

**FOR AUDIO-FREQUENCY AMPLIFIER APPLICATIONS**

**DESCRIPTION AND RATING**

The 1620 is a metal, sharp-cutoff pentode for use as a high-gain, audio-frequency amplifier or as a biased detector. The tube is a low-microphonic version of the 6J7 to which it is otherwise identical.

**GENERAL**

**ELECTRICAL**

Cathode—Coated Unipotential	
Heater Voltage, AC or DC.....	6.3 Volts
Heater Current.....	0.3 Amperes
Direct Interelectrode Capacitances*	
Pentode Connection	
Grid-Number 1 to Plate, maximum.....	0.005 $\mu\mu\text{f}$
Input.....	7.0 $\mu\mu\text{f}$
Output.....	12 $\mu\mu\text{f}$
Triode Connection†	
Grid-Number 1 to Plate.....	2.0 $\mu\mu\text{f}$
Input.....	5.0 $\mu\mu\text{f}$
Output.....	14 $\mu\mu\text{f}$

\* With pin 1 connected to pin 8.

† With screen and suppressor connected to plate.

**MECHANICAL**

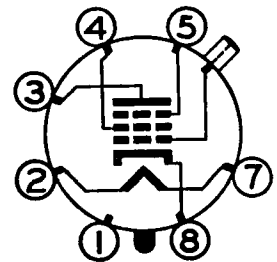
Mounting Position—Any  
Envelope—MT-8, Metal Shell  
Base—B7-22, Small-Wafer Octal 7-Pin  
Top Cap—C1-4, Miniature

**MAXIMUM RATINGS**

**DESIGN-CENTER VALUES**

	<b>Pentode Connection</b>	<b>Triode Connection†</b>
Plate Voltage.....	250	250 Volts
Screen Voltage.....	100	.. Volts
Positive DC Grid-Number 1 Voltage.....	0	0 Volts
Plate Dissipation.....	0.75	1.75 Watts
Screen Dissipation.....	0.1	.. Watts
Heater-Cathode Voltage		
Heater Positive with Respect to Cathode..	90	90 Volts
Heater Negative with Respect to Cathode..	90	90 Volts

**BASING DIAGRAM**

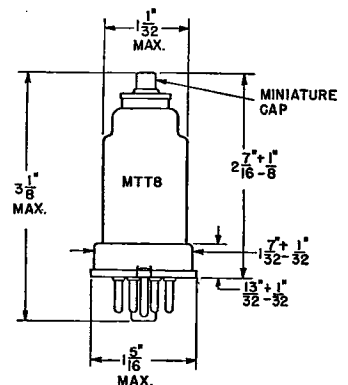


RETMA 7R

**TERMINAL CONNECTIONS**

- Pin 1—Shell
- Pin 2—Heater
- Pin 3—Plate
- Pin 4—Grid Number 2 (Screen)
- Pin 5—Grid Number 3 (Suppressor)
- Pin 7—Heater
- Pin 8—Cathode
- Cap—Grid Number 1

**PHYSICAL DIMENSIONS**



RETMA 8-4

## CHARACTERISTICS AND TYPICAL OPERATION

### CLASS A<sub>1</sub> AMPLIFIER

	Pentode Connection		Triode Connection †		
Plate Voltage .....	100	250	180	250	Volts
Suppressor, Connected to Cathode at Socket					
Screen Voltage .....	100	100	...	...	Volts
Grid-Number 1 Voltage .....	-3	-3	-5.3	-8	Volts
Amplification Factor .....			20	20	
Plate Resistance, approximate .....	1.0	1.0	0.011	0.0105	Megohms
Transconductance .....	1185	1225	1800	1900	Micromhos
Plate Current .....	2.0	2.0	5.3	6.5	Milliamperes
Screen Current .....	0.5	0.5	...	...	Milliamperes
Grid-Number 1 Voltage, approximate					
For Cathode Current Cutoff .....	-7.0	-7.0	...	...	Volts

† With screen and suppressor connected to plate.

TUBE DEPARTMENT  
**GENERAL  ELECTRIC**  
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