PENTODE MINIATURE TYPE

COATED UNIPOTENTIAL CATHODE HEATER

25 VOLTS 0.3 AMP.
AC OR DC
ANY MOUNTING POSITION

BOTTOM VIEW
MINIATURE BUTTON
7 PIN BASE
7CV

THE 25CA5 IS A BEAM PENTODE USING THE 7 PIN MINIATURE CONSTRUCTION. IT IS DESIGNED PRIMARILY FOR USE IN THE AUDIO FREQUENCY POWER OUTPUT STAGE OF TELEVISION AND RADIO RECEIVERS. IT FEATURES HIGH POWER SENSITIVITY AT RELATIVELY LOW PLATE AND SCREEN VOLTAGES. EXCEPT FOR HEATER RATINGS IT IS IDENTICAL TO THE 6CA5.

DIRECT INTERELECTRODE CAPACITANCES
*WITH NO EXTERNAL SHIELD

GRID #1 TO PLATE
INPUT
OUTPUT

0.5 µf
15 µf
9 µf

RATINGS
INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM

HEATER VOLTAGE

25 VOLTS

MAXIMUM HEATER-CATHODE VOLTAGE:
HEATER POSITIVE WITH RESPECT TO CATHODE
TOTAL DC AND PEAK
100 VOLTS

HEATER NEGATIVE WITH RESPECT TO CATHODE
TOTAL DC AND PEAK
200 VOLTS

MAXIMUM PLATE VOLTAGE
130 VOLTS

MAXIMUM GRID #2 VOLTAGE
130 VOLTS

MAXIMUM POSITIVE DC GRID #1 VOLTAGE
0 VOLTS

MAXIMUM PLATE DISSIPATION
5.0 WATTS

MAXIMUM GRID #2 DISSIPATION
1.4 WATTS

MAXIMUM GRID #1 CIRCUIT RESISTANCE:
FIXED BIAS
0.1 MEGOHM
CATHODE BIAS
0.5 MEGOHM
BULB TEMPERATURE AT HOTTEST POINT
150 °C

CONTINUED ON FOLLOWING PAGE
TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

CLASS A\textsubscript{1} AMPLIFIER

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heater Voltage</td>
<td>25 Volts</td>
</tr>
<tr>
<td>Heater Current</td>
<td>0.3 Amp.</td>
</tr>
<tr>
<td>Plate Voltage</td>
<td>110 125 Volts</td>
</tr>
<tr>
<td>Grid #2 Voltage</td>
<td>110 125 Volts</td>
</tr>
<tr>
<td>Grid #1 Voltage</td>
<td>-4.0 -4.5 Volts</td>
</tr>
<tr>
<td>Peak AF Grid #1 Voltage</td>
<td>4.0 4.5 Volts</td>
</tr>
<tr>
<td>Plate Resistance (Approx.)</td>
<td>16 000 16 000 Ohms</td>
</tr>
<tr>
<td>Transconductance</td>
<td>8 100 9 200 µMhos</td>
</tr>
<tr>
<td>Zero-Signal Plate Current</td>
<td>32 37 MA.</td>
</tr>
<tr>
<td>Maximum Signal Plate Current (Approx.)</td>
<td>31 36 MA.</td>
</tr>
<tr>
<td>Zero-Signal Grid #2 Current</td>
<td>3.5 4.0 MA.</td>
</tr>
<tr>
<td>Maximum Signal Grid #2 Current (Approx.)</td>
<td>7.5 11 MA.</td>
</tr>
<tr>
<td>Load Resistance</td>
<td>3 500 4 500 Ohms</td>
</tr>
<tr>
<td>Total Harmonic Distortion (Approx.)</td>
<td>5 6 Percent</td>
</tr>
<tr>
<td>Maximum Signal Power Output</td>
<td>1.1 1.5 Watts</td>
</tr>
</tbody>
</table>

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Diagram: 25CA5

\[ E_f = 25 \text{ Volts} \]
\[ E_{c2} = 125 \text{ Volts} \]

- \( I_{b} \)
- \( I_{c1} \)

Labeled curves for different values of \( E_c \), indicating plate and grid currents at various plate voltages.

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PLATE 25CA5  FEBRUARY 3, 1955  TUNG-SOL ELECTRIC INC. ELECTRON TUBE DIVISION BLOOMFIELD, NEW JERSEY, U.S.A.