



communications

Electron Devices

L5827

Helix Traveling Wave Tube

Features:

- **0.7 to 2.0 GHz**
- **1 kW Peak Minimum**
- **30 dB Gain**

Performance Characteristics

Frequency Range.....	0.7 - 2.0 GHz
Power Output	700 W min. (0.7 - 1.0 GHz)
.....	1000 W min. (1.0 - 2.0 GHz)
Small Signal Gain.....	30 dB min.

Typical Operating Conditions

Duty	4%
Cathode Voltage	-7.4 KVDC
Cathode Current	1.8 A Peak
Collector Voltage	75% of cathode
Helix Current	300 mA Peak
Grid Bias	-150 VDC
Grid Voltage	+75 VDC
Grid Current	200 mA Peak
Filament Voltage	-6.3 VDC
Filament Current	3.5 A

Maximum Ratings

Cathode Voltage.....	-7.7 KVDC
Cathode Current.....	2.1 A Peak
Duty	4.1%
Helix Current	1000 mA Peak
Heat Sink Temperature	110°C
Grid Current	300 mA Peak
Grid Bias.....	-200 VDC
Grid Voltage	+50 to +140 VDC
Pulse Width	up to 100 µsec
Load VSWR.....	3.0:1

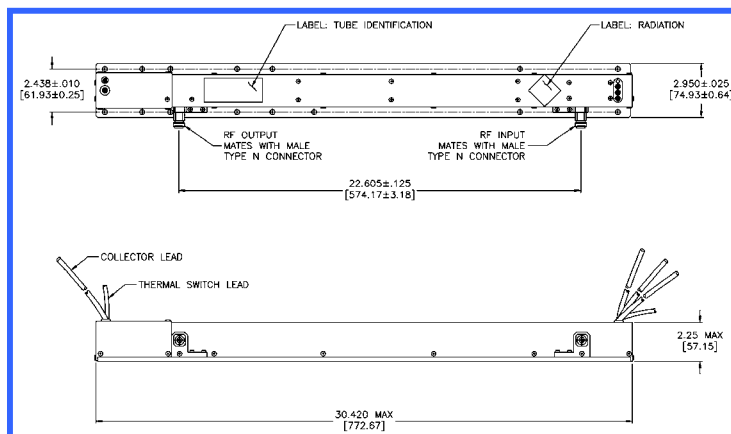
Mechanical Description

Dimensions.....	See Outline Drawing
Weight	13 lbs Max.
Cooling	Conduction
Mounting Position.....	Any

Environmental Capability

Shock 10ms, half sine	15 g
Vibration 5Hz to 2000Hz	15 g
Ambient Temperature	-40°C to +95°C
Altitude	70,000 feet
All voltages are with respect to cathode	

The L5827 is a broadband traveling wave tube with minimum peak power output of 700 watts over the frequency range of 0.7 to 2.0 GHz at a maximum duty cycle of 4%.
DS 58271102



The mechanical dimensions shown above are limited, for reference only and are subject to change. Current detailed outline drawings are available on request.

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