

Application for FCC Certificate
On Behalf of
LG Electronics U.S.A., Inc.

LCD Monitor

Model No.: E2342TA

Serial No.: 112NDTC87993

FCC ID : BEJE2342TA

Prepared For : LG Electronics U.S.A., Inc.
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NJ 07632, United States

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Report No. : ACI-F12011A2
Date of Test : Aug 14 – 16, 2012
Date of Report : Aug 21, 2012

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TEST REPORT FOR FCC CERTIFICATE

Applicant : LG Electronics U.S.A., Inc.
Manufacturer : LG Electronics Nanjing Display Co., Ltd.
EUT Description : LCD Monitor
(A) Model No. : E2342TA
(B) Serial No. : 112NDTC87993
(C) Power Supply : 120V/60Hz

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) and ICES-003, Issue 4 February 2004 (CISPR 22:2002) 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: E2342TA; S/N: 112NDTC87993) which was tested in 3m anechoic chamber Aug 14 – 16, 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.

Date of Test : Aug 14 – 16, 2012 Date of Report : Aug 21, 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 : LCD Monitor

Model No. : E2342TA

Serial No. : 112NDTC87993

Real Power : 25.30W

Note #1 : The different list for all the models are as follows:

Report No.	Model No.	Rev. Summary	Edition No.	Data of Rev.
ACI-F12011	E2342TA	Original Report	0	Jan 18, 2012
ACI-F12011A1	E2342TA	To change the main IC.	Rev. A1	Jul 25, 2012
ACI-F12011A2	E2342TA	To add two new adapters	Rev. A2	Aug 21, 2012

AC Adapter #1 : Manufacturer : LG
 Model Number : PSAB-L203A
 Input : 100-240V~, 50-60Hz 1.1A
 Output : 19V $\overline{\text{---}}$ 1.3A
 Output Cable : Unshielded, Undetachable, 1.8m, with one core

AC Adapter #2 : Manufacturer : LG
 Model Number : PSAB-L202*
 (* can be A, B, C, D,
 A, B, C, D stand for different AC plug type.
 PSAB-L202C was selected as the test model.)
 Input : 100-240V~, 50/60Hz 1.1A
 Output : 19V $\overline{\text{---}}$ 1.3A
 Output Cable : Unshielded, Undetachable, 1.8m, with one core

Note #2 : The above adapters are all the same except for the different type of AC input.
 The Adapter PSAB-L202C was selected and recorded in the report.

Adapter :

Original Adapter	New Adapter
Manufacturer : HONOR M/N : ADS-40SG-19-3 19025G	Manufacturer : LG M/N : PSAB-L203A
Manufacturer : HONOR M/N : ADS-40SG-19-3 19032G	Manufacturer : LG M/N : PSAB-L202*
Manufacturer : LIEN CHANG M/N : LCAP21	--
Manufacturer : LIEN CHANG M/N : LCAP21A	--
Manufacturer : LIEN CHANG M/N : LCAP26A-*	--
Manufacturer : LIEN CHANG M/N : LCAP26-*	--
Manufacturer : HONOR M/N : ADS-40FSG-19 19032G***-1	--
Manufacturer : HONOR M/N : ADS-40FSG-19 19025G***-1	--

Applicant : LG Electronics U.S.A., Inc.
No.346, YaoXin Road Economic&Technical Development Zone,
Nanjing, China

Manufacturer : LG Electronics Nanjing Display Co., Ltd.
No.346, YaoXin Road Economic&Technical Development Zone,
Nanjing, China

LCD Panel : Manufacturer : LG Display
M/N : LM230WF5

Max Resolution : 1920*1080@60Hz

D-Sub Cable #1 : Shielded, Detachable, 1.50m, with two cores on cable

D-Sub Cable #2 : Shielded, Detachable, 1.85m, with two cores in connector

DVI Cable #1 : Shielded, Detachable, 1.50m, with two cores on cable

DVI Cable #2 : Shielded, Detachable, 1.85m, with two cores in connector

Power Cord : Unshielded, Detachable, 1.50m

Note : The D-Sub cable #2 and DVI cable #2 were selected to be used in the test.

Remark:

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

- (1) One D-Sub Port : Connected with PC
- (2) One DVI Port : Connected with PC
- (3) One DC In Port : Connected with Adapter

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 Graphics Card (Used in PC)

Manufacturer : Asus
Model Number : EAH6670
Output port : DVI, D-Sub, HDMI

2.2.3 Printer

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

2.2.4 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

2.2.5 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

2.2.6 Modem

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

2.3 Description of Test Facility

Site Description : Sept. 17, 1998 file on
(Semi-Anechoic Chamber) 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

FCC registration Number : 91789

NVLAP Lab Code : 200371-0

2.4 Measurement Uncertainty

Conducted Emission Expanded Uncertainty: U = 3.42 dB

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)

