

HIGH - MU TRIODE - SHARP - CUTOFF PENTODE TYPES 6GN8 AND 8GN8

The 6GN8 and 8GN8 are 9-pin miniature high-mu triode and sharp-cutoff pentode types designed for service in color and black-and-white television receivers. The triode unit is designed for service as a sync separator, sync clipper and phase inverter while the pentode unit is designed for operation as a video amplifier.

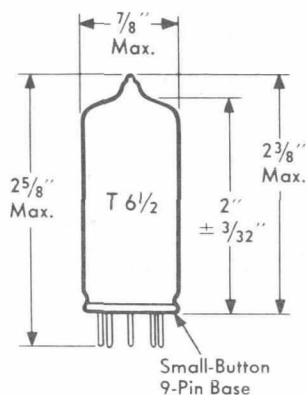
The 8GN8 has been designed for use in receivers which employ series-connected heaters, especially in television receivers where the picture-tube heater is in series with other heaters. When it is employed in this type of circuit with other tubes having a heater current rating of 600 ma., heater voltage surges across individual tubes are minimized inasmuch as the heater warm-up characteristic is controlled.

ELECTRICAL:

Cathodes	Coated Unipotential	
Heater:	6GN8	8GN8
Voltage (ac or dc)	6.3 ± 10%	8.0 Volts
Current	0.75	0.6 ± 6% Ampere
Warm-up Time (Approx.) ▲	--	11 Seconds
Direct Interelectrode Capacitances: (Unshielded)		
Triode:		
Grid to Plate	4.4	μμf
Input	2.4	μμf
Output	0.36	μμf
Pentode:		
Grid 1 to Plate	0.1 max.	μμf
Input	11	μμf
Output	4.2	μμf
Coupling:		
Pentode Grid 1 to Triode Plate	.005 max.	μμf
Pentode Plate to Triode Grid	0.018 max.	μμf
Pentode Plate to Triode Plate	0.17 max.	μμf

MECHANICAL:

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



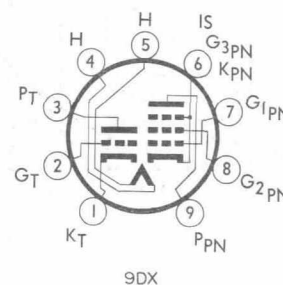
MAXIMUM RATINGS:

Design Maximum Values ♦

	Triode	Pentode	
Plate Voltage	330	330 max.	Volts
Grid 2 Supply Voltage	--	330 max.	Volts
Grid 2 Voltage	--	See CE-A825	
Plate Dissipation	1.0	5 max.	Watts
Grid 2 Dissipation	--	1.1 max.	Watts
Positive Grid 1 Bias Voltage	0	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	250	60 200	Volts
Grid 2 Voltage	--	150 150	Volts
Grid 1 Voltage	-2	0 --	Volts
Cathode Bias Resistor	--	-- 100	Ohms
Amplification Factor	100	-- --	
Plate Resistance (Approx.)	37000	-- 60000	Ohms
Transconductance	2700	-- 11500	μmhos
Plate Current	2	55★ 25	Ma.
Grid 2 Current	--	18★ 5.5	Ma.
Grid 1 Voltage	-5♦	-10□	Volts



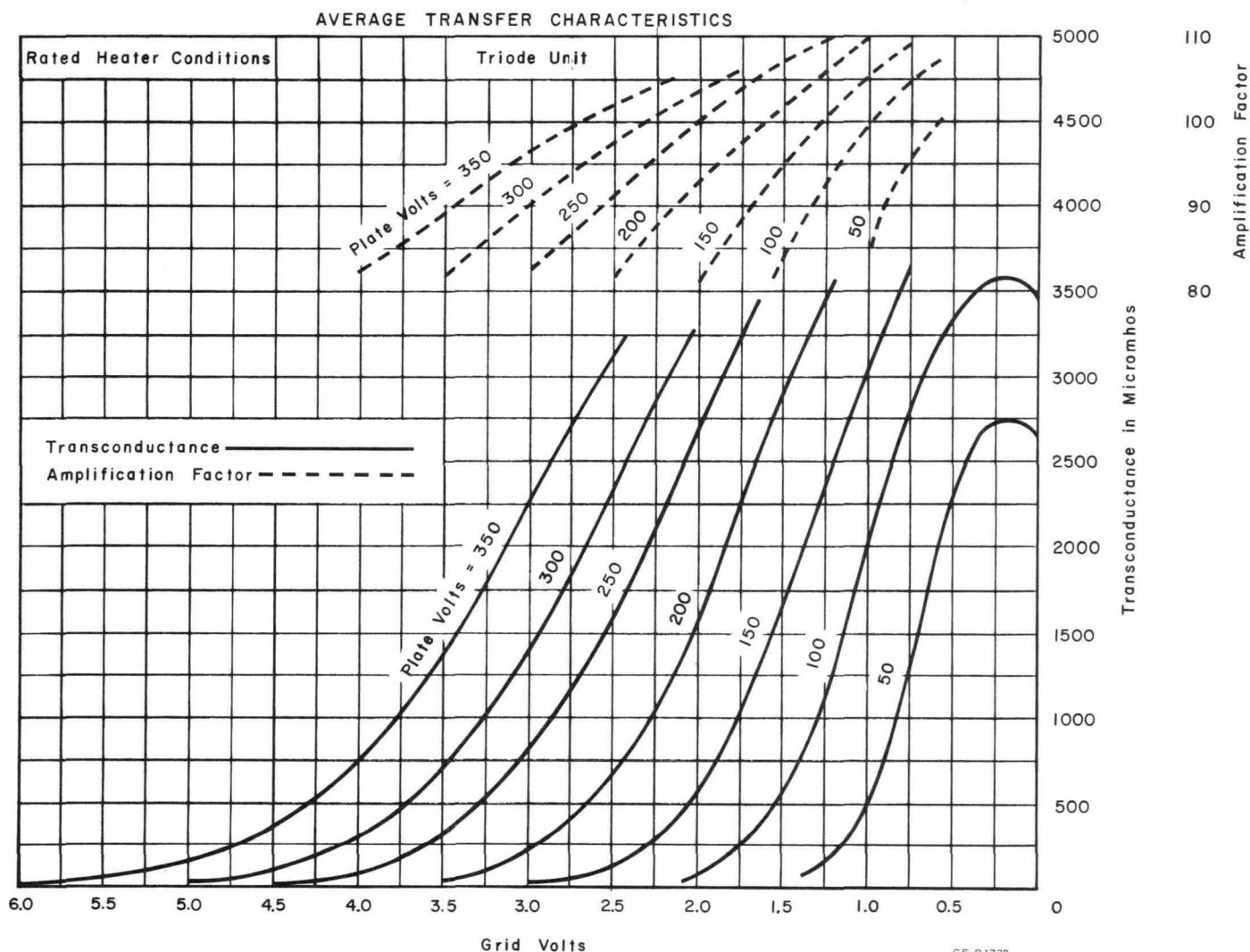
▲ Heater Warm-Up Time is defined as the time required for the voltage across the heater to reach 80% of its rated value after applying 4 times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to 3 times rated heater voltage divided by rated heater current.

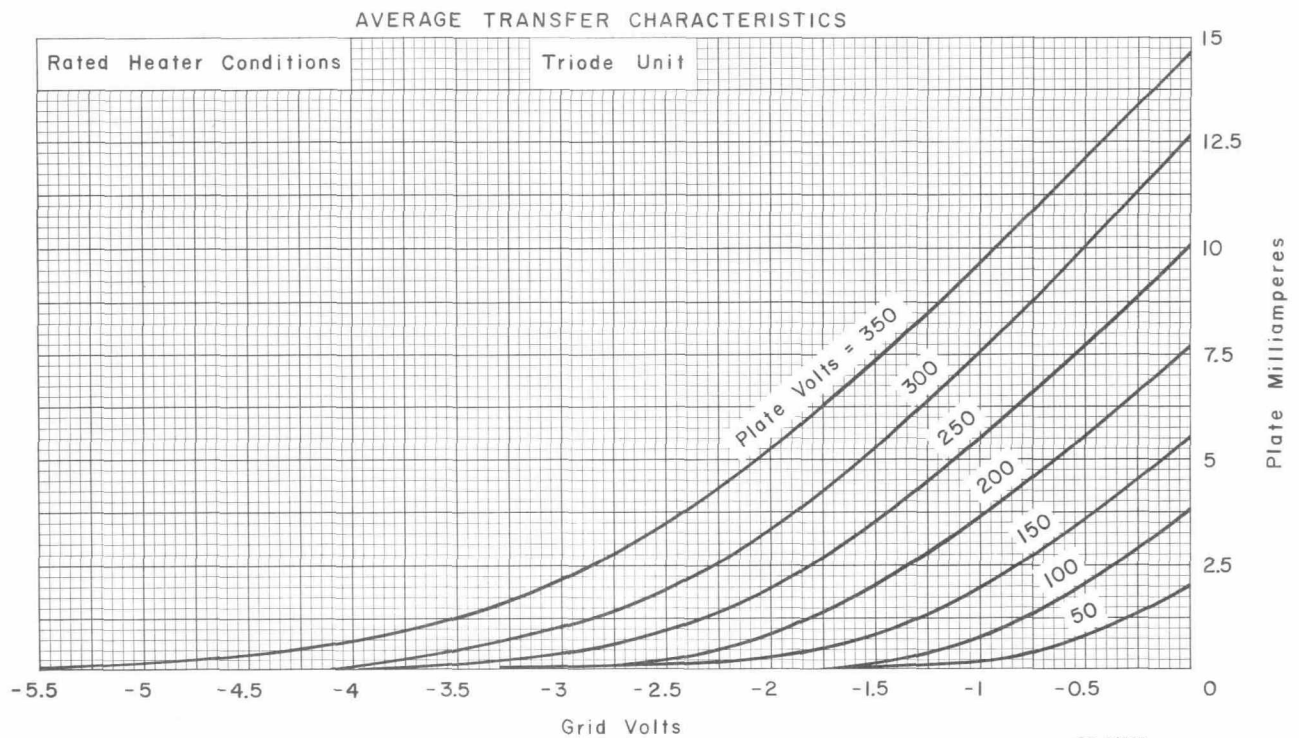
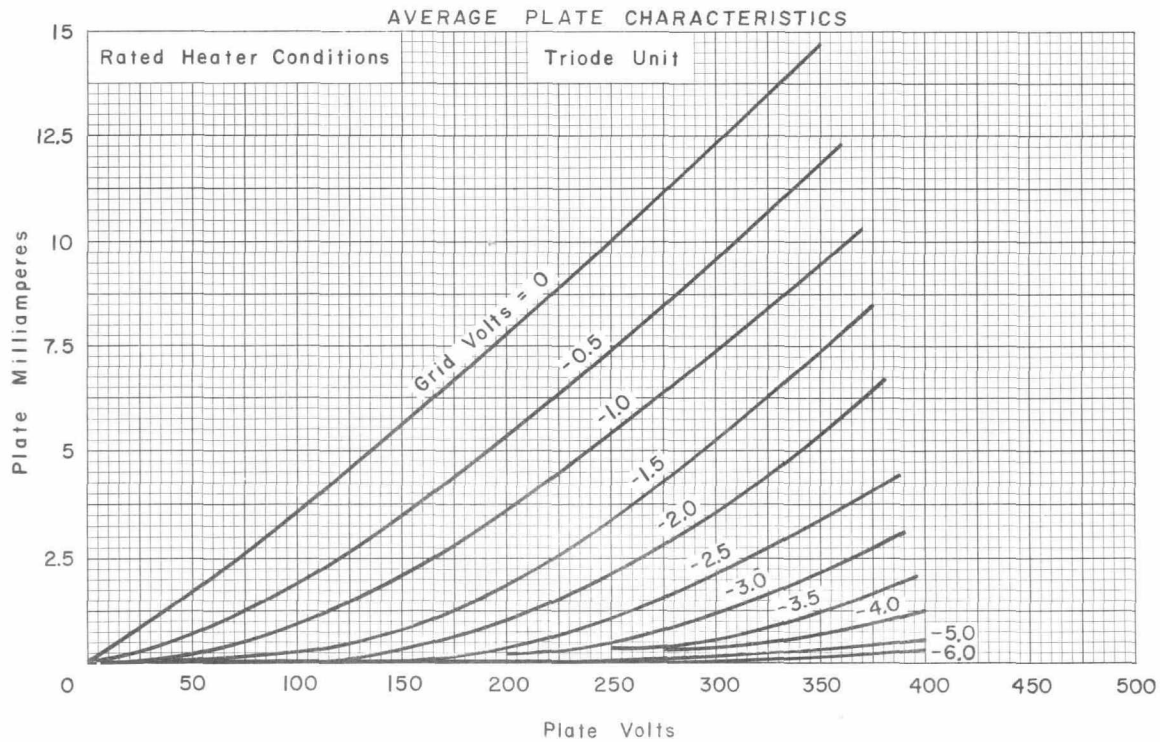
★ These values can be measured by a method involving a re-current waveform such that the plate and grid 2 dissipation will be kept within ratings to prevent damage to the tube.

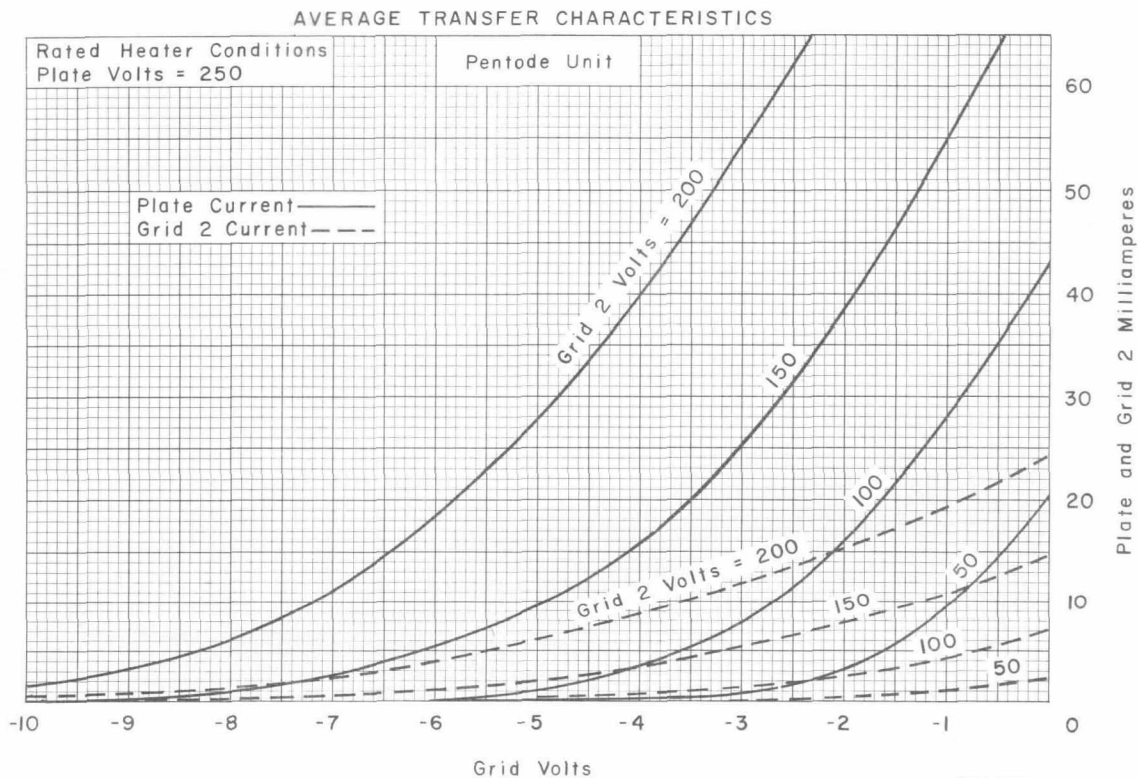
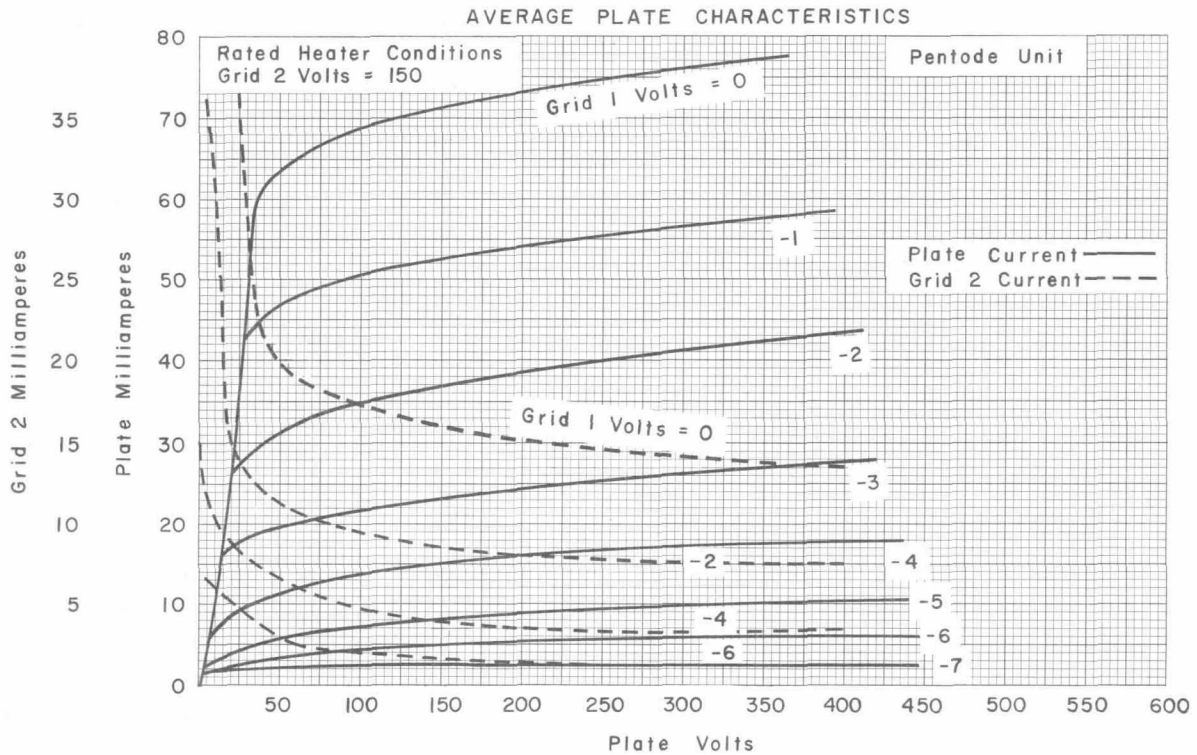
⊕ For plate current of 20 microamperes.

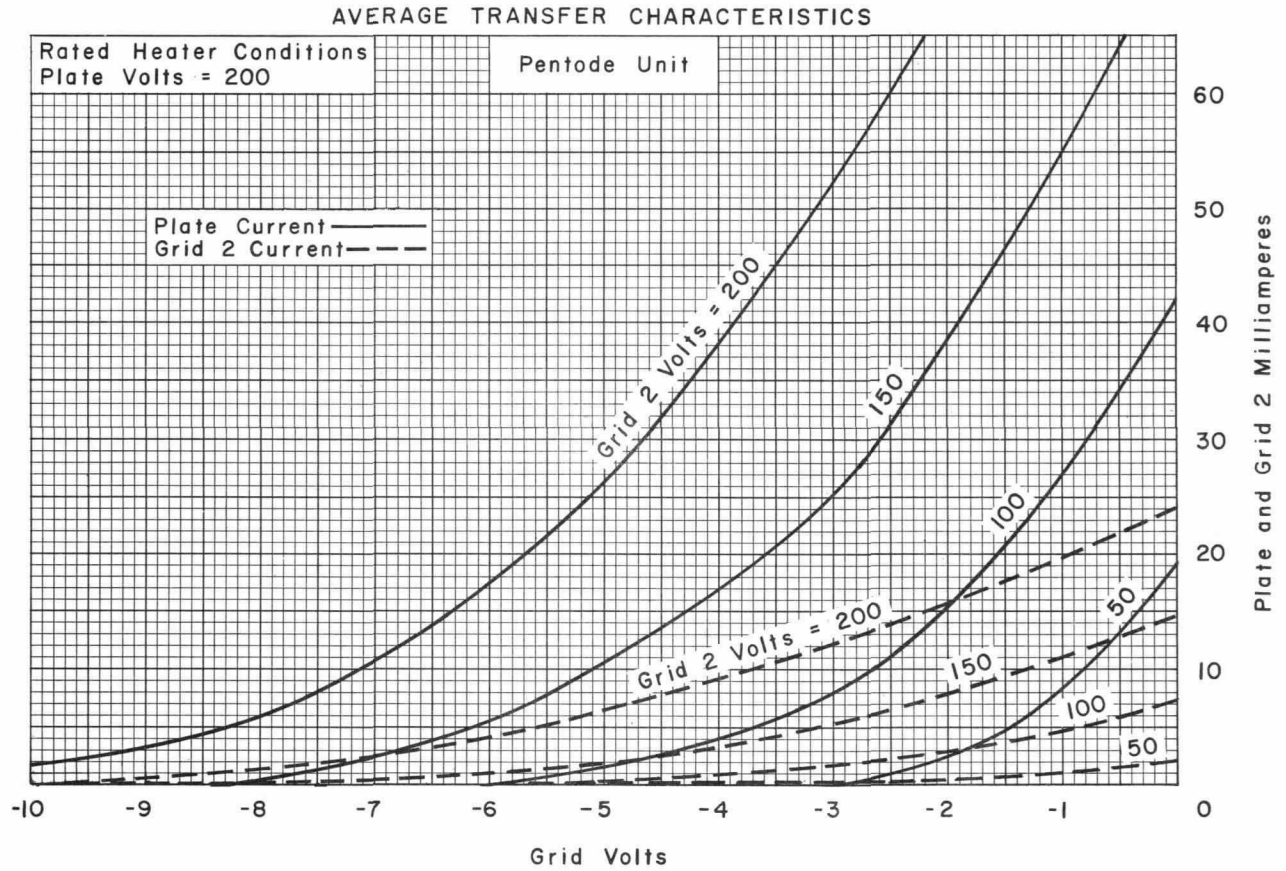
□ For plate current of 100 microamperes.

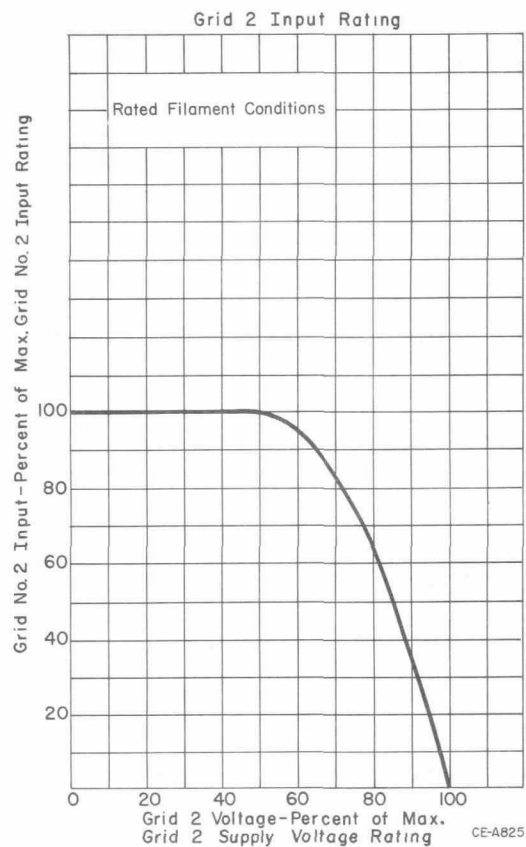
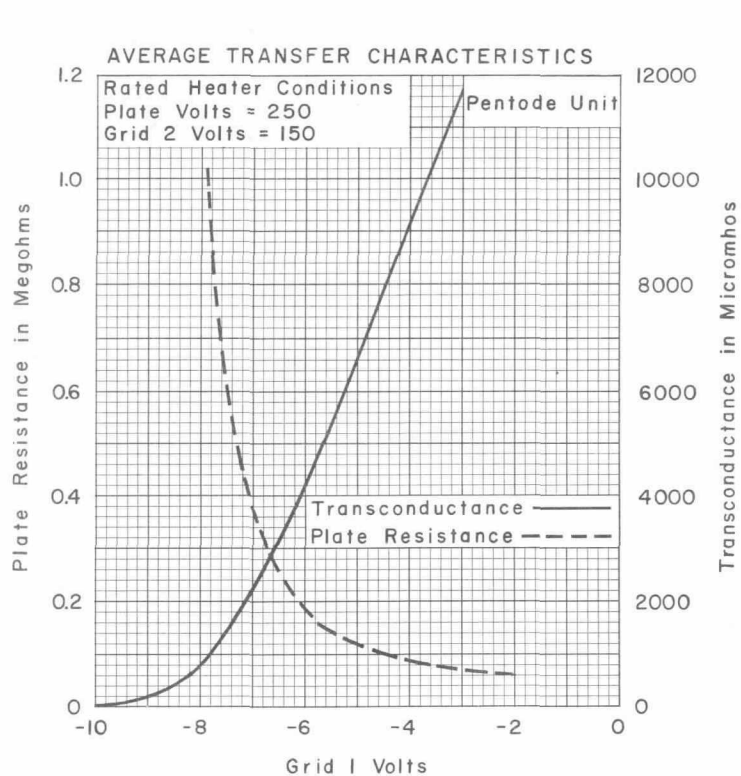
◆ Design-Maximum ratings are limiting values of operating and environmental conditions applicable to a bogey tube of a specified type as defined by its published data, and should not be exceeded under the worse probable conditions. The tube manufacturer chooses these values to provide acceptable serviceability of the tube, taking responsibility for the effects of changes in operating conditions due to variations in tube characteristics. 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 control adjustment, load variation, signal variation, and environmental conditions.











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