

6LY8

Triode-Pentode

The 6LY8 is a miniature triode-pentode containing a high-mu triode and a sharp-cutoff pentode. The pentode is intended for use as a video amplifier and the triode for general-purpose use.

GENERAL

ELECTRICAL

Cathode - Coated Unipotential

Heater Characteristics and Ratings

Heater Voltage, AC or DC* . . . 6.3±0.6 Volts
Heater Current†. 0.75 Amperes
Direct Interelectrode Capacitances§

Pentode Section

Grid-Number 1 to Plate: (Pg1 to Pp) 0.075 pf
Input: Pg1 to (h + Pk + Pg2 +
Pg3 + i.s.) 13 pf
Output: Pp to (h + Pk + Pg2 +
Pg3 + i.s.) 4.4 pf

Triode Section

Grid to Plate: (Tg to Tp) 3.8 pf
Input: Tg to (h + Tk + Pk +
Pg3 + i.s.) 2.6 pf
Output: Tp to (h + Tk + Pk +
Pg3 + i.s.) 2.8 pf

MECHANICAL

Operating Position - Any

Envelope - T-6 1/2, Glass

Base - E9-1, Small Button 9-Pin

Outline Drawing - EIA 6-3

Maximum Diameter 0.875 Inches
Minimum Diameter 0.750 Inches
Maximum Over-all Length 2.625 Inches
Maximum Seated Height. 2.375 Inches

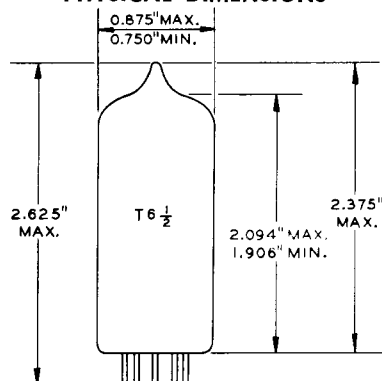
MAXIMUM RATINGS

Design-Maximum ratings are limiting values of operating and environmental conditions applicable to a bogey electron tube of a specified type as defined by its published data and should not be exceeded under the worst probable conditions.

The tube manufacturer chooses these values to provide acceptable serviceability of the tube, making allowance for the effects of changes in operating conditions due to variations in the characteristics of the tube under consideration.

The equipment manufacturer should design so that initially and throughout life no design-maximum value for the intended service is exceeded with a bogey tube under the worst probable operating conditions with respect to supply-voltage variation, equipment component variation, equipment control adjustment, load variation, signal variation, environmental conditions, and variations in the characteristics of all other electron devices in the equipment.

PHYSICAL DIMENSIONS

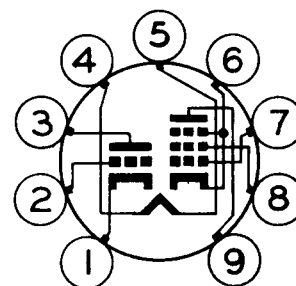


EIA 6-3

TERMINAL CONNECTIONS

- Pin 1 - Triode Cathode
- Pin 2 - Triode Grid
- Pin 3 - Triode Plate
- Pin 4 - Heater
- Pin 5 - Heater
- Pin 6 - Pentode Cathode, Grid Number 3, and Internal Shield
- Pin 7 - Pentode Grid Number 1
- Pin 8 - Pentode Grid Number 2 (Screen)
- Pin 9 - Pentode Plate

BASING DIAGRAM



EIA 9DX

MAXIMUM RATINGS (Cont'd)

DESIGN-MAXIMUM VALUES		Pentode Section	Triode Section	
Plate Voltage		330	330	Volts
Screen Supply Voltage.		330	---	Volts
Screen Voltage - See Screen Rating Chart				
Positive DC Grid-Number 1 Voltage.		0	0	Volts
Plate Dissipation		5.0	1.0	Watts
Screen Dissipation.		1.1	---	Watts
Heater-Cathode Voltage				
Heater Positive with Respect to Cathode				
DC Component.		100	100	Volts
Total DC and Peak		200	200	Volts
Heater Negative with Respect to Cathode				
Total DC and Peak		200	200	Volts
Grid-Number 1 Circuit Resistance				
With Fixed Bias.		0.5	0.5	Megohms
With Cathode Bias		1.0	1.0	Megohms

