RCA-5726 is a high-pervenance, miniature twin diode especially useful as a detector in circuits utilizing wide-band amplifiers. Constructed to give dependable performance under shock and vibration, this "premium" version of the 6AL5W is, therefore, well suited for use in mobile and aircraft equipment.

The two, sturdy, coiled heaters used in the 5726 are internally connected in series to provide fail-safe operation in applications which require that burn-out of either heater will make the heaters of both units simultaneously inoperative. These heaters employ pure tungsten to provide long life under conditions of frequent on-off switching.

Each 5726 is manufactured under rigid controls and undergoes rigorous tests to insure "premium" quality.

**GENERAL DATA**

**Electrical:**
- Heater, for unipolar cathodes:
  - Voltage (AC or DC)........... 6.9 ± 10% volts
  - Current.................... 0.3 ampere
  - Resonant Frequency (each unit, approx.) 700 Mc
- Direct Interelectrode Capacitances (With external shield JETEC No.316):
  - Unit No.1:
    - Plate to Cathode + External Shield, Heater, and Internal Shield.. 3.2 μF
    - Cathode to Plate + External Shield, Heater, and Internal Shield.. 3.9 μF
  - Unit No.2:
    - Plate to Cathode + External Shield, Heater, and Internal Shield.. 3.2 μF
    - Cathode to Plate + External Shield, Heater, and Internal Shield.. 3.9 μF
- Plate of Unit No.1 to Plate of Unit No.2........... 0.026 max.

**Mechanical:**
- Mounting Position........... Any
- Maximum Overall Length........ 1-9/16"
- Maximum Seated Length........ 1-1/2"
- Length, Base Seat to Bulb Top (Excluding tip)........ 1-1/8" ± 3/32"
- Maximum Diameter.............. 3/16"
- Bulb........ T-6-1/2 Base Small-Button Miniature 7-Pin (JETEC No.7-1)

**HALF-WAVE RECTIFIER**

**Maximum Ratings, Absolute Values:**
- PEAK INVERSE PLATE VOLTAGE........ 360 max. volts
- PEAK PLATE CURRENT PER PLATE........ 60 max. ma
- HOT-SWITCHING TRANSIENT PLATE CURRENT........ 50 max. ma
- DC OUTPUT CURRENT PER PLATE........ 10 max. ma

**Typical Operation:**
- The two units may be used separately or in parallel
  - AC Plate-Supply Voltage Per Plate (RMS)........... 117 volts
  - Minimum Total Effective Plate-Supply Impedance Per Plate........... 300 ohms
  - DC Output Current Per Plate........... 9 ma

**Shock and Vibration Tests:**
- These tests are made as indicated in the JAN Specifications: JAN I-A for Electron Tubes, May 1946 under the section as follows:
  - Section Feb (9e) Shock Test: Instantaneous Impact Acceleration........ 700 max. g
  - Section Feb (9f) Vibration Test: Vibration Acceleration........ 2.5 max. g

**Heater Cycling Life Test:**
- This test is made as indicated in the JAN Specifications: JAN I-A for Electron Tubes for type 5726/6AL5W.

**Cycles of Intermittent Operation:**
- At a heater voltage of 7.5 volts, 2000 min. cycles

**Characteristics Range Values for Equipment Design:**

<table>
<thead>
<tr>
<th>Note</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heater Current</td>
<td>0.275</td>
<td>0.325 amp</td>
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</tbody>
</table>

**Direct Inter-electrode Capacitances (With external shield JETEC No.316):**
- Unit No.1:
  - Plate to Cathode + External Shield, Heater, and Internal Shield........ 2.4 & 4.0 μF
  - Cathode to Plate + External Shield, Heater, and Internal Shield........ 2.8 & 4.4 μF
- Unit No.2:
  - Plate to Cathode + External Shield, Heater, and Internal Shield........ 2.4 & 4.0 μF
  - Cathode to Plate + External Shield, Heater, and Internal Shield........ 2.8 & 4.4 μF

**Plate of Unit No.1 to Plate of Unit No.2........... 1.3 & 40 ma**

**OPERATING NOTES**

The maximum ratings in the tabulated data for the 5726 are limiting values above which the serviceability of the 5726 may be impaired from viewpoint of life and satisfactory performance. Therefore, in order not to exceed these absolute ratings, the equipment designer has the responsibility of determining an average design value for each rating below the absolute value of that rating by an amount such that the absolute values will never be exceeded under any usual condition of supply-voltage variation, load variation, or manufacturing variation in the equipment itself.
Half-Wave Rectification Characteristics for Single Diode of Type 5726.

Average Plate Characteristic for Either Unit of Type 5726.