

**TRIODE-PENTODE**

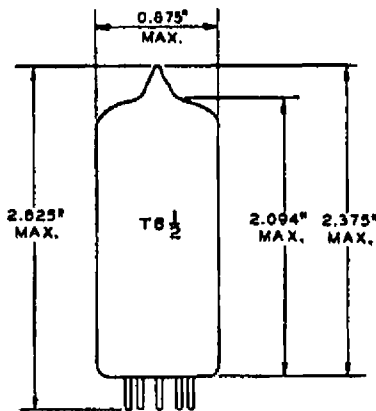
**DESCRIPTION AND RATING**

The 6KR8 is a miniature triode-pentode containing a medium- $\mu$  triode and a sharp-cutoff pentode. The pentode is intended for use as a video amplifier and the triode for general-purpose use.

**GENERAL**

ELECTRICAL		MECHANICAL	
Cathode - Coated Unipotential		Operating Position - Any	
Heater Characteristics and Ratings		Envelope - T-6 1/2, Glass	
Heater Voltage, AC or DC* . . . . .	6.3±0.6 Volts	Base - E9-1, Small Button 9-Pin	
Heater Current† . . . . .	0.75 Amperes	Outline Drawing - EIA 6-3	
Direct Interelectrode Capacitances‡		Maximum Diameter . . . . . 0.875 Inches	
Pentode Section		Maximum Over-all Length. . . . . 2.625 Inches	
Grid-Number 1 to Plate:		Maximum Seated Height . . . . . 2.375 Inches	
(Pg1 to Pp) . . . . .	0.075 pf		
Input: Pg1 to (h + Pk + Pg2 + Pg3 + i.s.) . . . . .	13 pf		
Output: Pp to (h + Pk + Pg2 + Pg3 + i.s.) . . . . .	4.4 pf		
Triode Section			
Grid to Plate: (Tg to Tp) . . . . .	2.6 pf		
Input: Tg to (h + Tk + Pk + Pg3 + i.s.) . . . . .	3.0 pf		
Output: Tp to (h + Tk + Pk + Pg3 + i.s.) . . . . .	4.2 pf		

**PHYSICAL DIMENSIONS**

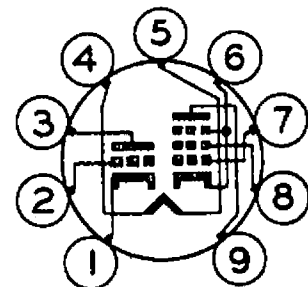


EIA 6-3

**TERMINAL CONNECTIONS**

- Pin 1 - Triode Cathode
- Pin 2 - Triode Grid
- Pin 3 - Triode Plate
- Pin 4 - Heater
- Pin 5 - Heater
- Pin 6 - Pentode Cathode, Grid Number 3, and Internal Shield
- Pin 7 - Pentode Grid Number 1
- Pin 8 - Pentode Grid Number 2 (Screen)
- Pin 9 - Pentode Plate

**BASING DIAGRAM**



EIA 9DX

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# 6KR8

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## MAXIMUM RATINGS

### DESIGN-MAXIMUM VALUES

	Pentode Section	Triode Section	
Plate Voltage . . . . .	330	330	Volts
Screen Supply Voltage . . . . .	330	---	Volts
Screen Voltage - See Screen Rating Chart			
Positive DC Grid-Number 1 Voltage . . . . .	0	0	Volts
Plate Dissipation . . . . .	5.0	2.0	Watts
Screen Dissipation . . . . .	1.1	---	Watts
Heater-Cathode Voltage			
Heater Positive with Respect to Cathode			
DC Component . . . . .	100	100	Volts
Total DC and Peak . . . . .	200	200	Volts
Heater Negative with Respect to Cathode			
Total DC and Peak . . . . .	200	200	Volts
Grid-Number 1 Circuit Resistance			
With Fixed Bias . . . . .	0.5	0.5	Megohms
With Cathode Bias . . . . .	1.0	1.0	Megohms

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.

## CHARACTERISTICS AND TYPICAL OPERATION

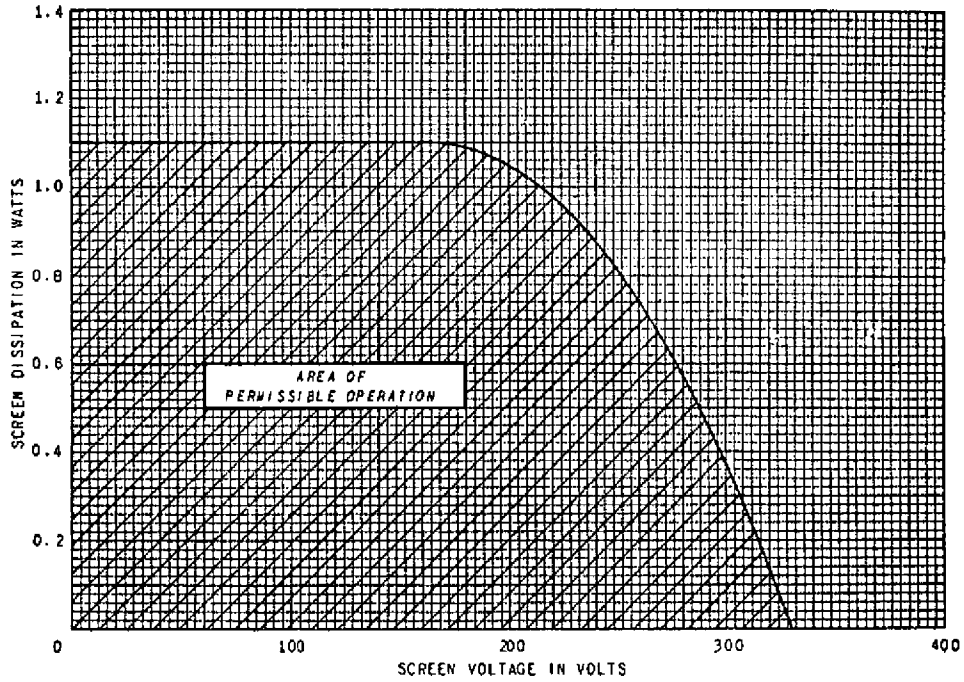
### AVERAGE CHARACTERISTICS

	Pentode Section	Triode Section	
Plate Voltage . . . . .	35	125	Volts
Screen Voltage . . . . .	100	---	Volts
Grid-Number 1 Voltage . . . . .	0	---	Volts
Cathode-Bias Resistor . . . . .	---	82	Ohms
Amplification Factor . . . . .	---	46	
Plate Resistance, approximate . . . . .	---	60000	Ohms
Transconductance . . . . .	---	20000	Micromhos
Plate Current . . . . .	54	19.5	Milliamperes
Screen Current . . . . .	13.5	3.0	Milliamperes
Grid-Number 1 Voltage, approximate			
I <sub>b</sub> = 10 Microamperes . . . . .	---	-8	Volts
Grid-Number 1 Voltage, approximate			
I <sub>b</sub> = 100 Microamperes . . . . .	-4.4	---	Volts

### FOOTNOTES

- \* The equipment designer should design the equipment so that heater voltage is centered at the specified bogey value, with heater supply variations restricted to maintain heater voltage within the specified tolerance.
- † Heater current of a bogey tube at E<sub>f</sub> = 6.3 volts.
- ‡ Without external shield

**SCREEN RATING CHART**



RECEIVING TUBE DEPARTMENT

**GENERAL  ELECTRIC**

Owensboro, Kentucky