

EITEL-McCULLOUGH, INC.

SAN BRUNO, CALIFORNIA

1500T

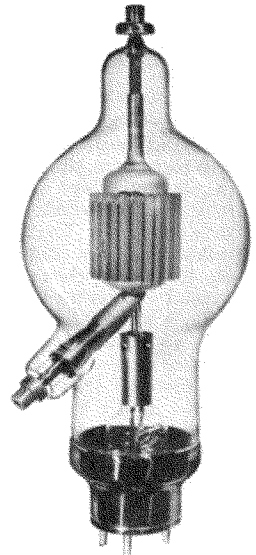
MEDIUM-MU TRIODE
 MODULATOR
 OSCILLATOR
 AMPLIFIER

The Eimac 1500T is a medium-mu, high-vacuum transmitting triode intended for amplifier, oscillator and modulator service. It has a maximum plate dissipation rating of 1500 watts. Cooling of the 1500T is accomplished by radiation from the plate, which operates at a visibly red temperature at maximum dissipation, and by means of forced air circulation around the envelope and at the seals.

GENERAL CHARACTERISTICS

ELECTRICAL

Filament: Thoriated tungsten	
Voltage - - - - -	7.5 volts
Current - - - - -	24.0 amperes
Amplification Factor (Average) - - - - -	24
Direct Interelectrode Capacitances (Average)	
Grid-Plate - - - - -	7.2 $\mu\mu\text{fd.}$
Grid-Filament - - - - -	9.9 $\mu\mu\text{fd.}$
Plate-Filament - - - - -	1.5 $\mu\mu\text{fd.}$
Transconductance ($i_b = 1.25 \text{ amp.}, E_b = 6000 \text{ v.}, E_c = -155 \text{ v.}$)	10,000 μmhos



MECHANICAL

Base - - - - -	Special 4-pin, No. 5005B
Basing - - - - -	RMA type 4BD
Cooling - - - - -	Radiation and forced air
Maximum Overall Dimensions:	
Length - - - - -	17.0 inches
Diameter - - - - -	7.125 inches
Net Weight - - - - -	3.5 pounds
Shipping Weight (Average) - - - - -	8.5 pounds

RADIO FREQUENCY POWER AMPLIFIER AND OSCILLATOR

Class-C Telegraphy (Key-down conditions, 1 tube)

MAXIMUM RATINGS (Frequencies below 40 Mc.)

D-C PLATE VOLTAGE - - - - -	8000 MAX. VOLTS
D-C PLATE CURRENT - - - - -	1.25 MAX. AMPS.
PLATE DISSIPATION - - - - -	1500 MAX. WATTS
GRID DISSIPATION - - - - -	125 MAX. WATTS

TYPICAL OPERATION (Frequencies below 40 Mc.)

D-C Plate Voltage - - - - -	5000	6000	7000	volts
D-C Grid Voltage - - - - -	-375	-600	-500	volts
D-C Plate Current - - - - -	1.00	1.00	.860	amps.
D-C Grid Current - - - - -	150	165	110	ma.
Grid Dissipation - - - - -	59	61	30	watts
Peak R-F Grid Input Voltage (approx.) -	850	1100	885	volts
Driving Power (approx.) - - - - -	115	160	85	watts
Plate Power Input - - - - -	5000	6000	6000	watts
Plate Dissipation - - - - -	1500	1500	1500	watts
Plate Power Output - - - - -	3500	4500	4500	watts

AUDIO FREQUENCY POWER AMPLIFIER AND MODULATOR

Class-B (Sinusoidal wave, two tubes unless otherwise specified)

MAXIMUM RATINGS

D-C PLATE VOLTAGE - - - - -	8000 MAX. VOLTS
MAX-SIGNAL D-C PLATE CURRENT, PER TUBE -	1.25 MAX. AMPS.
PLATE DISSIPATION, PER TUBE - - - - -	1500 MAX. WATTS
GRID DISSIPATION, PER TUBE - - - - -	125 MAX. WATTS

