6Y6-GT

BEAM PENTODE

DESCRIPTION AND RATING

The 6Y6-GT is a beam power pentode primarily intended for use as an audio-frequency power amplifier. It is particularly useful in applications where the available supply voltage is relatively low. The 6Y6-GT differs from the 6Y6-G in only one respect, the straight-sided T-9 construction.

GENERAL

ELECTRICAL
Cathode—Coated Unipotential
Heater Voltage, AC or DC............... 6.3 Volts
Heater Current.......................... 1.25 Amperes

MECHANICAL
Mounting Position—Any
Envelope—T-9, Glass
Base—B6-81 or B7-7, Intermediate Shell Octal
     or B6-84 or B7-59, Short Intermediate Shell Octal

MAXIMUM RATINGS

DESIGN-CENTER VALUES
Plate Voltage ................................ 200 Volts
Screen Voltage .......................... 135 Volts
Plate Dissipation ........................ 12.5 Watts
Screen Dissipation ......................... 1.75 Watts
Heater-Cathode Voltage
     Heater Positive with Respect to Cathode........... 180 Volts
     Heater Negative with Respect to Cathode......... 180 Volts
Grid-Number 1 Circuit Resistance
     With Fixed Bias ................................ 0.1 Megohms
     With Cathode Bias .......................... 0.5 Megohms

BASING DIAGRAM

TERMINAL CONNECTIONS
Pin 1—No Connection*
Pin 2—Heater
Pin 3—Plate
Pin 4—Grid Number 2 (Screen)
Pin 5—Grid Number 1
Pin 7—Heater
Pin 8—Cathode and Beam Plates
* Pin 1 omitted on bases B6-81 and B6-84.

PHYSICAL DIMENSIONS
CHARACTERISTICS AND TYPICAL OPERATION

CLASS A1 AMPLIFIER

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value 1</th>
<th>Value 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plate Voltage</td>
<td>135</td>
<td>200 Volts</td>
</tr>
<tr>
<td>Screen Voltage</td>
<td>135</td>
<td>135 Volts</td>
</tr>
<tr>
<td>Grid-Number 1 Voltage</td>
<td>-13.5</td>
<td>-14 Volts</td>
</tr>
<tr>
<td>Peak AF Grid-Number 1 Voltage</td>
<td>13.5</td>
<td>14 Volts</td>
</tr>
<tr>
<td>Plate Resistance, approximate</td>
<td>9300</td>
<td>18300 Ohms</td>
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<tr>
<td>Transconductance</td>
<td>7000</td>
<td>7100 Micromhos</td>
</tr>
<tr>
<td>Zero-Signal Plate Current</td>
<td>58</td>
<td>61 Milliamperes</td>
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<tr>
<td>Maximum-Signal Plate Current</td>
<td>60</td>
<td>66 Milliamperes</td>
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<tr>
<td>Zero-Signal Screen Current</td>
<td>3.5</td>
<td>2.2 Milliamperes</td>
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<tr>
<td>Maximum-Signal Screen Current</td>
<td>11.5</td>
<td>9.0 Milliamperes</td>
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<tr>
<td>Load Resistance</td>
<td>2000</td>
<td>2600 Ohms</td>
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<tr>
<td>Total Harmonic Distortion, approximate</td>
<td>10</td>
<td>10 Percent</td>
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<tr>
<td>Maximum-Signal Power Output</td>
<td>3.6</td>
<td>6.0 Watts</td>
</tr>
</tbody>
</table>

OPERATION CHARACTERISTICS

\[ E_f = \text{RATED VALUE} \]
\[ E_b = 200 \text{ VOLTS} \]
\[ E_{C2} = 135 \text{ VOLTS} \]
\[ E_{C1} = -14 \text{ VOLTS} \]
\[ E_{sig} = 9.9 \text{ VOLTS (RMS)} \]
$E_f = \text{RATED VALUE}$
$E_b = 200 \text{ VOLTS}$