

MEDIUM-MU TRIODE - SHARP CUT-OFF PENTODE TYPE 6BH8

The 6BH8 is a 9-pin miniature triode-pentode type designed for service in television receivers. The high transconductance pentode unit may be used as an i-f amplifier, video amplifier, agc amplifier and reactance tube. The triode unit may be used in low-frequency oscillator, sync separator, sync clipper and phase splitter circuits.

The 6BH8 has 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 it is employed in this type of circuit with other tubes having a heater current rating of 600 ma., heater voltage surges across individual tubes are minimized inasmuch as the heater warm-up characteristic is controlled.

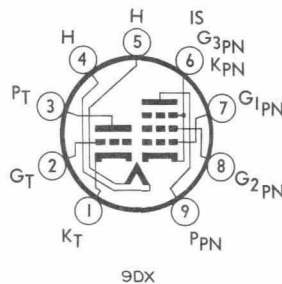
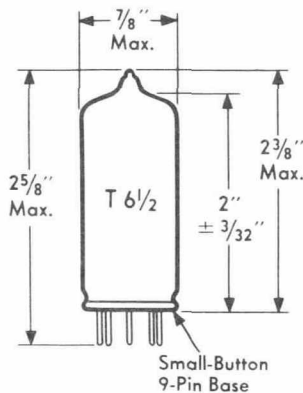
GENERAL DATA

ELECTRICAL:

Cathode.....	Coated Unipotential
Heater:	6BH8
Voltage.....	6.3 ac or dc Volts
Current.....	0.6 ± 6% Ampere
Warm-up Time (Approx.)*.....	11 Seconds
Direct Interelectrode Capacitances (Unshielded):	
Triode Unit	
Grid to Plate.....	2.4 μmf
Input.....	2.6 μmf
Output.....	0.38 μmf
Pentode Unit	
Grid 1 to Plate.....	0.046 μmf
Input.....	7 μmf
Output.....	2.4 μmf
Triode Grid to Pentode Plate.....	0.016 μmf
Pentode Grid 1 to Triode Plate.....	0.004 μmf
Pentode Plate to Triode Plate.....	0.095 μmf

MECHANICAL:

Bulb.....	T-6 1/2
Base.....	Miniature 9-Pin (JETEC E9-1)
Outline.....	6-3
Basing.....	9DX
Mounting Position.....	Any



MAXIMUM RATINGS

DESIGN CENTER VALUES:

	Triode Unit	Pentode Unit	
Plate Voltage.....	300 max.	300 max.	Volts
Grid 2 Supply Voltage.....	...	300 max.	Volts
Grid 2 Voltage.....	...	See Grid 2 Input Rating Chart	
Grid 1 Voltage			
Positive Bias Value.....	0 max.	0 max.	Volts
Plate Dissipation.....	2.5 max.	3.0 max.	Watts
Grid 2 Input.....	...	1.0 max.	Watt
Heater-Cathode Voltage:			
Heater Negative with Respect to Cathode			
Total DC + Peak.....	200 max.	200 max.	Volts
Heater Positive with Respect to Cathode			
DC Component.....	100 max.	100 max.	Volts
Total DC + Peak.....	200 max.	200 max.	Volts

MAXIMUM CIRCUIT VALUES:

Grid 1 Circuit Resistance**			
Cathode-Bias Operation.....	1.0 max.	1.0 max.	Megohm
Fixed-Bias Operation.....	0.5 max.	0.25 max.	Megohm

