



**communications**

Electron Devices

# PRELIMINARY

## L6130

# Mini Traveling Wave Tube

### Features

- **6.0 to 18.0 GHz**
- **100 Watts Minimum**
- **25 dB Gain Minimum**

### Performance Characteristics

Frequency.....	6.0 to 18.0 GHz
RF Output Power	
6.0 - 7.9 GHz .....	100 - 125 W min.
7.9 - 15.5 GHz .....	125 W min.
15.5 - 18.0 GHz .....	125 - 100 W min.
RF Input Power.....	30 dBm max
Small Signal Gain.....	25 dB min
Noise Power Density-Beam On.....	-45 dBm/MHz
AM/PM Conversion.....	TBD
Harmonic Separation at 6 GHz.....	-4 dBc min

### Typical Operating Conditions

Duty .....	CW
Cathode Voltage.....	-4200 VDC
Cathode Current.....	220 mA
Helix Current-DC .....	1 mA
Helix Current-RF.....	10 mA max
Beam Control Electrode Voltage-Off .....	-1000 VDC
Beam Control Electrode Current .....	1 mA max
Filament Voltage.....	-6.3 VDC
Filament Current.....	0.6 A
Collector 1 Voltage .....	2450 VDC
Collector 1 Current .....	100 mA max
Collector 2 Voltage .....	1800 VDC
Collector 2 Current .....	140 mA max
Collector 3 Voltage .....	500 VDC
Collector 3 Current .....	220 mA max
Prime Power .....	400 watts

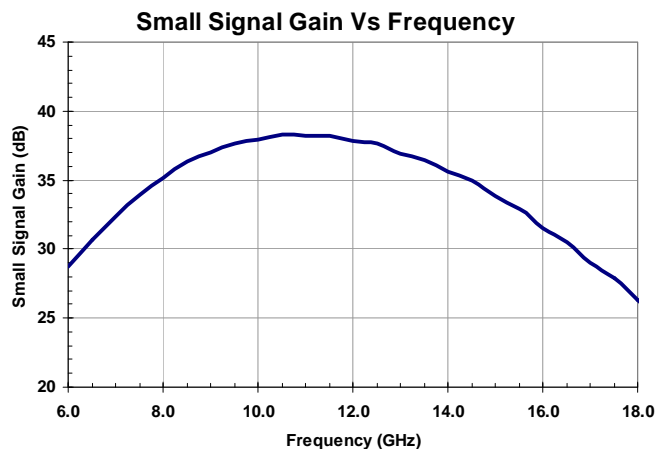
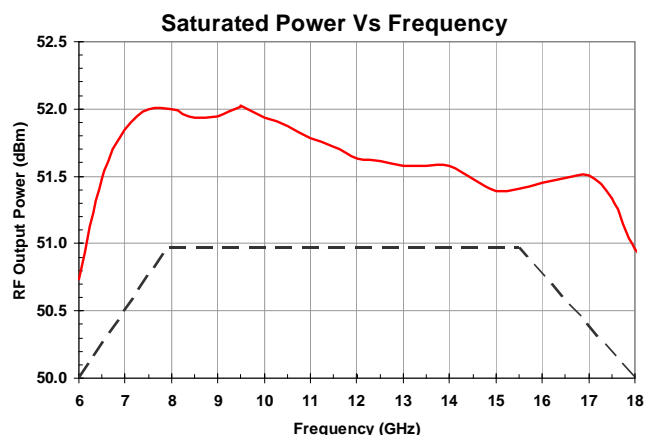
### Mechanical Description

Dimensions* .....	7.0" x 0.9" x 1.1"
Weight .....	< 1.0 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 L6130 is an unpackaged helix traveling tube with a power output of 100 to 140 watts over the frequency range of 6.0 to 18.0 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 L6130 is suitable for use in military and commercial applications. DS61301106



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