



E I M A C
 Division of Varian
 SAN CARLOS
 CALIFORNIA

EM-1602A
 TRAVELING WAVE TUBE
 4.0-12.4 GHz
 1W C.W. Min.
 30 dB Min. S.S.G.

The EM1602A TWT is one of a family of light weight, high performance TWTS available from EIMAC. Applications include both airborne and ground based systems subject to stringent environments where reliable, long life performance is of major concern. Typical applications include use as ECM drivers and radar augmenters, and in airborne radar, communications, and special test equipment.



FEATURES

- Small Size
- Light Weight
- Metal-Ceramic Construction
- PPM Focusing
- High Gain
- High Efficiency
- Broadband Operation
- Versatile Operation
- Conduction Cooling

GENERAL CHARACTERISTICS

PERFORMANCE

Frequency Range	4.0-12.4 GHz
Saturated Power Output (Min)	1 W
(Typical).....	2 W
Small Signal Gain (Min)	30 dB
(Typical).....	35 dB
Saturated Gain (Min)	24 dB
(Typical).....	29 dB
Output VSWR (Max)	2.5 : 1
Input VSWR (Max)	2.5 : 1
Impedance (Nominal)	50Ω
Noise Figure (Max)	30 dB
(Typical).....	25 dB

NOTE: These data may be used for prototype design purposes. Before establishing production design specifications, contact the nearest Varian Sales Office or Microwave Product Manager, EIMAC Division of Varian, 301 Industrial Way, San Carlos, Calif. 94070



ELECTRICAL

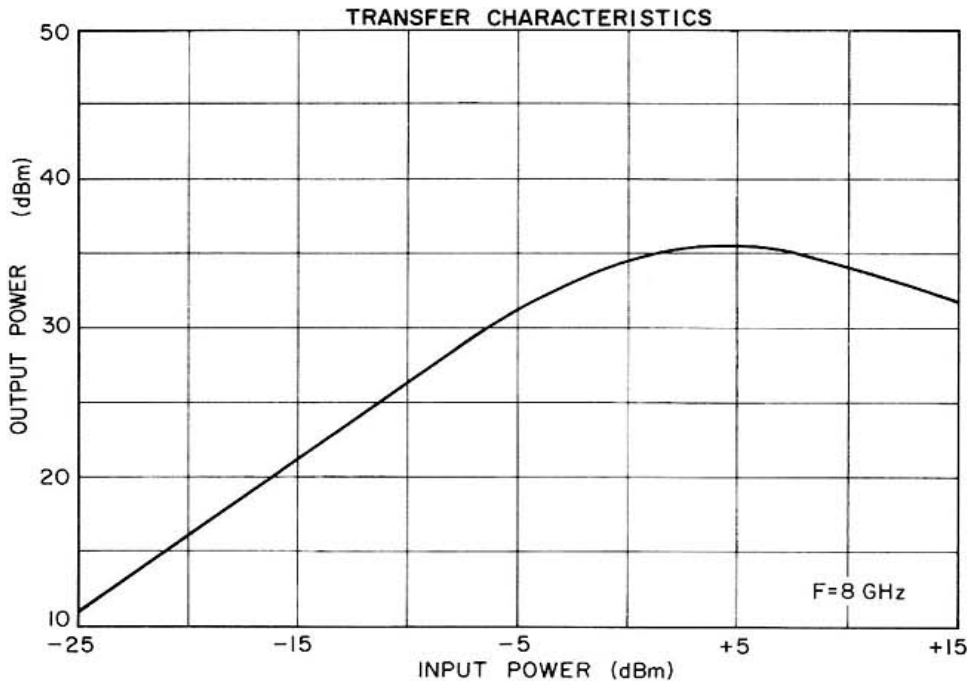
	<i>Min.</i>	<i>Max.</i>	<i>Units</i>
Cathode Voltage	-1 950	-2250	V
Cathode Current	15	25	mA
Focus Electrode Voltage	-30	0	V (Ref to Cath)
Focus Electrode Current		0	
Helix Voltage	GND		ground
Collector Voltage	GND		ground
Heater Voltage (Nominal)	6.3		V
Heater Current (Nominal)	0.5		A

ENVIRONMENT

Vibration	15G, 5 to 500 cps
Shock	25G, 11 ms
Acceleration	10G, sustained
Temperature	-54°C to 85°C
Altitude (unpressurized)	to 70,000 ft

