

How do transistors work?

<https://www.youtube.com/watch?v=7ukDKVHnac4>

1. What is the basic function of transistors?

They can amplify a weak signal. Amplification is the basic function of a transistor.

2. What are transistors made of?

They are made of semiconductors such as silicon.

3. What technique is used to improve the conductivity of semiconductors?

A technique called doping.

4. When is a diode formed?

A diode is formed when you dope one part of silicon as a P-type and the other part as an N-type.

5. Can you explain what is the forward biasing of a diode?

When a power source has enough voltage to overcome the potential barrier, the electrons will be pushed away by the negative terminal. When the electrons cross the potential barrier, they will be drained of energy and will easily occupy the holes in the P region. Due to the attraction of the positive terminal, these electrons can now jump to the holes nearby in the P region and flow through the external circuit.

6. What is the name of the kind of transistor the video talks about?

A bipolar junction transistor.