

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^a

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 + 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	Ω
Transconductance	g_m	16000	μmho
DC Plate Current	I_b	14	mA
DC Grid-No.2 Current	I_{c2}	3.4	mA
Cutoff DC Grid-No.1 Voltage.	$E_{c1}(\text{co})$	-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	Ω

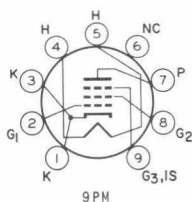
MECHANICAL CHARACTERISTICS

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 A₁ Amplifier Tube

DC Plate Voltage	E_b	330	V
Positive DC Grid-No.3 (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 ≤ 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

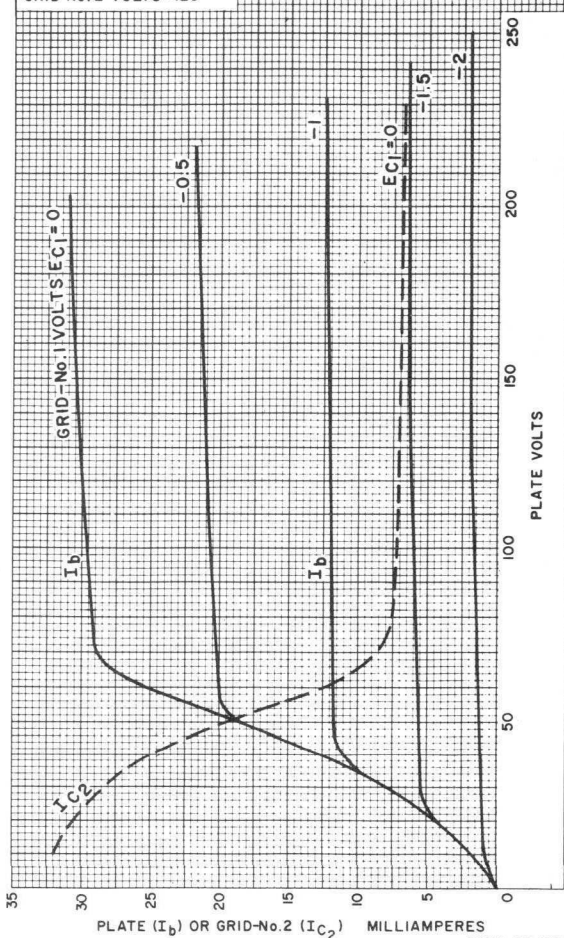
Grid-No.1 Circuit Resistance	$R_{g1(ckt)}$		
For fixed-bias operation	-	0.25	MΩ
For cathode-bias operation	-	1	MΩ

^a Unless otherwise specified.



Typical Characteristics

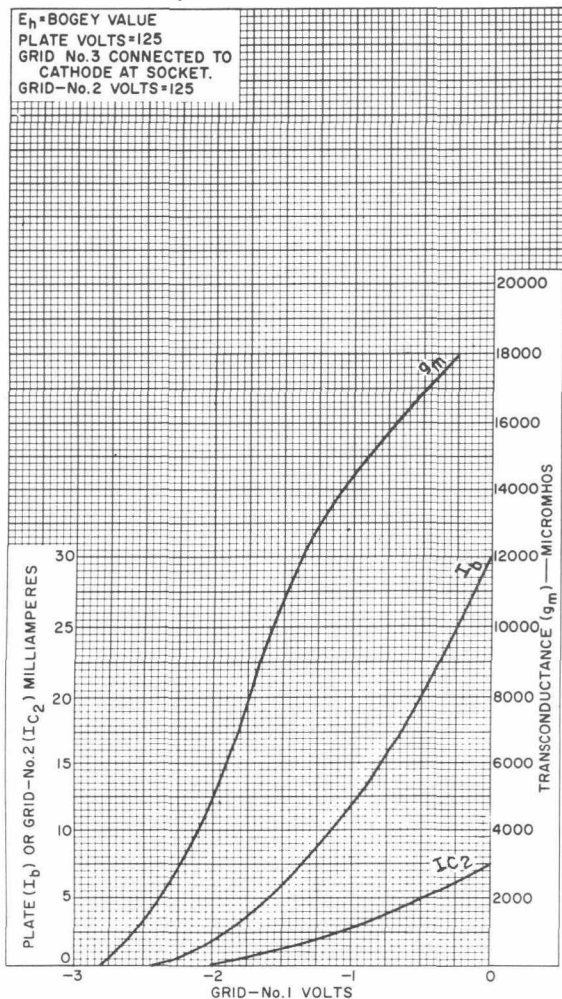
E_h = BOGEY VALUE
 GRID No. 3 CONNECTED TO
 CATHODE AT SOCKET.
 GRID-No. 2 VOLTS = 125



92CM-11948R1



Typical Characteristics



92CM-11949RI

