

Sharp-Cutoff Pentode

With Two Independent Control Grids

7-PIN MINIATURE TYPE
For FM Sound-Detector Service

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage (AC or DC)	6.3	volts
Current	0.45 $\pm$ 6%	amp
Warm-up time (Average)	11	sec

Direct Interelectrode Capacitances
(Approx.):^a

Grid No.1 to plate	0.022	$\mu\mu\text{f}$
Grid No.1 to cathode & internal shield, grid No.3, grid No.2, and heater.	8	$\mu\mu\text{f}$
Grid No.3 to plate	1.6	$\mu\mu\text{f}$
Grid No.1 to grid No.3.	0.11	$\mu\mu\text{f}$
Grid No.3 to cathode & internal shield, plate, grid No.2, grid No.1, and heater.	7.5	$\mu\mu\text{f}$

Characteristics, Class A₁ Amplifier:

Plate Supply Voltage.	150	volts
Grid-No.3 Supply Voltage.	0	volts
Grid-No.2 Supply Voltage.	100	volts
Grid-No.1 Supply Voltage.	0	volts
Cathode Resistor.	180	ohms
Plate Resistance (Approx.)	0.14	megohm
Transconductance, Grid No.1 to Plate.	3700	μmhos
Transconductance, Grid No.3 to Plate.	750	μmhos
Plate Current	3.7	ma
Grid-No.2 Current	3	ma
Grid-No.1 Supply Voltage (Approx.) for plate $\mu\text{a} = 20$	-4.5	volts
Grid-No.3 Supply Voltage (Approx.) for plate $\mu\text{a} = 20$	-7	volts

Mechanical:

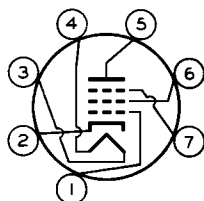
Operating Position.	Any
Maximum Overall Length.	2-1/8"
Maximum Seated Length	1-7/8"
Length, Base Seat to Bulb Top (Excluding tip).	1-1/2" $\pm$ 3/32"
Diameter.	0.650" to 0.750"
Dimensional Outline	See <i>General Section</i>
Bulb.	T5-1/2
Base.	Small-Button Miniature 7-Pin (JEDEC No.E7-1)



6GX6

Basing Designation for BOTTOM VIEW. 7EN

Pin 1—Grid No.1
Pin 2—Cathode,
Internal
Shield
Pin 3—Heater



Pin 4—Heater
Pin 5—Plate
Pin 6—Grid No.2
Pin 7—Grid No.3

FM SOUND-DETECTOR SERVICE

Maximum Ratings, Design-Maximum Values:

PLATE VOLTAGE	300	max.	volts
GRID-No.3 (CONTROL-GRID) VOLTAGE:			
Negative value (DC and Peak AC)	100	max.	volts
Positive value (DC and Peak AC)	25	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	max.	watt
For grid-No.2 voltages between 150 and 300 volts	See <i>Grid-No.2 Input Rating Chart</i> at front of Receiving Tube Section		
GRID-No.3 INPUT	0.1	max.	watt
PLATE DISSIPATION	1.7	max.	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode.	200	max.	volts
Heater positive with respect to cathode.	200 ^b	max.	volts

Maximum Circuit Values:

