



DESCRIPTION AND RATING

The 10JY8 is a 9-pin miniature tube containing a medium-mu triode and a sharp-cutoff pentode. The triode is intended for sync separator service and the pentode for video amplifier service.

GENERAL

ELECTRICAL

Cathode—Coated Unipotential

Heater Characteristics and Ratings

Heater Voltage, AC or DC*..... 10.5 Volts

Heater Current†..... 0.45 ± 0.03 Amperes

Heater Warm-up Time‡..... 11 Seconds

Direct Interelectrode Capacitances§

Pentode Section

Grid-Number 1 to Plate: (Pg1 to Pp)..... 0.08 pf

Input: Pg1 to (h + Pk + Pg2 + Pg3 + i.s.)..... 10 pf

Output: Pp to (h + Pk + Pg2 + Pg3 + i.s.)..... 4.6 pf

Triode Section

Grid to Plate: (Tg to Tp)..... 2.8 pf

Input: Tg to (h + Tk + Pk + Pg3 + i.s.)..... 4.2 pf

Output: Tp to (h + Tk + Pk + Pg3 + i.s.)..... 3.2 pf

MECHANICAL

Mounting Position—Any

Envelope—T-6½, Glass

Base—E9-1, Small Button 9-Pin

Outline Drawing—EIA 6-3

Maximum Diameter..... 0.875 Inches

Maximum Over-all Length..... 2.625 Inches

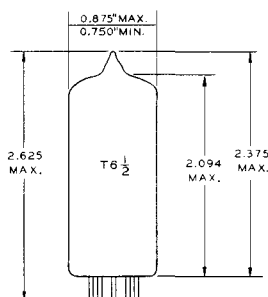
Maximum Seated Height..... 2.375 Inches

MAXIMUM RATINGS

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	2.0	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			
DC Component.....	...	200	Volts
Total DC and Peak.....	200	300	Volts
Grid-Number 1 Circuit Resistance			
With Fixed Bias.....	0.25	0.5	Megohms
With Cathode Bias.....	1.0	1.0	Megohms

PHYSICAL DIMENSIONS



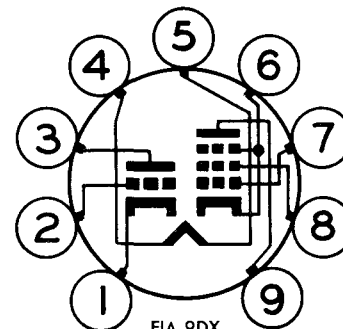
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The tubes and arrangements disclosed herein may be covered by patents of General Electric Company or others. Neither the disclosure of any information herein nor the sale of tubes by General Electric Company conveys any license under patent claims covering combinations of tubes with other devices or

TERMINAL CONNECTIONS

- Pin 1—Triode Cathode
- Pin 2—Triode Grid
- Pin 3—Triode Plate
- Pin 4—Heater
- Pin 5—Heater
- Pin 6—Pentode Cathode, 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

elements. In the absence of an express written agreement to the contrary, General Electric Company assumes no liability for patent infringement arising out of any use of the tubes with other devices or elements by any purchaser of tubes or others.

MAXIMUM RATINGS (Continued)

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.

