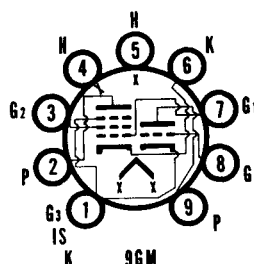




# **SYLVANIA TYPE 6CU8** **MEDIUM MU TRIODE** **SHARP CUTOFF PENTODE**



## **MECHANICAL DATA**

|                        |                          |
|------------------------|--------------------------|
| Bulb.....              | T-6 $\frac{1}{2}$        |
| Base.....              | E9-1, Small Button 9-Pin |
| Outline.....           | 6-2                      |
| Basing.....            | 9GM                      |
| Cathode.....           | Coated Unipotential      |
| Mounting Position..... | Any                      |

## **ELECTRICAL DATA**

### **HEATER CHARACTERISTICS**

|                                               |                |
|-----------------------------------------------|----------------|
| Heater Voltage.....                           | 6.3 Volts      |
| Heater Current.....                           | 450 Ma         |
| Heater Warm-up Time <sup>1</sup> .....        | 11 Seconds     |
| Heater-Cathode Voltage (Design Center Values) |                |
| 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 (Unshielded)**

#### **Triode Section**

|                             |                      |
|-----------------------------|----------------------|
| Grid to Plate.....          | 1.6 $\mu\mu\text{f}$ |
| Grid to (k+h+g3+l.S.).....  | 1.9 $\mu\mu\text{f}$ |
| Plate to (k+h+g3+l.S.)..... | 1.6 $\mu\mu\text{f}$ |

#### **Pentode Section**

|                                            |                             |
|--------------------------------------------|-----------------------------|
| Grid No. 1 to Plate.....                   | 0.025 $\mu\mu\text{f}$ Max. |
| Grid No. 1 to (k and g3+g2+h+Tk+l.S.)..... | 7.0 $\mu\mu\text{f}$        |
| Plate to (k and g3+g2+h+Tk+l.S.).....      | 2.4 $\mu\mu\text{f}$        |

# 6CU8 (Cont'd)

## DIRECT INTERELECTRODE CAPACITANCES (Cont'd)

### Coupling

|                                         |                        |
|-----------------------------------------|------------------------|
| Pentode Grid No. 1 to Triode Plate..... | 0.02 $\mu\mu\text{f}$  |
| Pentode Plate to Triode Plate.....      | 0.04 $\mu\mu\text{f}$  |
| Triode Grid to Pentode Plate.....       | 0.005 $\mu\mu\text{f}$ |

## MAXIMUM RATINGS (Design Center Values)

|                                                              | Triode Section        | Pentode Section |
|--------------------------------------------------------------|-----------------------|-----------------|
| Plate Voltage.....                                           | 300                   | 300 Volts       |
| Grid No. 2 Supply Voltage.....                               |                       | 300 Volts       |
| Grid No. 2 Voltage.....                                      | See 6AM8 Rating Chart |                 |
| Plate Dissipation.....                                       | 2.6                   | 2 Watts         |
| Positive Grid No. 1 Voltage.....                             | 0                     | 0 Volt          |
| Grid No. 2 Input:                                            |                       |                 |
| For Grid No. 2 Voltages up to 150 Volts....                  |                       | 0.5 Watt        |
| For Grid No. 2 Voltages Between 150 Volts and 300 Volts..... | See 6AM8 Rating Chart |                 |
| Grid No. 1 Circuit Resistance                                |                       |                 |
| Fixed Bias.....                                              | 0.5                   | 0.25 Megohm     |
| Self Bias.....                                               | 1.0                   | 1.0 Megohm      |

## AVERAGE CHARACTERISTICS

|                                                    | Triode Section | Pentode Section       |
|----------------------------------------------------|----------------|-----------------------|
| Plate Voltage.....                                 | 200            | 200 Volts             |
| Grid No. 2 Voltage.....                            |                | 150 Volts             |
| Grid Voltage.....                                  | -6             | Volts                 |
| Cathode Bias Resistor.....                         |                | 180 Ohms              |
| Plate Current.....                                 | 13             | 9.5 Ma                |
| Grid No. 2 Current.....                            |                | 2.0 Ma                |
| Transconductance.....                              | 3300           | 6200 $\mu\text{mhos}$ |
| Amplification Factor.....                          | 19             |                       |
| Plate Resistance.....                              | 5750           | 300,000 Ohms          |
| $E_{c1}$ for $I_b = 10 \mu\text{a}$ (approx.)..... | -19            | -8 Volts              |

### NOTE:

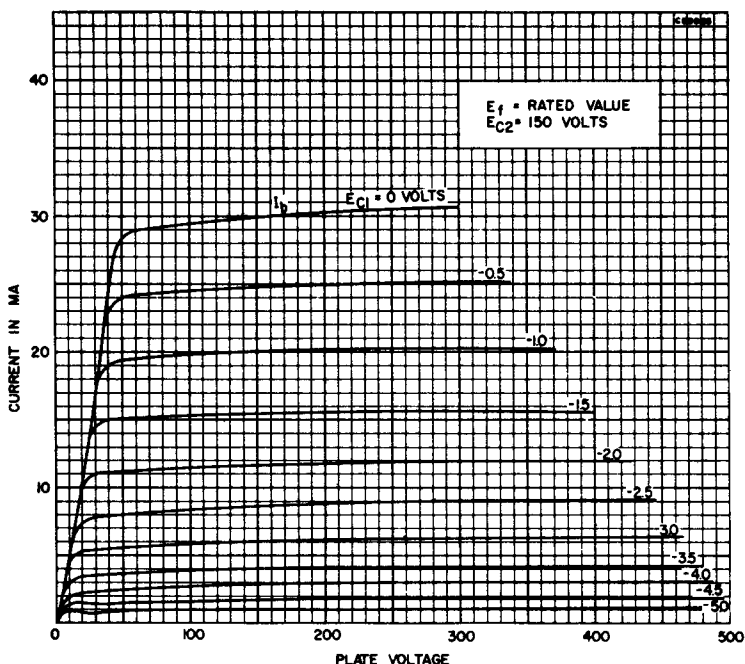
1. Heater warm-up time is defined as the time required for the voltage across the heater to reach 80% of its rated value after applying four (4) times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to three (3) times rated heater voltage divided by rated heater current.

## APPLICATION

The Sylvania Type 6CU8 is a medium mu triode and sharp cutoff pentode contained in a T-6½ envelope. The pentode section is suitable for use as an IF, video or agc amplifier. The triode section is well suited for use in low frequency oscillator, sync-separator, sync-clipper and phase-splitter circuits.

Type 6CU8 has controlled heater warm-up time for series string operation.

## AVERAGE PLATE CHARACTERISTICS (PENTODE SECTION)



# 6CU8 (Cont'd)

## AVERAGE PLATE CHARACTERISTICS (TRIODE SECTION)

