

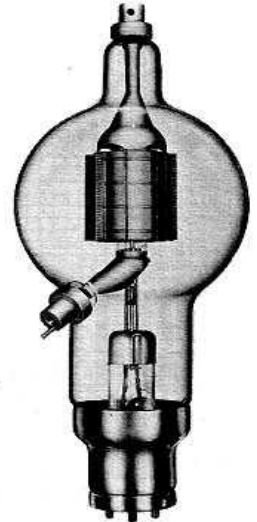
GENERAL CHARACTERISTICS

ELECTRICAL

Filament: Thoriated tungsten		
Voltage - - - - -	7.5	volts
Current - - - - -	12.0	amperes
Amplification Factor (Average) - - - - -	38	
Direct Interelectrode Capacitances (Average)		
Grid-Plate - - - - -	5.0	$\mu\mu\text{f}$
Grid-Filament - - - - -	8.8	$\mu\mu\text{f}$
Plate-Filament - - - - -	0.8	$\mu\mu\text{f}$
Transconductance ($I_b=500 \text{ ma.}, E_b=4000, e_c=-45$)	6650	μmhos
Frequency for Maximum Ratings - - - - -	40	mc

MECHANICAL

Base - - - - -	4 pin, No. 5002B
Basing - - - - -	RMA type 4AQ
Maximum Overall Dimensions:	
Length - - - - -	12.625 inches
Diameter - - - - -	5.125 inches
Net weight - - - - -	1 pound
Shipping weight (Average) - - - - -	4 pounds



AUDIO FREQUENCY POWER AMPLIFIER AND MODULATOR
Class B

	TYPICAL OPERATION—2 TUBES			MAX. RATING
	3000	4000	5000	
D-C Plate Voltage - - - - -	3000	4000	5000	6000 volts
Max.-Signal D-C Plate Current, per tube* - - -	•	•	•	600 ma.
Plate Dissipation, per tube* - - - - -	•	•	•	450 watts
D-C Grid Voltage (approx.) - - - - -	-50	-85	-115	volts
Peak A-F Grid Input Voltage - - - - -	450	470	535	volts
Zero-Signal D-C Plate Current - - - - -	200	150	120	ma.
Max.-Signal D-C Plate Current - - - - -	770	675	620	ma.
Max.-Signal Driving Power (approx.) - - - - -	17	14	10	watts
Effective Load, Plate-to-Plate - - - - -	7800	12800	18600	ohms
Max.-Signal Plate Power Output - - - - -	1400	1800	2200	watts

*Averaged over any sinusoidal audio frequency cycle.

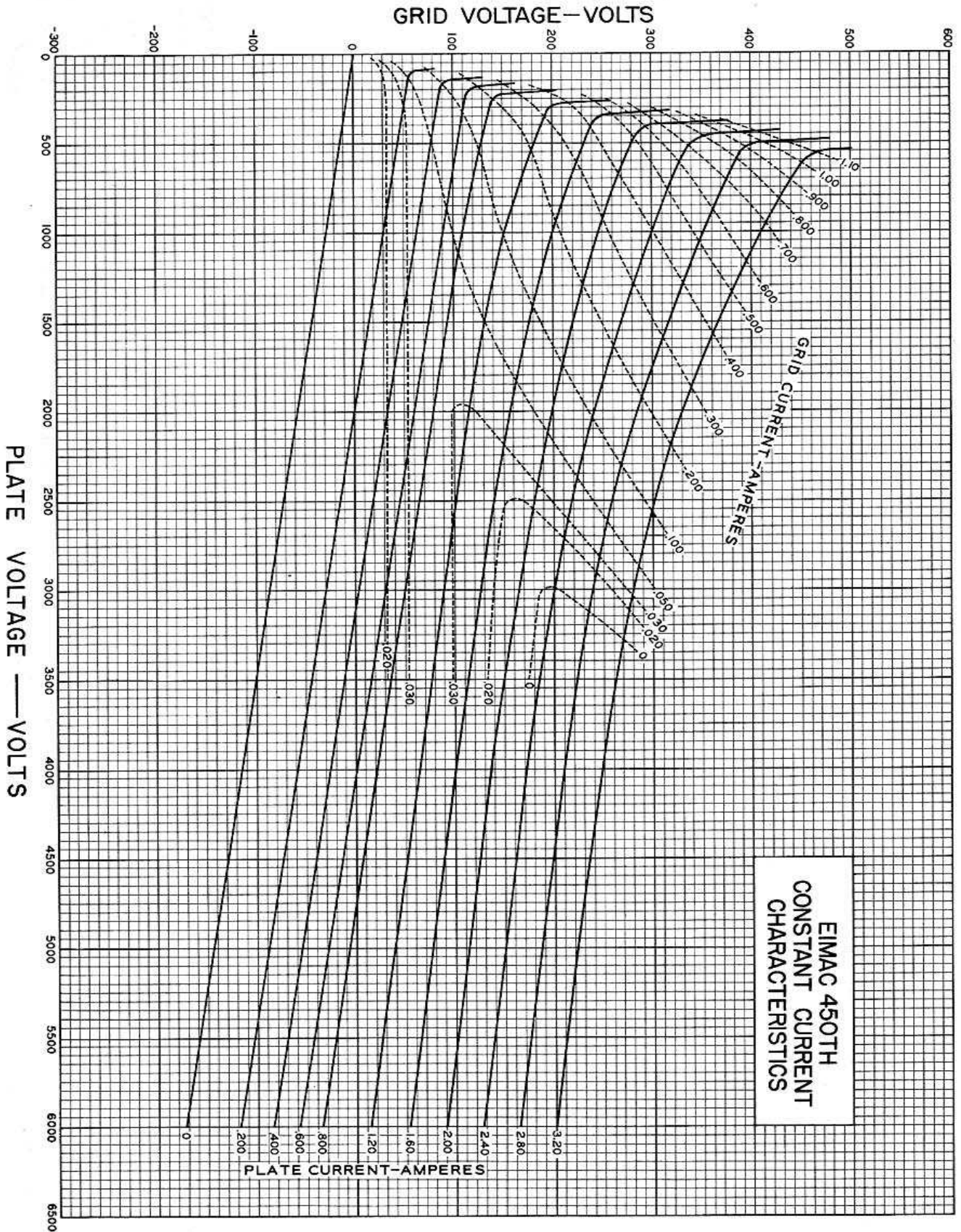
RADIO FREQUENCY POWER AMPLIFIER AND OSCILLATOR
Class-C *Telegraphy

(Key down conditions without modulation)

	TYPICAL OPERATION—1 TUBE			MAX. RATING
	3000	4000	5000	
D-C Plate Voltage - - - - -	3000	4000	5000	6000 volts
D-C Plate Current - - - - -	500	450	450	600 ma.
D-C Grid Current - - - - -	95	85	90	125 ma.
D-C Grid Voltage - - - - -	-175	-200	-300	volts
Plate Power Output - - - - -	1050	1350	1800	watts
Plate Input - - - - -	1500	1800	2250	watts
Plate Dissipation - - - - -	450	450	450	450 watts
Peak R. F. Grid Input Voltage, (approx.) - - -	400	410	570	volts
Driving Power, (approx.) - - - - -	35	35	46	watts

