

MEDIUM-MU TRIODE-SHARP CUT-OFF PENTODE TYPES 5AN8, 6AN8 AND 6AN8A

The 5AN8, 6AN8 and 6AN8A are 9-pin miniature triode-pentode types 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 tube is designed so that coupling between the triode and pentode units is held to a minimum.

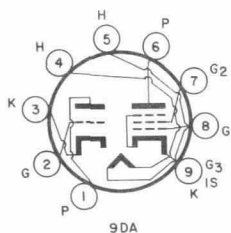
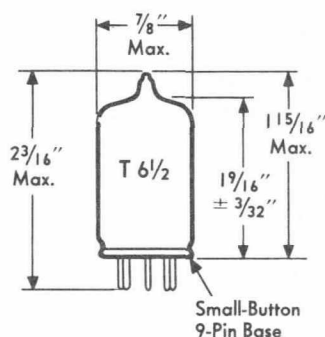
The 5AN8 and 6AN8A have been designed for use in receivers which employ series connected heaters, especially in television receivers where the picture-tube heater is in series with other heaters. When each is employed in this type of circuit with other tubes similarly designed having the same heater current rating, voltage surges across individual tubes are minimized inasmuch as heater warm-up characteristic is controlled.

ELECTRICAL

Cathodes	Coated Unipotential		
Filament:	5AN8	6AN8	6AN8A
Voltage (ac or dc)	4.7	6.3	6.3
Current	0.60	0.45	0.45
Warm-up Time (Note 1)	11	—	11
Direct Interelectrode Capacitances (Unshielded):			
Triode Unit:			
Grid 1 to Plate	1.5		$\mu\mu\text{f}$
Input	2.0		$\mu\mu\text{f}$
Output	0.26		$\mu\mu\text{f}$
Pentode Unit:			
Grid 1 to Plate	0.04	max.	$\mu\mu\text{f}$
Input	7.0		$\mu\mu\text{f}$
Output	2.4		$\mu\mu\text{f}$
Triode Grid to Pentode Plate	0.02	max.	$\mu\mu\text{f}$
Pentode Grid 1 to Triode Plate	0.02	max.	$\mu\mu\text{f}$
Pentode Plate to Triode Plate	0.15	max.	$\mu\mu\text{f}$

MECHANICAL

Bulb	T-6½
Base	Miniature 9-Pin (JEDEC E9-1)
Basing	.9DA
Mounting Position	Any



MAXIMUM RATINGS

Design Maximum Values

	Triode Unit	Pentode Unit
Plate Voltage	330	330 max. Volts
Grid 2 Supply Voltage	—	330 max. Volts
Grid 2 Voltage	—	See Grid 2 Input Rating Chart
Grid 1 Voltage		
Positive Bias Value	0	0 max. Volts
Plate Dissipation	2.8	2.3 max. Watts
Grid 2 Input	—	0.55 max. Watt
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

