

Sharp-Cutoff Pentode

With Two Independent Control Grids

7-PIN MINIATURE TYPE
For FM Detector Service

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage (AC or DC)	6.3 $\pm$ 10%	volts
Current at 6.3 volts.	0.3	amp

Direct Interelectrode Capacitances
(Approx.):▲

Grid No.1 to plate.	0.02	$\mu\mu\text{f}$
Grid No.1 to cathode & internal shield, grid No.3, grid No.2, and heater.	5.8	$\mu\mu\text{f}$
Grid No.3 to plate.	1.7	$\mu\mu\text{f}$
Grid No.1 to grid No.3.	0.1	$\mu\mu\text{f}$
Grid No.3 to cathode & internal shield, plate, grid No.2, grid No.1, and heater.	6.1	$\mu\mu\text{f}$

Characteristics, Class A₁ Amplifier:

Plate Supply Voltage.	150	volts
Grid No.3	<i>Connected to cathode at socket</i>	
Grid-No.2 Supply Voltage.	100	volts
Cathode Resistor.	560	ohms
Plate Resistance (Approx.).	0.15	megohm
Transconductance, Grid No.1 to Plate. .	1350	μmhos
Transconductance, Grid No.3 to Plate. .	515	μmhos
Plate Current	1.55	ma
Grid-No.2 Current	1.8	ma
Grid-No.1 Voltage (Approx.) for plate $\mu\text{a} = 10$	-5.2	volts
Grid-No.3 Voltage (Approx.) for plate $\mu\text{a} = 10$	-4.2	volts

Mechanical:

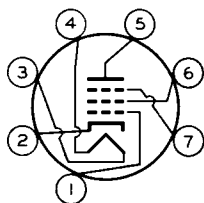
Operating Position.	Any
Maximum Overall Length.	2-1/8"
Maximum Seated Length	1-7/8"
Length, Base Seat to Bulb Top (Excluding tip) .	1-1/2" $\pm$ 3/32"
Diameter.	0.650" to 0.750"
Dimensional Outline	See <i>General Section</i>
Bulb.	T5-1/2
Base.	Small-Button Miniature 7-Pin (JEDEC No.E7-1)



6DT6-A

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 DETECTOR

Maximum Ratings, Design-Maximum Values:

PLATE VOLTAGE.	330 max.	volts
GRID-No.3 (CONTROL-GRID) VOLTAGE	28 max.	volts
GRID-No.2 (SCREEN-GRID) SUPPLY VOLTAGE	330 max.	volts
GRID-No.2 VOLTAGE.	<i>See Grid-No.2 Input Rating Chart at front of Receiving Tube Section</i>	
GRID-No.1 (CONTROL-GRID) VOLTAGE:		
Positive-bias value.	0 max.	volts
GRID-No.2 INPUT:		
For grid-No.2 voltages up to 165 volts	1.1 max.	watts
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.	1.7 max.	watts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode.	200 max.	volts
Heater positive with respect to cathode.	200 [●] max.	volts

