

## Converting Alternating Current to Direct Current

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A full-wave rectifier is a vital electronic component that efficiently converts alternating current (AC) to direct current (DC) by rectifying both positive and negative half-cycles of the input waveform. It employs a configuration of diodes to allow current flow in a single direction. By producing a smoother DC output compared to half-wave rectifiers, full-wave rectifiers minimize ripple voltage and reduce energy loss, leading to enhanced performance in power supply systems. This project delves into the operating principles, circuit configurations, and performance characteristics of full-wave rectifiers, highlighting their significance in modern electronic applications.