EMC Test Report

According to FCC Part 15 Subpart B

Project No.		**LBE050050**
Equipment under Test		
	Address	416 Maetan3-Dong,Yeongtong-Gu,Suwon-City,Gyeonggi-Do, Korea,443-742
	Product Name	**PDP MONITOR**
	Model Name	**SR50P5**
	Manufacturer	Samsung Electronics Co., Ltd
	Brand Name	SAMSUNG
	Variant Model	See Page 3
Date of Test		January 03 ~ 07, 2005
Issued Date		January 14, 2004

	Name/Position	Signature
Tested by	Dong Min, Lee Test Engineer	
Reviewed by	No Cheon, Park Manager of EMC Lab.	N. C. Park
Authorized by	Kyu Baek, Chung Chief of EMC Lab.	K. B. Chung

1. This test reports does not constitute an endorsement by NIST/NVLAP or U.S Government.
2. This test report is to certify that the tested device properly complies with the requirements of FCC Rules and Regulations Part 15 Subpart B Unintentional Radiators.
   All tests necessary to show compliance to the requirements were and these results met the specifications requirement.

This laboratory is registered by the NIST/NVLAP, U.S.A.
The test reported herein have been performed in accordance with its terms of registration.

NVLAP LAB CODE 200623-0

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1. General Information

1.1 Basic Information related Product

Applicant	Samsung Electronics Co., Ltd
Model name	SR50P5
Applicant Address	Samsung Electronics Co., Ltd 416 Maetan3- Dong, Yeongtong-Gu, Suwon-City, Gyeonggi-Do, Korea, 443-742
Kind of product	PDP Monitor
Valiant Model list	None
FCC ID	A3LSR50P5
Manufacturer	Samsung Electronics Co.,Ltd
New / Alternative / Permissive change Information	This report is original report #

1.2 Detail Information related Product

Specification

Item(s)	Description
Model Name	SR50P5
Product Name	PDP MONITOR
Resolution	1024 * 768
Horizontal Frequency	48.363 ~ 60.023 KHz
Vertical Frequency	60.004 ~ 75.029 Hz

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1.3 Operating Mode and Condition

The system was configured for testing in typical fashion use. Cable were attached to each of the available I/O Ports.

The mode of operation utilized for testing was selected to best simulate typical EUT use.

1.4 Equipment Modifications

No equipment modifications were required.

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1.5 Test Configuration

Used EUT and Peripherals

Seq	Device	Model Name	Serial #	Maker	Note
A	PDP Monitor	SR50P5	-	SAMSUNG	EUT
B	Desktop PC	M6050	802092FRC02513	SAMSUNG	DOC
C	Printer	ML-1740	BABX820386E	SAMSUNG	A3LML-1710P
D	PS/2 Keyboard	5900	K03119305	Samsung	DOC
E	Mouse	FRE204-USB	020002943	Samsung	DOC

Used Cable Description

No	Connect Cable	Length [m]	Shielded [Y/N]	Remark
1	Power	1.7	No	For EUT
2	Power	1.7	No	For PC
3	Power	1.7	No	For Printer
4	Monitor Analog	1.5	Yes	
5	Parallel (Printer)	1.5	Yes	
6	Keyboard	1.5	No	
7	PS/2 Mouse	1.5	No	

