. Broadband antenna (Calibrated Bilog Antenna) was used as receiving antenna. The antenna moved up and down between 1 meter and 4 meters to find out the maximum emission level. Both horizontal and vertical polarizations of the antenna were set on measurement. In order to find the maximum emission, all of the interference cables were manipulated according to ANSI C63.4:2003 requirements during radiated emission test.

The I.F. bandwidth of Test Receiver R&S ESVS10 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
D-Sub 1024*768@60Hz	P22
HDMI 1024*768@60Hz	P23
D-Sub 800*600@60Hz	P24
D-Sub 640*480@60Hz	P25
USB Play	P26
LAN	P27

NOTE 1 – Emission Level = Antenna Factor + Cable Loss + Meter Reading.
NOTE 2 – All readings are Quasi-Peak values.
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 D-Sub 640*480@60Hz test mode. The worst emission at horizontal polarization was detected at 740.800 MHz with corrected signal level of 43.76 dB (μV/m) (limit is 46.00 dB (μV/m)), when the antenna was 1.50 m height and the turntable was at 350°. The worst emission at vertical polarization was detected at 85.290 MHz with corrected signal level of 35.73 dB (μV/m) (limit is 40.00 dB (μV/m)), when the antenna was 1.50 m height and the turntable was at 130°.

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	LTDN40K366WUS	Humidity :	60%RH
Serial No.	:	E1207943-01/01	Date of Test :	Aug 18, 2012
Test Mode	:	D-Sub 1024*768@60Hz		

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	**34.850**	**19.81**	**15.70**	**0.84**	**36.35**	**40.00**	**3.65**
	94.020	22.52	11.15	1.78	35.45	43.50	8.05
	184.230	23.19	9.95	2.37	35.51	43.50	7.99
	233.700	20.18	11.23	2.56	33.97	46.00	12.03
	462.620	14.87	17.14	3.17	35.18	46.00	10.82
	774.960	14.52	20.34	3.84	38.70	46.00	7.30
Vertical	**152.220**	**26.12**	**10.37**	**2.24**	**38.73**	**43.50**	**4.77**
	211.390	24.33	10.26	2.47	37.06	43.50	6.44
	339.430	13.73	14.83	2.85	31.41	46.00	14.59
	466.500	16.81	17.19	3.17	37.17	46.00	8.83
	620.730	13.54	18.46	3.51	35.51	46.00	10.49
	774.960	16.01	20.34	3.84	40.19	46.00	5.81

TEST ENGINEER: RAVEN JIN

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	LTDN40K366WUS	Humidity :	60%RH	
Serial No.	:	E1207943-01/01	Date of Test :	Aug 18, 2012	
Test Mode	:	HDMI 1024*768@60Hz			

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	**35.820**	**20.10**	**15.19**	**0.84**	**36.13**	**40.00**	**3.87**
	72.680	19.48	10.08	1.47	31.03	40.00	8.97
	91.110	21.18	11.05	1.75	33.98	43.50	9.52
	154.160	15.53	10.34	2.25	28.12	43.50	15.38
	231.760	19.20	11.14	2.55	32.89	46.00	13.11
	497.540	14.44	17.58	3.27	35.29	46.00	10.71
Vertical	93.050	18.09	11.12	1.77	30.98	43.50	12.52
	140.580	22.42	10.60	2.18	35.20	43.50	8.30
	153.190	**26.01**	**10.36**	**2.24**	**38.61**	**43.50**	**4.89**
	186.170	20.86	9.93	2.38	33.17	43.50	10.33
	467.470	17.37	17.22	3.17	37.76	46.00	8.24
	774.960	16.01	20.34	3.84	40.19	46.00	5.81

TEST ENGINEER: RAVEN JIN

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	LTDN40K366WUS	Humidity :	60%RH
Serial No.	:	E1207943-01/01	Date of Test :	Aug 18, 2012
Test Mode	:	D-Sub 800*600@60Hz		

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	**34.850**	**20.55**	**15.70**	**0.84**	**37.09**	**40.00**	**2.91**
	90.140	20.49	11.00	1.73	33.22	43.50	10.28
	182.290	24.44	9.97	2.36	36.77	43.50	6.73
	226.910	21.50	10.93	2.53	34.96	46.00	11.04
	468.000	22.00	17.22	3.17	42.39	46.00	3.61
	773.020	13.67	20.34	3.84	37.85	46.00	8.15
Vertical	137.670	22.05	10.66	2.15	34.86	43.50	8.64
	184.230	20.59	9.95	2.37	32.91	43.50	10.59
	276.380	23.87	13.02	2.68	39.57	46.00	6.43
	468.000	**23.00**	**17.22**	**3.17**	**43.39**	**46.00**	**2.61**
	622.670	14.19	18.49	3.51	36.19	46.00	9.81
	780.780	11.58	20.40	3.86	35.84	46.00	10.16