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

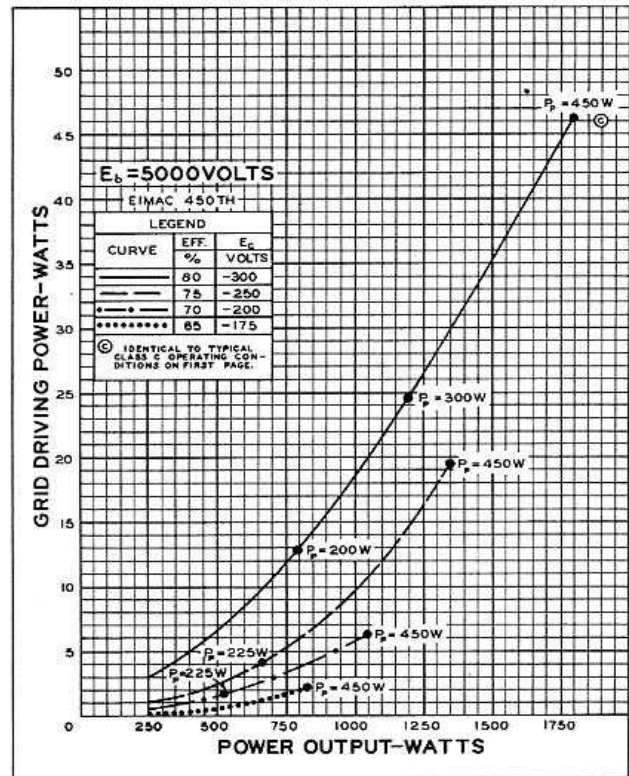
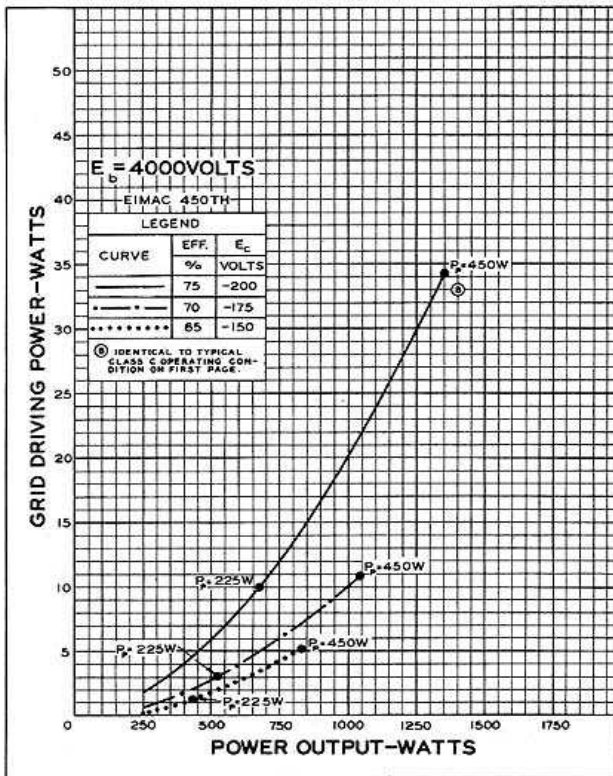
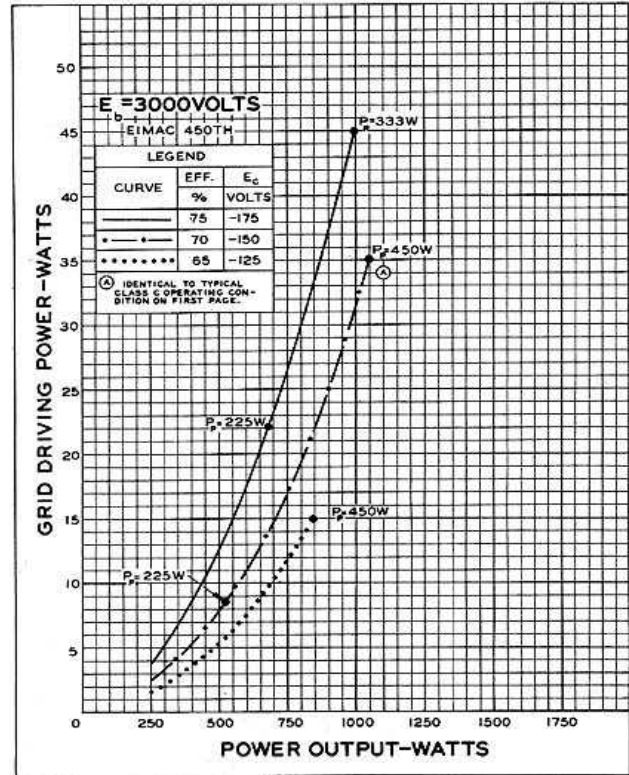
(Effective 7-1-44)

