



6BY6

6BY6

PENTAGRID AMPLIFIER

MINIATURE TYPE

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage 6.3 ac or dc volts

Current 0.3 amp

Direct Interelectrode Capacitances:*

Grid No.1 to Plate 0.08 max. $\mu\mu\text{f}$ Grid No.3 to Plate 0.35 max. $\mu\mu\text{f}$ Grid No.1 to Grid No.3 0.15 max. $\mu\mu\text{f}$ Grid No.1 to All Other Electrodes
and Heater 5.4 $\mu\mu\text{f}$ Grid No.3 to All Other Electrodes
and Heater 6.9 $\mu\mu\text{f}$ Plate to All Other Electrodes
and Heater 7.6 $\mu\mu\text{f}$ Characteristics, Class A₁ Amplifier:

Plate Voltage 250 volts

Grids-No.2-and-No.4 Voltage 100 volts

Grid-No.3 Voltage -2.5 volts

Grid-No.1 Voltage -2.5 volts

Grid-No.3-to-Plate Transconductance 500 μmhos Grid-No.1-to-Plate Transconductance 1900 μmhos

Plate Current 6.5 ma

Grids-No.2-and-No.4 Current 9 ma

Grid-No.3 Volts (Approx.) for plate
current of 35 μamp and grid-No.1
volts = -4 -15 voltsGrid-No.1 Volts (Approx.) for plate
current of 35 μamp and grid-No.3
volts = 0 -12 volts

Mechanical:

Mounting Position Any

Maximum Overall Length 2-1/8"

Maximum Seated Length 1-7/8"

Length from Base Seat to Bulb Top
(Excluding tip) 1-1/2" $\pm$ 3/32"

Maximum Diameter 3/4"

Bulb T-5-1/2

Base Small-Button Miniature 7-Pin (JETEC No.E7-1)

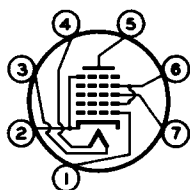
BOTTOM VIEW

Pin 1: Grid No.1

Pin 2: Cathode,
Grid No.5

Pin 3: Heater

Pin 4: Heater



Pin 5: Plate

Pin 6: Grid No.2,
Grid No.4

Pin 7: Grid No.3

*: With no external shield.

MARCH 1, 1954

TUBE DEPARTMENT

TENTATIVE DATA

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY



6BY6

PENTAGRID AMPLIFIER

GATED AMPLIFIER SERVICE

Maximum Ratings, Design-Center Values:

PLATE VOLTAGE	300 max.	volts
GRIDS-No.2-and-No.4 VOLTAGE	<i>See Rating Curve at front of this Section</i>	
GRIDS-No.2-and-No.4 SUPPLY VOLTAGE	300 max.	volts
GRID-No.3 SUPPLY VOLTAGE:		
Negative Bias Value	50 max.	volts
Positive Bias Value	0 max.	volts
Positive Peak Value	25 max.	volts
GRID-No.1 SUPPLY VOLTAGE:		
Negative Bias Value	100 max.	volts
PLATE DISSIPATION	2 max.	watts
GRID-No.3 INPUT	0.1 max.	watt
GRIDS-No.2-and-No.4 INPUT	1 max.	watt
GRID-No.1 INPUT	0.1 max.	watt
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode	200 max.	volts
Heater positive with respect to cathode	200 [#] max.	volts

Characteristics as Sync Separator and Sync Clipper:

Plate Voltage	10	volts
Grid-No.3 Voltage	0	volts
Grids-No.2-and-No.4 Voltage	25	volts
Grid-No.1 Voltage	0	volts
Plate Current	1.4	ma
Grids-No.2-and-No.4 Current	3.5	ma
Grid-No.3 Bias Volts (Approx.) for plate voltage of 25 volts, grids-No.2-and-No.4 voltage of 25 volts, grid-No.1 voltage of 0 volts, and plate current of 50 μ amp		
	-2.5	volts
Grid-No.1 Bias Volts (Approx.) for plate voltage of 25 volts, grids-No.2-and-No.4 voltage of 25 volts, grid-No.3 voltage of 0 volts, and plate current of 50 μ amp		
	-2.3	volts

