MECHANICAL DATA

Bulb	T-6½
Base	E9-1, Small Button, 9-Pin
Outline	6-2
Basing	9EC
Cathode	Coated Unipotential
Mounting Position	Any

ELECTRICAL DATA

HEATER CHARACTERISTICS

Heater Voltage	4.7	Volts
Heater Current	600	Ma
Heater Warm-up Time[1]	11	Seconds
Heater-Cathode Voltage (Design Center 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 (Unshielded Approx.)

Triode Grid to Triode Plate	1.7	μμf
Pentode Grid No. 1 to Pentode Plate	.05	μμf Max.
Triode Grid to (Triode Cathode, Pentode Grid No. 3, I.S., Heater)	1.9	μμf
Triode Plate to (Triode Cathode, Pentode Grid No. 3, I.S., Heater)	1.4	μμf
Pentode Grid No. 1 to (Pentode Cathode, Grid No. 2, Heater)	6.0	μμf
Pentode Plate to (Pentode Cathode, Grid No. 2, Grid No. 3, Triode Cathode, I.S., Heater)	2.6	μμf
Pentode Plate to (Pentode Cathode, Grid No. 2, Heater)	.15	μμf
Triode Grid to Pentode Plate	.0078	μμf
Pentode Grid No. 1 to Triode Plate	.0033	μμf
Triode Plate to Pentode Plate	.060	μμf

RATINGS (Design Center Values)

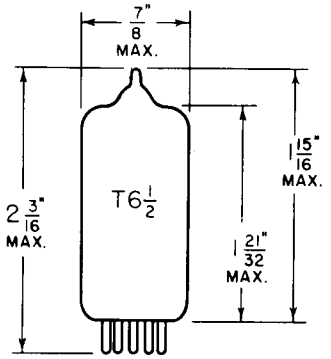
	Triode	Pentode	
Plate Voltage	300	300	Volts Max.
Grid No. 2 Supply Voltage		300	Volts Max.
Grid No. 2 Voltage	See Rating Chart		
Positive Grid No. 1 Voltage	0	0	Volts Max.
Plate Dissipation	2.5	2.0	Watts Max.
Grid No. 2 Dissipation		0.5	Watt Max.
Grid No. 1 Circuit Resistance[2]			
Fixed Bias	0.5	0.25	Megohm
Self Bias	1.0	1.0	Megohm

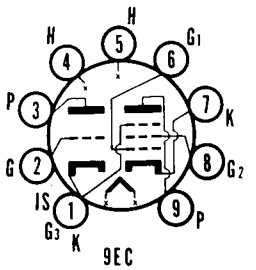
CHARACTERISTICS AND TYPICAL OPERATION

Class A_1 Amplifier	Triode	Pentode[3]	
Plate Voltage	200	200	Volts
Grid No. 2 Voltage		150	Volts
Grid No. 1 Voltage	-6	0	Volts
Cathode Bias Resistor		180	Ohms
Plate Current	13	9.5	Ma
Grid No. 2 Current		2.8	Ma
Amplification Factor	19		
Transconductance	3300	6200	μmhos
Plate Resistance (approx.)	5750	300,000	Ohms
Grid No. 1 Voltage for I_b = 10 μa (approx.)	-19	-8	Volts

QUICK REFERENCE DATA

The Sylvania Type 5B8 is a miniature sharp cutoff pentode and medium mu triode. The triode section may be used as a low frequency oscillator, sync separator or sync clipper. The pentode section may be used as an if amplifier, video amplifier or agc amplifier. The 5B8 features a 600 Ma heater and controlled heater warm-up time for service in series heater string television receivers. The tube is electrically similar to the 5AV8.





SYLVANIA ELECTRIC PRODUCTS INC.

RADIO TUBE DIVISION
EMPORIUM, PA.