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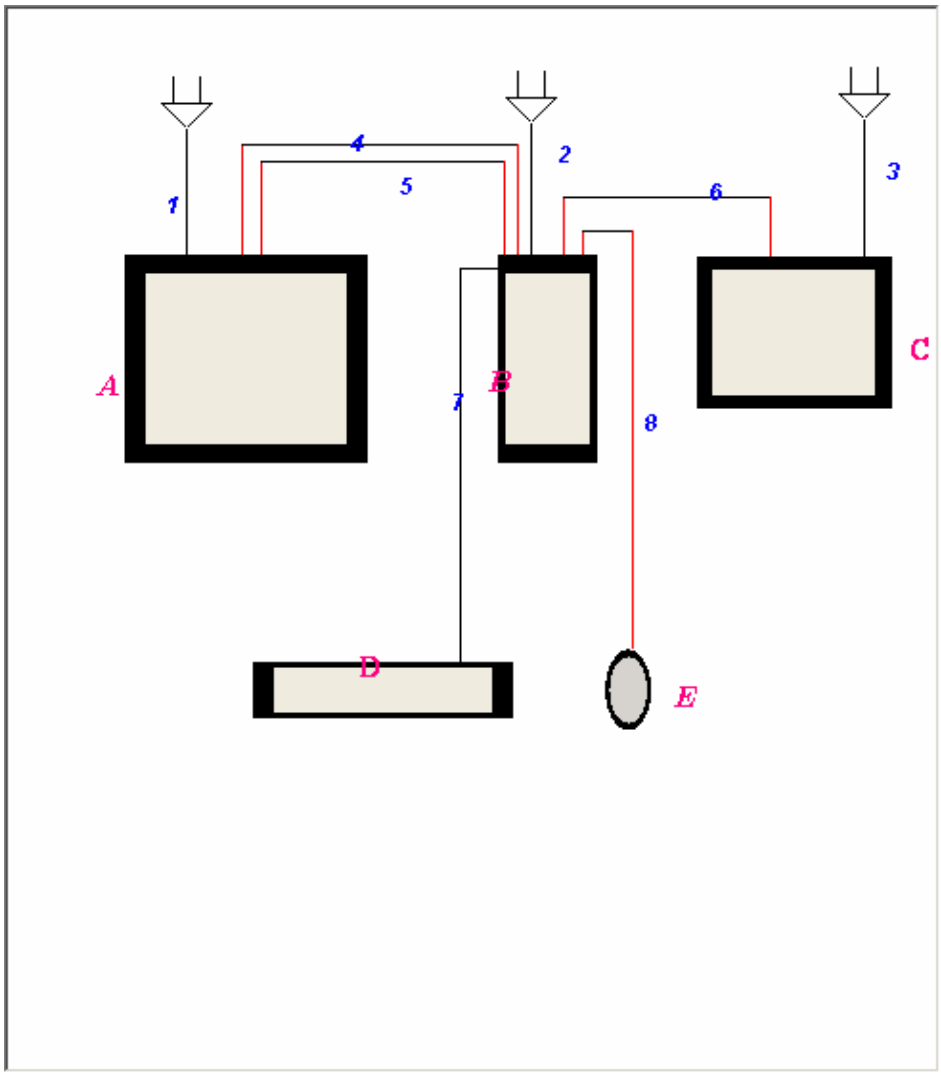
Block Diagram



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1.6 Applied Standards

List

Product or Generic Standards	Basic Standards
FCC Part15 Subpart B	ANSI C63.4 : 2003

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1.7 Test Facility

General Information

The sites are constructed in conformance with the requirements of ANSI C63.4 and CISPR 22.

This EMC Testing Lab. is accredited by Korea Laboratory Accreditation Scheme(KOLAS) which signed the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA) for the above test item(s) and test method(s).

This Lab. is operated as testing laboratory in accordance with the requirements of ISO/IEC 17025:1998.

Accreditation and Listing

Uncertainty (According to NAMAS Pub.NIS81)

Test Item	Expanded Uncertainty
Radiated Disturbance	±5.09
Disturbance voltage at the mains terminals	±1.64

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2. Summary of Test Results

Result : PASS

The equipment under test(EUT) has been found to comply with the applied standards.