CHARACTERISTICS AND TYPICAL OPERATION

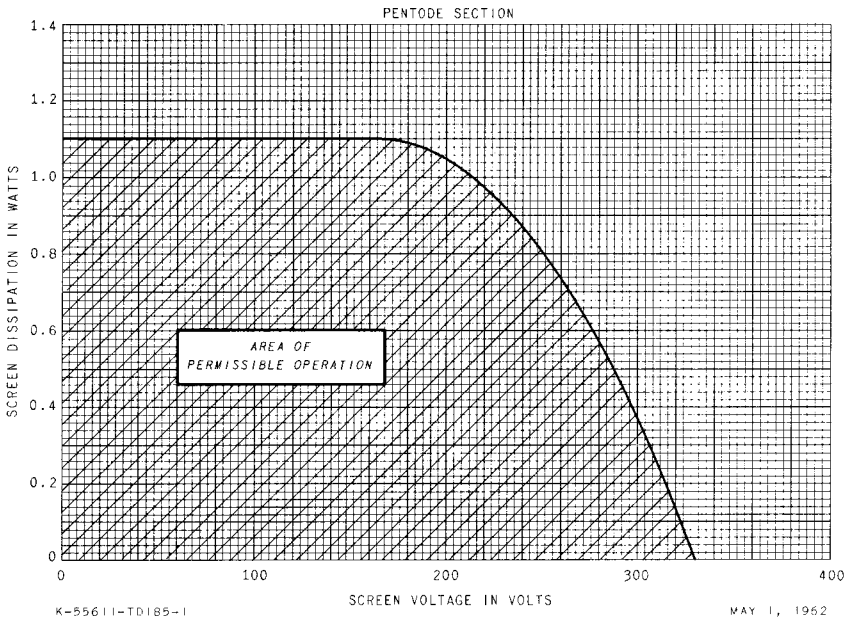
AVERAGE CHARACTERISTICS

	Pentode Section		Triode Section	
Plate Voltage.....	50	200	125	Volts
Screen Voltage.....	150	150	.....	Volts
Grid-Number 1 Voltage.....	0¶	.....	.....	Volts
Cathode-Bias Resistor.....	.....	100	68	Ohms
Amplification Factor.....	.....	.....	46	
Plate Resistance, approximate.....	.....	55000	4400	Ohms
Transconductance.....	.....	11000	10400	Micromhos
Plate Current.....	60	24	15	Milliamperes
Screen Current.....	18	4.8	.....	Milliamperes
Grid-Number 1 Voltage, approximate				
Ib = 10 Microamperes.....	.....	.....	-8	Volts
Grid-Number 1 Voltage, approximate				
Ib = 10 Microamperes.....	.....	-10	.....	Volts

FOOTNOTES

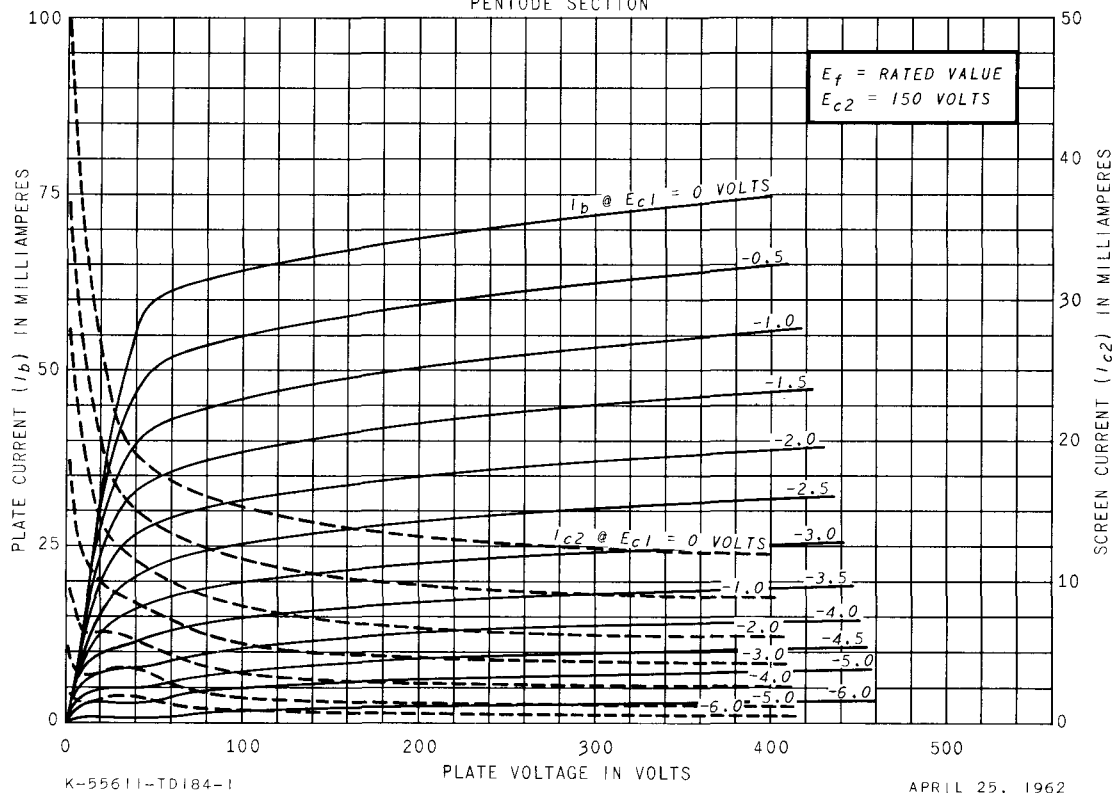
- * Heater voltage for bogey tube at If = 0.45 amperes.
- † For series heater operation, the equipment designer should design the equipment so that heater current is centered at the specified bogey value, with heater supply variations restricted to maintain heater current within the specified tolerance.
- ‡ The time required for the voltage across the heater to reach 80 percent of its rated value after applying 4 times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to 3 times the rated heater voltage divided by the rated heater current.
- § Without external shield.
- ¶ Applied for short interval (two seconds maximum) so as not to damage tube.

