

Medium-Mu Triode— Sharp-Cutoff Pentode

9-PIN MINIATURE TYPE

FRAME-GRID CONSTRUCTION (PENTODE UNIT)

For Use in Black-and-White TV Receivers Having Low-Voltage Power Supplies. Triode Unit Useful in Sync-Separator, Sound-IF Circuits, and as a General-Purpose Voltage-Amplifier Tube. Pentode Unit Especially Suited for Video Output Service.

Electrical:

Heater Characteristics and Ratings:

Current	0.450 ± 0.030	amp
Voltage (AC or DC) at heater amperes = 0.450	10.9	volts
Warm-up time (Average)	11	sec
Peak heater-cathode voltage:		
Heater negative with respect to cathode	200 max.	volts
Heater positive with respect to cathode	200 ^a max.	volts

Direct Interelectrode Capacitances (Approx.):^b

Triode Unit:

Grid to plate	2.8	pf
Input: G_T to $(K_T, K_P + G_3, P + IS, H)$. .	4.2	pf
Output: P_T to $(K_T, K_P + G_3, P + IS, H)$. .	2.4	pf

Pentode Unit:

Grid No. 1 to plate	0.090 max.	pf
Input: G_{1P} to $(K_P + G_3, P + IS, G_2, P, H)$.	14	pf
Output: P_P to $(K_P + G_3, P + IS, G_2, P, H)$. .	4.8	pf
Triode grid to pentode plate	0.015 max.	pf
Pentode plate to triode plate	0.17 max.	pf

Characteristics, Class A₁ Amplifier:

	Triode Unit	Pentode Unit		
Plate Supply Voltage	125	125	200 ^c	volts
Grid-No. 2 Supply Voltage	—	125	125	volts
Grid-No. 1 Supply	Connected to negative end of cathode resistor			
Cathode Resistor	68	82	68	ohms
Amplification Factor	46	—	—	
Plate Resistance (Approx.)	4400	55000	75000	ohms
Transconductance	10400	21000	23000	μmhos
Plate Current	15	19	22	ma
Grid-No. 2 Current	—	3.8	4	ma
Grid-No. 1 Voltage (Approx.) for plate $\mu_a = 100$	-6	-4.2	-4.2	volts

^a The dc component must not exceed 100 volts.

^b without external shield.

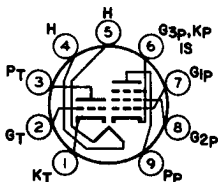


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Mechanical:

Operating Position Any
 Type of Cathodes Coated Unipotential
 Maximum Overall Length 2-5/8"
 Maximum Seated Length 2-3/8"
 Length, Base Seat to Bulb Top (Excluding tip) 2" ± 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 9DX

- Pin 1 - Triode Cathode
- Pin 2 - Triode Grid
- Pin 3 - Triode Plate
- Pin 4 - Heater
- Pin 5 - Heater
- Pin 6 - Pentode Grid No.3,
Pentode Cathode,
Internal Shield
- Pin 7 - Pentode Grid No.1
- Pin 8 - Pentode Grid No.2
- Pin 9 - Pentode Plate



AMPLIFIER — Class A₁

Maximum Ratings, Design-Maximum Values:

