Electronic TUBES

6AW8-A—8AW8-A

TRIODE-PENTODE

DESCRIPTION AND RATING

The 6AW8-A is a miniature tube containing a high-mu triode and a sharp-cutoff pentode. The triode section is intended for service as a sync separator and the pentode section as a video amplifier. As a result of its controlled heater-warm-up characteristic, the 6AW8-A is especially suited for use in television receivers which employ 600-milliampere, series-connected heaters. The 6AW8-A differs from the 6AW8 by incorporating a controlled plate-knee characteristic.

Except for heater ratings, the 8AW8-A is identical to the 6AW8-A. It is specially designed for use in television receivers which employ 450-milliampere, series-connected heaters.

GENERAL

ELECTRICAL

	6AW8-A	8AW8-A	
Cathode—Coated Unipotential			
Heater Voltage	6.3	8.4	Volts
Heater Current	0.6	0.45	Amperes
Heater Warm-up Time*	11	11	Seconds
Direct Interelectrode Capacitances	With Shield†	Without Shield	
Pentode Section			
Grid-Number 1 to Plate	0.03	0.04	μμf
Input	10	10	μμf
Output	4.5	3.6	μμf
Triode Section			
Grid to Plate	2.2	2.2	μμf
Input	3.4	3.2	μμf
Output	1.7	0.32	μμf
Pentode Grid-Number 1 to Triode Plate	0.003	0.006	μμf
Triode Grid to Pentode Plate	0.006	0.016	μμf
Pentode Plate to Triode Plate	0.023	0.150	μμf

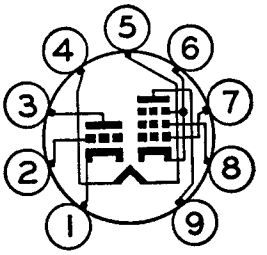
MECHANICAL

Mounting Position—Any
Envelope—T-6½, Glass
Base—E9-1, Small Button 9-Pin

MAXIMUM RATINGS

DESIGN-CENTER VALUES	Pentode Section	Triode Section	
Plate Voltage	300	300	Volts
Screen-Supply Voltage	300	.....	Volts
Screen Voltage—See Screen Rating Chart			
Positive DC Grid-Number 1 Voltage	0	0	Volts
Negative DC Grid-Number 1 Voltage	50	.....	Volts
Plate Dissipation	3.25	1.0	Watts
Screen Dissipation	1.0	.....	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	0.25	0.5	Megohms
With Cathode Bias	1.0	1.0	Megohms

