

Title (en)
POWER INTEGRATED CIRCUITS

Title (de)
INTEGRIERTE LEISTUNGSSCHALTKREISE

Title (fr)
CIRCUITS INTEGRES DE PUISSANCE

Publication
EP 1576669 A1 20050921 (EN)

Application
EP 03780365 A 20031209

Priority
• GB 0305367 W 20031209
• GB 0228754 A 20021210
• GB 0228755 A 20021210

Abstract (en)
[origin: WO2004053993A1] A monolithic integrated circuit comprising at least one relatively deep trench (14) etched into the rear or lower surface of a semiconductor wafer (1) to create a membrane in or on which low voltage logic circuitry for control and protection may be provided. At least one power device area (10) is also provided adjacent to the trench (14). The or each trench (14) is covered with an insulating material (3) and then filled with another material (4). A second, relatively shallow trench (12) is provided on the front or upper surface of the semiconductor wafer (1), in communication with the layer of insulating material (3) and located between adjacent devices or a power device (10) and the low voltage circuitry (2). A monolithic integrated circuit comprising a semiconductor (SOL) wafer is also disclosed.

IPC 1-7
H01L 27/12; **H01L 27/06**; **H01L 21/762**; **H01L 29/732**

IPC 8 full level
H01L 21/762 (2006.01); **H01L 21/84** (2006.01); **H01L 27/088** (2006.01); **H01L 27/12** (2006.01); **H01L 29/06** (2006.01); **H01L 29/739** (2006.01); **H01L 29/78** (2006.01)

CPC (source: EP US)
H01L 21/76283 (2013.01 - EP); **H01L 21/84** (2013.01 - EP); **H01L 27/088** (2013.01 - EP US); **H01L 27/1203** (2013.01 - EP); **H01L 29/0657** (2013.01 - EP); **H01L 29/7395** (2013.01 - EP); **H01L 29/7802** (2013.01 - EP US); **H01L 29/7813** (2013.01 - EP)

Citation (search report)
See references of WO 2004053993A1

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

DOCDB simple family (publication)
WO 2004053993 A1 20040624; AU 2003288446 A1 20040630; EP 1576669 A1 20050921

DOCDB simple family (application)
GB 0305367 W 20031209; AU 2003288446 A 20031209; EP 03780365 A 20031209