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TRIPLE-GRID POWER AMPLIFIER

Heater	Coated Unipotential Cathode	
Voltage	2.5	a-c or d-c volts
Current	2.0	amp.
Maximum Overall Length		5-3/8"
Maximum Diameter		2-1/16"
Bulb		ST-16
Base		Medium 7-Pin
Pin 1 - Heater		Pin 5 - Grid #3
Pin 2 - Plate		Pin 6 - Cathode
Pin 3 - Grid #2		Pin 7 - Heater
Pin 4 - Grid #1		
Mounting Position	BOTTOM VIEW	Any



AMPLIFIER - Class A (Triode Connection)

(Grids #2 and #3 tied to plate; #1 is control grid)

Operating Conditions and Characteristics:

Heater *	2.5	volts
Plate	250 max.	volts
Grid (#1) □	-28	volts
Amp. Fact.	6	
Plate Res.	2300	ohms
Transcond.	2600	μmhos
Plate Cur.	26	ma.
Load Res. •	5000	ohms
U.P.O.	1.25	watts

• Optimum for maximum U.P.O. Approximately twice this value is recommended for load of this tube when used as driver for class B stage.

AMPLIFIER - Class A (Pentode Connection)

(Grid #3 tied to cathode; #2 is screen; #1 is control grid)

Operating Conditions and Characteristics:

Heater *	2.5	volts
Plate	250 max.	volts
Screen (Grid #2)	250 max.	volts
Grid (#1) □	-18	volts
Cathode Res.	410	ohms
Amp. Fact.	100	
Plate Res.	40000	ohms
Transcond.	2500	μmhos
Plate Cur.	35	ma.
Screen Cur.	9	ma.
Load Res.	6000	ohms
P.O. (7% total dist.)	3	watts

□ The d-c resistance in the grid circuit of the 59 operating as a class A amplifier (triode or pentode) should not exceed 0.5 megohm with self-biasing; without self-bias, the resistance should not exceed 10000 ohms.

AMPLIFIER - Class B (Triode Connection)

(Grid #3 tied to plate; #2 and #1 tied together)

Plate Voltage	400 max.	volts
Peak Plate Current	200 max.	ma.
Average Plate Dissipation	10 max.	watts
Average Grid Dissipation (Grids #1 & #2)	1.5 max.	watts

Typical Operation:

Unless otherwise specified, values are for 2 tubes

Heater *	2.5	2.5	volts
Plate	300	400	volts
Grid	0	0	volts
Zero-Sig. Plate Current	20	26	ma.
Load Res. (per tube)	1150	1500	ohms
Effective Load Res. (plate to plate)	4600	6000	ohms
Power Output	15	20 approx.	watts

* In circuits where the cathode is not directly connected to the heater, the potential difference between heater and cathode should be kept as low as possible.

← Indicates a change.

DEC. 20, 1938

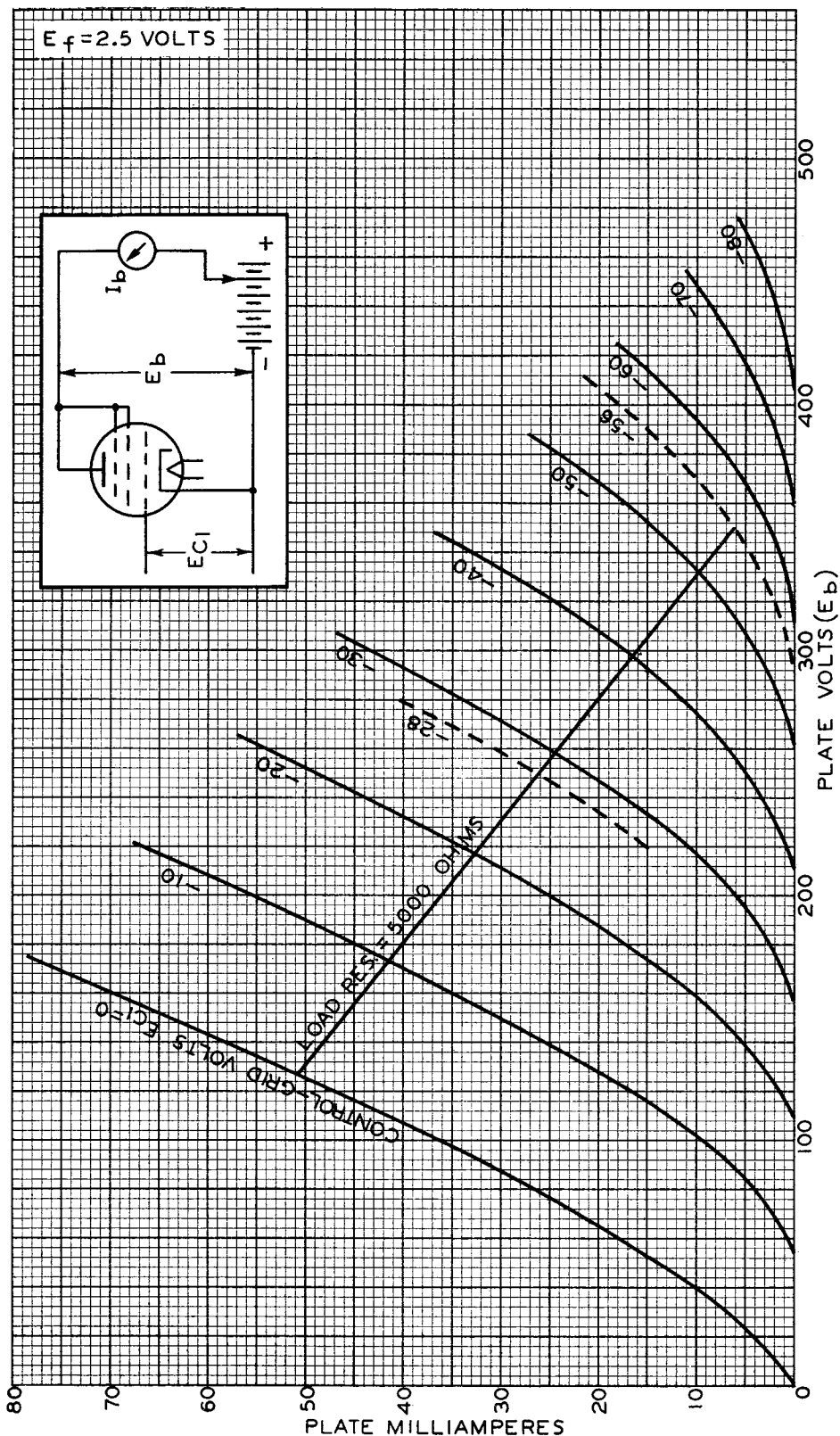
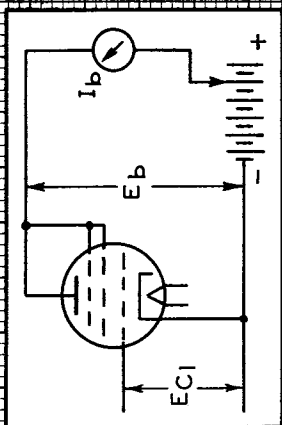
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DATA