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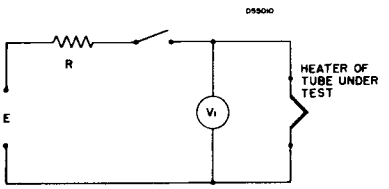
NOTES:

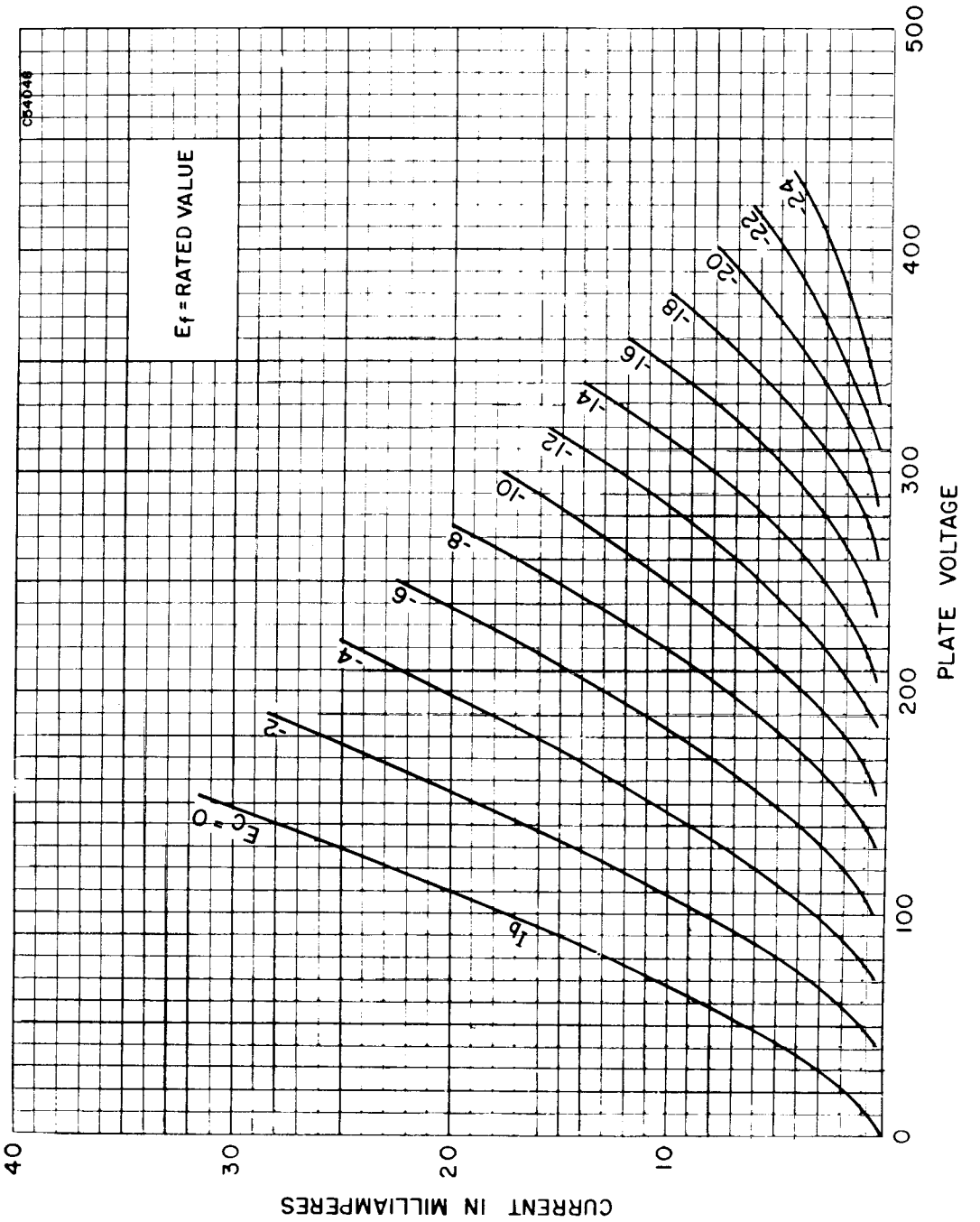
1. *Heater Warm-up Time is defined as the time required in the circuit shown below for the voltage across the heater terminals to increase from zero to the heater test voltage (V1). The conditions used in conjunction with the test circuit depend upon the rated heater voltage and current of the tube under test. For this type: E = 18.8 Volts, R = 23.6 Ohms, V1 = 3.75 Volts.*



