The 50EH5 is a miniature power pentode primarily designed for use in the audio-frequency power-output stage of radio receivers and phonographs. The tube features high power sensitivity at low plate and screen voltages.

**GENERAL**

**Cathode**—Coated Unipotential  
**Heater Voltage, AC or DC** ........................................ 50 Volts  
**Heater Current** ................................................... 0.15 Amperes  
**Direct Interelectrode Capacitances, approximate**  
- **Grid-Number 1 to Plate** ............................................ 0.65 µµf  
- **Input** ............................................................... 17 µµf  
- **Output** .............................................................. 9.0 µµf

**MECHANICAL**

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

**MAXIMUM RATINGS**

**DESIGN-CENTER VALUES**

- **Plate Voltage** .................................................. 135 Volts  
- **Screen Voltage** ................................................ 117 Volts  
- **Positive DC Grid-Number 1 Voltage** .............................. 0 Volts  
- **Plate Dissipation** ............................................... 5.0 Watts  
- **Screen Dissipation** ............................................ 1.75 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  
- **Grid-Number 1 Circuit Resistance**
  - **With Fixed Bias** ........................................... 0.1 Megohms  
  - **With Cathode Bias** ......................................... 0.5 Megohms  
- **Bulb Temperature at Hottest Point** .............................. 220 C

Design-Center ratings are limiting values of operating and environmental conditions applicable to a bogey 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, taking responsibility 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 tube characteristics.

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

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. In the absence of an express written agreement 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.
CHARACTERISTICS AND TYPICAL OPERATION

CLASS A₁ AMPLIFIER
Plate Voltage ........................................... 110 Volts
Screen Voltage ........................................... 115 Volts
Cathode-Bias Resistor ................................. 62 Ohms
Peak AF Grid-Number 1 Voltage .................... 3.0 Volts
Plate Resistance, approximate .................. 11000 Ohms
Transconductance ................................... 14600 Micromhos
Zero-Signal Plate Current ......................... 42 Milliamperes
Maximum-Signal Plate Current .................. 42 Milliamperes
Zero-Signal Screen Current ....................... 11.5 Milliamperes
Maximum-Signal Screen Current ............... 14.5 Milliamperes
Load Resistance ......................................... 3000 Ohms
Total Harmonic Distortion, approximate ....... 7 Percent
Maximum-Signal Power Output ................ 1.4 Watts

* Without external shield.

AVERAGE PLATE CHARACTERISTICS

$E_{c1} = \text{RATED VALUE}$
$E_{c2} = 115 \text{ VOLTS}$