MECHANICAL DATA

Bulb ........................................... T-5 3/2
Base ........................................... E7-1, Miniature Button 7-Pin
Outline ........................................ 5-2
Basing ......................................... 7BK
Cathode ....................................... Coated Unipotential
Mounting Position ......................... Any

ELECTRICAL DATA

HEATER CHARACTERISTICS

Heater Voltage1 ................................ 12.6 Volts
Heater Current ................................ 150 Ma
Heater-Cathode Voltage (Design Center Values)
  Heater Negative with Respect to Cathode ........ 30 Volts Max.
  Heater Positive with Respect to Cathode ........ 30 Volts Max.

DIRECT INTERELECTRODE CAPACITANCES

Shielded2 Unshielded

Grid No. 1 to Plate .............. .004 .005 μf
Input ........................................ 4.3 4.3 μf
Output ....................................... 5.0 5.0 μf

RATINGS (Design Center Values)

Plate Voltage ................................ 30 Volts Max.
Grid No. 2 Voltage .............. 30 Volts Max.
Cathode Current ..................... 20 Ma Max.
Grid No. 1 Circuit Resistance ... 10 Megohms Max.

CHARACTERISTICS AND TYPICAL OPERATION

Class A1 Amplifier

Plate Voltage ................................ 12.6 Volts
Grid No. 3 Voltage (Connected to Cathode at Socket) .... 0 Volts
Grid No. 2 Voltage .............. 12.6 Volts
Grid No. 1 Voltage3 .............. 2.2 Megohms
Grid No. 1 Resistor ................ 550 Ω
Grid No. 2 Current ............. 200 μA
Transconductance4 .............. 730 μmhos
Plate Resistance (Approx.) .......... 0.5 Megohm
Grid No. 1 Voltage for \( G_m = 10 \ \mu mhos \) (Approx.),
  \( E_c3 = 0 \) ................................ -5.2 Volts
Grid No. 3 Voltage for \( G_m = 10 \ \mu mhos \) (Approx.),
  \( E_c1 = 0 \) ................................ -3.7 Volts

NOTES:

1. This tube is intended for use in automobile radios operated from a nominal 12 volt battery. Design of the tube is such that the heater will operate satisfactorily over the range 10.0 volts to 15.9 volts, and that the maximum ratings provide a safety factor for the wide voltage variation encountered with this type of supply.
2. Shield No. 316.
3. Average contact potential is developed across the specified grid resistor.
4. Measured from Grid No. 1 to plate.
AVERAGE PLATE CHARACTERISTICS

$E_t =$ RATED VALUE
$E_{C2} = 12.6$ VOLTS
AVERAGE TRANSFER CHARACTERISTICS

$E_f = \text{RATED VALUE}$
$E_{C2} = 12.6 \text{ VOLTS}$
$E_b = 12.6 \text{ VOLTS}$

GRID NO. 1 VOLTAGE

TRANSCONDUCTANCE (gm) IN MICROMOS