

engineering data service

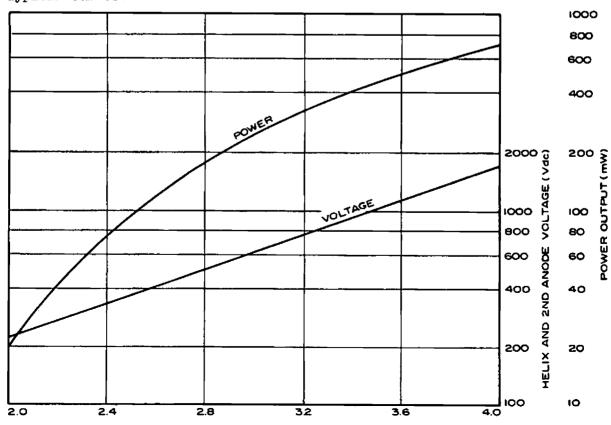
6496

MECHANICAL DATA				QUICK REFERENCE DATA
Envelope Power Connector RF Connector Focusing Cooling ² Mounting Position	Metal Capsule Winchester PM6P ¹ Type N Jack ¹ Electromagnetic Forced Air Any			Backward-wave Oscillator Full Octave Coverage 2.0 to 4.0 Gc Over 10 mW Power Output Voltage Tunable Suitable for Airborne
Tube Weight (Approx.) Solenoid Weight (Approx.): Military (Aluminum foil-wound) Non-Military (Copper wire-wound)		13.5	lbs lbs lbs	Applications
ELECTRICAL DATA ³				
HEATER CHARACTERISTICS				
Voltage Current (at 6.3 V) Minimum Preheat Time		6.3 ± 10% 1.8 - 2.7		
RATINGS (Absolute Maximum)				
Collector Voltage with Respect to F Grid 1 Voltage Grid 2 Voltage Helix, Grid 3 Voltage Grid 2 Current Cathode Current Collector Seal Temperature	Helix	±125 185 2000 5•5	Vdc	
TYPICAL OPERATION $^{1\!4}$				
Conditions				
Magnetic Focusing Field Density Minimum Uniform Length		¹ 490 7	Gausses Inches	POWER CONNECTIONS
Grid 1 Voltage Voltage to Gate-Off Oscillation Collector Voltage with Respect to Grid 2 Voltage (Approx.) 5 Helix, Grid 3 Voltage (Approx.)8	Helix	0 -100 150 100 220 - 1680	Vdc Vdc Vdc	A. Grid 1 B. Grid 2 C. Collector D. Heater, Cathode E. Heater
Characteristics	Min.	Max.		F. Grid 3, Helix, ⁶ Capsule, Outer
Frequency Grid 2 Current Helix, Grid 3 Current	2 -		Gc mAdc mAdc	Conductor of RF Cable
Cathode Current Collector Current RF Power Output ⁸	- - 10	42 35 1400	mAdc mAdc mW	SYLVANIA ELECTRIC PRODUCTS INC.
CIRCUIT DESIGN INFORMATION 7				MICROWAVE DEVICE OPERATIONS
Grid 2 Voltage Range Helix, Grid 3 Voltage Range	0 to 175 150 to 1900		Vđc Vđc	Mountain View. California January 31, 1961
from JEDEC release #1390A, April 10, 1961				Page 1 of 3

Page 2 of 3

NOTES:

- 1. Alternative connectors supplied on request.
- 2. In addition to the cooling requirements for the solenoid used with this tube it is recommended that at least 0.15 lbs/min of less than 100°F cooling air be directed into the collector end of this tube.
- 3. All voltages given are with respect to cathode except where otherwise specified. For safety, pin F should be operated at ground potential (see Note 6).
- 4. The quoted tube performance is for operation in a Sylvania-approved solenoid. Additional information will be supplied on request.
- 5. In typical operation the grid 2 voltage, with respect to cathode, remains fixed as a function of frequency. The appropriate value for an individual tube may be found by adjusting the grid 2 voltage to provide a specified value of cathode current when the tube is oscillating at 2 Gc. The specified value for cathode current, at 2 Gc, is supplied with each tube.
- 6. The inner conductor of the RF cable connects to the helix and hence has d-c continuity to pin F.
- 7. Ranges include values required as a result of initial spread in tube characteristics as well as those to accommodate changes throughout life.
- 8. Typical curves.



FREQUENCY (Gc)

