High-Mu Triode-
Sharp-Cutoff Pentode

Electrical:

Heater Characteristics and Ratings:
Voltage (AC or DC) .................. 6.3 volts
Current at heater volts = 6.3 .... 0.660 amp
Peak heater-cathode voltage .......... 100 volts

Direct Inter-electrode Capacitances:
Triode Unit:
  Grid to plate .................. 1.4 pf
  Input: G1 to (Kp, G3p, IS, G2p, H) .... 2.3 pf
  Output: P1 to (K1, H) ........... 2.5 pf
  Grid to heater .................. 0.006 max. pf

Pentode Unit:
  Grid No.1 to plate ................. 0.4 max. pf
  Input: G2p to (Kp, G3p, IS, G2p, H) .... 10.0 pf
  Grid No.1 to heater ............... 0.24 max. pf
  Triode plate to pentode grid No.1 ...... 0.2 max. pf
  Triode grid to pentode plate ........ 0.006 max. pf
  Triode grid to pentode grid No.1 ...... 0.02 max. pf
  Triode plate to pentode plate ........ 0.15 max. pf

Mechanical:

Operating Position .................. Any
Maximum Overall Length .............. 3-1/16"
Maximum Seated Length ............... 2-15/16"
Length, Base Seat to Bulb Top (Excluding tip) .... 2.7/16" ± 3/32"
Diameter ................................ 0.750" to 0.875"
Dimensional Outline (JEDEC No.6-4) .... See General Section
Bulb .................................. T6-1/2
Base ................................ Small-Ball Noval 9-Pin (JEDEC No.E9-1)
Basing Designation for BOTTOM VIEW ........ 9LZ

Pin 1 - Triode Grid
Pin 2 - Triode Cathode
Pin 3 - Pentode Grid No.2
Pin 4 - Heater
Pin 5 - Heater
Pin 6 - Pentode Plate
Pin 7 - Pentode Cathode, Grid No.3.
  Internal Shield
Pin 8 - Pentode Grid No.1
Pin 9 - Triode Plate
## Class A1 Amplifier

### Characteristics:

<table>
<thead>
<tr>
<th></th>
<th>Triode Unit</th>
<th>Pentode Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plate Voltage</td>
<td>250 volts</td>
<td>250 volts</td>
</tr>
<tr>
<td>Grid No. 2 (Screen-Grid) Voltage</td>
<td>–</td>
<td>250 volts</td>
</tr>
<tr>
<td>Grid No. 1 (Control-Grid) Voltage</td>
<td>–1.9</td>
<td>–7 volts</td>
</tr>
<tr>
<td>Amplification Factor</td>
<td>100</td>
<td>21&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Plate Resistance (Approx.)</td>
<td>–</td>
<td>48000 ohms</td>
</tr>
<tr>
<td>Transconductance</td>
<td>1600</td>
<td>10000 µhos</td>
</tr>
<tr>
<td>Plate Current</td>
<td>1.2</td>
<td>36 ma</td>
</tr>
<tr>
<td>Grid-No. 2 Current</td>
<td>–</td>
<td>6 ma</td>
</tr>
</tbody>
</table>

### Maximum Ratings, Design-Center Values:

<table>
<thead>
<tr>
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<th>Triode Unit</th>
<th>Pentode Unit</th>
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</thead>
<tbody>
<tr>
<td>Plate Supply Voltage</td>
<td>550 volts</td>
<td>550 volts</td>
</tr>
<tr>
<td>Plate Voltage</td>
<td>300 volts</td>
<td>300 volts</td>
</tr>
<tr>
<td>Grid-No. 2 Supply Voltage</td>
<td>–</td>
<td>550 volts</td>
</tr>
<tr>
<td>Grid-No. 2 Voltage</td>
<td>–</td>
<td>300 volts</td>
</tr>
<tr>
<td>Average Cathode Current</td>
<td>4</td>
<td>55 ma</td>
</tr>
<tr>
<td>Grid-No. 2 Input</td>
<td>–</td>
<td>1.8 watts</td>
</tr>
<tr>
<td>Plate Dissipation</td>
<td>0.5</td>
<td>9 watts</td>
</tr>
<tr>
<td>Grid-No. 1 Voltage at grid No. 1 μ&lt;sub&gt;a&lt;/sub&gt; = 0.3</td>
<td>–1.3</td>
<td>–1.3 volts</td>
</tr>
</tbody>
</table>

### Maximum Circuit Values:

- Grid-No. 1 Circuit Resistance:
  - For fixed-bias operation: 1 0.5 megohm

<sup>a</sup> Grid No. 1 to Grid No. 2