

MECHANICAL DATA

Bulb	T-6 1/2
Base	E9-1, Miniature Button, 9-Pin
Outline	6-3
Basing	9DX
Cathode	Coated Unipotential
Mounting Position	Any

ELECTRICAL DATA

HEATER CHARACTERISTICS

	6BA8A	8BA8A	
Heater Voltage	6.3	8.4 Volts	
Heater Current	600	450 Volts	
Heater Warm-up Time ¹	11	11 Seconds	
Heater-Cathode Voltage (Design Center Values)			
Heater Negative with Respect to Cathode			
Total DC and Peak	200	200 Volts	Max.
Heater Positive with Respect to Cathode			
DC	100	100 Volts	Max.
Total DC and Peak	200	200 Volts	Max.

DIRECT INTERELECTRODE CAPACITANCES

	Shielded ²	Unshielded
Triode		
Grid to plate: (g to p)	2.2	2.2 $\mu\mu\text{f}$
Input: g to (h + k)	2.7	2.5 $\mu\mu\text{f}$
Output: p to (h + k)	1.9	0.4 $\mu\mu\text{f}$
Pentode		
Grid to plate: (g1 to p)	0.03	0.04 $\mu\mu\text{f}$
Input: g1 to (h+k+g2+g3+ I.S.)	10.0	10.0 $\mu\mu\text{f}$
Output: p to (h+k+g2+g3+ I.S.)	4.5	3.6 $\mu\mu\text{f}$
Coupling		
Pentode Grid No. 1 to Triode Plate	0.003	0.006 $\mu\mu\text{f}$
Pentode Plate to Triode Grid	0.006	0.016 $\mu\mu\text{f}$
Pentode Plate to Triode Plate	0.023	0.150 $\mu\mu\text{f}$

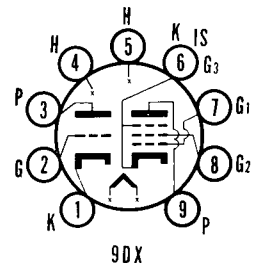
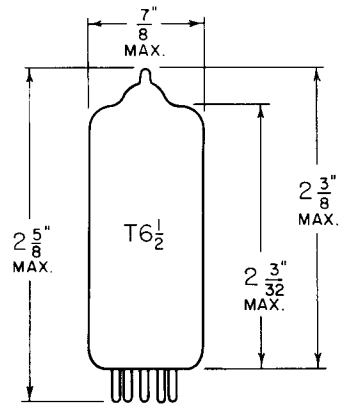
RATINGS (Design Center Values)

	Triode	Pentode	
Plate Voltage	300	300 Volts	Max.
Grid No. 2 Supply Voltage		300 Volts	Max.
Grid No. 2 Voltage	See Rating Chart		
Plate Dissipation	2.0	3.25 Watts	Max.
Grid No. 2 Dissipation		1.0 Watt	Max.
Negative Grid No. 1 Voltage		50 Volts	Max.
Positive Grid No. 1 Voltage		0 Volts	Max.
Grid No. 1 Circuit Resistance			
Fixed Bias	0.5	0.25 Megohm	Max.
Self Bias	1.0	1.0 Megohm	Max.

QUICK REFERENCE DATA

The Sylvania Type 6BA8A is a miniature, medium mu triode and sharp cutoff pentode. The triode section is intended for use as a sync separator and the pentode section as a video amplifier. The pentode section features a controlled plate knee characteristic. The 6BA8A incorporates a 600 ma heater and controlled heater warm-up time for operation in television receivers employing a series heater string.

The 8BA8A is identical to the 6BA8A except for heater characteristics.



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RADIO TUBE DIVISION
EMPORIUM, PA.

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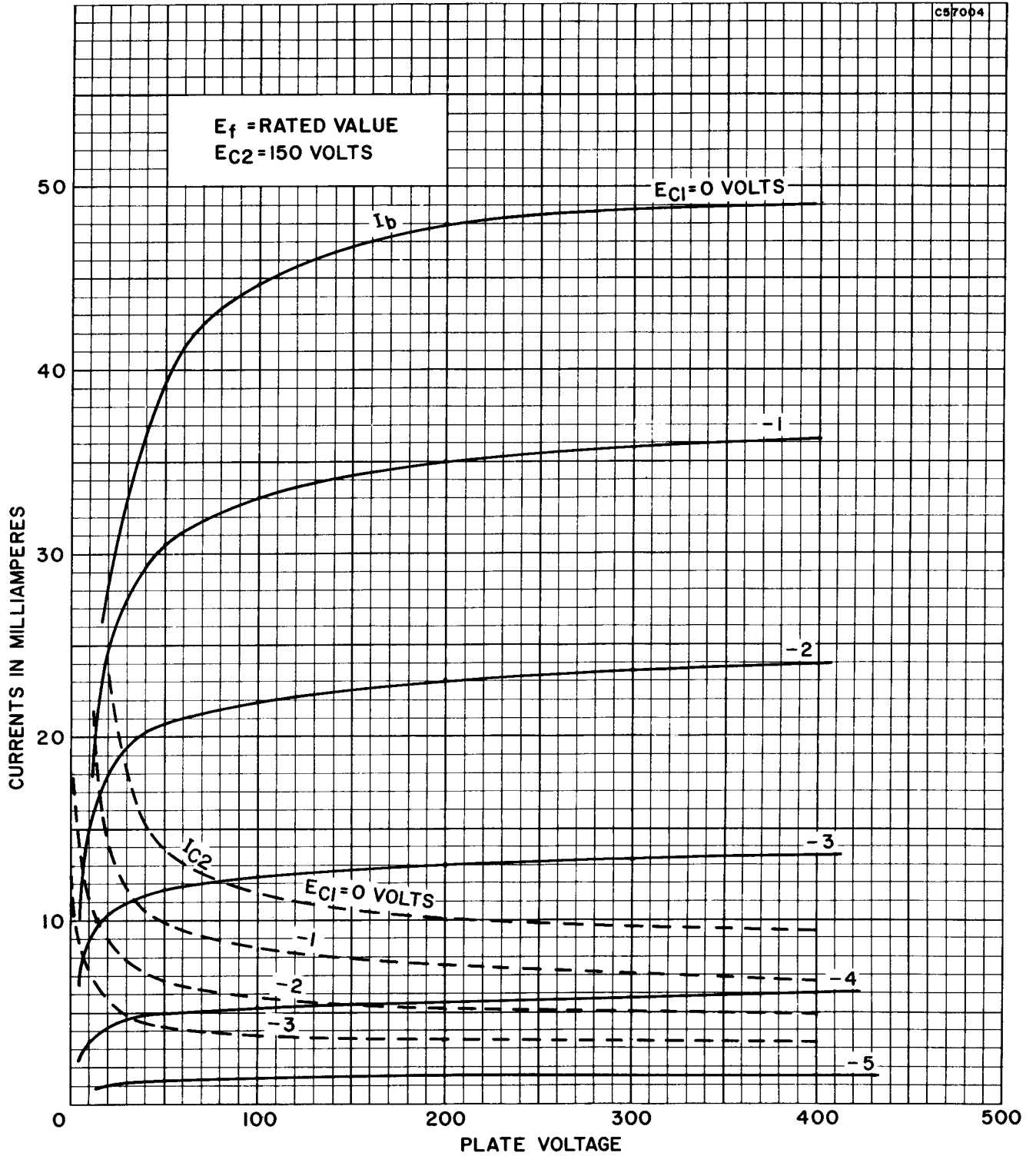
CHARACTERISTICS AND TYPICAL OPERATION

Class A ₁ Amplifier	Triode	Pentode
Plate Voltage	200	200 Volts
Grid No. 2 Voltage		150 Volts
Grid No. 1 Voltage	-8	0 Volts
Cathode Bias Resistor		180 Ohms
Plate Current	8.0	13 Ma
Grid No. 2 Current		3.5 Ma
Transconductance	2700	9000 μ mhos
Amplification Factor	18	
Plate Resistance (approx.)	6700	400,000 Ohms
Grid No. 1 Voltage for I _b = 10 μ a (approx.)	-16	-10 Volts
Zero Bias: With E _b = 65 V, and E _{c2} = 150 V; (Instantaneous Values)		
Plate Current		42 Ma
Grid No. 2 Current		12.5 Ma

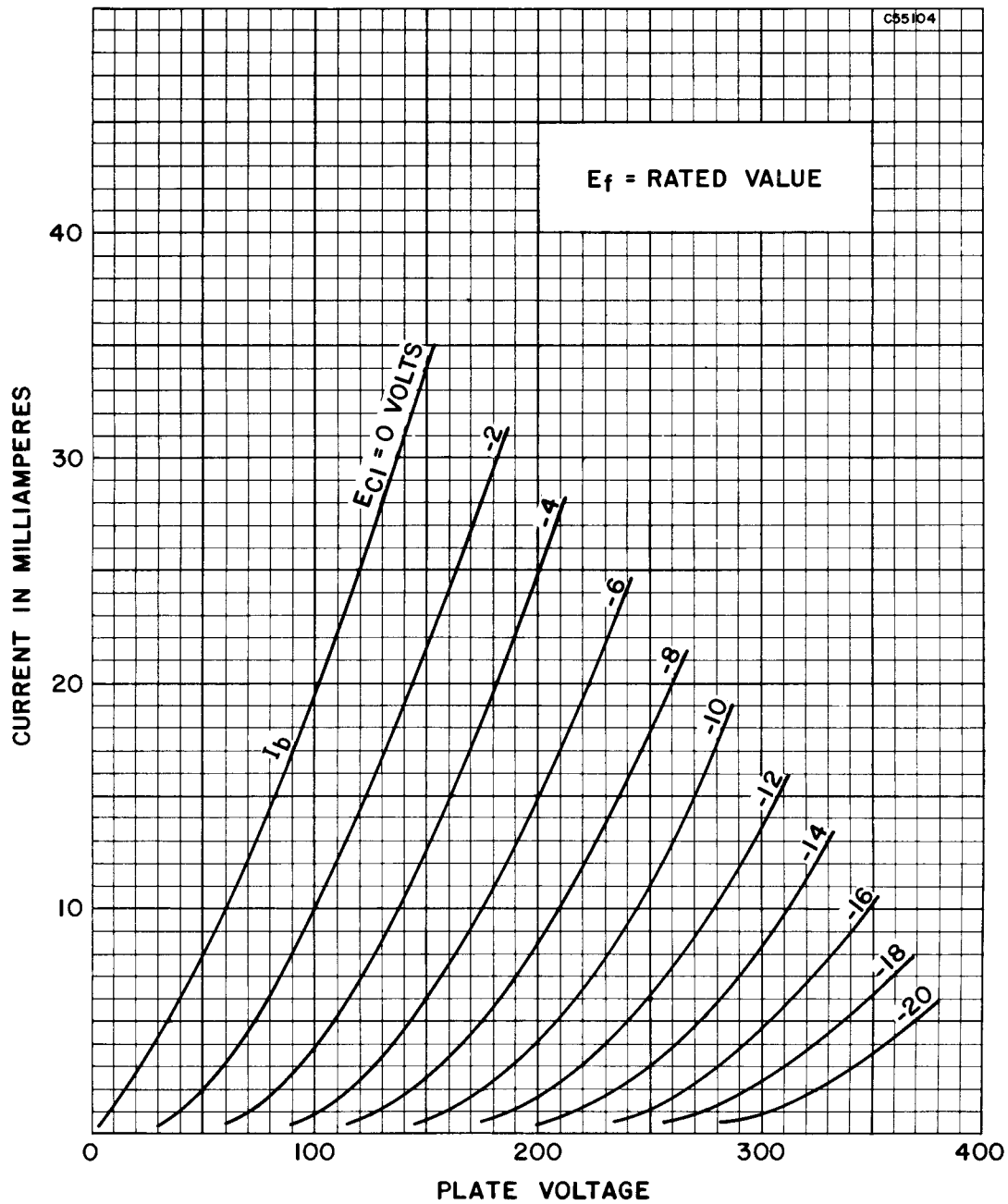
NOTES:

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. Shield No. 315 tied to cathode base pin of section under test.

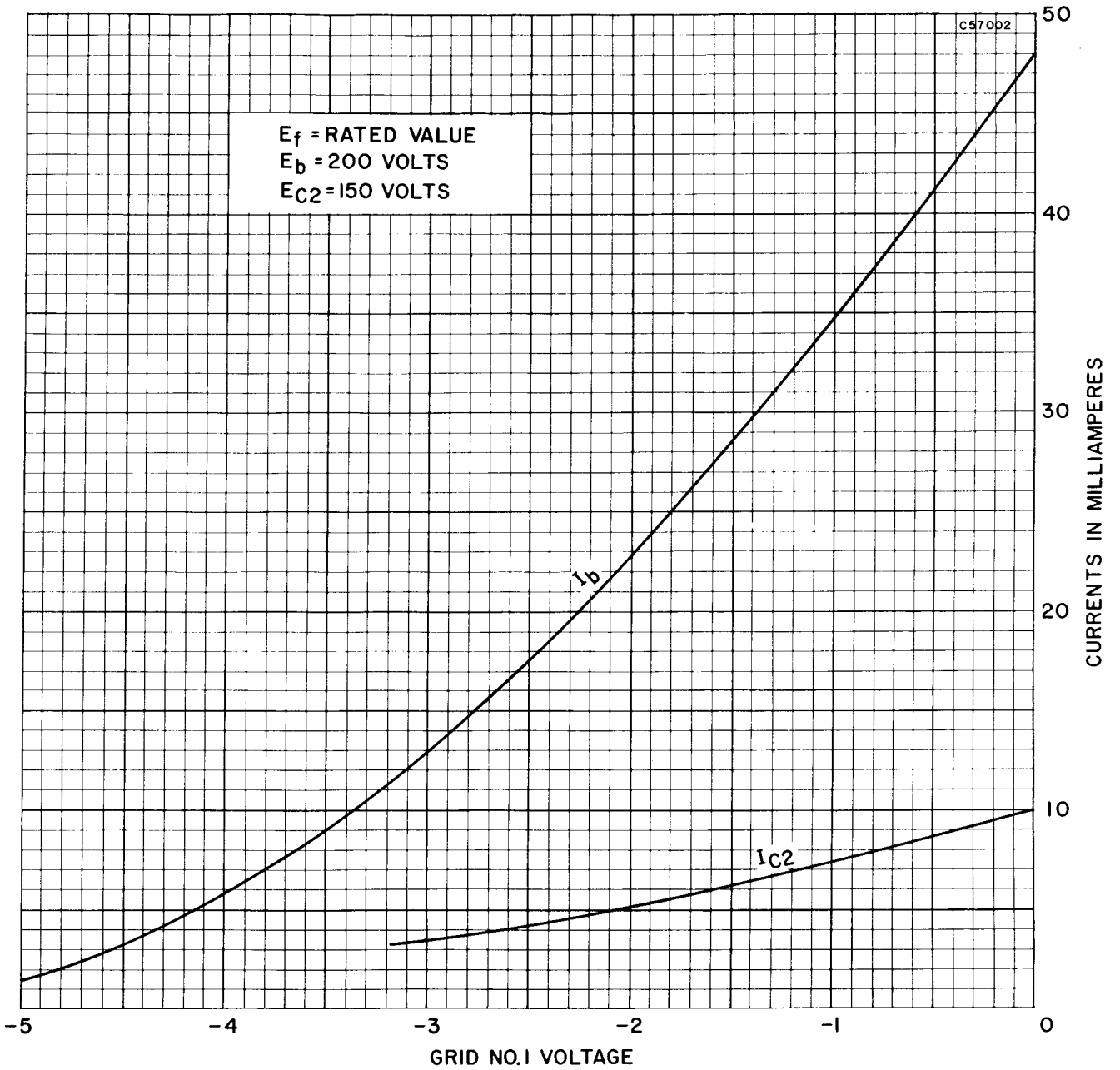
AVERAGE PLATE CHARACTERISTICS
(PENTODE SECTION)



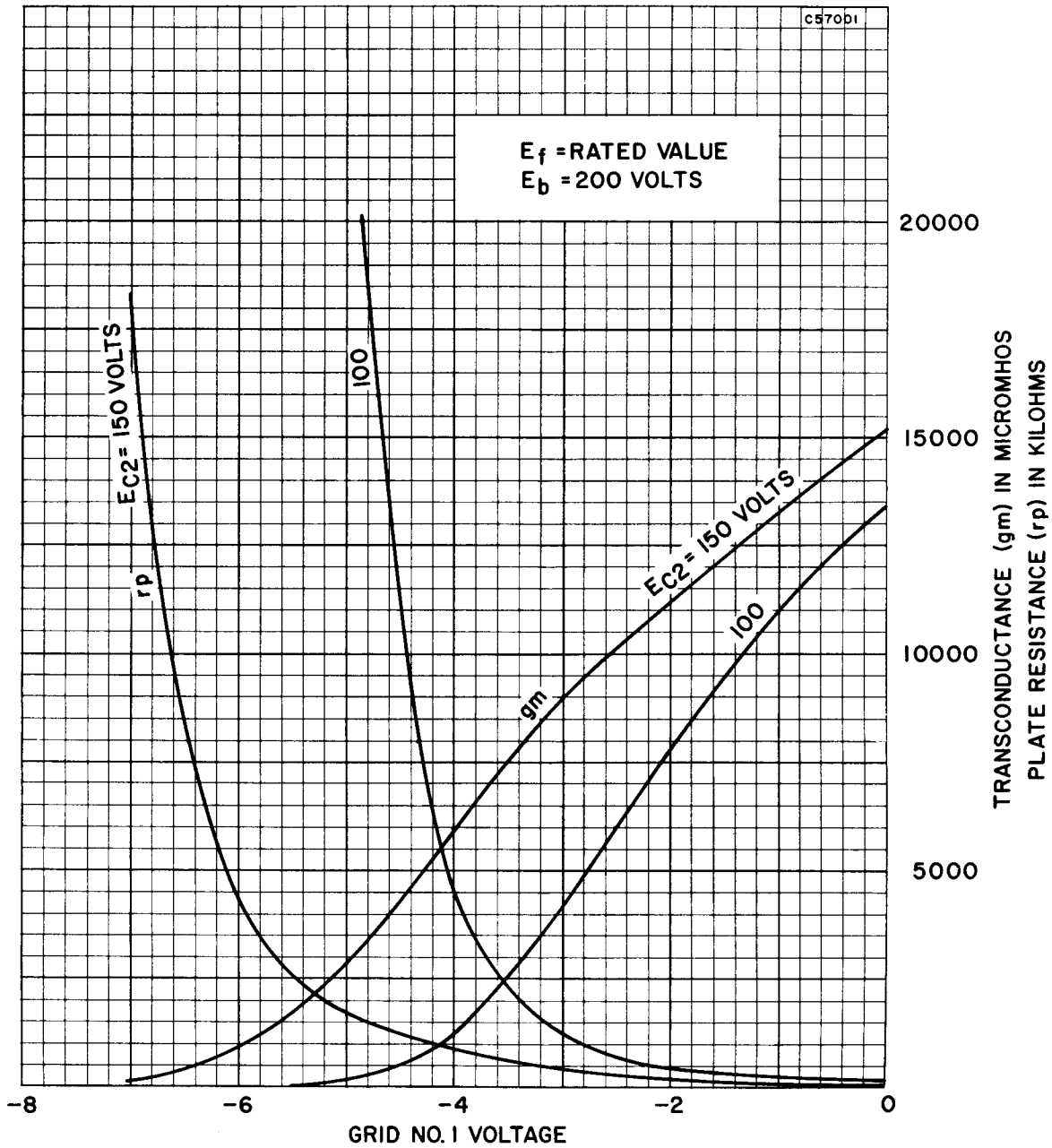
AVERAGE PLATE CHARACTERISTICS
(TRIODE SECTION)



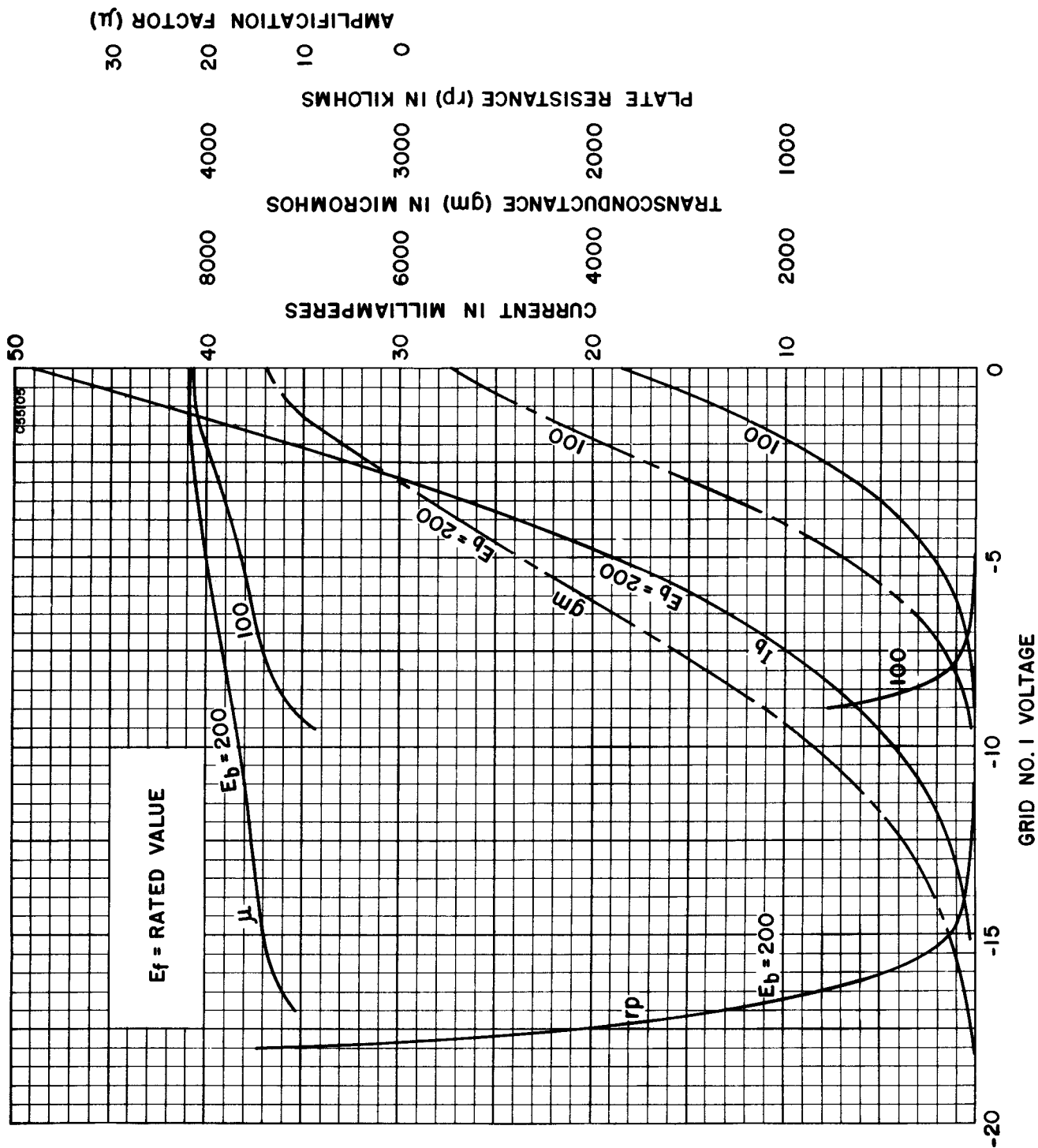
AVERAGE TRANSFER CHARACTERISTICS
(PENTODE SECTION)



AVERAGE TRANSFER CHARACTERISTICS
(PENTODE SECTION)



AVERAGE TRANSFER CHARACTERISTICS
(TRIODE SECTION)



RATING CHART