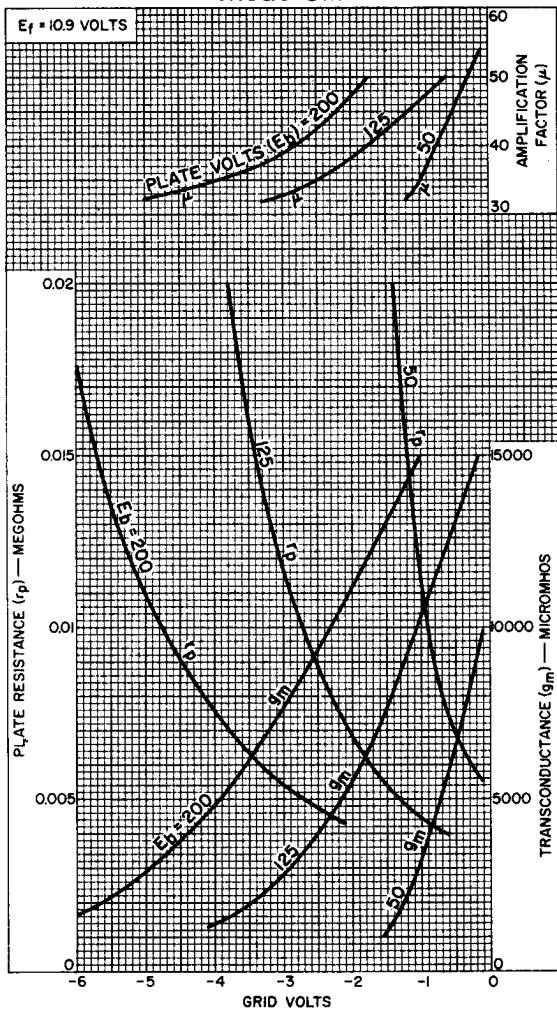
	Triode Unit	Pentode Unit	
Plate Voltage	300 max.	300 max.	volts
Grid-No.2 (Screen-grid) Supply Voltage	-	300 max.	volts
Grid-No.2 Voltage	-	See <i>Grid-No.2 Input Rating Chart</i> at front of Receiving Tube Section	
Grid-No.1 (Control-grid) Voltage:			
Positive-bias value	0 max.	0 max.	volts
Grid-No.2 Input:			
For grid-No.2 voltages up to 150 volts	-	1 max.	watt
For grid-No.2 voltages between 150 and 300 volts	-	See <i>Grid-No.2 Input Rating Chart</i> at front of Receiving Tube Section	
Plate Dissipation	2 max.	5 max.	watts

Maximum Circuit Values:

	Triode Unit	Pentode Unit	
Grid-No.1-Circuit Resistance:			
For fixed-bias operation	0.5 max.	0.1 max.	megohm
For cathode-bias operation	1 max.	0.25 max.	megohm



