

MECHANICAL DATA

Bulb	T-6 $\frac{1}{2}$
Base	E9-1, Miniature Button 9-Pin
Outline	6-3
Basing	9HF
Cathode	Coated Unipotential
Mounting Position	Any

ELECTRICAL DATA

HEATER CHARACTERISTICS

	6DR7	10DR7	13DR7	
Heater Voltage	6.3	9.7	13 Volts	
Heater Current	900	600	450 Ma	
Heater Warm-up Time ¹		11	11 Seconds	
Heater-Cathode Voltage (Design Maximum Values) ²				
Heater Negative with Respect to Cathode				
Total DC and Peak	200	200	200 Volts	Max.
Heater Positive with Respect to Cathode				
DC	100	100	100 Volts	Max.
Total DC and Peak	200	200	200 Volts	Max.

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

	Section No. 1	Section No. 2
Grid to Plate	4.5	8.5 $\mu\mu\text{f}$
Input: g to (h+k)	2.2	5.5 $\mu\mu\text{f}$
Output: p to (h+k)	0.34	1.0 $\mu\mu\text{f}$

RATINGS² (Design-Maximum Values—Except as Noted)

Vertical Deflection Oscillator and Amplifier³

	Section No. 1 Oscillator	Section No. 2 Amplifier	
Plate Voltage	330	275 Volts	Max.
Peak Positive Pulse Plate Voltage (Abs. Max.)	—	1500 Volts	
Peak Negative Pulse Grid Voltage	400	250 Volts	Max.
Plate Dissipation ⁴	1.0	7.0 Watts	Max.
Average Cathode Current	20	50 Ma	Max.
Peak Cathode Current	70	175 Ma	Max.
Grid Circuit Resistance Self Bias	2.2	2.2 Megohms	

AVERAGE CHARACTERISTICS

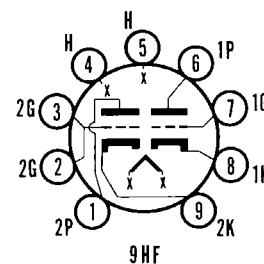
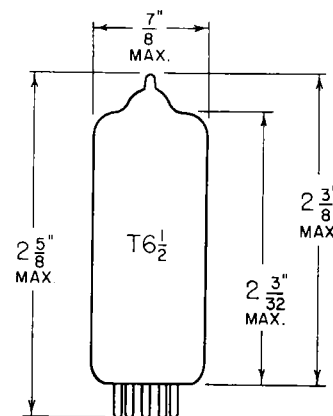
	Section No. 1	Section No. 2
Plate Voltage	250	150 Volts
Grid No. 1 Voltage	-3	-17.5 Volts
Plate Current	1.4	35 Ma
Transconductance	1600	6500 μmhos
Amplification Factor	68	6.0
Plate Resistance (approx.)	40,000	925 Ohms
Ec for Ib = 10 μa (approx.)	-5.5	— Volts
Ec for Ib = 50 μa (approx.)	—	-44 Volts
Ib at Ec = -24 Vdc (approx.)	—	10 Ma

Instantaneous Plate Knee Values (Section No. 2)

Eb = 60 V; Ec = 0
Ib = 80 Ma.

QUICK REFERENCE DATA

The Sylvania Types 6DR7, 10DR7 and 13DR7 have double triodes with dissimilar sections contained in a miniature envelope. Section No. 1 has a high mu and is intended for use as a Vertical Deflection Oscillator. Section No. 2 has a low mu and is designed for use as a Vertical Deflection Amplifier. The Vertical Deflection Amplifier Section of the Type 6DR7 is identical to the Vertical Deflection Amplifier Section of the Type 6DE7.



SYLVANIA ELECTRONIC TUBES

A Division of
Sylvania Electric Products, Inc.

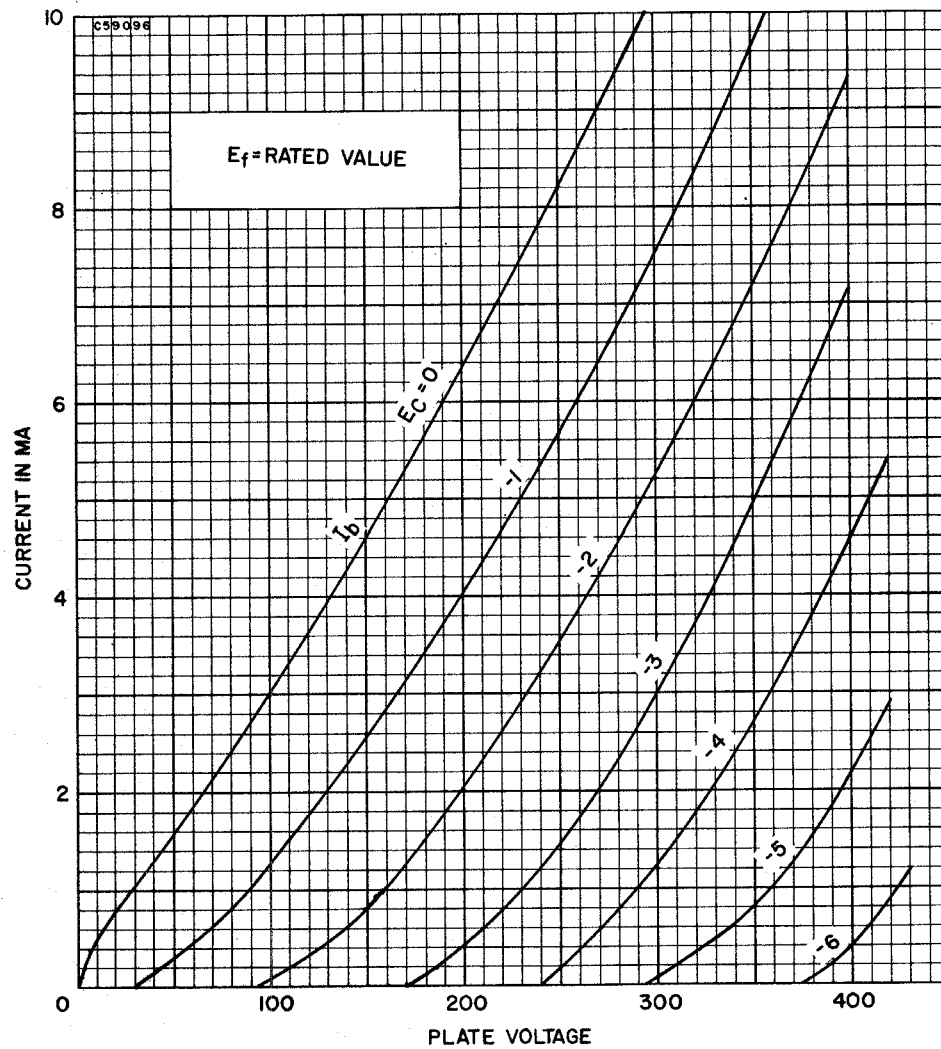
RECEIVING TUBE OPERATIONS EMPORIUM, PENNSYLVANIA

Prepared and Released By The
TECHNICAL PUBLICATIONS SECTION
EMPORIUM, PENNSYLVANIA

NOTES:

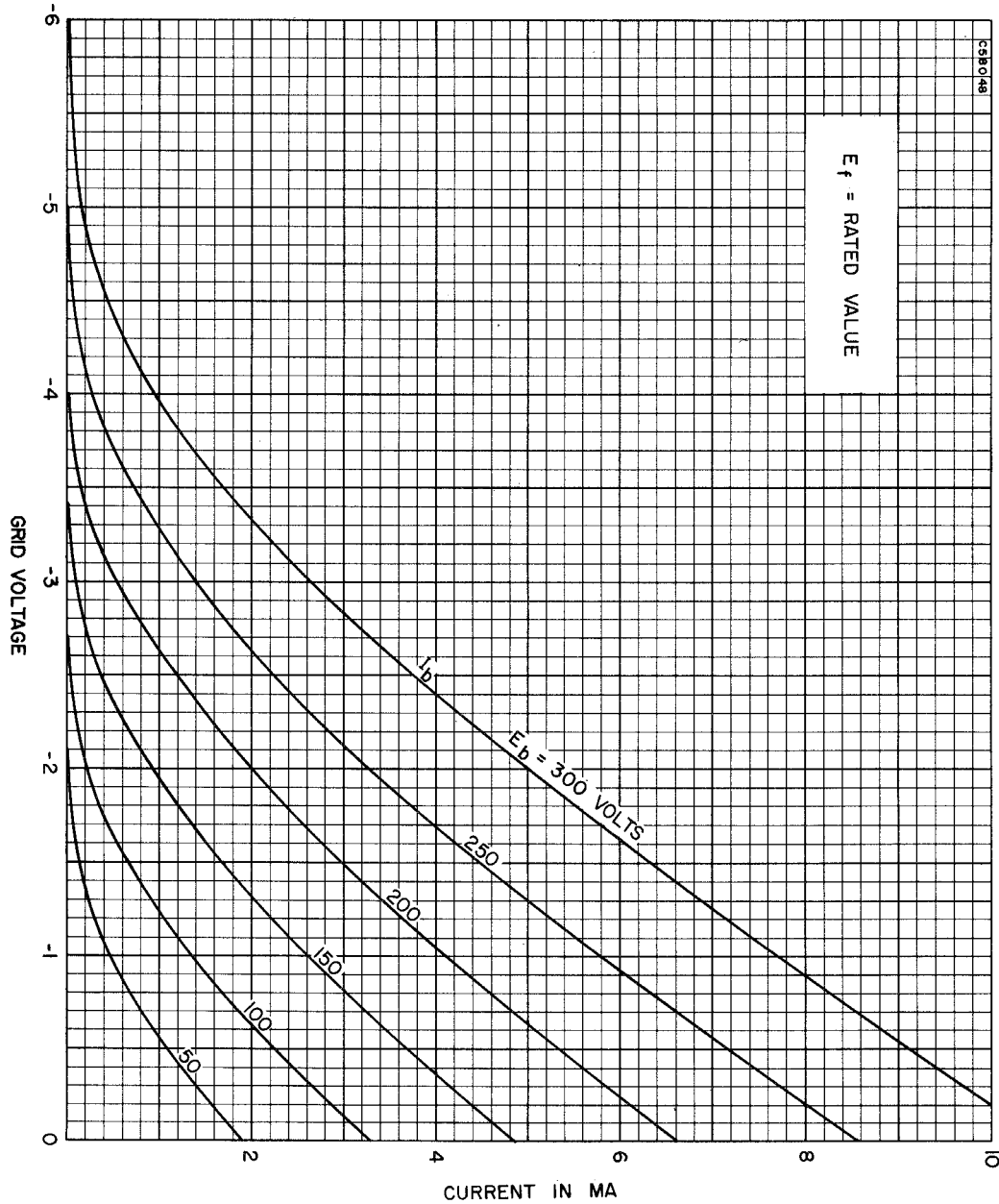
1. *Heater warm-up time is defined as the time required for the voltage across the heater to reach 80% of its rated value after applying four (4) times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to three (3) times rated heater voltage divided by rated heater current.*
2. *Design-Maximum Ratings are limiting values of operating and environmental conditions applicable to bogey electron device of a specified type as defined by its published data, and should not be exceeded under the worst probable conditions.*
The device manufacturer chooses these values to provide acceptable serviceability of the device, taking responsibility for the effects of changes in operating conditions due to variations in device characteristics.
The equipment manufacturer should design so that initially and throughout life no design-maximum value for the intended service is exceeded with a bogey device under the worst probable operating conditions with respect to supply-voltage variation, equipment component variation, equipment control adjustment, load variation, signal variation, and environmental conditions.
3. *For operation in a 525-line, 30-frame system as described in "Standards of Good Engineering Practice for Television Stations; Federal Communications Commission." The duty cycle of the voltage pulse must not exceed 15% of one scanning cycle.*
4. *In stages operating with grid-leak bias, an adequate bias resistor or other suitable means is required to protect the tube in the absence of excitation.*

AVERAGE PLATE CHARACTERISTICS
Section No. 1



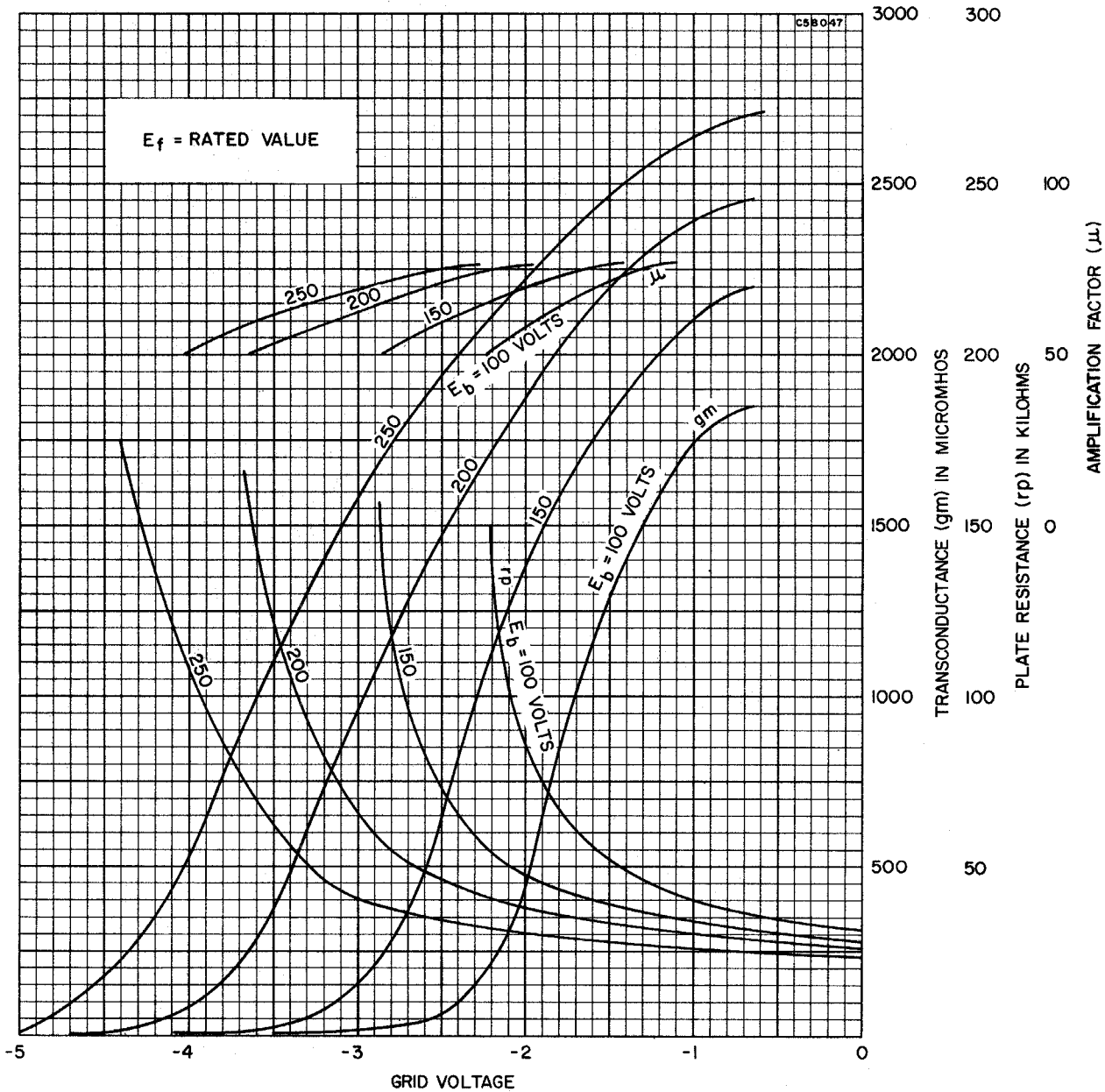
AVERAGE TRANSFER CHARACTERISTICS

Section No. 1



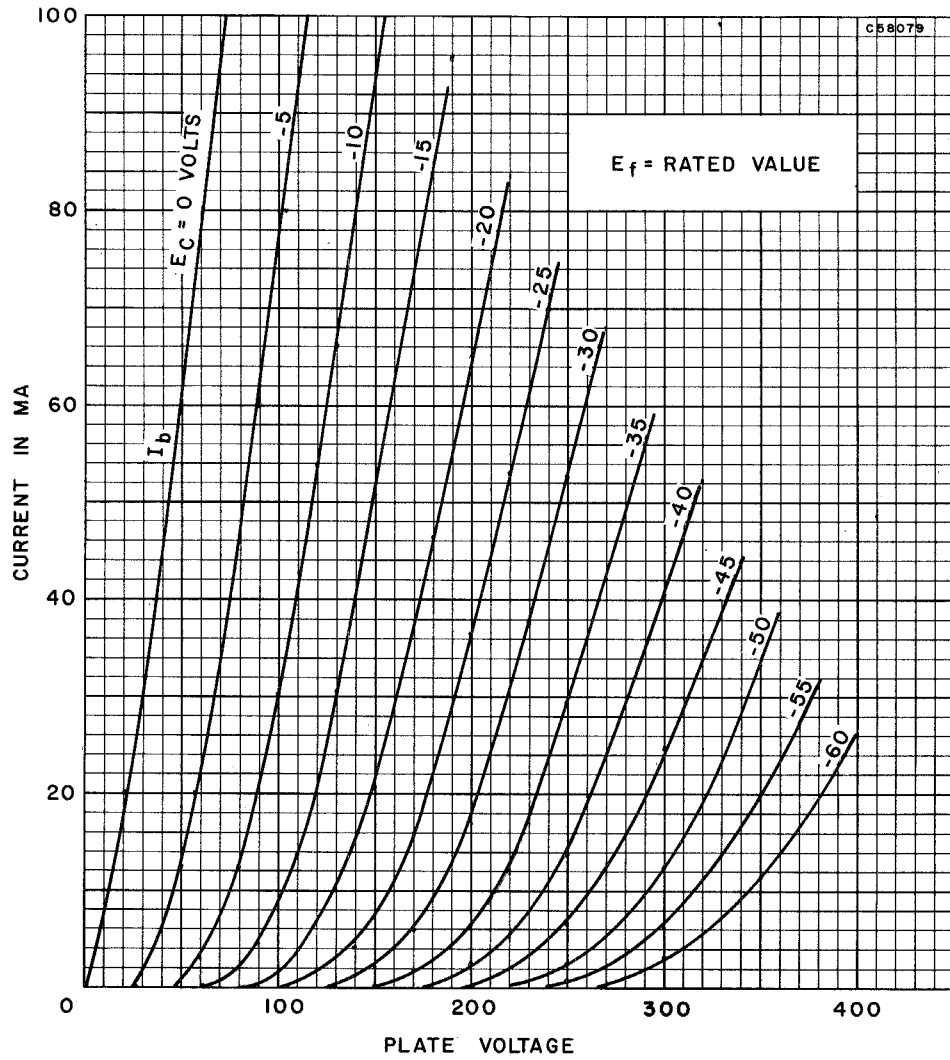
AVERAGE PLATE CHARACTERISTICS

Section No. 1



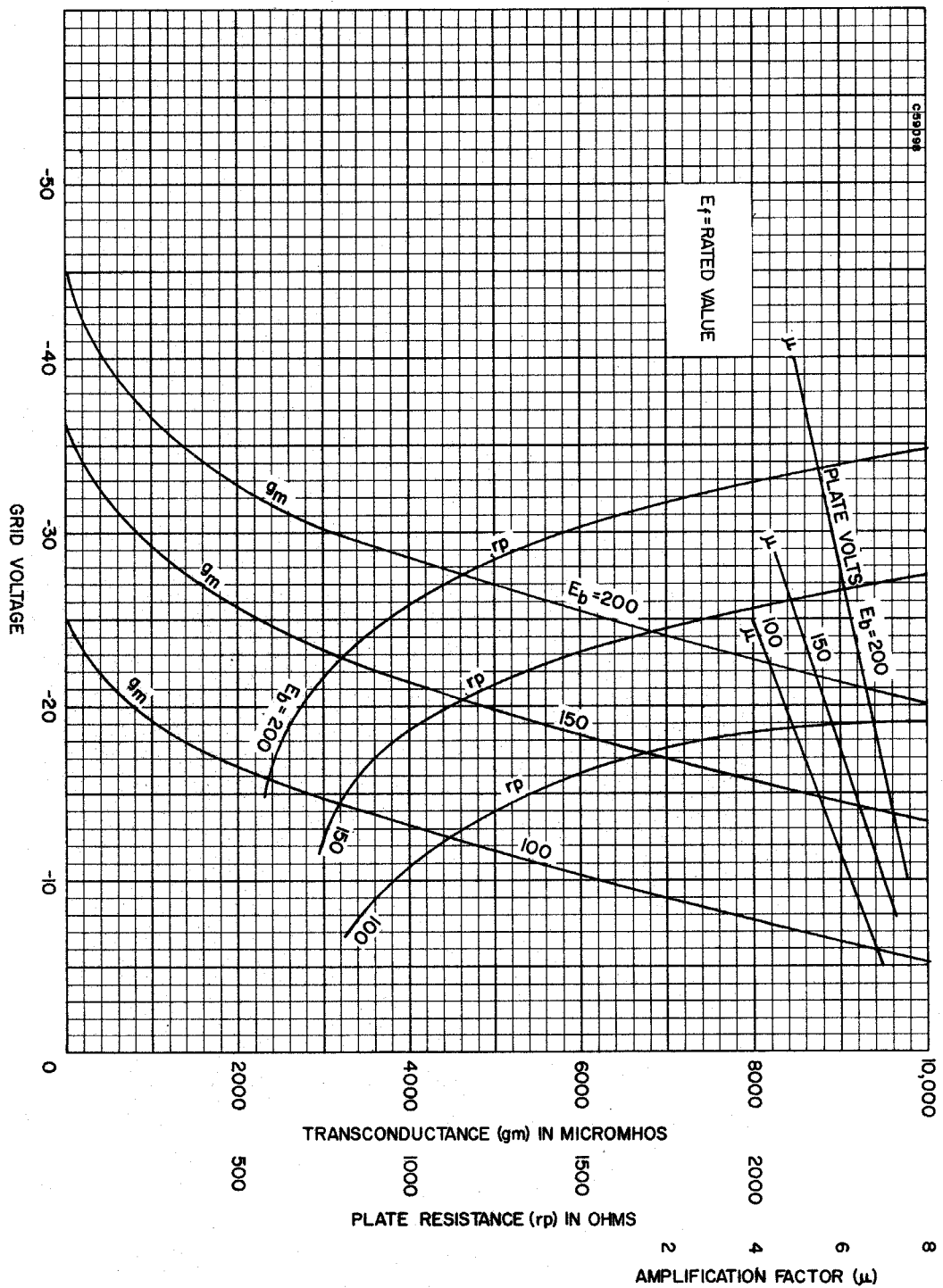
AVERAGE PLATE CHARACTERISTICS

Section No. 2



AVERAGE TRANSFER CHARACTERISTICS

Section No. 2



AVERAGE PLATE CHARACTERISTICS
Section No. 2