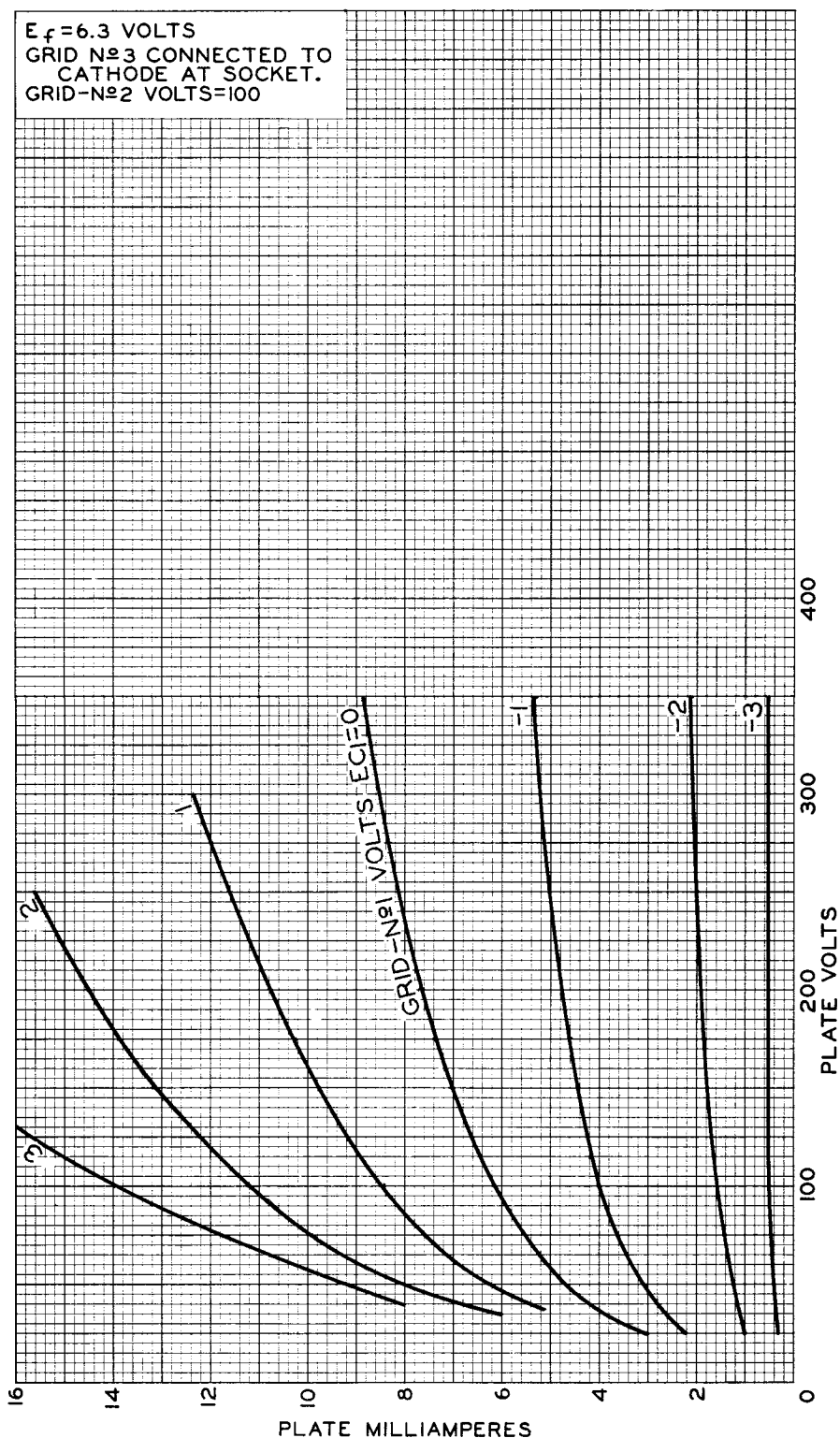
Maximum Circuit Values:

Grid-No.1—Circuit Resistance:		
For fixed-bias operation	0.25 max.	megohm
For cathode-bias operation	0.5 max.	megohm

- ▲ With external shield JEDEC No.316 connected to cathode.
● The dc component must not exceed 100 volts.



