The 6FG5 is a miniature tube, similar in construction to a beam pentode, with an internally connected grid between the control grid and the screen grid which serves to reduce the ratio of screen current to plate current. The tube is designed for use as a radio-frequency amplifier in VHF television receivers.

**GENERAL**

**Cathode—Coated Unipotential**
Heater Voltage, AC or DC ............................................... 6.3 ± 10% Volts
Heater Current ......................................................... 0.2 Amperes
Direct Interelectrode Capacitances*
  Grid-Number 1 to Plate, maximum (g1 to p) .......... 0.02 μF
  Input: g1 to (h + k + g2 + g3 + b.p.) ................. 4.2 μF
  Output: p to (h + k + g2 + g3 + b.p.) ............... 2.8 μF

**MECHANICAL**
Mounting Position—Any
Envelope—T-5½, Glass
Base—E7-1, Miniature Button 7-Pin

**MAXIMUM RATINGS**

**DESIGN-MAXIMUM VALUES**
Plate Voltage ............................................................. 275 Volts
Screen Voltage ............................................................. 275 Volts
Positive DC Grid-Number 1 Voltage ....................... 0 Volts
Negative DC Grid-Number 1 Voltage ......................... 50 Volts
Plate Dissipation ....................................................... 2.75 Watts
Screen Dissipation ..................................................... 0.15 Watts
DC Cathode Current ................................................... 20 Milliamperes

Heater-Cathode Voltage
  Heater Positive with Respect to Cathode
    DC Component ..................................................... 100 Volts
    Total DC and Peak ............................................... 200 Volts
  Heater Negative with Respect to Cathode
    Total DC and Peak ............................................... 200 Volts
  Grid-Number 1 Circuit Resistance ....................... 3.3 Megohms

Design-Maximum ratings are limiting values of operating and environmental conditions applicable to a bogey tube of a specified type as defined by its published data, and should not be exceeded under the worst probable conditions.

These values are chosen by the tube manufacturer to provide acceptable serviceability of the tube, taking responsibility for the effects of changes in operating conditions due to variations in the characteristics of the tube under consideration.

The equipment manufacturer should design so that initially and throughout life no design-maximum value for the intended service is exceeded with a bogey tube under the worst probable operating conditions with respect to supply-voltage variation, equipment component variation, variation in characteristics of all other tubes in the equipment, equipment control adjustment, load variation, signal variation, and environmental conditions.

The tubes and arrangements disclosed herein may be covered by patents of General Electric Company or others. Neither the disclosure of any information herein nor the sale of tubes by General Electric Company conveys any license under patent claims covering combinations of tubes with other devices or elements. In the absence of an express written agreement to the contrary, General Electric Company assumes no liability for patent infringement arising out of any use of the tubes with other devices or elements by any purchaser of tubes or others.
CHARACTERISTICS AND TYPICAL OPERATION

AVERAGE CHARACTERISTICS

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plate Voltage</td>
<td>250 Volts</td>
</tr>
<tr>
<td>Screen Voltage</td>
<td>250 Volts</td>
</tr>
<tr>
<td>Grid-Number 1 Voltage</td>
<td>-0.2 Volts</td>
</tr>
<tr>
<td>Plate Resistance, approximate</td>
<td>0.25 Megohms</td>
</tr>
<tr>
<td>Transconductance</td>
<td>9500 Micromhos</td>
</tr>
<tr>
<td>Plate Current</td>
<td>9.0 Milliamperes</td>
</tr>
<tr>
<td>Screen Current</td>
<td>0.42 Milliamperes</td>
</tr>
</tbody>
</table>

Grid-Number 1 Voltage, approximate
\[ G_m = 100 \text{ Micromhos} \]
\[ E_1 = \text{RATED VALUE} \]
\[ E_{c3} = 250 \text{ VOLTS} \]

* Without external shield.