TEST ENGINEER: RAVEN JIN

EUT	:	LED LCD TV	Temperature :	22℃	
Model No.	:	LTDN40K366WUS	Humidity	:	60%RH
Serial No.	:	E1207943-01/01	Date of Test	:	Aug 18, 2012
Test Mode	:	D-Sub 640*480@60Hz			

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	35.820	19.10	15.19	0.84	35.13	40.00	4.87
	67.830	20.93	9.70	1.36	31.99	40.00	8.01
	88.200	24.68	10.93	1.70	37.31	43.50	6.19
	223.030	19.59	10.76	2.51	32.86	46.00	13.14
	462.620	13.04	17.14	3.17	33.35	46.00	12.65
	740.800	**20.00**	**19.98**	**3.78**	**43.76**	**46.00**	**2.24**
Vertical	**85.290**	**23.27**	**10.80**	**1.66**	**35.73**	**40.00**	**4.27**
	148.340	26.14	10.44	2.22	38.80	43.50	4.70
	185.200	21.12	9.94	2.38	33.44	43.50	10.06
	234.670	19.00	11.28	2.56	32.84	46.00	13.16
	343.310	14.65	14.91	2.86	32.42	46.00	13.58
	464.560	16.39	17.17	3.17	36.73	46.00	9.27

TEST ENGINEER: RAVEN JIN

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	LTDN40K366WUS	Humidity :	60%RH
Serial No.	:	E1207943-01/01	Date of Test :	Aug 18, 2012
Test Mode	:	USB Play		

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	141.550	22.54	10.59	2.18	35.31	43.50	8.19
	186.170	21.76	9.93	2.38	34.07	43.50	9.43
	381.140	20.01	15.90	2.95	38.86	46.00	7.14
	445.160	14.58	16.90	3.11	34.59	46.00	11.41
	593.570	**17.73**	**18.17**	**3.45**	**39.35**	**46.00**	**6.65**
	741.980	14.85	19.98	3.78	38.61	46.00	7.39
Vertical	82.380	15.48	10.67	1.63	27.78	40.00	12.22
	185.200	**25.78**	**9.94**	**2.38**	**38.10**	**43.50**	**5.40**
	261.830	24.57	12.49	2.64	39.70	46.00	6.30
	381.140	19.63	15.90	2.95	38.48	46.00	7.52
	593.570	11.49	18.17	3.45	33.11	46.00	12.89
	889.420	12.26	20.33	4.89	37.48	46.00	8.52

TEST ENGINEER: RAVEN JIN

EUT	:	LED LCD TV	Temperature :	22℃
Model No.	:	LTDN40K366WUS	Humidity :	60%RH
Serial No.	:	E1207943-01/01	Date of Test :	Aug 18, 2012
Test Mode	:	LAN		

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	72.680	17.79	10.08	1.47	29.34	40.00	10.66
	182.290	23.53	9.97	2.36	35.86	43.50	7.64
	271.530	22.70	12.86	2.67	38.23	46.00	7.77
	397.630	21.89	16.24	2.98	41.11	46.00	4.89
	468.440	**20.99**	**17.22**	**3.19**	**41.40**	**46.00**	**4.60**
	872.930	15.74	20.37	4.60	40.71	46.00	5.29
Vertical	85.290	11.53	10.80	1.66	23.99	40.00	16.01
	145.430	15.25	10.50	2.20	27.95	43.50	15.55
	216.240	20.89	10.45	2.49	33.83	46.00	12.17
	255.040	18.79	12.22	2.63	33.64	46.00	12.36
	397.630	17.27	16.24	2.98	36.49	46.00	9.51
	470.380	**19.15**	**17.24**	**3.19**	**39.58**	**46.00**	**6.42**

TEST ENGINEER: RAVEN JIN

5 DEBUG DESCRIPTION

The following components are used during the countermeasure procedures:

Name	M/N	Manufacturer	Location
Ferrite Core	BNF-12\ZCAT1519-0830\ROH	FEELUX Rui Feng Electronic Co., Ltd. Hai An Magnetic Material No.2 Factory JIANGSU LETTALL ELECTRONICS CO., LTD.	See Internal Photos Figure 16
Ferrite Core	ZCAT2132-1130\ROH	FEELUX Rui Feng Electronic Co., Ltd. Hai An Magnetic Material No.2 Factory JIANGSU LETTALL ELECTRONICS CO., LTD.	See Internal Photos Figure 17
Gasket	35X0.7X41mm\VGA\ROH	Qingdao Joinset S&T Co., Ltd.	See Internal Photos Figure 18

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: Raven Jin

(RAVEN JIN)

6 DEVIATION TO TEST SPECIFICATIONS

None.