What Is Rectification? What Is Smoothing?

Rectification is the conversion of alternating current to direct current. Rectification is performed by a diode that allows current to flow in one direction but not in the opposite direction. Direct current that has only been rectified, however, has various changes in voltage (ripples) lingering from the alternating current. Capacitors are used to smooth the current and make it even.

The Functions of Main Components

In order to understand the structure of a power supply, it is necessary to know the functions of its main components. If you become familiar with the symbols used for circuits, you will be able to decipher the basic structure of a power supply circuit.

Capacitors (C), Coils (L), and Resistors (R) Are the Three Main Passive Components.

1. Capacitors
2. Coils (Inductor)
3. Transformer
4. Resistors

Even after rectification by the diodes and smoothing by the capacitor, the direct current is still not stable.

Capacitors allow alternating current to pass through, while coils prevent alternating current from passing.

An integrated circuit is made up of multiple transistors, the diodes, resistors, and other components mounted on a single chip made of silicon or other material.

Transistors are semiconductor elements that have amplification functions. They are used in power supply circuits as switching elements that turned the current ON and OFF. A MOSFET is a field effect transistor that uses metal oxide semiconductors.

Diodes are elements that have the property of allowing the electric current to flow through in one direction only. They are used in rectification and other circuits.