

Title (en)

SILICON SUBSTRATE COMPRISING POSITIVE ETCHING PROFILES WITH A DEFINED SLOPE ANGLE, AND PRODUCTION METHOD

Title (de)

SILIZIUMSUBSTRAT MIT POSITIVEN TZPROFILEN MIT DEFINIERTEM SCHUNGSWINKEL UND VERFAHREN ZUR HERSTELLUNG

Title (fr)

SUBSTRAT DE SILICIUM A PROFILS D'ATTAQUE POSITIFS, AYANT UN ANGLE D'INCLINAISON DETERMINE, ET SON PROCEDE DE PRODUCTION

Publication

EP 1614145 A2 20060111 (DE)

Application

EP 04727512 A 20040415

Priority

- DE 2004000804 W 20040415
- DE 10318568 A 20030415

Abstract (en)

[origin: WO2004093162A2] The invention relates to a silicon substrate comprising positive etching profiles with a defined slope angle. Said silicon substrate is obtained by etching the silicon substrate that is covered with a mask and by carrying out the following steps: a) the silicon substrate is isotropically etched, the undercut u of the mask being approximately identical to the etching depth A_t ; b) the etching depth is increased by means of anisotropic etching in alternating etching steps and polymerization steps during which the undercut of the mask remains constant and the etching front follows a new course, the sidewalls of the structure being coated with a polymer in said step; c) the polymer is removed from the structure; and d) steps a) to c) are repeated until the predefined etching profile has been obtained. Also disclosed is a method.

IPC 1-7

H01L 21/00

IPC 8 full level

B81C 1/00 (2006.01); **H01L 21/3065** (2006.01)

CPC (source: EP US)

B81C 1/00103 (2013.01 - EP US); **B81C 1/00571** (2013.01 - EP US); **H01L 21/3065** (2013.01 - EP US); **H01L 21/30655** (2013.01 - EP US);
B81B 2203/033 (2013.01 - EP US); **B81B 2203/0384** (2013.01 - EP US)

Citation (search report)

See references of WO 2004093162A2

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 PL PT RO SE SI SK TR

DOCDB simple family (publication)

WO 2004093162 A2 20041028; **WO 2004093162 A3 20050224**; DE 10318568 A1 20041125; EP 1614145 A2 20060111;
US 2006099811 A1 20060511; US 2006219654 A1 20061005; US 7498266 B2 20090303

DOCDB simple family (application)

DE 2004000804 W 20040415; DE 10318568 A 20030415; EP 04727512 A 20040415; US 26124105 A 20051027; US 55372804 A 20040415