AVERAGE PLATE CHARACTERISTICS

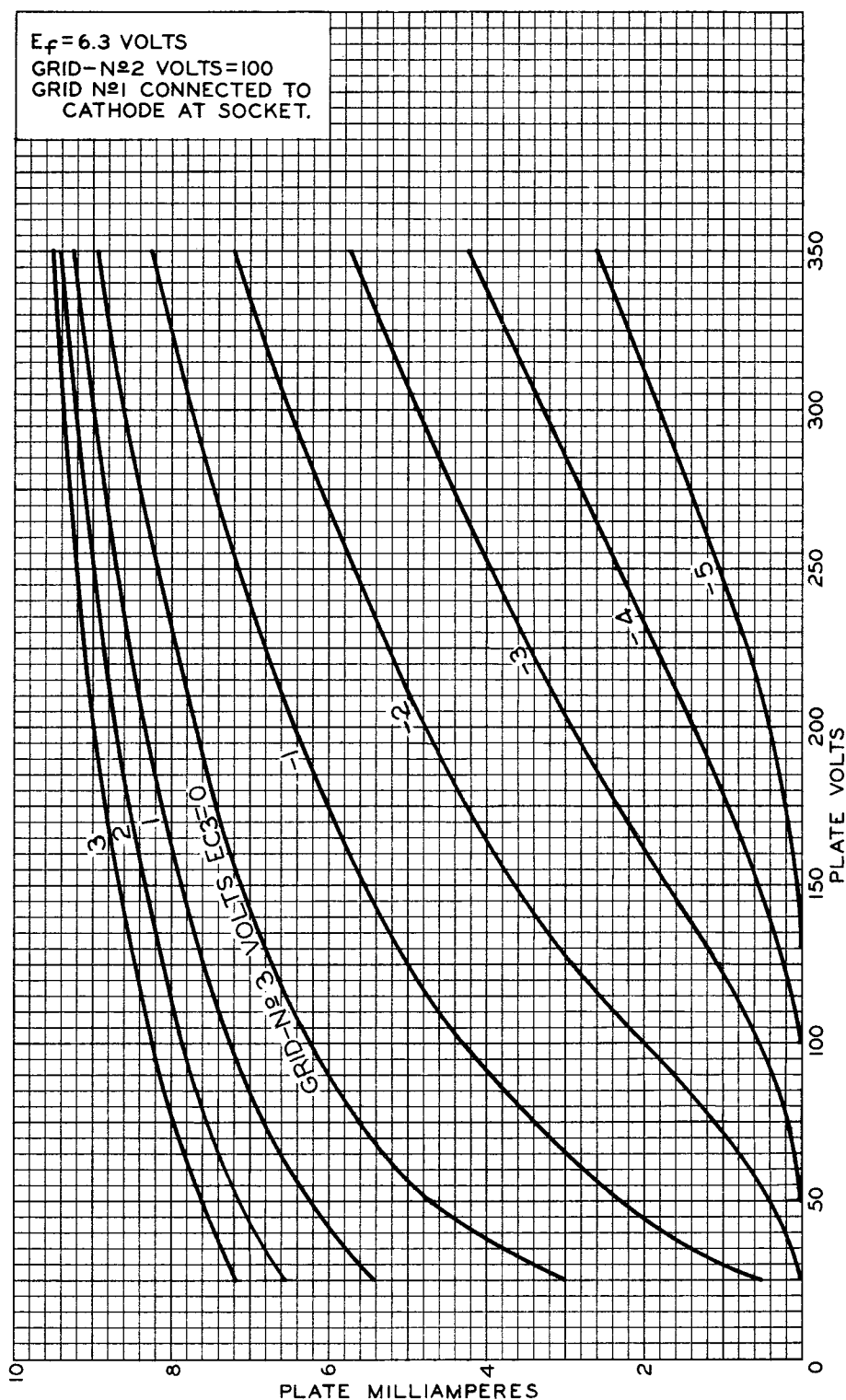