Test Name		Applied Standard	Result
Electromagnetic Emission Test			
3.1	Conducted Emission	FCC Part15 Subpart B	Complied
3.2	Radiated Emission	FCC Part15 Subpart B	Complied

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3. Description of Individual Tests

3.1 Conducted Emission

Test Information		
	Test Engineer	Dong Min, Lee
	Test Date	January 05, 2005
	Climate Condition	Ambient Temperature : 23℃ Relative Humidity : 37%
	Test Place	Shield Room #5

Test Equipments

Equipment	Modal Name	Manufacturer	Serial No.	Calibration	
				Next Date	Interval
Spectrum Analyzer	E7405A	Agilent	US4110272	2005-06-14	12
TV Signal Generator	PM5418-TDSI	PHILIPS	LO612437	2005-09-20	12
Signal Generator	SMY01	R&S	840703/019	2005-11-06	12
L.I.S.N	ESH3-Z5	R&S	100261	2005-07-16	12
Field strength meter	ESS	R&S	844661	2005-05-31	12
RF Relais Matrix	PSU	R&S	861206/024	N/A	12
L.I.S.N	ESH3-Z5	R&S	100260	2005-07-16	12
Test Software	EP5CE	TOYO	None	N/A	N/A

EUT Test Setup

The EUT was set up as per normal use on a wooden table 0.4m from a vertical ground reference plane, at least 0.8m from other conduction surfaces and 0.8m from the LISN.

See photo..

Test Result

Measurement Results	Pass No Operation errors were detected during or after the applied test.

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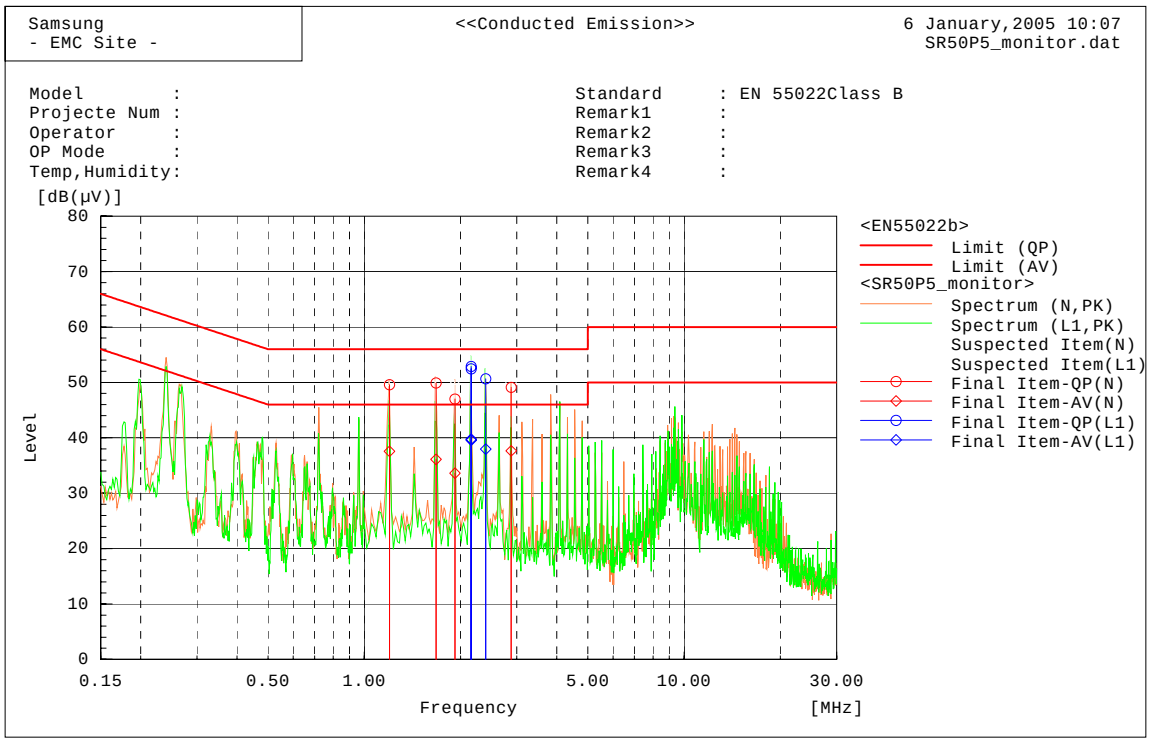
Test Data

[Graph and Data]



