



7V7

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## SHARP-CUTOFF PENTODE

## GENERAL DATA

## Electrical:

Heater, for Unipotential Cathode:

Voltage . . . . . 6.3<sup>□</sup> . . . . . ac or dc volts  
 Current . . . . . 0.45<sup>□□</sup> . . . . . amp

Direct Interelectrode Capacitances:<sup>○</sup>

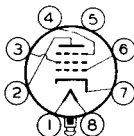
Grid No.1 to Plate . . . 0.004 max. . . . .  $\mu\mu\text{f}$   
 Input . . . . . 9.5 . . . . .  $\mu\mu\text{f}$   
 Output . . . . . 6.5 . . . . .  $\mu\mu\text{f}$

<sup>○</sup> With external shield connected to cathode.

## Mechanical:

Mounting Position . . . . . Any  
 Maximum Overall Length . . . . . 2-25/32"  
 Maximum Seated Length . . . . . 2-1/4"  
 Maximum Diameter . . . . . 1-3/16"  
 Bulb . . . . . T-9  
 Base . . . . . Lock-in 8-Pin  
 Basing Designation for BOTTOM VIEW . . . . . 8V

Pin 1 - Heater  
 Pin 2 - Plate  
 Pin 3 - Grid No.2  
 Pin 4 - Grid No.3  
 Pin 5 - Internal  
 Shield



Pin 6 - Grid No.1  
 Pin 7 - Cathode  
 Pin 8 - Heater  
 Plug - Base  
 Shell

AMPLIFIER - Class A<sub>1</sub>

## Maximum Ratings, Design-Center Values:

PLATE VOLTAGE . . . . . 300 max. volts  
 GRID-NO.2 (SCREEN) VOLTAGE . . . . . 150 max. volts  
 GRID-NO.2 SUPPLY VOLTAGE . . . . . 300 max. volts  
 PLATE DISSIPATION . . . . . 4 max. watts  
 GRID-NO.2 DISSIPATION . . . . . 0.8 max. watt  
 PEAK HEATER-CATHODE VOLTAGE:  
 Heater negative with respect to cathode . . . 90 max. volts  
 Heater positive with respect to cathode . . . 90 max. volts

## Typical Operation and Characteristics:

	<u>Condition I*</u>	<u>Condition II**</u>	
Plate Voltage . . . . .	300	300	volts
Grid No.3 (Suppressor)	Connected to cathode at socket		
Internal Shield . . . . .	Connected to cathode at socket		
Grid-No.2 Supply - Voltage# . . . . .	150	300	volts
Grid-No.2 Resistor . . . . .	-	40000	ohms
Min. Cathode-Bias Resistor . . . . .	160	160	ohms

<sup>□</sup> Nominal voltage = 7.0 volts.<sup>□□</sup> Nominal current = 0.48 ampere.

\* , \*\* , # : See next page.

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Plate Current. . . . .	10	10	ma
Grid-No.2 Current. . .	3.9	3.9	ma
Plate Resistance . . .	0.3	0.3	megohm
Transconductance . . .	5800	5800	$\mu$ hos
Grid-No.1 Bias (Approx.) for plate current of 10 $\mu$ a. . . . .	-8	-16	volts

\* Condition I with fixed grid-No.2 supply gives a sharp-cutoff characteristic.

\*\* Condition II with series grid-No.2 resistor gives an extended-cutoff characteristic.

# When grid-No.2 supply voltage in excess of 150 volts is used, a series grid-No.2 resistor must be used to limit grid-No.2 voltage to 150 volts when the plate current is at its normal value of 10 ma.