MAXIMUM CIRCUIT VALUES

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

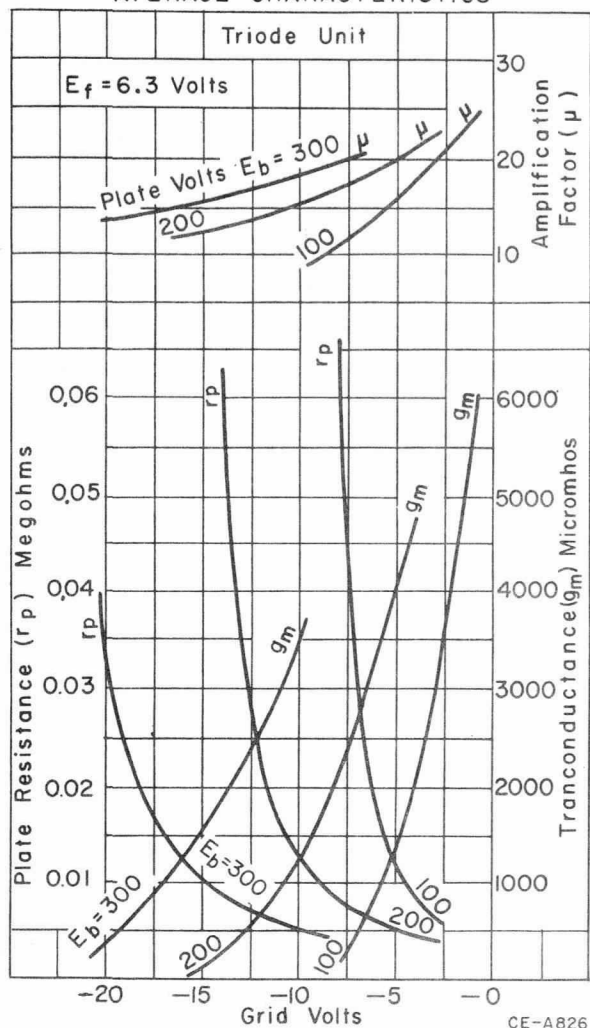
TYPICAL OPERATING CHARACTERISTICS

	Triode Unit	Pentode Unit
Plate Supply Voltage	150	125 Volts
Grid 2 (Screen) Supply Voltage	—	125 Volts
Grid 1 (Control-Grid) Voltage	—3	— Volts
Cathode-Bias Resistor	—	56 Ohms
Amplification Factor	21	—
Plate Resistance (Approx.)	4700	170000 Ohms
Transconductance	4500	7800 μmhos
Grid 1 Bias Cutoff (Note 2)	—17	—6 Volts
Plate Current	15	12 Ma.
Grid 2 Current	—	3.8 Ma.
Plate Current at Grid Volts = —3	—	1.6 Ma.

