

Title (en)
SOI VERTICAL BIPOLAR POWER COMPONENT

Title (de)
SOI VERTIKALES BIPOLARES LEISTUNGSBAUELEMENT

Title (fr)
COMPOSANT DE PUISSANCE BIPOLAIRE VERTICAL SOI

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Application
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Abstract (en)
[origin: WO2005122271A1] Disclosed is a vertical SOI component that is suitable for power applications. Said component comprises a vertical drift zone and an emitter structure which can be implemented with isolation trenches according to the silicon-on-insulator (SOI) technology. The aim of the invention is to reduce the area required for integrating power components (IGBT components and diode components) into circuits based on SOI disks. Said aim is achieved by an SOI component comprising an isolation trench (43) that defines a vertical drift zone (46), a buried insulating layer (42) to which the isolation trench extends, and an electrode region (31, 32) that emits charge carriers, is embodied adjacent to the insulating layer, and is in contact with the drift zone. Said electrode region is provided with first strip-shaped areas (31) that are doped in a first manner and second strip-shaped areas (32) that are doped in a second manner which is inverse to the first doping. The inventive SOI component further comprises a first sidewall doping (44) which is doped in the first manner and is disposed on a first sidewall of the isolation trench.

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