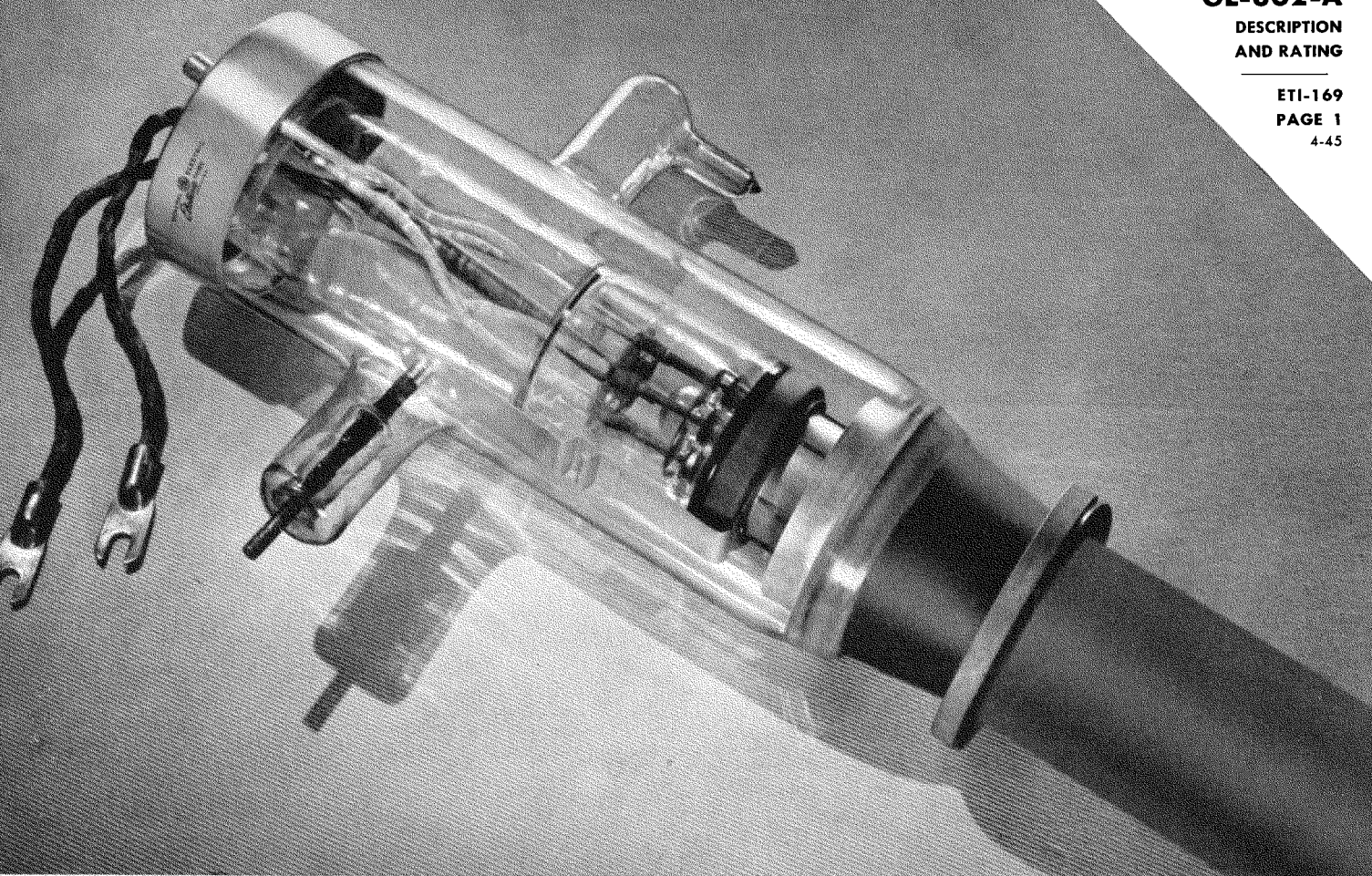




PLIOTRON

DESCRIPTION

The GL-862-A is a three-electrode power tube designed for use as a radio-frequency amplifier, oscillator, or Class B modulator. The plate is water-cooled and is capable of dissipating 50 to 100 kilowatts, depending upon the class of service in which the tube is used.

TECHNICAL INFORMATION

These data are for reference only. For design information refer to specifications.

