



SYLVANIA

engineering data service

7199

MECHANICAL DATA

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

ELECTRICAL DATA

HEATER CHARACTERISTICS

Heater Voltage	6.3 Volts
Heater Current	450 Ma
Heater-Cathode Voltage (Design Maximum Values) ¹	
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)

Triode Section	
Grid to Plate	2.0 $\mu\mu\text{f}$
Input: g to (h + k)	2.3 $\mu\mu\text{f}$
Output: p to (h + k)	0.3 $\mu\mu\text{f}$
Pentode Section	
Grid No. 1 to Plate	.06 $\mu\mu\text{f}$ Max.
Input: g1 to (h+k+g2+g3+Is)	5.0 $\mu\mu\text{f}$
Output: p to (h+k+g2+g3+Is)	2.0 $\mu\mu\text{f}$

RATINGS (Design Maximum Values)¹

	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 Grid No. 1 Voltage	0	0 Volts	Max.
Plate Dissipation	2.4	3.0 Watts	Max.
Grid No. 2 Dissipation	—	0.6 Watt	Max.
Grid Circuit Resistance			
Fixed Bias	0.5	0.25 Megohm	Max.
Cathode Bias	1.0	1.0 Megohm	Max.

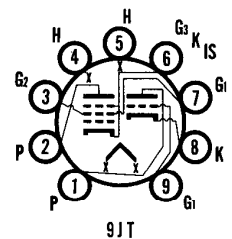
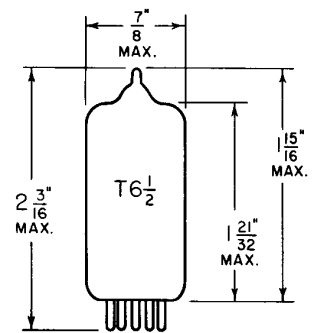
CHARACTERISTICS AND TYPICAL OPERATION

	Triode Section	Pentode Section	
Plate Voltage	215	100 220 Volts	
Grid No. 2 Voltage	—	50 130 Volts	
Grid No. 1 Voltage	-8.5	— Volts	
Cathode Bias Resistor	—	1000 62 Ohms	

QUICK REFERENCE DATA

The Sylvania Type 7199 is a triode-pentode designed primarily for High Fidelity audio applications. The pentode section is particularly suited to preamplifier service while the triode section is intended for use as a phase inverter.

Type 7199 features exceptionally low hum and noise output.



SYLVANIA ELECTRONIC TUBES

A Division of Sylvania Electric Products, Inc.

RECEIVING TUBE OPERATIONS EMPORIUM, PENNSYLVANIA

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CHARACTERISTICS AND TYPICAL OPERATION (Cont'd)

	Triode Section	Pentode Section	
Plate Current	9.0	1.1	12.5 Ma
Grid No. 2 Current	—	0.35	3.5 Ma
Transconductance	2100	1500	7000 μ mhos
Amplification Factor	17	—	—
Plate Resistance0081	1.0	0.4 Megohms
Ec1 for Ib = 10 μ a (Approx.)	-40	-4	— Volts

EQUIVALENT NOISE AND HUM VOLTAGE (Referenced to Grid)

	Triode Section ²	Pentode Section ³
Average Value	10	35 μ Volts rms
Maximum Value	150	100 μ Volts rms

NOTES:

1. Design-Maximum Ratings are limiting values of operating and environmental conditions applicable to a bogey electron device of a specified type as defined by its published data, and should not be exceeded under the worst probable conditions.