BASING DIAGRAM

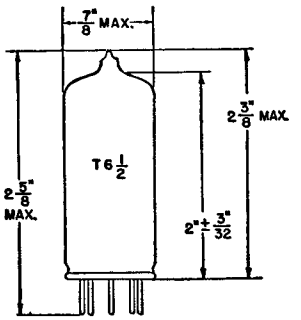


EIA 9DX

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

PHYSICAL DIMENSIONS



EIA 6-3

GENERAL ELECTRIC

△Supersedes pages 1 and 2, dated 6-56

CHARACTERISTICS AND TYPICAL OPERATION

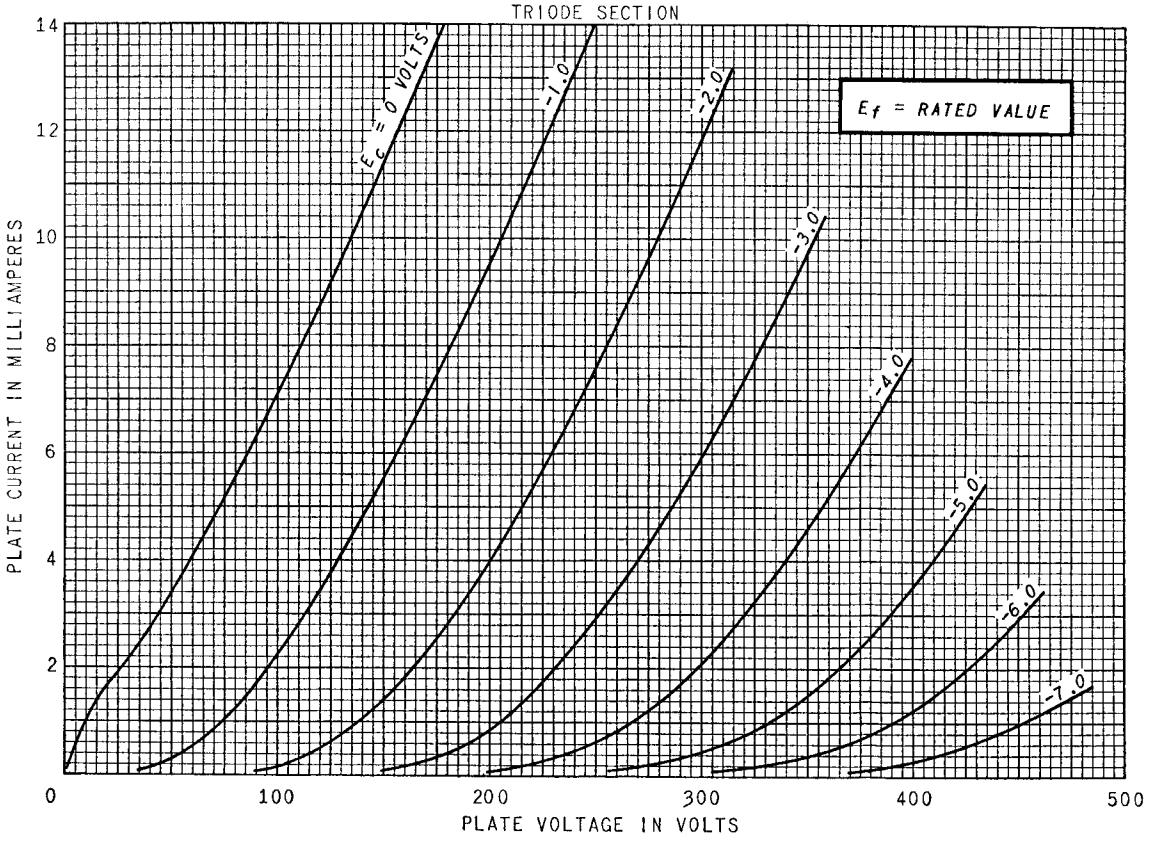
CLASS A_1 AMPLIFIER		**Pentode Section**	**Triode Section**	
Plate Voltage	65	200	200	Volts
Screen Voltage	150	150	....	Volts
Grid-Number 1 Voltage	0‡	....	−2.0	Volts
Cathode-Bias Resistor	....	180	....	Ohms
Amplification Factor	....	....	70	
Plate Resistance, approximate	....	400000	17500	Ohms
Transconductance	....	9000	4000	Micromhos
Plate Current	42	13	4.0	Milliamperes
Screen Current	12.5	3.5	....	Milliamperes
Grid-Number 1 Voltage, approximate Ib = 10 Microamperes	....	−10	−5	Volts

* 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.

† With external shield (EIA 315) connected to cathode of section under test.

