

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

LCD Monitor

Model No.: E2050TV

Serial No.: E2009111306

FCC ID : BEJE2050TV

Prepared For : LG Electronics U.S.A., Inc.
1000 Sylvan Avenue, Englewood Cliffs,
NJ 07632, United States

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

Tel: +86-21-64955500
Fax: +86-21-64955491

Report No. : ACI-F09116
Date of Test : Nov 06 – 17, 2009
Date of Report : Nov 26, 2009

TABLE OF CONTENTS

	Page
1 SUMMARY OF STANDARDS AND RESULTS.....	4
1.1 Description of Standards and Results.....	4
2 GENERAL INFORMATION.....	5
2.1 Description of Equipment Under Test.....	5
2.2 Peripherals.....	6
2.3 Description of Test Facility.....	7
2.4 Measurement Uncertainty.....	7
3 CONDUCTED EMISSION TEST.....	8
3.2 Block Diagram of Test Setup.....	8
3.3 Conducted Emission Limit [FCC Part 15 Subpart B 15.107(a)].....	9
3.4 Test Configuration.....	9
3.5 Operating Condition of EUT.....	10
3.6 Test Procedures.....	10
3.7 Test Results.....	11
4 RADIATED EMISSION TEST.....	24
4.1 Test Equipment.....	24
4.2 Block Diagram of Test Setup.....	24
4.3 Radiated Emission Limit [FCC Part 15 Subpart B 15.109(a)].....	25
4.4 Test Configuration.....	25
4.5 Operating Condition of EUT.....	26
4.6 Test Procedures.....	26
4.7 Test Results.....	27
5 DEVIATION TO TEST SPECIFICATIONS.....	40
6 DEBUG DESCRIPTION.....	41

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. : E2050TV
(B) Serial No. : E2009111306
(C) Power Supply : 120V/60Hz

Test Procedure Used:

*FCC RULES AND REGULATIONS PART 15 SUBPART B CLASS B OCTOBER 2008
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: E2050TV; S/N: E2009111306) which was tested in 3m anechoic chamber Nov 06 – 17, 2009 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.

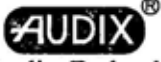
This report contains data that are not covered by the NVLAP accreditation.

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 : Nov 06 – 17, 2009 Date of Report : Nov 26, 2009

Producer : Kathy Wang
KATHY WANG / Assistant

Review : Dio Yang
DIO YANG / Deputy Assistant Manager

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

Signatory : Sammy Chen
Authorized Signature EMC SAMMY CHEN / Assistant 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 2008 AND ANSI C63.4-2003	15.107(a) Class B	Pass
Radiated Disturbance	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2008 AND ANSI C63.4-2003	15.109(a) Class B	Pass

2 GENERAL INFORMATION

2.1 Description of Equipment Under Test

Description	:	LCD Monitor
Type of EUT	:	☒ Production ☐ Pre-product ☐ Pro-type
Model No.	:	E2050TV
Serial No.	:	E2009111306
Real Power	:	21.00W for Adapter: ADS-24NP-12 1 24 22.00W for Adapter: DSA-36W-12 1 24
Applicant	:	LG Electronics U.S.A., Inc. 1000 Sylvan Avenue, Englewood Cliffs, NJ 07632, United States
Manufacturer	:	LG Electronics Nanjing Display Co., Ltd. No.346, Yao Xin Road, Economic & Technical Development Zone, Nanjing, China
LCD Panel	:	Manufacturer : LG Display M/N : LM200WD3 (TL) (A1)
Adapter #1	:	Switching Adapter Manufacturer: HONOR ELECTRONIC CO., LTD. M/N : ADS-24NP-12-1 12024G Input : 100-240V ~ 50/60Hz, 0.7A Output : 12V $\overline{\text{---}}$ 2.0A Output Cable: Unshielded, Undetachable, 1.80m, with one core
Adapter #2	:	Switching Adapter Manufacturer: DEE VAN ELECTRONICS (SHENZHEN) CO., LTD. M/N : DSA-36W-12 1 24 Input : 100-240V ~ 50/60Hz, 1.0A Output : +12V $\overline{\text{---}}$ 2A Output Cable: Unshielded, Undetachable, 1.20m, without core
Max Resolution	:	1600*900@60Hz
D-Sub Cable #1	:	Shielded, Detachable, 1.85m, with two cores on cable
D-Sub Cable #2	:	Shielded, Detachable, 1.85m, with two cores in connector

DVI Cable #1	:	Shielded, Detachable, 1.85m, with two cores on cable
DVI Cable #2	:	Shielded, Detachable, 1.85m, with two cores in connector
Power Cord	:	Unshielded, Detachable, 1.80m
Note	:	After evaluation, the D-Sub cable#1 and DVI cable#1 were used in the test for they will cause the maximum emission.

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 #1

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 PC #2

Manufacturer	:	HP
Model Number	:	dx7400MT
Serial Number	:	CNG8130K89
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))

2.2.3 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, 1.85m.
Certificate : FCC DoC, VCCI, CE/EMC, MIC, GS

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

Note: PC #2 was used in Radiated Emission test while PC #1 was used in Conducted Emission test.

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

NVLAP Lab Code : 200371-0

2.4 Measurement Uncertainty

Conducted Emission Expanded Uncertainty: U = 1.26 dB
Radiated Emission Expanded Uncertainty : U = 3.02 dB

3 CONDUCTED EMISSION TEST

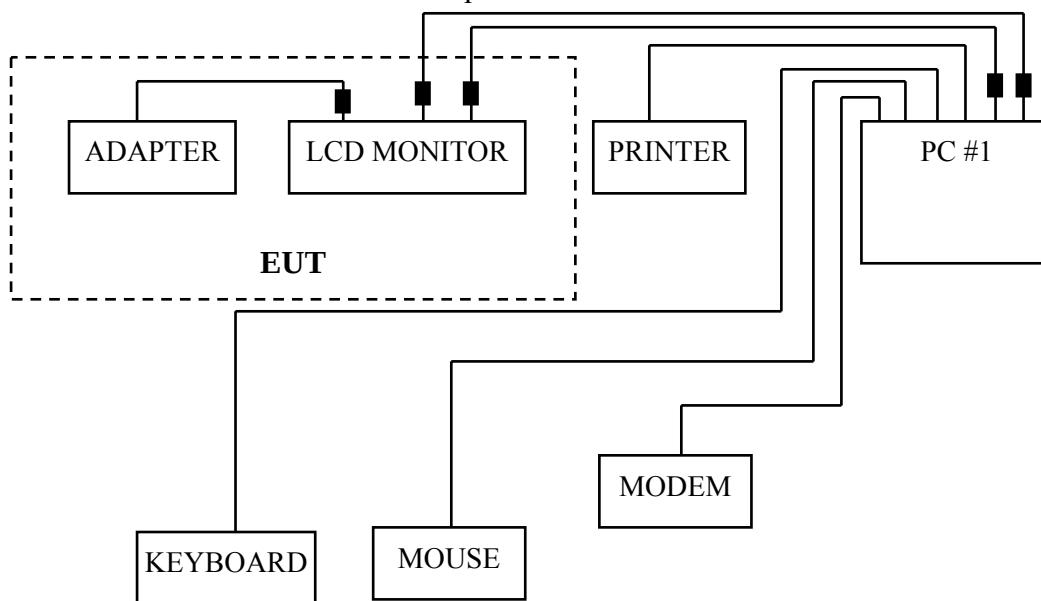
3.1.1 Test Equipment

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	Oct 15, 2009	Oct 15, 2010
2.	Artificial Mains Network (AMN)	R&S	ESH2-Z5	843890/011	Apr 02, 2009	Apr 02, 2010
3.	Line Impedance Stabilization Network (LISN)	Kyoritsu	KNW-407	8-1280-4	Apr 02, 2009	Apr 02, 2010
4.	50 Ω Coaxial Switch	Anritsu	MP59B	6200426389	Sep 19, 2009	Mar 19, 2010
5.	50 Ω Terminator	Anritsu	BNC	001	Apr 02, 2009	Apr 02, 2010
6.	Software	Audix	E3	SET00200 9804M592	--	--

