

MECHANICAL DATA

Bulb	T-9
Base	Intermediate Shell Octal 7-Pin (B7-233 or B8-142)
Outline	9-11
Basing	8KG
Cathode	Coated Unipotential
Mounting Position	Any

ELECTRICAL DATA

HEATER CHARACTERISTICS

Heater Voltage	6.3 Volts
Heater Current	0.8 Amperes
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 (Unshielded)

Grid No. 1 to Plate	0.25 $\mu\mu\text{f}$
Input	10 $\mu\mu\text{f}$
Output	5.0 $\mu\mu\text{f}$

RATINGS (Design Maximum Values)

Plate Voltage	550 Volts
Grid No. 2 Voltage	440 Volts
Plate Dissipation	19 Watts
Grid No. 2 Dissipation ¹	3.3 Watts
Cathode Current	85 Ma
Grid No. 1 Circuit Resistance	
Fixed Bias	0.3 Megohms
Self Bias	1.0 Megohms

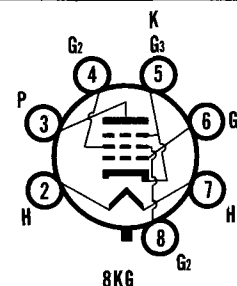
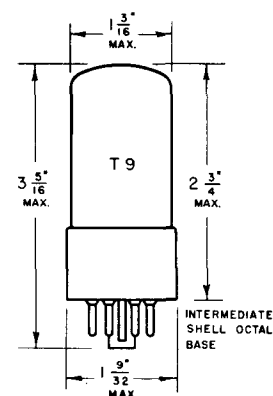
CHARACTERISTICS AND TYPICAL OPERATION

	Pentode Operation S.T. — Class A1 Amp	Ultra-Linear Operation ² Class AB1 — Push-Pull	
Plate Voltage	300	400	425 Volts
Grid No. 2 Voltage	300	Note 2	Note 2 Volts
Grid No. 1 Voltage	-10	-20.5	— Volts
Cathode Resistor	—	—	185 Ohms
Peak AF Grid Voltage	10	20.5	21 Volts
Zero Signal Plate Current	60	80	88 Ma
Max. Signal Plate Current	75	138	104 Ma
Zero Signal Grid No. 2 Current	8	11.5	13 Ma
Max. Signal Grid No. 2 Current	15	26.4	17.5 Ma
Transconductance	10.2K	—	— μmhos
Plate Resistance (Approx.)	29K	—	— Ohms
Load Resistance	3K	—	— Ohms
Load Resistance (PL to PL)	—	6600	6600 Ohms
Power Output	11	32	26 Watts
Total Harmonic Distortion	13	1.0	2 Percent

QUICK REFERENCE DATA

Sylvania Type 7591 is a power output tube, contained in a T-9 envelope, capable of furnishing 43 watts of power output at very low distortion when operated as a Push-Pull Class AB1 Amplifier.

In ultra-linear operation a power output of 32 watts is available with a 400 volt plate voltage.



SYLVANIA ELECTRONIC TUBES

A Division of
Sylvania Electric Products Inc.

RECEIVING TUBE OPERATIONS EMPORIUM, PA.

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File Under
RECEIVING TUBES

CHARACTERISTICS AND TYPICAL OPERATION (Con't.)

