

Type 6678/6U8 is designed specifically for use in mobile communication's equipment. The 6678/6U8 may be operated without serious degradation under normal variations in supply voltage as encountered with automotive electrical systems. Also consistent with the requirements of the equipment the tube is capable of withstanding appreciable on-off cycling.

MECHANICAL DATA

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

ELECTRICAL DATA

HEATER CHARACTERISTICS

Heater Voltage ¹	6.3 Volts	
Heater Current	450 Ma	
Heater-Cathode Voltage (Design Maximum Values)		
Heater Negative with Respect to Cathode		
Total DC and Peak	200 Volts	Max.
Heater Positive with Respect to Cathode		
DC	100 Volts	Max.
Total DC and Peak	200 Volts	Max.

DIRECT INTERELECTRODE CAPACITANCES

Pentode Section	Shielded	Unshielded	
Grid No. 1 to Plate	.006	.01 μf	Max.
Input: g1 to (h+k+g2+g3+I.S.)	5.0	5.0 μf	
Output: p to (h+k+g2+g3+I.S.)	3.5	2.6 μf	
Cathode to Heater	3.0	3.0 μf	
Triode Section			
Grid to Plate	1.8	1.8 μf	
Input: g to (h+Pk+Tk+g3+I.S.)	2.5	2.5 μf	
Output: p to (h+Pk+Tk+g3+I.S.)	1.0	0.4 μf	
Cathode to Heater	3.0	3.0 μf	
Coupling			
Pentode Grid No. 1 to Triode Plate	0.2	0.2 μf	Max.
Pentode Plate to Triode Plate	.02	0.1 μf	Max.

RATINGS (Design Maximum System)

	Triode Section	Pentode Section	
Plate Voltage	330	330 Volts	Max.
Grid No. 2 Supply Voltage		330 Volts	Max.
Grid No. 2 Voltage	See Rating Chart		
Positive DC Grid No. 1 Voltage	0	0 Volts	Max.
Plate Dissipation	3.0	3.0 Watts	Max.
Grid No. 2 Dissipation		0.55 Watt	Max.

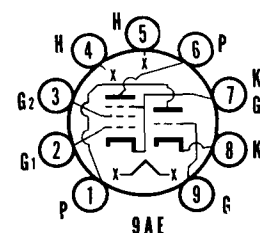
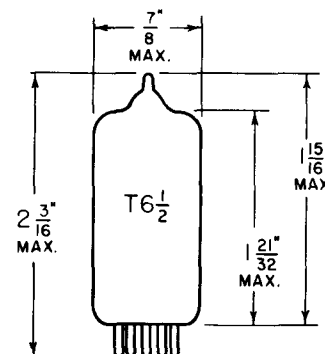
CHARACTERISTICS AND TYPICAL OPERATION

	Triode Section	Pentode Section
Plate Voltage	150	250 Volts
Grid No. 2 Voltage		110 Volts
Cathode Bias Resistor	56	68 Ohms
Plate Current	18	10 Ma
Grid No. 2 Current		3.5 Ma
Transconductance	8500	5200 μmhos
Amplification Factor	40	
Plate Resistance (Approx.)	5000	400K Ohms
E _{c1} for I _b = 10 μa (Approx.)	-10	-12 Volts

QUICK REFERENCE DATA

Sylvania Type 6678/6U8 is designed specifically for mobile operation. It is a T-6 $\frac{1}{2}$ triode-pentode intended for VHF OSC/MIXER service.

Type 6678/6U8 possesses electrical characteristics essentially equivalent to Type 6U8.



SYLVANIA ELECTRONIC TUBES

A Division of
Sylvania Electric Products Inc.

RECEIVING TUBE OPERATIONS EMPORIUM, PA.

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File Under
RECEIVING TUBES

SPECIAL TESTS AND RATINGS

Heater Cycling Ratings

Cycles of Intermittent Operation (Minimum) 2000 Cycles

$E_f = 7.5$ volts cycled for one minute on and one minute off.

$E_b + E_{c2} + E_{c1} = 0$ volts.

$E_{hk} = 135$ volts with heater positive with respect to cathode.

Average Transconductance at Reduced Heater Voltage

Pentode Section 4100 μ mhos

$E_f = 5.0$ volts, $E_b = 250$ volts, $E_{c2} = 110$ volts,

$R_k = 68$ ohms (bypassed)

Average Transconductance at Reduced Heater Voltage

Triode Section 6800 μ mhos

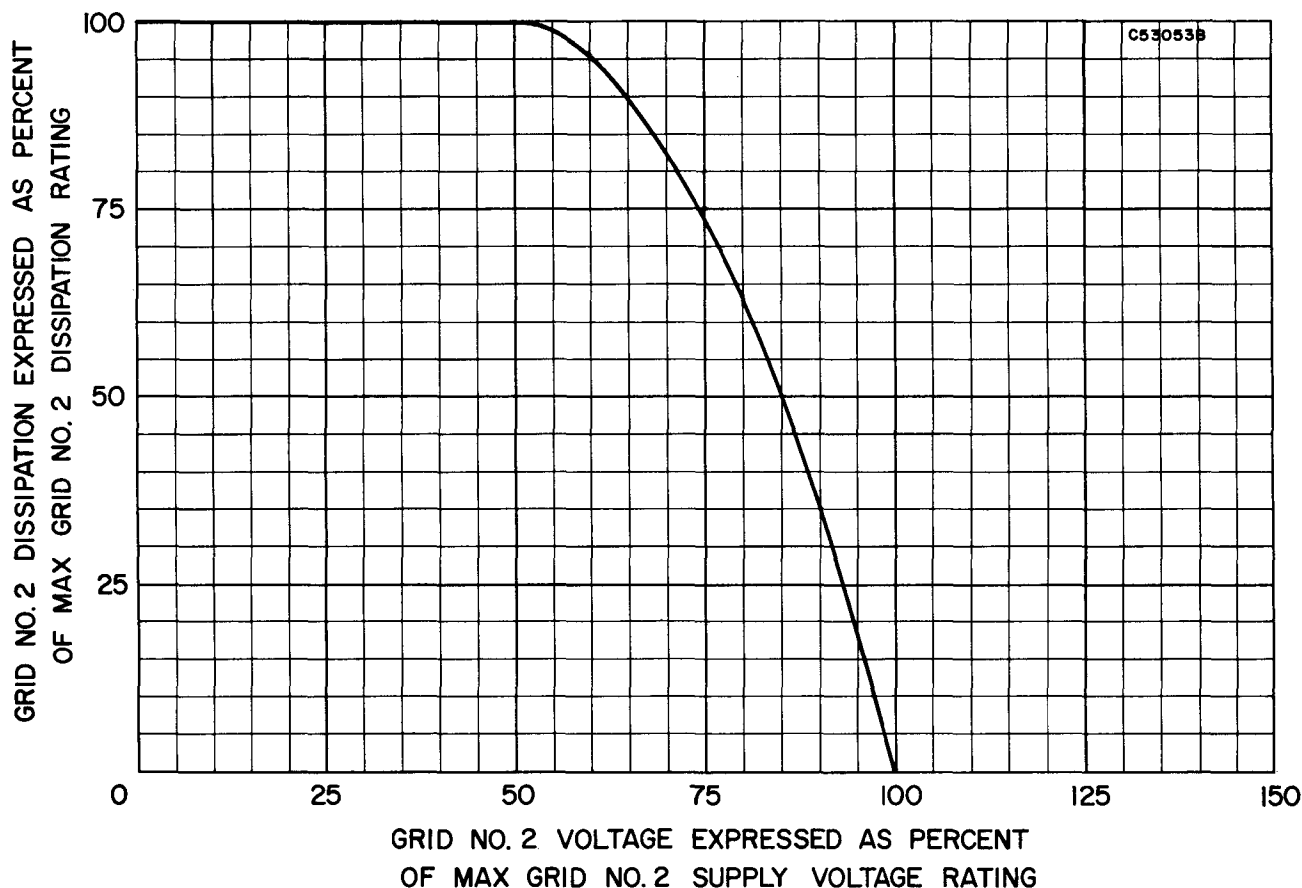
$E_f = 5.0$ volts, $E_b = 150$ volts,

$R_k = 56$ ohms (bypassed)

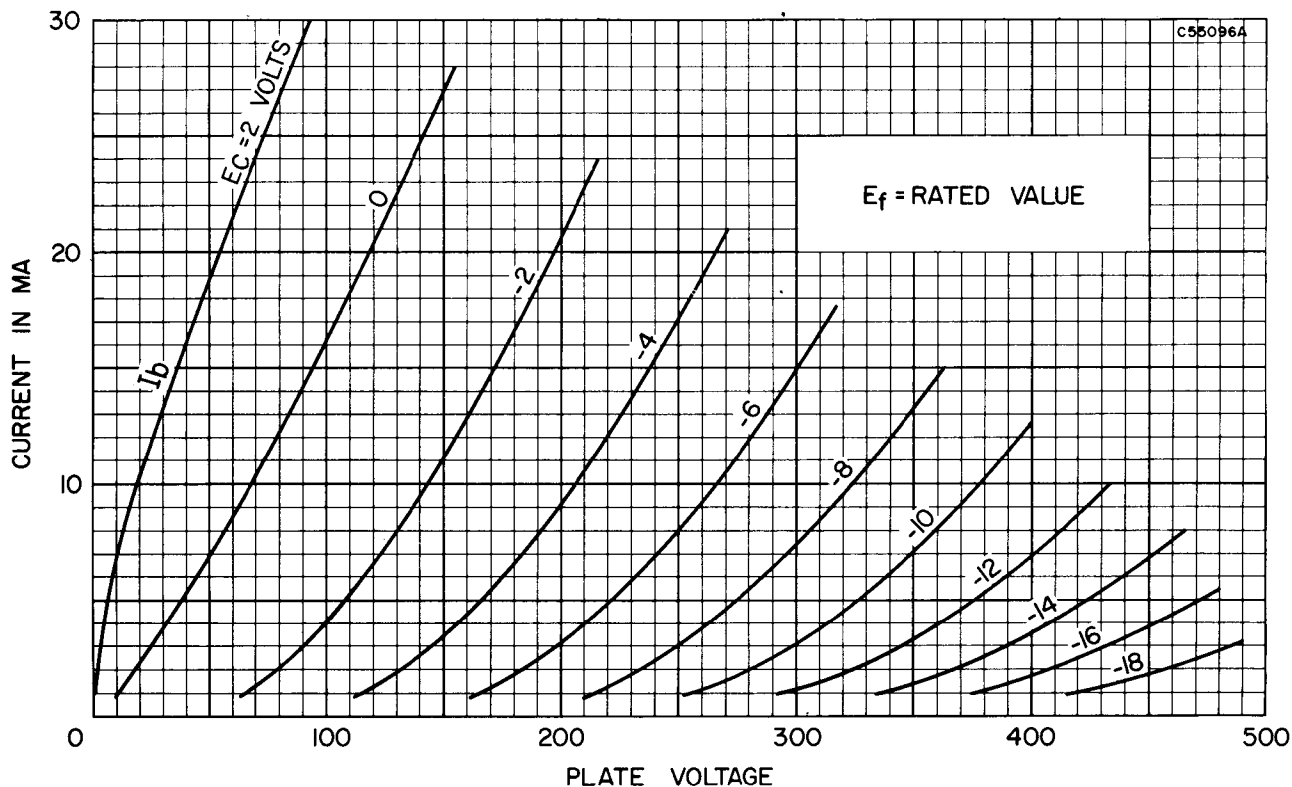
NOTE:

1. When operated from automotive electrical systems, the heater may be subjected to voltage variations as great as ± 20 percent. Although such extremes in heater voltage may be tolerated for short periods, increased equipment reliability can be achieved with improved supply-voltage regulation.

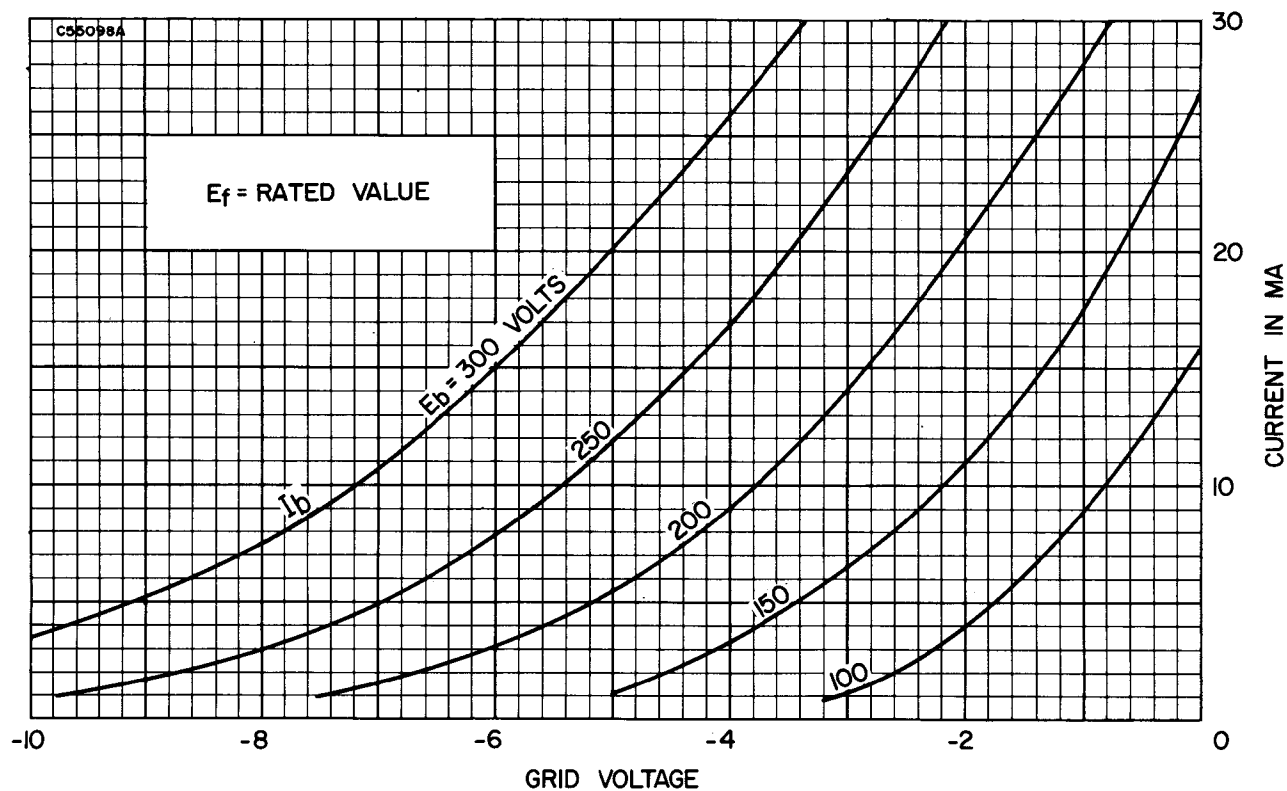
RATING CHART



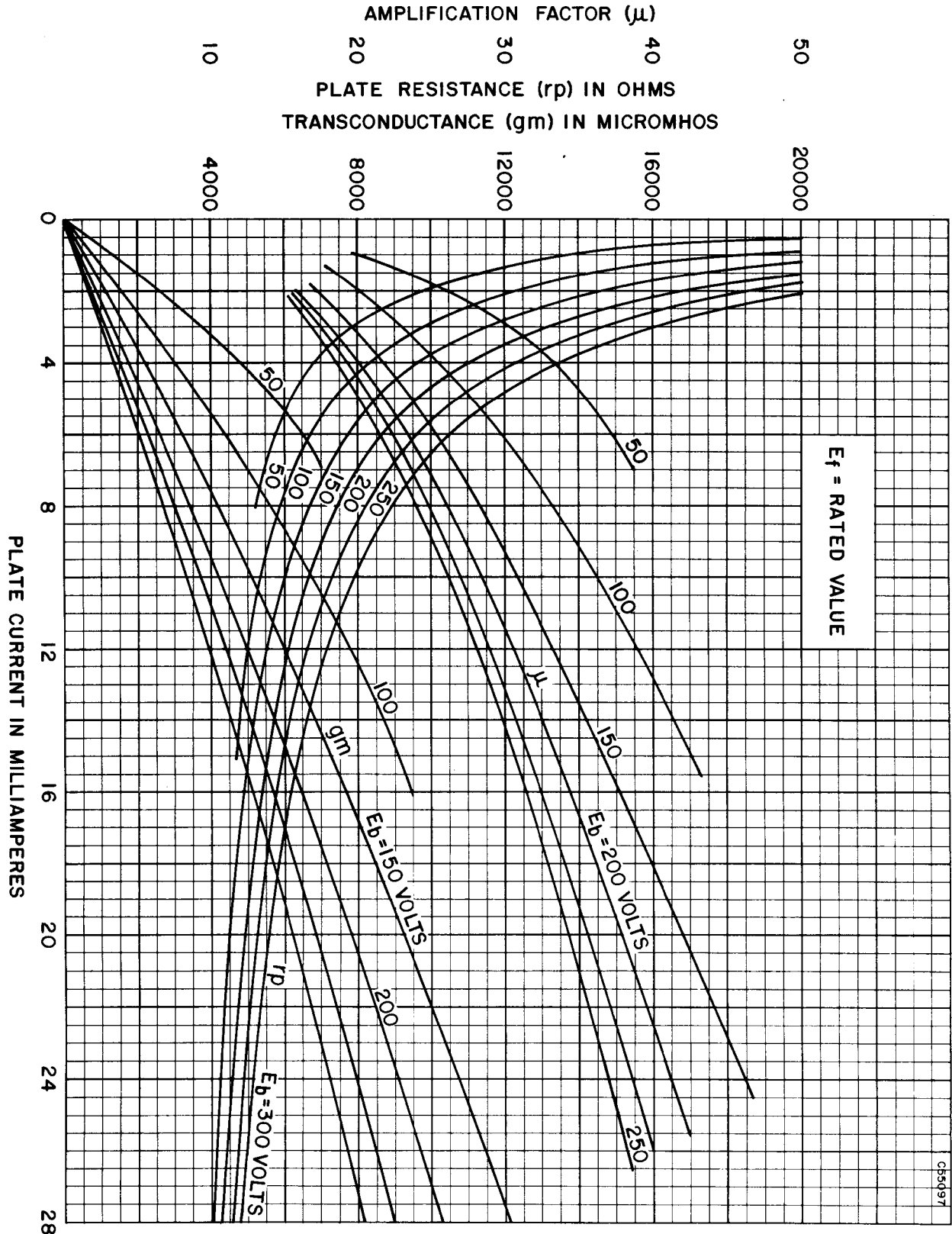
AVERAGE PLATE CHARACTERISTICS (Triode Section)



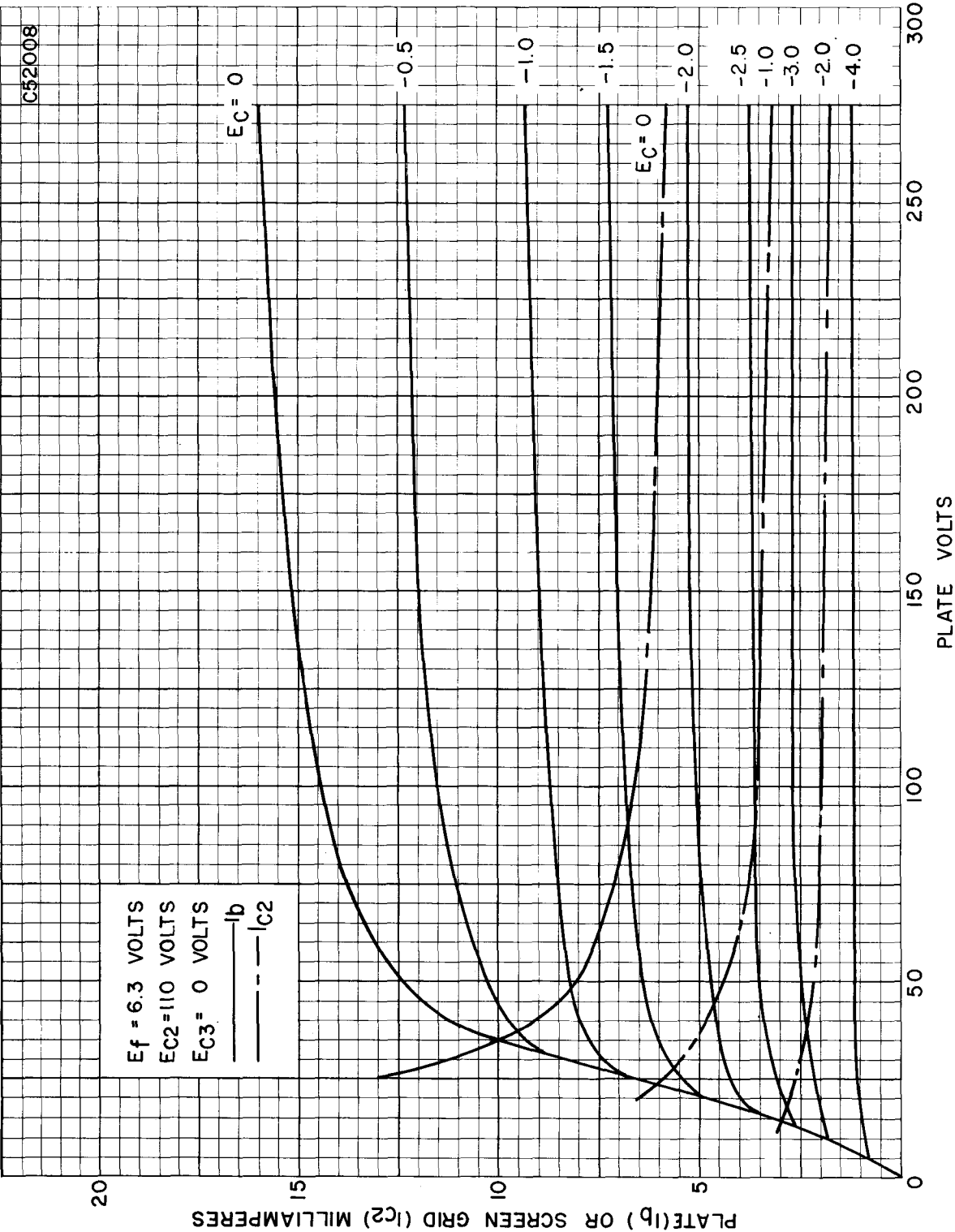
AVERAGE TRANSFER CHARACTERISTICS (Triode Section)



AVERAGE TRANSFER CHARACTERISTICS
 (Triode Section)



AVERAGE PLATE CHARACTERISTICS
(Pentode Section)



AVERAGE TRANSFER CHARACTERISTICS
(Pentode Section)

