

MEDIUM-MU TRIODE – SHARP-CUTOFF PENTODE TYPES 6AU8, 6AU8A AND 8AU8

The 6AU8, 6AU8A and 8AU8 are 9-pin miniature medium-mu triode and sharp-cutoff pentode types designed for service in color and black-and-white television receivers. The controlled cutoff triode unit is designed for service as a sync separator, sync clipper or blocking oscillator while the pentode unit is designed for operation as a video amplifier. The 6AU8A has a controlled plate knee characteristic.

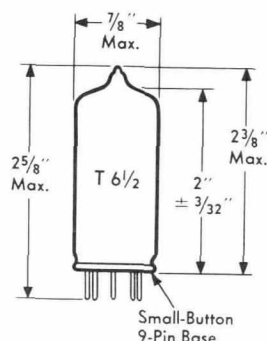
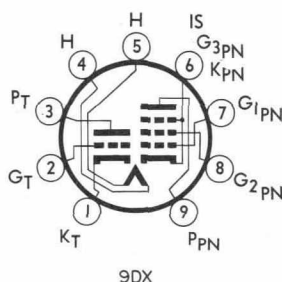
These types have been designed for use in receivers which employ series-connected heaters, especially in television receivers where the picture-tube heater is in series with other heaters. When each is employed in this type of circuit with other tubes having the same heater current, heater voltage surges across individual tubes are minimized inasmuch as the heater warm-up characteristic is controlled.

ELECTRICAL:

Cathode Heater:	Coated Unipotential		
	6AU8	8AU8	
	6AU8A		
Voltage (ac or dc)	6.3	8.4	Volts
Current	0.60	0.45	Ampere
Warm-up Time (Approx.) [▲]	11	11	Seconds
Direct Interelectrode Capacitances: (Unshielded)			
Triode			
Grid to Plate	2.2		$\mu\mu\text{f}$
Input	2.6		$\mu\mu\text{f}$
Output	0.34		$\mu\mu\text{f}$
Pentode			
Grid 1 to Plate	0.44	max.	$\mu\mu\text{f}$
Input	7.5	max.	$\mu\mu\text{f}$
Output	2.4	max.	$\mu\mu\text{f}$
Coupling			
Pentode Grid 1 to Triode Plate	0.006	max.	$\mu\mu\text{f}$
Pentode Plate to Triode Grid	0.022	max.	$\mu\mu\text{f}$
Pentode Plate to Triode Plate	0.12	max.	$\mu\mu\text{f}$

MECHANICAL:

Bulb	T-6½
Base	Miniature 9-Pin (JEDEC E9-1)
Outline	6-3
Basing	9DX
Mounting Position	Any



MAXIMUM RATINGS:

