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MEDIUM-MU TRIODE— SHARP-CUTOFF PENTODE

9-PIN MINIATURE TYPE

For high-fidelity audio-amplifier applications critical as to noise and hum

GENERAL DATA

Electrical:

Heater, for Unipotential Cathodes:

Voltage. 6.3 $\pm$ 10% ac or dc volts

Current. 0.45 amp

Direct Interelectrode Capacitances:^o

Triode Unit:

Grid to plate. 2 μ fGrid to cathode and heater 2.3 μ fPlate to cathode and heater. 0.3 μ f

Pentode Unit:

Grid No.1 to plate 0.06 max. μ fGrid No.1 to cathode & internal shield & grid No.3, grid No.2, and heater 5 μ fPlate to cathode & internal shield & grid No.3, grid No.2, and heater 2 μ f

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

Triode Unit

Median Value (RMS) 10 microvolts

Maximum Value (RMS). 150 microvolts

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

Pentode Unit

Median Value (RMS) 35 microvolts

Maximum Value (RMS). 100 microvolts

Measured in "true rms" units under the following conditions: heater volts = 6.3 ac, center-tap of heater transformer connected to ground, plate-supply volts = 250, plate-load resistor (megohms) = 0.1, grid-No.2 supply volts = 250, grid-No.2 resistor (megohms) = 0.33, grid-No.2-bypass capacitor (μ f) = 0.22, cathode resistor (ohms) = 1200, grid-No.1 resistor (megohms) = 0.05, and amplifier covering frequency range between 25 and 10,000 cps.

Characteristics, Class A₁ Amplifier:

Triode
UnitPentode
Unit

Plate-Supply Voltage 215 100 220 volts

^o: See next page.



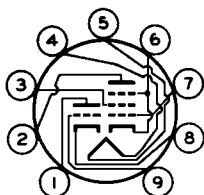
MEDIUM-MU TRIODE— SHARP-CUTOFF PENTODE

	Triode Unit	Pentode Unit	
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	μ mhos
Plate Current	9	1.1 12.5	ma
Grid-No.2 Current	—	0.35 3.5	ma
Grid-No.1 Voltage (Approx.) for plate μ a = 10.	-40	-4 —	volts

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	.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 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

0: See next page.



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	<i>Triode Unit</i>	<i>Pentode Unit</i>	
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.	—	<i>See Grid-No.2 Input Rating Chart at front of Receiving Tube Section</i>	
PLATE DISSIPATION.	2.4 max.	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

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 max.	1 max.	megohm

[○] Without external shield.

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

* If either unit is operated at maximum rated conditions, grid-No.1-circuit resistances for both units should not exceed the stated values.

