

EMI TEST REPORT

FCC Part 15 Subpart B, Class B

Product : PDP MONITOR
Model No. : HPL5025M

FCC ID : A3LHPL5025M

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3. 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.

Date of test : November 28, 2001 ~ November 29, 2001

Issued Date : December 7, 2001

Tested by:

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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.



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1. General Information

APPLICANT : SAMSUNG ELECTRONICS CO., LTD.

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REGULATION(S) : FCC Part 15 Subpart B, Class B

Model & Variant Names : HPL5025M (Basic)
HPL5025

SERIAL NUMBER : -

KIND OF PRODUCT : PDP MONITOR

TESTED DATE : November 28, 2001 ~ November 29, 2001

TEST FACILITY :

All test described in this report were performed by :
SAMSUNG ELECTRONICS CO., LTD.
EMC TESTING LABORATORY
416 Maetan 3 Dong, Paldal-Ku, Suwon City, Kyungki Do, Korea, 442-742
Semi Anechoic Chamber #1(Registration Number:98856) and Shielded Room.

This test facility has been filed in FCC under the criteria in ANSI C63.4-1992.

1.1 Product Description

Characteristics and specification of EUT is as follows;

Image Viewable Image Size: 50"
 Power Input Supply Voltage: AC 120 Vrms(60Hz)
 Power Consumption : 540W maximum
 Input Signal: Sync.: Separate H/V only
 Video signal : Analog 0.714Vp-p/75ohm (Terminalad)
 Maximum Resolution : 1280X1024
 Horizontal Frequency : 63.981 ~79.976KHz
 Vertical Frequency : 60.020 ~ 75.025Hz

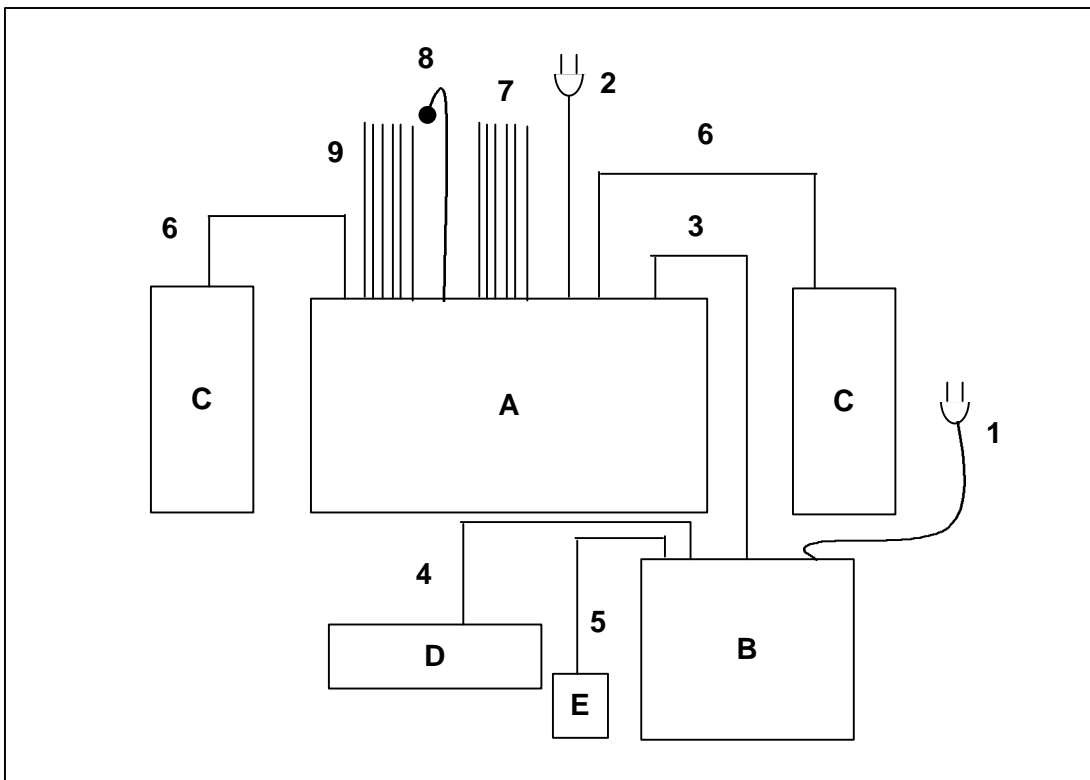
1.2 Configuration of EUT and peripherals

