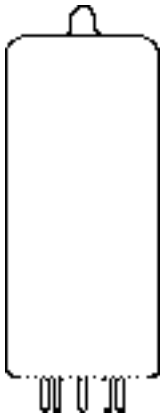


EL84
Power Pentode

The Penta Laboratories EL84 is a power amplifier pentode designed for use in the audio frequency power output stage of television and radio receivers and in high fidelity amplifiers.

Electrical Characteristics

Cathode	Coated, Uni-potential	
Heater Voltage	6.3	Volts
Heater Current	0.76	Amps
Heater Warm up time, minimum	15	sec
Interelectrode Capacitances		
Anode to Grid 1	0.7	pf
Anode to all except Grid 1	6.0	pf
Grid 1 to all except Anode	11	pf
Grid 1 to Heater	0.25	pf

Mechanical Characteristics

Overall Height, max	78.5	mm
Seated Height, max	71.4	mm
Diameter, max	22.2	mm
Base	Noval	
Socket	PSK9CCM	

Revised 01/04/00

P E N T A L A B O R A T O R I E S

9740 COZYCROFT AVENUE * CHATSWORTH * CALIFORNIA 91311

(800) 421-4219 * (818) 882-3872 * FAX: (818) 882-3968

Maximum Ratings

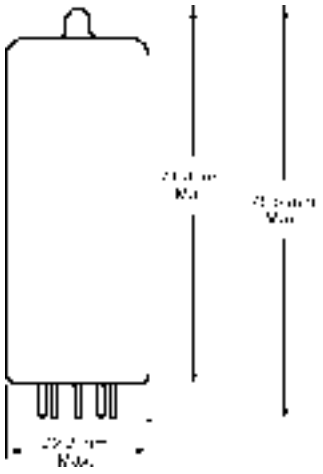
Plate Voltage	300	Volts
Plate Dissipation	12	Watts
Screen Grid Voltage	300	Volts
Screen Grid Dissipation	2	Watts
D.C. Cathode Current	65	mA
Heater - Cathode Voltage		
Heater Positive with Respect to Cathode	100	Volts
Heater Negative with Respect to Cathode	100	Volts
Grid 1 Circuit Resistance		
For Fixed Bias	0.3	M Ω
For Cathode Bias	1	M Ω

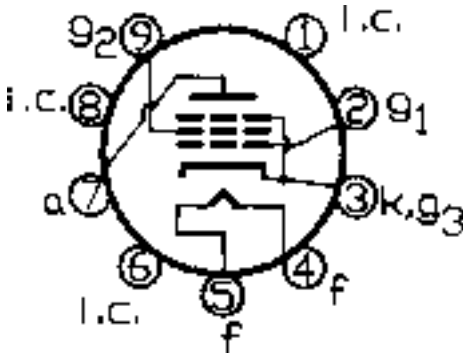
Typical Operating Conditions and Characteristics