Final Result

--- N Phase ---

No.	Frequency [MHz]	Reading QP [dB(µV)]	Reading AV [dB(µV)]	c.f [dB]	Result QP [dB(µV)]	Result AV [dB(µV)]	Limit QP [dB(µV)]	Limit AV [dB(µV)]	Margin QP [dB]	Margin AV [dB]
1	1.20047	49.5	37.5	0.1	49.6	37.6	56.0	46.0	6.4	8.4
2	1.67861	49.8	36.0	0.1	49.9	36.1	56.0	46.0	6.1	9.9
3	1.92318	46.9	33.5	0.1	47.0	33.6	56.0	46.0	9.0	12.4
4	2.88035	49.0	37.5	0.1	49.1	37.6	56.0	46.0	6.9	8.4

--- L1 Phase ---

No.	Frequency [MHz]	Reading QP [dB(µV)]	Reading AV [dB(µV)]	c.f [dB]	Result QP [dB(µV)]	Result AV [dB(µV)]	Limit QP [dB(µV)]	Limit AV [dB(µV)]	Margin QP [dB]	Margin AV [dB]
1	2.16034	52.8	39.7	0.1	52.9	39.8	56.0	46.0	3.1	6.2
2	2.39974	50.6	37.9	0.1	50.7	38.0	56.0	46.0	5.3	8.1
3	2.16124	52.3	39.5	0.1	52.4	39.6	56.0	46.0	3.6	6.4

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3.2 Radiated Emission

Test Information		
	Test Engineer	Dong Min, Lee
	Test Date	January 06, 2005
	Climate Condition	Ambient Temperature : 23℃ Relative Humidity : 37%
	Test Place	10m Semi Anechoic chamber

Test Equipments

Equipment	Modal Name	Manufacturer	Serial No.	Calibration	
				Next Date	Interval
Field strength meter	ESCS	R&S	100104	2005-10-17	12
RF Selector	NS4900	TOYO	0303-015	N/A	N/A
Biconilog Antenna	6112B	SCHAFFNER	2767	2005-06-03	12
Mast Controller	HD2000	HD	HD20000902027	N/A	N/A
EMI Receiver	ESI26	R&S	100067	2005-01-09	12
Test Software	EP5RE	TOYO	None	N/A	12
TV Signal Generator	PM5418-TDSI	PHILIPS	LO612437	2005-09-20	12
Signal Generator	SMY01	R&S	840703/019	2005-11-06	12
Biconilog Antenna	6112B	SCHAFFNER	2766	2005-06-03	12
Spectrum Analyzer	E7405A	Agilent	MY42000109	2005-11-27	12

EUT Test Setup

EUT set up in semi-anechoic chamber. EUT positioned at 3m from antenna in center of table. All ports terminated into characteristic loads.

Test Result

Measurement Results	Pass No Operation errors were detected during or after the applied test.

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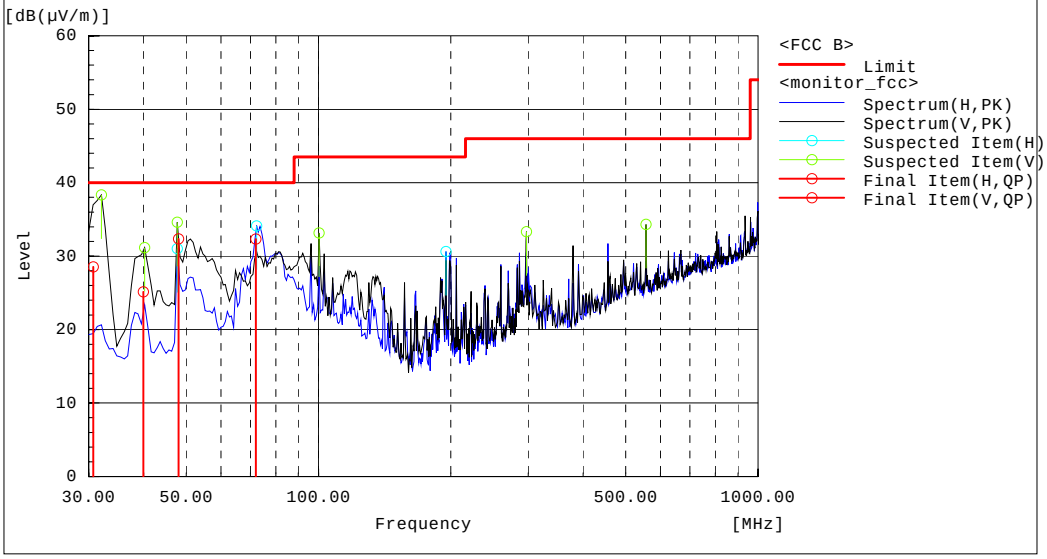
Test Data (Other Frequency)

