6CE5-3CE5-4CE5

PENTODE

DESCRIPTION AND RATING

The 6CE5 is a miniature sharp-cutoff pentode designed for use as a wide-band, radio-frequency amplifier in television receivers. Features of the tube include high transconductance and low interelectrode capacitance. The 6CE5 also exhibits a controlled heater warm-up characteristic which makes it especially suited for use in television receivers that employ series-connected heaters. Except for heater ratings, the 3CE5 and the 4CE5 are identical to the 6CE5.

GENERAL

ELECTRICAL
Cathode—Coated Unipotential 3CE5 4CE5 6CE5
Heater Voltage, AC or DC .................. 3.15 4.2 6.3 Volts
Heater Current .................. 0.6 0.45 0.3 Amperes
Heater Warm-up Time* .................. 11 11 11 Seconds
Direct Interelectrode Capacitances†
   Grid-Number 1 to Plate, maximum .................. 0.03 μf
   Input ................................ 6.5 μf
   Output ................................ 1.9 μf

MECHANICAL
Mounting Position—Any
Envelope—T-5½, Glass
Base—E7-1, Miniature Button 7-Pin

MAXIMUM RATINGS

DESIGN-CENTER VALUES
Plate Voltage .................. 300 Volts
Screen-Supply Voltage .................. 300 Volts
Screen Voltage—See Screen Rating Chart
Positive DC Grid-Number 1 Voltage .................. 0 Volts
Plate Dissipation .................. 2.0 Watts
Screen Dissipation .................. 0.5 Watts
Heater-Cathode Voltage
   Heater Positive with Respect to Cathode
      DC Component .................. 100 Volts
      Total DC and Peak .................. 200 Volts
   Heater Negative with Respect to Cathode
      Total DC and Peak .................. 200 Volts

PHYSICAL DIMENSIONS

GENERAL ELECTRIC
CHARACTERISTICS AND TYPICAL OPERATION

CLASS A, AMPLIFIER

Plate Voltage ............................................ 125 Volts
Screen Voltage ........................................ 125 Volts
Grid-Number 1 Supply Voltage ......................... -1.0 Volts
Grid-Number 1 Resistor (bypassed) .................... 1.0 Megohms
Plate Resistance, approximate .......................... 0.3 Megohms
Transconductance ..................................... 0.7600 Micromhos
Plate Current .......................................... 11 Milliamperes
Screen Current ......................................... 2.8 Milliamperes
Grid-Number 1 Voltage, approximate
\[ I_0 = 35 \text{ Microamperes} \] ........................................... -5.0 Volts

* The time required for the voltage across the heater to reach 80 per cent of its rated value after applying 4 times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to 3 times the rated heater voltage divided by the rated heater current.

† Without external shield.
AVERAGE TRANSFER CHARACTERISTICS

\[ E_f = \text{RATED VALUE} \]
\[ E_b = 125 \text{ VOLTS} \]
\[ R_{g1} = 0 \text{ OHMS} \]
\[ R_{g1} = 1.0 \text{ MEGOHMS (BYPASSED)} \]