Half-Wave Vacuum Rectifier
For Television Damper Service

Electrical:
Heater Characteristics and Ratings:
Current: 0.450 ± 0.030 amp
Voltage (AC or DC) at heater amperes = 0.450: 16.8 volts
Warm-up time (Average): 11 sec
Maximum heater-cathode voltage:
  Heater negative with respect to cathode:
    Peak: 5000 volts
    DC component: 900 volts
  Heater positive with respect to cathode:
    Peak: 300 volts
    DC component: 100 volts
Direct Interelectode Capacitances (Approx.):
  P to (K,H): 8.5 pf
  K to (P,H): 11.5 pf
  Heater to cathode: 4.0 pf

Mechanical:
Operating Position: Any
Type of Cathode: Coated Unipotential
Maximum Overall Length: 3-13/16"
Maximum Seated Length: 3-1/4"
Maximum Diameter: 1-9/32"
Bulb: T9
Base: Short Intermediate-Shell Octal 5-Pin (JEDEC No. B5-85)
Basing Designation for BOTTOM VIEW: 4CG

Pin 2 - Do Not Use
Pin 3 - Cathode
Pin 5 - Plate
Pin 7 - Heater
Pin 8 - Heater

DAMPER SERVICE
Maximum Ratings, Design-Maximum Values:
For operation in a 525-line, 30-frame system:
Peak Inverse Plate Voltage: 5000 volts
Peak Plate Current: 1200 ma
DC Plate Current: 200 ma
Plate Dissipation: 6.5 watts

Characteristics, Instantaneous Value:
Tube Voltage Drop for plate ma = 400: 35 volts

a This rating is applicable when the duty cycle of the voltage pulse does not exceed 15 per cent of one horizontal scanning cycle. In a 525-line, 30 frame system, 15 per cent of one horizontal scanning cycle is 10 microseconds.
b Socket terminals 1, 2, 4 and 6 should not be used as tie points.

c As described is "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission.

**DIMENSIONAL OUTLINE**

- T9 BULB
- BASE JEDEC GROUP 1
  - No. 85-85

**DIMENSIONS IN INCHES**

- 1.062 MIN.
- 1.188 MAX.
- DIA.
- 3/4 MAX.
- 3 13/16 MAX.
- 9/32 MAX. DIA.

**AVERAGE PLATE CHARACTERISTIC**

- $E_p = 16.8$ VOLTS

<table>
<thead>
<tr>
<th>DC PLATE VOLTS</th>
<th>PLATE MILLIAMPERES</th>
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<tbody>
<tr>
<td>0</td>
<td>0</td>
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<tr>
<td>10</td>
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<td>50</td>
<td>1000</td>
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<td>1200</td>
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