GENERAL CHARACTERISTICS

Number of electrodes 3

Electrical

Cathode—Filamentary

Filament voltage 33 volts

Filament current 207 amperes

Average characteristics

Amplification factor 45

Grid-plate transconductance 17200 micromhos

Direct interelectrode capacitances, approx

Grid-plate 69.5 micromicrofarads

Input 53 micromicrofarads

Output 4.5 micromicrofarads

Frequency for maximum ratings 1.6 megacycles


Electronic
TUBE

GENERAL  ELECTRIC

TECHNICAL INFORMATION (CONT'D)

Mechanical

Base.....	6628	
Gasket.....	Cat. No. 5182028P1	
Type of cooling.....	Water and forced air	
Water flow		
Max outlet temperature.....	70	centigrade
	15-25	gallons per minute
Air flow		
To bulb.....	15	cu ft per min
To stem.....	3	cu ft per min
Net weight, approximate.....	30	pounds
Shipping weight, approximate.....	175	pounds
Mounting position.....	Vertical, anode down	

MAXIMUM RATINGS AND TYPICAL OPERATING CONDITIONS

CLASS B AUDIO-FREQUENCY AMPLIFIER (TWO TUBES)

	Typical Operation	Maximum Ratings
D-c plate voltage.....	12000	15000 volts
Maximum signal plate current, per tube*.....		7.5 amperes
D-c maximum signal plate input, per tube*.....		100 kilowatts
Plate dissipation*, per tube.....		50 kilowatts
D-c grid voltage.....	0	volts
Peak, a-f grid input voltage.....	2000	volts
Zero signal plate current.....	3	amperes
Maximum signal plate current.....	13	amperes
Maximum signal plate input*.....	156	kilowatts
Maximum signal driving power, approx.....	450	watts
Effective load, plate to plate.....	1800	ohms
Maximum signal plate power output.....	90	kilowatts

CLASS B RADIO-FREQUENCY POWER AMPLIFIER

Carrier conditions per tube for use with a max modulation factor of 1.0

D-c plate voltage.....	12000	15000	18000	20000	volts
D-c grid voltage.....	-100	-150	-200		volts
D-c plate current.....	2.8	3.5	4.2	5	amperes
Plate input.....				100	kilowatts
Plate dissipation.....				75	kilowatts
Peak r-f grid input voltage.....	500	625	750		volts
Driving power**, approx.....	0.5	0.75	1.1		kilowatts
Plate power output.....	11	17.5	25		kilowatts

CLASS C RADIO-FREQUENCY POWER AMPLIFIER AND OSCILLATOR—PLATE MODULATED

Carrier conditions per tube for use with a max modulation factor of 1.0

D-c plate voltage.....	8000	10000	12000	12000	volts
D-c grid voltage.....	-700	-750	-800	-3000	volts
D-c plate current.....	4	4.5	5	5	amperes
D-c grid current, approx.....	1	1	1	1.25	amperes
Plate input.....				60	kilowatts
Plate dissipation.....				50	kilowatts
Peak r-f grid input voltage, approx.....	1700	1850	2000		volts
Driving power, approx.....	1.7	1.85	2		kilowatts
Plate power output.....	24	34	45		kilowatts

CLASS C RADIO-FREQUENCY POWER AMPLIFIER AND OSCILLATOR

Key-down conditions per tube without modulation #

D-c plate voltage.....	12000	15000	18000	20000	volts
D-c grid voltage.....	-800	-900	-1000	-3000	volts
D-c plate current.....	6.25	7.5	8.33	10	amperes
D-c grid current, approx.....	0.8	0.85	0.9	1	ampere
Plate input.....				200	kilowatts
Plate dissipation.....				100	kilowatts
Peak r-f grid input voltage, approx.....	2050	2300	2550		volts
Driving power, approx.....	1.6	2	2.4		kilowatts
Plate power output.....	50	75	100		kilowatts

* Averaged over any audio-frequency cycle.

