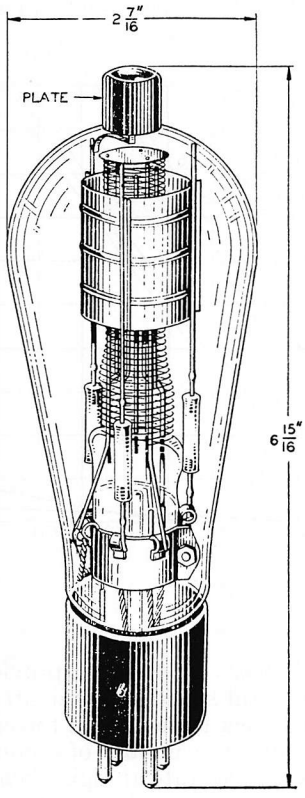
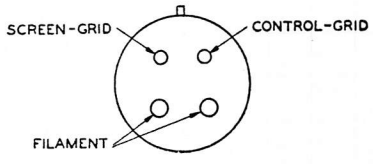
282A Vacuum Tube





Classification

The No. 282A Vacuum Tube is a four-element, screen-grid tube for use as a radio-frequency power amplifier or 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. 282A Vacuum Tube employs a standard four-prong thrust type base suitable for use in a Western Electric 130B (rigid), 131A (cushion), or similar type socket. The arrangement of electrode connections to the base terminals is shown above. The plate terminal is located at the top of the bulb and is arranged for a special quick release connector.

Rating and Characteristic Data

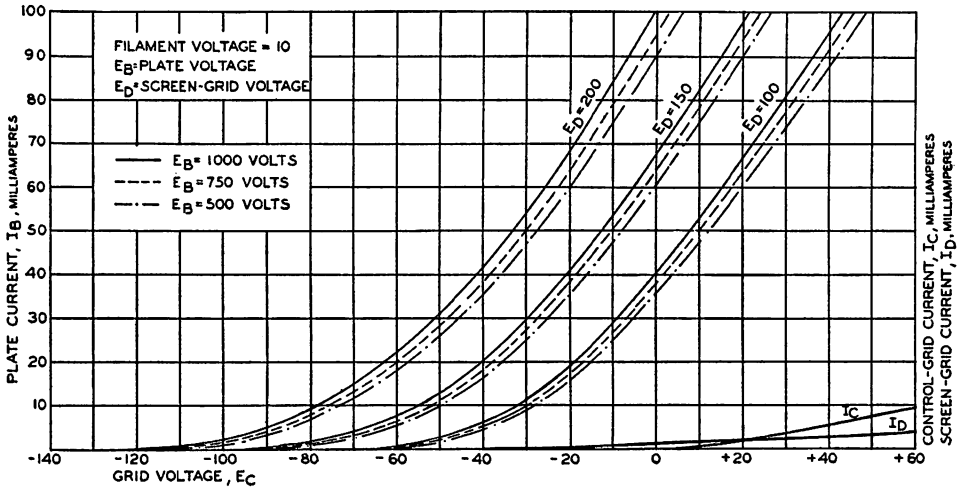
Filament Voltage	10 Volts
Nominal Filament Current	3 Amperes
Average Thermionic Emission	1.25 Amperes
Maximum Plate Voltage, DC	1000 Volts
Maximum Plate Current, DC	0.100 Ampere
Maximum Plate Dissipation	70 Watts
Maximum Screen-Grid Potential	250 Volts
Maximum Screen-Grid Dissipation	5 Watts
Average Amplification Factor	100
Average Plate Resistance	70,000 Ohms
Average Mutual Conductance	1430 Micromhos

Approximate Direct Interelectrode Capacities

Plate to Control-Grid	0.2 MMF
Plate to Filament and Screen-Grid	6.8 MMF
Control-Grid to Filament and Screen-Grid	12.2 MMF

Average Static Characteristics

The accompanying curves give the average static characteristics of the No. 282A Vacuum Tube. These curves are taken with the filament operated on alternating current and with the plate, screen and control-grid circuit returns connected to a mid-point of the filament transformer.



General Features

The No. 282A Vacuum Tube employs an extra grid or screen which provides an electrostatic shield between the plate and control-grid. Such internal shielding eliminates the necessity of neutralization to prevent unwanted oscillations or feed-back if the rest of the circuit elements are properly shielded. The screen has been designed to reduce the amount of current collected by it. The No. 282A bulb is made of hard glass which allows it to operate at higher temperatures and plate dissipation than the 254 type tubes.

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 usage.