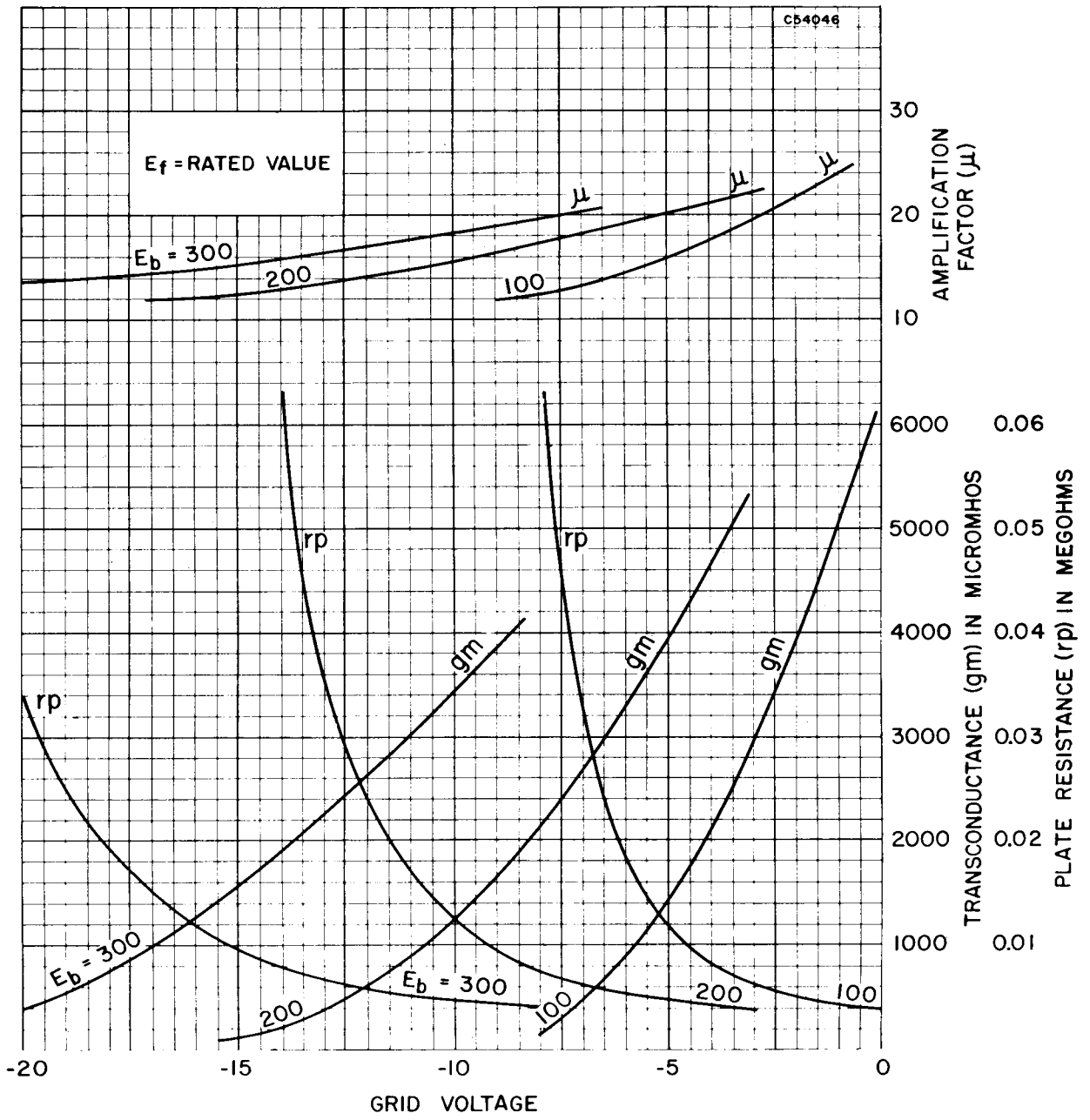
E — Applied Voltage, RMS or DC
R — Total Series Resistance
V1 — Heater Test Voltage, RMS or DC (80% Rated Heater Voltage)