CHARACTERISTICS AND TYPICAL OPERATION

CLASS A₁ AMPLIFIER

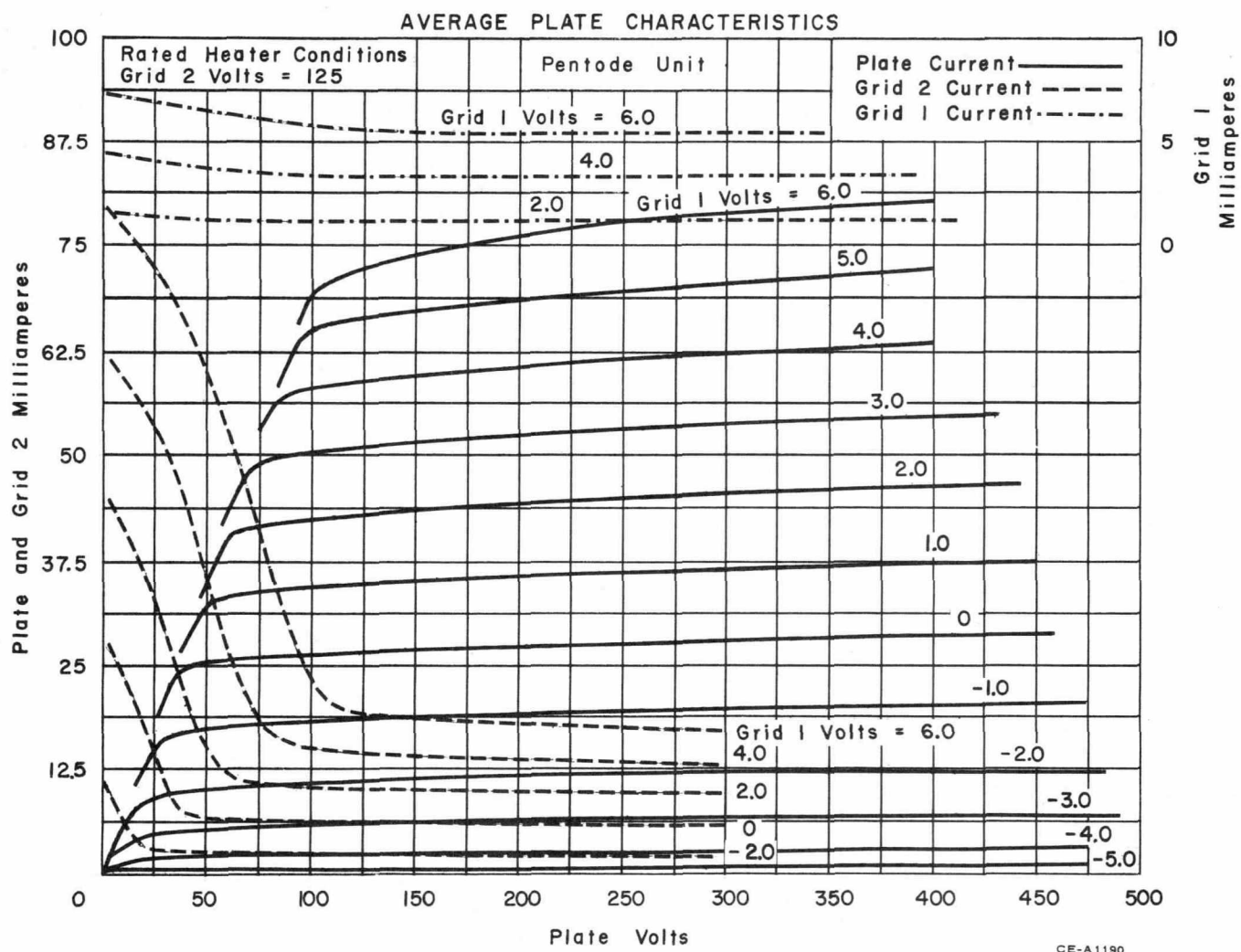
	Triode Unit	Pentode Unit	
Plate Supply Voltage.....	150	200	Volts
Grid 2 (Screen) Supply Voltage.....	...	125	Volts
Grid 1 (Control-Grid) Voltage.....	-5	...	Volts
Cathode-Bias Resistor.....	...	82	Ohms
Amplification Factor.....	17	...	
Plate Resistance (Approx.).....	5150	150000	Ohms
Transconductance.....	3300	7000	umhos
Grid 1 Cutoff Voltage* (Approx.).....	-14	-8	Volts
Plate Current.....	9.5	15	Ma.
Grid 2 Current.....	...	3.4	Ma.

