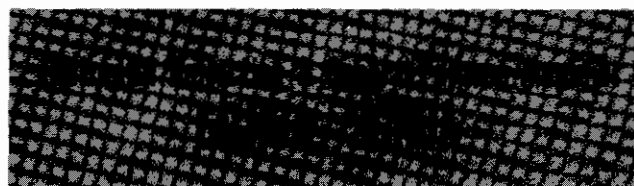
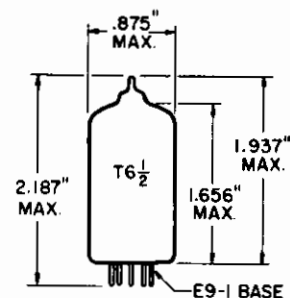
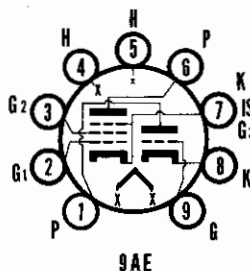


SYLVANIA



- MEDIUM-MU TRIODE
- SHARP CUTOFF PENTODE
- T-6½ ENVELOPE
- 9 PIN BASE



DESCRIPTION

The Sylvania Types 6GH8A and 5GH8A are designed for service in television receivers with the

pentode serving as a horizontal deflection oscillator, and the triode serving as a general purpose amplifier.

MECHANICAL DATA

Envelope	T-6½
Base	JEDEC No. E9-1
Outline	JEDEC No. 6-2
Maximum Diameter	0.875 Inches
Maximum Seated Height	1.937 Inches
Maximum Overall Length	2.187 Inches
Cathode	Coated Unipotential
Operating Position	Any
Basing	9AE

Terminal Connections:

- | | |
|---------------------------------------|--|
| Pin No. 1—Plate, Triode Section | Pin No. 6—Plate, Pentode Section |
| Pin No. 2—Grid No. 1, Pentode Section | Pin No. 7—Cathode, Grid No. 3, Pentode Section,
Internal Shield |
| Pin No. 3—Grid No. 2, Pentode Section | Pin No. 8—Cathode, Triode Section |
| Pin No. 4—Heater | Pin No. 9—Grid, Triode Section |
| Pin No. 5—Heater | |

ELECTRICAL DATA

HEATER CHARACTERISTICS AND RATINGS (Design Maximum Rating System)⁽¹⁾

	6GH8A	6GH8A	5GH8A
	Series	Parallel	Series
Heater Operation	Series	Parallel	Series
Heater Voltage	6.3 ⁽³⁾	6.3 ⁽¹⁾	4.7 ⁽³⁾ Volts
Heater Current	450 ⁽¹⁾	450 ⁽³⁾	600 ⁽¹⁾ Ma
Heater Warm-up Time ⁽²⁾	11	—	11 Seconds
Maximum Heater-Cathode Voltage			
Heater Negative with Respect to Cathode			
Total DC and Peak	200	200	200 Volts
Heater Positive with Respect to Cathode			
DC	100	100	100 Volts
Total DC and Peak	200	200	200 Volts

DIRECT INTERELECTRODE CAPACITANCES

Triode Section

	Shielded ⁽⁵⁾	Unshielded
Grid to Plate	1.7	1.7 pf
Input: g to (k + P _{g3} + P _k + IS + h)	3.2	3.0 pf
Output: p to (k + P _{g3} + P _k + IS + h)	1.9	1.4 pf
Heater to Cathode	3.0 ⁽⁷⁾	3.0 ⁽⁷⁾ pf

Pentode Section

	Shielded ⁽⁴⁾	Unshielded	Max.
Grid No. 1 to Plate	0.010	0.020 pf	
Input: g1 to (h + k + g2 + g3 + IS)	5.0	5.0 pf	
Output: p to (h + k + g2 + g3 + IS)	3.4	2.6 pf	
Heater to Cathode	3.0 ⁽⁷⁾	3.0 ⁽⁷⁾ pf	

RATINGS (Design Maximum Values)

Horizontal Deflection Oscillator⁽⁶⁾

	Triode Section	Pentode Section	Max.
Plate Voltage	330	350 Volts	Max.
Grid No. 2 Supply Voltage	—	330 Volts	Max.
Grid No. 2 Voltage	See Rating Chart		
Positive Grid No. 1 Voltage	0	0 Volt	Max.
Peak Negative Pulse Grid Voltage	—	175 Volts	Max.
Average Cathode Current	—	20 Ma	Max.
Peak Cathode Current	—	300 Ma	Max.
Plate Dissipation	2.5	2.5 Watts	Max.
Grid No. 2 Input	—	0.55 Watt	Max.
Cathode Current			
Peak	—	300 Ma	Max.
DC	—	20 Ma	Max.
Maximum Grid No. 1 Circuit Resistance			
Fixed Bias	2.2	2.2 Megohms	
Self Bias	2.2	2.2 Megohms	