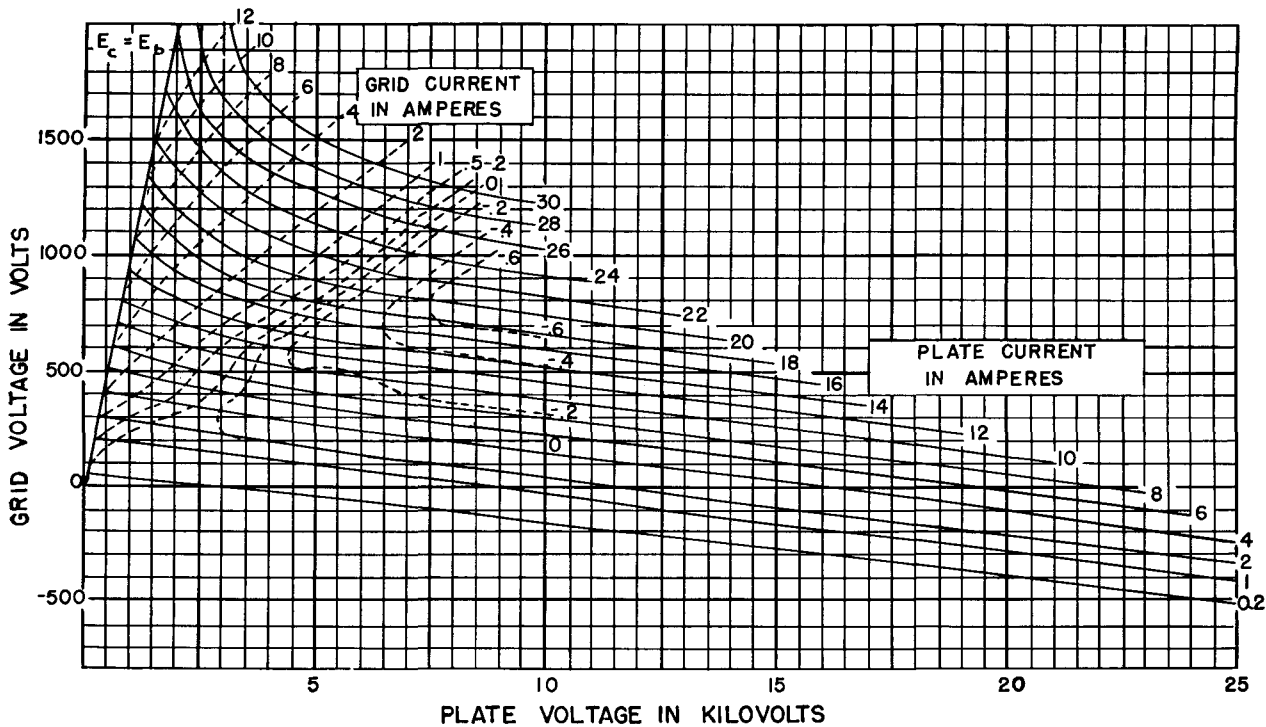
**At crest of audio-frequency cycle.

Modulation, essentially negative, may be used if the positive peak of the audio-frequency envelope does not exceed 115 per cent of the carrier conditions.

APPLICATION NOTES

Plate Series Protective Resistors (see paragraph describing plate circuit under Installation in the Instructions.)

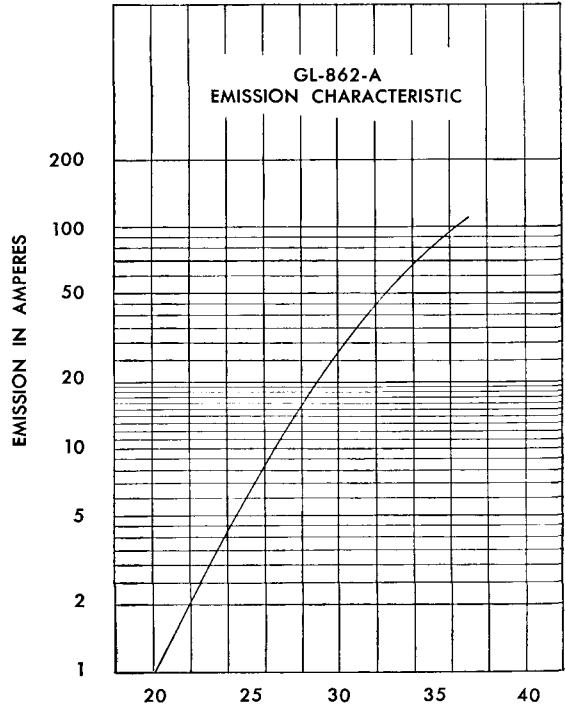
Series resistor	10	20	40	50	ohms
Maximum power output of rectifier	100	250	640	1600	kilowatts



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GL-862-A CHARACTERISTICS ($E_i = 33$ VOLTS A-C)