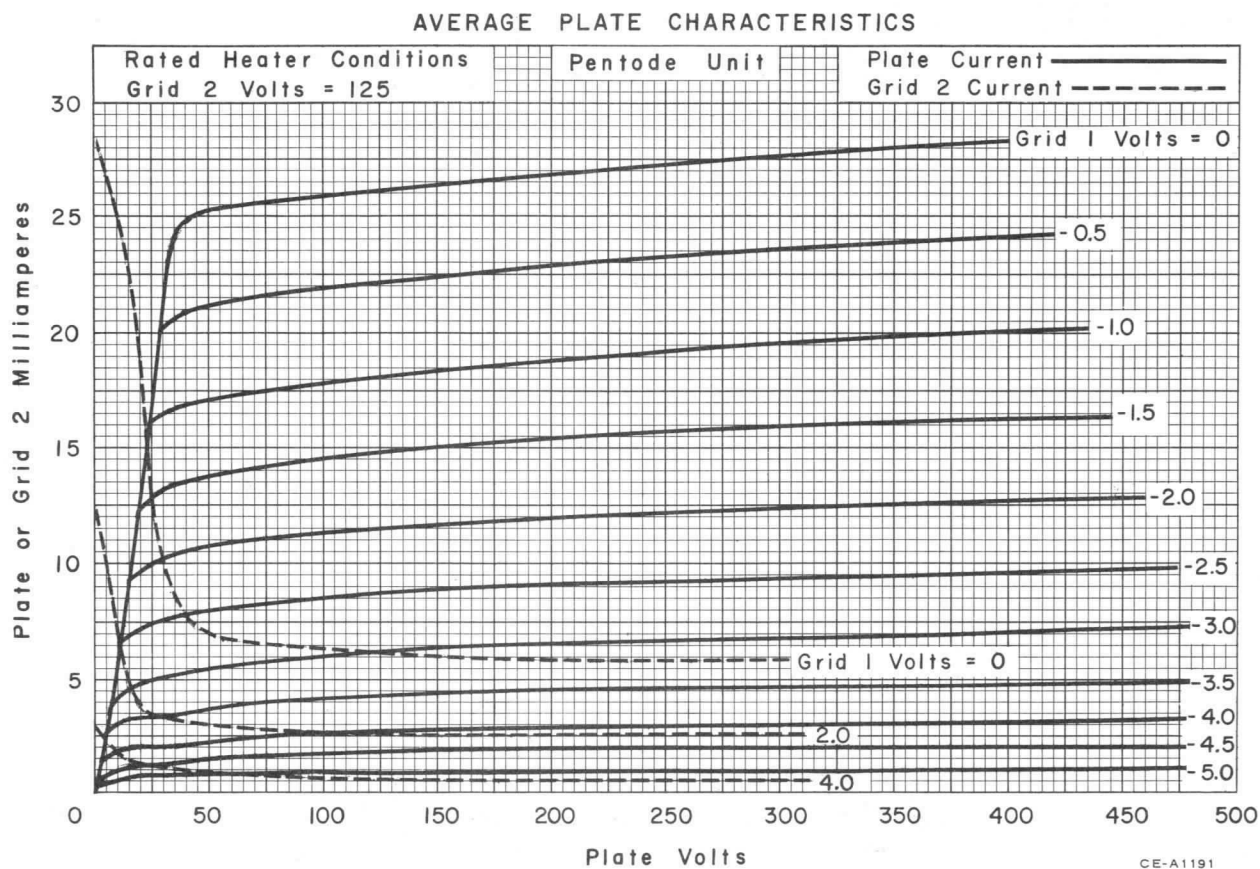
* Heater warm-up time is defined as the time required for the voltage across the heater to reach 80% of its rated value after applying 4 times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to 3 times rated heater voltage divided by rated heater current.