Maximum Circuit Values:

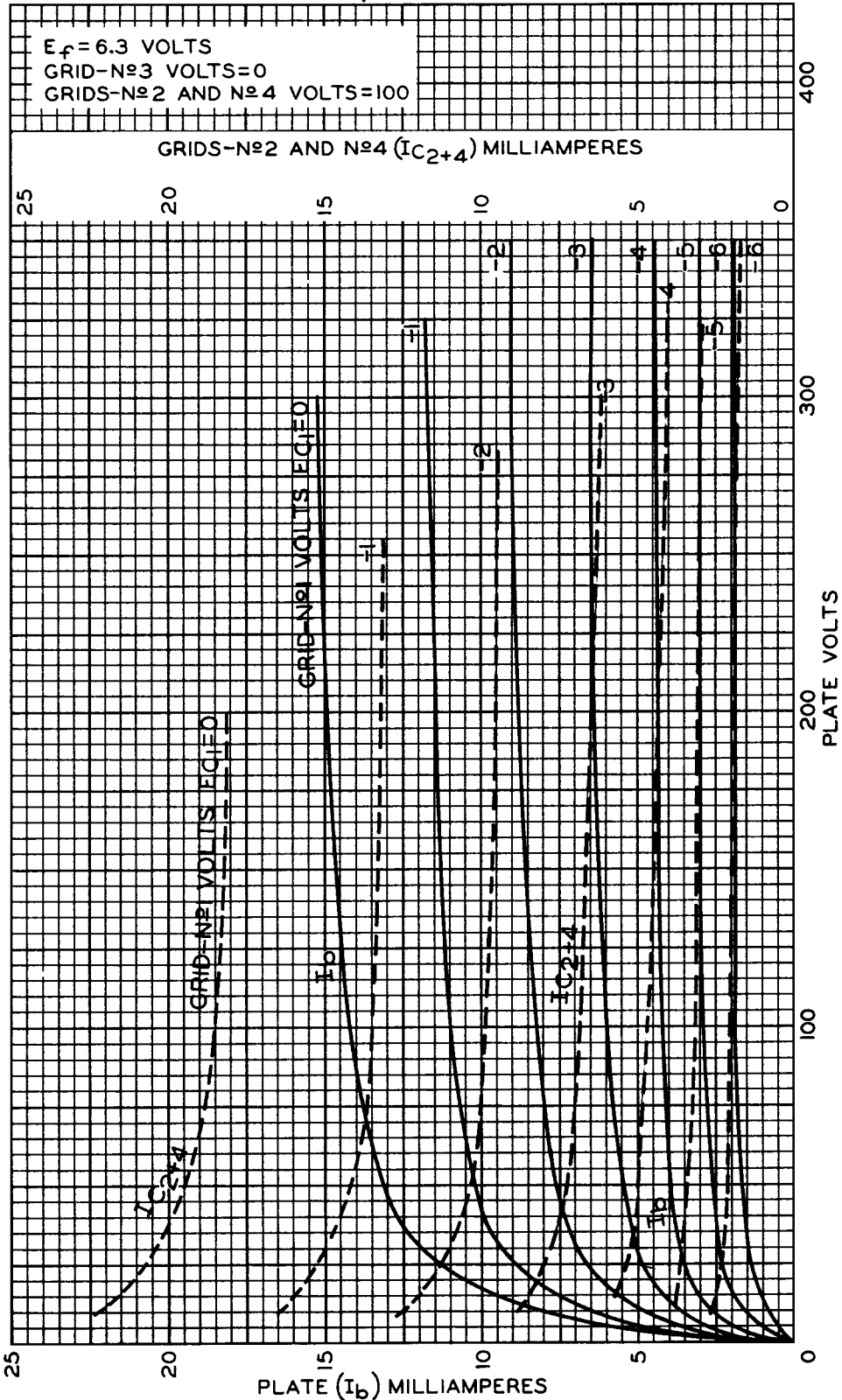
Grid-No.1 or Grid-No.3-Circuit Resistance:		
For fixed-bias operation	0.5 max.	megohm
For cathode-bias operation	1.0 max.	megohm

