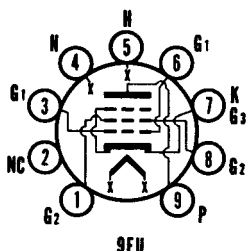


# SYLVANIA TYPE 6GC5

## BEAM POWER PENTODE



The 9T9 design utilizes a T-9 (1 $\frac{1}{8}$ " Dia.) bulb based to fit a standard 9-pin miniature socket. Advantages of the 9T9 include an increase in the heat dissipation safety margin, as compared to 9-pin miniature tubes employing T-6 $\frac{1}{2}$  ( $\frac{5}{16}$ " Dia.) bulbs.

### MECHANICAL DATA

Bulb	Special, T-9
Base	9-Pin, Same as E9-1, except Bulb Dia. (E9-68)
Outline	9-71
Basing	9EU
Cathode	Coated Unipotential
Mounting Position	Any

### ELECTRICAL DATA

#### HEATER CHARACTERISTICS AND RATINGS

##### Characteristics

Heater Voltage <sup>1</sup>	6.3 Volts
Heater Current <sup>2</sup>	1.2 Ma

##### Ratings (Design Maximum Values)

Heater Voltage <sup>3</sup>	6.3 $\pm$ 0.6 Volts
Maximum Heater-Cathode Voltage	
Heater Negative with Respect to Cathode	
Total D C and Peak	200 Volts Max.
Heater Positive with Respect to Cathode	
D C	100 Volts Max.
Total D C and Peak	200 Volts Max.

#### DIRECT INTERELECTRODE CAPACITANCES (Approx.)

Grid No. 1 to Plate	0.9 $\mu\mu\text{f}$
Input: g1 to (h + k, g3 + g2)	18 $\mu\mu\text{f}$
Output: p to (h + k, g3 + g2)	7 $\mu\mu\text{f}$

#### RATINGS (Design Maximum Values)

Plate Voltage	220 Volts Max.
Grid No. 2 Voltage	140 Volts Max.
Plate Dissipation	12 Watts Max.
Grid No. 2 Dissipation	1.4 Watts Max.
Grid No. 1 Circuit Resistance	
Fixed Bias	0.1 Megohm Max.
Cathode Bias	0.5 Megohm Max.

#### CHARACTERISTICS AND TYPICAL OPERATIONS

##### Class A1 Amplifier (Single Tube)

Plate Voltage	110	200 Volts
Grid No. 2 Voltage	110	125 Volts
Grid No. 1 Voltage	-7.5	— Volts
Cathode Resistor	—	180 Ohms
Peak AF Grid No. 1 Voltage	7.5	8.5 Volts
Zero Signal Plate Current	49	46 Ma
Max. Signal Plate Current	50	47 Ma
Zero Signal Grid No. 2 Current	4	2.2 Ma
Max. Signal Grid No. 2 Current	10	8.5 Ma
Transconductance	8000	8000 $\mu\text{mhos}$
Plate Resistance (approx.)	13,000	28,000 Ohms
Load Resistance	2000	4000 Ohms
Max. Signal Power Output	2.1	3.8 Watts
Total Harmonic Distortion (approx.)	10	10 Percent

#### NOTES:

- For parallel operation of heaters, equipment should be designed that at normal supply voltage bogy tubes will operate at this value of heater voltage.
- The bogy value of current is obtained when operating the heater at the specified 6.3 volts.
- Heater voltage supply variations shall be restricted to maintain heater voltage within the specified tolerance.

### APPLICATION

The Sylvania Type 6GC5, beam power pentode, features high power sensitivity as an audio power amplifier. In Class A1 operation, it can deliver 2.1 watts of power with a B+ voltage of only 110 volts.