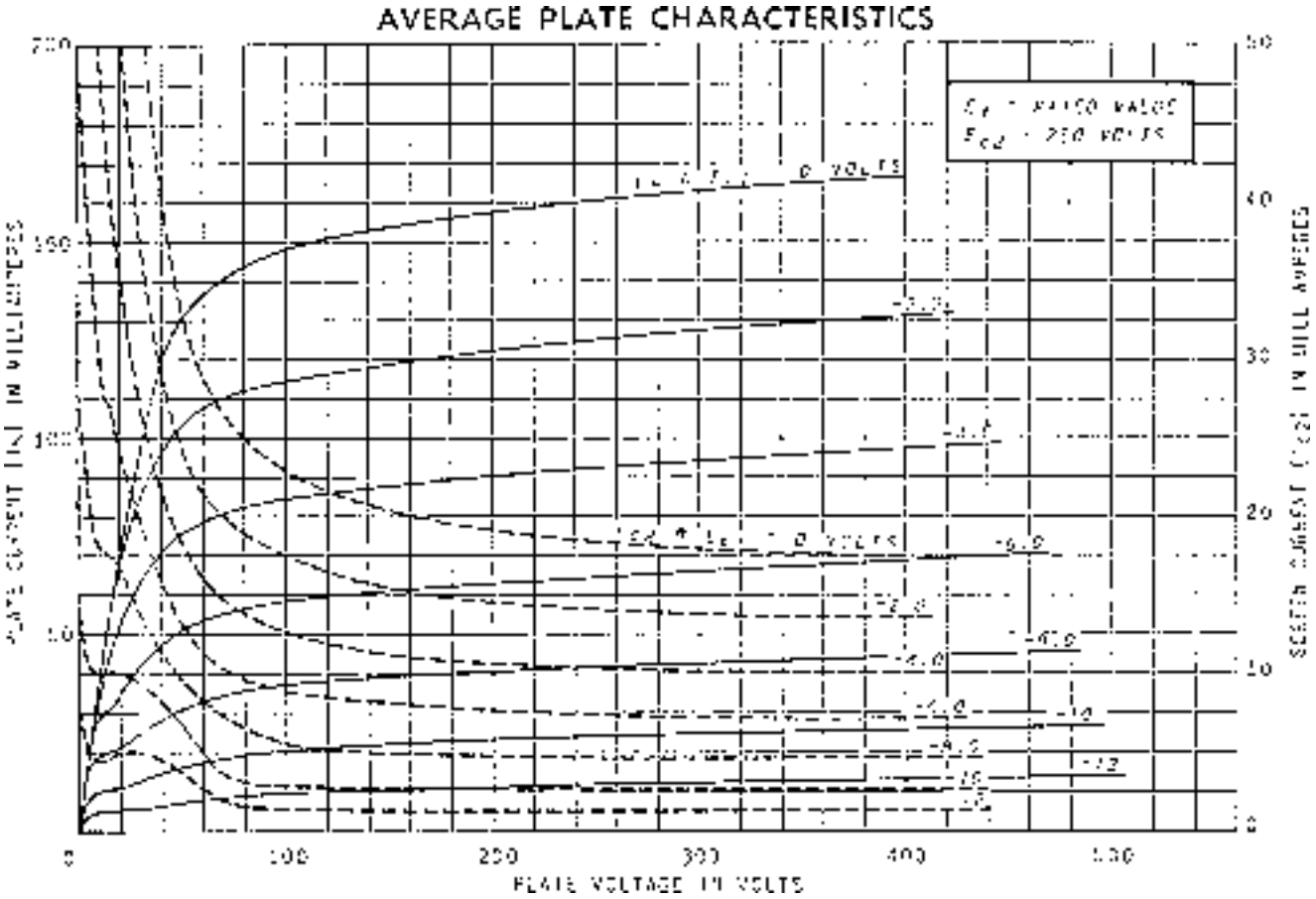
Plate Voltage	250	Volts
Screen Grid Voltage	250	Volts
Grid 1 Voltage (bias)	-7.3	Volts
Plate Resistance (approx)	40	k Ω
Transconductance	11,300	μmhos
Plate Current	48	mA
Screen Grid Current	5.5	mA
Amplification Factor (Grid 1 to Screen Grid)	19.5	

Class A_1 Amplifier

Plate Voltage	250	Volts
Screen Grid Voltage	250	Volts
Grid 1 Voltage (bias)	-7.3	Volts
Peak AF Grid 1 Voltage	6.1	Volts
Zero Signal Plate Current	48	mA
Maximum Signal Plate Current	49.5	mA
Zero Signal Screen Grid Current	5.5	mA
Maximum Signal Screen Grid Current	10.8	mA
Load Resistanace	5200	Ohms
Total Harmonic Distortion (approx)	10	%
Maximum Signal Power Output	5.7	Watts




g2
9
1
I.C.
I.C.
8
2
g1
a
7
3
k,g3
6
4
f
I.C.
5
f


AVERAGE PLATE CHARACTERISTICS
PLATE CURRENT (Ib) IN MILLIAMPERES
SCREEN CURRENT (Ic2) IN MILLIAMPERES
PLATE VOLTAGE IN VOLTS
0
100
200
300
400
500