Design Maximum Values

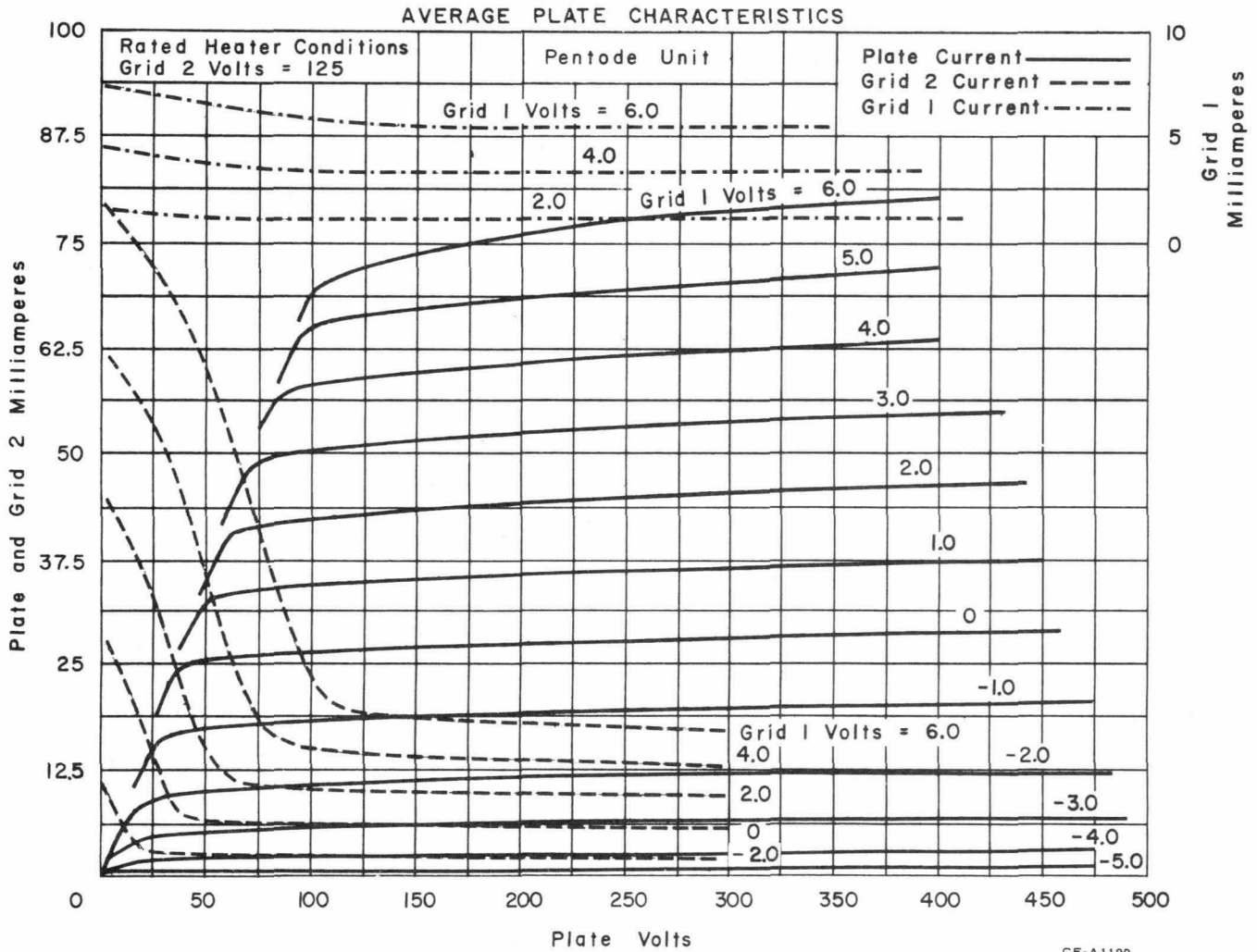
	Triode	Pentode	
Plate Voltage	300	300	max. Volts
Grid 2 Supply Voltage	--	300	max. Volts
Grid 2 Voltage	--		See Grid 2 Input Rating Chart
Plate Dissipation	2.5	3	max. Watts
Grid 2 Dissipation	--	1.0	max. Watts
Positive Grid 1 Bias Voltage	--	0	max. Volts
Grid 1 Circuit Resistance			
Fixed Bias	0.5	0.25	max. Megohm
Cathode Resistor Bias	1.0	1.0	max. Megohm
Heater-Cathode Voltage:			
Heater Negative with Respect to Cathode			
Total DC + Peak	200	200	max. Volts
Heater Positive with Respect to Cathode			
DC Component	100	100	max. Volts
Total DC + Peak	200	200	max. Volts

