

MECHANICAL DATA

Bulb	T-12
Base	Short Shell Octal 6-Pin
Outline	See Drawing
Basing	Modified 7S
Mounting Position	Any
Cathode	Coated Unipotential

ELECTRICAL DATA

HEATER CHARACTERISTICS

Heater Voltage	6.3 Volts
Heater Current	1600 Ma
Maximum Heater-Cathode Voltage	
Heater Negative with Respect to Cathode	
Total DC and Peak	200 Volts
Heater Positive with Respect to Cathode	
DC	100 Volts
Total DC and Peak	200 Volts

DIRECT INTERELECTRODE CAPACITANCES

Grid No. 1 to Plate	0.9 pf
Input	22 pf
Output	9.0 pf

RATINGS (Design Maximum Values)

Plate Voltage	660 Volts	Max.
Grid No. 2 Voltage	500 Volts	Max.
Plate Dissipation ¹	35 Watts	Max.
Grid No. 2 Dissipation ²	5 Watts	Max.
Cathode Current	200 Ma	Max.
Grid No. 1 Circuit Resistance		
Fixed Bias	0.1 Megohm	Max.
Cathode Bias	0.25 Megohms	Max.

AVERAGE CHARACTERISTICS

Plate Voltage	300 Volts
Grid No. 2 Voltage	300 Volts
Grid No. 1 Voltage	-12 Volts
Plate Current	100 Ma
Grid No. 2 Current	5.5 Ma
Transconductance	23,000 μ mhos
Plate Resistance	16,000 Ohms
Amplification Factor (Triode Connected)	16.5
Grid Voltage for $I_b = 1$ Ma	-37 Volts

TYPICAL OPERATION

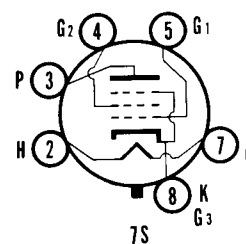
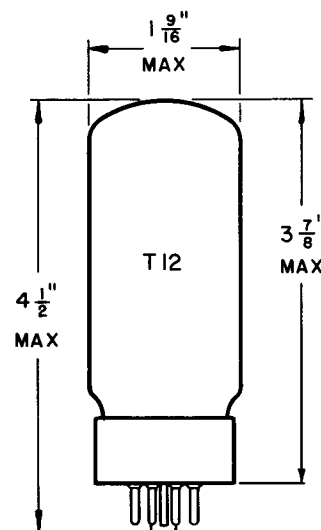
Class AB1 Ultra-Linear Push-Pull³

**Values for
2 Tubes**

Plate Supply Voltage	445 Volts
Grid No. 1 Voltage	-25 Volts
Peak AF Grid to Grid Voltage	45 Volts
Zero Signal Plate Current	146 Ma
Maximum Signal Plate Current	314 Ma
Effective Load (Plate to Plate)	3500 Ohms
Total Harmonic Distortion	2.5 Percent
Maximum Signal Power Output	70 Watts

QUICK REFERENCE DATA

The Sylvania Type 8417 is a beam-power pentode featuring a T-12 bulb and an octal 6-pin base. It is intended for service in high power, high-fidelity audio equipments and is capable of 100 watts output in push-pull circuitry. It also finds application as a regulator tube.



**SYLVANIA ELECTRIC
PRODUCTS INC.**

**Electronic Components Group
ELECTRONIC TUBE DIVISION
EMPORIUM, PA.**

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PAGE 1 OF 4

File Under

RECEIVING TUBES

TYPICAL OPERATION (Cont'd)

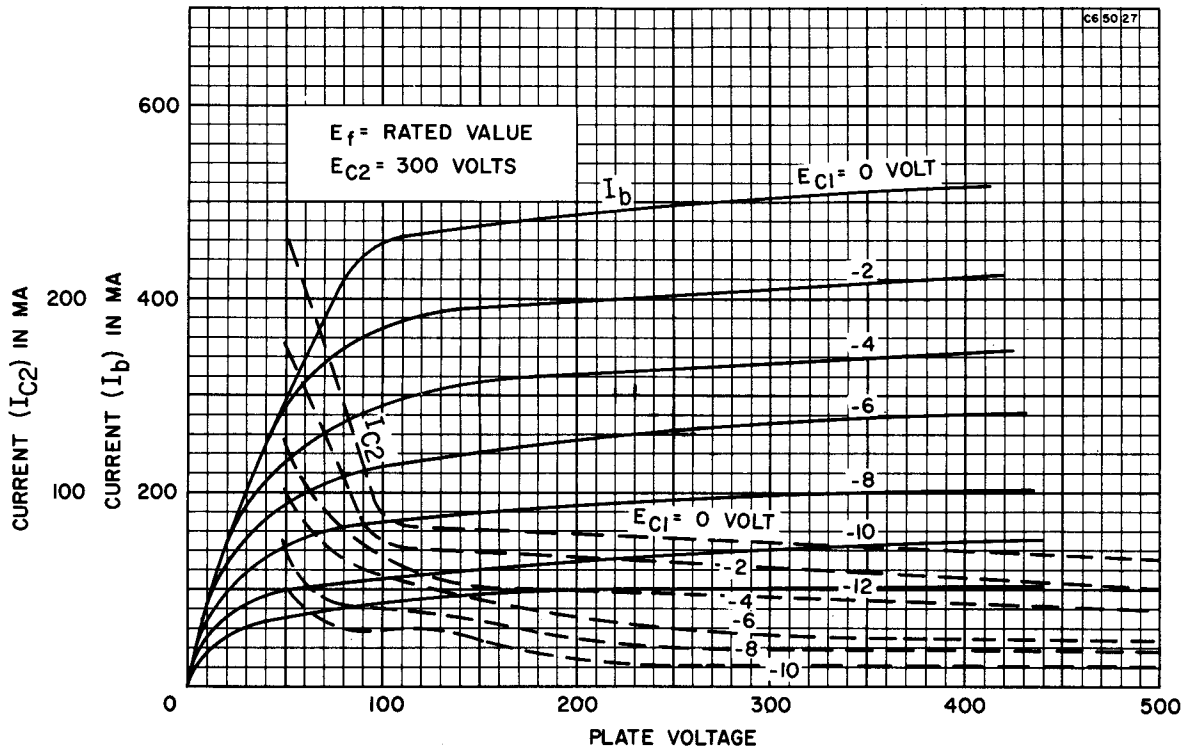
Class AB1 Pentode Connected

	Values for 2 Tubes	
Plate Supply Voltage	400	560 Volts
Grid No. 2 Supply Voltage	275	300 Volts
Grid No. 1 Voltage	-13	-15 Volts
Peak AF Grid to Grid Voltage	24	29 Volts
Zero Signal Plate Current	150	124 Ma
Maximum Signal Plate Current	294	290 Ma
Zero Signal Screen Current	4.4	3.6 Ma
Maximum Signal Screen Current	34	39 Ma
Effective Load (Plate to Plate)	2800	4200 Ohms
Total Harmonic Distortion	2.5	2.5 Percent
Maximum Signal Power Output	65	100 Watts

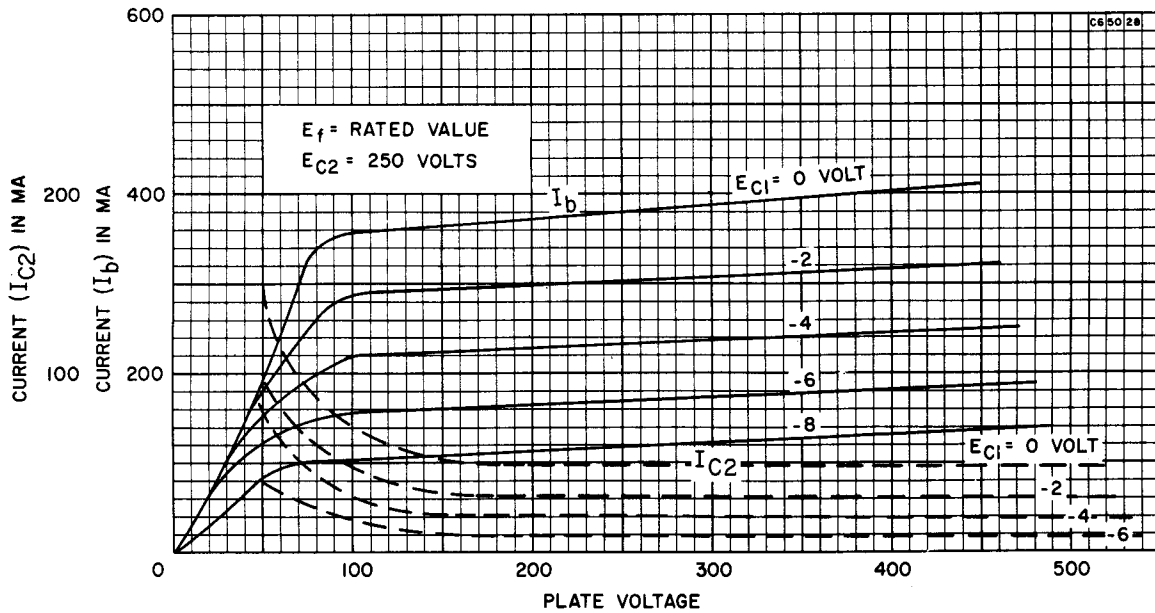
NOTES:

1. *It is essential to maintain free circulation of air around the tube for proper cooling.*
2. *Grid No. 2 dissipation may reach 8 watts during intervals of maximum speech and music signals.*
3. *Screen tapped at 40 % of primary turns. Plate current includes screen current.*

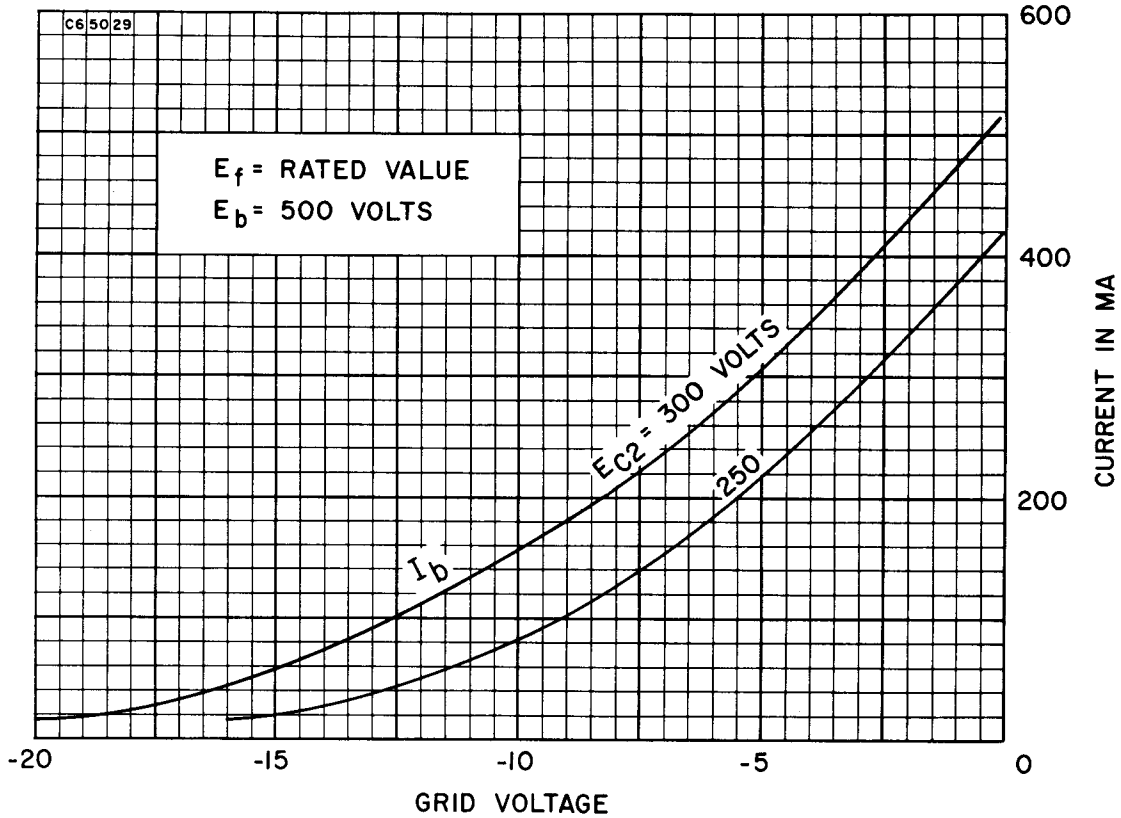
AVERAGE PLATE CHARACTERISTICS



AVERAGE PLATE CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS



AVERAGE PLATE CHARACTERISTICS

(Triode Connected)