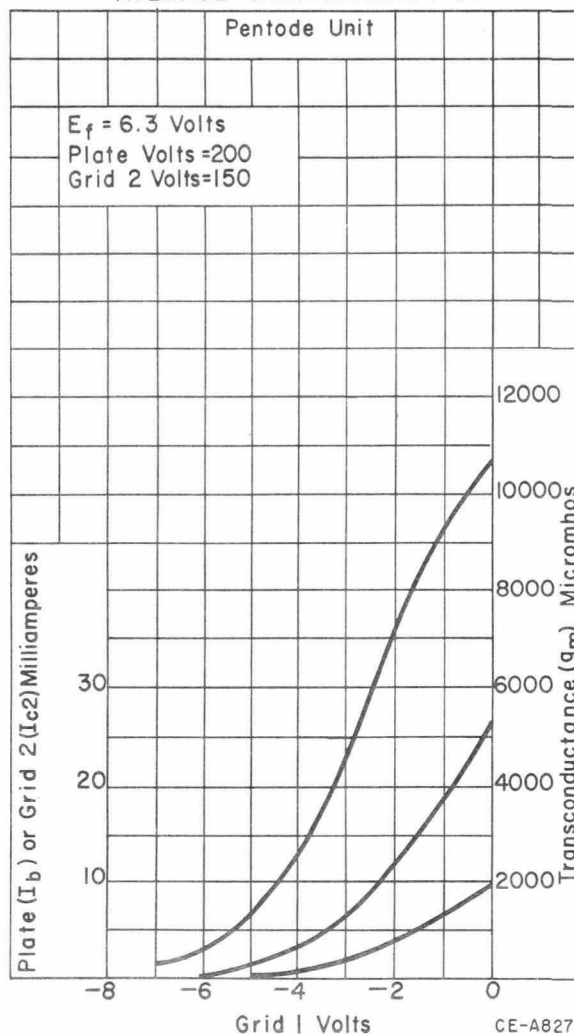
NOTES

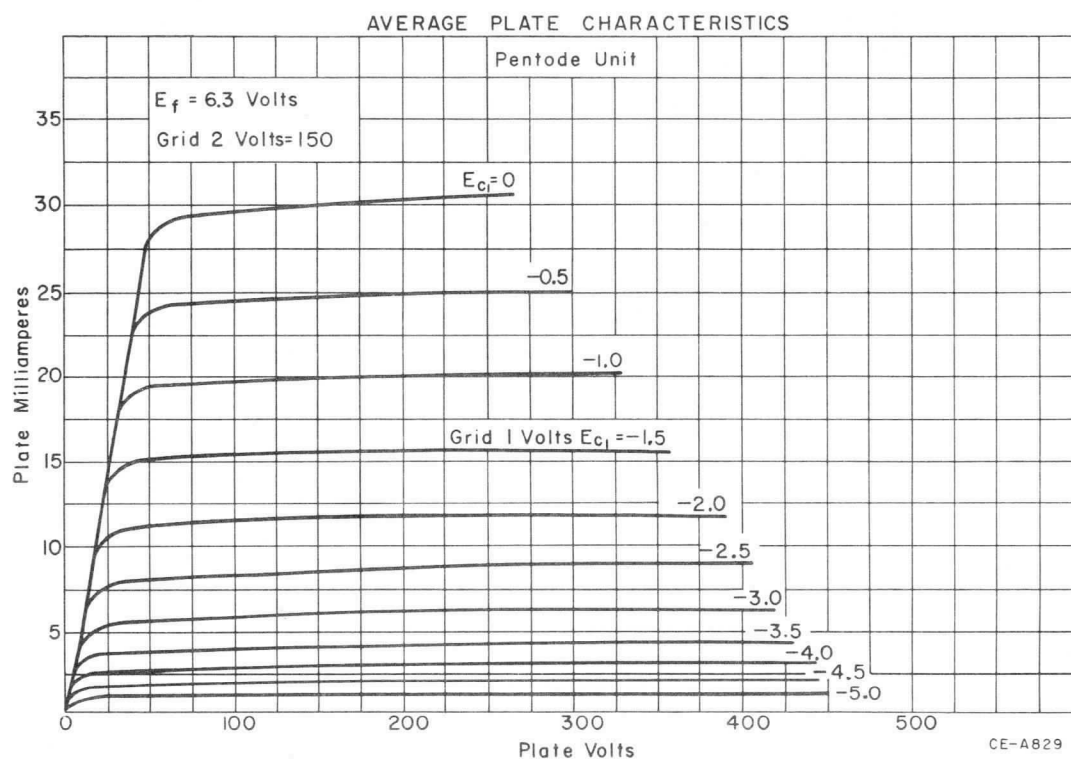
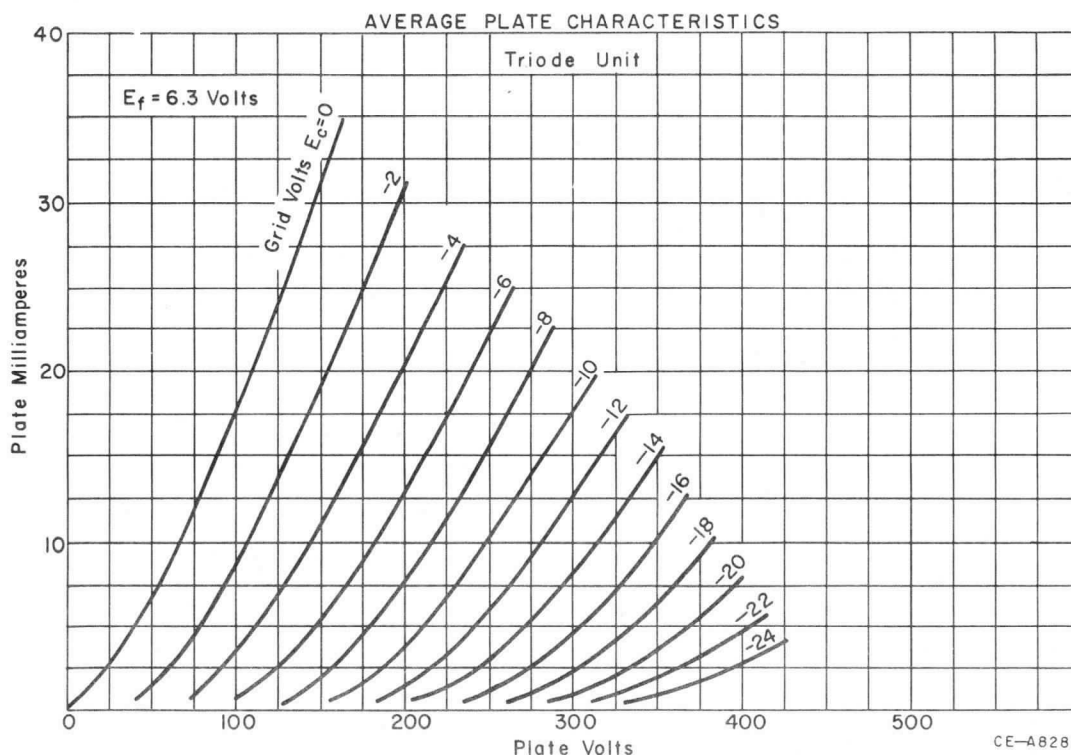
1. Heater warm-up time is defined as the time required for the voltage across the heater to reach 80% of its rated value after applying 4 times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to 3 times rated heater voltage divided by rated heater current.
2. For plate current of 20 microamperes.

