

Medium-Mu Triode— Sharp-Cutoff Pentode

9-PIN MINIATURE TYPE

For High-Fidelity Audio-Amplifier Ap-
plications Critical as to Noise and Hum

GENERAL DATA

Electrical:

Heater Characteristics and Ratings:

Voltage (AC or DC) 6.3 ± 0.6 volts

Current at heater volts = 6.3 0.450 amp

Peak heater-cathode voltage (Each
Unit):

Heater negative with
respect to cathode. 200 max. volts

Heater positive with
respect to cathode. 200^a max. volts

Direct Interelectrode Capacitances:^b

Triode Unit:

Grid to plate 2 pf

Grid to cathode and heater. 2.3 pf

Plate to cathode and heater 0.3 pf

Pentode Unit:

Grid No.1 to plate. 0.06 max. pf

Grid No.1 to cathode & internal
shield & grid No.3, grid No.2,
and heater. 5 pf

Plate to cathode & internal shield
& grid No.3, grid No.2, and
heater. 2 pf

Equivalent-Hum and Noise Voltage (Referenced to Grid):

Triode Unit

Average Value (RMS) 10 microvolts

Maximum Value (RMS) 50 microvolts

Measured in "true rms" units under the following conditions:
heater volts = 6.3 ac, center-tap of heater transformer con-
nected to ground, plate-supply volts = 250, plate load resis-
tor (megohms) = 0.1, cathode resistor (ohms) unbypassed = 1500,
grid resistor (megohms) = 0.05, and amplifier covering fre-
quency range between 25 and 10,000 cps.

Pentode Unit

Average Value (RMS) 15 microvolts

Maximum Value (RMS) 35 microvolts

Measured in "true rms" units under the following conditions:
heater volts = 6.3 ac, center-tap of heater transformer con-
nected to ground, plate-supply volts = 250, plate-load resis-
tor (megohms) = 0.22, grid-No.2 supply volts = 250; grid No.2
voltage divider: resistor (megohm) from grid No.2 to B+ = 0.68,
resistor (megohm) from grid-No.2 to ground = 0.33; bypass ca-

← Indicates a change.



pacitor (μf) from grid No.2 to cathode = 0.1; cathode resistor (ohms unbypassed) = 680; grid No.1 resistor (megohm) = 0.27; and amplifier covering frequency range between 25 and 10,000 cps.

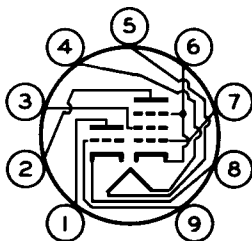
Characteristics, Class A₁ Amplifier:

	Triode Unit	Pentode Unit	
Plate-Supply Voltage.	215	100 220	volts
Grid-No.2 Supply Voltage.	—	50 130	volts
Grid-No.1 Voltage.	-8.5	—	volts
Cathode Resistor.	—	1000 62	ohms
Amplification Factor.	17	—	
Plate Resistance (Approx.).	0.0081	1 0.4	megohm
Transconductance.	2100	1500 7000	μmhos
Plate Current.	9	1.1 12.5	ma
Grid-No.2 Current.	—	0.35 3.5	ma
Grid-No.1 Voltage (Approx.) for plate μa = 10	-40	-4 —	volts

Mechanical:

Operating Position.	Any
Type of Cathodes.	Coated Unipotential
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 <i>General Section</i>
Bulb.	T6-1/2
Base.	Small-Button Noval 9-Pin (JEDEC No. E9-1)
Basing Designation for BOTTOM VIEW.	9JT

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



- Pin 6 - Pentode Cathode, Grid No.3, Internal Shield
- Pin 7 - Pentode Grid No.1
- Pin 8 - Triode Cathode
- Pin 9 - Triode Grid

AMPLIFIER — Class A₁

Maximum Ratings, Design-Maximum Values:

	Triode Unit	Pentode Unit	
PLATE VOLTAGE.	330 max.	330 max.	volts
GRID-No.2 (SCREEN-GRID) SUPPLY VOLTAGE.	—	330 max.	volts
GRID-No.2 VOLTAGE.	—	See <i>Grid-No.2 Input</i>	
<i>Rating Chart at front of Receiving Tube Section</i>			
GRID-No.1 (CONTROL-GRID) VOLTAGE: Positive-bias value.	0 max.	0 max.	volts



Triode
UnitPentode
Unit

GRID-No.2 INPUT:

For grid-No.2 voltages

up to 165 volts

-

0.6 max.

watt

For grid-No.2 voltages

between 165 and 330

volts

-

See *Grid-No.2 Input**Rating Chart* at front of Receiving Tube Section

PLATE DISSIPATION

2.4 max.