Radiated Emission Expanded Uncertainty (Above 1GHz):
U= 4.50 dB (Horizontal)
U= 4.16 dB (Vertical)

3 CONDUCTED EMISSION TEST

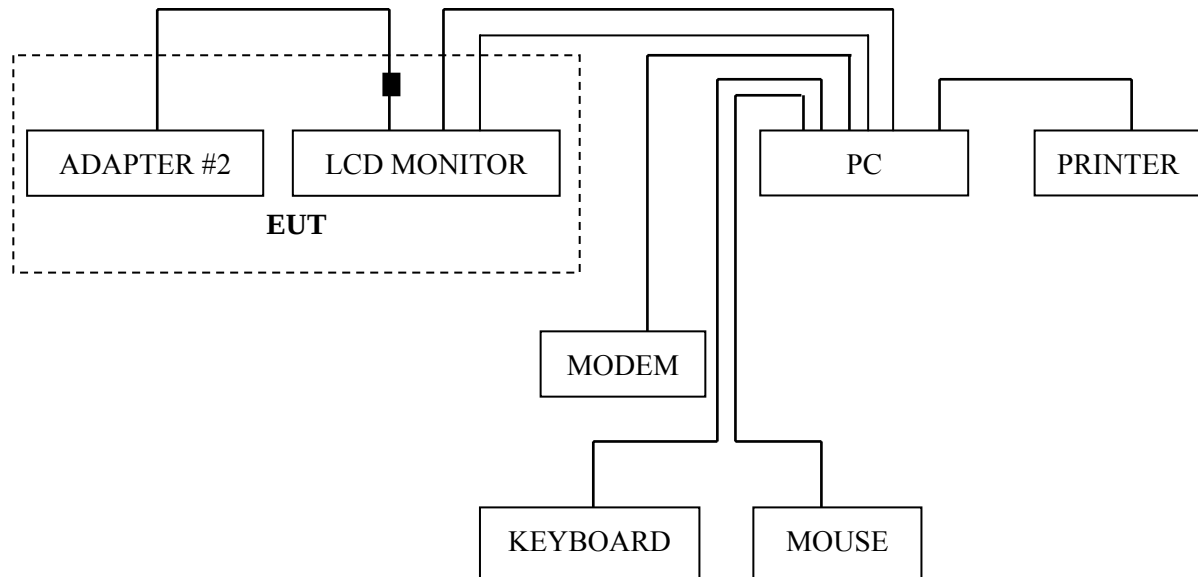
3.1 Test Equipment

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.	50 Ω Terminator	Anritsu	BNC	001	Mar 22, 2012	Mar 22, 2013
6.	Software	Audix	E3	SET00200 9804M592	--	--

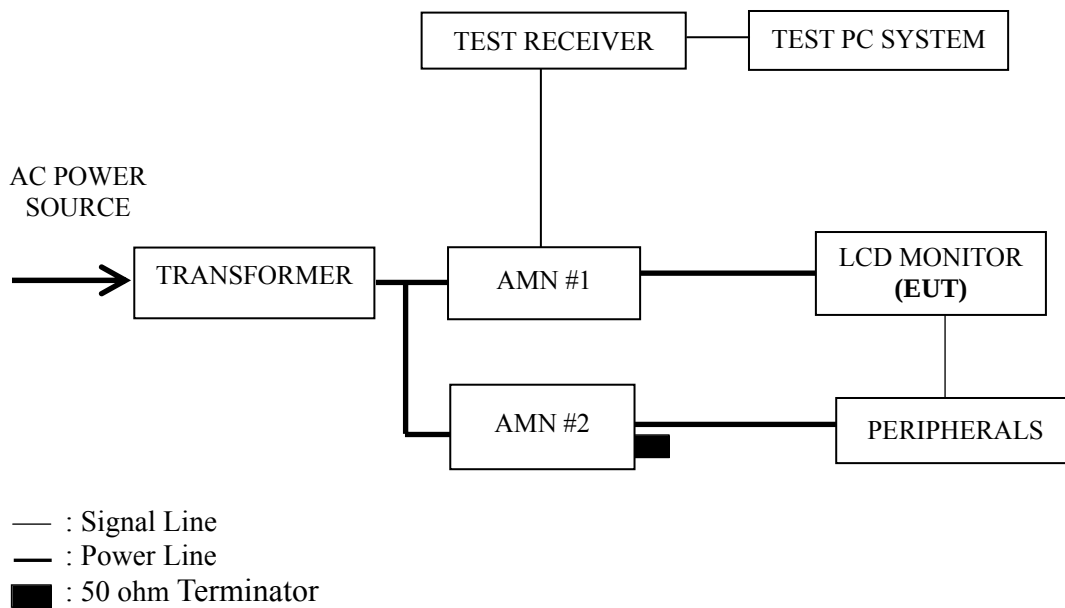
3.2 Block Diagram of Test Setup

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 (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 (we use white letters on a black background to represent all colors), the EUT's screen displayed and filled with "H" pattern by its resolution (Via D-Sub/DVI Input).

