Half-Wave Vacuum Rectifier

**DUODECAR TYPE**

**GENERAL DATA**

**Electrical:**

Heater Characteristics and Ratings *(Design-Maximum Values):*

- Voltage (AC or DC) .................. 6.3 ± 0.6 volts
- Current at heater volts = 6.3 ........ 1.200 amp
- Peak heater-cathode voltage:
  - Heater negative with respect to cathode .................. 5000^b^ max. volts
  - Heater positive with respect to cathode .................. 300^c^ max. volts
- Direct Interelectrode Capacitances *(Approx.):*
  - Plate to cathode and heater .................. 5.5 μf
  - Cathode to plate and heater .................. 7.5 μf
  - Heater to cathode ............................ 2.8 μf

**Mechanical:**

- Operating Position .................. Any
- Type of Cathode .................. Coated Unipotential
- Maximum Overall Length .............. 2.625"
- Seated Length .................. 2.000" to 2.250"
- Diameter .................. 1.062" to 1.188"
- Bulb .................. 1.79
- Base .................. Small-Button Duodecar 12-Pin (JEDEC No.E12-70)
- Basing Designation .................. BOTTOM VIEW .......................... 12BL

<table>
<thead>
<tr>
<th>Pin 1 - Heater</th>
<th>Pin 2 - No Internal Connection</th>
<th>Pin 3 - Same as Pin 2</th>
<th>Pin 4 - Plate</th>
<th>Pin 5 - Do Not Use</th>
<th>Pin 6 - Do Not Use</th>
<th>Pin 7 - Cathode</th>
<th>Pin 8 - Do Not Use</th>
<th>Pin 9 - Do Not Use</th>
<th>Pin 10 - Plate</th>
<th>Pin 11 - Same as Pin 2</th>
<th>Pin 12 - Heater</th>
</tr>
</thead>
</table>

**DAMPER SERVICE**

**Maximum Ratings, Design-Maximum Values:**

- For operation in a 525-line, 30-frame system

- PEAK INVERSE PLATE VOLTAGE .................. 5000 max. volts
- PEAK PLATE CURRENT .................. 1000 max. ma
- DC PLATE CURRENT .................. 165 max. ma
- PLATE DISSIPATION .................. 5.3 max. watts

**Characteristics, Instantaneous Value:**

- Tube Voltage Drop for plate ma. = 250 .............. 32 volts
a This rating is applicable when the duration of the voltage pulse does 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.
b The dc component must not exceed 900 volts.
c The dc component must not exceed 100 volts.
d Without external shield.
e Socket terminals 5, 6, 8, and 9 should not be used as tie points.
f As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission.