

High-Mu Triode—Sharp-Cutoff Pentode

Pentode Unit Has Two Independent Control Grids

9-PIN MINIATURE TYPE

With Heater Having Controlled Warm-Up Time

GENERAL DATA

Electrical:

Heater Characteristics and Ratings (*Design-Maximum Values*):

Voltage (AC or DC)	6.3 ^a	6.3 ± 0.6	volts
Current	0.600 ± 0.040	0.600 ^b	amp
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 ^c	max.	volts

Direct Interelectrode Capacitances:^d

Triode Unit:

Grid to plate	2.2	μμf
Grid to cathode & internal shield, and heater	2.8	μμf
Plate to cathode & internal shield, and heater	2.2	μμf

Pentode Unit:

Grid No.1 to plate	0.1 max.	μμf
Grid No.1 to cathode & internal shield, grid No.3, grid No.2, and heater	9.5	μμf
Grid No.1 to grid No.3	0.5	μμf
Grid No.3 to plate	2.2	μμf
Grid No.3 to cathode & internal shield, plate, grid No.2, grid No.1, and heater	7.0.	μμf

Characteristics, Class A₁ Amplifier:

	Triode Unit	Pentode Unit	
Plate Supply Voltage	200	150	volts
Grid-No.3 Supply Voltage	—	0	volts
Grid-No.2 Supply Voltage	—	100	volts
Grid-No.1 Supply Voltage	—2	0	volts
Cathode Resistor	—	180	ohms
Amplification Factor	70	—	
Plate Resistance (Approx.)	17500	100000	ohms
Transconductance, Grid No.1 to Plate	4000	4400	μmhos
Transconductance, Grid No.3 to Plate	—	600	μmhos



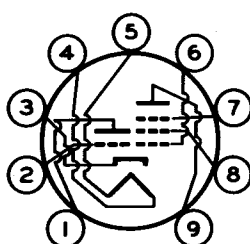
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Plate Current.	4	4	ma
Grid-No.2 Current.	-	2.8	ma
Grid-No.1 Supply Voltage (Approx.) for plate μ a =			
10	-5	-	volts
20	-	-4	volts
Grid-No.3 Supply Voltage (Approx.) for plate μ a = 20.	-	-7	volts

Mechanical:

Operating Position	Any
Type of Cathode.	Coated Unipotential
Maximum Overall Length	2-5/8"
Maximum Seated Length.	2-3/8"
Length, Base Seat to Bulb Top (Excluding tip).	2" $\pm$ 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	.9PV

Pin 1 - Triode
Plate
Pin 2 - Triode
Grid
Pin 3 - Cathode,
Internal
Shield
Pin 4 - Heater
Pin 5 - Heater



Pin 6 - Pentode
Grid No.1
Pin 7 - Pentode
Grid No.3
Pin 8 - Pentode
Grid No.2
Pin 9 - Pentode
Plate

GATED AGC AMPLIFIER & NOISE INVERTER

Pentode Unit

*For operation in a 525-line, 30-frame system**

Maximum Ratings, Design-Maximum Values:

PLATE VOLTAGE.	300 max.	volts
PEAK POSITIVE-PULSE PLATE VOLTAGE ^f	600 max.	volts
GRID-No.3 (CONTROL-GRID) VOLTAGE:		
Negative-bias value.	100 max.	volts
Positive-bias value.	0 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:		
Negative-bias value.	50 max.	volts
Positive-bias value.	0 max.	volts
GRID-No.2 INPUT:		
For grid-No.2 voltages up to 150 volts.	1.1 max.	watts

For grid-No.2 voltages
between 150 volts and
300 volts. See *Grid-No.2 Input Rating Chart*
at front of Receiving Tube Section

PLATE DISSIPATION. 2 max. watts

Maximum Circuit Values:

Grid-No.3-Circuit Resistance 0.68 max. megohm

Grid-No.1-Circuit Resistance:

For fixed-bias operation 0.5 max. megohm

For cathode-bias operation 1 max. megohm

AMPLIFIER — Class A₁

Triode Unit

Maximum Ratings, Design-Maximum Values:

PLATE VOLTAGE. 300 max. volts

GRID VOLTAGE:

Negative-bias value. 50 max. volts

Positive-bias value. 0 max. volts

PLATE DISSIPATION. 1.1 max. watts

Maximum Circuit Values:

Grid-Circuit Resistance:

For fixed-bias operation 0.25 max. megohm

For cathode-bias operation 1 max. megohm

a At heater amperes = 0.600.

b At heater volts = 6.3.

c The dc component must not exceed 100 volts.

d Without external shield.

