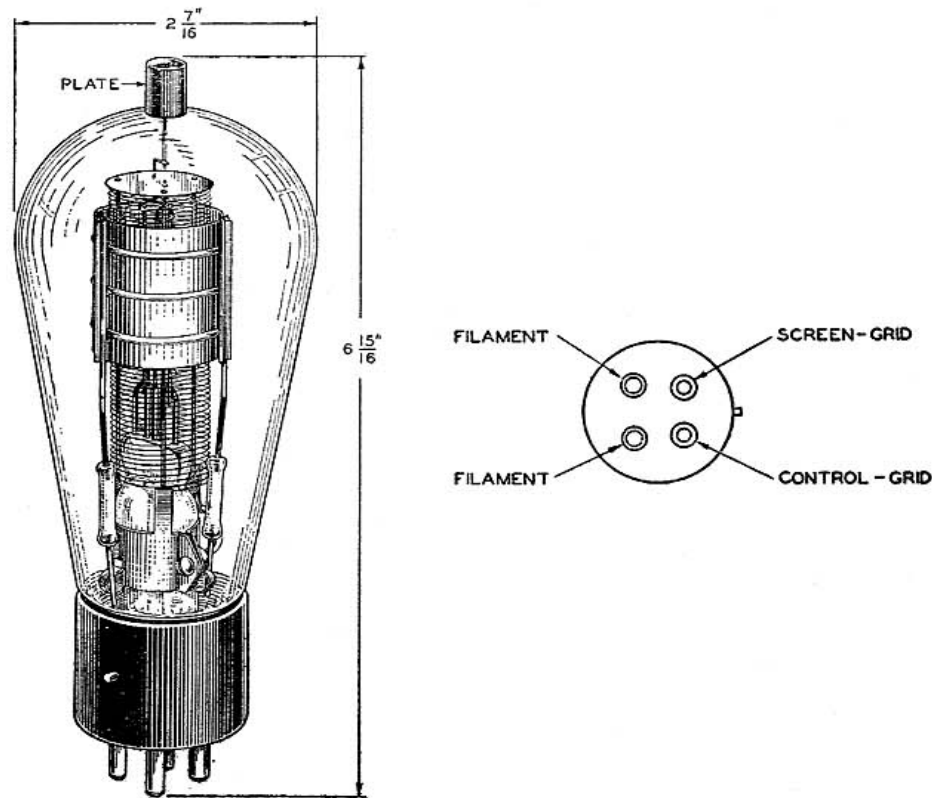


254A Vacuum Tube



Classification

The No. 254A Vacuum Tube is a four-element, screen-grid tube for use as a radio-frequency power-amplifier and as a harmonic-generator at intermediate power levels at high frequencies. It may also be used as an oscillator at high frequencies where the reduced plate to control-grid capacity will be of advantage.

Base and Socket

The No. 254A Vacuum Tube employs a standard four-prong, thrust-type base suitable for use in a Western Electric No. 130B (rigid) or No. 131A (cushion) Socket or similar type socket. The arrangement of electrode connections to the base terminals is shown above. The anode terminal is located at the top of the bulb and is arranged for a special quick-release connector.

Rating and Characteristic Data

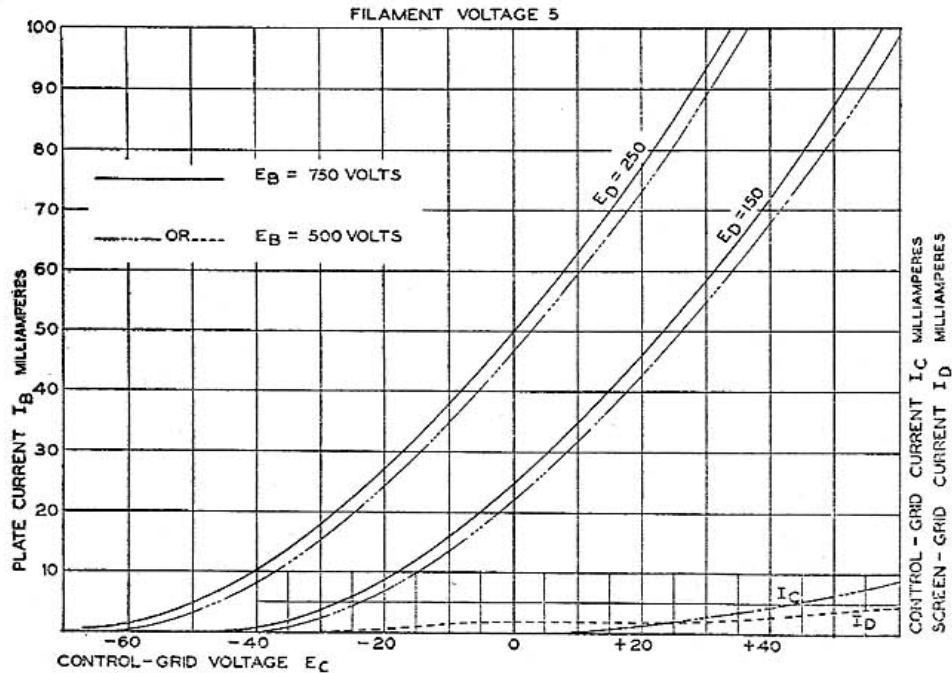
Filament Voltage.....	5 Volts
Filament Current.....	3.25 Amperes
Average Thermionic Emission.....	0.6 Ampere
Maximum Plate Voltage.....	750 Volts
Maximum Plate Current.....	0.06 Ampere
Maximum Plate Dissipation.....	20 Watts
Screen Grid Potential.....	175 Volts
Maximum Screen Grid Dissipation.....	5 Watts
Average Amplification Factor.....	80
Average Plate Resistance.....	80,000 Ohms
Average Mutual Conductance.....	1,000 Micromhos

Approximate Direct Interelectrode Capacities

Plate to Control Grid.....	0.1 MMF
Plate to Filament and Screen Grid.....	9.4 MMF
Control Grid to Filament and Screen Grid.....	4.6 MMF

Average Static Characteristics

The accompanying curves give the average static characteristics of the No. 254A Vacuum Tube. These curves are taken with the filament operating on alternating current with the plate, screen and control grid circuit returns connected to a midpoint of the filament transformer.



General Features

The No. 254A Vacuum Tube employs an extra grid or screen which provides an electrostatic shield between the plate and control grid. When the potential of the screen is held constant, variations of the plate potential have little effect upon the potential fields around the inner electrodes. Such internal shielding eliminates the necessity of neutralization to prevent unwanted oscillations or feedback if the rest of the circuit elements are properly shielded.

The thoriated tungsten filament of this tube is made in a spiral of such form as to maintain the tube internal impedance low and constant during its life. The mechanical structure has adequate strength for severe usages.