



5642

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# HALF-WAVE VACUUM RECTIFIER

SUBMINIATURE TYPE

For compact, portable high-voltage-rectifier applications

## GENERAL DATA

### Electrical:

Filament, Coated:

Voltage . . . . . 1.25 . . . . . ac or dc volts

Current . . . . . 0.2 . . . . . amp

Direct Interelectrode Capacitance (Approx.):<sup>o</sup>

Plate to filament . . . . . 0.6  $\mu$ f

### Mechanical:

Operating Position . . . . . Any

Maximum Length (Excluding flexible leads) . . . . . 2.380"

Length, Base Seat to Bulb Top (Excluding tip) . 1.700"  $\pm$  0.060"

Diameter . . . . . 0.366" to 0.400"

Bulb . . . . . T3

Plate Terminal:

Minimum length . . . . . 0.250"

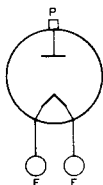
Leads, Flexible, Tinned . . . . . 2

Minimum length . . . . . 1.5"

Orientation and diameter . . . . . See Dimensional Outline

Maximum untinned distance from base seat . . . . . 0.050"

Base . . . . . Special 2-Lead



P - Plate Terminal

F - Filament Lead

## PULSED-RECTIFIER SERVICE

Maximum and Minimum Ratings, Design-Center Values:

For operation in a 525-line, 30-frame system<sup>□</sup>

PEAK INVERSE PLATE VOLTAGE . . . . . 10000 max. volts

PEAK PLATE CURRENT . . . . . 5 max. ma

DC PLATE CURRENT . . . . . 0.25 max. ma

FREQUENCY OF SUPPLY VOLTAGE . . . . . 5 min. kc

### Typical Operation:

Peak-Pulse Plate Voltage<sup>⊕</sup> . . . . . 8000 volts

DC Output Voltage (2 tubes) . . . . . 12000 volts

DC Output Current . . . . . 0.15 ma

### Characteristics:

Plate Current for plate volts = 30 . . . . . 4 ma

<sup>o</sup>, <sup>□</sup>, <sup>⊕</sup>: See next page.

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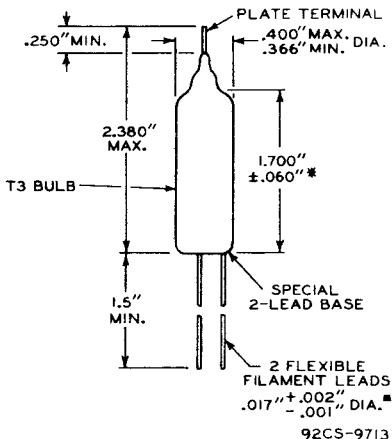
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## HALF-WAVE VACUUM RECTIFIER

- Without external shield.
- 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.

### OPERATING CONSIDERATIONS

The *flexible leads* of the 5642 are usually soldered to the circuit elements. Soldering of the connections should be made as far as possible from the glass button and the glass tip. If this precaution is not followed, the heat of the soldering operation will crack the glass seals of the leads and damage the tube.



\* Measured from base seat to bulb-top line as determined by a ring gauge of  $0.210 \pm 0.001$  inside diameter.

■ The specified lead diameter applies only in the zone between 0.050" and 0.250" from the base seat. Between 0.250" and 1.500", a maximum diameter of 0.021" is held. Outside of these zones, the lead diameter is not controlled.