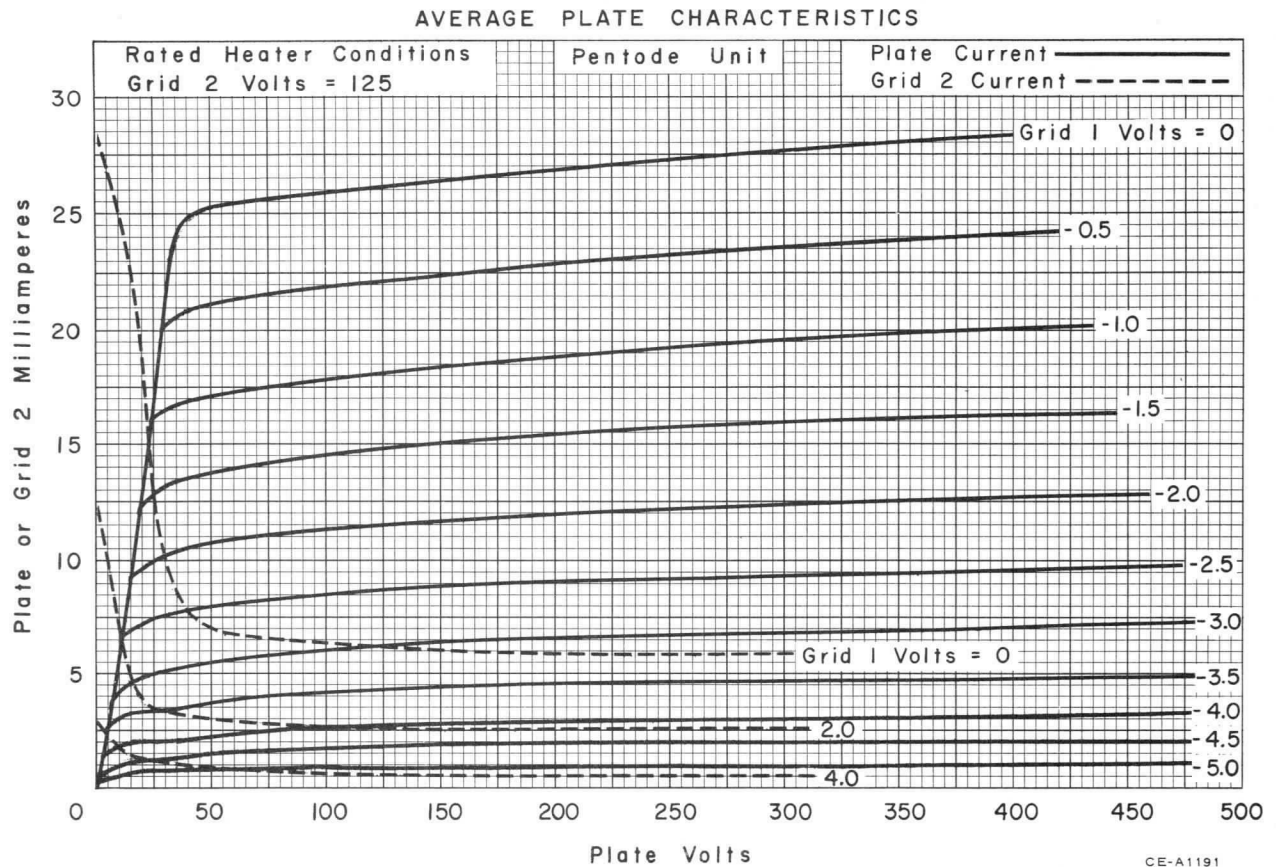
CHARACTERISTICS AND TYPICAL OPERATION:

