

LINEAR LOW-MU TRIODE TYPE 7685

The 7685 is a low-mu triode designed for service as a class AB₁ or class B linear amplifier in audio or r-f service. The 7685 is well suited for application in broadcast and single-sideband transmitters, ultrasonic generators, and sonar pulse amplifiers. The forced air cooled anode is capable of dissipating 600 watts. The cathode is of indirectly-heated, oxide-coated, unipotential design. Maximum ratings apply to 60 megacycles.

ELECTRICAL:

Cathode.....	Oxide-Coated Unipotential
Heater:	
Voltage.....	5.0 Volts
Current.....	8.0 Amperes
Starting Current (Max.).....	24 Amperes
Resistance (Cold).....	0.1 Ohm
Minimum Filament Heating Time.....	120 Seconds
Amplification Factor.....	6.5
Direct Interelectrode Capacitances:	Tube Tube in
	Only Socket
Grid to Plate.....	11.8 11.9 μft
Grid to Cathode.....	26.0 35.0 μft
Cathode to Plate.....	0.6 0.6 μft

MECHANICAL:

Mounting Position.....	Vertical, Anode Up or Down
Cooling:	
Method.....	Forced Air
Maximum Incoming Air Temperature.....	45 °C
Required Air Flow on Anode:	
Plate Dissipation.....	200 400 600 Watts
Air Flow Required.....	15 20 30 CFM
Static Pressure.....	0.3 0.5 0.9 In. H ₂ O
Maximum Glass Temperature.....	180 °C
Net Weight.....	14 Ounces
Shipping Weight.....	3 Pounds

CLASS AB POWER AMPLIFIER†

MAXIMUM RATINGS:

Absolute Maximum Values

DC Plate Voltage.....	4.0 max.	Kilovolts
DC Grid Voltage®.....	~800 max.	Volts
DC Plate Current.....	600 max.	Ma.
DC Plate Power Input*.....	1.5 max.	Kilowatts
Plate Dissipation*.....	600 max.	Watts
Grid Dissipation.....	3 max.	Watts

TYPICAL OPERATING CHARACTERISTICS - Class AB₁

(Values for two tubes)

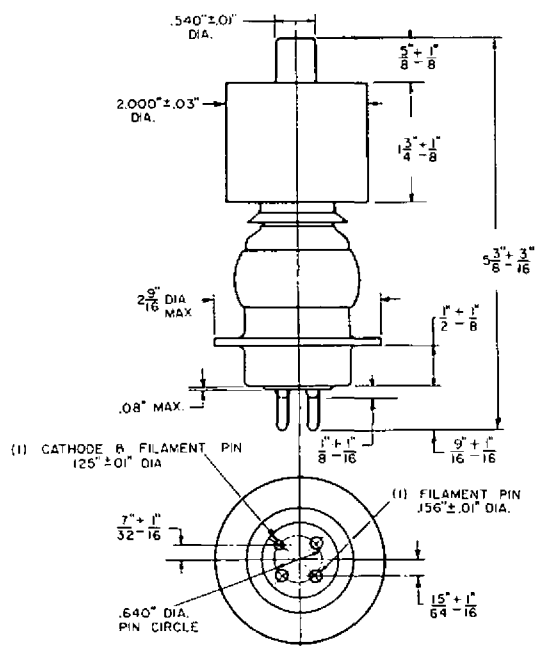
DC Plate Voltage.....	4000	Volts
DC Grid Voltage.....	-550	Volts
Peak A-F Grid-to-Grid Voltage.....	1100	Volts
Zero Signal Plate Current.....	0.120	Amperes
Maximum Signal Plate Current.....	0.635	Amperes
Effective Plate-to-Plate Load Resistance.....	12300	Ohms
Maximum Signal Driving Power.....	0	
Maximum Signal Power Output.....	1550	Watts