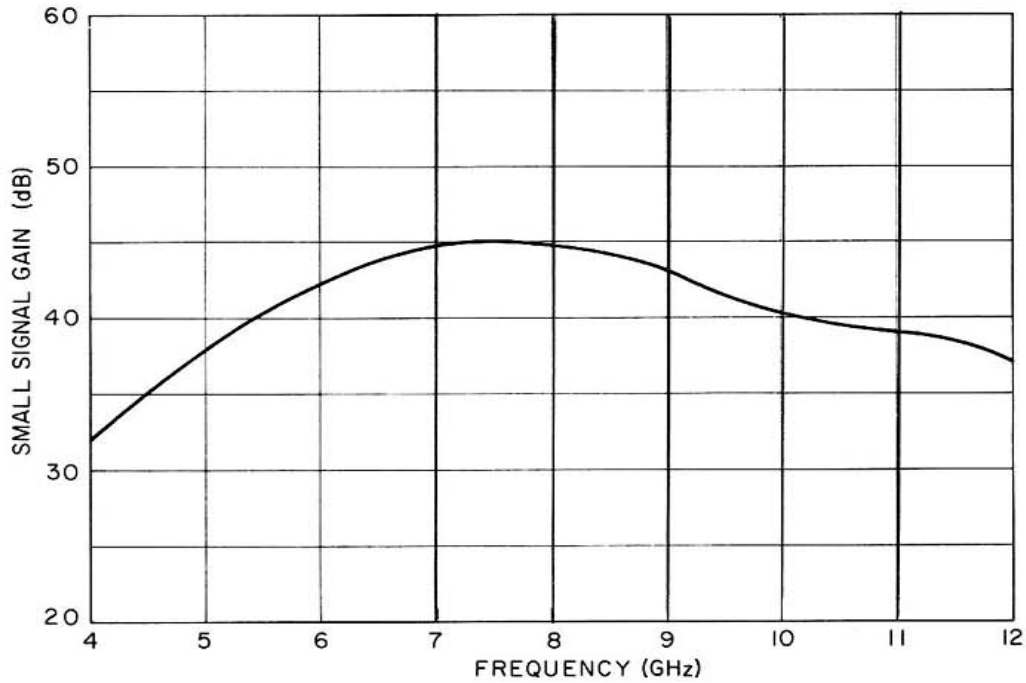
MECHANICAL

Length	7-3/4 in.
Width	1 in.
Height (excluding RF connectors)	1-1/8 in.
Weight	1-1/4 lb
Cooling	Conduction
D.C. Connections	Flying Leads
RF Connectors	OSM Female
Mounting Position	Any

