WORKSHOP PRACTICE

DEE/DETCE/S2

SMITA UKIL

TRANSISTOR

TRANSISTOR :

A transistor is a semiconductor device used to amplify or switch electronic signals and electrical power. It is composed of semiconductor material usually with at least three terminals for connection to an external circuit.

Why transistor is called BJT?

Bipolar transistors are so named because the controlled current must go through two types of semiconductor material: P and N. The current consists of both electron and hole flow, in different parts of the transistor. Bipolar transistors consist of either a P-N-P or an N-P-N semiconductor “sandwich” structure.

What is NPN transistor?

The transistor in which one p-type material is placed between two n-type materials is known as NPN transistor. The NPN transistor amplifies the weak signal enter into the base and produces strong amplify signals at the collector end.

What is PNP transistor?

The transistor in which one n-type material is doped with two p-type materials such type of transistor is known as PNP transistor. The PNP transistor turns on when a small current flows through the base. The direction of current in PNP transistor is from the emitter to collector.

Symbol:

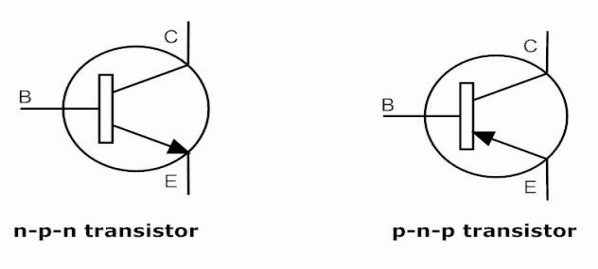
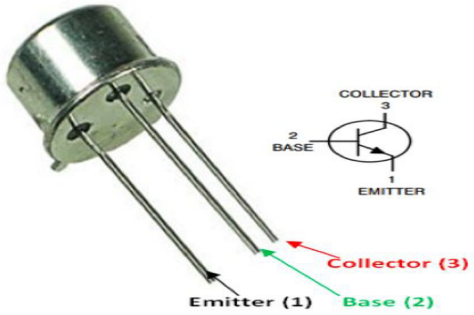


IMAGE & IDENTIFICATION



SL100B NPN transistor

Power transistor 2N3055

USE:

1. It is used in amplifier and oscillator circuits.
2. As a switch in digital circuits.
3. It has wide applications in computers ,satellites and other modern communication systems.