The Eimac 100TH is a high-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 100TH is accomplished by radiation from the plate, which operates at a visible red color at maximum dissipation, and by means of air circulation by convection around the envelope.

**GENERAL CHARACTERISTICS**

**ELECTRICAL**
- Filament: Thoriated tungsten
- Voltage: 5.0 volts
- Current: 6.3 amperes
- Amplification Factor (Average): 38
- Direct Interelectrode Capacitances (Average): Grid-Plate = 2.0 μf, Grid-Filament = 2.9 μf, Plate-Filament = 0.3 μf
- Transconductance ($i_t=200$ ma, $E_s=3000$v, $e_c=5$v) = 4500 μmhos
- Frequency for Maximum Ratings: 40 Mc.

**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 Eimac HR-6, Grid Eimac HR-2
- Maximum Overall Dimensions: Length = 7.75 inches, Diameter = 3.19 inches
- Net weight: 4 ounces, Shipping weight (Average) = 1.5 pounds

**AUDIO FREQUENCY POWER AMPLIFIER AND MODULATOR**

**TYPICAL OPERATION**
- D-C Plate Voltage: 1500, 2000, 2500 Volts
- D-C Grid Voltage (approx.)
- Effective Load, Plate-to-Plate: 80000, 15000, 22000 Ohms.
- Peak A-F Grid Input Voltage (per tube)
- Max-Signal Peak Driving Power: 18, 19, 15 Watts
- Max-Signal Nominal Driving Power (approx.)
- Max-Signal Plate Power Output: 280, 360, 425 Watts

**RADIO FREQUENCY POWER AMPLIFIER AND OSCILLATOR**

**TYPICAL OPERATION**
- D-C Plate Voltage: 1500, 2000, 3000 Volts
- D-C Grid Voltage: -65, -80, -200 Volts
- D-C Plate Current: 100, 165, 165 Ma.
- Peak R-F Grid Input Voltage: 230, 230, 385 Volts
- Driving Power (approx.)
- Grid Dissipation: 7, 5, 10 Watts
- Plate Power Input
- Plate Dissipation: 100, 100, 100 Watts
- Plate Power Output: 185, 235, 400 Watts

**PLATE MODULATED RADIO FREQUENCY AMPLIFIER**

**TYPICAL OPERATION**
- D-C Plate Voltage: 1500, 2000, 2500 Volts
- D-C Grid Voltage: -150, -200, -250 Volts
- D-C Plate Current: 160, 150, 140 Ma.
- D-C Grid Current: 46, 41, 40 Ma.
- Peak R-F Grid Input Voltage: 325, 375, 425 Volts
- Driving Power (approx.)
- Grid Dissipation: 8, 7.3, 7 Watts
- Plate Power Input
- Plate Dissipation: 65, 65, 65 Watts
- Plate Power Output: 175, 235, 285 Watts

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Indicates change from sheet dated 8-1-44.
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 $P_P$.

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.