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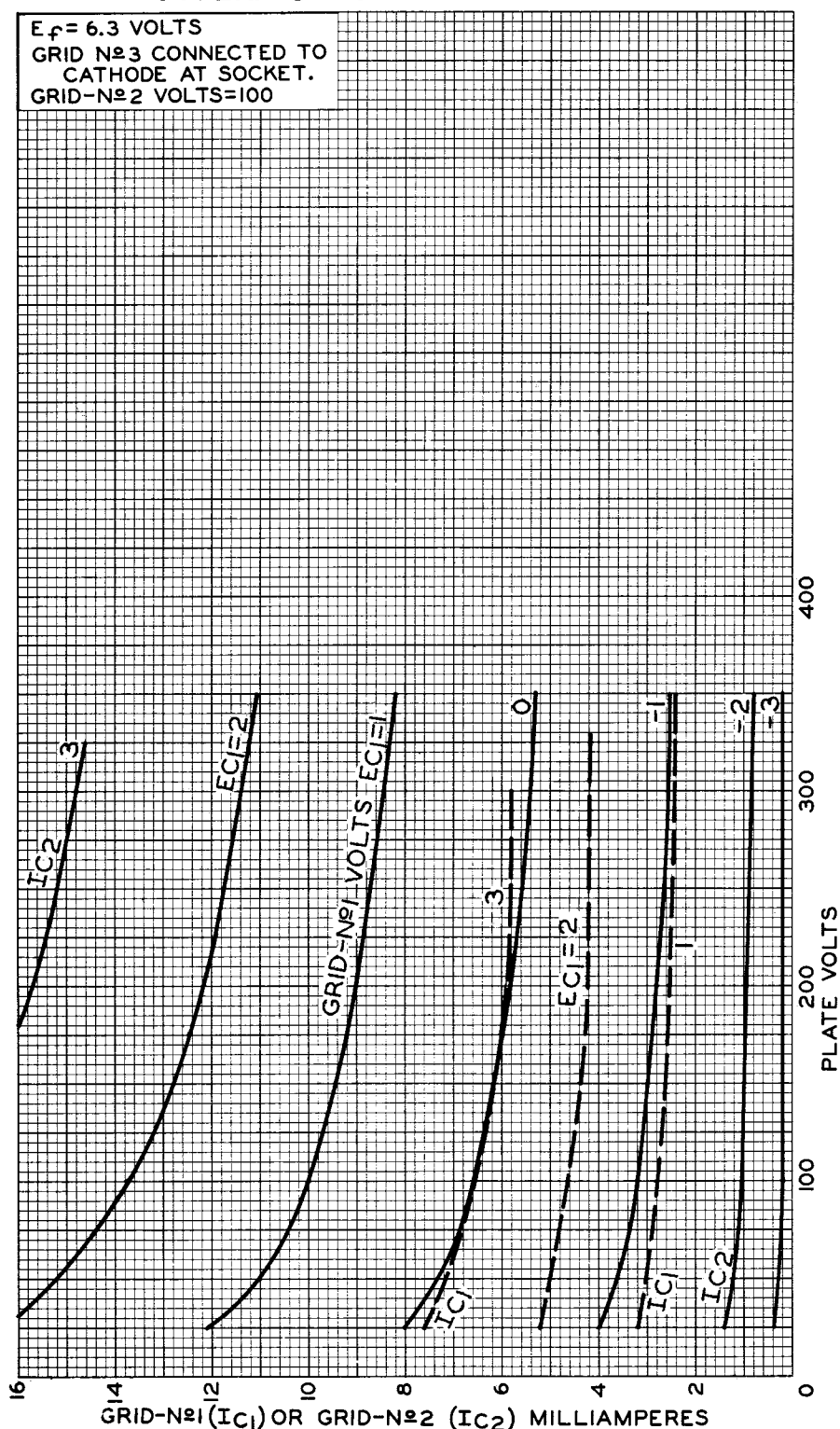
AVERAGE PLATE CHARACTERISTICS