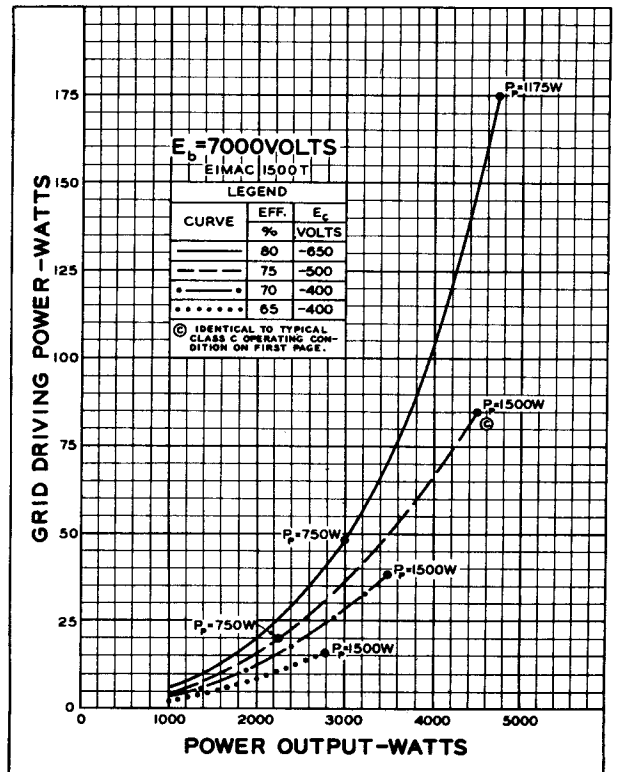
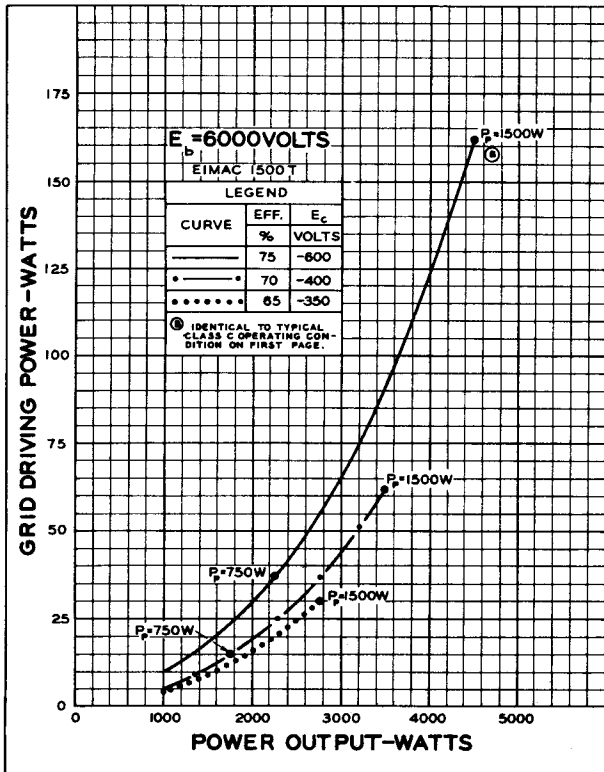
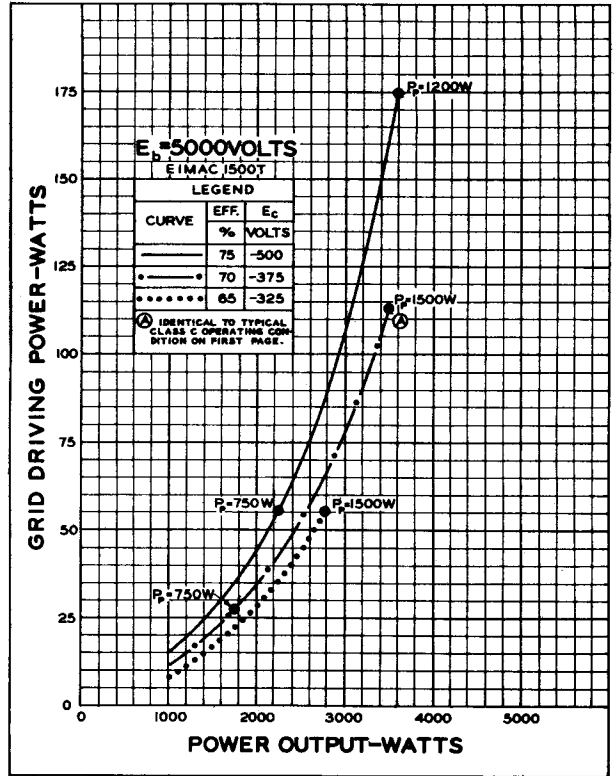
TYPICAL OPERATION

D-C Plate Voltage - - - - -	4000	5000	6000	volts
D-C Grid Voltage (approx.) - - - - -	-95	-145	-190	volts
Zero-Signal D-C Plate Current - - - - -	500	400	330	ma.
Max-Signal D-C Plate Current - - - - -	1.88	1.72	1.65	amps.
Effective Load, Plate-to-Plate - - - - -	4150	6150	8200	ohms
Peak A-F Grid Input Voltage (per tube) -	485	535	570	volts
Max-Signal Avg. Driving Power (approx.)	95	105	115	watts
Max-Signal Plate Dissipation - - - - -	1500	1500	1450	watts
Max-Signal Plate Power Output - - - - -	4500	5600	7000	watts

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 5000, 6000, and 7000 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 5000, 6000, and 7000 volts respectively.



GRID VOLTAGE - VOLTS

