



**communications**

Electron Devices

# L6115

## Mini Traveling Wave Tube

### Features:

- 2 to 8.0 GHz
- 65 Watts Minimum
- 21 dB Gain Minimum

### Performance Characteristics

Frequency.....	2.0 to 8.0 GHz
RF Output Power.....	65 W min
RF Input Power.....	30 dBm max
Small Signal Gain.....	21 dB min
Gain Tracking.....	±3.0 dB
Noise Power Density	
Beam On.....	-50 dBm/MHz
AM/PM Conversion.....	7°/dB max
Harmonic Separation.....	0 dBc min

### Typical Operating Conditions

Duty.....	CW
Cathode Voltage.....	-2670 VDC
Cathode Current.....	180 mA
Helix Current-DC.....	1 mA
Helix Current-RF.....	<15 mA
Beam Control	
Electrode Voltage -on.....	-5 VDC
Electrode Voltage - off.....	-1500 VDC
Electrode Current.....	1 mA max
Filament Voltage.....	-6.3 VDC
Filament Current.....	0.6 A
Collector 1 Voltage.....	2025 VDC
Collector 1 Current.....	100 mA max
Collector 2 Voltage.....	1520 VDC
Collector 2 Current.....	125 mA max
Collector 3 Voltage.....	810 VDC
Collector 3 Current.....	200 mA max
Prime Power.....	300 watts

### Mechanical Description

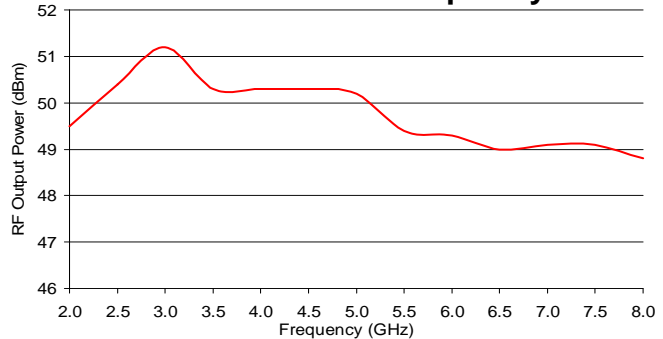
Dimensions*.....	10.50" x 1.50" x 1.25"
Weight.....	<2.0 lbs
Cooling.....	Conduction
Baseplate Temperature.....	-54°C to +110°C
RF Input Connector.....	SMA
RF Output Connector.....	TNC

All voltages are with respect to cathode.

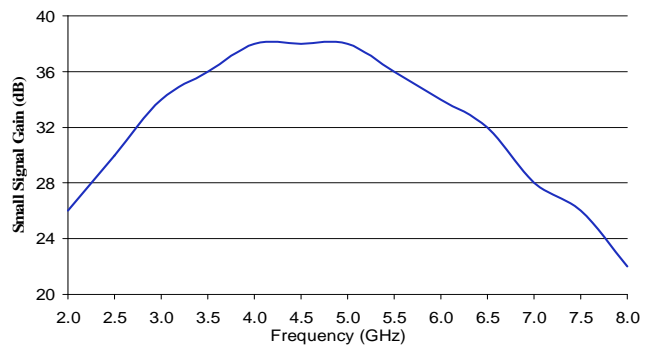
\*Unpackaged

The L6115 is an unpackaged helix traveling tube with a power output of 65 watts over the frequency range of 2.0 to 8.0 GHz. The tube has a metal-ceramic vacuum envelope, a beam control element, a multi-stage depressed collector for high efficiency and utilizes periodic permanent magnet focusing. The L6115 is suitable for use in airborne and shipboard applications. DS61150207

### Saturated Power vs. Frequency



### Small Signal Gain vs. Frequency Typical



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