

# EITEL-McCULLOUGH, Inc.

SAN BRUNO, CALIFORNIA

# 250TL

LOW-MU TRIODE  
 MODULATOR  
 OSCILLATOR  
 AMPLIFIER

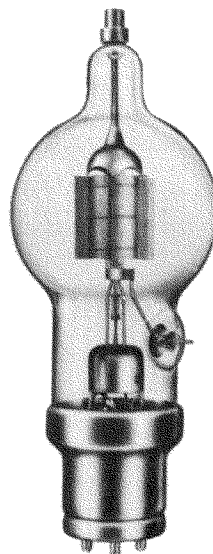
## GENERAL CHARACTERISTICS

### ELECTRICAL

Filament: Thoriated tungsten		
Voltage - - - - -	5.0	volts
Current - - - - -	10.5	amperes
Amplification Factor (Average) - - - - -	14	
Direct Interelectrode Capacitances (Average)		
Grid-Plate - - - - -	3.1	$\mu\mu\text{f}$
Grid-Filament - - - - -	3.7	$\mu\mu\text{f}$
Plate-Filament - - - - -	0.7	$\mu\mu\text{f}$
Transconductance ( $I_b=350 \text{ ma.}$ , $E_b=3000$ , $e_c=-130$ )	2650	$\mu\text{mhos}$
Frequency for Maximum Ratings - - - - -	40	mc

### MECHANICAL

Base - - - - -	4 pin, No. 5001B
Basing - - - - -	RMA type 2N
Maximum Overall Dimensions:	
Length - - - - -	10.125 inches
Diameter - - - - -	3.813 inches
Net weight - - - - -	12 ounces
Shipping weight (Average) - - - - -	2.25 pounds



## AUDIO FREQUENCY POWER AMPLIFIER AND MODULATOR

### Class B

	TYPICAL OPERATION—2 TUBES			MAX. RATING
D-C Plate Voltage - - - - -	1500	2000	3000	3000 volts
Max.-Signal D-C Plate Current, per tube* - - -	•	•	•	350 ma.
Plate Dissipation, per tube* - - - - -	•	•	•	250 watts
D-C Grid Voltage (approx.) - - - - -	-40	-80	-175	volts
Peak A-F Grid Input Voltage - - - - -	770	800	840	volts
Zero-Signal D-C Plate Current - - - - -	200	150	100	ma.
Max.-Signal D-C Plate Current - - - - -	700	650	500	ma.
Max.-Signal Driving Power (approx.) - - - - -	32	28	17	watts
Effective Load, Plate-to-Plate - - - - -	3700	6150	13000	ohms
Max.-Signal Plate Power Output - - - - -	580	800	1000	watts

\*Averaged over any sinusoidal audio frequency cycle.