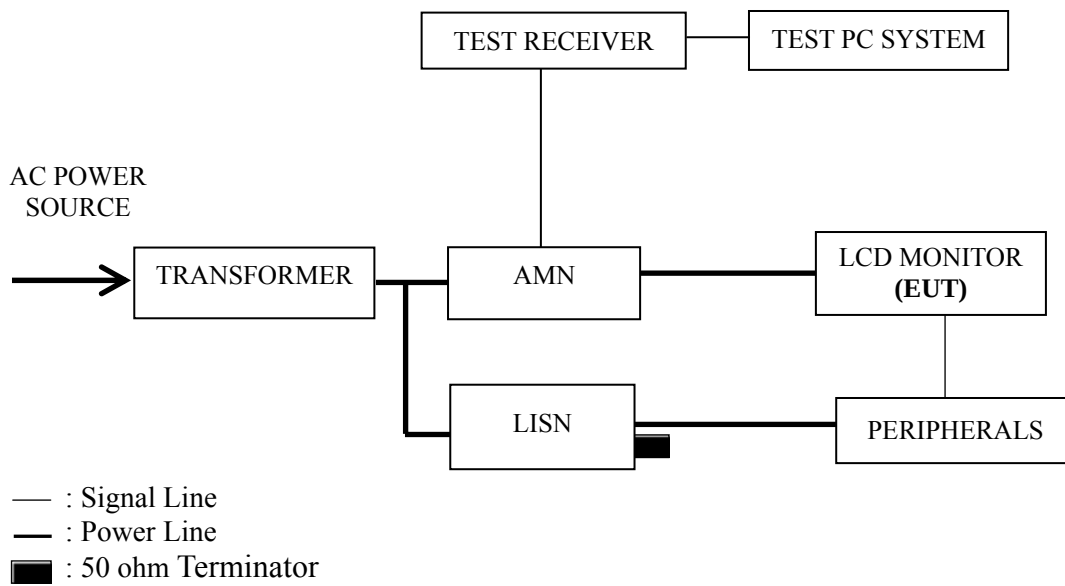
3.2 Block Diagram of Test Setup

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, the EUT’s screen displayed and filled with “H” pattern by its resolution (Via D-Sub or 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:

Adapter	Test Mode
ADS-24NP-12-1 12024G	D-Sub 640*480@60Hz
	D-Sub 1024*768@60Hz
	D-Sub 1600*900@60Hz
	DVI 640*480@60Hz
	DVI 1024*768@60Hz
	DVI 1600*900@60Hz
DSA-36W-12 1 24	D-Sub 640*480@60Hz
	D-Sub 1024*768@60Hz
	D-Sub 1600*900@60Hz
	DVI 640*480@60Hz
	DVI 1024*768@60Hz
	DVI 1600*900@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.

Adapter	Test Mode	Data Page
ADS-24NP-12-1 12024G	D-Sub 640*480@60Hz	P12
	D-Sub 1024*768@60Hz	P13
	D-Sub 1600*900@60Hz	P14
	DVI 640*480@60Hz	P15
	DVI 1024*768@60Hz	P16
	DVI 1600*900@60Hz	P17
DSA-36W-12 1 24	D-Sub 640*480@60Hz	P18
	D-Sub 1024*768@60Hz	P19
	D-Sub 1600*900@60Hz	P20
	DVI 640*480@60Hz	P21
	DVI 1024*768@60Hz	P22
	DVI 1600*900@60Hz	P23

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 640*480@60Hz test mode (Adapter: ADS-24NP-12 1 24). The worst emission is detected at 0.176 MHz (Quasi-Peak Value) with corrected signal level of 56.33 dB (μV) (limit is 64.68 dB (μV)), when the Line the EUT is connected to AMN.

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050TV Humidity : 48%RH

Serial No. : E2009111306 Date of Test : Nov 17, 2009

Test Mode : D-Sub 640*480@60Hz Adapter : ADS-24NP-12-1
12024G

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.162	53.95	0.23	54.18	65.34	11.16	QP
	0.325	40.21	0.26	40.47	59.57	19.10	
	1.043	33.88	0.30	34.18	56.00	21.82	
	2.650	33.43	0.39	33.82	56.00	22.18	
	5.277	28.99	0.44	29.43	60.00	30.57	
	10.233	27.37	0.49	27.86	60.00	32.14	
	0.162	40.41	0.23	40.64	55.34	14.70	AV
	0.325	28.72	0.26	28.98	49.57	20.59	
	1.043	21.50	0.30	21.80	46.00	24.20	
	2.650	22.53	0.39	22.92	46.00	23.08	
	5.277	19.28	0.44	19.72	50.00	30.28	
	10.233	19.28	0.49	19.77	50.00	30.23	
Neutral	0.162	53.64	0.20	53.84	65.34	11.50	QP
	0.329	40.81	0.23	41.04	59.49	18.45	
	0.694	36.02	0.27	36.29	56.00	19.71	
	2.794	34.44	0.39	34.83	56.00	21.17	
	30.000	27.09	0.82	27.91	60.00	32.09	
	5.058	30.63	0.45	31.08	60.00	28.92	
	0.162	37.94	0.20	38.14	55.34	17.20	AV
	0.329	31.30	0.23	31.53	49.49	17.96	
	0.694	25.41	0.27	25.68	46.00	20.32	
	2.794	24.07	0.39	24.46	46.00	21.54	
	5.058	21.37	0.45	21.82	50.00	28.18	
	30.000	18.63	0.82	19.45	50.00	30.55	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050TV Humidity : 48%RH

Serial No. : E2009111306 Date of Test : Nov 17, 2009

Test Mode : D-Sub 1024*768@60Hz Adapter : ADS-24NP-12-1
12024G

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.162	53.11	0.23	53.34	65.34	12.00	QP
	0.325	40.14	0.26	40.40	59.57	19.17	
	1.082	34.47	0.30	34.77	56.00	21.23	
	2.794	33.79	0.39	34.18	56.00	21.82	
	5.166	30.72	0.44	31.16	60.00	28.84	
	30.000	27.37	0.91	28.28	60.00	31.72	
	0.162	40.01	0.23	40.24	55.34	15.10	AV
	0.325	29.35	0.26	29.61	49.57	19.96	
	1.082	20.83	0.30	21.13	46.00	24.87	
	2.794	23.17	0.39	23.56	46.00	22.44	
	5.166	20.72	0.44	21.16	50.00	28.84	
	30.000	18.23	0.91	19.14	50.00	30.86	
Neutral	0.162	53.32	0.20	53.52	65.34	11.82	QP
	0.325	40.57	0.23	40.80	59.57	18.77	
	0.694	36.20	0.27	36.47	56.00	19.53	
	2.839	35.26	0.39	35.65	56.00	20.35	
	5.005	30.26	0.45	30.71	60.00	29.29	
	30.000	27.04	0.82	27.86	60.00	32.14	
	0.162	40.15	0.20	40.35	55.34	14.99	AV
	0.325	28.74	0.23	28.97	49.57	20.60	
	0.694	25.48	0.27	25.75	46.00	20.25	
	2.839	24.83	0.39	25.22	46.00	20.78	
	5.005	20.31	0.45	20.76	50.00	29.24	
	30.000	18.38	0.82	19.20	50.00	30.80	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050TV Humidity : 48%RH