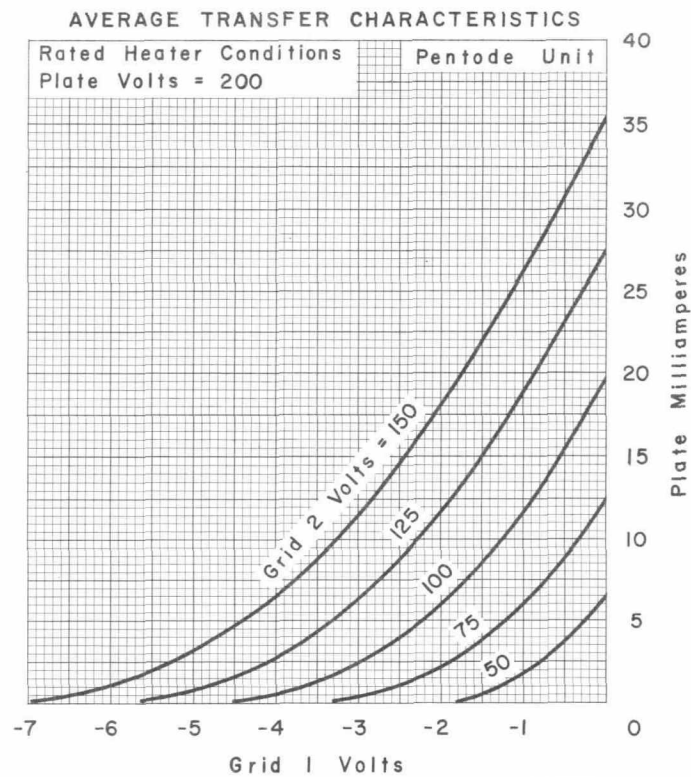
	Triode	Pentode	
Plate Voltage	150	200	Volts
Grid 2 Voltage	--	125	Volts
Cathode Bias Resistor	150	82	Ohms
Amplification Factor	40	--	
Plate Resistance (Approx.)	8200	150000	Ohms
Transconductance	4900	7000	μmhos
Plate Current	9	15	Ma.
Grid 2 Current	--	3.4	Ma.
Grid 1 Voltage	-6.5□	-8□	Volts