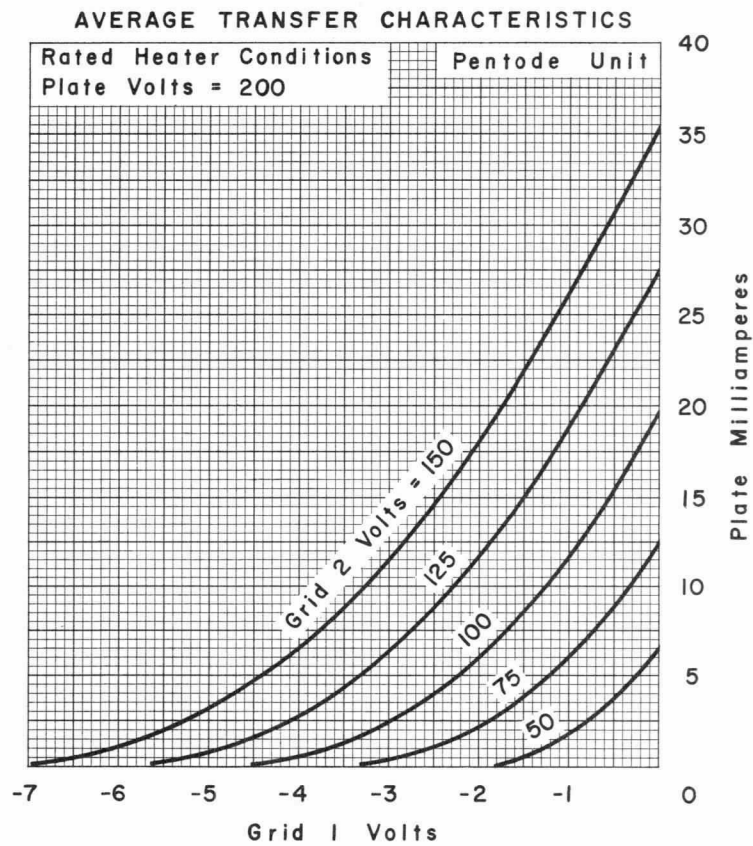
** If either unit is operating at maximum rated conditions, grid 1 circuit resistances for both units should not exceed the stated values.

• For plate current of 100 μamp .