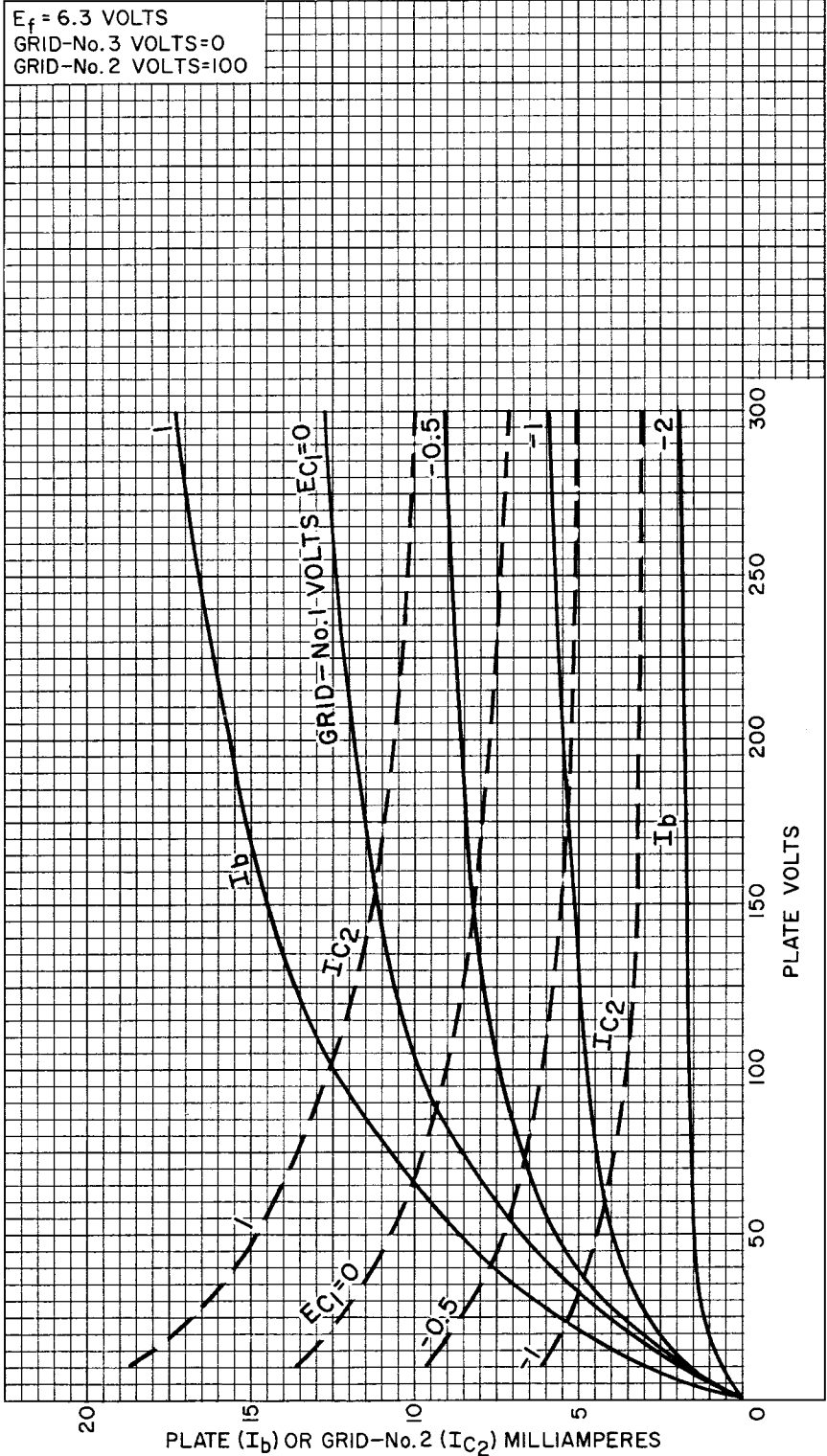
Grid-No.3—Circuit Resistance.	0.68	max.	megohm
Grid-No.1—Circuit Resistance:			
For fixed-bias operation.	0.22	max.	megohm
For cathode-bias operation.	0.47	max.	megohm

^a Without external shield.

^b The dc component must not exceed 100 volts.



