

INSTRUMENTATION:

Radiated and conducted signal strength measurements were taken with a spectrum analyzer. Radiated emissions were measured with broadband and tuned dipole antennas. Conducted emissions were measured with a 50ohm/50μH line impedance stabilization network (LISN). The test equipment consists of the following:

<u>Test Equipment</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Cal. Due</u>
Spectrum Analyzer	HP 8591A	3144A02506	01-06-04
Spectrum Analyzer	8592L	3649A00744	01-10-04
LISN	94641-1	0145/0146	06-05-03
LISN	3825/2	9305-2088	08-21-03
LISN	LI-210	25145	07-10-03
Biconical Antenna	3110B	1708	10-01-03
Biconical Antenna	BIA-25	2451	09-18-03
Log Periodic	LPA25	1112	10-01-03
Dipole Antenna	DM-105A-T1	31402-110	06-05-03
Dipole Antenna	DM-105A-T2	31402-105	06-05-03
Dipole Antenna	DM-105A-T3	31402-109	06-05-03
Horn Antenna	3115	9405-4264	10-01-03
R.F. Amplifier	QB-820	11602	01-11-04
Preamplifier	8449B	3008A00914	01-07-04

DETECTOR FUNCTION:

All measurements were taken using a peak hold signal detector function. In this mode, the spectrum analyzer makes continuous scans across the frequency band and stores the highest emission value detected at each frequency for all scans. The peak hold integration will detect transient or low duty cycle emissions peak which might be missed on single scan measurement. The emission value at each frequency was a true value.

SPECTRUM ANALYZER SETTING:

For all measurements, the spectrum analyzer was set for a 10 dB input attenuation, 10 dB/Division vertical scale and 90 or 100 dBμV reference level. The resolution bandwidth was set at 9 Khz for the 0.15 - 30 Mhz span, at 120 Khz for 30 Mhz to 1.0 Ghz and 1 Mhz from 1 Ghz to 5.0 Ghz span. The video bandwidth and sweep rate were automatically coupled by the analyzer.

RADIATED EMISSIONS MEASUREMENTS

Model number: SD300

Test Date: 04/21/03

Frequency Mhz	Measurement Reading dBμV/m	Corrected Reading dBμV/m	EN55022 Limit dBμV/m	FCC Limit dBμV/m	Minimum Margin dBμV/m
Vertical					
30.6	22.1	14.2	30.0	29.5	- 15.3
125	28.0	19.4	30.0	33.0	- 10.6
Horizontal					
49.6	39.2	28.0	30.0	29.5	- 1.5
200	30.5	22.1	30.0	33.0	- 7.9
400	28.4	24.7	37.0	35.5	- 10.8
700	25.3	28.5	37.0	35.5	- 7.0

CONDUCTED EMISSIONS MEASUREMENTS

Model number: SD300

Test voltage: 120V 60Hz

Test Date: 04/21/03

Power supply, Ventronics, Part no. R48W051000-14/1

Frequency Mhz	Reading dBuV, L1	Frequency Mhz	Reading dBuV, L2	FCC Limit, dBuV	Margin dBuV
.498	29.6	.450	44.9	47.0	-2.1
18.6	21.2	17.7	35.8	50.0	-14.2
-	-	18.3	35.3	50.0	-14.7
-	-	20.2	31.1	50.0	-18.9

Conducted Emissions Measurements cont...

Model number: SD300**Test voltage:** 220V 60Hz**Test Date:** 04/21/03

Power supply, Globtek, part no. GT-3T48-5-1000R-3

Frequency Mhz	Reading dBuV, L1	Frequency Mhz	Reading dBuV, L2	CISPR Limit, dBuV	Margin dBuV
.474	38.7	.450	26.3	46.6	-20.3
16.3	36.0	16.3	34.0	50.0	-14.0
21.6	37.6	17.7	33.1	50.0	-12.4

Power supply, Globtek Inc. – Part No. WR23A1000 LCP-N

Frequency Mhz	Reading dBuV, L1	Frequency Mhz	Reading dBuV, L2	CISPR Limit, dBuV	Margin dBuV
.15	38.8	.15	34.8	56.1	-17.3
.79	24.0	.79	24.4	46.0	-21.6
2.3	20.7	2.3	21.8	46.0	-24.2
14.6	19.1	14.6	21.6	50.0	-28.4