■ Operating Mode : 30 ~1000 MHz

SAMSUNG EMC LAB. <<Radiated Emission>> monitor_fcc.dat

Model Name :
Serial Num. : -
Test Enginee:
AC Power :
OP Mode :

Standard : FCC Part.15 Class B 3m
Remark 1 :
Remark 2 :



Final Result

--- Horizontal Polarization (QP)---

No.	Frequency [MHz]	Reading [dB(μV)]	c.f [dB(1/m)]	Result [dB(μV/m)]	Limit [dB(μV/m)]	Margin [dB]	Remark
1	72.005	52.0	-19.7	32.3	40.0	7.7	

--- Vertical Polarization (QP)---

No.	Frequency [MHz]	Reading [dB(μV)]	c.f [dB(1/m)]	Result [dB(μV/m)]	Limit [dB(μV/m)]	Margin [dB]	Remark
1	39.936	38.3	-13.2	25.1	40.0	14.9	
2	48.002	49.3	-16.9	32.4	40.0	7.7	
3	30.722	36.9	-8.4	28.5	40.0	11.5	

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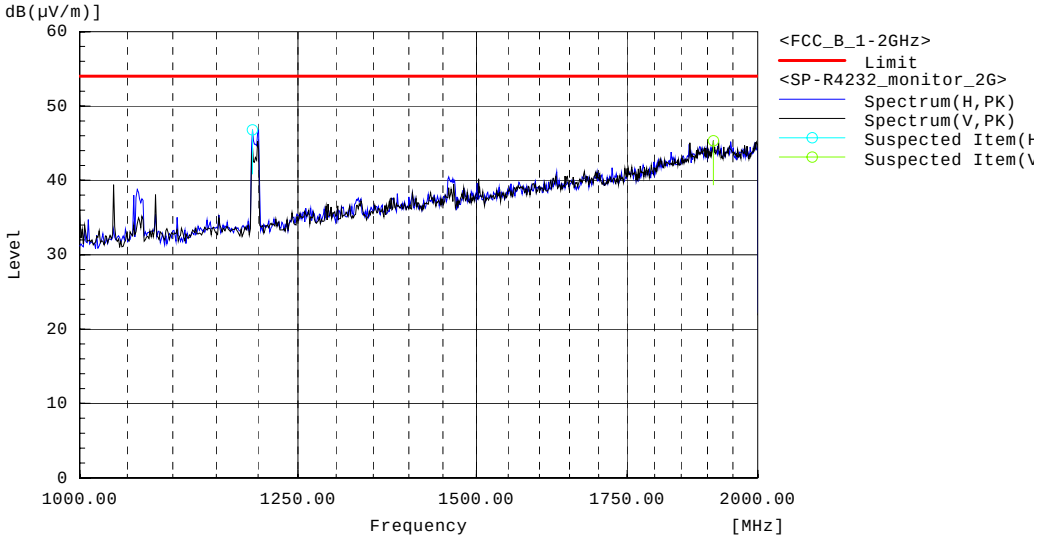
■ Operating Mode : 1 ~ 2GHz

Model :
Serial : -
Operator :
AC Power :
Temp,Humidity

Standard : FCC Part.15 Class B 3m
Project Num :
OP Mode :
Remark3 :
Remark4 :