3.5.5 Repeat above procedure from 3.5.3 to 3.5.4 for difference test mode.

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

3.5.7 The test modes are as follows:

Test Mode
D-Sub 1920*1080@60Hz
DVI 1920*1080@60Hz
DVI 1680*1050@60Hz
DVI 1280*1024@75Hz
DVI 640*480@60Hz

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	Page
D-Sub 1920*1080@60Hz	P13
DVI 1920*1080@60Hz	P14
DVI 1680*1050@60Hz	P15
DVI 1280*1024@75Hz	P16
DVI 640*480@60Hz	P17

NOTE 1 – The **bold test mode** listed above means the worst test mode.

NOTE 2 – Factor = Cable Loss + AMN Factor.

NOTE 3 – Emission Level = Meter Reading + Factor.

NOTE 4 – “QP” means “Quasi-Peak” values, “AV” means “Average” values.

NOTE 5 – The worst case is for DVI 1920*1080@60Hz test mode. The worst emission is detected at 15.552 MHz (Quasi-Peak Value) with corrected signal level of 37.53 dB (μV) (limit is 50.00 dB (μV)), when the Neutral of the EUT is connected to AMN.

EUT : LCD Monitor Temperature : 22°C

Model No. : E2342TA Humidity : 48%RH

Serial No. : 112NDTC87993 Date of Test : Aug 14, 2012

Test Mode : D-Sub 1920*1080@60Hz Adapter #2 : PSAB-L202C

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.188	48.76	0.25	49.01	64.11	15.10	QP
	0.343	42.41	0.31	42.72	59.13	16.41	
	0.686	36.23	0.19	36.42	56.00	19.58	
	3.799	34.40	0.48	34.88	56.00	21.12	
	9.451	35.12	0.73	35.85	60.00	24.15	
	15.885	43.96	0.85	44.81	60.00	15.19	
	0.188	38.40	0.25	38.65	54.11	15.46	AV
	0.343	32.80	0.31	33.11	49.13	16.02	
	0.686	27.80	0.19	27.99	46.00	18.01	
	3.799	24.80	0.48	25.28	46.00	20.72	
	9.451	25.80	0.73	26.53	50.00	23.47	
	15.885	33.80	0.85	34.65	50.00	15.35	
Neutral	0.186	49.56	0.12	49.68	64.20	14.52	QP
	0.339	42.56	0.14	42.70	59.22	16.52	
	0.694	35.02	0.20	35.22	56.00	20.78	
	3.759	35.51	0.38	35.89	56.00	20.11	
	9.451	34.15	0.49	34.64	60.00	25.36	
	15.552	45.10	0.73	45.83	60.00	14.17	
	0.186	38.40	0.12	38.52	54.20	15.68	AV
	0.339	32.80	0.14	32.94	49.22	16.28	
	0.694	26.80	0.20	27.00	46.00	19.00	
	3.759	25.50	0.38	25.88	46.00	20.12	
	9.451	25.60	0.49	26.09	50.00	23.91	
	15.552	35.30	0.73	36.03	50.00	13.97	

TEST ENGINEER: SAWEN LI

EUT : LCD Monitor Temperature : 22°C

Model No. : E2342TA Humidity : 48%RH

Serial No. : 112NDTC87993 Date of Test : Aug 14, 2012

Test Mode : DVI 1920*1080@60Hz Adapter #2 : PSAB-L202C

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.188	48.63	0.25	48.88	64.11	15.23	QP
	0.343	42.48	0.31	42.79	59.13	16.34	
	0.686	35.23	0.19	35.42	56.00	20.58	
	3.799	33.67	0.48	34.15	56.00	21.85	
	9.757	34.18	0.73	34.91	60.00	25.09	
	15.718	44.02	0.84	44.86	60.00	15.14	
	0.188	38.60	0.25	38.85	54.11	15.26	AV
	0.343	30.90	0.31	31.21	49.13	17.92	
	0.686	27.50	0.19	27.69	46.00	18.31	
	3.799	22.50	0.48	22.98	46.00	23.02	
	9.757	23.20	0.73	23.93	50.00	26.07	
	15.718	32.81	0.84	33.65	50.00	16.35	
Neutral	0.188	49.38	0.12	49.50	64.11	14.61	QP
	0.343	42.62	0.14	42.76	59.13	16.37	
	0.694	35.86	0.20	36.06	56.00	19.94	
	3.799	35.09	0.38	35.47	56.00	20.53	
	9.451	34.91	0.49	35.40	60.00	24.60	
	15.552	44.36	0.73	45.09	60.00	14.91	
	0.188	39.90	0.12	40.02	54.11	14.09	AV
	0.343	34.60	0.14	34.74	49.13	14.39	
	0.694	24.20	0.20	24.40	46.00	21.60	
	3.799	22.90	0.38	23.28	46.00	22.72	
	9.451	21.60	0.49	22.09	50.00	27.91	
	15.552	36.80	0.73	37.53	50.00	12.47	

