

MECHANICAL DATA

Bulb	T-6 $\frac{1}{2}$
Base	E9-1, Small Button 9-Pin
Outline	6-3
Basing	9H
Cathode	Coated Unipotential
Mounting Position	
Preferred	Upright or with Plate Majors in a Vertical Position
Permissible	Any

ELECTRICAL DATA

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

	Section 1	Section 2
Grid to Plate	6.0	6.0 μf
Input: g to (h+k)	4.8	4.8 μf
Output: p to (h+k)	0.65	0.55 μf
Heater to Cathode	6.0	6.0 μf
Grid No. 1 to Grid No. 2		0.10 μf
Plate No. 1 to Plate No. 2		1.4 μf

HEATER CHARACTERISTICS

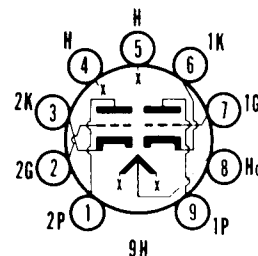
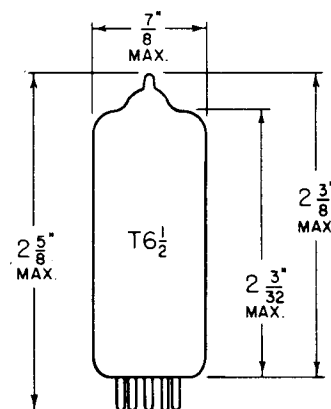
	Series	Parallel
Heater Voltage	12.6 $\pm$ 5%	6.3 $\pm$ 5% Volts
Heater Current	450	900 Ma
Heater Power	5.7	5.7 Watts
Maximum Heater-Cathode Voltage		
Heater Negative with Respect to Cathode		
Total DC and Peak		200 Volts
Heater Positive with Respect to Cathode ¹		
DC		100 Volts
Total DC and Peak		200 Volts

RATINGS (Absolute Maximum Values—Each Section)²

Average Plate Voltage ³	300 Volts	Max.
Peak Plate Voltage (Measured Between Plate and Cathode) ⁴	600 Volts	Max.
Grid Voltage		
Negative Bias Value DC	100 Volts	Max.
Positive Bias Value DC	1.0 Volt	Max.
Peak Negative Value ⁴	300 Volts	Max.
Peak Positive Value ⁴	30 Volts	Max.
Average Positive Grid Current ³	5.0 Ma	Max.
Peak Positive Grid Current ⁴	200 Ma	Max.
Average Plate Dissipation ³	4.5 Watts	Max.
Average Total Plate Dissipation (Both Sections) ³	8.0 Watts	Max.
Average Cathode Current ³	50 Ma	Max.
Peak Cathode Current ⁴	400 Ma	Max.
Grid Circuit Resistance		
Fixed Bias	0.1 Megohm	Max.
Cathode Bias	0.47 Megohm	Max.
Bulb Temperature (At hottest point on bulb)	160° C	Max.

QUICK REFERENCE DATA

The Sylvania Type 7044 is a high-perveance, medium-mu, double triode designed primarily for computer applications. The tube is characterized by high zero-bias plate current and exceptional freedom from the development of cathode interface.



SYLVANIA ELECTRIC
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RADIO TUBE DIVISION
EMPORIUM, PA.

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INITIAL CHARACTERISTICS (Each Section)⁵

Plate Voltage	120 Volts
Grid Voltage	-2 Volts
Plate Current	36 Ma
Transconductance	10,000 μ mhos
Amplification Factor	19
Plate Resistance	1900 Ohms
Grid Voltage for $I_b = 200 \mu$ a (approx.) at $E_b = 150V$	-12 Volts
Plate Current (Instantaneous Value) at $E_b = 90 Vdc$; E_c adjusted for $I_c = +250 \mu$ a	50 Ma

INITIAL CHARACTERISTICS LIMITS (Range Values for Equipment Design)⁵

	Min.	Max.
Heater Current		
$E_f = 12.6$ Volts	410	490 Ma
Plate Current		
$E_f = 12.6$ Volts; $E_b = 90$ Volts; E_c		
Adjusted for $I_c = 250 \mu$ a	41	62 Ma
Plate Current		
$E_f = 12.6$ Volts; $E_b = 120$ Volts; $E_c = -2$ Volts	26	45 Ma
Cutoff Plate Current		
$E_f = 12.6$ Volts; $E_b = 150$ Volts; $E_c = -14$ Volts	—	200 μ a
Reverse Grid Current		
$E_f = 12.6$ Volts; $E_b = 120$ Volts; $E_c = -2$ Volts	—	1.5 μ a
Heater-Cathode Leakage		
$E_f = 12.6$ Volts and $E_{hk} = \pm 100$ Volts	—	30 μ a
Minimum Interelectrode Resistance (Except Heater-Cathode)		
Grid to All: Measured with 300 Volts, Grid Negative	50	— Megohms
Plate to All: Measured with 500 Volts, Plate Negative	50	— Megohms
Intermittent Leakage ⁶		

