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POWER PENTODEFOR "ON-OFF" CONTROL APPLICATIONS INVOLVING
LONG PERIODS OF OPERATION UNDER CUTOFF CONDITIONS**GENERAL DATA****Electrical:**

Heater, Pure Tungsten, for Unipotential Cathode:

Voltage $6.3 \pm 5\%$ ac or dc volts

Current at 6.3 volts . . . 0.65 amp

Direct Interelectrode Capacitances

(Approx. with no external shield):

Grid No.1 to Plate 0.125 μf Grid No.1 to Cathode and Heater 11.5 μf Plate to Cathode and Heater 5.0 μf Heater to Cathode 8.5 μf **Characteristics, Class A₁ Amplifier:**

Heater Voltage 6.3 volts

Plate Voltage 250 volts

Grid No.3 Connected to Cathode at Socket

Grid-No.2 Voltage 150 volts

Grid-No.1 Voltage -3 volts

Mu-Factor, Grid No.2 to Grid No.1 22

Plate Resistance 90000 ohms

Transconductance 11000 μmhos

Plate Current 30 ma

Grid-No.2 Current 7 ma

Maximum Plate Current for grid-No.1
voltage of -12 volts 100 μamp **Mechanical:**Mounting Position Vertical; Horizontal operation permitted if
pins No.3 and No.8 are in a vertical plane

Maximum Overall Length 2-5/8"

Maximum Seated Length 2-3/8"

Length, Base Seat to Bulb Top (Excluding tip) 2" $\pm$ 3/32"

Maximum Diameter 7/8"

Bulb T-6-1/2

Base Small-Button Noval 9-Pin (JETEC No.E9-1)

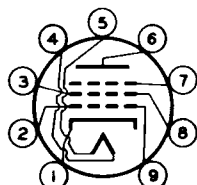
BOTTOM VIEWPin 1: Cathode
Pin 2: Grid No.1
Pin 3: Grid No.2
Pin 4: Heater
Pin 5: HeaterPin 6: Plate
Pin 7: Grid No.3,
Int. Shield
Pin 8: Grid No.2
Pin 9: Grid No.1**FREQUENCY DIVIDER IN COMPUTER SERVICE
and "ON-OFF" CONTROL SERVICE****Maximum Ratings, Absolute Values:**

PLATE VOLTAGE 300 max. volts

GRID-No.3 (SUPPRESSOR) VOLTAGE 0 max. volts

MARCH 1, 1954

TUBE DEPARTMENT

TENTATIVE DATA

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY



POWER PENTODE

GRID-No.2 (SCREEN) VOLTAGE	250 max.	volts
GRID-No.1 (CONTROL-GRID) VOLTAGE	-50 max.	volts
PLATE DISSIPATION	7.5 max.	watts
GRID-No.2 INPUT	2.5 max.	watts
CATHODE CURRENT	50 max.	ma
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode	180 [•] max.	volts
Heater positive with respect to cathode	180 [•] max.	volts
BULB TEMPERATURE (At hottest point on bulb surface)	200 max.	°C

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:

For fixed-bias operation	0.1 max.	megohm
For cathode-bias operation	0.5 max.	megohm

CHARACTERISTICS RANGE VALUES FOR EQUIPMENT DESIGN

	Note	Min.	Max.	
Heater Current	1	0.61	0.69	amp
Mu-Factor, Grid No.2				
to Grid No.1	1,2	19	25	
Plate Current (1).	1,3	26	46	ma
Plate Current (2).	1,4	20	40	ma
Plate Current (3).	1,5	-	100	μamp
Grid-No.2 Current	1,4	5	9	ma
Reverse Grid-No.1 Current	1,6	-	2	μamp
Heater-Cathode Leakage Current:				
Heater negative with respect to cathode	1,7	-	40	μamp
Heater positive with respect to cathode	1,7	-	40	μamp
Transconductance	1,4	9000	13000	μmhos

Note 1: With 6.3 volts ac or dc on heater.

Note 2: With grid No.3 tied to cathode, grid No.2 tied to plate, plate voltage of 150 volts, grid-No.2 voltage of 150 volts, and grid-No.1 voltage of -3 volts.

Note 3: With plate voltage of 50 volts, grid No.3 tied to cathode, grid No.2 voltage of 100 volts, and grid-No.1 voltage of 0 volts.

Note 4: With plate voltage of 250 volts, grid No.3 connected to cathode, grid-No.2 voltage of 150 volts, and grid-No.1 voltage of -3 volts.