AVERAGE CHARACTERISTICS

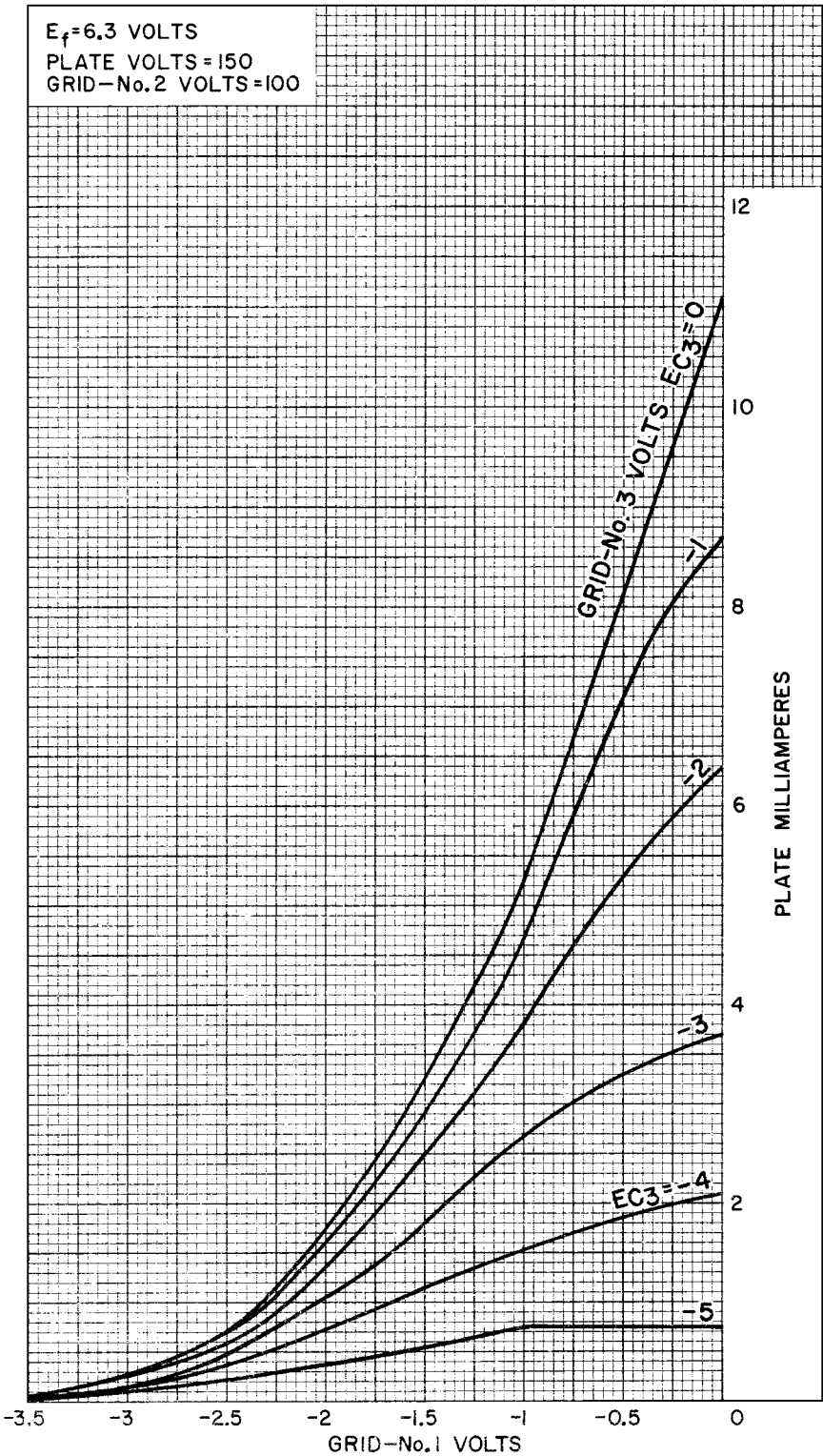


