

Title (en)

METHOD FOR THE PRODUCTION OF MOS TRANSISTORS

Title (de)

VERFAHREN ZUR HERSTELLUNG VON MOS-TRANSISTOREN

Title (fr)

PROCEDE DE PRODUCTION DE TRANSISTORS MOS

Publication

EP 1522101 A1 20050413 (DE)

Application

EP 03720179 A 20030314

Priority

- DE 0300835 W 20030314
- DE 10229265 A 20020628

Abstract (en)

[origin: WO2004004010A1] The invention relates to a method for the production of MOS transistors with extremely low leakage currents at the pn junctions and logic/switching transistors (2), whose gates (3) are laterally defined by spacers (8), a p- substrate or a p-trough in an n-substrate (5). The aim of the invention is to provide a method for the production of MOS transistors with extremely low leakage currents and allows for parallel logic/switching transistors. This is achieved by initially carrying out an LDD ion implementation via the edges of the gates in order to form an LDD area (6) and by subsequently removing the spacers (8) by means of an anisotropic etching step exhibiting high selectivity in relation to the gate and substrate materials including the covering layers thereof or by covering the MOS transistors with extremely low leakage currents prior to isotropic spacer production such that the spacers (8) are formed exclusively on the edges of the gates of the logic/switching transistors (2) whereby the MOS transistors with extremely low leakage currents remain exclusively connected via the LDD area (6) and no high dose implantation (As) in the S/D areas of said MOS transistors with extremely low leakage currents occurs.

IPC 1-7

H01L 27/092

IPC 8 full level

H01L 21/8238 (2006.01); **H01L 27/092** (2006.01)

CPC (source: EP US)

H01L 21/823864 (2013.01 - EP US); **H01L 27/0922** (2013.01 - EP US)

Citation (search report)

See references of WO 2004004010A1

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

WO 2004004010 A1 20040108; AU 2003223871 A1 20040119; EP 1522101 A1 20050413; US 2007207621 A1 20070906;
US 2010219477 A1 20100902; US 7718501 B2 20100518; US 8269276 B2 20120918

DOCDB simple family (application)

DE 0300835 W 20030314; AU 2003223871 A 20030314; EP 03720179 A 20030314; US 51013006 A 20060825; US 74886510 A 20100329