3CA3

Half-Wave Vacuum Rectifier

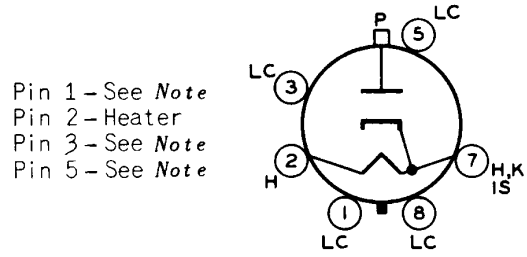
For High-Voltage Rectifier Circuits in TV Receivers

ELECTRICAL

Heater Characteristics and Ratings		
Voltage (AC)	3.60 ± 0.54	V
Current at 3.60 V	0.225	A
Direct Interelectrode Capacitance (Approx.)		
Without external shield		
P to (H + K + IS)	1.6	pF

MECHANICAL

Mounting Position . . . . . Any
Type of Cathode . . . . . Coated Unipotential
Maximum Overall Length . . . . . 4-1/16 in
Seated Length . . . . . 3-1/8 to 3-1/2 in
Maximum Diameter . . . . . 1-9/32 in
Bulb T9
Cap . . . . . Small with Tubular Support (JEDEC No.C1-34)
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)
Basing Designation for BOTTOM VIEW . . . . . 8MH ←



Pin 1 – See *Note*
Pin 2 – Heater
Pin 3 – See *Note*
Pin 5 – See *Note*
Pin 7 – Heater, Cathode, Internal Shield
Pin 8 – See *Note*

Note: May be used only under conditions specified in Operating Considerations

PULSED-RECTIFIER SERVICE

For operation in a 525-line; 30-frame system[a]

Design-Maximum Ratings

Peak Inverse Plate Voltage	30000	V
Peak Plate Current	100	mA
Average Plate Current	2	mA

Characteristic, Instantaneous Value

Tube Voltage Drop for plate mA = 11	100	V

[a] As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission. The duty cycle of the voltage pulse must not exceed 15 per cent of one scanning cycle.

← Indicates a change.

OPERATING CONSIDERATIONS

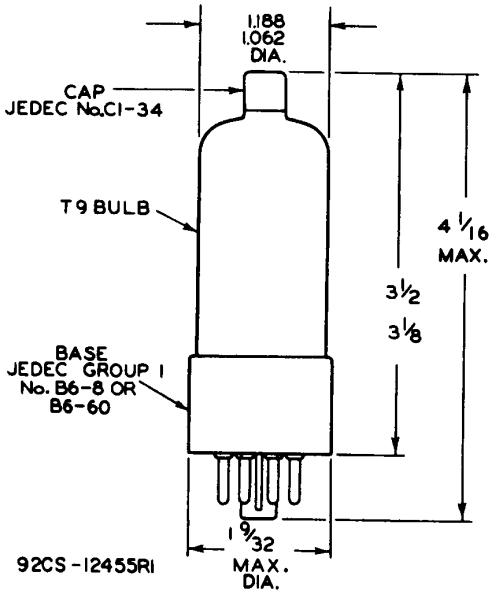
Socket terminals 1, 3, 4, 5, 6 and 8 may be connected to terminal 7 or to a corona shield which connects to terminal 7. Socket terminals 4 and 6 may be used as tie points at or near cathode potential. Otherwise, do not use.

The high voltages at which the 3CA3 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 above 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. The interlock devices should function to break the primary circuit of the high-voltage supply when any gate or door on the protective housing is opened, and should prevent the closing of this primary circuit until the door is locked again.

It should be noted that *high voltages* may appear at normally low-potential points in the circuit as a result of capacitor breakdown or incorrect circuit connections. Therefore, before any part of the circuit is touched, the power-supply switch should be turned off and both terminals of any capacitor should be grounded.

Operation of the 3CA3 with a plate voltage above approximately 16000 volts (absolute value) results in the production of X-radiations which can constitute a health hazard on prolonged exposure at close range unless the tube is adequately shielded. Relatively simply shielding should prove adequate, but the need for this precaution should be considered in equipment design.

DIMENSIONAL OUTLINE



DIMENSIONS IN INCHES

RADIO CORPORATION OF AMERICA
Electronic Components and Devices Harrison, N. J.