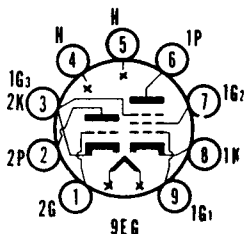


# SYLVANIA TYPE 6BE8 5BE8

MEDIUM MU TRIODE  
SHARP CUTOFF PENTODE



## MECHANICAL DATA

Bulb	T-6 $\frac{1}{2}$
Base	E9-1, Miniature Button, 9-Pin
Outline	6-2
Basing	9EG
Cathode	Coated Unipotential
Mounting Position	Any

## ELECTRICAL DATA

### HEATER CHARACTERISTICS

	5BE8	6BE8
Heater Voltage	4.7	6.3 Volts
Heater Current	600	450 Ma
Heater Warm-up Time (See Appendix)	11	Seconds
Heater-Cathode Voltage (Design Center Values)		
Heater Negative with Respect to Cathode		
Total D C and Peak	200	200 Volts Max
Heater Positive with Respect to Cathode		
D C	100	100 Volts Max
Total D C and Peak	200	200 Volts Max

### DIRECT INTERELECTRODE CAPACITANCES (Approx.)

#### Triode

Grid to Plate (g to p)	1.8 $\mu$ f
Input: g to (k + pentode g3 + I.S. + h)	2.8 $\mu$ f
Output: p to (k + pentode g3 + I.S. + h)	1.5 $\mu$ f

#### Pentode

Grid to Plate (g1 to p)	.040 $\mu$ f Max
Input: g1 to (k + g2 + h)	4.4 $\mu$ f
Output: p to (k + g2 + g3 + triode k + I.S. + h)	2.6 $\mu$ f
Plate to (k + g2 + h)	.30 $\mu$ f

#### Coupling

Triode Grid to Pentode Plate	.010 $\mu$ f
Pentode Grid No. 1 to Triode Plate	.009 $\mu$ f
Triode Plate to Pentode Plate	.065 $\mu$ f

### RATINGS (Design Center Values)

	Triode	Pentode
Plate Voltage	300	300 Volts Max
Grid No. 2 Supply Voltage		300 Volts Max
Grid No. 2 Voltage	See Rating	Chart for Type 6AM8
Plate Dissipation	2.5	2.8 Watts Max
Grid No. 2 Dissipation		0.5 Watt Max
Positive Grid No. 1 Voltage	0	0 Volts Max
Grid No. 1 Circuit Resistance <sup>1</sup>		
Fixed Bias	0.5	0.25 Megohm Max
Self Bias	1.0	1.0 Megohm Max

### CHARACTERISTICS AND TYPICAL OPERATION

#### Class A<sub>1</sub> Amplifier<sup>2</sup>

	Triode	Pentode
Plate Voltage	150	250 Volts
Grid No. 2 Voltage		110 Volts
Grid No. 1 Voltage	0	0 Volts
Cathode Bias Resistor	56	68 Ohms
Amplification Factor	40	
Plate Resistance (approx.)	.005	0.4 Megohm
Transconductance	8500	5200 $\mu$ mhos
Plate Current	18	10 Ma
Grid No. 2 Current		3.5 Ma
Grid No. 1 Voltage (approx.) for I <sub>b</sub> = 10 $\mu$ a	-12	-10 Volts

### NOTES:

1. If either unit is operating at maximum rated conditions, Grid No. 1 Circuit Resistance for both units shall not exceed the stated values.
2. When reading characteristics of the pentode section all triode elements shall be at ground potential. Thus, because of internal connections to pin No. 3, the pentode suppressor will also be at ground.

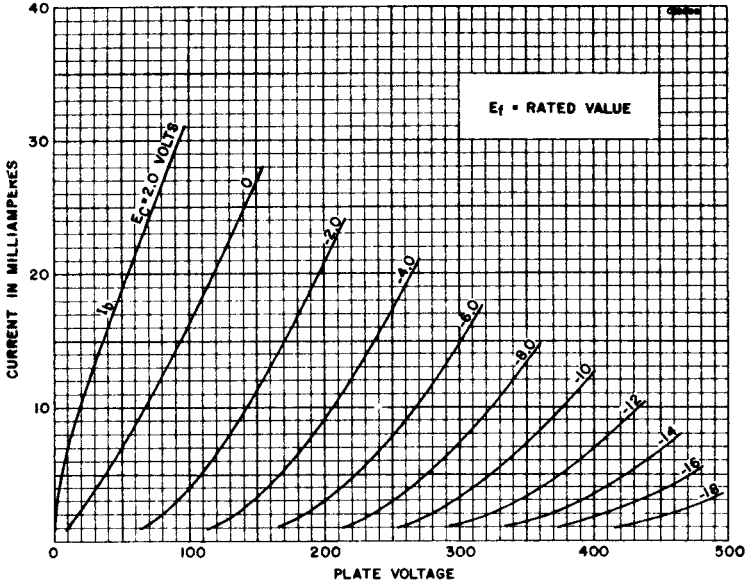
## APPLICATION

The 6BE8 is a miniature, medium mu triode and sharp cutoff pentode intended for use as a v h f oscillator mixer. The basing is unique in that the pentode No. 3 grid and internal shield are connected to the triode cathode.

The 5BE8 employs controlled heater warm-up time for service in series string television receivers; otherwise, the 5BE8 is identical to the 6BE8.

# 6BE8, 5BE8 (Cont'd)

## AVERAGE PLATE CHARACTERISTICS (Triode Section)



## AVERAGE PLATE CHARACTERISTICS (Pentode Section)

