Half-Wave Vacuum Rectifier

NOVAR TYPE
PRESSURE-WELDED CATHODE COATING
For Color-TV Damper-Diode Applications

ELECTRICAL CHARACTERISTICS
Bogey Values

Heater Voltage (AC or DC) \( E_h \) 6.3 V
Heater Current \( I_h \) 1.2 A

Direct Interelectrode Capacitances
Without external shield
Plate to cathode and heater \( C_{p(k+h)} \) 6.5 pF
Cathode to plate and heater \( C_{k(p+h)} \) 9.0 pF
Heater to cathode \( C_{h-k} \) 3.0 pF

Instantaneous Tube Voltage Drop \( e_b \) 16 V
For instantaneous plate current \( i_b \) = 350 mA

MECHANICAL CHARACTERISTICS
Operating Position ................. Any
Type of Cathode ................. Coated Unipotential
Maximum Overall Length .......... 3.005 in
Maximum Seated Length .......... 2.625 in
Maximum Diameter ............... 1.188 in
Dimensional Outline .............. See General Section
Envelope ......................... T9
Base .......................... Small-Button Novar 9-Pin with Exhaust Tip (JEDEC E9-89)

TERMINAL DIAGRAM (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 - Cathode

DESIGN-MAXIMUM RATINGS
For operation as a Damper Tube in Black-and-White TV Receivers utilizing a 525-line, 30-frame system

Peak Inverse Plate Voltage \( -e_{bm} \) 5500* V
Heater-Cathode Voltage
Peak \( e_{hkm} \) \[ \begin{align*} +300 & \text{ V} \\ -5500 & \text{ V} \end{align*} \]
Average \( e_{hk(\text{av})} \) \[ \begin{align*} +100 & \text{ V} \\ -900 & \text{ V} \end{align*} \]
Heater Voltage (AC or DC) \( E_h \) 5.7 to 6.9 V
Plate Current

Peak: \( i_{bm} \) 1300 mA
Average: \( i_{b(av)} \) 250 mA

Plate Dissipation \( P_d \) 8.5 W
Envelope Temperature \( T_E \) 220 °C

At hottest point on envelope surface

\( a \) 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 μs.

\( b \) Measured with a dc meter.

OPERATING CONSIDERATIONS

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