

**Unit Name:** Analogue Electronics 2 Simulation 1

## **Title**

Clipping and Clamping Circuits

## **Details**

In addition to the use of diodes as rectifiers, there are a number of other interesting applications. For example, diodes are frequently used in applications such as wave-shaping, detectors, voltage multipliers, switching circuits, protection circuits, and mixers.

In this experiment, we will investigate two widely used applications of diode circuits, namely diode clipping circuits and diode clamping circuits. 1.1 Clipping Circuits Diode clipping circuits are wave-shaping circuits that are used to prevent signal voltages from going above or below certain levels.

The clipping level may be either equal to the diode's barrier potential or made variable with a DC voltage source (or bias voltage). Because of this limiting capability, the clipper is also called a limiter. There are, in general, two types of clipping circuits: parallel clippers and series clippers. In parallel clippers, the diode is connected in a branch parallel to the load, while in series clippers, the diode is connected in series with the load.