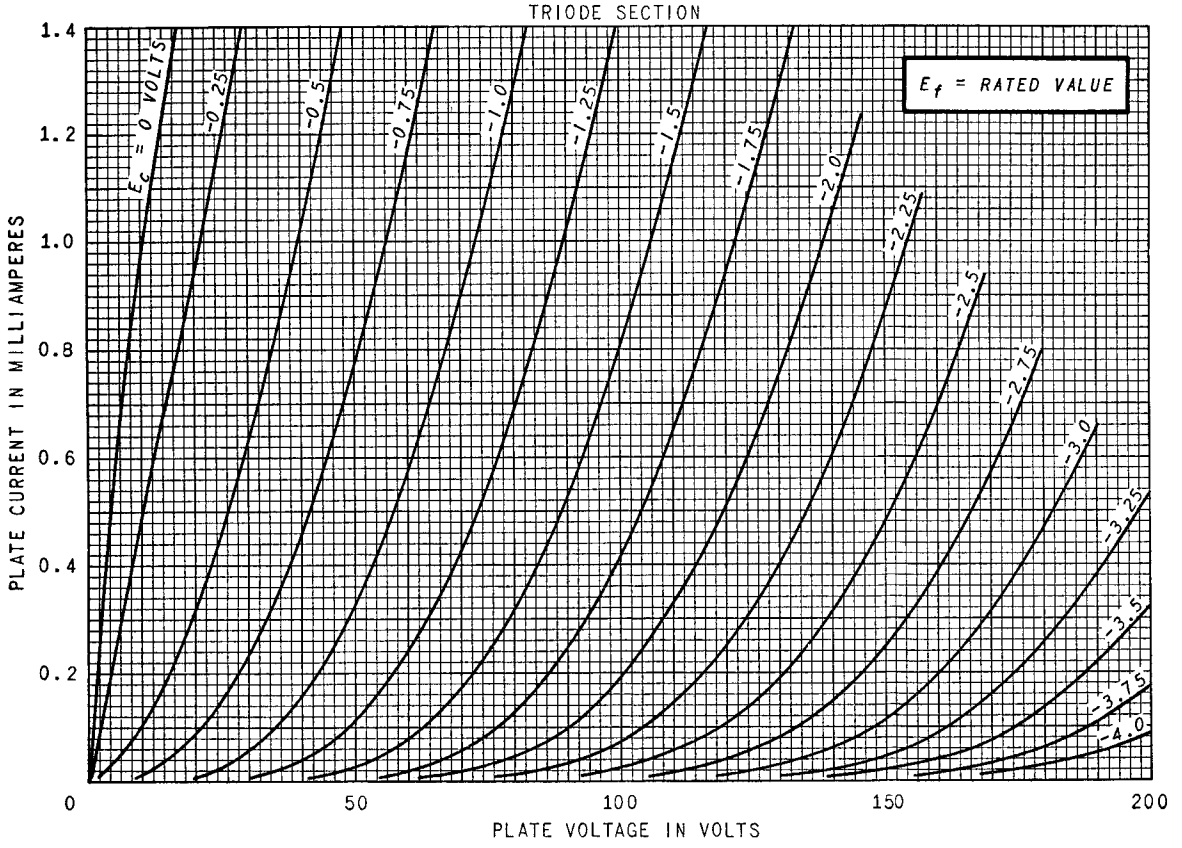
‡ Applied for short interval (two seconds maximum) so as not to damage tube.