TEST ENGINEER: SAWEN LI

EUT : LCD Monitor Temperature : 22°C

Model No. : E2342TA Humidity : 48%RH

Serial No. : 112NDTC87993 Date of Test : Aug 14, 2012

Test Mode : DVI 1680*1050@60Hz Adapter #2 : PSAB-L202C

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.188	46.73	0.25	46.98	64.11	17.13	QP
	0.343	40.38	0.31	40.69	59.13	18.44	
	0.686	34.06	0.19	34.25	56.00	21.75	
	3.720	32.17	0.48	32.65	56.00	23.35	
	10.676	32.92	0.73	33.65	60.00	26.35	
	15.718	42.14	0.84	42.98	60.00	17.02	
	0.188	36.80	0.25	37.05	54.11	17.06	AV
	0.343	31.50	0.31	31.81	49.13	17.32	
	0.686	25.70	0.19	25.89	46.00	20.11	
	3.720	20.50	0.48	20.98	46.00	25.02	
	10.676	22.81	0.73	23.54	50.00	26.46	
	15.718	31.31	0.84	32.15	50.00	17.85	
Neutral	0.188	47.38	0.12	47.50	64.11	16.61	QP
	0.343	40.61	0.14	40.75	59.13	18.38	
	0.686	34.23	0.20	34.43	56.00	21.57	
	3.799	32.87	0.38	33.25	56.00	22.75	
	9.654	32.18	0.49	32.67	60.00	27.33	
	15.718	43.04	0.73	43.77	60.00	16.23	
	0.188	35.50	0.12	35.62	54.11	18.49	AV
	0.343	29.80	0.14	29.94	49.13	19.19	
	0.686	24.80	0.20	25.00	46.00	21.00	
	3.799	22.90	0.38	23.28	46.00	22.72	
	9.654	22.00	0.49	22.49	50.00	27.51	
	15.718	33.51	0.73	34.24	50.00	15.76	

TEST ENGINEER: SAWEN LI

EUT : LCD Monitor Temperature : 22°C

Model No. : E2342TA Humidity : 48%RH

Serial No. : 112NDTC87993 Date of Test : Aug 14, 2012

Test Mode : DVI 1280*1024@75Hz Adapter #2 : PSAB-L202C

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.188	46.73	0.25	46.98	64.11	17.13	QP
	0.339	40.47	0.31	40.78	59.22	18.44	
	0.686	34.13	0.19	34.32	56.00	21.68	
	3.799	32.79	0.48	33.27	56.00	22.73	
	9.451	32.17	0.73	32.90	60.00	27.10	
	15.718	42.56	0.84	43.40	60.00	16.60	
	0.188	36.80	0.25	37.05	54.11	17.06	AV
	0.339	30.90	0.31	31.21	49.22	18.01	
	0.686	26.90	0.19	27.09	46.00	18.91	
	3.799	18.40	0.48	18.88	46.00	27.12	
	9.451	22.20	0.73	22.93	50.00	27.07	
	15.718	32.61	0.84	33.45	50.00	16.55	
Neutral	0.186	47.44	0.12	47.56	64.20	16.64	QP
	0.343	40.61	0.14	40.75	59.13	18.38	
	0.686	34.17	0.20	34.37	56.00	21.63	
	3.799	34.05	0.38	34.43	56.00	21.57	
	10.676	32.76	0.49	33.25	60.00	26.75	
	15.718	42.63	0.73	43.36	60.00	16.64	
	0.186	37.20	0.12	37.32	54.20	16.88	AV
	0.343	30.80	0.14	30.94	49.13	18.19	
	0.686	24.80	0.20	25.00	46.00	21.00	
	3.799	23.30	0.38	23.68	46.00	22.32	
	10.676	20.91	0.49	21.40	50.00	28.60	
	15.718	30.51	0.73	31.24	50.00	18.76	

