

**ADVANCE DATA**

**MECHANICAL DATA**

Envelope	Metal Capsule
Power Connector	Winchester PM6S
RF Connectors	Type TNC Jack
Cathode	Philips Impregnated
Focusing <sub>1</sub>	Integral Permanent Magnet
Focusing <sub>2</sub>	Forced Air
Cooling	Any
Mounting Position	Any
Weight (Approx.)	3 Pounds

**ELECTRICAL DATA**

**HEATER CHARACTERISTICS**

Voltage	6.3 ± 10% V
Current (at 6.3 V)	1.1 - 1.5 A

**RATINGS (Absolute Maximum)<sup>3</sup>**

Collector Voltage with respect to Helix	250 Vdc
Helix Voltage	1000 Vdc
Anode Voltage	800 Vdc
Focus Electrode Voltage Range	-20 to -150 Vdc
Cathode Current	50 mA <sub>dc</sub>
Helix Current	8 mA <sub>dc</sub>
Anode Current	1 mA <sub>dc</sub>
CW rf Input	100 mW
Collector Temperature	150 °C

**TYPICAL OPERATION<sup>3</sup>**

**Conditions**

Frequency	2.0 to 4.0 kMc
Collector Voltage with respect to Helix	150 Vdc
Helix Voltage (Approx.) <sup>4</sup>	825 Vdc
Anode Voltage (Approx.) <sup>4</sup>	500 Vdc
Focus Electrode Voltage <sup>4</sup>	-45 Vdc

**Characteristics**

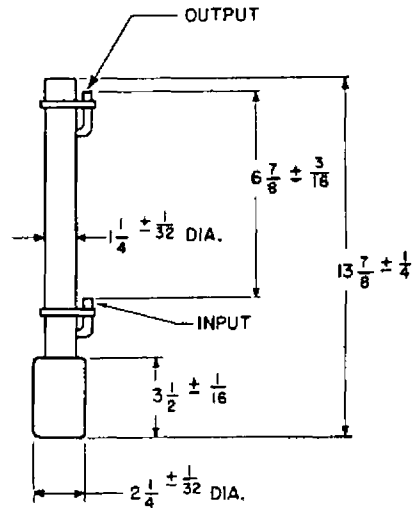
	Min.	Max.
Collector Current	-	45 mA <sub>dc</sub>
Helix Current	-	7 mA <sub>dc</sub>
Anode Current	-	0.8 mA <sub>dc</sub>
RF Power Output (1 mW Input)	1	- W
Gain (1 mW Input)	30	- db

**BIAS CIRCUIT DESIGN INFORMATION<sup>5</sup>**

Helix Voltage Range	700 to 900 Vdc
Anode Voltage Range	400 to 650 Vdc
Focus Electrode Voltage Range	-25 to -75 Vdc

**QUICK REFERENCE DATA**

Traveling-wave Amplifier  
 Permanent Magnet Focused  
 2.0 - 4.0 kMc  
 Over 1 W Power Output  
 CW or Pulsed  
 Full Octave Coverage  
 Lightweight  
 Rugged  
 Reliable  
 Suitable for Airborne Applications



**POWER CONNECTIONS**

- A. Focus Electrode
- B. Anode
- C. Helix
- D. Heater, Cathode
- E. Heater
- F. Collector, Capsule

**SYLVANIA ELECTRIC PRODUCTS INC.**

SPECIAL TUBE OPERATIONS  
 MOUNTAIN VIEW, CALIFORNIA

*Prepared and Released By The  
 TECHNICAL PUBLICATIONS SECTION  
 EMPORIUM, PENNSYLVANIA*

**NOTES:**

- 1. The permanent magnet stack is designed to focus the tube properly at operating temperature; therefore, for stable operation and to prevent damaging the tube it is recommended that application of beam current be withheld until 15 minutes after application of the heater potential.**
- 2. To maintain temperatures below the specified maxima it is recommended that a sufficient volume of cooling air (approximately 0.2 lbs/min at 26°C) be directed into one of the openings provided on the collector end of the tube.**
- 3. All voltages given are with respect to cathode except where specified otherwise. For safety, pin F should be grounded.**
- 4. Specific recommended operating voltage values supplied with each tube.**
- 5. Ranges include values required as a result of initial spread in tube characteristics as well as those to accommodate changes throughout life.**