

TRIODE-PENTODE CONVERTER TYPES 5FG7 AND 6FG7

The 5FG7 and 6FG7 are 9-Pin miniature medium-mu triode and sharp-cutoff pentode types designed for service as combined oscillator and mixer in television receiver VHF tuners.

The 5EA8 and 6EA8 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 similarly designed having the same heater current rating, heater voltage surges across individual tubes are minimized inasmuch as the heater warm-up characteristic is controlled.

ELECTRICAL:

Cathode.....	Coated Unipotential			
Heater:	5FG7	6FG7		
Voltage (ac or dc)	4.7	6.3	Volts	
Current	0.60 ± 6%	0.45 ± 6%	Amperes	
Warm-up Time●.....	11	11	Seconds	
Direct Interelectrode Capacitances:				
Triode Unit:	Unshielded		Shielded #	
Grid to Plate	1.8	1.8	μμf	
Input.....	3.0	3.0	μμf	
Output.....	1.3	1.9	μμf	
Pentode Unit:				
Grid 1 to Plate	0.02	max.	0.01	max. μμf
Input.....	5.0		5.0	μμf
Output.....	2.4		3.4	μμf
Heater to Cathode	6.0		6.0□	

MECHANICAL:

Bulb	T-6-½
Base.....	Miniature 9-pin (JEDEC E9-1)
Basing.....	9GF
Outline	6-2
Mounting	Any

CHARACTERISTICS:

	Triode Unit	Pentode Unit	
Plate Voltage	125	125	100 Volts
Grid 2 Voltage.....	-	125	100 Volts
Grid 1 Voltage.....	-1.0	-1.0	0 Volts
Amplification Factor	43	-	-
Plate Resistance (Approx.)	5700	180000	- Ohms
Transconductance	7500	6000	7400 μmhos
Grid 1 Cutoff Bias ⊕.....	-6.5	-7.5	- Volts
Plate Current	13	11	- Ma.
Grid 2 Current.....	-	4.0	- Ma.

MAXIMUM RATINGS:

Design Maximum Values

	Triode Unit	Pentode Unit	
Plate Voltage	330	330	max. Volts
Grid 2 (Screen) Voltage.....	-	-	See Grid 2 Input Rating Curve
Grid 2 Supply Voltage.....	-	330	max. Volts
Grid 1 (Control Grid) Voltage	-	-	-
Positive Bias Value.....	0	0	max. Volts
Plate Dissipation.....	2.5	3.0	max. Watts
Grid 2 Input	-	0.55	max. Watt
Heater Cathode Voltage			
Heater Positive with Respect to Cathode			
DC Component.....	100	100	max. Volts
Total DC and Peak.....	200	200	max. Volts
Heater Negative with Respect to Cathode, Total DC and Peak.....			
	200	200	max. Volts

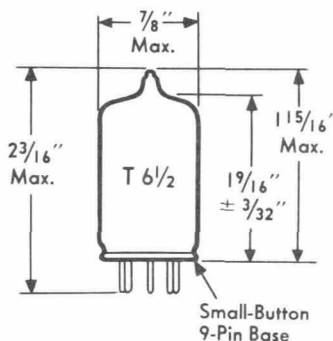
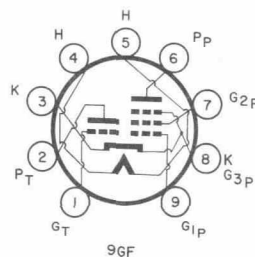
● Heater Warm-up Time is defined as the time required for the voltage across the heater to reach 80% of its rated value after applying 4 times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to 3 times rated heater voltage divided by rated heater current.