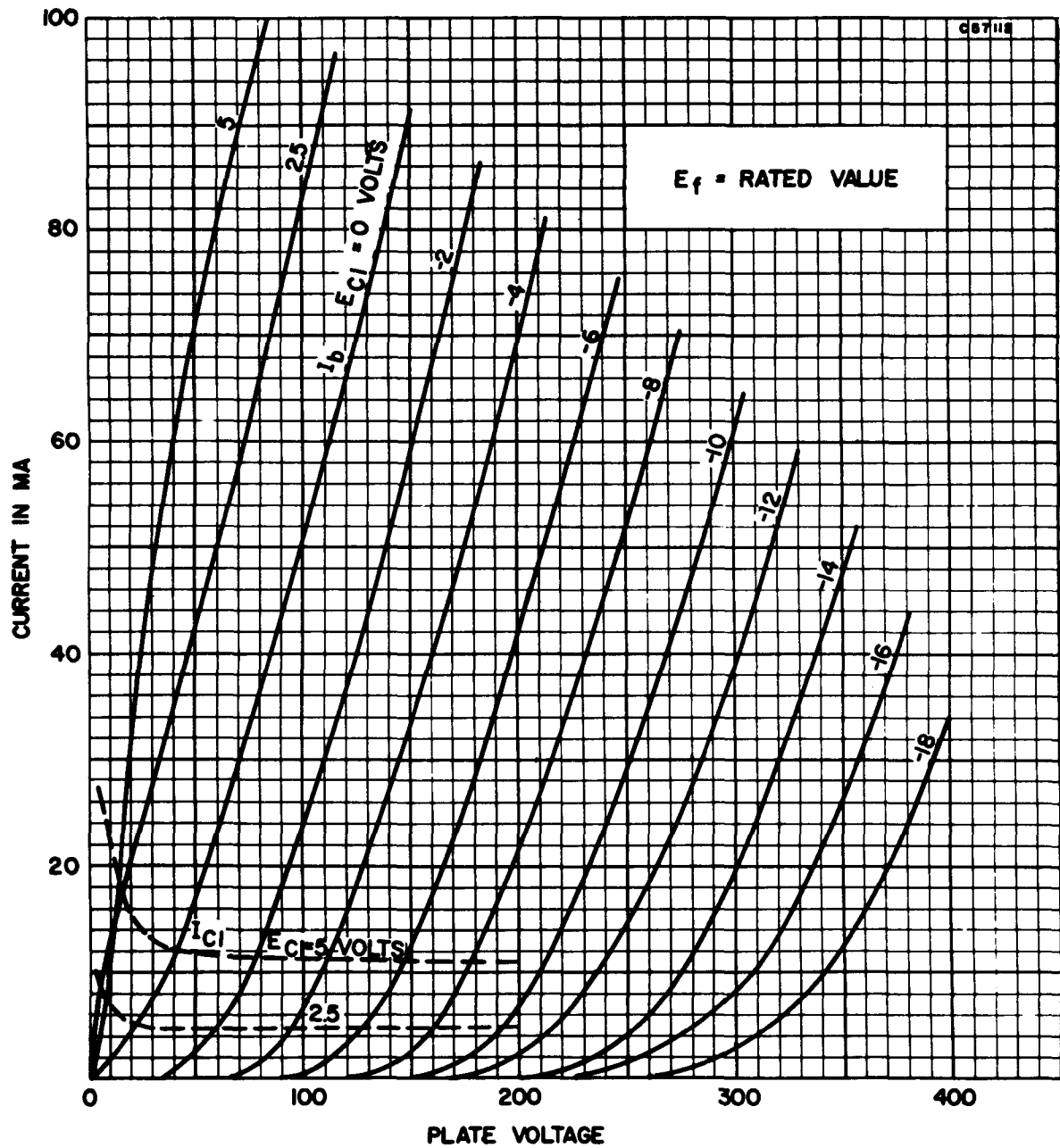
TIME DEPENDENT CHARACTERISTIC LIMITS⁵

	Min.	Max.
Cathode Interface		
$E_f = 12.6$ Volts; $E_b = 85$ Volts;		
E_c Adjusted for $I_b = 2.0$ Ma	—	25 Ohms
Number of Heater Cycles ⁷	2000	— Cycles

