6J4
Description and Rating

HIGH-FREQUENCY TRIODE

GENERAL DESCRIPTION
Principal Application: The 6J4 is a miniature high-mu triode designed for use as a grounded-grid amplifier at frequencies up to approximately 500 megacycles. The tube features an extremely high transconductance of 12000 micromhos and permits operation with a high signal-to-noise ratio. Three terminals on the grid provide effective grounding with a minimum of reactance. The 6J4 may also be used in conventional triode circuits with an ungrounded grid.

Direct Interelectrode Capacitances: (Approx)#
Plate to Cathode and Heater (Max) 0.24 µf
Grid to Cathode and Heater 5.5 µf
Grid to Plate 4.0 µf
Heater to Cathode 3.2 µf

PHYSICAL DIMENSIONS

TERMINAL CONNECTIONS

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

MAXIMUM RATINGS

<table>
<thead>
<tr>
<th>Plate Voltage</th>
<th>Plate Dissipation</th>
<th>Plate Current</th>
<th>D-C Heater-Cathode Voltage</th>
<th>Grid Circuit Resistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>150 Volts</td>
<td>2.25 Watts</td>
<td>20 Milliamperes</td>
<td>90 Volts</td>
<td>0.25 Megohm</td>
</tr>
</tbody>
</table>

GROUNDED-GRID CLASS A1 AMPLIFIER

<table>
<thead>
<tr>
<th>Plate Voltage</th>
<th>Cathode Bias Resistor*</th>
<th>Amplification Factor</th>
<th>Plate Resistance</th>
<th>Transconductance</th>
<th>Plate Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 Volts</td>
<td>100</td>
<td>55</td>
<td>5000 Ohms</td>
<td>110000 Micromhos</td>
<td>10 Milliamperes</td>
</tr>
</tbody>
</table>

Note: When the 6J4 is used in grounded-grid operation at high frequencies, all three grid terminals should be grounded to minimize the effects of grid-lead inductance.

# With external shield #316 connected to grid.

* Operation with fixed bias is not recommended; in addition, the cathode bias resistor should always be suitably by-passed.