SCREEN RATING CHART



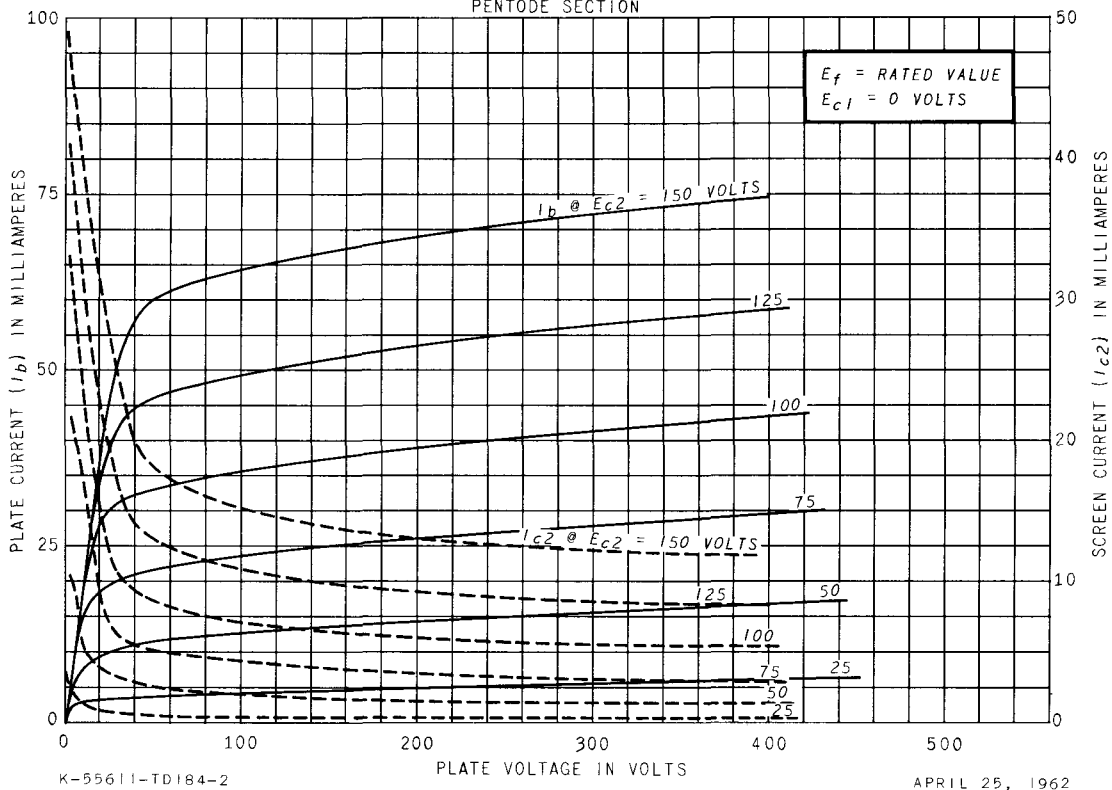
AVERAGE PLATE CHARACTERISTICS

PENTODE SECTION



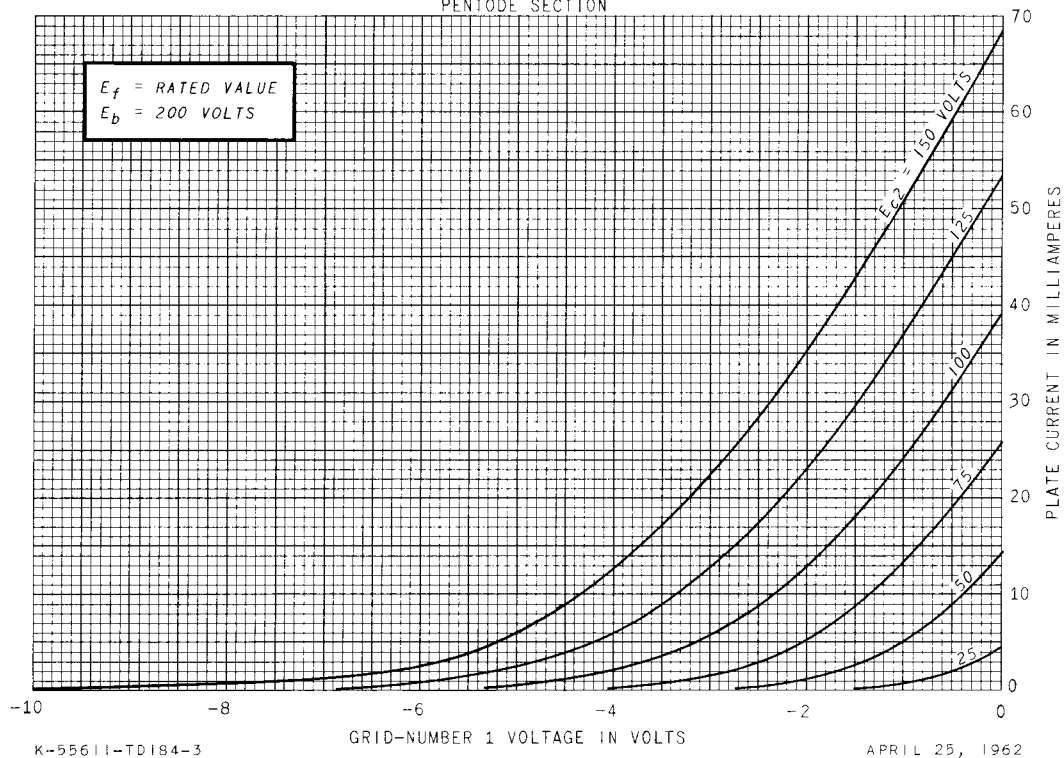
