



1K3

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HALF-WAVE VACUUM RECTIFIER

GENERAL DATA

Electrical:

Filament, Coated:

Voltage* 1.25 ac volts

Current 0.2 amp

Direct Interelectrode Capacitance (Approx.):^oPlate to filament and internal shield . . . 1.6 μ f

Mechanical:

Operating Position. Any

Maximum Overall Length. 3-9/16"

Seated Length 2-13/16" $\pm$ 3/16"

Maximum Diameter. 1-9/32"

Bulb. T9

Cap Small with Tubular Support (JEDEC No.C1-34)

Base. Intermediate-Shell Octal 6-Pin,

Arrangement 1 (JEDEC No.B6-8), or

Short Intermediate-Shell Octal 6-Pin

with External Barriers, Arrangement 1 (JEDEC No.B6-60)

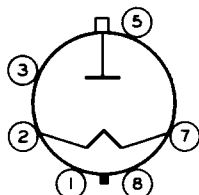
Basing Designation for BOTTOM VIEW. 3C

Pin 1 - Internal Con-
nection—
Do Not Use ■

Pin 2 - Filament

Pin 3 - Same as Pin 1

Pin 5 - Same as Pin 1

Pin 7 - Filament,
Internal
ShieldPin 8 - Same as Pin 1
Cap - Plate

PULSED-RECTIFIER SERVICE

Maximum Ratings, Design-Maximum Values:

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

INVERSE PLATE VOLTAGE:

Total dc and peak[⊕]. 26000 max. volts

DC. 22000 max. volts

PEAK PLATE CURRENT. 50 max. ma

DC PLATE CURRENT. 0.5 max. ma

Characteristics:

DC Plate Voltage. 225 volts

DC Plate Current. 7 ma

* Under no circumstances should the filament voltage be less than 1.05 volts or more than 1.45 volts.

^o Without external shield.

■ See Operating Considerations.

[□] As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission.[⊕] The duration of the voltage pulse must not exceed 15 per cent of one horizontal scanning cycle. In a 525-line, 30-frame system, 15 per cent of one horizontal scanning cycle is 10 microseconds.

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OPERATING CONSIDERATIONS

Socket Connections. Socket terminals Nos. 1, 3, 4, 5, 6, and 8 may be connected to socket terminal No. 7 or to a corona shield which is connected to socket terminal No. 7. Socket terminals Nos. 4 and 6 may be used as tie points for components at or near filament potential.

Measurement of Filament Voltage. To measure the filament voltage when the filament is at a high dc potential with respect to ground, it is recommended that a simple method utilizing visual comparison of the filament temperature be used. The color temperature of the filament, operating from a pulse- or rf-power source, may be checked by observing in a darkened room the reflection of the incandescent filament upon the surface of the internal shield. A visual comparison of this color temperature with that obtained when the filament of another 1K3 is operated from a dc or low-frequency ac supply of 1.25 volts, provides a convenient means for adjusting the amount of excitation to produce 1.25 volts (rms) at the filament terminals.

The high voltages at which the 1K3 is operated are very dangerous. Great care should be taken in the design of apparatus to prevent the operator from coming in contact with these high voltages. Particular care against fatal shock should be taken in the measurement of filament voltage. Under all circumstances, circuit parts which may be at high potentials should be enclosed or adequately insulated.

