Title (en)

MEMS ACOUSTIC TRANSDUCER WITH SILICON NITRIDE BACKPLATE AND SILICON SACRIFICIAL LAYER

Title (de)

AKUSTISCHER MEMS-WANDLER MIT SILICIUMNITRIDRÜCKPLATTE UND SILICIUMOPFERSCHICHT

Title (fr)

TRANSDUCTEUR ACOUSTIQUE DE MICRO-SYSTÈME ÉLECTROMÉCANIQUE PRÉSENTANT UNE PLAQUE SUPPORT À BASE DE NITRURE DE SILICIUM ET UNE COUCHE SACRIFIÉE À BASE DE SILICIUM

Publication

EP 2969911 A4 20161102 (EN)

Application

EP 14775941 A 20140312

Priority

- US 201361781940 P 20130314
- US 2014024147 W 20140312

Abstract (en)

[origin: WO2014159552A1] A microelectromechanical system (MEMS) microphone has a substrate including a backside trench, and a flexible membrane deposited on the substrate extending over the backside trench. The flexible membrane includes a first electrode. A silicon spacer layer is deposited on a perimeter portion of the flexible membrane. The spacer layer defines an acoustic chamber above the membrane and the backside trench. A silicon rich silicon nitride (SiN) backplate layer is deposited on top of the silicon spacer layer extending over the acoustic chamber. The backplate defines a plurality of opening into the acoustic chamber and includes a metallization that serves as a second electrode.

IPC 8 full level

H04R 19/04 (2006.01); **B81B 7/02** (2006.01); **B81C 1/00** (2006.01); **H04R 31/00** (2006.01)

CPC (source: EP)

B81B 7/02 (2013.01); **B81C 1/00246** (2013.01); **H04R 19/005** (2013.01); **H04R 19/04** (2013.01); **H04R 31/00** (2013.01); B81B 2201/0257 (2013.01); B81B 2201/0264 (2013.01); B81C 2201/014 (2013.01); B81C 2203/0714 (2013.01)

Citation (search report)

- [XAI] US 5573679 A 19961112 - MITCHELL ALAN W [US], et al
- [A] US 4558184 A 19851210 - BUSCH-VISHNIAC ILENE J [US], et al
- See references of WO 2014159552A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

WO 2014159552 A1 20141002; CN 105531220 A 20160427; EP 2969911 A1 20160120; EP 2969911 A4 20161102

DOCDB simple family (application)

US 2014024147 W 20140312; CN 201480027801 A 20140312; EP 14775941 A 20140312