—PRODUCT INFORMATION—

Compactron Diode

34CE3

FOR TV DAMPING DIODE APPLICATIONS

- COLOR TV TYPE
- LOW TUBE DROP
- DIFFUSION BONDED CATHODE
- 5000 VOLTS DC
- 350 MILLIAMPERES DC

The 34CE3 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★	34.5	Volts
Heater Current♦	0.45 ± 0.03	Amperes
Heater Warm-up Time, average●	11	Seconds

Direct Interelectrode Capacitances, approximate♦

Cathode to Plate and Heater: k to (p + h)	18	pf
Plate to Cathode and Heater: p to (k + h)	13	pf
Heater to Cathode: (h to k)	5.5	pf

MECHANICAL

Operating Position - Any
Envelope - T-9, Glass
Base - E12-70, Button 12-Pin
Outline Drawing - EIA 9-62

Maximum Diameter	1.188	Inches
Minimum Diameter	1.062	Inches
Maximum Over-all Length	3.375	Inches
Maximum Seated Height	3.000	Inches
Minimum Seated Height	2.750	Inches

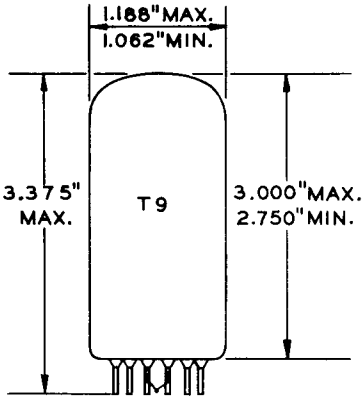
MAXIMUM RATINGS

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.

PHYSICAL DIMENSIONS

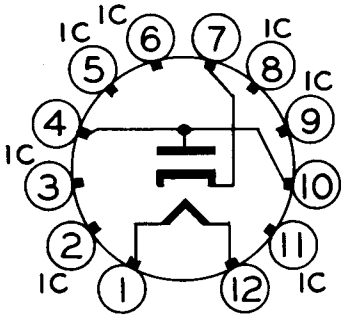


EIA 9-62

TERMINAL CONNECTIONS

Pin 1 - Heater
Pin 2 - Internal Connection - Do Not Use
Pin 3 - Internal Connection - Do Not Use
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 - Internal Connection - Do Not Use
Pin 12 - Heater

BASING DIAGRAM



EIA 12GK

MAXIMUM RATINGS (Cont'd)

TV DAMPER SERVICE▲—DESIGN-MAXIMUM VALUES

Peak Inverse Plate Voltage	5000	Volts
Plate Dissipation	11	Watts
Steady-State Peak Plate Current	1500	Milliamperes
DC Output Current	350	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

AVERAGE CHARACTERISTICS

Tube Voltage Drop		
Ib = 680 Milliamperes DC	20	Volts

NOTES

★ Heater voltage for a bogey tube at If = 0.45 amperes.

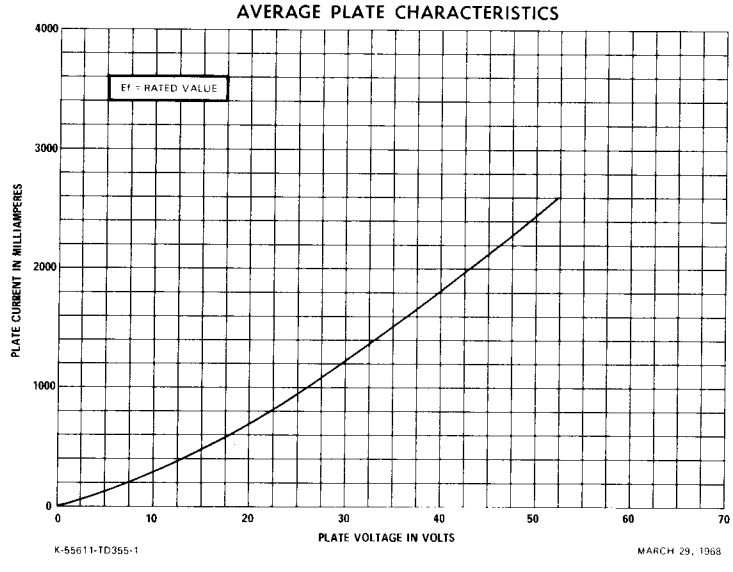
♦ The equipment designer should design the equipment so that heater current is centered at the specified bogey value, with heater supply variations restricted to maintain heater current within the specified tolerance.

● The time required for the voltage across the heater to reach 80 percent of the bogey value after applying 4 times the bogey heater voltage to a circuit consisting of the tube heater in series with a resistance equal to 3 times the bogey heater voltage divided by the bogey heater current.

♦ 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



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