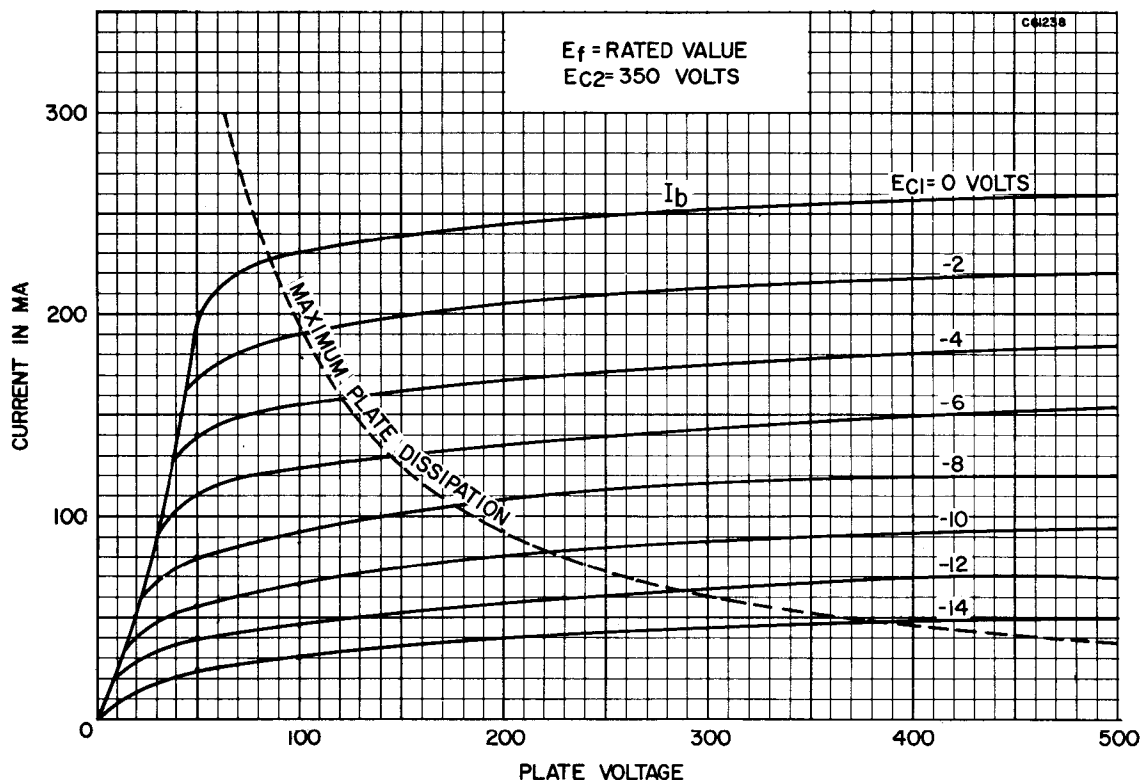
Pentode Operation (Class AB1 Push-Pull Amp.)

Plate Voltage	300	350	400	450	450	450 Volts
Grid No. 2 Voltage	300	350	350	350	400	400 Volts
Grid No. 1 Voltage	-12.5	-15.5	-16	-16.5	-21	— Volts
Cathode Resistor	—	—	—	—	—	200 Ohms
Peak AF Grid to Grid Voltage . . .	25	31	32	33	42	28 Volts
Zero Signal Plate Current	86	92	85	77	66	82 Ma
Max. Signal Plate Current	116	130	143	153	144	94 Ma
Zero Signal Grid No. 2 Current . .	12.6	13	11	9.6	9.4	11.5 Ma
Max. Signal Grid No. 2 Current . .	26	28.6	27	27	30	22 Ma
Load Resistance (PL to PL) . . .	6600	6600	6600	6600	6600	9000 Ohms
Power Output	23	30	37	43	45	28 Watts
Total Harmonic Distortion	2.5	2	1.5	1.5	1.5	2 Percent

