



6K6-GT

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POWER PENTODE

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage 6.3 ac or dc volts
 Current 0.4 amp

Direct Interelectrode Capacitances (Approx.):⁰

Grid No.1 to plate. 0.5 μf
 Grid No.1 to cathode & grid No.3,
 grid No.2, and heater 5.5 μf
 Plate to cathode & grid No.3,
 grid No.2, and heater 6 μf

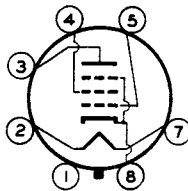
Mechanical:

Mounting Position Any
 Maximum Overall Length. 3-5/16"
 Maximum Seated Length 2-3/4"
 Maximum Diameter. 1-9/32"
 Dimensional Outline See General Section

Bulb. T-9
 Base. Intermediate-Shell Octal 7-Pin (JETEC No.B7-7),
 Short Intermediate-Shell Octal 7-Pin
 with External Barriers (JETEC No.B7-59),
 Intermediate-Shell Octal 6-Pin (JETEC No.B6-81),
 or Short Intermediate-Shell Octal 6-Pin
 with External Barriers (JETEC No.B6-84)

Basing Designation for BOTTOM VIEW 7S

Pin 1♦ - No Connec-
 tion
 Pin 2 - Heater
 Pin 3 - Plate
 Pin 4 - Grid No.2



Pin 5 - Grid No.1
 Pin 7 - Heater
 Pin 8 - Cathode,
 Grid No.3

AF POWER AMPLIFIER - Class A₁

Maximum Ratings, Design-Center Values:

PLATE VOLTAGE 315 max. volts
 GRID-No.2 (SCREEN-GRID) VOLTAGE 285 max. volts
 GRID-No.1 (CONTROL-GRID) VOLTAGE:
 Positive bias value 0 max. volts
 GRID-No.2 INPUT 2.8 max. watts
 PLATE DISSIPATION 8.5 max. watts
 PEAK HEATER-CATHODE VOLTAGE:
 Heater negative with respect to cathode 200 max. volts
 Heater positive with respect to cathode 200[▲]max. volts

⁰ Without external shield.

♦ Pin 1 as well as pin 6 is omitted on the 6-Pin bases.

▲: See next page.

← Indicates a change.



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Typical Operation and Characteristics:

Plate Voltage	100	250	315	volts
Grid-No.2 Voltage	100	250	250	volts
Grid-No.1 Voltage	-7	-18	-21	volts
Peak AF Grid-No.1 Voltage . .	7	18	21	volts
Zero-Signal Plate Current . .	9	32	25.5	ma
Max.-Signal Plate Current . .	9.5	33	28	ma
Zero-Signal Grid-No.2 Current	1.6	5.5	4	ma
Max.-Signal Grid-No.2 Current	3	10	9	ma
Plate Resistance (Approx.) . .	104000	90000	110000	ohms
Transconductance	1500	2300	2100	μmhos
Load Resistance	12000	7600	9000	ohms
Total Harmonic Distortion . .	11	11	15	%
Max.-Signal Power Output . .	0.35	3.4	4.5	watts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:

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

PUSH-PULL AF POWER AMPLIFIER - Class A₁**Maximum Ratings, Design-Center Values:**

PLATE VOLTAGE	315 max.	volts
GRID-No.2 (SCREEN-GRID) VOLTAGE	285 max.	volts
GRID-No.1 (CONTROL-GRID) VOLTAGE:		
Positive bias value	0 max.	volts
GRID-No.2 INPUT	2.8 max.	watts
PLATE DISSIPATION	8.5 max.	watts
→ PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode.	200 max.	volts
Heater positive with respect to cathode.	200▲max.	volts

Typical Operation:*Values are for 2 tubes**Fixed Bias Cathode Bias*

Plate Voltage	285	285	volts
Grid-No.2 Voltage	285	285	volts
Grid-No.1 Voltage	-25.5	-	volts
Cathode Resistor	-	400	ohms
Peak AF Grid-No.1-to-			
Grid-No.1 Voltage	51	51	volts
Zero-Signal Plate Current . .	55	55	ma
Max.-Signal Plate Current . .	72	61	ma
Zero-Signal Grid-No.2 Current	9	9	ma
Max.-Signal Grid-No.2 Current	17	13	ma

▲: See next page.

