Sharp-Cutoff Pentode

9-PIN MINIATURE TYPE
FRAME-GRID CONSTRUCTION

For Use as High-Gain Intermediate-Frequency-Amplifier
Tube in Television Receivers. No External Shield Re-
quired. Cutoff Characteristic Approaching Semiremote.

GENERAL DATA

Electrical:

Heater Characteristics and Ratings:
Voltage (AC or DC) ...................... 6.3 ± 0.6 volts
Current at heater volts = 6.3 ........ 0.300 amp
Peak heater-cathode voltage:
Heater negative with
respect to cathode .............. 200 max. volts
Heater positive with
respect to cathode .............. 200\(\text{a}\) max. volts

Direct Interelectrode Capacitances:
Grid No.1 to plate ....................... 0.019 max. pf
Grid No.1 to cathode, grid No.3 &
internal shield, grid No.2,
and heater ......................... 8.2 pf
Plate to cathode, grid No.3 &
internal shield, grid No.2,
and heater ......................... 3.0 pf

Characteristics, Class A\(_1\) Amplifier:
Plate Supply Voltage .................... 125 volts
Grid-No.3 Voltage ...................... 0 volts
Grid-No.2 Supply Voltage .............. 125 volts
Grid-No.1 Supply Voltage .............. 0 volts
Cathode Resistor ....................... 56 ohms
Plate Resistance (Approx.) ........... 160000 ohms
Transconductance ...................... 14000 \(\mu\)hos
Plate Current ......................... 15 ma
Grid-No.2 Current ...................... 4 ma
Grid-No.1 Voltage (Approx.) for
transconductance (\(\mu\)hos) = 600 ........ -4.5 volts

Mechanical:

Operating Position ...................... Any
Type of Cathode ....................... Coated Unipotential
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. .......... 9PM

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

AMPLIFIER — Class A1

Maximum Ratings, Design-Maximum Values:

PLATE VOLTAGE ............. 330 max. volts
GRID-NO.3 (SUPPRESSOR-GRID) VOLTAGE:
  Positive value .................. 0 max. volts
GRID-NO.2 (SCREEN-GRID) SUPPLY VOLTAGE .... 330 max. volts
GRID-NO.2 VOLTAGE ........... See Grid-No.2 Input Rating Chart at front of Receiving Tube Section
GRID-NO.1 (CONTROL-GRID) VOLTAGE:
  Positive-bias value ............ 0 max. volts
GRID-NO.2 INPUT:
  For grid-No.2 voltages up to 165 volts ........... 0.6 max. watt
  For grid-No.2 voltages between 165 and 330 volts. See Grid-No.2 Input Rating Chart at front of Receiving Tube Section
PLATE DISSIPATION ........... 2.5 max. watts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:
  For fixed-bias operation ....... 0.25 max. megohm
  For cathode-bias operation .... 1 max. megohm

a The dc component must not exceed 100 volts.
b Without external shield.
AVERAGE CHARACTERISTICS

$E_f = 6.3$ VOLTS
GRID No.3 CONNECTED TO CATHODE AT SOCKET.
GRID-No.2 VOLTS=125

PLATE (I_D) OR GRID-No.2 (I_C2) MILLIAMPERES

RADIO CORPORATION OF AMERICA
Electron Tube Division
Harrison, N. J.
AVERAGE CHARACTERISTICS

$E_t = 6.3$ VOLTS
PLATE VOLTS = 125
GRID No. 3 CONNECTED TO CATHODE AT SOCKET,
GRID-No. 2 VOLTS = 125

PLATE (I_B) OR GRID-No.2 (I_C2) MILLIAMPERES

GRID-No.1 VOLTS

TRANSCONDUCTANCE ($g_m$) MICROMOS