Sharp-Cutoff Pentode

9-PIN MINIATURE TYPE

FRAME-GRID CONSTRUCTION

DARK HEATER

For Use in IF-Amplifier Stages of Color- and Black-and-White TV Receivers

ELECTRICAL CHARACTERISTICS

Bogey Values

Heater Voltage (AC or DC) .......... \( E_h = 6.3 \) V
Heater Current ............... \( I_h = 0.300 \) A

Direct Interelectrode Capacitances

Without external shield

Grid No.1 to plate. .......... \( C_{gl-p} = 0.019 \) max \( \mu \)F
Input: G1 to (K, G3+IS, G2, H) .......... \( C_i = 8.5 \) pF
Output: P to (K, G3+IS, G2, H) .......... \( C_o = 3.0 \) pF

For the following characteristics, see Conditions

Plate Resistance (Approx.) ........ \( r_p = 180 \) \( \Omega \)
Transconductance ............. \( g_m = 16000 \) \( \mu \)mho
DC Plate Current ............... \( I_b = 14 \) mA
DC Grid-No.2 Current .......... \( I_{c2} = 3.4 \) mA
Cutoff DC Grid-No.1 Voltage .... \( E_{cl(co)} = -3 \) V
Plate \( \mu A = 100 \)

Conditions

Heater Voltage .......... \( E_h = \) Bogey Value \( V \)
DC Plate Supply Voltage .......... \( E_{bb} = 125 \) V
Grid No.3 .......... Connected to cathode at socket
DC Grid-No.2 Supply Voltage .......... \( E_{cc2} = 125 \) V
Cathode Resistor .......... \( R_k = 56 \) \( \Omega \)

MECHANICAL CHARACTERISTICS

Operating Position .......... Any
Type of Cathode .......... Coated Unipotential
Maximum Overall Length .......... 2.187 in
Maximum Seated Length .......... 1.937 in
Length, Base Seat to Bulb Top .......... 1.469 to 1.656 in
Excluding tip
Maximum Diameter .......... 0.875 in
Dimensional Outline (JEDEC 6-2) .......... See General Section
Envelope .......... Small-Button Noval 9-Pin (JEDEC E9-1)
TERMINAL DIAGRAM (Bottom View)

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

DESIGN-MAXIMUM RATINGS

For operation as a Class A4 Amplifier Tube

DC Plate Voltage
Positive DC Grid-No.3 (Suppressor-Grid)
Voltage
DC Grid-No.2 (Screen-Grid)
Supply Voltage
DC Grid-No.2 Voltage

at front of Receiving Tube Section

DC Grid-No.1 (Control-Grid) Voltage
Positive-bias value
Heater-Cathode Voltage
Peak
DC
Heater Voltage (AC or DC)

Grid-No.2 Input
For $E_{C2} \leq 165$ V
For $E_{C2} \geq 165$ V and $\leq 330$ V

Plate Dissipation

MAXIMUM CIRCUIT VALUES

Grid-No.1 Circuit Resistance
For fixed-bias operation
For cathode-bias operation

*Unless otherwise specified.
Typical Characteristics

$E_h$ = BOGEY VALUE
GRID No. 3 CONNECTED TO CATHODE AT SOCKET.
GRID-No. 2 VOLTS = 125

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

RADIO CORPORATION OF AMERICA
Electronic Components and Devices
Harrison, N. J.
DATA 2
10-66
Typical Characteristics

Eh=BOGEY VALUE
PLATE VOLTS=125
GRID No.3 CONNECTED TO CATHODE AT SOCKET.
GRID No.2 VOLTS=125

PLATE (I_b) OR GRID No. 2 (Vc2) MILLIAMPERES

TRANSCONDUCTANCE (g_m) MICROMHOMS

GRID No.1 VOLTS

92CM-11949R1