TEST ENGINEER: SAWEN LI

EUT : LCD Monitor Temperature : 22°C

Model No. : E2342TA Humidity : 48%RH

Serial No. : 112NDTC87993 Date of Test : Aug 14, 2012

Test Mode : DVI 640*480@60Hz Adapter #2 : PSAB-L202C

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.186	46.89	0.25	47.14	64.20	17.06	QP
	0.343	40.10	0.31	40.41	59.13	18.72	
	0.686	33.97	0.19	34.16	56.00	21.84	
	3.901	31.66	0.49	32.15	56.00	23.85	
	9.757	31.31	0.73	32.04	60.00	27.96	
	15.718	42.10	0.84	42.94	60.00	17.06	
	0.186	35.50	0.25	35.75	54.20	18.45	AV
	0.343	29.90	0.31	30.21	49.13	18.92	
	0.686	20.80	0.19	20.99	46.00	25.01	
	3.901	20.79	0.49	21.28	46.00	24.72	
	9.757	20.50	0.73	21.23	50.00	28.77	
	15.718	31.11	0.84	31.95	50.00	18.05	
Neutral	0.186	47.38	0.12	47.50	64.20	16.70	QP
	0.343	40.72	0.14	40.86	59.13	18.27	
	0.686	34.18	0.20	34.38	56.00	21.62	
	3.720	33.05	0.38	33.43	56.00	22.57	
	9.451	32.15	0.49	32.64	60.00	27.36	
	15.718	43.05	0.73	43.78	60.00	16.22	
	0.186	35.60	0.12	35.72	54.20	18.48	AV
	0.343	27.50	0.14	27.64	49.13	21.49	
	0.686	24.80	0.20	25.00	46.00	21.00	
	3.720	23.80	0.38	24.18	46.00	21.82	
	9.451	22.15	0.49	22.64	50.00	27.36	
	15.718	33.51	0.73	34.24	50.00	15.76	

TEST ENGINEER: SAWEN LI

4 RADIATED EMISSION TEST

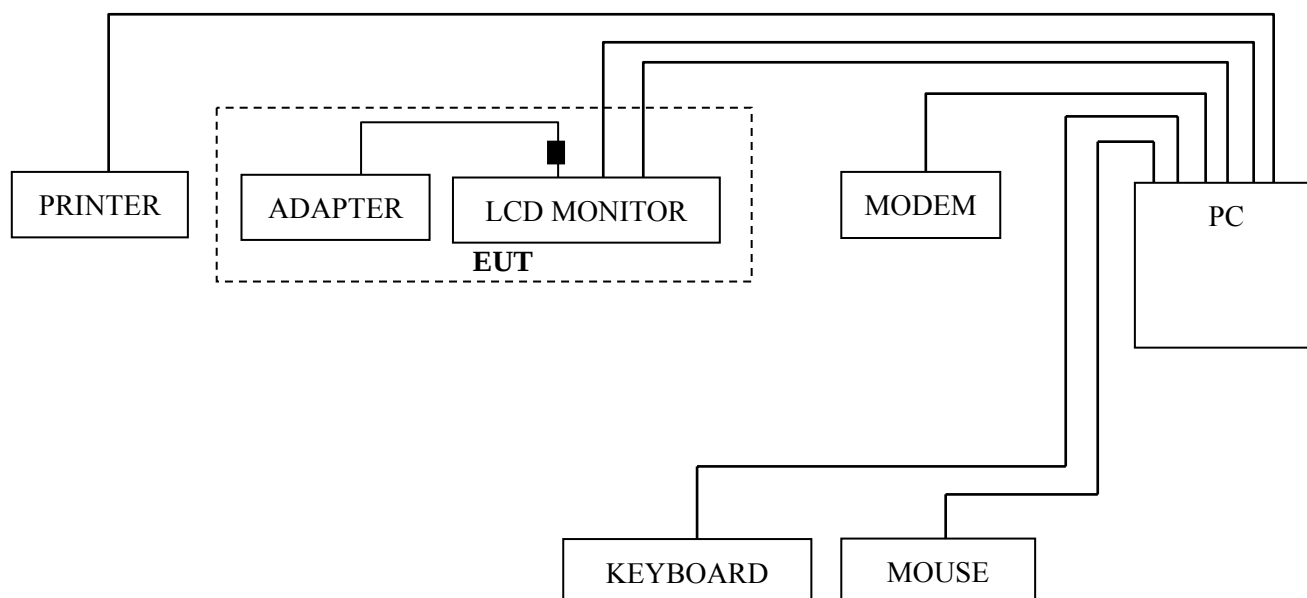
4.1 Test Equipment

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.	Preamplifier	HP	8449B	3008A00864	Mar 22, 2012	Mar 22, 2013
4.	Bi-log Antenna	TESEQ	CBL6112D	23192	Dec 01, 2011	Dec 01, 2012
5.	Horn Antenna	EMCO	3115	9607-4878	May 03, 2012	May 03, 2013
6.	Spectrum	Agilent	E7405A	MY45106600	Mar 22, 2012	Mar 22, 2013
7.	50 Ω Coaxial Switch	Anritsu	MP59B	6200426390	Mar 18, 2012	Sep 18, 2012
8.	Software	Audix	E3	SET00200 9912M295-2	--	--

