



communications

Electron Devices

L5841

Helix Traveling Wave Tube

Features:

- 7.5 to 18.0 GHz
- 125 Watts Minimum
- Shadow Grid
- 42 dB Min. Gain
- PPM Focused

Typical Operating Conditions

Duty	CW
Cathode Voltage	-9.2 KVDC
Cathode Current	190 mA
Helix Current	6.0 mA
Collector #1 Voltage	4.60 KV
Collector #2 Voltage	2.76 KV
Grid Voltage	+140 VDC
Grid Bias Voltage	-200 VDC
Filament Voltage	-6.3 VDC
Filament Current	1.3 A
Grid Current.....	2 mA

Performance Characteristics (Note 1)

Frequency Range	7.5 to 18.0 GHz
Power Output	Min. 125 W
Small Signal Gain (Equalized).....	Min. 42 dB

Maximum Ratings

Duty	CW
Helix Current with RF Drive	12 mA
Baseplate Temperature	110°C

Mechanical Description

Dimensions.....	See Outline Drawing
Weight	6.0 lbs Max.
Cooling	Conduction
Mounting Position	Any

Environmental Capability (Note 2)

Shock	15g
Vibration	10g
Ambient Temperature.....	-54°C to +100°C
Altitude	70,000 feet

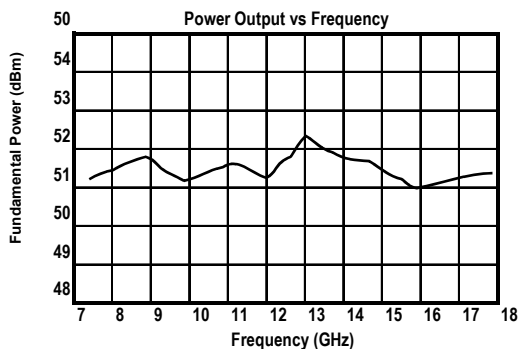
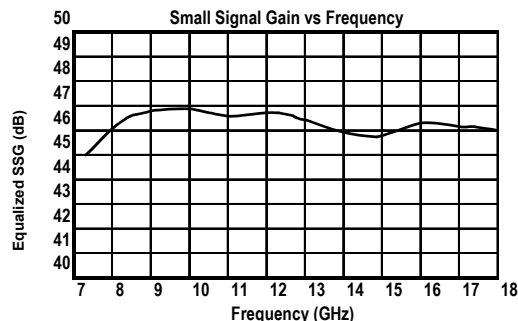
Power Supply Requirements

Cathode Voltage Range	-8.7 to -9.7 KVDC
Cathode Current, Max	250 mA
Grid Voltage Range.....	+100 to +250 VDC
Grid Current , Max.....	10 mA
Grid Bias Voltage	-200 VDC
Filament Voltage	-6.3 VDC
Filament Current.....	1.0 to 2.0 A



The L5841 is a broadband traveling wave tube with a minimum power output of 125 watts over the frequency range of 7.5 to 18.0 GHz. The tube has a metal-ceramic vacuum envelope, a non-intercepting grid, a two-stage depressed collector and utilizes periodic permanent magnet focusing. DS58411102

Typical Performance*



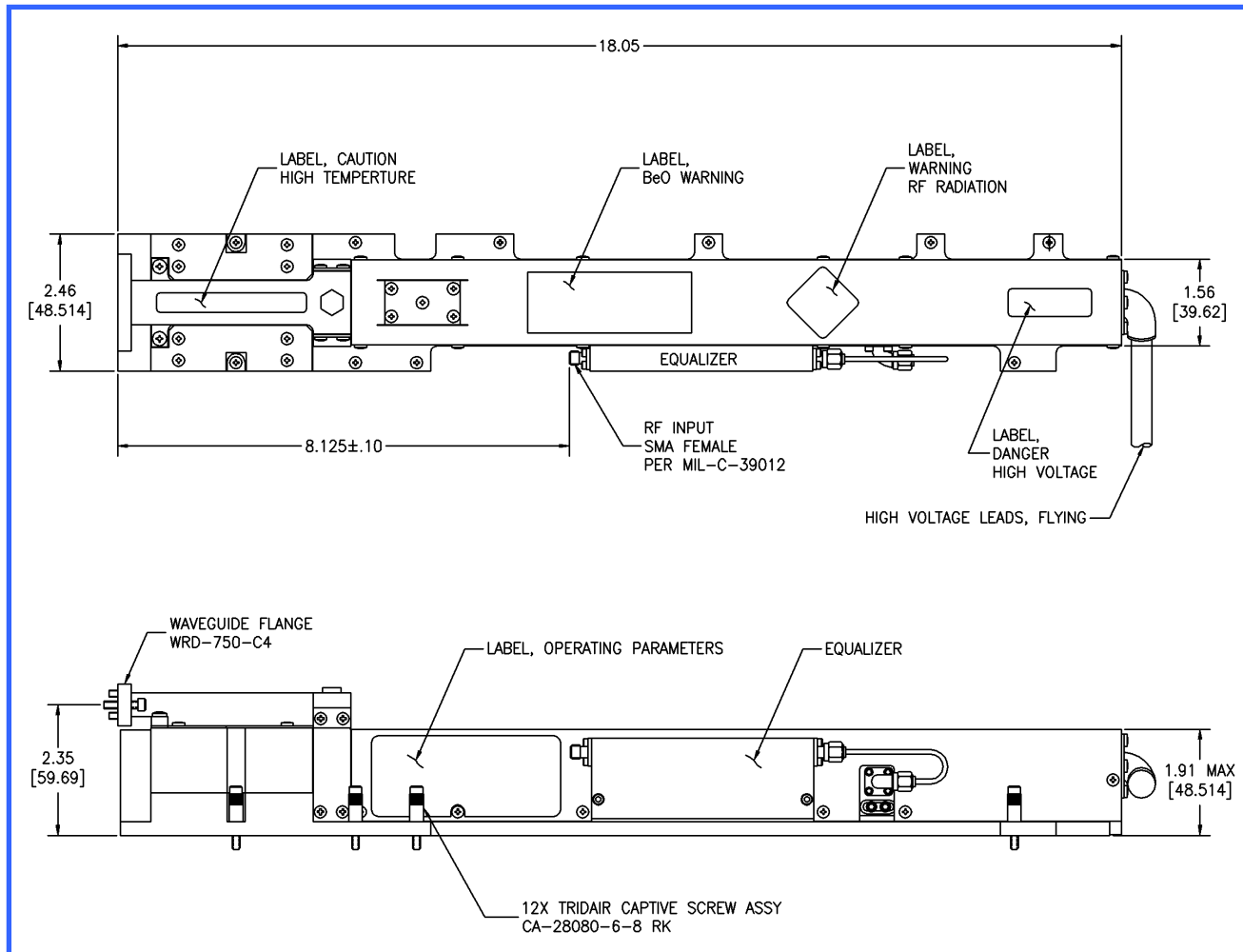
*Equalized Curves

Notes:

1. Other performance characteristics available on request.
2. Designed for MIL and ISO standard environments. Environmental and screening testing available upon request.
3. All voltages are with respect to cathode

Cleared by DoD/DFOISR for public release under 03-S-0450 on 4/3/03

L5841 Outline Drawing



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