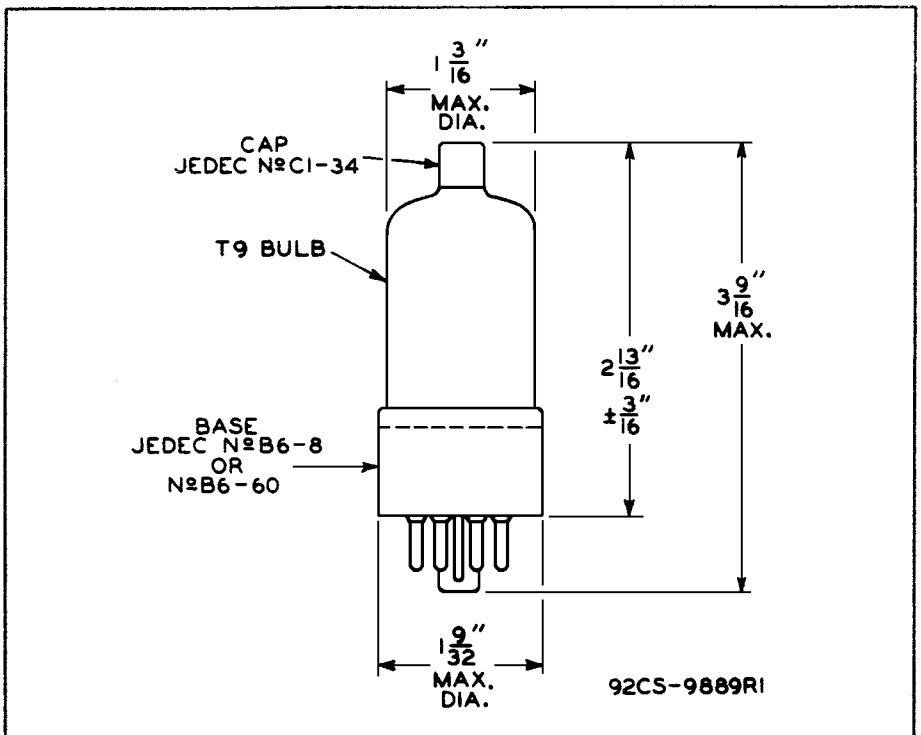
X rays. The voltages employed in some television receivers and other high-voltage equipment are sufficiently high that high-voltage rectifier tubes may produce X rays which can constitute a health hazard unless such tubes are adequately shielded. Relatively simple shielding should prove adequate, but the need for this precaution should be considered in equipment design.



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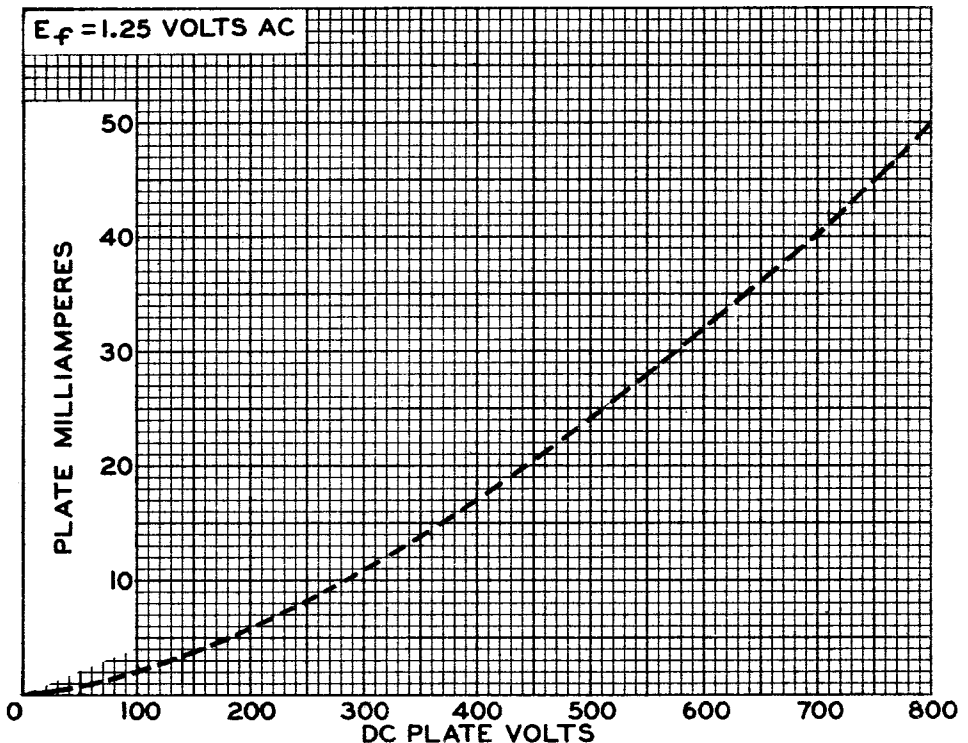
HALF-WAVE VACUUM RECTIFIER



10-59

CE-9889R1

AVERAGE PLATE CHARACTERISTIC



ELECTRON TUBE DIVISION

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CS-1025I