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MEDIUM-MU TRIODE — SHARP-CUTOFF PENTODE

9-PIN MINIATURE TYPE

*Intended for use in equipment having
series heater-string arrangement*

GENERAL DATA

Electrical:

Heater, for Unipotential Cathodes:

Voltage	6.3		ac or dc volts
Current	0.6		amp
Warm-up time (Average).	11		sec

*For definition of heater warm-up time and method of determining
it, see sheet HEATER WARM-UP TIME MEASUREMENT at front of
this Section.*

Direct Interelectrode Capacitances (Approx.):

	Without External Shield	With External Shield ⁰	
Triode Unit:			
Grid to plate	2.2	2.2	μf
Grid to cathode and heater.	2.5	2.7	μf
Plate to cathode and heater.	0.4	1.9	μf
Pentode Unit:			
Grid No.1 to plate. . . .	0.04	0.03	μf
Grid No.1 to cathode & grid No.3 & internal shield, grid No.2, and heater.	10	10	μf
Plate to cathode & grid No.3 & internal shield, grid No.2, and heater.	3.6	4.5	μf
Triode grid to pentode plate	0.016	0.006	μf
Pentode grid No.1 to triode plate.	0.006	0.003	μf
Pentode plate to triode plate.	0.15	0.023	μf

Characteristics, Class A₁ Amplifier:

	Triode Unit	Pentode Unit	
Plate-Supply Voltage. . .	200	65	200 volts
Grid-No.2 Supply Voltage.	—	150	150 volts
Grid-No.1 Voltage	—8	0	0 volts
Cathode Resistor.	—	—	180 ohms
Amplification Factor. . .	18	—	—
Plate Resistance (Approx.)	6700	—	400000 ohms

⁰ with external shield JETEC No.315 connected to cathode of unit under test.



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	Triode Unit	Pentode Unit	
Transconductance	2700	—	9000 μ hos
Plate Current	8	42*	13 ma
Grid-No.2 Current	—	12.5*	3.5 ma
Grid-No.1 Voltage (Approx.) for plate current of 10 μ a	-16	—	-10 volts

Mechanical:

Mounting Position	Any
Maximum Overall Length	2-5/8"
Maximum Seated Length	2-3/8"
Length, Base Seat to Bulb-Top (Excluding tip)	2" $\pm$ 3/32"
Maximum Diameter	7/8"
Dimensional Outline	See General Section
Bulb	T6-1/2
Base	Small-Button Noval 9-Pin (JETEC No.E9-1)
Basing Designation for BOTTOM VIEW	.9DX

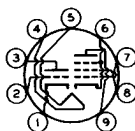
Pin 1—Triode
Cathode

Pin 2—Triode
Grid

Pin 3—Triode
Plate

Pin 4—Heater

Pin 5—Heater



Pin 6—Pentode
Cathode,
Grid No.3,
Internal
Shield

Pin 7—Pentode
Grid No.1

Pin 8—Pentode
Grid No.2

Pin 9—Pentode
Plate

AMPLIFIER - Class A₁

Maximum Ratings, Design-Center 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 Grid-No.2 Input	
Rating Chart at front of Receiving Tube Section			
GRID-No.1 (CONTROL-GRID) VOLTAGE:			
Negative bias value	—	50 max.	volts
Positive bias value	—	0 max.	volts
PLATE DISSIPATION	2 max.	3.25 max.	watts
GRID-No.2 INPUT:			
For grid-No.2 voltages up to 150 volts	—	1 max.	watt

* These values can be measured by a method involving a recurrent wave form such that the grid-No.2 input will be kept within ratings in order to prevent damage to the tube.