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AVERAGE CHARACTERISTICS

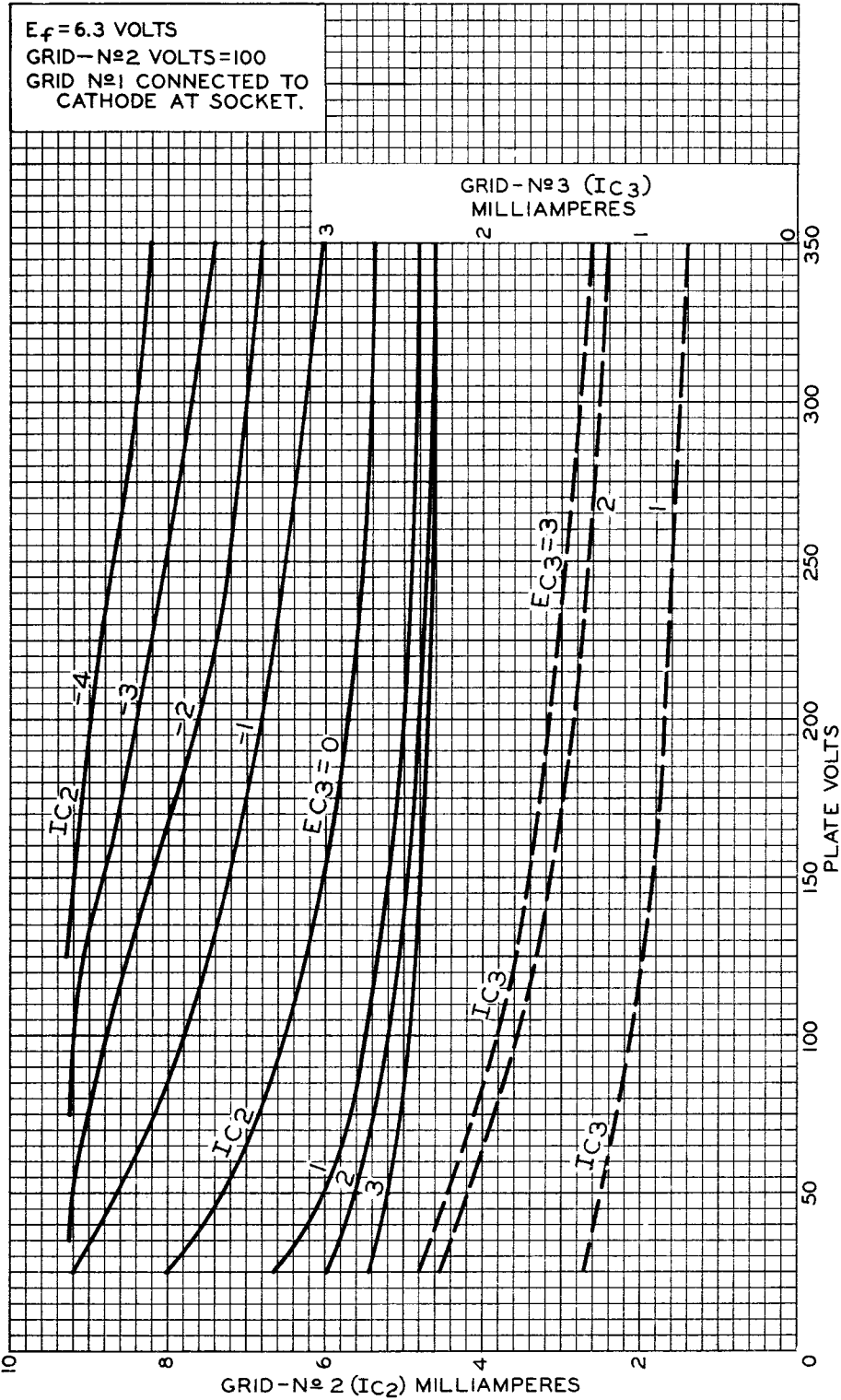


