

ADVANCE DATA

MECHANICAL DATA

Bulb	T-9
Base	E9-75, 9 Pin
Outline	See Drawing
Basing	9QT
Cathode	Coated Unipotential
Mounting Position	Any

ELECTRICAL DATA

HEATER CHARACTERISTICS AND RATINGS

Average Characteristics

Heater Operation	17LD8 Series
Heater Voltage	16.8 Volts
Heater Current	450 ¹ Ma
Heater Warm-up Time ²	11 Seconds

Ratings (Design Maximum Values)⁴

	Min.	Max.
Heater Current ³	420	480 Ma
Maximum Heater-Cathode Voltage		
Heater Negative with Respect to Cathode		200 Volts
Total DC and Peak		
Heater Positive with Respect to Cathode		100 Volts
DC		200 Volts
Total DC and Peak		

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

Triode Section

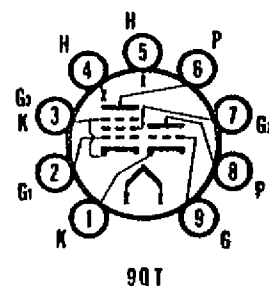
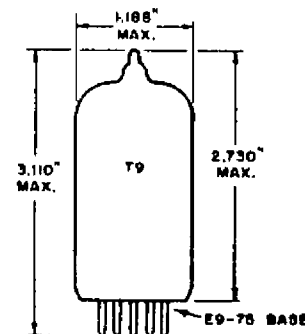
Grid to Plate	3.8 pf
Input: g to (h + Tk)	2.0 pf
Output: p to (h + Tk)	0.4 pf

Pentode Section

Grid No. 1 to Plate	0.26 pf Max.
Input: g ₁ to (h + Pk, g ₃)	13 pf
Output: p to (h + Pk, g ₃)	7 pf

QUICK REFERENCE DATA

The Sylvania Type 17LD8 is a triode-pentode contained in a T-9 bulb with a 9 pin base. 17LD8 is intended to serve the combined functions of vertical deflection oscillator and amplifier.



SYLVANIA ELECTRONIC TUBES
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RATINGS (Design Maximum Values)⁴

Vertical Deflection Oscillator and Amplifier⁵

	Tri. Osc.	Pent. Amp.	
Plate Voltage	250	250 Volts	Max.
Grid No. 2 Voltage	-	200 Volts	Max.
Peak Positive Pulse Plate Voltage	-	2,000 Volts	Max.
Peak Negative Grid No. 1 Voltage	400	150 Volts	Max.
Plate Dissipation ⁶	1.0	7 Watts	Max.
Grid No. 2 Dissipation ⁶	-	1.8 Watts	Max.
Average Cathode Current	20	70 Ma	Max.
Peak Cathode Current	70	245 Ma	Max.
Grid Circuit Resistance			
Self Bias	2.2	2.2 Megohms	Max.
Fixed Bias	1.0	1.0 Megohm	Max.

AVERAGE CHARACTERISTICS

	Triode Section	Pentode Section
Plate Voltage	150	120 Volts
Grid No. 2 Voltage	-	110 Volts
Grid No. 1 Voltage	-5	-8 Volts
Plate Current	3.3	46 Ma
Grid No. 2 Current	-	4 Ma
Transconductance	1,900	7,100 μ mhos
Amplification Factor	21.5	-
Plate Resistance (approx.)	11,300	11,700 Ohms
Ec for Ib = 10 μ a (approx.)	-10	- Volts
Ec for Ib = 100 μ a (approx.)	-	-25 Volts
Instantaneous Plate Knee Values		
Eb = 45 V; Ec2 = 110 V; and Ec = 0 V		
Ib = 122 Ma, and Ic2 = 17 Ma		

NOTES:

1. For series operation of heaters, equipment should be designed so that at normal supply voltage bogey tubes will operate at this value of heater current.
2. 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.
3. Heater voltage supply variations shall be restricted to maintain heater current within the specified tolerance.

NOTES: (Cont.)

4. Design Maximum Ratings are limiting values of operating and environmental conditions applicable to a bogey electron tube of a specified type as defined by its published data and should not be exceeded under the worst probable conditions.

The tube manufacturer chooses these values to provide acceptable serviceability of the tube, making allowance for the effects of changes in operating conditions due to variations in the characteristics of the tube under consideration.

The equipment manufacturer should design so that initially and throughout life no design maximum value for the intended service is exceeded with a bogey tube under the worst probable operating conditions with respect to supply voltage variation, equipment component variation, equipment control adjustment, load variation, signal variation, environmental conditions, and variations in the characteristics of all other electron devices in the equipment.

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.