→ Indicates a change.



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Fixed Bias Cathode Bias

Effective Load Resistance (Plate to plate)	12000	12000	ohms
Total Harmonic Distortion . .	6	4	%
Max.—Signal Power Output. . .	10.5	9.8	watts

Maximum Circuit Values:

Grid-No.1—Circuit Resistance:

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

AF POWER AMPLIFIER - Class A₁

Triode Connection - Grid No.2 Connected to Plate

Characteristics:

Plate Voltage	250	volts
Grid-No.1 Voltage	-18	volts
Amplification Factor.	6.8	
Plate Resistance (Approx.)	2500	ohms
Transconductance.	2700	μhos
Plate Current	37.5	ma
Grid-No.1 Voltage (Approx.) for plate current of 0.5 ma	-48	volts

VERTICAL DEFLECTION AMPLIFIER

Triode Connection - Grid No.2 Connected to Plate

Maximum Ratings, Design-Center Values Except as Noted:

For operation in a 525-line, 30-frame system[□]

DC PLATE VOLTAGE.	315 max.	volts
PEAK POSITIVE-PULSE PLATE VOLTAGE (Absolute maximum) [#]	1200 [■] max.	volts
PEAK NEGATIVE-PULSE GRID-No.1 VOLTAGE . .	-250 max.	volts
CATHODE CURRENT:		
Peak.	75 max.	ma
Average	25 max.	ma
PLATE DISSIPATION	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 cathode-bias operation.	2.2 max.	megohms
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[▲] The dc component must not exceed 100 volts.[□] As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations", Federal Communications Commission.[#] This rating is applicable where the duration of the voltage pulse does not exceed 15 per cent of one vertical scanning cycle. In a 525-line, 30-frame system, 15 percent of one vertical scanning cycle is 2.5 milliseconds.[■] Under no circumstances should this absolute value be exceeded.

