

HIGH-MU TRIODE - SHARP-CUTOFF PENTODE TYPES 6EB8 and 8EB8

The 6EB8 and 8EB8 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.

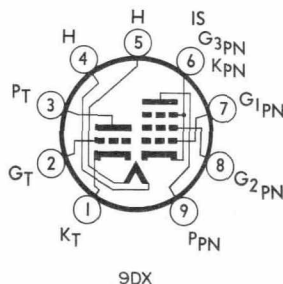
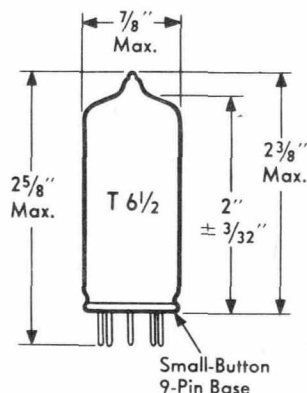
The 8EB8 has been designed for use in receivers which employ series-connected heaters, especially in television receivers where the picture-tube heater is in series with other heaters. When it is employed in this type of circuit with other tubes having a heater current rating of 600 ma., heater voltage surges across individual tubes are minimized inasmuch as the heater warm-up characteristic is controlled.

ELECTRICAL:

Cathode	Coated Unipotential
Heater:	6EB8 8EB8
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	45 200	Volts
Grid 2 Voltage	--	125 125	Volts
Grid 1 Voltage	-2	0 --	Volts
Cathode Bias Resistor	--	-- 68	Ohms
Amplification Factor	100	-- --	
Plate Resistance (approx.)	37000	-- 75000	Ohms
Transconductance	2700	-- 12500	μmhos
Plate Current	2	40* 25	Ma.
Grid 2 Current	--	15* 7	Ma.
Grid 1 Voltage	-5⊕	-9□	Volts

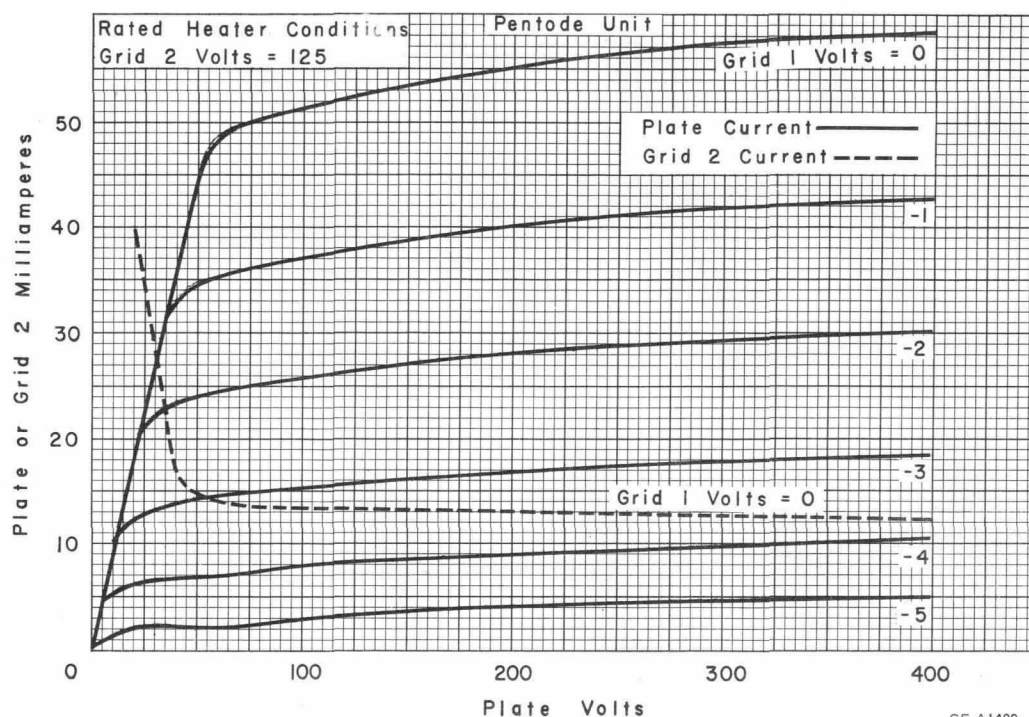
▲ Heater Warm-Up Time is defined as the time required for the voltage across the heater to reach 80% of its rated value after applying 4 times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to 3 times rated heater voltage divided by rated heater current.

* 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.