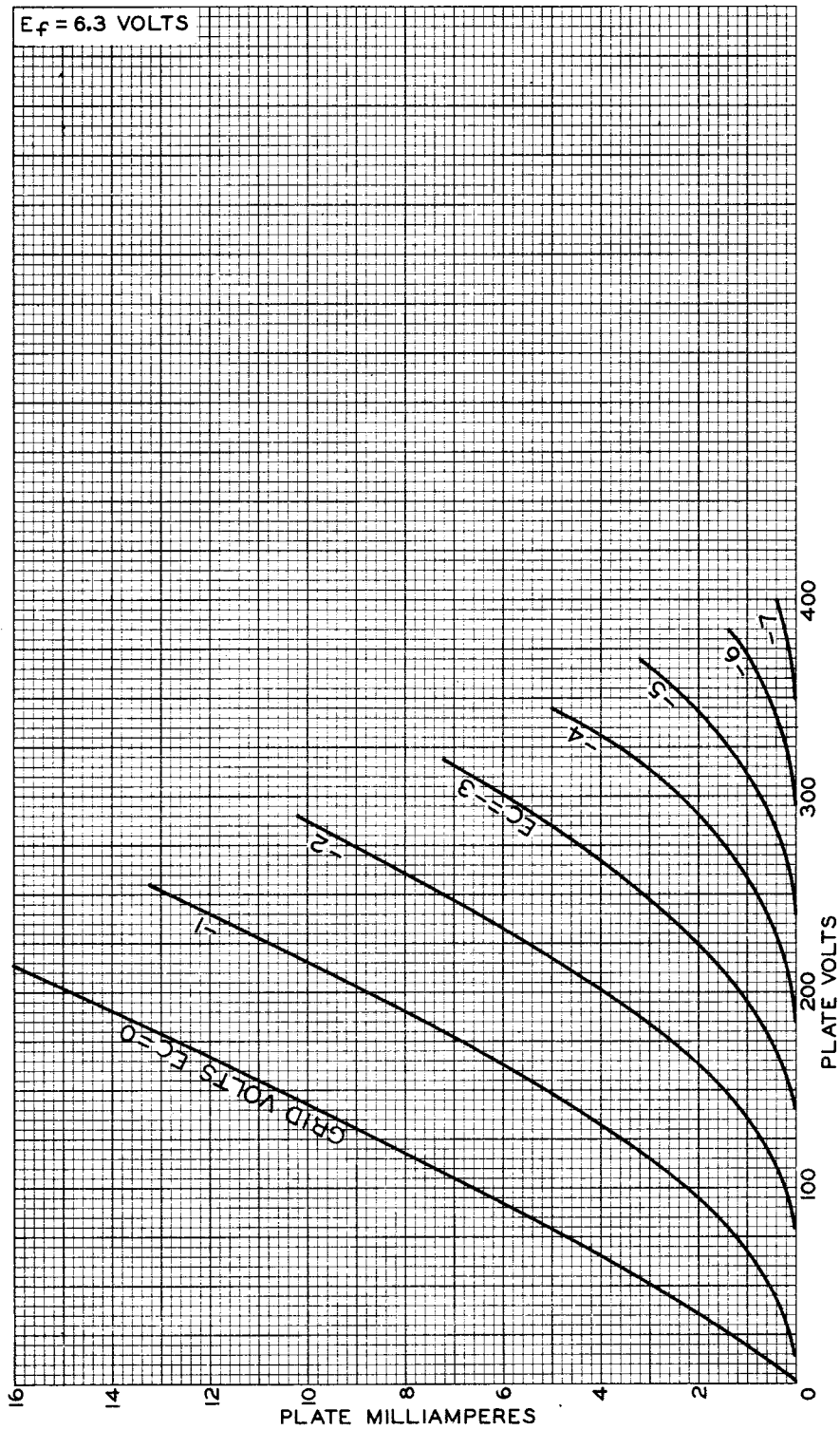
e As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission.

f This rating is applicable when the duration of the voltage pulse does not exceed 15 per cent of one horizontal scanning cycle. In a 525-line, 30-frame system, 15 per cent of one horizontal scanning cycle is 10 microsecs.



