

Study the I-V characteristics of Non Ohmic Resistance



General Aim

Verify the nonlinear relation between current and voltage in a non-Ohmic resistor.

Method

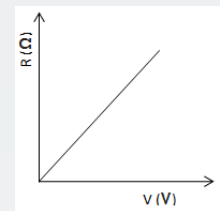
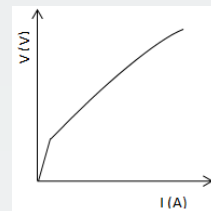
General method using Non-Ohmic resistance circuits.

Learning Objectives (ILOs)

- Understanding the difference between the non-Ohmic resistance and Ohmic resistance.
- Set up an experiment to study the I-V characteristics of non-Ohmic resistors.

Theoretical Background/Context

According to the type of material, its resistance may either obey Ohm's law or not. This can be explained by the behavior of these materials after connection in an electric circuit. Non-Ohmic resistance is referred to the materials that are affected by the applied voltage via elevation in their temperature. Hence, the value of the resistance is increased by raising the voltage.



Principle of Work

Direct measurement of the current vs the applied voltage on the non-Ohmic resistance, and verify their relation does not obey Ohm's law.