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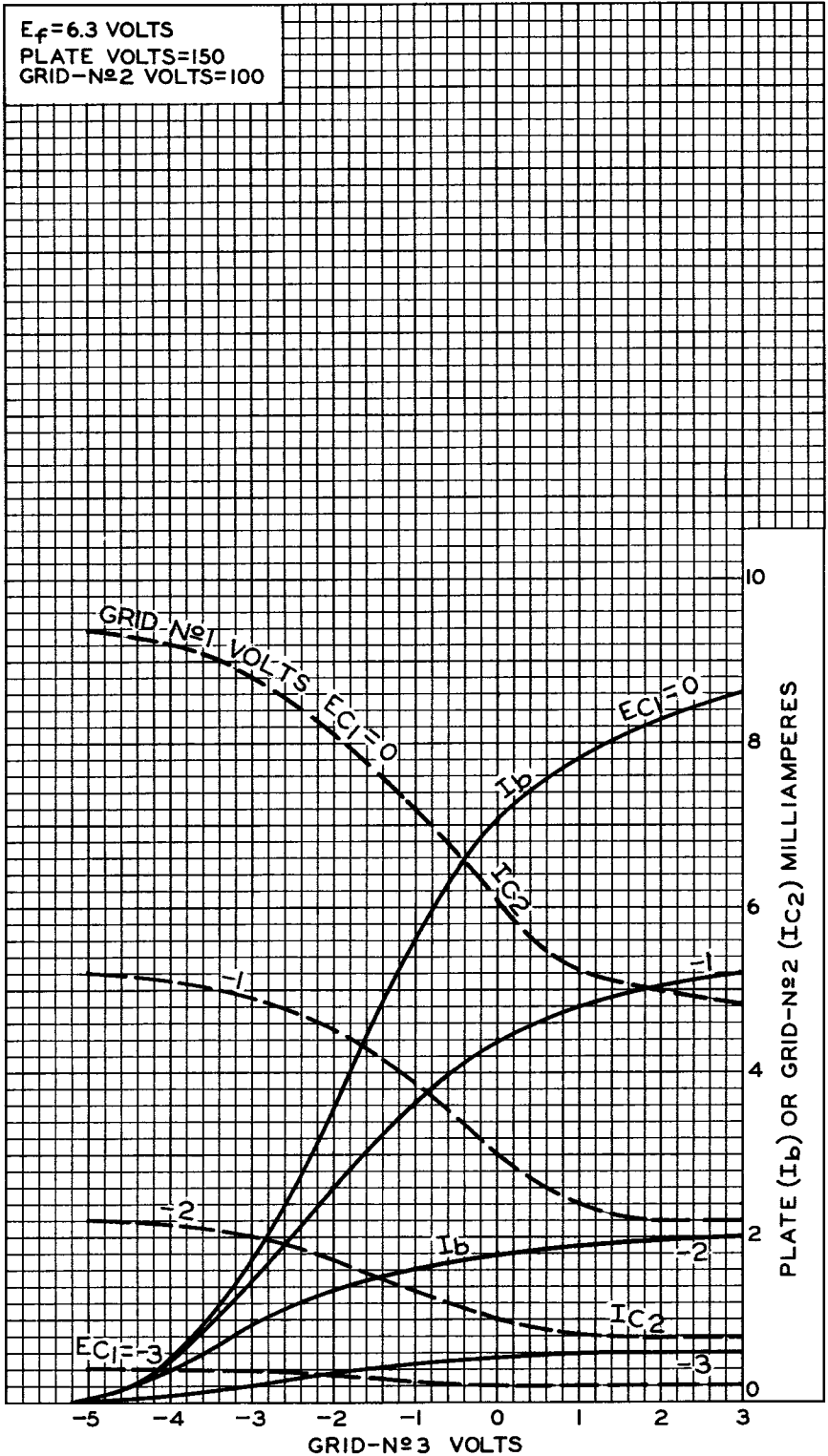
AVERAGE CHARACTERISTICS



