Electronic TUBES

6AU4-GTA—19AU4-GTA

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-milliampere 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

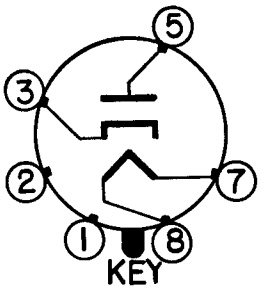
ELECTRICAL

	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 μμf	
Plate to Cathode and Heater	8.5 μμf	
Heater to Cathode	4.0 μμf	

MECHANICAL

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

BASING DIAGRAM

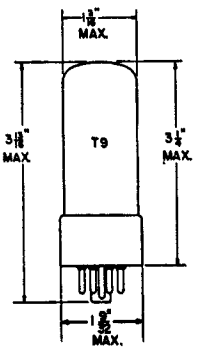


RETMA 4CG

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

GENERAL ELECTRIC

MAXIMUM RATINGS

TV DAMPER SERVICE§
DESIGN-CENTER VALUES UNLESS OTHERWISE INDICATED

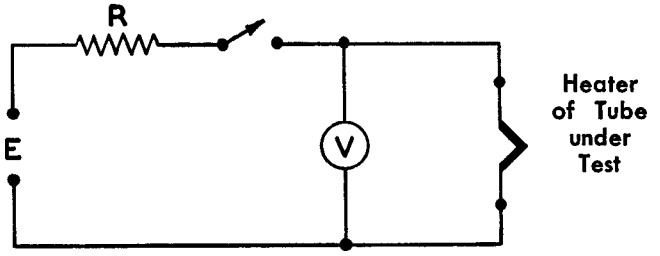
Peak Inverse Plate Voltage	4500π	Volts
Plate Dissipation	6.0	Watts
Steady-State Peak Plate Current	1150	Milliamperes
DC Output Current	190	Milliamperes
Heater-Cathode Voltage		
Heater Positive with Respect to Cathode		
DC Component	100	Volts
Total DC and Peak	300	Volts
Heater Negative with Respect to Cathode		
DC Component	900	Volts
Total DC and Peak	4500π	Volts

AVERAGE CHARACTERISTICS

Tube Voltage Drop		
I_b=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_1). For this type, E=75 volts (RMS or DC), V_1=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.

π 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