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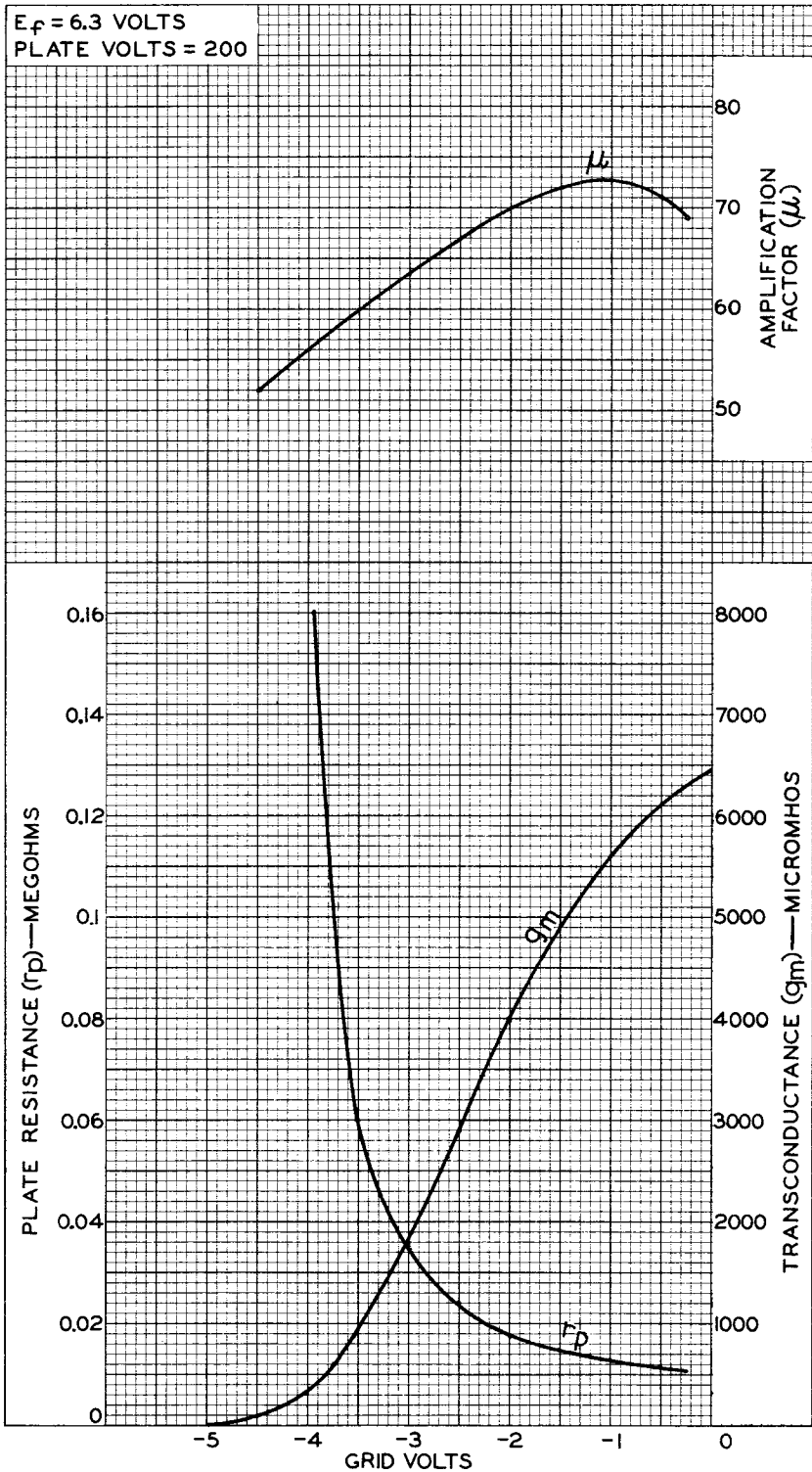
AVERAGE PLATE CHARACTERISTICS Triode Unit



