

Semiremote-Cutoff Pentode

9-PIN MINIATURE TYPE

FRAME-GRID CONSTRUCTION

DARK HEATER

For High-Gain IF-Amplifier Applications in TV Receivers

ELECTRICAL CHARACTERISTICS

Bogey Values^a

Heater Voltage (AC or DC)	E_h	6.3	V
Heater Current	I_h	300	mA
Heater Warm-up Time.	-	11	s

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	9.5	pF
Output: P to (K, G3 + IS, G2, H). . .	c_o	3	pF

For the following characteristics, see Conditions

Plate Resistance (Approx.)	r_p	160	-	Ω
Transconductance	g_m	18000	-	μmho
DC Plate Current	I_b	17	-	mA
DC Grid-No.2 Current	I_{c2}	4.2	-	mA
Cutoff DC Grid-No.1 Voltage	$E_{c1(co)}$	-	-22	V

For $g_m = 10 \mu\text{mho}$

Conditions

Heater Voltage	E_h	Bogey Value	V
DC Plate Supply Voltage.	E_{bb}	125 170	V
DC Grid-No.3 Voltage	E_{c3}	0 0	V
DC Grid-No.2 Supply Voltage	E_{cc2}	125 170	V
Grid No.1.	-	Connected to negative end of R_k	
Cathode Resistor	R_k	56 56	Ω

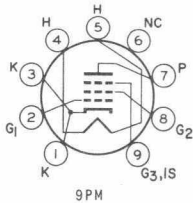
MECHANICAL CHARACTERISTICS

Operating Position	Any
Type of Cathode.	Coated Unipotential
Maximum Overall Length	2.187 in
Maximum Seated Length.	1.937 in
Maximum Diameter	0.875 in
Length, Base Seat to Bulb Top.	1.469 to 1.656 in
Excluding tip	
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 in TV Receivers

DC Plate Voltage	E _b	330	V
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.	E _{c1}	+0	V
Heater-Cathode Voltage			
Peak	e _{hkm}	±200	V
Average.	E _{hk(av)}	100	V
Heater Voltage (AC or DC).	E _h	5.7 to 6.9	V
Grid-No.2 Input	P _{g2}		
For E _{c2} ≤ 165 V.		0.6	W
For E _{c2} > 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

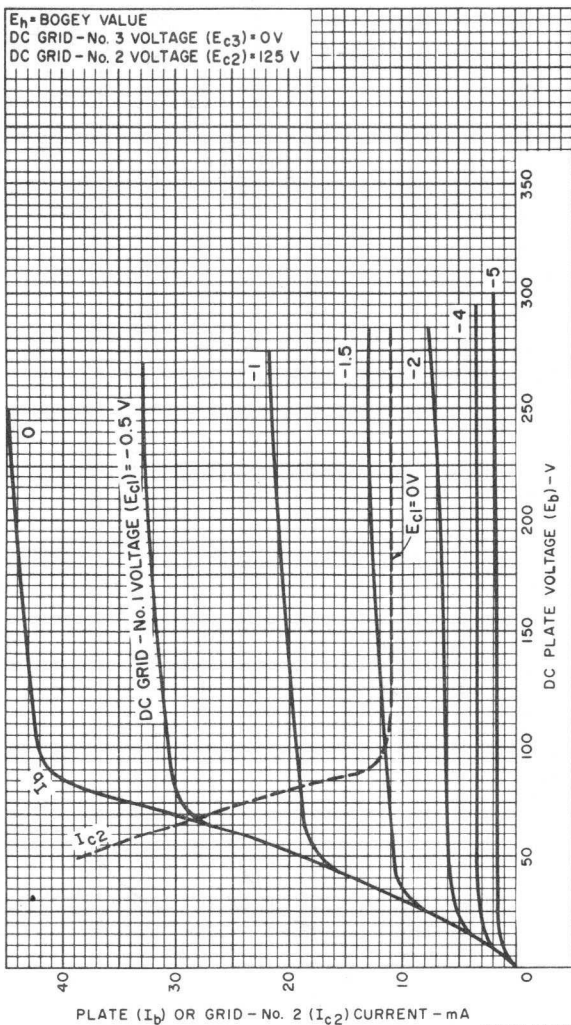
MAXIMUM CIRCUIT VALUES

Grid-No.1 Circuit Resistance	R _{g1(ckt)}		
For fixed-bias operation	-	250	kΩ
For cathode-bias operation	-	1	MΩ

^a Unless otherwise specified.



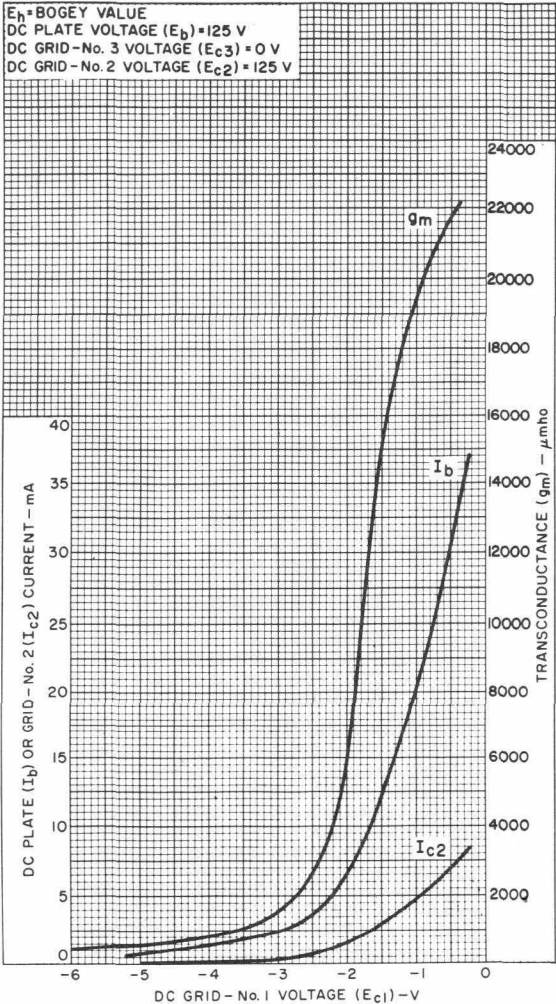
Typical Characteristics



92CM-14009



Typical Characteristics



92CM-14005

