DIODE PENTODE
MINIATURE TYPE

COATED UNIPOTENTIAL CATHODE

HEATER
6.3 ± 10% VOLTS 450 MA.
AC OR DC
ANY MOUNTING POSITION

THE 6AM8A IS A DIODE PENTODE ESPECIALLY DESIGNED FOR USE AS A VIDEO DETECTOR AND IF AMPLIFIER IN TELEVISION RECEIVERS. IN ADDITION, THERMAL CHARACTERISTICS OF THE HEATER ARE CONTROLLED SUCH THAT HEATER VOLTAGE SURGES DURING THE WARM-UP CYCLE ARE MINIMIZED PROVIDED IT IS USED WITH OTHER TYPES WHICH ARE SIMILARLY CONTROLLED.

DIRECT INTERELECTRODE CAPACITANCES

<table>
<thead>
<tr>
<th>PENTODE</th>
<th>WITH SHIELD</th>
<th>WITHOUT SHIELD</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRID #1 TO PLATE (MAX.)</td>
<td>0.015</td>
<td>0.015</td>
</tr>
<tr>
<td>INPUT</td>
<td>6.0</td>
<td>6.5</td>
</tr>
<tr>
<td>OUTPUT</td>
<td>3.4</td>
<td>2.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DIODE</th>
<th>WITH SHIELD</th>
<th>WITHOUT SHIELD</th>
</tr>
</thead>
<tbody>
<tr>
<td>INPUT: P TO (H+K)</td>
<td>2.3</td>
<td>1.8</td>
</tr>
<tr>
<td>CATHODE TO (H+)</td>
<td>3.0</td>
<td>3.0</td>
</tr>
<tr>
<td>COUPLING (DIODE PLATE TO PENTODE PLATE)</td>
<td>0.035</td>
<td>0.10</td>
</tr>
<tr>
<td>COUPLING (DIODE PLATE TO GRID #1)</td>
<td>0.006</td>
<td>0.006</td>
</tr>
<tr>
<td>COUPLING (DIODE CATHODE TO PENTODE PLATE)</td>
<td>0.15</td>
<td>0.15</td>
</tr>
</tbody>
</table>

A SHIELD #335 CONNECTED TO GROUND.

CONTINUED ON FOLLOWING PAGE
RATINGS
INTERPRETED ACCORDING TO DESIGN MAXIMUM SYSTEM

MAXIMUM HEATER-CATHODE VOLTAGE:
HEATER NEGATIVE WITH RESPECT TO CATHODE
TOTAL DC AND PEAK 200 VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE
DC 100 VOLTS
TOTAL DC AND PEAK 200 VOLTS
MAXIMUM PLATE VOLTAGE 350 VOLTS
MAXIMUM PLATE DISSIPATION 3.2 WATTS
MAXIMUM GRID #2 VOLTAGE SEE RATING CHART
MAXIMUM GRID #2 SUPPLY VOLTAGE 350 VOLTS
MAXIMUM GRID #2 DISSIPATION 0.85 WATTS
MAXIMUM POSITIVE GRID #1 VOLTAGE 0 VOLTS
MAXIMUM GRID #3 VOLTAGE 0 VOLTS
MAXIMUM GRID #1 CIRCUIT RESISTANCE:
CATHODE BIAS 1.0 MEGOHM
FIXED BIAS 0.25 MEGOHM
MAXIMUM DIODE CURRENT FOR CONTINUOUS OPERATION 5.0 MA.
HEATER WARM-UP TIME (APPROX.)* 21.0 SECONDS

*HEATER WARM-UP TIME IS DEFINED AS THE TIME REQUIRED FOR THE VOLTAGE ACROSS THE HEATER TO REACH 80% OF ITS RATED VOLTAGE AFTER APPLYING 4 TIMES RATED HEATER VOLTAGE TO A CIRCUIT CONSISTING OF THE TUBE HEATER IN SERIES WITH A RESISTANCE OF VALUE 3 TIMES THE NOMINAL HEATER OPERATING RESISTANCE.

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

PLATE VOLTAGE 125 VOLTS
GRID #2 VOLTAGE 125 VOLTS
GRID #3 VOLTAGE 0 VOLTS
CATHODE RESISTOR 56 OHMS
PLATE CURRENT 12.5 MA.
GRID #2 CURRENT 3.2 MA.
TRANSCONDUCTANCE 7800 uMHO
PLATE RESISTANCE (APPROX.) 0.3 MEGOHM
GRID #1 VOLTAGE FOR I_D = 20 MA. (APPROX.) -6 VOLTS
PLATE CURRENT AT E_C1 = 5V \rightarrow R_K = 0 2.0 MA.
DIODE PLATE VOLTAGE FOR DIODE CURRENT = 50 MA. 10 VOLTS

DESIGN-MAXIMUM RATINGS ARE LIMITING VALUES OF OPERATING AND ENVIRONMENTAL CONDITIONS APPLICABLE TO A BOGUE 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 CHOOSES 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 BOGUE 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.
6AM8A

GRID #2 RATING CURVE

$E_f = 6.3$ Volts

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

6AM8A PENTODE

$E_f = 6.3$ Volts

$E_{C2} = 150$ Volts

$I_b$

$I_{C2}$

PLATE (I_b) OR GRID #2 (I_{C2}) CURRENT - MILLIAMPERES

PLATE VOLTS

TUNG-SOL ELECTRIC INC. ELECTRON TUBE DIVISION BLOOMFIELD, NEW JERSEY, U.S.A. JULY 1, 1962 PLATE #6106