

Cascade Tunneling Field Effect Transistor

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Categories:

- Electrical Engineering

Keywords:

- Electrical Engineering
- Logic Devices
- Quantum
- Transistors
- Transportation

Tunneling field effect transistors are promising candidates for next generation nanodevices. They can offer better switching behavior compared to traditional field effect transistors. Some issues with the current transistor technology is it has too low ON current densities or suppressed OFF current densities. Another issue with current tunneling field effect transistors is they are switch due to band alignment. There is a need for a new technology that can fix these issues with the current tunneling field effect transistors.

Researchers at Purdue University have developed a new technology for tunneling field effect transistors. This technology will help the manufacturers of integrated circuits who want to build smaller and more transistors per unit area. This technology will do this because it is a new design concept with large ON current and low OFF current. It also has a small subthreshold swing. This technology will also combine several different switching mechanisms that simultaneously turn the transistor on or off. This new technology will open the door for tunneling field effect transistors for the future.

Advantages:

- Large ON current
- Small OFF current
- Small subthreshold swing

Potential Applications:

- Transistors
- Circuits

People:

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Intellectual Property:

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