

Title (en)
SEMICONDUCTOR POWER COMPONENT AND CORRESPONDING PRODUCTION METHOD

Title (de)
HALBLEITERLEISTUNGSBAUELEMENT UND ENTSPRECHENDES HERSTELLUNGSVERFAHREN

Title (fr)
COMPOSANT DE PUISSANCE A SEMI-CONDUCTEUR ET SON PROCEDE DE PRODUCTION

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Application
EP 02735015 A 20020326

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Abstract (en)
[origin: WO02082552A1] The invention relates to a semiconductor power component and a corresponding production method, and especially a vertical NPT-IGBT for ignition applications, with a turnover voltage of less than approximately 1000 V. The semiconductor power component has a wafer substrate (51; 52) of a first type of conduction (n-) having a rear emitting region (51) of a second type of conduction (p+) and a front drift region (52) of the first type of conduction (n-). Said component also comprises a rear anode contact (58) which is connected to the emitting region (51) and partially reaches the front surface, a front MOS control structure (53,53',54, 54', 55, 55', 56, 57a), and a front cathode contact (59) which is connected to a front source region (54, 54') and a body region (53) of said front MOS control structure (53, 53', 54, 54', 55, 55', 56, 57a). The thickness of the drift region (52) is essentially larger than the width of the space charge region for a pre-determined turnover voltage, and the thickness of the rear emitting region (51) is larger than 5 & m.

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