

Medium-Mu Triode— Sharp-Cutoff Pentode

9-PIN MINIATURE TYPE

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage (AC or DC)	6.3 ± 10%	volts
Current at 6.3 volts.	0.45	amp

Direct Interelectrode Capacitances:

	<i>Without External Shield</i>	<i>With External Shield[▲]</i>	
Triode Unit:			
Grid to plate	1.5	1.5	μf
Grid to cathode and heater.	2	2.4	μf
Plate to cathode and heater.	0.5	1	μf
Pentode Unit:			
Grid No.1 to plate.	0.09 max.	0.06 max.	μf
Grid No.1 to cathode, grid No.3, grid No.2, and heater.	4.6	4.8	μf
Plate to cathode, grid No.3, grid No.2, and heater.	0.9	1.6	μf
Pentode grid No.1 to triode plate.	0.05 max.	0.04 max.	μf
Pentode plate to triode plate.	0.05 max.	0.008 max.	μf
Heater to cathode	6.5	6.5 [●]	μf

Characteristics, Class A₁ Amplifier:

	<i>Triode Unit</i>	<i>Pentode Unit</i>	
Plate Voltage	125	100 125	volts
Grid No.3	—	<i>Connected to cathode at socket</i>	
Grid-No.2 Voltage	—	70 125	volts
Grid-No.1 Voltage	-1	— -1	volt
Amplification Factor.	40	—	
Plate Resistance (Approx.)	6000	— 300000	ohms
Transconductance.	6500	5700 5500	μmhos
Plate Current	12	— 9	ma
Grid-No.2 Current	—	— 2.2	ma
Grid-No.1 Voltage (Approx.) for plate μ a = 20	-7	— -6.5	volts

▲ Indicates a change.



6X8

Mechanical:

Operating Position. Any
 Maximum Overall Length. 2-3/16"
 Maximum Seated Length. 1-15/16"
 Length, Base Seat to Bulb Top (Excluding tip) . 1-9/16" $\pm$ 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. 9AK

Pin 1 - Pentode
 Grid No.3
 Pin 2 - Triode Grid
 Pin 3 - Triode Plate
 Pin 4 - Heater
 Pin 5 - Heater



Pin 6 - Cathode
 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	275 max.	275 max. volts
GRID No.3 (SUPPRESSOR GRID)	—	Connect to cathode at socket
GRID-No.2 (SCREEN-GRID)		
SUPPLY VOLTAGE.	—	275 max. volts
GRID-No.2 VOLTAGE	—	See Grid-No.2 Input Rating Chart 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 137.5 volts	—	0.45 max. watt
For grid-No.2 voltages		
between 137.5 and 275 volts	—	See Grid-No.2 Input Rating Chart at front of Receiving Tube Section
PLATE DISSIPATION	1.7 max.	2.3 max. watts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with		
respect to cathode.	200 max.	200 max. volts
Heater positive with		
respect to cathode.	200★ max.	200★ max. volts

▲ With external shield JEDEC No.315 connected to cathode except as noted.

● With external shield JEDEC No.315 connected to pentode plate.

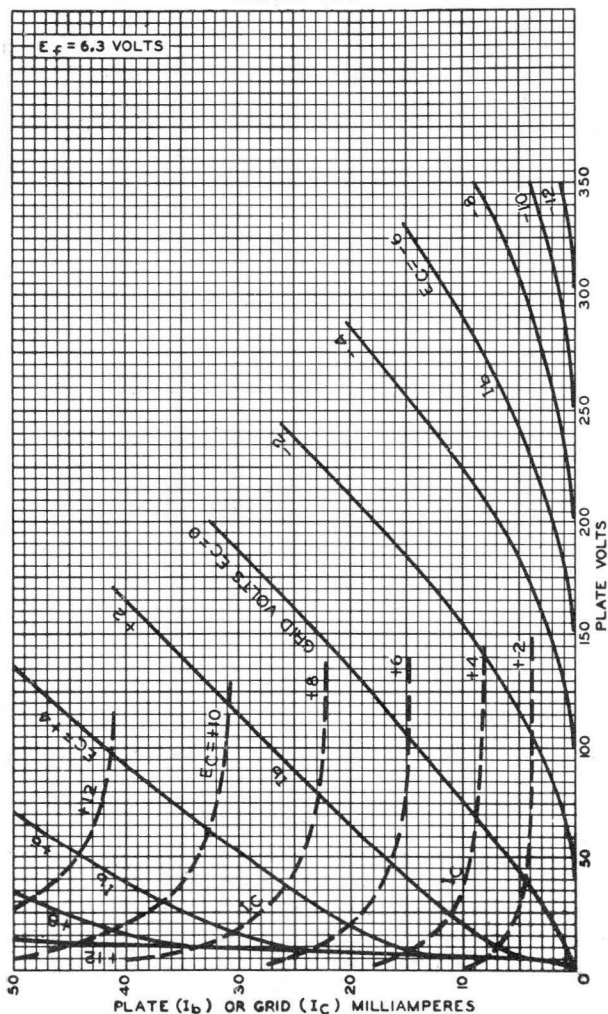
★ The dc component must not exceed 100 volts.

→ Indicates a change.