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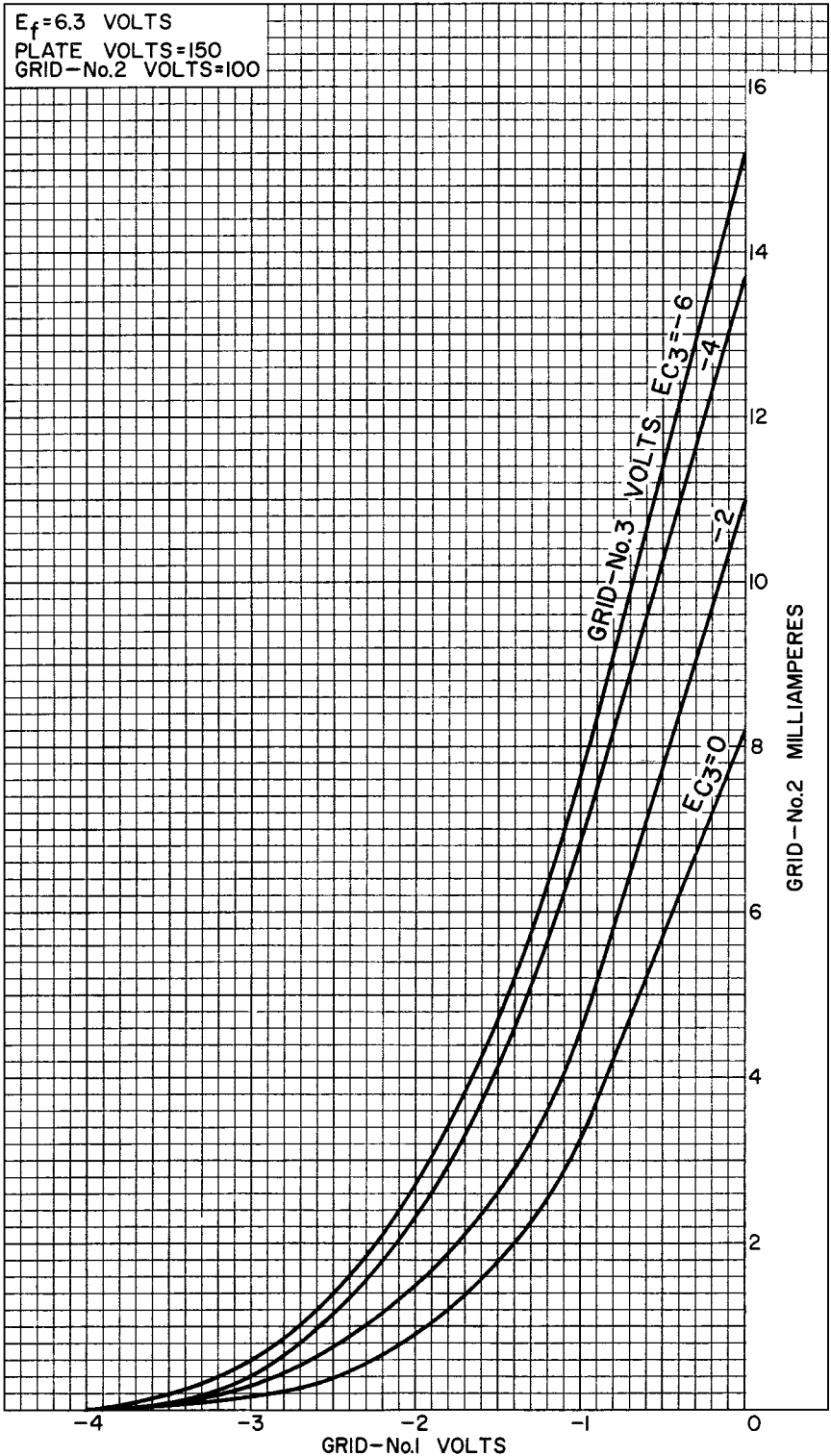
AVERAGE CHARACTERISTICS



