

Title (en)

CONTROLLABLE SEMICONDUCTOR COMPONENT

Title (de)

STEUERBARES HALBLEITERBAUELEMENT

Title (fr)

COMPOSANT A SEMI-CONDUCTEUR POUVANT ETRE COMMANDE

Publication

**EP 0782769 A1 19970709 (DE)**

Application

**EP 95934099 A 19950922**

Priority

- DE 4433796 A 19940922
- EP 9503742 W 19950922

Abstract (en)

[origin: DE4433796A1] The invention concerns a semiconductor component which can be controlled on the anode side and whose semiconductor body comprises a plurality of adjacent, parallel-connected unit cells having a thyristor structure. A lightly doped n-base region (3) is adjoined on both sides by highly doped p-regions constituting p-base region (2) and p-emitter region (4). The p-base region (2) is followed by a highly doped n-emitter region (1) which contacts a cathode electrode (7). Integrated in the p-emitter region (4) is a first n-channel MOSFET (M1) which is connected in series with the thyristor structure by means of a floating electrode (FE). The drain electrode (5b) of the first MOSFET (M1) is provided with an outer anode (8) which has no contact with the p-emitter region (4). A second n-channel MOSFET (M2) is integrated between the n-base region (3) and the drain region (5b) of the first MOSFET (M1).

IPC 1-7

**H01L 29/747**; **H01L 29/749**; **H01L 29/08**

IPC 8 full level

**H01L 29/74** (2006.01); **H01L 27/04** (2006.01); **H01L 29/08** (2006.01); **H01L 29/739** (2006.01); **H01L 29/747** (2006.01); **H01L 29/749** (2006.01); **H01L 29/78** (2006.01)

CPC (source: EP US)

**H01L 29/0834** (2013.01 - EP US); **H01L 29/747** (2013.01 - EP US); **H01L 29/749** (2013.01 - EP US)

Citation (search report)

See references of WO 9609649A1

Cited by

US8378032B2

Designated contracting state (EPC)

AT CH DE FR GB LI

DOCDB simple family (publication)

**DE 4433796 A1 19960328**; EP 0782769 A1 19970709; JP H10505953 A 19980609; US 5923055 A 19990713; WO 9609649 A1 19960328

DOCDB simple family (application)

**DE 4433796 A 19940922**; EP 9503742 W 19950922; EP 95934099 A 19950922; JP 51060996 A 19950922; US 80984897 A 19970321