4.2 Block Diagram of Test Setup

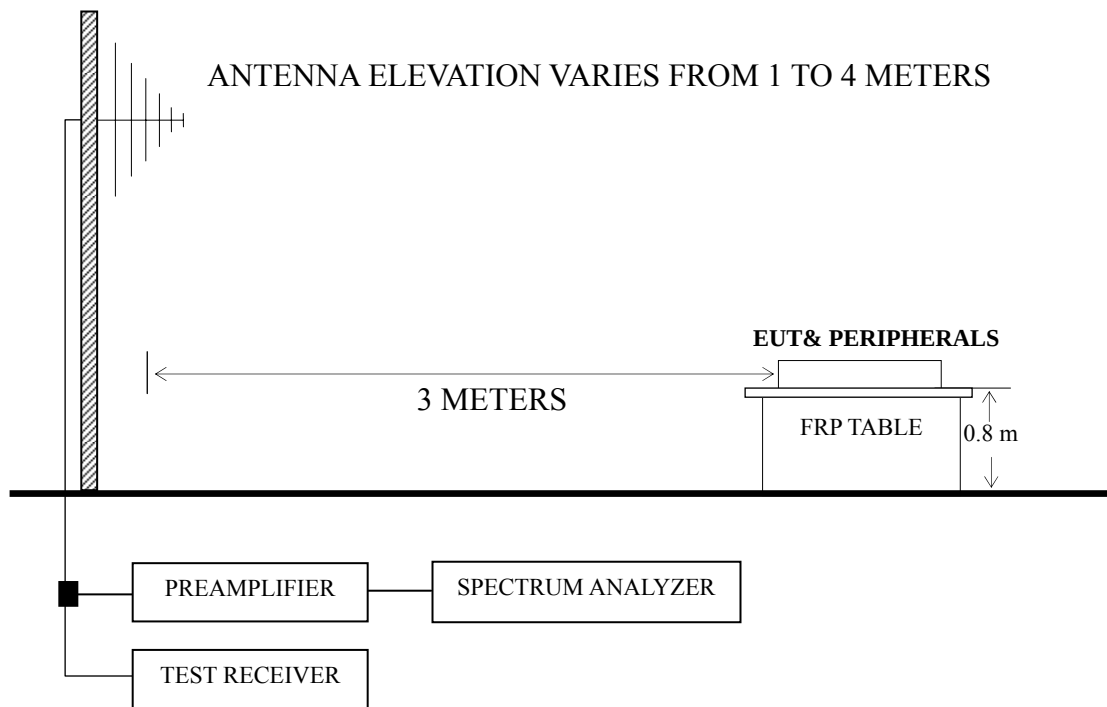
4.2.1 EUT and Peripherals



■ : Ferrite core

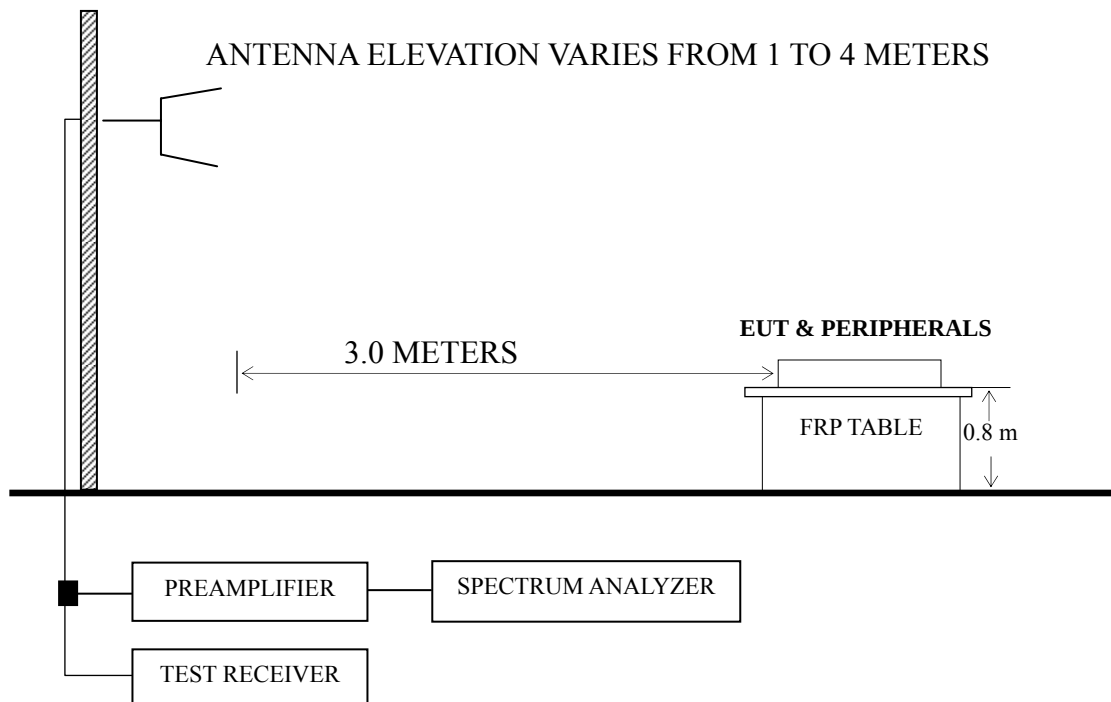
4.2.2 Radiated emission test setup

4.2.2.1 Below 1GHz



■ : 50 ohm Coaxial Switch

4.2.2.2 Above 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 below or equal to 1GHz and Average value detector above 1GHz. 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) or Horn 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 below 1GHz and The Spectrum Agilent E7405A was set at 1MHz above 1GHz.