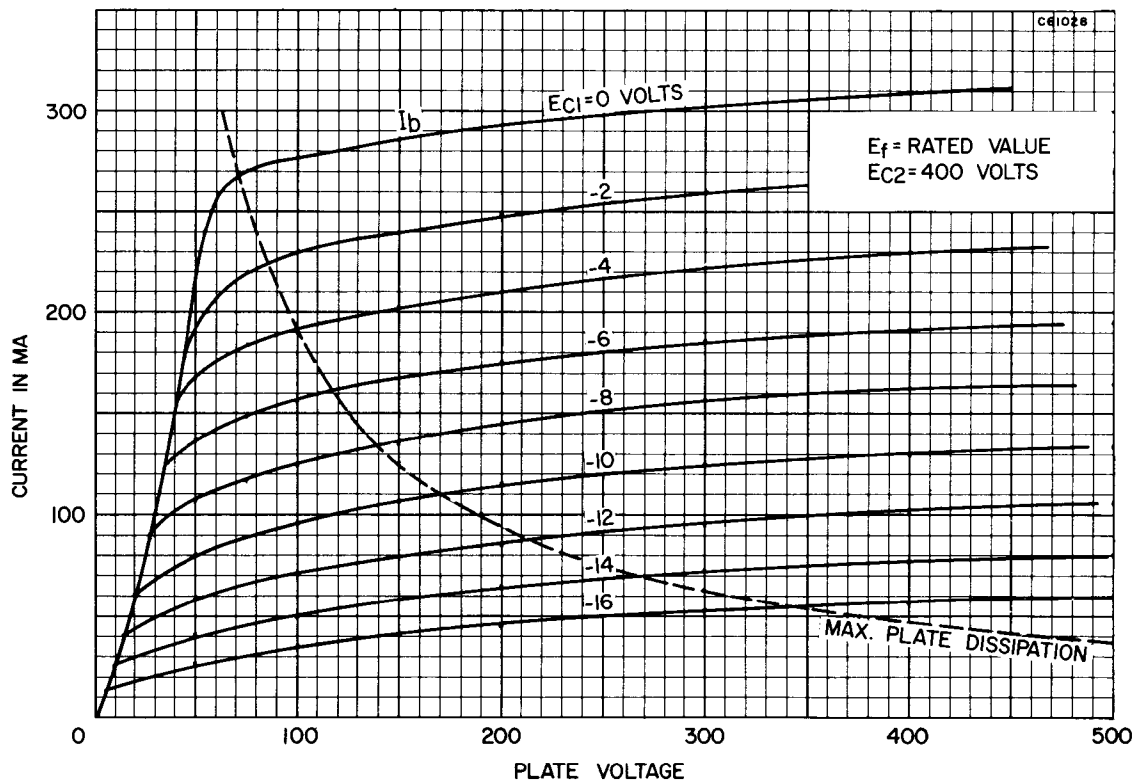
NOTES

1. Grid No. 2 Dissipation may be permitted to reach 6 watts during the periods of maximum input of speech and music signals. For efficient operation of Grid No. 2, the two Grid No. 2 connections, Pins 4 and 8, should be externally tied together.
2. Grid No. 2 tapped at 40% of the primary winding.