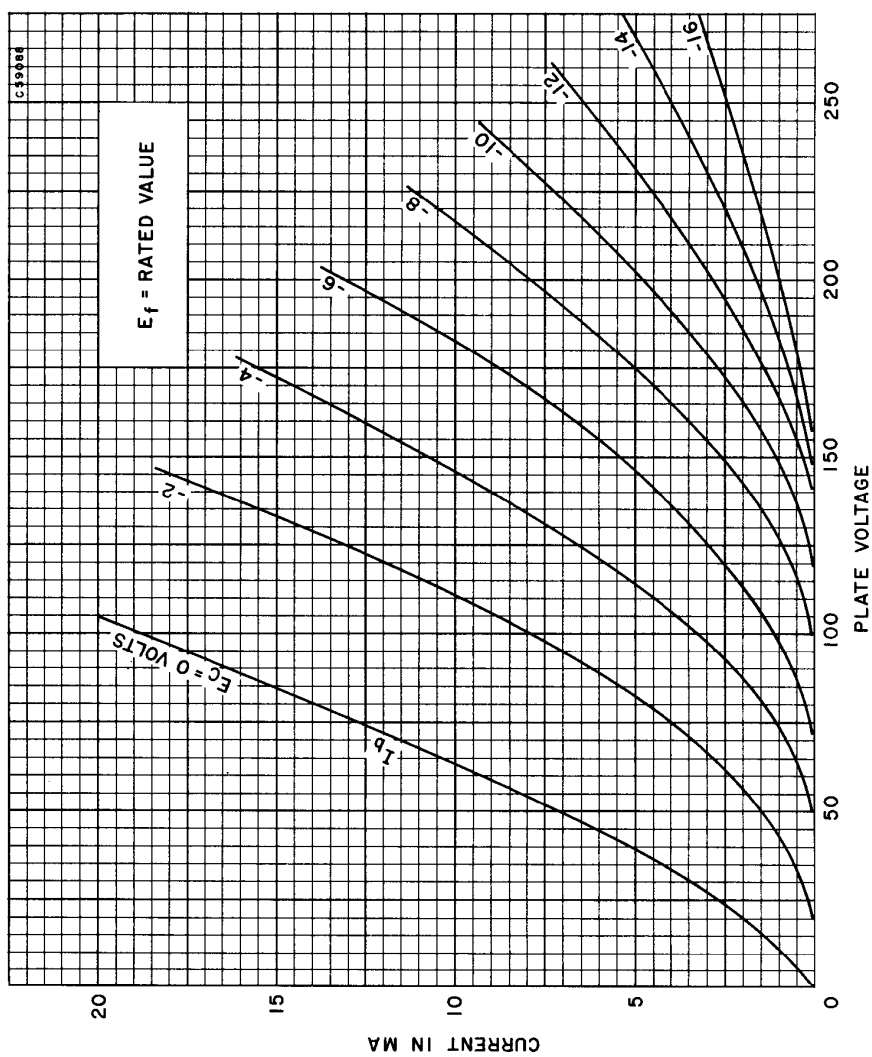
The device manufacturer chooses these values to provide acceptable serviceability of the device, taking responsibility for the effects of changes in operating conditions due to variations in device characteristics.

The equipment manufacturer should design so that initially and throughout life no design-maximum value for the intended service is exceeded with a bogey device under the worst probable operating conditions with respect to supply-voltage variation, equipment component variation, equipment control adjustment, load variation, signal variation, and environmental conditions.

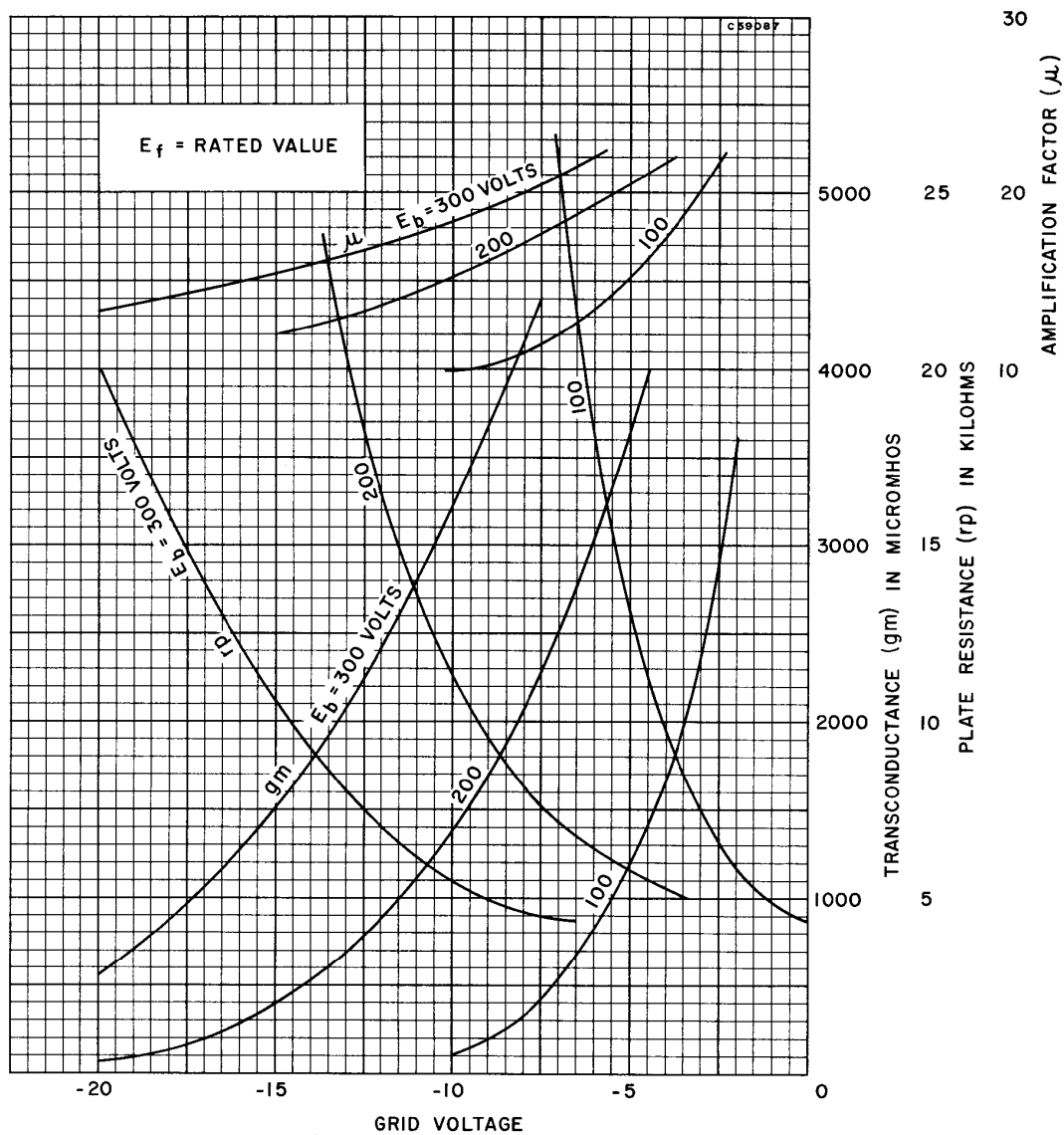
2. Measured under the following conditions: Ef = 6.3 Vac; center-tap of heater transformer grounded; Ebb = 250 Vdc; RL = 0.1 Megohm; Rk = 1500 ohms; Rg = 50,000 ohms; F = 25 to 10,000 cps.