Spectrum Selection

--- Horizontal Polarization ---

No.	Frequency [MHz]	Reading [dB(μV)]	c.f [dB(1/m)]	Result PK [dB(μV/m)]	Limit [dB(μV/m)]	Margin [dB]	Remark
1	1193.163	39.0	7.8	46.8	54.0	7.2	

--- Vertical Polarization ---

No.	Frequency [MHz]	Reading [dB(μV)]	c.f [dB(1/m)]	Result PK [dB(μV/m)]	Limit [dB(μV/m)]	Margin [dB]	Remark
1	1911.575	23.8	21.5	45.3	54.0	8.7	

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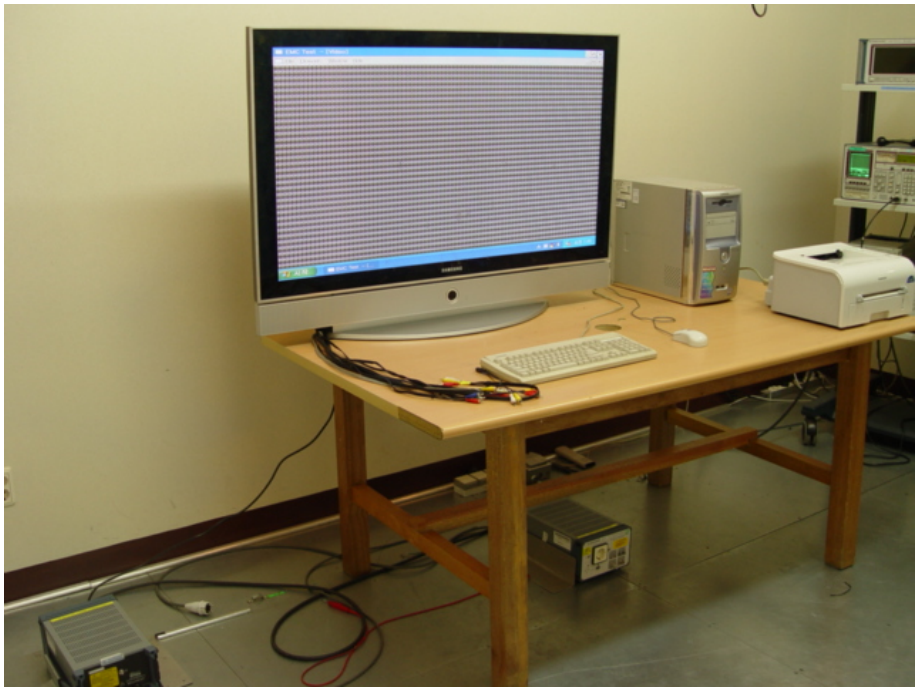
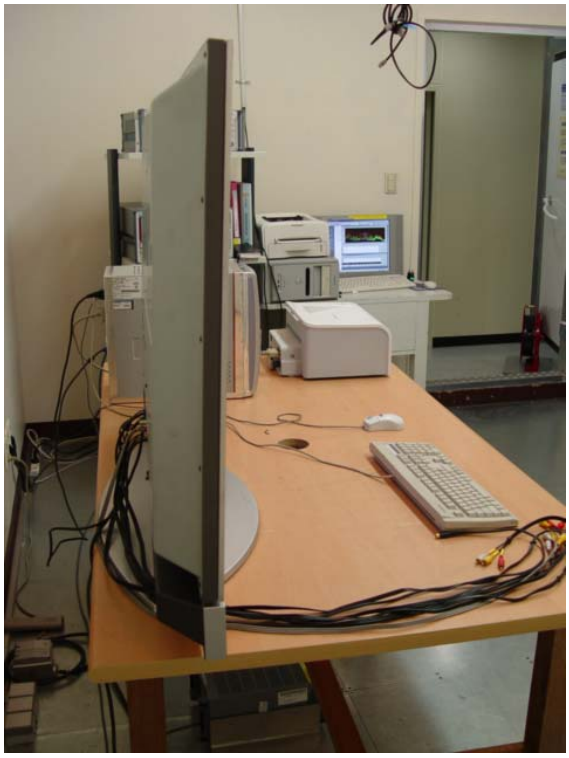
4. Appendix A