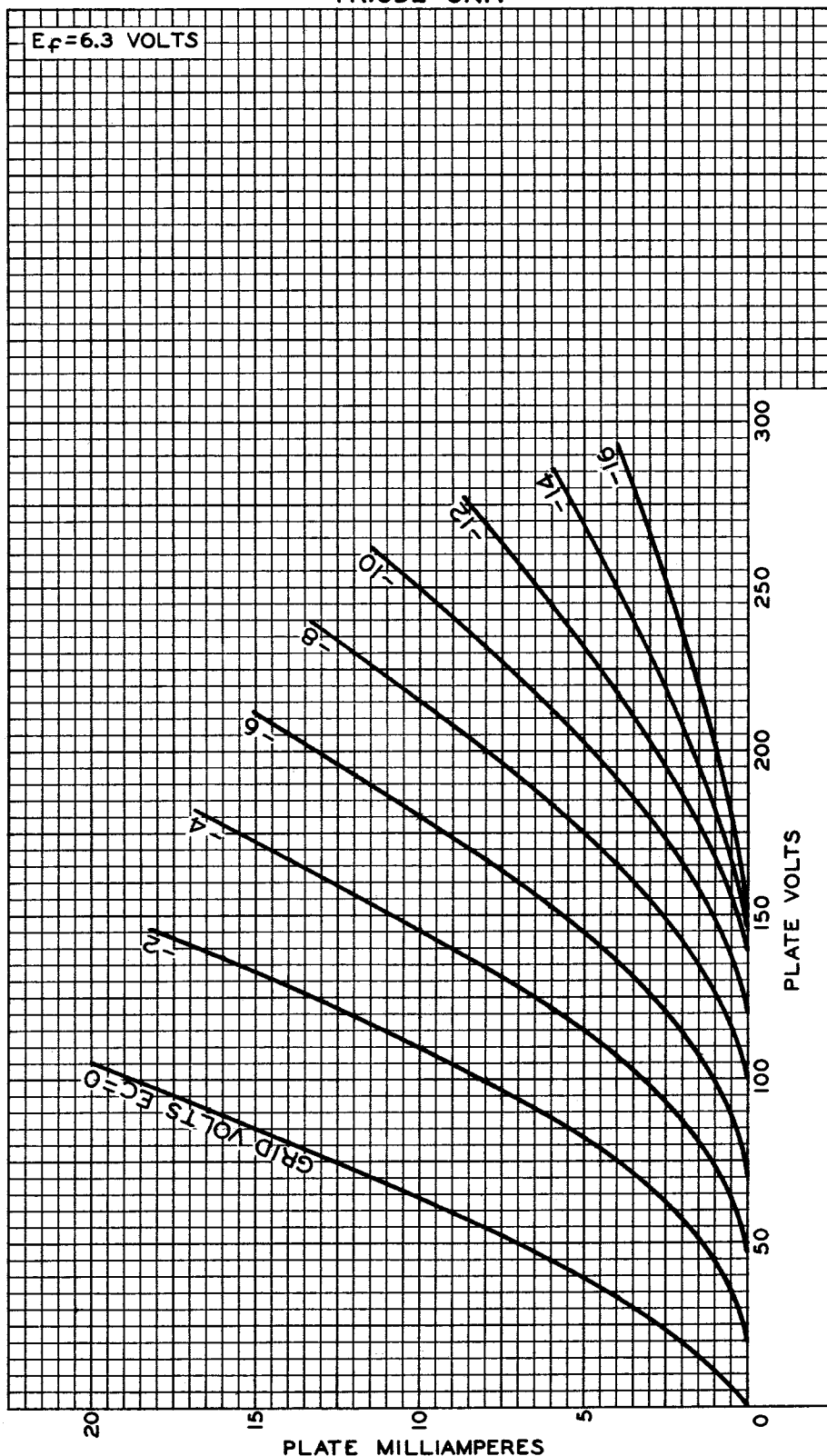
DEFINITIONS

Median. That value in a series such that half of the tubes in the series are on one side of it, and half on the other.