3. Measured under the following conditions: Ef = 6.3 Vac; Center-tap of heater transformer grounded; Ebb = 250 Vdc; RL = 0.1 Megohm; Ecc2 = 250 Vdc; Rg2 = 330,000 ohms; Cg2 = 0.22 μ f; Rk = 1200 ohms; Rg1 = 50,000 ohms; F = 25 to 10,000 cps.

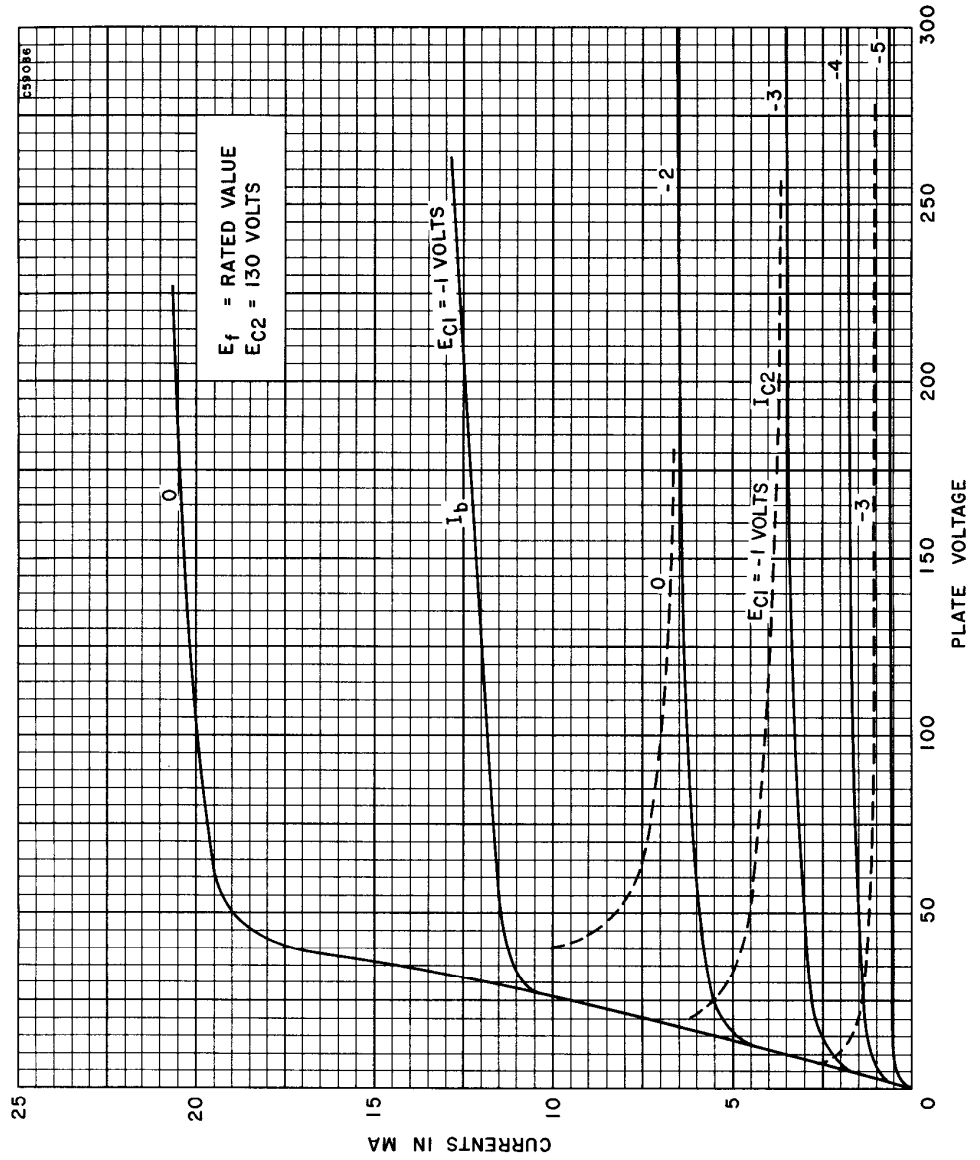
AVERAGE PLATE CHARACTERISTICS
(Triode Section)