AVERAGE PLATE CHARACTERISTICS



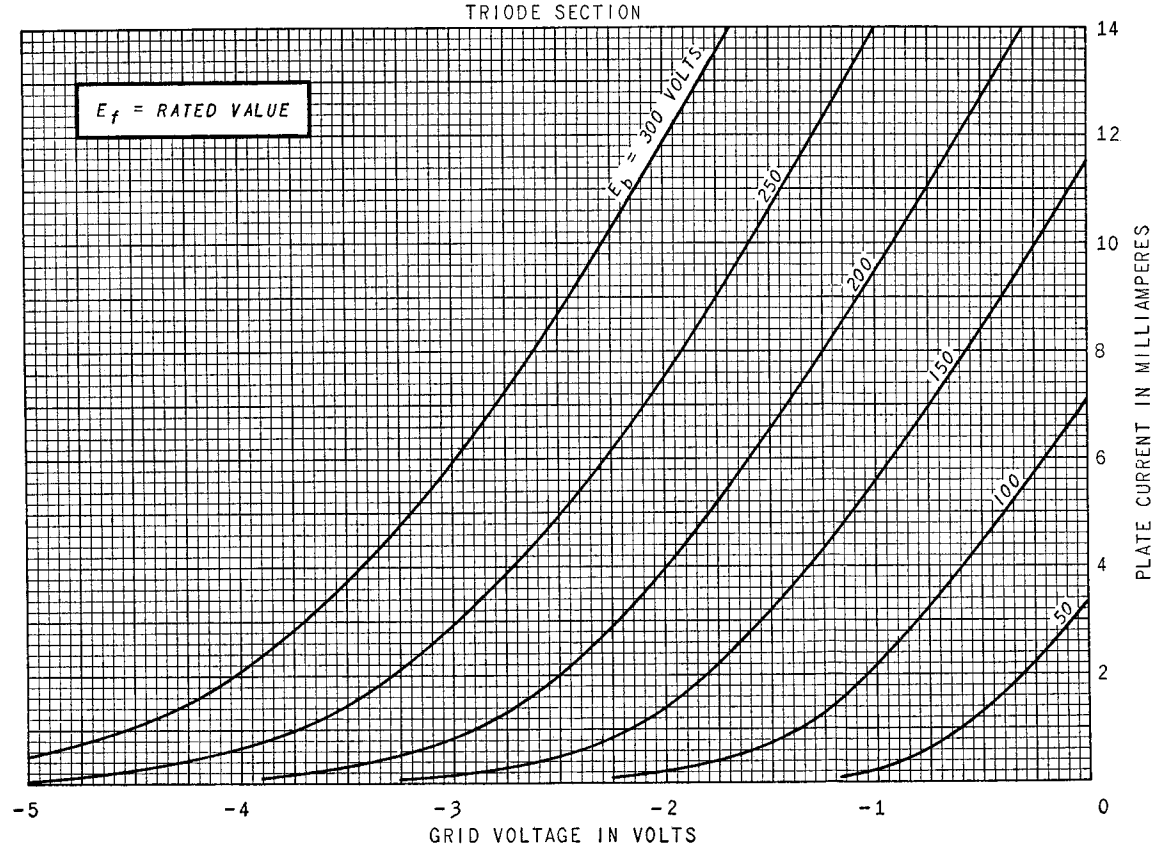
AVERAGE PLATE CHARACTERISTICS

TRIODE SECTION

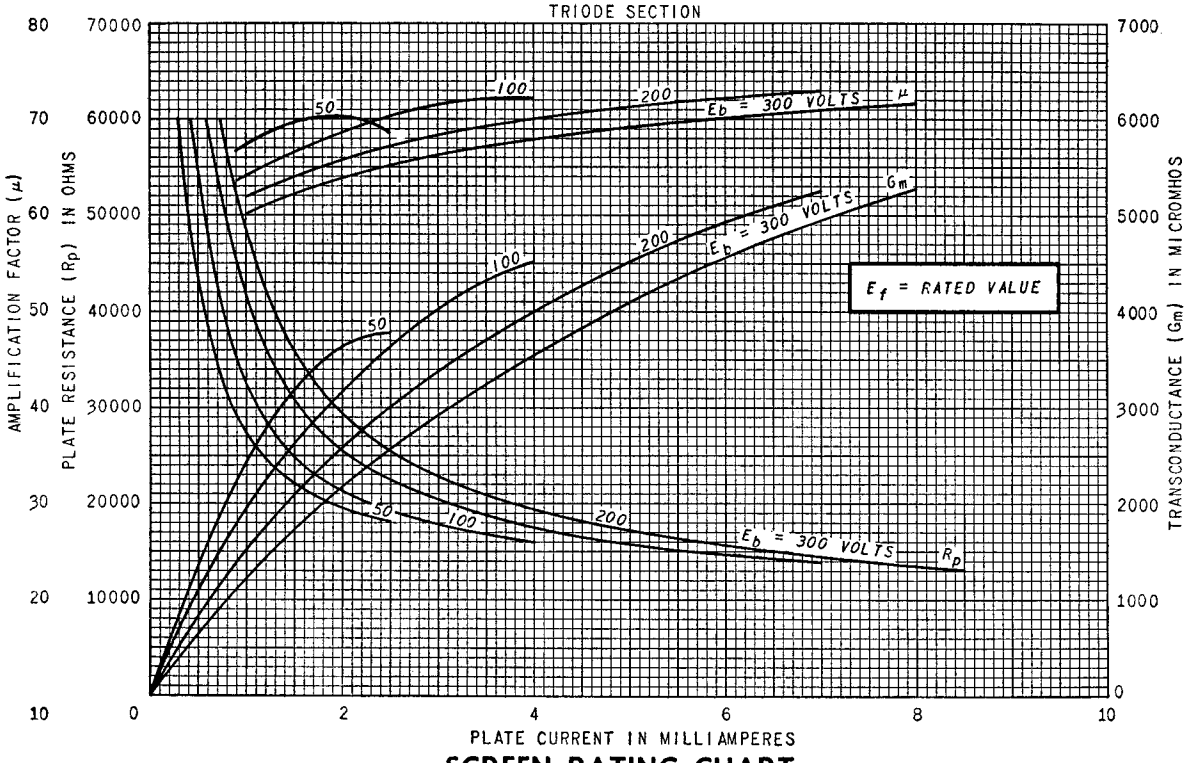