92CM-8644



AVERAGE CHARACTERISTICS Triode Unit

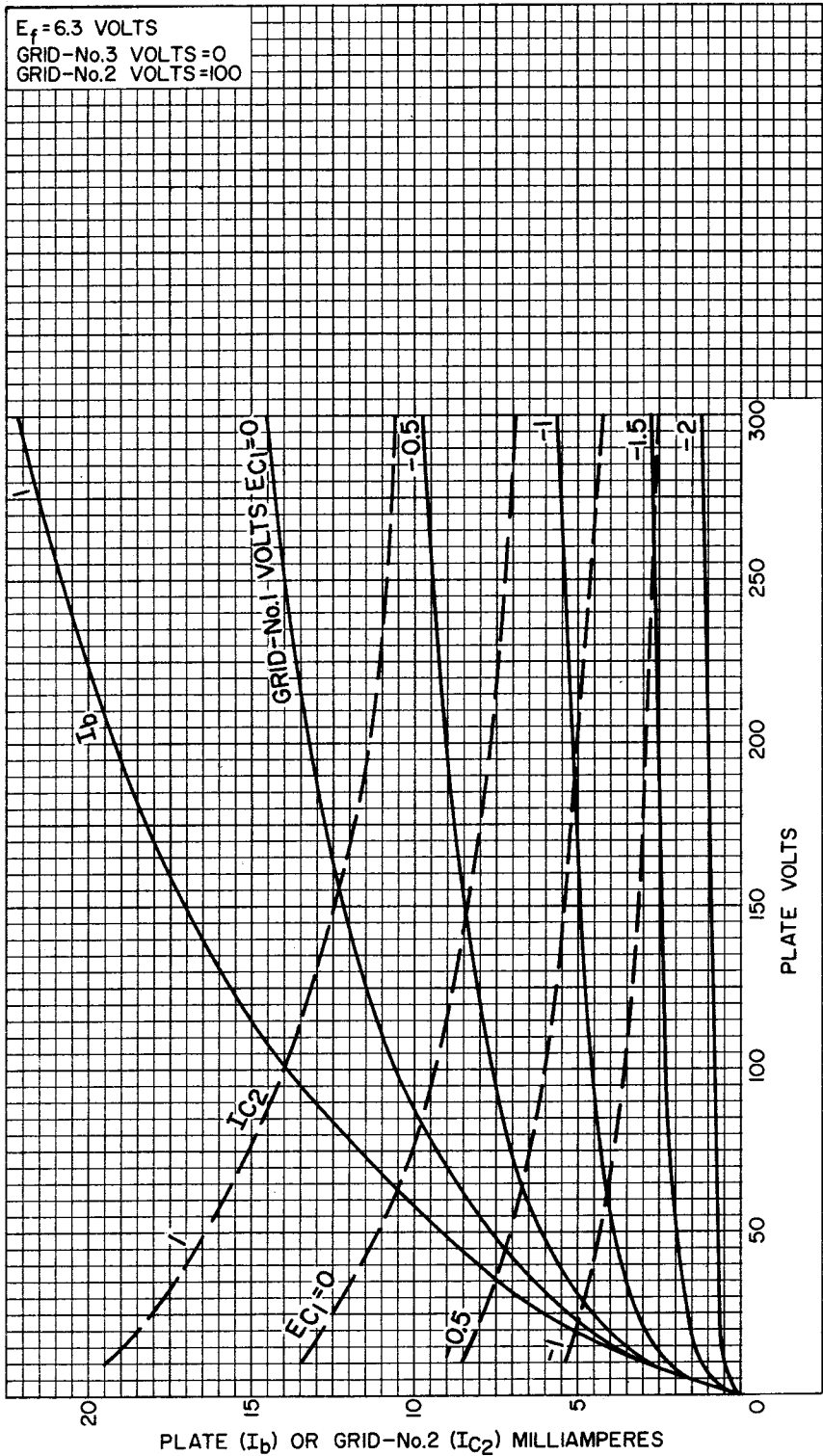