3 max.

watts

Maximum Circuit Values:Triode
UnitPentode
Unit

Grid-No.1-Circuit

Resistance:^c

For fixed-bias

operation

0.5 max.

0.25 max.

megohm

For cathode-bias

operation

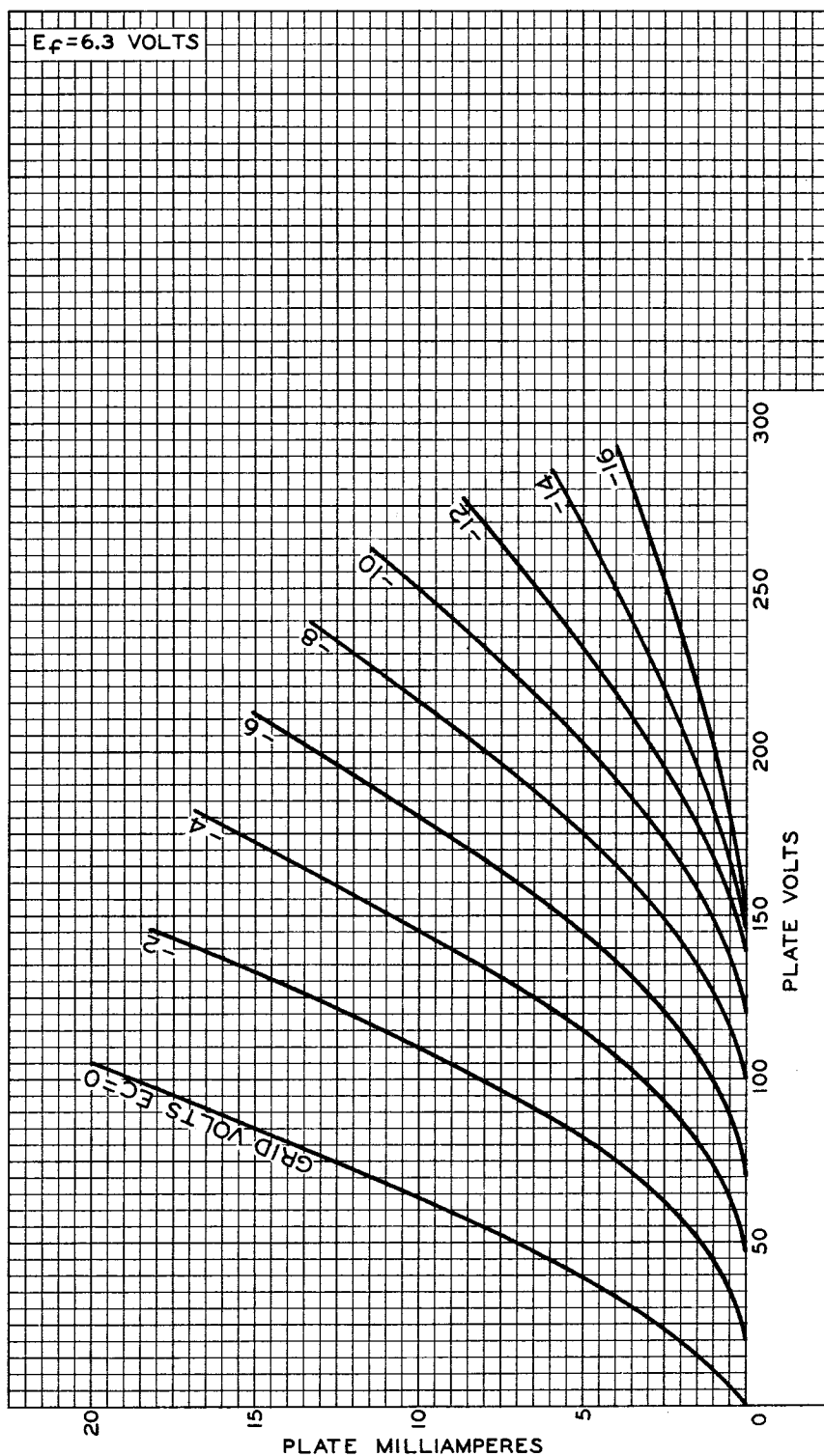
1 max.

