CATHODE RAY TUNING INDICATOR

Heater Type Glass Bulb

The 6U5/6G5 is a high vacuum type indicator tube with remote cutoff characteristics designed for service as a tuning indicator in radio receivers. The 6U5/6G5 may be used also to replace types 6H5 and 6T5.

RATINGS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heater Voltage (a-c or d-c)</td>
<td>6.3 volts</td>
</tr>
<tr>
<td>Heater Current</td>
<td>0.3 amp</td>
</tr>
<tr>
<td>Maximum Plate Supply Voltage</td>
<td>250 volts</td>
</tr>
<tr>
<td>Maximum Target Voltage</td>
<td>250 volts</td>
</tr>
<tr>
<td>Minimum Target Voltage</td>
<td>90 volts</td>
</tr>
</tbody>
</table>

TUNING INDICATOR

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plate Supply Voltage</td>
<td>100 200 volts</td>
</tr>
<tr>
<td>Target Voltage</td>
<td>100 200 volts</td>
</tr>
<tr>
<td>Plate Resistor</td>
<td>0.5 1 m</td>
</tr>
<tr>
<td>Target Current *</td>
<td>1 4 mA</td>
</tr>
<tr>
<td>Plate Current (zero bias)</td>
<td>0.19 0.19 mA</td>
</tr>
<tr>
<td>Grid Bias (approximate)</td>
<td>-3 -18.5 volts</td>
</tr>
<tr>
<td>(For Shadow angle = 0°)</td>
<td></td>
</tr>
<tr>
<td>Grid Bias (approximate)</td>
<td>0 0 volts</td>
</tr>
<tr>
<td>(For Shadow angle = 90°)</td>
<td></td>
</tr>
</tbody>
</table>

The 6U5/6G5 is a high vacuum tube designed to indicate visually the effect of changing the control grid bias. The shaded pattern produced on the fluorescent target varies through an angle from 90° to approximately 0° as the control voltage is varied. The voltage on the shadow control electrode, the extension of the triode plate between the cathode and target, controls the extent of the shaded area. The voltage of the shadow control electrode is determined by the voltage of the control grid of the triode connected as a d-c amplifier. Thus the control grid voltage determines the extent of the shadow. An increase of control grid bias thus increases the shadow control voltage and decreases the shadow while a decrease of bias increases the shadow. In practice, the control grid voltage is obtained from a suitable point in the AVG network.

* Subject to wide variations.

from RMA release #146, Nov. 1, 1938

Revised October 6, 1938
MECHANICAL DATA

Coated unipotential cathode
Outline drawing. 9-26 Bulb. T-9
Base A6-7 small 6-pin
Maximum diameter 1-3/16"
Maximum overall length 4-3/16"
Maximum seated height 3-9/16"
Pin connections:
Pin 1 - Heater
Pin 2 - Plate
Pin 3 - Triode grid
Pin 4 - Target
Pin 5 - Cathode and target grid
Pin 6 - Heater
Mounting position. Basing 6R-0-0 any

ELECTRICAL DATA

Ratings

Heater voltage (ac or dc) 6.3 volts
Heater current 0.300ampere
Maximum plate-supply voltage 285 volts
Maximum target voltage 285 volts
Minimum target voltage 125 volts
Maximum plate dissipation 1.0 watt

Typical Operating Conditions and Characteristics

Heater voltage 6.3 volts
Plate and target supply 200 250 volts
Series triode-plate resistor 1 1 megohm
Target current* (subject to wide variations) 3 4 ma
Triode-plate current* 0.19 0.24 ma
Grid bias (approx.) for shadow angle = 0° -18.5 -22 volts
Grid bias (approx.) for shadow angle = 90° 0 0 volts

*Measured at zero grid bias

The 6U5/6G5 will supersede the 6G5 and 6U5. It can also be used to replace types 6H5 and 6T5.

Refer to "Interpretation of Receiving Tube Ratings"