CHARACTERISTICS AND TYPICAL OPERATION

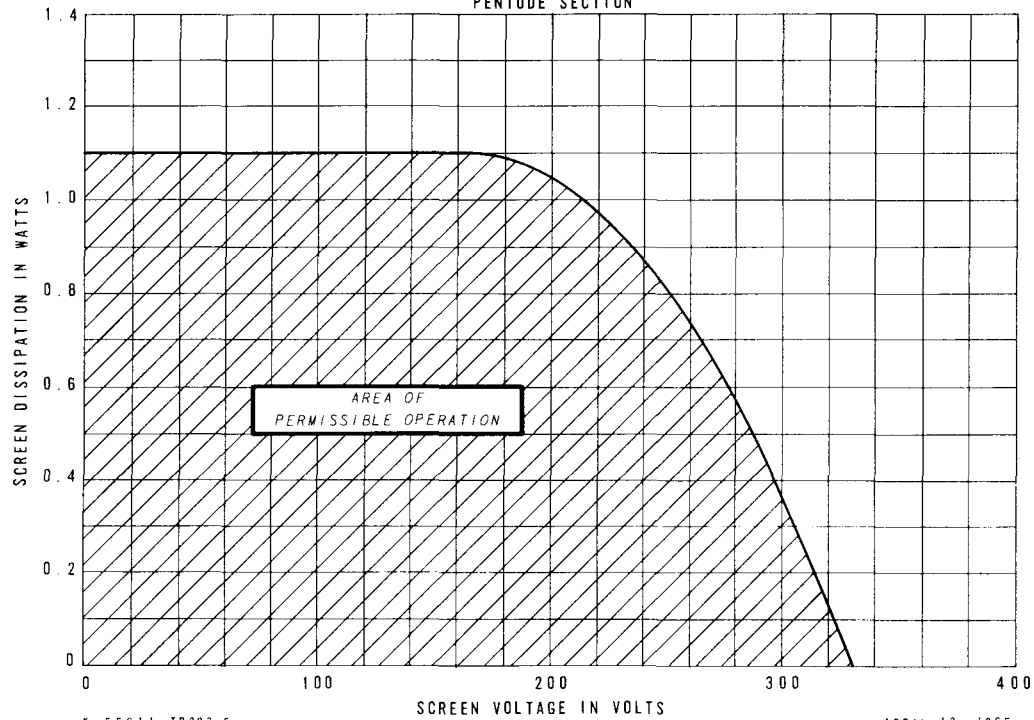
AVERAGE CHARACTERISTICS	Pentode Section	Triode Section	
Plate Voltage	35	250	Volts
Screen Voltage	100	---	Volts
Grid-Number 1 Voltage.	0	-2.0	Volts
Cathode-Bias Resistor.	---	82	Ohms
Amplification Factor	---	100	
Plate Resistance, approximate	---	60000	Ohms
Transconductance	---	20000	Micromhos
Plate Current	54	19.5	Milliamperes
Screen Current	13.5	3.0	Milliamperes
Grid Voltage, approximate			
Ib = 10 Microamperes	---	---	-5 Volts
Grid-Number 1 Voltage, approximate			
Ib = 100 Microamperes.	---	-6.3	---

NOTES

- * The equipment designer should design the equipment so that heater voltage is centered at the specified bogey value, with heater supply variations restricted to maintain heater voltage within the specified tolerance.
- # Heater current of a bogey tube at Ef = 6.3 volts.
- § Without external shield.

