Half-Wave Vacuum Rectifier

Novar Type

For Black-and-White-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:

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  $C_{hk}$  3.0  pF

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

MECHANICAL CHARACTERISTICS

Maximum Overall Length ($l_m$)  3.410 in. (86.61 mm)
Maximum Seated Length ($l_{sm}$)  3.030 in. (76.96 mm)
Maximum Diameter ($d_m$)  1.188 in. (30.1 mm)
Envelope  JEDEC Designation T9
Base  Small-Button Novar 9-Pin with Exhaust Tip (JEDEC Designation E9-89)

Terminal Connections
(See TERMINAL DIAGRAM)  JEDEC Designation 9HP

Type of Cathode  Coated Unipotential
Operating Position  Any

MAXIMUM RATINGS – Design-Maximum Values

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

Peak Inverse Plate Voltage  $-e_{bm}$  5200 V
Heater-Cathode Voltage:
  Peak  $e_{hk}$  300 V
  Average  $E_{hk(floor)}$  100 V
Heater Voltage  $E_h$  5.7 to 6.9 V
Plate Current:

- Peak \( i_{bm} \) ................. 1200 mA
- Average \( I_{b(\text{av})} \) .......... 250 mA
- Plate Dissipation \( P_b \) ........... 6.5 W

Envelope Temperature (at hottest point on envelope surface) \( T_E \) .... 220 °C

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

\(^b\) 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-239.

\(^d\) As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations", Federal Communications Commission.

\(^e\) This rating is applicable when the duration of the voltage pulse does not exceed 15% of one horizontal scanning cycle. In a 52-line, 30-frame system, 15% on one horizontal scanning cycle is 10 \( \mu \text{s} \).

\(^f\) 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.

**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