Mark	Item	Model No.	Serial No.	Manufacturer	FCC ID
A	PDP MONITOR	HPL5025M	-	Samsung	A3LHPL5025M
B	Personal Computer	M5330FR006	496092EN503331	Samsung	-
C	Speaker	-	-	Samsung	DOC
D	PS/2 Keyboard	5900	K9C101489	Samsung	-
E	PS/2 Mouse	M-S48a	LZA95254485	Samsung	JNZ211360

1.3 Used Cable Description

No.	Item	Length[m]	Shielded (Y/N)	Remark
1	AC Power Cable	1.2	N	AC Mains
2	AC Power Cable	1.8	N	
3	Video Cable	1.5	Y	
4	PS/2 Keyboard Cable	1.6	N	
5	PS/2 Mouse Cable	1.8	N	
6	Speaker cable	2	N	
7	A/V Cable (6)	1.5	Y	
8	Super Cable	1.5	Y	
9	Cable (6)	1.5	N	

1.4 System Block Diagram of Test Configuration



2. System Test Configuration

2.1 Operation Environment

	Conduction	Radiation
Temperature [C] :	24	25.5
Humidity [%] :	35	43
Power supply :	AC110V/60Hz	AC110V/60Hz

2.2 Justification

The system was configured in typical fashion(as a customer would normally use it) for testing.

2.3 EUT Exercise Soft ware

The EUT exercise program used during radiated and conducted testing was designed to exercise the various system components in a manner similar to typical use.

2.4 Test Procedure

2.4.1 Conducted Emissions

EUT was placed on a platform of nominal size, 1m by 1.5m, raised 80cm above the conducting ground plane. The rear of tabletop was located 40cm to the vertical conducting ground plane.

The rear of EUT, including peripherals was aligned and flush with rear of tabletop. All other surfaces of tabletop was at least 80cm from any other grounded conducting surface. I/O cables and AC cables that were connected to the peripherals were bundled in center. They were folded back and forth forming a bundle 30cm to 40cm long and were hanged at a 40cm height to the ground plane.

Each EUT current-carrying power lead, except the ground(safety) lead, were individually connected through a LISN to the input power source.

All unused 50 ohm connectors of the LISN were resistively terminated in 50 ohm when not connected to the measuring equipment.

2.4.2 Radiated Emissions

EUT was placed on a platform of nominal size, 1m by 1.5m, raised 80cm above the conducting ground plane.

The rear of EUT, including peripherals was aligned and flush with rear of tabletop. I/O cables that were connected to the peripherals were bundle in center.

They were folded back and forth forming a bundle 30cm to 40cm long and were hanged 40cm height to the ground plane.

Test was made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna was varied in height above the conducting ground plane to obtain the maximum signal strength.

4. Conducted Emission Test Data

The initial step in collecting conducted data was to perform a quasi-peak scan over the measurement range using a spectrum analyzer.

The final data represents worst-case emissions.