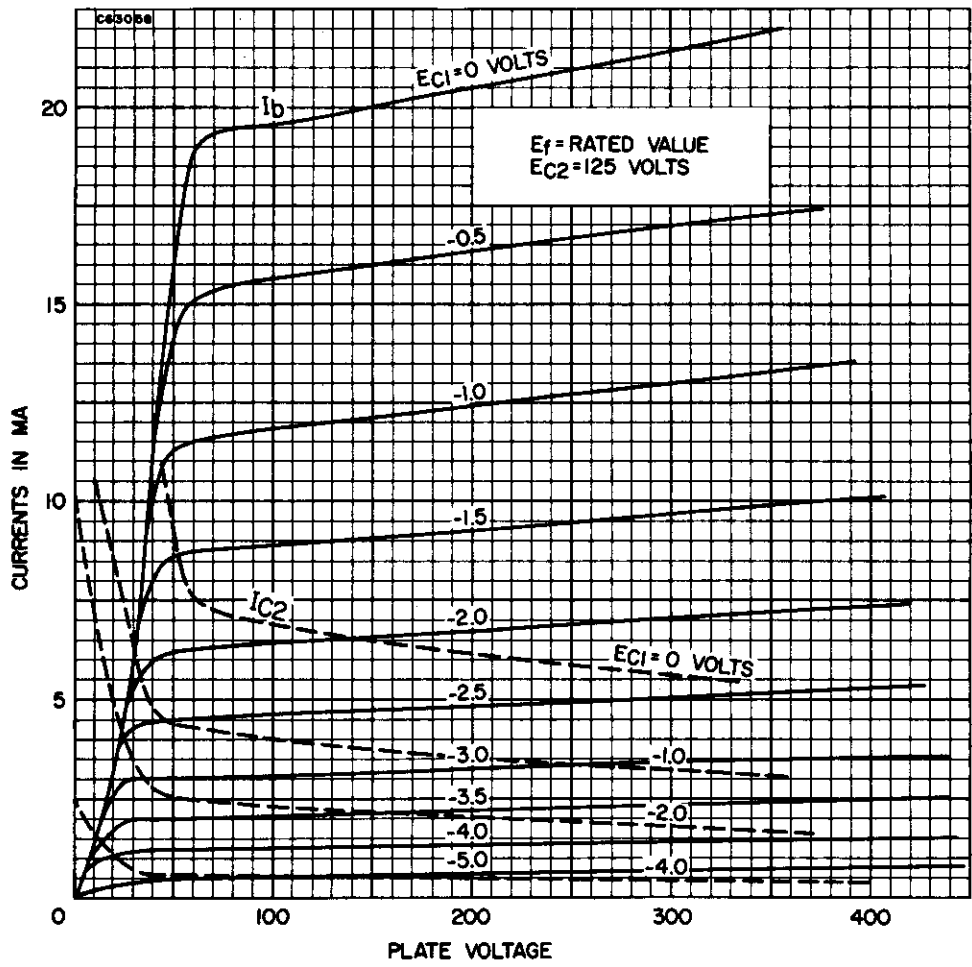
AVERAGE CHARACTERISTICS

	Triode Section	Pentode Section
Plate Voltage	125	125 Volts
Grid No. 2 Voltage	—	125 Volts
Grid No. 1 Voltage	-1.0	-1.0 Volts
Transconductance	8500	7500 μ mhos
Plate Current	13.5	12.0 Ma
Grid No. 2 Current	—	4.0 Ma
Plate Resistance (Approx.)	5400	200,000 Ohms
Amplification Factor	46	—
Ec1 for Ib = 10 μ a (Approx.)	-8	-8 Volts

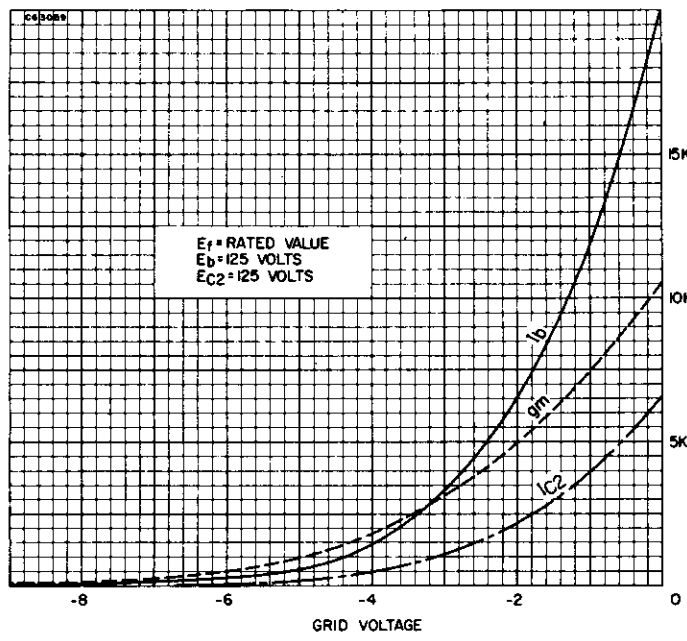
NOTES:

- (1) For series/parallel operation of heaters, equipment should be designed that at normal supply voltage bagey tubes will operate at this value of heater current/voltage.
- (2) Heater warm-up time is defined as the time required for the voltage across the heater to reach 80% of the rated heater voltage after applying four (4) times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to three (3) times the rated heater voltage divided by the rated heater current.
- (3) Heater voltage supply variations shall be restricted to maintain heater voltage/current within the specified values.
- (4) Shield No. 315 tied to Pin No. 7.
- (5) Shield No. 315 tied to Pin No. 8
- (6) For operation in a 525 line, 30 frame system as described in "Standards of Good Engineering Practice for Television Stations; Federal Communications Commission." The duty cycle of the voltage pulse must not exceed 15% of one horizontal scanning cycle.
- (7) Shield No. 315 tied to ground.