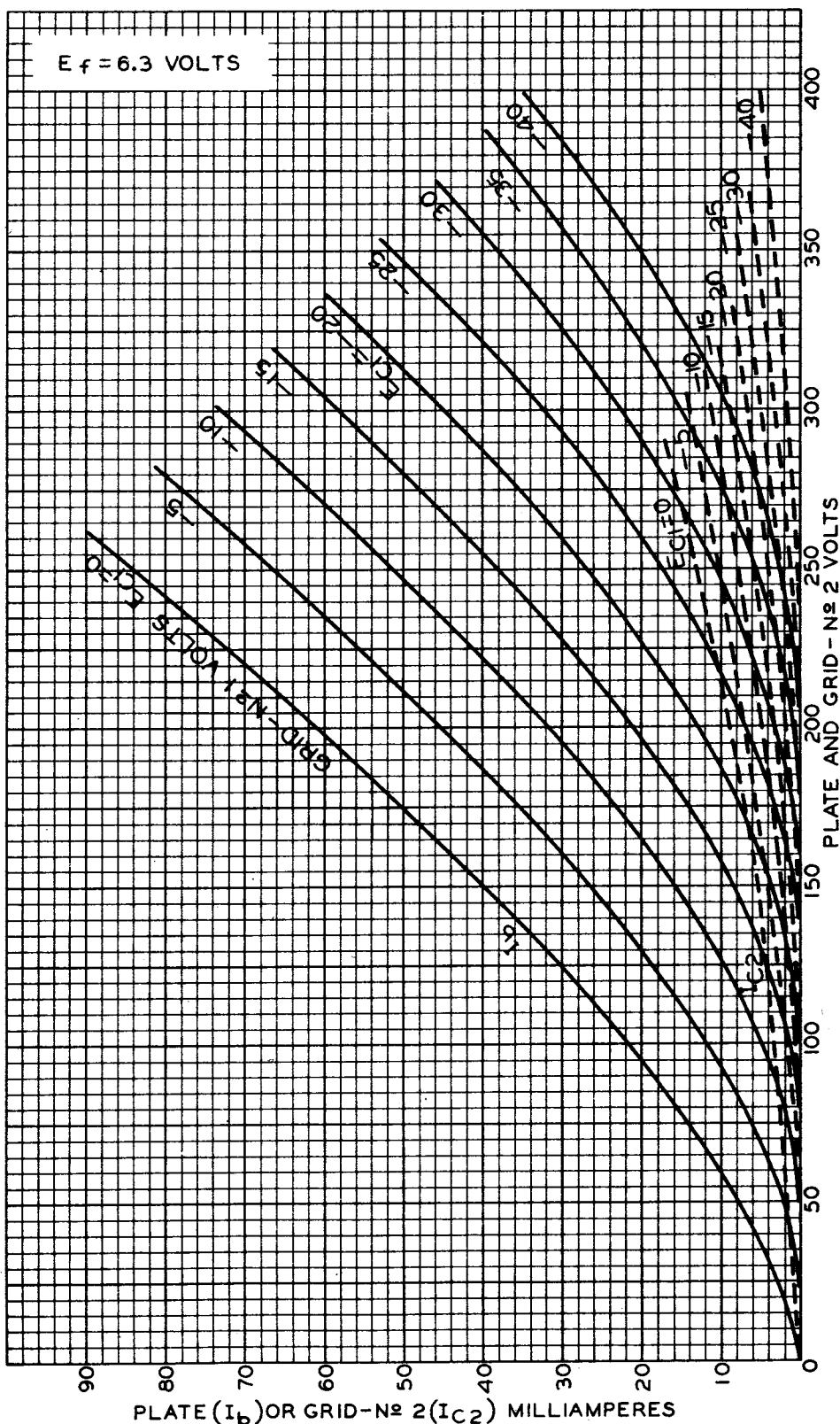
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AVERAGE CHARACTERISTICS