1 max.

megohm

^a The dc component must not exceed 100 volts.^b Without external shield.^c If either unit is operated at maximum rated conditions, grid-No.1-circuit resistances for both units should not exceed the stated values.

AVERAGE PLATE CHARACTERISTICS Triode Unit



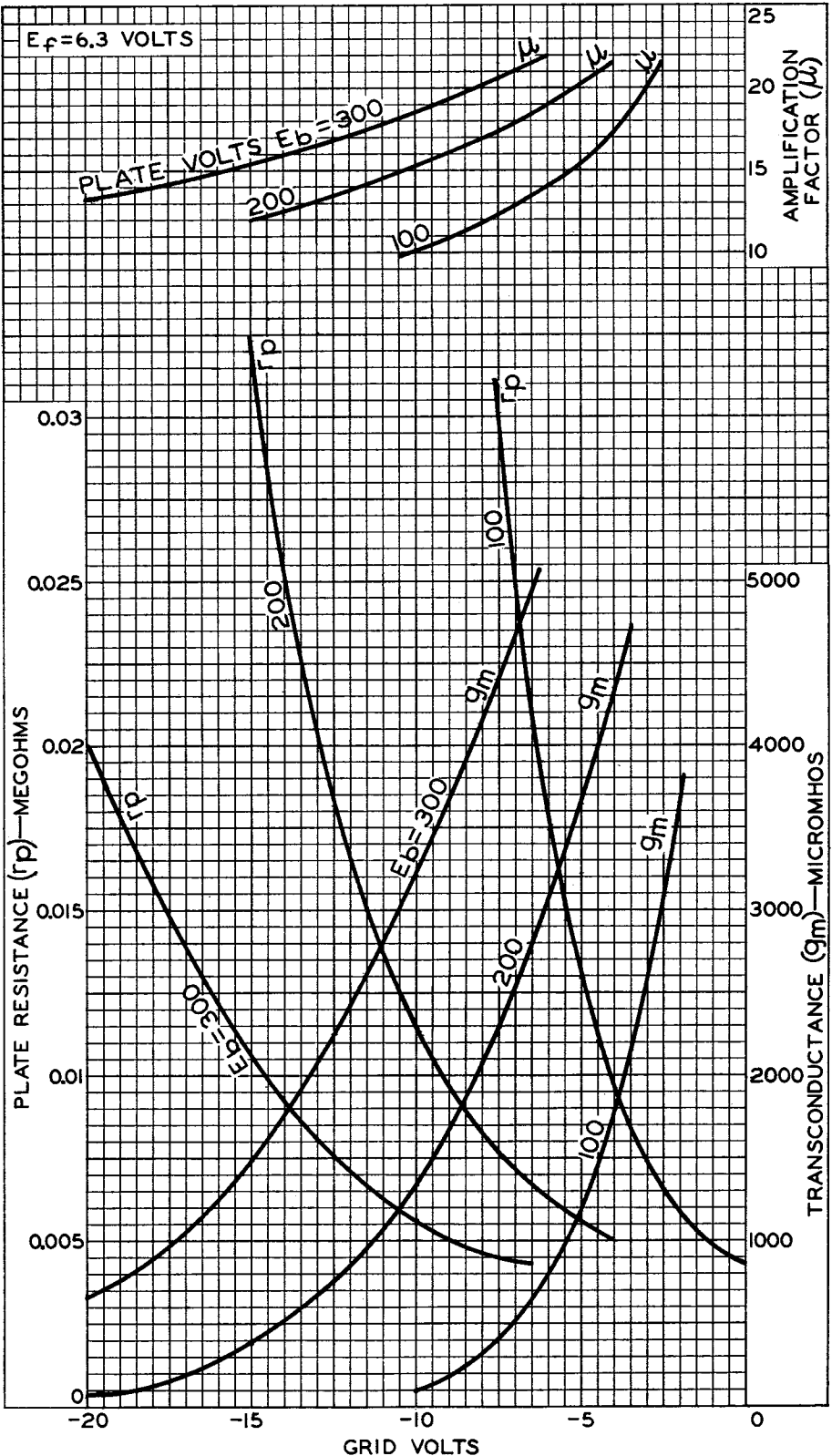
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AVERAGE CHARACTERISTICS TRIODE UNIT