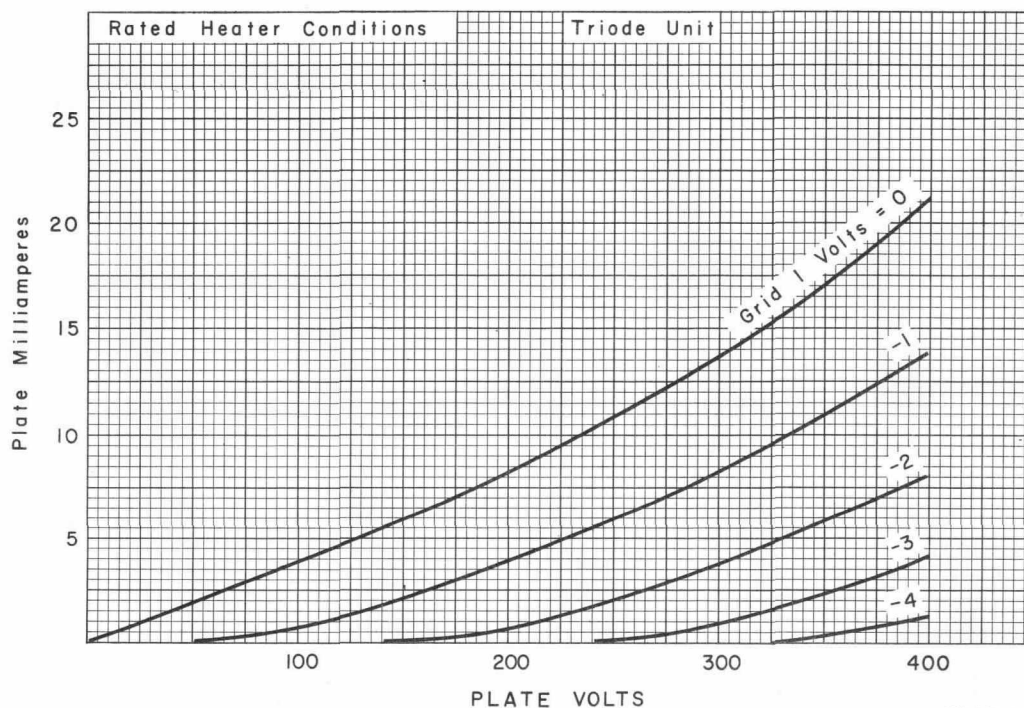
⊕ For plate current of 20 microamperes.

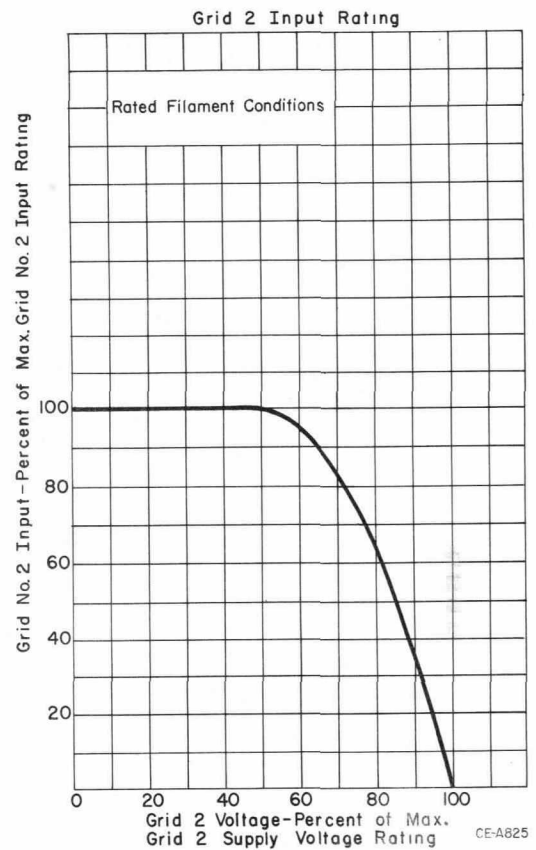
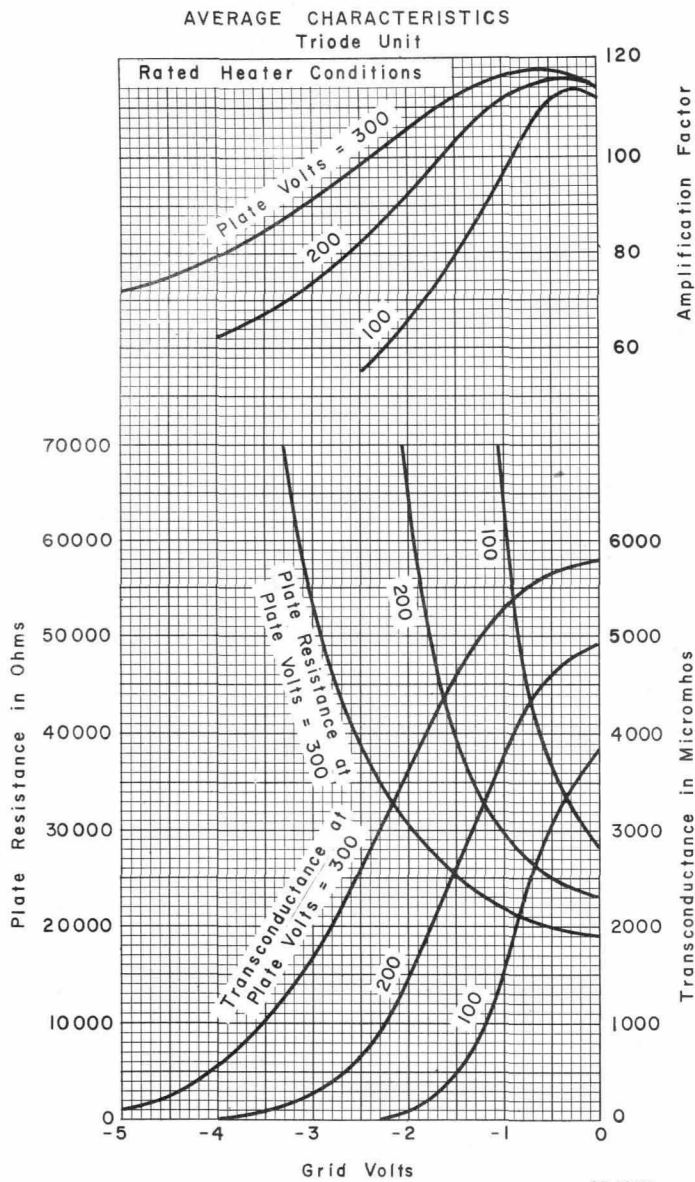
□ For plate current of 100 microamperes.

AVERAGE PLATE CHARACTERISTICS



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