Title (en)

VERTICALL STRUCTURED POWER TRANSISTOR WITH TRENCH SUPPLY ELECTRODE

Title (de)

VERTIKALER STRUKTURIERTER LEISTUNGSTRANSISTOR MIT GRABENANSCHLUSSELEKTRODE

Title (fr)

TRANSISTOR DE PUISSANCE A STRUCTURE VERTICALE ET A ÉLECTRODE D'ALIMENTATION EN TRANCHEE

Publication

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Application

EP 15817449 A 20151124

Priority

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- FR 2015053189 W 20151124

Abstract (en)

[origin: WO2016083725A1] The invention relates to a vertically structured power transistor, such as a VDMOS or an IGBT, having a cell comprising: two symmetrical source layers (308), preferably N+ doped, which extend from a front surface (312) of the semiconductor substrate; a well layer (307), preferably P doped, comprising an area having a higher doping concentration (307b) that extends from one source layer to the other; a source/well NP junction (J3) between the source layer and the well layer. According to the invention, a cathode formed on the front surface (312) of the semiconductor substrate has a trench portion (309) with a bottom (313) that extends into the area having a higher doping concentration (307b) of the well layer (307) to a certain depth away from the source/well NP junction (J3).

IPC 8 full level

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Citation (search report)

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