4.1 Test Photography



Picture 1. Conducted Emission (Front)



Picture 2. Conducted Emission (Side)

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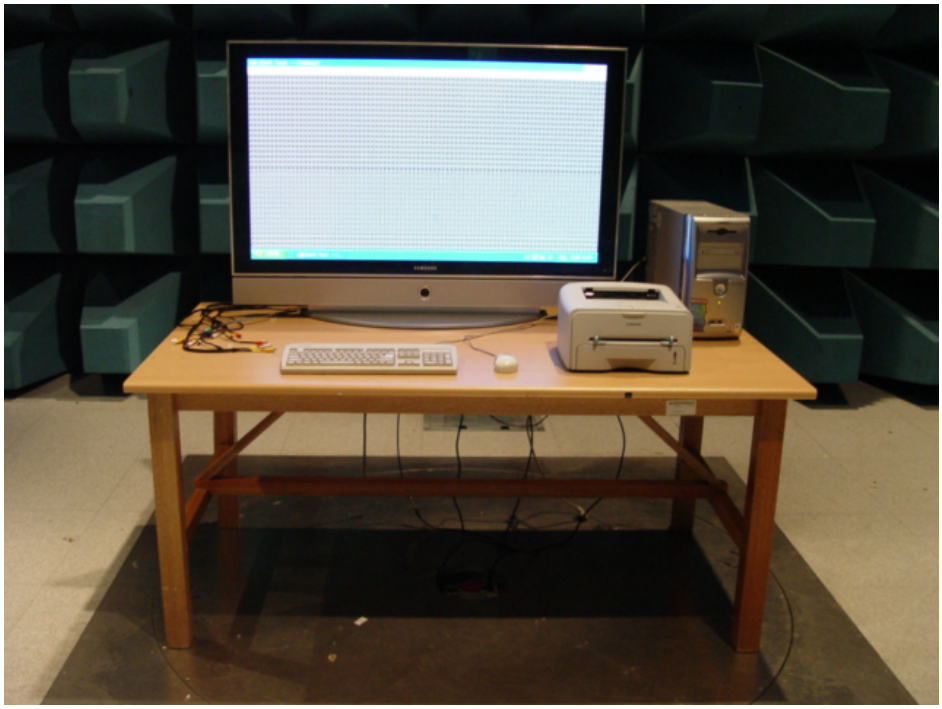
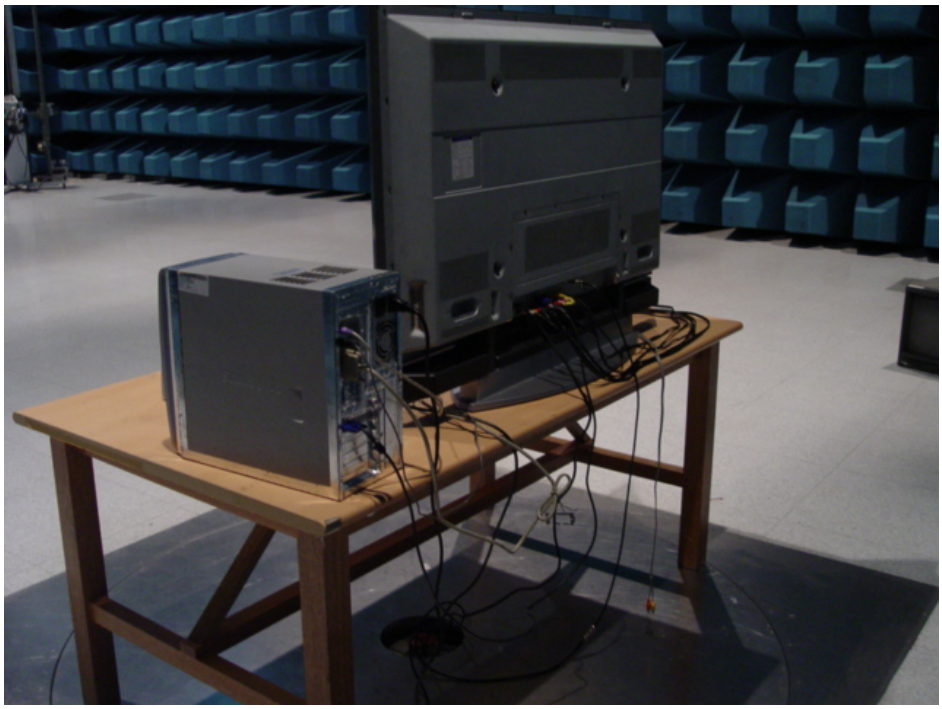