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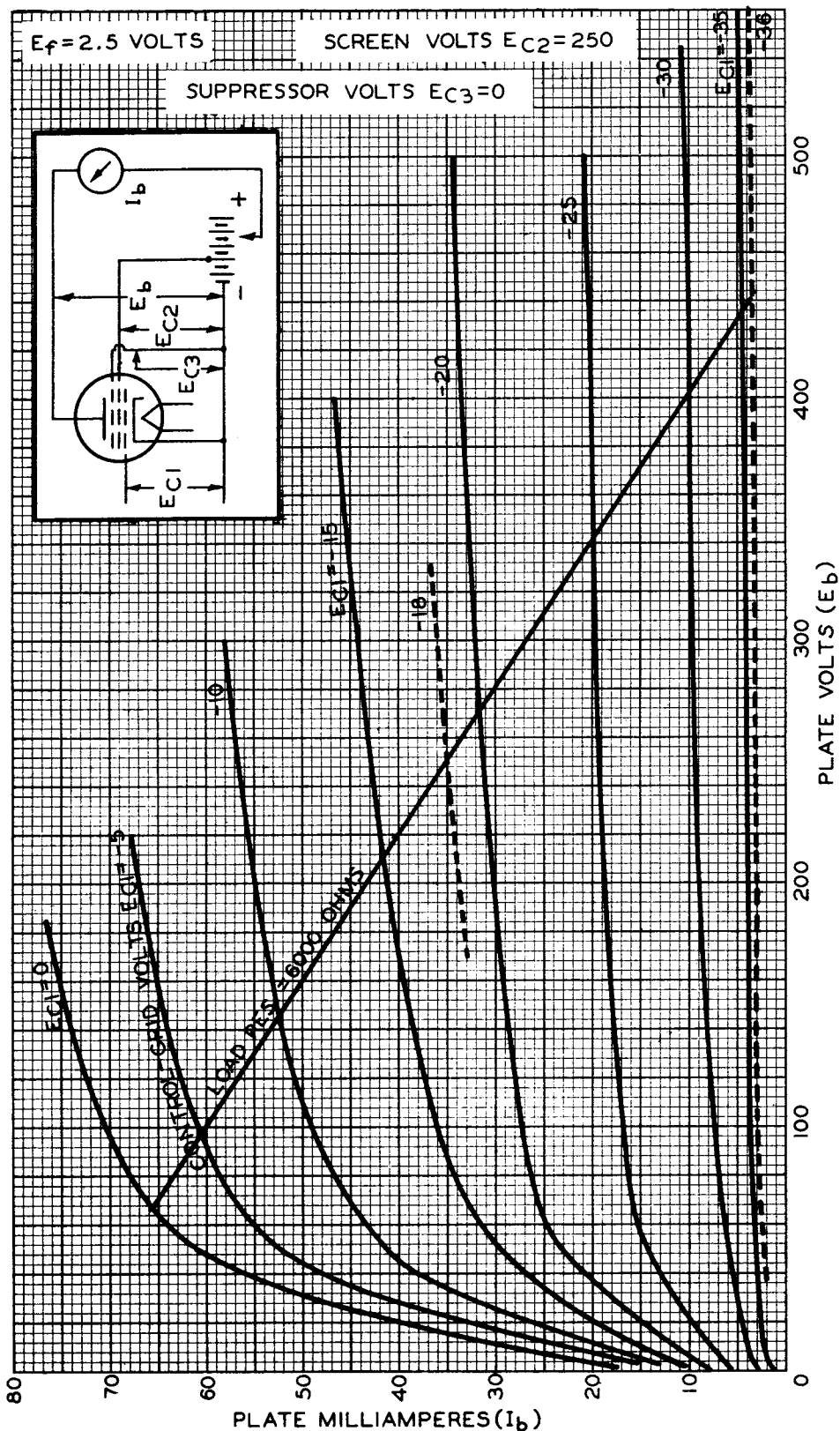
AVERAGE PLATE CHARACTERISTICS CLASS A OPERATION - TRIODE CONNECTION

 $E_f = 2.5$ VOLTS



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AVERAGE PLATE CHARACTERISTICS CLASS A OPERATION - PENTODE CONNECTION



JAN. 31, 1934

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AVERAGE PLATE CHARACTERISTICS CLASS B OPERATION