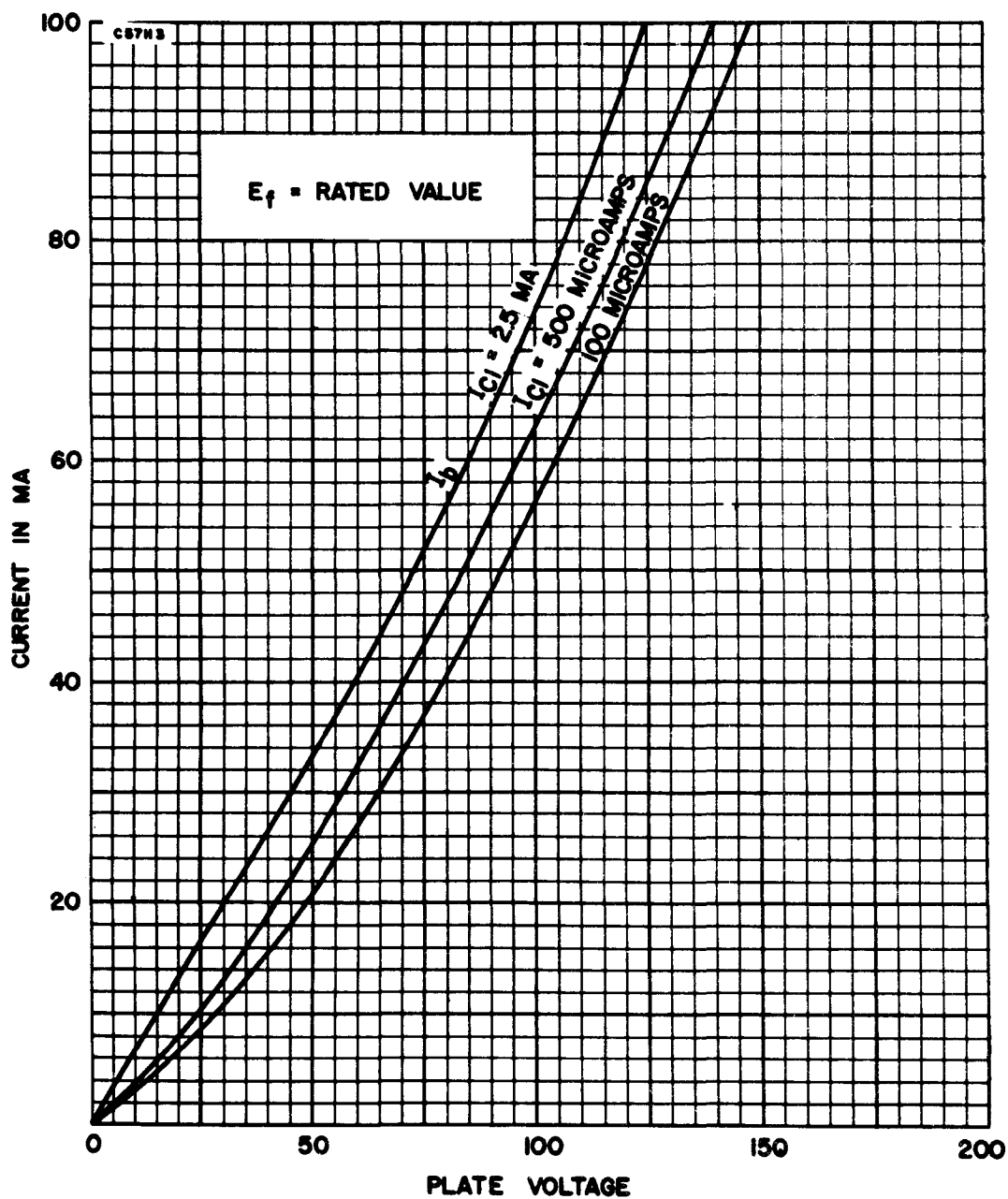
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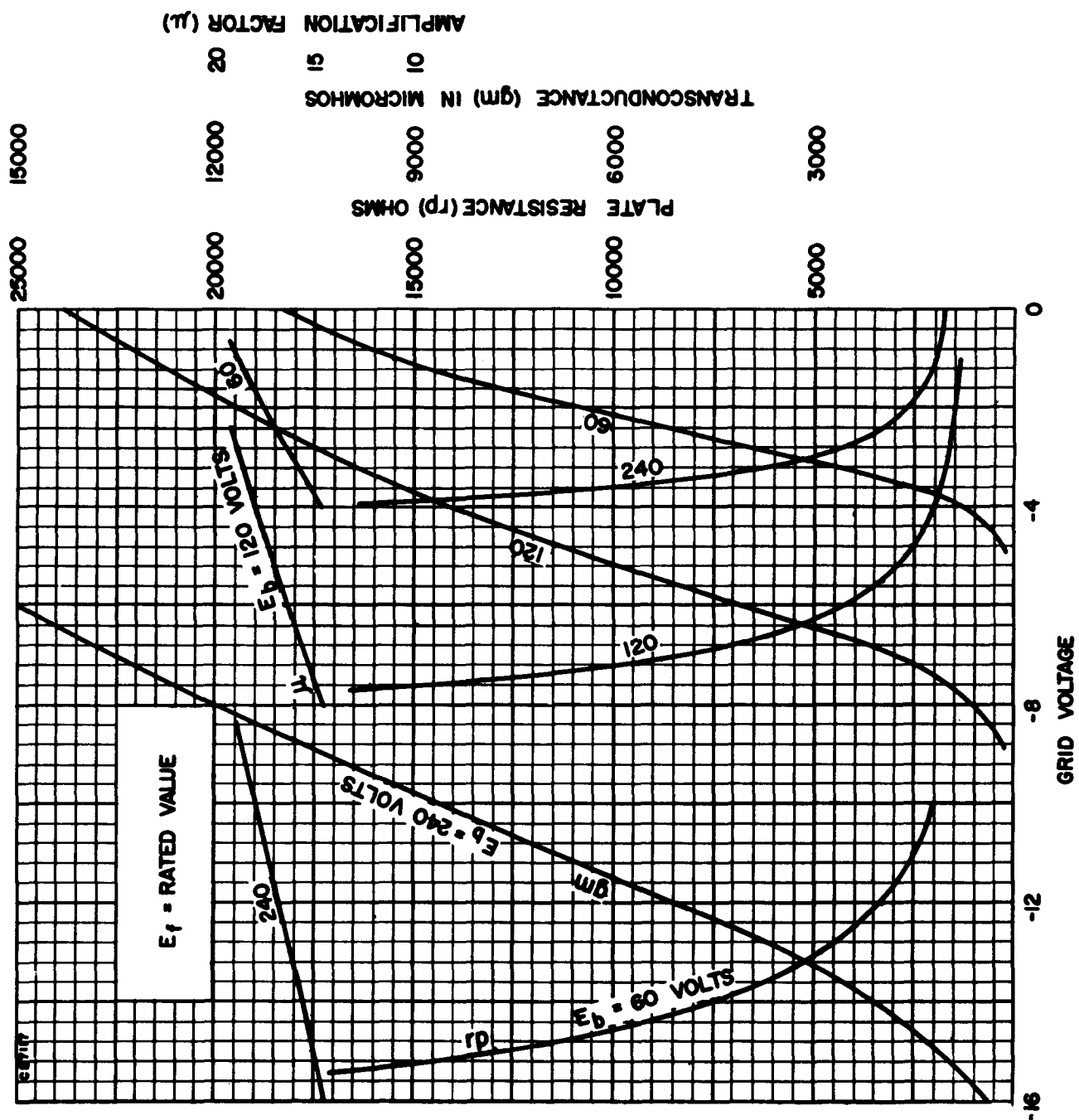
1. Heater positive not recommended for reliable operation.
2. Pulse terms in accordance with IRE Standards on Pulses: Definitions of Terms, Parts I and II, 1951, 1952.
3. Averaging time 1 millisecond unless otherwise specified.
4. A rectangular pulse is used of 10 μ sec width, 1% duty factor ($\pm 0.1\%$) and 1 kc repetition rate. The rise time shall be less than 1 μ sec and the fall time shall be less than 2 μ sec. Overshoot shall be less than 5% and droop shall be less than 10%.
5. Elements of the section not under test shall be grounded.
6. Intermittent leakage shall be measured with equipment capable of detecting resistances as follows:
 less than 1,000 ohms for 2 microseconds.
 less than 100,000 ohms for 15 microseconds.
 less than 2.5 megohms for 1 millisecond.
 The acceleration applied to the tube should be an approximate half sinusoid of 50 to 100 G for a base duration of approximately 500 Microseconds.
7. One cycle consists of operating the heater on for one minute, with $E_f = 15.0$ Volts, and off for four minutes. $E_{hk} = 140 V_{ac}$, is applied continuously. The no load to steady state full load regulation of the heater voltage supply shall be no more than 3.0 percent.

AVERAGE PLATE CHARACTERISTICS



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