



# 6AU4-GTA—19AU4-GTA

**6AU4-GTA**  
**19AU4-GTA**  
 ET-T932  
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## DIODE

FOR TV DAMPING DIODE APPLICATIONS

### DESCRIPTION AND RATING

The 6AU4-GTA is a single heater-cathode type diode intended for service as the damping diode in the horizontal-deflection circuit of television receivers. Its high output current capabilities make the tube particularly well suited for operation in conjunction with the 6CD6-GA in autotransformer deflection systems. Except for increased maximum d-c output current and peak plate current ratings, the 6AU4-GTA is identical to the 6AU4-GT.

The 19AU4-GTA differs from the 6AU4-GTA by incorporating different heater ratings. In addition, the 19AU4-GTA as a result of its controlled heater warm-up characteristic, is especially suited for use in television receivers which employ series-connected heaters. When used in conjunction with other 600-milliamper types which exhibit essentially the same heater warm-up characteristic, heater voltage surges across the individual tubes are minimized during the warm-up period.

### GENERAL

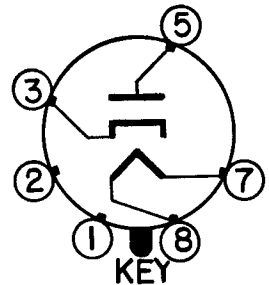
#### ELECTRICAL

	6AU4-GTA	19AU4-GTA
Cathode—Coated Unipotential		
Heater Voltage, AC or DC.....	6.3	18.9 Volts
Heater Current.....	1.8	0.6 Amperes
Heater Warm-up Time*.....		11 Seconds
Direct Interelectrode Capacitances, approximate†		
Cathode to Plate and Heater.....		11.5 $\mu\mu\text{f}$
Plate to Cathode and Heater.....		8.5 $\mu\mu\text{f}$
Heater to Cathode.....		4.0 $\mu\mu\text{f}$

#### MECHANICAL

Mounting Position—Any  
 Envelope—T-9, Glass  
 Base—B5-85 or B6-60, Short Intermediate Shell Octal

#### BASING DIAGRAM

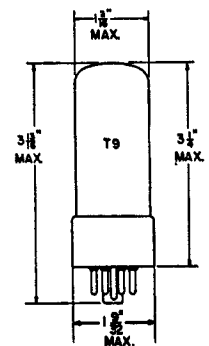


RETMA 4CG

#### TERMINAL CONNECTIONS

- Pin 1—No Connection.‡
- Pin 2—Internal Connection  
Do Not Use
- Pin 3—Cathode
- Pin 5—Plate
- Pin 7—Heater
- Pin 8—Heater
- ‡ Pin 1 omitted on base B5-85

#### PHYSICAL DIMENSIONS



RETMA 9-44

**MAXIMUM RATINGS**

**TV DAMPER SERVICE§**

**DESIGN-CENTER VALUES UNLESS OTHERWISE INDICATED**

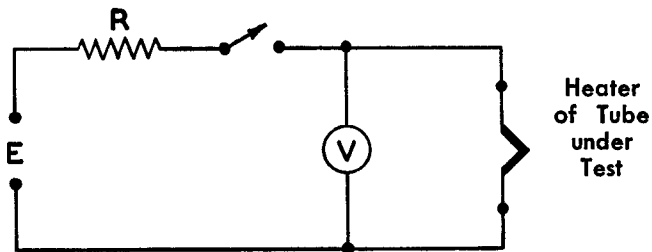
Peak Inverse Plate Voltage .....	4500 $\pi$ Volts
Plate Dissipation .....	6.0 Watts
Steady-State Peak Plate Current .....	1150 Milliamperes
DC Output Current .....	190 Milliamperes
<b>Heater-Cathode Voltage</b>	
Heater Positive with Respect to Cathode	
DC Component .....	100 Volts
Total DC and Peak .....	300 Volts
Heater Negative with Respect to Cathode	
DC Component .....	900 Volts
Total DC and Peak .....	4500 $\pi$ Volts

**AVERAGE CHARACTERISTICS**

Tube Voltage Drop	
I <sub>b</sub> =350 Milliamperes DC .....	25 Volts

\* Heater warm-up time is defined as the time required in the circuit shown at the right for the voltage across the heater terminals to increase from zero to the heater test voltage (V<sub>1</sub>). For this type, E=75 volts (RMS or DC), V<sub>1</sub>=15.0 volts (RMS or DC), and R=94.5 ohms.

† Without external shield.



§ For operation in a 525-line, 30-frame television system as described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission. The duty cycle of the voltage pulse must not exceed 15 percent of one scanning cycle.

$\pi$  Value given is to be considered as an Absolute Maximum Rating. In this case, the combined effect of supply voltage variation, manufacturing variation including components in the equipment, and adjustment of equipment controls should not cause rated value to be exceeded.

Note: Socket terminals 1, 2, 4, and 6 should not be used. Operation of this tube as a power rectifier is not recommended.

### AVERAGE PLATE CHARACTERISTICS