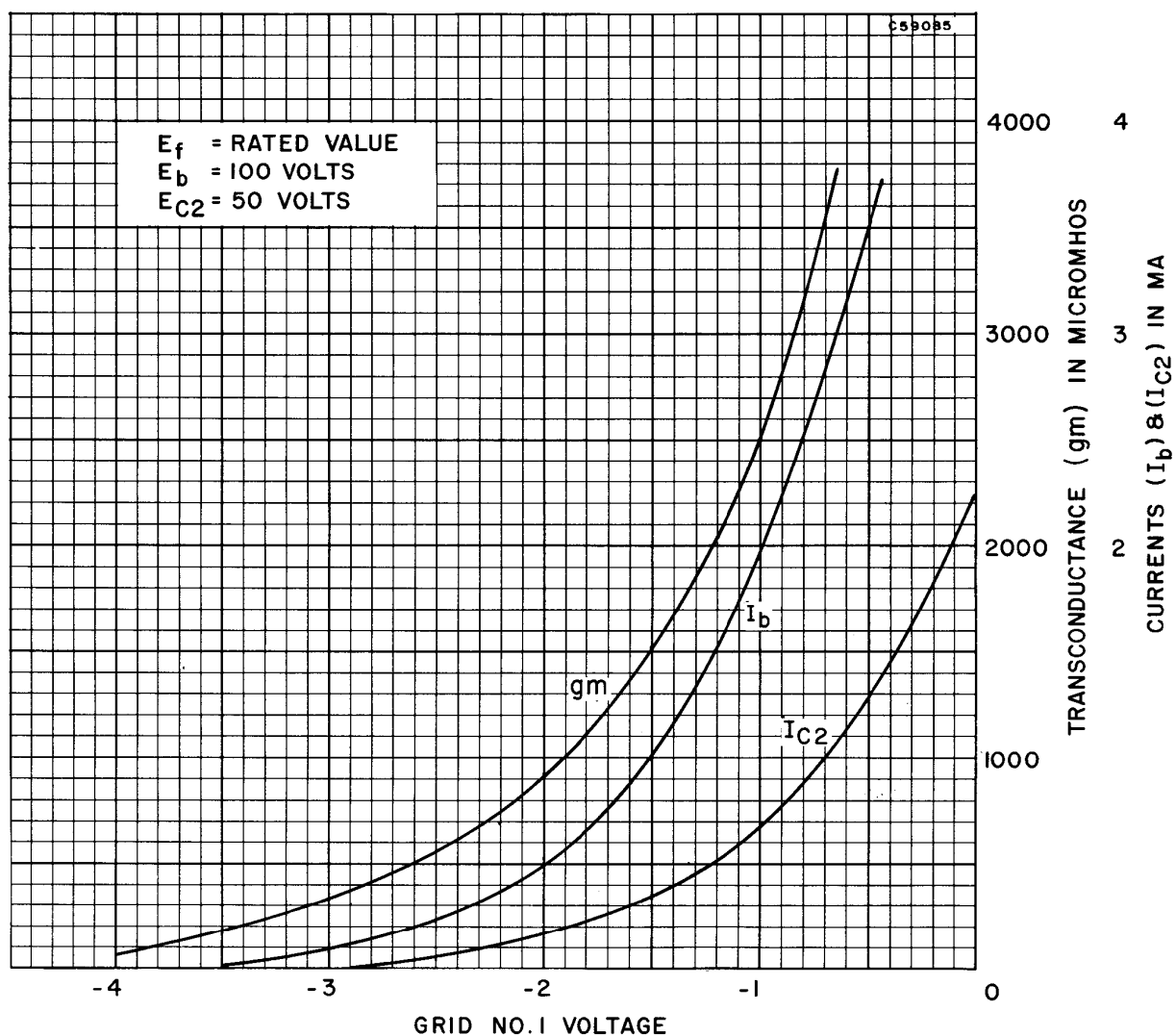
AVERAGE TRANSFER CHARACTERISTICS
 (Triode Section)