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AVERAGE CHARACTERISTICS

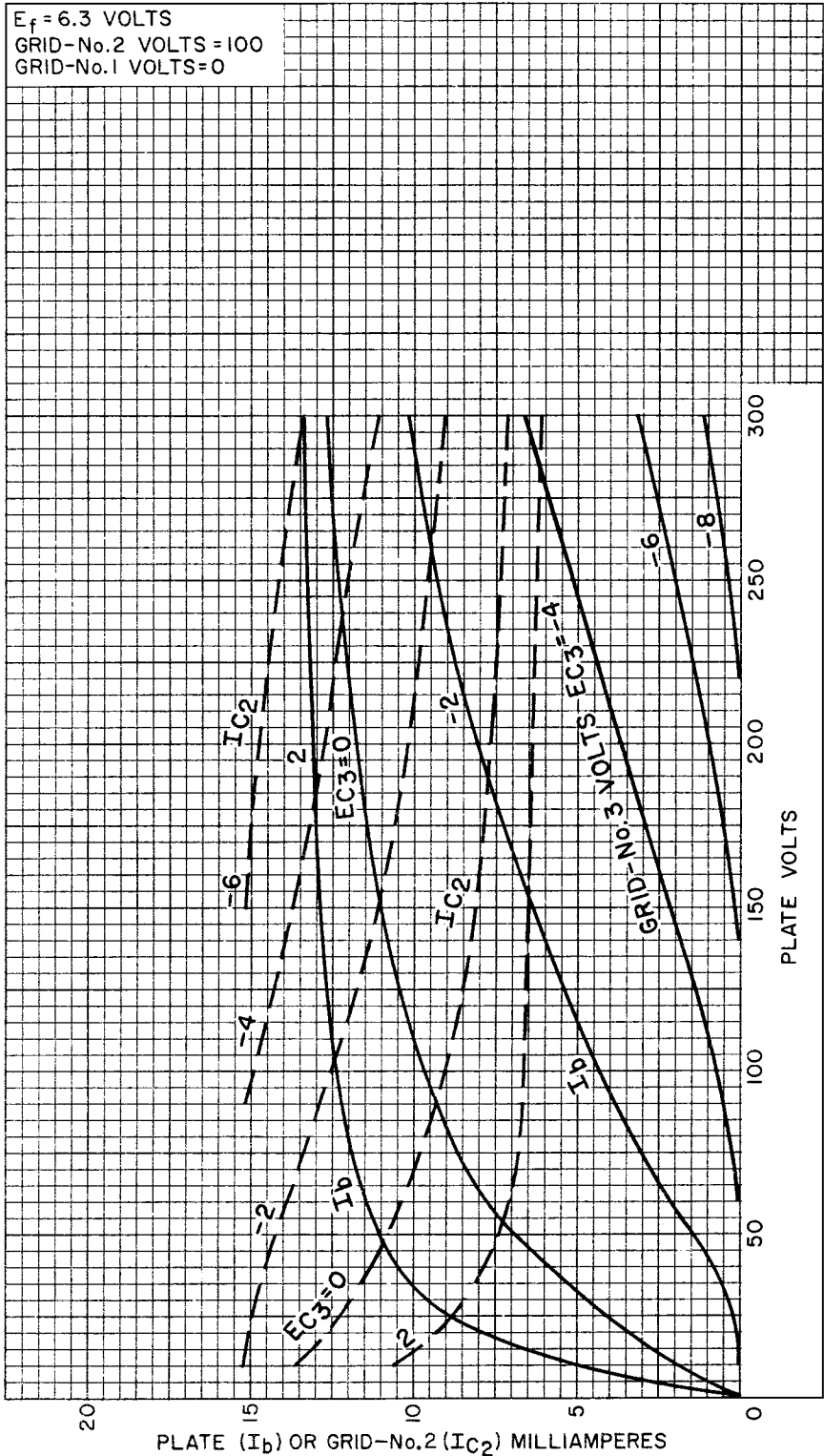


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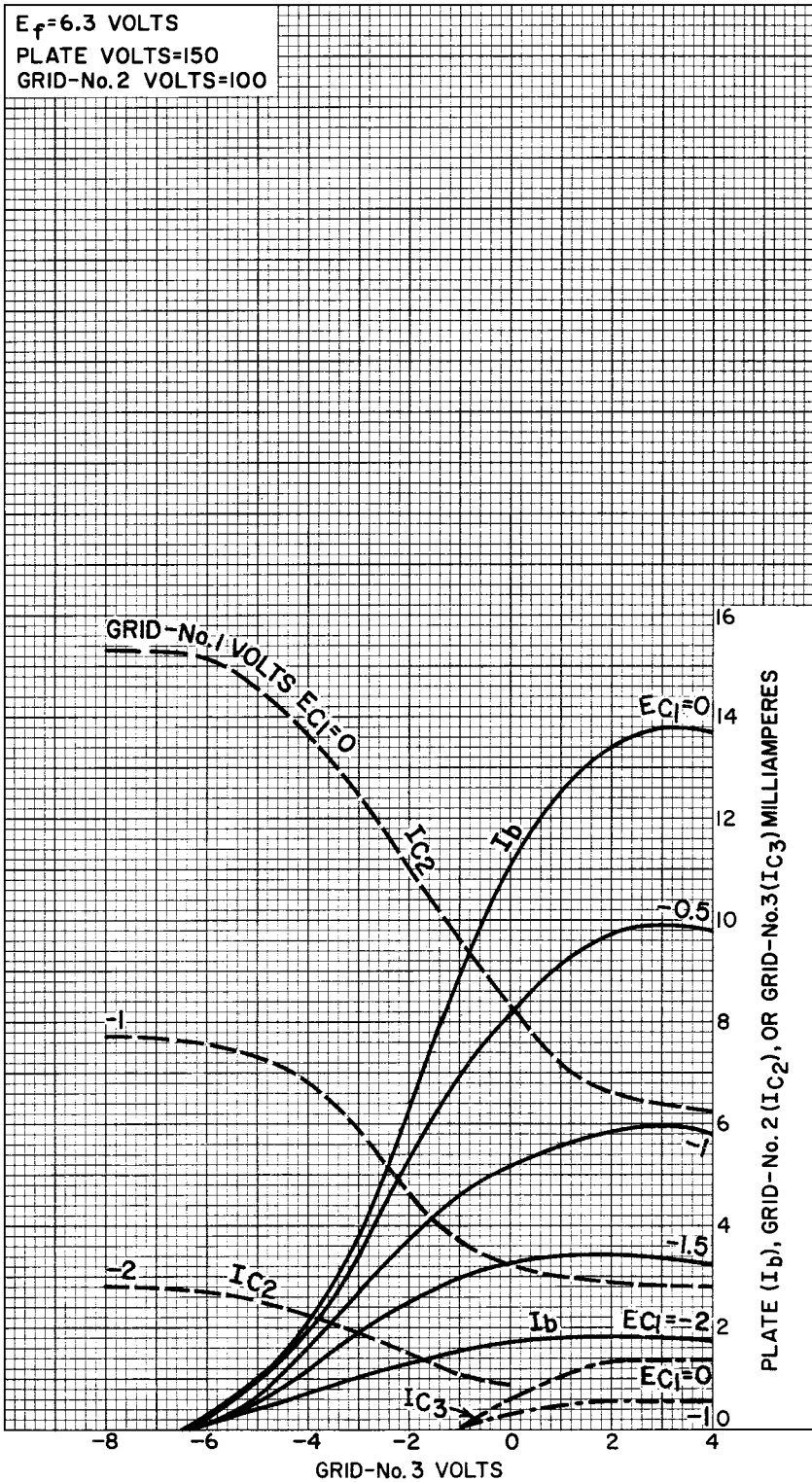
AVERAGE CHARACTERISTICS