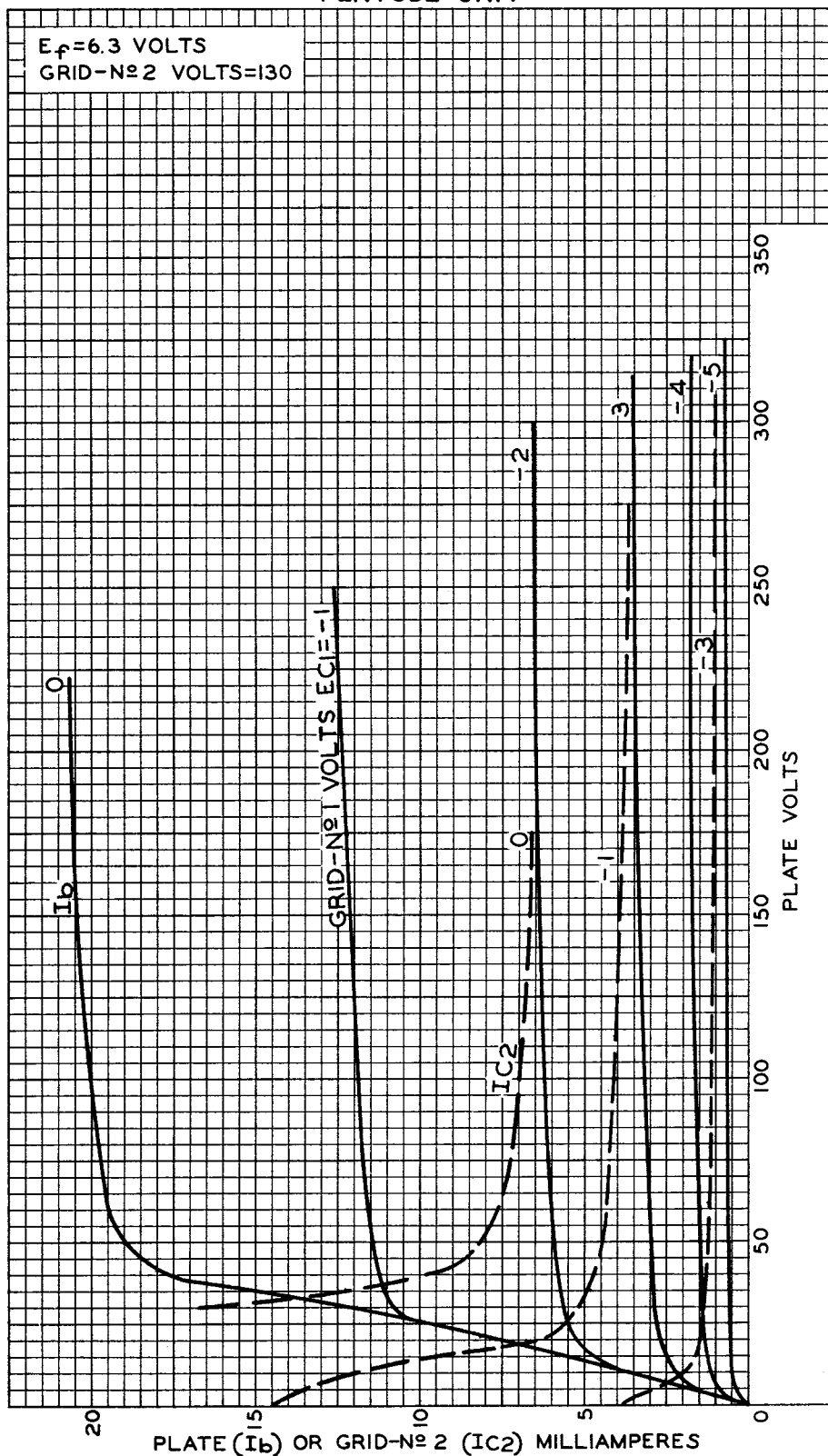
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AVERAGE CHARACTERISTICS
PENTODE UNIT

