

## 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 . . . . .	$I_h$	2.5	A
Direct Interelectrode Capacitances: <sup>a</sup>			
Plate to cathode and heater . .	$c_{p(k+h)}$	13	pF
Cathode to plate and heater . .	$c_{k(p+h)}$	18	pF
Heater to cathode . . . . .	$c_{h-k}$	5.5	pF
Instantaneous Tube Voltage Drop for instantaneous plate current ( $i_b$ ) = 680 mA . .			
	$e_b$	20	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 <sup>b</sup> . . . . .	Duodecar 12-Pin with Exhaust Tip (JEDEC E12-70)
Terminal Diagram . . . . .	JEDEC 12GK
Type of Cathode . . . . .	Coated Unipotential
Operating Position . . . . .	Any

### MAXIMUM RATINGS – Design-Maximum Values<sup>c</sup>

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

Peak Inverse Plate Voltage, $-e_{bm}$	5000 <sup>d</sup>	V
Heater-Cathode Voltage:		
Peak . . . . .	$e_{hkm}$	$\left\{ \begin{array}{l} +300 \\ -5000 \end{array} \right.$ V
Average <sup>e</sup> . . . . .	$E_{hk(av)}$	$\left\{ \begin{array}{l} +100 \\ -900 \end{array} \right.$ V
Heater Voltage, ac or dc . . .	$E_h$	5.7 to 6.9 V
Plate Current:		
Peak . . . . .	$i_{bm}$	1500 mA
Average <sup>e</sup> . . . . .	$I_{b(av)}$	350 mA
Plate Dissipation . . . . .	$P_b$	11 W

# 6CE3

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

- <sup>a</sup> Measured without external shield in accordance with the current issue of EIA Standard RS-191.
- <sup>b</sup> Designed to mate with Duodecar 12-Contact Socket generally available from your local RCA Distributor.
- <sup>c</sup> As defined in the current issue of EIA Standard RS-239.
- <sup>d</sup> 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  $\mu$ s.
- Measured with a dc meter.

## OPERATING CONSIDERATIONS

Socket terminals 2, 3, 5, 6, 8, 9 and 11 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: Do Not Use
- 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: Do Not Use
- Pin 12: Heater