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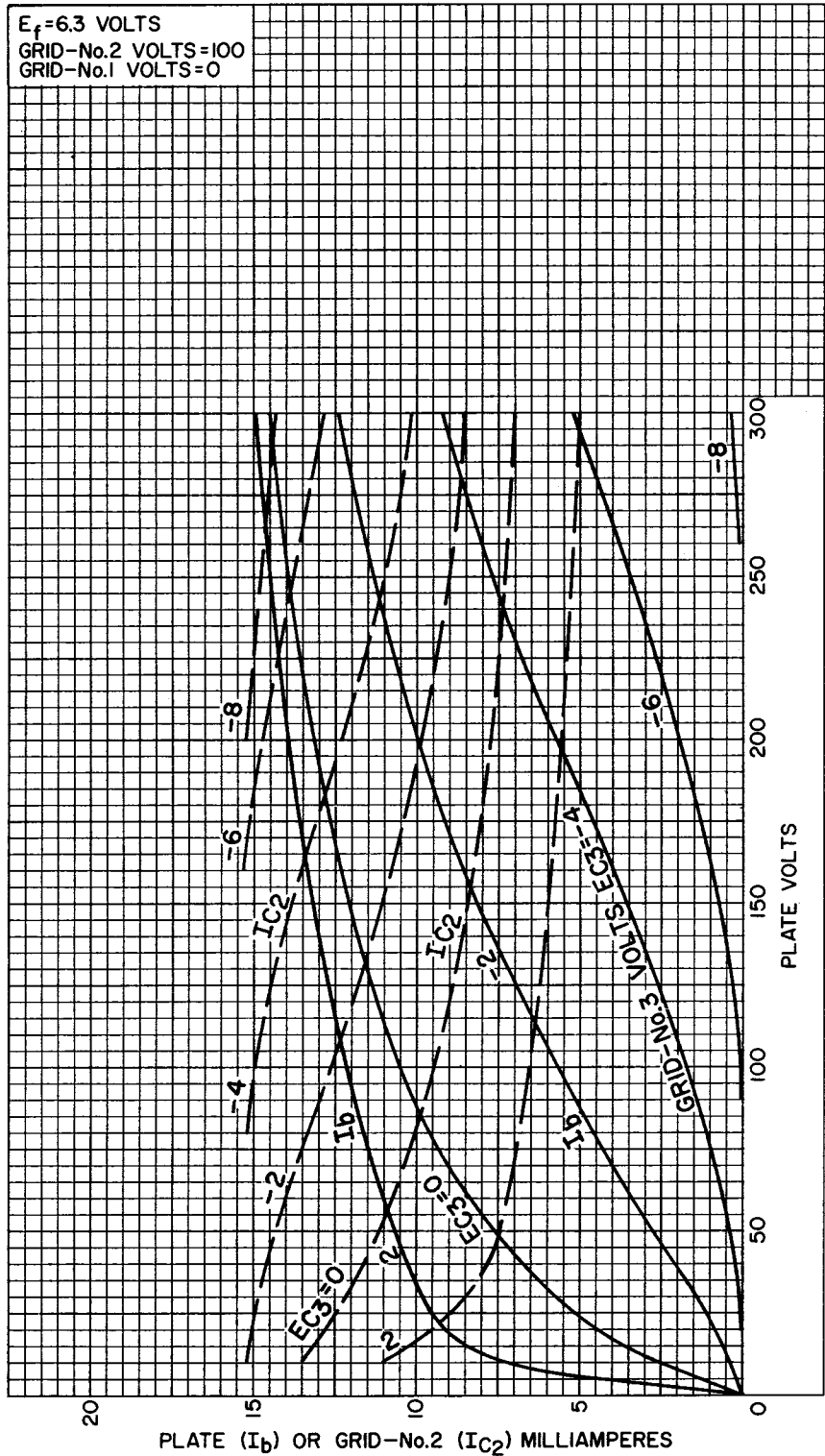
AVERAGE CHARACTERISTICS Pentode Unit