2. *If either unit is operating at maximum rated conditions, Grid No. 1 circuit resistances for both units shall not exceed the stated values.*
3. *When reading characteristics of the pentode section, all triode elements shall be at ground potential. Thus, because of internal connections to Pin No. 1, the pentode suppressor will also be at ground.*

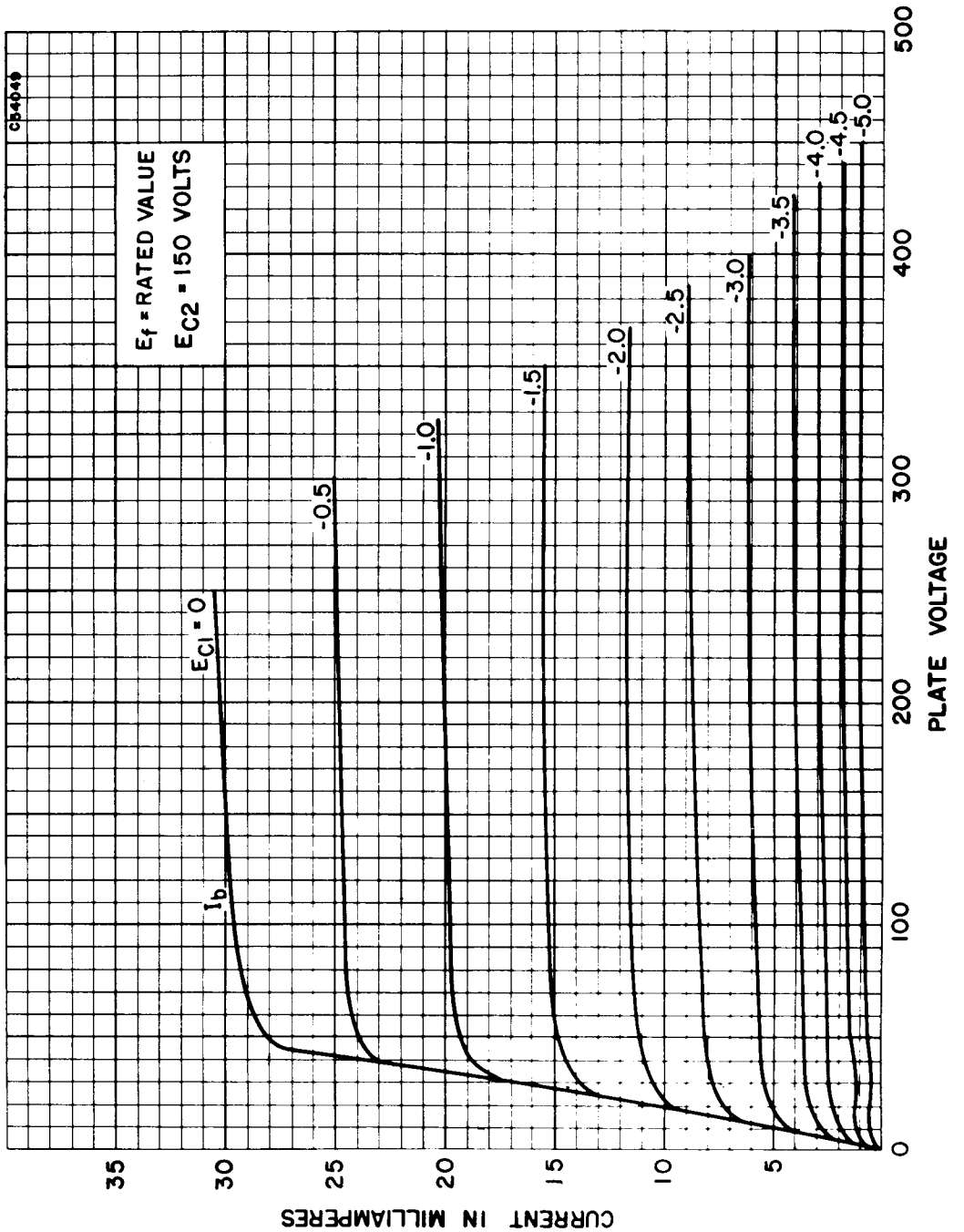
AVERAGE PLATE CHARACTERISTICS
TRIODE SECTION



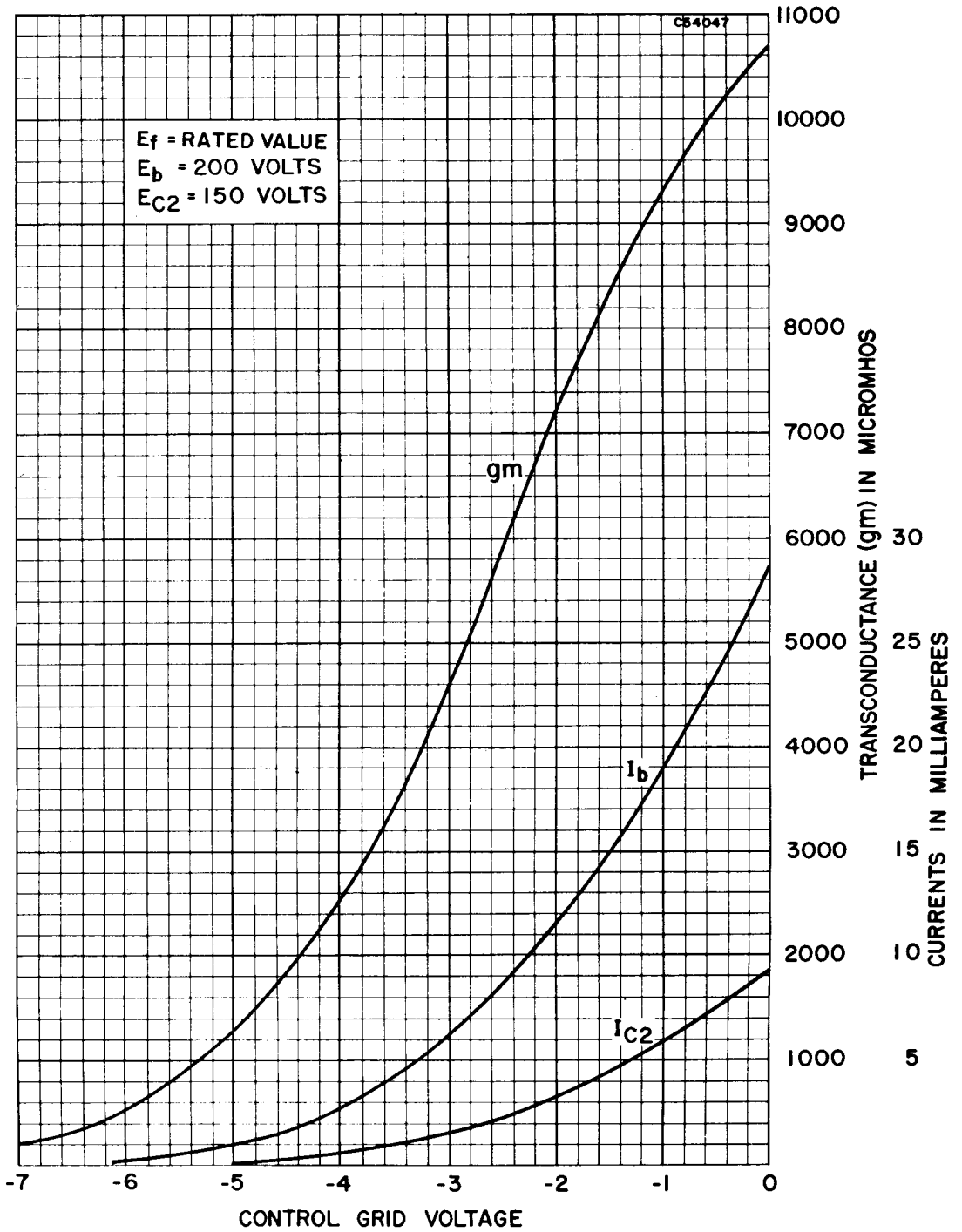
AVERAGE TRANSFER CHARACTERISTICS
TRIODE SECTION



AVERAGE PLATE CHARACTERISTICS
PENTODE SECTION



AVERAGE TRANSFER CHARACTERISTICS
PENTODE SECTION



RATING CURVE