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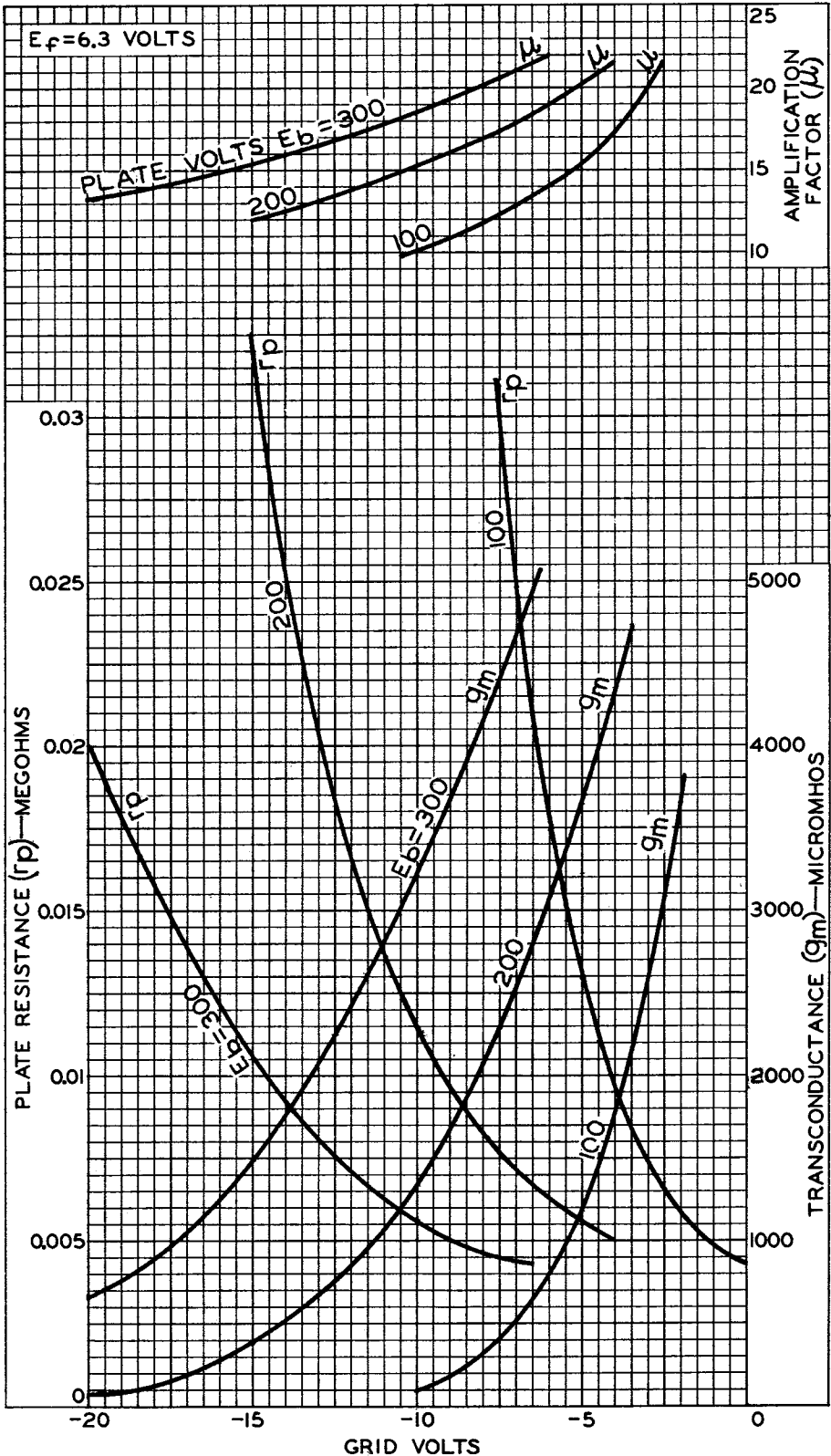
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AVERAGE PLATE CHARACTERISTICS
TRIODE UNIT



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AVERAGE CHARACTERISTICS
TRIODE UNIT