SEPT. 24, 1951

TUBE DEPARTMENT

92CM-5209R2

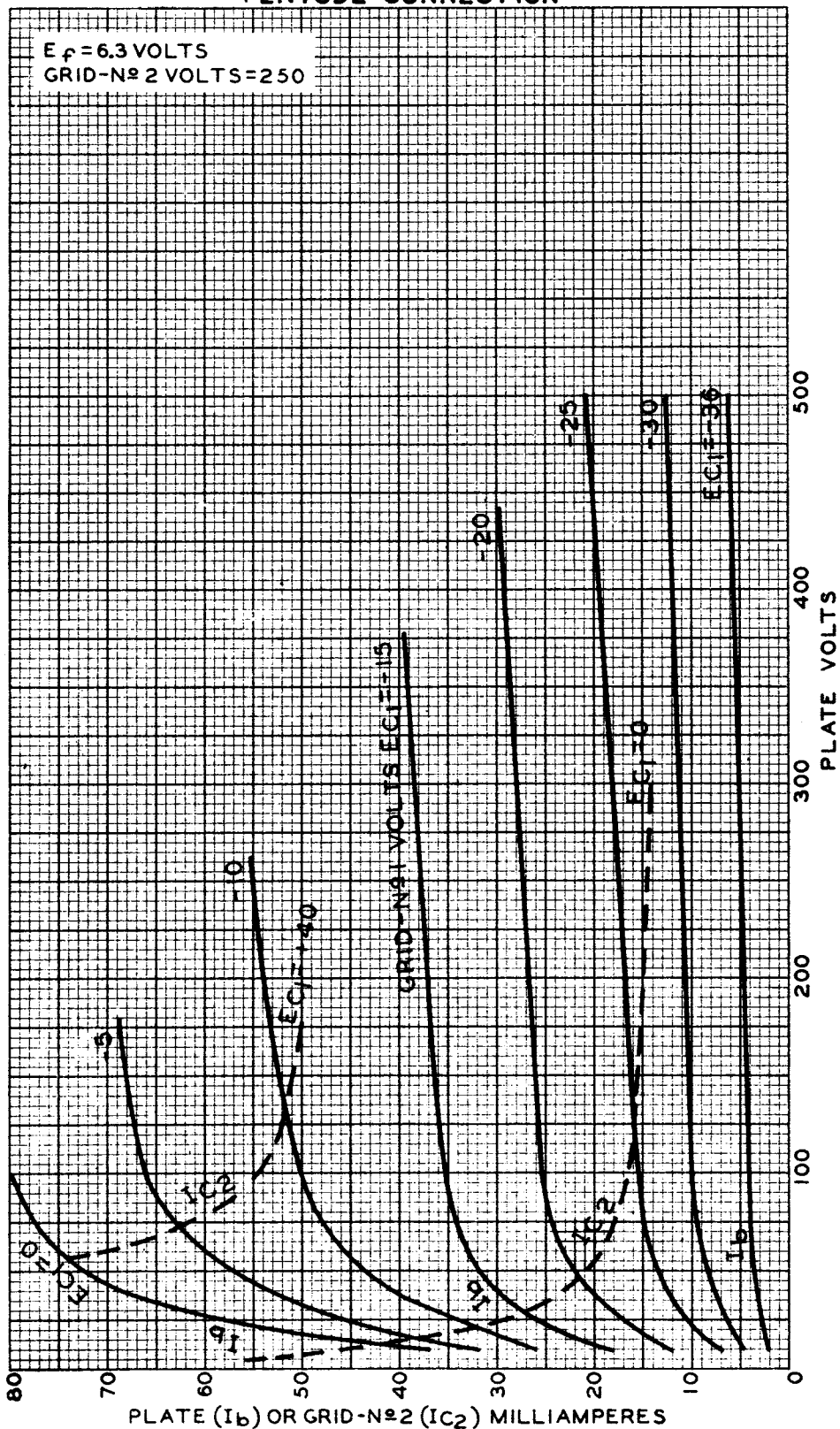
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AVERAGE PLATE CHARACTERISTICS PENTODE CONNECTION



