



**communications**

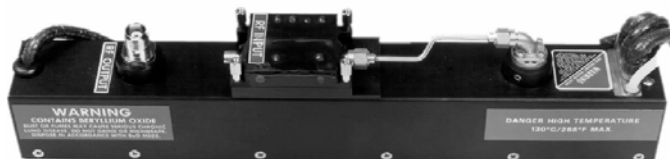
Electron Devices

**L5843**

# Helix Traveling Wave Tube

## Features

- **7.0 to 16.5 GHz**
- **300 W Peak Min.**
- **48 dB Gain (Equalized)**
- **PPM Focused**



## Performance Characteristics

Frequency Range .....7.0 to 16.5 GHz  
Power Output .....300 W min.  
Small Signal Gain (Equalized) .....48 dB min.

## Typical Operating Conditions

Duty .....7%  
Cathode Voltage .....-6.35 KVDC  
Beam Current .....735 mA Peak  
Helix Current .....100mA Peak  
Grid Voltage ..... Off: -100VDC On: +65VDC Peak  
Filament Voltage .....-6.3 V  
Filament Current .....1.4 A  
Collector Voltage .....4.55 KV  
Grid Current .....95 mA Peak

## Maximum Ratings

Beam Duty .....7.0%  
Pulse Width .....20 Microseconds  
Helix Current .....250 mA Peak  
Grid Current .....115 mA  
Heat Sink Temperature .....110°C

## Mechanical Description

Dimensions ..... See Outline Drawing  
Weight .....2.3 lbs.  
Cooling .....Conduction  
Mounting Position .....Any

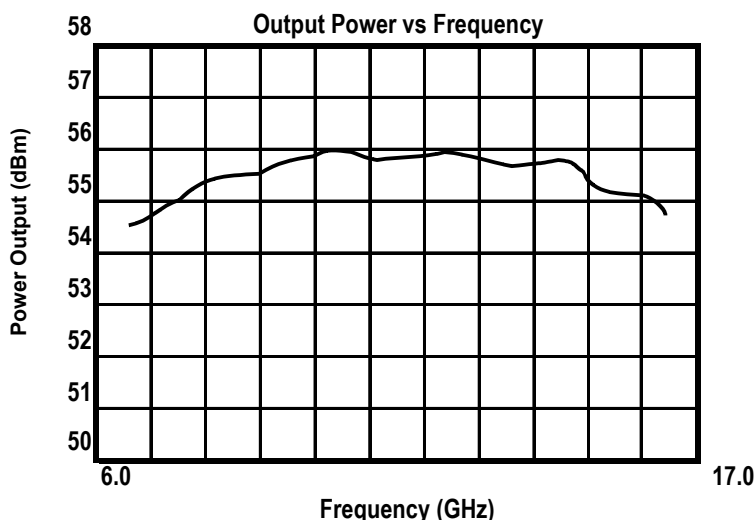
## Environmental Capability

Shock .....15 g  
Vibration .....10 g  
Ambient temperature .....- 54° to + 100°C  
Altitude .....35,000 feet

## Power Supply Requirements\*

Cathode Voltage Range .....-6.1 to -6.7 KVDC  
Cathode Current, Max .....835 mA Peak  
Grid Voltage Range .....+40 to +110 VDC Peak  
Filament Voltage .....-6.3 VDC  
Filament Current .....1.7 A  
Collector Voltage .....4.0 to 4.4 KV

The L-5843 is a broadband traveling wave tube with a minimum peak power output of 300 watts over the frequency range of 7.0 to 16.5 GHz at a maximum duty cycle of 7%. The tube has a metal ceramic vacuum envelope, an intercepting grid, and utilizes periodic permanent magnet focusing. DS58430404