Note 5: With plate voltage of 250 volts, grid No.3 connected to cathode, grid-No.2 voltage of 150 volts, and grid-No.1 voltage of -12 volts.

Note 6: With plate voltage of 250 volts, grid No.3 connected to cathode, grid-No.2 voltage of 150 volts, grid-No.1 supply voltage of -3 volts, and grid-No.1 resistor of 0.25 megohm.

Note 7: With 90 volts dc between heater and cathode.

• DC component must not exceed 90 volts.

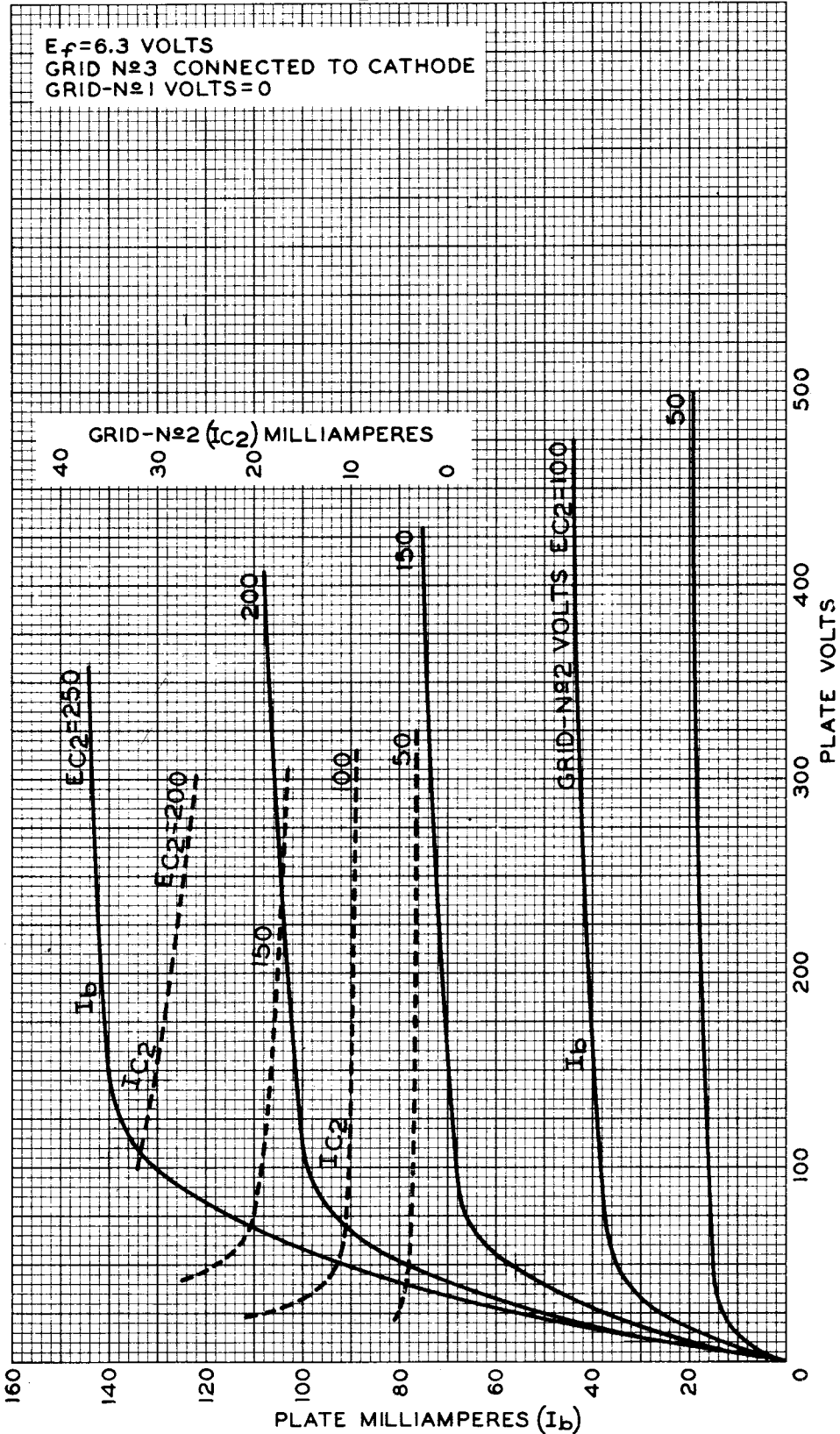


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AVERAGE PLATE CHARACTERISTICS WITH EC_2 AS VARIABLE

$E_f = 6.3$ VOLTS
GRID-Nº3 CONNECTED TO CATHODE
GRID-Nº1 VOLTS = 0



