

Title (en)

SEMICONDUCTOR MEMORY ELEMENT, PRODUCTION METHOD AND OPERATIONAL METHOD

Title (de)

HALBLEITERSPEICHERELEMENT, VERFAHREN ZUR HERSTELLUNG UND VERFAHREN ZUM BETRIEB

Title (fr)

ELEMENT DE MEMOIRE A SEMI-CONDUCTEURS, SON PROCEDE DE FABRICATION ET PROCEDE PERMETTANT SON FONCTIONNEMENT

Publication

**EP 1423880 A1 20040602 (DE)**

Application

**EP 02760145 A 20020902**

Priority

- DE 0203220 W 20020902
- DE 10143235 A 20010904

Abstract (en)

[origin: WO03026014A1] A semiconductor memory element (200) comprising a substrate, wherein a source area (201) and a drain area (202) are formed; a floating gate (203) which is electrically insulated from the substrate; a tunnel barrier arrangement (204) which enables the floating gate (203) to be charged or discharged, the conductivity of the channel between the source (201) and drain (202) area being modifiable by charging or discharging the floating gate; in addition to means which control transmission of the charge of the tunnel barrier arrangement and which have a source line (213) which is electroconductingly connected to the source area.

IPC 1-7

**H01L 27/115**; **H01L 29/788**; **H01L 29/51**; **H01L 21/8247**; **G11C 16/04**

IPC 8 full level

**H01L 21/28** (2006.01); **H01L 21/336** (2006.01); **H01L 21/8247** (2006.01); **H01L 27/115** (2017.01); **H01L 27/11521** (2017.01); **H01L 29/51** (2006.01); **H01L 29/788** (2006.01); **H01L 29/792** (2006.01); **G11C 16/04** (2006.01)

CPC (source: EP US)

**H01L 29/40114** (2019.07 - EP US); **H01L 29/513** (2013.01 - EP US); **H01L 29/518** (2013.01 - EP US); **H01L 29/66825** (2013.01 - EP US); **H01L 29/7883** (2013.01 - EP US); **H10B 41/30** (2023.02 - EP US); **H10B 69/00** (2023.02 - EP US); **G11C 16/0416** (2013.01 - EP US)

Citation (search report)

See references of WO 03026014A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LU MC NL PT SE SK TR

DOCDB simple family (publication)

**WO 03026014 A1 20030327**; DE 10143235 A1 20030327; EP 1423880 A1 20040602; JP 2005503040 A 20050127; JP 4076950 B2 20080416; TW I271820 B 20070121; US 2005040456 A1 20050224; US 7157767 B2 20070102

DOCDB simple family (application)

**DE 0203220 W 20020902**; DE 10143235 A 20010904; EP 02760145 A 20020902; JP 2003529530 A 20020902; TW 91120154 A 20020904; US 48618404 A 20041025