12C5 Beam Pentode. Except for heater characteristics and ratings, the 12C5 is identical to the 50C5.

**GENERAL**

**ELECTRICAL**
Cathode—Coated Unipotential
Heater Characteristics and Ratings
Heater Voltage, AC or DC* .......................................................... 12.6 Volts
Heater Current† .......................................................... 0.6 ± 0.04 Amperes
Heater Warm-up Time‡ .......................................................... 11 Seconds

---

12CA5 Beam Pentode. Except for heater ratings and heater-cathode voltage ratings, the 12CA5 is identical to the 6CA5.

**GENERAL**

**ELECTRICAL**
Cathode—Coated Unipotential
Heater Characteristics and Ratings
Heater Voltage, AC or DC .......................................................... 12.6 Volts
Heater Current .......................................................... 0.6 Amperes
Heater Warm-up Time‡ .......................................................... 11 Seconds

**MAXIMUM RATINGS**

**DESIGN-CENTER VALUES**
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
  DC Component .......................................................... 200 Volts
  Total DC and Peak .......................................................... 300 Volts

Design-Center ratings are limiting values of operating and environmental conditions applicable to a bogey electron tube of a specified type as defined by its published data and should not be exceeded under normal conditions.

The tube manufacturer chooses these values to provide acceptable serviceability of the tube in average applications, making allowance for normal changes in operating conditions due to rated supply-voltage variation, equipment component variation, equipment control adjustment, load variation, signal variation, environmental conditions, and variations in the characteristics of the tube under consideration and of all other electron devices in the equipment.

The equipment manufacturer should design so that initially no design-center value for the intended service is exceeded with a bogey tube under normal operating conditions at the stated normal supply voltage.

---

**NOTES**

φ Heater voltage for a bogey tube at If = 0.3 amperes.
† Heater voltage for a bogey tube at If = 0.45 amperes.
* Heater voltage for a bogey tube at If = 0.6 amperes.
† For series heater operation, the equipment designer should design the equipment so that heater current is centered at the specified bogey value, with heater supply variations restricted to maintain heater current within the specified tolerance.
‡ The time required for the voltage across the heater to reach 80 percent 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.

The tubes and arrangements disclosed herein may be covered by patents of General Electric Company or others. Neither the disclosure of any information herein nor the sale of tubes by General Electric Company conveys any license under patent claims covering combinations of tubes with other devices or elements. To the contrary, General Electric Company assumes no liability for patent infringement arising out of any use of the tubes with other devices or elements by any purchaser of tubes or others.