

TRIODE-PENTODE TYPE 6GH8

The 6GH8 is a 9-Pin miniature medium-mu triode and sharp-cutoff pentode type designed for service as a general purpose tube in television receivers. The pentode unit is intended for horizontal oscillator service. The 6GH8 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 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:

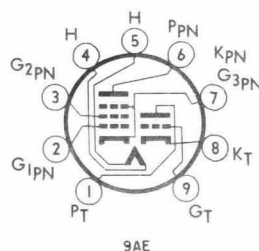
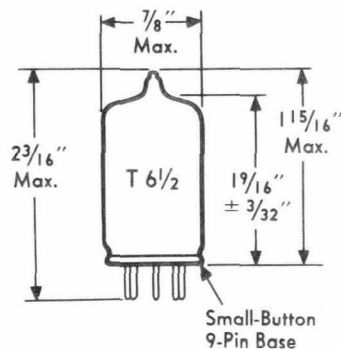
Voltage (ac or dc)..... 6.3 Volts
Current..... $0.45 \pm 6\%$ Amperes
Warm-up Time (Note 1)..... 11 Seconds

Direct Interelectrode Capacitances:

Triode Unit:	Unshielded	Shielded (Note 2)	
Grid to Plate	1.6	1.6	$\mu\mu\text{f}$
Input.....	3.4	3.6	$\mu\mu\text{f}$
Output.....	1.7	2.2	$\mu\mu\text{f}$
Heater to Cathode (Note 3).....	3.0	3.0	$\mu\mu\text{f}$
Pentode Unit:			
Grid 1 to Plate	0.02 max.	0.015 max.	$\mu\mu\text{f}$
Input.....	5.5	5.5	$\mu\mu\text{f}$
Output.....	2.6	3.4	$\mu\mu\text{f}$
Heater to Cathode (Note 3).....	3.0	3.0	$\mu\mu\text{f}$

MECHANICAL

Bulb..... T-6½
Base..... Miniature 9-pin (JEDEC E9-1)
Basing..... 9AE
Outline..... 6-2
Mounting..... Any



MAXIMUM RATINGS

Design Maximum Values

Pentode

Unit as

Horiz.

Oscillator

	Triode Unit (Note 4)		
Plate Voltage.....	330	350	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
Negative Peak Value ...	—	175	max. Volts
Cathode Current:			
DC Value.....	—	20	max. Ma.
Peak Value	—	300	max. Ma.
Plate Dissipation.....	2.5	2.5	max. Watts
Grid 2 Dissipation	—	0.55	max. Watts
Heater-Cathode Voltage:			
Heater Positive with Respect to Cathode:			
DC Component	100	100	max. Volts
DC & Peak.....	200	200	max. Volts
Heater Negative with Respect to Cathode:			
DC & Peak.....	200	200	max. Volts

LIMITING CIRCUIT VALUES

Grid 1 Circuit Resistance:			
With Fixed Bias	2.2	2.2	max. Megohms
With Cathode Resistor Bias	2.2	2.2	max. Megohms

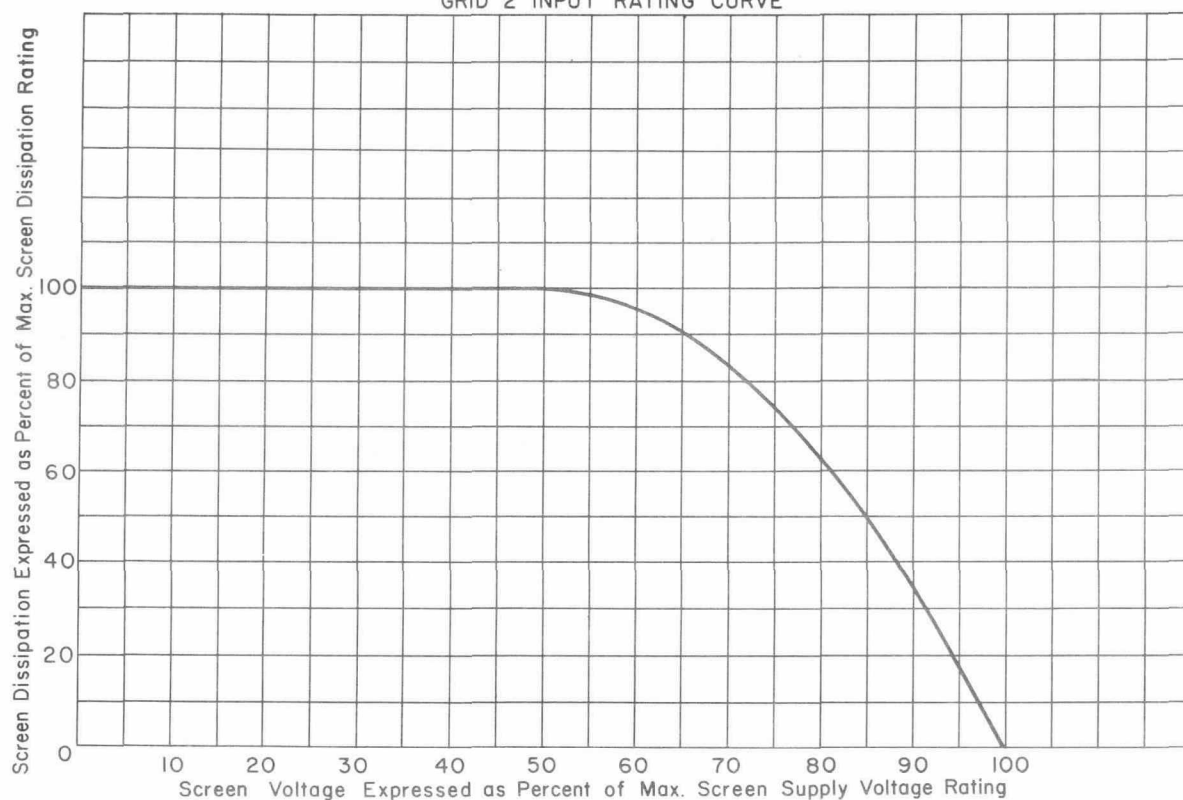
CHARACTERISTICS

	Triode Unit	Pentode Unit	
Plate Voltage	125	125	Volts
Grid 2 Voltage.....	—	125	Volts
Grid 1 Voltage.....	—1	—1	Volts
Amplification Factor	46	—	—
Plate Resistance (Approx.) ...	5400	200000	Ohms
Transconductance	8500	7500	μmhos
Grid 1 Cutoff Bias (Note 5) ...	—8	—8	Volts
Plate Current	13.5	12	Ma.
Grid 2 Current.....	—	4	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. With JEDEC shield #315 connected to Cathode of unit under test.
3. With JEDEC shield #315 connected to ground.
4. For operation in a 525-line, 30-frame television system as described in "Standards of Good Engineering Practice for Television Broadcasting Stations, Federal Communications Commission." The duty cycle of the voltage pulse must not exceed 15% of one scanning cycle.
5. For plate current of 10 microamperes.

GRID 2 INPUT RATING CURVE



CE-A864