AVERAGE PLATE CHARACTERISTICS

PENTODE SECTION



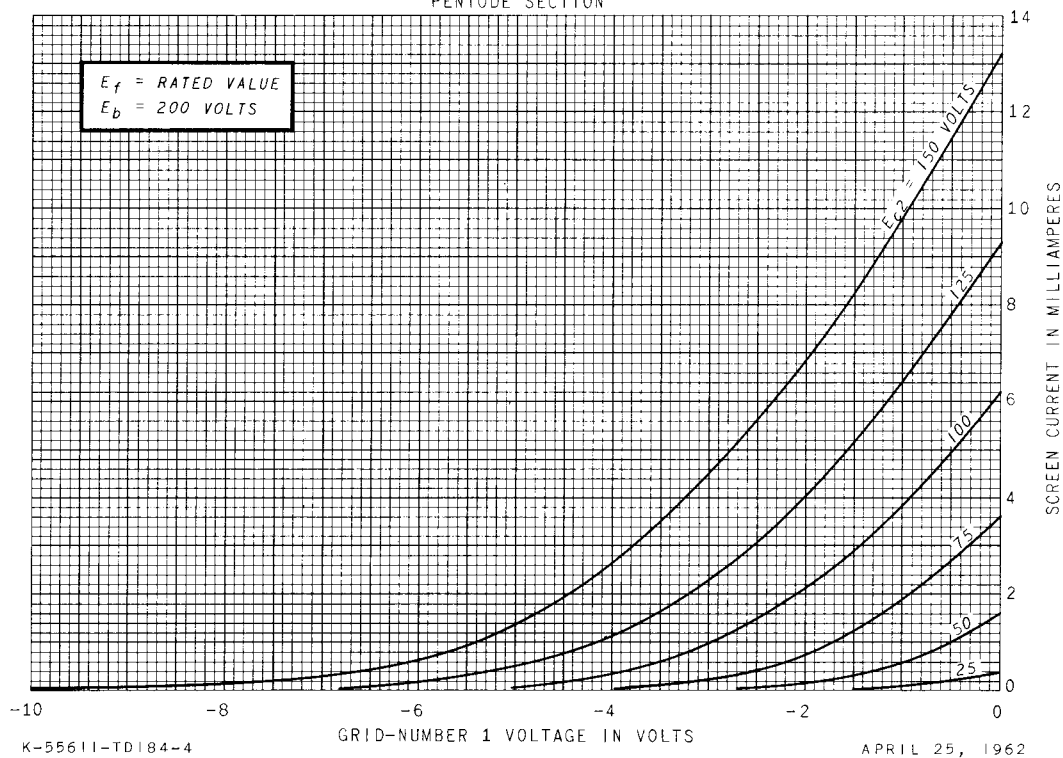
AVERAGE TRANSFER CHARACTERISTICS

PENTODE SECTION