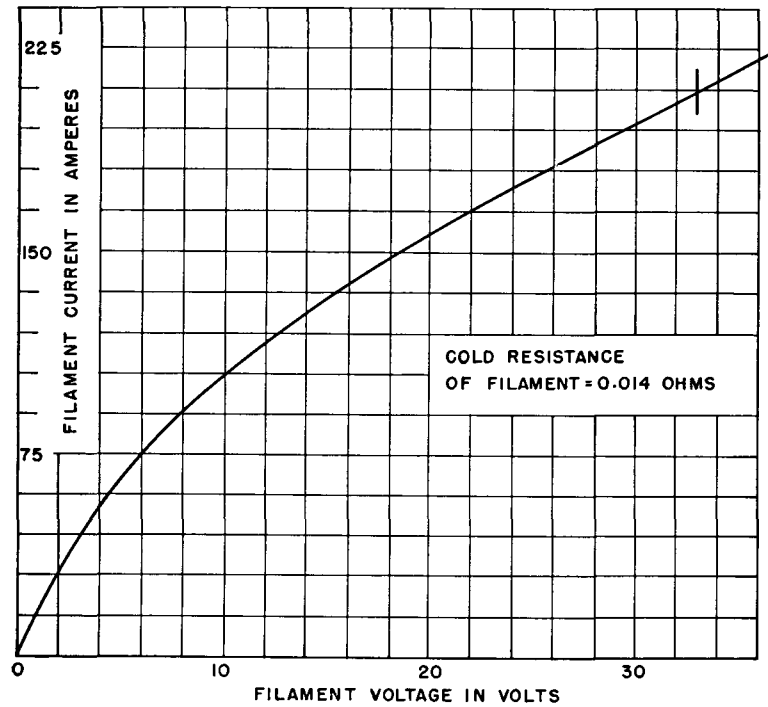


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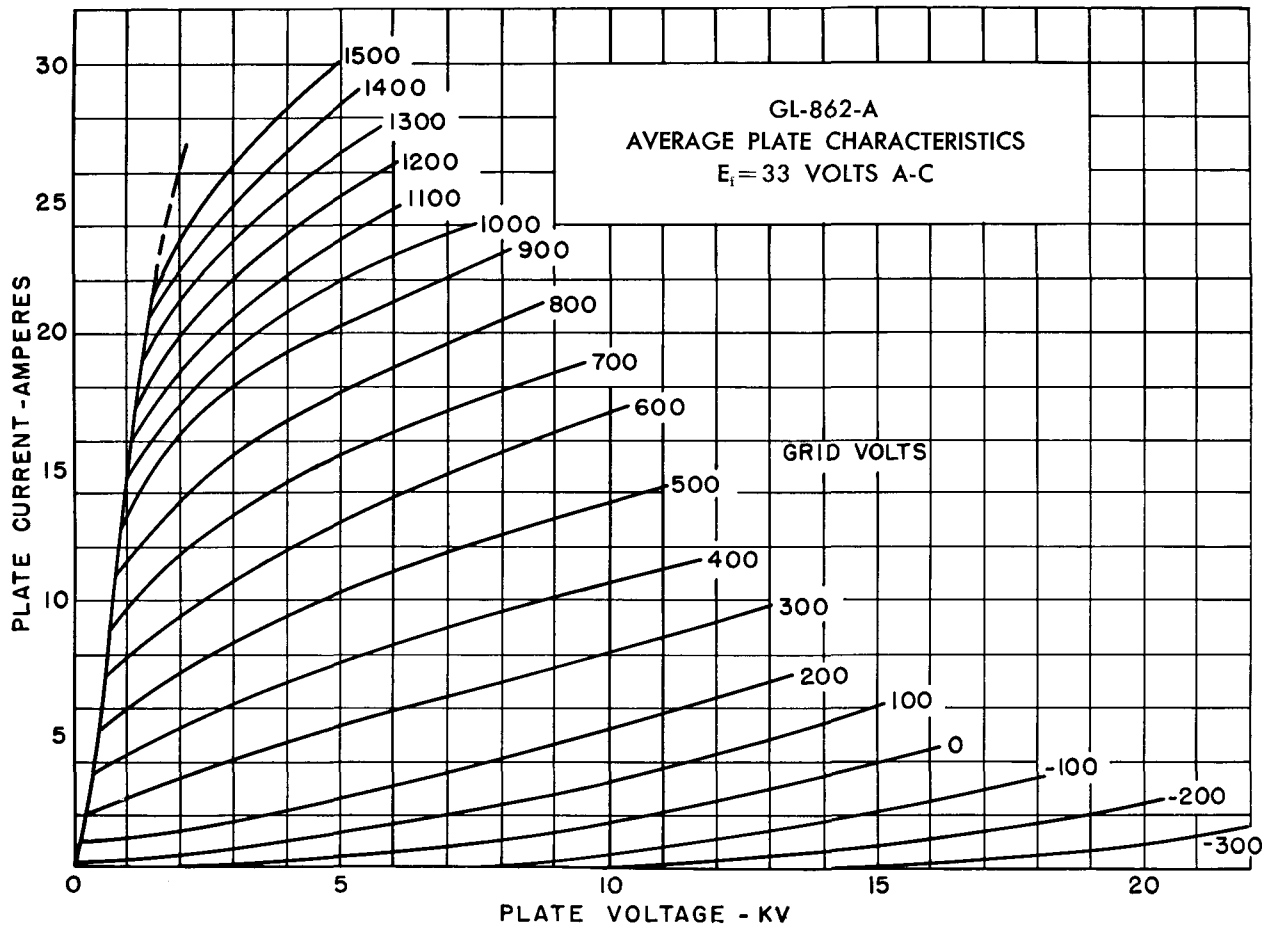
FILAMENT VOLTAGE IN VOLTS (SINGLE-PHASE FILAMENT EXCITATION)