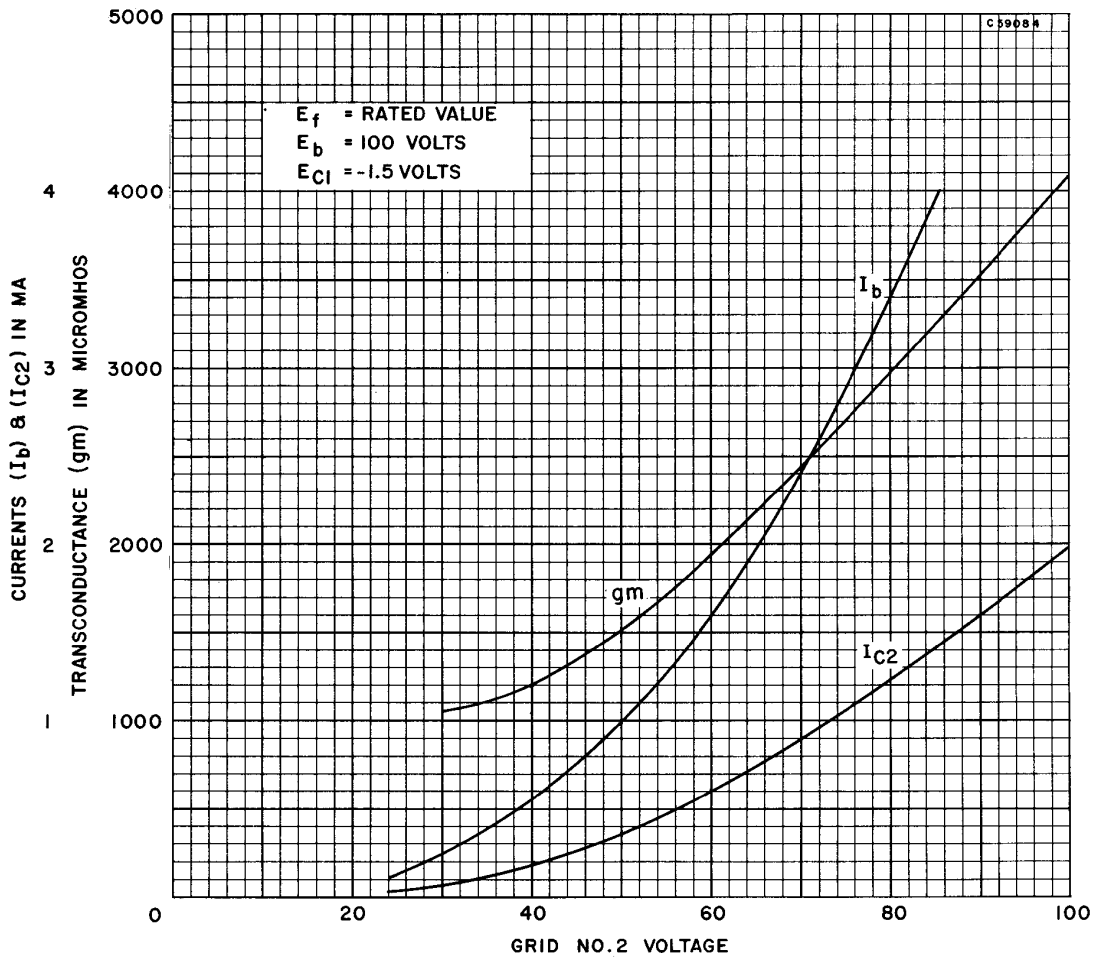
AVERAGE PLATE CHARACTERISTICS
(Pentode Section)



AVERAGE TRANSFER CHARACTERISTICS
 (Pentode Section)



AVERAGE TRANSFER CHARACTERISTICS
(Pentode Section)



RATING CHART

