

Half-Wave Vacuum Rectifier

Duodecar 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	1.8	A
Direct Interelectrode Capacitances: ^a			
Plate to cathode and heater.	$c_{p(k+h)}$	13	pF
Cathode to plate and heater.	$c_{k(p+h)}$	16	pF
Heater to cathode	c_{h-k}	4.0	pF
Instantaneous Tube Voltage Drop for instantaneous plate current (i_b) = 700 mA			
	e_b	25	V

MECHANICAL CHARACTERISTICS

Maximum Overall Length	3.375 in (85.72 mm)
Maximum Seated Length	3.000 in (76.2 mm)
Maximum Diameter	1.188 in (30.1 mm)
Envelope	JEDEC T9
Base ^b	Duodecar 12-Pin with Exhaust Tip (JEDEC E12-70)
Terminal Diagram	JEDEC 12HF
Type of Cathode	Coated Unipotential
Operating Position	Any

MAXIMUM RATINGS – Design-Maximum Values^c

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

Peak Inverse Plate Voltage.	$-e_{bm}$	5000 ^d	V
Heater-Cathode Voltage:			
Peak	e_{hkm}	$\left\{ \begin{array}{l} +300 \\ -5000 \end{array} \right.$	$\left\{ \begin{array}{l} V \\ V \end{array} \right.$
Average ^e	$E_{hk(av)}$	$\left\{ \begin{array}{l} +100 \\ -900 \end{array} \right.$	$\left\{ \begin{array}{l} V \\ V \end{array} \right.$
Heater Voltage, ac or dc.	E_h	5.7 to 6.9	V
Plate Current:			
Peak	i_{bm}	2100	mA
Average ^e	$I_{b(av)}$	350	mA
Plate Dissipation	P_b	6.5	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-191.
- b Designed to mate with Duodecar 12-Contact Socket generally available from your local RCA Distributor.
- c As defined in the current issue of EIA Standard RS-239.
- 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 μs .
- e Measured with a dc meter.

OPERATING CONSIDERATIONS

Socket terminals 2, 5, 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 (Bottom View)

- Pin 1: Heater
- Pin 2: Do Not Use
- Pin 3: No Internal Connection
- Pin 4: Plate
- Pin 5: Do Not Use
- Pin 6: Do Not Use
- Pin 7: Cathode
- Pin 8: Do Not Use
- Pin 9: Do Not Use
- Pin 10: Plate
- Pin 11: No Internal Connection
- Pin 12: Heater

