RCA-6026 is a high-efficiency oscillator triode of the subminiature type intended particularly for transmitting service in radiosonde and similar applications. As a class C oscillator in such service, the tube can deliver a useful power output of 1.25 watts.

Utilizing subminiature construction with flexible leads, the 6026 has very short transit time and low interelectrode capacitances. In addition, the very small size and light weight of this tube make it especially useful in equipment requiring extreme compactness.

Ratings for this tube have been established on the basis of its intended use in radiosonde and similar applications where power output, compactness, and light weight are the primary considerations, and where a tube life of only a few hours is required.

**GENERAL DATA**

**Electrical:**
- Heater, for unipotential cathode: voltage range* (AC or DC)...
- Current with 6.3 volts on heater...
- Direct interelectrode capacitances (with no external shield):
  - Grid to plate...
  - Input...
- Characteristics, class A Amplifier:
  - Plate voltage...
  - Grid-to-Plate Capacitance...
  - Grid-to-Cathode Capacitance...
  - Plate-to-Cathode Capacitance...
  - Plate current...
  - Plate current...
  - Plate current...
  - Transcondutance...
  - Transcondutance...

**Mechanical:**
- Mounting position...
- Maximum envelope length...
- Maximum length from button to bulb top (excluding tip)...1.26"...
- Bulb...
- Leads, flexible...
- Length...
- Orientation and diameter...

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**OSCILLATOR-CLASS C TELEGRAPHY**

Maxmum Ratings, Absolute Values:
- DC PLATE VOLTAGE...
- DC GRID VOLTAGE...
- DC GRID CURRENT...
- PLATE INPUT...
- PLATE DISSIPATION...
- PEAK HEATER-GRID VOLTAGE...

Typical Operation as Oscillator at 400 Mc:
- DC Plate voltage...
- Grid Resistor...
- DC Plate Current...
- DC Grid Current (approx.)...
- Useful power output...

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></td>
<td></td>
</tr>
<tr>
<td>With 5.2 volts ac on heater.</td>
<td>0.176</td>
<td></td>
</tr>
<tr>
<td>With 6.6 volts ac on heater.</td>
<td>0.225</td>
<td></td>
</tr>
<tr>
<td>Amplification factor</td>
<td>17</td>
<td>31</td>
</tr>
<tr>
<td>Grid-to-Plate capacitance</td>
<td>1.05</td>
<td>1.65</td>
</tr>
<tr>
<td>Grid-to-Cathode capacitance</td>
<td>1.75</td>
<td>2.65</td>
</tr>
<tr>
<td>Plate-to-Cathode capacitance</td>
<td>0.305</td>
<td>0.405</td>
</tr>
<tr>
<td>Plate Current</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Plate Current</td>
<td>3</td>
<td>9.5</td>
</tr>
<tr>
<td>Plate Current</td>
<td>4</td>
<td>18.5</td>
</tr>
<tr>
<td>Transconductance</td>
<td>4200</td>
<td>12000</td>
</tr>
<tr>
<td>Transconductance</td>
<td>4000</td>
<td>8000</td>
</tr>
</tbody>
</table>

Note 1: With 5.2 or 6.3 volts ac on heater, 120 volts dc on plate, and cathode resistor of 220 ohms.

Note 2: With 5.2 volts ac on heater, 120 volts dc on plate, and cathode resistor of 220 ohms.

Note 3: With 6.3 volts ac on heater, 120 volts dc on plate, and cathode resistor of 220 ohms.

Note 4: With 5.2 volts ac on heater, 120 volts dc on plate, 12 volts dc on grid, and cathode resistor of 220 ohms.

*heater voltage range and maximum ratings are established on basis that tube heater will be supplied from batteries in radiosonde and similar applications utilizing equipment designed for extreme compactness and light weight and requiring tube life of only a few hours.

**OPERATING NOTES**
The maximum ratings in the tabulated data for the 6026 are limiting values above which the serviceability of the 6026 may be impaired from the 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.

It is recommended that the cathode be connected directly to the heater.
The *flexible leads* of the 6026 are usually soldered to the circuit elements. Soldering of the connections should be made as far as possible from the glass button. If this precaution is not followed, the heat of the soldering operation may crack the glass seals of the leads and damage the tube.

**Average Plate Characteristics of Type 6026.**