The 6X4W is a heater-cathode type high-vacuum double diode of miniature construction designed for dependable operation as a full-wave power rectifier under conditions of shock and vibration usually found in mobile and aircraft applications.

MECHANICAL DATA

- **ENVELOPE:** T-5½ Glass
- **BASE:** Miniature Button 7-Pin
- **TERMINAL CONNECTIONS:**
  - Pin 1 Plate, Diode #2
  - Pin 2 No Connection
  - Pin 3 Heater
  - Pin 4 Heater
  - Pin 5 No Connections
  - Pin 6 Plate, Diode #1
  - Pin 7 Cathode
- **MECHANICAL RATINGS:**
  - Maximum Impact Acceleration (Shock Test - Note 1) 700 G
  - Minimum Intermittent Heater Voltage Cycles (Note 2) 2000
- **MOUNTING POSITION:** Any

ELECTRICAL DATA

- **HEATER CHARACTERISTICS:**
  - Heater Voltage (ac or dc) 6.3±10% volts
  - Heater Current 0.6 amps.
  - Maximum Heater-Cathode Voltage:
    - Heater Positive with Respect to Cathode 495 volts
    - Heater Negative with Respect to Cathode 495 volts
- **RATINGS - ABSOLUTE MAXIMUM VALUES:**
  - Peak Inverse Plate Voltage 1375 volts
  - Peak Plate Current, per Plate 230 ma.
  - DC Output Current 77 ma.

- **CHARACTERISTICS AND TYPICAL OPERATION - FULL-WAVE RECTIFIER:**

<table>
<thead>
<tr>
<th>Choke Input</th>
<th>Condenser Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC Plate Voltage, per Plate (RMS)</td>
<td>450</td>
</tr>
<tr>
<td>Filter Input Condenser</td>
<td>...</td>
</tr>
<tr>
<td>Minimum Filter Input Choke</td>
<td>8</td>
</tr>
<tr>
<td>Total Effective Plate Supply Impedance, per Plate*</td>
<td>...</td>
</tr>
<tr>
<td>DC Output Current</td>
<td>70</td>
</tr>
<tr>
<td>DC Output Voltage at Input to Filter:</td>
<td></td>
</tr>
<tr>
<td>At half-load (35 ma.)</td>
<td>390</td>
</tr>
<tr>
<td>At full-load (70 ma.)</td>
<td>350</td>
</tr>
</tbody>
</table>

* Indicated value for conditions shown will limit peak plate current to maximum rated value. When a filter input condenser larger than 4 µf. is used, it may be necessary to increase the plate supply impedance to limit the peak current to the rated value.

Note 1 Test conditions and acceptance criteria per shock test procedures of JAN basic specifications.

Note 2 As checked at Ef=7.5 volts ac, one minute and off one minute.
DOUBLE DIODE

RATING CHART 2

Maximum Rectification Efficiency
To Keep Steady State Peak
Current in Rating
Capacitor Input to Filter

Based on an absolute maximum steady state peak plate current of 230 ma. per plate.

DC Output Current - Milliamperes per Plate

AREA OF PERMISSIBLE OPERATION

Rectification Efficiency

0 0.2 0.4 0.6 0.8 1.0
RATING CHART 3

Minimum Source Resistance to Keep Surge Current Within Rating

Based on maximum transient peak plate current of 1.0 amperes per plate.