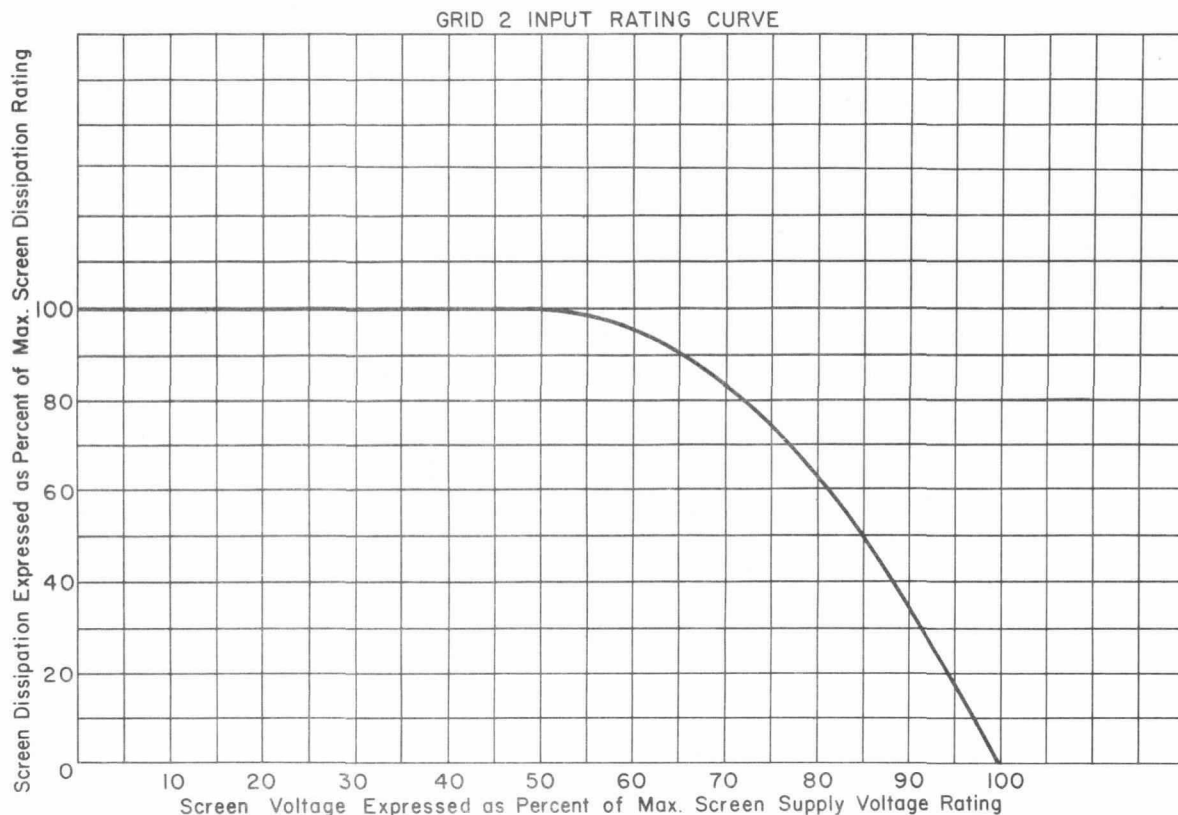
AVERAGE CHARACTERISTICS



AVERAGE CHARACTERISTICS







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