MECHANICAL DATA

Bulb .................................................. T-5 1/2
Base ................................................ E7-1, Miniature Button 7-Pin
Basing .............................................. 7BF
Cathode .............................................. Coated Unipotential
Mounting Position ......................... Any

ELECTRICAL DATA

HEATER CHARACTERISTICS

Heater Voltage ...................................... 6.3 Volts
Heater Current ...................................... 300 Ma
Heater-Cathode Voltage
Heater Positive with Respect to Cathode
DC Component .................................. 90 Volts Max.
Total DC and Peak .............................. 180 Volts Max.
Heater Negative with Respect to Cathode
Total DC and Peak .............................. 180 Volts Max.

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

Grid to Plate (Each Section) ............... 2.7 μF
Input (Each Section) ...................... 2.4 μF
Output (Section 1) .......................... 0.5 μF
Output (Section 2) .......................... 0.4 μF
Plate to Plate ...................................... 0.8 μF

RATINGS (Design Center Values — Each Section)

Plate Voltage ...................................... 175 Volts Max.
Plate Dissipation ............................... 0.5 Watts Max.
Cathode Current ................................. 9.0 Ma Max.
Positive DC Grid Voltage .................. 0 Volts Max.
Grid Circuit Resistance
Fixed Bias ...................................... .05 Megohm Max.
Cathode Bias ..................................... 0.1 Megohm Max.

CHARACTERISTICS AND TYPICAL OPERATION (Each Section)

Average Characteristics
Plate Voltage ...................................... 100 Volts
Cathode Bias Resistor ....................... 470 Ohms
Plate Current .................................. 4.8 Ma
Amplification Factor ......................... 27
Transconductance ............................ 3400 μmhos
Plate Resistance (approx.) .................. 7950 Ohms

<table>
<thead>
<tr>
<th>Computer Service</th>
<th>On Condition</th>
<th>Off Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plate Supply Voltage</td>
<td>150</td>
<td>150 Volts</td>
</tr>
<tr>
<td>Grid Voltage</td>
<td>0</td>
<td>-10 Volts</td>
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<tr>
<td>Plate Current (Minimum)</td>
<td>0.10 Ma</td>
<td></td>
</tr>
<tr>
<td>Plate Current (Maximum)</td>
<td>4.8 Ma</td>
<td></td>
</tr>
<tr>
<td>Grid Resistor</td>
<td>47,000</td>
<td>47,000 Ohms</td>
</tr>
<tr>
<td>Plate Load Resistor</td>
<td>20,000</td>
<td>20,000 Ohms</td>
</tr>
</tbody>
</table>
NOTE:

1. Section 1 connects to pins 2 and 3. Section 2 connects to pins 1 and 6.

APPLICATION

Sylvania type 5844 features relatively high zero-bias plate current and sharp cutoff, heater cathode construction designed for dependable service under conditions of intermittent operation, and a cathode constructed to maintain its emission capabilities after long periods of operation under cutoff conditions.

The grid voltage required to produce 100 microamperes in one section must not differ by more than 1.0 volt from the grid voltage required to produce 100 microamperes in the other section with a plate supply voltage of 150 volts and a plate load resistor of 20,000 ohms.
AVERAGE TRANSFER CHARACTERISTICS

TRANSCONDUCTANCE ($g_m$) IN MICROMOHRS

PLATE CURRENT IN MILLIAMPERES

AMPLIFICATION FACTOR ($\mu$)

PLATE RESISTANCE ($r_p$) IN OHMS
AVERAGE CHARACTERISTICS

PLATE CURRENT IN MILLIAMPERES

GRID VOLTAGE IN VOLTS

Ef = 6.3 VOLTS

Eb = 150 VOLTS

50

75

100

125