Serial No. : E2009111306 Date of Test : Nov 17, 2009

Test Mode : D-Sub 1600*900@60Hz Adapter : ADS-24NP-12-1
12024G

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.162	52.76	0.23	52.99	65.34	12.35	QP
	0.325	40.16	0.26	40.42	59.57	19.15	
	0.694	36.23	0.27	36.50	56.00	19.50	
	2.650	32.66	0.39	33.05	56.00	22.95	
	5.005	29.35	0.44	29.79	60.00	30.21	
	29.371	27.14	0.90	28.04	60.00	31.96	
	0.162	37.57	0.23	37.80	55.34	17.54	AV
	0.325	29.43	0.26	29.69	49.57	19.88	
	0.694	24.94	0.27	25.21	46.00	20.79	
	2.650	22.02	0.39	22.41	46.00	23.59	
	5.005	19.41	0.44	19.85	50.00	30.15	
	29.371	18.41	0.90	19.31	50.00	30.69	
Neutral	0.162	52.43	0.20	52.63	65.34	12.71	QP
	0.325	40.40	0.23	40.63	59.57	18.94	
	0.694	36.36	0.27	36.63	56.00	19.37	
	2.500	33.01	0.39	33.40	56.00	22.60	
	5.221	30.98	0.45	31.43	60.00	28.57	
	10.072	28.05	0.51	28.56	60.00	31.44	
	0.162	39.60	0.20	39.80	55.34	15.54	AV
	0.325	29.17	0.23	29.40	49.57	20.17	
	0.694	25.11	0.27	25.38	46.00	20.62	
	2.500	20.85	0.39	21.24	46.00	24.76	
	5.221	20.91	0.45	21.36	50.00	28.64	
	10.072	20.34	0.51	20.85	50.00	29.15	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050TV Humidity : 48%RH

Serial No. : E2009111306 Date of Test : Nov 17, 2009

Test Mode : DVI 640*480@60Hz Adapter : ADS-24NP-12-1
12024G

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.176	56.11	0.22	56.33	64.68	8.35	QP
	0.307	40.25	0.25	40.50	60.06	19.56	
	0.505	27.47	0.29	27.76	56.00	28.24	
	3.276	30.08	0.41	30.49	56.00	25.51	
	5.929	28.55	0.45	29.00	60.00	31.00	
	10.564	29.20	0.51	29.71	60.00	30.29	
	0.176	42.36	0.22	42.58	54.68	12.10	AV
	0.307	24.11	0.25	24.36	50.06	25.70	
	0.505	14.89	0.29	15.18	46.00	30.82	
	3.276	20.99	0.41	21.40	46.00	24.60	
	5.929	21.36	0.45	21.81	50.00	28.19	
	10.564	23.94	0.51	24.45	50.00	25.55	
Neutral	0.174	55.10	0.20	55.30	64.77	9.47	QP
	0.317	40.34	0.23	40.57	59.80	19.23	
	0.510	29.42	0.26	29.68	56.00	26.32	
	3.436	27.92	0.41	28.33	56.00	27.67	
	5.805	28.32	0.46	28.78	60.00	31.22	
	10.790	29.25	0.54	29.79	60.00	30.21	
	0.174	39.56	0.20	39.76	54.77	15.01	AV
	0.317	27.91	0.23	28.14	49.80	21.66	
	0.510	15.51	0.26	15.77	46.00	30.23	
	3.436	18.84	0.41	19.25	46.00	26.75	
	5.805	21.02	0.46	21.48	50.00	28.52	
	10.790	23.37	0.54	23.91	50.00	26.09	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050TV Humidity : 48%RH

Serial No. : E2009111306 Date of Test : Nov 17, 2009

Test Mode : DVI 1024*768@60Hz Adapter : ADS-24NP-12-1
12024G

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.176	55.46	0.22	55.68	64.68	9.00	QP
	0.307	40.25	0.25	40.50	60.06	19.56	
	0.499	28.17	0.29	28.46	56.01	27.55	
	3.328	27.63	0.41	28.04	56.00	27.96	
	6.121	27.36	0.45	27.81	60.00	32.19	
	11.198	29.13	0.55	29.68	60.00	30.32	
	0.176	42.38	0.22	42.60	54.68	12.08	AV
	0.307	24.85	0.25	25.10	50.06	24.96	
	0.499	14.74	0.29	15.03	46.01	30.98	
	3.328	18.00	0.41	18.41	46.00	27.59	
	6.121	20.32	0.45	20.77	50.00	29.23	
	11.198	23.53	0.55	24.08	50.00	25.92	
Neutral	0.178	55.37	0.20	55.57	64.59	9.02	QP
	0.313	40.64	0.23	40.87	59.88	19.01	
	0.499	29.61	0.26	29.87	56.01	26.14	
	3.759	26.93	0.43	27.36	56.00	28.64	
	5.362	27.57	0.45	28.02	60.00	31.98	
	11.198	28.93	0.56	29.49	60.00	30.51	
	0.178	44.17	0.20	44.37	54.59	10.22	AV
	0.313	28.10	0.23	28.33	49.88	21.55	
	0.499	16.83	0.26	17.09	46.01	28.92	
	3.759	16.88	0.43	17.31	46.00	28.69	
	5.362	19.52	0.45	19.97	50.00	30.03	
	11.198	23.15	0.56	23.71	50.00	26.29	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050TV Humidity : 48%RH

Serial No. : E2009111306 Date of Test : Nov 17, 2009

Test Mode : DVI 1600*900@60Hz Adapter : ADS-24NP-12-1
12024G

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.176	55.30	0.22	55.52	64.68	9.16	QP
	0.303	39.42	0.25	39.67	60.15	20.48	
	0.499	28.47	0.29	28.76	56.01	27.25	
	3.328	27.02	0.41	27.43	56.00	28.57	
	5.929	27.27	0.45	27.72	60.00	32.28	
	11.317	28.87	0.55	29.42	60.00	30.58	
	0.176	41.74	0.22	41.96	54.68	12.72	AV
	0.303	22.10	0.25	22.35	50.15	27.80	
	0.499	15.46	0.29	15.75	46.01	30.26	
	3.328	17.26	0.41	17.67	46.00	28.33	
	5.929	20.22	0.45	20.67	50.00	29.33	
	11.317	22.92	0.55	23.47	50.00	26.53	
Neutral	0.174	54.47	0.20	54.67	64.77	10.10	QP
	0.310	41.12	0.23	41.35	59.97	18.62	
	0.505	30.90	0.26	31.16	56.00	24.84	
	3.293	25.37	0.41	25.78	56.00	30.22	
	6.698	26.48	0.48	26.96	60.00	33.04	
	10.905	29.26	0.54	29.80	60.00	30.20	
	0.174	39.13	0.20	39.33	54.77	15.44	AV
	0.310	28.77	0.23	29.00	49.97	20.97	
	0.505	17.62	0.26	17.88	46.00	28.12	
	3.293	14.74	0.41	15.15	46.00	30.85	
	6.698	19.20	0.48	19.68	50.00	30.32	
	10.905	23.27	0.54	23.81	50.00	26.19	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050TV Humidity : 48%RH

