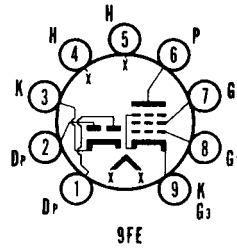
SYLVANIA TYPE 6BT8
5BT8

DUODIODE
SHARP CUTOFF PENTODE



MECHANICAL DATA

Bulb	T-6½
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[1]	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 μμf Max.
Input	7.0 μμf
Output	2.3 μμf
Diode (Each Section)	
Plate to (h + k)	1.3 μμf
Cathode to (h + p)	3.0 μμf
Coupling	
Pentode Grid No. 1 to Diode Plate	0.005 μμf
Pentode Plate to Diode Plate	0.020 μμf

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 μmhos
Plate Resistance (approx.)	300,000 Ohms
Grid No. 1 Voltage for I_b = 10 μamp (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.