



communications

Electron Devices

L6074

Mini Traveling Wave Tube

Features

- **6.0 to 18.0 GHz**
- **65 Watts Minimum**
- **23 dB Gain Minimum**

Performance Characteristics

Frequency	6.0 to 18.0 GHz
RF Output Power	65 W min
RF Input Power	30 dBm max
Small Signal Gain	23 dB min
Gain Tracking	± 2.5 dB
Noise Power Density-Beam On	-45 dBm/MHz
AM/PM Conversion	6°/dB max
Harmonic Separation at 6 GHz	-3 dBc min

Typical Operating Conditions

Duty	CW
Cathode Voltage	-3800 VDC
Cathode Current	155 mA
Helix Current-DC	1 mA
Helix Current-RF	10 mA max
FE Voltage	
Beam off	-1100 Volts
Beam on	-5 Volts
FE Current	1 mA max
Filament Voltage	-6.3 VDC
Filament Current	0.5 A
Collector 1 Voltage	2250 VDC
Collector 1 Current	80 mA max
Collector 2 Voltage	1950 VDC
Collector 2 Current	100 mA max
Collector 3 Voltage	720 VDC
Collector 3 Current	160 mA max
Prime Power	280 watts

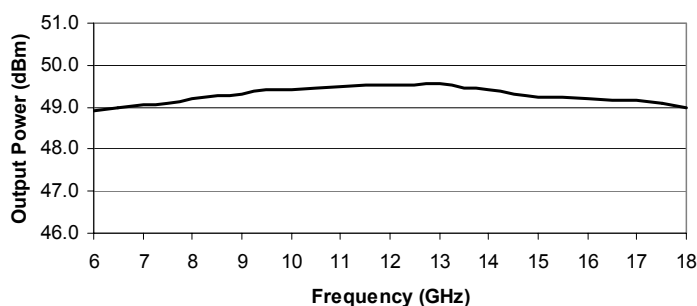
All voltages are with respect to cathode

Mechanical Description

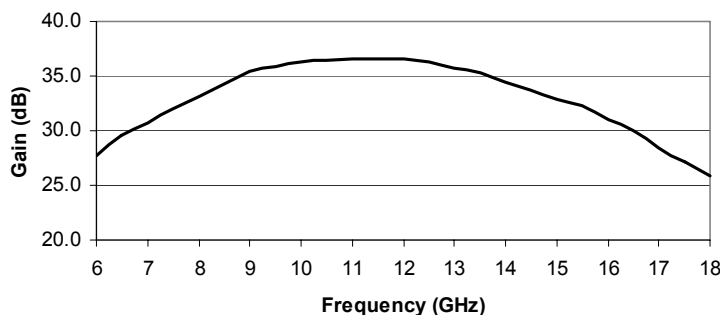
Dimensions	See Outline
Weight	< 1.0 lbs
Cooling	Conduction
Baseplate Temperature	-54° C to +110 ° C
RF Input Connector	SMA
RF Output Connector	TNC

The L6074 is an unpackaged helix traveling tube with an output power of 65 to 100 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 L6074 is suitable for use in airborne and shipboard applications. DS60741106

Typical Saturated Power vs. Frequency

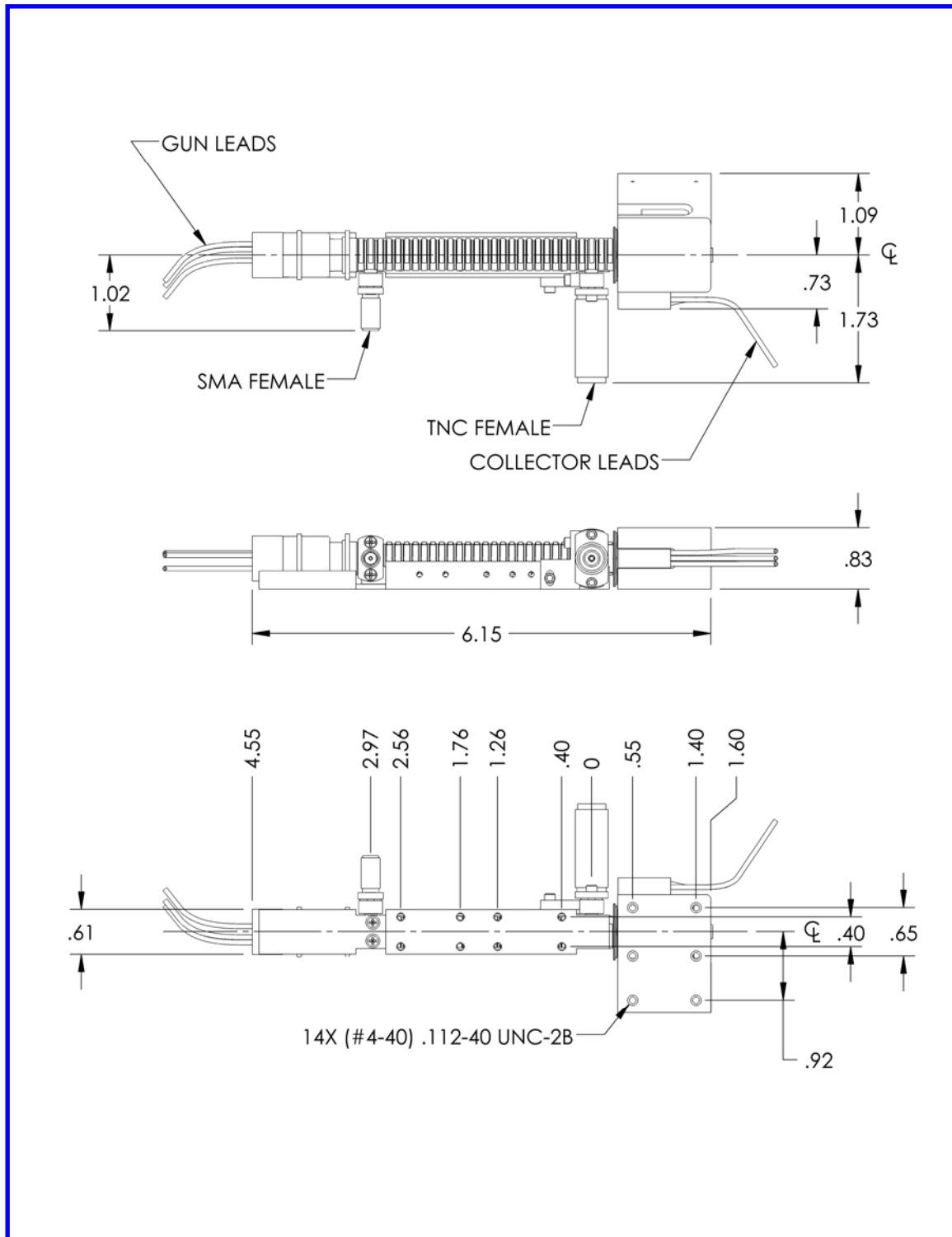


Typical Small Signal Gain vs. Frequency



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L6074 Outline Drawing



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