The Eimac 100TL is a low-mu power triode having a maximum plate dissipation rating of 100 watts, and is intended for use as an amplifier, oscillator or modulator. It can be used at its maximum ratings at frequencies as high as 40-Mc.

Cooling of the 100TL is accomplished by radiation from the plate, which operates at a visible red glow at maximum dissipation, and by means of air circulation by convection around the envelope.

**GENERAL CHARACTERISTICS**

- **Filament:** Thoriated tungsten
- **Voltage**
- **Current**
- **Amplification Factor (Average)**
- **Direct Inter-electrode Capacitances (Average)**
  - Grid-Plate
  - Grid-Filament
  - Plate-Filament
- **Transconductance** ($i_g = 225$ ma, $E_g = 3000$ V., $e_r = -90$ V.)
- **Frequency for Maximum Ratings**
- **Mechanical**
  - **Base** (Medium 4-pin bayonet, ceramic) RMA type M8-078
  - **Basing** RMA type 2M
  - **Mounting** Vertical, base down or up.
  - **Cooling** Convection and Radiation.
  - **Recommended Heat Dissipating Connectors:**
    - Plate
    - Grid
- **Maximum Overall Dimensions:**
  - **Length**
  - **Diameter**
- **Net weight**
- **Shipping weight (Average)**

**ELECTRICAL**

- **Voltage**
- **Current**
- **Amplification Factor (Average)**
- **Direct Inter-electrode Capacitances (Average)**
  - Grid-Plate
  - Grid-Filament
  - Plate-Filament
- **Transconductance** ($i_g = 225$ ma, $E_g = 3000$ V., $e_r = -90$ V.)
- **Frequency for Maximum Ratings**

**MECHANICAL**

- **Base** (Medium 4-pin bayonet, ceramic) RMA type M8-078
- **Basing** RMA type 2M
- **Mounting** Vertical, base down or up.
- **Cooling** Convection and Radiation.
- **Recommended Heat Dissipating Connectors:**
  - Plate
  - Grid
- **Maximum Overall Dimensions:**
  - **Length**
  - **Diameter**
- **Net weight**
- **Shipping weight (Average)**

**AUDIO FREQUENCY POWER AMPLIFIER AND MODULATOR**

- **Class-AB:** (Sinusoidal wave, two tubes unless otherwise specified)
- **MAXIMUM RATINGS**
  - **D-C PLATE VOLTAGE**
  - **MAX-SIGNAL D-C PLATE CURRENT, PER TUBE**
  - **PLATE DISSIPATION, PER TUBE**

**RADIO FREQUENCY POWER AMPLIFIER AND OSCILLATOR**

- **Class-C Telegraphy or FM Telephony** (Carrier conditions, per tube)
- **MAXIMUM RATINGS**
  - **D-C PLATE VOLTAGE**
  - **D-C PLATE CURRENT**
  - **PLATE DISSIPATION**
  - **GRID DISSIPATION**

**PLATE MODULATED RADIO FREQUENCY AMPLIFIER**

- **Class-C Telegraphy** (Carrier conditions, per tube)
- **MAXIMUM RATINGS**
  - **D-C PLATE VOLTAGE**
  - **D-C PLATE CURRENT**
  - **PLATE DISSIPATION**
  - **GRID DISSIPATION**

<table>
<thead>
<tr>
<th><strong>TYPICAL OPERATION</strong></th>
<th>D-C Plate Voltage</th>
<th>1500</th>
<th>2000</th>
<th>2500 Volts</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-C Grid Voltage</td>
<td>-</td>
<td>-50</td>
<td>-100</td>
<td>-150 Volts</td>
</tr>
<tr>
<td>Zero-Signal D-C Plate Current</td>
<td>-</td>
<td>80</td>
<td>100</td>
<td>100 Ma.</td>
</tr>
<tr>
<td>Max-Signal D-C Plate Current</td>
<td>-</td>
<td>320</td>
<td>380</td>
<td>380 Ma.</td>
</tr>
<tr>
<td>Effective Load, Plate-to-Plate</td>
<td>-</td>
<td>8600</td>
<td>15,000</td>
<td>22,000 Ohms</td>
</tr>
<tr>
<td>Peak A-F Grid Input Voltage (per tube)</td>
<td>-</td>
<td>270</td>
<td>270</td>
<td>270 Volts</td>
</tr>
<tr>
<td>Max-Signal Peak Driving Power</td>
<td>-</td>
<td>21</td>
<td>22</td>
<td>22 Watts</td>
</tr>
<tr>
<td>Max-Signal Nominal Driving Power (approx.)</td>
<td>-</td>
<td>10.5</td>
<td>11</td>
<td>10 Watts</td>
</tr>
<tr>
<td>Max-Signal Plate Output</td>
<td>-</td>
<td>280</td>
<td>360</td>
<td>425 Volts</td>
</tr>
</tbody>
</table>

*Adjust to give stated zero signal plate current.*

**Plates and Grids:**

- **Eimac HR-6**
- **Eimac HR-2**

**AUDIO FREQUENCY POWER AMPLIFIER AND MODULATOR**

- **D-C Voltage**
- **D-C Grid Voltage**
- **D-C Plate Current**
- **D-C Grid Current**
- **Peak R-F Grid Input Voltage**
- **Driving Power (approx.)**
- **Grid Dissipation**
- **Plate Power Input**
- **Plate Power Dissipation**
- **Plate Power Output**

**RADIO FREQUENCY POWER AMPLIFIER AND OSCILLATOR**

- **D-C Voltage**
- **D-C Grid Voltage**
- **D-C Plate Current**
- **D-C Grid Current**
- **Peak R-F Grid Input Voltage**
- **Driving Power (approx.)**
- **Grid Dissipation**
- **Plate Power Input**
- **Plate Power Dissipation**
- **Plate Power Output**

**PLATE MODULATED RADIO FREQUENCY AMPLIFIER**

- **D-C Voltage**
- **D-C Grid Voltage**
- **D-C Plate Current**
- **Peak R-F Grid Input Voltage**
- **Driving Power (approx.)**
- **Grid Dissipation**
- **Plate Power Input**
- **Plate Power Dissipation**
- **Plate Power Output**

(Effective 4-1-49) Copyright, 1949 by Eitel-McCullough, Inc.
DRIVING POWER vs. POWER OUTPUT

The three charts on this page show the relationship of plate efficiency, power output and grid driving power at plate voltages of 1500, 2000 and 3000 volts. These charts show combined grid and bias losses only. The driving power and power output figures do not include circuit losses. The plate dissipation in watts is indicated by Pp.

Points A, B, and C are identical to the typical Class C operating conditions shown on the first page under 1500, 2000, and 3000 volts respectively.