AVERAGE TRANSFER CHARACTERISTICS

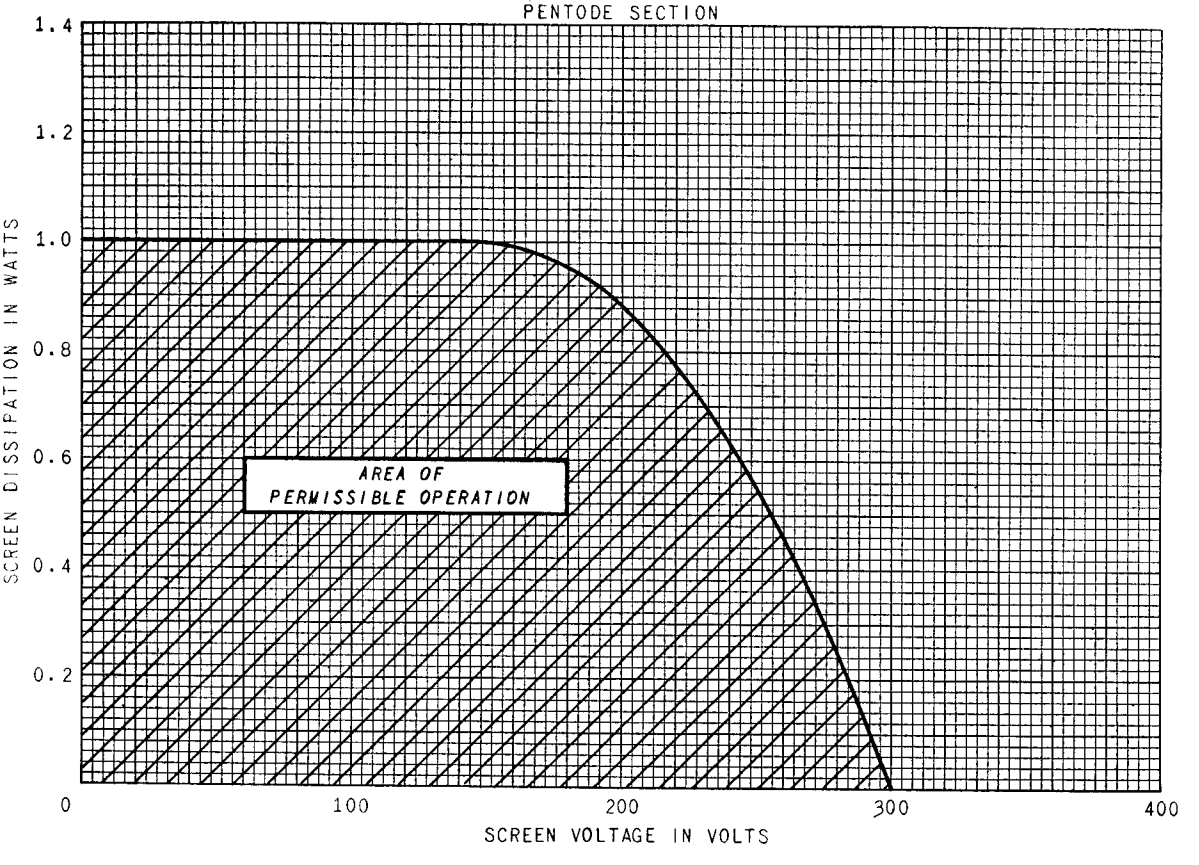
TRIODE SECTION



AVERAGE CHARACTERISTICS

