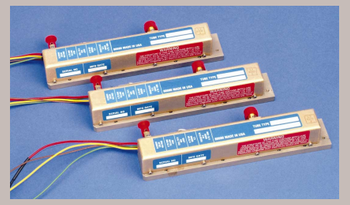
Mini Traveling Wave Tubes

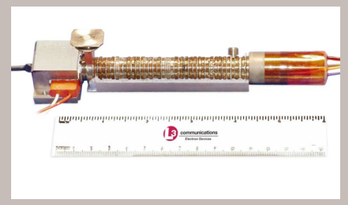
L3 communications
Electron Devices

Mini Traveling Wave Tubes from L-3 Electron Devices

L-3 Communications, Electron Devices Division, builds Mini-TWTs for a wide variety of applications including Electronic Warfare, Radar, Communications, and Decoys. The configuration of these Mini-TWTs range from the conventional single-stage collector designs to state-of-the-art, high efficiency, Vacuum Power Boosters used in Microwave Power Modules. Electron Devices' Mini-TWTs are available in single and multi-octave models operating from 2 to 46 GHZ.



Compact Mini Traveling Wave Tubes.



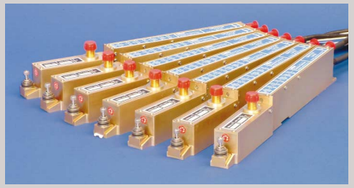
Electron Devices newest millimeter mini TWT the L6083.

Mini tube integrated into an open Microwave Power Module.

Mini Traveling Wave Tubes

Conventional Mini TWTs

Electron Devices Mini-TWTs typically operate at voltages less than 5 KV and incorporate APBN rods and AL203 output windows and ALN collectors, eliminating BeO, a hazardous material. These Mini-TWTs incorporate a focus electrode for modulation of the electron beam.

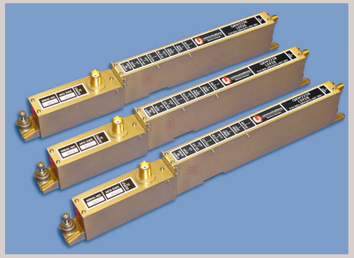


Product Information

Conventional Miniature TWTs	Frequency Range (GHz)	Output Power (Watts)	Small Signal Gain (dB)	Minimum Efficiency (%)	Collector Stages	Dimensions L x W x H (inches)
L6043	2.0 to 8.0	50	30	15	Single	14.1 x 1.05 x 1.75
L5936	4.5 to 18.0	20	43	12	Single	12.05 x .0795 x 1.75
L6117	6.0 to 18.0	50	40	17	Single	12.05 x .840 x 2.44
L5990	9.5 to 10.0	140	30	30	Single	7.3 x 1.3 x 1.25
L5928	6.0 to 18.0	65	40	15	Single	12.25 x 1.035 x 1.81

High Efficiency Mini TWTs & VPBs

In response to new requirements with reduced prime power consumption, Electron Devices developed a line of high efficiency Mini-TWTs incorporating two, three, and four stage collectors. A line of Vacuum Power Boosters (VPBs) was also developed for use in Microwave Power Modules. These VPBs are miniaturized, high efficiency Mini-TWTs incorporating multi-stage collectors and minimal packaging and are the smallest and lightest TWTs available.

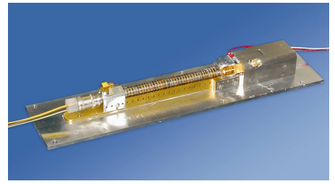


Product Information

Conventional Miniature TWTs	Frequency Range (GHz)	Output Power (Watts)	Small Signal Gain (dB)	Minimum Efficiency (%)	Collector Stages	Dimensions L x W x H (inches)
L6017	2.0 to 8.0	50	25	30	Triple	10.5 x 1.5 x 1.25
L5978	6.0 to 17.5	20	24	25	Dual	5.75 x 1.5 x 0.8
L6074	6.0 to 18.0	50 or 65	23	25	Triple	6.1 x 0.9 x 1.1
L6035	4.5 to 18.0	35	30	25	Dual	9.0 x 1.8 x 1.0
L6108	14.0 to 14.5	125	30	35	Dual	9.0 x 1.23 x 0.9
L6083	26.0 to 40.0	20	30	20	Dual	6.0 x 1.0 x 1.0
L6024	40.0 to 46.0	40	30	22	Triple	6.0 x 1.0 x 1.0

High Power Mini TWTs

Electron Devices has also developed a line of high power Mini-TWTs. These Mini-TWTs are capable of providing RF output power comparable to conventional high voltage TWTs. These Mini-TWTs operate at a nominal 5 KVDC and incorporate multi-stage collectors for improved efficiency. When compared to conventional "big bottle" TWTs, these high power Mini-TWTs are significantly smaller and lighter and offer increased reliability.



Product Information

High Power Miniature TWTs	Frequency Range (GHz)	Output Power (Watts)	Small Signal Gain (dB)	Minimum Efficiency (%)	Collector Stages	Dimensions L x W x H (inches)
L6049	4.5 to 18.0	110	30	25	Dual	9.0 x 1.8 x 1.5
L6084	5.0 to 10.0	200	35	30	Triple	11.0 x 1.3 x 1.5
L6103	4.5 to 18.0	110	34	27	Triple	9.0 x 1.8 x 1.5