Picture 3. Radiated Emission (Front)



Picture 4. Radiated Emission (Rear)

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4.2 EUT Photography

Picture 5. EUT (Front)

Picture 6. EUT (Rear)

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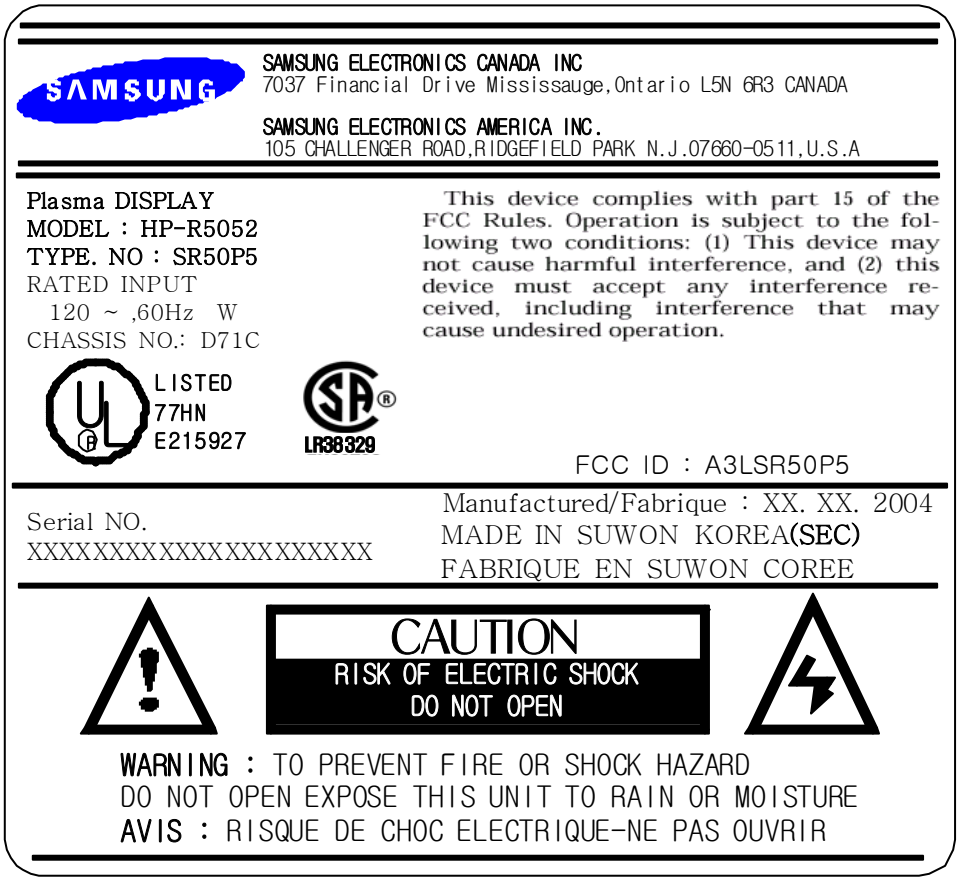

Picture 7. Label