



E I M A C
 Division of Varian
 SAN CARLOS
 CALIFORNIA

EM-1601A
 TRAVELING WAVE TUBE
 1.0-4.0 GHz
 1 W C.W. Min.
 30 dB Min. S.S.G.

The EM1601A 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 are 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	1.0-4.0 GHz
Saturated Power Output (Min)	1 W
(Typical).....	1.5 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).....	27 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.

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**ELECTRICAL**

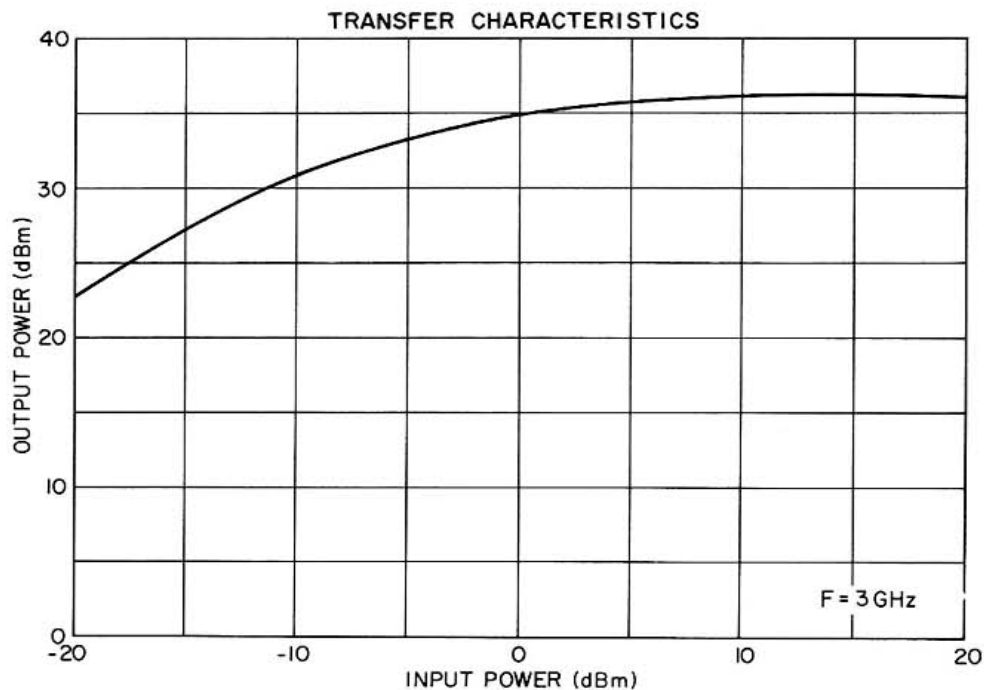
	<i>Min.</i>	<i>Max.</i>	<i>Units</i>
Cathode Voltage	-600	-800	V
Cathode Current	30	50	mA
Grid Voltage	0	25	V (Ref to Cath)
Grid Current	0	10	mA
Helix Voltage	GND		ground
Collector Voltage	GND		ground
Heater Voltage (Nominal)	6.3		V
Heater Current (Nominal)	0.5		A

ENVIRONMENT

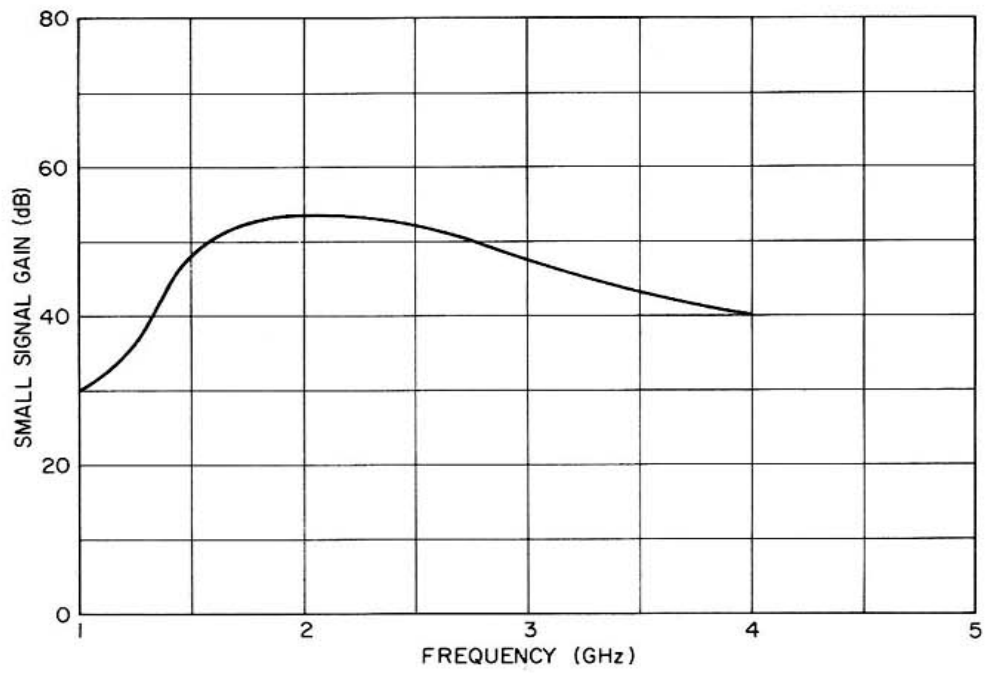
Vibration	15G, 5 to 500 c/s
Shock	25G, 11 ms
Acceleration	10G, sustained
Temperature	-54°C to 85°C
Altitude (unpressurized)	to 70,000 ft

