7-PIN MINIATURE TYPE
For VHF-Amplifier Applications

GENERAL DATA

Electrical:
Heater, for Unipotential Cathode:
  Voltage (AC or DC) .................. 6.3 ± 10% volts
  Current at 6.3 volts .................. 0.18 amp
Direct Interelectrode Capacitances (Approx.):\n  Grid to plate .................. 0.52 µf
  Grid to cathode, internal shield, and heater .................. 5 µf
  Plate to cathode, internal shield, and heater .................. 3.5 µf
  Heater to cathode .................. 2.5b µf

Characteristics, Class A, Amplifier:
  Plate Voltage .................. 135 volts
  Grid Voltage .................. -1 volt
  Amplification Factor .................. 78
  Plate Resistance (Approx.) .................. 5400 ohms
  Transconductance .................. 15000 µmhos
  Plate Current .................. 11.5 ma
  Grid Voltage (Approx.) for transconductance (µmhos) =
    150 .................. -4.2 volts
    1500 .................. -2.5 volts
  Input Resistance\* .................. 275 ohms
  Input Capacitance\* .................. 11.2 µf
  Noise Figure\* .................. 4.7 db

Mechanical:
  Operating Position .................. Any
  Maximum Overall Length .................. 2-1/8"
  Maximum Seated Length .................. 1-7/8"
  Length, Base Seat to Bulb Top (Excluding tip) .................. 1-1/2" ± 3/32"
  Diameter .................. 0.650" to 0.750"
  Dimensional Outline .................. See General Section
  Bulb .................. T5-1/2
  Base .................. Small-Button Miniature 7-Pin (JEDEC No.E7-1)
  Basing Designation for BOTTOM VIEW .................. 7FP

Pin 1 - Cathode
Pin 2 - Grid
Pin 3 - Heater
Pin 4 - Heater
Pin 5 - Plate
Pin 6 - Internal Shield
Pin 7 - Cathode
AMPLIFIER — Class A₁

Maximum Ratings, Design-Maximum Values:

PLATE VOLTAGE: .......................... 200 max. volts
GRID VOLTAGE:
  Negative-bias value: ...................... 50 max. volts
  Positive-bias value: ...................... 0 max. volts
AVERAGE CATHODE CURRENT: .............. 22 max. ma
PLATE DISSIPATION: ....................... 2.5 max. watts
PEAK HEATER—CATHODE VOLTAGE:
  Heater negative with respect to cathode: 100 max. volts
  Heater positive with respect to cathode: 100 max. volts

Maximum Circuit Values:

Grid—Circuit Resistance:
  For cathode-bias operation: .............. 1 max. megohm

a With external shield JEDEC No. 316 connected to cathode except as noted.
b With external shield JEDEC No. 316 and internal shield connected to ground.
c Measured at 200 Mc with heater volts = 6.3 and plate effectively grounded for rf voltages.
d For a neutralized triode amplifier at a frequency of 200 Mc with signal-source impedance adjusted for minimum noise output.