



SYLVANIA

engineering data service

7072

ADVANCE DATA

MECHANICAL DATA

Envelope	Metal Capsule
Power Connector	Winchester PM6S
RF Connectors	Type TNC Jack
Cathode	Philips Impregnated
Focusing ₁	Integral Permanent Magnet
Cooling ₂	Forced Air
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)³

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 mAdc
Helix Current	8 mAdc
Anode Current	1 mAdc
CW rf Input	100 mW
Collector Temperature	150 °C

TYPICAL OPERATION³

Conditions

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

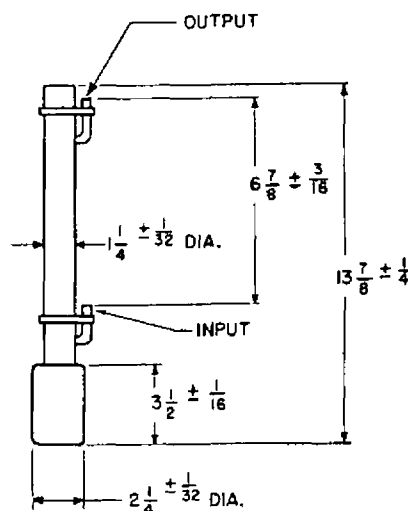
Characteristics	Min.	Max.
Collector Current	-	45 mAdc
Helix Current	-	7 mAdc
Anode Current	-	0.8 mAdc
RF Power Output (1 mW Input)	1	- W
Gain (1 mW Input)	30	- db

CIRCUIT DESIGN INFORMATION⁵

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
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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.**