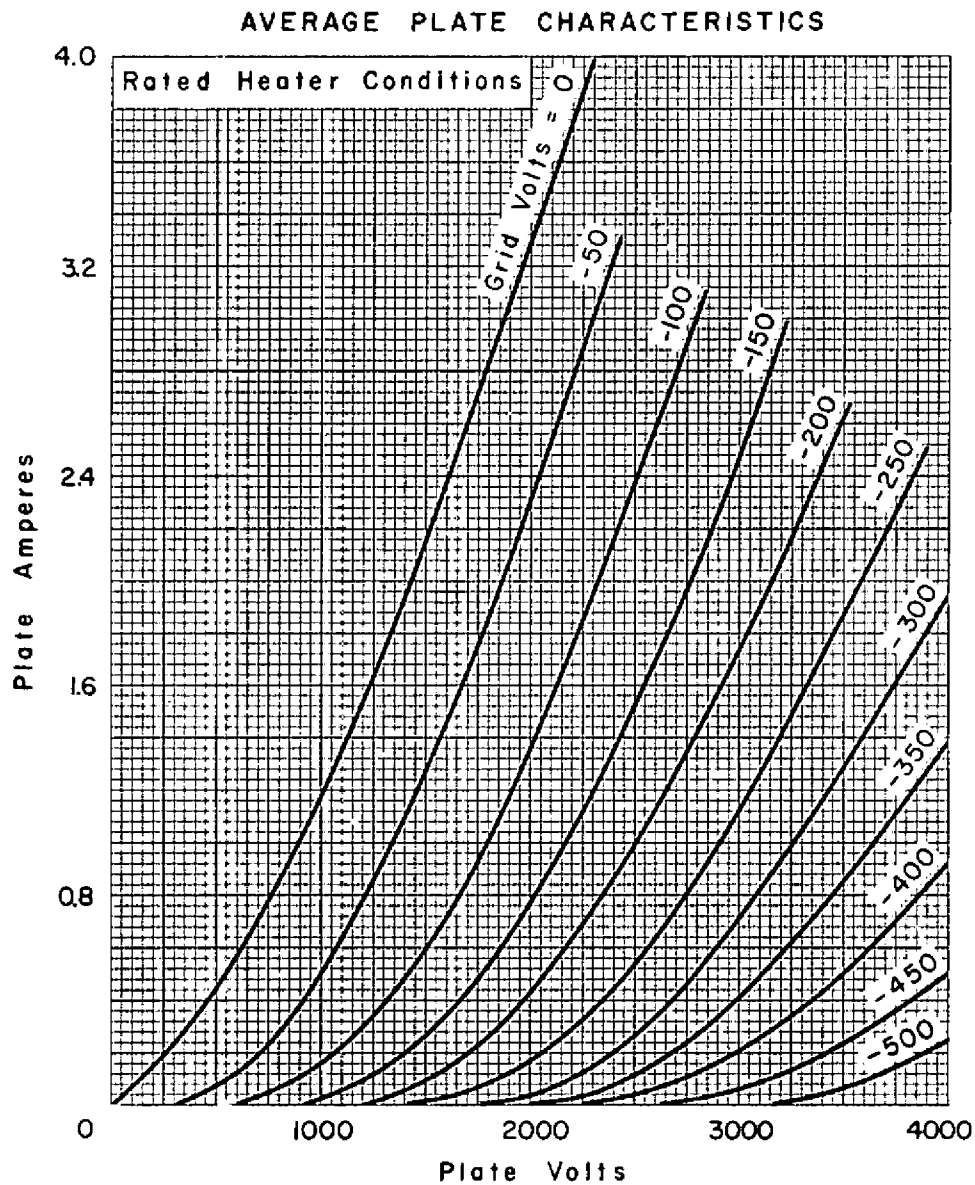
® Grid circuit resistance should not exceed 100000 ohms.

* Averaged over any cycle of sine wave form.

□ The tube may be supported either by the anode or by use of a socket, Westinghouse Part No. 3-2H-4290. This socket is designed to provide a low inductance contact to the grid. Anode support of the tube may be done with a Lapp No. 43751 Insulating Support, sold by Lapp Insulator Co., Leroy, N.Y. or equivalent. When tube is operated anode down, cooling of the base end of the tube is necessary. Free air convection will suffice for most applications.

† Operation in other classes of service is possible. For information on specific applications, contact Westinghouse Electronic Tube Division Sales Department outlining your design requirements.





CE-A1587