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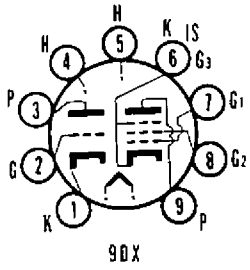
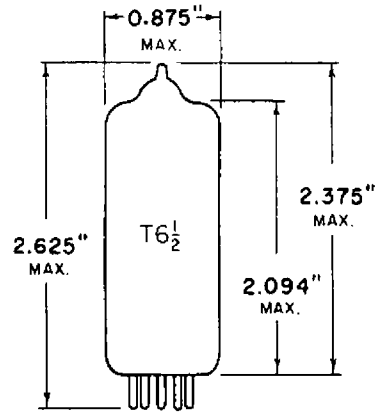
SYLVANIA

RECEIVING TUBES

Video and General Purpose Amplifier
8KR8

- MEDIUM MU TRIODE
- SHARP CUTOFF PENTODE
- MINIATURE CONSTRUCTION
- T-6 1/2 ENVELOPE
- 9 PIN BASE





DESCRIPTION

The Sylvania Type 8KR8 features a sharp cutoff pentode in combination with a medium mu triode in a T-6 1/2 envelope. The pentode section has a Gm of 20,000 and is designed for video amplifier service. The triode section is designed as a general purpose amplifier to be used as a voltage amplifier, sync separator or sound IF amplifier.

MECHANICAL DATA

Envelope	T-6 1/2
Base	E9-1
Outline	6-3
Maximum Diameter	0.875 Inches
Maximum Seated Height	2.375 Inches
Maximum Overall Length	2.625 Inches
Cathode	Coated Unipotential
Operating Position	Any
Basing	9DX

Terminal Connections:

Pin No.1 - Cathode, Triode Section
Pin No.2 - Grid, Triode Section
Pin No.3 - Plate, Triode Section
Pin No.4 - Heater
Pin No.5 - Heater
Pin No.6 - Cathode, Internal Shield, Grid No.3, Pentode Section
Pin No.7 - Grid No.1 Pentode Section
Pin No.8 - Grid No.2 Pentode Section
Pin No.9 - Plate, Pentode Section

ELECTRICAL DATA

Heater Characteristics and Ratings (Design Maximum Rating System) (4)

Heater Circuit	Series	Circuit (1)
Heater Current (3) (1)	0.600 ± 0.040	Amp
Heater Voltage (5)	8.0	Volts
Heater Warm-up Time (2)	11	Seconds
Maximum Heater-Cathode Voltage		
Heater Negative with Respect to Cathode		
Total DC and Peak	200	Volts
Heater Positive with Respect to Cathode		
DC	100	Volts
Total DC and Peak	200	Volts

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

Triode Section			
Grid to Plate	2.6	pf	
Input: g to (h +Tk + Pk, g3, I.S.)	4.2	pf	
Output: p to (h + Tk + Pk, g3, I.S.)	3.0	pf	
Pentode Section			
Grid No.1 to Plate	0.075	pf	Max.
Input: g1 to (h + Pk, g3, I.S. + g2)	13	pf	
Output: p to (h + Pk, g3, I.S. +g2)	4.4	pf	

RATINGS (Design Maximum Values) (4)

	Triode Section	Pentode Section	
Plate Voltage	330	330	Volts
Grid No.2 Supply Voltage	-	330	Volts Max.
Grid No.2 Voltage	See Rating Chart		
Positive Grid No.1 Voltage	0	0	Volt Max.
Plate Dissipation	2.0	5.0	Watts Max.
Grid No.2 Dissipation			
Up to 150 Volts	-	1.1	Watts Max.
150 to 300 Volts	See Rating Chart		
Grid No.1 Circuit Resistance			
Fixed Bias	0.5	0.01	Meg. Max.
Cathode Bias	1.0	0.01	Meg. Max.

NOTE: Control grid to cathode spacing of the pentode section of these types are of such low order of magnitude as to preclude the use of voltage between these elements of more than 50 volts dc or peak ac in commercial tube checkers and shorts indicating devices, particularly where mechanical excitation of the tube is employed.

AVERAGE CHARACTERISTICS AND TYPICAL OPERATION

	Triode Section	Pentode Section		
Plate Voltage	125	35	200	Volts
Grid No.1 Voltage	-	0	-	Volts
Grid No.2 Voltage	-	100	100	Volts
Cathode Bias Resistor	68	-	82	Ohms
Plate Current	15	54	19.5	Ma
Grid No.2 Current	-	13.5	3.0	Ma
Transconductance	10,400	-	20,000	μmhos
Amplification Factor	46	-	-	
Plate Resistance (approx.)	4400		60,000	Ohms
Ec1 for Ib = 100 μa (approx.)	-		-6.3	Volts
Ec1 for Ib = 10 μa (approx.)	-8		-	Volts

NOTES:

(1) Operated with the heater in series with the heaters of other tubes having the same bogey heater current.

(2) Heater warm-up time is defined as the time required for the voltage 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) The equipment designer should design the equipment so that heater current is centered at the specified bogey value, with heater supply variations restricted to maintain heater current within the specified tolerance.

(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 the 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) Heater voltage for a bogey tube at If = 0.600 amperes.

RATING CHART