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AVERAGE CHARACTERISTICS

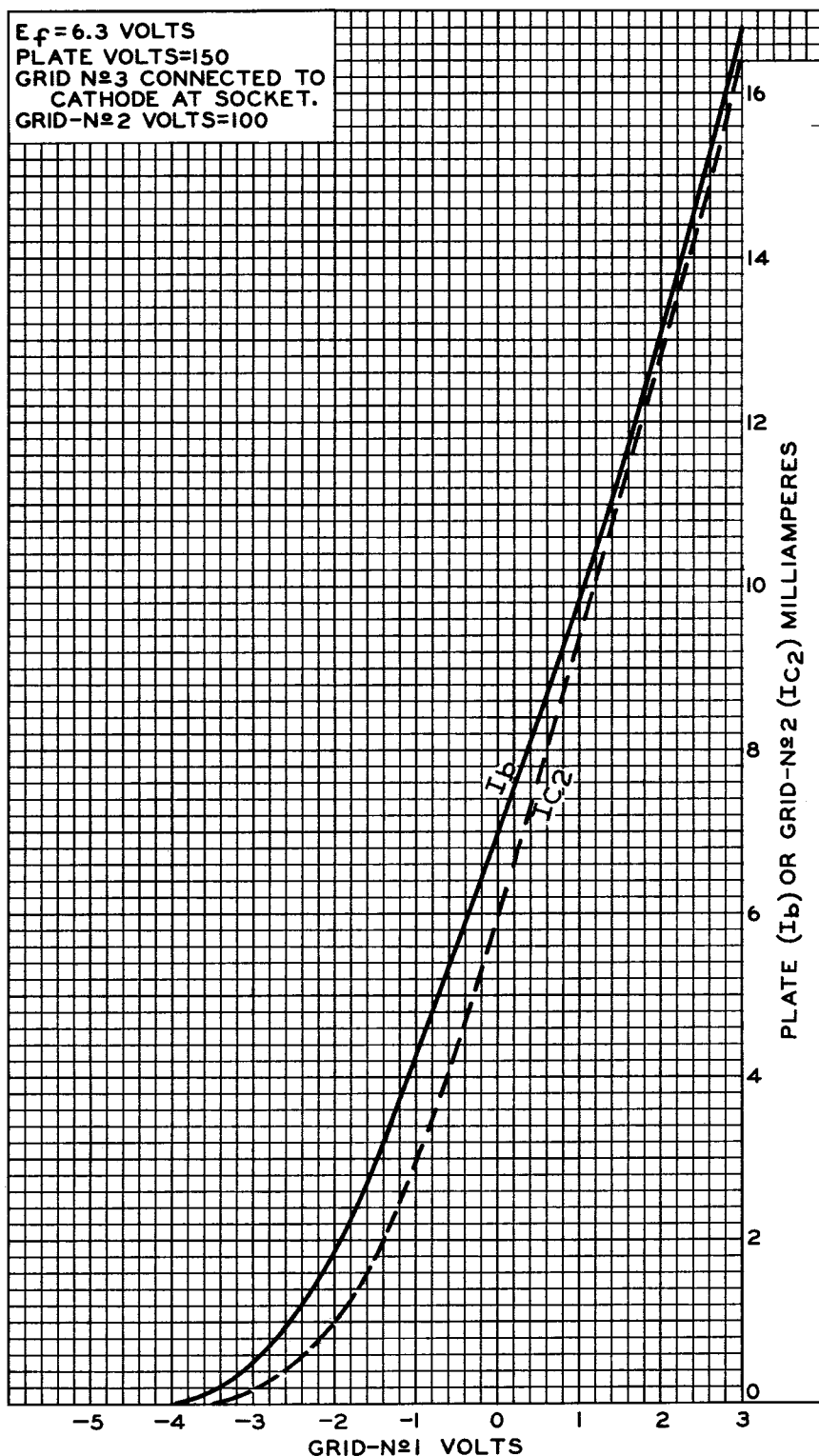


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AVERAGE CHARACTERISTICS



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