SYLVANIA TYPE 6GK6
BEAM POWER PENTODE

MECHANICAL DATA

Bulb ........................................... T-6½
Base ........................................... ES-1, Miniature Button 9-Pin
Outline ........................................... 6-4
Basing ........................................... 9GK
Cathode ........................................ Coated Unpotential
Mounting Position ................................ Any

ELECTRICAL DATA

HEATER CHARACTERISTICS AND RATINGS

Characteristics
Heater Voltage\(^1\) ........................................... 6.3 Volts
Heater Current\(^2\) ........................................... 760 Ma
Heater Voltage ........................................... 6.3 ± 0.6 Volts
Maximum Heater-Cathode Voltage
  Heater Negative with Respect to Cathode ........................................... 100 Volts Max.
  Heater Positive with Respect to Cathode ........................................... 100 Volts Max.

DIRECT INTERELECTRODE CAPACITANCES

Grid No. 1 to Plate ........................................... 0.14 \(\mu\)F Max.
Input ........................................... 10 \(\mu\)F
Output ........................................... 7 \(\mu\)F

RATINGS (Design Maximum Values)

Plate Voltage\(^4\) ........................................... 330 Volts Max.
Grid No. 2 Voltage\(^4\) ........................................... 330 Volts Max.
Negative Grid No. 1 Voltage ........................................... 100 Volts Max.
Plate Dissipation ........................................... 13.2 Watts Max.
Grid No. 2 Dissipation (Average) ........................................... 2 Watts Max.
Grid No. 2 Dissipation (Peak) ........................................... 4 Watts Max.
Cathode Current ........................................... 65 Ma Max.
Grid No. 1 Circuit Resistance ........................................... 0.3 Megohm Max.
Fixed Bias ........................................... 1.0 Megohm Max.
Cathode Bias ........................................... .......

CHARACTERISTICS AND TYPICAL OPERATION

<table>
<thead>
<tr>
<th>Pentode Operation</th>
<th>Single Tube Class A1</th>
<th>Class AB1 Push-Pull</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plate Voltage</td>
<td>250 250</td>
<td>300 Volts</td>
</tr>
<tr>
<td>Grid No. 2 Voltage</td>
<td>250 250</td>
<td>300 Volts</td>
</tr>
<tr>
<td>Grid No. 1 Voltage</td>
<td>-7.3 130</td>
<td>-130 Ohms</td>
</tr>
<tr>
<td>Cathode Resistor</td>
<td>135 130</td>
<td>-</td>
</tr>
<tr>
<td>Grid Voltage (RMS) Per Grid</td>
<td>4.3 8</td>
<td>10 Volts</td>
</tr>
<tr>
<td>Plate Current (Zero Signal)</td>
<td>48 62</td>
<td>72 Ma</td>
</tr>
<tr>
<td>Plate Current (Max. Signal)</td>
<td>49.5 75</td>
<td>92 Ma</td>
</tr>
<tr>
<td>Grid No. 2 Current (Zero Signal)</td>
<td>5.5 70 8 Ma</td>
<td></td>
</tr>
<tr>
<td>Grid No. 2 Current (Max. Signal)</td>
<td>19.8 15</td>
<td>22 Ma</td>
</tr>
<tr>
<td>Transconductance</td>
<td>11.3K</td>
<td>- Ahmhos</td>
</tr>
<tr>
<td>Amplification Factor(^5)</td>
<td>19 19</td>
<td>-</td>
</tr>
<tr>
<td>Plate Resistance</td>
<td>38K</td>
<td>- Ohms</td>
</tr>
<tr>
<td>Load Resistance</td>
<td>5.2K</td>
<td>- Ohms</td>
</tr>
<tr>
<td>Load Resistance (Plate to Plate)</td>
<td>- 8K</td>
<td>8K Ohms</td>
</tr>
<tr>
<td>Maximum-Signal Power Output</td>
<td>5.7 11</td>
<td>17 Watts</td>
</tr>
<tr>
<td>Total Harmonic Distortion</td>
<td>- 10 3.0</td>
<td>4.9 Percent</td>
</tr>
</tbody>
</table>

NOTES:

1. For parallel operation of heaters, equipment should be designed that at normal supply voltage bogey tubes will operate at this value of heater voltage.
2. The bogey value of current is obtained when operating the heater at the specified 6.3 volts.
3. Heater voltage supply variations shall be restricted to maintain heater voltage within the specified tolerance.

SYLVANIA ELECTRONIC TUBES
111-5-7-60
SYLVANIA TYPE 6GK6 (Cont'd)

4. When the heater and positive voltages are obtained from a storage battery by means of a vibrator, the maximum values of the plate and Grid No. 2 Voltages are 275 volts and that of the plate dissipation 9.9 watts.
5. Measured from Grid No. 2 to Plate.

APPLICATION

The Sylvania Type 6GK6 is a beam power pentode audio Amplifier designed for service in the output stage of high quality audio amplifiers or other equipment requiring high power output at relative low distortion.