Diode

Intro

→ *So, in this video, we will see Diode following the four-step process on which I have already created a video, so let's start.*

Diode

→ *A Diode is used to allow the current only to flow in one direction it will never allow to reverse the current.*

→ *We can also use it to convert AC to DC current (Rectifiers) I am not going to discuss about the rectifier circuit here because first I am going to finish the components and later, we will do that. But as of now for a diode it is enough.*

→ *It retains two filaments (pins) a positive and a negative.*

How to find Diode's polarity

→ *To determine the positive and negative pin, in the Diode the grey shade strip is there whichever pin is closest to that strip is the negative pin and the other is the positive pin.*

P-N Junction Diode

→ *The diode consists of two things, one is P-type junction and the other is N-type junction. The p-type junction is where you have all the positives and, in the N-type junction is where you have all the negatives.*

Circuit Symbol

→ *Circuit symbol of a diode is very similar to the symbol of the LED*

→ *We just have to remove the two arrows.*

Real-Time Application

- *Phone Charger*
- *Light Bulb*
- *Adapter*
- *Laptop Charger*

Online Circuit Simulation

→ *Let's open our Tinker CAD, then we create a new project, and then we will simply drag some basic components like Bread Board, Battery, and a LED. Now we will drag a Diode.*

→ ***Now let's do the connections, so we will connect the battery terminals to their respective power rails in the Bread Board, then we will connect the Diode to any random strip of the Bread Board, then we will connect the positive power rail to the Cathode of the diode and then we will connect the positive filament of the LED to the Anode and then we will connect the negative power rail to the negative pin of the LED.***

→ ***Now click on the 'Run Simulation' and your LED is glowing Perfectly.***

Practical Experimentation

→ ***Components Required:***

- ***A Bread Board***
- ***A LED***
- ***A Battery***
- ***A Diode***

→ ***Now let's do the connections, so we will connect the battery terminals to their respective power rails in the Bread Board, then we will connect the Diode to any random strip of the Bread Board, then we will connect the positive power rail to the Cathode of the diode and then we will connect the positive filament of the LED to the Anode and then we will connect the negative power rail to the negative pin of the LED. And now the LED is glowing perfectly.***

Circuit Diagram

→ ***First, we will draw the symbol of a battery, then the symbol of a LED, then we will draw the symbol of the Diode, then we will connect the negative line of the battery to the LED, then we will connect the positive line of the battery to the Cathode of the Diode, then we will connect the Anode of the Diode of the resistor to the Positive line of the LED, and your diagram is completed.***

Outro

→ ***That's all for this video and I will see you in this next one until then BYE BYE!!***