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



6BY6

6BY6

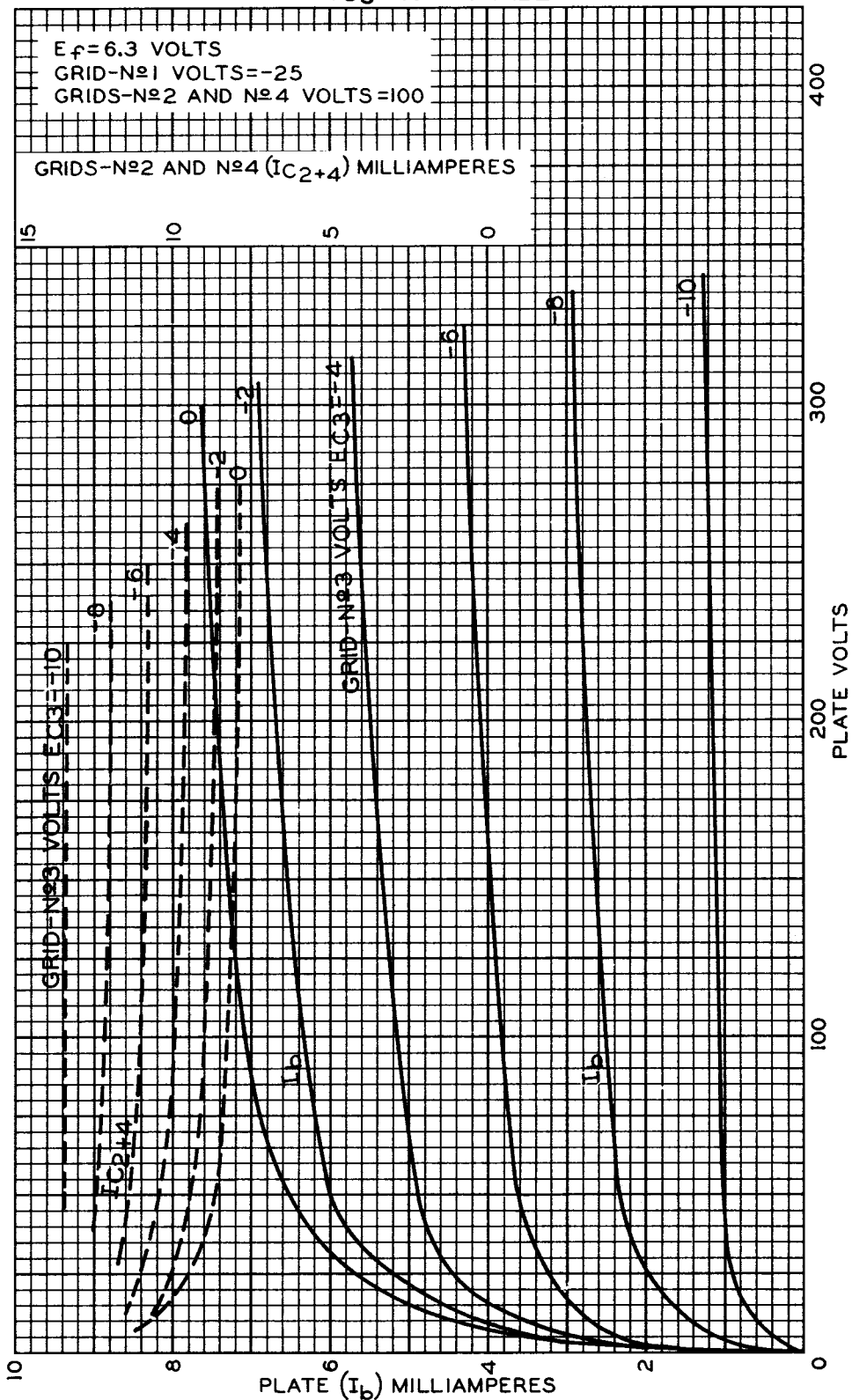
AVERAGE OPERATION CHARACTERISTICS
WITH E_{C1} AS VARIABLE

