



communications

Electron Devices

L5850 Traveling Wave Tube

- **Features:**
- **8.5 to 10.5GHz**
- **2 KW min.**
- **60 dB gain**



Typical Operating Conditions

Duty	6%
Cathode Voltage	-11.0 KVDC
Cathode Current	1.4 A Peak
Helix Voltage	Ground Potential
Helix Current	0.3A Peak
Grid Voltage	Off: -200 VDC
.....	On: +150Vpk
Filament Voltage	-6.3 VDC
Filament Current	1.8 A
Collector #1 Voltage	7.7 KV

Performance Characteristics

Frequency Range	8.5 to 10.5 GHz
Power Output	Min. 2 KW
Rated Gain	Min. 60 dB

Maximum Ratings

Beam Duty	6.5%
Helix Current	0.4 A Peak
Heat Sink Temperature	100°C

Mechanical Description

Dimensions	See Outline Drawing
Weight	7.7 lbs
Cooling	Conduction

Environmental Capability

Shock (at 11 ms)	15 g
Vibration (at 500cps)	10 g
Ambient Temperature	-54°C to +110°C
Altitude	70,000 feet

Power Supply Requirements

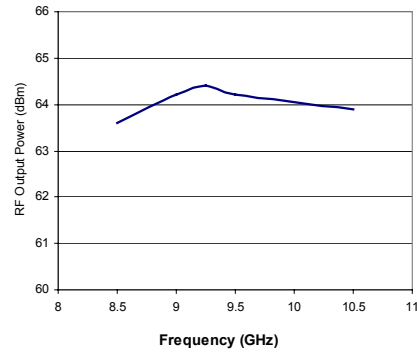
Cathode Voltage Range	-10.5 to -11.5 KVDC
Cathode Current, Max	1.8 A Peak
Grid Voltage Range	-250 VDC to +200 Vpk
Filament Voltage	-6.3 VDC
Filament Current	1.2 to 2.0 A

All voltages are with respect to cathode

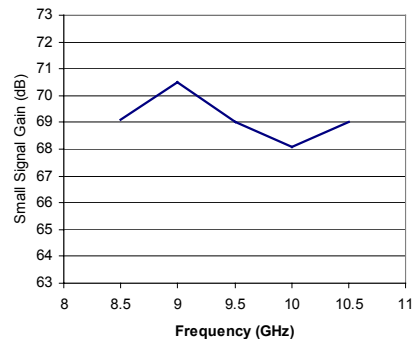
The L5850 is a helix traveling wave tube amplifier with a minimum peak power output of 2 KW over the frequency range of 8.5 to 10.5 GHz at a maximum duty cycle of 6%. The tube has a metal-ceramic vacuum envelope, a non-intercepting grid, a depressed collector, and utilizes periodic permanent magnet focusing. DS58500303

Typical Performance

Saturated Power vs. Frequency

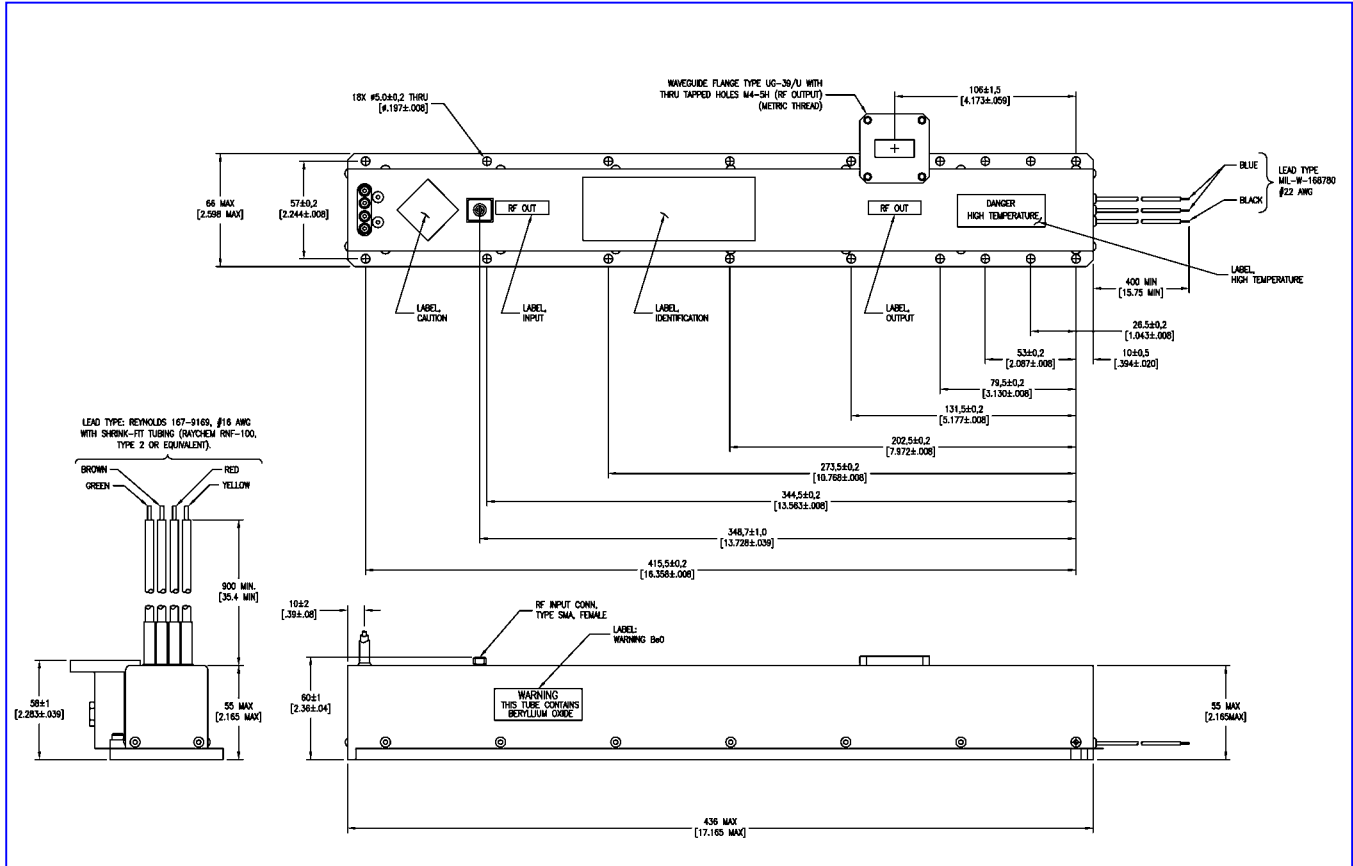


Small Signal Gain vs. Frequency



Cleared by DoD/DFOISR for public release under 03-S-1428 06/27/03

L5850 Outline Drawing



Current detailed outline drawings are available on request. Specifications and features are subject to change without notice.