AVERAGE CHARACTERISTICS

Triode Unit

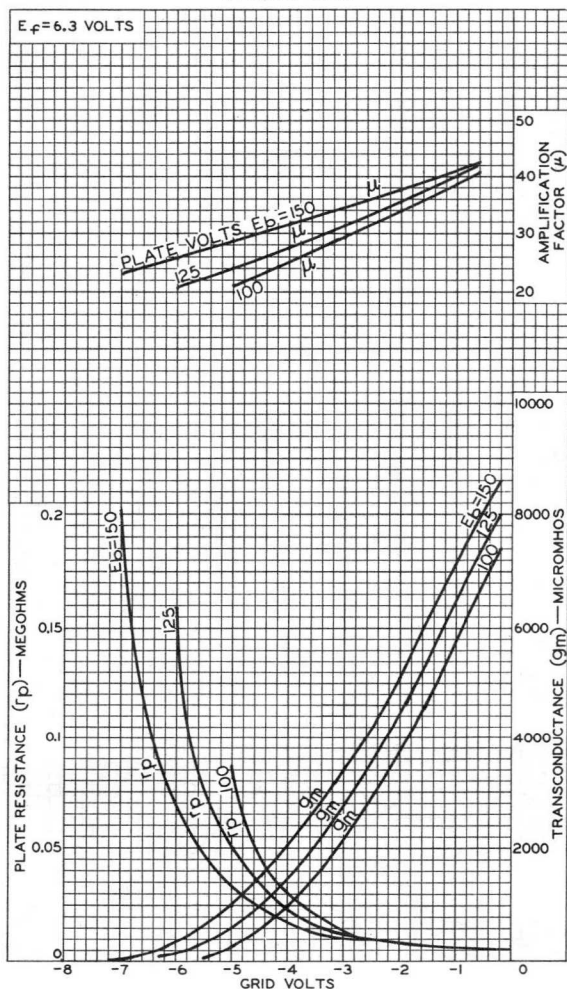


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AVERAGE CHARACTERISTICS Triode Unit

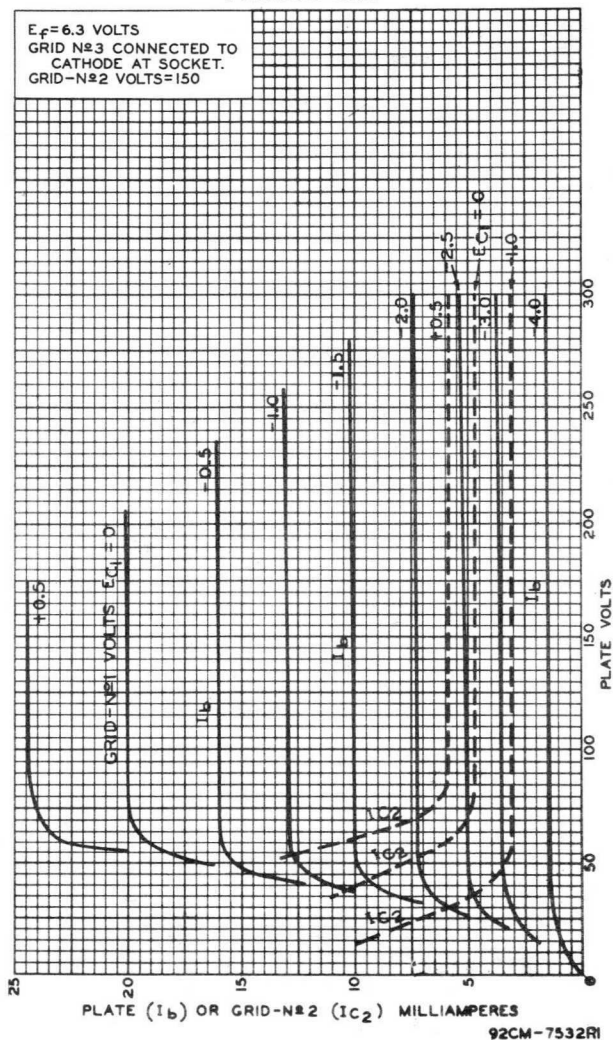


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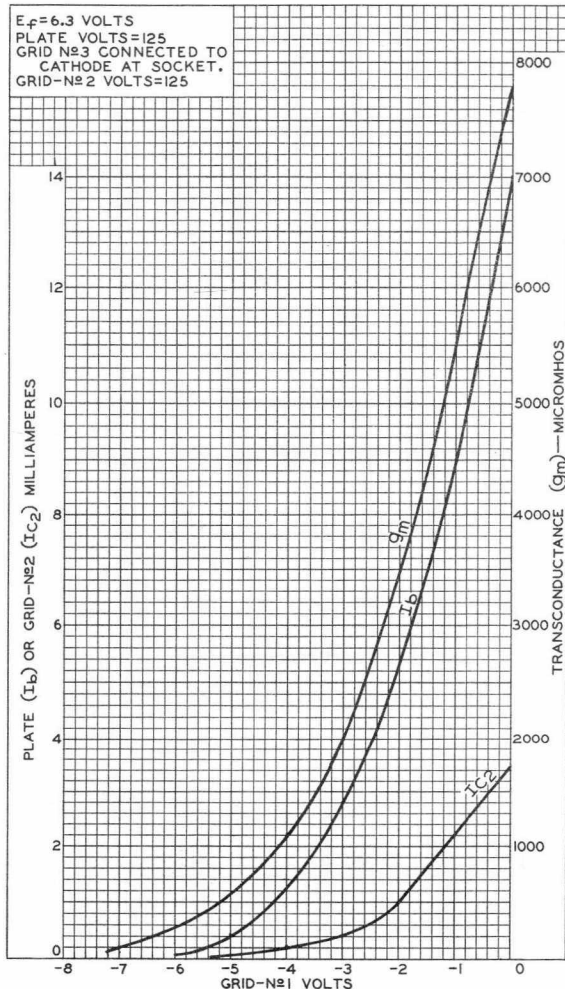
AVERAGE CHARACTERISTICS

Pentode Unit



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AVERAGE CHARACTERISTICS Pentode Unit



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