The CK5678 is a filament type, fully shielded, subminiature pentode designed for service in RF applications requiring economy of space, weight, and battery drain. The flexible terminal leads may be soldered or welded directly to the terminals of circuit components without the use of sockets. Standard inline subminiature sockets may be used by cutting the leads to a suitable length.

**MECHANICAL DATA**

**ENVELOPE:** T-2 x 3 Glass

**BASE:** None (0.016" tinned flexible leads. Length: 1.5" min. Spacing: 0.048" center-to-center.)

**TERMINAL CONNECTIONS:** (Red dot is adjacent to Lead 1)

<table>
<thead>
<tr>
<th>Lead 1</th>
<th>Lead 2</th>
<th>Lead 3</th>
<th>Lead 4</th>
<th>Grid #2</th>
<th>Grid #3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plate</td>
<td>Grid, negative; Shield</td>
<td>Filament, positive;</td>
<td>Grid #1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**MOUNTING POSITION** Any

**ELECTRICAL DATA DATA**

**DIRECT INTERELECTRODE CAPACITANCES:** (μfd.)

<table>
<thead>
<tr>
<th></th>
<th>max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grid to Plate</td>
<td>0.01</td>
</tr>
<tr>
<td>Input</td>
<td>3.3</td>
</tr>
<tr>
<td>Output</td>
<td>3.8</td>
</tr>
</tbody>
</table>

**RATINGS - ABSOLUTE MAXIMUM VALUES:**

| Filament Voltage (dc) | 1.25 ± 2.0% volts |
| Plate Voltage         | 90 volts          |
| Grid #2 Voltage       | 67.5 volts        |

**CHARACTERISTICS AND TYPICAL OPERATION - CLASS A1 AMPLIFIER:**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filament Voltage (dc)</td>
<td>1.25</td>
</tr>
<tr>
<td>Filament Current</td>
<td>50 ma.</td>
</tr>
<tr>
<td>Plate Voltage</td>
<td>45</td>
</tr>
<tr>
<td>Grid #2 Voltage</td>
<td>67.5 volts</td>
</tr>
<tr>
<td>Grid #3 Voltage</td>
<td>0</td>
</tr>
<tr>
<td>Plate Resistance</td>
<td>1.2</td>
</tr>
<tr>
<td>Transconductance</td>
<td>820</td>
</tr>
<tr>
<td>Plate Current</td>
<td>0.8</td>
</tr>
<tr>
<td>Grid #2 Current</td>
<td>0.48</td>
</tr>
<tr>
<td>Grid #3 Voltage (approx.) for Gm = 10 μmhos</td>
<td>0.3 - 4 volts</td>
</tr>
</tbody>
</table>

- *Bulb is entirely coated with a metallic shield connected to Lead 3.
- *Grid #3 is comprised of two separate deflector plates, one of which is connected to lead 3 and the other to lead 5.
- *Grid resistor = 5 megohms.
AVERAGE CHARACTERISTICS

Conditions:
- \( E_f = 1.25 \text{ volts} \)
- \( E_b = E_c2 = 45 \text{ volts} \)
- \( E_b = E_c2 = 67.5 \text{ volts} \)

- Grid #1 Voltage - Volts
- Plate or Grid #2 Current - Milliamperes
- Transconductance - mhos
AVERAGE PLATE CHARACTERISTICS
(Triode Connected)

Conditions:
E1 = 1.25

Plate Current - Milliamperes
0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0

Plate Voltage - Volts
0 10 20 30 40 50 60 70 80 90 100

E1 = 0 Volts
-0.5
-1.0
-1.5
-2.0
-2.5
-3.0