6AQ7-GT

Description and Rating

DUPLEX-DIODE TRIODE

GENERAL DESCRIPTION

Principal Application: The 6AQ7-GT is a duplex-diode high-mu triode in which separate cathodes are provided for the diode and triode sections. The tube is designed for service as a combined FM detector and audio amplifier in circuits which require the separated cathodes.

Cathodes: Coated Unipotential
Heater Voltage (A-C or D-C) 6.3 Volts
Heater Current 0.3 Ampere
Envelope: T-9, Glass
Base: 6B-6, Intermediate Shell Octal 8-Pin or 8B-46, Short Intermediate Shell Octal 8-Pin
Mounting Position: Any

PHYSICAL DIMENSIONS

TERMINAL CONNECTIONS

Pin 1 - Diode Number 2 Plate
Pin 2 - Diode Cathode
Pin 3 - Diode Number 1 Plate
Pin 4 - Triode Grid
Pin 5 - Triode Plate
Pin 6 - Triode Cathode
Pin 7 - Heater
Pin 8 - Heater

BASING DIAGRAM

RTMA 8CK
BOTTOM VIEW

MAXIMUM RATINGS

Plate Voltage 250 Volts
Positive D-C Grid Voltage 0 Volts
Plate Dissipation 1.0 Watt
Heater-Cathode Voltage 90 Volts
Diode Current for Continuous Operation (Each Diode) 0.9 Milliampere

CLASS A1 AMPLIFIER

Plate Voltage 100 Volts
Grid Voltage -1 Volts
Amplification Factor 79 Ohms
Plate Resistance (Approx) 64000 Ohms
Transconductance 1250 Micromhos
Plate Current 1.1 Milliampere

CHARACTERISTICS AND TYPICAL OPERATION

Average Diode Current: (Each Diode) Measured with 10 Volts D-C Applied 4.0 Milliampere

# With external shield #308 connected to triode cathode
* With external shield #308 connected to diode cathode

GENERAL

Supersedes ET-1273 dated 4-46
**CLASS A RESISTANCE-COUPLED AMPLIFIER**

<table>
<thead>
<tr>
<th>Rp</th>
<th>Rg1</th>
<th>Rs</th>
<th>Ebb = 90 Volts</th>
<th>Ebb = 150 Volts</th>
<th>Ebb = 200 Volts</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.10</td>
<td>0.10</td>
<td>4300</td>
<td>4700</td>
<td>6.0</td>
<td>2200</td>
</tr>
<tr>
<td>0.10</td>
<td>0.24</td>
<td>4700</td>
<td>25</td>
<td>7.5</td>
<td>2400</td>
</tr>
<tr>
<td>0.24</td>
<td>0.24</td>
<td>7100</td>
<td>28</td>
<td>8.5</td>
<td>4300</td>
</tr>
<tr>
<td>0.24</td>
<td>0.51</td>
<td>7900</td>
<td>32</td>
<td>11</td>
<td>4700</td>
</tr>
<tr>
<td>0.51</td>
<td>0.51</td>
<td>11500</td>
<td>39</td>
<td>10</td>
<td>7500</td>
</tr>
<tr>
<td>0.51</td>
<td>1.0</td>
<td>12700</td>
<td>38</td>
<td>17</td>
<td>8200</td>
</tr>
<tr>
<td>0.24</td>
<td>0.24</td>
<td>0</td>
<td>32</td>
<td>5.0</td>
<td>0</td>
</tr>
<tr>
<td>0.24</td>
<td>0.51</td>
<td>0</td>
<td>36</td>
<td>7.0</td>
<td>0</td>
</tr>
<tr>
<td>0.51</td>
<td>0.51</td>
<td>0</td>
<td>37</td>
<td>6.5</td>
<td>0</td>
</tr>
<tr>
<td>0.51</td>
<td>1.0</td>
<td>0</td>
<td>40</td>
<td>9.5</td>
<td>0</td>
</tr>
</tbody>
</table>

*Note: Coupling capacitors (C) should be selected to give desired frequency response. Rs should be adequately by-passed.*

**Notes:**
1. Eo is maximum rms voltage output for five percent (5%) total harmonic distortion.
2. Gain measured at 2.0 volts rms output.
3. For zero-bias data generator impedance is negligible. *Value of Rg1 is non-critical.*

---

**AVERAGE PLATE CHARACTERISTICS**

**TRIODE SECTION**

- **Ea = 6.3 Volts**
- **Plate Current in Milliamperes**

---

**GENERAL ELECTRIC**

Schenectady, N. Y.