



**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

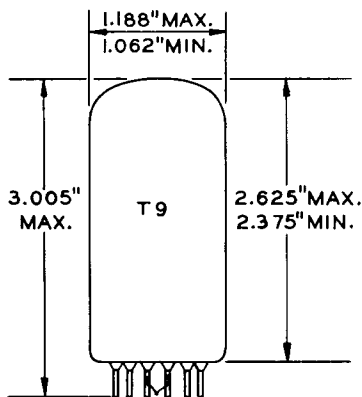
Operating Position - Any
 Envelope - T-9, Glass
 Base - E9-89, Button 9-Pin
 Outline Drawing
 Maximum Diameter 1.188 Inches
 Minimum Diameter 1.062 Inches
 Maximum Over-all Length 3.005 Inches
 Maximum Seated Height 2.625 Inches
 Minimum Seated Height 2.375 Inches

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
Heater-Cathode Voltage		
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

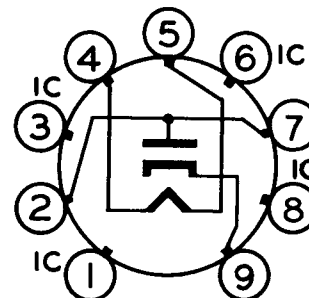
PHYSICAL DIMENSIONS



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

The tubes and arrangements disclosed herein may be covered by patents of General Electric Company or others. Neither the disclosure of any information herein nor the sale of tubes by General Electric Company conveys any license under patent claims covering combinations of tubes with other devices or elements. In the absence of an

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.

