

Title (en)

THERMOCOMPRESSION BONDING WITH RAISED FEATURE

Title (de)

THERMOKOMPRESSIONSSCHWEISSEN MIT ERHÖHTEM MERKMAL

Title (fr)

LIAISON PAR THERMOCOMPRESSION AVEC CARACTÉRISTIQUES SUR ÉLEVÉES

Publication

EP 3469625 A1 20190417 (EN)

Application

EP 16904801 A 20160609

Priority

US 2016036593 W 20160609

Abstract (en)

[origin: WO2017213652A1] A method for bonding two substrates is described, comprising providing a first and a second silicon substrate, providing a raised feature on at least one of the first and the second silicon substrate, forming a layer of gold on the first and the second silicon substrates, and pressing the first substrate against the second substrate, to form a thermocompression bond around the raised feature. The high initial pressure caused by the raised feature on the opposing surface provides for a hermetic bond without fracture of the raised feature, while the complete embedding of the raised feature into the opposing surface allows for the two bonding planes to come into contact. This large contact area provides for high strength.

IPC 8 full level

H01L 21/02 (2006.01); **H01L 21/447** (2006.01); **H01L 21/50** (2006.01); **H01L 21/603** (2006.01)

CPC (source: EP)

B81C 1/00269 (2013.01); **H01L 21/50** (2013.01); **H01L 23/10** (2013.01); **B81C 2203/019** (2013.01); **B81C 2203/037** (2013.01)

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

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

WO 2017213652 A1 20171214; EP 3469625 A1 20190417; EP 3469625 A4 20200304; JP 2019523983 A 20190829; JP 6755558 B2 20200916

DOCDB simple family (application)

US 2016036593 W 20160609; EP 16904801 A 20160609; JP 2018560114 A 20160609