THE 6946 IS A GENERAL PURPOSE MEDIUM-MU TRIODE IN THE 8 PIN SUBMINIATURE CONSTRUCTION. IT IS DESIGNED SPECIFICALLY FOR GUIDED MISSILE SERVICE. THIS TYPE IS CHARACTERIZED BY STABLE PERFORMANCE IN OPERATION AT HIGH ALTITUDES AND WHERE SEVERE CONDITIONS OF MECHANICAL SHOCK, VIBRATION AND HIGH TEMPERATURES ARE ENCOUNTERED.

**DIRECT INTERELECTRODE CAPACITANCES**

**WITHOUT EXTERNAL SHIELD**

- Grid to Plate: 1.0 pf
- Input: 1.6 pf
- Output: 0.75 pf

**HEATER CHARACTERISTICS AND RATINGS**

**ABSOLUTE MAXIMUM VALUES – SEE EIA STANDARD RS-299**

- Average Characteristics: 6.3 Volts 175 mA
- Limits of Applied Voltage: 5.5 to 6.9 Volts
- Heater-Cathode Voltage:
  - Heater Positive with Respect to Cathode: 200 Volts
  - Heater Negative with Respect to Cathode: 200 Volts

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MAXIMUM RATINGS

ABSOLUTE MAXIMUM VALUES – SEE EIA STANDARD RS-239

DC PLATE VOLTAGE 250 VOLTS
PEAK-PLATE FORWARD VOLTAGE 360 VOLTS
DC GRID VOLTAGE:
  POSITIVE VALUE 0 VOLTS
  NEGATIVE VALUE 55 VOLTS
PLATE DISSIPATION 1.5 WATTS
DC CATHODE CURRENT 15 mA
GRID CIRCUIT RESISTANCE 1.0 MEGOHM
BULB TEMPERATURE 250 °C

CHARACTERISTICS

DC PLATE VOLTAGE 100 VOLTS
CATHODE RESISTOR 270 OHMS
DC PLATE CURRENT 9.0 mA
AMPLIFICATION FACTOR 16.5
TRANSCONDUCTANCE 3,800 mW/MA

DC GRID VOLTAGE FOR \( I_b = 150 \mu A \) DC MAX.
  -11.5 VOLTS
DC GRID VOLTAGE FOR \( I_b = 5 \mu A \) DC MIN.
  -8.5 VOLTS

SPECIAL TESTS AND RATINGS

IMPACT ACCELERATION

FATIGUE

FAILURE RATE

ALTITUDE—ABSOLUTE MAXIMUM 80,000 FT.

RADIATION—ABSOLUTE MAXIMUM

  TOTAL DOSAGE—NEUTRONS/SQ. CM 10^{16} NVT
  DOSE RATE—NEUTRONS/SQ. CM/SEC 10^{12} NV