MECHANICAL

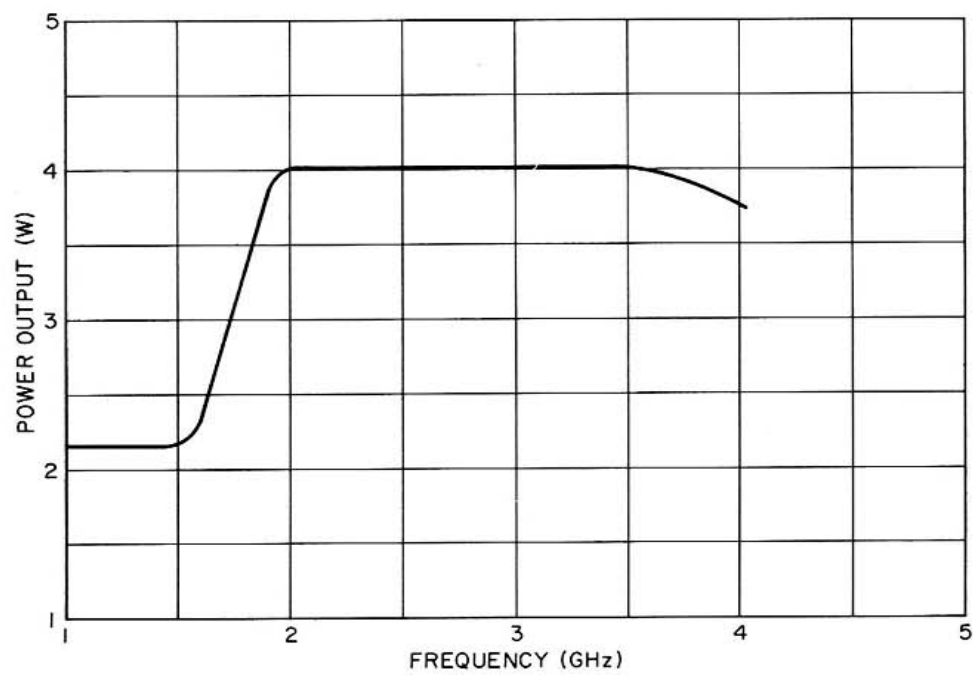
Length	8-3/4 in.
Width	1 in.
Height (excluding RF connectors)	1-1/8 in.
Weight	1-1/4 lb
Cooling	Conduction
D.C. Connections	Flying Leads
RF Connectors	OSM Female
Mounting Position	Any



GAIN CHARACTERISTICS

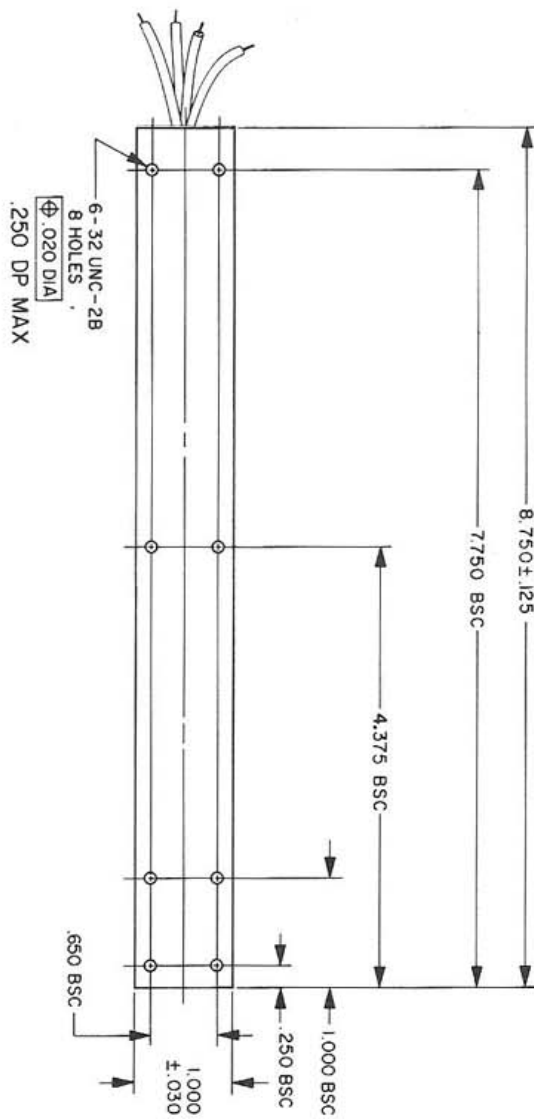


POWER OUTPUT CHARACTERISTICS





EM-1601A



LEAD	ELEMENT
BROWN	HEATER
YELLOW	HEATER CATHODE
GREEN	FOCUS ELECTRODE
BLACK	BODY GROUND

