Sharp-Cutoff Pentode

9-PIN MINIATURE TYPE
FRAME-GRID CONSTRUCTION
For Use as an IF-Amplifier Tube in TV Receivers. No External Shield Required.

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° 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 Amplifier:**
- Plate Supply Voltage ................ 125 volts
- Grid No.3 ........................ Connected to cathode at socket
- Grid-No.2 Supply Voltage ............ 125 volts
- Cathode Resistor .................. 56 ohms
- Plate Resistance (Approx.) .......... 0.18 megohm
- Transconductance .................. 15000 μmhos
- Plate Current .................... 13 ma
- Grid-No.2 Current ................. 3.2 ma
- Grid-No.1 Voltage (Approx.) for plate μa = 100 .................. -3 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 ..................... .T6-1/2
- 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 A

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

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

PLATE (I_b) OR GRID-No. 2 (I_c2) MILLIAMPERES

PLATE VOLTS

92CM-11948
AVERAGE CHARACTERISTICS

E_f=6.3 VOLTS
PLATE VOLTS=125
GRID No.3 CONNECTED TO CATHODE AT SOCKET.
GRID—No.2 VOLTS=125

PLATE (I_a) OR GRID—No.2 (I_{C_2}) MILLIAMPERES

GRID—No.1 VOLTS

TRANSCONDUCTANCE (I_{m}) MICROMOS