## RADIO FREQUENCY POWER AMPLIFIER AND OSCILLATOR

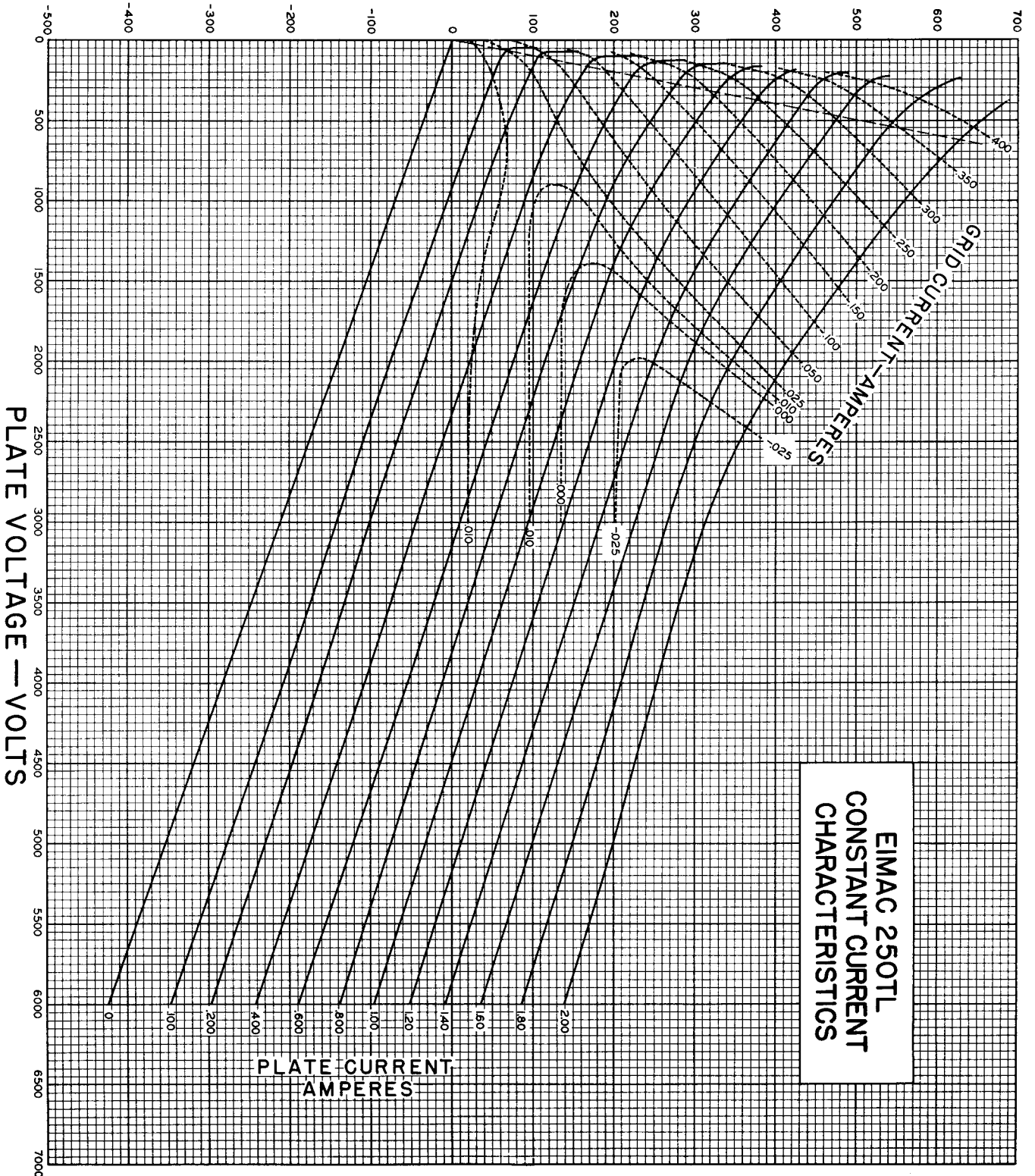
### Class-C \*Telegraphy

(Key down conditions without modulation)

	TYPICAL OPERATION—1 TUBE			MAX. RATING
D-C Plate Voltage - - - - -	2000	3000	4000	4000 volts
D-C Plate Current - - - - -	350	335	310	350 ma.
D-C Grid Current - - - - -	45	45	40	50 ma.
D-C Grid Voltage - - - - -	-200	-350	-500	volts
Plate Power Output - - - - -	455	750	1000	watts
Plate Input - - - - -	700	1000	1250	watts
Plate Dissipation - - - - -	245	250	250	250 watts
Peak R. F. Grid Input Voltage, (approx.) - - -	575	720	900	volts
Driving Power, (approx.) - - - - -	22	29	33	watts

\*The above figures show actual measured tube performance, and do not allow for variations in circuit losses.

