TUNG-SOL

TRIODE PENTODE

MINIATURE TYPE

COATED UNIPOTENTIAL CATHODE

HEATER

6.3 VOLTS  0.75 AMP.

ANY MOUNTING POSITION

BOTTOM VIEW

MINIATURE BUTTON

9 PIN BASE

9DX

THE 6GN8 IS A HIGH MU TRIODE AND A SHARP CUTOFF PENTODE IN THE 9 PIN MINIATURE CONSTRUCTION. THE TRIODE SECTION IS DESIGNED FOR USE AS A VOLTAGE AMPLIFIER OR SYNC-SEPARATOR. THE PENTODE SECTION IS DESIGNED FOR VIDEO AMPLIFIER SERVICE FEATURING A CONTROLLED PLATE KNEE CHARACTERISTIC. EXCEPT FOR HEATER RATINGS AND HEATER WARM-UP TIME, THE 6GN8 IS IDENTICAL TO THE 8GN8.

DIRECT INTERELECTRODE CAPACITANCES

WITHOUT EXTERNAL SHIELD

TRIODE SECTION

GRID TO PLATE
INPUT: G TO (H+K)
OUTPUT: P TO (H+K)

PENTODE SECTION

GRID #1 TO PLATE (MAX)
INPUT: G1 TO (H+K+G2+G3+I.S.)
OUTPUT: P TO (H+K+G2+G3+I.S.)

COUPLING

TRIODE GRID TO PENTODE PLATE (MAX.)
PENTODE GRID #1 TO TRIODE PLATE (MAX.)
PENTODE PLATE TO TRIODE PLATE (MAX.)

RATINGS

INTERPRETED ACCORDING TO DESIGN MAXIMUM SYSTEM A

TRIODE SECTION

HEATER VOLTAGE
MAXIMUM PLATE VOLTAGE
MAXIMUM GRID #2 SUPPLY VOLTAGE

PENTODE SECTION

VOLTS
VOLTS
VOLTS

CONTINUED ON FOLLOWING PAGE

TUNG-SOL ELECTRIC INC., ELECTRON TUBE DIVISION, BLOOMFIELD, NEW JERSEY, U.S.A. FEBRUARY 1, 1960 PLATE 5771
CONTINUED FROM PRECEDING PAGE

**RATINGS - CONT'D.**
INTERPRETED ACCORDING TO DESIGN MAXIMUM SYSTEM A

<table>
<thead>
<tr>
<th>HEATER VOLTAGE</th>
<th>TRIODE SECTION</th>
<th>PENODE SECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAXIMUM GRID #2 VOLTAGE</td>
<td>SEE RATING CHART</td>
<td></td>
</tr>
<tr>
<td>MAXIMUM POSITIVE GRID #1 VOLTAGE</td>
<td>0</td>
<td>0 VOLTS</td>
</tr>
<tr>
<td>MAXIMUM PLATE DISSIPATION</td>
<td>1.0</td>
<td>5.0 WATTS</td>
</tr>
<tr>
<td>MAXIMUM GRID #2 DISSIPATION</td>
<td>1.1</td>
<td>WATTS</td>
</tr>
<tr>
<td>MAXIMUM GRID #1 CIRCUIT RESISTANCE:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIXED BIAS</td>
<td>0.5</td>
<td>0.25 MEGOHM</td>
</tr>
<tr>
<td>CATHODE BIAS</td>
<td>1.0</td>
<td>1.0 MEGOHM</td>
</tr>
</tbody>
</table>

MAXIMUM HEATER - CATHODE VOLTAGE:
- HEATER NEGATIVE WITH RESPECT TO CATHODE
  - TOTAL DC AND PEAK: DC = 200 VOLTS
- HEATER POSITIVE WITH RESPECT TO CATHODE
  - TOTAL DC AND PEAK: DC = 200 VOLTS

**TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS**

<table>
<thead>
<tr>
<th>HEATER VOLTAGE</th>
<th>TRIODE SECTION</th>
<th>PENODE SECTION</th>
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</thead>
<tbody>
<tr>
<td>HEATER CURRENT</td>
<td>0.75 AMP</td>
<td></td>
</tr>
<tr>
<td>PLATE VOLTAGE</td>
<td>250</td>
<td>200 VOLTS</td>
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<tr>
<td>GRID #2 VOLTAGE</td>
<td>150</td>
<td>VOLTS</td>
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<tr>
<td>GRID #1 VOLTAGE</td>
<td>-2</td>
<td>VOLTS</td>
</tr>
<tr>
<td>CATHODE BIAS RESISTOR</td>
<td>100</td>
<td>OHMS</td>
</tr>
<tr>
<td>PLATE CURRENT</td>
<td>2</td>
<td>25 MA</td>
</tr>
<tr>
<td>GRID #2 CURRENT</td>
<td>5.5</td>
<td>MA</td>
</tr>
<tr>
<td>TRANSCONDUCTANCE</td>
<td>2700</td>
<td>11500 µMHO</td>
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<tr>
<td>AMPLIFICATION FACTOR</td>
<td>100</td>
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<tr>
<td>PLATE RESISTANCE</td>
<td>37000</td>
<td>60000 OHMS</td>
</tr>
</tbody>
</table>

Ec1 FOR Ib = 100 µA (APPROX.)
Ec1 FOR Ib = 20 µA (APPROX.)

**INSTANTANEOUS PLATE KNEE CHARACTERISTICS**

**PENODE SECTION**

Eb = 60 VOLTS, Ec2 = 150 VOLTS AND Ec1 = 0 VOLTS
Ib = 55 MA AND Ic2 = 18 MA.

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A. DESIGN-MAXIMUM RATINGS ARE LIMITING VALUES OF OPERATING AND ENVIRONMENTAL CONDITIONS APPLICABLE TO BOGEY ELECTRON DEVICE OF A SPECIFIED TYPE AS DEFINED BY ITS PUBLISHED DATA, AND SHOULD NOT BE EXCEEDED UNDER THE WORST PROBABLE CONDITIONS.

THE DEVICE MANUFACTURER CHOSES THESE VALUES TO PROVIDE ACCEPTABLE SERVICEABILITY OF THE DEVICE, TAKING RESPONSIBILITY FOR THE EFFECTS OF CHANGES IN OPERATING CONDITIONS DUE TO VARIATIONS IN DEVICE CHARACTERISTICS.

THE EQUIPMENT MANUFACTURER SHOULD DESIGN SO THAT INITIALLY AND THROUGHOUT LIFE NO DESIGN-MAXIMUM VALUE FOR THE INTENDED SERVICE IS EXCEEDED WITH A BOGEY DEVICE UNDER THE WORST PROBABLE OPERATING CONDITIONS WITH RESPECT TO SUPPLY-VOLTAGE VARIATION, EQUIPMENT COMPONENT VARIATION, EQUIPMENT CONTROL ADJUSTMENT, LOAD VARIATION, SIGNAL VARIATION AND ENVIRONMENTAL CONDITIONS.
6GN8 RATING CHART

GRID #2 DISSIPATION EXPRESSED AS % OF MAX. GRID #2 DISSIPATION RATING

GRID #2 VOLTAGE EXPRESSED AS % OF MAX. GRID #2 SUPPLY VOLTAGE RATING