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

The frequency range from 1 GHz to 2 GHz was checked for worst test mode in 30 – 1000 MHz test.

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 1920*1080@60Hz	P23 – P24
DVI 1920*1080@60Hz	P25
D-Sub 1680*1050@60Hz	P26
D-Sub 1280*1024@75Hz	P27
D-Sub 640*480@60Hz	P28

NOTE 1 – **The bold test mode** listed above means the worst test mode.

NOTE 2 – Emission Level = Antenna Factor + Cable Loss + Meter Reading.(< 1GHz)

NOTE 3 – Emission Level = Antenna Factor + Cable Loss – Preamp Factor + Meter Reading.(> 1GHz)

NOTE 4 – All readings are Quasi-Peak values below or equal to 1GHz, Peak and Average values above 1GHz.

NOTE 5 – The emission levels that are 20dB below the official limit are not reported.

NOTE 6 – 0° was the table front facing the antenna. Degree is calculated

NOTE 7 – The worst case is for D-Sub 1920*1080@60Hz test mode. The worst emission at horizontal polarization was detected at 83.350 MHz with corrected signal level of 34.58 dB (μV/m) (limit is 40.00 dB (μV/m)), when the antenna was 1.20 m height and the turntable was at 250°. The worst emission at vertical polarization was detected at 215.270 MHz with corrected signal level of 40.80 dB (μV/m) (limit is 43.50 dB (μV/m)), when the antenna was 1.20 m height and the turntable was at 120°.

EUT : LCD Monitor Temperature : 22°C

Model No. : E2342TA Humidity : 60%RH

Serial No. : 112NDTC87993 Date of Test : Aug 16, 2012

Test Mode : D-Sub 1920*1080@60Hz Adapter #2 : PSAB-L202C

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	50.370	17.38	8.51	0.93	--	26.82	40.00	13.18	QP
	83.350	22.24	10.70	1.64	--	34.58	40.00	5.42	
	116.330	18.65	11.07	2.00	--	31.72	43.50	11.78	
	281.230	20.61	13.17	2.70	--	36.48	46.00	9.52	
	347.190	21.71	15.04	2.88	--	39.63	46.00	6.37	
	395.690	17.80	16.20	2.98	--	36.98	46.00	9.02	
	1075.000	55.88	22.16	5.27	38.04	45.27	74.00	28.73	PK
	1250.000	50.46	24.05	5.42	37.65	42.28	74.00	31.72	
	1365.000	51.43	24.80	5.55	37.33	44.45	74.00	29.55	
	1465.000	46.20	26.11	5.72	37.06	40.97	74.00	33.03	
	1595.000	47.72	26.41	5.93	36.77	43.29	74.00	30.71	
	1760.000	50.18	26.96	6.17	36.49	46.82	74.00	27.18	
	1075.000	44.88	22.16	5.27	38.04	34.27	54.00	19.73	AV
	1250.000	35.46	24.05	5.42	37.65	27.28	54.00	26.72	
	1365.000	38.43	24.80	5.55	37.33	31.45	54.00	22.55	
	1465.000	35.20	26.11	5.72	37.06	29.97	54.00	24.03	
	1595.000	38.72	26.41	5.93	36.77	34.29	54.00	19.71	
	1760.000	36.18	26.96	6.17	36.49	32.82	54.00	21.18	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2342TA Humidity : 60%RH

Serial No. : 112NDTC87993 Date of Test : Aug 16, 2012

Test Mode : D-Sub 1920*1080@60Hz Adapter #2 : PSAB-L202C

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Vertical	50.370	27.33	8.51	0.93	--	36.77	40.00	3.23	QP
	116.330	23.05	11.07	2.00	--	36.12	43.50	7.38	
	215.270	27.90	10.41	2.49	--	40.80	43.50	2.70	
	275.410	21.51	12.98	2.68	--	37.17	46.00	8.83	
	347.190	22.77	15.04	2.88	--	40.69	46.00	5.31	
	593.570	13.97	18.17	3.45	--	35.59	46.00	10.41	
	1080.000	46.24	22.24	5.27	38.03	35.72	74.00	38.28	PK
	1170.000	44.47	23.38	5.34	37.83	35.36	74.00	38.64	
	1315.000	46.87	24.50	5.51	37.48	39.40	74.00	34.60	
	1465.000	41.26	26.11	5.72	37.06	36.03	74.00	37.97	
	1600.000	44.52	26.40	5.93	36.76	40.09	74.00	33.91	
	1760.000	46.08	26.96	6.17	36.49	42.72	74.00	31.28	
	1080.000	37.24	22.24	5.27	38.03	26.72	54.00	27.28	AV
	1170.000	29.47	23.38	5.34	37.83	20.36	54.00	33.64	
	1315.000	35.87	24.50	5.51	37.48	28.40	54.00	25.60	
	1465.000	27.26	26.11	5.72	37.06	22.03	54.00	31.97	
	1600.000	33.52	26.40	5.93	36.76	29.09	54.00	24.91	
	1760.000	30.08	26.96	6.17	36.49	26.72	54.00	27.28	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2342TA Humidity : 60%RH