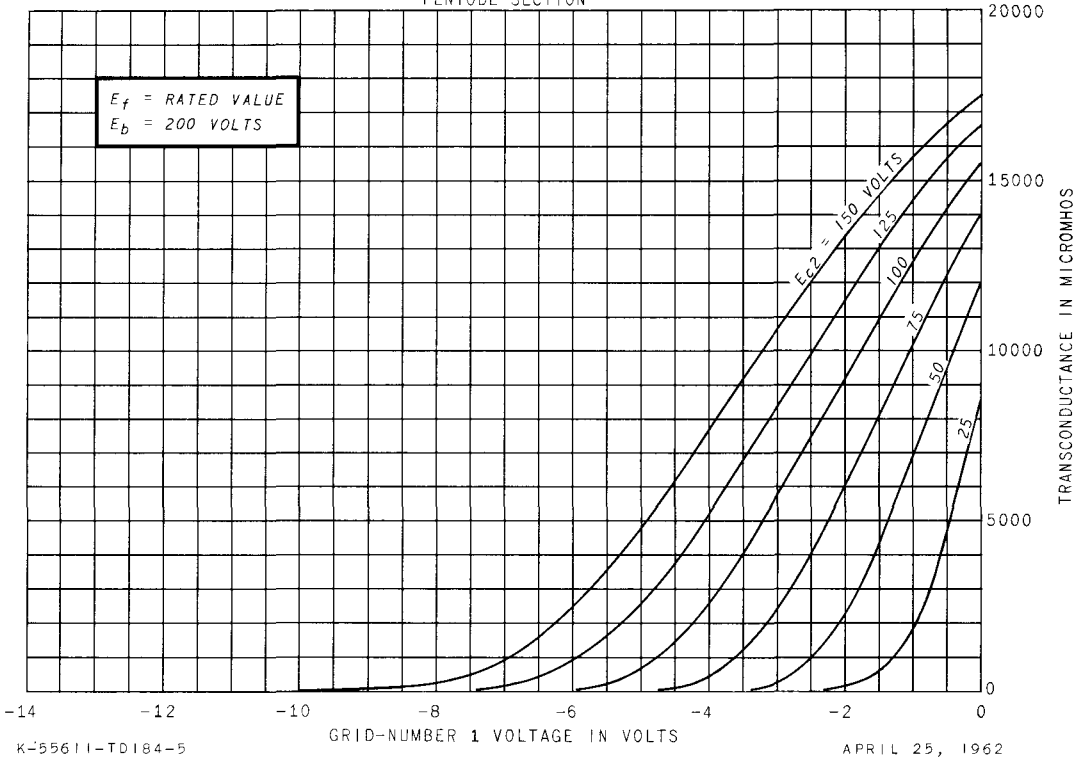
AVERAGE TRANSFER CHARACTERISTICS

PENTODE SECTION



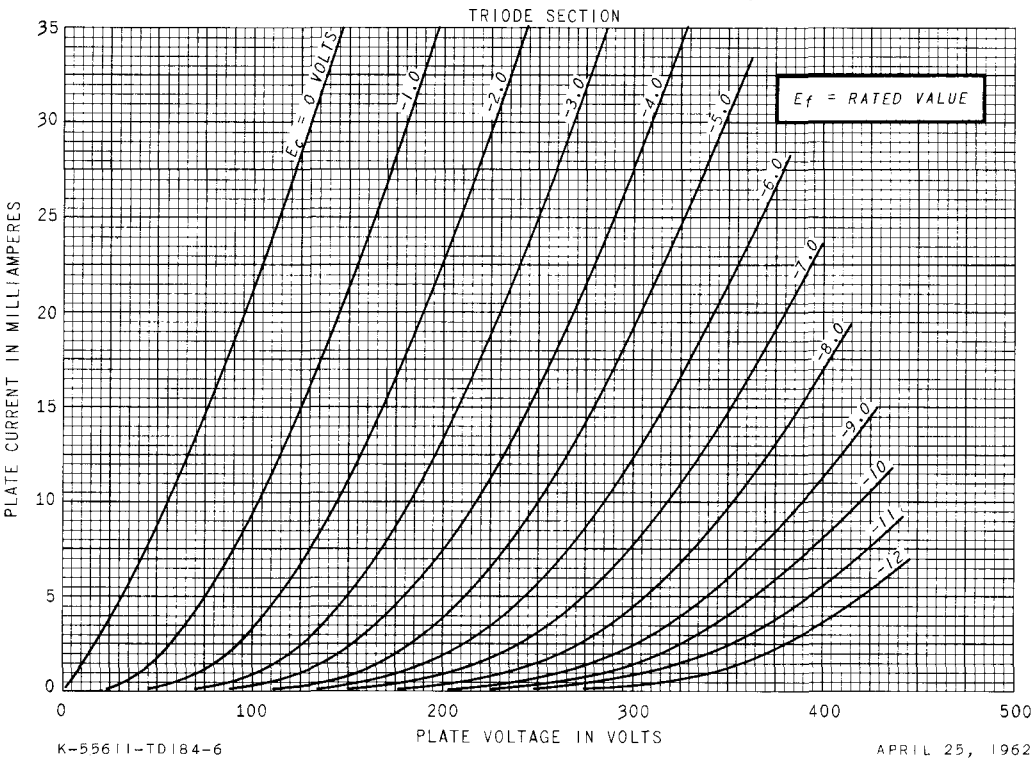