O Test Data Sheet

Tested Frequency [MHz]	Meter Reading [A] [dBuV]	LISN Pol. [L,N]	Total Loss [B] [dB]	Results [A+B] [dBuV]	Limits [dBuV]	Margin (Limit - Result) [dB]
0.594	36.50	L2	0.09	36.59	48.00	11.41
0.792	33.60	L1	0.07	33.67	48.00	14.33
1.386	36.00	L1	0.09	36.09	48.00	11.91
1.776	40.20	L2	0.11	40.31	48.00	7.69
2.172	39.50	L2	0.09	39.59	48.00	8.41
2.178	36.90	L1	0.08	36.98	48.00	11.02
4.152	35.50	L1	0.08	35.58	48.00	12.42
4.548	35.20	L2	0.08	35.28	48.00	12.72
5.928	31.30	L2	0.08	31.38	48.00	16.62
8.694	23.20	L1	0.14	23.34	48.00	24.66
13.638	27.40	L2	0.75	28.15	48.00	19.85
14.034	26.30	L1	0.78	27.08	48.00	20.92
20.754	26.20	L2	1.25	27.45	48.00	20.55

* Results = Meter Reading(QP) + Total Loss(LISN Insertion loss + Cable loss)

* Measurement detector function and bandwidth

Detector function : CISPR quasi-peak

Bandwidth : 10kHz

5. Radiated Emission Test Data

The initial step in collecting radiated data was to perform a quasi-peak scan over the measurement range using a spectrum analyzer. All modes of operation were investigated and the worst-case emission are reported. All other emission are non-significant.

O Test Data Sheet

Frequency Range [MHz]	Tested Frequency [MHz]	Ant. Pol.	Meter Reading [A] [dBuV/m]	Total Loss [B] [dB]	Antenna Height [Cm]	Turn table Degree [Deg]	Results [A+B] [dBuV/m]	FCC Margin [dB]	Limits [3m] [dBuV/m]
30 - 88	48.017	H	18.5	13.90	200	360	32.4	7.60	40.0
	42.692	V	12.2	15.50	120	50	27.7	12.30	
	52.187	V	7.2	12.90	110	50	20.1	19.90	
88 - 216	100.189	H	23.6	9.60	180	30	33.2	10.30	43.5
	167.656	H	15.1	12.90	180	320	28.0	15.50	
	105.087	V	14.5	11.60	100	160	26.1	17.40	
	143.986	V	15.0	11.90	100	50	26.9	16.60	
	186.132	H	12.5	13.70	200	70	26.2	17.30	
216 - 960	301.249	H	16.1	18.60	280	90	34.7	11.30	46.0
	254.986	H	17.5	16.50	300	45	34.0	12.00	
	240.022	H	12.2	16.00	380	40	28.2	17.80	
	601.332	H	5.8	26.10	130	20	31.9	14.10	
	272.024	V	9.8	16.80	110	700	26.6	19.40	
960 -	-	-	-	-	-	-	-	-	54.0

* "<" Means equal or less than ! * All readings are quasi-peak mode.

* Receiving Antenna Mode : **Horizontal, Vertical**

* Results = Meter Reading + Total Loss(Antenna factor + Cable loss)

* Measurement detector function and bandwidth

Detector function : CISPR quasi-peak(Above 1000MHz: Average)

Resolution Bandwidth : 120kHz(Above 1000MHz: 1MHz)

7. Test Equipment Used

Equipment	Model No.	Serial No.	Makers	Calibration Last calibration and Interval
Spectrum analyzer	8566B	3340A21744	H.P	01/ 3/20, 12Months
	Firmware versions : Rev.29.9.86			
Quasi-peak adapter	85650A	2521A00687	H.P	00/10/10, 12Months
RF Preselector	85685A	2602A00224	H.P	00/10/10, 12Months
Field strength meter	ESCS30	839809/022	R & S	01/ 6/18, 12Months
	Firmware versions : Main 1.08, OTP 02.01, GRA 02.03			
Field strength meter	ESI 26	832692/002	R & S	01/06/18, 12Months
	Firmware versions : BIOS 3.3, Analyzer 2.09.2			
L.I.S.N	3825-2	9208-1981	EMCO	01/03/23, 12Months
Double Ridged Guide Antenna	3115	9505-4441	EMCO	01/06/03, 12Months
Biconilog Antenna	3142	1237	EMCO	01/ 0/02, 12Months