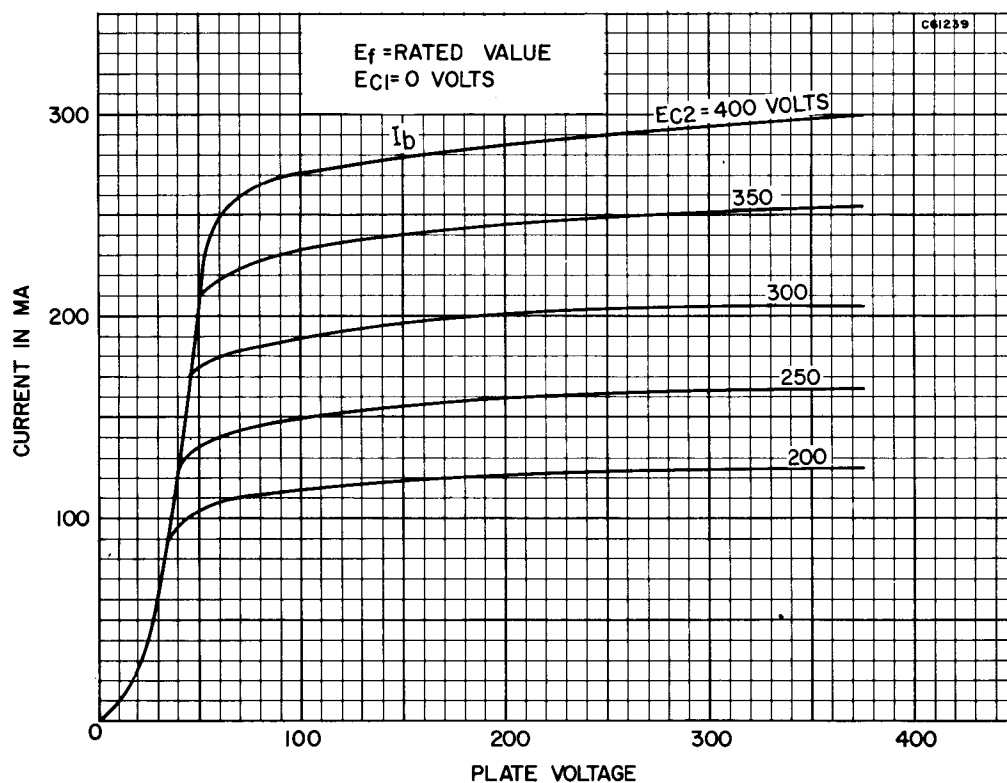
AVERAGE PLATE CHARACTERISTICS



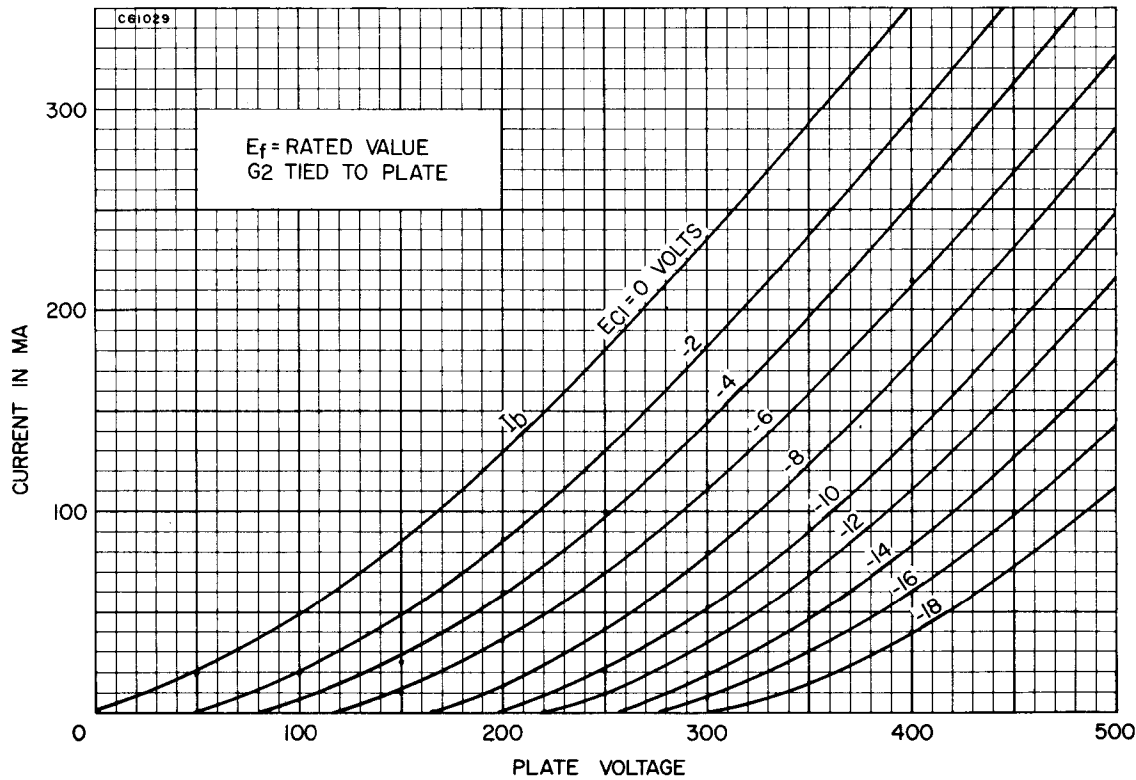
AVERAGE PLATE CHARACTERISTICS



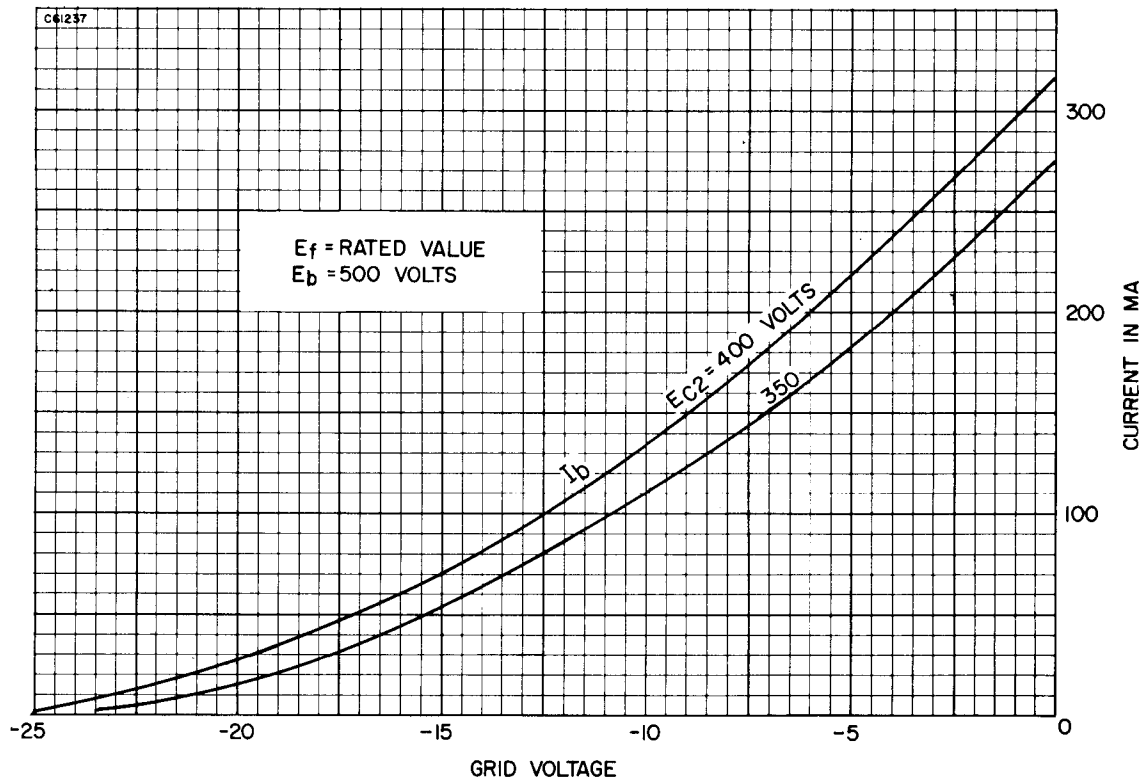
AVERAGE PLATE CHARACTERISTICS



