THE 6FG5 IS A "SHADOW GRID" BEAM PENTODE IN THE 7 PIN MINIATURE CONSTRUCTION. IT HAS 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.

DIRECT INTERELECTRODE CAPACITANCES
WITHOUT EXTERNAL SHEILD

GRID #1 TO PLATE (MAX.) (G1 TO P) 0.02 \( \mu \text{F} \)
INPUT: G1 TO (H+K+G2+G3+B,P.) 4.2 \( \mu \text{F} \)
OUTPUT: P TO (H+K+G2+G3+B,P.) 2.8 \( \mu \text{F} \)

RATINGS
INTERPRETED ACCORDING TO DESIGN MAXIMUM SYSTEM

HEATER VOLTAGE 6.3±10% VOLS
MAXIMUM PLATE VOLTAGE 275 VOLS
MAXIMUM SCREEN VOLTAGE 275 VOLS
MAXIMUM POSITIVE DC GRID #1 VOLTAGE 0 VOLS
MAXIMUM NEGATIVE DC GRID #1 VOLTAGE 50 VOLS
MAXIMUM PLATE DISSIPATION 2.75 WATTS
MAXIMUM SCREEN DISSIPATION 0.15 WATTS
MAXIMUM DC CATHODE CURRENT 20 MA
MAXIMUM HEATER-CATHODE VOLTAGE:
HEATER POSITIVE WITH RESPECT TO CATHODE 100 VOLS
DC COMPONENT
TOTAL DC AND PEAK
HEATER NEGATIVE WITH RESPECT TO CATHODE 200 VOLS
TOTAL DC AND PEAK
MAXIMUM GRID #1 CIRCUIT RESISTANCE 3.3 MEGOMHS
TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEATER VOLTAGE</td>
<td>6.3 ± 10% VOLS</td>
</tr>
<tr>
<td>HEATER CURRENT</td>
<td>0.2 AMP</td>
</tr>
<tr>
<td>PLATE VOLTAGE</td>
<td>250 VOLS</td>
</tr>
<tr>
<td>SCREEN VOLTAGE</td>
<td>250 VOLS</td>
</tr>
<tr>
<td>GRID #1 VOLTAGE</td>
<td>-0.2 VOLS</td>
</tr>
<tr>
<td>PLATE RESISTANCE (APPROX.)</td>
<td>0.25 MEGOHMS</td>
</tr>
<tr>
<td>TRANSCONDUCTANCE</td>
<td>9500 AMMOS</td>
</tr>
<tr>
<td>PLATE CURRENT</td>
<td>9.0 MA.</td>
</tr>
<tr>
<td>SCREEN CURRENT</td>
<td>0.42 MA.</td>
</tr>
</tbody>
</table>

GRID #1 VOLTAGE (APPROX.)

\[ G_m = 100 \, \text{AMMOS} \]

\[ -5 \, \text{VOLTS} \]

DESIGN-MAXIMUM RATINGS ARE LIMITING VALUES OF OPERATING AND ENVIRONMENTAL CONDITIONS APPLICABLE TO A ROGET 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 CHOSES 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 ROGET 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.

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**6FG5**

\[ E_r = 6.3 \, \text{Volts} \]

\[ E_{c5} = 250 \, \text{Volts} \]

**Graph:**

- **Y-axis:** 0 to 12.5, label: **PLATE (b) MILLIAMPERES**
- **X-axis:** 0 to 500, label: **PLATE VOLTS**

- Key values:
  - \[ I_{0.5 E_{c1}} = 0 \]
  - -0.2
  - -0.5
  - -1.0
  - -1.5
  - -2.0
  - -3.0
  - -5.0