**5687**

**MEDIUM-MU TWIN TRIODE**

**9-PIN MINIATURE TYPE**

### GENERAL DATA

**Electrical:**

- **Heater, for Unipotential Cathodes:**
  - **Heater arrangement**:
    - **Series**
    - **Parallel**
  - **Voltage**
    - 12.6 ac or dc volts
  - **Current**
    - 0.45 amp
  - **Direct Interelectrode Capacitances (Approx.)**:
    - Grid to plate (Each unit)
    - 4 μμf
    - Grid to cathode and heater (Each unit)
    - 4 μμf
    - Plate to cathode and heater:
      - Unit No.1
      - 0.6 μμf
      - Unit No.2
      - 0.5 μμf
    - Heater to cathode (Each unit)
    - 7 μμf
    - Grid to grid
    - 0.025 μμf
    - Plate to plate
    - 0.75 μμf

**Characteristics, Class A; Amplifier (Each Unit):**

- **Plate Voltage**
  - 120 180 250 volts
- **Grid Voltage**
  - -2 -7 -12.5 volts
- **Amplification Factor**
  - 18 17 16
- **Plate Resistance (Approx.)**
  - 1560 2000 3000 ohms
- **Transconductance**
  - 11500 8500 5400 μmhos
- **Plate Current**
  - 36 23 12 ma
- **Grid Voltage (Approx.) for plate μa = 100.**
  - -9 -14 -19 volts

**Mechanical:**

- **Operating Position**: Any
- **Maximum Overall Length**: 2-3/16”
- **Maximum Seated Length**: 1-15/16”
- **Length, Base Seat to Bulb Top (Excluding tip)**: 1-9/16” ± 3/32”
- **Diameter**: 0.750” to 0.875”
- **Dimensional Outline**: See General Section
- **Bulb**: T6-1/2
- **Base**: Small-Button Noval 9-Pin (JEDEC No.E9-1)
- **Basing Designation for BOTTOM VIEW**: .9H

**Pin Connections:**

- **Pin 1–Plate of Unit No.2**
- **Pin 2–Grid of Unit No.2**
- **Pin 3–Cathode of Unit No.2**
- **Pins 4 & 8–Heater of Unit No.2**
- **Pins 5 & 8–Heater of Unit No.1**
- **Pin 6–Cathode of Unit No.1**
- **Pin 7–Grid of Unit No.1**
- **Pin 8–Heater Mid-Tap**
- **Pin 9–Plate of Unit No.1**

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O: See next page.
AMPLIFIER — Class A

Values are for Each Unit

Maximum Ratings, Absolute Values:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLATE VOLTAGE</td>
<td>330 max. volts</td>
</tr>
<tr>
<td>GRID CURRENT</td>
<td>6.6 max. ma</td>
</tr>
<tr>
<td>PLATE DISSIPATION:</td>
<td></td>
</tr>
<tr>
<td>Either plate</td>
<td>4.2 max. watts</td>
</tr>
<tr>
<td>Both plates (Both units operating)</td>
<td>7.5 max. watts</td>
</tr>
<tr>
<td>PEAK HEATER-CATHODE VOLTAGE:</td>
<td></td>
</tr>
<tr>
<td>Heater negative with respect to cathode</td>
<td>100 max. volts</td>
</tr>
<tr>
<td>Heater positive with respect to cathode</td>
<td>100 max. volts</td>
</tr>
<tr>
<td>BULB TEMPERATURE (At hottest point on bulb surface)</td>
<td>220 max. °C</td>
</tr>
</tbody>
</table>

Maximum Circuit Values:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grid-Circuit Resistance</td>
<td>1 max. megohm</td>
</tr>
</tbody>
</table>

° Without external shield.