

ADVANCE DATA

MECHANICAL DATA

Bulb	T-6 $\frac{1}{2}$
Base	E9-1, Miniature Button, 9-Pin
Outline	6-3
Basing	9DX
Cathode	Coated Unipotential
Mounting Position	Any

ELECTRICAL DATA

HEATER CHARACTERISTICS AND RATINGS

Average Characteristics

Heater Operation	6KS8	6KS8	8KS8	
	Series	Parallel	Series	
Heater Voltage	6.3	6.3 ¹	8.4	Volts
Heater Current	600 ¹	600	450 ¹	Ma
Heater Warm-up Time ²	11	-	11	Seconds

Ratings (Design Maximum Values)

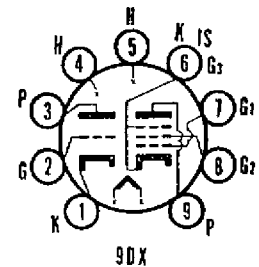
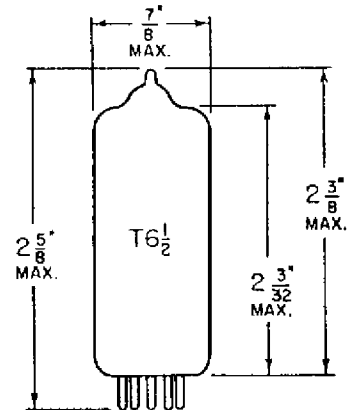
	6KS8	6KS8	8KS8	
	Min.-Max.	Min.-Max.	Min.-Max.	
Heater Voltage ³	-	5.7-6.9		Volts
Heater Current ³	560-640		420-480	Ma
Maximum Heater-Cathode Voltage				
Heater Negative with Respect to Cathode				
Total DC and Peak	200	200	200	Volts
Heater Positive with Respect to Cathode				
DC	100	100	100	Volts
Total DC and Peak	200	200	200	Volts

DIRECT INTERELECTRODE CAPACITANCES

Triode Section	Shielded ⁴	Unshielded
Grid to Plate	2.2	2.2 μ f
Input: g to (h+Tk+Pk,g3,I.S.)	3.4	3.2 μ f
Output: p to (h+Tk+Pk,g3,I.S.)	3.0	1.8 μ f

QUICK REFERENCE DATA

Sylvania Types 6KS8 and 8KS8 have a high mu triode and a semi-remote cutoff pentode contained in a T-6 $\frac{1}{2}$ envelope. Special design features of the pentode video amplifier section reduces overloading effects when used with simple AGC circuits. The triode section may be used as a sync separator or general purpose tube.



SYLVANIA ELECTRONIC TUBES

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DIRECT INTERELECTRODE CAPACITANCES (Cont'd)

Pentode Section	Shielded ¹	Unshielded		
Grid No. 1 to Plate	.04	.05	μf	Max.
Input: g1 to (h+Tk+Pk,g3,I.S.+g2)	10	10	μf	
Output: p to (h+Tk+Pk,g3,I.S.+g2)	4.5	3.6	μf	
Coupling				
Pentode Plate to Triode Plate	.025	.150	μf	Max.
Pentode Grid No. 1 to Triode Plate	.005	.008	μf	Max.

RATINGS (Design Maximum Values)

	Triode Section	Pentode Section		
Plate Voltage	330	330	Volts	Max.
Grid No. 2 Supply Voltage		330	Volts	Max.
Grid No. 2 Voltage	See J5/C4-2 Rating Chart			
Plate Dissipation	1.1	3.75	Watts	Max.
Grid No. 2 Dissipation		1.1	Watt	Max.
Positive Grid No. 1 Voltage	0	0	Volt	Max.
Grid No. 1 Circuit Resistance				
Fixed Bias	0.5	0.25	Megohm	Max.
Self Bias	1.0	1.0	Megohm	Max.

Control grid to cathode spacing of the pentode section is of such low order of magnitude as to preclude the use of voltage between these elements of more than 100 volts DC or peak AC in commercial tube checkers and shorts indicating devices, particularly where mechanical excitation of the tube is employed.

CHARACTERISTICS AND TYPICAL OPERATION

Class A ₁ Amplifier	Triode	Pentode	
Plate Voltage	200	150	Volts
Grid No. 2 Voltage		150	Volts
Grid No. 1 Voltage	-2	0	Volts
Cathode Bias Resistor		150	Ohms
Plate Current	4.0	20	Ma
Grid No. 2 Current		4.5	Ma
Transconductance	4000	9500	μmhos
Amplification Factor	70		
Plate Resistance (approx.)	17,500	150,000	Ohms
E _{c1} for I _b = 100 μa (approx.)		-10	Volts
E _c for I _b = 20 μa (approx.)	-5		Volts
Plate Knee Characteristics			
E _b =65V, E _{c2} =150V, E _{c1} =0 and I _b =60 Ma., I _{c2} =20 Ma.			

NOTES:

1. For series/parallel operation of heaters, equipment should be designed that at normal supply voltage bogey tubes will operate at this value of heater current/voltage.
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 voltage/current within the specified values.
4. External shield No. 315 connected to Pins 4 and 5.