AVERAGE TRANSFER CHARACTERISTICS

PENTODE SECTION

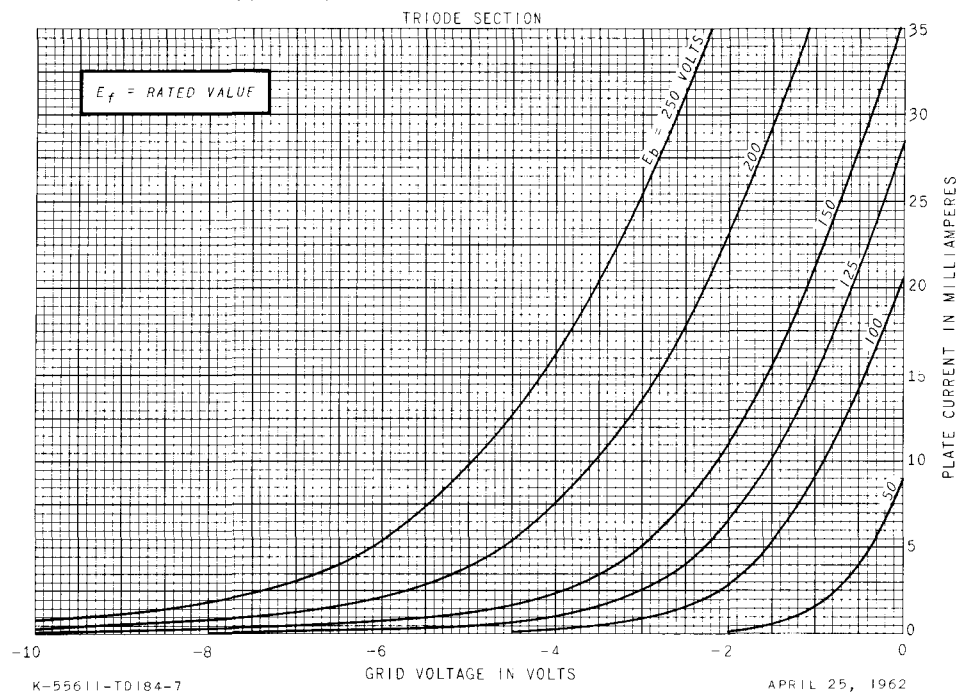


AVERAGE PLATE CHARACTERISTICS

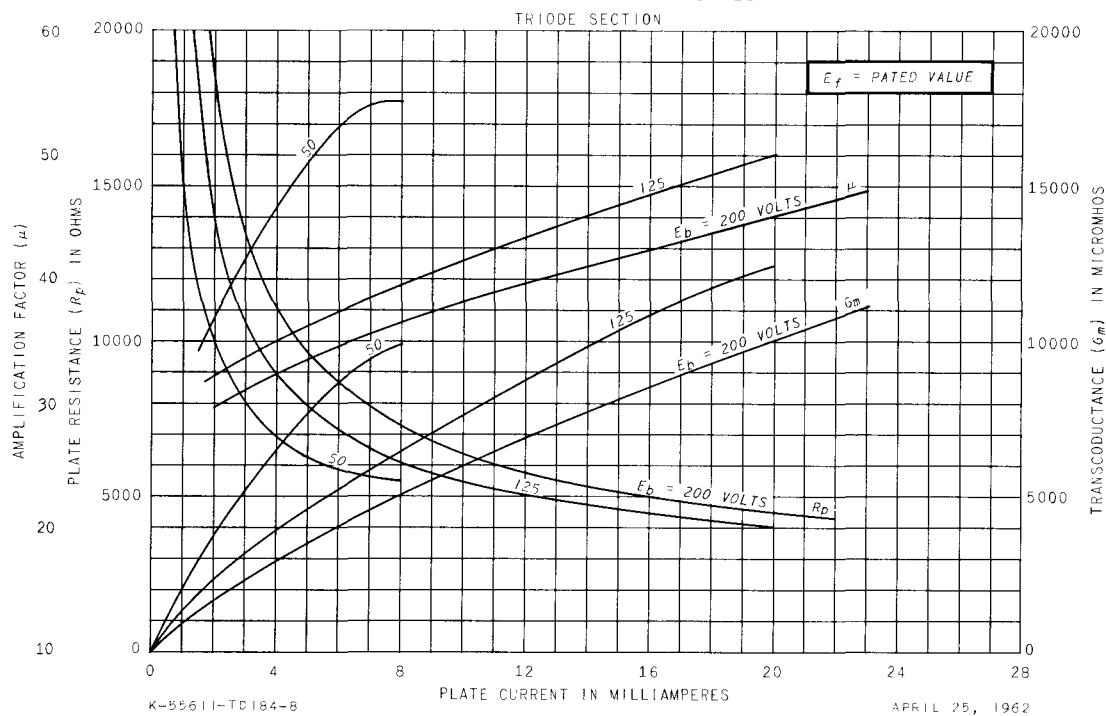
TRIODE SECTION



AVERAGE TRANSFER CHARACTERISTICS



AVERAGE CHARACTERISTICS



RECEIVING TUBE DEPARTMENT

GENERAL  ELECTRIC

Owensboro, Kentucky