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	<i>Triode Unit</i>	<i>Pentode Unit</i>	
For grid-No.2 voltages between 150 and 300 volts	-		<i>See Grid-No.2 Input Rating Chart at front of Receiving Tube Section</i>
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
Maximum Circuit Values:			
	<i>Triode Unit</i>	<i>Pentode Unit</i>	
Grid-No.1-Circuit Resistance:			
For fixed-bias operation	0.5 max.	0.25 max.	megohm
For cathode-bias operation	1.0 max.	1.0 max.	megohm

[▲] The dc component must not exceed 100 volts.

OPERATING CONSIDERATIONS

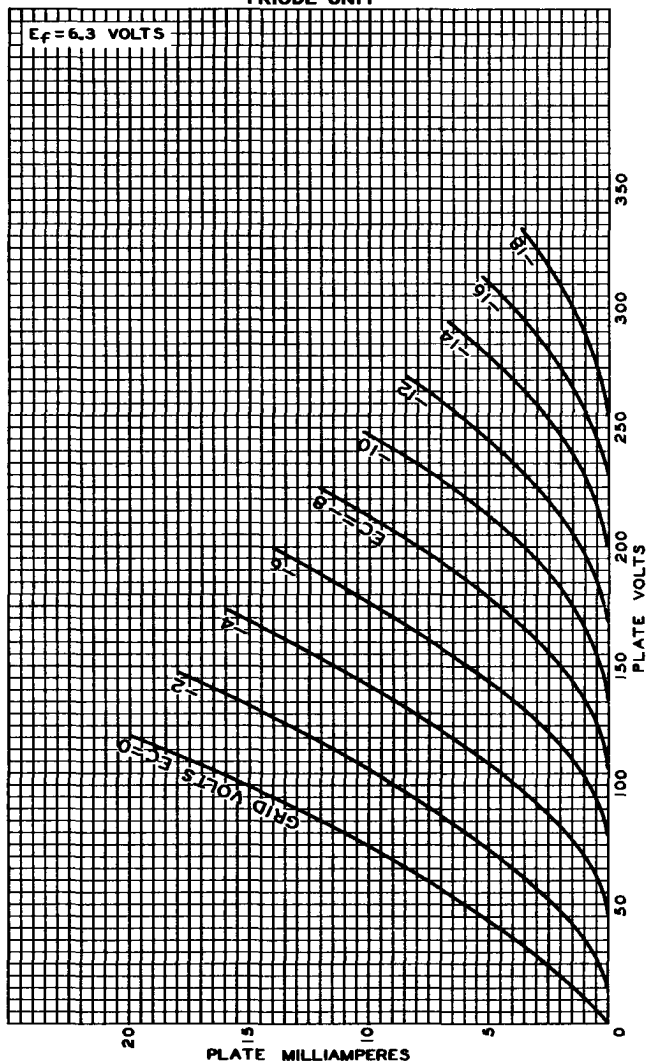
Because the internal shield is connected to the cathode and grid No.3, the impedance in the cathode circuit should be kept as low as possible to minimize cross-coupling effects.