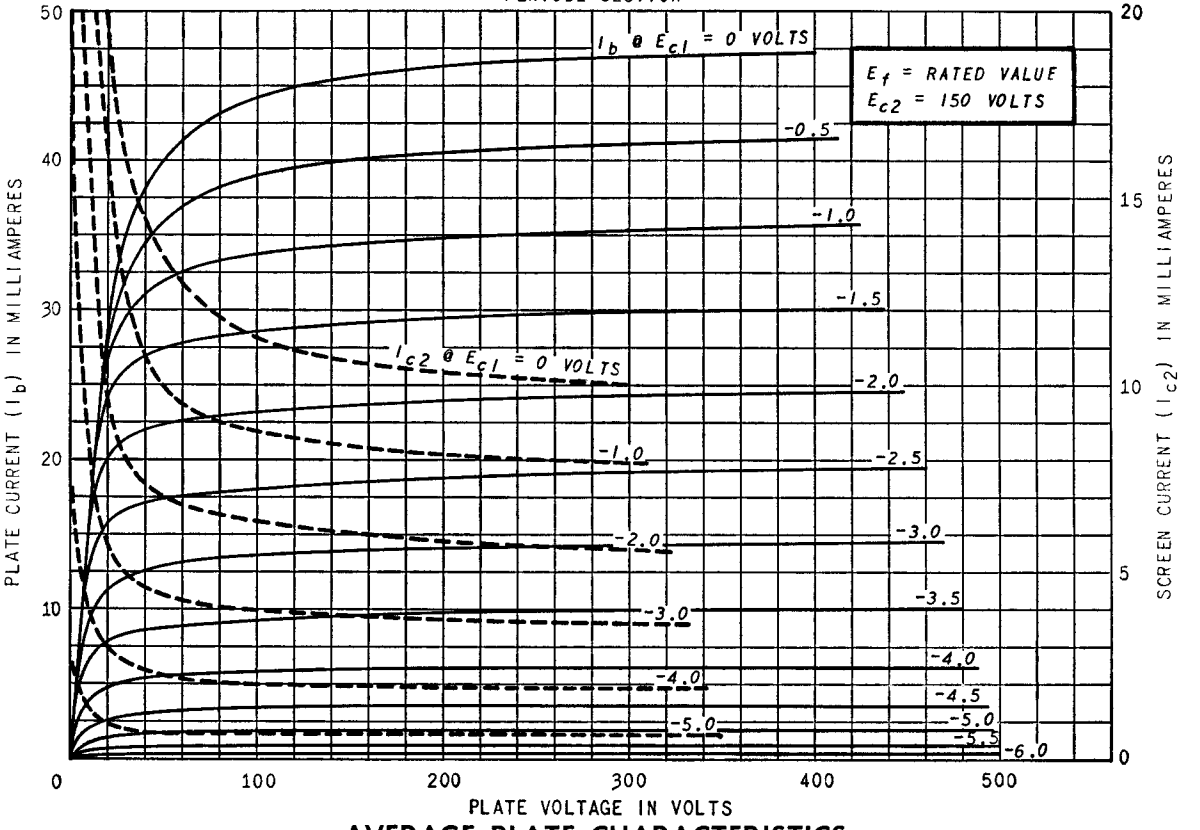


SCREEN RATING CHART



AVERAGE PLATE CHARACTERISTICS

PENTODE SECTION



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