

## 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<sup>a</sup>

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. . . . .	$C_{g1-p}$	0.019 max	pF
Input: G1 to (K, G3+1S, G2, H) . . . . .	$C_{ci}$	8.5	pF
Output: P to (K, G3+1S, G2, H) . . . . .	$C_o$	3.0	pF

For the following characteristics, see Conditions

Plate Resistance (Approx.) . . . . .	$r_p$	180	$\Omega$
Transconductance . . . . .	$g_m$	16000	$\mu\text{mho}$
DC Plate Current . . . . .	$I_b$	14	mA
DC Grid-No.2 Current . . . . .	$I_{c2}$	3.4	mA
Cutoff DC Grid-No.1 Voltage. . . . .	$E_{c1}(co)$	-3	V

Plate  $\mu\text{A} = 100$

## 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	$\Omega$

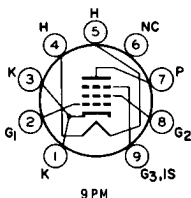
## MECHANICAL CHARACTERISTICS

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 . . . . .		JEDEC T6-1/2
Base . . . . .		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 A<sub>1</sub> Amplifier Tube*

DC Plate Voltage . . . . .	$E_b$	330	V
Positive DC Grid-No.1 (Suppressor-Grid) Voltage . . . . .	$E_{c3}$	0	V
DC Grid-No.2 (Screen-Grid) Supply Voltage. . . . .	$E_{cc2}$	330	V
DC Grid-No.2 Voltage . . . . .	$E_{c2}$	See Grid-No. 2	

*Input Rating Chart*

at front of Receiving Tube Section

DC Grid-No.1 (Control-Grid) Voltage Positive-bias value. . . . .	$E_{c1}$	0	V
Heater-Cathode Voltage Peak . . . . .	$e_{hkm}$	±200	V
DC . . . . .	$E_{hk}$	100	V
Heater Voltage (AC or DC). . . . .	$E_h$	5.7 to 6.9	V
Grid-No.2 Input	$P_{g2}$		
For $E_{c2} \leq 165$ V. . . . .	-	0.7	W
For $E_{c2} \geq 165$ V and $\leq 330$ V. . . . .	-	See Grid-No. 2	

*Input Rating Chart*

at front of Receiving Tube Section

Plate Dissipation. . . . .	$P_b$	3.1	W
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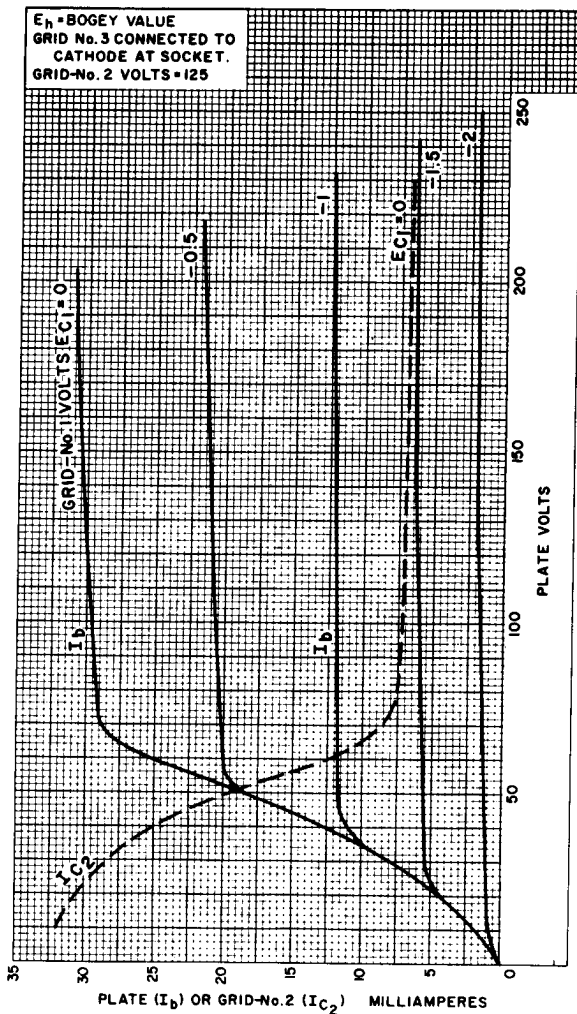
## MAXIMUM CIRCUIT VALUES

Grid-No.1 Circuit Resistance . . . . .	$R_{g1}(\text{ckt})$		
For fixed-bias operation . . . . .	-	0.25	MΩ
For cathode-bias operation . . . . .	-	1	MΩ

<sup>a</sup> Unless otherwise specified.

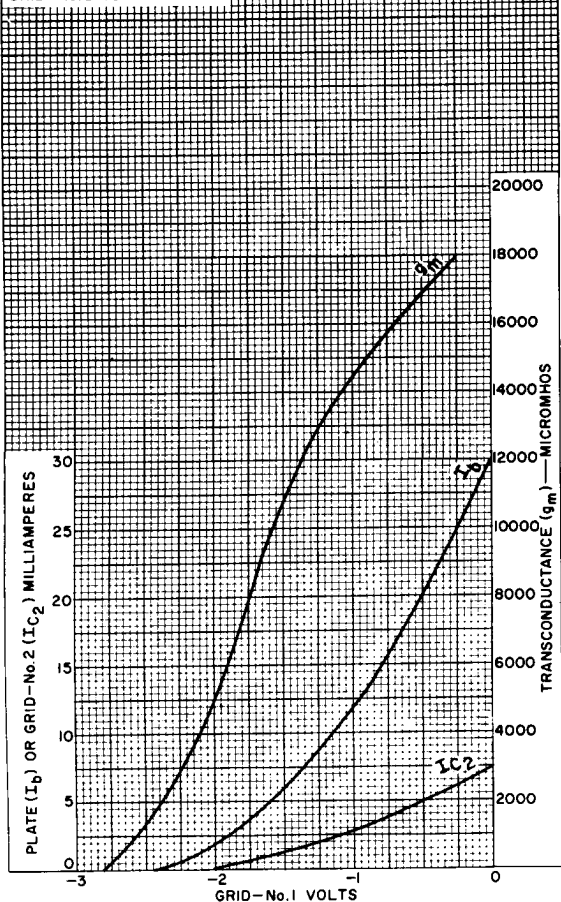


## Typical Characteristics



## Typical Characteristics

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



92CM-11949R1

