SYLVANIA TYPE 6CM8
5CM8

HIGH-MU TRIODE
SHARP CUTOFF PENTODE

MECHANICAL DATA

Bulb .............................................. T-6½
Base .............................................. E9-1, Small Button 9-Pin
Outline ........................................... 6-2
Base Pins ........................................ 9FZ
Cathode .......................................... Coated Unipotential
Mounting Position ............................ Any

ELECTRICAL DATA

HEATER CHARACTERISTICS

5CM8
6CM8

Heater Voltage .................................. 4.7 6.3 Volts
Heater Current ................................ 600 450 Ma
Heater Warm-up Time ............................ 11 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 (Approx.)

Triode Section

Grid to Plate .................................... 1.9 μF
Input: g to (h + k) ................................ 1.6 μF
Output: p to (h + k) ............................. 0.22 μF

Pentode Section

Grid No. 1 to Plate ............................ 0.04 μF Max.
Input: g1 to (h+k+g2+g3+I.S.) ............... 6.0 μF
Output: p to (h+k+g2+g3+I.S.)  .................. 2.6 μF

Coupling

Pentode Plate to Triode Grid ................. 0.01 μF Max.
Pentode Grid No. 1 to Triode Plate ......... 0.15 μF Max.
Pentode Plate to Triode Plate .................. 0.10 μF Max.

MAXIMUM RATINGS (Design Center Values)

Triode Section

Plate Voltage ................................ 300 300 Volts
Grid No. 2 Supply Voltage ................. See 6AM8 Rating Chart
Grid No. 2 Voltage .......................... 300 Volts
Positive Grid No. 1 Voltage ................. 9 V
Plate Dissipation ............................. 2.0 Watts
Grid No. 2 Dissipation ....................... 0.5 Watt
Grid No. 1 Circuit Resistance ............... 1.0 Megohm
Self Bias ...................................... 0.25 Megohm

Pentode Section

Plate Voltage ................................ 300 300 Volts
Grid No. 2 Supply Voltage ................. See 6AM8 Rating Chart
Grid No. 2 Voltage ...................... See 6AM8 Rating Chart
Positive Grid No. 1 Voltage ................. 9 V
Plate Dissipation ............................. 2.8 Ma
Grid No. 2 Dissipation ....................... 0.5 Watt
Grid No. 1 Circuit Resistance ............... 1.0 Megohm
Self Bias ...................................... 0.25 Megohm

CHARACTERISTICS

Class A: Amplifier

Triode Section

Plate Supply Voltage ......................... 250 200 Volts
Grid No. 2 Voltage .......................... 150 Volts
Grid No. 1 Voltage .......................... 0 Volts
Cathode Bias Resistor ....................... 180 Ohms
Plate Current ................................ 9.5 Ma
Grid No. 2 Current .......................... 2.8 Ma
Amplification Factor .......................... 100
Plate Resistance (approx.) ................. 50,000 600,000 Ohms
Transconductance ........................... 6000 1200 μmhos

Pentode Section

Grid No. 1 Voltage for Ib = 10 μA (approx.) ....... ~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 6CM8 is a high mu triode and sharp cutoff pentode. The pentode section may be used as an IF amplifier, video amplifier, AGC amplifier and reactance tube.

The 5CM8 is identical to the 6CM8 except for heater characteristics. Both types employ controlled heater warm-up time for services in series heater string television receivers.

SYLVANIA ELECTRONIC TUBES