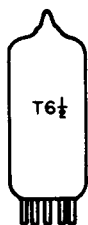
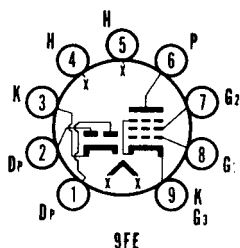


# SYLVANIA TYPE 6BT8 5BT8



**DUODIODE  
SHARP CUTOFF PENTODE**



## MECHANICAL DATA

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

## ELECTRICAL DATA

### HEATER CHARACTERISTICS

	5BT8	6BT8
Heater Voltage.....	4.7	6.3 Volts
Heater Current.....	600	450 Ma
Heater Warm-up Time <sup>1</sup> .....	11	Seconds
Heater Negative with Respect to Cathode Total D C and Peak.....		200 Volts Max.
Heater Positive with Respect to Cathode D C.....		100 Volts Max.
Total D C and Peak.....		200 Volts Max.

### DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

Pentode Section	
Grid No. 1 to Plate.....	.04 $\mu\text{mf}$ Max.
Input.....	7.0 $\mu\text{mf}$
Output.....	2.3 $\mu\text{mf}$
Diode (Each Section)	
Plate to (h + k).....	1.3 $\mu\text{mf}$
Cathode to (h + p).....	3.0 $\mu\text{mf}$

### Coupling

Pentode Grid No. 1 to Diode Plate.....	0.005 $\mu\text{mf}$
Pentode Plate to Diode Plate.....	0.020 $\mu\text{mf}$

### RATINGS (Design Center System)

Plate Voltage.....	300 Volts Max.
Grid No. 2 Supply Voltage.....	300 Volts Max.
Grid No. 2 Voltage.....	See 6AM8 Rating Chart
Positive Grid No. 1 Voltage.....	0 Volts Max.
Plate Dissipation.....	2.0 Watts Max.
Grid No. 2 Input.....	0.5 Watts Max.
Grid No. 1 Circuit Resistance	
Fixed Bias.....	0.25 Megohm Max.
Self Bias.....	1.0 Megohm Max.

### CHARACTERISTICS AND TYPICAL OPERATION

Plate Voltage.....	200 Volts
Grid No. 2 Voltage.....	150 Volts
Cathode Bias Resistor.....	180 Ohms
Plate Current.....	9.5 Ma
Grid No. 2 Current.....	2.8 Ma
Transconductance.....	6200 $\mu\text{mhos}$
Plate Resistance (approx.).....	300,000 Ohms
Grid No. 1 Voltage for $I_b = 10 \mu\text{amp}$ (approx.).....	-8 Volts
Average Diode Current with 10 Volts D C Applied (Each Section).....	8.0 Ma

### NOTE:

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 four (4) times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to three (3) times rated heater voltage divided by rated heater current.

## APPLICATION

The Sylvania Types 5BT8 and 6BT8 have a double diode and sharp cutoff pentode contained in one envelope. The pentode section may be used as an IF amplifier, video amplifier, a gc amplifier or reactance tube. Type 5BT8 has controlled heater warm-up time for series string operation.