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AVERAGE PLATE CHARACTERISTICS WITH E_{C1} AS VARIABLE

$E_f = 6.3$ VOLTS
GRID-№ 3 CONNECTED TO CATHODE
GRID-№ 2 VOLTS = 150

GRID-№ 1 (I_{C1}) MILLIAMPERES

30

20

10

0

500

400

300

200

100

0

PLATE VOLTS

GRID-№ 2 VOLTS E_{C2}

+1

+2

+4

+6

+8

+2

+4

+6

+8

+10

+12

+14

+16

+18

+20

+1

+2

+4

+6

+8

+10

+12

+14

+16

+18

+1

+2

+4

+6

+8

+10

+12

+14

+16

+18

PLATE (I_b) OR GRID-№ 2 (I_{C2}) MILLIAMPERES

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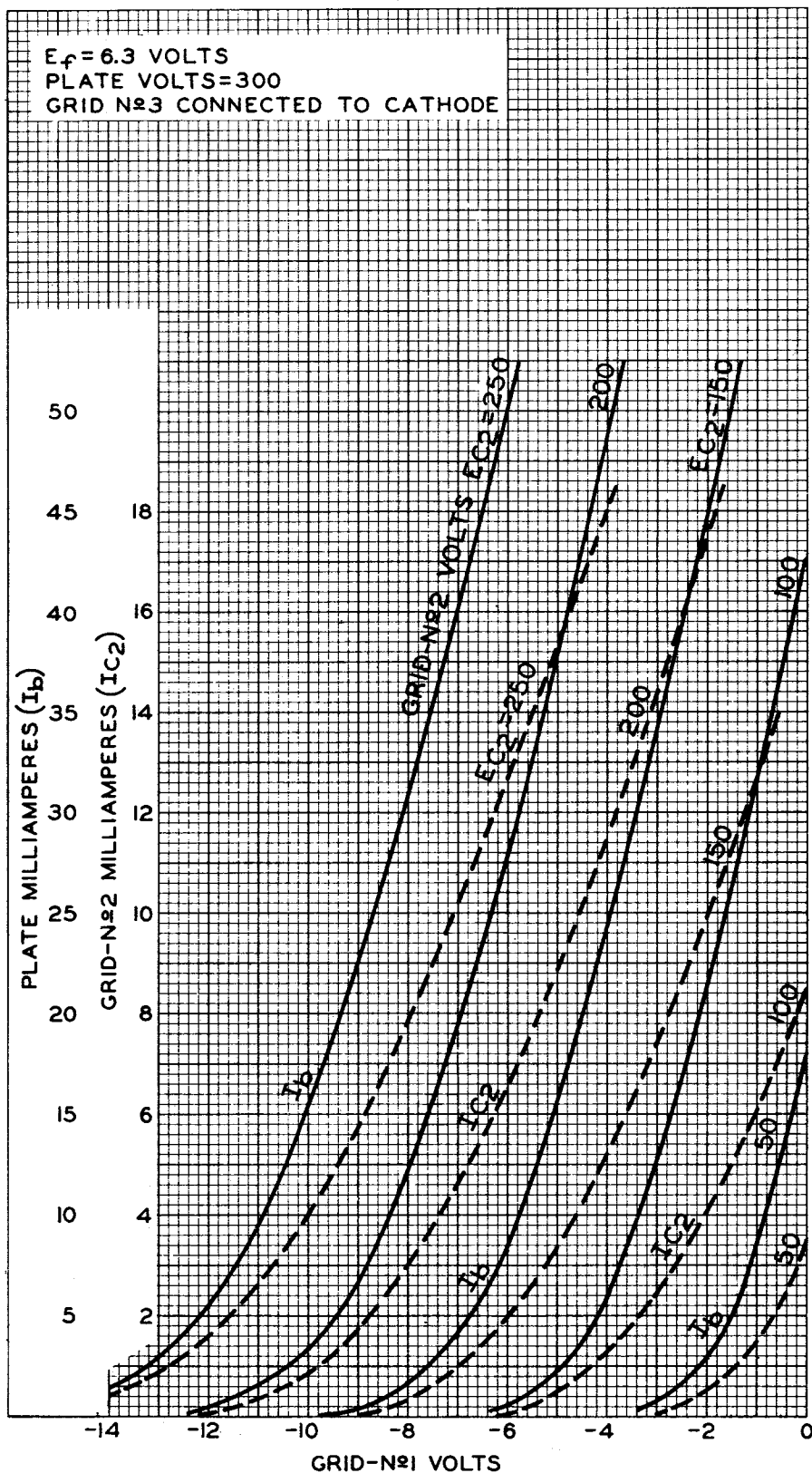
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AVERAGE CHARACTERISTICS