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AVERAGE CHARACTERISTICS

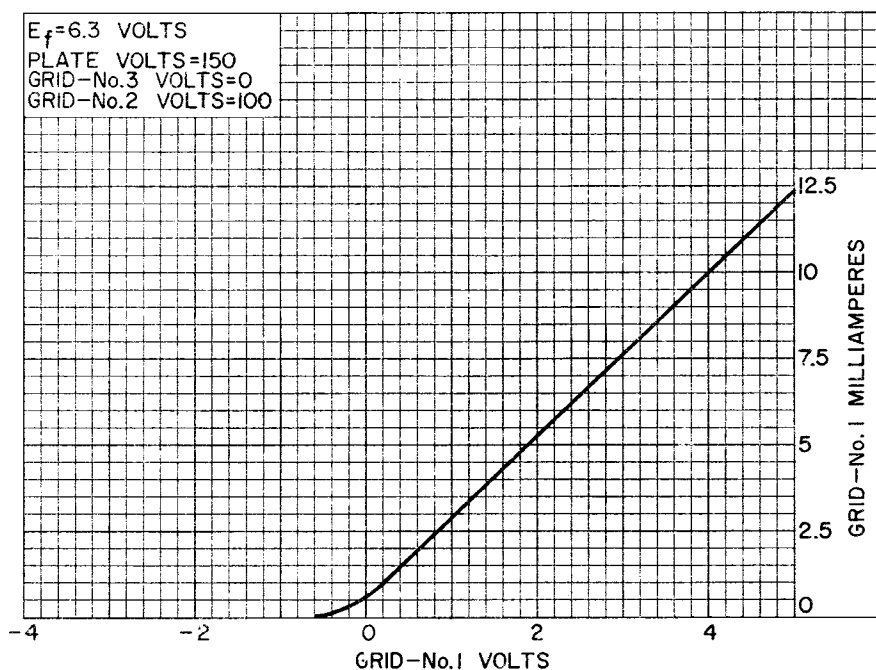


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AVERAGE GRID-No.1 OPERATION CHARACTERISTIC



92CS-11004

