



**ELECTRONIC  
INNOVATIONS**  
IN ACTION

**TUBES**

**PRODUCT INFORMATION**

**6AY3-B**

**Diode**

**FOR TV DAMPING DIODE APPLICATIONS**

The 6AY3-B is a single heater-cathode type diode designed for use as the damping diode in the horizontal-deflection circuit of television receivers.

**GENERAL**

**ELECTRICAL**

Cathode - Coated Unipotential  
 Heater Characteristics and Ratings  
 Heater Voltage, AC or DC\* . . . 6.3±0.6 Volts  
 Heater Current† . . . . . 1.2 Amperes  
 Direct Interelectrode Capacitances, approximate‡  
 Cathode to Plate and Heater:  
 k to (p + h) . . . . . 9.0 pf  
 Plate to Cathode and Heater:  
 p to (k + h) . . . . . 6.5 pf  
 Heater to Cathode: (h to k) . . . 2.8 pf

**MECHANICAL**

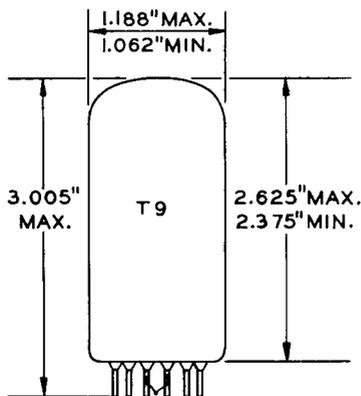
Operating Position - Any  
 Envelope - T-9, Glass  
 Base - E9-89, Button 9-Pin  
 Outline Drawing  
 Maximum Diameter . . . . . 1.188 Inches  
 Minimum Diameter . . . . . 1.062 Inches  
 Maximum Over-all Length . . . . 3.005 Inches  
 Maximum Seated Height . . . . . 2.625 Inches  
 Minimum Seated Height . . . . . 2.375 Inches

**MAXIMUM RATINGS**

**TV DAMPER SERVICE††—DESIGN-MAXIMUM VALUES**

Peak Inverse Plate Voltage . . . . .	5000	Volts
Plate Dissipation . . . . .	6.5	Watts
Steady-State Peak Plate Current . . . . .	1100	Milliamperes
DC Output Current . . . . .	175	Milliamperes
<b>Heater-Cathode Voltage</b>		
Heater Positive with Respect to Cathode		
DC Component . . . . .	100	Volts
Total DC and Peak . . . . .	300	Volts
Heater Negative with Respect to Cathode		
DC Component . . . . .	900	Volts
Total DC and Peak . . . . .	5000	Volts

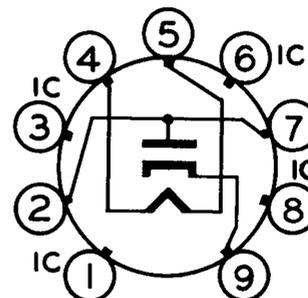
**PHYSICAL DIMENSIONS**



**TERMINAL CONNECTIONS**

- Pin 1 - Internal Connection - Do Not Use
- Pin 2 - Plate
- Pin 3 - Internal Connection - Do Not Use
- Pin 4 - Heater
- Pin 5 - Heater
- Pin 6 - Internal Connection - Do Not Use
- Pin 7 - Plate
- Pin 8 - Internal Connection - Do Not Use
- Pin 9 - Cathode

**BASING DIAGRAM**



EIA 9HP

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express written agreement to the contrary, General Electric Company assumes no liability for patent infringement arising out of any use of the tubes with other devices or elements by any purchaser of tubes or others.

### MAXIMUM RATINGS (Cont'd)

Design-Maximum ratings are limiting values of operating and environmental conditions applicable to a bogey electron tube of a specified type as defined by its published data and should not be exceeded under the worst probable conditions.

The tube manufacturer chooses these values to provide acceptable serviceability of the tube, making allowance for the effects of changes in operating conditions due to variations in the characteristics of the tube under consideration.

The equipment manufacturer should design so that initially and throughout life no design-maximum value for the intended service is exceeded with a bogey tube under the worst probable operating conditions with respect to supply-voltage variation, equipment component variation, equipment control adjustment, load variation, signal variation, environmental conditions, and variations in the characteristics of all other electron devices in the equipment.

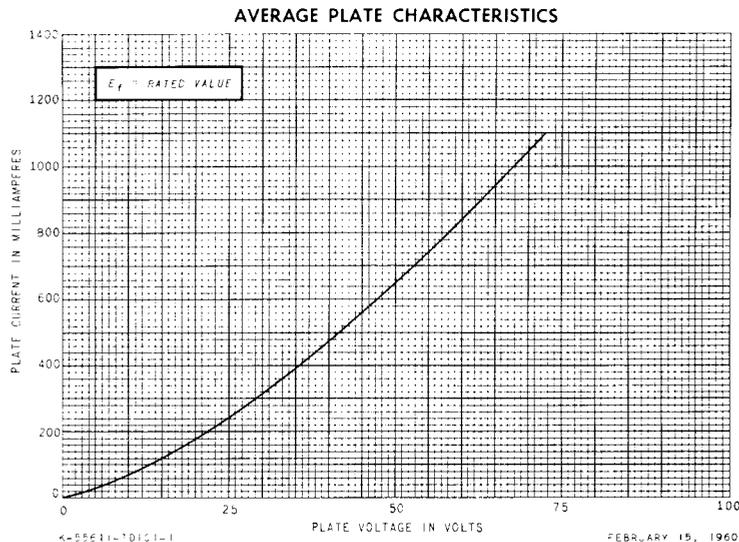
### AVERAGE CHARACTERISTICS

Tube Voltage Drop

$I_b = 350$  Milliamperes DC. . . . . 32 Volts

### NOTES

- \* The equipment designer should design the equipment so that heater voltage is centered at the specified bogey value, with heater supply variations restricted to maintain heater voltage within the specified tolerance.
- ‡ Heater current of a bogey tube at  $E_f = 6.3$  volts.
- § Without external shield.
- ¶ For operation in a 525-line, 30-frame television system as described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations", Federal Communications Commission. The duty cycle of the voltage pulse must not exceed 15 percent of one scanning cycle.



TUBE DEPARTMENT



Owensboro, Kentucky