5.0 FCC Rules and Regulations Part 2 §2.1053 (a): Field strength of spurious radiation

5.1 Test Procedure

ANSI/TIA/EIA-603-1992, section 2.2.12

The transmitter is terminated with a 50 Ω load and is modulated with a 2,500 Hz sine wave at an input level 16 dB greater than that required to produce 50% of the rated system deviation at 1000 Hz.

Refer to section "Radiated Measurement" in this report for further information.

5.2 Test Data

The worst-case emissions test data are shown. The magnitude of emissions attenuated more than 20 dB below the FCC limit need not be recorded.

4 W 25 kHz

Radiated Emissions (Channel 1 at 450.025 MHz)
Substitution Method

Frequency	S/G level (dBm)	Cable Loss*	Difference in gain (ref. To 1/2 wave dipole)	Emission level (dBm)	Limit (dBm) Mask B	Margin
900.050	-32.4	0.67	1.95	-35.0	-13	-22.0
1350.075	-27.0	0.83	-3.22	-24.6	-13	-11.6
1800.100	-42.7	1.00	-4.78	-38.9	-13	-25.9
2250.125	-35.9	1.34	-5.01	-32.2	-13	-19.2
2700.150	-48.8	1.33	-5.60	-44.5	-13	-31.5
3150.175	-37.7	1.50	-9.95	-29.3	-13	-16.3
3600.200	-55.8	3.00	-5.94	-52.9	-13	-39.9
4050.225	-53.6	2.34	-5.98	-50.0	-13	-37.0
4500.250	-61.5	2.67	-7.06	-57.1	-13	-44.1

4W 12.5 kHz						
Radiated Emissions (Channel 4 at 450.025 MHz) Substitution Method						
Frequency	**ERP S/G level (dBm)**	**Cable Loss***	**Difference in gain (ref. to 1/2 wave dipole)**	**Emission level (dBm)**	**Limit (dBm) Mask D**	**Margin**
900.050	-31.4	0.67	1.95	-34.0	-20	-14.0
1350.075	-41.5	0.83	-3.22	-39.1	-20	-19.1
1800.100	-46.1	1.00	-4.78	-42.3	-20	-22.3
2250.125	-35.8	1.34	-5.01	-32.1	-20	-12.1
2700.150	-50.3	1.33	-5.60	-46.0	-20	-26.0
3150.175	-39.7	1.50	-9.95	-31.3	-20	-11.3
3600.200	-53.3	3.00	-5.94	-50.4	-20	-30.4
4050.225	-52.0	2.34	-5.98	-48.4	-20	-28.4
4500.250	-61.2	2.67	-7.06	-56.8	-20	-36.8

*This insertion loss corresponds to the cable connecting the RF Signal Generator to the ½ wave dipole antenna.

5.3 Test Equipment

Antenna: CHASE CBL6112 s/n 2099
Amplifier: HP8449B s/n 3008A00505
Spectrum analyzer: HP8564E s/n 3943A01719

RF Signal Generator HP8648C s/n 3537A01741
Synthesized Sweeper HP83752A s/n 3610A00846