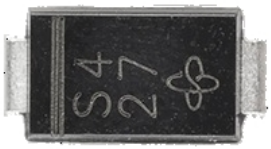
DIODE / TRANSISTORS
https://github.com/teaksoon/lmaewapm

BASIC DIODE:
Generally it is a device that allows current to flow in one direction, from +ve to -ve. If the diode is connected in reverse, electric current will not flow. There are many specialized diode with special features. For example: the "LED", which will glow when current flow through it. It comes in many shapes and sizes.

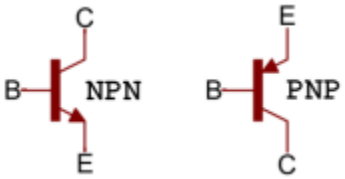
The diode markings with lines are normally the -ve side. If not sure, refer to product datasheet

Positive +ve Terminal of Power Source **(A)** → Negative -ve Terminal(GND) of Power Source **(B)** → **(A) to (B)** is **connected**

Positive +ve Terminal of Power Source **(A)** → Negative -ve Terminal(GND) of Power Source **(B)** → **(A) to (B)** is **disconnected**

BASIC TRANSISTORS:
A typical transistor allow and disallow current from flowing through it depending on the VOLTAGE at its BASE(B). Because of this ability, it is often used as a switch. Although there are other usage for transistors, we now only interested to use it as a switch.

They come in many shape and sizes. Below are some of the transistors that we normally see, there are many tiny ones inside our micro-controller chip that we cannot see. They are probably billions or trillions of transistors inside our modern computers chips, used for memory and logic operations.



Transistor has 3 Pins. Refer to datasheet to find out which Pin is collector(C) or emitter(E) and the base(B) is normally in the middle.

Positive +ve Terminal of Power Source **(A)**

Input VOLTAGE → NPN

Negative -ve Terminal(GND) of Power Source **(B)**

When **Input VOLTAGE** = **0V**, Path from **(A) to (B)** is **disconnected**

When **Input VOLTAGE** is **more than 0V**, Path from **(A) to (B)** is **connected**

(The actual minimum Input Voltage to trigger, refer to datasheet)

Positive +ve Terminal of Power Source **(A)**

Input VOLTAGE → PNP

Negative -ve Terminal(GND) of Power Source **(B)**

When **Input VOLTAGE** = **0V**, Path from **(A) to (B)** is **connected**

When **Input VOLTAGE** is **more than 0V**, Path from **(A) to (B)** is **disconnected**

(The actual minimum Input Voltage to trigger, refer to datasheet)