Tung-Sol

Beam Pentode
Miniature Type
Coated Unipotential Cathode

Heater
50±10% Volts 0.15 Amp.
AC or DC
Any Mounting Position
For Series String

The 50C5 is a Beam Power Amplifier using the 7 Pin Miniature Construction. Because of its high power sensitivity at low plate-screen voltage, it is particularly adaptable to AC/DC Receiver Applications.

Direct Interelectrode Capacitances - Approx.
With No External Shield

Grid to Plate: G4 to P
Input: G4 to (H+R&G3+G2)
Output: P to (H+R&G3+G2)

Ratings
Interpreted According to Design Center System

Heater Voltage
Maximum Heater-Cathode Voltage:
Heater Negative with Respect to Cathode
DC and Peak
200 Volts
Heater Positive with Respect to Cathode
DC
100 Volts
DC and Peak
200 Volts

Maximum Plate Voltage
150 Volts

Maximum Grid #2 Voltage
130 Volts

Maximum Plate Dissipation
7 Watts

Maximum Grid #2 Dissipation
1.4 Watts

Maximum Positive DC Grid #1 Voltage
0 Volts

Maximum Grid #1 Circuit Resistance:
Fixed Bias
0.1 Megohm
Cathode Bias
0.5 Megohm

Maximum Bulb Temperature
220 °C

All Electrical Data Except Heater Characteristics for Type 50C5 Are Identical With Those of Types 12C5, 12C6U, 17C5, 25C5, and 50B5.

—Indicates a Change.

Continued on Following Page

Tung-Sol Electric Inc. Electron Tube Division Bloomfield, New Jersey, U.S.A. October 1, 1961 Plate #6298
TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS
CLASS A\textsubscript{1} AMPLIFIER

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLATE VOLTAGE</td>
<td>120 Vols</td>
</tr>
<tr>
<td>GRID #2 VOLTAGE</td>
<td>110 Vols</td>
</tr>
<tr>
<td>GRID #1 VOLTAGE</td>
<td>8 Vols</td>
</tr>
<tr>
<td>PEAK AF GRID #1 VOLTAGE</td>
<td>49 MA</td>
</tr>
<tr>
<td>ZERO-SIGNAL PLATE CURRENT</td>
<td>4 MA</td>
</tr>
<tr>
<td>ZERO-SIGNAL GRID #2 CURRENT</td>
<td>90 MA</td>
</tr>
<tr>
<td>MAXIMUM SIGNAL GRID #1 CURRENT</td>
<td>8.5 MA</td>
</tr>
<tr>
<td>PLATE RESISTANCE (APPROX.)</td>
<td>10 000 Ohms</td>
</tr>
<tr>
<td>TRANSCONDUCTANCE</td>
<td>7 500 \mu\text{OHMS}</td>
</tr>
<tr>
<td>LOAD RESISTANCE</td>
<td>2 500 \text{OHMS}</td>
</tr>
<tr>
<td>TOTAL HARMONIC DISTORTION</td>
<td>10 \text{PERCENT}</td>
</tr>
<tr>
<td>MAXIMUM SIGNAL POWER OUTPUT</td>
<td>2.5 Watts</td>
</tr>
</tbody>
</table>

![Graph](50c5.png)

**PENTODE CONNECTION**
- \( E_f = 50 \text{ Volts} \)
- \( E_b = 110 \text{ Volts} \)
- \( E_c = 110 \text{ Volts} \)
- \( E_{c1} = -7.5 \text{ Volts} \)
- \( E_{\text{Sig}} = 5.3 \text{ Volts RMS} \)

\[ P_0 \]

**TOTAL HARMONIC DISTORTION - PERCENT**

\[ \text{Dist.} \]

**LOAD RESISTANCE (R\textsubscript{L}) - KILOHMS**

\[ 0, 2.5, 5.0, 7.5 \text{ KILOHMS} \]