92CM-11594



AVERAGE CHARACTERISTICS Pentode Unit

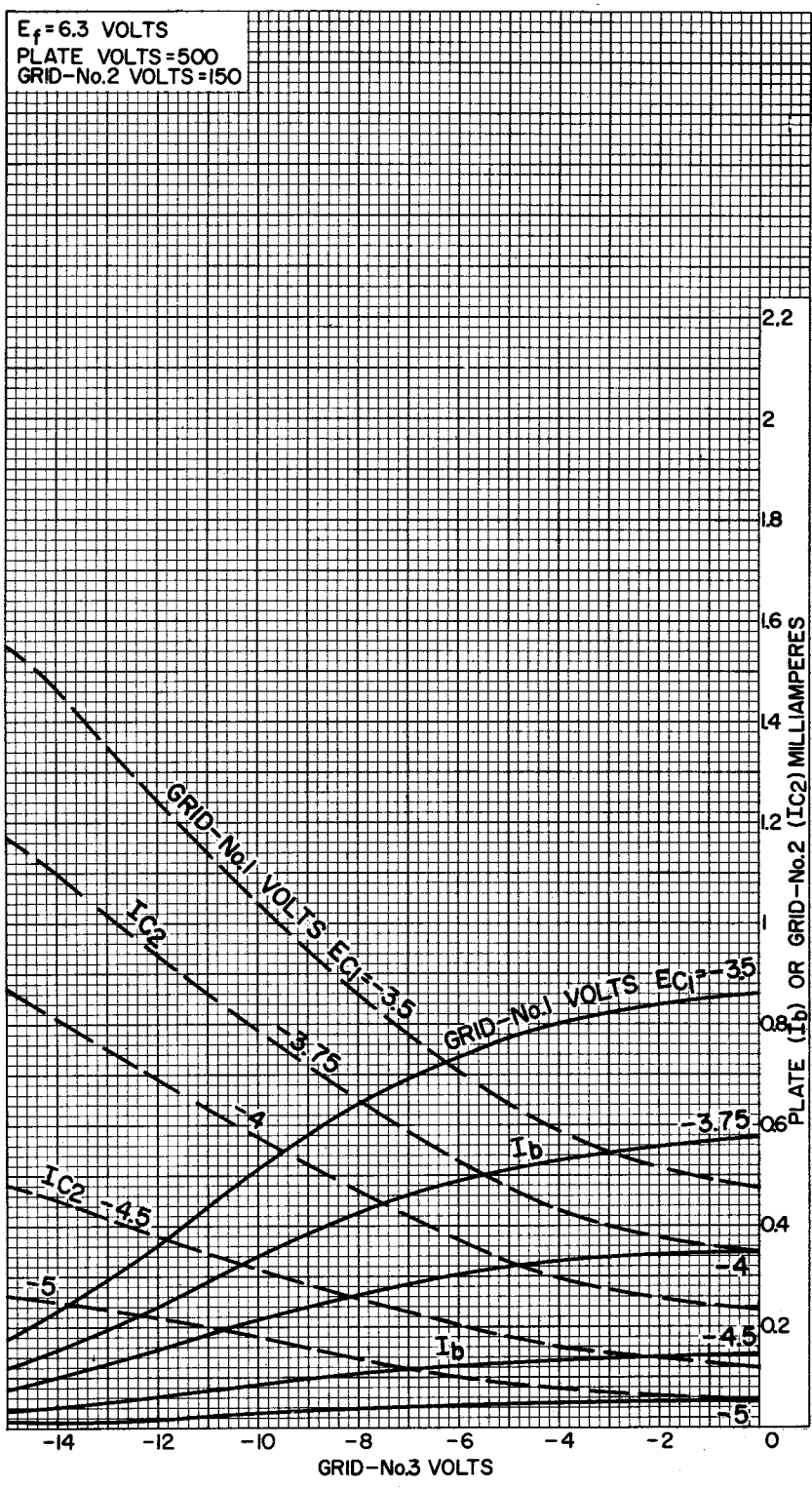


92CM-11606



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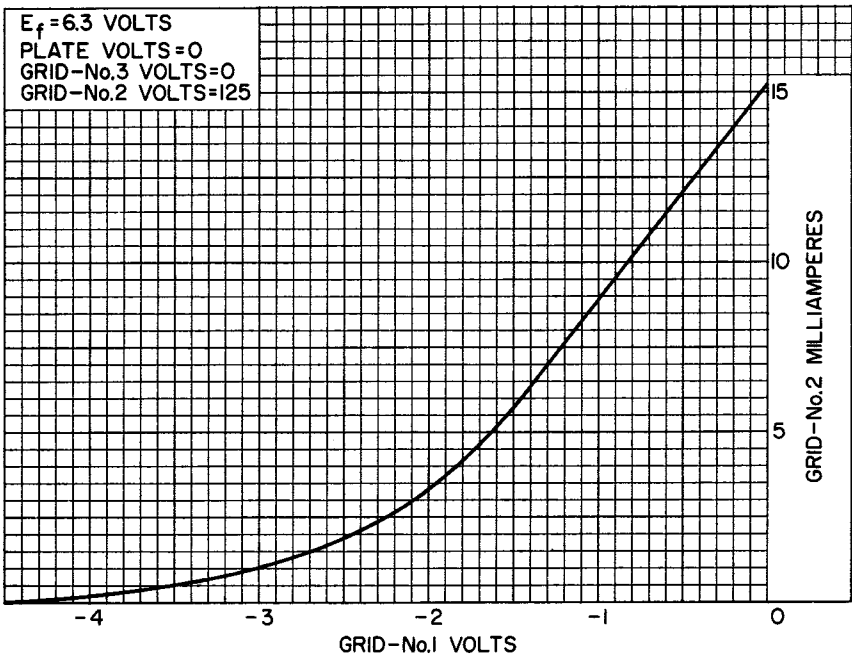
AVERAGE CHARACTERISTICS Pentode Unit