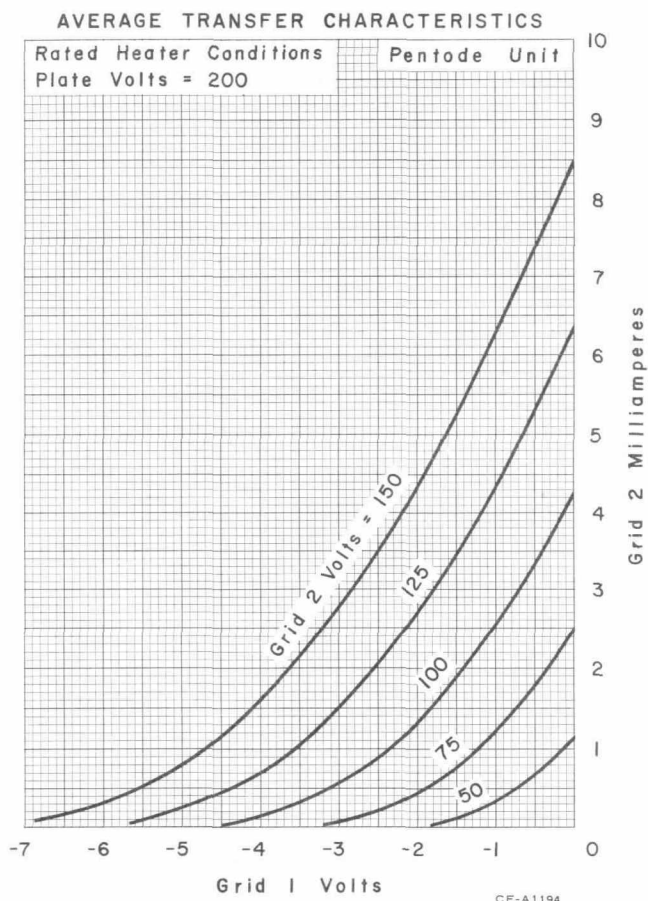
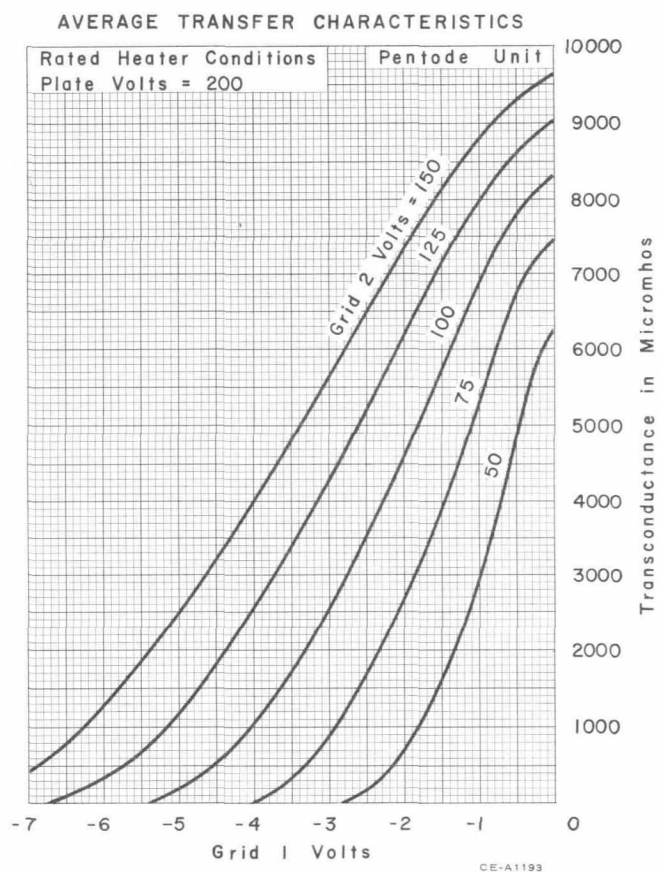
▲ Heater Warm-Up Time is defined as the time required for the voltage across the heater to reach 80% of its rated value after applying 4 times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to 3 times rated heater voltage divided by rated heater current.

