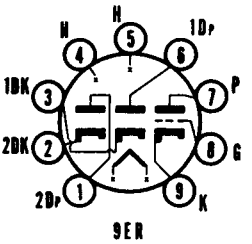
SYLVANIA TYPE 6BN8 8BN8



9ER

MECHANICAL DATA

Bulb	T-6½
Base	E9-1, Small Button 9-Pin
Outline	6-3
Basing	9ER
Cathode	Coated Unipotential
Mounting Position	Any

ELECTRICAL DATA

HEATER CHARACTERISTICS

	6BN8	8BN8	
Heater Voltage	6.3	8.4	Volts
Heater Current	600	450	Ma
Heater Warm-up Time[1]	11	11	Seconds
Heater-Cathode Voltage (Triode and Diodes Design Center Values)			
Heater Negative with Respect to Cathode			
Total D C and Peak	200	200	Volts Max.
Heater Positive with with Respect to Cathode			
D C	100	100	Volts Max.
Total D C and Peak	200	200	Volts Max.

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

Triode	
Grid to Plate	2.5 μμf
Input: g to (h + Tk)	3.6 μμf
Output: p to (h + Tk)	0.25 μμf
Diodes	
No. 1 Diode Plate to No. 1 Diode Cathode + Heater	1.9 μμf
No. 2 Diode Plate to No. 2 Diode Cathode + Heater	1.9 μμf
No. 1 Diode Cathode to No. 1 Diode Plate + Heater	4.8 μμf
No. 2 Diode Cathode to No. 2 Diode Plate + Heater	4.8 μμf

SYLVANIA TYPE 6BN8, 8BN8 (Cont'd)

DIRECT INTERELECTRODE CAPACITANCES (Unshielded) (Cont'd)

Coupling	
No. 1 Diode Plate to Triode Grid	0.060 μμf Max.
No. 2 Diode Plate to Triode Grid	0.10 μμf Max.
No. 1 Diode Cathode to All:	
1Dk to (h + Tk + 2Dk + Tp + 1Dp + Tg + 2Dp)	5.0 μμf
No. 2 Diode Cathode to All:	
2Dk to (h + Tk + 1Dk + Tp + 1Dp + 2Dp + Tg)	5.0 μμf
No. 1 Diode Plate to No. 2 Diode Plate	0.070 μμf Max.
No. 1 Diode Plate to All:	
1Dp to (h + Tk + 1Dk + 2Dk + Tp + 2Dp + Tg)	3.0 μμf
No. 2 Diode Plate to All:	
2Dp to (h + Tk + 1Dk + 2Dk + Tp + 1Dp + Tg)	3.0 μμf

MAXIMUM RATINGS (Design Center Values)

	Triode Section
Plate Voltage	300 Volts
Positive D C Grid Voltage	0 Volts
Plate Dissipation	1.5 Watts
Grid Circuit Resistance	1.0 Megohm
	Diode Section
Peak Plate Current (Each Plate)	54 Ma
D C Current (Each Plate)	9 Ma

CHARACTERISTICS AND TYPICAL OPERATION

		Triode Section
Class A_1 Amplifier		
Plate Voltage	100	250 Volts
Grid Voltage	−1	−3 Volts
Plate Current	1.5	1.6 Ma
Transconductance	3500	2500 μmhos
Amplification Factor	75	70
Plate Resistance (approx.)	21,000	28,000 Ohms
Grid Voltage (approx.) for Ib = 10 μa	−2.5	−5.5 Volts
		Diode Section
Average Current Each Plate at 10 Volts D C[2]		50 Ma
Voltage Drop Each Section at Ib = 9 Ma D C		2.6 Volts