AVERAGE CHARACTERISTICS Triode Unit

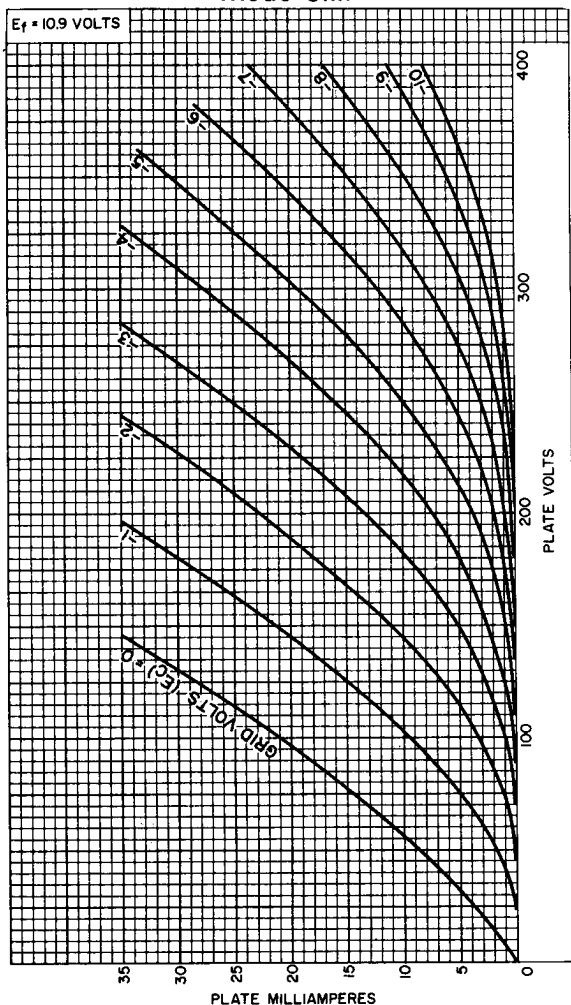


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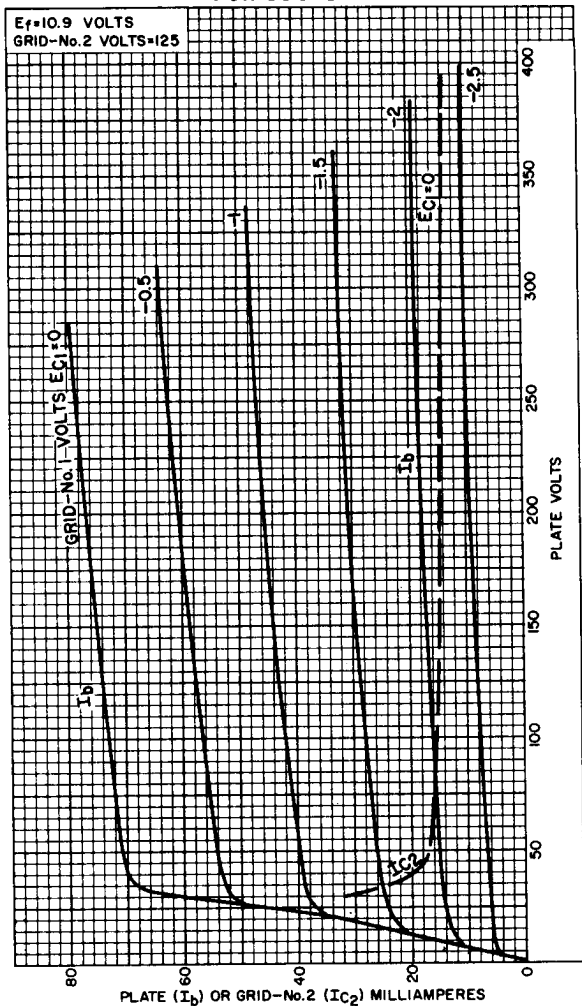
AVERAGE PLATE CHARACTERISTICS Triode Unit



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AVERAGE CHARACTERISTICS Pentode Unit

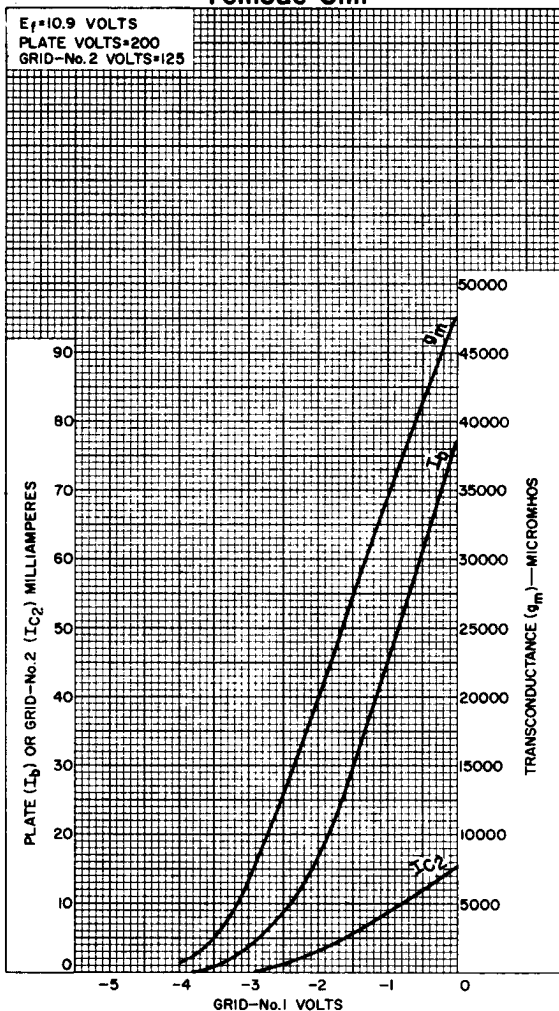


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AVERAGE CHARACTERISTICS Pentode Unit



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