Serial No. : E2009111306 Date of Test : Nov 17, 2009

Test Mode : D-Sub 640*480@60Hz Adapter : DSA-36W-12 1 24

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.174	54.89	0.22	55.11	64.77	9.66	QP
	0.303	39.55	0.25	39.80	60.15	20.35	
	0.499	28.88	0.29	29.17	56.01	26.84	
	3.293	27.04	0.41	27.45	56.00	28.55	
	5.867	26.95	0.45	27.40	60.00	32.60	
	10.342	28.34	0.51	28.85	60.00	31.15	
	0.174	40.43	0.22	40.65	54.77	14.12	AV
	0.303	21.87	0.25	22.12	50.15	28.03	
	0.499	15.33	0.29	15.62	46.01	30.39	
	3.293	17.03	0.41	17.44	46.00	28.56	
	5.867	19.97	0.45	20.42	50.00	29.58	
	10.342	22.36	0.51	22.87	50.00	27.13	
Neutral	0.174	54.66	0.20	54.86	64.77	9.91	QP
	0.303	40.18	0.23	40.41	60.15	19.74	
	0.499	30.26	0.26	30.52	56.01	25.49	
	3.293	26.30	0.41	26.71	56.00	29.29	
	8.235	26.76	0.49	27.25	60.00	32.75	
	10.676	28.88	0.53	29.41	60.00	30.59	
	0.174	39.24	0.20	39.44	54.77	15.33	AV
	0.303	24.75	0.23	24.98	50.15	25.17	
	0.499	17.18	0.26	17.44	46.01	28.57	
	3.293	15.47	0.41	15.88	46.00	30.12	
	8.235	20.39	0.49	20.88	50.00	29.12	
	10.676	22.98	0.53	23.51	50.00	26.49	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050TV Humidity : 48%RH

Serial No. : E2009111306 Date of Test : Nov 17, 2009

Test Mode : D-Sub 1024*768@60Hz Adapter : DSA-36W-12 1 24

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.176	55.92	0.22	56.14	64.68	8.54	QP
	0.303	39.26	0.25	39.51	60.15	20.64	
	0.505	28.39	0.29	28.68	56.00	27.32	
	3.509	28.06	0.41	28.47	56.00	27.53	
	8.637	27.84	0.48	28.32	60.00	31.68	
	11.198	28.74	0.55	29.29	60.00	30.71	
	0.176	42.55	0.22	42.77	54.68	11.91	AV
	0.303	21.06	0.25	21.31	50.15	28.84	
	0.505	14.53	0.29	14.82	46.00	31.18	
	3.509	19.33	0.41	19.74	46.00	26.26	
	8.637	21.55	0.48	22.03	50.00	27.97	
	11.198	23.35	0.55	23.90	50.00	26.10	
Neutral	0.174	54.84	0.20	55.04	64.77	9.73	QP
	0.310	41.15	0.23	41.38	59.97	18.59	
	0.505	30.32	0.26	30.58	56.00	25.42	
	3.436	26.98	0.41	27.39	56.00	28.61	
	5.166	27.44	0.45	27.89	60.00	32.11	
	10.905	28.93	0.54	29.47	60.00	30.53	
	0.174	41.01	0.20	41.21	54.77	13.56	AV
	0.310	28.41	0.23	28.64	49.97	21.33	
	0.505	17.40	0.26	17.66	46.00	28.34	
	3.436	16.64	0.41	17.05	46.00	28.95	
	5.166	18.67	0.45	19.12	50.00	30.88	
	10.905	23.32	0.54	23.86	50.00	26.14	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050TV Humidity : 48%RH

Serial No. : E2009111306 Date of Test : Nov 17, 2009

Test Mode : D-Sub 1600*900@60Hz Adapter : DSA-36W-12 1 24

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.178	55.02	0.22	56.24	63.59	9.35	QP
	0.307	40.47	0.25	40.72	60.06	19.34	
	0.499	27.86	0.29	28.15	56.01	27.86	
	3.399	29.13	0.41	29.54	56.00	26.46	
	5.535	28.07	0.45	28.52	60.00	31.48	
	10.905	29.28	0.53	29.81	60.00	30.19	
	0.178	44.01	0.22	44.23	54.59	10.36	AV
	0.307	26.13	0.25	26.38	50.06	23.68	
	0.499	14.64	0.29	14.93	46.01	31.08	
	3.399	20.43	0.41	20.84	46.00	25.16	
	5.535	20.47	0.45	20.92	50.00	29.08	
	10.905	23.72	0.53	24.25	50.00	25.75	
Neutral	0.180	55.76	0.20	55.96	64.50	8.54	QP
	0.307	41.34	0.23	41.57	60.06	18.49	
	0.505	29.76	0.26	30.02	56.00	25.98	
	3.472	28.43	0.42	28.85	56.00	27.15	
	5.419	28.10	0.45	28.55	60.00	31.45	
	10.905	29.11	0.54	29.65	60.00	30.35	
	0.180	44.91	0.20	45.11	54.50	9.39	AV
	0.307	26.11	0.23	26.34	50.06	23.72	
	0.505	16.95	0.26	17.21	46.00	28.79	
	3.472	19.25	0.42	19.67	46.00	26.33	
	5.419	20.69	0.45	21.14	50.00	28.86	
	10.905	23.22	0.54	23.76	50.00	26.24	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050TV Humidity : 48%RH

Serial No. : E2009111306 Date of Test : Nov 17, 2009

Test Mode : DVI 640*480@60Hz Adapter : DSA-36W-12 1 24

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.162	49.74	0.23	49.97	65.34	15.37	QP
	0.322	39.12	0.26	39.38	59.66	20.28	
	0.694	36.42	0.27	36.69	56.00	19.31	
	2.500	32.58	0.39	32.97	56.00	23.03	
	5.005	30.59	0.44	31.03	60.00	28.97	
	28.755	25.86	0.88	26.74	60.00	33.26	
	0.162	34.92	0.23	35.15	55.34	20.19	AV
	0.322	26.27	0.26	26.53	49.66	23.13	
	0.694	25.15	0.27	25.42	46.00	20.58	
	2.500	22.64	0.39	23.03	46.00	22.97	
	5.005	21.33	0.44	21.77	50.00	28.23	
	28.755	18.29	0.88	19.17	50.00	30.83	
Neutral	0.162	49.75	0.20	49.95	65.34	15.39	QP
	0.322	38.93	0.23	39.16	59.66	20.50	
	0.686	36.34	0.27	36.61	56.00	19.39	
	2.474	34.09	0.39	34.48	56.00	21.52	
	10.564	27.85	0.53	28.38	60.00	31.62	
	5.005	31.21	0.45	31.66	60.00	28.34	
	0.162	35.11	0.20	35.31	55.34	20.03	AV
	0.322	26.39	0.23	26.62	49.66	23.04	
	0.686	25.85	0.27	26.12	46.00	19.88	
	2.474	23.27	0.39	23.66	46.00	22.34	
	5.005	21.29	0.45	21.74	50.00	28.26	
	10.564	20.01	0.53	20.54	50.00	29.46	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050TV Humidity : 48%RH