Serial No. : 112NDTC87993 Date of Test : Aug 16, 2012

Test Mode : DVI 1920*1080@60Hz Adapter #2 : PSAB-L202C

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	65.890	22.87	9.55	1.32	33.74	40.00	6.26
	86.260	22.39	10.83	1.68	34.90	40.00	5.10
	137.670	24.29	10.66	2.15	37.10	43.50	6.40
	206.540	24.72	10.04	2.45	37.21	43.50	6.29
	343.310	23.56	14.91	2.86	41.33	46.00	4.67
	742.950	18.61	19.98	3.78	42.37	46.00	3.63
Vertical	65.890	16.32	9.55	1.32	27.19	40.00	12.81
	209.450	25.84	10.18	2.46	38.48	43.50	5.02
	446.130	19.40	16.92	3.11	39.43	46.00	6.57
	500.450	13.32	17.60	3.27	34.19	46.00	11.81
	593.570	14.21	18.17	3.45	35.83	46.00	10.17
	891.360	16.55	20.32	4.89	41.76	46.00	4.24

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2342TA Humidity : 60%RH

Serial No. : 112NDTC87993 Date of Test : Aug 16, 2012

Test Mode : D-Sub 1680*1050@60Hz Adapter #2 : PSAB-L202C

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	71.710	22.12	9.99	1.45	33.56	40.00	6.44
	84.320	18.01	10.75	1.64	30.40	40.00	9.60
	144.460	20.81	10.52	2.19	33.52	43.50	9.98
	206.540	25.53	10.04	2.45	38.02	43.50	5.48
	288.020	25.81	13.39	2.72	41.92	46.00	4.08
	395.690	15.76	16.20	2.98	34.94	46.00	11.06
Vertical	71.710	24.86	9.99	1.45	36.30	40.00	3.70
	131.850	21.71	10.78	2.11	34.60	43.50	8.90
	180.350	25.29	9.99	2.36	37.64	43.50	5.86
	264.740	24.20	12.62	2.65	39.47	46.00	6.53
	348.160	22.71	15.09	2.88	40.68	46.00	5.32
	481.050	18.52	17.39	3.21	39.12	46.00	6.88

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2342TA Humidity : 60%RH

Serial No. : 112NDTC87993 Date of Test : Aug 16, 2012

Test Mode : D-Sub 1280*1024@75Hz Adapter #2 : PSAB-L202C

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	60.070	25.44	9.14	1.19	35.77	40.00	4.23
	74.620	24.61	10.21	1.51	36.33	40.00	3.67
	180.350	26.29	9.99	2.36	38.64	43.50	4.86
	270.560	26.04	12.82	2.67	41.53	46.00	4.47
	433.520	16.30	16.74	3.08	36.12	46.00	9.88
	540.220	14.20	17.84	3.34	35.38	46.00	10.62
Vertical	74.620	19.49	10.21	1.51	31.21	40.00	8.79
	180.350	24.38	9.99	2.36	36.73	43.50	6.77
	194.900	25.76	9.84	2.41	38.01	43.50	5.49
	224.970	29.56	10.84	2.52	42.92	46.00	3.08
	344.280	20.13	14.96	2.86	37.95	46.00	8.05
	450.010	15.20	16.98	3.13	35.31	46.00	10.69

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2342TA Humidity : 60%RH

Serial No. : 112NDTC87993 Date of Test : Aug 16, 2012

Test Mode : D-Sub 640*480@60Hz Adapter #2 : PSAB-L202C

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	86.260	22.37	10.83	1.68	34.88	40.00	5.12
	216.240	24.46	10.45	2.49	37.40	46.00	8.60
	288.020	22.50	13.39	2.72	38.61	46.00	7.39
	359.800	16.34	15.41	2.90	34.65	46.00	11.35
	510.150	17.18	17.66	3.28	38.12	46.00	7.88
	800.180	6.11	20.60	3.88	30.59	46.00	15.41
Vertical	69.770	13.40	9.85	1.41	24.66	40.00	15.34
	142.520	13.86	10.56	2.18	26.60	43.50	16.90
	216.240	25.59	10.45	2.49	38.53	46.00	7.47
	290.930	18.12	13.46	2.74	34.32	46.00	11.68
	450.010	10.30	16.98	3.13	30.41	46.00	15.59
	500.450	8.36	17.60	3.27	29.23	46.00	16.77

TEST ENGINEER: RAVEN JIN

5 DEVIATION TO TEST SPECIFICATIONS

None.