

Half-Wave Vacuum Rectifier

ELECTRICAL CHARACTERISTICS - Bogey Values

Filament Voltage, ac	E_f	3.15	V
Filament Current at $E_f = 3.15$ V	I_f	0.280	A
Direct Interelectrode Capacitance: ^a			
P to (F + IS)	c_{p-all}	1.5	pF
Instantaneous Tube Voltage Drop for Instantaneous Plate Current (i_b) = 7 mA	e_b	50	V

MECHANICAL CHARACTERISTICS

Maximum Overall Length	3.812 in (96.82 mm)
Maximum Seated Length	3.250 in (82.55 mm)
Maximum Diameter	1.281 in (32.53 mm)
Envelope	JEDEC T9
Top Cap (Alternates):	Small (JEDEC C1-1)
	Small with Tubular Support (JEDEC C1-34)
	Small embossed (JEDEC C1-48)

Base (Alternates):

Intermediate-Shell Octal:

6-Pin, Arrangement 1 (JEDEC Group 1, No.B6-8)

Short Intermediate-Shell Octal with External Barriers:

6-Pin, Arrangement 1 (JEDEC Group 1, No.B6-60)

Ultra Short Small-Wafer Octal with External Barriers:

6-Pin, (JEDEC Group 1, No.B6-253)

Terminal-Connections Designation JEDEC 8MK

Type of Cathode Coated Filament

Operating Position Any

MAXIMUM RATINGS - Design-Maximum Values^b

*For operation as a pulsed rectifier tube in a
525-line, 30-frame system*

Peak Inverse Plate Voltage ^c	33,000	V
Plate Current:		
Peak	i_b	100 mA
Average	$I_{b(av)}$	2 mA
Filament Voltage, ac	E_f	2.65 to 3.65 V

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

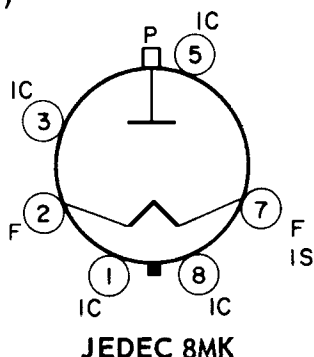
^b As defined in the current issue of EIA Standard RS-329.

^c 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 μ s.

3CU3

TERMINAL DIAGRAM (Bottom View)

- Pin 1 - Do Not Use
- Pin 2 - Filament
- Pin 3 - Do Not Use
- Pin 5 - Do Not Use
- Pin 7 - Filament
- Internal Shield
- Pin 8 - Do Not Use
- Top Cap - Plate



OPERATING CONSIDERATIONS

Socket Connections. The base pins of the 3CU3 fit the standard octal socket. Socket terminals 1, 3, 4, 5, 6 and 8 may be connected to terminal 7 or to a corona shield which connects to terminal 7. Terminals 4 and 6 may be used as tie points at or near filament potential. Otherwise, do not use.

High Voltages. The high voltages at which the 3CU3 is operated may be extremely dangerous to the user. Great care should be taken during the adjustment of circuits. The tube and its associated apparatus, especially all parts which may be at high potential with respect to ground, should be housed in a protective enclosure. The protective housing should be designed with interlocks so that personnel cannot possibly come in contact with any high potential point in the electrical system.

Operation of the 3CU3 with a plate voltage above approximately 16,000 V results in the production of X-radiation which can constitute a health hazard on prolonged exposure at close range unless the tube is adequately shielded. Relatively simple shielding should prove adequate, but the need for this precaution should be considered in equipment design.