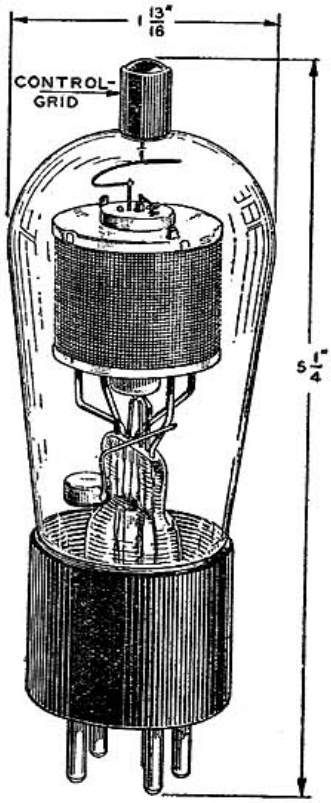
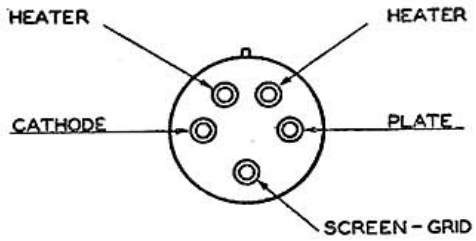
259A Vacuum Tube





Classification

The No. 259A Vacuum Tube is a four-element, screen-grid tube having an indirectly heated cathode which permits operation of the heater element directly on alternating current. The tube is for use as a screened grid, high-frequency amplifier, but also may be used as an audio-frequency voltage amplifier.

Base and Socket

The No. 259A Vacuum Tube employs a standard five-prong base suitable for use in a Western Electric No. 134A (cushion) or No. 137A (rigid) Socket or similar type socket. The arrangement of electrode connections to the base terminals is shown above. The control-grid terminal is located at the top of the bulb and is arranged for a special, quick-release connector.

Rating and Characteristic Data

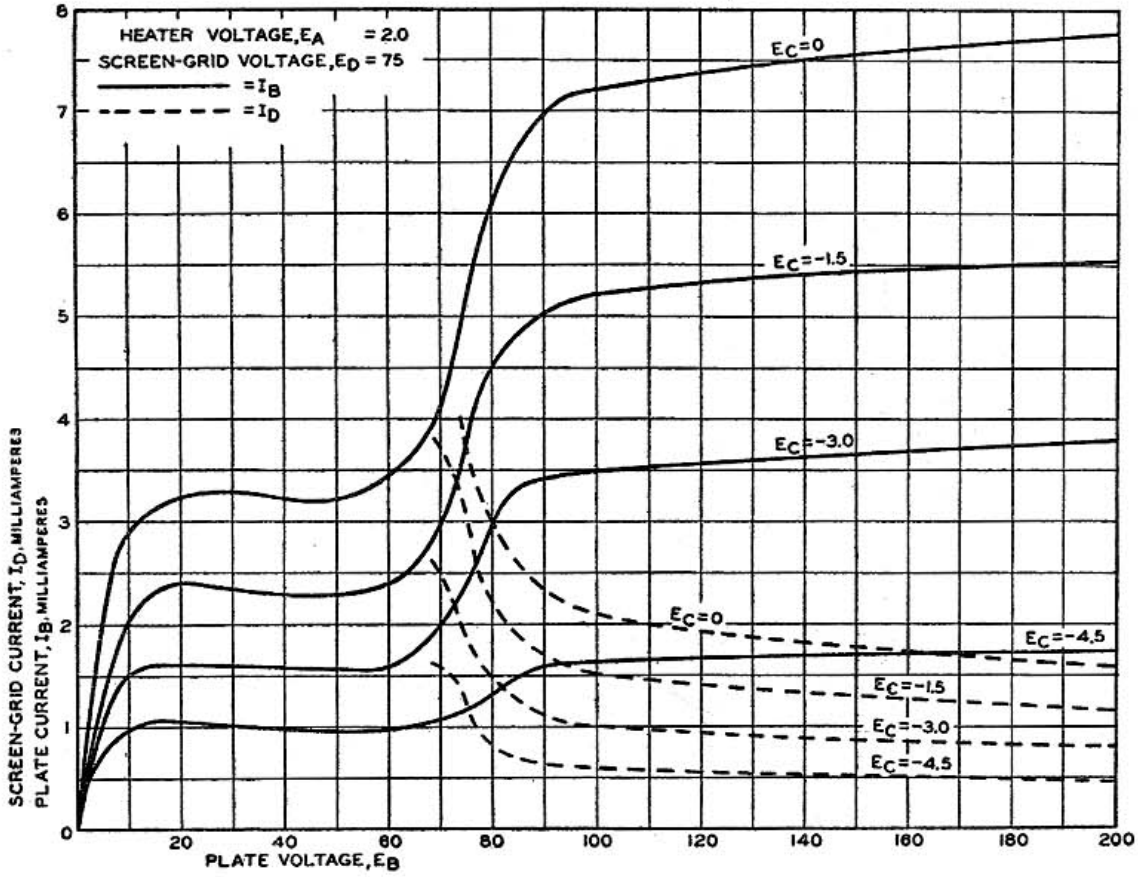
Heater Voltage		2 Volts, AC or DC
Average Heater Current		1.60 Amperes
Plate Voltage	180	180 Volts
Screen-Grid Voltage	75	90 Volts Maximum
Control-Grid Voltage	—1.5	—1.5 Volts
Average Plate Current	5.5	7.5 Milliamperes
Average Plate Resistance	400,000	320,000 Ohms
Average Mutual Conductance	1,380	1,500 Micromhos
Average Amplification Factor	550	480

Approximate Direct Interelectrode Capacities

Plate to Control-Grid	0.004 MMF
Control-Grid to Heater, Cathode and Screen-Grid	5.8 MMF
Plate to Heater, Cathode and Screen-Grid	14.0 MMF

Average Static Characteristics

The accompanying curves give the average static characteristics of the No. 259A Vacuum Tube.



General Features

The No. 259A Vacuum Tube employs an extra grid or a screen which provides an electrostatic shield between the plate and control grid. Such internal shielding eliminates the necessity of neutralization to prevent unwarranted oscillation or feed-back if the rest of the circuit elements are properly shielded.

The structure has been so designed as to give an unusually high mutual conductance for a tube of its rating, thereby making possible a comparatively high amplification.

The cathode is designed to provide a very large electron emission compared with the space current drain, thus assuring the maintenance of uniform electrical characteristics over a long life.