**Mechanical Data**

Coated unipotential cathode

Outline drawing 6-2 Bulb T 6 1/2
Base E 9-1 9-pin

Maximum diameter 7/8 
Maximum overall length 2-3/16 
Maximum seated height 1-15/16 

Pin connections

Pin 1 - Plate  Pin 6 - Grid
Pin 2 - Grid  Pin 7 - Cathode
Pin 3 - Cathode  Pin 8 - Grid
Pin 4 - Heater  Pin 9 - Plate
Pin 5 - Heater

Mounting position Any

**Electrical Data**

<table>
<thead>
<tr>
<th>Capacitances</th>
<th>With Shield(^+)</th>
<th>Without Shield</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grid to plate ((g \text{ to } p))</td>
<td>3.1 (\mu\text{f})</td>
<td>2.0 (\mu\text{f})</td>
</tr>
<tr>
<td>Plate to grid and heater ((r \text{ to } g + h))</td>
<td>(-)</td>
<td>2.1 (\mu\text{f})</td>
</tr>
<tr>
<td>Plate to cathode ((p \text{ to } k))</td>
<td>(-)</td>
<td>0.2 (\mu\text{f})</td>
</tr>
<tr>
<td>Grid to cathode ((g \text{ to } k))</td>
<td>(-)</td>
<td>3.6 (\mu\text{f})</td>
</tr>
<tr>
<td>Cathode to grid and heater ((k \text{ to } g + h))</td>
<td>(-)</td>
<td>6.6 (\mu\text{f})</td>
</tr>
<tr>
<td>Grid to heater ((g \text{ to } h))</td>
<td>(-)</td>
<td>(&lt;0.3) (\mu\text{f})</td>
</tr>
<tr>
<td>Grid to cathode and heater ((g \text{ to } h + k))</td>
<td>4.2</td>
<td>3.9 (\mu\text{f})</td>
</tr>
<tr>
<td>Plate to cathode and heater ((p \text{ to } h + k))</td>
<td>0.25</td>
<td>0.3 (\mu\text{f})</td>
</tr>
</tbody>
</table>

\(^+\)External Shield \(\frac{15}{16}\) Dia, Length 2"

**Ratings**

Heater voltage (ac or dc) 6.3 volts

Maximum heater-cathode voltage

Heater negative with respect to cathode 100 volts
Heater positive with respect to cathode 100 volts

from JEDEC release #2405, March 9, 1959
Maximum resistance cathode-heater 20,000 ohms
Maximum plate voltage 220 volts
Maximum plate dissipation 2.2 watts
Maximum cathode current 20 ma
Maximum grid circuit resistance 1.0 megohm
Maximum negative grid voltage 50 volts
Maximum frequency (UHF amplification) 800 Mc

**Typical operating conditions and characteristics, grounded-grid amplifier**

Heater voltage 6.3 volts
Heater current 170 ma
Plate voltage 175 volts
Grid voltage - 1.5 volts
Plate current 12 ma
Transconductance 14,000 μmhos
Amplification factor 68
Equivalent noise resistance 230 ohms
Space-charge capacitance (grounded cathode) 2.0 μμf

**Characteristics at 100 Mc**

Phase of transconductance - 7°
Additional grid-noise-conductance 0.5 mmhos