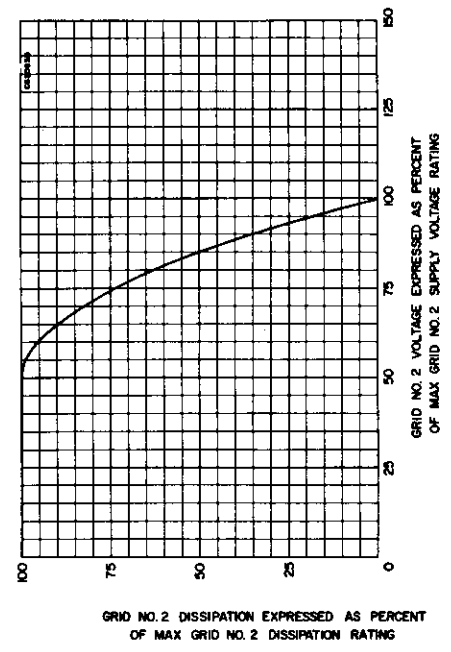
AVERAGE PLATE CHARACTERISTICS
(Pentode Section)



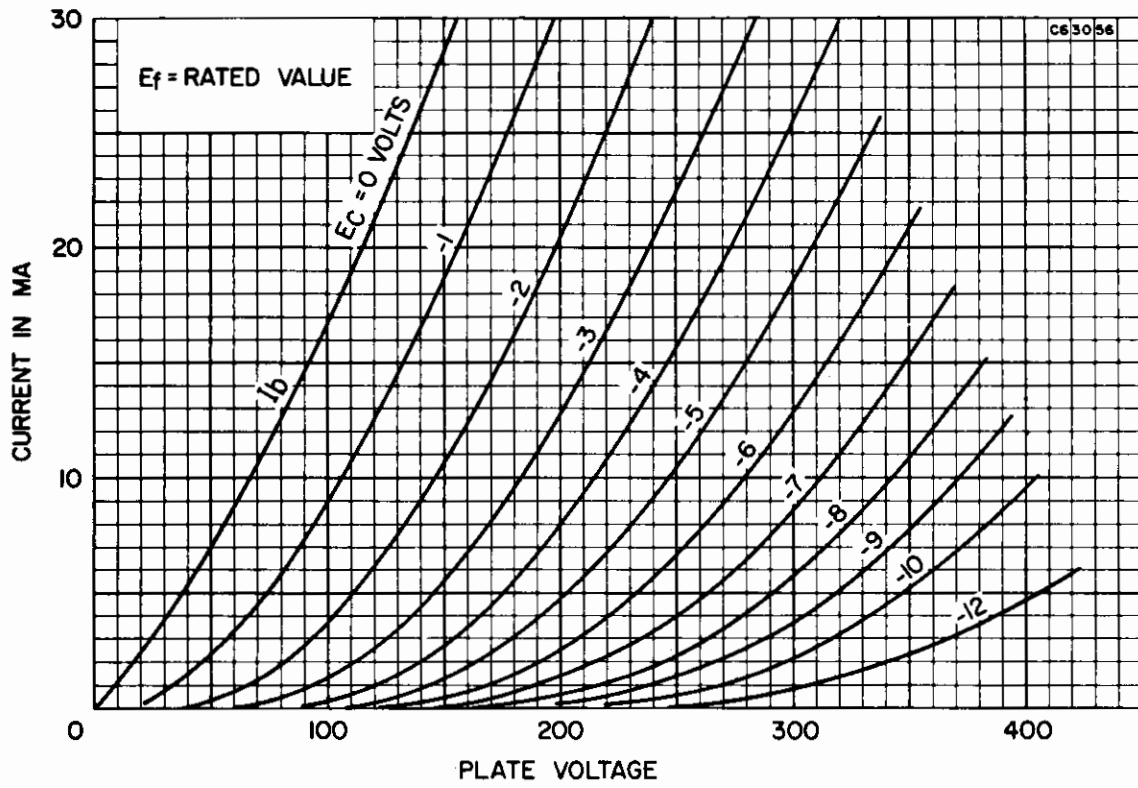
AVERAGE TRANSFER CHARACTERISTICS
(Pentode Section)



RATING CHART



AVERAGE PLATE CHARACTERISTICS
(Triode Section)



AVERAGE TRANSFER CHARACTERISTICS
(Triode Section)