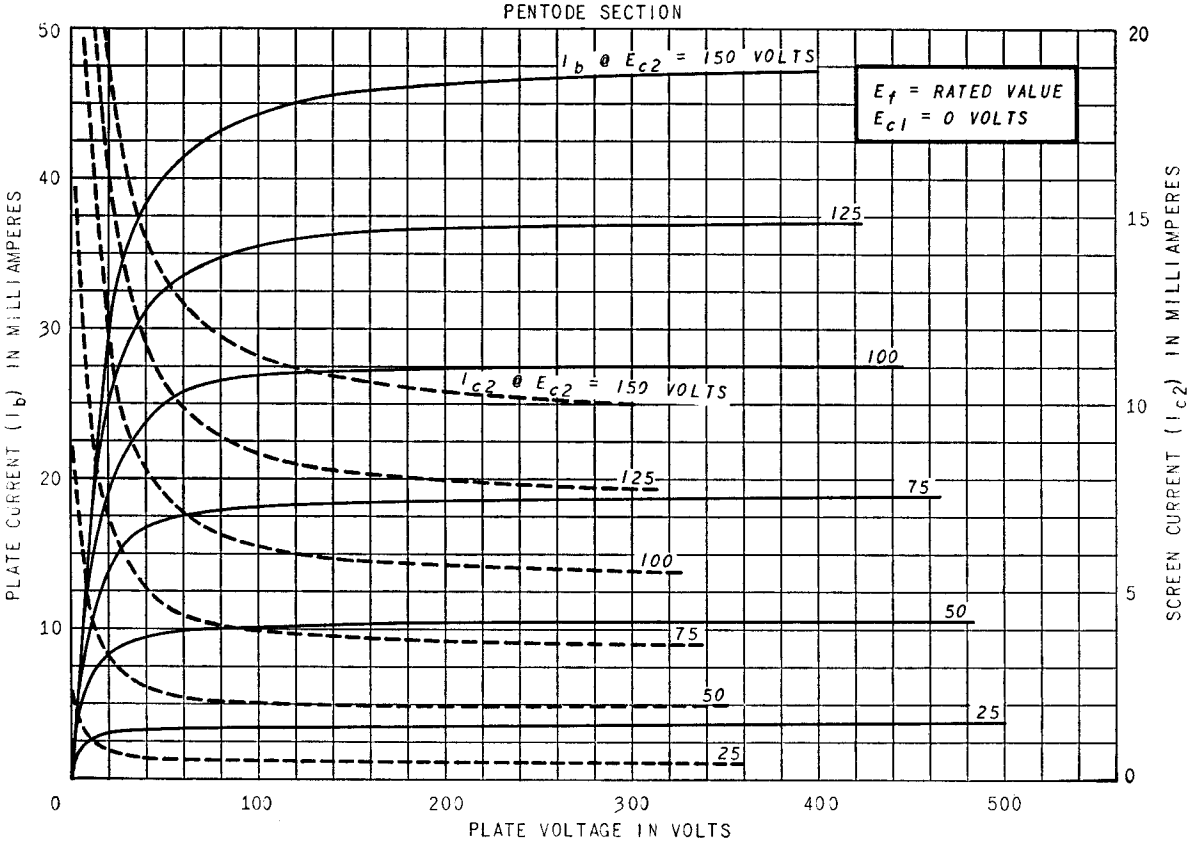
PENTODE SECTION



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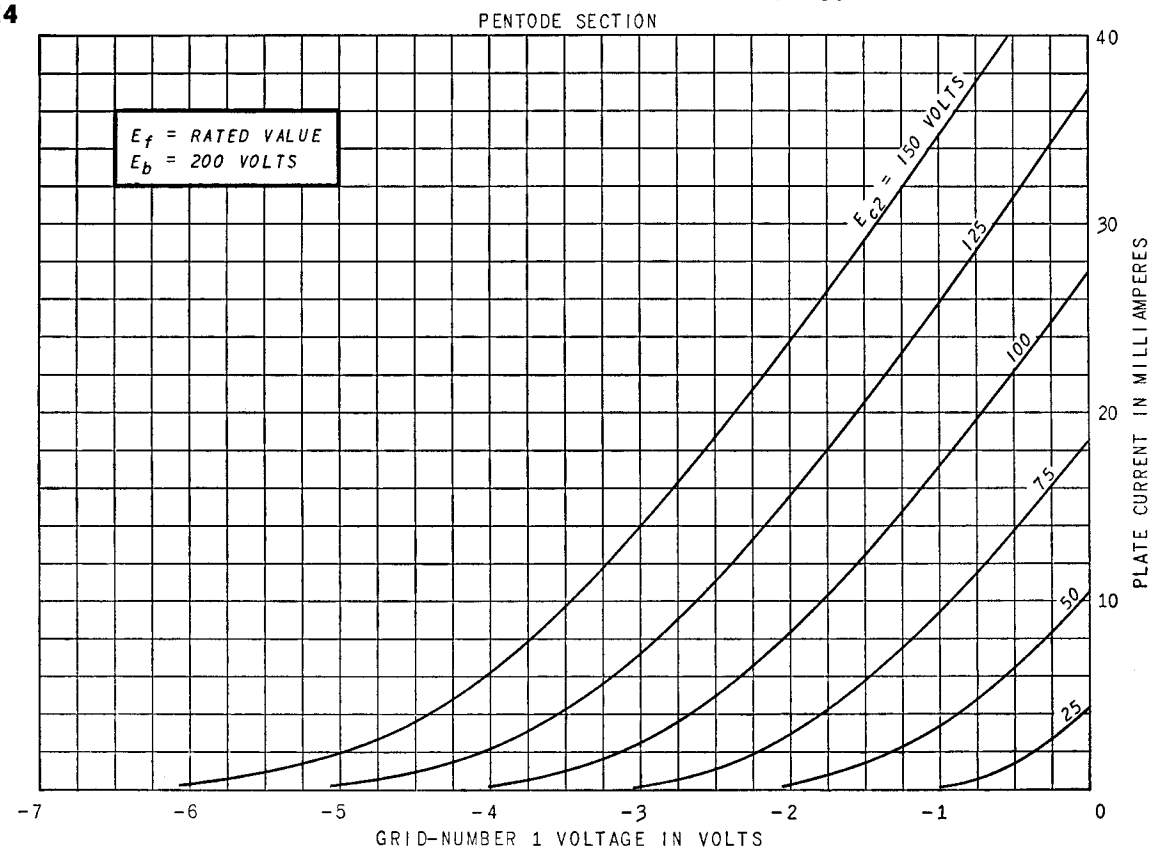