Receiving Tube Section

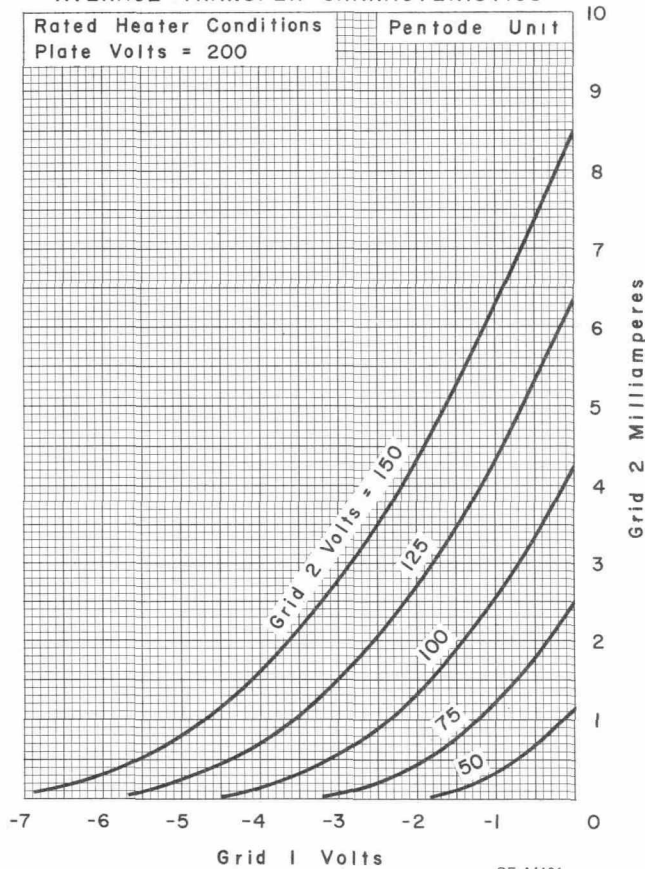




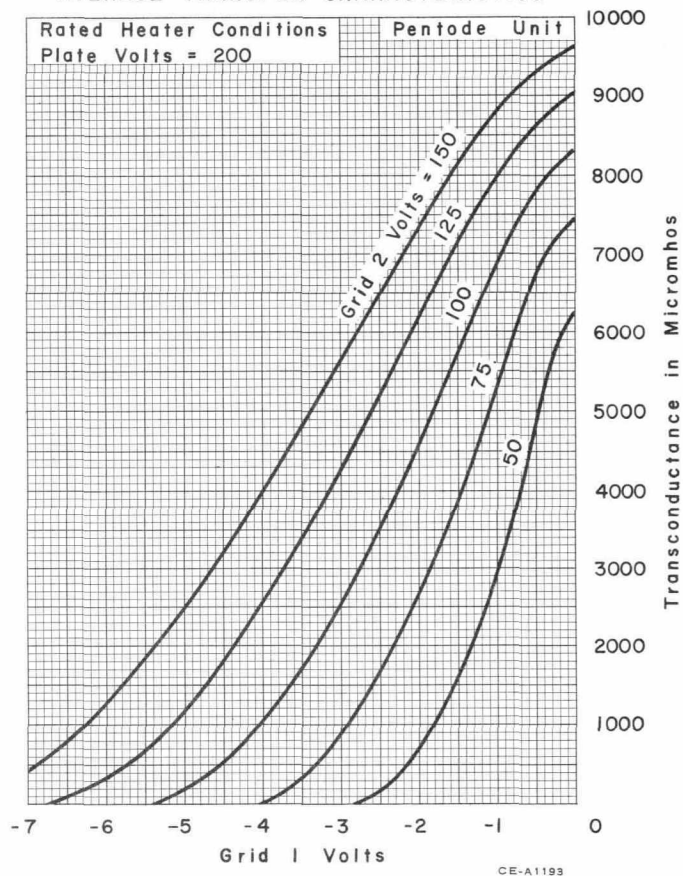


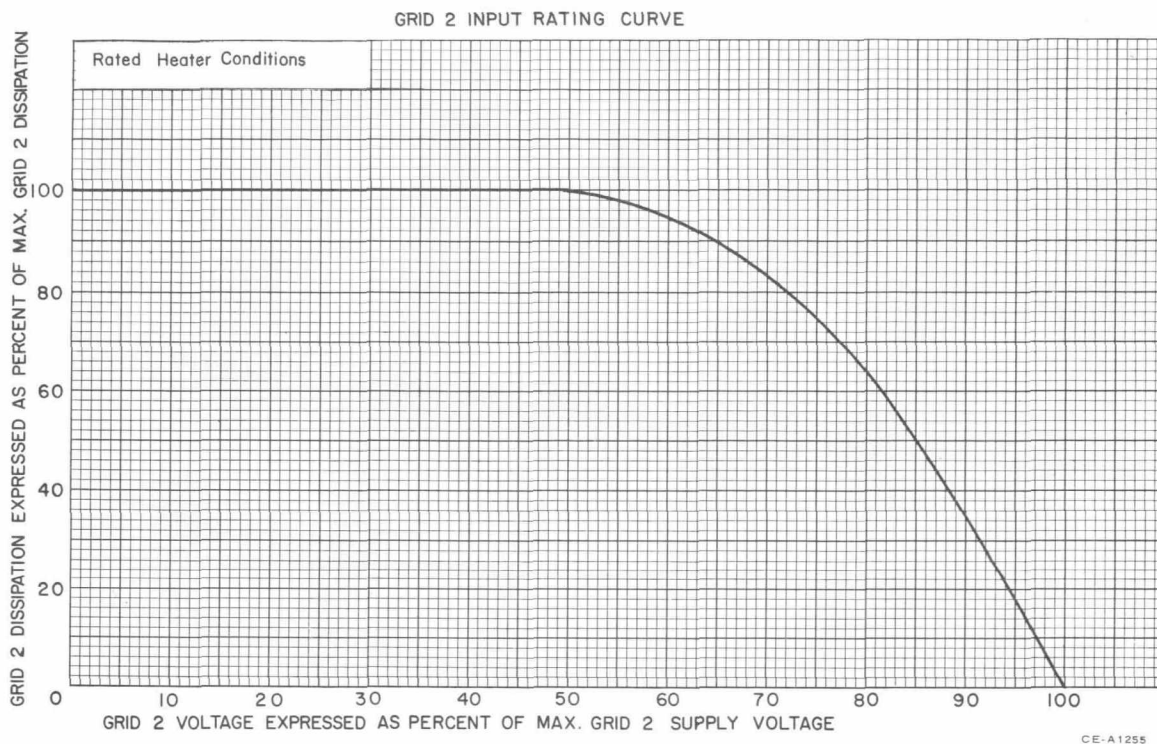
