Engineering

HIGH-VOLTAGE BIDIRECTIONAL FIELD EFFECT TRANSISTOR

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Inventors: Chirag Gupta, Shubhra Pasayat

The Invention

UW-Madison researchers have designed a bidirectional switch based on an AlGaN/GaN structure with BaTiO3 to achieve the ideal target of ~1-1.1x resistance. The design is scalable from 100 V - 10 kV. The new structure allows for elimination of field plates, which enables closer spacing of the gate sand and therefore the ability to reach the 1:1 optimized V ratio. Elimination of these field plates will also reduce manufacturing costs as the processing is simpler.

Additional Information

For More Information About the Inventors

- Chirag Gupta
- Shubhra Pasayat

Tech Fields

- Engineering : Power electronics & control systems
- Semiconductors & Integrated Circuits : Design & fabrication

For current licensing status, please contact Jeanine Burmania at jeanine@warf.org or 608-960-9846