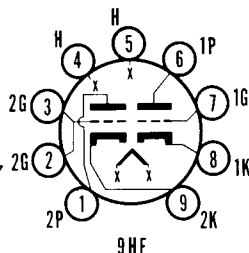


SYLVANIA TYPES **6EW7** **10EW7** DISSIMILAR DUO TRIODE



The 9-T9 design utilized a T-9 ($1\frac{1}{8}$ " Dia.) bulb based to fit a standard 9-pin miniature socket. Advantages of the 9-T9 include an increase in the heat dissipation safety margin, as compared to 9-pin miniature tubes employing T-6 $\frac{1}{2}$ ($\frac{5}{16}$ " Dia.) bulbs.

MECHANICAL DATA

Bulb.....	Special, T-9
Base.....	9-Pin, same as E9-1, except bulb diameter
Outline.....	See Drawing
Basing.....	9HF
Cathode.....	Coated Unipotential
Mounting Position.....	Any

ELECTRICAL DATA

HEATER CHARACTERISTICS

	6EW7	10EW7
Heater Voltage.....	6.3 ¹	9.7 Volts
Heater Current.....	900	600 ² Ma
Heater Warm-up Time ³		11 Seconds
Maximum Heater Voltage Range ⁴	5.7-6.9	— Volts
Maximum Heater Current Range ⁴	—	560-640 Ma
Heater-Cathode Voltage (Design Maximum 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 (Unshielded)

	Section No. 1	Section No. 2
Grid to Plate.....	4.2	9.0 $\mu\mu\text{f}$
Input: g (h+k).....	2.2	7.0 $\mu\mu\text{f}$
Output: p to (h+k).....	0.4	1.2 $\mu\mu\text{f}$

RATINGS (Design Maximum Values)

Vertical Deflection Oscillator and Amplifier⁵

	Section ⁷ No. 1 Oscillator	Section ⁷ No. 2 Amplifier
Plate Voltage.....	330	330 Volts Max.
Peak Positive Pulse Plate Voltage.....	—	1500 Volts Max.
Peak Negative Pulse Grid Voltage.....	400	250 Volts Max.
Plate Dissipation ⁶	1.5	10 Watts Max.
Average Cathode Current.....	22	50 Ma Max.
Peak Cathode Current.....	77	175 Ma Max.
Grid Circuit Resistance		
Self Bias.....	2.2	2.2 Megohms

AVERAGE CHARACTERISTICS

	Section ⁷ No. 1	Section ⁷ No. 2
Plate Voltage.....	250	150 Volts
Grid No. 1 Voltage.....	-11	-17.5 Volts
Plate Current.....	5.5	45 Ma
Transconductance.....	2000	7500 μmhms
Amplification Factor.....	17.5	6.0
Plate Resistance (approx.).....	8750	800 Ohms
Ec for Ib = 10 μa (approx.).....	-20	— Volts
Ec for Ib = 100 μa (approx.).....	—	-40 Volts
Ib at Ec = -25 Vdc.....	—	8 Ma
Ib with Eb = 60 V and Ec = 0 V (Instantaneous Values).....	—	95 Ma

NOTES:

1. For parallel heater operation, equipment should be so designed so that at normal supply voltage bogey tubes will operate at this value of heater voltage.
2. For series heater operation, equipment should be so designed so that at normal supply voltage bogey tubes will operate at this value of heater current.
3. 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.

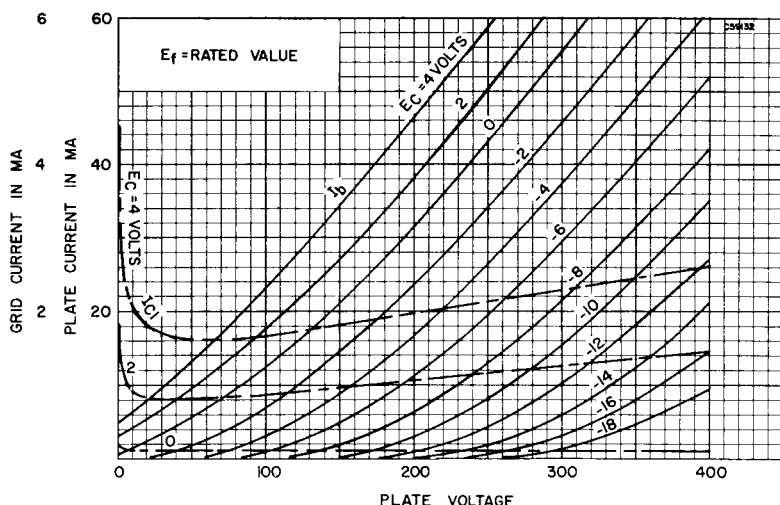
SYLVANIA TYPES 6EW7, 10EW7 (Cont'd)

4. Design-Maximum Ratings.
5. 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 scanning cycle.
6. In stages operating with grid leak bias, an adequate bias resistor or other suitable means is required to protect the tube in the absence of excitation.
7. Section No. 1 connects to Pins 6, 7 and 8. Section No. 2 connects to Pins 1, 2, 3 and 9.

APPLICATION

The Sylvania Types 6EW7 and 10EW7 are dissimilar-section double triodes featuring the 9-T9 bulb and pin configuration. The 6EW7 and 10EW7 are intended to serve the combined functions of vertical deflection oscillator and amplifier.

AVERAGE PLATE CHARACTERISTICS (Section No.1)



AVERAGE TRANSFER CHARACTERISTICS (Section No.2)