$E_f = 6.3$ VOLTS
GRID-Nº 2 VOLTS = 130

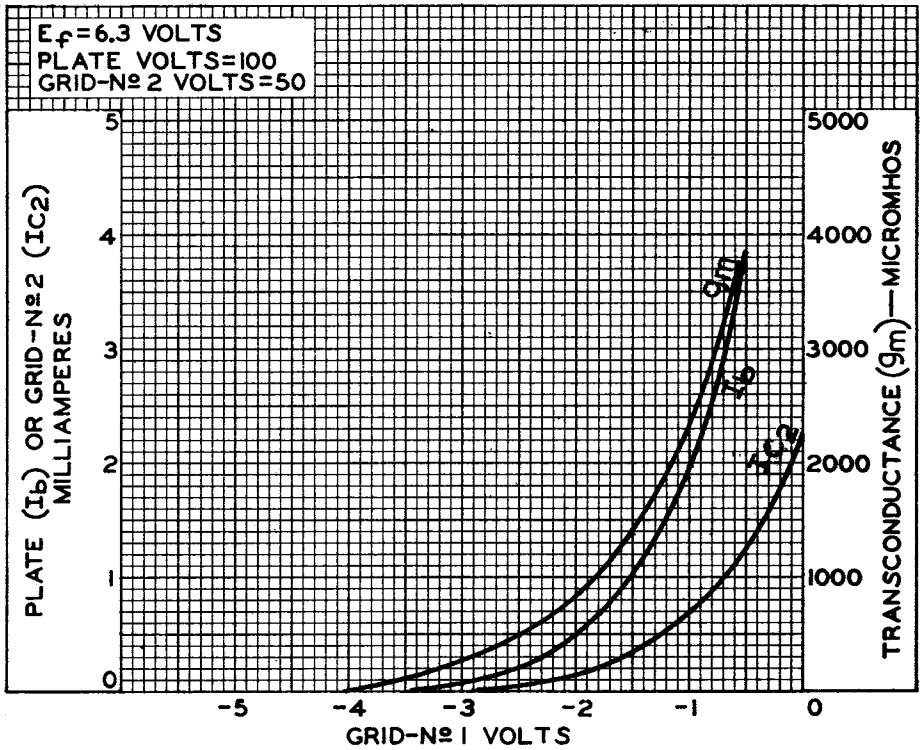




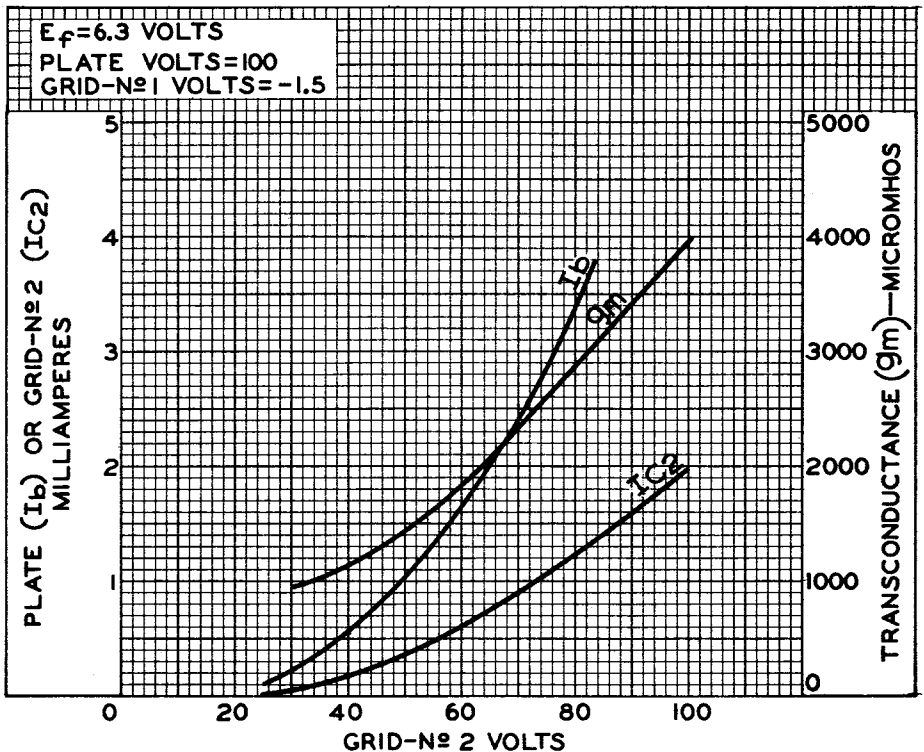
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AVERAGE CHARACTERISTICS PENTODE UNIT



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ELECTRON TUBE DIVISION

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

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