

Title (en)

VERTICAL POWER TRANSISTOR WITH IMPROVED CONDUCTIVITY AND HIGH REVERSE-BIASING PERFORMANCE

Title (de)

VERTIKALER LEISTUNGSTRANSISTOR MIT VERBESSERTER LEITFÄHIGKEIT UND HOHEM SPERRVERHALTEN

Title (fr)

TRANSISTOR DE PUISSANCE VERTICAL PRÉSENTANT UNE CONDUCTIVITÉ AMÉLIORÉE ET DES PERFORMANCES DE BLOCAGE ÉLEVÉES

Publication

EP 3646387 A1 20200506 (DE)

Application

EP 18708342 A 20180209

Priority

- DE 102017207848 A 20170510
- EP 2018053282 W 20180209

Abstract (en)

[origin: WO2018206165A1] Vertical power transistor (100, 200) with at least one epitaxial layer (103, 203), which comprises a first semiconductor material, which is doped with first charge carriers, and a plurality of trenches (107, 207), wherein the trenches (107, 207) extend from a surface of the epitaxial layer (103, 203) into the interior of the epitaxial layer (103, 203), characterized in that each trench (107, 207) has a region (108, 208) which extends from the trench base up to a specific height, wherein the region (108, 208) is at least partially filled with a second semiconductor material (109, 209) which is doped with second charge carriers, and the region (108, 208) is electrically connected to a source region (105, 205), wherein the first charge carriers and the second charge carriers are different.

IPC 8 full level

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CPC (source: EP)

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Citation (search report)

See references of WO 2018206165A1

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