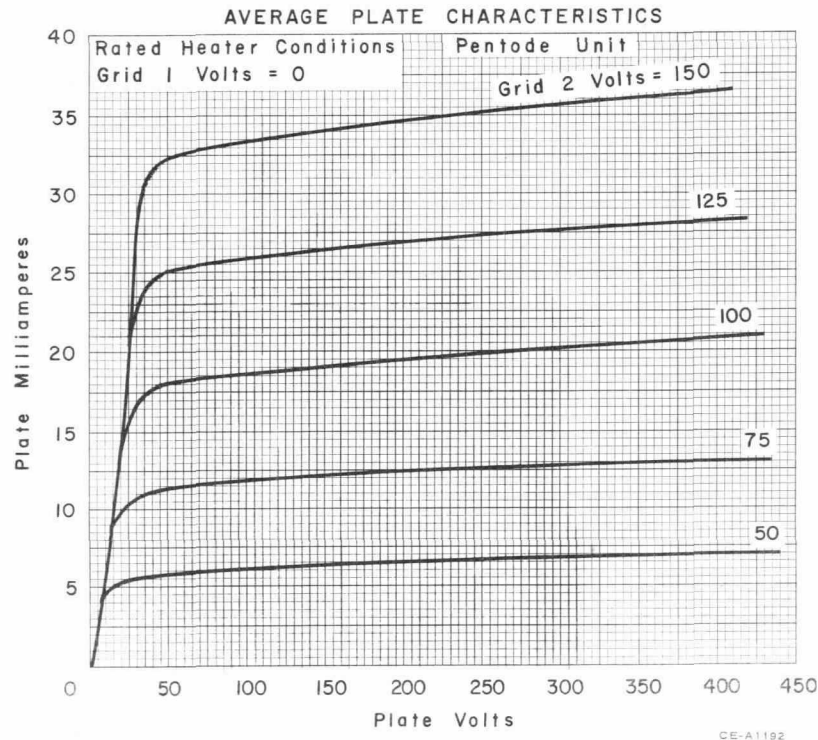
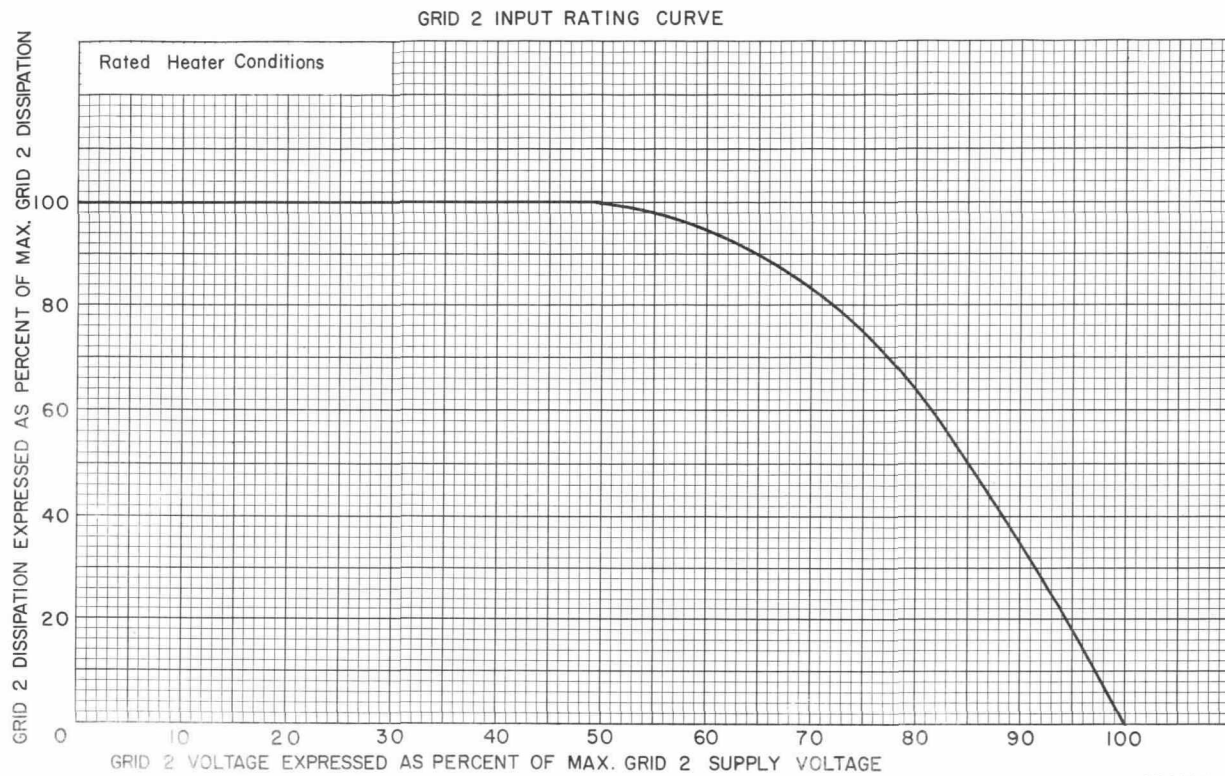
□ For plate current of 100 microamperes.