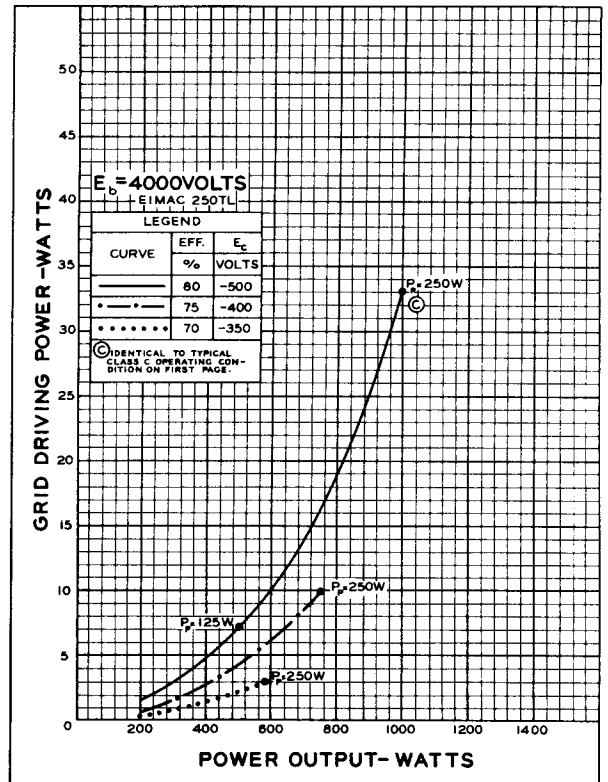
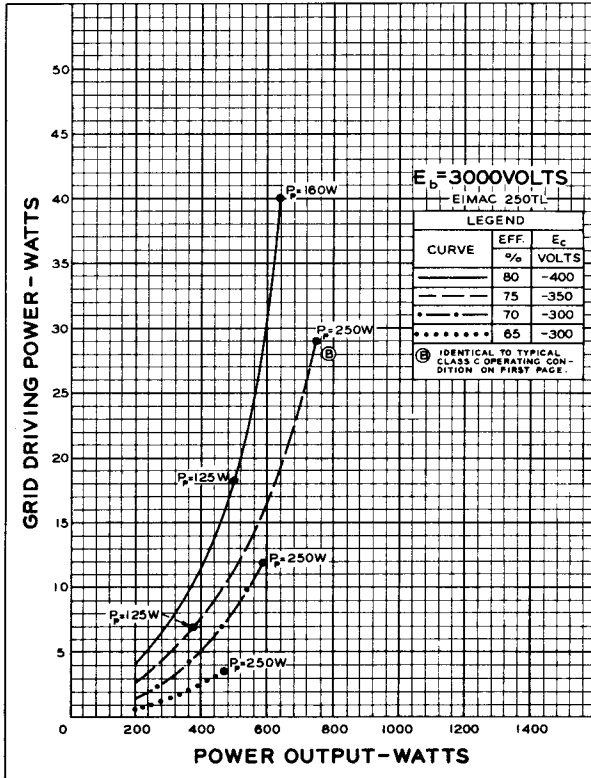
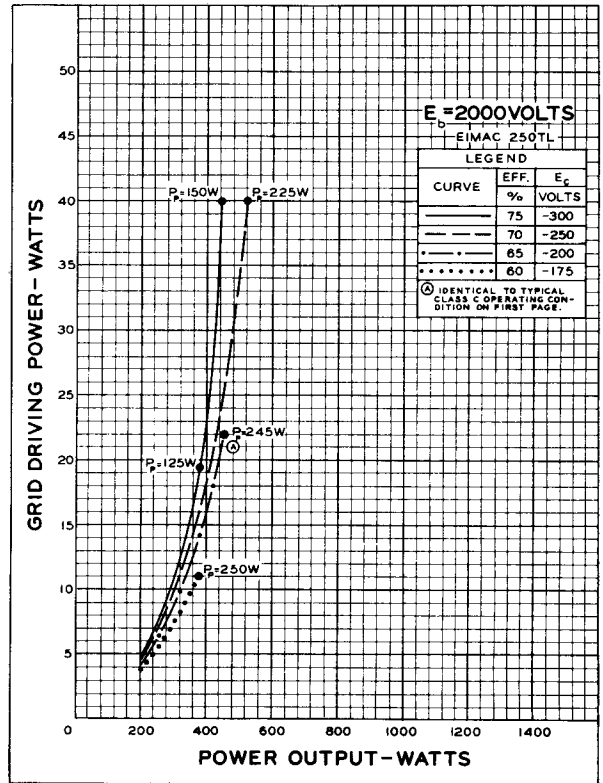
**GRID VOLTAGE—VOLTS**