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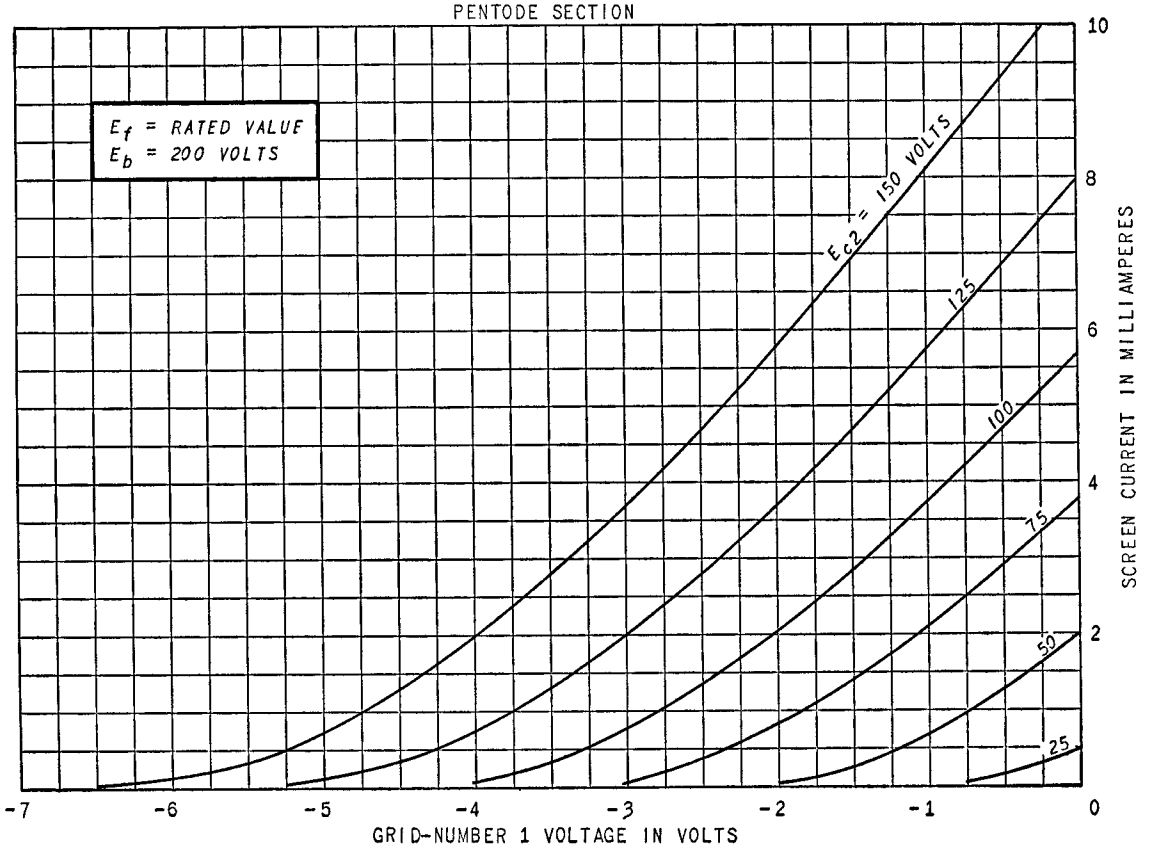

AVERAGE TRANSFER CHARACTERISTICS