[54] ASYMMETRICAL FIELD CONTROLLED THYRISTOR

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Related U.S. Application Data

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[58] Field of Search 357/22, 38, 58, 89

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[57] ABSTRACT

A field controlled thyristor having its base doped more lightly near the gate than near the anode achieves a low forward voltage drop, high blocking gain, and fast switching speed at any given forward blocking voltage rating. Although the high resistivity region around the gate area allows the device to pinch off anode current flow at zero gate bias due to the gate junction inherent potential, a small forward gate voltage can trigger the device into conduction. The high resistivity of the channel area between gates provides DC blocking gains greater than 60. The device can be fabricated using conventional planar processing techniques.

20 Claims, 3 Drawing Sheets