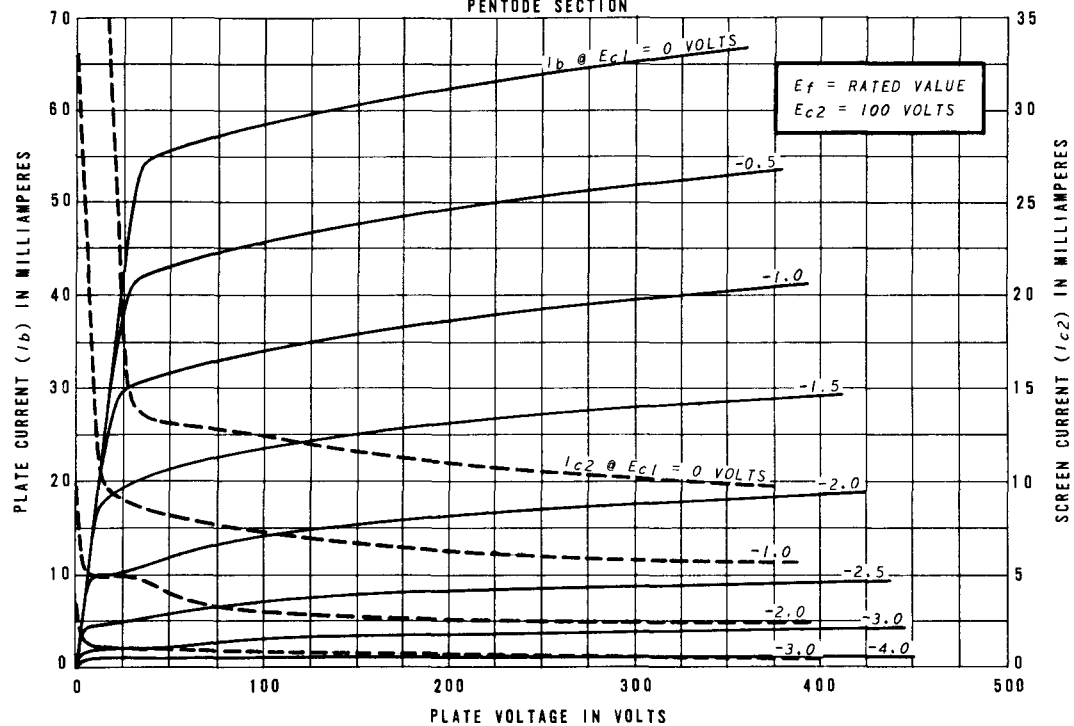
SCREEN RATING CHART

PENTODE SECTION

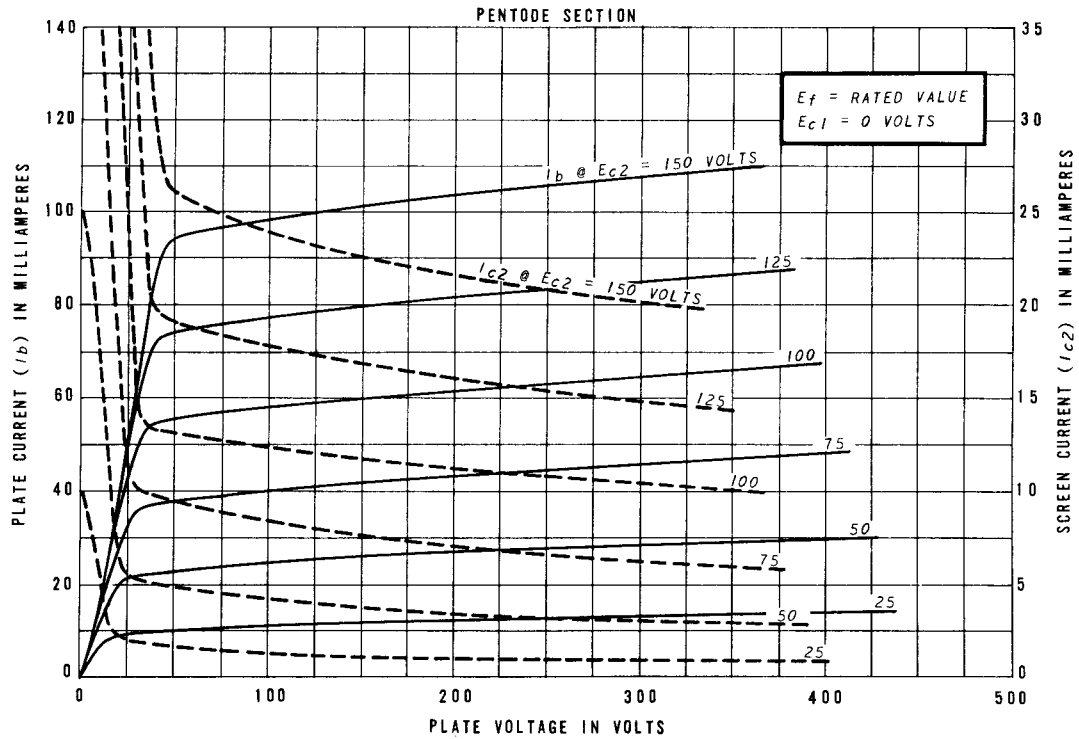


AVERAGE PLATE CHARACTERISTICS