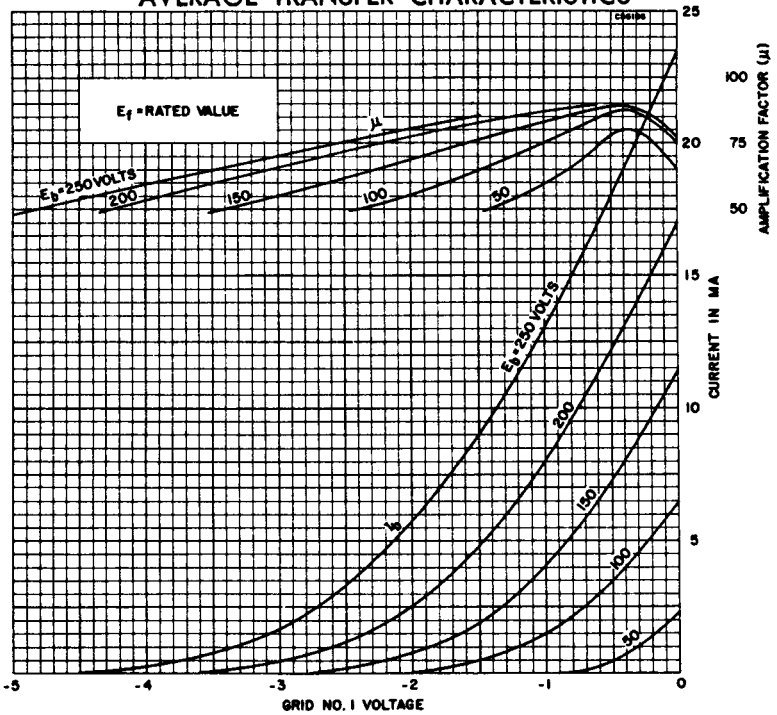
NOTE:

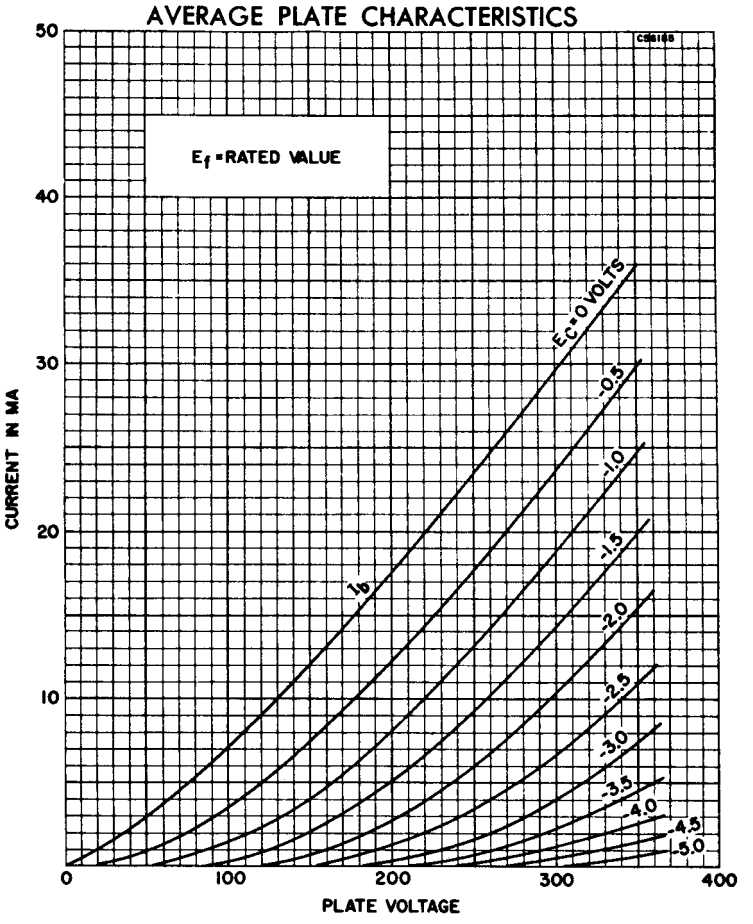
1. Heater warm-up time is defined as the time required for the voltage across the heater to reach 80% of its rated value after applying four (4) times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to three (3) times rated heater voltage divided by rated heater current.
2. Test conditions only.

APPLICATION DATA

The Sylvania Type 6BN8 is a miniature, high mu triode, double diode intended for application in color and monochrome television receivers. The tube features separate cathode connections for each section and controlled heater warm-up time to insure dependable operation in series string receivers.
The 8BN8 is identical to the 6BN8 except for heater characteristics.

AVERAGE TRANSFER CHARACTERISTICS




AVERAGE PLATE CHARACTERISTICS
CBS165
E_f = RATED VALUE
Ec = 0 VOLTS
-0.5
-1.0
-1.5
-2.0
-2.5
-3.0
-3.5
-4.0
-4.5
-5.0
1b
CURRENT IN MA
50
40
30
20
10
0
100
200
300
400
PLATE VOLTAGE