ELECTRON TUBE DIVISION

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-9704

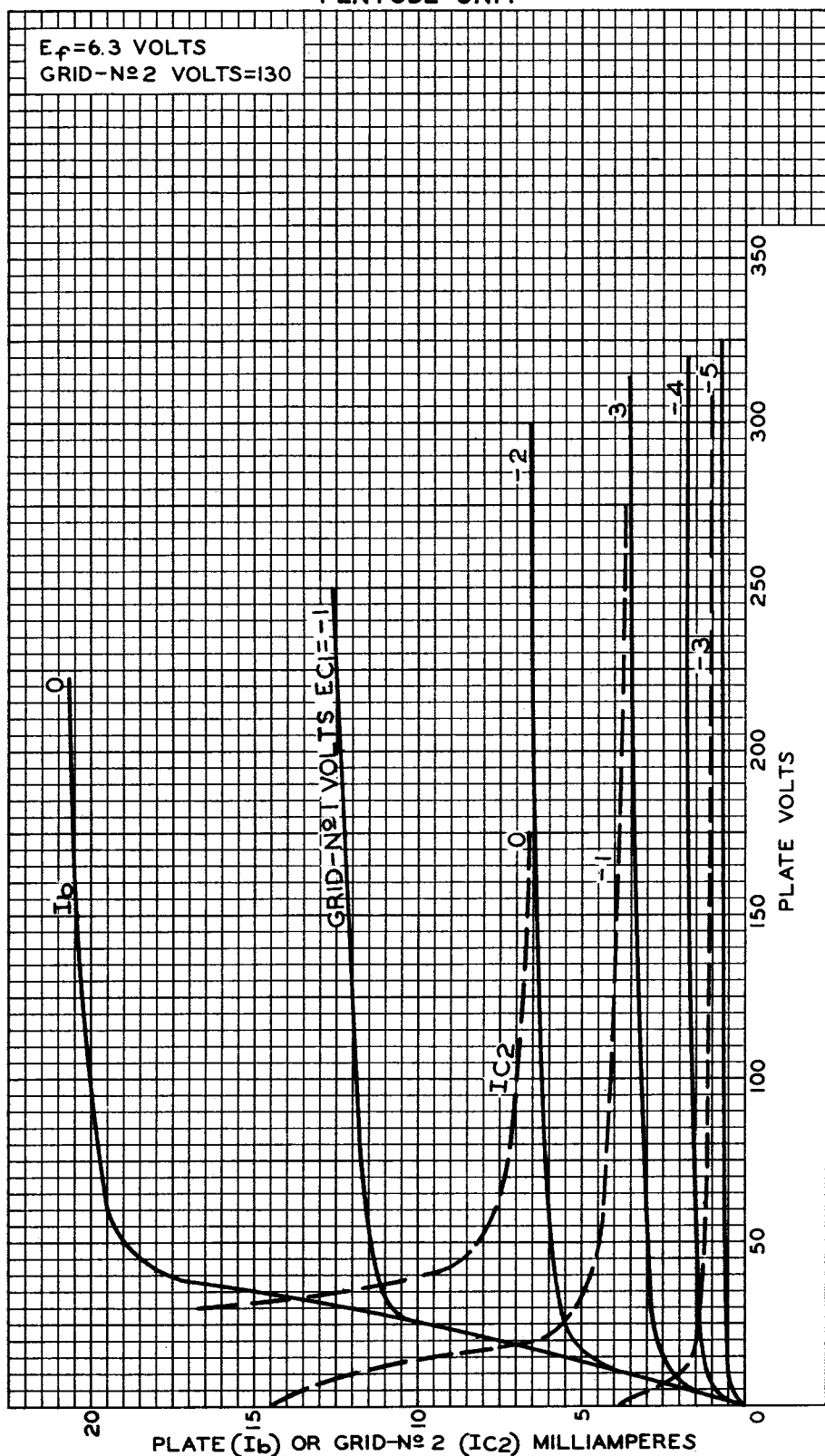
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AVERAGE CHARACTERISTICS PENTODE UNIT

$E_f = 6.3$ VOLTS
GRID-Nº2 VOLTS=130



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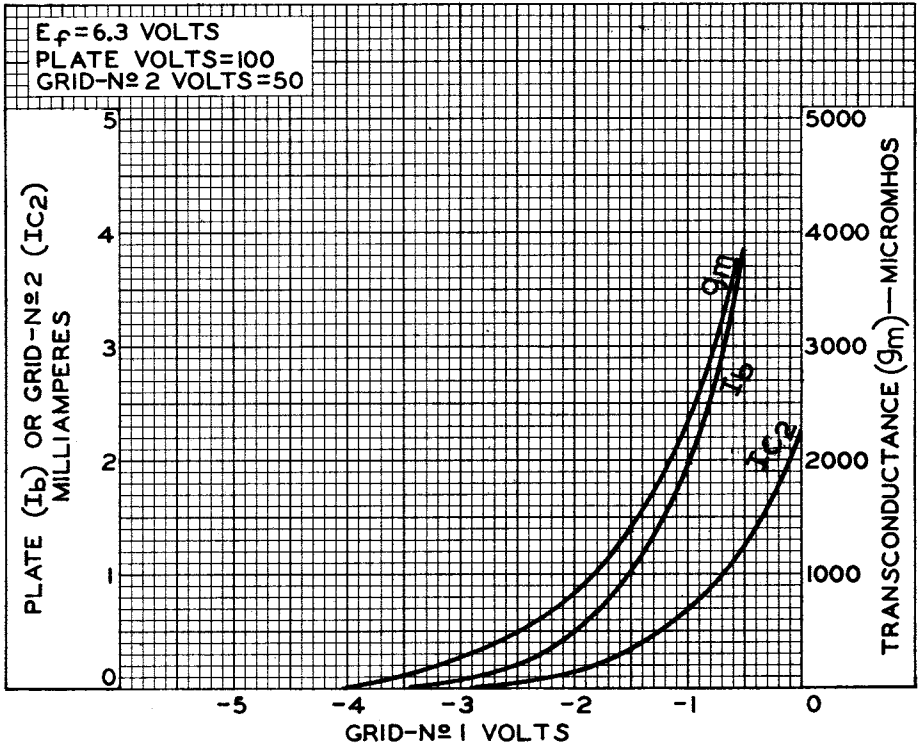
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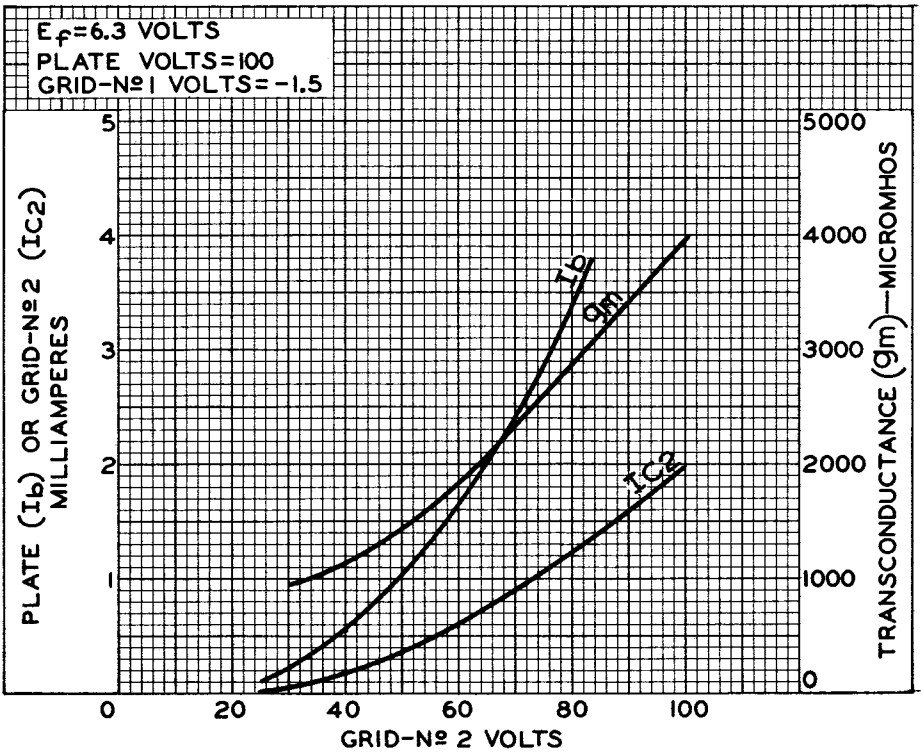
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AVERAGE CHARACTERISTICS PENTODE UNIT



92CS-9702



ELECTRON TUBE DIVISION

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92CS-9703