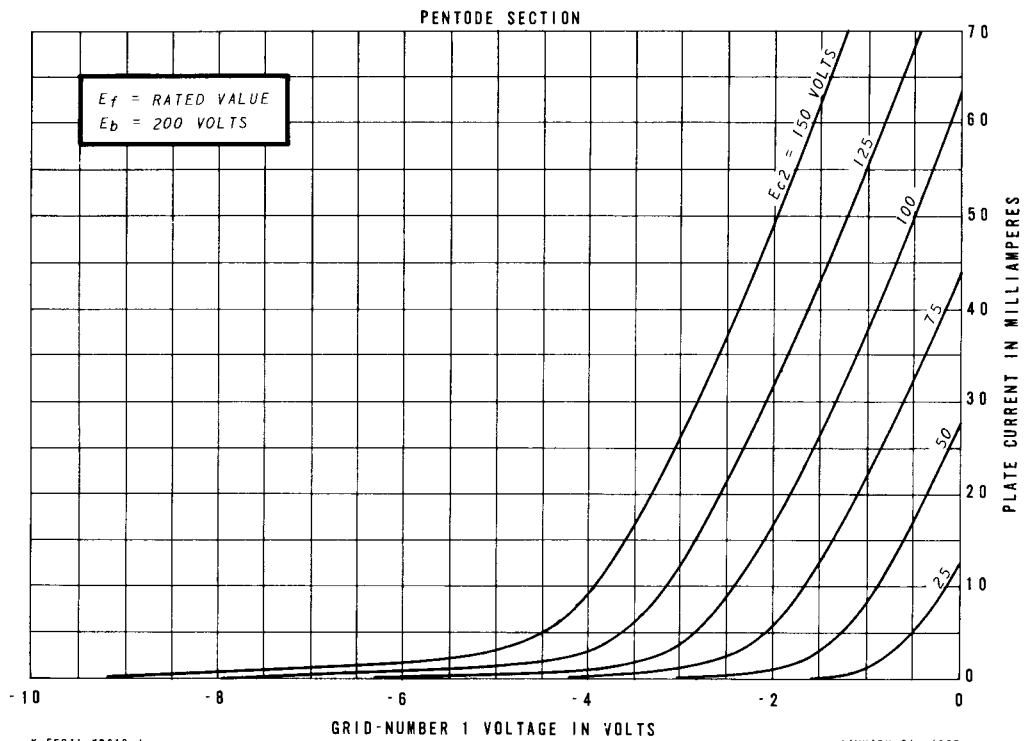
PENTODE SECTION



AVERAGE PLATE CHARACTERISTICS

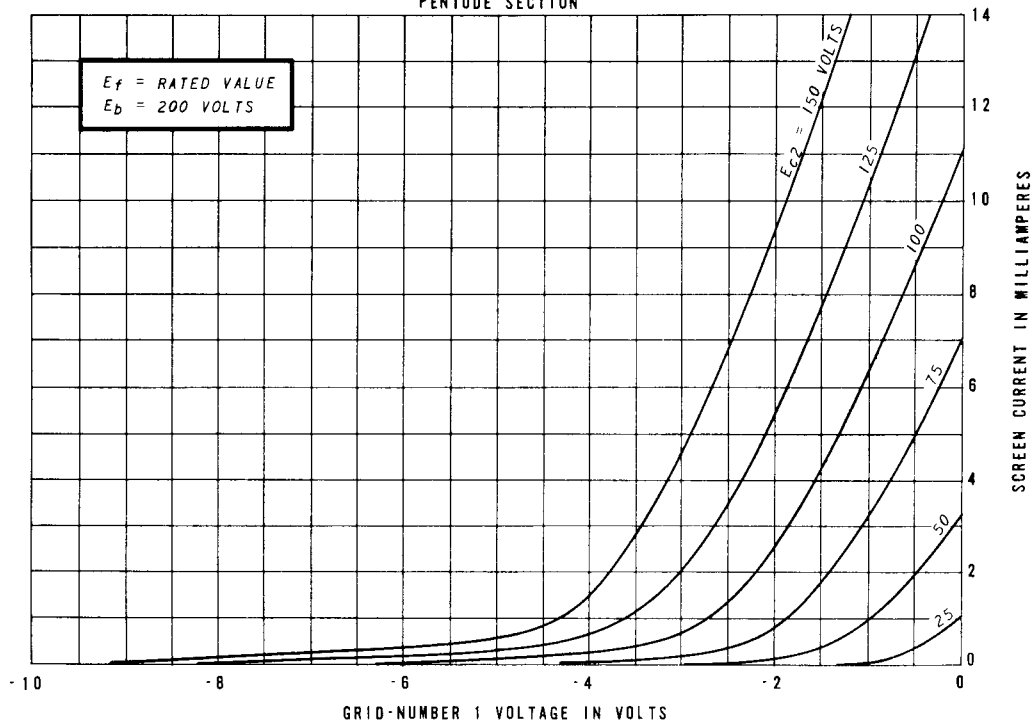


AVERAGE TRANSFER CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS

PENTODE SECTION

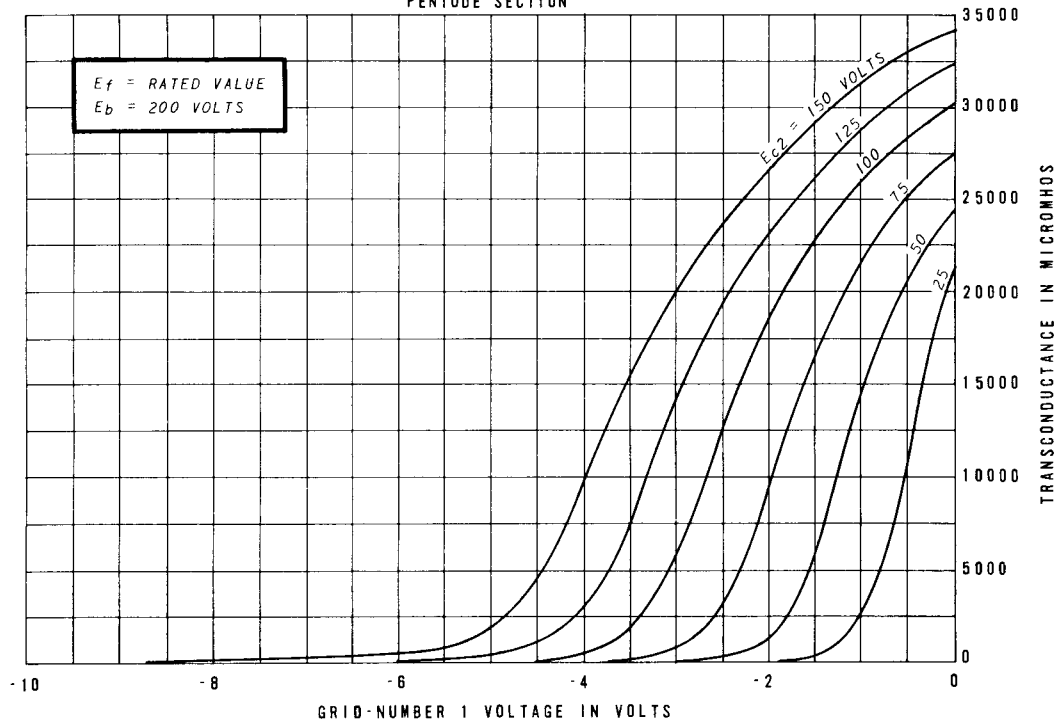


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AVERAGE TRANSFER CHARACTERISTICS

