PENTODE

MINIATURE TYPE

COATED UNIPOTENTIAL CATHODE

FOR

VOLTAGE AMPLIFIER

SERVICE IN T.V. APPLICATIONS

ANY MOUNTING POSITION

THE 6AH6 IS A SHARP CUT-OFF VOLTAGE AMPLIFIER IN THE MINIATURE CONSTRUCTION. IT IS CHARACTERIZED BY A VERY HIGH TRANSCONDUCTANCE AND MODERATELY LOW INTERELECTRODE CAPACITANCES WHICH ADAPT IT TO WIDE BAND VIDEO AND INTERMEDIATE FREQUENCY AMPLIFIER SERVICE.

→ DIRECT INTERELECTRODE CAPACITANCES

EXTERNAL SHIELD #316 CONNECTED TO PIN 7

GRID TO PLATE: (G1 TO P) 0.020 pf
INPUT: G1 TO (H+K+G2+G3) 10 pf
OUTPUT: P TO (H+K+G2+G3) 3.6 pf

HEATER CHARACTERISTICS AND RATINGS

DESIGN CENTER VALUES - SEE EIA STANDARD RS-239

AVERAGE CHARACTERISTICS 6.3 VOLTS 450 MA.

MAXIMUM RATINGS

DESIGN CENTER VALUES - SEE EIA STANDARD RS-239

PLATE VOLTAGE 300 VOLTS
GRID #2 VOLTAGE SEE RATING CHART
PLATE DISSIPATION 3.2 WATTS
GRID #2 DISSIPATION 0.4 WATTS
CATHODE CURRENT 13 MA.
GRID #2 SUPPLY VOLTAGE → 300 VOLTS

→ INDICATES A CHANGE.

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### Typical Operating Characteristics

<table>
<thead>
<tr>
<th></th>
<th>Pentode Connected</th>
<th>Triode Connected</th>
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</thead>
<tbody>
<tr>
<td>Plate Voltage</td>
<td>300</td>
<td>150</td>
</tr>
<tr>
<td>Grid #2 Voltage</td>
<td>150</td>
<td>150</td>
</tr>
<tr>
<td>Grid #3 Voltage*</td>
<td>A</td>
<td>150</td>
</tr>
<tr>
<td>Cathode Resistor</td>
<td>160</td>
<td>160</td>
</tr>
<tr>
<td>Plate Resistance (Approx.)</td>
<td>0.5</td>
<td>0.0036 MEGOHMS</td>
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<tr>
<td>Transconductance</td>
<td>9000</td>
<td>11000</td>
</tr>
<tr>
<td>Transconductance (Grid #3 to Plate)</td>
<td>B</td>
<td>---</td>
</tr>
<tr>
<td>Amplification Factor</td>
<td>---</td>
<td>40</td>
</tr>
<tr>
<td>Plate Current</td>
<td>10</td>
<td>12.6</td>
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<tr>
<td>Grid #2 Current</td>
<td>2.5</td>
<td>---</td>
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<tr>
<td>Grid #4 Voltage (Approx.)</td>
<td>For 1b = 10 μA.</td>
<td>-7</td>
</tr>
</tbody>
</table>

A. Pin #2 connected to #7 at socket.

B. Grid #3 has practically no control characteristic and it is not intended to be used as a control electrode. Its transconductance to the plate is approximately 2 μMOS and the μk is 0.7 to 1.5.

* Indicates an addition.

→ Indicates a change.

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**6AH6**

Grid #2 Input Rating Chart

- Maximum Operating Conditions
- Grid #2 Input expressed as per cent of maximum grid #2 supply voltage rating
- Area of permissible operation
6AH6
PENTODE CONNECTION
\( E_f = 6.3 \text{ Volts} \)
\( E_{c2} = 150 \text{ Volts} \)
\( E_{c3} = 0 \text{ Volts} \)

\( I_b \)
\( I_{c2} \)

<table>
<thead>
<tr>
<th>CURVE</th>
<th>SCREEN SUPPLY VOLTS</th>
<th>SERIES SCREEN RESISTOR-OMMS</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>150</td>
<td>---</td>
</tr>
<tr>
<td>2</td>
<td>100</td>
<td>---</td>
</tr>
<tr>
<td>3</td>
<td>50</td>
<td>---</td>
</tr>
<tr>
<td>4</td>
<td>300</td>
<td>75000</td>
</tr>
</tbody>
</table>

GRID VOLTS

GRID (I_{c2}) CURRENT

-10.0
-7.5
-5.0
-2.5
0

5.0
7.5

0

PLATE (I_b) CURRENT

10
20
30

GRID VOLTS

TRANSCONDUCTANCE \( (g_m) \) MICROMOS

0
5,000
10,000
15,000

TUNG SDL ELECTRIC INC., ELECTION TUBE DIVISION, PIEDMONT, NEW JERSEY, U.S.A., FEBRUARY 1, 1956, PLATE #6385
6AH6

PENTODE CONNECTION

$E_f = 6.3$ Volts
$E_{C2} = 150$ Volts
$E_{C3} = 0$ Volts

$I_h$

$I_{C2}$

PLATE (I_B) OR SCREEN (I_C2) CURRENT vs. PLATE VOLTS