Serial No. : E2009111306 Date of Test : Nov 17, 2009

Test Mode : DVI 1024*768@60Hz Adapter : DSA-36W-12 1 24

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.161	49.58	0.23	49.81	65.43	15.62	QP
	0.322	38.99	0.26	39.25	59.66	20.41	
	0.694	36.39	0.27	36.66	56.00	19.34	
	2.500	32.11	0.39	32.50	56.00	23.50	
	5.166	28.62	0.44	29.06	60.00	30.94	
	10.790	27.27	0.53	27.80	60.00	32.20	
	0.161	32.98	0.23	33.21	55.43	22.22	AV
	0.322	26.16	0.26	26.42	49.66	23.24	
	0.694	25.57	0.27	25.84	46.00	20.16	
	2.500	21.55	0.39	21.94	46.00	24.06	
	5.166	19.59	0.44	20.03	50.00	29.97	
	10.790	19.66	0.53	20.19	50.00	29.81	
Neutral	0.162	50.08	0.20	50.28	65.34	15.06	QP
	0.322	38.88	0.23	39.11	59.66	20.55	
	0.694	36.49	0.27	36.76	56.00	19.24	
	2.527	34.20	0.39	34.59	56.00	21.41	
	5.476	29.50	0.45	29.95	60.00	30.05	
	29.371	25.96	0.81	26.77	60.00	33.23	
	0.162	37.05	0.20	37.25	55.34	18.09	AV
	0.322	26.18	0.23	26.41	49.66	23.25	
	0.694	25.43	0.27	25.70	46.00	20.30	
	2.527	23.42	0.39	23.81	46.00	22.19	
	5.476	18.90	0.45	19.35	50.00	30.65	
	29.371	18.05	0.81	18.86	50.00	31.14	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050TV Humidity : 48%RH

Serial No. : E2009111306 Date of Test : Nov 17, 2009

Test Mode : DVI 1600*900@60Hz Adapter : DSA-36W-12 1 24

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.162	50.99	0.23	51.22	65.34	14.12	QP
	0.325	40.57	0.26	40.83	59.57	18.74	
	0.694	36.44	0.27	36.71	56.00	19.29	
	2.384	34.07	0.39	34.46	56.00	21.54	
	5.221	30.60	0.44	31.04	60.00	28.96	
	29.371	25.88	0.90	26.78	60.00	33.22	
	0.162	36.11	0.23	36.34	55.34	19.00	AV
	0.325	29.74	0.26	30.00	49.57	19.57	
	0.694	25.38	0.27	25.65	46.00	20.35	
	2.384	22.98	0.39	23.37	46.00	22.63	
	5.221	19.83	0.44	20.27	50.00	29.73	
	29.371	17.68	0.90	18.58	50.00	31.42	
Neutral	0.162	51.19	0.20	51.39	65.34	13.95	QP
	0.325	40.46	0.23	40.69	59.57	18.88	
	0.694	36.45	0.27	36.72	56.00	19.28	
	2.384	33.91	0.39	34.30	56.00	21.70	
	5.221	30.31	0.45	30.76	60.00	29.24	
	29.371	26.08	0.81	26.89	60.00	33.11	
	0.162	36.18	0.20	36.38	55.34	18.96	AV
	0.325	30.21	0.23	30.44	49.57	19.13	
	0.694	25.65	0.27	25.92	46.00	20.08	
	2.384	22.67	0.39	23.06	46.00	22.94	
	5.221	20.14	0.45	20.59	50.00	29.41	
	29.371	17.99	0.81	18.80	50.00	31.20	