FEB. 13, 1948

TUBE DEPARTMENT

92CM-4881R2

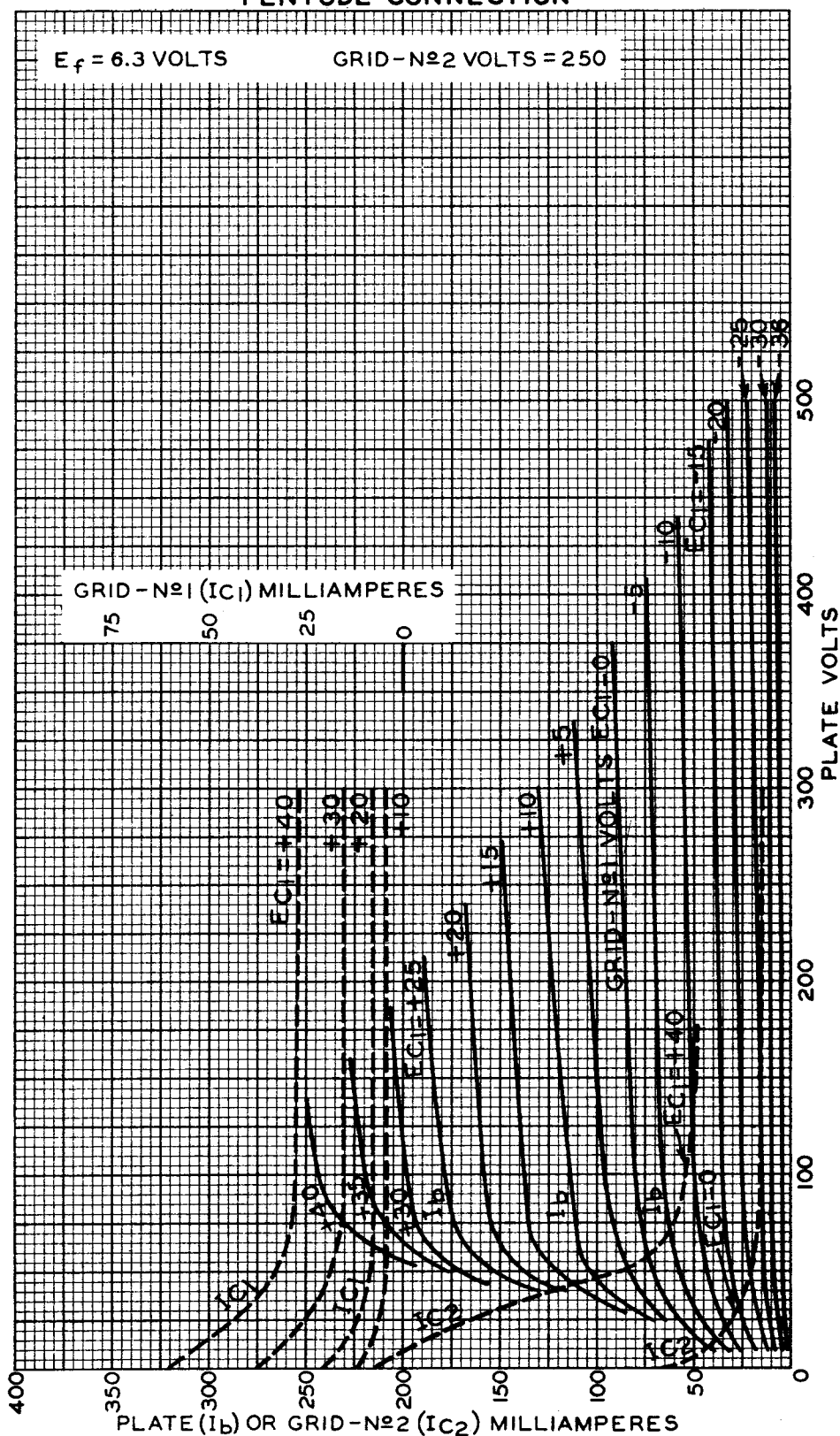
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AVERAGE PLATE CHARACTERISTICS PENTODE CONNECTION



FEB. 13, 1948

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RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-6311R1