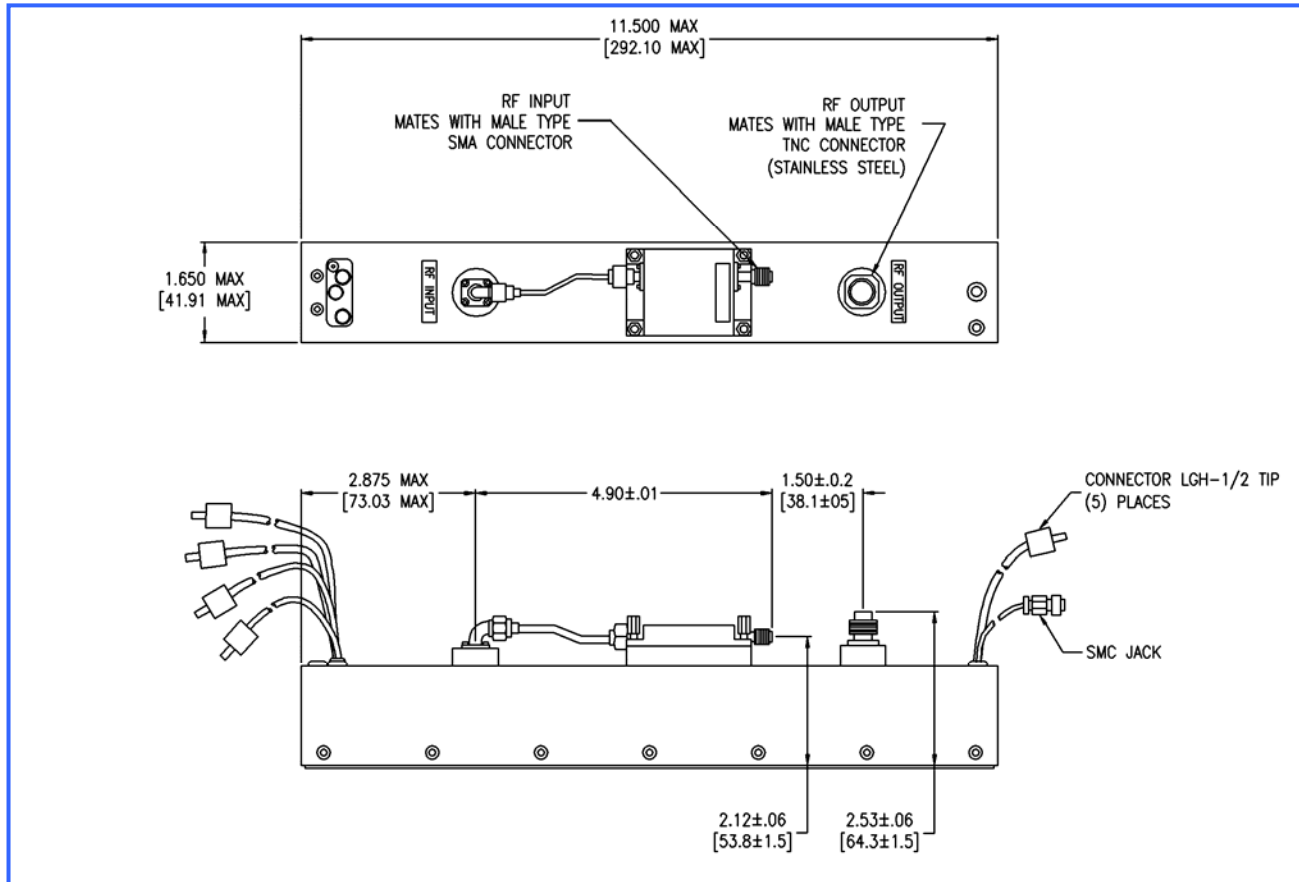


All voltages are specified with respect to cathode.

\*This TWT is designed to mate with Electron Devices' power supply/modulator Model M-702 to form a compact light weight TWTA for ECM, Datalink or RADAR applications.

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## L-5843 Outline Drawing



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