TEST ENGINEER: HUGH HUANG

4 RADIATED EMISSION TEST

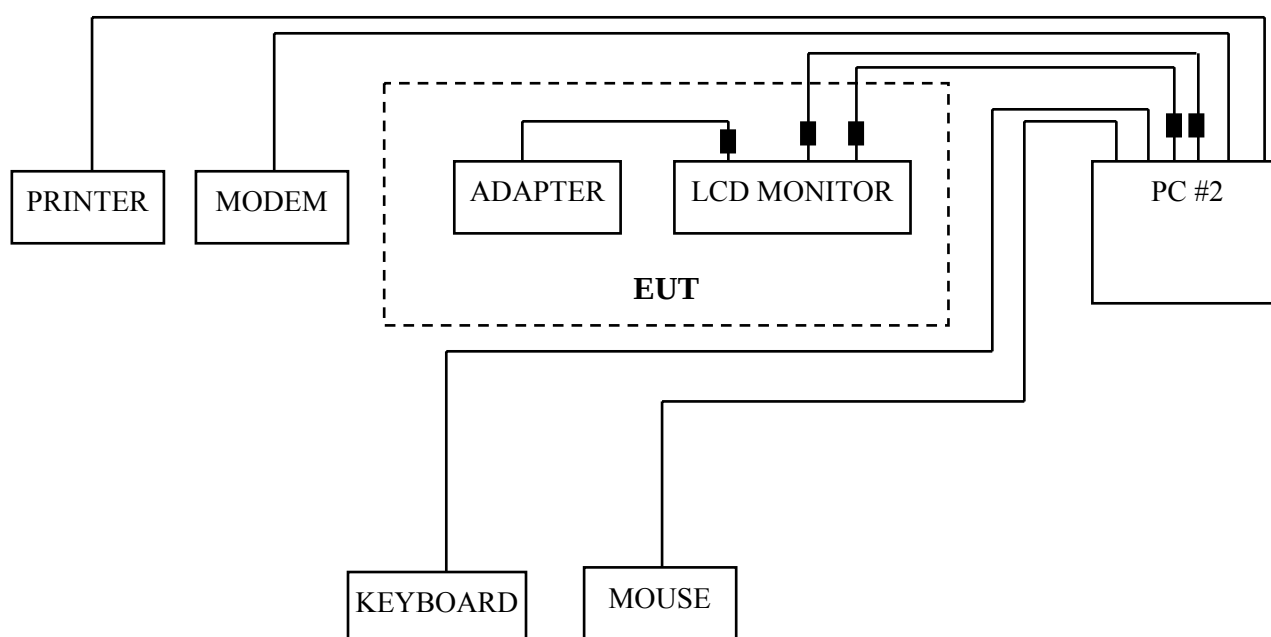
4.1 Test Equipment

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

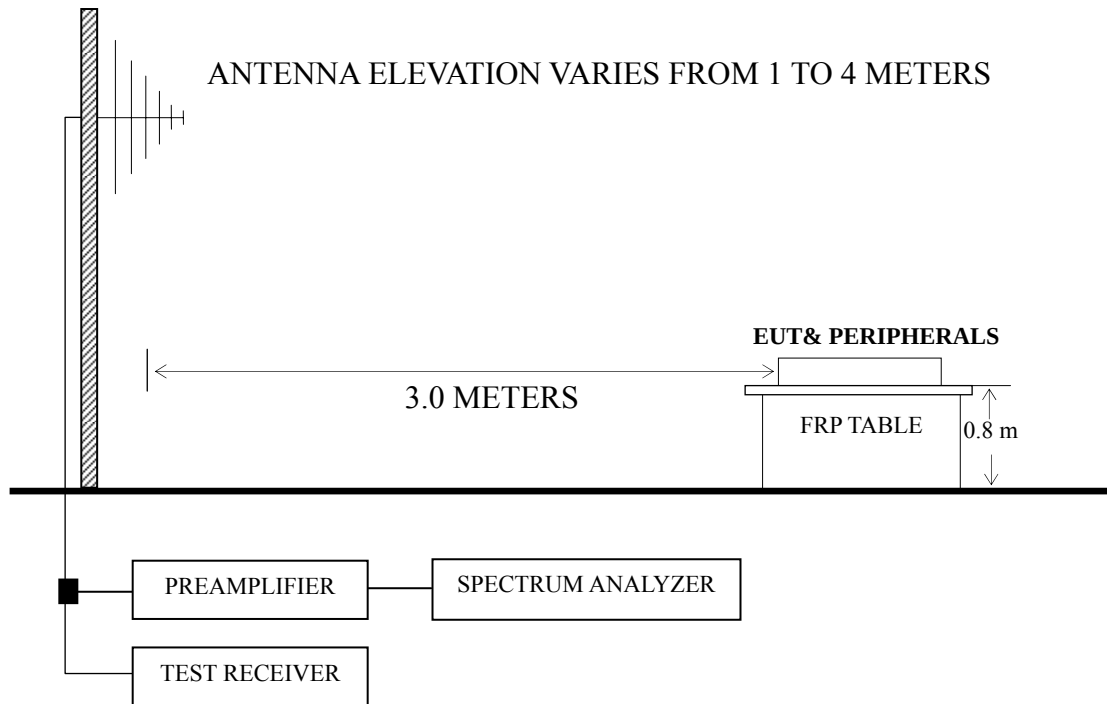
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESVS10	844594/001	Mar 07, 2009	Mar 07, 2010
2.	Preamplifier	Agilent	8447D	2944A10548	Sep 19, 2009	Mar 19, 2010
3.	Preamplifier	HP	8449B	3008A00864	Apr 29, 2009	Apr 29, 2010
4.	Bi-log Antenna	TESEQ	CBL6112D	23193	May 14, 2008	May 14, 2010
5.	Spectrum	Agilent	E7405A	MY45106600	May 19, 2009	May 19, 2010
6.	Software	Audix	E3	SET00200 9912M295-2	--	--

4.2 Block Diagram of Test Setup

4.2.1 EUT and Peripherals



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	
		($\mu\text{V/m}$)	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) 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 D-Sub/DVI 1600*900@60Hz 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.

Adapter	Test Mode	Data Page
ADS-24NP-12 1 24	D-Sub 640*480@60Hz	P28
	D-Sub 1024*768@60Hz	P29
	D-Sub 1600*900@60Hz	P30
	DVI 640*480@60Hz	P31
	DVI 1024*768@60Hz	P32
	DVI 1600*900@60Hz	P33
DSA-36W-12 1 24	D-Sub 640*480@60Hz	P34
	D-Sub 1024*768@60Hz	P35
	D-Sub 1600*900@60Hz	P36
	DVI 640*480@60Hz	P37
	DVI 1024*768@60Hz	P38
	DVI 1600*900@60Hz	P39

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

NOTE 2 – Emission Level = Antenna Factor + Cable Loss + Meter Reading.($< 1\text{GHz}$)

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

NOTE 4 – The emission levels that are 20dB below the official limit are not reported.

NOTE 5 – 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

NOTE 6 – The worst case is for DVI 1600*900@60Hz test mode (Adapter: DSA-36W-12 1 24). The worst emission at horizontal polarization was detected at 755.560 MHz with corrected signal level of 40.68 dB ($\mu\text{V/m}$) (limit is 46.00dB ($\mu\text{V/m}$)), when the antenna was 1.00 m height and the turntable was at 280° . The worst emission at vertical polarization was detected at 44.550MHz with corrected signal level of 35.85 dB ($\mu\text{V/m}$) (limit is 40.00 dB ($\mu\text{V/m}$)), when the antenna was 1.00 m height and the turntable was at 45° .

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050TV Humidity : 60%RH

Serial No. : E2009111306 Date of Test : Nov 16, 2009

Test Mode : D-Sub 640*480@60Hz Adapter : ADS-24NP-12-1
12024G

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	102.750	19.60	11.70	1.05	32.35	43.50	11.15
	154.160	17.34	10.94	1.27	29.55	43.50	13.95
	212.360	26.25	11.26	1.48	38.99	43.50	4.51
	495.600	12.33	17.85	2.25	32.43	46.00	13.57
	702.210	10.64	19.73	2.71	33.08	46.00	12.92
	860.320	8.47	21.31	2.98	32.76	46.00	13.24
Vertical	33.880	10.47	17.44	0.64	28.55	40.00	11.45
	102.750	17.83	11.70	1.05	30.58	43.50	12.92
	127.000	16.80	12.66	1.17	30.63	43.50	12.87
	275.410	20.67	13.45	1.68	35.80	46.00	10.20
	444.190	21.33	17.14	2.12	40.59	46.00	5.41
	851.590	8.83	21.24	2.96	33.03	46.00	12.97

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050TV Humidity : 60%RH

Serial No. : E2009111306 Date of Test : Nov 16, 2009

Test Mode : D-Sub 1024*768@60Hz Adapter : ADS-24NP-12-1
12024G

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	1.71	16.97	0.67	19.35	40.00	20.65
	98.870	18.45	11.27	1.04	30.76	43.50	12.74
	168.710	18.25	10.25	1.33	29.83	43.50	13.67
	212.360	25.18	11.26	1.48	37.92	43.50	5.58
	485.900	11.97	17.73	2.21	31.91	46.00	14.09
	882.630	8.60	21.53	3.03	33.16	46.00	12.84
Vertical	33.880	13.48	17.44	0.64	31.56	40.00	8.44
	85.290	21.25	8.66	0.98	30.89	40.00	9.11
	127.000	16.32	12.66	1.17	30.15	43.50	13.35
	212.360	23.55	11.26	1.48	36.29	43.50	7.21
	444.190	22.31	17.14	2.12	41.57	46.00	4.43
	859.350	9.22	21.31	2.98	33.51	46.00	12.49

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050TV Humidity : 60%RH

Serial No. : E2009111306 Date of Test : Nov 16, 2009

Test Mode : D-Sub 1600*900@60Hz Adapter : ADS-24NP-12-1
12024G

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	33.880	1.05	17.44	0.64	--	19.13	40.00	20.87	QP
	85.290	15.27	8.66	0.98	--	24.91	40.00	15.09	
	157.070	17.83	10.74	1.29	--	29.86	43.50	13.64	
	212.360	23.81	11.26	1.48	--	36.55	43.50	6.95	
	498.510	11.98	17.88	2.27	--	32.13	46.00	13.87	
	888.450	7.07	21.60	3.05	--	31.72	46.00	14.28	
	1057.000	49.99	22.79	3.84	34.10	42.52	74.00	31.48	PK
	1157.000	50.37	23.48	4.10	34.11	43.84	74.00	30.16	
	1275.000	51.91	24.32	4.35	34.13	46.45	74.00	27.55	
	1346.000	46.14	24.86	4.51	34.13	41.38	74.00	32.62	
	1500.000	47.38	25.80	4.80	34.15	43.83	74.00	30.17	
	1797.000	45.93	26.90	5.40	34.18	44.05	74.00	29.95	
Vertical	33.880	12.59	17.44	0.64	--	30.67	40.00	9.33	QP
	85.290	17.70	8.66	0.98	--	27.34	40.00	12.66	
	168.710	18.46	10.25	1.33	--	30.04	43.50	13.46	
	212.360	23.71	11.26	1.48	--	36.45	43.50	7.05	
	444.190	21.94	17.14	2.12	--	41.20	46.00	4.80	
	851.590	9.14	21.24	2.96	--	33.34	46.00	12.66	
	1058.000	54.80	22.79	3.85	34.10	47.34	74.00	26.66	PK
	1157.000	53.89	23.48	4.10	34.11	47.36	74.00	26.64	
	1245.000	52.43	24.06	4.29	34.12	46.66	74.00	27.34	
	1461.000	48.18	25.56	4.73	34.14	44.33	74.00	29.67	
	1664.000	44.74	26.56	5.12	34.17	42.25	74.00	31.75	
	1742.000	45.69	26.76	5.28	34.18	43.55	74.00	30.45	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050TV Humidity : 60%RH

Serial No. : E2009111306 Date of Test : Nov 16, 2009

Test Mode : DVI 640*480@60Hz Adapter : ADS-24NP-12-1
12024G

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	102.750	18.51	11.70	1.05	31.26	43.50	12.24
	154.160	16.76	10.94	1.27	28.97	43.50	14.53
	212.360	24.53	11.26	1.48	37.27	43.50	6.23
	444.190	12.91	17.14	2.12	32.17	46.00	13.83
	603.270	10.66	19.22	2.46	32.34	46.00	13.66
	865.170	7.95	21.35	3.00	32.30	46.00	13.70
Vertical	33.880	12.76	17.44	0.64	30.84	40.00	9.16
	33.880	13.61	17.44	0.64	31.69	40.00	8.31
	127.000	15.93	12.66	1.17	29.76	43.50	13.74
	275.410	20.60	13.45	1.68	35.73	46.00	10.27
	359.800	20.01	15.61	1.93	37.55	46.00	8.45
	859.350	8.81	21.31	2.98	33.10	46.00	12.90

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050TV Humidity : 60%RH

Serial No. : E2009111306 Date of Test : Nov 16, 2009

Test Mode : DVI 1024*768@60Hz Adapter : ADS-24NP-12-1
12024G

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	95.960	20.22	10.70	1.01	31.93	43.50	11.57
	148.340	16.04	11.41	1.24	28.69	43.50	14.81
	212.360	23.95	11.26	1.48	36.69	43.50	6.81
	317.120	17.02	14.35	1.82	33.19	46.00	12.81
	444.190	13.47	17.14	2.12	32.73	46.00	13.27
	888.450	10.03	21.60	3.05	34.68	46.00	11.32
Vertical	37.760	19.62	15.20	0.66	35.48	40.00	4.52
	98.870	21.31	11.27	1.04	33.62	43.50	9.88
	127.000	14.08	12.66	1.17	27.91	43.50	15.59
	275.410	20.84	13.45	1.68	35.97	46.00	10.03
	358.830	22.45	15.57	1.94	39.96	46.00	6.04
	851.590	8.68	21.24	2.96	32.88	46.00	13.12

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050TV Humidity : 60%RH

Serial No. : E2009111306 Date of Test : Nov 16, 2009

Test Mode : DVI 1600*900@60Hz Adapter : ADS-24NP-12-1
12024G

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	85.290	15.33	8.66	0.98	--	24.97	40.00	15.03	QP
	104.690	17.61	11.88	1.07	--	30.56	43.50	12.94	
	157.070	17.92	10.74	1.29	--	29.95	43.50	13.55	
	212.360	24.50	11.26	1.48	--	37.24	43.50	6.26	
	540.220	17.69	18.42	2.35	--	38.46	46.00	7.54	
	755.560	14.27	20.27	2.80	--	37.34	46.00	8.66	
	1083.000	47.78	22.98	3.91	34.11	40.56	74.00	33.44	PK
	1262.000	53.93	24.19	4.33	34.12	48.33	74.00	25.67	
	1427.000	48.82	25.38	4.66	34.14	44.72	74.00	29.28	
	1571.000	45.51	26.26	4.94	34.16	42.55	74.00	31.45	
	1664.000	43.58	26.56	5.12	34.17	41.09	74.00	32.91	
	1860.000	45.82	27.26	5.46	34.19	44.35	74.00	29.65	
Vertical	33.880	13.38	17.44	0.64	--	31.46	40.00	8.54	QP
	75.590	20.46	7.24	0.91	--	28.61	40.00	11.39	
	157.070	16.01	10.74	1.29	--	28.04	43.50	15.46	
	275.410	20.54	13.45	1.68	--	35.67	46.00	10.33	
	444.190	22.15	17.14	2.12	--	41.41	46.00	4.59	
	755.560	13.86	20.27	2.80	--	36.93	46.00	9.07	
	1044.000	48.03	22.69	3.81	34.10	40.43	74.00	33.57	PK
	1155.000	49.40	23.45	4.10	34.11	42.84	74.00	31.16	
	1255.000	54.05	24.14	4.31	34.12	48.38	74.00	25.62	
	1408.000	48.22	25.24	4.62	34.14	43.94	74.00	30.06	
	1600.000	43.75	26.40	5.00	34.16	40.99	74.00	33.01	
	1740.000	45.07	26.76	5.28	34.18	42.93	74.00	31.07	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050TV Humidity : 60%RH

Serial No. : E2009111306 Date of Test : Nov 16, 2009

Test Mode : D-Sub 640*480@60Hz Adapter : DSA-36W-12 1 24

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	102.750	18.94	11.70	1.05	31.69	43.50	11.81
	161.920	22.77	10.46	1.30	34.53	43.50	8.97
	212.360	23.95	11.26	1.48	36.69	43.50	6.81
	359.800	16.21	15.61	1.93	33.75	46.00	12.25
	494.630	15.67	17.83	2.24	35.74	46.00	10.26
	875.840	11.15	21.46	3.01	35.62	46.00	10.38
Vertical	40.670	17.67	13.62	0.71	32.00	40.00	8.00
	102.750	20.58	11.70	1.05	33.33	43.50	10.17
	159.010	25.95	10.59	1.29	37.83	43.50	5.67
	276.380	21.85	13.47	1.68	37.00	46.00	9.00
	445.160	21.74	17.14	2.12	41.00	46.00	5.00
	856.440	9.80	21.28	2.98	34.06	46.00	11.94

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050TV Humidity : 60%RH

Serial No. : E2009111306 Date of Test : Nov 16, 2009

Test Mode : D-Sub 1024*768@60Hz Adapter : DSA-36W-12 1 24

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	96.930	20.18	10.87	1.02	32.07	43.50	11.43
	159.010	24.91	10.59	1.29	36.79	43.50	6.71
	212.360	24.96	11.26	1.48	37.70	43.50	5.80
	445.160	16.69	17.14	2.12	35.95	46.00	10.05
	688.630	11.20	19.65	2.65	33.50	46.00	12.50
	891.360	9.26	21.63	3.02	33.91	46.00	12.09
Vertical	44.550	22.95	11.38	0.71	35.04	40.00	4.96
	96.930	22.35	10.87	1.02	34.24	43.50	9.26
	161.920	26.42	10.46	1.30	38.18	43.50	5.32
	276.380	22.87	13.47	1.68	38.02	46.00	7.98
	445.160	20.95	17.14	2.12	40.21	46.00	5.79
	856.440	9.48	21.28	2.98	33.74	46.00	12.26

