



—PRODUCT INFORMATION—

6BW3

Compactron Diode

TUBES

FOR TV DAMPING DIODE APPLICATIONS

- COLOR TV TYPE
- DIFFUSION BONDED CATHODE
- 5000 VOLTS DC
- 175 MILLIAMPERES DC

The 6BW3 is a compactron containing a single heater-cathode type diode. It is intended for service as the damping diode in the horizontal deflection circuit of color television receivers.

The diffusion bonded cathode practically eliminates one of the major failure mechanisms in damping diodes, which is plate-to-cathode arcing caused by emissive particles being pulled from the cathode by the high electrostatic field.

GENERAL

ELECTRICAL

- Cathode - Coated Unipotential
- Heater Characteristics and Ratings
- Heater Voltage, AC or DC*.....6.3±0.6 Volts
- Heater Current♦.....1.6 Amperes
- Direct Interelectrode Capacitances, approximate●
 - Cathode to Plate and Heater: k to (p + h)..... 8.5 pf
 - Plate to Cathode and Heater: p to (k + h)..... 6.0 pf
 - Heater to Cathode: (h to k)..... 3.8 pf

MECHANICAL

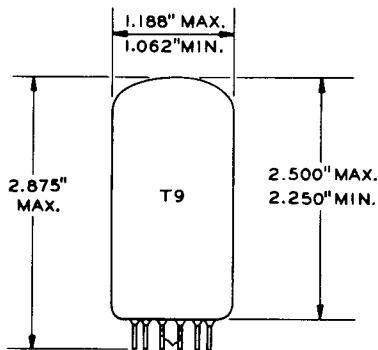
- Operating Position - Any
- Envelope - T-9, Glass
- Base - E12-70, Button 12-Pin
- Outline Drawing - EIA 9-60
- Maximum Diameter.....1.188 Inches
- Minimum Diameter.....1.062 Inches
- Maximum Over-all Length.....2.875 Inches
- Maximum Seated Height.....2.500 Inches
- Minimum Seated Height.....2.250 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 Milliampere
- DC Output Current.....175 Milliampere
- 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

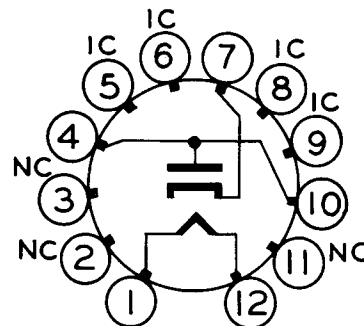


EIA 9-60

TERMINAL CONNECTIONS

- Pin 1 - Heater
- Pin 2 - No Connection
- Pin 3 - No Connection
- Pin 4 - Plate
- Pin 5 - Internal Connection - Do Not Use
- Pin 6 - Internal Connection - Do Not Use
- Pin 7 - Cathode
- Pin 8 - Internal Connection - Do Not Use
- Pin 9 - Internal Connection - Do Not Use
- Pin 10 - Plate
- Pin 11 - No Connection
- Pin 12 - Heater

BASING DIAGRAM



EIA 12FX

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.

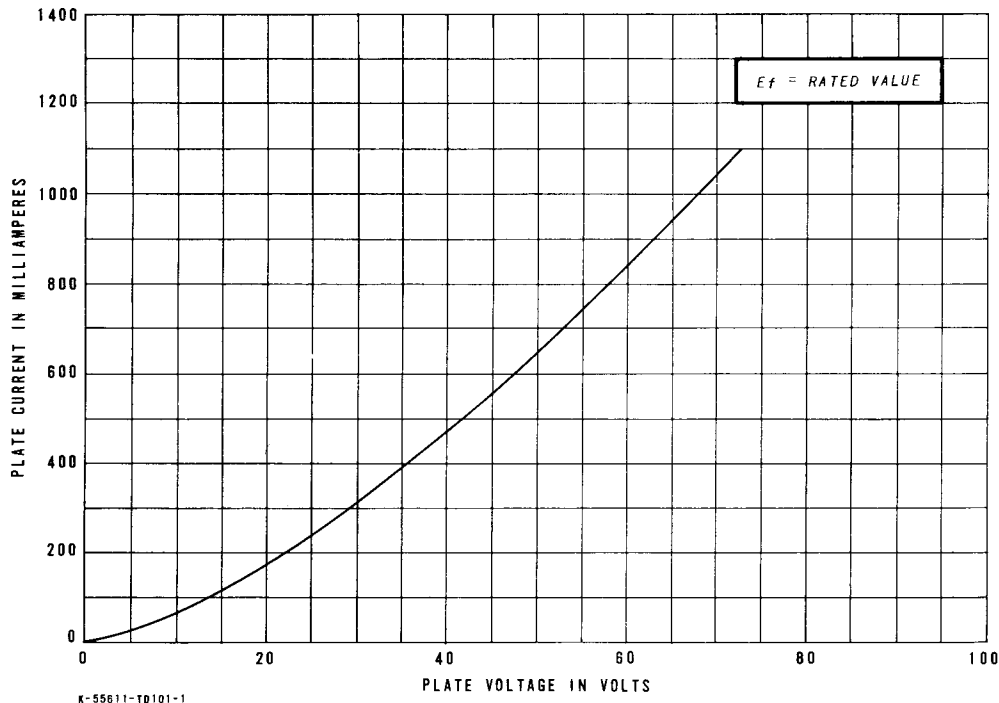
AVERAGE CHARACTERISTICS

Tube Voltage Drop
I_b = 350 Milliampers DC32 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.

AVERAGE PLATE CHARACTERISTICS



K-55611-TD101-1

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TUBE PRODUCTS DEPARTMENT



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