

OBJECTIVE DATA

The EIMAC X-2099 is a compact, quick heat tetrode designed for push-to-talk mobile and airborne applications. The tube warms up to 70% peak current or 50% RF power output in 250 milliseconds. The X-2099 can be driven by low-level solid state up to its rated plate dissipation of 500 watts. The tube is air cooled, ceramic-metal construction.

The data supplied in this sheet is for guidance only. Before establishing final design specifications contact Product Manager, Power Grid Division, EIMAC Division of Varian.



GENERAL CHARACTERISTICS

ELECTRICAL

Cathode: Oxide Coated, Uni-Potential

Heating Time, nominal (see curves) 250 ms

Heater:

Voltage, nominal (see curves) 2.5 V

Current, nominal (Inrush current approximately twice operating current) . . . 10.5 A

Direct Interelectrode Capacitances, grounded cathode

Input 56.0 pF

Output 6.1 pF

Feedback 0.14 pF

Direct Interelectrode Capacitances, grounded grid

Input 33.0 pF

Output 6.2 pF

Feedback 0.02 pF

MECHANICAL

Base Special 9-pin

Maximum Operating Temperatures:

Ceramic-to-Metal Seals 250°C

Anode Core 250°C

Nominal Dimensions:

Height 3.50 in.

Seated Height 3.00 in.

Diameter 2.65 in.

Cooling Forced Air

Net Weight 8 ozs.

OPERATING CHARACTERISTICS

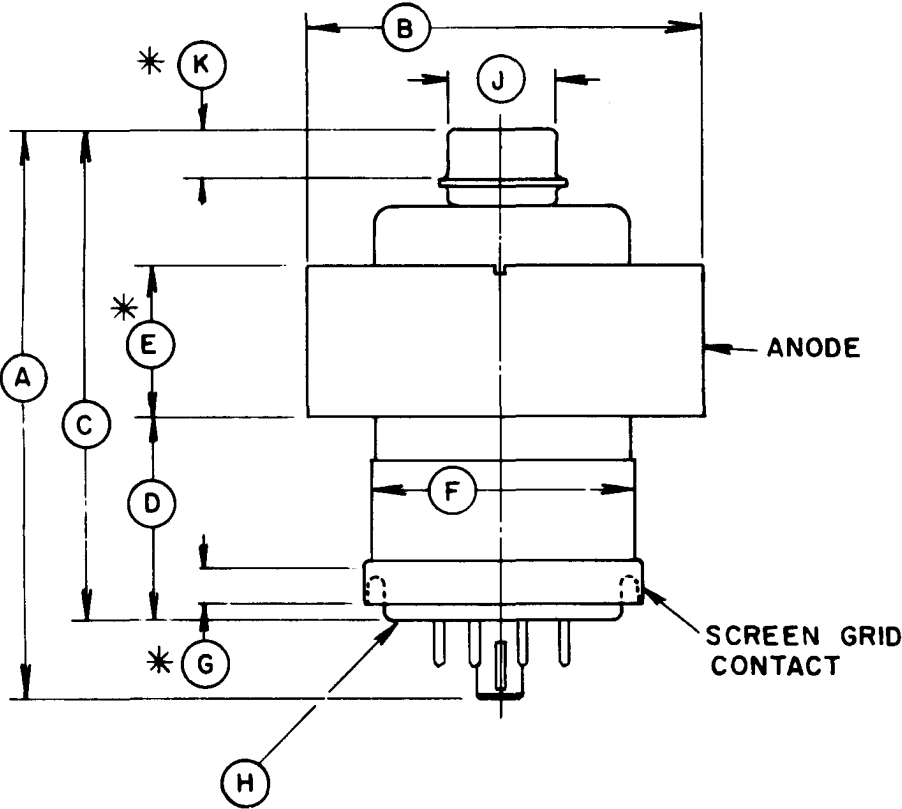
Class AB₁ Radio Frequency Linear Power Amplifier

DC Plate Voltage	1600	2600 V
DC Screen Voltage	200	250 V
DC Grid Voltage	-24	-34 V
Zero Signal Plate Current	250	225 mA
Max Signal DC Plate Current	455	370 mA

OPERATING CHARACTERISTICS (cont.)

PEP or CW Plate Output Power	400	500 W
Third Order Intermodulation Distortion	-36	-38 dB
Fifth Order Intermodulation Distortion	-54	-46 dB
Filament Voltage	2.5	2.5 V
Filament Current	10.0	10.0 A
Warm up time to half power	250	250 ms

PINS 1,3,5,7 – CONTROL GRID
PINS 2,4,6,8 – HEATER CATHODE
CENTER PIN – HEATER



DIMENSIONS IN INCHES

DIMENSIONAL DATA			
REF.	MIN.	MAX.	NOM.
A			3 1/2
B	2.050	2.080	
C			3
D	.910	1.030	
E	.710	.790	
F		1.406	
G	.187		
H	BASE: B8-236 (JEDEC DESIGNATION)		
J	.559	.573	
K	.240	.280	

- NOTES:
1. (*) CONTACT SURFACE
2. REFERENCE DIMENSIONS ARE FOR INFORMATION ONLY & ARE NOT REQ'D FOR INSPECTION PURPOSES.