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050TV Humidity : 60%RH

Serial No. : E2009111306 Date of Test : Nov 16, 2009

Test Mode : D-Sub 1600*900@60Hz Adapter : DSA-36W-12 1 24

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	31.940	0.80	18.49	0.62	--	19.91	40.00	20.09	QP
	85.290	14.26	8.66	0.98	--	23.90	40.00	16.10	
	159.980	25.89	10.50	1.30	--	37.69	43.50	5.81	
	212.360	25.37	11.26	1.48	--	38.11	43.50	5.39	
	506.270	13.98	17.98	2.28	--	34.24	46.00	11.76	
	888.450	7.67	21.60	3.05	--	32.32	46.00	13.68	
	1094.000	48.92	23.05	3.94	34.10	41.80	74.00	32.20	PK
	1157.000	51.37	23.48	4.10	34.11	44.84	74.00	29.16	
	1275.000	53.91	24.32	4.35	34.13	48.45	74.00	25.55	
	1500.000	47.38	25.80	4.80	34.15	43.83	74.00	30.17	
	1572.000	48.61	26.26	4.95	34.16	45.66	74.00	28.34	
	1683.000	48.40	26.61	5.16	34.17	46.00	74.00	28.00	
Vertical	40.670	21.25	13.62	0.71	--	35.58	40.00	4.42	QP
	92.080	22.16	9.82	1.01	--	32.99	43.50	10.51	
	160.950	26.76	10.48	1.30	--	38.54	43.50	4.96	
	275.410	21.76	13.45	1.68	--	36.89	46.00	9.11	
	445.160	20.69	17.14	2.12	--	39.95	46.00	6.05	
	851.590	10.45	21.24	2.96	--	34.65	46.00	11.35	
	1058.000	47.80	22.79	3.85	34.10	40.34	74.00	33.66	PK
	1153.000	48.05	23.45	4.10	34.11	41.49	74.00	32.51	
	1255.000	51.77	24.14	4.31	34.12	46.10	74.00	27.90	
	1419.000	49.51	25.31	4.64	34.14	45.32	74.00	28.68	
	1564.000	47.43	26.19	4.93	34.16	44.39	74.00	29.61	
	1742.000	46.69	26.76	5.28	34.18	44.55	74.00	29.45	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050TV Humidity : 60%RH

Serial No. : E2009111306 Date of Test : Nov 16, 2009

Test Mode : DVI 640*480@60Hz Adapter : DSA-36W-12 1 24

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	44.550	19.09	11.38	0.71	31.18	40.00	8.82
	99.840	18.71	11.42	1.05	31.18	43.50	12.32
	158.040	25.66	10.64	1.29	37.59	43.50	5.91
	212.360	24.15	11.26	1.48	36.89	43.50	6.61
	445.160	14.63	17.14	2.12	33.89	46.00	12.11
	872.930	10.69	21.46	2.99	35.14	46.00	10.86
Vertical	40.670	21.30	13.62	0.71	35.63	40.00	4.37
	40.670	18.53	13.62	0.71	32.86	40.00	7.14
	158.040	27.16	10.64	1.29	39.09	43.50	4.41
	275.410	20.93	13.45	1.68	36.06	46.00	9.94
	445.160	22.00	17.14	2.12	41.26	46.00	4.74
	856.440	10.95	21.28	2.98	35.21	46.00	10.79

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050TV Humidity : 60%RH

Serial No. : E2009111306 Date of Test : Nov 16, 2009

Test Mode : DVI 1024*768@60Hz Adapter : DSA-36W-12 1 24

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	40.670	8.97	13.62	0.71	23.30	40.00	16.70
	98.870	19.64	11.27	1.04	31.95	43.50	11.55
	166.770	25.01	10.31	1.31	36.63	43.50	6.87
	212.360	23.45	11.26	1.48	36.19	43.50	7.31
	403.450	19.14	16.55	2.04	37.73	46.00	8.27
	888.450	12.02	21.60	3.05	36.67	46.00	9.33
Vertical	40.670	21.00	13.62	0.71	35.33	40.00	4.67
	96.930	23.22	10.87	1.02	35.11	43.50	8.39
	158.040	26.85	10.64	1.29	38.78	43.50	4.72
	275.410	20.07	13.45	1.68	35.20	46.00	10.80
	444.190	20.38	17.14	2.12	39.64	46.00	6.36
	856.440	11.06	21.28	2.98	35.32	46.00	10.68

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2050TV Humidity : 60%RH

Serial No. : E2009111306 Date of Test : Nov 16, 2009

Test Mode : DVI 1600*900@60Hz Adapter : DSA-36W-12 1 24

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	85.290	14.35	8.66	0.98	--	23.99	40.00	16.01	QP
	101.780	17.97	11.63	1.05	--	30.65	43.50	12.85	
	161.920	26.01	10.46	1.30	--	37.77	43.50	5.73	
	212.360	25.07	11.26	1.48	--	37.81	43.50	5.69	
	540.220	18.54	18.42	2.35	--	39.31	46.00	6.69	
	755.560	17.61	20.27	2.80	--	40.68	46.00	5.32	
	1076.000	49.61	22.92	3.89	34.10	42.31	74.00	31.69	PK
	1144.000	49.65	23.39	4.08	34.11	43.01	74.00	30.99	
	1274.000	55.15	24.32	4.35	34.13	49.69	74.00	24.31	
	1498.000	47.50	25.80	4.80	34.15	43.95	74.00	30.05	
	1664.000	50.58	26.56	5.12	34.17	48.09	74.00	25.91	
	1860.000	48.82	27.26	5.46	34.19	47.35	74.00	26.65	
Vertical	44.550	23.76	11.38	0.71	--	35.85	40.00	4.15	QP
	93.050	21.30	10.09	1.01	--	32.40	43.50	11.10	
	159.980	27.33	10.50	1.30	--	39.13	43.50	4.37	
	295.780	18.68	13.84	1.76	--	34.28	46.00	11.72	
	359.800	20.87	15.61	1.93	--	38.41	46.00	7.59	
	755.560	15.51	20.27	2.80	--	38.58	46.00	7.42	
	1025.000	51.08	22.57	3.76	34.10	43.31	74.00	30.69	PK
	1155.000	51.40	23.45	4.10	34.11	44.84	74.00	29.16	
	1255.000	56.05	24.14	4.31	34.12	50.38	74.00	23.62	
	1329.000	48.10	24.74	4.47	34.13	43.18	74.00	30.82	
	1421.000	52.72	25.34	4.65	34.14	48.57	74.00	25.43	
	1629.000	52.07	26.47	5.05	34.16	49.43	74.00	24.57	

TEST ENGINEER: RAVEN JIN

5 DEVIATION TO TEST SPECIFICATIONS

None.

6 DEBUG DESCRIPTION

The following components are used during the countermeasure procedures:

Name	M/N	Specifications (mm)	Manufacturer	Location
Adhesive Tape	T-308	50*60	DAEHUNG SUBSIDIARY MATERIALS.	See Internal Photo Figure 11
Gasket	T-308	100*9mm*1T	DAEHUNG SUBSIDIARY MATERIALS.	See Internal Photo Figure 12
Gasket	T-308	110*9mm*1T	DAEHUNG SUBSIDIARY MATERIALS.	See Internal Photo Figure 12

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)