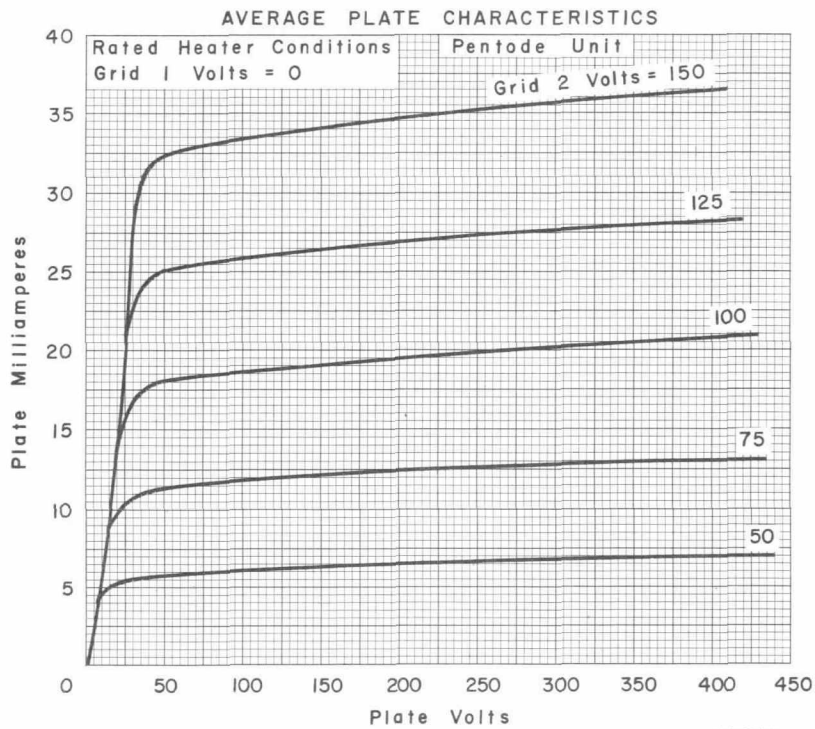
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AVERAGE TRANSFER CHARACTERISTICS