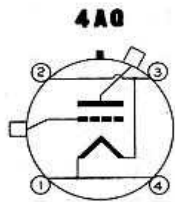
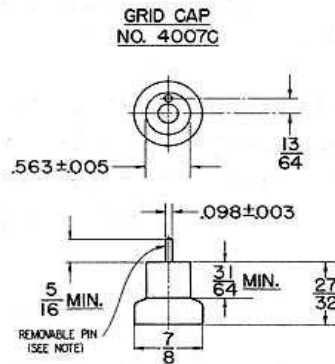
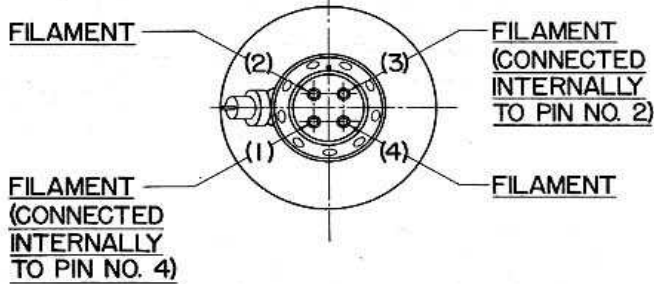
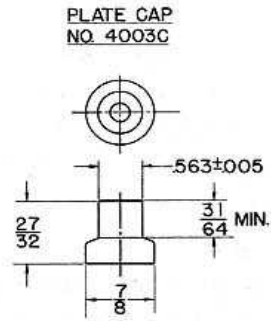
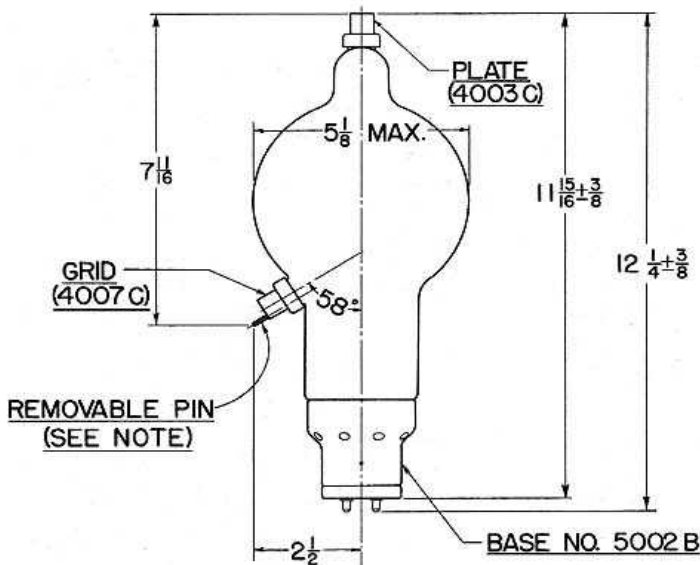


DRIVING POWER vs. POWER OUTPUT

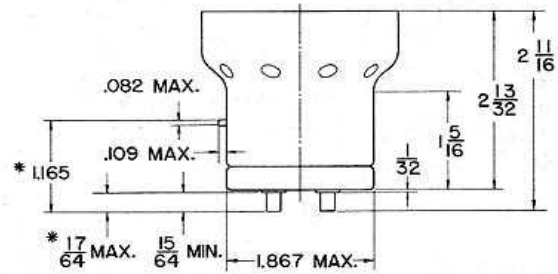
The three charts on this page show the relationship of plate efficiency, power output and grid driving power at plate voltages of 3000, 4000, and 5000 volts. These charts show combined grid and bias losses only. The driving power and power output figures do not include circuit losses. The plate dissipation 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 3000, 4000, and 5000 volts respectively.

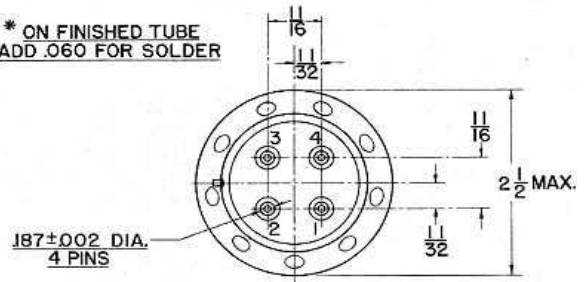




BASE NO. 5002 B



* ON FINISHED TUBE
 ADD .060 FOR SOLDER



NOTE:—The grid terminal on the new 450TH and TL type tube is now .563" in diameter. To accommodate existing equipment which uses the 450TH or TL tubes with the old style .098" grid terminal, an adaptor pin is provided. This adaptor pin, if not needed, may be removed by unscrewing.