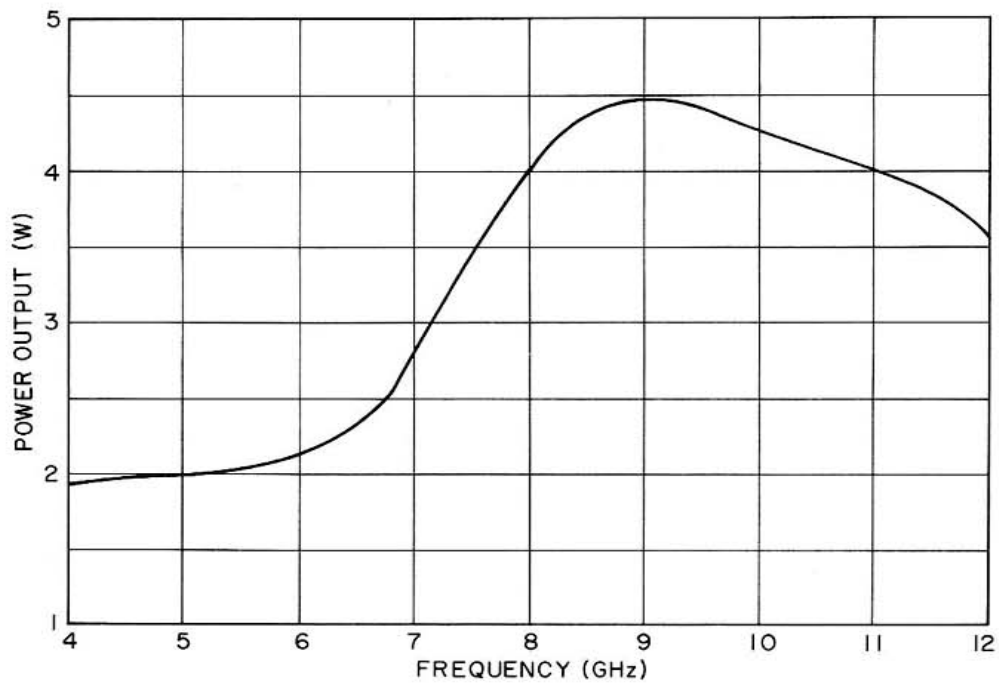




GAIN CHARACTERISTICS

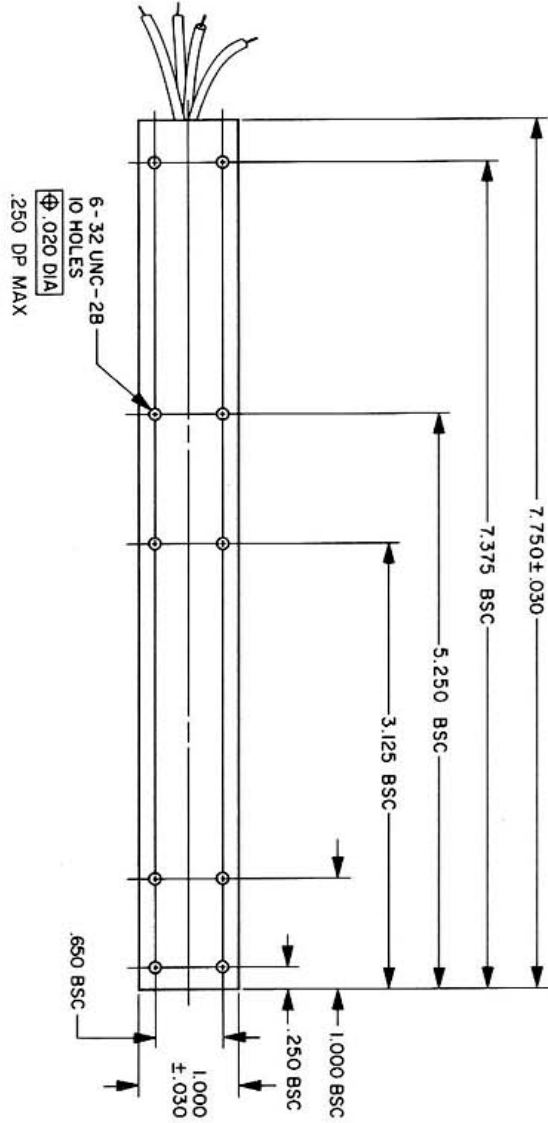
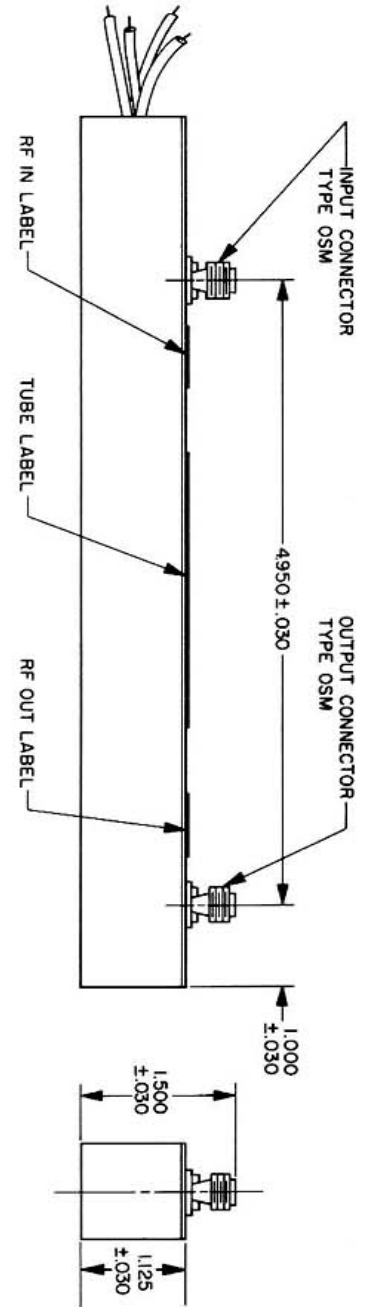


POWER OUTPUT CHARACTERISTICS





EM-1602A



LEAD	ELEMENT
BROWN	HEATER
YELLOW	HEATER CATHODE
BLACK	GROUND
GREEN	GRID