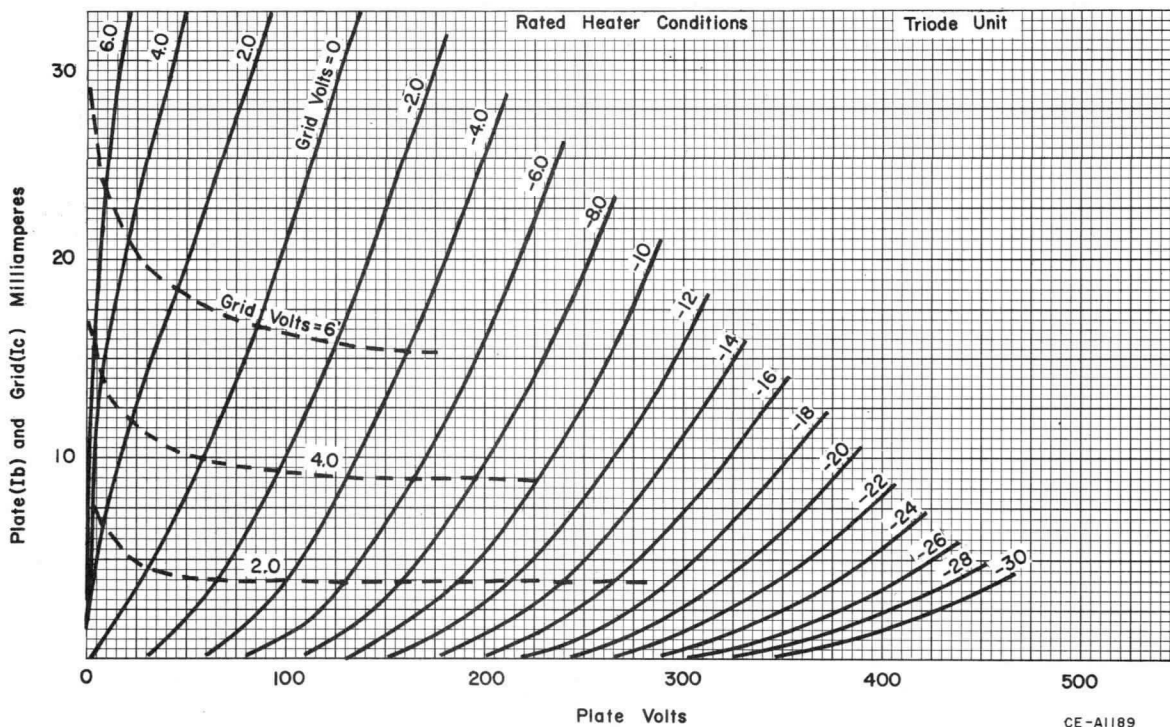


AVERAGE TRANSFER CHARACTERISTICS

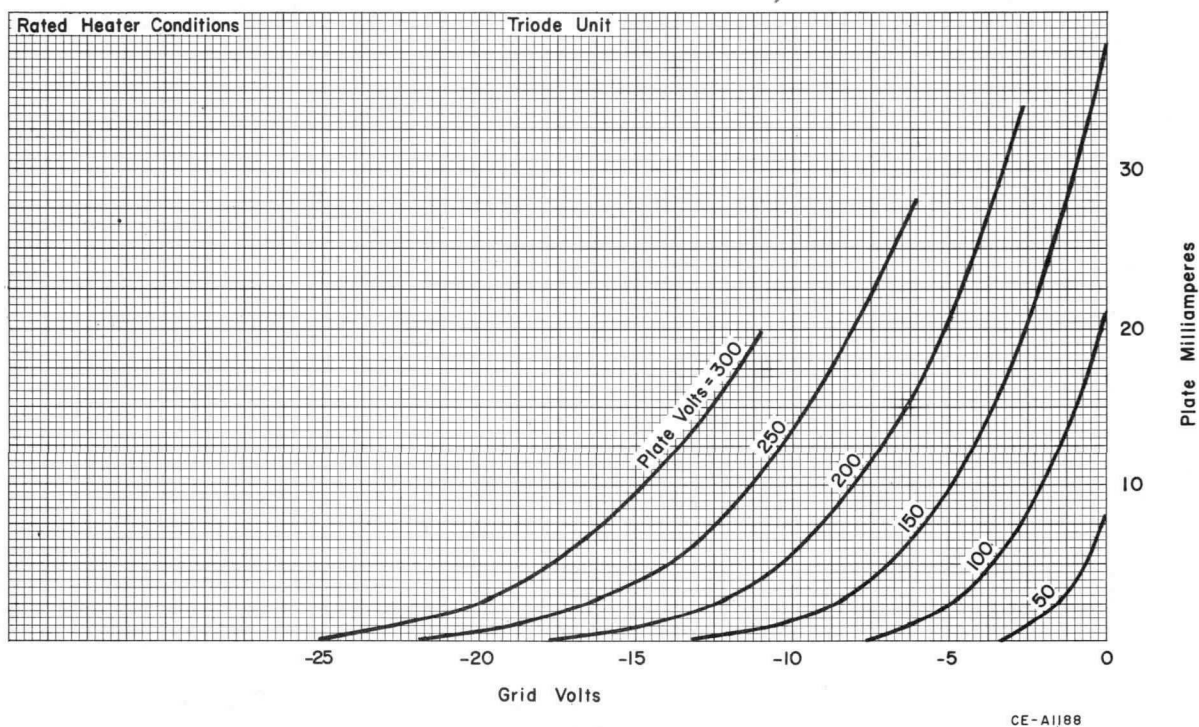




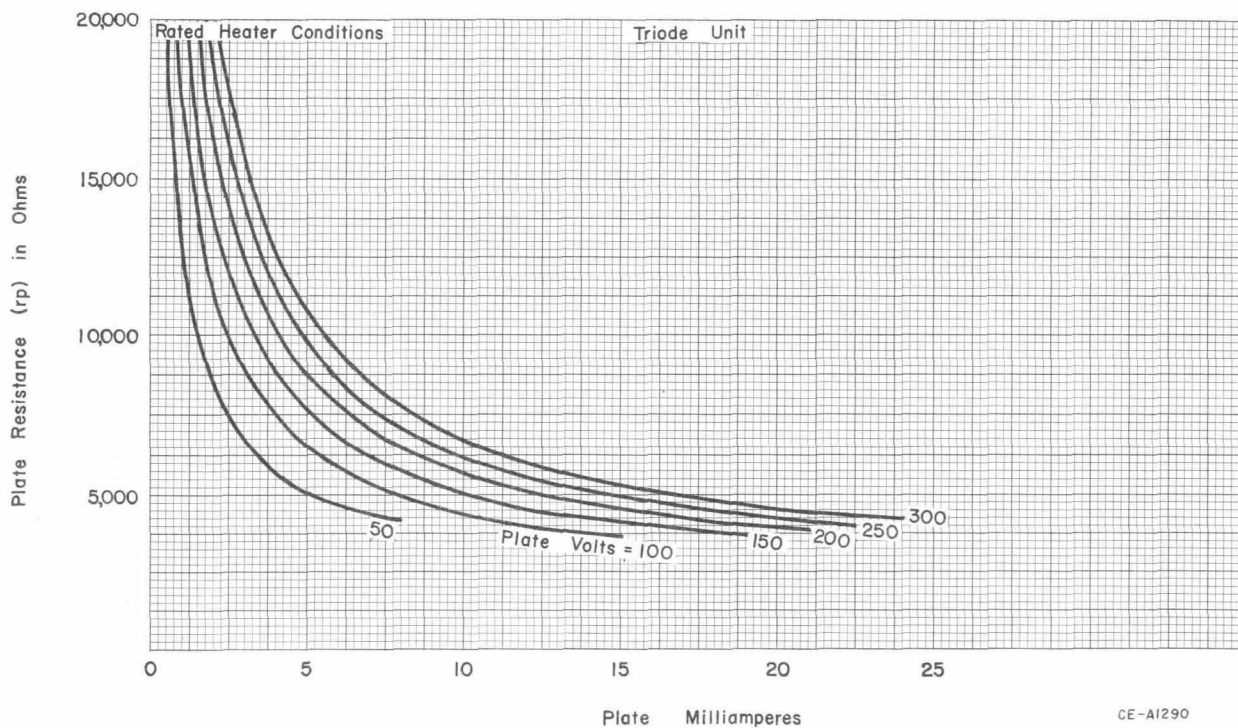
AVERAGE PLATE CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS



AVERAGE CHARACTERISTICS



AVERAGE CHARACTERISTICS