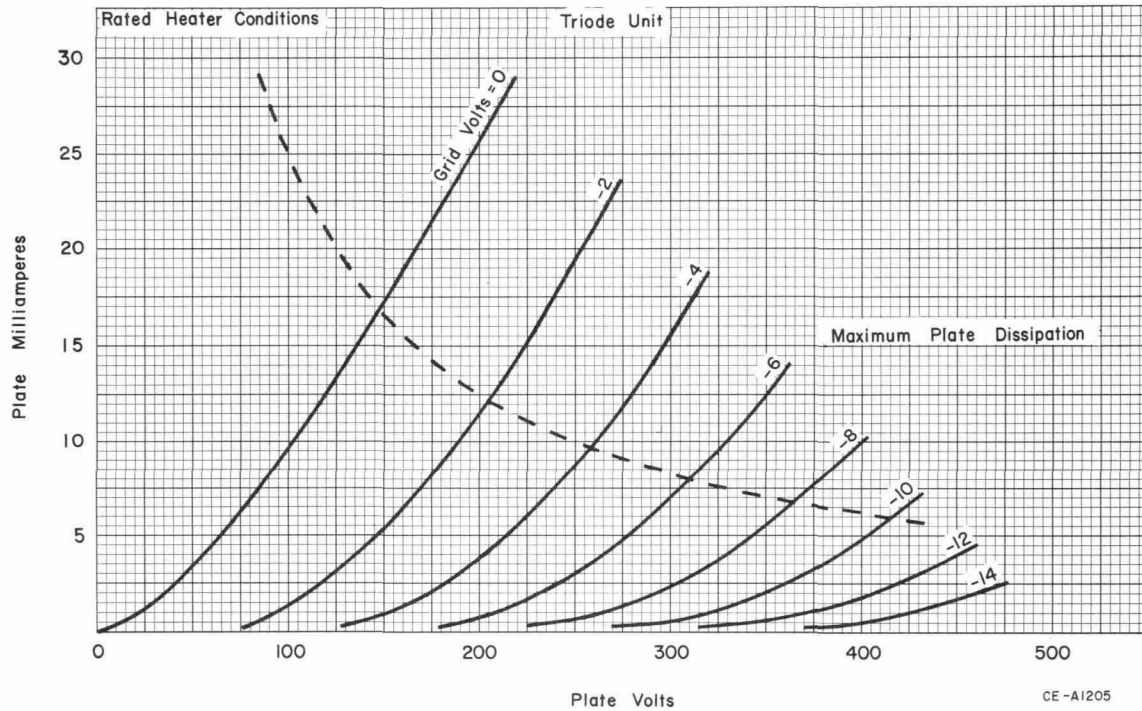




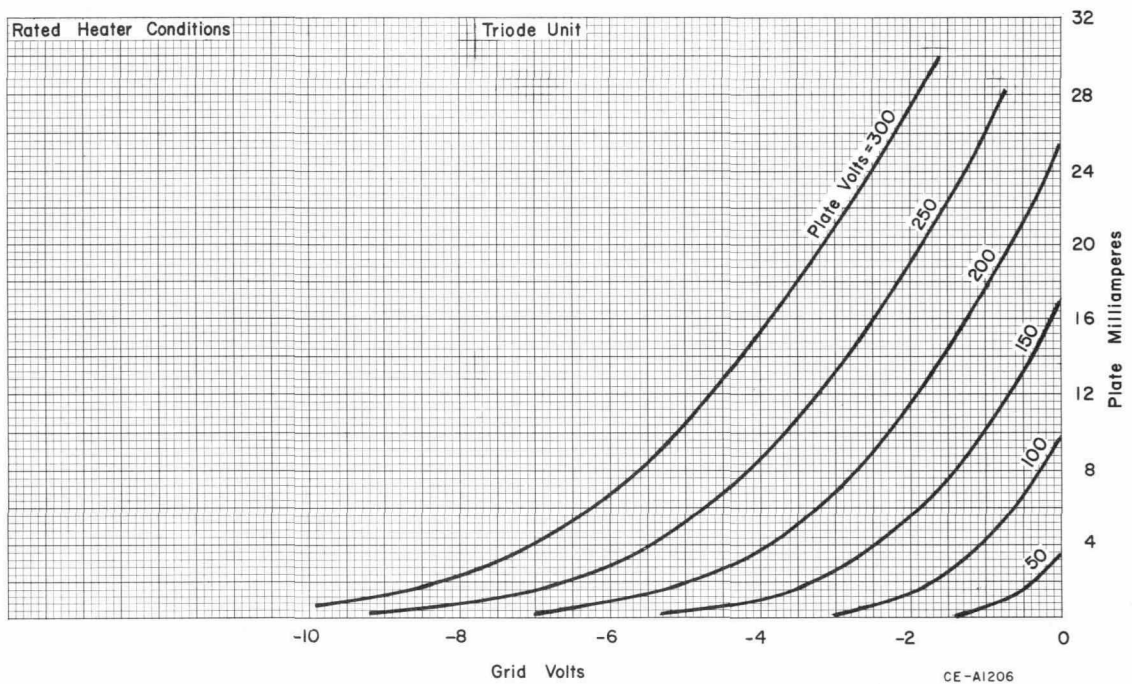




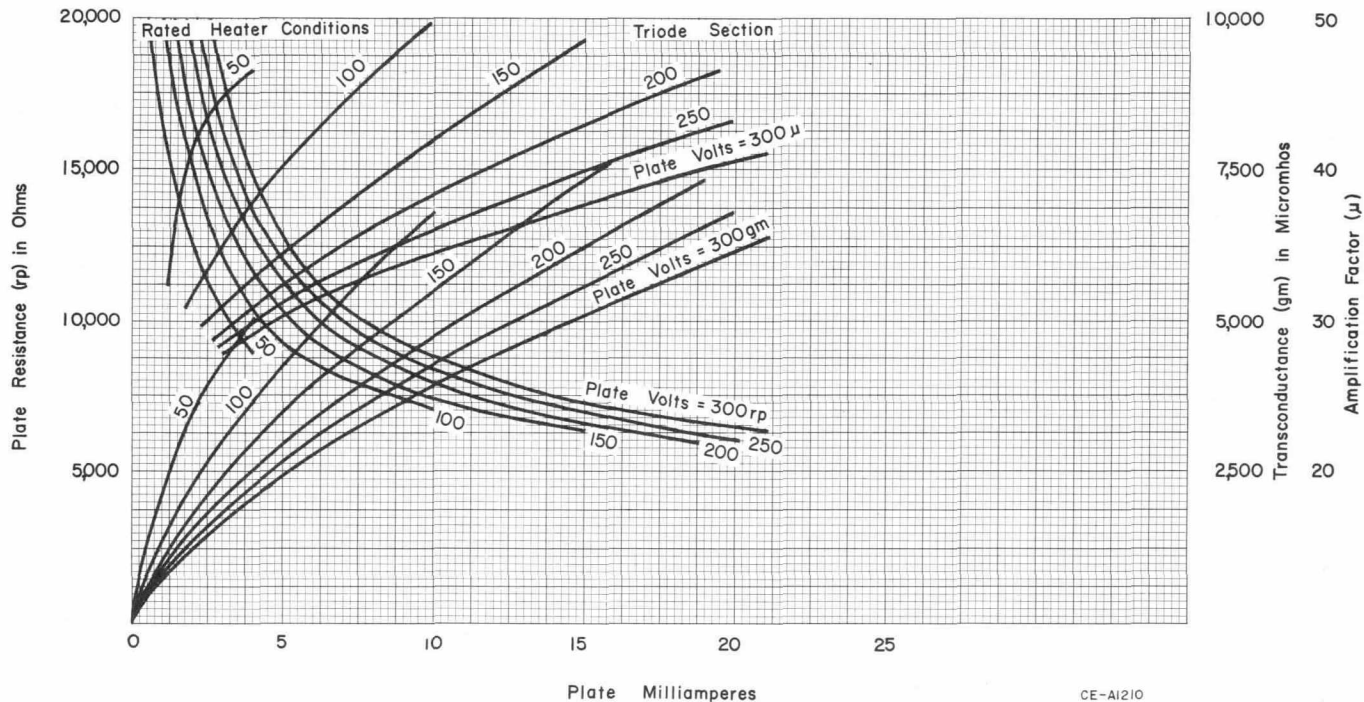
AVERAGE PLATE CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS



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