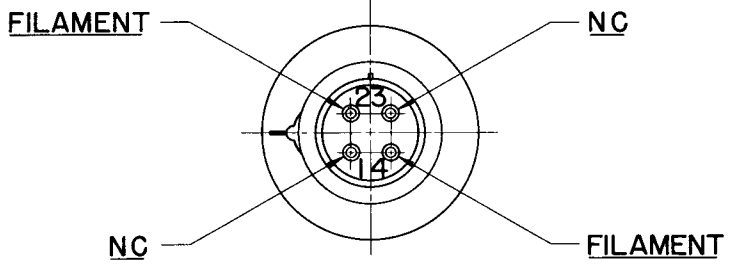
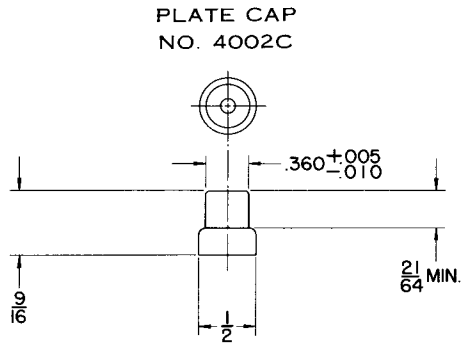
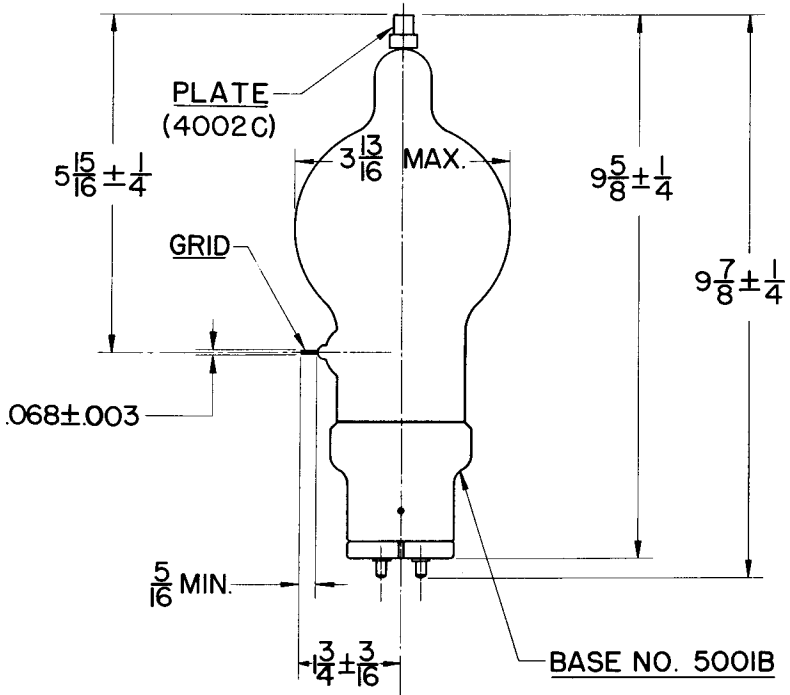


## DRIVING POWER vs. POWER OUTPUT

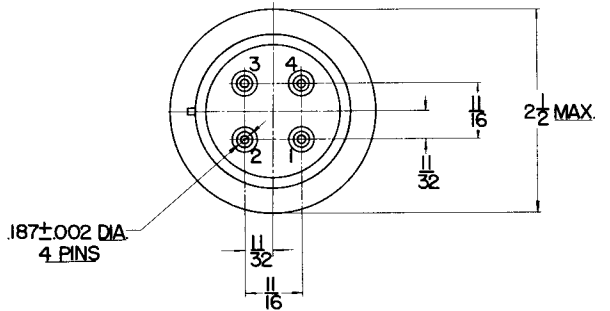
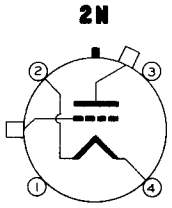
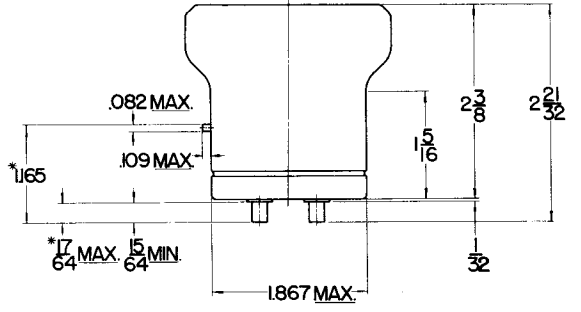
The three charts on this page show the relationship of plate efficiency, power output and grid driving power at plate voltages of 2000, 3000 and 4000 volts. These charts show combined grid and bias losses only. The driving power and power output figures do not include circuit losses. The plate dissipation 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 2000, 3000, and 4000 volts respectively.





**BASE NO. 500IB**



\*ON FINISHED TUBE ADD .060 FOR SOLDER.