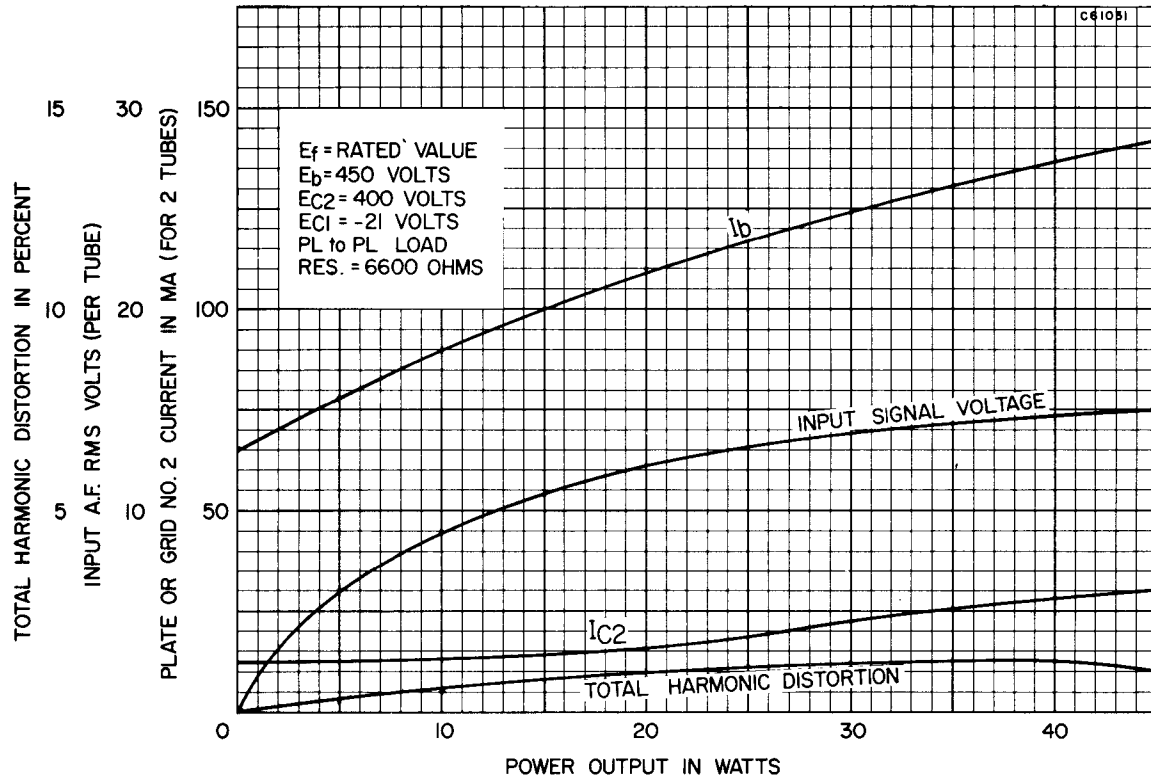
AVERAGE PLATE CHARACTERISTICS
(Triode Connected)



AVERAGE TRANSFER CHARACTERISTICS



OPERATIONAL CHARACTERISTICS



OPERATIONAL CHARACTERISTICS (Ultra-Linear Operation)