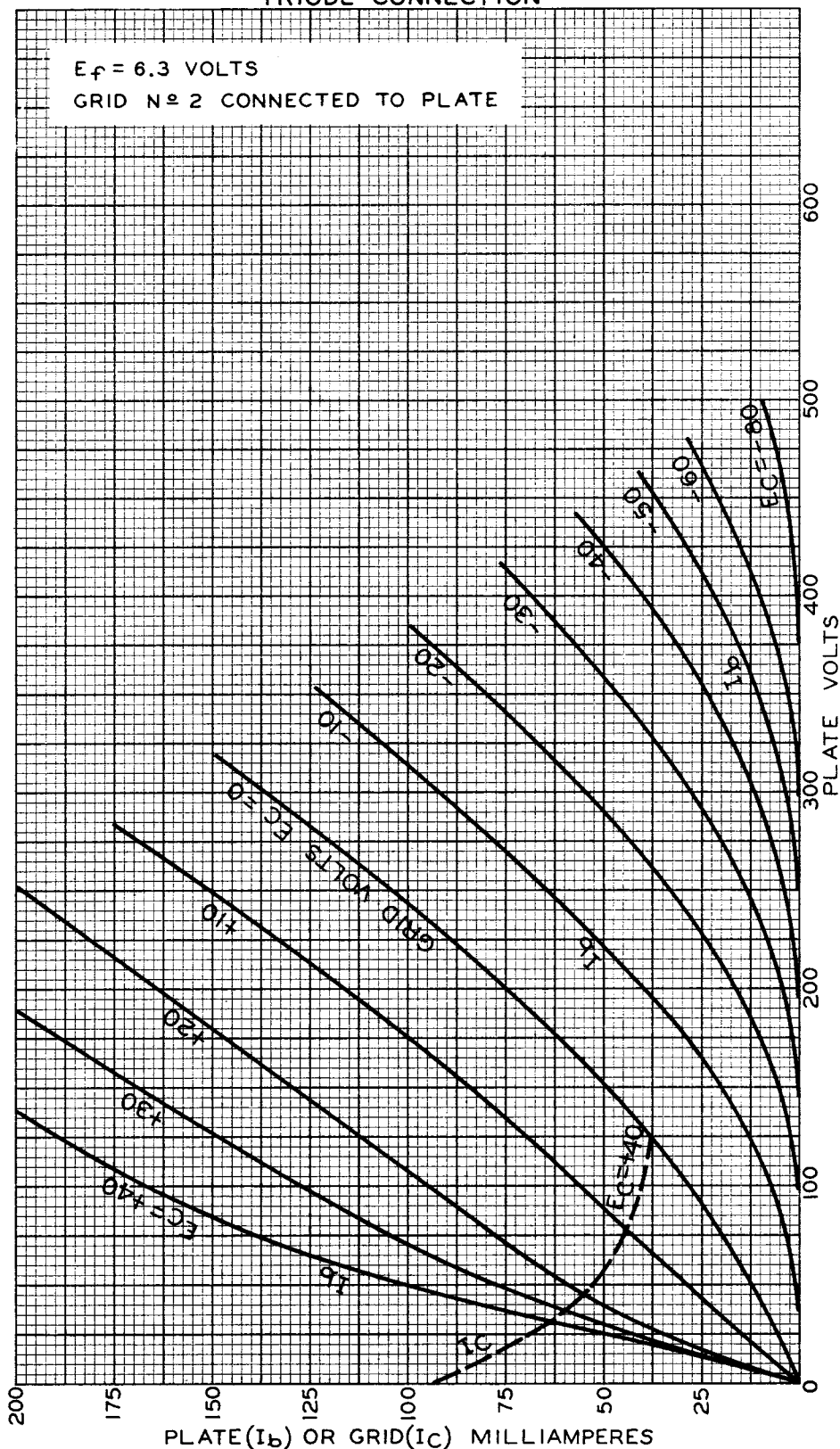
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AVERAGE PLATE CHARACTERISTICS TRIODE CONNECTION

$E_f = 6.3$ VOLTS

GRID N° 2 CONNECTED TO PLATE



AUG. 18, 1941

TUBE DEPARTMENT

92CM-6313

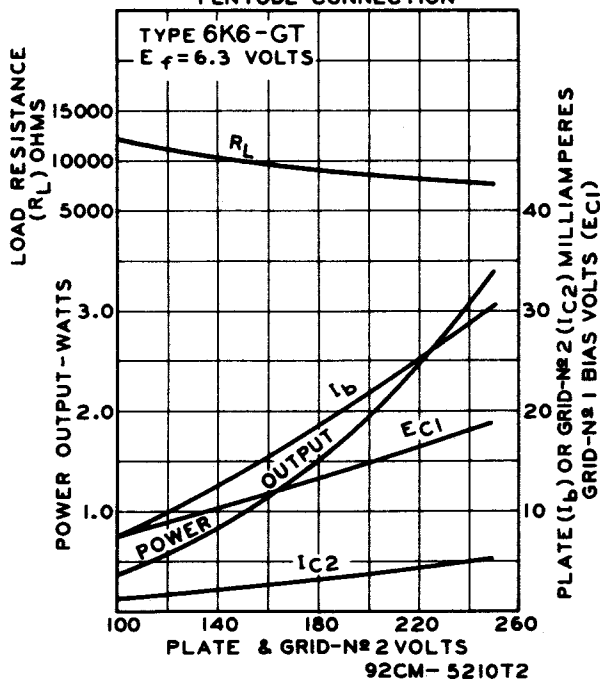
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6K6-GT POWER PENTODE

OPERATION CHARACTERISTICS
PENTODE CONNECTION



OPERATION CHARACTERISTICS
PENTODE CONNECTION

