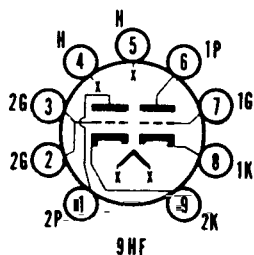


SYLVANIA TYPE

**6DE7
10DE7
13DE7**



MECHANICAL DATA

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

ELECTRICAL DATA

HEATER CHARACTERISTICS

	6DE7	10DE7	13DE7
Heater Voltage.....	6.3	9.7	13.0 Volts
Heater Current.....	900	600	450 Ma
Heater Warm-up Time ¹	—	11	11 Seconds
Heater-Cathode Voltage (Design Maximum Values) ²			
Heater Negative with Respect to Cathode			
Total DC and Peak.....			200 Volts Max.
Heater Positive with Respect to Cathode			
DC.....			100 Volts Max.
Total DC and Peak.....			200 Volts Max.

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

	Triode No. 1	Triode No. 2
Grid to Plate.....	4.0	8.5 μμf
Input: g to (h + k).....	2.2	5.5 μμf
Output: p to (h + k).....	0.52	1.0 μμf

RATINGS² (Design Maximum Values—Except as Noted)

Vertical Deflection Oscillator and Amplifier³

	Triode No. 1 Oscillator	Triode No. 2 Amplifier
DC Plate Voltage.....	330	275 Volts Max.
Peak Positive Pulse Plate Voltage (Abs. Max.).....	—	1500 Volts
Peak Negative Pulse Grid Voltage.....	400	250 Volts Max.
Plate Dissipation ⁴	1.5	7.0 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

	Triode No. 1	Triode No. 2
Plate Voltage.....	250	150 Volts
Grid No. 1 Voltage.....	-11	-17.5 Volts
Plate Current.....	5.5	35 Ma
Transconductance.....	2000	6500 μmhos
Amplification Factor.....	17.5	6.0
Plate Resistance (approx.).....	8750	925 Ohms
Grid Voltage for Ib = 10 μa.....	-20	— Ohms
Grid Voltage for Ib = 50 μa.....	—	-44 Volts
Plate Current at Ec = -24 Vdc.....	—	10 Ma
Plate Knee Characteristics		
Eb = 60 V; Ec = 0 (Instantaneous Values).....	—	80 Ma

NOTES:

1. 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.
2. Design Maximum Ratings are the limiting values expressed with respect to bogen tubes at which satisfactory tube life can be expected to occur. To obtain the most satisfactory performance, the following design maximum values should be observed: (a) Plate voltage should not exceed the design maximum value with respect to supply voltage variation, equipment component variations, control adjustment, load variation, and environmental conditions. (b) Plate current should not exceed the design maximum value with respect to supply voltage variation, equipment component variations, control adjustment, load variation, and environmental conditions. (c) Plate resistance should not exceed the design maximum value with respect to supply voltage variation, equipment component variations, control adjustment, load variation, and environmental conditions. (d) Grid voltage for Ib = 10 μa should not exceed the design maximum value with respect to supply voltage variation, equipment component variations, control adjustment, load variation, and environmental conditions. (e) Grid voltage for Ib = 50 μa should not exceed the design maximum value with respect to supply voltage variation, equipment component variations, control adjustment, load variation, and environmental conditions. (f) Plate current at Ec = -24 Vdc should not exceed the design maximum value with respect to supply voltage variation, equipment component variations, control adjustment, load variation, and environmental conditions. (g) Plate knee characteristics should not exceed the design maximum value with respect to supply voltage variation, equipment component variations, control adjustment, load variation, and environmental conditions.
3. 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 50% of the line cycle.
4. In stages operating with grid-leak bias, an adequate bias suitable means is required to protect the tube from abuse.

SYLVANIA TYPE 6DE7, 10DE7, 13DE7 (Cont'd)

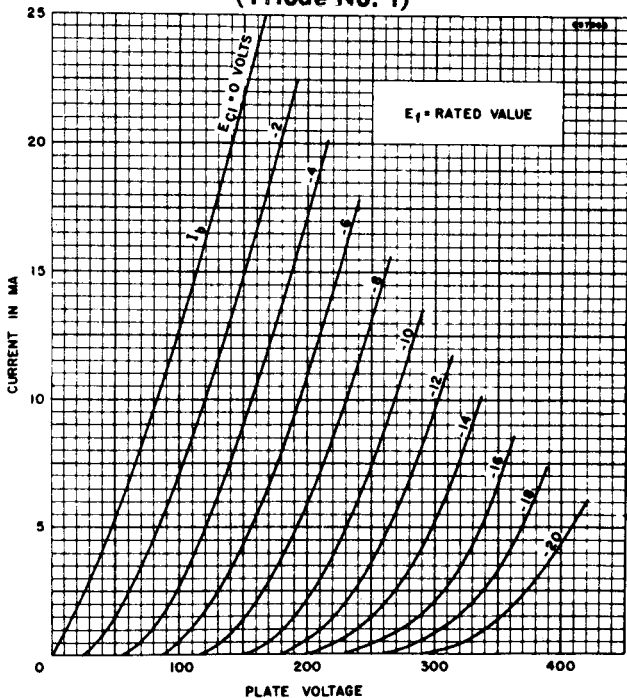
APPLICATION NOTES

The Sylvania Types 6DE7, 10DE7, and 13DE7 have dissimilar double triode contained in a miniature envelope. Triode No. 1 is intended for use as a Vertical Deflection Oscillator and Triode No. 2 is intended for use as a Vertical Deflection Amplifier.

Types 10DE7 and 13DE7 have controlled heater warm-up time for series string operation.

AVERAGE PLATE CHARACTERISTICS

(Triode No. 1)



AVERAGE PLATE CHARACTERISTICS

(Triode No. 2)

