



ELECTRONIC
INNOVATIONS
IN ACTION

TUBES

PRODUCT INFORMATION

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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

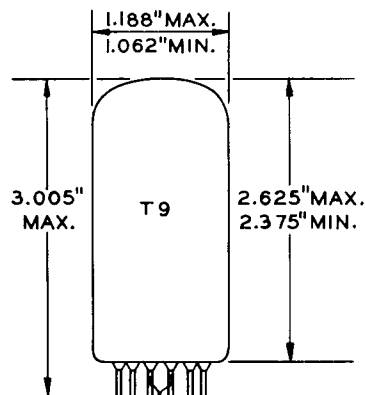
Total DC and Peak 300 Volts

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

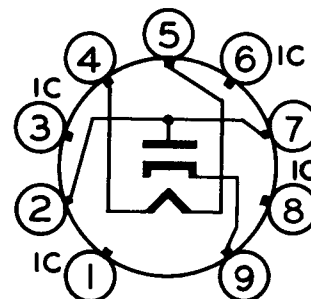
Pin 6 - Internal Connection -
Do Not Use

Pin 7 - Plate

Pin 8 - Internal Connection -
Do Not Use

Pin 9 - Cathode

BASING DIAGRAM



EIA 9HP

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GENERAL  ELECTRIC

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.

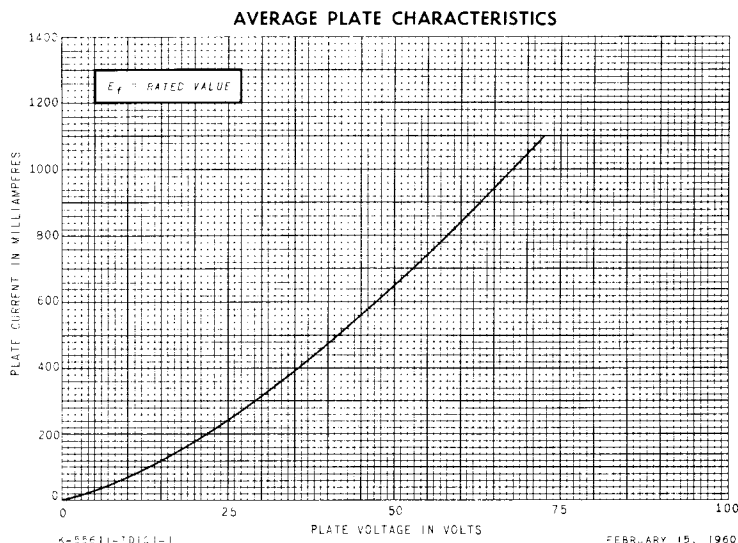
AVERAGE CHARACTERISTICS

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

GENERAL  **ELECTRIC**

Owensboro, Kentucky