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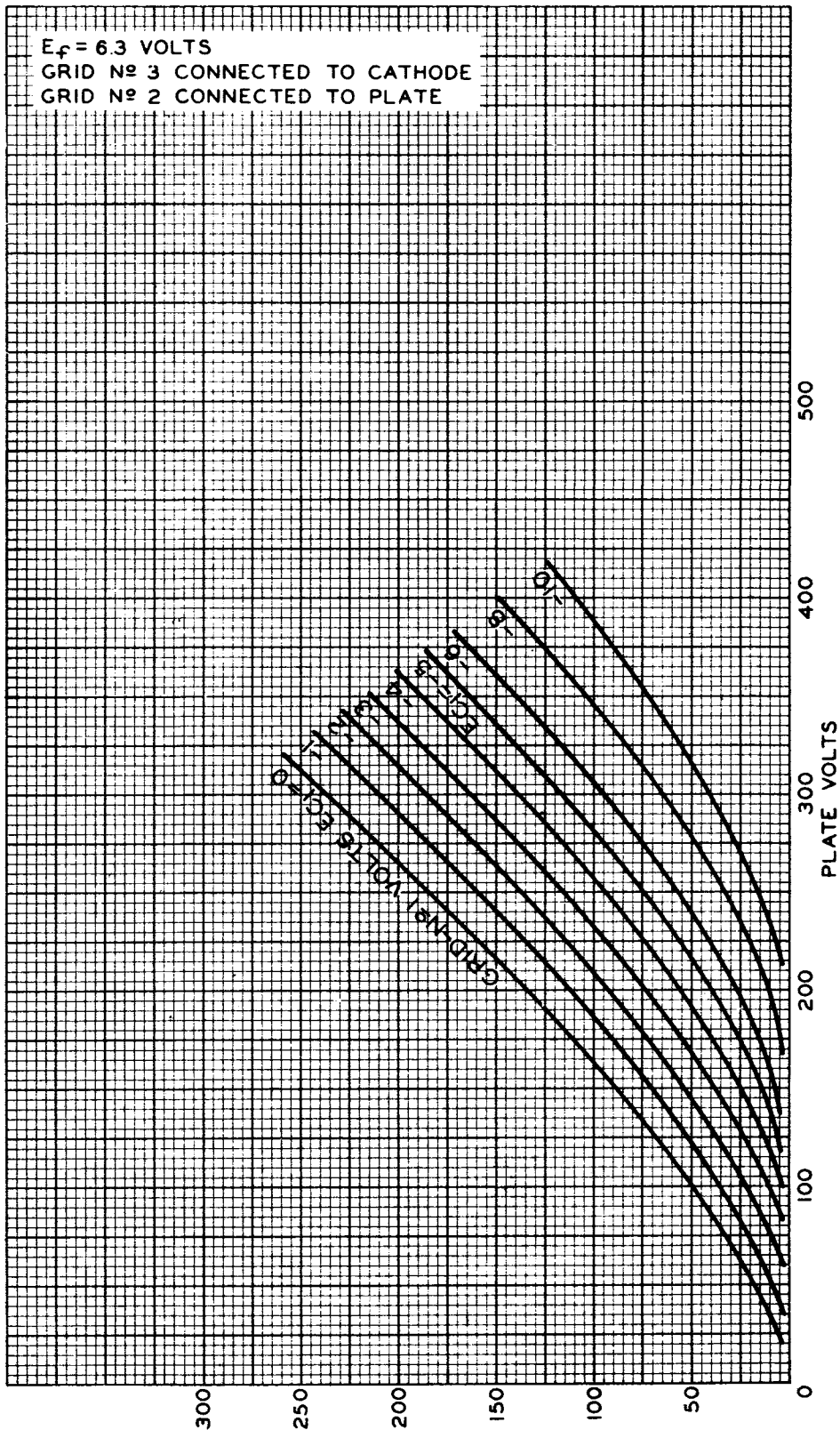
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AVERAGE PLATE CHARACTERISTICS
TRIODE CONNECTION

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