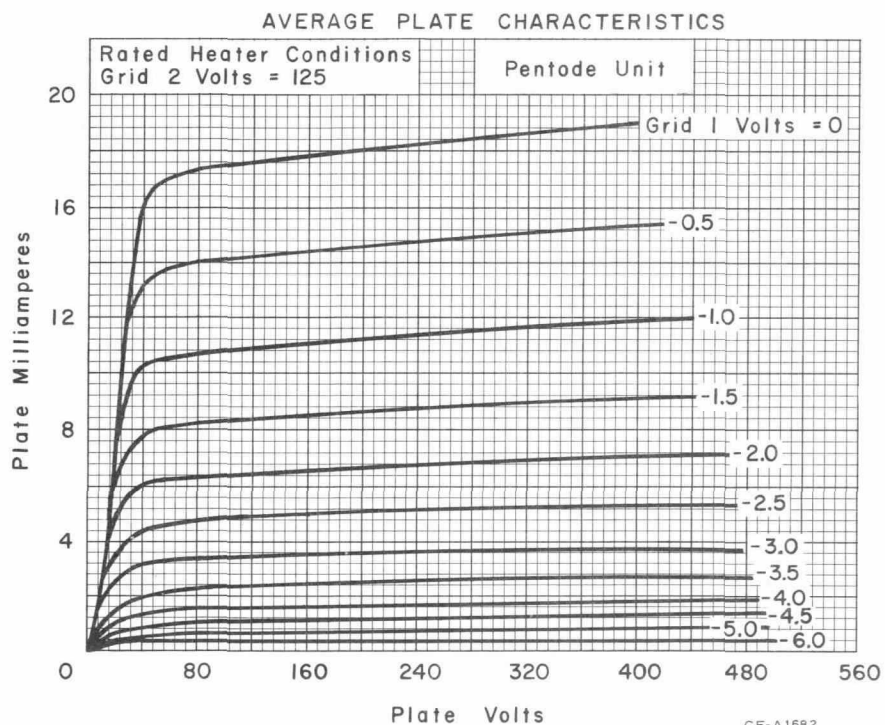
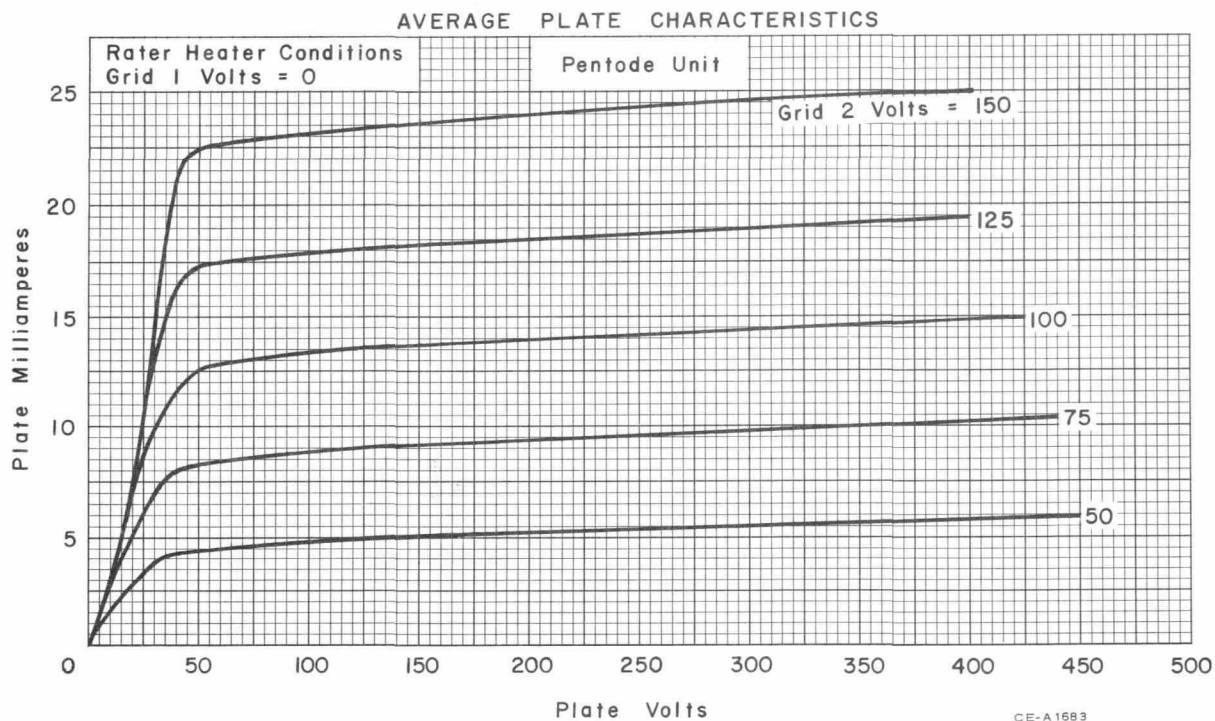
With JEDEC shield #315 connected to Cathode of unit under test.

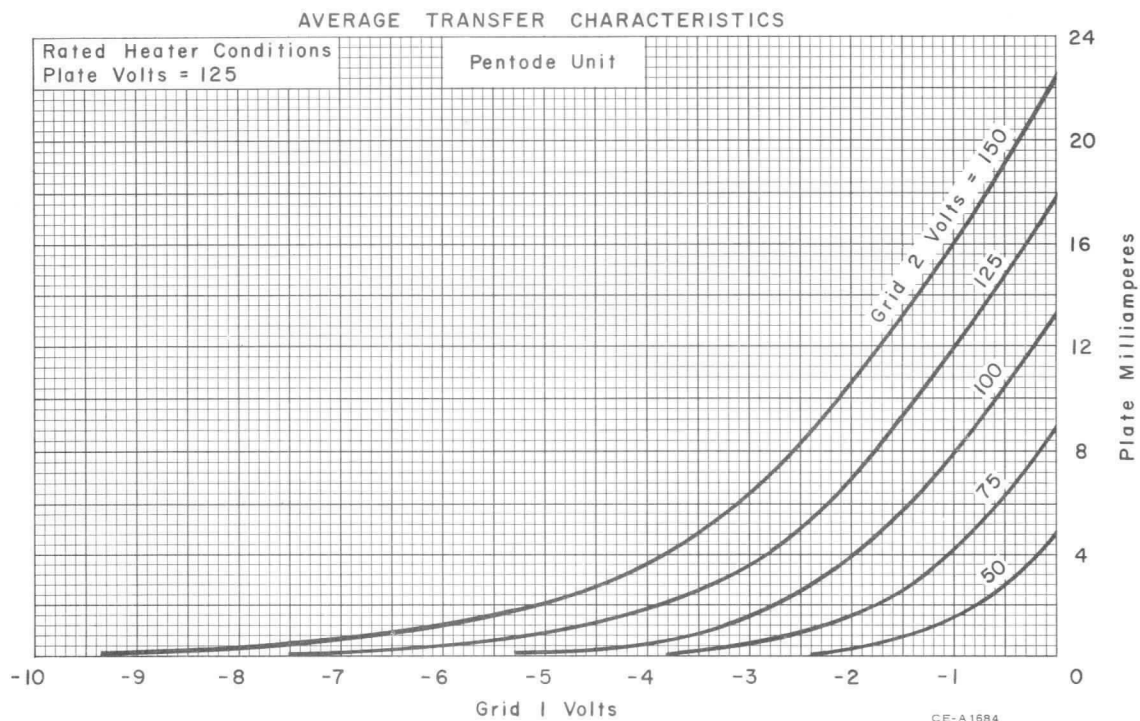
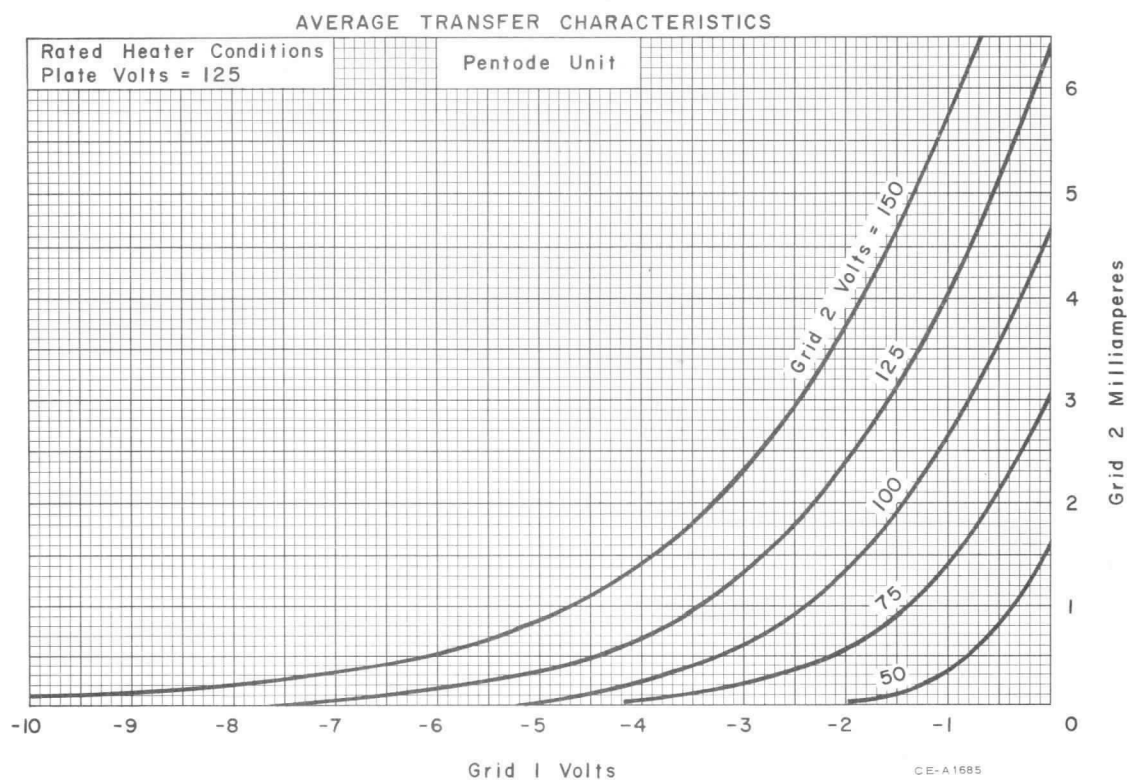
□ With JEDEC shield #315 connected to ground.

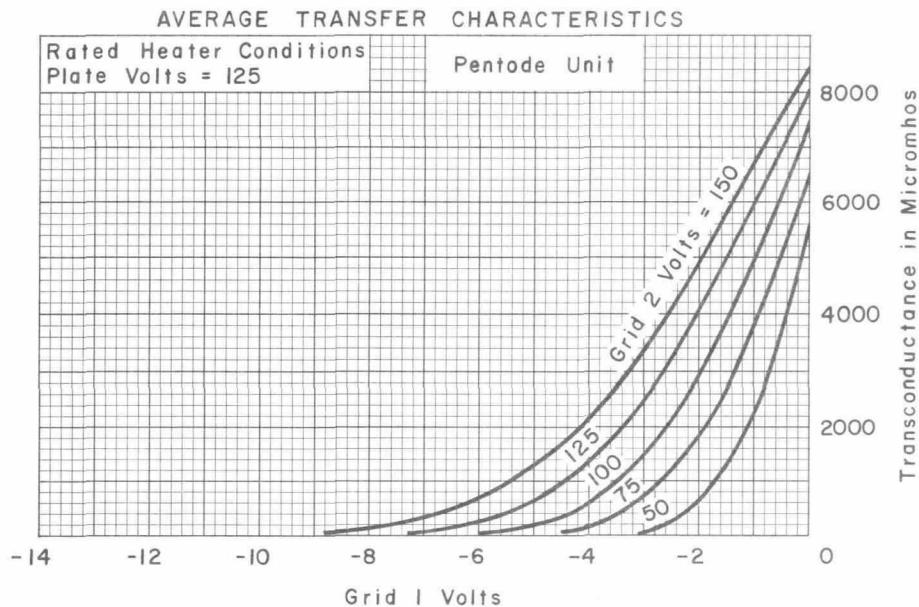
⊕ For plate current of 30 microamperes.

◆ 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, talking 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.

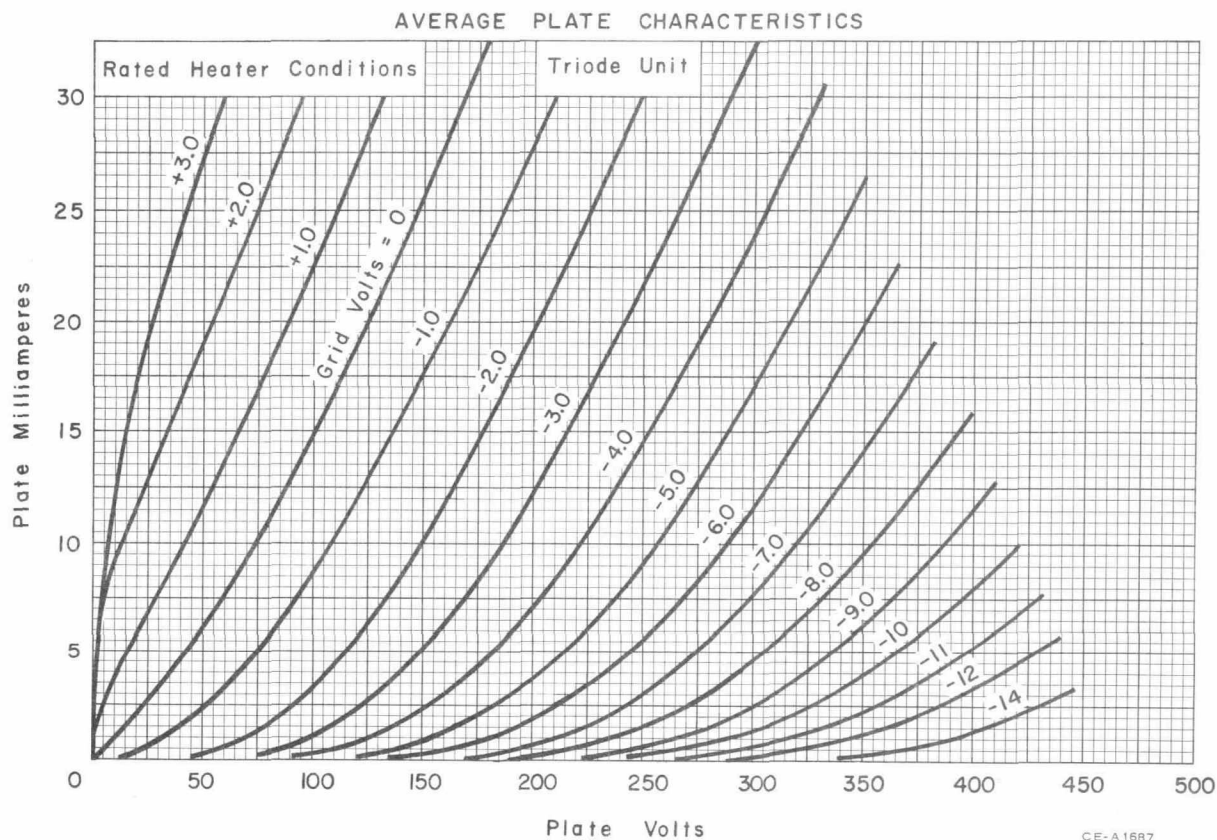








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