6GM6
PENTODE

DESCRIPTION AND RATING

The 6GM6 is a miniature, semiremote-cutoff pentode designed for use in gain-controlled, intermediate-frequency amplifier stages of television receivers.

GENERAL

ELECTRICAL

Cathode - Coated Unipotential

Heater Characteristics and Ratings
Heater Voltage, AC or DC* .... 6.3±0.6 Volts
Heater Current† .... 0.4 Amperes

Direct Interelectrode Capacitances‡
Grid-Number 1 to Plate: (g1 to p),
  maximum .... 0.036 pf
Input: g1 to (h + k + g2 + g3 +
  i.s.) .... 10 pf
Output: p to (h + k + g2 + g3 +
  i.s.) .... 2.4 pf

MECHANICAL

Operating Position - Any
Envelope - T-5 1/2, Glass
Base - E7-1, Miniature Button 7-Pin
Outline Drawing - EIA 5-2

Maximum Diameter .... 0.750 Inches
Maximum Over-all Length ... 2.125 Inches
Maximum Seated Height ... 1.875 Inches

MAXIMUM RATINGS

Design-Maximum Values
Plate Voltage .... 330 Volts
Suppressor Voltage ........................................ 0 Volts
Screen-Supply Voltage ....................................... 330 Volts
Screen Voltage - See Screen Rating Chart
Positive DC Grid-Number 1 Voltage ......................... 0 Volts
Plate Dissipation ........................................... 3.1 Watts
Screen Dissipation ......................................... 0.65 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

TERMINAL CONNECTIONS

Pin 1 - Grid Number 1
Pin 2 - Cathode
Pin 3 - Heater
Pin 4 - Heater
Pin 5 - Plate
Pin 6 - Grid Number 2 (Screen)
Pin 7 - Grid Number 3 (Suppressor) and Internal Shield

GENERAL ELECTRIC
MAXIMUM RATINGS (Cont’d)

Design-Maximum ratings are limiting values of operating and environmental conditions applicable to a bogy 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 allowance for the effects of changes in operating conditions due to variations in the characteristics of the tube under consideration.

The equipment manufacturer should design so that initially and throughout life no design-maximum value for the intended service is exceeded with a bogy 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 all other electron devices in the equipment.

CHARACTERISTICS AND TYPICAL OPERATION

CLASS A1 AMPLIFIER

Plate Voltage ................................................. 125 Volts
Suppressor, Connected to Cathode at Socket
Screen Voltage .................................................. 125 Volts
Cathode-Bias Resistor ......................................... 56 Ohms
Plate Resistance, approximate .......................... 0.2 Megohms
Transconductance ........................................... 13000 Micromhos
Plate Current ................................................... 14 Milliamperes
Screen Current .................................................. 3.4 Milliamperes
Grid-Number 1 Voltage, approximate
Gm = 60 Micromhos .............................................. -15 Volts

NOTES

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

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

‡ Without external shield.

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