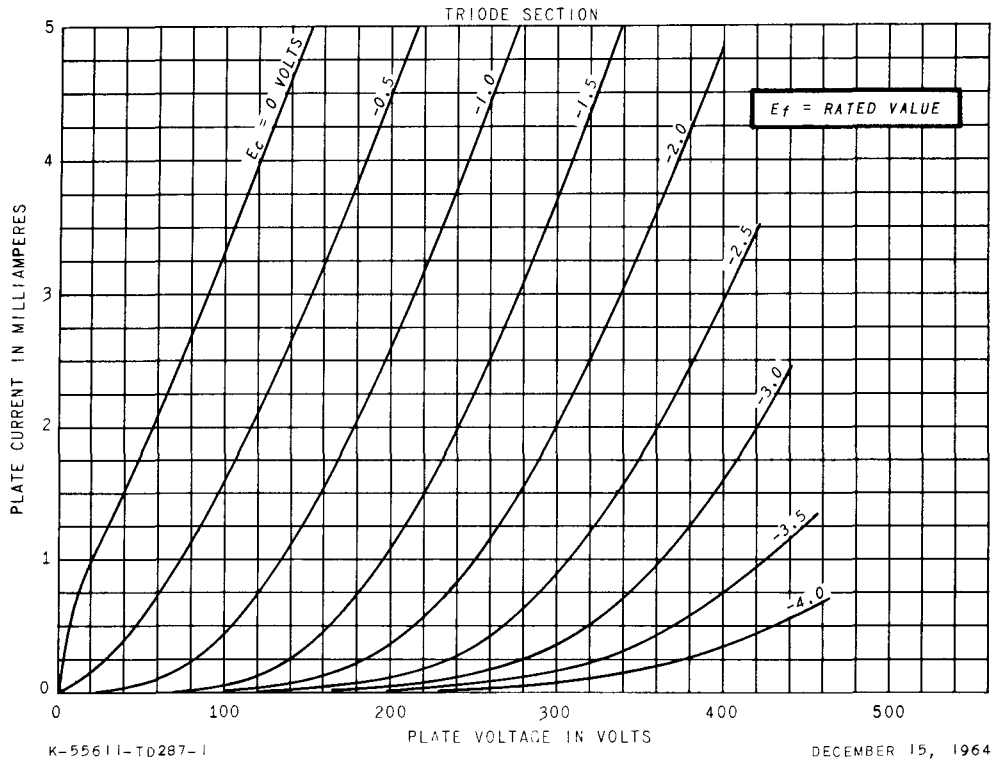
PENTODE SECTION



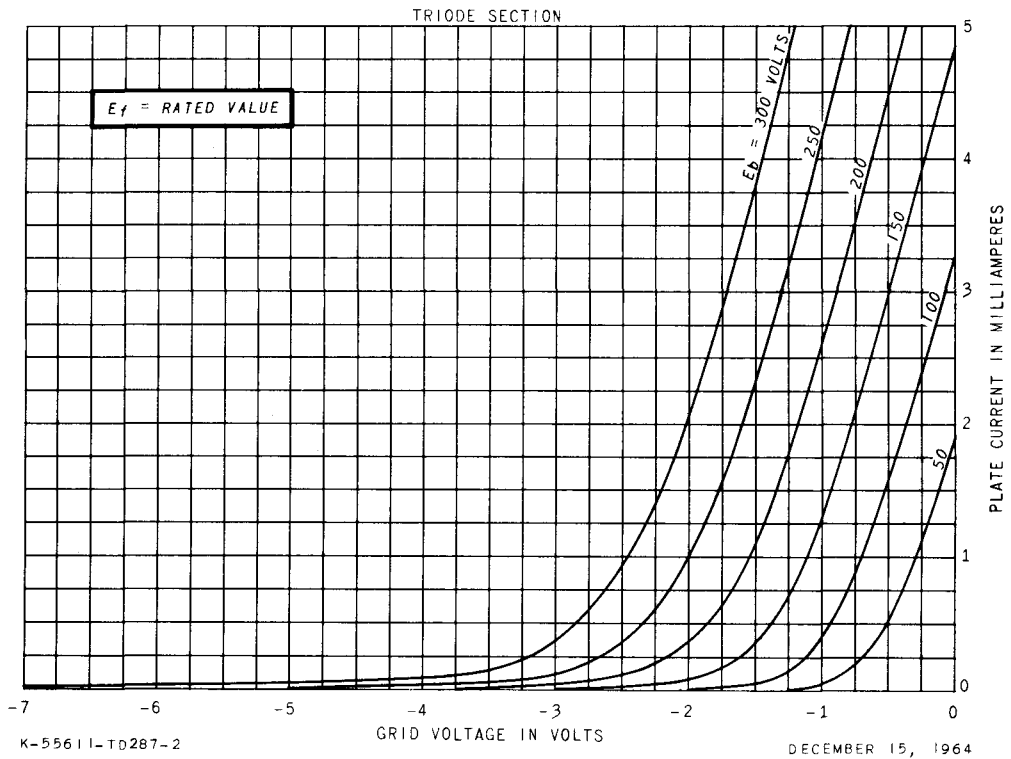
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AVERAGE PLATE CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS



AVERAGE CHARACTERISTICS

