High-Mu Twin Triode

9-PIN MINIATURE TYPE
For High-Fidelity Audio-Amplifier Applications Critical as to Noise and Hum

GENERAL DATA

Electrical:

Heater, for Unipotential Cathodes:
  Voltage (AC or DC) .................. 6.3 ± 10% volts
  Current at 6.3 volts ................. 0.3 amp

Direct Interelectrode Capacitances
  (Each Unit, Approx.):
  Grid to plate ...................... 1.5 μF
  Grid to cathode
    and heater ..................... 1.6 μF
  Plate to cathode
    and heater .................... 0.2 μF

Equivalent Noise and Hum Voltage
  (Referenced to Grid, Each Unit):
  Average Value (RMS) ............... 1.8 μvolts
  Measured in "true rms" units under the following conditions: Heater volts (AC) = 6.3; center-tap of heater transformer connected to ground; plate supply volts (DC) = 250; plate load resistor (megohms) = 0.1; cathode resistor (ohms) = 2700; cathode bypass capacitor (μF) = 100; grid resistor (ohms) = 0; amplifier frequency range 25 to 10000 cps.

Characteristics, Class A1 Amplifier (Each Unit):

  Plate Voltage ..................... 100 250 volts
  Grid Voltage ........................ -1 -2 volts
  Amplification Factor .............. 100 100
  Plate Resistance (Approx.) ........ 80000 62500 ohms
  Transconductance ................... 1250 1600 μmhos
  Plate Current ...................... 0.5 1.2 ma

Mechanical:

  Operating Position .................. Any
  Maximum Overall Length ............. 2-3/16"
  Maximum Seated Length .............. 1-15/16"
  Length, Base Seat to Bulb Top (Excluding tip) 1-9/16" ± 3/32"
  Diameter .................................. 0.750" to 0.875"

  Dimensional Outline ................ See General Section
  Bulb .................................... 76-1/2
  Base .................................. Small-Button Noval 9-Pin (JEDEC No.E9-1)

  Basing Designation for BOTTOM VIEW ............. 9LS

  Pin 1 - Heater
  Pin 2 - Heater
  Pin 3 - No Connection
  Pin 4 - Cathode of Unit No.2
  Pin 5 - Grid of Unit No.2
  Pin 6 - Plate of Unit No.2
  Pin 7 - Plate of Unit No.1
  Pin 8 - Grid of Unit No.1
  Pin 9 - Cathode of Unit No.1

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DATA 8-60
AMPLIFIER — Class A₁

Values are for Each Unit

Maximum Ratings, Design-Maximum Values:

PLATE VOLTAGE: 330 max. volts
GRID VOLTAGE:
  Negative-bias value: 55 max. volts
  Positive-bias value: 0 max. volts
PLATE DISSIPATION: 1.2 max. watts
PEAK HEATER-CATHODE VOLTAGE:
  Heater negative with respect to cathode: 200 max. volts
  Heater positive with respect to cathode: 200* max. volts

Typical Operation as Resistance-Coupled Amplifier:

See RESISTANCE-COUPLED-AMPLIFIER CHART No. 25
at front of this Section

* The dc component must not exceed 100 volts.
AVERAGE PLATE CHARACTERISTICS
Each Unit

Eₚ = 8.3 VOLTS

PLATE VOLTS

300 400 500

PLATE MILLIAMPERES

0 100 200 300

92CM-10470

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