GL-862-A
FILAMENT CHARACTERISTICS



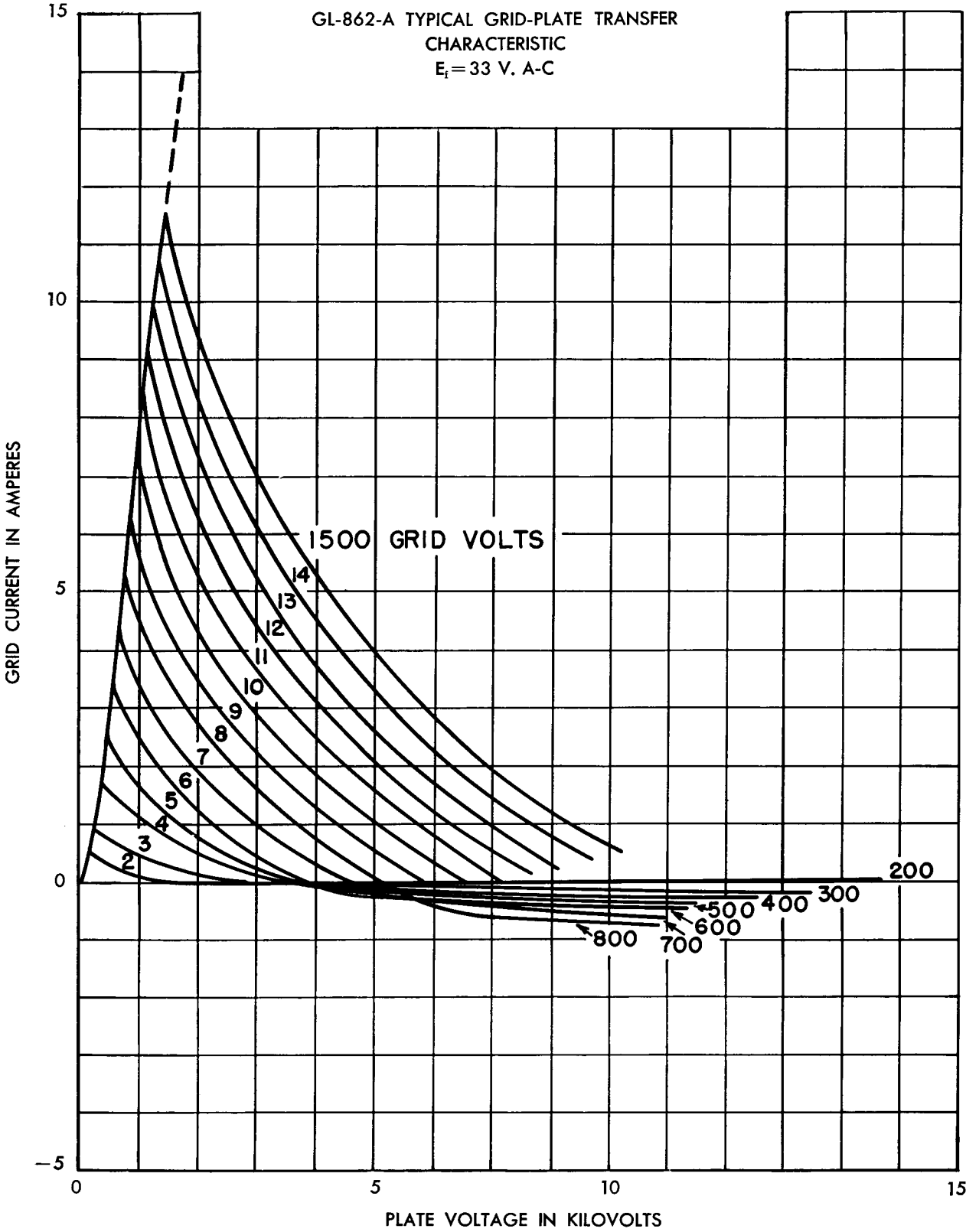
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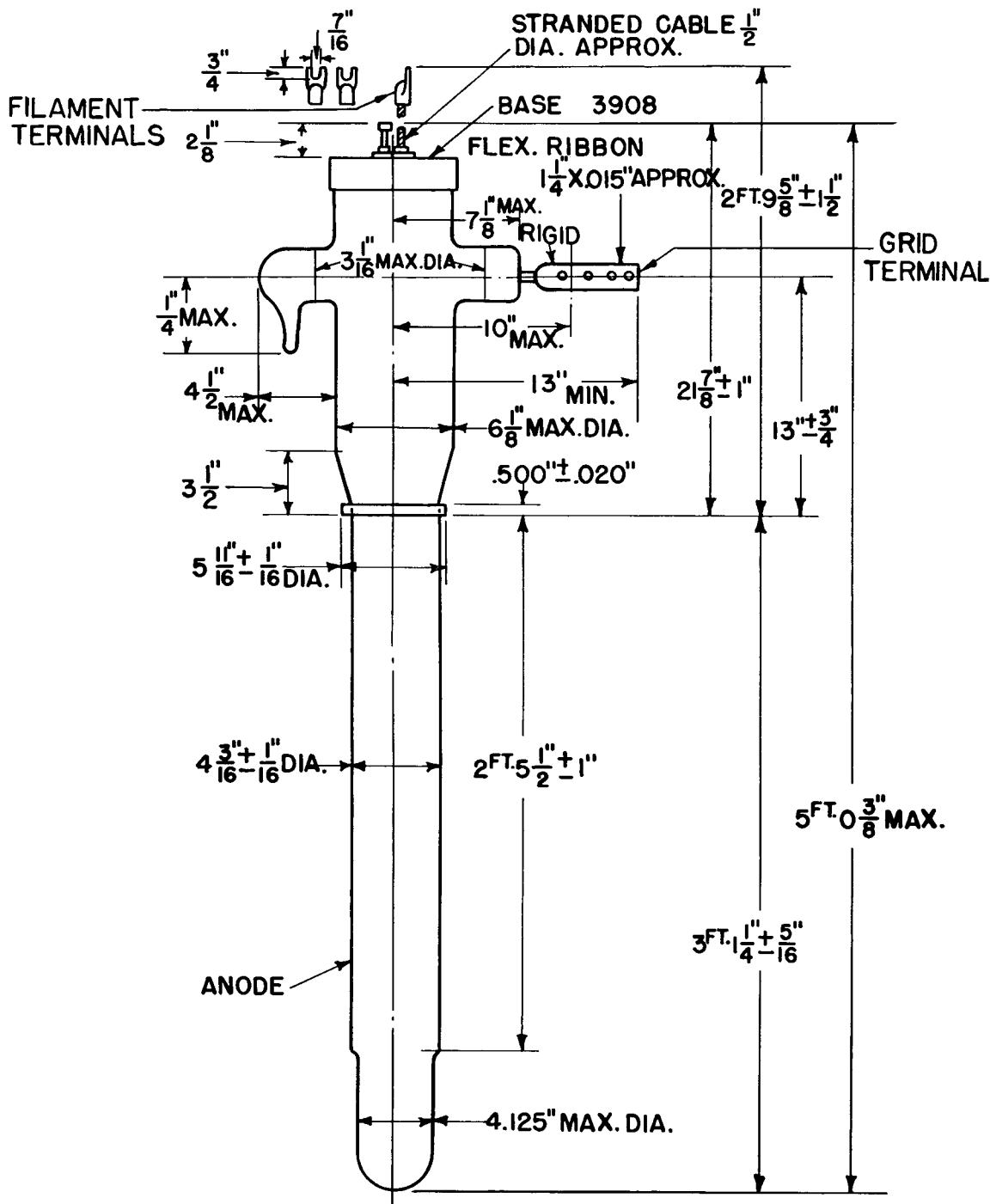
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OUTLINE GL-862-A PLOTTRON

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