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AVERAGE PLATE CHARACTERISTICS TRIODE UNIT



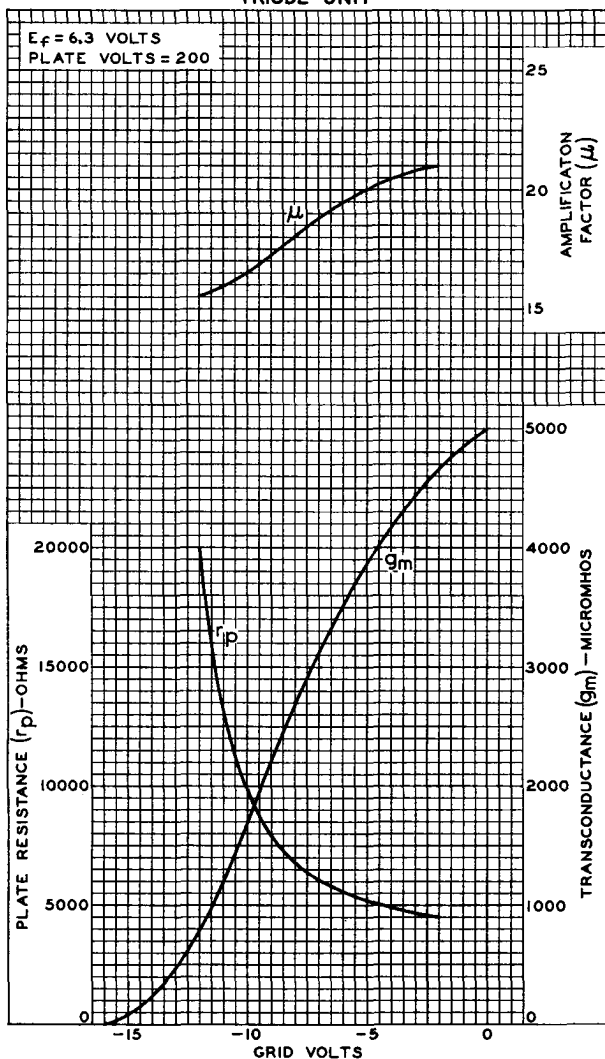


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AVERAGE CHARACTERISTICS

TRIODE UNIT

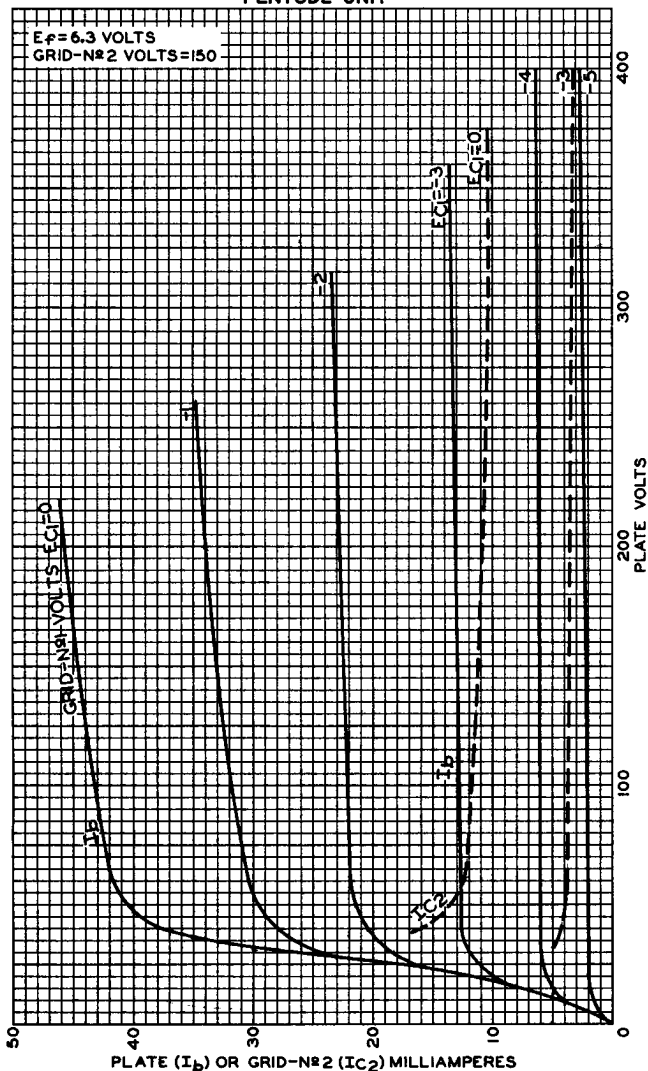


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AVERAGE CHARACTERISTICS PENTODE UNIT



ELECTRON TUBE DIVISION

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-9173



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AVERAGE CHARACTERISTICS PENTODE UNIT

$E_f = 6.3$ VOLTS
PLATE VOLTS = 200
GRID-N^o 2 VOLTS = 150

