Half-Wave Vacuum Rectifier

NOVAR TYPE

- Top Cap Cathode Connection
- Pressure-Welded Cathode Coating
- RCA Dark Heater
- Voltage Drop: \( E_b = 25 \text{V for } I_b = 800 \text{mA} \)

**ELECTRICAL CHARACTERISTICS — Bogey Values**

<table>
<thead>
<tr>
<th><strong>Heater Voltage, ac or dc</strong></th>
<th>( E_h )</th>
<th>6.3</th>
<th>V</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Heater Current</strong></td>
<td>( I_h )</td>
<td>2.3</td>
<td>A</td>
</tr>
<tr>
<td>**Direct Interelectrode Capacitances:**³</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plate to cathode and heater</td>
<td>( c_{p(k+h)} )</td>
<td>17.0</td>
<td>pF</td>
</tr>
<tr>
<td>Cathode to plate and heater</td>
<td>( c_{k(p+h)} )</td>
<td>13.0</td>
<td>pF</td>
</tr>
<tr>
<td>Heater to cathode</td>
<td>( c_{h-k} )</td>
<td>4.4</td>
<td>pF</td>
</tr>
</tbody>
</table>

**Instantaneous Tube Voltage**

- Drop for instantaneous plate current \((I_b) = 800 \text{mA}\)  
  \( e_b \) | 25 | V |

**MECHANICAL CHARACTERISTICS**

- Maximum Overall Length  | 3.850 in (97.79 mm) |
- Maximum Seated Length   | 3.470 in (88.1 mm)  |
- Maximum Diameter        | 1.188 in (30.1 mm)  |
- Envelope                | JEDEC T9 |
- Top Cap                 | Small embossed (JEDEC C1-2, C1-3 or C1-33) |
- Base⁵                    | Small-Button Novar 9-Pin with Exhaust Tip (JEDEC E9-89) |
- Terminal Diagram        | JEDEC 9GD |
- Type of Cathode          | Coated Unipotential |
- Operating Position      | Any |

**MAXIMUM RATINGS — Design-Maximum Values⁶**

For operation as a Damper Tube in Color-TV Receivers utilizing a 525-line, 30-frame system

- Peak Inverse Plate Voltage \(-e_{bm}\)  | 6500⁷ | V |
- Heater-Cathode Voltage:
  - Peak \( e_{hkm} \)  | \{ +300, -6500 \} | V |
  - Average \( E_{hk(av)} \)  | \{ +100, -900 \} | V |

RCA Electronic Components
Heater Voltage, ac or dc ........ \( E_h \) 5.7 to 6.9 \( \text{V} \)

Plate Current:

- Peak .................. \( i_{bm} \) 1800 \( \text{mA} \)
- Average\( ^e \) .............. \( i_{b(\text{av})} \) 400 \( \text{mA} \)

Plate Dissipation ............ \( P_b \) 11.0 \( \text{W} \)

Envelope Temperature (at
hottest point on envelope
surface) .................. \( T_E \) 220 \( \circ\text{C} \)

\( ^a \) Measured without external shield in accordance with the current issue of EIA Standard RS-191B.

\( ^b \) Designed to mate with Novar 9-Contact Socket generally available from your local RCA Distributor.

\( ^c \) As defined in the current issue of EIA Standard RS-239A.

\( ^d \) This rating is applicable when the duration of the voltage pulse does not exceed 15% of one horizontal scanning cycle. In a 525-line, 30-frame system, 15% of one horizontal scanning cycle is 10 \( \mu\text{s} \).

\( ^e \) Measured with a dc meter.

**OPERATING CONSIDERATIONS**

Socket terminals 1, 3, 6, 8 and 9 should not be used as tie points for external-circuit components. It is recommended that the socket tabs be removed to reduce the possibility of arc-over and to minimize leakage.

**TERMINAL DIAGRAM — JEDEC 9GD (Bottom View)**

- Pin 1 - Do Not Use
- Pin 2 - Plate
- Pin 3 - Do Not Use
- Pin 4 - Heater
- Pin 5 - Heater
- Pin 6 - Do Not Use
- Pin 7 - Plate
- Pin 8 - Do Not Use
- Pin 9 - Do Not Use
- Cap - Cathode
## Dimentional Outline

![Diagram of the capacitor](image)

### Table: Dimensions

<table>
<thead>
<tr>
<th>DIMENSION</th>
<th>INCHES</th>
<th>MILLIMETERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1.062*</td>
<td>–</td>
</tr>
<tr>
<td>C</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>D</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

**Millimeter Dimension Derived from Inch Dimension**

*Applies to the minimum diameter except in the area of the seal.*