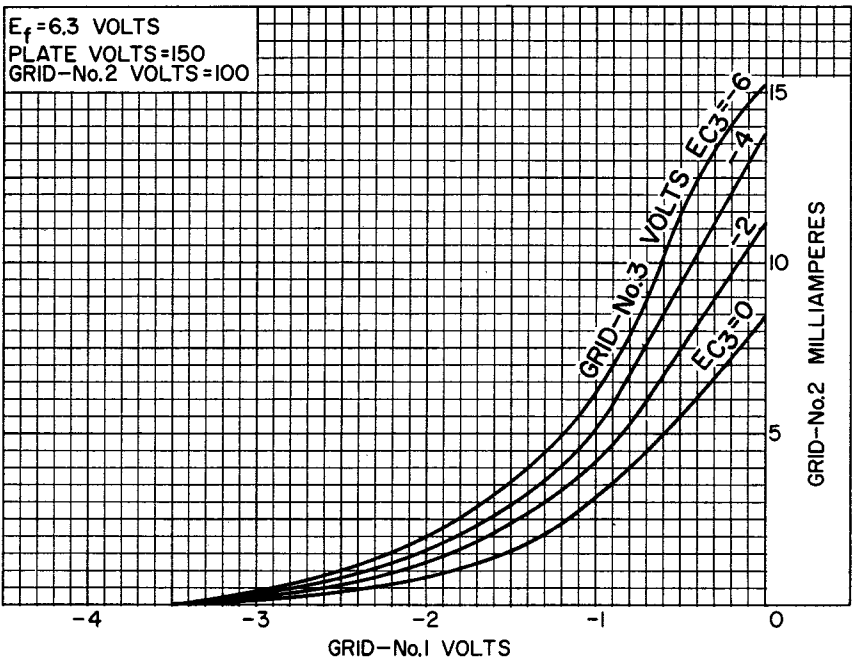
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AVERAGE CHARACTERISTICS Pentode Unit



92CS-11603

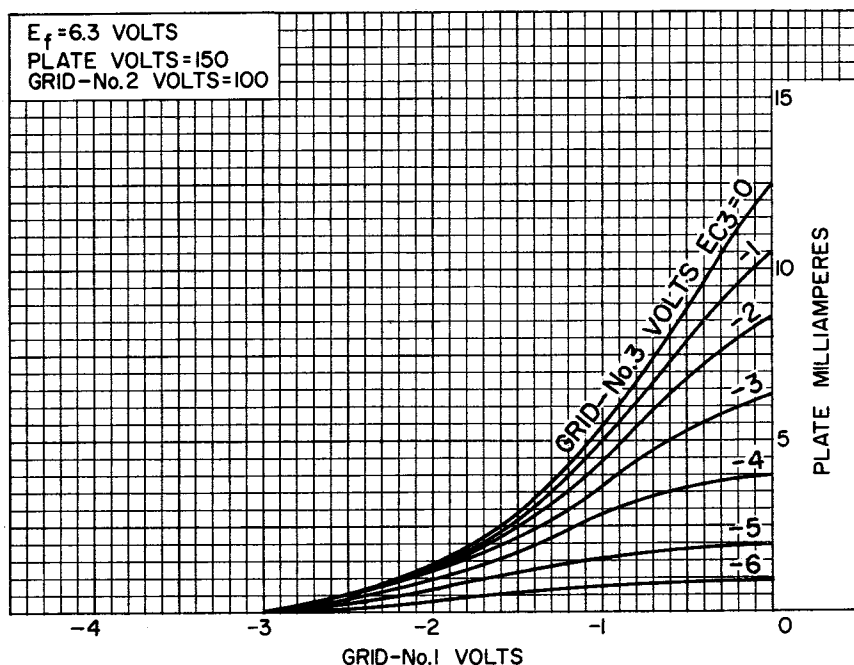


92CS-11596



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AVERAGE CHARACTERISTICS Pentode Unit



92CS-11614