6BY6



6BY6

AVERAGE OPERATION CHARACTERISTICS WITH EC_3 AS VARIABLE



NOV.5,1953

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

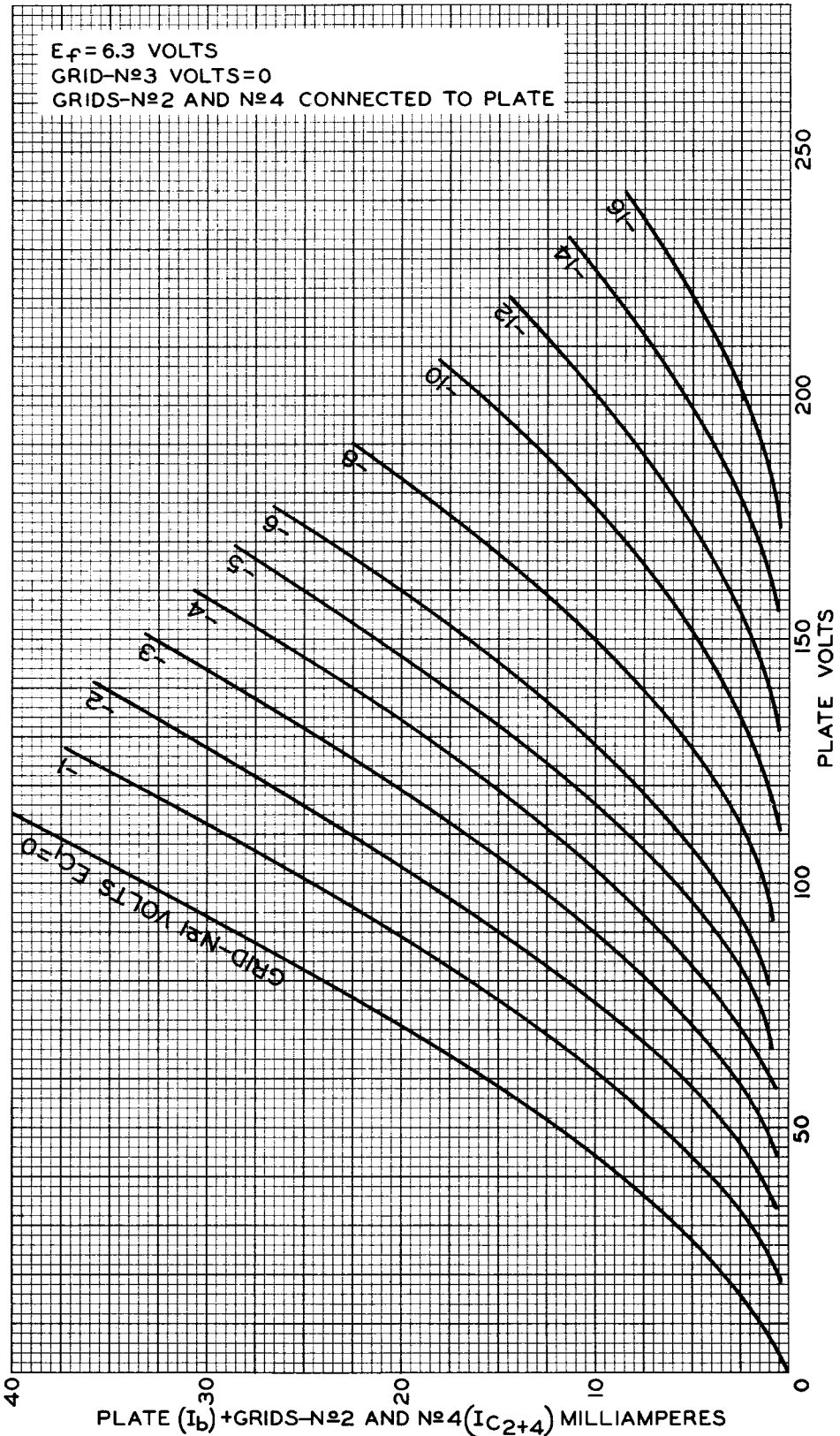
92CM-8139



6BY6

6BY6

AVERAGE PLATE CHARACTERISTICS



NOV. 5, 1953

TUBE DEPARTMENT

92CM-8138

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY