SYLVANIA

engineering data service

MECHANICAL DATA

Bulb	T-6 ½
Base	E9-1, Small Button 9-Pin
Outline	6-3
Basing	9ER
Cathode	Coated Unipotential
Mounting Position	Any

ELECTRICAL DATA

HEATER CHARACTERISTICS

	6BN8	8BN8	
Heater Voltage	6.3	8.4 Volts	
Heater Current	600	450 Ma	
Heater Warm-up Time[1]	11	11 Seconds	
Heater-Cathode Voltage (Triode and Diodes 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 (Unshielded)

Triode		
Grid to Plate: (g to p)	2.5 μμf	
Input: g to (h+tk)	3.6 μμf	
Output: p to (h+tk)	0.32 μμf	
Diodes		
No. 1 Diode Plate to Triode Grid	0.060 μμf	Max.
No. 2 Diode Plate to Triode Grid	0.10 μμf	Max.
No. 1 Diode Cathode to All: 1dk to (h+tk+2dk+tp+1dp+tg+2dp)	5.0 μμf	
No. 2 Diode Cathode to All: 2dk to (h+tk+1dk+tp+1dp+2dp+tg)	5.0 μμf	
No. 1 Diode Plate to No. 2 Diode Plate	0.070 μμf	Max.
No. 1 Diode Plate to No. 1 Diode Cathode+Heater: 1dp to (1dk+h)	1.9 μμf	
No. 2 Diode Plate to No. 2 Diode Cathode+Heater: 2dp to (2dk+h)	1.9 μμf	
No. 1 Diode Cathode to No. 1 Diode Plate+Heater: 1dk to (1dp+h)	4.8 μμf	
No. 2 Diode Cathode to No. 2 Diode Plate+Heater: 2dk to (2dp+h)	4.8 μμf	
No. 1 Diode Plate to All: 1dp to (h+tk+1dk+2dk+tp+2dp+tg)	3.0 μμf	
No. 2 Diode Plate to All: 2dp to (h+tk+1dk+2dk+tp+1dp+tg)	3.0 μμf	

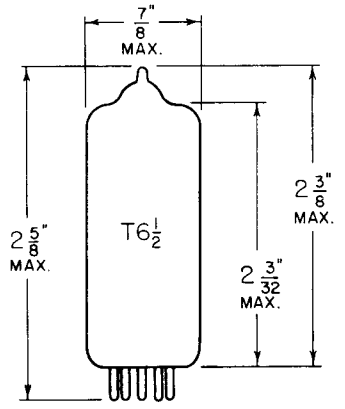
RATINGS—Each Section (Design Center Values)

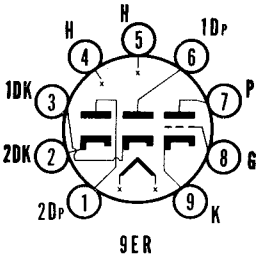
Triode		
Plate Voltage	300 Volts	Max.
Positive DC Grid Voltage	0 Volts	Max.
Plate Dissipation	1.5 Watts	Max.
Grid Circuit Resistance	1.0 Megohm	Max.
Diodes		
Peak Plate Current, Each Plate	54 Ma	Max.
DC Current, Each Plate	9 Ma	Max.

QUICK REFERENCE DATA

The Sylvania Type 6BN8 is a miniature, high mu triode, double diode intended for application in color and monochrome television receivers. The tube features separate cathode connections for each section and controlled heater warm-up time to insure dependable operation in series string receivers.

The 8BN8 is identical to the 6BN8 except for heater characteristics.





SYLVANIA ELECTRIC PRODUCTS INC.

RADIO TUBE DIVISION
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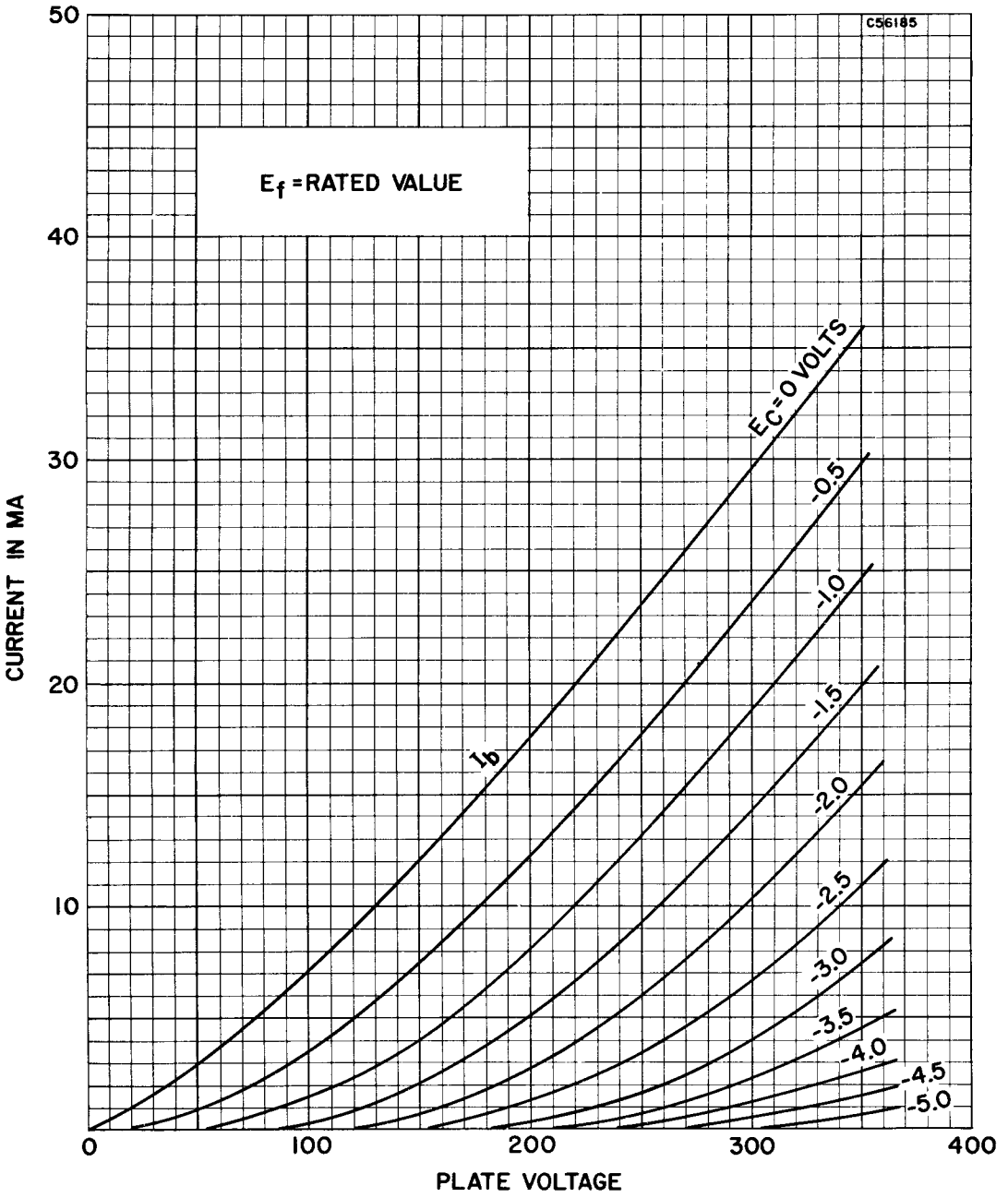
CHARACTERISTICS AND TYPICAL OPERATION

Triode: Class A_1 Amplifier		
Plate Voltage	100	250 Volts
Grid Voltage	−1	−3 Volts
Plate Current	1.5	1.6 Ma
Transconductance	3500	2500 μmhos
Amplification Factor	75	70
Plate Resistance (approx.)	21,000	28,000 Ohms
Grid Voltage (approx.) for $I_b = 10$ μa	−2.5	−5.5 Volts
Diodes		
Average Current Each Plate at 10 Volts D C		50 Ma
Voltage Drop Each Section at $I_b = 9$ Ma D C		2.6 Volts

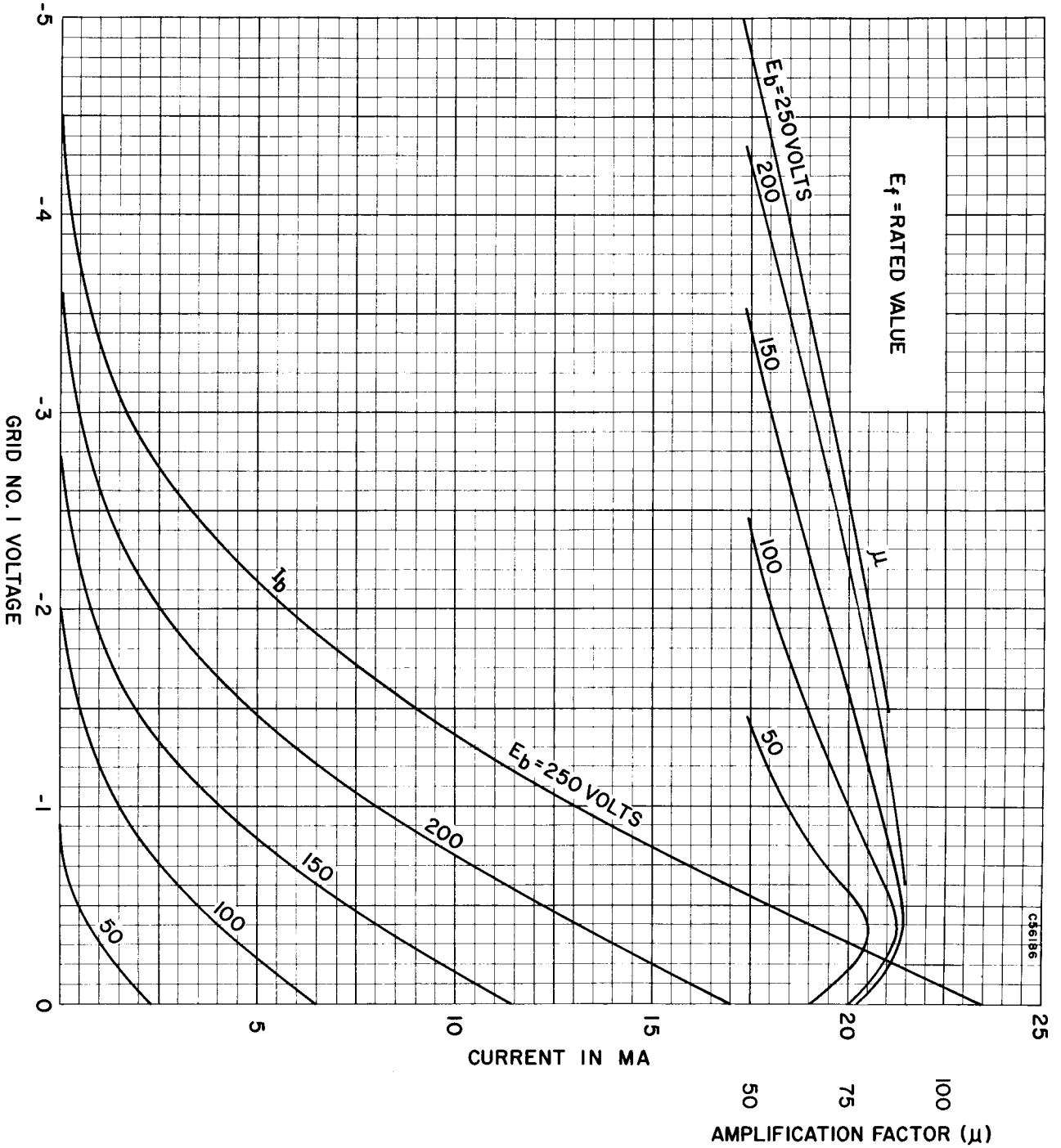
NOTE:

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.*

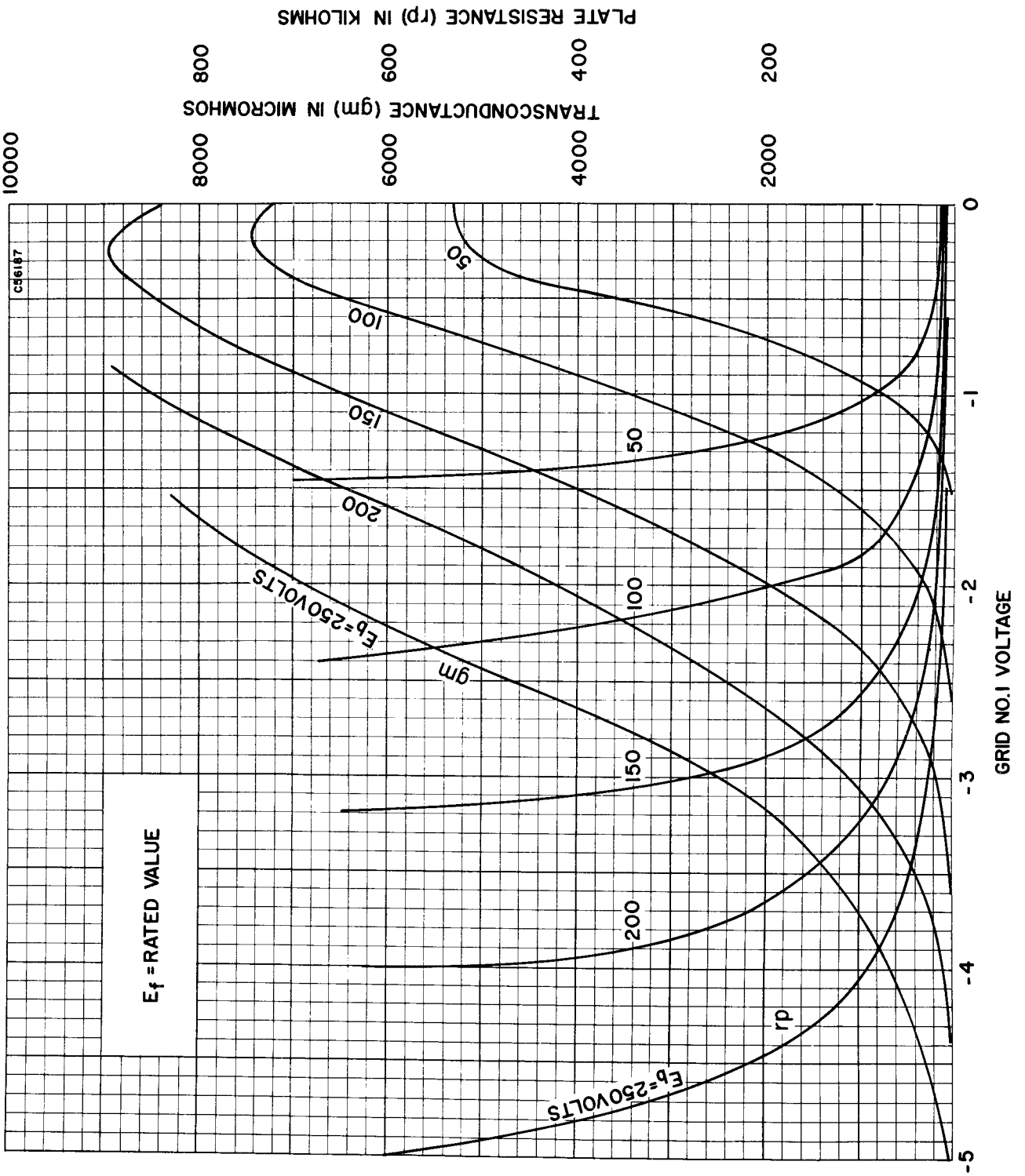
AVERAGE PLATE CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS



AVERAGE DIODE CHARACTERISTICS