The 8068 is a beam pentode designed for use as a series regulator in high-voltage power supplies.

**GENERAL**

**ELECTRICAL**
- Cathode—Coated Unipotential
- Heater Characteristics and Ratings
  - Heater Voltage, AC or DC*: 6.3 ≈ 0.6 Volts
  - Heater Current†: 0.9 Amperes
- Direct Interelectrode Capacitances‡:
  - Grid to Plate: (g to p): 0.6 pf
  - Input: g to (h + k + g2 + b.p.): 10.0 pf
  - Output: p to (h + k + g2 + b.p.): 5.5 pf

**MECHANICAL**
- Mounting Position—Any
- Envelope—T12, Glass
- Base—B5-149, Octal 8-Pin
- Top Cap—C1-1, Small
- Outline Drawing—EIA 12-20
  - Maximum Diameter: 1.76 Inches
  - Maximum Over-all Length: 4.56 Inches
  - Maximum Seated Height: 4.76 Inches
  - Minimum Seated Height: 3.16 Inches

**MAXIMUM RATINGS**

**ABSOLUTE-MAXIMUM VALUES**
- Plate Voltage: 3500 Volts
- Screen Voltage: 250 Volts
- Plate Dissipation: 35 Watts
- Screen Dissipation: 1.0 Watts
- DC Cathode Current: 100 Milliamperes
- Heater-Cathode Voltage: 200 Volts
  - Heater Positive with Respect to Cathode
  - Heater Negative with Respect to Cathode
- Grid-Number 1 Circuit Resistance: 0.1 Megohms

**PHYSICAL DIMENSIONS**

**TERMINAL CONNECTIONS**
- Pin 1—No Connection
- Pin 2—Heater
- Pin 3—Cathode and Beam Plates
- Pin 4—No Connection
- Pin 5—Grid Number 1
- Pin 6—No Connection
- Pin 7—Heater
- Pin 8—Grid Number 2 (Screen) Cap—Plate

**BASING DIAGRAM**

**GENERAL ELECTRIC**
AVERAGE CHARACTERISTICS

Plate Voltage .................. 3500 600 Volts
Screen Voltage .................. 100 125 Volts
Grid-Number 1 Voltage ........... -30 -7.5 Volts
Plate Resistance, approximate ... 54500 Ohms
Transconductance ............... 5200 Micromhos
Plate Current ................... 1.0 36 Milliamperes

Screen Current ................... 1.0 Milliamperes

* The equipment designer should design the equipment so that the heater voltage is centered at the specified bogey value, with heater supply variations restricted to maintain heater voltage within the specified tolerance.

† Heater current of a bogey tube at Ef = 6.3 volts.

‡ Without external shield.

Absolute-Maximum ratings are limiting values of operating and environmental conditions applicable to any electron tube of a specified type as defined by its published data and should not be exceeded under the worst probable conditions.

The tube manufacturer chooses these values to provide acceptable serviceability of the tube, making no allowance for equipment variations, environmental variations, and the effects of changes in operating conditions due to 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 and throughout life no absolute-maximum value for the intended service is exceeded with any tube under the worst probable operating conditions with respect to 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 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.

AVERAGE PLATE CHARACTERISTICS

$E_f = \text{RATED VALUE}$

$E_{x2} = 125 \text{ VOLTS}$

Plate Current ($I_p$) in Milliamperes

Screen Current ($I_{x2}$) in Milliamperes

Plate Voltage in Volts

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